Water Resources Data
Montana
Water Year 2005

Volume 2. Yellowstone and Upper Columbia River Basins and Ground-Water Levels

By Wayne R. Berkas, Melvin K. White, Patricia B. Ladd, Fred A. Bailey, and Kent A. Dodge

Water-Data Report MT-05-2

Prepared in cooperation with the State of Montana and other agencies

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PREFACE

In the act that established the U.S. Geological Survey more than a century ago, the agency was charged by Congress with the responsibility for "...classification of the public lands, and examination of the geologic structure, mineral resources, and products of the national domain." This charge was simple recognition of the principle that factual information is essential to sound development and management decisions involving natural resources. In keeping with this principle, the U.S. Geological Survey publishes annually, by state, hydrologic records for water resources thought to be of particular usefulness to the public and to the scientific community.

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

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Water resources data for Montana for the 2005 water year, volumes 1 and 2, consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels in wells. This volume contains discharge records for 120 streamflow-gaging stations; stage or content records for 22 lakes and reservoirs; water-quality records for 86 streamflow stations (32 ungaged), and 25 ground-water wells; water-level records for 25 observation wells; and precipitation records for 2 atmospheric-deposition stations. Additional water year 2005 data collected at crest-stage gage and miscellaneous-measurement sites were collected but are not published in this report. These data are stored within the office files located in Helena and are available on request. These data represent part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Montana.

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COUNTIES AND STATIONS FOR WHICH GROUND-WATER LEVELS ARE PUBLISHED IN THIS VOLUME

WELLS IN WHICH WATER LEVELS WERE MEASURED BY A CONTINUOUS RECORDER

WELLS IN WHICH WATER LEVELS WERE MEASURED PERIODICALLY ONLY

QUANTITY OF PRECIPITATION
NATIONAL ATMOSPHERIC DEPOSITION PROGRAM/NATIONAL TRENDS NETWORK

Water Resources Data, Montana, Water Year 2005

By Wayne R. Berkas, Melvin K. White, Patricia B. Ladd, Fred A. Bailey, and Kent A. Dodge

INTRODUCTION

The U.S. Geological Survey (USGS), in cooperation with other Federal, State, and local agencies and Tribal governments, collects a large amount of data pertaining to the water resources of Montana each water year. These data, accumulated over many years, constitute a valuable database for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the USGS, the data are published annually, by water year, in this report series entitled, "Water Resources Data, Montana."

This report, volumes 1 and 2, includes records of both surface and ground water from stations within the State and selected stations near the Montana border in adjacent states and Canada. Specifically, this report contains (1) discharge records for 245 streamflow-gaging stations; (2) stage or content records for 39 reservoirs or lakes; (3) water-quality records for 154 stream sites (69 ungaged), 12 reservoir or lake sites, and 13 wells; (4) water-level records for 27 wells; and (5) precipitation records for 2 atmospheric-deposition stations. Volume 1 contains discharge records for 125 streamflow-gaging stations; stage or content records for 17 reservoirs or lakes; and water-quality records for 68 stream sites (37 ungaged), 12 reservoir or lake sites, and 13 wells. Volume 2 contains discharge records for 120 streamflow-gaging stations; stage or content records for 22 reservoirs or lakes; water-quality records for 86 stream sites (32 ungaged), water-level records for 25 observation wells; and precipitation records for 2 atmospheric-deposition stations. The locations of streamflow-gaging and reservoir stations are shown in figure 6, locations of water-quality and precipitation stations are shown in figure 7, and locations of observation wells are shown in figure 8.

Additional data for water year 2005 were collected at crest-stage gage and miscellaneous-measurement sites but are not published in this report. These data are stored in the USGS Montana Water Science Center in Helena and are available on request.

Records pertaining to the discharge of streams and contents of lakes and reservoirs were first published in a series of USGS Water-Supply Papers entitled "Surface Water Supply of the United States." These Water-Supply Papers were published in an annual series for water years 1899-1960 and then in a 5-year series for water years 1961-65 and 1966-70. Records of chemical quality, water temperature, and suspended-sediment concentration were published from 1941 to 1970 in an annual series of Water-Supply Papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of Water-Supply Papers entitled "Ground-Water Levels in the United States." Water-Supply Papers may be reviewed in the libraries of the principal cities of the United States. The annual Water-Supply Papers were compiled and may be purchased by writing to USGS Information Services, Box 25286, Denver, Colo. 80225 (*http://ask.usgs.gov*). For water years 1961 through 1970, streamflow data were published by the USGS in annual reports for each State. Water-quality records for water years 1964 through 1970 were similarly published either in separate reports or in conjunction with streamflow records. Beginning with the 1971 water year, data for surface and ground water are published as a single or multi-volume USGS annual water-data report for each State. These reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, volume 1 is identified as "U.S. Geological Survey Water-Data Report MT-05-1." The water-data reports published prior to 2003 are for sale, in paper copy or on microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22161 (*http://www.ntis.gov/*). Reports published from 2003 to present are located on the Web at *http://water.usgs.gov/pubs/wdr*.

Water-resources information for Montana and the rest of the Nation are available through the Web as part of the USGS National Water-Information System (NWIS) at *http://waterdata.usgs.gov/nwis*. For Montana, this information includes surface-water, water-quality, and ground-water data. Surface-water information available from the USGS includes provisional real-time streamflow data for stations with satellite telemetry, provisional daily data for the previous 18 months, and daily data for the period of record at each site. Daily, monthly, and annual streamflow statistics also are available as well as annual peak-streamflow data. In addition, flood-frequency and basin-characteristics information for selected sites in Montana is available at *http://mt.water.usgs.gov/freq*.

Water-quality information available from the USGS includes provisional real-time specific-conductance and water-temperature data for selected sites with satellite telemetry. Historical water-quality data also are available for many surface- and ground-water sites in Montana.

Ground-water information available from the USGS includes descriptive information for wells, springs, and test holes such as location (latitude and longitude), well depth, site use, water levels, and aquifer.

Additional information, including current prices, for ordering specific reports may be obtained from the Director, USGS Montana Water Science Center, at the address given on the back of the title page or by telephone at 1-888-ASK-USGS.

COOPERATION

The USGS has had cooperative agreements with other agencies and organizations for the systematic collection of streamflow records since 1906, for water-quality records since 1946, and for ground-water levels since 1964. In water year 2005, agencies and organizations that supported data collection through cooperative agreements with the USGS were:

Federal Agencies
- Department of Energy, Bonneville Power Administration
- Bureau of Indian Affairs
- Bureau of Land Management
- Bureau of Reclamation
- Department of State, International Joint Commission
- Federal Emergency Management Agency
- National Park Service
- National Oceanic and Atmospheric Administration, National Weather Service
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture, Forest Service
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Geological Survey

Tribal Governments
- Blackfeet Nation
- Confederated Salish and Kootenai Tribes of the Flathead Nation
- Fort Peck Tribes
- Northern Cheyenne Tribe

State Agencies
- Montana Bureau of Mines and Geology
- Montana Department of Environmental Quality
- Montana Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- Montana Department of Transportation
- Wyoming Department of Environmental Quality
- Wyoming State Engineer

Federal Energy Regulatory Commission Licensees
- Avista Corporation
- PPL—Montana

Local Agencies
- Cascade County Conservation District
- City of Bozeman
- East Bench Irrigation District
- Lewis and Clark County Water Quality Protection District
- Lower Musselshell Conservation District
- Meagher County Conservation District
- North Powell Conservation District
- Stillwater Conservation District
- Teton County Conservation District
- Tongue and Yellowstone Irrigation District

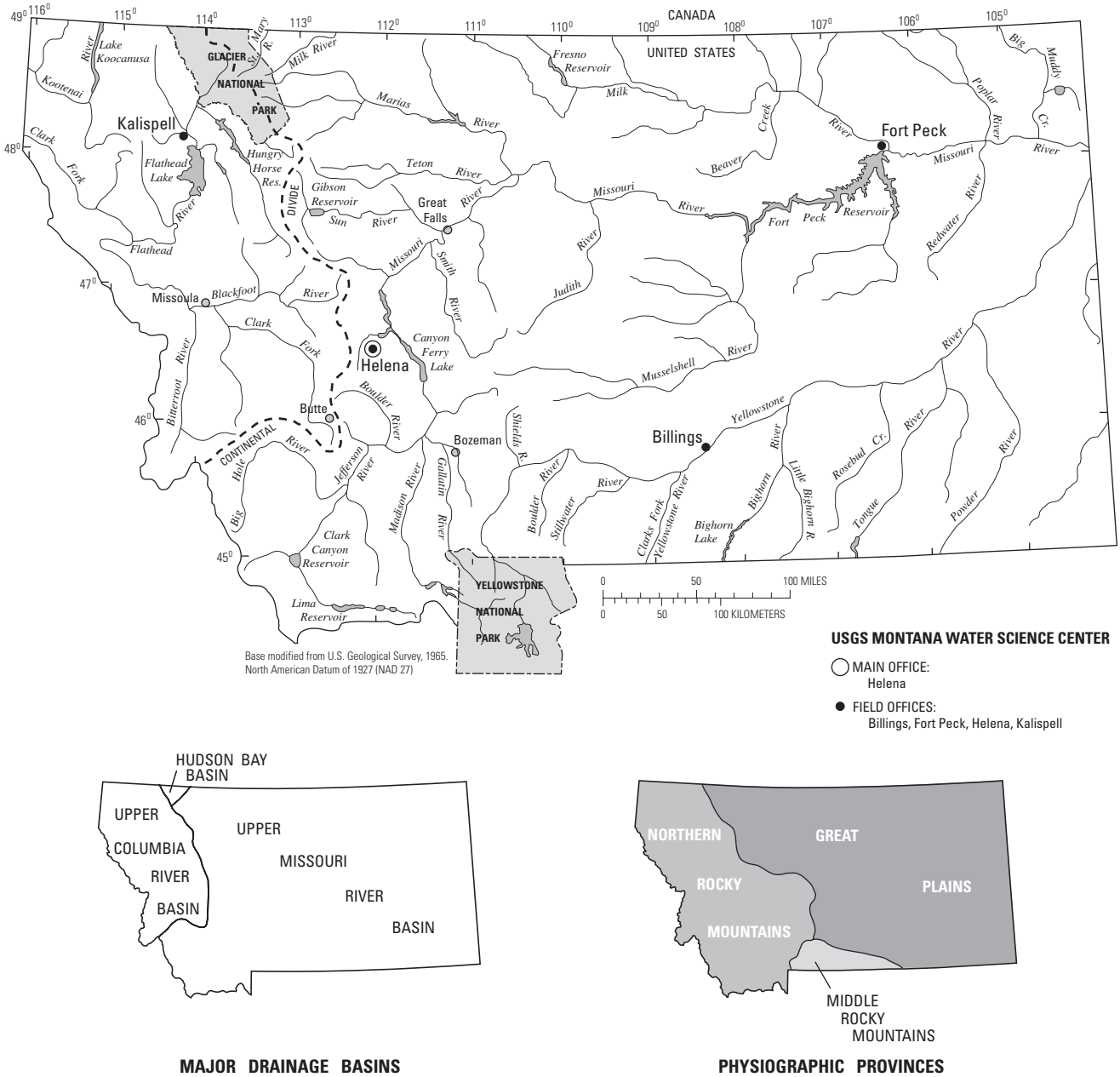
GENERAL HYDROLOGIC SETTING

Montana, with an area of about 147,200 square miles (mi^2), is the fourth largest State in the Nation (fig. 1). The major drainage basins in the State are the Hudson Bay basin (465 mi^2) and the upper Missouri River basin (120,700 mi^2) east of the Continental Divide, and the upper Columbia River basin (26,000 mi^2) west of the divide. The Hudson Bay and upper Missouri River basins drain about 82 percent of the State and provide about 40 percent of the total annual streamflow (1971-2000 average). The upper Columbia River basin drains about 18 percent of the State and provides about 60 percent of the total annual streamflow (1971-2000 average).

The western and southwestern parts of the State are in the Northern and Middle Rocky Mountains.[1] The central and eastern parts are in the Great Plains. The Northern and Middle Rocky Mountains are characterized by rugged mountains and intermontane valleys, whereas the Great Plains consists of rolling to dissected plains and small mountain ranges. Altitude in Montana ranges from more than 12,000 feet above the National Geodetic Vertical Datum of 1929 (NGVD 29) in the mountains northeast of Yellowstone National Park to about 1,850 feet above NGVD 29 where the Kootenai River flows from the northwestern part of the State.

Climate and hydrologic conditions differ substantially across the State. Annual precipitation varies considerably throughout the basins, from about 100-120 inches along the Continental Divide in Glacier National Park to about 8-10 inches in parts of south-central Montana and in some of the

[1]Fenneman, N.M. and Johnson, D.W., 1946, Physical divisions of the United States: U.S. Geological Survey, scale 1:7,000,000, 1 sheet.



MAJOR DRAINAGE BASINS

PHYSIOGRAPHIC PROVINCES

Figure 1. General geographic features of Montana.

western intermontane valleys.[2] The diverse precipitation patterns in Montana result from the effects of geographic and topographic features on warm, moist air from either the Gulf of Mexico or the Pacific Ocean. In mountainous areas, much of the annual precipitation falls as snow during the winter. Although much of the annual precipitation on the Great Plains also falls as snow during the winter, intense rainstorms during the summer can add substantial quantities of precipitation to the annual totals in a short time. In areas east of the mountains, generally one-half of the annual precipitation falls from May through July.

Peak runoff can result from snowmelt, snowmelt mixed with rain, or intense rainfall. In addition, backwater from ice jams commonly creates flooding in many rivers throughout the State. The record flood of April 1952 in northeastern Montana is an example of spring snowmelt flooding. The flood of May 1981 in west-central Montana is an example of flooding caused by snowmelt mixed with rain. The floods of June 1964, June 1975, and May 1978 are examples of flooding predominantly caused by intense rainfall. Flash floods, although restricted in areal extent, are common at times in the north-central and eastern parts of the State. In many areas, peak runoff is stored in reservoirs to decrease flooding. The stored water is used for irrigation (the predominant consumptive use of water statewide), power generation, and recreation.

Surface water throughout the State generally is suitable for most uses except in parts of eastern Montana where, because of large concentrations of dissolved solids and some individual constituents, water-quality standards or recommended guidelines for protecting human health, agricultural irrigation, and freshwater-aquatic life may be exceeded. The ionic composition of surface water is largely influenced by geology and can vary markedly between the western mountains and the eastern plains. In addition, dissolved-solids concentrations can vary substantially between runoff conditions and base flow. In the western mountains, where the rocks generally are older and resistant to weathering, the streamflow characteristically is a calcium bicarbonate type. The dissolved-solids concentrations in mountain streams commonly are less than 100 milligrams per liter (mg/L) and seldom exceed 500 mg/L, even during base flow. In the eastern plains, where sedimentary rocks are less resistant to weathering, streamflow commonly is a sodium sulfate type, with dissolved-solids concentrations ranging from about 100 mg/L during runoff to several thousand mg/L during base flow. In the northeastern part of the State, streamflow typically is a sodium bicarbonate type. Snowmelt and intense rainstorms sometimes produce large quantities of runoff that can dilute concentrations of dissolved solids, modify chemical compositions, and increase concentrations of suspended sediment.

The availability and quality of ground water in Montana are largely controlled by the diverse hydraulic and geochemical properties of the various rocks, sediments, and hydrologic settings in which it occurs. In western Montana, ground water of good quality for most uses is available from alluvium along streams and rivers, from basin fill in intermontane valleys, from glacial deposits, and from fractured consolidated rocks. In eastern Montana, ground water is available from alluvial deposits along larger rivers and streams and from sedimentary rocks. Outside of the alluvial valleys, ground-water availability in sedimentary rock is variable. Quality of ground water in eastern Montana ranges from good quality for most uses to water with large amounts of dissolved solids that is not suitable for irrigation, public-water supply, and domestic uses. Throughout Montana, alluvial deposits along streams generally are the most productive aquifers, and wells completed in alluvium along the major streams may produce several hundred gallons per minute. Alluvium can be readily recharged by precipitation, by streams during periods of high flow, and by applied irrigation water. The particle-size distribution and sorting of glacial deposits largely determines their potential for water development. Where coarse, well-sorted outwash gravels are present, the potential for developing large-yield wells is good, whereas yields from wells completed in poorly sorted glacial till generally are limited to a few gallons per minute. Many fractured consolidated-rock formations are tapped for ground water but, because of the complexity of the geology, fractured rocks might not provide an adequate water supply in all areas. Wells completed in consolidated rocks generally yield only a few gallons per minute. However, several hundred gallons per minute can be obtained from highly fractured or cavernous formations in some areas. The well depth required to reach a given aquifer varies with location.

HYDROLOGIC-MONITORING ACTIVITY

Six streamflow-gaging stations were established during water year 2005 to aid in the assessment of the Nation's water resources:

05013900 Grinnell Creek at Grinnell Glacier, near Many Glacier
06076560 Smith River below Newlan Creek, near White Sulphur Springs
06307990 Tongue River above T and Y Diversion Dam, near Miles City
12323670 Mill Creek near Anaconda
12323710 Willow Creek near Anaconda
12323840 Lost Creek near Anaconda

[2]Cannon, M.R. and Johnson, D.R., 2004, Estimated water use in Montana in 2000: U.S. Geological Survey Scientific Investigations Report 2004-5223, 50 p.

One streamflow-gaging station (12331500 Flint Creek near Drummond) was discontinued at the end of water year 2005.

Water-quality and bottom-sediment samples were collected one or more times from April 2004 through September 2005 in a cooperative study with Montana Fish, Wildlife and Parks. These samples were analyzed for organic carbon, mercury, and related geothermal constituents in order to evaluate the occurrence of mercury within the Madison River and adjacent watersheds. The laboratory results for samples collected in August and September 2004 were not available in time for publication in the water year 2004 data report and are, therefore, included in this report. The 28 stations sampled as part of this investigation were:

06036650 Jefferson River near Three Forks
06036905 Firehole River near West Yellowstone
06037100 Gibbon River at Madison Junction, Yellowstone National Park
06037500 Madison River near West Yellowstone
06038500 Madison River below Hebgen Lake, near Grayling
06038800 Madison River at Kirby Ranch, near Cameron
06039200 West Fork Madison River near Cameron
06040000 Madison River near Cameron
06040800 Madison River above powerplant, near McAllister
06041300 Hot Springs Creek near Norris
06042600 Madison River at Three Forks
06052500 Gallatin River at Logan
06054500 Missouri River at Toston
443406110500701 Firehole River below Lower Geyser Basin, Yellowstone National Park
443824110531601 Madison River near Madison Junction, Yellowstone National Park
444349111081901 Hebgen Lake, Madison Arm near Grayling
444548111144401 Upper Hebgen Lake near Grayling
444710111102301 Hebgen Lake, Grayling Arm near Grayling
444909111161201 Middle Hebgen Lake near Grayling
444950111251201 Lower Quake Lake near Grayling
445107111214501 Upper Quake Lake near Grayling
445122111193501 Lower Hebgen Lake near Grayling
445220111213601 Beaver Creek near mouth, near Grayling
452518111412201 Upper Ennis Lake near Ennis
452702111393001 Lower Ennis Lake near Ennis
460719111243201 Lower Toston Reservoir near Toston
462334111311701 Upper Canyon Ferry Lake near Townsend
463811111420001 Lower Canyon Ferry Lake near Townsend

A one-time sampling of selected biota and major ions was conducted during 2005 to characterize the aquatic biology and habitat of streams in an area of coal-bed methane development at the following stations; the biological data will not be available for publication until next year. The 13 stations sampled as part of this investigation are:

06306100 Squirrel Creek near Decker
06307570 Hanging Woman Creek below Horse Creek, near Birney
06324710 Powder River at Broadus
06325000 Little Powder River at Biddle
445832106551401 Youngs Creek above mouth, near Decker
445957106524701 Tongue River below Youngs Creek, near Decker
450047106514201 Squirrel Creek above mouth, at Decker
450137106595101 Youngs Creek near reservation boundary, near Decker
451340106295501 Hanging Woman Creek below Hay Gulch, near Birney
451607106372801 Tongue River at Prairie Dog Creek, near Birney
451732106085001 Otter Creek below Taylor Creek, near Otter
452642106091201 Otter Creek below Tenmile Creek, near Ashland
453209105201201 Powder River below Little Powder River, near Broadus

A one-time reconnaissance sampling for major ions and trace elements was conducted to characterize water quality of inflows to the Tongue River upstream from Tongue River Reservoir. The seven sites sampled as part of this investigation are:

445700106563101 Ash Creek at mouth, near Acme, Wyo.
445817106544601 Youngs Creek at mouth, near Decker
445949106524801 Discharge from coal-bed methane production facilities, Permit MT-0030457-009
445955106515801 Discharge from coal-bed methane production facilities, Permit MT-0030457-005
450007106495201 Discharge from coal-bed methane production facilities, Permit MT-0030457-013
450011106522501 Discharge from coal-bed methane production facilities, Permit MT-0030457-004
450017106494001 Discharge from coal-bed methane production facilities, Permit MT-0030457-015

Three new stations were established and one former station was reestablished in the upper Clark Fork basin for determining greater spatial resolution of metal sources in areas where remediation is occurring. These stations are:

12323230 Blacktail Creek at Harrison Avenue, at Butte
12323670 Mill Creek near Anaconda
12323710 Willow Creek near Anaconda
12323840 Lost Creek near Anaconda

Water-quality data collection was discontinued at two stations during or at the end of water year 2005. These stations are:

06132000 Missouri River below Fort Peck Dam
06177000 Missouri River near Wolf Point

SUMMARY OF HYDROLOGIC CONDITIONS

Temperature and Precipitation

For most of Montana, temperatures from October 2004 through April 2005 were warmer than normal. In many areas, the above-normal temperatures in March caused valley and prairie snow to melt earlier than usual. Warmer-than-normal temperatures in April caused mountain snow to begin to melt earlier than usual, but cooler-than-normal temperatures in May and June slowed the melting of the remaining mountain snowpack. Temperatures generally remained above normal across the State for the rest of the water year.[3]

Data for precipitation, departure from normal precipitation, and percentage of normal precipitation for seven climatological divisions of the State are presented in table 1. The precipitation data listed in table 1 are averages of the total monthly precipitation for the National Weather Service (NWS) reporting stations within each of the climatological divisions. No attempt was made to area-weight the division totals. As shown in table 1, for October 2004 through March 2005, precipitation in all climatological divisions was less than normal, ranging from 64 percent of normal in the western division to 92 percent of normal in the north-central division. For April through September 2005, precipitation ranged from 96 percent of normal in the north-central division to 130 percent of normal in the southeastern division. Percentage of normal precipitation for water year 2005 varied across the State from 82 percent of normal in the western division to 118 percent of normal in the southeastern division. Total average precipitation for water year 2005 ranged from 12.66 inches in the north-central division to 16.37 inches in the southeastern division (table 1).

[3]U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, 2005, Climatological Data, Montana, v. 106, no. 10 through v. 107, no. 9.

Table 1. Precipitation and departure from normal, in inches, and percentage of normal, Montana, water year 2005.[1]

Climatological division (number of stations)	October 2004 through March 2005			April through September 2005			Water year 2005		
	Total monthly precipitation	Departure from normal, 1971-2000	Percentage of normal	Total monthly precipitation	Departure from normal, 1971-2000	Percentage of normal	Total average precipitation	Departure from normal, 1971-2000	Percentage of normal
Western (45)	6.29	-3.49	64	9.72	0.01	100	15.98	-3.48	82
Southwestern (22)	3.76	-1.63	70	10.21	-.25	98	13.97	-1.88	88
North Central (42)	2.98	-.26	92	9.68	-.45	96	12.66	-.71	95
Central (35)	3.33	-.82	80	10.89	-.04	100	14.22	-.86	94
South Central (26)	4.24	-1.24	77	12.06	1.04	109	16.30	-.20	99
Northeastern (27)	2.08	-.54	79	11.79	1.55	115	13.87	1.01	108
Southeastern (22)	2.96	-.67	82	13.41	3.12	130	16.37	2.45	118

[1]Data from U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, 2005, Climatological Data, Montana, v. 106, no. 10 through v. 107, no. 9. Normals of precipitation are determined from the base period 1971-2000.

Most NWS stations in Montana measure precipitation in valley or non-mountainous locations. Data for precipitation falling as snow in the mountainous parts of the State during the winter are published by the U.S. Department of Agriculture, Natural Resources Conservation Service (available at http://www.wcc.nrcs.usda.gov/snow/snotel-reports.html). Snow-water equivalents of mountain snowpack, determined from SNOpack TELemetry (SNOTEL) information, for various basins in Montana are presented in table 2.

By March 1, 2005, snow-water equivalent of the snowpack in all basins ranged from 0 (Lower Milk drainage basin) to 78 percent of average. During March, the snowpack continued to increase, but all drainages remained less than average on April 1. Between April 1 and May 1, some drainage basins increased in snowpack and others decreased in snowpack, but all drainage basins had less than average snowpack on May 1.

Table 2. Snow-water equivalent and percent of average snow-water equivalent of mountain snowpack in selected basins in Montana, March 1-May 1, 2005.[1]

Drainage basin	March 1, 2005			April 1, 2005			May 1, 2005		
	Basin-wide snow-water equivalent, in inches	Basin-wide average snow-water equivalent, in inches	Percentage of average	Basin-wide snow-water equivalent, in inches	Basin-wide average snow-water equivalent, in inches	Percentage of average	Basin-wide snow-water equivalent, in inches	Basin-wide average snow-water equivalent, in inches	Percentage of average
Hudson Bay drainage basin									
St. Mary	13.7	26.8	51	17.5	30.2	58	15.9	26.2	61
Missouri drainage basin									
Upper Missouri	9.4	14.0	67	12.8	17.4	74	13.6	17.4	78
Sun, Teton, Marias	6.8	16.1	42	10.4	19.1	54	10.2	17.7	58
Smith, Judith, Musselshell	6.4	10.6	60	10.5	13.1	80	10.6	11.4	93
Lower Milk	.0	4.3	0	2.4	4.4	55	.4	1.2	33
Upper Yellowstone	10.3	15.7	66	13.7	19.2	71	13.2	19.2	69
Bighorn	7.4	11.6	64	9.8	14.3	68	9.6	15.2	63
Tongue	6.2	8.9	70	9.3	11.6	80	9.2	12.2	75
Powder	5.8	7.4	78	8.5	9.6	88	6.9	10.0	69
Upper Columbia drainage basin									
Kootenai	12.5	22.7	55	16.3	26.3	62	12.3	23.8	52
Flathead	12.0	22.8	53	16.3	26.7	61	14.8	23.8	62
Clark Fork	9.1	18.8	48	12.2	22.1	55	11.8	19.9	59

[1]SNOTEL data from Natural Resources Conservation Service (NRCS) National Water and Climate Center, accessed January 31, 2006 at *http://www.wcc.nrcs.usda.gov/snow/snotel-reports.html*. Averages were determined from the base period 1971-2000.

SURFACE WATER

Streamflow

Streamflow data for water year 2005 can be compared to long-term data for water years 1971-2000 and maximum and minimum monthly mean discharge for the period of record at seven streamflow-gaging stations (fig. 2). Compared to the mean annual discharge (average of the annual mean discharges) for water years 1971-2000, the annual mean discharge (fig. 2) during water year 2005 was 86 percent of average at Middle Fork Flathead River near West Glacier (station 12358500); 74 percent of average at Clark Fork at St. Regis (station 12354500); 68 percent of average at Missouri River at Toston (station 06054500); 83 percent of average at Yellowstone River at Corwin Springs (station 06191500); 79 percent of average at Yellowstone River at Billings (station 06214500); 31 percent of average at Rock Creek below Horse Creek, near international boundary (station 06169500); and 58 percent of average at Marias River near Shelby (station 06099500).

The annual departure from mean annual discharge at two streamflow-gaging stations on unregulated streams is shown in figure 3. At both Yellowstone River at Corwin Springs and Middle Fork Flathead River near West Glacier, the annual mean discharge during water year 2005 was less than the long-term average for the period of record.

A comparison of instantaneous peak discharge for water year 2005 at 25 selected streamflow-gaging stations to instantaneous peak discharge for the period of record is presented in table 3. Record peak discharges were not recorded for any of these stations. The recurrence intervals for peak discharges during water year 2005 were less than 2 years at 22 gaging stations and 2-5 years at the other 3 stations.

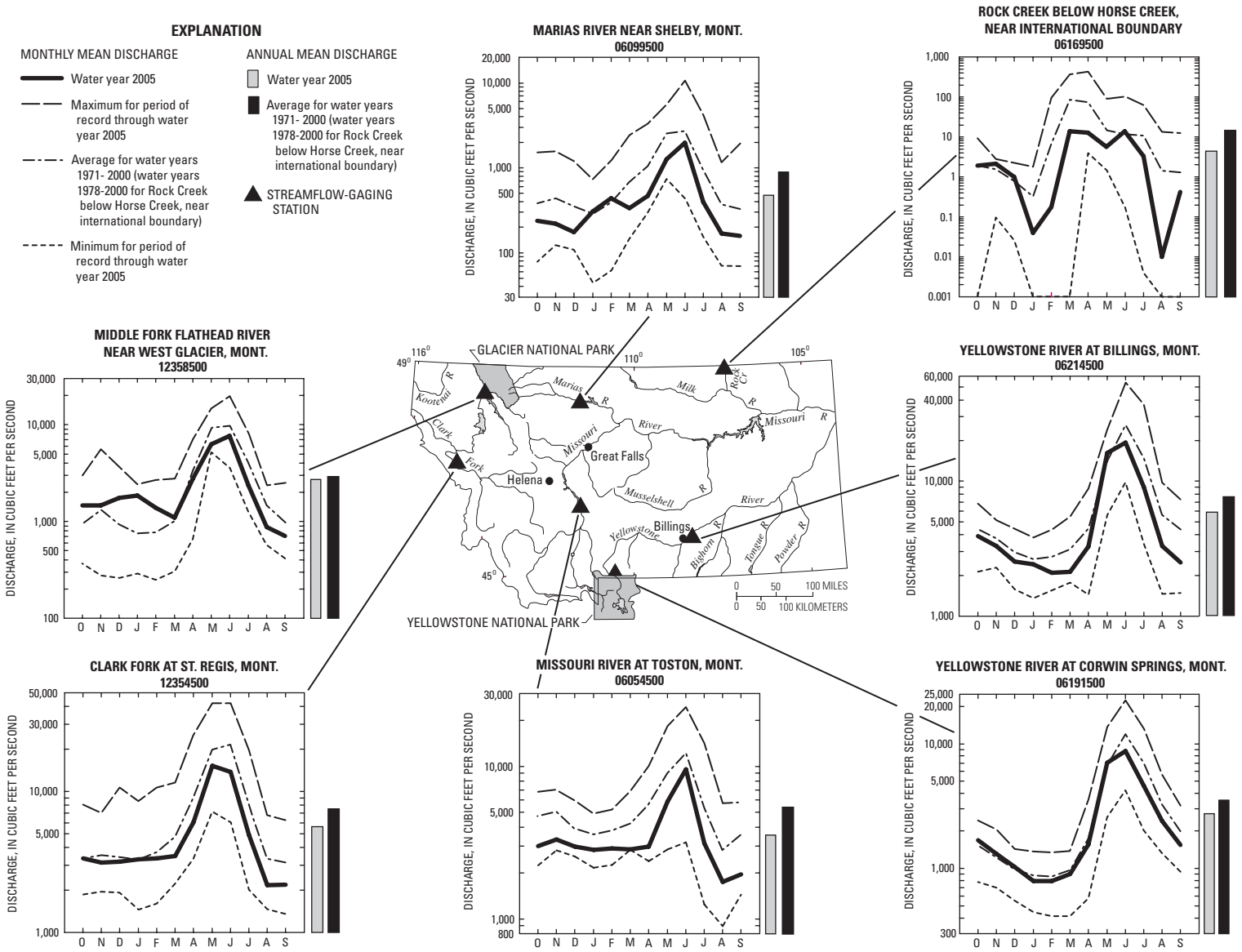


Figure 2. Streamflow data for water year 2005 compared to long-term data at selected streamflow-gaging stations in Montana.

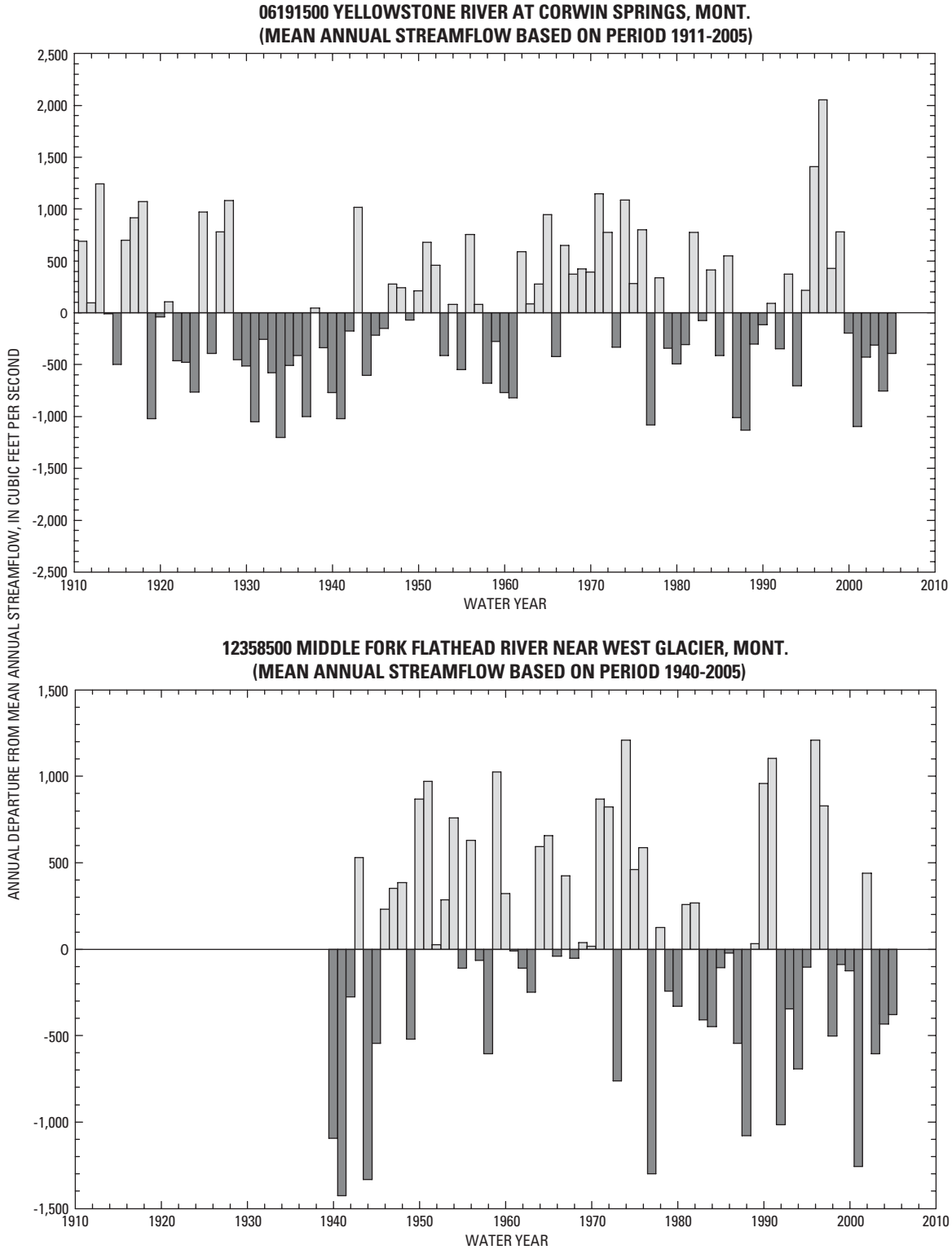


Figure 3. Annual departure from mean annual discharge at two streamflow-gaging stations on unregulated streams in Montana.

Table 3. Comparisons of instantaneous peak discharge for water year 2005 to instantaneous peak discharge for period of record at selected stations in Montana.

[Symbols: <, less than; --, not determined; *, outside period of record]

Station number	Station name	Drainage area (square miles)	Peak discharge, water year 2005			Peak discharge, period of record through water year 2004	
			Date	Cubic feet per second	Recurrence interval (years)	Date	Cubic feet per second
05014500	Swiftcurrent Creek at Many Glacier	30.9	06/04	894	<2	06/08/64	6,700
05017500	St. Mary River near Babb	276	06/07	2,530	<2	06/09/64	16,500
06025500	Big Hole River near Melrose	2,476	05/21	3,430	<2	06/10/72	14,300
06054500	Missouri River at Toston	14,669	06/18	12,500	<2	06/12/97	34,000
06089000	Sun River near Vaughn	1,854	05/18	3,850	<2	06/09/64	53,500
06099500	Marias River near Shelby	3,242	06/06	5,160	<2	06/09/64	241,000
06115200	Missouri River near Landusky	40,987	06/06	17,700	<2	06/03/53	137,000
06120500	Musselshell River at Harlowton	1,125	05/21	1,070	2-5	06/20/75	7,270
06154400	Peoples Creek near Hays	220	06/28	49	<2	06/08/72	8,460
06174500	Milk River at Nashua	22,332	06/11	4,540	<2	04/18/52	45,300
06181000	Poplar River near Poplar	3,174	06/15	230	<2	04/06/54	37,400
06191500	Yellowstone River at Corwin Springs	2,623	05/21	16,800	<2	06/10/96 06/06/97	32,200 32,200
06200000	Boulder River at Big Timber	523	06/23	5,160	<2	06/05/97	9,940
06214500	Yellowstone River at Billings	11,795	05/22	35,900	<2	06/12/97	82,000
06289000	Little Bighorn River at State line, near Wyola	193	05/20	1,180	2-5	06/03/44	2,730
06308500	Tongue River at Miles City	5,397	06/09	3,750	2-5	06/15/62	13,300
06329500	Yellowstone River near Sidney	69,103	06/29	48,100	<2	06/21/21	159,000
12301300	Tobacco River near Eureka	440	06/09	943	<2	05/13/91	3,180
12304500	Yaak River near Troy	766	12/11	2,550	<2	05/17/97 * 05/54	12,600 *13,400
12332000	Middle Fork Rock Creek near Philipsburg	123	05/19	535	<2	06/16/74	1,680
12335500	Nevada Creek above reservoir, near Helmville	116	06/04	268	<2	06/02/53	1,800
12340000	Blackfoot River near Bonner	2,290	05/17	5,360	<2	06/10/64	19,200
12354500	Clark Fork at St. Regis	10,709	05/21	22,700	<2	05/24/48 05/18/97	68,900 68,900
12358500	Middle Fork Flathead River near West Glacier	1,128	06/04	12,800	<2	06/09/64	140,000
12370000	Swan River near Bigfork	671	06/05	4,860	<2	06/20/74	8,890

A comparison of minimum daily mean discharge for water year 2005 to minimum daily mean discharge for the period of record through water year 2004 at 24 selected long-term streamflow-gaging stations is presented in table 4. No record minimum daily mean discharges were recorded during water year 2005. The recurrence intervals for minimum daily discharges were less than 2 years at 9 sites, 2-5 years at 12 sites, and 10-20 years at 3 sites.

Table 4. Comparisons of minimum daily mean discharge for water year 2005 to minimum daily mean discharge for period of record at selected stations in Montana.

[Symbol: <, less than]

Station number	Station name	Drainage area (square miles)	Minimum daily mean discharge, water year 2005			Minimum daily mean discharge, period of record through water year 2004	
			Date	Cubic feet per second	Recurrence interval (years)	Date	Cubic feet per second
05014500	Swiftcurrent Creek at Many Glacier	30.9	02/25	25	<2	11/14,16/76	0
05017500	St. Mary River near Babb	276	03/07	103	<2	01/03/53	27
06025500	Big Hole River near Melrose	2,476	09/04	169	2-5	08/17/31	49
06054500	Missouri River at Toston	14,669	07/28	1,530	2-5	01/12/63	700
06089000	Sun River near Vaughn	1,854	01/15	100	2-5	05/26/41	23
06099500	Marias River near Shelby	3,242	08/08	83	2-5	08/20/19	10
06115200	Missouri River near Landusky	40,987	12/26	3,700	2-5	12/13/36	1,220
06120500	Musselshell River at Harlowton	1,125	01/15	13	2-5	([1])	0
06174500	Milk River at Nashua	22,332	04/08	26	2-5	([1])	0
06181000	Poplar River near Poplar	3,174	01/16	3.5	<2	([1])	0
06191500	Yellowstone River at Corwin Springs	2,623	01/06	700	<2	02/05/89	380
06200000	Boulder River at Big Timber	523	01/14	60	2-5	08/26/61	12
06214500	Yellowstone River at Billings	11,795	01/14	1,700	<2	12/12/32	450
06289000	Little Bighorn River at State line, near Wyola	193	12/23	24	10-20	02/02/89	18
06308500	Tongue River at Miles City	5,397	05/05	12	2-5	07/09/40	0
06329500	Yellowstone River near Sidney	69,103	01/08	1,500	10-20	05/17/61	570
12301300	Tobacco River near Eureka	440	09/08	46	2-5	01/11/63	20
12304500	Yaak River near Troy	766	09/09	103	<2	09/19/01	49
12332000	Middle Fork Rock Creek near Philipsburg	123	02/16	9.0	10-20	02/09/53	5.3
12335500	Nevada Creek above reservoir, near Helmville	116	01/05	5.0	<2	01/11/44	2.0
12340000	Blackfoot River near Bonner	2,290	01/04	300	2-5	01/04/50	200
12354500	Clark Fork at St. Regis	10,709	01/06	1,600	2-5	02/03/89	800
12358500	Middle Fork Flathead River near West Glacier	1,128	09/09	541	<2	11/27/52	189
12370000	Swan River near Bigfork	671	09/27	352	<2	01/26-29/30	193

[1]On various dates.

The percentage of average storage (based on water years 1971-2000), by month, for selected major reservoirs is presented in table 5. At the end of water year 2005, storage was within 10 percent of average in five of the six major reservoirs used to supply water primarily for hydroelectric-power generation. Storage was within 20 percent of average at the end of water year 2005 in two of the four reservoirs used to supply water primarily for irrigation. Gibson Reservoir was 17 percent of average at the end of water year 2005.

Table 5. Percentage of average storage, by month, during water year 2005 for selected major reservoirs in Montana used to supply water principally for hydroelectric-power generation and irrigation.

Reservoir	Usable capacity (acre-feet)	Percentage of average storage based on 1971-2000 period of record											
		2004			2005								
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Hydroelectric-power generation													
Canyon Ferry Lake	1,993,000	81	81	84	87	91	94	94	96	103	100	97	92
Fort Peck Lake	18,910,000	55	56	56	56	57	58	57	55	56	57	56	57
Bighorn Lake	1,356,000	71	80	76	78	80	80	84	103	108	99	106	102
Lake Koocanusa	5,748,000	118	122	119	154	190	182	172	148	119	102	92	94
Hungry Horse Reservoir	3,451,000	111	115	125	139	151	168	160	128	109	101	97	101
Flathead Lake	1,791,000	98	108	105	120	136	156	156	111	101	100	99	100
Irrigation													
Lima Reservoir	84,050	103	108	110	108	108	108	113	113	124	122	112	103
Clark Canyon Reservoir	255,600	23	26	30	35	37	38	39	39	40	32	31	37
Gibson Reservoir	99,050	75	69	77	89	95	104	119	108	99	56	16	17
Fresno Reservoir	103,000	76	75	74	73	72	53	60	59	84	116	91	89

WATER QUALITY

The USGS operates water-quality stations throughout Montana in cooperation with numerous Federal, State, and local agencies and Tribal governments. The stations change from year to year as objectives are achieved or modified, or funding levels change. Some stations are operated for only a few years and commonly are part of a short-term investigation to examine water quality related to a specific condition. Other stations have been in operation for many years and provide a basis for description of long-term water-quality conditions or trends that represent a wide range of hydrologic or land-use variability. Long-term stations typically are located on major streams that represent an important water resource in the area and require data on an ongoing basis for various management concerns.

Two of the most intensively sampled networks of water-quality stations are in the upper Clark Fork basin of western Montana and in the Yellowstone River tributary basins of Rosebud Creek, Tongue River, and Powder River in southeastern Montana (fig. 7). The primary constituents of concern in the upper Clark Fork basin are trace elements associated with historical mining of metals. In the basins of southeastern Montana, dissolved solids and sodium associated with coal-bed methane development are of concern. Other large sampling networks with small to moderate sampling frequencies are in the Tenmile Creek and Boulder River basins of southwestern Montana where trace elements associated with historical mining are of concern. Small to moderate-sized networks of sampling stations are operated in the Bitterroot River, Sun River, Muddy Creek, Teton River, and Flathead River basins. Numerous sites are equipped with continuous monitoring for water temperature and a smaller number of sites are equipped with continuous monitors for specific conductance.

Various water-quality measurements are made, either onsite or by laboratory analysis of samples, depending on the objective of the investigation. Several types of water-quality data that describe physical and chemical characteristics are routinely obtained in many sampling programs. Examples of commonly measured water-quality characteristics are dissolved solids, dissolved oxygen, dissolved nitrite plus nitrate, total phosphorus, and suspended sediment. Guideline concentrations and standards have been established by the State of Montana (*http://www.deq.state.mt.us/wqinfo/Circulars/WQB-7.PDF*) and U.S. Environmental Protection Agency (USEPA) (*http://epa.gov/waterscience/standards/wqcriteria.html*) to provide values protective of human health and aquatic organisms.

The concentration of dissolved solids, which represents the mass (milligrams) of all constituents dissolved in a unit volume (liter) of water, can be determined either from the weight of dry residue that remains after evaporation of a known volume of water that has been filtered to remove particulate material, or estimated from the sum of the individual dissolved major-ion concentrations. An excessive concentration of dissolved solids can render the water unsuitable for certain uses such as human consumption, irrigation of crops, or livestock watering. Recommended guidelines compiled by the U.S. Department of Agriculture[4] indicate that water might not be suitable when dissolved-

solids concentrations exceed 500 mg/L if used for human consumption, 1,000 mg/L if used for crop irrigation, and 10,000 mg/L if used for livestock watering.

Dissolved oxygen in surface water is essential for most aquatic organisms and is an indicator of the biochemical condition of the stream or lake. The solubility of oxygen in water is a function of water temperature and barometric pressure; therefore, the oxygen content in surface water is subject to considerable daily and seasonal change. Biological activities such as photosynthesis and decomposition also can cause rapid and large changes in dissolved-oxygen concentration. Dissolved-oxygen concentrations less than 5.0 mg/L for warm-water fish or less than 8.0 mg/L for cold-water fish may be detrimental to early life stages.[5]

Nitrogen (N) is an essential plant nutrient that occurs in several forms in water. Common sources of nitrogen are atmospheric deposition, soils, plant fertilizer, animal waste, and sewage or septic effluent. Nitrite and nitrate are inorganic forms of nitrogen that can occur in water, although nitrite is seldom present in large amounts in oxygenated water. Dissolved nitrate is a major nutrient for plants; consequently, large concentrations of nitrate in streams and lakes can cause rapid growth of aquatic plants. Nitrate concentrations in excess of 0.30 mg/L as N have the potential to stimulate growths of algae in the presence of adequate phosphorus.[6] In addition, human health can be adversely affected if the nitrate concentration exceeds 10 mg/L as N in drinking water.[5,7]

Phosphorus (P) is an essential plant nutrient that can stimulate excessive growth of aquatic plants. Total phosphorus includes the inorganic and organic forms of dissolved and suspended phosphorus and is commonly analyzed as an indicator of eutrophication potential. Although phosphorus can originate naturally from igneous and sedimentary rock formations, more common sources include sewage, detergents, fertilizer, and livestock waste. Total phosphorus concentrations to limit nuisance aquatic plant growth in streams should not exceed 0.03 mg/L as P in western Montana and 1.0 mg/L as P in eastern Montana.[4] Water-quality criteria established by the USEPA[8] also indicate that total phosphorus should not exceed 0.05 mg/L as P in streams discharging directly to lakes or 0.025 mg/L as P within lakes.

Suspended sediment is particulate material eroded from the land surface by either wind or water and maintained in suspension in streams by hydraulic energy. The quantity of suspended sediment in streams typically increases during periods of increased runoff, when large amounts of rainfall or snowmelt can rapidly erode soil and the increased streamflow can scour channel sediments. Although large suspended-sediment concentrations can occur naturally in areas underlain by easily erodible geologic materials, land use that disturbs soils also can contribute substantial quantities of sediment to streams and lakes. The quantity of sediment in suspension has important physical and chemical implications for aquatic life. Sediment in suspension during high flow may be deposited in stream channels or lakes where water velocities decrease. In areas of sediment deposition, aquatic insects or fish eggs can be smothered, thereby rendering the bottom habitat unsuitable for their survival. Many chemical constituents such as some metals, phosphorus, and some pesticides tend to sorb strongly to sediment. As a result, chemicals may be readily transported from land sources into river systems where aquatic organisms could be exposed to toxic concentrations.

Statistical summaries of selected water-quality measurements made at eight long-term water-quality stations in Montana are presented in table 6. The range of values for each type of measurement is described by the minimum and maximum values. To compare current and long-term water-quality conditions, the range of values are summarized for both water year 2005 and the period of record through water year 2004. In addition, the central tendency of data collected over the period of record is described by the median (50th percentile).

[4]U.S. Department of Agriculture, 2002, Natural Resources Conservation Service, Assessing water quality for agriculture and aquatic life uses: Environment Technical Note No. MT-1, 27 p.

[5]Montana Department of Environmental Quality, 2004, Montana numeric water quality standards: Circular WBQ-7, 38 p., Administrative Rules of Montana 17.30.619.

[6]Mackenthun, K.M., 1969, The practice of water pollution biology: U.S. Department of the Interior, Federal Water Pollution Control Administration, Division of Technical Support, 281 p.

[7]U.S. Environmental Protection Agency, 1991, Maximum Contaminant Levels (section 141.62 of subpart G of part 141, National Revised Primary Drinking Water Regulations): U.S. Code of Federal Regulations Title 40, Parts 100 to 149, revised as of July 1, 1991, p. 673.

[8]U.S. Environmental Protection Agency, 1986, Quality criteria for water, 1986: Washington, D.C., Office of Water Regulations and Standards, EPA 440/5-86-001, unpaged.

Table 6. Statistical summaries of selected water-quality measurements for long-term water-quality stations in Montana for water year 2005 and the period of record through water year 2004.

[Symbols: <, less than; --, no data]

Station number	Station name	Water year 2005			Period of record through water year 2004			
		Number of samples	Minimum	Maximum	Number of samples	Minimum	Maximum	Median
Dissolved solids, in milligrams per liter								
06089000	Sun River near Vaughn	0	--	--	306	155	1,100	462
06178500	East Poplar River at international boundary	4	770	975	271	97	1,480	941
06185500	Missouri River near Culbertson	7	343	403	247	221	579	401
06308500	Tongue River at Miles City	18	204	693	219	155	1,330	562
06326500	Powder River near Locate	12	522	2,060	229	408	3,450	1,470
06329500	Yellowstone River near Sidney	0	--	--	297	142	863	467
12340000	Blackfoot River near Bonner	0	--	--	26	78	156	128
12352500	Bitterroot River near Missoula	2	42	62	35	26	107	56
Dissolved oxygen, in milligrams per liter								
06089000	Sun River near Vaughn	0	--	--	47	7.4	13.2	10.9
06178500	East Poplar River at international boundary	4	5.5	8.1	267	.9	17.2	9.2
06185500	Missouri River near Culbertson	7	7.0	12.9	285	6.0	14.2	9.3
06308500	Tongue River at Miles City	17	6.8	13.2	208	6.5	15.6	8.8
06326500	Powder River near Locate	9	8.3	13.7	265	2.7	15.7	8.8
06329500	Yellowstone River near Sidney	6	8.5	13.7	430	4.4	15.0	9.1
12340000	Blackfoot River near Bonner	6	8.0	12.3	5	7.2	10.6	9.0
12352500	Bitterroot River near Missoula	0	--	--	33	8.2	15.2	10.6
Dissolved nitrite plus nitrate, in milligrams per liter as nitrogen								
06089000	Sun River near Vaughn	9	.139	.922	355	<.01	4.7	.61
06178500	East Poplar River at international boundary	4	<.016	.127	69	<.01	.29	.07
06185500	Missouri River near Culbertson	7	<.016	.155	173	<.005	.38	.006
06308500	Tongue River at Miles City	7	<.016	.594	151	<.02	.97	.04
06326500	Powder River near Locate	12	<.016	.771	167	<.01	1.8	.26
06329500	Yellowstone River near Sidney	6	<.06	.710	257	<.005	.73	.20
12340000	Blackfoot River near Bonner	6	<.016	.040	26	<.005	.03	<.05
12352500	Bitterroot River near Missoula	4	<.016	.047	44	<.005	.17	.03
Total phosphorus, in milligrams per liter as phosphorus								
06089000	Sun River near Vaughn	9	.007	.08	129	<.01	.64	.03
06178500	East Poplar River at international boundary	4	.043	.10	273	<.01	.40	.03
06185500	Missouri River near Culbertson	7	.089	.34	233	.01	1.0	.09
06308500	Tongue River at Miles City	7	.011	2.7	177	<.01	2.6	.04
06326500	Powder River near Locate	12	.011	5.4	230	.005	26	.17
06329500	Yellowstone River near Sidney	6	.010	.84	388	<.01	2.7	.09
12340000	Blackfoot River near Bonner	6	.006	.06	26	.003	.17	.02
12352500	Bitterroot River near Missoula	4	.016	.09	44	.004	.18	.02
Suspended sediment, in milligrams per liter								
06089000	Sun River near Vaughn	9	16	62	130	8	910	57
06178500	East Poplar River at international boundary	4	58	95	237	4	322	56
06185500	Missouri River near Culbertson	7	110	1,890	194	19	2,370	244
06308500	Tongue River at Miles City	18	31	8,110	194	5	14,000	84
06326500	Powder River near Locate	12	36	18,700	259	8	41,400	1,040
06329500	Yellowstone River near Sidney	13	23	4,670	379	10	15,500	296
12340000	Blackfoot River near Bonner	6	2	66	147	1	271	9
12352500	Bitterroot River near Missoula	4	2	178	46	1	186	11

GROUND WATER

Ground-Water Levels

Water levels were measured in 27 observation wells during water year 2005 (fig. 8). Water levels in most of these wells primarily reflect the response of the ground-water system in the area to natural climatic conditions. However, several wells are within the zone of influence of human activities, and water levels in these wells can be affected by pumping or infiltration of applied irrigation water. Water levels commonly fluctuate throughout the year and from year to year as a result of changes in climatic conditions or human activities.

Seventeen of the observation wells are equipped with continuous water-level recorders and have varying lengths of record. One of the continuous recorders also provides near real-time data delivery, with water level data collected hourly and transmitted every 4 hours via satellite for display as part of the USGS National Water Information System program website: *http://waterdata.usgs.gov/nwis*. Individual data values from the continuous recorders are not presented in this report but are available at the USGS Montana Water Science Center. Hydrographs are included for the 17 wells equipped with continuous recorders and periodic water-level data for all 27 wells are presented.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for water year 2005 that began October 1, 2004, and ended September 30, 2005. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 6 through 8. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation

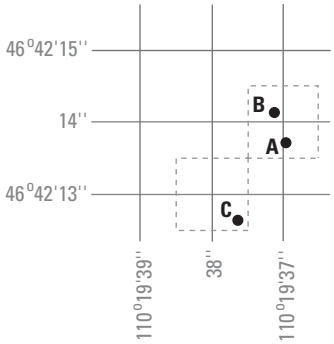
DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number “09” plus the 6-digit (or 8-digit) downstream order number “004100.” In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as “01,” “02,” and so forth, would be assigned as one would for wells (see fig. 4). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.



LATITUDE AND LONGITUDE
Coordinates for site **A:** (464214110193701)
Coordinates for site **B:** (464214110193702)
Coordinates for site **C:** (464213110193801)

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

In addition to the well number that is based on latitude and longitude given for each well, another well number may be provided which in many states is based on the Public Land Survey System, a set of rectangular surveys that is used to identify land parcels. The well-numbering system used by the Geological Survey in Montana consists of a location number of as many as 14 characters. The first three characters specify the township and its position south (S) or north (N) of the Montana Base Line. The next three characters specify the range and its position east (E) or west (W) of the Montana Principal Meridian. The next two characters are the section number. The letters following the section number indicate the well location within the section: the first letter designates the160-acre tract (quarter section), the second the 40-acre tract (quarter-quarter section), the third the 10-acre tract (quarter-quarter-quarter section), and the fourth letter designates the 2.5-acre tract (quarter-quarter-quarter-quarter tract). The four subdivisions of the section are designated A, B, C, and D in a counter-clockwise direction, beginning in the northeastern quadrant. The last two characters in the location number specify a sequence number to distinguish between multiple wells in a single tract. For example, as shown in figure 5, well 30N33W05ABAB01 is the first well inventoried in the $NW^1/_4$ (B) of the $NE^1/_4$ (A) of the $NW^1/_4$ (B) of the $NE^1/_4$ (A) of section 5, in township 30 north, range 33 west.

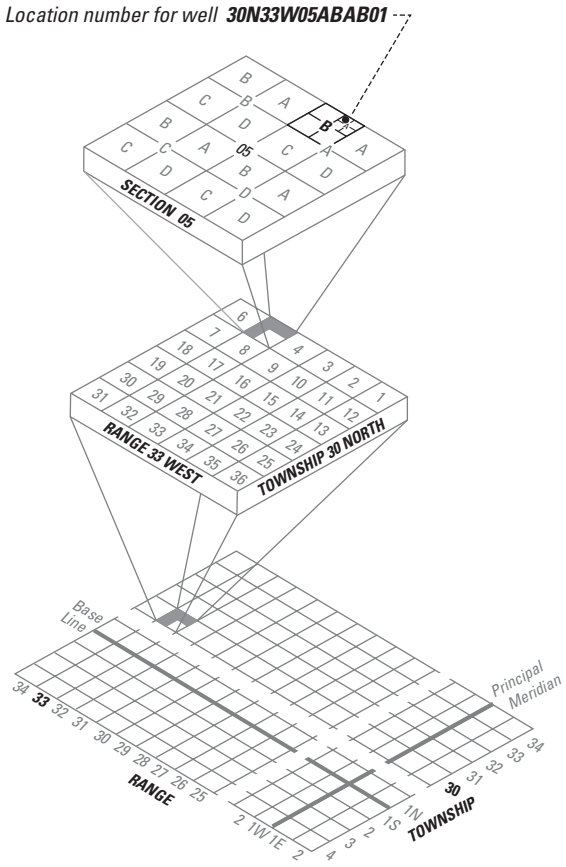


Figure 5. System for numbering wells and miscellaneous sites (township and range).

SPECIAL NETWORKS AND PROGRAMS

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

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000

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

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

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

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

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

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

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 6) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume 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 a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper

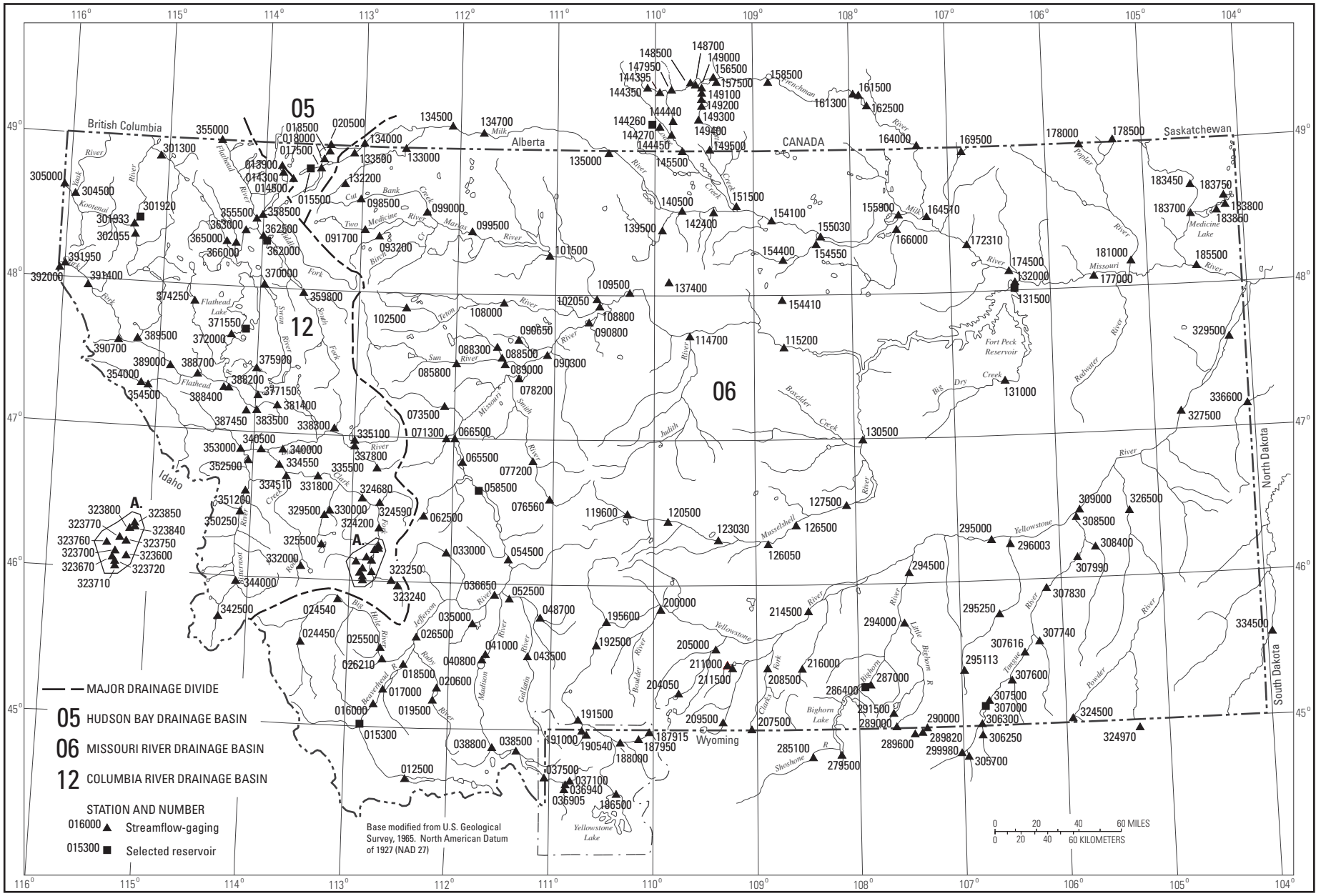


Figure 6. Location of streamflow-gaging and selected reservoir stations in Montana and adjacent areas, water year 2005.

2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from http://water.usgs.gov/pubs/twri/. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors that are based on individual discharge measurements and notes by engineers and observers are used when 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 controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations, and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, the stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or 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 changes are 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 stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the 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, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

Station Manuscript

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

information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for most stations, were determined by methods given in Montana Department of Natural Resources and Conservation River Mile Index.[9,10,11]

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

PERIOD OF RECORD.—This term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the USGS Water Science Center (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is expressed in cubic feet per second per square mile (line headed CFSM); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in

[9]Montana Department of Natural Resources and Conservation, 1976, River mile index of the Yellowstone River: Helena, Mont., 61 p.
[10]Montana Department of Natural Resources and Conservation, 1979, River mile index of the Missouri River: Helena, Mont., 142 p.
[11]Montana Department of Natural Resources and Conservation, 1984, River mile index of the Columbia River basin: Helena, Mont., p. 1-76.

effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

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

Summary Statistics

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

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

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

ANNUAL TOTAL.—The sum of the daily mean values of discharge for the year.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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

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

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

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

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

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

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In

this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of Field Data and Computed Results

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 interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair," within 15 percent. "Poor" indicates that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to three significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Data Records Available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the USGS Water Science Center (see address that is shown on the back of the title page of this report).

Publications

The annual series of Water-Supply Papers that give information on quantity of surface waters in Montana are given in table 7. Data for the Hudson Bay basin is given in Part 5, for the Missouri River basin in Part 6, and for the Columbia River basin in Part 12.

Table 7. Water-Supply Paper numbers and parts for surface-water stations, 1899-1970.

Year	Part 5	Part 6	Part 12	Year	Part 5	Part 6	Part 12
1899		36,37	38				
1900	49	49	51,52				
1901	66,75	66,75	66,75	1926	625	626	632
1902	83,85	84	85	1927	645	646	652
1903	98,99,100	99	100	1928	665	666	672
1904	130	130	135	1929	685	686	692
1905	171	172	178	1930	700	701	707
1906	207	208	214	1931	715	716	722
1907	245	246	252	1932	730	731	737
1908	245	246	252	1933	745	746	752
1909	265	266	272	1934	760	761	767
1910	285	286	292	1935	785	786	792
1911	305	306	312	1936	805	806	812
1912	325	326	332A	1937	825	826	832
1913	355	356	362A	1938	855	856	862
1914	385	386	392	1939	875	876	882
1915	405	406	412	1940	895	896	902
1916	435	436	442	1941	925	926	932
1917	455	456	462	1942	955	956	962
1918	475	476	482	1943	975	976	982
1919	505	506	512	1944	1005	1006	1012
1920	505	506	512	1945	1035	1036	1042
1921	525	526	532	1946	1055	1056	1062
1922	545	546	552	1947	1085	1086	1092
1923	565	566	572	1948	1115	1116	1122
1924	585	586	592	1949	1145	1146	1152
1925	605	606	612	1950	1175	1176	1182
1951	1208	1209	1216	1961-65	1913	1916	1933
1952	1238	1239	1246	1966-70	2113	2116	2133
1953	1278	1279	1286				
1954	1338	1339	1346	1950 Compilation	1308	1309	1316
1955	1388	1389	1396				
1956	1438	1439	1446	1960 Compilation	1728	1729	1736
1957	1508	1509	1516				
1958	1558	1559	1566				
1959	1628	1629	1636				
1960	1708	1709	1716				

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

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 considerably 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 at several verticals 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 exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for

each constituent measured and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

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

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 7.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent (table 8). The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Arrangement of Records

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

Table 8. Rating the accuracy of continuous water-quality records.

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

Measured field parameter	Ratings of accuracy (Based on combined fouling and calibration drift corrections applied to the record)			
	Excellent	Good	Fair	Poor
Water temperature	≤ ± 0.2 °C	> ± 0.2 – 0.5 °C	> ± 0.5 – 0.8 °C	> ± 0.8 °C
Specific conductance	≤ ± 3%	> ± 3 – 10%	> ± 10 – 15%	> ± 15%
Dissolved oxygen	≤ ± 0.3 mg/L or ≤ ± 5%, whichever is greater	> ± 0.3 – 0.5 mg/L or > ± 5 – 10%, whichever is greater	> ± 0.5 – 0.8 mg/L or > ± 10 – 15%, whichever is greater	> ± 0.8 mg/L or > ± 15%, whichever is greater
pH	≤ ± 0.2 units	> ± 0.2 – 0.5 units	> ± 0.5 – 0.8 units	> ± 0.8 units
Turbidity	≤ ± 0.5 turbidity units or ≤ ± 5%, whichever is greater	> ± 0.5 – 1.0 turbidity units or > ± 5 – 10%, whichever is greater	> ± 1.0 – 1.5 turbidity units or > ± 10 – 15%, whichever is greater	> ± 1.5 turbidity units or > ± 15%, whichever is greater

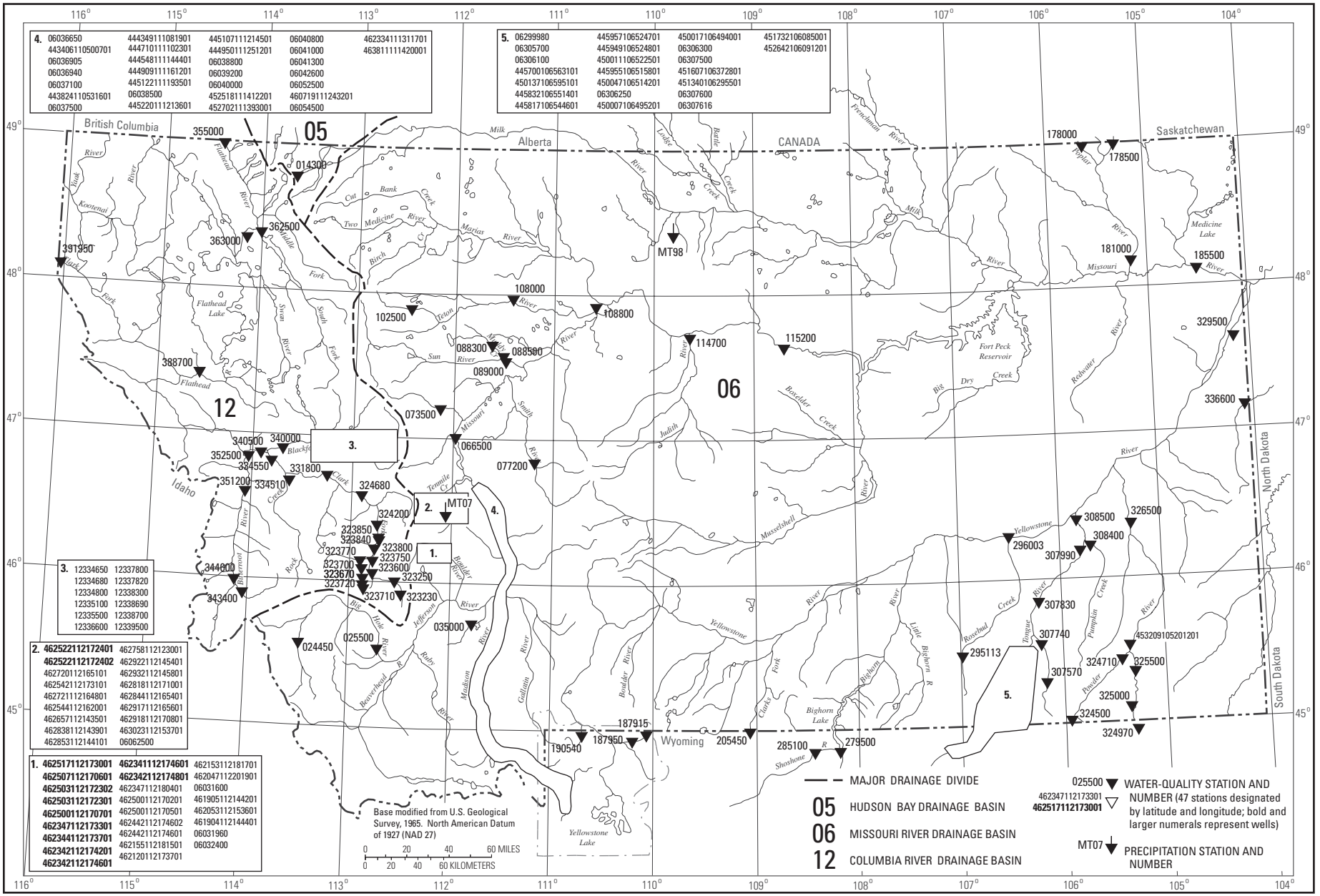


Figure 7. Location of water-quality and precipitation stations in Montana and adjacent areas, water year 2005.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS Water Science Center (see address that is shown on the back of title page in this report).

Water Temperature

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

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the USGS Water Science Center.

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 section.

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

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

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

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

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

LOCATION.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

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

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

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (*http://waterdata.usgs.gov/nwis*). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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

Remark Codes

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

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

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

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a nondetection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte either was not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of “E.” These data should be used with the understanding that their

uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by a USGS Water Science Center are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the USGS Montana Water Science Center.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected by this USGS Water Science Center are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected by the USGS Montana Water Science Center are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

Publications

The annual series of Water-Supply Papers that gives information on quality of surface waters in Montana is shown in the following table. Data for Hudson Bay and Missouri River basins are given in parts 5-6 and data for Upper Columbia River basin are given in part 12.

Table 9. Water-Supply Paper numbers and parts for water-quality stations, 1947-70.

Year	Parts 5-6	Part 12	Year	Parts 5-6	Part 12
1946	1050	---	1961	1883	1885
1947	1102	---	1962	1943	1945
1948	1132	---	1963	1949	1951
1949	1162	1163	1964	1956	1959
1950	1187	1189	1965	1963	1966
1951	1198	1200	1966	1993	1996
1952	1251	1253	1967	2013	2016
1953	1291	1293	1968	2094, 2095	2100
1954	1351	1353	1969	2145	2150
1955	1401	1403	1970	2155	2160
1956	1451	1453			
1957	1521	1523			
1958	1572	1574			
1959	1643	1645			
1960	1743	1745			

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs. (See NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES in this report for a detailed explanation.)

Data Collection and Computation

Measurements are made in many types of wells, under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Most methods for collecting and analyzing water samples are described in the TWRIs referred to in the Onsite Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The TWRI publications may be accessed from http://water.usgs.gov/pubs/twri/. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum above 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 of water of several hundred feet, the error in 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 or 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.

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification

number is the local or county well number. Well locations are shown and each well is identified by its local well or county well number on a map in this report (fig. 8)

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

HYDROGEOLOGIC UNIT.—This entry designates by name and geologic age the aquifer that the well taps.

WELL CHARACTERISTICS.—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and changes since construction.

INSTRUMENTATION.—This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

DATUM.—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above National Geodetic Vertical Datum of 1929 (NGVD 29); it is reported with a precision depending on the method of determination.

REMARKS.—This entry describes factors that may affect the water level in a well or the measurement of the water level, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder’s float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide.

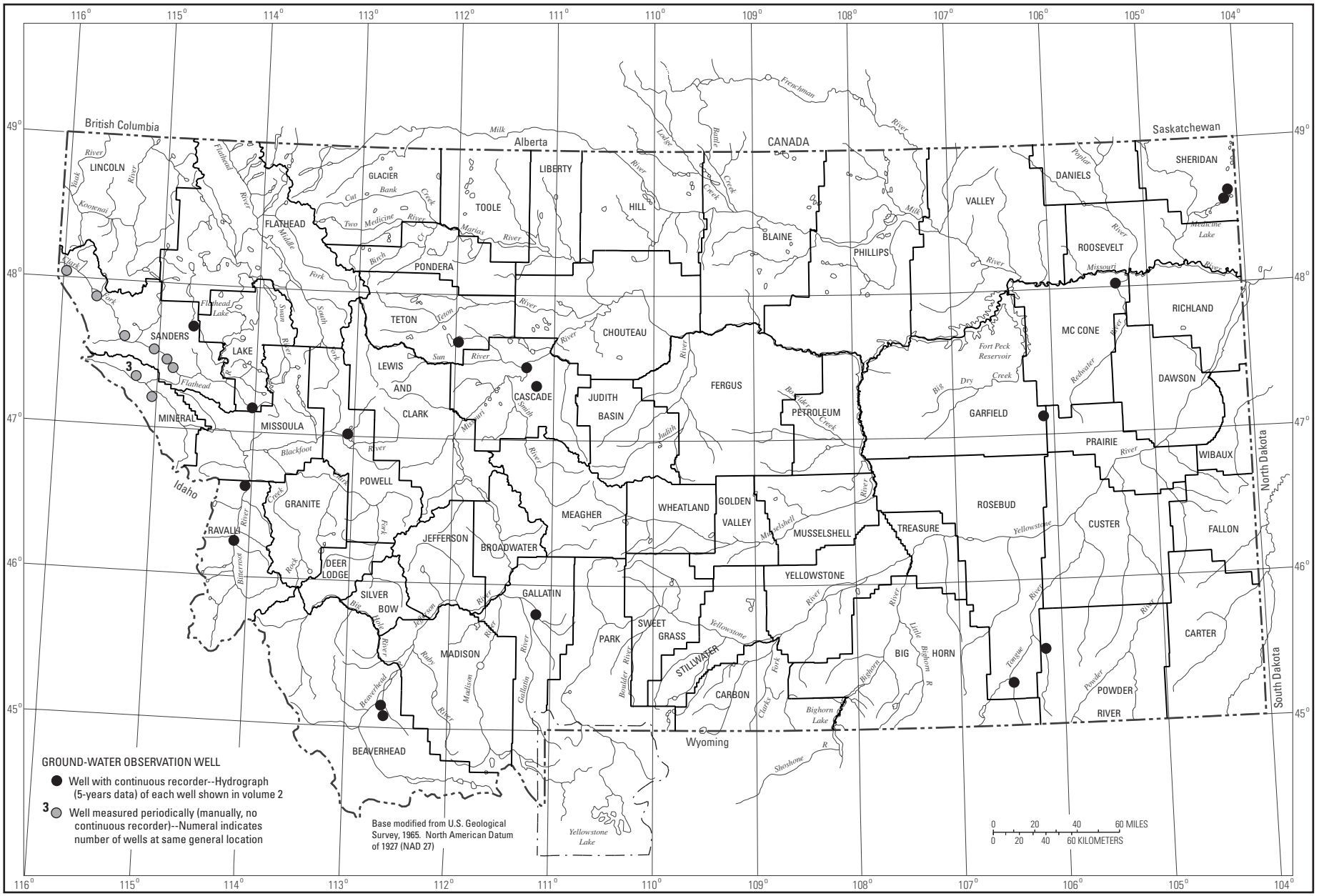


Figure 8. Location of ground-water observation wells in Montana, water year 2005.

Most methods for collecting and analyzing water samples are described in the TWRIs, which may be accessed from http://water.usgs.gov/pubs/twri/. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 5, Chapters A1, A3, and A4; and Book 9, Chapters A1-A6. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS Water Science Center (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed onsite. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2 and Book 5, Chapters A1, A3, and A4, which may be accessed from http://water.usgs.gov/pubs/twri/.

Publications

Publication of ground-water level data for the United States in Water-Supply Papers was begun by the USGS in 1935. From 1935 through 1939, a single Water-Supply Paper for each year covering the entire nation was issued (Water-Supply Papers 777, 817, 840, 845, and 886). From 1940 through 1974, separate Water-Supply Papers were issued for 6 sections of the United States. Water-level data for Montana are in the Water-Supply Papers listed in the following table, each report containing one or more calendar years (January-December) of data. Data in this report are for the 12-month water year ending September 30. Information about reports and other data on ground water in Montana may be obtained from theUSGS Water Science Center, at the address given on the back of the title page.

Table 10. Water-Supply Paper numbers and parts for ground-water stations, 1940-74.

Year	WSP No. Pt. 5	Year	WSP No. Pt. 5	Year	WSP No. Pt.5
1940	910	1947	1100	1954	1325
1941	940	1948	1130	1955	1408
1942	948	1949	1160	1956-60	1760
1943	990	1950	1169	1961-65	1845
1944	1020	1951	1195	1966-70	1980
1945	1027	1952	1225	1971-74	2161
1946	1075	1953	1269		

ACCESS TO USGS WATER DATA

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

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each USGS Water Science Center. (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material (See "Bed material")

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

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

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

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

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of

water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is exceeded. For example, the 90th percentile of river flow is the streamflow exceeded 90 percent of the time in the period of interest.

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

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

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

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site: *http://www.csc.noaa.gov/text/glossary.html* (see "High water")

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

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

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

Horizontal datum (See "Datum")

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Website: *http://www.csc.noaa.gov/text/glossary.html* (see "Low water")

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

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

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

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

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

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

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

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

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

Method code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

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

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

Methylene blue active substances (MBAS) indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nonfilterable refers to the portion of the total residue retained by a filter.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or **screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the

number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Recoverable is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100

years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

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

Return period (See "Recurrence interval")

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

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

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

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

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

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

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

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

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

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

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

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

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

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a

function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

Stage (See "Gage height")

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

Suspended is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Suspended")

Suspended sediment is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (See also "Sediment")

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

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

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

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

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

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

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

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

Kingdom:	Animal
Phylum:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

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

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

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

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

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

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

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

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

"total sediment discharge," "total chloride discharge," and so on.

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

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

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

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

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

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

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

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

Turbidity is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30±15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see *http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html*.

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

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

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Vertical datum (See "Datum")

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

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

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

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2005, is called the "2005 water year."

Watershed (See "Drainage basin")

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

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

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

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

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

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

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).

[P, present; --, no data]

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
	Part 5--Hudson Bay Basin									
05010000	Belly River at international boundary	74.8	1947-64	1948-64	--	--	--	--	--	--
05010500	North Fork Belly River at international boundary	10.1	1947-55	1948-55	--	--	--	--	--	--
05010700	Mountain View Irrigation District Canal near Mtn. View, Alberta	--	1935-78	--	--	--	--	--	--	--
05011000	Belly River near Mountain View, Alberta	121	1912-78	1912-78	--	--	--	--	--	--
05011500	Waterton River near international boundary	61.0	1947-64	1948-64	--	--	--	--	--	--
05012000	Street Creek at international boundary	6.0	1948-55	1948-55, 1964	--	--	--	--	--	--
05012500	Boundary Creek at international boundary	21.0	1948-64	1948-64	--	--	--	--	--	--
05013000	Waterton River near Waterton Park, Alberta	238	1908-33, 1948-78	1908-30, 1933, 1948-78	--	--	--	--	--	--
05013500	St. Mary Lake near St. Mary	130	1929-61	--	--	--	--	--	--	--
05013600	St. Mary River near St. Mary	130	1961-62	--	--	--	--	--	--	--
05013700	St. Mary River above Swiftcurrent Creek, near Babb	173	1902-15	1902-15	--	--	--	--	--	--
05013900	**Grinnell Creek at Grinnell Glacier, near Many Glacier**	1.1	**1959-71 2005**	**1960-63, 1965-66, 1968-71, 2005**	--	--	--	--	--	--
05014000	Grinnell Creek near Many Glacier	3.32	1949-78	1950-78	--	--	--	--	--	--
05014300	**Swiftcurrent Creek ab Swiftcurrent Lake, nr Many Glacier**	14.5	**2003-P**	**2003-P**	--	--	--	**2001-P**	--	--
05014500	**Swiftcurrent Creek at Many Glacier**	30.9	**1912-P**	**1913-P**	--	1966-69	--	--	1966	--
05015000	Canyon Creek near Many Glacier	7.1	1918-37	1919, 1921-27, 1929-31, 1934,1936	--	--	--	--	--	--
05015500	**Lake Sherburne at Sherburne**	64.1	**1915-P**	--	--	--	--	--	--	--
05016000	Swiftcurrent Creek at Sherburne	64.6	1912-81, 1984-2004	1913-2004	--	--	--	1990-92	1996-2004	--
05016400	Swiftcurrent Creek at mouth, near Babb	--	--	--	--	--	--	--	1996	--
05016500	Swiftcurrent Creek near Babb	98.6	1902-10	1902, 1904-07, 1909	--	--	--	--	--	--
05017000	Lower St. Mary Lake near Babb	276	1929-55	--	--	--	--	--	--	--
05017500	**St. Mary River near Babb**	276	**1901-02, 1910-25, 1950-P**	**1902, 1911-25, 1951-P**	--	--	--	1965	--	--
05018000	**St. Mary Canal at intake, near Babb**	--	**1918-50, 1997-P**	--	--	--	--	--	--	--
05018500	**St. Mary Canal at St. Mary Crossing, near Babb**	--	**1918-P**	--	--	--	--	--	--	--
05019000	St. Mary Canal at Hudson Bay Divide, near Browning	--	1917-66	--	--	--	--	1965, 1981-83	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 5--Hudson Bay Basin--Continued							
05019500	St. Mary River below St. Mary Canal, near Babb	286	1929-50	1929-33, 1935-50	--	--	--	--	--	--
05020000	Kennedy Creek near Babb	60.8	1905	1964,1975	--	--	--	--	--	--
05020500	**St. Mary River at international boundary**	465	**1902-P**	**1903-P**	1978-81	1978-79	--	1978-93	1978-93	1978-93
			Part 6--Missouri River Basin							
06006000	Red Rock Creek above Lakes, near Lakeview	39.2	1997-2004	1997-2004	--	--	--	--	--	--
06007000	Tom Creek near Lakeview	6.43	1989	1989	--	--	--	--	--	--
06008000	Odell Creek above Taft Ranch, near Lakeview	17.7	1993-98	1994-98	--	--	--	--	--	--
06010000	Red Rock River near Lakeview	237	1933-37	--	--	--	--	--	--	--
06010500	Red Rock River at Metzel Fork, near Monida	264	1925-29	--	--	--	--	--	--	--
06010600	Red Rock River at Brundage Bridge, near Lakeview	277	1988-89	1989	--	--	--	--	--	--
06011000	Red Rock River at Kennedy Ranch, near Lakeview	323	1936-67	1937-42, 1945-54, 1956-67, 1984	--	--	--	--	--	--
06011400	Long Creek near Lakeview	36	--	1960-67, 1969,1984	--	--	--	--	--	--
06011500	Red Rock River above Lima Reservoir, near Monida	431	1911, 1914-18, 1925,1930	--	--	--	--	--	--	--
06011900	Red Rock River tributary near Monida	0.37	--	1960-67, 1984	--	--	--	--	--	--
06012000	**Lima Reservoir near Monida**	570	**1940-P**	--	--	--	--	--	--	--
06012500	**Red Rock River below Lima Reservoir, near Monida**	570	**1911-19, 1925-69, 1974-82, 1985-P**	**1912-18, 1926-69, 1974-82, 1985-P**	--	--	--	--	--	--
06013000	Red Rock River at Lima	602	1907-11	--	--	--	--	--	--	--
06013200	Traux Creek near Lima	4.06	--	1960-74, 1984	--	--	--	--	--	--
06013400	Muddy Creek near Dell	63.4	--	1960-74, 1984	--	--	--	--	--	--
06013500	Big Sheep Creek below Muddy Creek, near Dell	278	1936, 1946-53, 1977-79	1946-53, 1960-91	--	1977-79	1977-79	--	1977-79	--
06013900	Sage Creek tributary near Dell	0.34	--	1959-67	--	--	--	--	--	--
06014000	Red Rock River near Dell	1,421	1942-67	1943-67	--	--	--	--	--	--
06014500	Red Rock River at Red Rock	1,548	1890, 1951-52, 1974-83	1974-83	--	--	--	--	--	--
06015000	Horse Prairie Creek near Grant	325	1946-53	1946-53	--	--	--	--	--	--
06015300	**Clark Canyon Reservoir near Grant**	2,321	**1964-P**	--	--	--	--	--	--	--
06015400	Beaverhead River near Grant	2,322	1962-83	1963-83	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06015430	**Clark Canyon near Dillon**	18.0	--	**1969, 1974-P**	--	--	--	--	--	--
06015460	**Farlin Creek near Polaris**	5.46	--	**2003-P**	--	--	--	--	--	--
06015480	**Grasshopper Creek tributary near Dillon**	0.80	--	**2003-P**	--	--	--	--	--	--
06015500	Grasshopper Creek near Dillon	348	1921-33, 1946-54, 1955-58, 1960-61	1921-32, 1946-53, 1955-58, 1960-73, 1975	--	--	--	1986	--	--
06016000	**Beaverhead River at Barretts**	2,737	**1907-P**	**1908-P**	1965-78	1965-78	--	1965-78, 1986		--
06016500	Rattlesnake Creek near Dillon	23.9	1946-49	--	--	--	--	--	--	--
06016900	Beaverhead River tributary near Dillon	0.93	--	1960-74	--	--	--	--	--	--
06017000	**Beaverhead River at Dillon**	2,895	**1950-52, 1963-71 2002-P**	**1951-52, 1964-71 2002-P**	--	--	--	--	--	--
06017500	Blacktail Deer Creek near Dillon	312	1946-54, 1955-66	1946-53, 1955-66, 1984	--	--	--	--	--	--
06017600	Blacktail Deer Creek at Dillon	--	--	--	--	--	--	1986	--	--
06018000	Beaverhead River near Dillon	3,484	1951-52, 1963-83	1951-52, 1964-83	--	--	--	--	--	--
06018200	Beaverhead River tributary No. 2 near Dillon	0.88	--	1958-65	--	--	--	--	--	--
06018500	**Beaverhead River near Twin Bridges**	3,619	**1935-P**	**1936-44, 1946-P**	--	2001-03	1962-74	1950-51, 1962-81, 1986, 1999-2003	1999-2003	--
06019000	Ruby River above Warm Springs Creek, near Alder	145	1948-53	1948-53	--	--	--	--	--	--
06019400	Sweetwater Creek near Alder	81.5	--	1974-91	--	--	--	--	--	--
06019500	**Ruby River above reservoir, near Alder**	534	**1938-P**	**1939-P**	--	--	--	--	1994	--
06019800	Idaho Creek near Alder	11.0	--	1960-85	--	--	--	--	--	--
06020000	Ruby River at damsite, near Alder	592	1911-14, 1935-37	--	--	--	--	--	--	--
06020600	**Ruby River below reservoir, near Alder**	596	**1962-P**	**1963-P**	--	--	--	--	1994	--
06021000	Ruby River near Alder	614	1929-39, 1946-61	1929-39, 1947-60	--	--	--	--	--	--
06021500	Ruby River at Laurin	650	1946-61	1947-60	--	--	--	--	--	--
06022000	Ruby River below Ramshorn Creek, near Sheridan	843	1946-53	1947-53	--	--	--	--	--	--
06022500	Ruby River near Sheridan	863	1946-51	--	--	--	--	--	--	--
06023000	Ruby River near Twin Bridges	935	1940-43, 1946-65, 1979-81	1942-73, 1947-65, 1980-81	--	1979-81	--	1986	1965	--
06023500	Big Hole River near Jackson	44.0	1948-54	1948-53	--	--	--	--	--	--
06024000	Miner Creek near Jackson	17.6	1948-54	1948-53	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06024100	**Fox Gulch near Jackson**	3.32	--	**2003-P**	--	--	--	--	--	--
06024450	**Big Hole River below Big Lake Creek, at Wisdom**	575	**1988-P**	**1988-P**	--	**1988-P**	--	--	--	--
06024470	Swamp Creek near Wisdom	66.1	1995-96	1995-96	--	--	--	--	--	--
06024500	Trail Creek near Wisdom	71.4	1948-54, 1966-72	1948-53, 1967-72	--	--	--	--	--	--
06024510	West Fork Ruby Creek near Wisdom	13.4	1995-96	1995-96	--	--	--	--	--	--
06024540	**Big Hole River below Mudd Creek, near Wisdom**	1,267	**1997-P**	**1998-P**	--	--	--	--	--	--
06024580	Big Hole River near Wise River	1,611	1979-81	1980-81	--	--	--	--	--	--
06024590	Wise River near Wise River	214	1973-85	1973-85	--	--	--	--	--	--
06025000	Big Hole River near Dewey	1,990	1910-13	--	--	--	--	--	--	--
06025100	**Quartz Hill Gulch near Wise River**	14.3	--	**1974-P**	--	--	--	--	--	--
06025250	Big Hole River at Maiden Rock, near Divide	2,199	1997-2002	1998-2002	--	--	--	--	--	--
06025270	Moose Creek above Maclean Creek, near Divide	31.9	1998-99	1998-99	--	--	--	--	--	--
06025300	Moose Creek near Divide	42.3	--	1960-74	--	--	--	--	--	--
06025480	Rock Creek below Browns Lake, near Glen	23.0	1998-99	1998-99	--	--	--	--	--	--
06025500	**Big Hole River near Melrose**	2,476	**1923-P**	**1924-40, 1942-P**	--	**1960-64, 1977-P**	1960-64	1957, 1961, 1961-64	--	--
06025700	Willow Creek diversions to Birch Creek, near Glen	--	1946-53, 1955-66	--	--	--	--	--	--	--
06025800	Willow Creek near Glen	35.6	1962-66, 1997-99	1998-99	--	--	--	1963-65	1964-65	--
06026000	Birch Creek near Glen	36.0	1946-53, 1955-76	1946-53, 1955-76	--	--	--	1959-62	1960-61	--
06026210	**Big Hole River near Glen**	2,655	**1997-P**	**1998-P**	--	--	--	--	--	--
06026400	Big Hole River near Twin Bridges	2,762	1979-81	1980-81	--	--	--	1986	--	--
06026500	**Jefferson River near Twin Bridges**	7,632	**1940-43, 1958-72, 1994-P**	**1942-43, 1958-72, 1994-P**	--	1994-2002	1960-62, 1965-72	1958-62, 1965-72	1971-72	--
06027000	Jefferson River near Silver Star	7,683	1910-16, 1920-39	1911-16, 1921-39, 1966	--	--	--	--	--	--
06027200	Jefferson River at Silver Star	7,683	1972-74	1973-74	--	--	--	1973-74	1974	--
06027500	Bell Creek near Waterloo	5.63	1941-42	--	--	--	--	--	--	--
06027700	Fish Creek near Silver Star	38.9	1959-91	1959-91	--	--	--	--	--	--
06028000	Big Pipestone Creek near Whitehall	108	1910-11	--	--	--	--	--	--	--
06028500	Little Pipestone Creek near Whitehall	30.7	1935-40	1935-40	--	--	--	--	--	--
06028700	Big Pipestone Creek at Whitehall	--	--	--	--	--	--	1986	--	--
06029000	Whitetail Creek near Whitehall	30.8	1949-68	1950-53, 1955-68, 1981	--	--	--	--	--	--
06029500	Little Whitetail Creek near Whitetail	91.0	1911	--	--	--	--	--	--	--
06030000	Whitetail Creek at Whitehall	179	1911	--	--	--	--	--	--	--
06030200	Jefferson River tributary near Whitehall	1.85	--	1960-75	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06030300	**Jefferson River tributary No. 2 near Whitehall**	4.50	--	**1958-P**	--	--	--	--	--	--
06030500	Boulder River above Rock Creek, near Basin	19.4	1936, 1946-53, 1955-57	1947-53, 1955-57, 1975,1981	--	--	--	--	--	--
06031000	Rock Creek at CCC Camp, near Bernice	9.87	1936	--	--	--	--	--	--	--
06031450	Boulder River above Kleinsmith Gulch, near Basin	--	--	--	--	--	--	1997-2004	1997-2004	--
06031500	Boulder River at Basin	219	1921-23	--	--	--	--	1997-99	1997-99	--
06031600	**Basin Creek at Basin**	--	--	--	--	--	--	**1997-P**	**1997-P**	--
06031950	**Cataract Creek near Basin**	30.6	--	**1973-P**	--	--	--	1997-99	1997-99	--
06031960	**Cataract Creek at Basin**	--	--	--	--	--	--	**1997-P**	**1997-P**	--
06032000	Boulder River near Basin	292	1919-20	--	--	--	--	1997-99	1997-99	--
06032300	High Ore Creek near Basin	8.86	1997	1997	--	--	1997	1997-2002	1997-2002	--
06032400	**Boulder River below Little Galena Gulch, near Boulder**	318	1997	1997	--	--	1997	**1997-P**	**1997-P**	--
06032500	Muskrat Creek near Boulder	6.09	1912-14	--	--	--	--	--	--	--
06033000	**Boulder River near Boulder**	381	**1929-72, 1985-P**	**1929-72, 1975,1981, 1985-P**	--	--	--	1997-99	1997-99	--
06033500	North Fork Little Boulder River near Boulder	18.8	1926-27	--	--	--	--	--	--	--
06033900	Boulder River near Cardwell	756	--	--	--	--		1986	1997	--
06034000	South Boulder River near Jefferson Island	27.5	1926-33	1926-33	--	--	--	--	--	--
06034300	South Boulder River near Cardwell	--	--	--	--	--	--	1986	--	--
06034500	Jefferson River at Sappington	9,277	1895-1905, 1938-69	1895-1905, 1939-69, 1975	--	--	--	--	--	--
06034700	Sand Creek at Sappington	9.41	--	1960-74	--	--	--	--	--	--
06034800	Jefferson River tributary No. 3 near Sappington	1.14	--	1960-74	--	--	--	--	--	--
06035000	**Willow Creek near Harrison**	83.8	**1938-2002, 2004-P**	**1938-2002, 2004-P**	--	**2002-P**	--	--	--	--
06035500	Norwegian Creek near Harrison	22.4	1938-43, 1946-51	1938-43, 1947-51	--	--	--	--	--	--
06036500	Willow Creek near Willow Creek	165	1919-33, 1946-53, 1955-57	1920-29, 1931-32, 1947-53, 1955-56	--	--	--	1986	--	--
06036600	Jefferson River tributary No. 4 near Three Forks	0.53	--	1960-74, 1982-83	--	--	--	--	--	--
06036650	**Jefferson River near Three Forks**	9,532	**1978-P**	**1979-P**	--	1980-81 2000-2003	--	**1986-87, 1999-2003 2005**	1999-2003	--
06036700	Jefferson River tributary No. 5 near Three Forks	3.69	--	1960-73, 1980, 1982-83	--	--	--	--	--	--
06036800	Firehole River near Old Faithful, Yellowstone National Park	--	--	--	--	--	--	1958	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06036905	**Firehole River near West Yellowstone**	282	**1984-96 2003-P**	**1984-96 2003-P**	1983-88	**1983-93 2003-P**	--	**1987,1989 2004-05**	--	--
06036940	**Tantalus Creek at Norris Junction, Yellowstone National Park**	1.29	**2004-P**	**2004-P**	--	**2004-P**	--	--	--	--
06037000	Gibbon River near West Yellowstone	118	1913-16, 1984-96	1984-96	1983-88	1983-93	--	1987, 1989	--	--
06037100	**Gibbon River at Madison Junction, Yellowstone Nat'l Park**	126	**2003-P**	**2003-P**	--	**2003-P**	--	**2004-05**	--	--
06037500	**Madison River near West Yellowstone**	420	**1913-73, 1983-86, 1989-P**	**1914-17, 1919-73, 1984-86, 1989-P**	1983-86	1983-86	--	**1959, 1986-95 2004-05**	1989-90 1992-95	--
06037600	Madison River above Hebgen Lake, near West Yellowstone	--	--	--	--	--	--	1993-94	1993-94	--
06037700	South Fork Madison River above Denny Creek, near West Yellowstone	--	--	--	--	--	--	1987-88	--	--
06038000	**Hebgen Lake near Grayling**	904	**1936-P**	--	--	--	--	--	--	--
06038500	**Madison River below Hebgen Lake, near Grayling**	905	**1909-P**	**1940-P**	--	--	--	**1986-95 2004-05**	1992-95	--
06038550	**Cabin Creek near West Yellowstone**	30.3	--	**1974-P**	--	--	--	--	--	--
06038800	**Madison River at Kirby Ranch, near Cameron**	1,065	**1959-63, 1978-P**	**1960-61, 1963, 1985-P**	--	1995-2002	1960	**1959, 2004-05**	1959-60	--
06039000	West Fork Madison River near Lakeview	11.9	1936	--	--	--	--	--	--	--
06039200	**West Fork Madison River near Cameron**	220	1965-67	1966-67	--	--	--	**1986-88, 2005**	--	--
06039500	Madison River at Lyon	1,346	1928-32	--	--	--	--	1959	--	--
06040000	**Madison River near Cameron**	1,669	1952-63, 1968-70	1952-58, 1960-63, 1968-70	--	--	--	**1988, 1993-95 2005**	1993-95	--
06040010	Blaine Spring Creek near Cameron	3.42	1971-72	--	--	--	--	--	--	--
06040300	Jack Creek near Ennis	51.5	1973-86, 1992	1974-86, 1991-92	--	--	--	1980	--	--
06040400	Meadow Creek near McAllister	--	--	--	--	--	--	1986	--	--
06040500	**Ennis Lake near McAllister**	2,181	**1936-P**	--	--	--	--	--	--	--
06040800	**Madison River above powerplant, near McAllister**	4,690	**2002-P**	**2002-P**	--	--	--	2004	--	--
06041000	**Madison River below Ennis Lake, near McAllister**	2,186	**1901-P**	**1943-P**	--	**1977-P**	--	1972-73, 1986-87, 1991-95	1991-95	1972-73
06041300	**Hot Springs Creek near Norris**	72.5	--	--	--	--	--	**1986-87, 1993-94 2005**	1993-94	--
06041500	Madison River near Norris	2,288	1890-93, 1910	--	--	--	--	1993-95	1993-95	--
06041700	Cherry Creek near Norris	--	--	--	--	--	--	1986-87, 1993-94	1993-94	--
06042000	Madison River below Cherry Creek, near Norris	2,387	1897-1905	1898-1905	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06042500	Madison River near Three Forks	2,511	1893-97, 1928-32, 1941-50	1894-96 1929-32, 1942-50	--	--	--	--	--	--
06042600	**Madison River at Three Forks**	2,531	--	--	--	--	--	**1986-87 1990, 1993-95, 2004-05**	1990, 1993-95	--
06043000	Taylor Creek near Grayling	98.0	1946-54, 1955-57, 1966-67	1947-53, 1955-57, 1967	--	--	--	--	--	--
06043200	Squaw Creek near Gallatin Gateway	40.4	--	1959-75	--	--	--	--	--	--
06043300	**Logger Creek near Gallatin Gateway**	2.48	--	**1959-P**	--	--	--	--	--	--
06043500	**Gallatin River near Gallatin Gateway**	825	**1889-94, 1930-69, 1971-81, 1985-P**	**1890-94, 1931-81, 1985-P**	--	2001-2002	--	1949-51, 1986-87, 1998	--	1998
06044000	Gallatin River near Salesville	833	1895-1905, 1910-13, 1921-23	1896-1905, 1912-13, 1921-23	--	--	--	--	--	--
06044100	Wilson Creek near Gallatin Gateway	5.33	1952-53	--	--	--	--	--	--	--
06044200	West Fork Wilson Creek near Gallatin Gateway	3.81	1952-53	--	--	--	--	--	--	--
06044300	Big Bear Creek near Gallatin Gateway	13.2	1952-53	--	--	--	--	--	--	--
06044400	Little Bear Creek near Gallatin Gateway	3.87	1952-53	--	--	--	--	--	--	--
06044500	South Cottonwood Creek near Gallatin Gateway	21.9	1951-53	--	--	--	--	--	--	--
06045000	Gallatin River at Axtell Bridge, near Gallatin Gateway	927	1950-54	--	--	--	--	--	--	--
06045200	Fish Creek near Gallatin Gateway	--	1952-53	--	--	--	--	--	--	--
06045300	Yellow Dog Creek near Belgrade	6.85	1952-53	--	--	--	--	--	--	--
06045350	Godfrey Creek near Belgrade	6.32	1952-53	--	--	--	--	--	--	--
06045400	Baker Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06045500	Gallatin River near Belgrade	965	1950-54	--	--	--	--	1949	--	--
06046000	Gallatin River near Manhattan	970	1950-54	--	--	--	--	1949	--	--
06046100	Ridgley Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06046200	Gallatin River above Camp Creek, near Manhattan	--	--	--	--	--	--	1949	--	--
06046300	Camp Creek near Belgrade	34.5	1952-53	--	--	--	--	--	--	--
06046400	Randall Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06046500	Rocky Creek near Bozeman	50.5	1951-53	1952-53, 1959-91	--	--	--	1949	--	--
06046520	Unnamed Creek near Bozeman	2.63	--	1997-2002	--	--	--	--	--	--
06046700	Pitcher Creek near Bozeman	2.33	--	1960-75, 1981	--	--	--	--	--	--
06047000	Bear Canyon near Bozeman	17.0	1951-53	1952-53, 1959-73, 1975,1981	--	--	--	--	--	--
06047500	Sourdough Creek near Bozeman	28.2	1951-53	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06048000	East Gallatin River at Bozeman	148	1939-61	1940-61, 1981	--	--	--	1949,1951	--	--
06048500	Bridger Creek near Bozeman	62.5	1946-69, 1971-72, 1987	1946-69, 1971-72, 1981,1987	--	--	--	1949	--	--
06048600	Lyman Creek near Bozeman	1.75	1952-53	--	--	--	--	1949	--	--
06048700	**East Gallatin River below Bridger Creek, near Bozeman**	226	**2002-P**	**2002-P**	--	2002	--	--	--	--
06048800	Deer Creek near Bozeman	--	1953	--	--	--	--	--	--	--
06048900	East Gallatin River near Belgrade	--	1952-53	--	--	--	--	--	--	--
06049000	Middle Cottonwood Creek near Bozeman	4.25	1951-53	--	--	--	--	--	--	--
06050000	Hyalite Creek at Hyalite Ranger Station, near Bozeman	48.2	1895-96, 1898-1900, 1902,1904, 1935-95	1898-1899, 1902, 1935-95	--	--	--	1949	--	--
06050100	Hyalite Creek near Belgrade	--	1952	--	--	--	--	--	--	--
06050200	Bostwick Creek near Belgrade	5.04	1952-53	--	--	--	--	1949	--	--
06050400	Thompson Creek near Belgrade	--	1952-53	--	--	--	--	--	--	--
06050450	Ben Hart Creek near Belgrade	--	1952-53	--	--	--	--	--	--	--
06050500	Ross Creek near Belgrade	1.25	1951-53	--	--	--	--	1949,1951	--	--
06050700	Truman Creek near Belgrade	2.94	1952-53	--	--	--	--	--	--	--
06051000	Reese Creek near Belgrade	21.5	1951-53	--	--	--	--	--	--	--
06051200	Bear Creek near Belgrade	4.30	1952-53	--	--	--	--	--	--	--
06051300	Foster Creek near Belgrade	--	1953	--	--	--	--	--	--	--
06051500	Dry Creek at Andrus Ranch, near Manhattan	96.2	1952-53	--	--	--	--	--	--	--
06051700	Reynolds (Quagle) Creek near Manhattan	--	1953	--	--	--	--	--	--	--
06052000	Dry Creek at Brownell Ranch, near Manhattan	104	1951	--	--	--	--	--	--	--
06052050	Story Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06052100	Cowan Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06052200	Gibson Creek near Manhattan	--	1952-53	--	--	--	--	1949,1951	--	--
06052300	Bull Run Creek near Manhattan	--	1952-53	--	--	--	--	--	--	--
06052500	**Gallatin River at Logan**	1,795	**1893-1905, 1928-P**	**1895-1900, 1902-1905, 1929-33, 1935-P**	--	**1979-85, 2001-P**	--	**1949,1951, 1957,1986, 1999-2005**	1965, 1999-2003	--
06053000	Sixteenmile Creek at Ringling	79.0	1950-55	1951-55	--	--	--	--	--	--
06053050	**Lost Creek near Ringling**	9.59	--	**1974-P**	--	--	--	--	--	--
06053400	Sixteenmile Creek near Toston	--	--	--	--	--	--	1986	--	--
06053500	Broadwater East Canal near Toston	--	1941-49	--	--	--	--	--	--	--
06054000	Broadwater West Canal near Toston	--	1941-49	--	--	--	--	--	--	--
06054500	**Missouri River at Toston**	14,669	**1890-91, 1910-16, 1941-P**	**1890, 1910-16, 1941-P**	1973-81	**1949-53 1973-P**	1949-53	**1949-51, 1972-95, 1999-2005**	1965, 1973-95, 1999-2003	1972-94
06055000	Crow Creek near Townsend	48.6	1912-13	--	--	--	--	1950,1986, 1988-91	1989-90	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06055500	Crow Creek near Radersburg	76.6	1901, 1919-29, 1966-72, 1989-90	1901, 1920-29, 1966-72, 1975,1981, 1989-90	--	--	--	--	--	--
06056200	Castle Creek tributary near Ringling	2.51	--	1960-74, 1981, 1989-90	--	--	--	--	--	--
06056300	**Cabin Creek near Townsend**	11.8	--	**1960-P**	--	--	--	--	--	--
06056500	Deep Creek near Townsend	65.4	1910-15	--	--	--	--	--	--	--
06056600	Deep Creek below North Fork Deep Creek, near Townsend	87.7	--	1959-73, 1975,1981, 1989-90	--	--	--	--	--	--
06057000	Missouri River near Townsend	15,343	1891-1904	1892-1903, 1964	--	--	--	--	--	--
06057400	Beaver Creek above Weasel Creek, near Winston	21.5	--	--	--	--	--	1950, 1988-91	1989-90	--
06057500	Lake Sewell near Helena	15,894	1936-53	--	--	--	--	--	--	--
06058000	Missouri River at Canyon Ferry	15,894	1889	--	--	--	--	--	--	--
06058500	**Canyon Ferry Lake near Helena**	15,904	**1953-P**	--	--	--	--	--	--	--
06058502	Missouri River below Canyon Ferry Dam, near Helena	15,904	--	--	1968-87	--	--	1968-87	--	--
06058700	Mitchell Gulch near East Helena	8.09	--	1959-2002	--	--	--	--	--	--
06058900	Prickly Pear Creek below Anderson Gulch, near Jefferson City	14.0	--	1989-90	--	--	--	1988-90	1989-90	--
06059000	Dutchman Creek near Alhambra	9.78	1921-24	--	--	--	--	--	--	--
06059500	Warm Springs Creek at Alhambra	20.6	1921-24	--	--	--	--	--	--	--
06060000	Clancy Creek at Clancy	33.1	1921-23	--	--	--	--	--	--	--
06060500	Lump Gulch at Foley's Ranch, near Clancy	33.0	1921-24	--	--	--	--	--	--	--
06061000	Lump Gulch at Zastrow's Ranch, near Clancy	43.4	1908-13	1909-13, 1981	--	--	--	--	--	--
06061500	Prickly Pear Creek near Clancy	192	1908-16, 1921-33, 1945-69, 1978-2002	1911-16, 1923-33, 1946-53, 1955-69, 1975, 1979-2002	--	--	--	1950, 1999-2003	1999-2003	--
06061700	Jackson Creek near East Helena	3.44	--	1961-75, 1981, 1989-90	--	--	--	--	--	--
06061800	Crystal Creek near East Helena	3.77	--	1961-75, 1981, 1989-90	--	--	--	--	--	--
06061900	McClellan Creek near East Helena	33.2	--	1961-75, 1981, 1989-90	--	--	--	1988-90	1989-90	--
06062000	Prickly Pear Creek at East Helena	251	1908-13	--	--	--	--	1995	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
	Part 6--Missouri River Basin--Continued									
06062010	Prickly Pear Creek below East Helena	--	--	--	--	--	--	1971	--	--
06062500	**Tenmile Creek near Rimini**	30.9	**1914-94, 1997-P**	**1915-94, 1997-P**	--	--	--	**1981, 1997-99, 2005**	**1997-99 2005**	--
06062700	Little Porcupine Creek tributary near Helena	0.39	--	1959-73, 1981,1989	--	--	--	--	--	--
06062750	Tenmile Creek at Tenmile Water Treatment Plant, near Rimini	51.1	1997-2002	1997-2002	--	--	--	1999-2004	1999-2004	--
06063000	Tenmile Creek near Helena	96.5	1908-54, 1997-98	1909-54, 1975,1981, 1997-98	--	--	--	1950-51, 1997-98 2002-04	1997-98 2002-04	--
06063500	Sevenmile Creek at Birdseye	31.9	1908-13	--	--	--	--	--	--	--
06064000	Sevenmile Creek near Helena	--	1908	--	--	--	--	--	--	--
06064100	Tenmile Creek at Green Meadow Drive, at Helena	161	1997-98	1997-98	--	--	--	2002-04	2002-04	--
06064150	Tenmile Creek above Prickly Pear Creek, near Helena	188	1997-98	1997-98	--	--	--	--	--	--
06064500	**Lake Helena near Helena**	610	**1945-P**	--	--	--	--	--	--	--
06065000	**Hauser Lake near Helena**	16,876	**1936-P**	--	--	--	--	--	--	--
06065500	**Missouri River below Hauser Dam, near Helena**	16,876	**1923-42 1995-P**	**1923-42, 1995-P**	--	--	--	--	--	--
06066000	**Holter Lake near Wolf Creek**	17,149	**1936-P**	--	--	--	--	--	--	--
06066500	**Missouri River below Holter Dam, near Wolf Creek**	17,149	**1945-P**	**1946-P**	--	**2000-P**	--	--	--	--
06067000	Little Prickly Pear Creek above Deadman Creek, near Marysville	20.1	1909-11	--	--	--	--	--	--	--
06067500	Deadman Creek near Marysville	9.52	1909-11	--	--	--	--	--	--	--
06068000	Lost Horse Creek near Marysville	13.1	1909-11	--	--	--	--	--	--	--
06068500	Little Prickly Pear Creek near Marysville	44.4	1913-33	1913-32	--	--	--	--	--	--
06069000	Marsh Creek near Marysville	6.07	1909-12	--	--	--	--	--	--	--
06070000	Canyon Creek near Canyon Creek	73.8	1921-23	--	--	--	--	--	--	--
06070500	Cottonwood Creek near Canyon Creek	16.5	1921-22	--	--	--	--	--	--	--
06071000	Little Prickly Pear Creek near Canyon Creek	183	1909-11, 1913-24	1909-11, 1913-24	--	--	--	--	--	--
06071080	Sieben Ranch ditch below Clark Creek, near Wolf Creek	--	--	--	--	--	--	--	1964-67	--
06071100	Little Prickly Pear Creek at Sieben Ranch, near Wolf Creek	270	1962-67	1962-67	--	--	1962-67	1964	1966	--
06071130	Little Prickly Pear Creek above Medicine Rock Creek, near Wolf Creek	--	--	--	--	--	--	--	1964-67	--
06071180	Medicine Rock Creek near Wolf Creek	--	--	--	--	--	--	--	1964-67	--
06071200	Lyons Creek near Wolf Creek	29.9	--	1959-73, 1975	--	--	--	--	1964-67	--
06071220	Little Prickly Pear Creek below Lyons Creek, near Wolf Creek	--	--	--	--	--	--	--	1965-67	--
06071230	Little Prickly Pear Creek above Sheep Creek, near Wolf Creek	--	--	--	--	--	--	--	1964	--
06071240	Sheep Creek near Wolf Creek	--	--	--	--	--	--	--	1964-67	--
06071290	Wolf Creek at Wolf Creek	--	--	--	--	--	--	--	1964-64	--
06071300	**Little Prickly Pear Creek at Wolf Creek**	381	**1962-67, 1992-P**	**1962-65, 1967,1975, 1992-P**	--	2001-2002	1962-67	1964	1964-67	--
06071400	Dog Creek near Craig	15.7	--	1960-75	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06071500	Missouri River at Craig	17,739	1890-92	--	--	--	--	--	--	--
06071600	Wegner Creek at Craig	35.7	--	1960-91	--	--	--	--	--	--
06072000	Dearborn River above Falls Creek, near Clemons	69.6	1908-12	--	--	--	--	--	--	--
06072500	Falls Creek near Clemons	37.6	1908-12	--	--	--	--	--	--	--
06073000	Dearborn River near Clemons	123	1921-23, 1929-53	1921-23 1929-53, 1964,1975	--	--	--	--	--	--
06073500	**Dearborn River near Craig**	325	**1946-69, 1994-P**	**1946-69, 1975, 1994-P**	--	**1993-P**	--	1991, 1999-2003	1999-2003	--
06073600	**Black Rock Creek near Augusta**	5.54	--	**1974-P**	--	--	--	--	--	--
06074000	Missouri River at Cascade	18,493	1902-15, 1953	1903-15	--	--	--	--	--	--
06074500	Smith River near White Sulphur Springs	30.7	1923-31, 1934-36	1923-31, 1934-36	--	--	--	--	--	--
06075500	Smith River above Fivemile Creek, near White Sulphur Springs	73.2	1934-43	1934-43	--	--	--	--	--	--
06075600	Fivemile Creek near White Sulphur Springs	6.42	--	1960-74	--	--	--	--	--	--
06075700	North Fork Smith River near mouth, near White Sulphur Springs	185	--	--	--	--	--	1993-95	1993-95	1993-95
06075800	South Fork Smith River at mouth, near White Sulphur Springs	174	--	--	--	--	--	1993-95	1993-95	1993-95
06075900	Big Birch Creek at mouth, near White Sulphur Springs	49.6	--	--	--	--	--	1993-95	1993-95	1993-95
06076000	Newlan Creek near White Sulphur Springs	7.27	1946-54	1946-53, 1960-73	--	--	--	--	--	--
06076500	Newlan Creek near damsite, near White Sulphur Springs	44.8	1950-57	1951-57	--	--	--	--	--	--
06076550	Newlan Creek at mouth, near White Sulphur Springs	--	--	--	--	--	--	1993-95	1993-95	1993-95
06076560	**Smith River below Newlan Creek, near White Sulphur Springs**	517	**2005**	**2005**	--	--	--	--	--	--
06076600	Camas Creek at mouth, near White Sulphur Springs	--	--	--	--	--	--	1993-95	1993-95	1992-95
06076650	Benton Gulch at mouth, near White Sulphur Springs	57.6	--	--	--	--	--	1993-95	1993-95	1993-95
06076690	Smith River near Fort Logan	846	1978-96	1978-96	--	--	--	1993-95	1993-95	1993-95
06076700	Sheep Creek near Neihart	5.22	--	1960-91	--	--	--	--	--	--
06076800	Nugget Creek near Neihart	1.50	--	1959-73	--	--	--	--	--	--
06077000	Sheep Creek near White Sulphur Springs	42.8	1941-72	1942-72, 1975,1981	--	--	--	1956,1980	1980	--
06077090	Sheep Creek near mouth, near White Sulphur Springs	192	--	--	--	--	--	1993-95	1993-95	1991, 1993-95
06077200	**Smith River below Eagle Creek, near Fort Logan**	1,088	**1996-P**	**1997-P**	--	**1997-P**	--	--	--	--
06077300	Trout Creek near Eden	13.2	--	1974-84	--	--	--	--	--	--
06077500	Smith River near Eden	1,594	1951-69	1951-69, 1975,1981	--	--	--	--	--	--
06077700	Smith River tributary near Eden	1.44	--	1960-73, 1975	--	--	--	--	--	--
06077800	Goodman Coulee near Eden	22.1	--	1959-82	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06078000	Smith River at Truly	2,006	1905-07, 1929-32	1905-07, 1929-32, 1953	--	--	--	1991	--	--
06078200	**Missouri River near Ulm**	20,941	**1957-P**	**1948,1953, 1958-P**	--	--	--	--	--	--
06078230	Sand Coulee Creek above Cottonwood Creek, at Centerville	78.8	1995-96	1995-96	--	--	--	1994-96	--	--
06078250	Cottonwood Creek near Stockett	--	1995-96	1995-96	--	--	--	1994-96	--	--
06078260	Number Five Coulee below Giffen Spring, near Stockett	16.7	1995-96	1995-96	--	--	--	1994-96	--	--
06078270	Sand Coulee at Sand Coulee	6.36	1995-96	1995-96	--	--	--	1994-96	--	--
06078500	North Fork Sun River near Augusta	258	1911-12, 1946-68, 1989-93	1911-12, 1946-68, 1989-93	--	--	--	--	1989-93	--
06079000	South Fork Sun River near Augusta	252	1911-12	--	--	--	--	--	--	--
06079500	**Gibson Reservoir near Augusta**	575	**1930-P**	--	--	--	--	1951	--	--
06079600	Beaver Creek at Gibson Dam, near Augusta	20.8	--	1959-73	--	--	--	--	--	--
06080000	Sun River near Augusta	609	1889-91, 1904-40	1890, 1905-29, 1964	--	--	--	--	--	--
06080500	Pishkun Reservoir near Augusta	--	1936-95	--	--	--	--	1951	--	--
06080700	Spring Valley Canal below Spring Valley drop, near Fairfield	--	1967-68	--	--	--	--	--	--	--
06080800	Spring Valley Canal above Upper Turnbull drop, near Fairfield	--	1967-68	--	--	--	--	--	--	--
06080900	Sun River below diversion dam, near Augusta	609	1967-80	1964, 1968-80	1968-79	--	--	1968-79	--	--
06081000	Floweree Big Canal near Augusta	--	1912	--	--	--	--	--	--	--
06081500	Willow Creek near Augusta	96.1	1905-25	1905-1910, 1912-25	--	--	--	--	--	--
06082000	Willow Creek Reservoir near Augusta	--	1936-95	--	--	--	--	--	--	--
06082200	Sun River below Willow Creek, near Augusta	827	1967-74	1964, 1968-75	--	--	--	--	--	--
06082500	Smith Creek near Augusta	25.0	1906-13	1906-12	--	--	--	--	--	--
06083000	Nilan Reservoir near Augusta	--	1951-95	--	--	--	--	--	--	--
06083500	Ford Creek near Augusta	19.4	1906-13	1906-12, 1964	--	--	--	--	--	--
06084000	Smith Creek below Ford Creek, near Augusta	74.0	1946-52	1946-52, 1964,1975	--	--	--	1951	--	--
06084500	Elk Creek at Augusta	157	1905-25	1905-24, 1964,1975	--	--	--	--	--	--
06085000	Crown Butte Canal at Riebling	--	1912	--	--	--	--	--	--	--
06085500	Crown Butte Canal near Simms	--	1912	--	--	--	--	--	--	--
06085510	**Crown Butte near Simms**	--	--	**2003-P**	--	--	--	--	--	--
06085800	**Sun River at Simms**	1,320	**1953, 1966-79. 1997-P**	**1964, 1966-79, 1997-P**	--	--	--	1996-98	1996-98	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06086000	Sun River at Fort Shaw	1,417	1912-28	1913-28	--	--	--	--	--	--
06086500	Sun River Canal at Sun River	--	1912	--	--	--	--	--	--	--
06087000	Sun River Canal at Vaughn	--	1912	--	--	--	--	--	--	--
06087500	Sun River at Sun River	1,454	1905-12	1906-12	--	--	--	--	--	--
06087900	Muddy Creek tributary near Power	3.15	--	1963-78, 1986	--	--	--	--	--	--
06088000	Muddy Creek near Power	137	1935-40, 1982-83	1982-83	--	--	--	1992	--	--
06088100	Spring Coulee near Power	30.4	1982-83	1982	--	--	--	1992	--	--
06088200	Tank Coulee near Power	31.0	1982-83	1982	--	--	--	1992	--	--
06088300	**Muddy Creek near Vaughn**	282	**1968-87, 1996-P**	**1968-87, 1996-P**	1968-82	1968-79	1968-82	1968-82, 1992-2004	**1971-82, 1996-P**	--
06088500	**Muddy Creek at Vaughn**	314	**1925-26. 1934-68, 1971-P**	**1925, 1934-37, 1939-68, 1971-P**	1968, 1972-82	1968, 1971-79	1971-82	**1968, 1972-82, 1992-P**	**1968, 1971-81, 1993-P**	--
06089000	**Sun River near Vaughn**	1,849	**1897, 1934-P**	**1934-P**	1969-2003	**1969-79 1999-2003, 2005**	--	**1969-P**	**1987-94 1996-P**	1987-94
06089300	Sun River tributary near Great Falls	21.0	--	1956-73, 1975, 1979-80	--	--	--	--	--	--
06090100	Missouri River at Black Eagle Dam, at Great Falls	--	--	--	--	--	--	1951	--	--
06090130	Missouri River below Rainbow Dam, near Great Falls	--	--	--	--	--	--	1971	--	--
06090300	**Missouri River near Great Falls**	23,292	**1953, 1956-P**	**1952-P**	--	--	--	1994-95	1994-95	--
06090500	Belt Creek near Monarch	368	1951-82	1952-82	--	1977-81	--	--	--	--
06090550	**Little Otter Creek near Raynesford**	39.5	--	**1974-P**	--	--	--	--	--	--
06090570	Big Otter Creek near Belt	197	1994-98	1994-98	--	--	--	--	--	--
06090590	Anaconda Drain at Belt	0.05	1995-96	1995-96	--	--	--	94-96	--	--
06090600	Belt Creek near Belt	700	1905-07	--	--	--	--	--	--	--
06090610	Belt Creek near Portage	799	1980-83	1981-83	--	1981-83	--	1981-83	1981-83	--
06090650	**Lake Creek near Power**	83.8	**1990-P**	**1990-P**	1992-96	1992-95	1992-95	1990-96	--	--
06090700	Highwood Creek near Highwood	57.8	1905-06	--	--	--	--	--	--	--
06090720	Highwood Creek near Portage	122	1980-83	1981-83	--	1981-83	--	1981-83	1981-83	1981
06090800	**Missouri River at Fort Benton**	24,749	**1890-P**	**1891-1899, 1901-P**	--	1981-82	1980	1969-73 1981-86	1965, 1980-86	1969-73 1981-86
06090810	Ninemile Coulee near Fort Benton	16.9	--	1972-73, 1975-90	--	--	--	--	--	--
06091000	Two Medicine River near East Glacier	51.1	1912-13, 1918-24, 1962-64	1912, 1918-21, 1923-24, 1963-64	--	--	--	--	--	--
06091500	Two Medicine River at Midvale	--	1902-03	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06091700	**Two Medicine River below South Fork, near Browning**	250	**1977-P**	**1977-P**	--	--	--	1988-89	--	--
06091850	Two Medicine Canal wasteway to Mission Lake, near Blackfoot	--	--	--	--	--	--	1971	--	--
06091852	Mission Lake near Blackfoot	--	--	--	--	--	--	1971-75	--	--
06091853	Spring Creek at Mission Lake outlet, near Cut Bank	--	--	--	--	--	--	1971	--	--
06091900	Two Medicine Canal near Cut Bank	--	--	--	--	--	--	1956	--	--
06092000	Two Medicine River near Browning	317	1907-25, 1951-77	1907, 1909-12, 1914-24, 1951-77	--	--	--	1956	--	--
06092500	Badger Creek near Browning	133	1951-73	1951-73	--	--	--	--	--	--
06093200	**Badger Creek below Four Horns Canal, near Browning**	152	**1973-P**	**1974-P**	--	--	--	1988-89	--	--
06093300	Badger Canal near Dupuyer	--	--	--	--	--	--	1956	--	--
06093500	Badger Creek near Family	239	1907-25	1910-13, 1915-24	--	--	--	--	--	--
06093600	Two Medicine River near Cut Bank	--	--	--	--	--	--	1982-84	--	--
06094000	Swift Reservoir near Dupuyer	75.3	1916, 1936-64, 1967-95	--	--	--	--	--	--	--
06094500	Birch Creek at Swift Dam, near Dupuyer	75.3	1913-29	1913-26, 1929	--	--	--	--	--	--
06095000	Birch Creek near Dupuyer	105	1907-37	1909-37, 1964	--	--	--	--	--	--
06095500	Lake Frances near Valier	--	1936-95	--	--	--	--	--	--	--
06096000	Birch Creek at Nelson's Ranch, near Dupuyer	111	1914-26	1914-15, 1917-21, 1923-26	--	--	--	--	--	--
06096500	Birch Creek at Hall's Ranch, near Dupuyer	122	1913-20	1913-15, 1917-20	--	--	--	--	--	--
06097000	Birch Creek at Robare	128	1914-26	1915, 1917-23, 1925-26	--	--	--	--	--	--
06097100	Blacktail Creek near Heart Butte	16.4	--	1975-91	--	--	--	--	--	--
06097200	Blacktail Creek near Dupuyer	--	--	--	--	--	--	1982-84	--	--
06097300	**Cartwright Coulee near Dupuyer**	7.86	--	**2003-P**	--	--	--	--	--	--
06097500	Dupuyer Creek at Dupuyer	65.7	1908-13	--	--	--	--	--	--	--
06098000	Dupuyer Creek near Valier	137	1912-37	1913-29, 1932-37, 1948,1964	--	--	--	--	--	--
06098100	Birch Creek near Valier	471	1978-83	1978-83	--	--	--	1955, 1978-83	--	--
06098500	**Cut Bank Creek near Browning**	123	**1918-25, 1991-P**	**1918, 1920-24, 1991-P**	--	--	--	1991-92	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06098700	**Powell Coulee near Browning**	12.7	--	**1974-P**	--	--	--	--	--	--
06098900	Big Rock Coulee near Santa Rita	185	--	--	--	--	--	1982-84, 1991-92	--	--
06099000	**Cut Bank Creek at Cut Bank**	1,041	**1905-20, 1922-24, 1951-73, 1982-P**	**1906-12, 1914-17, 1919-20, 1922-24, 1951-73, 1975, 1982-P**	--	--	--	1951, 1982-89, 1991-92	--	--
06099010	**Cut Bank Creek tributary near Cut Bank**	1.96	--	**2004-P**	--	--	--	--	--	--
06099100	Spring Creek near Cut Bank	91	--	--	--	--	--	1982-84, 1991-92	--	--
06099300	Cut Bank Creek at mouth, near Cut Bank	1,213	--	--	--	--	--	1991-92	--	--
06099500	**Marias River near Shelby**	3,242	**1902-08, 1911-P**	**1902-04, 1906-07, 1911-46, 1948-P**	--	1950-51	1950-51	--	--	--
06099700	Middle Fork Dry Fork Marias River near Dupuyer	20.2	--	1960-74, 1986	--	--	--	--	--	--
06100000	Dry Fork Marias River near Valier	131	1911-15	--	--	--	--	--	1980	--
06100200	Heines Coulee tributary near Valier	0.60	--	1960-75, 1986	--	--	--	--	--	--
06100300	**Lone Man Coulee near Valier**	14.1	--	**1960-P**	--	--	--	--	--	--
06100500	Dry Fork Marias River at Fowler	314	1921-31	1920-31	--	--	--	--	--	--
06101000	Willow Creek near Devon	310	1921-25	--	--	--	--	--	--	--
06101200	Willow Creek near Galata	839	1977-82	1978-82	--	--	--	--	--	--
06101300	Lake Elwell near Chester	4,923	1956-95	--	--	--	--	--	--	--
06101500	**Marias River near Chester**	4,927	**1921, 1945-47, 1955-P**	**1921,1946, 1956-P**	--	1994-2004	--	1964-72, 1978-86, 1991	1978-86	1978-86
06101510	Pondera Coulee near Conrad	4.96	--	2003	--	--	--	--	--	--
06101520	**Favot Coulee tributary near Ledger**	0.86	--	**1974-P**	--	--	--	--	--	--
06101560	Pondera Coulee near Chester	598	1976-85	1964, 1976-85	--	--	--	--	--	--
06101600	Marias River tributary No. 3 near Chester	0.26	--	1962-76, 1978	--	--	--	--	--	--
06101700	Fey Coulee tributary near Chester	2.47	--	1963-91	--	--	--	--	--	--
06101800	Sixmile Coulee near Chester	30.3	--	1963-77, 1979,1986	--	--	--	--	--	--
06101900	Dead Indian Coulee near Fort Benton	2.73	--	1963-77, 1986	--	--	--	--	--	--
06102000	Marias River near Brinkman	6,425	1922-56	1908, 1922-56	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06102050	**Marias River near Loma**	7,137	**1960-72 2001-P**	**1960-72 2001-P**	--	--	--	--	1965	--
06102100	Dry Fork Coulee tributary near Loma	0.84	--	1959-73	--	--	--	--	--	--
06102200	Marias River tributary at Loma	1.62	--	1956-60, 1962-73	--	--	--	--	--	--
06102300	Maris River tributary No. 2 at Loma	0.25	--	1956-60, 1962-73	--	--	--	--	--	--
06102500	**Teton River below South Fork, near Choteau**	105	**1947-55 1998-P**	**1948-54, 1964, 1998-P**	--	--	--	**1998-P**	**1998-P**	--
06103000	Teton River at Strabane	128	1904-06, 1908-25	1908-25	--	--	--	--	--	--
06103500	McDonald Creek near Strabane	5.17	1913-14, 1917-20	--	--	--	--	--	--	--
06104000	McDonald Creek near Choteau	10.4	1917-20	--	--	--	--	--	--	--
06104500	Teton River near Choteau	221	1906, 1913-19	--	--	--	--	--	--	--
06105000	Deep Creek at Frazer's ranch, near Choteau	37.7	1912	--	--	--	--	--	--	--
06105500	Willow Creek near Choteau	88.2	1912-17	--	--	--	--	--	--	--
06105800	Bruce Coulee tributary near Choteau	1.70	--	1963-2002	--	--	--	--	--	--
06106000	Deep Creek near Choteau	223	1911-25	1911-24, 1964	--	--	--	--	--	--
06106400	**Government Coulee tributary near Dutton**	0.81	--	**2005**	--	--	--	--	--	--
06106500	Muddy Creek near Bynum	71.1	1912-25	1913-18, 1920, 1922-24	--	--	--	--	--	--
06107000	North Fork Muddy Creek near Bynum	61.3	1912-24	1913-17, 1919-24	--	--	--	--	--	--
06107500	Muddy Creek near Agawam	274	1917	--	--	--	--	--	--	--
06108000	**Teton River near Dutton**	1,307	**1954-P**	**1955-P**	--	--	--	**1998-P**	**1998-P**	--
06108200	Kinley Coulee near Dutton	9.67	--	1963-78	--	--	--	--	--	--
06108300	Kinley Coulee tributary near Dutton	2.65	--	1963-78	--	--	--	--	--	--
06108500	Teton River near Fort Benton	1,989	1929-32	--	--	--	--	1991	--	--
06108800	**Teton River at Loma**	2,010	**1998-P**	**1999-P**	--	**2000-03, 2005**	--	**1998-P**	**1965, 1998-P**	--
06109000	Missouri River at Loma	34,221	1935-53	--	--	--	--	--	--	--
06109500	**Missouri River at Virgelle**	34,379	**1935-P**	**1935-P**	--	--	--	1975-85 1991	1975-85, 1991	1975-85
06109530	Little Sandy Creek tributary near Virgelle	0.80	--	1972, 1974-2002	--	--	--	--	--	--
06109560	**Alkali Coulee tributary near Virgelle**	0.96	--	**1974-P**	--	--	--	--	--	--
06109600	**Chip Creek tributary near Winifred**	0.07	--	**2003-P**	--	--	--	--	--	--
06109750	Middle Fork Judith River below Lost Fork, near Utica	108	1972-75	1972-75	--	--	--	--	--	--
06109775	Middle Fork Judith River at Ranger Station, near Utica	--	--	--	--	--	--	1964	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06109780	Middle Fork Judith River near Utica	160	1972-79	1972-79	--	--	--	--	--	--
06109800	South Fork Judith River near Utica	58.7	1958-79	1959-79	--	--	--	--	--	--
06109900	Judith River tributary near Utica	7.15	--	1960-74	--	--	--	--	--	--
06109950	Judith River tributary No. 2, near Utica	6.97		1959-67	--	--	--	--	--	--
06110000	Judith River near Utica	328	1920-75	1920-32, 1934-75	--	--	--	--	--	--
06110500	Ackley Lake near Hobson	--	1938-95	--	--	--	--	--	--	--
06111000	Ross Fork Creek near Hobson	337	1946-54, 1955-62	1947-53, 1955-62, 1975	--	--	--	--	--	--
06111500	Big Spring Creek near Lewistown	20.9	1932-57	1932-57	--	--	--	--	--	--
06111700	Mill Creek near Lewistown	3.14	--	1960-91	--	--	--	--	--	--
06112000	Cottonwood Creek near Lewistown	45.6	1946-51	--	--	--	--	--	--	--
06112100	Cottonwood Creek near Moore	47.9	1957-63	1958-73, 1975,1978	--	--	--	--	--	--
06112500	Sage Creek at Windham	58.6	1920-22	--	--	--	--	--	--	--
06112800	**Bull Creek tributary near Hilger**	0.99	--	**1974-P**	--	--	--	--	--	--
06113000	Judith River near Lewistown	1,939	1910-11	--	--	--	--	--	--	--
06113500	Judith River near Winifred	2,160	1929-32	--	--	--	--	1991	--	--
06114000	Wolf Creek at Neubert ranch, near Stanford	79.2	1920-26	1920-26	--	--	--	--	--	--
06114500	Wolf Creek near Stanford	112	1950-53, 1955-62	1950-53, 1955-58, 1960-62, 1975,1978	--	--	--	--	--	--
06114550	**Wolf Creek tributary near Coffee Creek**	1.73	--	**1974-P**	--	--	--	--	--	--
06114700	**Judith River near mouth, near Winifred**	2,731	**2001-P**	**2001-P**	--	**2001-P**	--	2001-03	2001-03	--
06114900	Taffy Creek tributary near Winifred	2.95	--	1974-2002	--	--	--	--	--	--
06115000	Missouri River at Power Plant ferry, near Zortman	40,763	1934-68	1934-67	--	--	--	--	--	--
06115200	**Missouri River near Landusky**	40,987	**1934-P**	**1934-P**	--	**2004-P**	**1972-P**	1976-94	**1972-P**	1979-94
06115270	Armells Creek near Landusky	--	2000-2004	2000-2004	--	--	--	--	--	--
06115300	**Duval Creek near Landusky**	3.31	2000-2004	**1963-P**	--	--	--	--	--	--
06115350	Rock Creek near Landusky	--	2000-2004	2000-2004	--	--	--	--	--	--
06115500	North Fork Musselshell River near Delpine	31.4	1940-79	1941-79	--	--	--	--	--	--
06116000	North Fork Musselshell River at Delpine	48.6	1909-12, 1922-32	1909-11, 1922-32	--	--	--	--	--	--
06116500	Bair Reservoir near Delpine	48.6	1939-95	--	--	--	--	--	--	--
06116900	Checkerboard Creek near Delpine	21.1	1909-15	--	--	--	--	--	--	--
06117000	Checkerboard Creek at Delpine	23.9	1922-32	1922-30, 1932	--	--	--	--	--	--
06117500	Spring Creek near Martinsdale	32.5	1922-24	--	--	--	--	--	--	--
06117800	Big Coulee near Martinsdale	2.86	--	1972, 1974-2002	--	--	--	--	--	--
06118000	North Fork Musselshell River near Martinsdale	233	1907-14	1908-14	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06118500	South Fork Musselshell River above Martinsdale	287	1942-79	1942-79	--	--	--	--	--	--
06119000	Martinsdale Reservoir near Martinsdale	--	1939-95	--	--	--	--	--	--	--
06119500	South Fork Musselshell River near Martinsdale	300	1907-15, 1930-32	1908-14, 1930,1932	--	--	--	--	--	--
06119600	**Musselshell River at Martinsdale**	538	**2003-P**	**2003-P**	--	--	--	--	--	--
06120000	Big Elk Creek at Twodot	89.1	1953-56	--	--	--	--	--	--	--
06120500	**Musselshell River at Harlowton**	1,125	**1907-P**	**1909-P**	--	2001-2002	--	1988-91	1988-91	--
06120600	Antelope Creek tributary near Harlowton	0.47	--	1956-73	--	--	--	--	--	--
06120700	Antelope Creek tributary near mouth, near Harlowton	1.92	--	1956-73	--	--	--	--	--	--
06120800	Alkali Creek near Harlowton	21.2	--	1956-91	--	--	--	--	--	--
06120900	Antelope Creek at Harlowton	88.7	--	1950, 1954-73, 1976, 1978-80	--	--	--	--	--	--
06121000	American Fork near Harlowton	94.6	1907-14, 1924-32	1908-11, 1913, 1924-30, 1932	--	--	--	--	--	--
06121500	Lebo Creek near Harlowton	59.1	1907-14, 1924-32	1910,1913, 1924-32	--	--	--	--	--	--
06122000	American Fork below Lebo Creek, near Harlowton	166	1946-67	1947-67, 1975	--	--	--	--	--	--
06122500	Deadmans Basin Reservoir near Shawmut	--	1941-95	--	--	--	--	--	--	--
06122800	Musselshell River near Shawmut	1,479	1986-98	1986-97	--	--	--	--	--	--
06123000	Musselshell River at Shawmut	1,496	1902-07	--	--	--	--	--	--	--
06123030	**Musselshell River above Mud Creek, near Shawmut**	--	**1998-P**	**1998-P**	--	--	--	--	--	--
06123200	**Sadie Creek tributary near Harlowton**	2.10	--	**1971, 1973-P**	--	--	--	--	--	--
06123500	Musselshell River near Ryegate	1,979	1946-79	1947-79	--	--	--	--	--	--
06124000	Careless Creek near Living Springs	21.2	1920-23	--	--	--	--	--	--	--
06124500	West Careless Creek near Living Springs	23.5	1920-21	--	--	--	--	--	--	--
06124600	**East Fork Roberts Creek tributary near Judith Gap**	0.74	--	**1974-P**	--	--	--	--	--	--
06125000	Roberts Creek at Hedgesville	322	1920-23	--	--	--	--	--	--	--
06125500	Careless Creek at Wallum	471	1934-42	1934-37, 1939-42	--	--	--	--	--	--
06125520	**Swimming Woman Creek tributary near Living Springs**	1.27	--	**1974-P**	--	--	--	--	--	--
06125680	**Big Coulee Creek tributary near Cushman**	1.23	--	**1974-P**	--	--	--	--	--	--
06125700	Big Coulee Creek near Lavina	232	1957-72	1958-72	--	--	--	--	--	--
06126000	Musselshell River at Lavina	2,928	1906	--	--	--	--	--	--	--
06126050	**Musselshell River near Lavina**	2,970	**1992-P**	**1992-P**	--	--	--	--	--	--
06126300	Currant Creek near Roundup	220	--	1958-59, 1961-73	--	--	--	--	--	--
06126470	Halfbreed Creek near Klein	53.2	1978-91	1978-91	--	--	--	1978-81, 1984	1978-81, 1984	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06126500	**Musselshell River near Roundup**	4,023	**1946-P**	**1946-48, 1950-P**	--	--	--	1978-81	1978-81	--
06127000	South Willow Creek near Roundup	--	1922-23	--	--	--	--	--	--	--
06127020	Willow Creek above LMGA Reservoir, near Roundup	124	1995-2004	1996-2004	--	--	--	--	--	--
06127060	Willow Creek at U.S. canal, near Roundup	141	1995-2004	1996-2004	--	--	--	--	--	--
06127100	South Willow Creek tributary near Roundup	1.38	--	1962-76	--	--	--	--	--	--
06127150	East Parrot Creek near Roundup	20.2	--	--	--	--	--	1979-80	1979-80	--
06127160	West Parrot Creek near Roundup	20.5	--	--	--	--	--	1978-81	1978-81	--
06127200	Musselshell River tributary near Musselshell	10.8	--	1963-77, 1991	--	--	--	--	--	--
06127300	Fattig Creek near Delphia	22.9	--	--	--	--	--	1978-81	1978-81	--
06127500	**Musselshell River at Musselshell**	4,568	**1928-32, 1945-79, 1983-P**	**1929-30, 1932, 1946-79, 1983-P**	--	--	--	1988-91	1988-91	--
06127505	**Fishel Creek near Musselshell**	16.5	--	**1974-P**	--	--	--	--	--	--
06127520	**Home Creek near Sumatra**	1.98	--	**1973-P**	--	--	--	--	--	--
06127570	**Butts Coulee near Melstone**	6.71	--	**1963-P**	--	--	--	--	--	--
06127585	**Little Wall Creek tributary near Flatwillow**	9.77	--	**1974-P**	--	--	--	--	--	--
06127600	Musselshell River near Mosby	5,941	1963-66	--	--	--	1963-66	1963-66	1964-66	--
06127900	Flatwillow Creek near Flatwillow	188	1911-32, 1934-56	1911-32, 1934-36, 1938-56	--	--	--	--	--	--
06128200	Flatwillow Creek near Winnett	642	1921-32, 1948-51	1923-29, 1931-32, 1948-51	--	--	--	--	--	--
06128400	South Fork Bear Creek near Roy	39.6	--	1962-76	--	--	--	--	--	--
06128500	**South Fork Bear Creek tributary near Roy**	5.40	--	**1962-P**	--	--	--	--	--	--
06128900	Box Elder Creek tributary near Winnett	16.2	--	1955-73	--	--	--	--	--	--
06129000	Box Elder Creek near Winnett	684	1930-33, 1934-38, 1958-72	1931-32, 1934-38, 1959-71, 1978	--	--	--	--	--	--
06129100	North Fork McDonald Creek tributary near Heath	2.24	--	1960-75	--	--	--	--	--	--
06129200	Alkali Creek near Heath	3.76	--	1960-74	--	--	--	--	--	--
06129400	South Fork McDonald Creek tributary near Grass Range	0.51	--	1963-77	--	--	--	--	--	--
06129500	McDonald Creek at Winnett	421	1930-32, 1934-45, 1953-56	1931-32, 1934-45, 1953-73, 1975	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06129700	**Gorman Coulee near Cat Creek**	2.32	--	**1955-59, 1962-73, 1977,1980, 1991-P**	--	--	--	--	--	--
06129800	Gorman Coulee tributary near Cat Creek	0.81	--	1955-2002	--	--	--	--	--	--
06130000	Flatwillow Creek near Mosby	1,855	1964-66	--	--	--	1964-66	1964-66	1964-66	--
06130500	**Musselshell River at Mosby**	7,846	**1929-35, 1934-P**	**1929, 1931-32, 1934-P**	--	2000-03	1983-95	1975-95, 1999-2003	1975-1997, 1999-2004	1975-95
06130600	Cat Creek near Cat Creek	36.5	--	1958-73, 1977,1980	--	--	--	--	--	--
06130610	**Bair Coulee near Mosby**	1.79	--	**1974-P**	--	--	--	--	--	--
06130620	**Blood Creek tributary near Valentine**	1.97	--	**1974-P**	--	--	--	--	--	--
06130630	**Crooked Creek tributary near Roy**	0.61	--	**2003-P**	--	--	--	--	--	--
06130650	Hell Creek near Jordan	70.6	2000-04	2000-04	--	--	--	--	--	--
06130680	Big Dry Creek at Jordan	521	--	--	--	--	--	1976-77	1976-77	--
06130700	Sand Creek near Jordan	317	1957-67	1958-67, 1986	--	--	--	--	--	--
06130800	Second Creek tributary near Jordan	0.52	--	1954, 1958-73	--	--	--	--	--	--
06130850	Second Creek tributary No. 2 near Jordan	2.08	--	1958-90	--	--	--	--	--	--
06130900	Second Creek tributary No. 3 near Jordan	0.72	--	1958-72	--	--	--	--	--	--
06130915	**Russian Coulee near Jordan**	3.45	--	**1974-P**	--	--	--	--	--	--
06130925	Thompson Creek tributary near Cohagen	1.23	--	1974-95	--	--	--	--	--	--
06130935	Crow Rock Creek near Cohagen	213	--	--	--	--	--	1978-80	1978-80	1978-80
06130940	**Spring Creek tributary near Van Norman**	1.39	--	**1974-P**	--	--	--	--	--	--
06130950	Little Dry Creek near Van Norman	1,224	1980	1958-75, 1986,1995	--	--	--	1976-77	1976-77	--
06131000	**Big Dry Creek near Van Norman**	2,554	**1939-P**	**1940-P**	--	--	--	1978,1981	1978	--
06131100	**Terry Coulee near Van Norman**	0.48	--	**1974-P**	--	--	--	--	--	--
06131120	Timber Creek near Van Norman	287	1982-85, 1988	1982-85, 1988	--	--	--	1976-79	1976-80	--
06131200	**Nelson Creek near Van Norman**	100	1976-85, 2000-04	**1976-85, 1991, 2000-P**	--	--	--	1976-79	1976-79	--
06131300	**McGuire Creek tributary near Van Norman**	0.79	--	**1974-P**	--	--	--	--	--	--
06131500	**Fort Peck Lake at Fort Peck**	57,500	**1938-P**	--	--	--	--	--	--	--
06132000	**Missouri River below Fork Peck Dam, at Fort Peck**	57,556	**1936-P**	**1934-P**	--	2002-2004	--	1964, 1975-87, 2002-2004	1975-87, 2002-2004	1975-86
06132200	**South Fork Milk River near Babb**	70.4	**1961-P**	**1961-P**	--	--	--	1990-92	--	--
06132250	Livermore Creek near Babb	25.0	--	1962-67	--	--	--	--	--	--
06132400	Dry Fork Milk River near Babb	17.9	--	1962-91	--	--	--	--	--	--
06132500	South Fork Milk River near international boundary, near Browning	287	1905-31	--	--	--	--	1964	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06132700	Milk River near Del Bonita	325	1962-65	1906-08, 1911, 1913-17, 1919, 1923-24, 1927, 1929-30, 1962-67	--	--	--	--	--	--
06133000	**Milk River at western crossing of international boundary**	401	**1931-P**	**1931-38, 1940-P**	--	--	--	1960,1973, 1984-86, 1993	--	--
06133500	**North Fork Milk River above St. Mary Canal, near Browning**	60.2	**1911-12, 1919-P**	**1911-12, 1924, 1926-27, 1937, 1941-42, 1944-45, 1948, 1950-51, 1953-P**	--	--	--	1960,1965, 1973-74, 1982-83, 1990-92	--	--
06134000	**North Milk River near international boundary**	91.8	**1909-P**	**1911, 1913-P**	--	--	--	1960,1965, 1973-74, 1981, 1984-86, 1993	--	--
06134500	**Milk River at Milk River, Alberta**	1,050	**1909-P**	**1909, 1913-P**	--	--	--	1960,1965	--	--
06134600	Red River at international boundary	138	--	--	--	--	--	1995	--	--
06134700	**Verdigris Coulee near the mouth, near Milk River, Alberta**	137	**1985-P**	**1985-P**	--	--	--	--	--	--
06134800	Van Cleeve Coulee tributary near Sunburst	10.8	--	1963-91	--	--	--	--	--	--
06134850	Milk River near Writing-on-Stone Provincial Park, Alberta	1,690	1978-83	1978-82	--	--	--	--	--	--
06134890	Miners Coulee near international boundary	--	1966-94	--	--	--	--	--	--	--
06134930	Bear Creek near international boundary	--	1966-94	--	--	--	--	--	--	--
06134950	Milk River near Pendant D'Oreille	2,330	1978-83	1978-82	--	--	--	--	--	--
06135000	**Milk River at eastern crossing of international boundary**	2,525	**1910-P**	**1910-11, 1913-15, 1917, 1919-P**	--	--	--	1960,1965, 1974, 1984-86, 1993-94	--	--
06135500	Sage Creek at Q Ranch, near Wild Horse, Alberta	175	1935-83	1936-41, 1943, 1946-83	--	--	--	1965	--	--
06136000	Sage Creek at international boundary	220	1946-84	1946-83	--	--	--	1965	--	--
06136400	Spring Coulee tributary near Simpson	2.49	--	1972, 1974-2002	--	--	--	--	--	--
06136500	**Fresno Reservoir near Havre**	3,766	**1940-P**	--	--	--	--	--	--	--
06136700	Milk River below Fresno Dam, near Havre	3,400	1952-53	--	--	--	--	1950-53	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06137000	Milk River above Havre	3,826	1928-33	--	--	--	--	--	--	--
06137400	**Big Sandy Creek at reservation boundary, near Rocky Boy**	24.7	**1982-P**	**1982-P**	--	--	--	1982-84, 1987-89	--	--
06137500	Big Sandy Creek near Big Sandy	83.3	1946-51	--	--	--	--	--	--	--
06137540	Duck Creek near Box Elder	--	--	--	--	--	--	1982-84	--	--
06137550	Camp Creek near Box Elder	7.2	--	--	--	--	--	1983-84	--	--
06137570	Boxelder Creek near Rocky Boy	48.2	1975-97	1976-97	--	--	--	1977-81 1983-84, 1993	1977-81, 1993	1977-81
06137575	Boxelder Creek at Box Elder	67.1	--	--	--	--	--	1983	--	--
06137580	Sage Creek near Whitlash	7.26	1976-82, 1985-90	1977-82, 1985-90	--	--	--	--	--	--
06137600	**Sage Creek tributary No. 2 near Joplin**	2.21	--	**1974-P**	--	--	--	--	--	--
06137900	England Coulee at Hingham	0.93	--	1960-74	--	--	--	--	--	--
06138000	Sage Creek near Kremlin	914	1946-51	1946-48, 1950-52	--	--	--	--	--	--
06138500	Big Sandy Creek near Box Elder	1,629	1927-39	1927-32, 1934-36, 1938	--	--	--	--	--	--
06138570	Big Sandy Creek above Gravel Coulee, near Laredo	1,639	--	--	--	--	--	1982-84	--	--
06138700	**South Fork Spring Coulee near Havre**	6.47	--	**1960-P**	--	--	--	--	--	--
06138800	Spring Coulee near Havre	17.8	--	1959-73	--	--	--	--	--	--
06139000	Big Sandy Creek near Laredo	1,752	1918-20	--	--	--	--	--	--	--
06139500	**Big Sandy Creek near Havre**	1,805	**1946-53, 1984-P**	**1946-53, 1955-67, 1969,1978, 1984-P**	--	--	--	1986-90	1986-90	--
06139800	West Fork Beaver Creek near Rocky Boy	2.92	2001-2003	--	--	--	--	--	--	--
06139850	Beaver Creek above Elk Creek, near Rocky Boy	7.63	2001-2003	--	--	--	--	--	--	--
06139900	Beaver Creek at reservation boundary, near Rocky Boy	16.1	2001-04	--	--	--	--	1982-84	--	--
06140000	Beaver Creek near Havre	87.4	1918-21	1919-21, 1966-86	--	--	--	--	--	--
06140400	Bullhook Creek near Havre	39.6	--	1960-71, 1973-75, 1986	--	--	--	--	--	--
06140500	**Milk River at Havre**	5,785	**1898-1923, 1954-P**	**1899-1922, 1952-53, 1955-P**	--	--	--	1964-72	--	--
06141000	Boxelder Creek near Havre	23.7	1919-22	--	--	--	--	--	--	--
06141500	Boxelder Creek at P.X. ranch, near Havre	33.3	1918	--	--	--	--	--	--	--
06141600	Little Boxelder Creek at mouth, near Havre	95.9	1986-92, 1994-96	1986-92, 1994-96	--	--	--	--	--	--
06141900	Milk River tributary near Lohman	0.11	--	1960-74	--	--	--	--	--	--
06142000	Clear Creek near Bearpaw	69.6	1918-22	--	--	--	--	--	--	--
06142400	**Clear Creek near Chinook**	135	**1984-P**	**1984-P**	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06142500	Fort Belknap Canal near Chinook	--	1903-21	--	--	--	--	--	--	--
06143000	Milk River at Lohman	6,166	1918-26, 1934-51	1919,1923, 1925, 1934-48, 1950-52	--	--	--	--	--	--
06144000	Paradise Valley Canal near headgate, near Chinook	--	1906-08, 1920-21	--	--	--	--	--	--	--
06144100	Walburger Coulee below diversion, near Govenlock, Saskatchewan	32.6	1963-79	1963-78	--	--	--	--	--	--
06144250	Lodge Creek at Alberta boundary	342	1951, 1963-67	--	--	--	--	1960	--	--
06144260	**Altawan Reservoir near Govenlock, Saskatchewan**	373	**1966-P**	--	--	--	--	--	--	--
06144270	**Spangler Ditch near Govenlock, Saskatchewan**	--	**1966-P**	--	--	--	--	--	--	--
06144300	Lodge Creek below Spangler Project, near Govenlock, Sask.	--	1963-66	--	--	--	--	--	--	--
06144350	**Middle Creek near Saskatchewan boundary**	118	**1963-P**	**1952, 1963-P**	--	--	--	--	--	--
06144360	Middle Creek Reservoir near Govenlock, Saskatchewan	130	1966-95	--	--	--	--	--	--	--
06144395	**Middle Creek below Middle Creek Reservoir, near Govenlock, Saskatchewan**	149	**1972-P**	1974-78, 1983, 1986-87	--	--	--	--	--	--
06144400	Middle Creek near Battle Creek, Saskatchewan	177	1963-72	1963-71, 1994	--	--	--	--	--	--
06144440	**Middle Creek near Govenlock, Saskatchewan**	253	**1986-P**	**1986-P**	--	--	--	--	--	--
06144450	**Middle Creek above Lodge Creek, near Govenlock, Sask.**	276	**1962-66, 1986-P**	**1986-P**	--	--	--	--	--	--
06144500	Lodge Creek at international boundary	753	1910-52	1911-15, 1917-52	--	--	--	--	--	--
06145000	McRae Creek at international boundary	59.0	1927-52	1927-28, 1930-33, 1935-47, 1950-52	--	--	--	--	--	--
06145500	**Lodge Creek below McRae Creek, at international boundary**	825	**1951-P**	**1952-P**	--	--	--	1960,1964, 1973, 1977-80, 1987-89	--	--
06146000	North Chinook Irrigation Canal near Havre	--	1921-24, 1928-68	--	--	--	--	--	--	--
06146500	Reser Ditch near Chinook	--	1905-06	--	--	--	--	--	--	--
06147000	West Fork Ditch near Chinook	--	1905-07	--	--	--	--	--	--	--
06147500	Lodge Creek at Chinook	1,175	1906-08	--	--	--	--	--	--	--
06147950	**Gaff Ditch near Merryflat, Saskatchewan**	--	**1972-P**	--	--	--	--	--	--	--
06148000	Battle Creek above Cypress Lake west inflow canal, near West Plains, Saskatchewan	270	1939-66	1939-66	--	--	--	1960	--	--
06148500	**Cypress Lake west inflow canal near West Plains, Sask.**	--	**1939-P**	--	--	--	--	--	--	--
06148700	**Cypress Lake west inflow canal drain near Oxarat, Sask.**	--	**1963-P**	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06149000	**Cypress Lake west outflow near West Plains, Sask.**	--	**1940-P**	--	--	--	--	1960	--	--
06149100	**Vidora Ditch near Consul, Saskatchewan**	--	**1963-P**	--	--	--	--	--	--	--
06149200	**Richardson Ditch near Consul, Saskatchewan**	--	**1963-P**	--	---	--	--	--	--	--
06149300	**McKinnon Ditch near Consul Saskatchewan**	--	**1963-P**	--	--	--	--	--	--	--
06149400	**Nashlyn Canal near Consul, Saskatchewan**	--	**1963-P**	--	--	--	--	--	--	--
06149500	**Battle Creek at international boundary**	997	**1917-P**	**1917-P**	--	--	--	1960,1964, 1972-74, 1987-89	--	1972
06150000	Woodpile Coulee near international boundary	60.2	1927-77	1927-30, 1932-47, 1950-63, 1965-76, 1986	--	--	--	--	--	--
06150500	East Fork Battle Creek near international boundary	89.5	1927-76	1927-33, 1935-63, 1965-67, 1969, 1971-76, 1986	--	--	--	--	--	--
06151000	Lyons Creek at international boundary	66.7	1927-94	1927-30, 1932, 1934-47, 1950-52, 1954-63, 1965-94	--	--	--	--	--	--
06151500	**Battle Creek near Chinook**	1,623	**1905-21, 1984-P**	**1905-14, 1917-21, 1952, 1984-P**	--	--	--	--	--	--
06152000	Cook Canal near Chinook	--	1905-19	--	--	--	--	--	--	--
06152500	Matheson Ditch near Chinook	--	1905-21, 1928-49, 1951-56	--	--	--	--	--	--	--
06153000	Paradise Valley Canal near Chinook	--	1903-19	--	--	--	--	--	--	--
06153400	**Fifteenmile Creek tributary near Zurich**	1.60	--	**1974-P**	--	--	--	--	--	--
06153500	Harlem Canal near Zurich	--	1904-21	--	--	--	--	--	--	--
06154000	Milk River Canal A near Harlem	--	1905, 1910-20, 1986-87	--	--	--	--	--	--	--
06154100	**Milk River near Harlem**	9,822	**1959-69, 1983-P**	**1952, 1960-69, 1978, 1983-P**	--	--	--	1959-69 1994	--	--
06154140	Fifteenmile Creek tributary near Harlem	2.31	1983-92	1983-92	--	--	--	--	--	--
06154150	White Bear Creek below Fifteenmile Creek, near Dodson	--	--	--	--	--	--	1982-84	--	--
06154350	**Peoples Creek tributary near Lloyd**	2.51	--	**1974-P**	--	--	--	--	--	--
06154390	Peoples Creek near Cleveland	--	--	--	--	--	--	1982-84	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06154400	**Peoples Creek near Hays**	220	**1966-P**	**1967-P**	--	--	--	1960-61, 1963,1994	--	--
06154410	**Little Peoples Creek near Hays**	13	**1973-P**	**1973-P**	--	--	--	1977-2003	1977-85 1988-2003	1977-85
06154430	Lodge Pole Creek at Lodge Pole	19.5	1987-2000	1987-2000	--	--	--	1982-84, 1988-92, 1994	1988-92	--
06154490	Willow Creek near Dodson	5.16	1983-92	1983-92	--	--	--	--	--	--
06154500	Peoples Creek near Dodson	670	1918-22, 1951-73, 1982-88	1952-66, 1968-73, 1982-88	--	--	--	1982-88	--	--
06154510	**Kuhr Coulee tributary near Dodson**	1.25	1983-92	**1983-P**	--	--	--	--	--	--
06154550	**Peoples Creek below Kuhr Coulee, near Dodson**	675	**1918-21, 1951-73, 1982-P**	**1989-P**	--	--	--	1989-92, 1994, 1999-2003	--	--
06155000	Nelson Reservoir near Saco	--	1928-95	--	--	--	--	--	--	--
06155005	Dodson North Canal near Dodson	--	--	--	--	1973	--	--	--	--
06155030	**Milk River near Dodson**	11,192	**1983-P**	**1983-P**	--	--	--	1994	--	--
06155100	Black Coulee near Malta	6.64	--	1956-67, 1986	--	--	--	--	--	--
06155200	Alkali Creek near Malta	162	--	1956-59, 1961-73, 1986	--	--	--	--	--	--
06155300	Disjardin Coulee near Malta	4.84	--	1956-2002	--	--	--	--	--	--
06155400	South Fork Taylor Coulee near Malta	5.08	--	1956-73, 1986	--	--	--	--	--	--
06155500	Milk River at Malta	11,762	1902-22, 1952	1903-09, 1911-13, 1915-22, 1952	--	--	--	--	--	--
06155600	**Murphy Coulee tributary near Hogeland**	2.62	--	**1974-P**	--	--	--	--	--	--
06155900	**Milk River at Cree Crossing, near Saco**	13,118	**2000-P**	**2000-P**	--	--	--	--	--	--
06156000	Whitewater Creek near international boundary	458	1927-80	1927-33, 1935-79	--	--	--	1965, 1977-80	--	--
06156100	**Lush Coulee near Whitewater**	9.58	--	**1972, 1974-P**	--	--	--	--	--	--
06156500	**Belanger Creek diversion canal near Vidora, Saskatchewan**	--	**1946-P**	--	--	--	--	--	--	--
06157000	**Cypress Lake near Vidora, Saskatchewan**	107	**1939-P**	--	--	--	--	--	--	--
06157500	**Cypress Lake east outflow canal near Vidora, Saskatchewan**	--	**1940, 1943-P**	--	--	--	--	--	--	--
06158000	Frenchman River above Eastend Reservoir, near Ravenscrag, Saskatchewan	601	1912-18, 1937-67	1913-15, 1917, 1937-66	--	--	--	1960	--	--
06158500	**Eastend Canal at Eastend, Saskatchewan**	--	**1937-P**	--	--	--	--	--	--	--
06159000	**Eastend Reservoir at Eastend, Saskatchewan**	619	**1937-P**	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06159500	Frenchman River below Eastend Reservoir, near Eastend, Saskatchewan	619	1909-16, 1918-31, 1935-36, 1939-91	1909, 1911-15, 1918-31, 1940-91	--	--	--	--	--	--
06160500	Frenchman River at Morrison's, near Eastend, Saskatchewan	800	1937-55	1939-52	--	--	--	1960	--	--
06160600	Frenchman River below Eastern Irrigation Project, near Eastend, Saskatchewan	835	1937-55, 1962-75	1939-52, 1962-75	--	--	--	--	--	--
06161000	Frenchman River at 50-mile, near Bracken, Saskatchewan	1,248	1914-31, 1935-55	1914-17, 1919-31, 1936-52	--	--	--	--	--	--
06161300	**Huff Lake pumping canal near Val Marie, Saskatchewan**	--	**1963-P**	--	--	--	--	--	--	--
06161500	**Huff Lake gravity canal near Val Marie, Saskatchewan**	--	**1946-P**	--	--	--	--	--	--	--
06162000	**Huff Lake near Val Marie, Saskatchewan**	1,274	**1940-P**	--	--	--	--	--	--	--
06162500	**Newton Lake main canal near Val Marie, Saskatchewan**	--	**1937-P**	--	--	--	--	--	--	--
06163000	**Newton Lake near Val Marie, Saskatchewan**	1,349	**1937-P**	--	--	--	--	--	--	--
06163050	Frenchman River below Newton Lake, near Val Marie, Sask.	1,349	1976-94	--	--	--	--	--	--	--
06163400	Denniel Creek near Val Marie, Saskatchewan	251	1963-77	1963-76	--	--	--	--	--	--
06163500	Frenchman River below Val Marie, Saskatchewan	1,725	1937-53, 1963-76	1937-52, 1962-67, 1969-75	--	--	--	1960	--	--
06164000	**Frenchman River at international boundary**	2,120	**1917-P**	**1917-P**	--	--	--	1960,1964 1973, 1987-89	--	--
06164500	Frenchman Canal near Saco	--	1921, 1928-68	--	--	--	--	--	--	--
06164510	**Milk River at Juneburg Bridge, near Saco**	17,670	**1978-P**	**1978-P**	--	--	--	1978-96	--	--
06164590	Beaver Creek near Zortman	10.1	1983-92	1984-92	--	--	--	1984,1994	--	--
06164600	**Beaver Creek tributary near Zortman**	3.89	--	**1974-P**	--	--	--	--	--	--
06164615	Little Warm Creek at reservation boundary, near Zortman	6.31	1983-92	1983-92	--	--	--	1983-90	--	--
06164620	Little Warm Creek near Lodge Pole	--	--	--	--	--	--	1982-83	--	--
06164623	**Little Warm Creek tributary near Lodge Pole**	2.42	1983-92	**1983-P**	--	--	--	1994	--	--
06164630	Big Warm Creek near Zortman	8.58	1983-87	1983-87	--	--	--	1983-84	--	--
06164640	Big Warm Creek near Lodge Pole	--	--	--	--	--	--	1982-83	--	--
06164800	Beaver Creek above Dix Creek, near Malta	929	1967-69, 1976-82	1967-69, 1974, 1976-82, 1986	--	--	--	--	--	--
06165000	Beaver Creek near Malta	1,010	1917-21	--	--	--	--	--	--	--
06165200	**Guston Coulee near Malta**	2.06	--	**1974-P**	--	--	--	--	--	--
06165500	Beaver Creek overflow near Bowdoin	--	1903-13	1903-06, 1909, 1912	--	--	--	--	--	--
06166000	**Beaver Creek below Guston Coulee, near Saco (Beaver Creek near Bowdoin)**	1,208	**1920-21, 1981-P**	**1982-93, 1995-P**	--	--	--	1980-85	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06166500	Beaver Creek near Saco	1,224	1903-06, 1908-13	--	--	--	--	--	--	--
06167000	Beaver Creek near Brady's Ranch, at Ashfield	1,327	1918	--	--	--	--	--	--	--
06167100	Beaver Creek above dam, near Saco	1,338	--	--	--	--	--	1982-83, 1985	--	--
06167500	Beaver Creek near Hinsdale	1,785	1918-21, 1952	--	--	--	--	--	--	--
06168000	Bowray Ditch near Barnard	--	1914	--	--	--	--	--	--	--
06168500	Rock Creek at international boundary	241	1914-16, 1927-62	1927-61	--	--	--	--	--	--
06169000	Horse Creek at international boundary	73.5	1914-62	1915-33, 1935-61	--	--	--	--	--	--
06169500	**Rock Creek below Horse Creek, near international boundary**	328	**1916-26, 1956-P**	**1917, 1919-26, 1952, 1957-P**	--	--	--	1964,1965, 1977-96	1979-96	1979-96
06169600	South Creek tributary near Opheim	2.15	1983-87	1983-87	--	--	--	--	--	--
06169700	South Creek tributary No. 2 near Opheim	1.62	1983-87	1983-87	--	--	--	--	--	--
06169800	South Creek tributary No. 3 near international boundary	.32	1983-87	1983-87	--	--	--	--	--	--
06170000	McEachern Creek at international boundary	182	1924-77	1924-76	--	--	--	1965, 1978-80	--	--
06170050	Rock Creek below McEachern Creek, near international boundary	650	1983-87	1983-87	--	--	--	--	--	--
06170080	Starbuck Coulee near international boundary	4.16	1983-87	1983-87	--	--	--	--	--	--
06170200	Willow Creek near Hinsdale	283	1965-73	1965-73, 1979	--	--	--	--	--	--
06170500	Rock Creek Canal near Hinsdale	--	1918-20	--	--	--	--	--	--	--
06171000	Rock Creek near Hinsdale	1,313	1906-07, 1912-20	1906-07, 1912, 1914-20, 1952	--	--	--	--	--	--
06171500	Milk River at Hinsdale	20,897	1908-14, 1952	--	--	--	--	--	--	--
06172000	Milk River near Vandalia	20,926	1915-25, 1928-39, 1952	1915, 1917-25, 1929-39, 1952	--	--	--	1970-73	--	--
06172000	Milk River at Vandalia	20,944	1970-73, 1983-86	1970-73, 1983-87	--	--	--	--	--	--
06172200	Buggy Creek near Tampico	105	1958-67	1958-67, 1972, 1982	--	--	--	--	--	--
06172300	**Unger Coulee near Vandalia**	11.1	--	**1958-P**	--	--	--	--	--	--
06172310	**Milk River at Tampico**	21,078	**1973-77, 1987-P**	**1974-77, 1988-P**	--	--	--	1974-77	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06172350	Mooney Coulee near Tampico	14.3	--	1961-75, 1982	--	--	--	--	--	--
06172400	Milk River tributary No. 2 near Glasgow	1.79	--	1958-60	--	--	--	--	--	--
06172500	Sheepshed Reservoir	11.3	1955-67	--	--	--	--	--	--	--
06173000	Halfway Reservoir	16.2	1955-62	--	--	--	--	--	--	--
06173300	Willow Creek tributary near Fort Peck	0.86	--	1972, 1974-91	--	--	--	--	--	--
06173500	Burnett Northwest Reservoir	5.0	1954-59, 1960-67	--	--	--	--	--	--	--
06174000	Willow Creek near Glasgow	538	1954-87	1954-87, 1993	--	--	--	--	1960-64	--
06174200	Milk River near Glasgow	21,965	1952	--	--	--	--	1969-73	--	1969-73
06174300	**Milk River tributary No. 3 near Glasgow**	1.82	--	**1974-P**	--	--	--	--	--	--
06174500	**Milk River at Nashua**	22,332	**1939-P**	**1940-P**	--	**2000-P**	--	1950-53, 1959-94, 1999-2003	1974-94, 1999-2003	1974-94
06174550	Middle Fork Porcupine Creek near Baylor	--	--	--	--	--	--	1982-83	--	--
06174600	**Snow Coulee at Opheim**	3.11	--	**1972, 1974-P**	--	--	--	--	--	--
06174700	West Fork Porcupine Creek near Baylor	--	--	--	--	--	--	1982-83	--	--
06175000	Porcupine Creek at Nashua	725	1908-24, 1982-92	1909, 1912-21, 1923-24, 1939, 1982-93	--	--	--	1982-89	--	--
06175400	Frazer Reservoir outlet near Frazer	--	--	--	--	--	--	1960-63 1966-97, 1969-72	--	--
06175500	Little Porcupine Creek at Frazer	280	1909-16, 1918-19	--	--	--	--	--	--	--
06175505	Little Porcupine Creek below diversion, at Frazer	--	--	--	--	--	--	1982-83	--	--
06175540	Prairie Elk Creek near Oswego	352	1975-85	1976-85	--	--	--	1976-79	1976-79	--
06175550	East Fork Sand Creek near Vida	8.51	--	1963-77	--	--	--	--	--	--
06175580	Sand Creek near Wolf Point	201	--	--	--	--	--	1976-77	1976-77	--
06175600	West Fork Wolf Creek near Lustre	6.57	--	1956-67	--	--	--	--	--	--
06175700	East Fork Wolf Creek near Lustre	9.61	--	1956-2002	--	--	--	--	--	--
06175800	Wolf Creek tributary near Wolf Point	2.46	--	1955-67	--	--	--	--	--	--
06175900	Wolf Creek tributary No. 2 near Wolf Point	6.10	--	1955-84	--	--	--	--	--	--
06176000	Wolf Point ditch at Wolf Point	--	1909-10	--	--	--	--	--	--	--
06176500	Wolf Creek near Wolf Point	251	1908-14, 1950-53, 1982-92	1910-12, 1950-54, 1956-70, 1972-73, 1982-93	--	--	--	1982-84	--	--
06176950	Missouri River tributary No. 6 near Wolf Point	0.53	--	1973-91	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06177000	**Missouri River near Wolf Point**	82,290	**1928-P**	**1929-P**	--	1979-85 2002-2004	--	1949-51, 1961-62, 1965-68, 1970-73 2002-2004	2002-2004	--
06177020	**Tule Creek tributary near Wolf Point**	1.91	--	**1974-P**	--	--	--	--	--	--
06177025	Tule Creek near Poplar	--	--	--	--	--	--	1982	--	--
06177050	East Fork Duck Creek near Brockway	12.4	--	1955-2002	--	--	--	--	--	--
06177100	Duck Creek near Brockway	54.0	--	1957-73	--	--	--	--	--	--
06177150	Redwater River at Brockway	216	--	1957-73, 1986	--	--	--	1980-83	--	--
06177200	Tusler Creek near Brockway	90.2	--	1957-72	--	--	--	--	--	--
06177250	Tusler Creek tributary near Brockway	3.17	--	1957-73, 1986	--	--	--	--	--	--
06177300	Redwater River tributary near Brockway	0.29	--	1954,1957, 1959-73	--	--	--	--	--	--
06177350	South Fork Dry Ash Creek near Circle	5.74	--	1955-60, 1962-72, 1986	--	--	--	--	--	--
06177400	McCune Creek near Circle	29.9	1982-85	1955-58, 1960-73, 1982-86	--	--	--	--	--	--
06177500	Redwater River at Circle	547	1929-72, 1974-2004	1929-30, 1932-72, 1975-2004	--	--	--	1975-85	1975-85	--
06177520	Horse Creek near Circle	101	--	--	--	--	--	1977-79, 1982	1977-79	--
06177650	Redwater River near Richey	1,071	1982-86	1983-85	1982-85	--	--	1982-85	1982-84	--
06177700	**Cow Creek tributary near Vida**	1.71	1982-85	**1963-P**	--	--	--	--	--	--
06177720	West Fork Sullivan Creek near Richey	14.8	--	1972, 1974-92	--	--	--	--	--	--
06177800	Gady Coulee near Vida	0.91	--	1962-91	--	--	--	--	--	--
06177820	**Horse Creek tributary near Richey**	0.63	--	**1974-P**	--	--	--	--	--	--
06177825	Redwater River near Vida	1,974	1975-85	1976-85	--	--	--	1976-85	1976-85	--
06178000	**Poplar River at international boundary**	358	**1931-P**	**1931, 1933-P**	--	--	--	**1964-65, 1976-P**	**1977-P**	1977-78
06178150	Poplar River near Scobey	572	--	--	--	--	--	1975-80	1977-79	1977-78
06178500	**East Poplar River at international boundary**	541	**1931-P**	**1931-32, 1935-43, 1945-P**	**1982-P**	--	--	**1964-65, 1975-P**	**1975-P**	1977-81
06179000	East Fork Poplar River near Scobey	722	1935-40, 1975-79	1975-79	--	--	--	1975-95	1977-95	1977-78
06179100	**Butte Creek tributary near Four Buttes**	1.60	--	**1972, 1974-P**	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06179200	Poplar River above West Fork, near Bredette	1,745	--	--	--	--	--	1976-81, 1985-93	1977-81	1977-78
06179500	West Fork Poplar River at international boundary	139	1931-53	1931-33, 1935-37, 1939-52	--	--	--	1976-83	1977-79	1977-78
06180000	West Fork Poplar River near Richland	428	1935-49	1935-49, 1990,1994	--	--	--	--	--	--
06180200	West Fork Poplar River near Four Buttes	732	--	--	--	--	--	1975-76	--	--
06180400	West Fork Poplar River near Bredette	1,010	--	--	--	--	--	1976-93	1977-84	1977-78
06180500	Poplar River near Bredette	2,940	1934-47	1934-47	--	--	--	--	--	--
06180600	Poplar River above Slims Coulee, near Poplar	--	--	--	--	--	--	1991-93	--	--
06181000	**Poplar River near Poplar**	3,174	**1908-24, 1947-69, 1975-79, 1982-P**	**1909,1915, 1921,1923, 1946, 1948-63, 1965-69, 1975-79, 1982-P**	--	2000-04	--	**1975-81, 1987-94, 1999-P**	**1975-81, 1987-94, 1999-P**	1975-78, 1987-94
06181200	Missouri River tributary No. 2 near Brockton	1.60	--	1962-76	--	--	--	--	--	--
06181500	Big Muddy Creek at international boundary	29.0	1949-52	--	--	--	--	--	--	--
06181995	Beaver Creek at international boundary	149	1977-94	1978-94	--	--	--	1977-91	1977-91	1977-78
06182000	Beaver Creek near international boundary	224	1949-53	--	--	--	--	--	--	--
06182500	Big Muddy Creek at Daleview	279	1947-72	1948-72, 1975	--	--	--	--	--	--
06182700	Middle Fork Big Muddy Creek near Flaxville	3.12	--	1972, 1974-83	--	--	--	--	--	--
06183000	Big Muddy Creek at Plentywood	850	1948-53	1948-53, 1955-67	--	--	--	--	--	--
06183100	Box Elder Creek near Plentywood	9.40	--	1956-73, 1976	--	--	--	--	--	--
06183200	Box Elder Creek at dam site, near Plentywood	19.9	--	1953,1955, 1957-63	--	--	--	--	--	--
06183300	Marron Creek tributary near Plentywood	6.08	--	1955-2002	--	--	--	--	--	--
06183400	Spring Creek at Highway 16, near Plentywood	16.9	--	1956-73, 1976	--	--	--	--	--	--
06183450	**Big Muddy Creek near Antelope**	967	**1979-P**	**1979-P**	--	--	--	1979-93	1979-87	--
06183500	Big Muddy Creek at Reserve	1,044	1920-25, 1950-53	1920-21, 1923-24, 1950-53	--	--	--	--	--	--
06183700	**Big Muddy Creek diversion canal near Medicine Lake**	--	**1985-P**	--	--	--	--	--	--	--
06183750	**Lake Creek near Dagmar**	101	**1985-89, 1995-P**	**1986-89, 1996-P**	--	--	--	--	--	--
06183800	**Cottonwood Creek near Dagmar**	126	**1985-89, 1995-P**	**1986-89, 1996-P**	--	--	--	--	--	--
06183850	**Sand Creek near Dagmar**	122	**1985-89, 1995-P**	**1986-89, 1995-P**	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Missouri River Basin--Continued							
06183900	Wolf Creek near Reserve	--	--	--	--	--	--	1982-84	--	--
06184000	Wolf Creek near Medicine Lake	165	1918-19	--	--	--	--	--	--	--
06184200	**Lost Creek tributary near Homestead**	1.90	--	**1972, 1974-P**	--	--	--	--	--	--
06184400	Smoke Creek near Flaxville	--	--	--	--	--	--	1982	--	--
06184500	Smoke Creek near Poplar	283	1918	--	--	--	--	--	--	--
06185000	Big Muddy Creek near Culbertson	2,447	1908-21	1909-14, 1916-21	--	--	--	--	--	--
06185100	Big Muddy Creek tributary near Culbertson	7.38	--	1963-77	--	--	--	--	--	--
06185110	Big Muddy Creek near mouth, near Culbertson	2,684	1982-92	1982-92	--	--	--	1982-89	--	--
06185150	Hardscrabble Creek near Culbertson	121	--	--	--	--	--	1981-83	1981-83	--
06185200	Missouri River tributary No. 3 near Culbertson	1.23	--	1963-77	--	--	--	--	--	--
06185300	Missouri River tributary No. 4 near Bainville	11.6	--	1963-77	--	--	--	--	--	--
06185400	**Missouri River tributary No. 5 at Culbertson**	3.67	--	**1963-P**	--	--	--	--	--	--
06185500	**Missouri River near Culbertson**	91,557	**1941-51, 1958-P**	**1942-51, 1959-P**	--	2002-04	1972-76	**1965-86, 1992-94, 1997-P**	**1972-86, 1997-P**	1969-86, 2003-04
			Part 6--Yellowstone River Basin							
06186000	Yellowstone Lake at Bridge Bay, Yellowstone National Park	1,006	1921-86	--	--	--	--	--	--	--
06186500	**Yellowstone River at Yellowstone Lake outlet, Yellowstone National Park**	991	**1922-82, 1984-86, 1989-P**	**1923-86, 1989-P**	1984-85	1984-85	--	--	--	--
06187000	Yellowstone River near Canyon Hotel, Yellowstone National Park	1,157	1913-51	1913-18, 1821-51	--	--	--	--	--	--
06187500	Tower Creek at Tower Falls, Yellowstone National Park	50.4	1922-43	1923-43	--	--	--	--	--	--
06187550	Yellowstone River at Tower Junction, Yellowstone National Park	1,342	1984-86	1984-86	1984-85	1984-85	--	--	--	--
06187915	**Soda Butte Creek at park boundary, at Silver Gate**	31.2	**1999-P**	**1999-P**	--	**2003-P**	--	1999-2001	1999-2001	2000-2001
06187950	**Soda Butte Creek near Lamar Ranger Station, Yellowstone National Park**	99	**1989-P**	**1989-P**	--	**2005**	--	1989	--	--
06188000	**Lamar River near Tower Ranger Station, Yellowstone National Park**	660	**1922-69, 1985-86, 1988-P**	**1923-69, 1985-86, 1989-P**	--	--	1985-86, 1989-92	1989	1985-86, 1988-92,	--
06188500	East Fork Blacktail Deer Creek near Mammoth, Yellowstone National Park	10.3	1938-41	--	--	--	--	--	--	--
06189000	Blacktail Deer Creek near Mammoth, Yellowstone National Park	15	1938-45, 1989-93	1938-45, 1989-93	--	--	--	1989	--	--
06189500	Bear Creek at Jardine	40.8	1946-49	--	--	--	--	--	--	--
06190000	Lupine Creek near Mammoth, Yellowstone National Park	4.67	1938-41	--	--	--	--	--	--	--
06190370	Gardner River above Mammoth Hot Springs outflow, near Mammoth, Yellowstone National Park	--	--	--	--	--	--	1988-93	--	--
06190415	Mammoth Hot Springs outflow at Mammoth, Yellowstone National Park	--	--	--	--	--	--	1988-94	--	--
06190500	Gardner River at Mammoth, Yellowstone National Park	200	1922-39	1923-38	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06190525	Gardner River sinkhole diversion at Mammoth, Yellowstone National Park	--	--	--	--	--	--	1989-92	--	--
06190530	Clematis Creek at Mammoth, Yellowstone National Park	2.71	--	--	--	--	--	1990-92	--	--
06190540	**Boiling River at Mammoth, Yellowstone National Park**	--	**1989-94 2003-P**	**1989-95 2003-P**	1989-90	**1989-90 2003-P**	--	1967, 1988-94	--	--
06191000	**Gardner River near Mammoth, Yellowstone National Park**	202	**1938-72, 1984-P**	**1939-72, 1984-P**	1985	1985	--	1988-93	1989	--
06191400	LaDuke Hot Springs near Corwin Springs	--	--	--	--	--	--	1988-94	--	--
06191500	**Yellowstone River at Corwin Springs**	2,619	**1889-93, 1910-P**	**1890-93, 1911-P**	1984-85	1977-81, 1984-85 2002	1985-92	1956-57, 1969-74, 1988-90 1999-2001	1965, 1985-92 1999-2001	1969-74 2000-2001
06191800	Big Creek near Emigrant	60.9	1973-79, 1983-85	1974-79, 1983-85	--	--	--	--	--	--
06192000	Mill Creek near Pray	148	1951-56	1951-56	--	--	--	--	--	--
06192500	**Yellowstone River near Livingston**	3,551	**1897-1905, 1928-32, 1937-P**	**1897-1905, 1929-32, 1938-P**	--	2000-03	1985-86	1970-94, 1999-2003	1965, 1979-94, 1999-2003	1979-94
06193000	Shields River near Wilsall	87.8	1935-57	1936-57	--	--	--	--	--	--
06193500	Shields River at Clyde Park	543	1921-23, 1929-32, 1934-67	1921-23, 1929-32, 1934-67	--	--	--	--	1965	--
06194000	Brackett Creek near Clyde Park	57.9	1921-23, 1934-57	1921-23, 1934-57	--	--	--	--	--	--
06194500	Canyon Creek near Chadbourn	21.5	1923	--	--	--	--	--	--	--
06195000	Bangtail Creek at Chadbourn	13.3	1923	--	--	--	--	--	--	--
06195500	Willow Creek near Chadbourn	29.7	1923	--	--	--	--	--	--	--
06195600	**Shields River near Livingston**	852	**1979-P**	**1979-P**	--	2000-03	--	1999-2003	1999-2003	--
06196000	North Fork Big Timber Creek near Big Timber	36.6	1907-12	--	--	--	--	--	--	--
06196500	South Fork Big Timber Creek near Big Timber	28.1	1907-11	--	--	--	--	--	--	--
06197000	Big Timber Creek near Big Timber	74.9	1912-24	1912-16, 1918-24, 1971	--	--	--	--	--	--
06197020	Big Timber Creek near mouth, near Big Timber	--	--	--	--	--	--	--	1965	--
06197500	Boulder River near Contact	226	1910-16, 1929, 1950-69, 1970-74, 1981-83	1910-16, 1929, 1951-69, 1971-75, 1982-83	--	--	1972	1971-73	1971-73 1981-83	--
06197800	East Boulder River below Dry Fork Creek, near McLeod	--	--	--	--	--	--	--	1981-83	--
06198000	East Fork Boulder River near McLeod	85.6	1907-10, 1981-83	1908-09, 1982-83	--	--	--	--	1981-83	1982-83
06198450	West Fork Boulder River at West Boulder Reservoir, near McLeod	--	--	--	--	--	--	--	1981-83	--
06198500	West Fork Boulder River near Bruffeys	91.6	1904-10	1904-1908, 1910	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06199000	West Boulder River at McLeod	135	1907-14	1907-14	--	--	--	--	1981-83	--
06199500	Boulder River near McLeod	476	1912-14	--	--	--	--	--	--	--
06200000	**Boulder River at Big Timber**	523	**1947-53, 1955-P**	**1947-53, 1955-P**	--	2000-03	--	1965, 1999-2003	1965, 1981-83, 1999-2003	--
06200400	Sweet Grass Creek near Melville	46.3	1907-12	--	--	--	--	--	--	--
06200500	Sweet Grass Creek above Melville	63.8	1913-25, 1937-69	1914-24, 1937-69, 1971,1975	--	--	--	--	--	--
06201000	Sweet Grass Creek below Melville	143	1907-24, 1937-43, 1946-52	1907-16, 1918-24, 1937-42, 1946-52	--	--	--	--	--	--
06201500	Sweet Grass Creek near Greycliff	368	1941-42	--	--	--	--	--	--	--
06201550	Yellowstone River tributary near Greycliff	2.72	--	1960-74	--	--	--	--	--	--
06201600	Bridger Creek near Greycliff	61.5	--	1960-75	--	--	--	--	--	--
06201650	Work Creek near Reed Point	32.5	--	1959-73, 1978	--	--	--	--	--	--
06201700	**Hump Creek near Reed Point**	7.61	--	**1960-P**	--	--	--	--	--	--
06201750	Berry Creek near Columbus	23.5	--	1958-73, 1978	--	--	--	--	--	--
06201800	Stillwater River above Woodbine Creek, near Nye	160	1924-27	--	--	--	--	--	--	--
06202000	Woodbine Creek near Nye	19.4	1924-27	--	--	--	--	--	--	--
06202500	Stillwater River near Nye	180	1929-32	--	--	--	--	--	--	--
06202510	Stillwater River above Nye Creek, near Nye	193	1980-91	1980-91	--	--	--	--	1981-83	1982-83
06202530	Stillwater River above West Fork, at Nye	193	--	--	--	--	--	--	1971-73	--
06202590	West Fork Stillwater River above Cathedral Creek, near Nye	--	--	--	--	--	--	--	1981-83	--
06202597	Castle Creek near Nye	--	--	--	--	--	--	--	1973	--
06202598	West Fork Stillwater River below Castle Creek, near Nye	122	--	--	--	--	--	--	1971-73 1981-83	--
06202600	Stillwater River at Nye	337	1969-77	1970-76	--	--	--	--	--	--
06202610	Stillwater River at Beehive	371	--	--	--	--	1972-73	1971-73, 1982-83	1973, 1982-83	1982-83
06203000	East Rosebud Creek near Roscoe	105	1920-21	--	--	--	--	--	--	--
06203500	East Rosebud Creek at Roscoe	125	1921-24	--	--	--	--	--	--	--
06204000	**Mystic Lake near Roscoe**	46.9	**1936-P**	--	--	--	--	--	--	--
06204050	**West Rosebud Creek near Roscoe**	52.1	**1965-P**	**1966-P**	--	--	--	--	--	--
06204150	Fishtail Creek near Dean	--	--	--	--	--	--	--	1981-83	--
06204170	**Meadow Creek near Dean**	6.11	--	**2003-P**	--	--	--	--	--	--
06204220	Butcher Creek near Luther	9.69	--	--	--	--	--	1960	1960-61	--
06204240	Butcher Creek near Roscoe	--	--	--	--	--	--	--	1960-61	--
06204260	Butcher Creek near Fishtail	--	--	--	--	--	--	--	1960-61	--
06204300	Butcher Creek near Absarokee	39.6	1960-62	--	--	--	--	1960	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06204500	Rosebud Creek near Absarokee	394	1935-69	1935-69	--	--	--	--	--	--
06204700	Rosebud Creek at Absarokee	401	1910-14	--	--	--	--	--	--	--
06205000	**Stillwater River near Absarokee**	975	**1910-14, 1935-P**	**1911-14, 1935-P**	--	2001-2002	--	1999-2003	1965,1981, 1999-2003	--
06205050	Stillwater River near Columbus	--	--	--	--	--	--	--	1982-83	--
06205100	Allen Creek near Park City	7.17	--	1961-2002	--	--	--	--	--	--
06205200	Yellowstone River at Laurel	8,189	--	--	--	--	--	1951-52, 1974-79	1975-78	1974-79
06207500	**Clarks Fork Yellowstone River near Belfry**	1,154	**1921-P**	**1922-P**	--	--	1984	1966-88	1965,1971 1984	--
06207510	Big Sand Coulee at Wyoming-Montana State line	134	1973-81	1973-80	--	--	1973-81	--	--	--
06207520	Silver Tip Creek below Amoco dam, near Belfry	--	--	--	--	--	--	1972	--	--
06207523	Silver Tip Creek below Sinclair oil field, near Belfry	--	--	--	--	--	--	1972	--	--
06207530	Silver Tip Creek above Gobblers draw, near Belfry	--	--	--	--	--	--	1971	--	--
06207540	Silver Tip Creek near Belfry	88.0	1968-75	1968-75	--	--	1969-72, 1974	1969-75	1970-75	--
06207600	Jack Creek tributary near Belfry	0.85	--	1975-91	--	--	--	--	--	--
06207700	North Fork Bluewater Creek near Bridger	8.1	--	--	--	--	--	--	1960-61, 1964-68	--
06207800	Bluewater Creek near Bridger	28.1	1960-70	1960-70, 1978	--	--	1962-70	1960	1964-65	--
06207850	Bluewater Creek at Sanford Ranch	43.9	--	--	--	--	1964-70	--	1960-61 1964-70	--
06207870	Bluewater Creek near Fromberg	46.6	--	--	--	--	1964-70	1960	1960-61, 1964-68	--
06207900	Bluewater Creek at Fromberg	53.2	1961-64	--	--	--	1962-64	1960,1980	1960-761, 1964-68, 1970,1980	--
06208000	Clarks Fork Yellowstone River at Fromberg	1,940	1905-14	1905-13	--	--	--	--	--	--
06208400	Elbow Creek near Joliet	48.6	1984	1984	--	--	--	1984	1984	--
06208500	**Clarks Fork Yellowstone River at Edgar**	2,022	**1921-69, 1987-P**	**1922-32, 1934-69, 1987-P**	--	2000-03	1972-73	1964-65, 1999-2003	1965,1973, 1999-2003	2000-01
06208800	Clarks Fork Yellowstone River near Silesia	2,093	1970-87	1970-86	--	--	1984	1984	1984	--
06209000	Glacier Lake near Red Lodge	3.77	1939-47, 1960-64	--	--	--	--	--	--	--
06209010	Rock Creek below Glacier Lake, near Red Lodge	3.89	1960-64	--	--	--	--	--	--	--
06209500	**Rock Creek near Red Lodge**	105	**1932-82, 1985-86, 2000-P**	**1932, 1934-82, 1985-86, 2000-P**	--	2001-2002	--	--	--	--
06210000	West Fork Rock Creek below Basin Creek, near Red Lodge	63.1	1937-57	1938-56	--	--	--	--	--	--
06210500	West Fork Rock Creek near Red Lodge	66.9	1932-44	1932, 1934-44	--	--	--	--	--	--
06210950	**Cole Creek near Red Lodge**	4.30	--	**2003-P**	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06211000	**Red Lodge Creek above Cooney Reservoir, near Boyd**	143	**1937-P**	**1937-P**	--	--	--	--	--	--
06211500	**Willow Creek near Boyd**	53.3	**1937-P**	**1937-P**	--	--	--	--	--	--
06212000	Cooney Reservoir near Boyd	206	1937-95	--	--	--	--	--	--	--
06212500	Red Lodge Creek below Cooney Reservoir, near Boyd	210	1937-2002	1938-2002	--	--	--	--	--	--
06213000	Red Lodge Creek near Boyd	234	1932-37	--	--	--	--	--	--	--
06213500	Rock Creek at Joliet	539	1946-53	1946-53	--	--	--	--	--	--
06214000	Rock Creek at Rockvale	569	1920-22, 1952-40, 1984-90	1921-22, 1932,1934, 1935-40, 1985-90	--	--	--	--	--	--
06214050	Clarks Fork Yellowstone River near Laurel	2,783	--	--	--	--	--	1969-73	--	1969-73
06214100	Yellowstone River near Laurel	11,036	--	--	--	--	--	1969-72	--	1969-72
06214150	Mills Creek at Rapelje	3.32	--	1974-2002	--	--	--	--	--	--
06214500	**Yellowstone River at Billings**	11,805	**1904-05, 1928-P**	**1904-05, 1918, 1929-P**	--	2001-2002	1977-81	1963-93 1999-2001	1965, 1975-93 1999-2001	1975-93 2000-01
06215000	Pryor Creek above Pryor	39.6	1921-24, 1967-74	1921-24, 1967-74	--	--	--	1987-90	--	--
06215500	Lost Creek near Pryor	9.72	1921-24	1922-24	--	--	--	--	--	--
06216000	**Pryor Creek at Pryor**	117	**1921-24, 1966-P**	**1922-24, 1967-P**	--	--	--	--	--	--
06216200	**West Wets Creek near Billings**	8.80	--	**1955-P**	--	--	--	--	--	--
06216300	West Buckeye Creek near Billing	2.64	--	1955-73, 1978	--	--	--	--	--	--
06216500	Pryor Creek near Billings	440	1911-24, 1938-54	1912-24, 1938-53, 1955-73, 1978	--	--	--	--	--	--
06216900	Pryor Creek near Huntley	582	1979-99	1978-99	--	--	--	--	--	--
06217000	Pryor Creek at Huntley	606	1904-17	1905-06, 1908, 1910-15, 1978	--	--	--	--	--	--
06217300	**Twelvemile Creek near Shepherd**	9.05	--	**1973-P**	--	--	--	--	--	--
06217500	Yellowstone River at Huntley	12,840	1908-16	1908-16	--	--	--	1951-52, 1971-81	1975-81	1972-81
06217700	**North Fork Crooked Creek tributary near Shepherd**	6.85	--	**1962-P**	--	--	--	--	--	--
06217750	Fly Creek at Pompeys Pillar	285	1969-81	1969-81	--	--	--	1969-81	--	--
06217800	Yellowstone River tributary No. 2 near Pompeys Pillar	0.70	--	1962-73	--	--	--	--	--	--
06217950	Buffalo Creek near Custer	221	1980-83	1980-83	--	--	--	--	--	--
06218000	Yellowstone River at Junction (at Custer)	14,427	1906-08	--	--	--	--	1969-70	--	1969-70
06286258	Big Coulee near Lovell, Wyoming	30.1	1970-78	--	--	--	--	--	--	--
06286270	Porcupine Creek near Lovell, Wyoming	135	1964-67	--	--	--	--	--	--	--
06286340	Dry Head Creek near Pryor	58.0	1965-66	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06286350	Dry Head Creek above Hoodoo Creek, near Pryor	80.0	1966-68	1966-67	--	--	--	--	--	--
06286370	Big Bull Elk Creek near St. Xavier	35.0	1965-68	--	--	--	--	--	--	--
06286390	Black Canyon Creek near St. Xavier	52.0	1965-66	1965-66	--	--	--	--	--	--
06286395	Black Canyon Creek below Three Springs Creek, near St. Xavier	75.0	1966-68	1966-67	--	--	--	--	--	--
06286400	**Bighorn Lake near St. Xavier**	19,626	**1965-P**	--	---	--	--	--	--	--
06286490	**Big Horn Canal near St. Xavier**	--	**1966-P**	--	--	--	--	--	--	--
06286500	Big Horn Canal below wasteway, near St. Xavier	--	1947-52	--	--	--	--	--	--	--
06287000	**Bighorn River near St. Xavier**	19,667	**1934-P**	**1935-P**	--	1970-79	--	1967-81		1969-70
06287500	Soap Creek near St. Xavier	98.3	1911-14, 1939-53, 1968-72	1939-53, 1963, 1968-72, 1978	--	--	--	--	--	--
06287700	Soap Creek near mouth, near St. Xavier	111	1914-24	1914-18, 1920-24	--	--	--	--	--	--
06288000	Rotten Grass Creek near St. Xavier	147	1911-22, 1968-73	1914-17, 1968-72, 1978	--	--	--	--	--	--
06288200	Beauvais Creek near St. Xavier	100	1967-77	1968-78	--	--	--	1967-78	1968-78	1969-78
06288500	Bighorn River near Hardin	20,722	1904-25, 1928-33	1904-24, 1929-33	--	1968-74	--	1951, 1969-73, 1987-89	--	1970-73
06288960	Little Bighorn River near Parkman, Wyoming	137	1970-72	1972	--	--	--	--	--	--
06288990	West Fork Little Bighorn River near Parkman, Wyoming	38.2	1970-72, 1983-87	--	--	--	--	--	--	--
06289000	**Little Bighorn River at State line, near Wyola**	182	**1939-P**	**1939-P**	--	--	--	1993-2001	1993-2001	1993-2001
06289500	Little Bighorn River near Wyola	251	1912-24	1912-24	--	--	--	1993-2001	1993-2001	1993-2001
06290000	**Pass Creek near Wyola**	111	**1935-56, 1983-P**	**1935-56, 1978, 1983-P**	--	--	--	--	--	--
06290200	Little Bighorn River tributary near Wyola	4.43	--	1973-86	--	--	--	--	--	--
06290500	Little Bighorn River below Pass Creek, near Wyola	428	1939-75, 1977-2004	1939-2004	--	--	1970-73	1970-75, 1977	1970-73	--
06291000	Owl Creek near Lodge Grass	163	1939-45, 1980-92	1939-42, 1944-45, 1980-92	--	--	--	--	--	--
06291200	Lodge Grass Creek at State Line, near Wyola	16.7	1983-84	1983-89	--	--	--	--	--	--
06291500	**Lodge Grass Creek above Willow Creek diversion, near Wyola**	80.7	**1939-74, 1983-P**	**1939-74, 1978, 1983-P**	--	--	--	--	--	--
06292000	Lodge Grass Creek near Wyola	88.9	1921-24	--	--	--	--	--	--	--
06292500	Lodge Grass Creek near Lodge Grass	143	1912-16, 1921-24	1912-15, 1921-24	--	--	--	--	--	--
06293000	Lodge Grass Creek at Lodge Grass	170	1916-20	--	--	--	--	--	--	--
06293300	**Long Otter Creek near Lodge Grass**	11.7	--	**1973-P**	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06293500	Little Bighorn River near Crow Agency	1,181	1912-24, 1928-33, 1938-60	1912, 1914-24, 1929-32, 1938-60	--	--	--	--	--	--
06293900	Little Bighorn River at Crow Agency	1,190	1905-06	--	--	--	--	--	--	--
06294000	**Little Bighorn River near Hardin**	1,294	**1953-P**	**1953-P**	--	--	1970-77	1970-79, 1987-89, 1993-2001	1971-75, 1977, 1993-2001	1993-2001
06294400	**Andresen Coulee near Custer**	2.35	--	**1963-P**	--	--	--	--	--	--
06294500	**Bighorn River above Tullock Creek, near Bighorn**	22,414	**1982-P**	**1982-P**	--	2000-03	--	1999-2003	1999-2003	--
06294600	**East Cabin Creek tributary near Hardin**	8.63	1982-85	**1973-P**	--	--	--	--	--	--
06294690	Tullock Creek near Bighorn	446	1975-82	1975-82	--	--	--	--	--	--
06294700	Bighorn River at Bighorn	22,885	1945-81	1945-81	--	--	1960-72	1960-92	1960-72, 1975-92	1975-92
06294800	Unknown Creek near Bighorn	14.6	--	1962-76, 1979,1991	--	--	--	--	--	--
06294840	Yellowstone River at Myers	37,674	--	--	--	--	--	1974-77	--	1975-77
06294850	Buckingham Coulee near Myers	2.63	--	1962-76, 1979,1991	--	--	--	--	--	--
06294900	Middle Fork Froze to Death Creek tributary near Ingomar	1.36	--	1962-76	--	--	--	--	--	--
06294920	East Fork Sarpy Creek near Colstrip	79.2	--	--	--	--	--	1981-83	1981-83	--
06294930	**Sarpy Creek tributary near Colstrip**	4.44	--	**1972-P**	--	--	--	--	--	--
06294940	Sarpy Creek near Hysham	453	1973-84	1974-84	--	--	--	1975-84	1975-84	--
06294950	Starved to Death Creek near Sanders	36.9	1980-85	1980-85	--	--	--	--	--	--
06294960	Anderson Creek at Vananda	5.71	--	1973-84, 1991	--	--	--	--	--	--
06294980	East Fork Armells Creek near Colstrip	97.3	--	--	--	--	--	1975-85	1975-85	--
06294985	**East Fork Armells Creek tributary near Colstrip**	1.87	--	**1973-P**	--	--	--	--	--	--
06294991	West Fork Armells Creek near Forsyth	148	--	--	--	--	--	1975-77	1975-77	--
06294995	Armells Creek near Forsyth	370	1974-84, 1988-95	1975-84, 1988-95	--	--	--	1975-86, 1988-95	1975-86, 1988-95	--
06295000	**Yellowstone River at Forsyth**	40,146	**1921-23, 1977-P**	**1921-23, 1978-P**	--	--	1978-81	**1974-82 1999-P**	**1975-82 1999-P**	1975,1978, 1979,2000-2002,2004
06295020	**Short Creek near Forsyth**	3.23	--	**1962-P**	--	--	--	--	--	--
06295050	Little Porcupine Creek near Forsyth	614	--	1958-73, 1975,1978, 1986,1993	--	--	--	--	--	--
06295100	Rosebud Creek near Kirby	35.5	1982-85, 1988	1960-74, 1982-2002	--	--	--	--	--	--
06295110	Rosebud Creek at Kirby	--	--	--	--	--	--	1978-79	1978-79	--
06295113	**Rosebud Creek at reservation boundary, near Kirby**	123	**1980-P**	**1980-P**	**1983, 2005**	--	--	**1980-84 2003-P**	**1980-84 2003-P**	2003-2004
06295130	Rosebud Creek tributary near Busby	1.14	--	1963-77	--	--	--	--	--	--

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Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06295200	Whitedirt Creek near Lame Deer	1.58	--	1959-73	--	--	--	--	--	--
06295250	**Rosebud Creek near Colstrip**	799	**1974-P**	**1975-P**	--	--	--	1975-85	1975-84	--
06295350	Greenleaf Creek near Colstrip	30.5	--	--	--	--	--	1975	1975	--
06295380	Cow Creek near Colstrip	27.2	--	--	--	--	--	1980-85	1980-85	--
06295400	Rosebud Creek above Pony Creek, near Colstrip	961	--	--	--	--	--	1975-78	1975-77	--
06295420	Snider Creek near Brandenberg	11.9	--	--	--	--	--	1978	1978	--
06295500	Rosebud Creek near Rosebud	1,193	1938-43	1938-43	--	--	--	1975-77	1975-77	--
06296000	Rosebud Creek near Forsyth	1,279	1947-54	1948-53, 1655-57, 1959, 1961-67, 1969,1978	--	--	--	--	--	--
06296003	**Rosebud Creek at mouth, near Rosebud**	1,302	**1974-P**	**1975-P**	--	--	--	**1975-86, 1988-93, 1999-2003 2005**	**1975-86, 1988-93, 1999-2003 2005**	--
06296100	**Snell Creek near Hathaway**	10.5	1982-85	**1963-77, 1979, 1982-P**	--	--	--	--	--	--
06296115	**Reservation Creek near Miles City**	6.29	--	**1973-P**	--	--	--	--	--	--
06296120	Yellowstone River near Miles City	42,847	--	--	1969-84	--	--	1969-84	1975-84	1974-81
06306000	Tongue River near Acme, Wyoming	894	1939-57	--	--	--	--	--	--	--
06306100	**Squirrel Creek near Decker**	33.6	1975-85	1976-85	--	--	--	**1976-85, 2005**	1976-85	--
06306250	**Prairie Dog Creek near Acme, Wyoming**	358	**1971-79, 2004-P**	**2004-P**	**2004-P**	--	--	**2004-P**	**2004-P**	--
06306300	**Tongue River at State line, near Decker**	1,453	**1960-P**	**1961-P**	**1983-87 2001-P**	1966-76 2001-2004	--	**1966-P**	**1966-P**	1986-88, 2003-2004
06306500	Tongue River near Decker	1,585	1928-38	1928-38	--	--	--	--	--	--
06306800	Deer Creek near Decker	47.7	--	--	--	--	--	1975-77	1975-76	--
06306900	Spring Creek near Decker	34.7	--	1958-86	--	--	--	1978,1980	1978,1980	--
06306950	South Fork Leaf Rock Creek near Kirby (Leaf Rock Creek near Kirby)	4.53	1982-85	1958, 1960-96	--	--	--	--	--	--
06307000	**Tongue River Reservoir near Decker**	1,770	**1938-P**	--	--	--	--	--	--	--
06307500	**Tongue River at Tongue River Dam, near Decker**	1,770	**1939-P**	**1939-P**	**1981-87, 2004-P**	--	--	**1951, 1976-95, 2004-P**	**1976-96, 2004-P**	--
06307510	Fourmile Creek near Birney	22.3	--	--	--	--	--	1975	1975	--
06307520	Canyon Creek near Birney	50.2	--	1972-91	--	--	--	--	--	--
06307525	Prairie Dog Creek above Jack Creek, near Birney	6.57	1979-83	1979-83	--	--	--	1978-81, 1983	1978-83	--
06307528	Prairie Dog Creek near Birney	19.6	1979-84	1979-84	--	--	--	1978-80, 1983	1978-83	--
06307530	Bull Creek near Birney	45.8	--	--	--	--	--	1975	1975	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06307540	Hanging Woman Creek at State line, near Otter	90.2	--	--	--	--	--	1980, 1982-83	1980, 1982-83	--
06307560	East Trail Creek near Otter	31.3	1976-81	1977-81	--	--	--	1977-80	1977-78, 1980	--
06307563	Corral Creek near Otter	26.5	--	--	--	--	--	1980-83	1980-83	--
06307567	Horse Creek near Birney	16.0	--	--	--	--	--	1983	1983	--
06307570	**Hanging Woman Creek below Horse Creek, near Birney**	321	--	--	--	--	--	**1978-83, 1986-87, 2005**	1978-83, 1986-87	--
06307600	**Hanging Woman Creek near Birney**	470	**1974-84, 1986-95 2003-P**	**1974-84, 1986-95 2003-P**	**1981-83, 1986-87 2004-P**	--	--	**1975-95 2003-P**	**1975-95 2003-P**	2004
06307610	Tongue River below Hanging Woman Creek, near Birney	2,533	--	--	--	--	--	1974-79	1975-79	1975-79
06307615	Cook Creek near Birney	62.6	--	--	--	--	--	1975-77	1975-77	--
06307616	**Tongue River at Birney Day School, near Birney**	2,621	**1980-P**	**1980-P**	**2004-P**	--	--	**1980-93 2004-P**	**1980-86 2004-P**	--
06307620	Tie Creek near Birney	18.7	--	1973-84, 1991	--	--	--	--	--	--
06307640	Spring Creek near Ashland	1.56	--	1962-76	--	--	--	--	--	--
06307660	Walking Horse Creek near Ashland	3.33	--	1963-78	--	--	--	--	--	--
06307665	Otter Creek near Otter	40.9	--	--	--	--	--	1978-84	1978-84	--
06307670	Bear Creek at Otter	90.4	--	--	--	--	--	1975-76	1975-76	--
06307700	**Cow Creek near Fort Howes Ranger Station, near Otter**	8.37	--	**1972-P**	--	--	--	--	--	--
06307717	Otter Creek below Fifteenmile Creek, near Otter	453	1982-86	1982-85	1983-85	--	--	1982-85	1982-85	--
06307720	**Brian Creek near Ashland**	8.03	--	**1973-P**	--	--	--	--	--	--
06307725	Otter Creek above Tenmile Creek, near Ashland	466	--	--	--	--	--	1978-81	1978-81	--
06307730	Threemile Creek near Ashland	51.5	--	--	--	--	--	1975	1975	--
06307735	Home Creek near Ashland	58.7	--	--	--	--	--	1977-84	1977-84	--
06307740	**Otter Creek at Ashland**	707	**1973-85, 1988-95 2003-P**	**1973-85, 1988-95 2003-P**	**1981-85 2004-P**	--	--	**1975-85, 1988-95 2003-P**	**1975-85, 1988-95 2003-P**	2003
06307760	Stebbins Creek near Ashland	5.41	--	1963-77	--	--	--	--	--	--
06307780	Stebbins Creek at mouth, near Ashland	20.8	--	1963-91	--	--	--	--	--	--
06307800	Tongue River near Ashland	3,830	1956-73	1967-72	--	--	--	--	--	--
06307810	Beaver Creek near Ashland	92.3	--	--	--	--	--	1975-76	1975-76	--
06307830	**Tongue River below Brandenberg bridge, near Ashland**	3,948	**1973-84, 2000-P**	**1974-84, 2000-P**	**2001-P**	2001-03	1975-81	**1974-81, 2000-P**	**1975, 1978-81, 2000-P**	2003-2004
06307840	Liscom Creek near Ashland	47.6	--	--	--	--	--	1975,1977	1975,1977	--
06307890	Foster Creek near Volborg	116	--	--	--	--	--	1975-77	1975-77	--
06307930	Jack Creek near Volborg	5.47	--	1973-2002	--	--	--	--	--	--
06307990	**Tongue River above T-Y Diversion Dam, near Miles City**	4,508	**2005**	**2005**	**2005**	--	--	**2005**	**2005**	--
06308000	Tongue River near Miles City	4,539	1929-33	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06308100	Sixmile Creek tributary near Epsie	0.80	--	1972-91	--	--	--	--	--	--
06308160	Pumpkin Creek near Loesch	102	--	--	--	--	--	1976-79	1976-79	--
06308170	Little Pumpkin Creek near Volborg	101	--	--	--	--	--	1976-77	1976-77	--
06308190	Pumpkin Creek near Volborg	386	--	--	--	--	--	1976-77	1976-77	--
06308200	**Basin Creek tributary near Volborg**	0.14	--	**1955-P**	--	--	--	--	--	--
06308300	Basin Creek near Volborg	11.1	--	1955-73	--	--	--	--	--	--
06308330	**Deer Creek tributary near Volborg**	1.65	--	**1973-P**	--	--	--	--	--	--
06308340	**LaGrange Creek near Volborg**	3.66	--	**1973-P**	--	--	--	--	--	--
06308400	**Pumpkin Creek near Miles City**	697	**1972-85 2004-P**	**1973-85 2004-P**	**2004-P**	--	--	**1976-85, 2004-P**	**1976-85, 2004-P**	--
06308500	**Tongue River at Miles City**	5,379	**1938-42, 1946-P**	**1938-41, 1946-P**	**2004-P**	2000-03	1978-86	**1949-94, 1999-P**	**1975-94, 1999-P**	1975-94
06309000	**Yellowstone River at Miles City**	48,253	**1922-23, 1928-P**	**1923, 1929-P**	--	--	--	1948-52, 1965	1965	--
06309020	Rock Springs Creek tributary at Rock Springs	0.96	--	1963-78, 1987	--	--	--	--	--	--
06309040	Dry House Creek near Angela	38.6	--	1963-77, 1987	--	--	--	--	--	--
06309060	North Fork Sunday Creek tributary No. 2 near Angela	0.22	--	1962-91	--	--	--	--	--	--
06309075	Sunday Creek near Miles City	714	1975-84	1975-84	--	--	--	--	--	--
06309078	Tree Coulee near Kinsey	4.13	--	1972, 1974-2002	--	--	--	--	--	--
06309079	Muster Creek near Kinsey	28.5	--	--	--	--	--	1978-80	1978-80	1978-80
06309080	**Deep Creek near Kinsey**	11.5	--	**1962-P**	--	--	--	--	--	--
06309090	Ash Creek near Locate	6.23	--	1962-76	--	--	--	--	--	--
06309145	Custer Creek near Kinsey	151	--	--	--	--	--	1978-80	1978-80	1978-80
06324500	**Powder River at Moorhead**	8,086	**1929-72, 1974-P**	**1923, 1929-72, 1975-P**	**1986-89 2001-P**	--	1975-96	**1949, 1951-53, 1956-57, 1969-72, 1975-92 2001-P**	**1975-1997 2001-P**	1969-72
06324700	Sand Creek near Broadus	10.2	--	1955-84	--	--	--	--	--	--
06324710	**Powder River at Broadus**	8,748	1975-92	1976-92	--	--	1976-92	**1979, 1988-90, 2005**	1976-92, 1995	--
06324995	**Badger Creek at Biddle**	6.06	--	**1972-P**	--	--	--	--	--	--
06325000	**Little Powder River at Biddle**	1,541	1938-43	--	--	--	--	**2005**	--	--
06325400	East Fork Little Powder River tributary near Hammond	3.45	--	1974-84	--	--	--	--	--	--
06325500	**Little Powder River near Broadus**	1,974	1947-53, 1957-72	1947-53, 1956-72, 1978	--	--	--	**2002-P**	**2002-P**	--
06325550	Little Powder River at mouth, near Broadus	--	--	--	--	--	--	1978-79, 1988-90 2001-2002	1988-89 2001-2002	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06325650	Powder River near Powderville	--	--	--	--	--	--	1978-90	1988	--
06325700	**Deep Creek tributary near Powderville**	3.00	--	**1973-P**	--	--	--	--	--	--
06325950	**Cut Coulee near Mizpah**	2.23	--	**1973-P**	--	--	--	--	--	--
06326000	Powder River near Mizpah	12,132	1928-33	--	--	--	--	1989	--	--
06326050	Mizpah Creek at Olive	129	--	--	--	--	--	1976-79	1976-79	--
06326200	Mizpah Creek near Volberg	510	--	--	--	--	--	1976-79	1976-77	--
06326300	Mizpah Creek near Mizpah	797	1975-86	1975-86	--	--	--	1976-84, 1989-90	1976-84	--
06326400	Meyers Creek near Locate	9.42	--	1962-76, 1982	--	--	--	--	--	--
06326500	**Powder River near Locate**	13,068	**1938-P**	**1938-P**	1951-62, 1975-81, 1988-90	--	1975-84	**1948-63, 1975-94, 1999-P**	**1965, 1974-94 1999-P**	1975-94
06326507	Locate Creek near Ismay	--	--	--	--	--	--	1982-83	1982-83	--
06326510	Locate Creek tributary near Locate	0.91	--	1973-91	--	--	--	--	--	--
06326520	Powder River at mouth, near Terry	13,512	--	--	--	--	--	1978,1989	--	--
06326530	Yellowstone River near Terry	63,447	--	--	--	--	--	1974-83	1975-83	1975-80
06326550	Cherry Creek tributary near Terry	2.52	--	1973-91	--	--	--	--	--	--
06326555	Cherry Creek near Terry	358	1980-81, 1990-94	1980-81, 1990-94	1990-94	--	1990-94	1978-81	1978-81, 1990-94	--
06326580	**Lame Jones Creek tributary near Willard**	0.51	--	**1974-P**	--	--	--	--	--	--
06326600	O'Fallon Creek near Ismay	669	1978-92	1962-92	--	--	--	1978-84	1978-84	1978-80
06326650	O'Fallon Creek tributary near Ismay	0.16	--	1962-76	--	--	--	--	--	--
06326700	Deep Creek near Baker	3.79	--	1962-76, 1978	--	--	--	--	--	--
06326800	Pennel Creek tributary near Baker	0.86	--	1962-91	--	--	--	--	--	--
06326850	O'Fallon Creek at Mildred	1,396	1975-78	1976-78	--	--	--	--	--	--
06326900	Yellowstone River tributary No. 4 near Fallon	0.67	--	1962-76	--	--	--	--	--	--
06326940	**Spring Creek tributary near Fallon**	3.10	--	**1972-P**	--	--	--	--	--	--
06326950	**Yellowstone River tributary No. 5 near Marsh**	0.87	--	**1962-P**	--	--	--	--	--	--
06326952	Clear Creek near Lindsay	101	1982-85, 1988	1982-86	--	--	--	--	--	--
06326953	Clear Creek near Hoyt	138	--	1980	--	--	--	1978-80	1978-80	1978-80
06326960	**Timber Fork Upper Sevenmile Creek tributary near Lindsay**	1.13	--	**1974-P**	--	--	--	--	--	--
06326995	Upper Sevenmile Creek near Lindsay	137	--	--	--	--	--	1978-80	1978-80	1978-80
06327000	Upper Sevenmile Creek near Glendive	--	1921-22	--	--	--	--	--	--	--
06327450	**Cains Coulee at Glendive**	3.72	--	**1991-P**	--	--	--	--	--	--
06327500	**Yellowstone River at Glendive**	66,788	**1898-1911, 1932-34 2003-P**	**1903-10, 1932-34 2003-P**	--	--	--	1950	--	--
06327550	**South Fork Horse Creek tributary near Wibaux**	1.34	--	**1973-P**	--	--	--	--	--	--
06327700	Griffith Creek near Glendive	15.5	--	1955-63, 1965-67	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 6--Yellowstone River Basin--Continued							
06327720	**Griffith Creek tributary near Glendive**	3.48	--	**1965, 1974-P**	--	--	--	--	--	--
06327790	**Krug Creek tributary No. 2 near Wibaux**	0.44	--	**1974-P**	--	--	--	--	--	--
06327800	Krug Creek tributary near Wibaux	1.74	--	1955-61	--	--	--	--	--	--
06327850	Glendive Creek near Glendive	300	--	--	--	--	--	1978-81	1978-81	--
06328000	Deer Creek near Glendive	198	1921-22	--	--	--	--	1978-80	1978-80	1978-80
06328100	**Yellowstone River tributary No. 6 near Glendive**	2.93	--	**1974-P**	--	--	--	--	--	--
06328200	Lower Sevenmile Creek near Bloomfield	25.2	1982-85	1983-87	--	--	--	--	--	--
06328400	Thirteenmile Creek tributary near Bloomfield	0.67	--	1972, 1974-91	--	--	--	--	--	--
06328700	Linden Creek at Intake	4.20	--	1958-73, 1980	--	--	--	--	--	--
06328800	Indian Creek at Intake	0.46	--	1958-73	--	--	--	--	--	--
06328900	War Dance Creek near Intake	3.69	--	1958-73, 1980	--	--	--	--	--	--
06329000	Cottonwood Creek near Intake	85.3	--	--	--	--	--	1978-81	1978-81	--
06329200	Burns Creek near Savage	233	1958-67, 1975-84, 1986	1958-67, 1975-84, 1986	--	--	--	1976-79, 1984,1986	1976-79, 1984,1986	--
06329350	**Alkali Creek near Sidney**	0.49	--	**1974-P**	--	--	--	--	--	--
06329500	**Yellowstone River near Sidney**	69,083	**1910-31, 1933-P**	**1911-31, 1934-P**	--	--	**1972-81, 1983-P**	**1948-P**	**1965, 1972-P**	1970-95 2004
06329510	Fox Creek tributary near Lambert	5.01	--	1972, 1974-96	--	--	--	--	--	--
06329520	Fox Creek near Lambert	183	--	--	--	--	--	1981-83	1981-83	--
06329540	Lone Tree Creek near Sidney	39.4	--	--	--	--	--	1981-83	1981-83	--
06329570	First Hay Creek near Sidney	29.1	--	1963-2004	--	--	--	--	--	--
06333500	Little Missouri River at Alzada	671	1904-07	--	--	--	--	1949-51	--	--
06333850	North Creek near Alzada	1.25	1951	1951-52, 1956-77	--	--	--	--	--	--
06333900	North Creek spreader diversion near Alzada	1.29	1952-56	--	--	--	--	--	--	--
06334000	Little Missouri River near Alzada	904	1911-25, 1928-32, 1935-69	1912-25, 1929-32, 1935-69	--	--	--	--	--	--
06334100	Wolf Creek near Hammond	10.1	--	1955-2002	--	--	--	--	--	--
06334200	Willow Creek near Alzada	122	--	1958-73	--	--	--	--	--	--
06334330	**Little Missouri River tributary near Albion**	1.49	--	**1972-P**	--	--	--	--	--	--
06334610	Hawks Nest Creek tributary near Albion	0.92	--	1973-2002	--	--	--	--	--	--
06334625	**Coal Creek tributary near Mill Iron**	0.64	--	**1974-P**	--	--	--	--	--	--
06334630	Boxelder Creek at Webster	1,092	1959-73	1960-73, 1975	--	--	--	1972-73	--	--
06334640	North Fork Coal Bank Creek near Mill Iron	15.6	--	1962-76	--	--	--	--	--	--
06334720	Soda Creek tributary near Webster	2.22	--	1962-91	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
		Part 6--Yellowstone River Basin--Continued								
06336447	Duck Creek near Wibaux	46.5	1978-85	1978-85	--	--	--	1979	1978-79	--
06336450	Spring Creek near Wibaux	4.00	1955-73	1956-73	--	--	--	--	--	--
06336500	Beaver Creek at Wibaux	351	1938-69, 1979-83	1872,1921, 1929, 1938-69, 1979-83	--	--	--	1979-84	1979-84	--
06336510	Upper Hay Creek tributary No. 2 near Wibaux	4.1	1978-82	1978-82	--	--	--	--	--	--
06336515	Hay Creek near Wibaux	11.4	1978-82	1978-82	--	--	--	--	--	--
06336545	Little Beaver Creek near Wibaux	96.2	1978-81	1978-81	--	--	--	1979-80	1979-80	--
06336550	Beaver Creek near Wibaux	--	1958-64	--	--	--	--	--	--	--
		Part 12--Kootenai River Basin								
12300000	Kootenay River at Newgate, British Columbia	7,660	1931-72	1931-71	--	--	--	1949,1965	--	--
12300110	Lake Koocanusa at international boundary	--	--	--	--	--	--	1972-2004	--	1972-82, 2003-04
12300200	Young Creek near Rexford	36.0	1973-75	1974-75	--	--	--	--	--	--
12300400	Cayuse Creek near Trego	5.29	--	1972-84	--	--	--	--	--	--
12300500	Fortine Creek near Trego	110	1947-53	1947-54, 1958, 1960-73	--	--	--	--	--	--
12300800	Deep Creek near Fortine	18.9	--	1954-91	--	--	--	--	--	--
12301000	Grave Creek near Fortine	54.9	1923-24	--	--	--	--	--	--	--
12301300	**Tobacco River near Eureka**	440	**1958-P**	**1948, 1959-P**	--	1971-85	--	1971-76	--	1974-76
12301500	Kootenai River near Rexford	8,420	1929-40, 1968-71	1929-40, 1948, 1968-71	--	--	1968-71	1967-72	1968-71	--
12301550	Pinkham Creek near Rexford	75.7	1973-81	1973-81	--	--	--	--	--	--
12301600	Lake Koocanusa below Pinkham Creek, near Rexford	--	--	--	--	--	--	1972-76	--	1972-76
12301700	Kootenai River tributary near Rexford	0.86	--	1959-70	--	--	--	--	--	--
12301800	Gold Creek near Rexford	6.12	--	1959-69	--	--	--	--	--	--
12301810	Big Creek near Rexford	137	1972-81	1973-82	--	--	--	--	--	--
12301830	Lake Koocanusa at Tenmile Creek, near Libby	--	--	--	--	--	--	1972-2004	--	1972-2004
12301850	Kootenai River at Worland bridge, near Libby	8,892	1961-71	1961-71	--	--	--	--	--	--
12301900	Little Jackson Creek near Libby	2.60	--	1961-69	--	--	--	--	--	--
12301919	Lake Koocanusa at forebay, near Libby	--	--	--	--	--	--	1972-2004	--	1972-82, 2003-04
12301920	**Lake Koocanusa near Libby**	8,985	**1972-P**	--	--	--	--	--	--	--
12301921	Libby Dam near Libby	--	--	--	--	--	--	1964	--	--
12301933	**Kootenai River below Libby Dam, near Libby**	8,985	**1972-P**	**1972-P**	--	2001-03	1968-76	1967-2004	1968-71	1973-82
12301990	Fisher River above Wolf Creek, near Libby	768	--	--	--	--	--	1967-70	1968-70	--
12301993	Wolf Creek tributary near Libby	2.76	--	1974-84	--	--	--	--	--	--
12301997	Richards Creek near Libby	9.50	--	1973-91	--	--	--	--	--	--

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Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Kootenai River Basin--Continued							
12301999	Wolf Creek near Libby	216	1967-77	1967-77	--	--	1968-70	1967-70	1969-70	--
12302000	Fisher River near Jennings	780	1951-69	1948, 1951-69, 1974	--	-	--	--	--	--
12302050	Peoples Creek near Libby	2.54	--	1961-67, 1976	--	--	--	--	--	--
12302055	**Fisher River near Libby**	838	**1967-P**	**1948, 1969-P**	--	1968-85	1968-76	1967-76, 1999-2003	1969-72, 1974-76, 1999-2003	1974-76
12302400	Shaughnessy Creek near Libby	1.16	--	1959-91	--	--	--	--	--	--
12302500	Granite Creek near Libby	23.6	1933-34, 1936-44, 1960-69	1933, 1937-44, 1948,1954, 1959-69, 1974	--	--	--	--	--	--
12303000	Kootenai River at Libby	10,240	1911-91	1911-91	--	--	--	1969-72, 1978	--	1969-73
12303100	Flower Creek near Libby	11.1	1960-92	1960-92	--	--	--	--	--	--
12303400	Ross Creek near Troy	23.8	--	1972-91	--	--	--	1971, 1976-78	1976-78	--
12303430	Stanley Creek near Troy	12.8	--	--	--	--	--	1976-78	1976-78	--
12303440	Camp Creek near Troy	11.3	--	1972-91	--	--	--	--	--	--
12303490	Lake Creek near Troy	179	--	--	--	--	--	1976-78	1976-78	--
12303500	Lake Creek at Troy	210	1945-57, 1983-95	1945-57, 1974, 1983-96	--	--	--	--	--	--
12304000	Callahan Creek at Troy	85.8	1911-12, 1914-16	--	--	--	--	--	--	--
12304040	Basin Creek near Yaak	27.4	1990-2000	1990-2000	--	--	--	--	--	--
12304060	Blacktail Creek near Yaak	8.66	--	1964, 1972-84	--	--	--	--	--	--
12304120	Zulu Creek near Yaak	5.27	--	1972-84	--	--	--	--	--	--
12304200	Yaak River near Yaak	493	1957-62	1956-62	--	--	--	--	--	--
12304250	Whitetail Creek near Yaak	2.48	--	1960-74	--	--	--	--	--	--
12304300	Cyclone Creek near Yaak	5.73	--	1960-91	--	--	--	--	--	--
12304400	Fourth of July Creek near Yaak	7.84	--	1960-74	--	--	--	--	--	--
12304500	**Yaak River near Troy**	766	**1910-16, 1956-P**	**1948,1954, 1956-P**	--	1963-85 2000-03	--	1999-2003	1999-2003	--
			Part 12--Pend Oreille River Basin							
12323170	Silver Bow Creek above Blacktail Creek, at Butte	--	1984-94	1984-94	--	--	--	--	--	--
12323200	Blacktail Creek near Butte	14.7	1984-88	1984-88	--	--	--	--	--	--
12323220	Basin Creek near Butte	37.6	1984-86	--	--	--	--	--	--	--
12323230	**Blacktail Creek at Harrison Avenue, at Butte**	--	--	--	--	--	--	**1993-95, 1997-2003, 2005**	**1993-95, 1997-2003, 2005**	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12323240	**Blacktail Creek at Butte**	95.4	**1988-P**	**1989-P**	--	--	--	--	--	--
12323248	Silver Bow Creek above wastewater plant outflow, at Butte	--	1999-2002	2000-2002	--	--	--	--	--	--
12323250	**Silver Bow Creek below Blacktail Creek, at Butte**	103	**1984-P**	**1984-P**	--	--	--	**1993-95, 1997-P**	**1993-95, 1997-P**	--
12323300	Smith Gulch near Silver Bow	4.36	--	1959-2002	--	--	--	--	--	--
12323500	German Gulch Creek near Ramsay	40.6	1955-69	1955-69, 1975	--	--	--	--	--	--
12323600	**Silver Bow Creek at Opportunity**	363	**1988-P**	**1989-P**	--	--	1993-95	**1993-95, 1997-P**	**1993-95, 1997-P**	--
12323670	**Mill Creek near Anaconda**	34.4	**2005**	**2005**	--	--	--	**2005**	**2005**	--
12323700	**Mill Creek at Opportunity**	43.2	**2003-P**	**2003-P**	--	--	--	**2003-P**	**2003-P**	--
12323710	**Willow Creek near Anaconda**	13.7	**2005**	**2005**	--	--	--	**2005**	**2005**	--
12323720	**Willow Creek at Opportunity**	30.8	**2003-P**	**2003-P**	--	--	--	**2003-P**	**2003-P**	--
12323750	**Silver Bow Creek at Warm Springs**	473	**1972-79, 1994-P**	**1972-79, 1989, 1993-P**	--	--	1993-95	**1971, 1993-P**	**1993-P**	--
12323760	**Warm Springs Creek near Anaconda**	157	**1998-P**	**1998-P**	--	--	--	--	--	--
12323770	**Warm Springs Creek at Warm Springs**	163	**1984-P**	**1984-P**	--	**2000-P**	--	**1993-P**	**1993-P**	--
12323800	**Clark Fork near Galen**	651	**1988-P**	**1989-P**	--	1991-2002	--	**1971-74 1988-P**	**1988-P**	1971-74
12323840	**Lost Creek near Anaconda**	26.4	**2005**	**2005**	--	--	--	**2005**	**2005**	--
12323850	**Lost Creek near Galen**	60.5	**2003-P**	**2003-P**	--	--	--	**2003-P**	**2003-P**	--
12324000	Racetrack Creek near Anaconda	39.5	1911-13	--	--	--	--	--	--	--
12324100	Racetrack Creek below Granite Creek, near Anaconda	39.5	1914-17, 1957-73	1958-73, 1975	--	--	--	--	--	--
12324200	**Clark Fork at Deer Lodge**	995	**1979-P**	**1979-P**	--	1979-83, 1992-98, 2001-2002	**1985-P**	**1963, 1969-71, 1985-P**	**1985-P**	1969-71
12324250	Cottonwood Creek at Deer Lodge	45.4	--	1964, 1975-91	--	--	--	--	--	--
12324300	Clark Fork near Garrison	1,139	1961-62	--	--	--	--	--	--	--
12324590	**Little Blackfoot River near Garrison**	407	**1973-P**	**1973-P**	--	2000-03	--	1963, 1985-2004	1985-2004	--
12324600	Clark Fork at Garrison	1,550	--	--	--	--	--	1963, 1969-71	--	1970-71
12324660	Gold Creek at Goldcreek	64.1	1964-66	--	--	--	--	--	--	--
12324680	**Clark Fork at Goldcreek**	1,704	**1978-P**	**1978-P**	--	1992-98	--	**1992-P**	**1993-P**	--
12324700	Clark Fork tributary near Drummond	4.61	--	1958-95	--	--	--	--	--	--
12324800	Morris Creek near Drummond	12.6	--	1960-74, 1980	--	--	--	--	--	--
12325000	Georgetown Lake near Philipsburg	50.1	1939-97	--	--	--	--	--	--	--
12325500	**Flint Creek near Southern Cross**	52.6	**1940-98, 2000-P**	1941-98	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12326000	Trout Creek above main canal, near Philipsburg	4.09	1946-49	--	--	--	--	--	--	--
12326500	Trout Creek near Southern Cross	36.1	1946-51	--	--	--	--	--	--	--
12327000	Trout Creek near Philipsburg	34.9	1939-43, 1945-46	--	--	--	--	--	--	--
12327090	Flint Creek above Fred Burr Creek, near Philipsburg	108	1994-98	1994-98	--	--	--	--	--	--
12327100	Fred Burr Creek near Philipsburg	15.7	1994-96	1994-96	--	--	--	--	--	--
12327500	Marshall Creek near Philipsburg	22.8	1942-43	--	--	--	--	--	--	--
12328000	Marshall Creek at mouth, near Philipsburg	23.2	1939-42	--	--	--	--	--	--	--
12328500	Flint Creek near Philipsburg	192	1939-41	--	--	--	--	1972-73	--	1972-73
12329000	Flint Creek above Maxville siding, at Maxville	207	1939-41	--	--	--	--	--	--	--
12329500	**Flint Creek at Maxville**	208	**1941-P**	**1942-P**	--	--	--	--	--	--
12330000	**Boulder Creek at Maxville**	71.3	**1939-P**	**1940-P**	--	--	--	--	--	--
12330100	Flint Creek below Boulder Creek, near Maxville	--	--	--	--	--	--	1971	--	--
12330500	Flint Creek near Maxville	325	1946-49	--	--	--	--	--	--	--
12331000	Flint Creek near Hall	325	1939	--	--	--	--	--	--	--
12331100	Flint Creek below Douglas Creek, near Hall	339	1994-98	1995-98	--	--	--	--	--	--
12331500	Flint Creek near Drummond	490	1990-2004	1991-2004	--	--	--	1972-73, 1985-2004	1985-2004	1972-73
12331600	Clark Fork at Drummond	2,378	1967-68, 1973-83	1967, 1973-83	--	--	--	1971-74	--	1971-74
12331700	Edwards Gulch at Drummond	4.69	--	1960-62, 1974-91, 1996-2002	--	--	--	--	--	--
12331800	**Clark Fork near Drummond**	2,501	**1993-P**	**1993-P**	--	--	--	**1993-P**	**1993-P**	--
12331900	Clark Fork near Clinton	2,629	1979-90, 1992-94	1980-90, 1992-94	--	--	--	1963	--	--
12332000	**Middle Fork Rock Creek near Philipsburg**	123	**1937-P**	**1938-P**	--	--	--	--	--	--
12332500	East Fork Rock Creek Reservoir near Philipsburg	30.3	1939-95	--	--	--	--	--	--	--
12333000	East Fork Rock Creek near Philipsburg	30.3	1935-43	--	--	--	--	--	--	--
12333500	Rock Creek near Quigley	749	1922-27	1922	--	--	--	--	--	--
12334000	Ranch Creek near Quigley	42.7	1922-27	1922-27	--	--	--	--	--	--
12334500	Rock Creek below Ranch Creek, near Quigley	794	1911-12	--	--	--	--	--	--	--
12334510	**Rock Creek near Clinton**	885	**1972-P**	**1972-P**	--	**1979-83, 1995-2002 2005**	--	1985-2004	1985-2004	--
12334550	**Clark Fork at Turah Bridge, near Bonner**	3,641	**1985-P**	**1986-P**	--	1992-98	**1985-P**	**1985-P**	**1985-P**	--
12334600	Blackfoot River near Lincoln	15.1	1969-70	1969-70, 1975	--	--	--	1969-70	--	--
12334620	Blackfoot River below First Gulch, near Lincoln	25.9	--	--	--	--	--	1995-97	1995-97	--
12334650	**Blackfoot River below Alice Creek, near Lincoln**	96.9	1971-75	1971-75	--	--	--	**1971-74, 1995-97, 2004-P**	**1971-73, 1995-97, 2004-P**	1973
12334680	**Landers Fork near Lincoln**	130	--	--	--	--	--	**1995-97, 2004-P**	**1995-97, 2004-P**	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12334700	Blackfoot River below Seven-up Pete Creek, near Lincoln	255	--	--	--	--	--	1973, 1995-97	1995-97	1973, 1995-97
12334800	**Blackfoot River at Dalton Mountain Road bridge, near Lincoln**	399	--	--	--	--	--	**1973, 1995-97, 2004-P**	**1995-97, 2004-P**	1973, 1995-97
12334900	Blackfoot River at Blackfoot Canyon Campground, near Lincoln	437	--	--	--	--	--	1973	--	1973 1995-97
12335000	Blackfoot River near Helmville	481	1940-54	1941-53, 1964, 1974-75	--	--	--	--	--	--
12335100	**Blackfoot River above Nevada Creek, near Helmville**	494	**2000-P**	--	--	2000-2002	--	**1995-97 2003-P**	**1995-97 2003-P**	--
12335500	**Nevada Creek above reservoir, near Helmville**	116	**1939-P**	**1940-P**	--	--	--	**1980, 2003-P**	**1980,1994-2000, 2003-P**	--
12336000	Nevada Creek near Finn	144	1934-39	--	--	--	--	--	--	--
12336500	Nevada Lake near Finn	142	1939-95	--	--	-	--	--	--	--
12336600	**Nevada Creek below reservoir, near Helmville**	143	--	--	--	--	--	**2004-P**	**2004-P**	--
12337000	Nevada Creek near Helmville	165	1946-49	--	--	--	--	--	--	--
12337500	Douglas Creek near Helmville	84.8	1946-47	--	--	--	--	--	--	--
12337800	**Nevada Creek at mouth, near Helmville**	308	**2002-P**	--	--	**2002-P**	--	**2002-P**	**2002-P**	--
12337820	**Blackfoot River at Raymond Bridge, near Ovando**	--	--	--	--	--	--	**2004-P**	**2004-P**	--
12338000	North Fork Blackfoot River near Ovando	228	1921-23	--	--	--	--	--	--	--
12338100	Rock Creek above Salmon Creek, near Ovando	7.60	1998	1998	--	--	--	--	--	--
12338300	**North Fork Blackfoot River above Dry Gulch, near Ovando**	314	**1998-P**	**1998-P**	--	2001-2002	--	**1995-97, 2004-P**	**1995-97, 2004-P**	--
12338500	Blackfoot River near Ovando	1,274	1940-63	1941-64, 1975	--	--	--	--	--	--
12338540	Monture Creek above Dunham Creek, near Ovando	64.7	--	1978-91	--	--	--	--	--	--
12338550	Dunham Creek at mouth, near Ovando	31.7	--	1978-91	--	--	--	--	--	--
12338600	Monture Creek at Forest Service boundary, near Ovando	105	--	1964, 1974-91	--	--	--	--	--	--
12338690	**Monture Creek near Ovando**	140	1973-83	1974-83	--	--	--	**2004-P**	**2004-P**	--
12338700	**Blackfoot River at Scotty Brown Bridge, near Ovando**	1,428	--	--	--	--	--	**1995-97, 2004-P**	**1995-97, 2004-P**	1995-97
12339000	Blackfoot River at Clearwater	1,550	1921-23	--	--	--	--	--	--	--
12339300	Deer Creek near Seeley Lake	19.8	--	1974-91	--	--	--	--	--	--
12339450	Clearwater River near Clearwater	345	1975-92	1975-92, 1997	--	--	--	1995-97	1995-97	--
12339500	**Clearwater River at Clearwater**	391	1921-23	--	--	--	--	**2004-P**	**2004-P**	--
12339800	Blackfoot River near Potomac	2,046	1957-65	1957-65	--	--	--	--	--	--
12339900	West Twin Creek near Bonner	7.33	--	1959-91	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12340000	**Blackfoot River near Bonner**	2,290	**1898-99, 1901, 1903-05 1939-P**	**1899-1901, 1903-05, 1940-P**	--	**2000-P**	1986-95	**1963, 1985-P**	**1985-P**	--
12340200	Marshall Creek near Missoula	5.63	--	1959-73, 1980	--	--	--	--	--	--
12340500	**Clark Fork above Missoula**	5,999	**1929-P**	**1908, 1930-P**	--	1977-83	**1986-P**	**1969-71 1986-P**	**1986-P**	1969-71
12341000	Rattlesnake Creek at Missoula	79.7	1899-1901, 1958-67	1899,1948, 1958-59, 1961-64, 1966-67	--	--	--	--	--	--
12341500	Clark Fork at Missoula	6,084	1898-1907	1899-1907	--	--	--	1963	--	--
12342000	Painted Rocks Lake near Conner	317	1940-95	--	--	--	--	--	--	--
12342500	**West Fork Bitterroot River near Conner**	317	**1941-P**	**1941-P**	--	--	--	2001-2003	2001-2003	--
12342950	Trapper Creek near Conner	28.5	--	1974-91	--	--	--	--	--	--
12343000	West Fork Bitterroot River near Darby	552	1910-17	1911-17	--	--	--	2004	2004	--
12343300	**Laird Creek near Sula**	9.3	--	**2001-P**	--	--	--	--	--	--
12343400	**East Fork Bitterroot River near Conner**	381	1956-72 2001-2004	1956-72 2001-2004	--	--	--	**2001-P**	**2001-P**	--
12343500	East Fork Bitterroot River at Conner	405	1910-16, 1937-57	1937-57	--	--	--	--	--	--
12344000	**Bitterroot River near Darby**	1,049	**1937-P**	**1938-P**	--	**2001-P**	--	**1956, 1997-98 2001-P**	**1997-98 2001-P**	--
12344300	Burke Gulch near Darby	6.50	--	1958-82, 2001-03	--	--	--	--	--	--
12344500	Lake Como near Darby	54.6	1939-99	--	--	--	--	1956	--	--
12345000	Rock Creek near Darby	55.4	1946-53, 1957-59	1948-53, 1958-59	--	--	--	--	--	--
12345500	Rock Creek Canal near Darby	--	1946, 1948-53	--	--	--	--	--	--	--
12345800	Camas Creek near Hamilton	5.05	--	1958-73	--	--	--	--	--	--
12345850	Sleeping Child Creek near Hamilton	65.2	1973-77	1972-91	--	--	--	1956	--	--
12346000	Bitterroot River near Grantsdale	1,414	1902-07	--	--	--	--	--	--	--
12346500	Skalkaho Creek near Hamilton	87.8	1949-53, 1957-79, 2001-03	1948-54, 1958-79, 2001-03	--	--	--	1956,1980, 2001-03	1980, 2001-03	--
12347000	Skalkaho Creek at Brennan's ranch, near Hamilton	96.2	1920-24	1920-24, 1948	--	--	--	--	--	--
12347360	Bitterroot River at Hamilton	--	--	--	--	--	--	1997-98	1997-98	--
12347500	Blodgett Creek near Corvallis	25.9	1947-69	1947-69, 1972	--	--	--	1956	--	--
12348000	Blodgett Creek near Hamilton	28.3	1938-43	1938-43	--	--	--	--	--	--
12348200	Bitterroot River near Corvallis	1,711	1959-63	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12348500	Willow Creek near Corvallis	21.9	1920-24, 1957-66	1920-22, 1958-73	--	--	--	1956	--	--
12349000	Willow Creek at Anfinson Ranch, near Corvallis	23.2	1938-43	1938-43	--	--	--	--	--	--
12349500	Fred Burr Creek near Victor	17.7	1947-51	--	--	--	--	--	--	--
12350000	Bear Creek near Victor	26.8	1938-55, 1957-59	1938-54, 1958-59	--	--	--	1956	--	--
12350200	Gash Creek near Victor	3.37	--	1958-73	--	--	--	--	--	--
12350250	**Bitterroot River at Bell Crossing, near Victor**	1,963	**1987-P**	**1987-P**	--	--	--	1997-98	1997-98	--
12350300	Big Creek near Victor	--	--	--	--	--	--	1956	--	--
12350500	Kootenai Creek near Stevensville	28.9	1949-53, 1957-63	1948-53, 1958-73	--	--	--	1956	--	--
12351000	Burnt Fork Bitterroot River near Stevensville	73.2	1920, 1922-24, 1938-62	1920, 1922-24, 1938-73	--	--	--	1956	1965	--
12351200	**Bitterroot River near Florence**	2,354	**1957-66 2003-P**	**1958-66, 1974,1982 2003-P**	--	--	--	**1956, 1997-98, 2004-P**	**1997-98, 2004-P**	--
12351400	Eightmile Creek near Florence	19.5	1957-63	1958-73	--	--	--	1956	--	--
12351500	Lolo Creek near Lolo	231	1911-15	--	--	--	--	--	--	--
12352000	Lolo Creek above Sleeman Creek, near Lolo	250	1951-60	1951-60, 1972,1974	--	--	--	--	--	--
12352200	Hays Creek near Missoula	4.16	--	1959-66, 1968-74, 1980	--	--	--	--	--	--
12352500	**Bitterroot River near Missoula**	2,814	**1898-1901, 1903-04, 1989-P**	**1899-1901, 1903-04, 1990-P**	--	**2000-P**	--	**1997-P**	**1997-P**	--
12352980	Bitterroot River at Maclay bridge, near Missoula	2,850	--	--	--	--	--	1970-73	--	1970-73
12353000	**Clark Fork below Missoula**	9,003	**1929-P**	**1930-P**	--	1977-82	--	1979-95	1979-95	1979-95
12353250	Ninemile Creek near Alberton	50.2	--	1972, 1974-82	--	--	--	--	--	--
12353280	Ninemile Creek near Huson	170	1973-83	1974-83	--	--	--	--	--	--
12353300	Clark Fork near Alberton	9,272	1959-63	--	--	--	--	1969-71	--	1970-71
12353400	Negro Gulch near Alberton	8.02	--	1959-73, 1984-91	--	--	--	--	--	--
12353450	Fish Creek below West Fork, near Tarkio	242	--	--	--	1985-91	--	--	--	--
12353500	Clark Fork at Tarkio	9,882	1945-49	--	--	--	--	--	--	--
12353650	Clark Fork at Superior	10,210	--	--	--	1985-91	--	--	--	--
12353800	Thompson Creek near Superior	12.2	--	1961-79, 1982	--	--	--	--	--	--
12353820	Dry Creek near Superior	46.3	1982-86	1982-91	--	--	--	--	--	--
12353850	East Fork Timber Creek near Haugan	2.72	--	1961-75, 1979	--	--	--	--	--	--
12353900	St. Regis River tributary near St. Regis	1.16	--	1959-61	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12354000	**St. Regis River near St. Regis**	303	**1910-17, 1958-75, 2002-P**	**1911-17, 1934,1948, 1954, 1959-75, 2002-P**	--	1985-91	--	--	--	--
12354100	North Fork Little Joe Creek near St. Regis	14.7	--	1960-74	--	--	--	--	--	--
12354500	**Clark Fork at St. Regis**	10,709	**1910-P**	**1911-23, 1929-P**	--	2002	--	1999-2003	--	--
12354700	Clark Fork near Paradise	10,794	--	--	--	1985-91	--	--	--	--
12355000	**Flathead River at Flathead, British Columbia**	427	**1929-95, 1999-P**	**1929-94, 2000-P**	--	1975-91	1975-79, 1985-91,	**1949-50, 1965,1970, 1975-93, 1999-P**	**1965,1970, 1975-93 1999-P**	1970, 1975-93
12355100	Starvation Creek near Flathead, British Columbia	16.4	1986-87	1986-87	--	--	--	--	--	--
12355150	Tuchuck Creek near Flathead, British Columbia	10.1	1986-88	1986-88	--	--	--	--	--	--
12355350	Big Creek at Big Creek Ranger Station, near Columbia Falls	82.1	--	1964, 1973-91	--	--	--	1980	1980	--
12355500	**North Fork Flathead River near Columbia Falls**	1,548	**1910-17, 1929-P**	**1911-17, 1929-P**	1976-79	1976-2004	1976-79	1950,1970, 1976-79 1999-2003	1976-79, 1999-2003	1970, 1976-79
12355600	Middle Fork Flathead River at Schafer Ranger Station, near Essex	--	--	--	--	--	--	1970	--	1970
12355700	Middle Fork Flathead River near Essex	408	1957-61	1942-43, 1945-53, 1956-61, 1964	--	--	--	--	--	--
12355900	Middle Fork Flathead River above Bear Creek, near Essex	--	--	--	--	--	--	1970	--	1970
12356000	Skyland Creek near Essex	8.09	1946-52	1946-52, 1954, 1959-75	--	--	--	--	--	--
12356500	Bear Creek near Essex	20.4	1946-52	1946-52, 1964, 1975-91	--	--	--	--	--	--
12357000	Middle Fork Flathead River at Essex	510	1940-53, 1956-64	1940-54, 1956-64	--	--	--	--	--	--
12357300	Moccasin Creek near West Glacier	2.38	--	1959-75	--	--	--	--	--	--
12357400	Middle Fork Flathead River tributary at West Glacier	0.14	--	1960-74	--	--	--	--	--	--
12357500	Middle Fork Flathead River at West Glacier	943	1911-23, 1929-33, 1943-48	1911-23, 1929-33, 1944-48	--	--	--	--	--	--
12358000	McDonald Creek at Apgar	175	1912-14	--	--	--	--	--	--	--
12358500	**Middle Fork Flathead River near West Glacier**	1,128	**1939-P**	**1940-P**	--	--	--	1949-50, 1970, 1998-2003	1999-2003	1970
12358900	South Fork Flathead River above Harrison Creek, near Swan Lake	--	--	--	--	--	--	1970	--	1970
12359000	South Fork Flathead River at Spotted Bear Ranger Station, near Hungry Horse	958	1948-57, 1959-67	1948-57, 1960-67	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12359500	Spotted Bear River near Hungry Horse	184	1949-56	1948-56, 1964	--	--	--	--	--	--
12359800	**South Fork Flathead River above Twin Creek, near Hungry Horse**	1,160	**1964-82, 1985-P**	**1964-82, 1985-P**	--	--	--	1970	--	1970
12360000	Twin Creek near Hungry Horse	47.0	1948-56, 1965-67	1948-56, 1964-67	--	--	--	--	--	--
12360500	Lower Twin Creek near Hungry Horse	22.4	1948-56	1948-56	--	--	--	--	--	--
12360600	Soldier Creek near Hungry Horse	4.77	1965-67	1965-66	--	--	--	--	--	--
12361000	Sullivan Creek near Hungry Horse	71.3	1948-56, 1959-76	1948-56, 1960-76	--	--	--	--	--	--
12361500	Graves Creek near Hungry Horse	27.0	1948-56, 1965-67	1948-56, 1964-67	--	--	--	--	--	--
12361600	Canyon Creek near Hungry Horse	5.8	1965-67	1965-66	--	--	--	--	--	--
12361700	Goldie Creek near Hungry Horse	3.29	1965-67	1966	--	--	--	--	--	--
12361880	Wounded Buck Creek near Hungry Horse	13.6	1965-67	1965-66	--	--	--	--	--	--
12361950	Hungry Horse Creek near Hungry Horse	23.3	1969-72	1970	--	--	--	--	--	--
12361960	Emery Creek near Hungry Horse	26.4	1965-67	1965-66	--	--	--	--	--	--
12362000	**Hungry Horse Reservoir near Hungry Horse**	1,654	**1951-P**	--	--	--	--	--	--	--
12362500	**South Fork Flathead River near Columbia Falls**	1,663	**1910-16, 1923-P**	**1911-P**	--	**1964-68, 1979-P**	--	1949-50	--	--
12363000	**Flathead River at Columbia Falls**	4,464	**1922-23, 1928-P**	**1894, 1922-23, 1928-P**	1996-67, 1979-81	**1949-50, 1963-67, 1979-P**	1965-67	**1949-50, 1963-67, 1970, 1979-94 2002-P**	**1965,1967, 1979-94 2002-P**	1979-94
12363500	Flathead River near Kalispell	4,500	--	--	--	--	1968-69	--	1968	--
12363900	Rock Creek near Olney	3.61	--	1961-75	--	--	--	--	--	--
12363920	Stillwater River at Olney	146	1973-82	1973-82	--	--	--	--	--	--
12364000	Logan Creek at Tally Lake, near Whitefish	183	1931-34, 1936-42, 1945-47	1936-42, 1945-47	--	--	--	--	--	--
12364500	Logan Creek near Whitefish	199	1931	--	--	--	--	--	--	--
12365000	**Stillwater River near Whitefish**	556	**1930-50, 1972-P**	**1931-50, 1964, 1973-P**	--	--	--	--	--	--
12365500	Stillwater River near Kalispell	338	1907,1922, 1928-31	--	--	--	--	--	--	--
12365800	Swift Creek near Whitefish	78.0	1973-81	1973-81	--	--	--	--	--	--
12366000	**Whitefish River near Kalispell**	170	**1928-50, 1972-P**	**1929-50, 1964, 1973-P**	--	--	--	1999-2003	1999-2003	--
12366100	Trumbull Creek near Columbia Falls	9.0	--	1997-2002	--	--	--	--	--	--
12367000	Ashley Creek near Kila	44.2	1916	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12367500	Ashley Creek near Kalispell	201	1931-50, 1972-74	1931-32, 1935-50, 1973-74	--	--	---	1969-70	--	1969-70
12367800	Ashley Creek below Kalispell	--	--	--	--	--	--	1969-70	--	1969-70
12368500	Flathead River at Therriault ferry, near Kalispell	--	1934-45	--	--	--	--	--	--	--
12369000	Flathead River near Bigfork	6,300	1909-12, 1928-37, 1939-45	--	--	--	--	--	--	1969-71
12369200	Swan River near Condon	69.1	1973-92	1973-92	--	--	--	--	--	--
12369250	Holland Creek near Condon	22.3	--	1974-91	--	--	--	--	--	--
12369650	North Fork Lost Creek near Swan Lake	13.0	--	1982-91	--	--	--	--	--	--
12370000	**Swan River near Bigfork**	671	**1910-11, 1922-P**	**1922-P**	--	2000-2003	--	1999-2003	1999-2003	--
12370500	Dayton Creek near Proctor	18.5	--	1959-91	--	--	--	--	--	--
12370900	Teepee Creek near Polson	2.18	1983-87	1960-74, 1980, 1983-87	--	--	--	1983-85	1983-85	--
12371000	**Turtle Lake near Polson**	--	**1939-P**	--	--	--	--	--	--	--
12371100	Hell Roaring Creek near Polson	6.22	1917-32	1917-32, 1948, 1959-67, 1980	--	--	--	--	--	--
12371500	Flathead Lake at Somers	7,086	1900, 1908-98	--	--	--	--	--	--	--
12371550	**Flathead Lake at Polson**	7,086	**1999-P**	--	--	--	--	1969-71	--	1969-71
12372000	**Flathead River near Polson**	7,096	**1907-P**	**1894, 1908-P**	--	1977-83	--	--	--	--
12372500	**Little Bitterroot Lake near Marion**	31.8	**1939-P**	--	--	--	--	--	--	--
12373000	Little Bitterroot River near Marion	31.8	1910-16	--	--	--	--	--	--	--
12373500	**Hubbart Reservoir near Niarada**	114	**1939-P**	--	--	--	--	--	--	--
12374000	Little Bitterroot River near Hubbart	134	1909-16	--	--	--	--	--	--	--
12374250	**Mill Creek above Bassoo Creek, near Niarada**	19.6	**1983-P**	**1983-P**	--	--	--	1983-85	1983-85	--
12374300	Mill Creek near Niarada	28.2	--	1959-73	--	--	--	--	--	--
12374500	Little Bitterroot River near Niarada	223	1908-10, 1916-17	--	--	--	--	--	--	--
12374800	Cromwell Creek near Niarada	14.3	1983-89	1983-89	--	--	--	1983-85	1983-85	--
12374900	Garden Creek near Hot Springs	3.57	--	1959-73	--	--	--	--	--	--
12375000	**Upper Dry Fork Reservoir near Lonepine**	8.53	**1940-P**	--	--	--	--	--	--	--
12375500	**Dry Fork Reservoir near Lonepine**	17.8	**1939-P**	--	--	--	--	--	--	--
12375800	Little Bitterroot River near Perma	--	--	--	--	--	--	1987-92	1987-92	--
12375900	**South Crow Creek near Ronan**	7.57	**1982-P**	**1983-P**	--	--	--	1983-85	1983-85	--
12376000	Crow Creek near Ronan	46.1	1906-17	1907-11, 1913-17	--	--	--	--	--	--
12376500	Mud Creek near Ronan	30.4	1908-11	--	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conduct-ance	Water tempera-ture	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12376700	**Lower Crow Reservoir near Charlo**	--	**1939-P**	--	--	--	--	--	--	--
12376900	Crow Creek at mouth, near Ronan	--	--	--	--	--	--	1987-92	1987-92	--
12377000	Crow Creek at Lozeaus ranch, near Ronan	139	1911-16	--	--	--	--	--	--	--
12377150	**Mission Creek above reservoir, near St. Ignatius**	12.4	**1982-P**	**1982-P**	--	--	--	1983-85	1983-86	--
12377200	**Mission Reservoir near St. Ignatius**	--	**1939-P**	--	--	--	--	--	--	--
12377300	**St. Mary's Lake near St. Ignatius**	--	**1939-P**	--	--	--	--	--	--	--
12377500	Dry Creek near St. Ignatius	24.7	1908-16	1909-16	--	--	--	--	--	--
12377900	**Pablo Reservoir near Polson**	--	**1939-P**	--	--	--	--	--	--	--
12378000	Mission Creek near St. Ignatius	74.8	1906-17	1907-17	--	--	--	--	--	--
12378200	**McDonald Reservoir near Charlo**	--	**1939-P**	--	--	--	--	--	--	--
12378300	**Kicking Horse Reservoir near Charlo**	--	**1939-P**	--	--	--	--	--	--	--
12378400	**Ninepipe Reservoir near Charlo**	--	**1939-P**	--	--	--	--	--	--	--
12378500	Post Creek at Fitzpatrick's ranch, near Ronan	28.4	1906-11	--	--	--	--	--	--	--
12379000	Post Creek at Deschamp's ranch, near Ronan	29.7	1911	--	--	--	--	--	--	--
12379500	Post Creek near St. Ignatius	47.6	1911-17	--	--	--	--	--	--	--
12379600	Mission Creek at National Bison Range, at Moiese	236	--	--	--	--	--	1987-92	1987-92	--
12380000	**Upper Jocko Lake near Arlee**	2.99	**1968-P**	--	--	--	--	--	--	--
12380500	**Lower Jocko Lake near Arlee**	7.39	**1939-P**	--	--	--	--	--	--	--
12381000	Jocko River above South Fork, near Jocko	14.9	1912-16	--	--	--	--	--	--	--
12381400	**South Fork Jocko River near Arlee**	56.0	**1982-P**	**1983-P**	--	--	--	1983-86	1983-86	
12381500	Jocko River below South Fork, near Jocko	72.3	1912-16	--	--	--	--	--	--	--
12382000	Middle Fork Jocko River near Jocko	19.5	1912-16	--	--	--	--	--	--	--
12382500	Falls Creek near Jocko	3.57	1912-16	--	--	--	--	--	--	--
12383000	Jocko River near Jocko	140	1918-19	--	--	--	--	--	--	--
12383500	**Big Knife Creek near Arlee**	6.88	**1910-16, 1983-P**	**1982-P**	--	--	--	1983-85	1983-85	--
12384000	Big Knife Creek near Jocko	7.44	1909-11	--	--	--	--	--	--	--
12384500	Jocko River below Big Knife Creek, near Jocko	154	1909-16	--	--	--	--	--	--	--
12386000	East Finley Creek near Jocko	5.48	1909-16	--	--	--	--	--	-	--
12386500	Indian Ditch near Jocko	--	1909-16	--	--	--	--	--	--	--
12387000	Finley Creek near Jocko	36.7	1909-16	--	--	--	--	--	--	--
12387100	Agency Creek near Jocko	4.00	1909-16	--	--	--	--	--	--	--
12387200	Blodgett Creek near Jocko	5.48	1909	--	--	--	--	--	--	--
12387450	**Valley Creek near Arlee**	15.3	**1983-P**	**1983-P**	--	--	--	1983-85	1983-85	--
12387500	Valley Creek near Ravalli	64.1	1909-10	--	--	--	--	--	--	--
12388000	Jocko River at Ravalli	348	1907-11	--	--	--	--	--	--	--
12388200	**Jocko River at Dixon**	380	**1990-P**	**1990-P**	--	--		1987-92	1987-92	--
12388400	**Revais Creek below West Fork, near Dixon**	23.4	**1983-P**	**1983-P**	--	--	--	1983-85, 1991-92	1983-85, 1991-92	--
12388500	Revais Creek near Dixon	26.3	1911-19	1911-16, 1918-19	--	--	--	--	--	--

Table 11. Montana active and discontinued streamflow-gaging, water-quality, and crest-stage gage stations (active stations in bold print).--Continued

Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
			Discharge or contents		Water quality					
					Daily			Periodic		
			Daily or monthly	Annual peak	Specific conductance	Water temperature	Sediment	Chemistry	Sediment	Biology
			Part 12--Pend Oreille River Basin--Continued							
12388650	Camas Creek near Hot Springs	4.46	1983-87	1983-87	--	--	--	1983-85	1983-85	--
12388700	**Flathead River at Perma**	8,795	**1984-P**	**1984-P**	--	**2000-2003, 2005**	--	1971-73, 1984-92 1997-2003	1984-92, 1999-2003	1971-73
12389000	**Clark Fork near Plains**	19,958	**1910-P**	**1912-P**	--	--	--	1969-70	--	1969-70
12389150	McGregor Creek tributary near Marion	2.55	--	1972-82	--	--	--	--	--	--
12389200	Thompson River near Marion	104	--	--	--	--	--	1975-76	1975-76	1975-76
12389300	Thompson River above Little Thompson River, near Thompson Falls	321	--	--	--	--	--	1975-76	1975-76	1975-76
12389400	Little Thompson River near Thompson Falls	129	--	--	--	--	--	1975-76	1975-76	1975-76
12389450	West Fork Thompson River near Thompson Falls	35.7	--	--	--	--	--	1975-76	1975-76	1975-76
12389500	**Thompson River near Thompson Falls**	642	**1911-16, 1956-P**	**1948, 1956-P**	--	--	--	1975-76	1975-76	1975-76
12390000	**Thompson Falls Reservoir at Thompson Falls**	20,968	**1939-P**	--	--	--	--	--	--	--
12390500	Prospect Creek near Thompson Falls	145	1911	--	--	--	--	--	--	--
12390700	**Prospect Creek at Thompson Falls**	182	**1956-P**	**1956-P**	--	--	--	--	--	--
12391000	Clark Fork at Thompson Falls	21,113	1952-59	1952-59	--	--	--	1963, 1969-73	--	1970-73
12391100	White Pine Creek near Trout Creek	8.75	--	1974-84	--	--	--	--	--	--
12391200	Canyon Creek near Trout Creek	8.64	--	1972, 1974-91	--	--	--	--	--	--
12391300	**Noxon Rapids Reservoir near Noxon**	21,833	**1959-P**	--	--	--	--	--	--	--
12391400	**Clark Fork below Noxon Rapids Dam, near Noxon**	21,833	**1960-P**	**1960-P**	--	--	--	--	--	--
12391420	Rock Creek near Noxon	32	--	--	--	--	--	1998	1998	--
12391430	Skeleton Creek near Noxon	2.10	--	1973-84	--	--	--	--	--	--
12391500	Bull River near Heron	45.7	--	--	--	--	--	1971	--	--
12391525	Snake Creek near Noxon	3.11	--	1972-84	--	--	--	--	--	--
12391550	Bull River near Noxon	139	1973-82	1973-82	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'03", long 110°22'48" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft downstream from Fishing Bridge, 0.3 mi downstream from outlet of Yellowstone Lake, and at river mile 616.4.

DRAINAGE AREA.--991 mi^2.

PERIOD OF RECORD.--December 1922 to September 1982, October 1983 to September 1986, October 1988 to current year. Prior to October 1926, gage heights only. Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46 published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area. WDR MT-03-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,729.58 ft (NGVD 29). Prior to Oct. 2, 1928, nonrecording gage at site 450 ft upstream at elevation 1.07 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No artificial regulation. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,000	811	619	e400	e330	e360	e450	588	2,760	3,470	1,970	1,170
2	998	800	612	e400	e330	e360	e450	593	2,790	3,450	1,950	1,150
3	991	791	601	e380	e330	e370	e450	602	2,790	3,420	1,930	1,120
4	983	788	592	e380	e330	e370	e450	616	2,790	3,380	1,910	1,100
5	977	789	590	e360	e330	e380	e450	636	2,790	3,330	1,870	1,090
6	971	780	589	e350	e330	e380	e460	660	2,860	3,290	1,830	1,060
7	953	770	587	e340	e330	e400	e460	697	2,900	3,240	1,780	1,040
8	946	765	e580	e340	e330	e400	e460	734	2,910	3,190	1,740	1,020
9	936	764	e580	e340	e330	e420	e460	768	2,910	3,150	1,710	1,010
10	922	762	e560	e340	e330	e420	e460	826	2,910	3,110	1,680	1,000
11	915	754	e560	e330	e330	e420	e460	861	2,870	3,080	1,650	978
12	905	751	e560	e330	e330	e430	e460	897	2,890	3,020	1,610	958
13	894	743	e540	e330	e330	e430	e460	922	2,910	2,970	1,560	959
14	886	741	e540	e330	e330	e430	e470	942	2,880	2,920	1,540	946
15	880	734	e540	e330	e320	e430	e470	973	2,870	2,850	1,520	926
16	874	729	e520	e330	e320	e430	472	1,020	2,860	2,820	1,480	906
17	858	726	e520	e330	e320	e440	472	1,100	2,900	2,730	1,470	893
18	867	719	e520	e330	e320	e440	475	1,150	2,950	2,680	1,480	887
19	850	710	e500	e330	e320	e440	477	1,220	3,000	2,620	1,520	874
20	845	702	e500	e330	e330	e440	481	1,290	3,060	2,550	1,490	858
21	843	695	e480	e340	e330	e440	486	1,270	3,140	2,490	1,470	854
22	837	686	e480	e340	e330	e440	488	1,740	3,230	2,440	1,440	844
23	845	679	e460	e340	e340	e450	490	1,940	3,330	2,410	1,440	847
24	849	677	e460	e340	e340	e450	494	2,120	3,420	2,340	1,410	848
25	841	677	e440	e340	e340	e450	506	2,270	3,490	2,270	1,360	849
26	831	661	e440	e340	e350	e450	522	2,370	3,530	2,220	1,330	837
27	825	651	e440	e340	e350	e450	546	2,440	3,530	2,180	1,300	825
28	823	637	e440	e340	e350	e450	563	2,510	3,540	2,130	1,270	814
29	827	636	e420	e340	---	e450	574	2,570	3,530	2,080	1,250	805
30	828	628	e420	e340	---	e450	581	2,620	3,500	2,040	1,230	795
31	814	---	e420	e340	---	e450	---	2,670	---	2,010	1,190	---
TOTAL	27,614	21,756	16,110	10,670	9,280	13,120	14,497	41,615	91,840	85,880	48,380	28,263
MEAN	891	725	520	344	331	423	483	1,342	3,061	2,770	1,561	942
MAX	1,000	811	619	400	350	450	581	2,670	3,540	3,470	1,970	1,170
MIN	814	628	420	330	320	360	450	588	2,760	2,010	1,190	795
AC-FT	54,770	43,150	31,950	21,160	18,410	26,020	28,750	82,540	182,200	170,300	95,960	56,060
CFSM	0.90	0.73	0.52	0.35	0.33	0.43	0.49	1.35	3.09	2.80	1.57	0.95
IN.	1.04	0.82	0.60	0.40	0.35	0.49	0.54	1.56	3.45	3.22	1.82	1.06

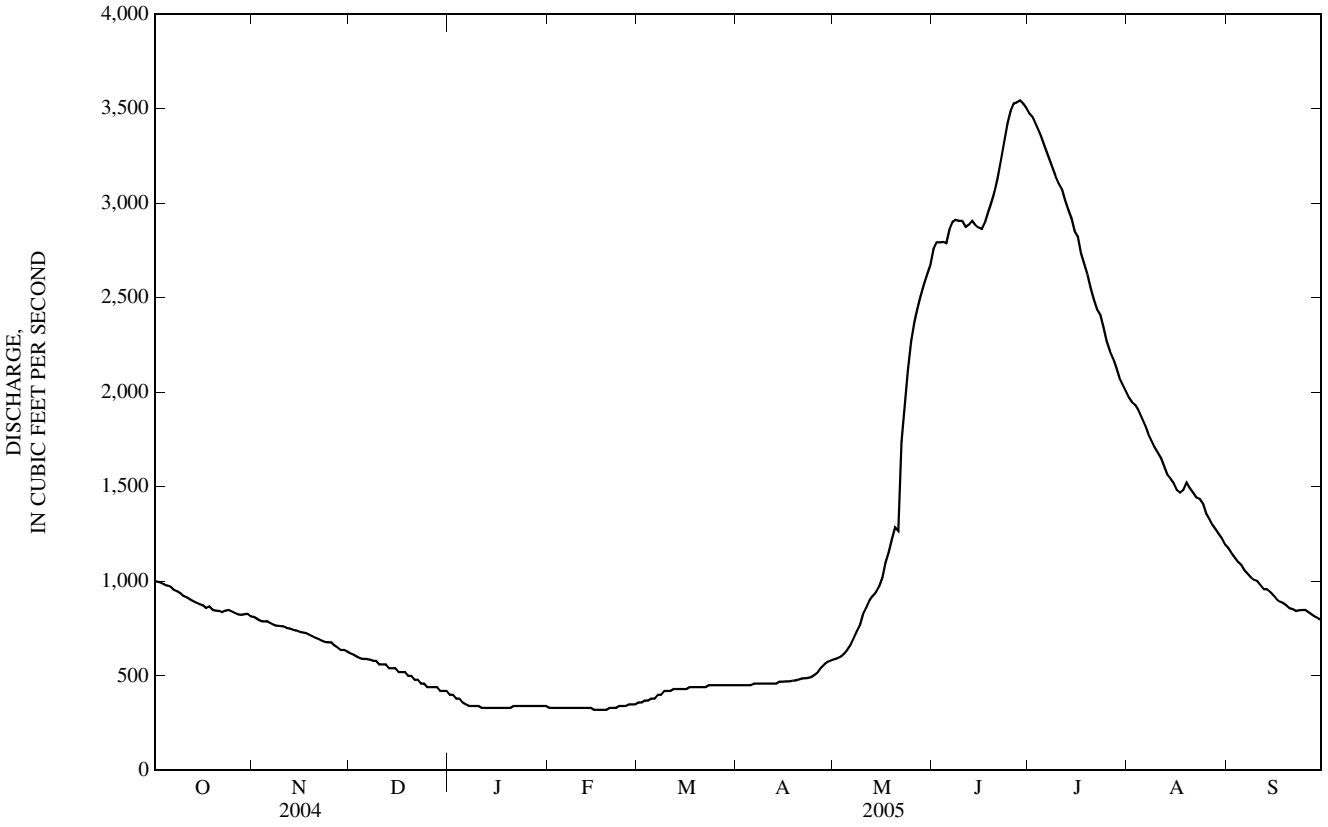
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2005, BY WATER YEAR (WY)*

MEAN	797	604	473	396	386	444	540	1,164	3,678	3,995	2,188	1,202
MAX	1,259	984	775	699	637	717	801	2,214	8,574	7,160	4,031	1,954
(WY)	(1973)	(1951)	(1951)	(1998)	(1998)	(1962)	(1952)	(1997)	(1997)	(1982)	(1982)	(1982)
MIN	327	276	246	168	122	130	175	605	1,707	1,272	812	538
(WY)	(1989)	(1989)	(1932)	(1989)	(1989)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1934)

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1927 - 2005*	
ANNUAL TOTAL	369,433		409,025			
ANNUAL MEAN	1,009		1,121		1,327	
HIGHEST ANNUAL MEAN					2,253	1997
LOWEST ANNUAL MEAN					682	1934
HIGHEST DAILY MEAN	2,600	Jul 2	3,540	Jun 28	9,930	Jun 19, 1997
LOWEST DAILY MEAN	340	Jan 4	320	Feb 15	100	Feb 18, 1993
ANNUAL SEVEN-DAY MINIMUM	344	Jan 1	323	Feb 13	113	Feb 11, 1989
MAXIMUM PEAK FLOW			3,610	Jun 26	9,950	Jun 18, 1997
MAXIMUM PEAK STAGE			5.82	Jun 26	8.90	Jun 18, 1997
ANNUAL RUNOFF (AC-FT)	732,800		811,300		961,600	
ANNUAL RUNOFF (CFSM)	1.02		1.13		1.34	
ANNUAL RUNOFF (INCHES)	13.87		15.35		18.20	
10 PERCENT EXCEEDS	2,330		2,870		3,460	
50 PERCENT EXCEEDS	788		768		676	
90 PERCENT EXCEEDS	350		340		340	

*--During periods of operation (October 1926 to September 1982, October 1983 to September 1986, October 1988 to current year).
e--Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT

LOCATION.--Lat 45°00'11", long 110°00'04" (NAD 27), in $SW^1/_4NW^1/_4SW^1/_4$ sec.33, T.9 S., R.14 E., Park County, Hydrologic Unit 10070001, at Yellowstone National Park boundary, 0.25 mi downstream from Silver Creek, 0.75 mi southwest of Silver Gate, and at river mile 17.8.

DRAINAGE AREA.--31.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to current year. October 1998 to September 2002 records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft (NGVD 29).

REMARKS.--Water-discharge records good except for those discharges greater than 600 ft^3/s, which are fair, and estimated daily discharges, which are poor. No known regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	e12	e9.0	6.8	e4.0	e2.5	3.0	17	188	255	34	13
2	29	e13	e10	6.9	e4.0	e2.5	3.1	18	159	240	33	13
3	28	14	e10	6.8	e4.0	e2.3	3.3	19	143	209	32	12
4	27	14	e8.5	e5.0	e4.5	e2.3	3.1	20	141	186	30	12
5	26	14	e7.5	e5.5	e4.5	e2.5	2.9	29	e160	182	28	12
6	25	15	e8.0	e7.0	e4.0	e2.8	3.2	43	e270	180	26	11
7	24	14	e8.5	e7.0	e4.0	e3.0	5.0	48	e220	170	25	11
8	23	15	e9.0	e7.5	e4.0	e3.2	6.0	50	e180	172	24	11
9	22	14	e9.0	e7.5	e4.0	3.4	4.5	55	e160	157	24	11
10	22	14	9.1	e6.5	e3.5	3.5	4.0	58	e150	205	24	12
11	21	13	8.9	e6.0	e3.5	3.5	4.0	50	e160	188	27	12
12	20	15	8.1	e5.5	e4.0	3.5	4.6	46	e180	139	27	13
13	19	15	8.8	e6.0	e4.5	3.5	6.2	43	e160	134	28	12
14	19	13	9.2	e6.5	e3.5	e3.2	6.9	53	e160	122	23	11
15	21	14	8.4	e6.5	e2.5	e3.2	5.6	73	218	111	21	11
16	20	15	7.8	e6.0	e2.0	e3.2	7.1	154	e310	102	20	11
17	19	16	8.6	e6.5	e2.0	3.4	10	150	e380	91	21	11
18	18	13	8.4	6.6	e2.5	3.6	11	115	e360	82	40	12
19	18	e12	8.1	6.0	e3.0	3.5	9.0	308	e330	75	31	10
20	18	e10	7.7	5.5	e3.5	3.3	8.1	403	e380	69	22	9.7
21	18	e11	e6.0	5.1	e3.0	3.3	7.9	439	e430	64	20	9.5
22	18	e12	e5.0	4.7	e2.5	3.2	8.7	388	e480	59	20	9.5
23	17	e13	e4.0	e4.5	e2.2	3.2	13	408	517	57	19	10
24	16	e13	e5.0	e4.0	e2.2	3.1	18	341	485	52	18	16
25	18	e13	e6.0	e4.0	e2.2	3.2	24	257	418	60	17	15
26	17	e12	e6.0	e4.0	e2.2	3.1	25	221	337	52	16	11
27	16	e11	e6.5	e4.0	e2.2	3.1	20	219	308	45	16	13
28	16	e9.0	e7.0	e4.5	e2.2	3.1	17	243	299	42	15	15
29	16	e7.0	7.1	e4.5	---	3.1	17	238	258	40	14	11
30	15	e8.0	7.0	e4.5	---	3.0	17	201	243	38	14	11
31	15	---	6.9	e4.0	---	2.9	---	178	---	35	14	---
TOTAL	631	384.0	239.1	175.4	90.2	96.2	278.2	4,885	8,184	3,613	723	351.7
MEAN	20.4	12.8	7.71	5.66	3.22	3.10	9.27	158	273	117	23.3	11.7
MAX	30	16	10	7.5	4.5	3.6	25	439	517	255	40	16
MIN	15	7.0	4.0	4.0	2.0	2.3	2.9	17	141	35	14	9.5
AC-FT	1,250	762	474	348	179	191	552	9,690	16,230	7,170	1,430	698
CFSM	0.65	0.41	0.25	0.18	0.10	0.10	0.30	5.05	8.74	3.74	0.75	0.38
IN.	0.75	0.46	0.29	0.21	0.11	0.11	0.33	5.82	9.76	4.31	0.86	0.42

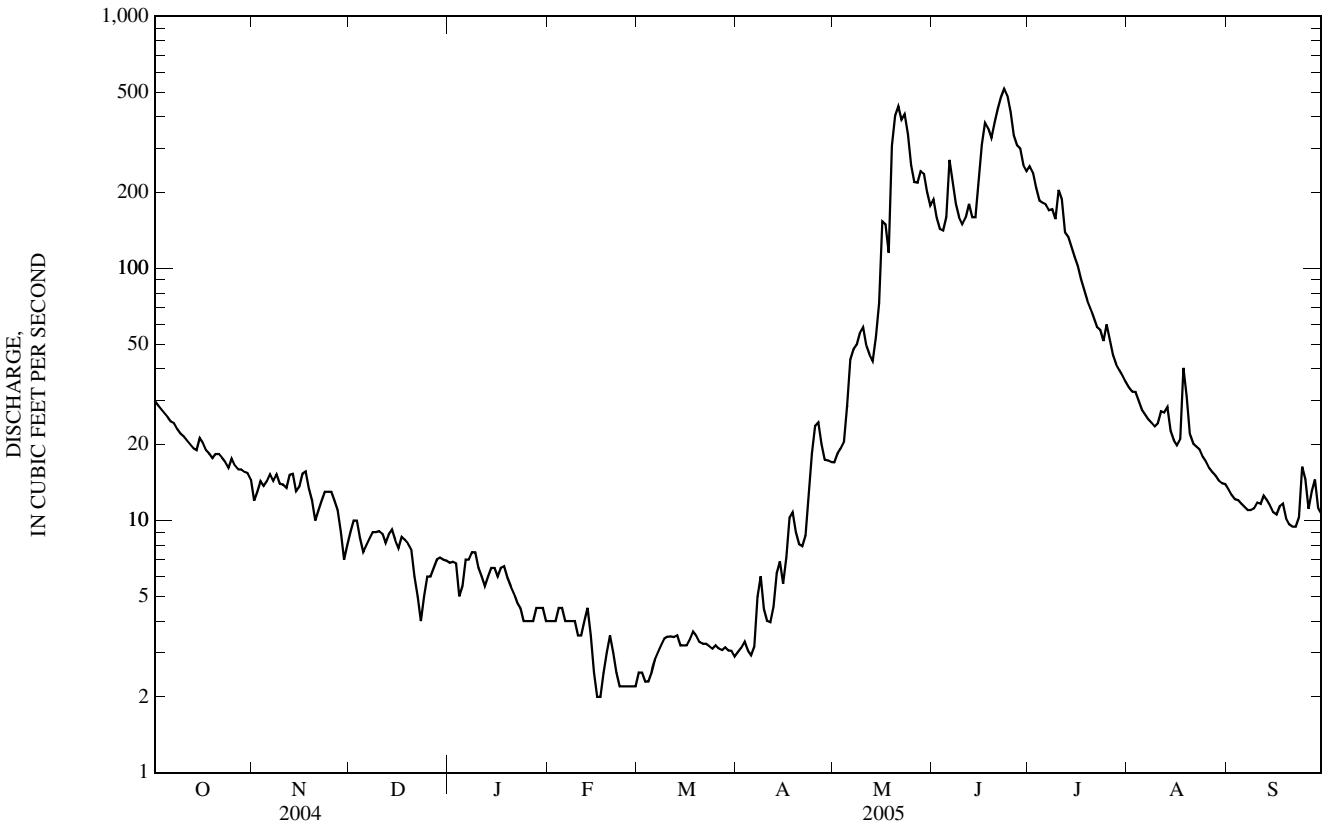
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2005, BY WATER YEAR (WY)

MEAN	10.4	6.46	4.15	2.91	2.09	1.90	10.0	137	312	130	27.5	15.3
MAX	20.4	12.8	7.71	5.66	3.22	3.10	19.3	167	408	212	45.0	27.9
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2001)	(2003)	(1999)	(1999)	(2004)
MIN	5.14	4.30	2.85	2.01	1.57	1.13	4.23	95.9	176	61.6	15.5	8.27
(WY)	(2002)	(2003)	(2001)	(2000)	(2004)	(2003)	(1999)	(1999)	(2001)	(2001)	(2001)	(2001)

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1999 - 2005	
ANNUAL TOTAL	19,397.00		19,650.8			
ANNUAL MEAN	53.0		53.8		55.0	
HIGHEST ANNUAL MEAN					65.4	2003
LOWEST ANNUAL MEAN					38.5	2001
HIGHEST DAILY MEAN	496	Jun 9	517	Jun 23	735	Jun 1, 2002
LOWEST DAILY MEAN	0.90	Mar 2	2.0	Feb 16	0.80	Feb 23, 2003
ANNUAL SEVEN-DAY MINIMUM	1.1	Feb 28	2.2	Feb 22	0.99	Mar 23, 2003
MAXIMUM PEAK FLOW			604	Jun 23	912	Jun 1, 2002
MAXIMUM PEAK STAGE			2.84	Jun 23	3.49	Jun 1, 2002
INSTANTANEOUS LOW FLOW			a1.8	Mar 31		
ANNUAL RUNOFF (AC-FT)	38,470		38,980		39,820	
ANNUAL RUNOFF (CFSM)	1.70		1.73		1.76	
ANNUAL RUNOFF (INCHES)	23.13		23.43		23.93	
10 PERCENT EXCEEDS	168		187		200	
50 PERCENT EXCEEDS	18		13		8.7	
90 PERCENT EXCEEDS	1.5		3.2		1.9	

a--Gage height, 0.75 ft, may have been less during periods of ice effect.
e--Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1999 to 2001, April 2003 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2003 to current year.

INSTRUMENTATION.--Temperature recorder installed April 23, 2003.

REMARKS.--Daily water temperature record good except for the period June 24 to July 20, which is poor. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 17.5°C, Aug. 15, 2003; minimum, 0.0°C, many days October through May.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 16.0°C, Aug. 4-7 and 21; minimum, 0.0°C, many days October through May.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.5	3.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.5	3.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.5	2.5	5.0	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
4	6.5	2.0	4.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
5	7.5	2.0	4.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	7.5	1.5	4.5	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
7	6.0	2.5	4.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	7.5	1.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.0	2.0	4.5	2.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
10	6.0	3.0	4.5	2.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
11	7.5	2.5	4.5	1.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
12	5.5	2.0	3.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
13	5.5	1.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	5.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	5.0	4.0	4.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
16	4.5	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	5.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	3.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	3.5	0.5	2.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
20	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
21	3.5	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
22	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
24	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	3.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	3.5	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	2.5	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	2.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
30	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
31	1.5	0.0	0.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	9.5	0.0	3.0	2.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.0	7.5	0.0	2.5
2	0.0	0.0	0.0	0.5	0.0	0.0	3.5	0.5	2.0	6.0	0.0	2.5
3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.5	1.5	6.5	0.0	3.0
4	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.5	1.5	6.0	1.5	3.5
5	0.0	0.0	0.0	0.5	0.0	0.0	3.0	0.5	1.5	6.5	1.5	3.5
6	0.0	0.0	0.0	0.5	0.0	0.0	5.0	0.0	2.0	7.5	0.5	3.0
7	0.0	0.0	0.0	0.5	0.0	0.0	5.5	0.0	2.0	4.5	1.0	2.5
8	0.0	0.0	0.0	1.0	0.0	0.5	2.5	0.5	1.0	7.0	1.5	3.0
9	0.0	0.0	0.0	1.5	0.0	0.5	4.0	0.5	2.0	5.0	1.5	3.0
10	0.0	0.0	0.0	2.0	0.0	0.5	4.5	0.5	2.0	4.5	1.5	3.0
11	0.0	0.0	0.0	1.5	0.0	0.5	5.5	0.0	2.0	5.5	1.5	3.0
12	0.0	0.0	0.0	1.0	0.0	0.5	5.0	1.0	3.0	4.0	0.5	2.0
13	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.5	2.5	7.5	0.0	3.5
14	0.0	0.0	0.0	0.5	0.0	0.0	2.0	0.0	1.0	7.5	1.5	4.0
15	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.0	2.0	7.0	1.0	3.5
16	0.0	0.0	0.0	1.0	0.0	0.5	7.0	0.0	3.0	4.0	1.5	2.5
17	0.0	0.0	0.0	0.5	0.0	0.5	5.5	0.5	2.5	3.0	1.5	2.0
18	0.0	0.0	0.0	0.5	0.0	0.0	3.5	1.0	2.0	4.5	1.5	2.5
19	0.0	0.0	0.0	1.0	0.0	0.5	3.5	0.5	1.5	4.0	1.5	2.5
20	0.0	0.0	0.0	2.0	0.5	1.0	6.0	0.5	2.5	4.5	2.0	3.0
21	0.0	0.0	0.0	2.0	0.0	1.0	2.5	1.0	1.5	6.0	1.5	3.0
22	0.0	0.0	0.0	2.0	0.5	1.0	8.5	0.5	3.5	7.5	1.0	3.5
23	0.0	0.0	0.0	2.5	0.0	1.0	7.0	0.5	3.0	5.5	2.5	3.5
24	0.0	0.0	0.0	1.0	0.0	0.5	6.0	0.5	3.0	4.5	1.5	3.0
25	0.0	0.0	0.0	1.5	0.0	0.5	7.0	0.0	2.5	6.0	0.5	3.0
26	0.0	0.0	0.0	2.5	0.0	1.0	5.0	0.0	2.0	7.0	0.5	3.5
27	0.0	0.0	0.0	1.5	0.0	1.0	3.5	0.5	1.5	8.5	0.5	4.0
28	0.0	0.0	0.0	1.5	0.5	1.0	6.5	0.0	2.0	8.5	1.5	4.0
29	---	---	---	1.5	0.0	0.5	5.5	0.0	2.0	6.0	1.5	3.5
30	---	---	---	1.5	0.0	0.5	4.5	0.0	1.5	5.5	2.0	3.5
31	---	---	---	2.5	0.0	1.0	---	---	---	5.0	1.5	3.5
MONTH	0.0	0.0	0.0	2.5	0.0	0.5	8.5	0.0	2.0	8.5	0.0	3.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.5	1.5	3.0	11.0	3.5	6.5	15.5	6.5	10.5	13.0	4.0	8.0
2	4.0	1.5	2.5	8.5	4.0	5.5	14.5	8.0	10.5	12.5	4.0	8.5
3	5.5	2.0	3.5	9.5	3.0	6.0	15.5	8.0	10.5	11.5	5.0	8.5
4	7.0	2.5	4.5	10.5	3.0	6.5	16.0	6.0	10.5	11.0	5.5	8.0
5	8.0	2.5	4.5	11.0	3.5	7.0	16.0	6.5	11.0	10.5	5.0	8.0
6	5.0	2.5	4.0	12.0	4.0	7.5	16.0	7.0	11.0	12.5	5.0	8.5
7	5.5	0.5	3.0	11.0	4.5	7.5	16.0	7.0	11.0	12.5	4.5	8.5
8	4.5	0.5	2.5	12.5	5.0	8.0	14.0	7.5	10.5	13.5	5.0	9.5
9	5.5	2.0	3.0	11.5	5.0	8.0	15.5	8.0	11.5	11.0	6.5	9.0
10	7.5	2.0	4.0	8.0	6.0	6.5	14.0	7.5	10.5	9.0	6.5	7.5
11	9.0	2.5	5.0	12.0	5.0	8.0	11.0	7.0	9.0	7.0	4.5	5.5
12	5.0	2.5	3.5	13.0	4.5	8.5	11.5	6.0	8.0	5.5	3.0	4.5
13	7.0	2.0	4.0	13.5	6.0	9.0	12.0	5.5	8.0	7.5	3.0	5.0
14	10.5	2.0	5.5	13.5	6.0	9.5	15.0	6.0	9.5	9.0	2.0	6.0
15	9.0	3.0	5.5	13.5	6.0	9.5	15.0	5.5	10.0	9.5	3.0	6.5
16	8.5	2.5	4.5	13.0	7.0	9.5	13.0	6.0	9.5	7.5	3.0	5.5
17	8.0	3.0	5.0	12.0	5.5	8.5	13.0	8.0	10.0	7.0	4.0	5.5
18	5.5	3.0	4.0	13.5	4.5	8.5	10.0	6.5	8.0	6.0	4.0	5.0
19	8.5	2.5	4.5	13.5	5.5	9.5	15.5	6.0	9.5	9.5	2.0	5.5
20	9.5	2.5	5.5	14.5	6.0	10.0	15.5	5.0	10.0	10.5	2.5	6.5
21	8.5	3.0	5.0	15.5	6.0	10.5	16.0	6.0	10.5	8.5	6.0	7.0
22	9.0	3.0	5.5	12.5	7.0	10.0	13.0	7.0	10.0	8.5	4.5	6.0
23	9.0	3.0	5.0	15.0	7.5	11.0	13.5	7.0	10.0	8.0	5.0	6.0
24	9.5	3.0	5.5	14.5	6.5	10.0	12.0	7.5	9.5	6.0	4.5	5.0
25	8.5	3.0	5.5	11.5	6.5	8.5	12.5	4.0	8.0	6.0	3.5	4.5
26	6.0	3.5	4.5	14.5	5.5	9.0	14.0	4.0	8.5	9.5	3.0	6.0
27	8.0	3.5	5.5	14.5	4.5	9.5	14.0	5.0	9.0	6.0	3.0	5.0
28	7.5	3.5	5.0	13.5	5.5	9.5	14.5	5.5	9.5	9.0	3.5	5.5
29	7.5	3.5	5.0	12.0	6.0	9.0	14.5	5.5	10.0	8.5	1.5	5.0
30	10.5	3.5	6.0	14.0	6.5	10.0	10.5	6.0	8.0	8.0	3.0	5.5
31	---	---	---	12.5	7.0	9.5	12.5	3.0	7.5	---	---	---
MONTH	10.5	0.5	4.5	15.5	3.0	8.5	16.0	3.0	9.5	13.5	1.5	6.5

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°52'06", long 110°09'53" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank, 4 mi southeast of Lamar Ranger Station, and at river mile 1.5.

DRAINAGE AREA.--99.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	40	33	e28	e25	23	e23	71	419	375	94	52
2	76	40	32	e28	e25	e22	26	73	390	371	92	51
3	74	46	33	30	e25	e20	27	77	350	339	92	50
4	73	44	e31	e25	e24	e20	28	80	346	299	87	50
5	71	43	e30	e27	e22	e20	26	87	364	289	83	48
6	69	43	32	e28	e22	e21	26	115	505	284	81	47
7	69	42	34	e28	e22	e22	32	133	466	276	78	46
8	67	42	35	30	e22	23	37	137	435	270	77	45
9	65	46	36	30	e24	23	34	157	399	259	76	45
10	65	47	37	30	e20	23	31	175	382	288	76	47
11	64	46	38	e28	e22	21	30	161	394	359	85	47
12	62	42	e35	e25	24	22	33	151	421	250	87	53
13	60	40	e32	e29	24	e20	37	139	383	236	91	51
14	59	38	33	e28	e20	e21	43	150	374	222	79	48
15	61	37	34	e25	e16	23	37	191	458	206	74	46
16	62	40	e31	e26	e15	24	39	381	563	196	70	45
17	59	45	e32	e28	e17	e23	50	434	630	184	70	47
18	59	38	e32	30	e20	e22	58	326	641	168	99	49
19	57	42	34	29	24	25	52	604	597	159	110	47
20	57	e40	e32	30	24	23	49	817	627	149	79	44
21	59	e32	e30	30	24	23	51	960	684	137	72	44
22	56	e34	e25	e28	e22	22	49	821	714	131	69	43
23	58	35	e20	28	e18	22	59	829	797	126	68	45
24	56	35	e25	e25	e19	22	77	720	736	120	65	55
25	50	36	e27	e23	e19	22	94	571	622	131	63	59
26	51	36	e28	e24	e20	e22	104	500	533	142	61	50
27	51	e32	30	e25	e22	23	93	475	470	116	59	50
28	51	e28	31	26	e23	24	81	498	452	109	57	57
29	52	e25	31	27	---	24	76	504	413	105	55	50
30	51	e30	e31	27	---	23	73	445	375	101	54	46
31	50	---	e30	e25	---	e22	---	398	---	97	54	---
TOTAL	1,893	1,164	974	850	604	690	1,475	11,180	14,940	6,494	2,357	1,457
MEAN	61.1	38.8	31.4	27.4	21.6	22.3	49.2	361	498	209	76.0	48.6
MAX	79	47	38	30	25	25	104	960	797	375	110	59
MIN	50	25	20	23	15	20	23	71	346	97	54	43
AC-FT	3,750	2,310	1,930	1,690	1,200	1,370	2,930	22,180	29,630	12,880	4,680	2,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)

MEAN	44.2	31.7	25.5	25.1	23.1	23.5	62.2	395	672	281	92.3	57.6
MAX	68.8	40.3	31.4	33.3	32.0	32.0	127	580	1,251	447	162	92.0
(WY)	(1998)	(1997)	(2005)	(1997)	(2000)	(1997)	(1990)	(1993)	(1996)	(1998)	(1997)	(1997)
MIN	27.8	21.4	16.0	16.7	16.2	17.2	32.3	217	338	106	51.0	36.1
(WY)	(1989)	(1995)	(1989)	(1989)	(2002)	(2002)	(1993)	(1995)	(2001)	(1994)	(2001)	(2001)

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005	
ANNUAL TOTAL	44,711		44,078			
ANNUAL MEAN	122		121		145	
HIGHEST ANNUAL MEAN					204	1996
LOWEST ANNUAL MEAN					96.5	2001
HIGHEST DAILY MEAN	963	Jun 10	960	May 21	2,070	Jun 9, 1996
LOWEST DAILY MEAN	13	Feb 12	15	Feb 16	12	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	17	Feb 9	19	Feb 12	13	Feb 2, 1989
MAXIMUM PEAK FLOW			1,070	May 21	b2,450	Jun 8, 1996
MAXIMUM PEAK STAGE			6.71	May 21	7.20	May 28, 2003
INSTANTANEOUS LOW FLOW			a12	Mar 13	11	Jan 31, 1989
ANNUAL RUNOFF (AC-FT)	88,680		87,430		104,900	
10 PERCENT EXCEEDS	360		392		464	
50 PERCENT EXCEEDS	64		48		42	
90 PERCENT EXCEEDS	20		23		21	

a--Gage height, 4.20 ft.
b--Gage height, 5.61 ft.
e--Estimated.

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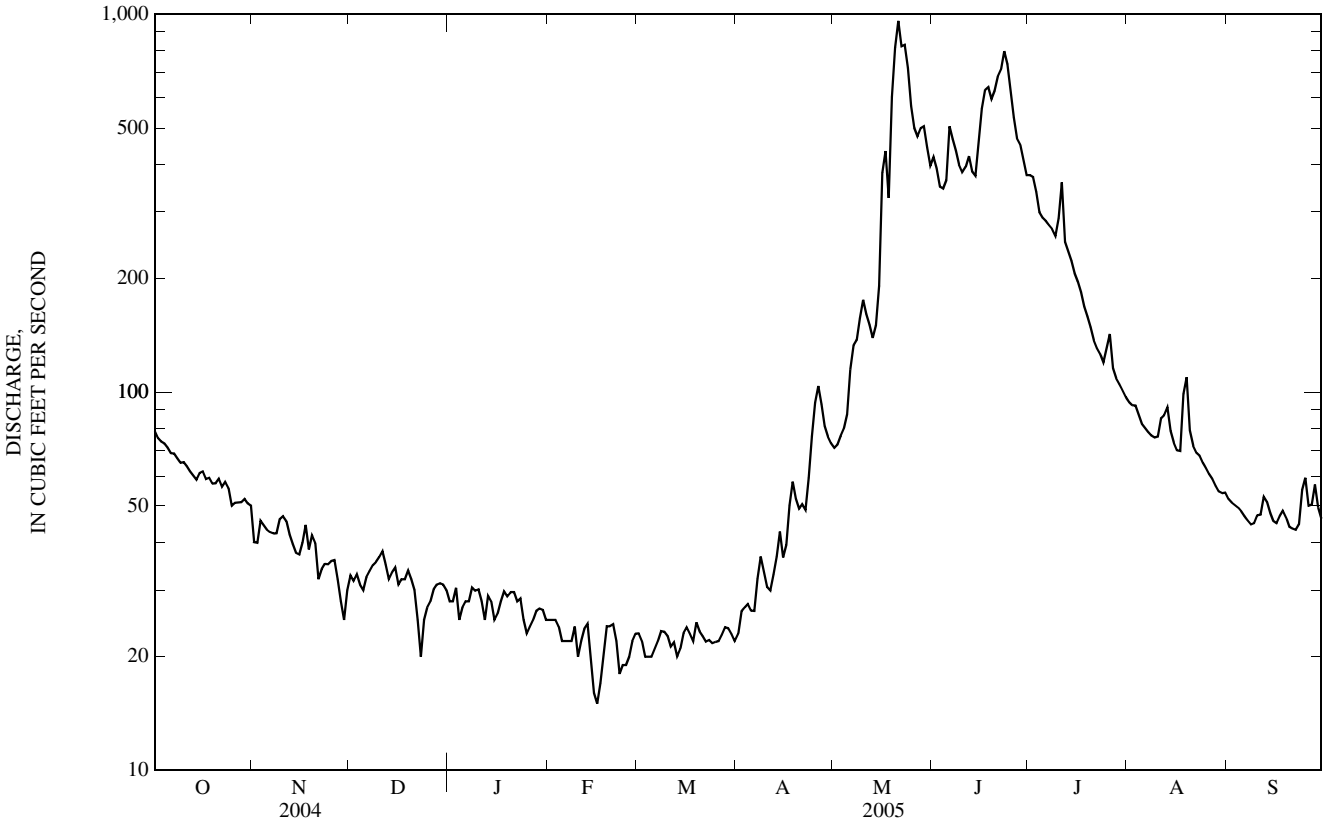


WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1988.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2005 to September 2005.

INSTRUMENTATION.--Temperature recorder installed April 20, 2005.

REMARKS.--Daily water temperature record rated excellent. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 19.5°C, Aug. 5, 2005; minimum, during reporting period, 0.0°C, Apr. 28 to May 1, 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 19.5°C, Aug. 5; minimum, during reporting period, 0.0°C, Apr. 28 to May 1.

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	APRIL			MAY			JUNE			JULY		
1				9.5	0.0	4.0	5.5	3.5	4.5	14.5	5.5	9.5
2				9.5	0.5	4.5	5.5	2.5	4.0	12.0	5.5	8.5
3				7.0	1.0	4.5	8.0	3.0	5.0	12.0	5.0	8.5
4				9.5	3.0	5.5	10.0	4.0	6.5	14.0	5.0	9.5
5				8.5	4.0	6.0	11.0	4.0	7.0	14.5	5.5	10.0
6				8.0	2.5	5.0	7.0	4.5	5.5	16.0	6.0	10.5
7				6.5	3.0	5.0	7.5	3.0	4.5	14.0	6.5	10.5
8				8.0	3.5	5.5	7.0	1.5	4.0	16.5	7.0	11.5
9				6.5	2.5	4.5	7.0	2.5	4.5	14.5	7.0	11.0
10				6.0	3.0	4.5	9.0	2.5	5.5	11.5	8.0	9.5
11				7.0	3.0	4.5	11.0	4.0	6.5	16.5	7.0	11.0
12				5.5	1.5	3.5	6.5	4.0	5.0	17.5	7.0	12.0
13				9.5	1.0	5.0	9.5	3.0	5.5	17.5	8.0	12.5
14				11.5	3.5	7.0	12.5	3.0	7.5	18.0	8.5	13.0
15				9.5	3.0	6.0	12.5	4.5	8.0	18.0	8.5	13.0
16				6.5	3.5	4.5	11.0	3.5	7.0	17.0	9.5	13.0
17				4.5	2.5	3.5	13.0	4.5	8.0	16.5	8.5	12.0
18				5.5	2.5	4.0	9.5	4.5	7.0	17.0	7.0	12.0
19				9.0	3.5	5.5	11.0	3.5	7.0	17.5	8.0	12.5
20				7.5	3.0	4.5	13.0	4.0	8.0	18.0	9.0	13.0
21	4.0	2.5	3.0	9.5	2.5	5.5	11.5	4.0	8.0	19.0	9.0	14.0
22	11.0	2.0	5.5	11.0	1.5	5.5	12.0	5.0	8.0	17.0	10.5	13.5
23	10.5	1.5	5.5	9.5	3.5	5.5	13.0	5.0	8.5	19.0	10.0	14.0
24	10.5	1.5	5.5	7.0	3.0	4.5	13.0	5.0	8.5	17.5	9.5	13.5
25	10.5	1.0	5.0	8.0	1.5	4.5	11.5	4.5	8.0	14.0	9.5	11.5
26	6.5	1.0	3.5	9.5	1.5	5.0	8.0	5.0	6.5	17.5	8.0	12.0
27	5.0	2.0	3.0	11.5	1.5	6.0	11.0	4.5	7.5	17.5	7.5	12.5
28	9.5	0.0	3.5	10.5	2.5	6.5	10.5	5.0	7.5	15.5	8.5	12.5
29	7.0	0.0	3.0	7.5	3.0	5.5	11.0	5.5	7.5	15.0	9.0	11.5
30	7.0	0.0	2.5	7.0	3.0	5.0	14.0	5.0	9.0	17.0	9.5	12.5
31	---	---	---	8.0	2.5	5.5	---	---	---	17.5	9.5	13.0
MONTH	11.0	0.0	4.0	11.5	0.0	5.0	14.0	1.5	6.5	19.0	5.0	11.5

	AUGUST			SEPTEMBER		
1	17.5	9.0	13.0	16.0	5.5	10.5
2	17.0	10.5	13.5	14.5	6.0	10.0
3	18.0	10.5	13.5	14.5	7.0	10.5
4	19.0	8.5	13.5	14.5	7.0	10.5
5	19.5	9.0	14.0	15.0	6.5	10.5
6	17.0	9.5	13.5	15.0	6.5	10.5
7	17.5	9.5	13.5	15.5	5.5	10.0
8	17.0	9.5	13.0	16.5	7.0	11.0
9	16.5	9.5	13.5	14.5	7.5	11.0
10	16.5	10.0	13.0	12.5	7.5	9.5
11	15.0	9.5	12.0	9.0	6.0	7.5
12	14.0	8.0	10.5	8.5	5.5	6.5
13	16.5	8.0	11.5	10.0	4.0	7.0
14	18.0	8.0	12.5	12.5	4.5	8.0
15	17.0	8.0	12.5	13.0	4.5	8.5
16	15.0	8.0	11.5	11.0	5.0	7.5
17	16.5	10.5	12.5	10.0	5.5	7.0
18	11.5	8.5	10.0	9.5	5.5	7.0
19	16.5	7.5	11.0	12.5	3.0	7.5
20	18.0	7.5	12.5	13.5	4.0	8.5
21	19.0	8.0	13.5	11.0	7.5	8.5
22	15.0	9.5	12.0	12.5	6.0	8.5
23	17.5	9.5	13.0	11.0	6.5	8.0
24	15.5	9.0	12.0	8.0	6.5	7.0
25	15.0	6.0	10.5	11.0	5.0	7.0
26	16.0	6.0	11.0	13.0	4.5	8.0
27	16.5	7.0	11.5	8.0	5.0	6.5
28	17.0	7.5	12.0	12.5	4.5	7.5
29	17.0	7.5	12.0	12.5	3.5	7.5
30	11.5	7.5	9.5	10.0	4.0	7.0
31	15.0	4.5	9.5	---	---	---
MONTH	19.5	4.5	12.0	16.5	3.0	8.5

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°55'40", long 110°23'35" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi^2.

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft (NGVD 29). Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925 to July 29, 1927, water-stage recorder at same site at elevation 1.00 ft higher. July 29, 1927 to Sept. 30, 1969, water-stage recorder at same site and elevation. May 1985 to September 1986, nonrecording gage at same site and elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	475	246	e180	e150	e100	e120	127	738	3,160	1,960	358	183
2	446	252	e200	e150	e100	e110	147	780	2,960	1,900	345	175
3	423	302	e170	e160	e100	e105	178	838	2,500	1,860	396	168
4	410	285	e150	e100	e100	e105	202	987	2,400	1,530	358	166
5	396	269	e140	e110	e95	e105	188	1,340	2,520	1,410	310	163
6	382	272	e150	e120	e95	e110	173	2,000	3,760	1,330	288	160
7	371	277	e160	e120	e90	e120	248	2,240	3,480	1,260	275	156
8	372	275	e180	e130	e90	e130	381	2,050	3,150	1,190	266	152
9	352	312	e180	e130	e100	e130	346	2,390	2,960	1,120	267	149
10	344	330	e200	e120	e85	e130	287	2,620	2,740	1,080	270	160
11	344	298	e200	e100	e85	e120	244	2,250	2,730	1,480	306	171
12	330	263	e170	e90	e100	e120	271	1,870	2,960	1,040	303	180
13	323	246	e160	e110	e130	e110	339	1,570	2,870	921	313	204
14	315	241	e170	e100	e110	e100	522	1,740	2,530	855	288	200
15	319	251	e180	e90	e80	e105	401	2,590	2,970	778	256	184
16	346	281	e160	e100	e70	e110	388	4,160	3,760	708	238	170
17	335	284	e170	e120	e80	e105	551	4,650	4,090	664	234	171
18	327	233	e180	e150	e90	e100	783	3,250	4,370	606	304	194
19	322	248	e180	e150	e100	e120	628	5,250	3,870	560	662	191
20	322	e200	e180	e130	e130	e140	529	7,190	3,920	515	365	171
21	344	e180	e160	e110	e120	e130	542	8,580	4,090	488	283	161
22	333	e200	e120	e110	e100	e130	479	6,770	4,010	456	253	161
23	326	e210	e90	e100	e90	e120	680	7,070	4,470	437	255	165
24	332	e220	e110	e100	e90	e110	1,070	6,210	4,060	421	235	207
25	285	e220	e130	e100	e90	e110	1,500	4,580	3,450	410	221	304
26	303	e180	e150	e110	e95	e100	1,670	3,800	2,960	493	213	247
27	310	e160	e160	e120	e95	e115	1,360	3,720	2,640	404	204	215
28	318	e140	e170	e130	e100	e130	1,030	3,900	2,510	375	196	228
29	326	e120	e180	e120	---	e130	906	4,000	2,290	356	188	204
30	315	e140	e180	e120	---	e120	813	3,520	2,160	348	182	186
31	304	---	e170	e100	---	e110	---	3,060	---	336	187	---
TOTAL	10,750	7,135	5,080	3,650	2,710	3,600	16,983	105,713	96,340	27,291	8,819	5,546
MEAN	347	238	164	118	96.8	116	566	3,410	3,211	880	284	185
MAX	475	330	200	160	130	140	1,670	8,580	4,470	1,960	662	304
MIN	285	120	90	90	70	100	127	738	2,160	336	182	149
AC-FT	21,320	14,150	10,080	7,240	5,380	7,140	33,690	209,700	191,100	54,130	17,490	11,000

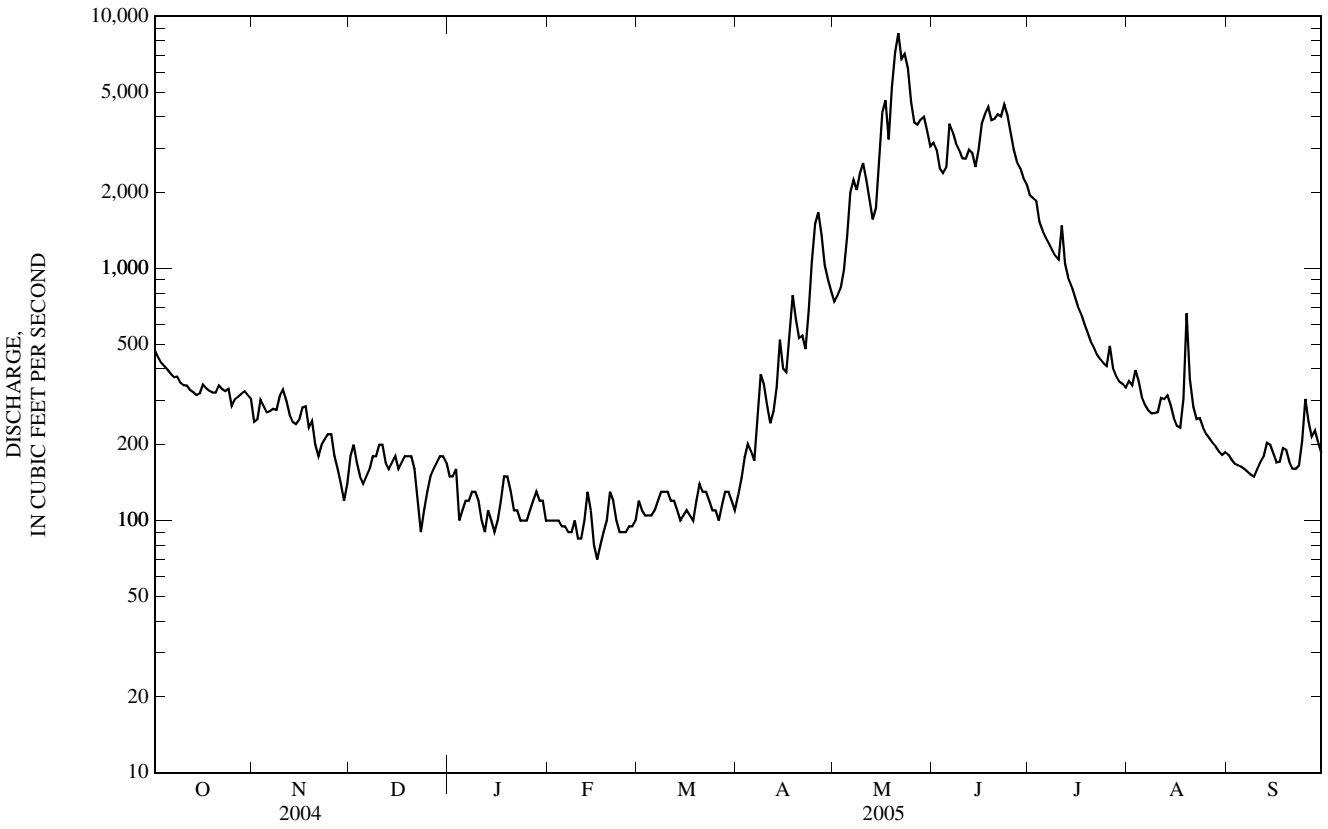
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2005, BY WATER YEAR (WY)*

MEAN	213	157	120	106	102	114	477	2,868	4,213	1,335	350	230
MAX	485	330	202	200	171	204	1,684	6,885	9,044	3,256	886	518
(WY)	(1942)	(1928)	(1951)	(1969)	(1969)	(1999)	(1990)	(1928)	(1996)	(1943)	(1968)	(1968)
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1,408	344	173	115
(WY)	(1989)	(1937)	(1953)	(1989)	(1942)	(1964)	(1945)	(1933)	(1934)	(1931)	(1940)	(1988)

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1923 - 2005*	
ANNUAL TOTAL	280,696		293,617			
ANNUAL MEAN	767		804		863	
HIGHEST ANNUAL MEAN					1,531	1997
LOWEST ANNUAL MEAN					525	1934
HIGHEST DAILY MEAN	5,130	Jun 10	8,580	May 21	15,600	Jun 10, 1996
LOWEST DAILY MEAN	65	Jan 5	70	Feb 16	45	Mar 23, 1964
ANNUAL SEVEN-DAY MINIMUM	76	Feb 9	91	Feb 5	57	Mar 5, 1964
MAXIMUM PEAK FLOW			9,610	May 21	19,500	Jun 10, 1996
MAXIMUM PEAK STAGE			8.55	May 21	12.15	Jun 10, 1996
INSTANTANEOUS LOW FLOW					a40	Mar 16, 1945
ANNUAL RUNOFF (AC-FT)	556,800		582,400		625,300	
10 PERCENT EXCEEDS	2,240		2,790		2,900	
50 PERCENT EXCEEDS	319		248		183	
90 PERCENT EXCEEDS	85		100		90	

*--During periods of record [September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year].
a--Observed, but may have been lower during periods of no gage-height record in winter.
e--Estimated.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'07", long 110°41'18" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 50 ft downstream from outfall, 150 ft upstream of mouth, and 0.8 mi northeast of U.S. Post Office at Mammoth.

DRAINAGE AREA.-- Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1995, October 2002 to September 2003. Published as "Hot River" at Mammoth from 1989-94.

GAGE.--Water-stage recorder. Elevation of gage is 5,666.11 ft (NGVD 29) (levels by U.S. National Park Service).

REMARKS.--Water-discharge records good. No regulation or diversion upstream from station, however, flow is added from sinkholes upstream from spring. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	23	21	22	22	23	24	29	28	28	28
2	24	24	23	22	22	22	23	24	29	28	28	28
3	24	24	23	22	21	22	23	24	29	28	28	28
4	24	24	23	22	22	22	23	25	28	28	28	28
5	24	24	22	22	22	22	23	25	28	28	28	28
6	24	24	23	22	21	23	23	27	29	28	28	28
7	24	24	23	22	21	23	23	28	29	28	27	28
8	24	24	23	22	22	23	24	28	29	28	27	28
9	24	24	23	22	21	23	24	28	29	28	27	28
10	24	24	23	22	21	23	23	28	29	28	27	28
11	24	24	23	22	21	23	23	28	29	28	27	28
12	24	23	23	21	22	23	23	29	29	28	27	28
13	24	23	22	22	23	23	24	28	29	28	27	28
14	24	23	23	22	23	22	24	29	29	28	27	28
15	24	23	23	22	21	23	24	29	29	28	27	28
16	24	23	23	23	22	23	24	29	29	28	27	28
17	24	23	23	23	22	23	24	29	29	28	27	27
18	24	23	23	23	22	23	24	29	29	28	27	27
19	24	23	23	22	23	23	24	29	29	28	28	27
20	24	23	23	23	23	23	24	29	29	28	28	27
21	25	21	22	23	23	23	24	30	29	28	28	27
22	24	23	21	23	23	23	24	29	29	27	28	27
23	24	23	21	22	22	23	24	29	29	27	28	27
24	24	23	22	22	22	22	24	29	29	27	28	27
25	24	23	23	22	21	22	24	29	29	28	28	27
26	24	23	23	22	22	23	24	29	29	28	28	27
27	24	22	23	22	22	22	25	28	29	28	28	27
28	24	22	23	23	22	23	25	28	29	28	28	27
29	24	20	23	23	---	23	24	28	29	28	28	27
30	24	22	23	23	---	23	24	28	28	28	28	27
31	24	---	22	22	---	22	---	29	---	28	28	---
TOTAL	745	692	704	689	614	703	712	865	867	865	856	826
MEAN	24.0	23.1	22.7	22.2	21.9	22.7	23.7	27.9	28.9	27.9	27.6	27.5
MAX	25	24	23	23	23	23	25	30	29	28	28	28
MIN	24	20	21	21	21	22	23	24	28	27	27	27
AC-FT	1,480	1,370	1,400	1,370	1,220	1,390	1,410	1,720	1,720	1,720	1,700	1,640

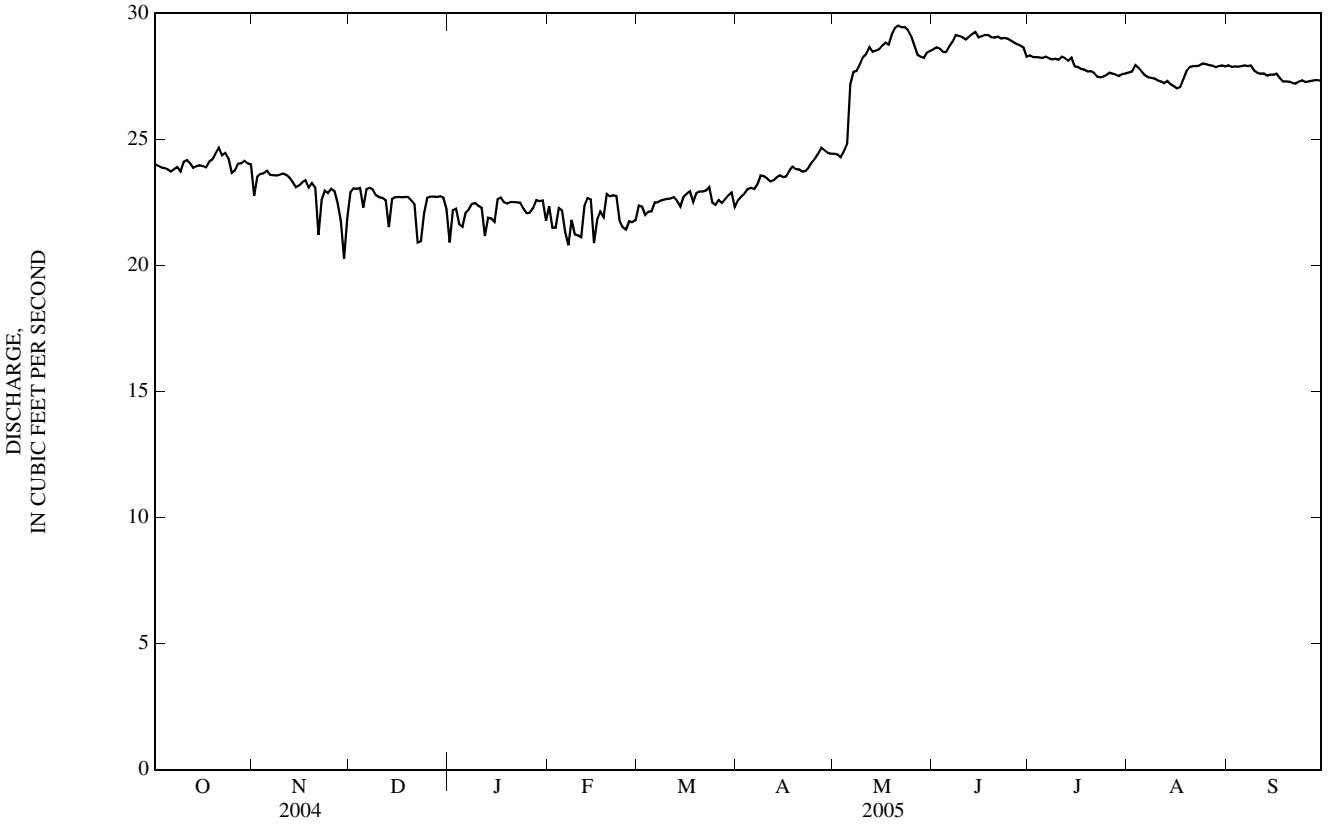
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)*

MEAN	26.4	25.4	25.2	25.5	24.7	25.0	26.4	29.2	29.0	27.5	26.6	26.1
MAX	29.9	29.1	28.3	29.8	29.6	30.8	31.5	33.1	33.0	31.2	29.1	28.6
(WY)	(1989)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	21.3	21.4	21.9	21.0	20.9	21.6	23.7	25.5	26.9	25.0	23.5	21.3
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2003)

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005*	
ANNUAL TOTAL	8,641		9,138			
ANNUAL MEAN	23.6		25.0		26.4	
HIGHEST ANNUAL MEAN					28.5	2003
LOWEST ANNUAL MEAN					23.2	2004
HIGHEST DAILY MEAN	27	May 29	30	May 21	36	May 20, 1995
LOWEST DAILY MEAN	19	Aug 15	20	Nov 29	19	Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	20	Aug 10	21	Feb 5	20	Aug 10, 2004
MAXIMUM PEAK FLOW			30	May 14	b36	May 20, 1995
MAXIMUM PEAK STAGE			1.36	May 14	1.50	May 17, 1993
INSTANTANEOUS LOW FLOW			a19	Nov 29	c17	Jan 30, 1994
ANNUAL RUNOFF (AC-FT)	17,140		18,130		19,130	
10 PERCENT EXCEEDS	27		29		30	
50 PERCENT EXCEEDS	24		24		27	
90 PERCENT EXCEEDS	21		22		22	

*--During periods of operation (October 1988 to September 1995, October 2002 to current year).
a--Gage height, 1.07 ft.
b--Gage height, 1.45 ft.
c--Gage height, 1.06 ft.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to September 1994, October 2002 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1988 to September 1990.
WATER TEMPERATURE: October 1988 to September 1994, October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 25, 2002.

REMARKS.--Daily water temperature record rated good except for Jan. 20 to July 30, which is fair. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,410 microsiemens per centimeter (µS/cm) at 25.0°C, Jan. 29, 1990; minimum daily, 1,500 µS/cm at 25.0°C, July, 17, 22, 23, 1990.
WATER TEMPERATURE: Maximum, 59.0°C, many days October 2003 to January 2004 and August 2004; minimum, 38.0°C, June 16, 27, 1989, Apr. 19, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 58.5°C, Feb. 25; minimum, 41.5°C, May 21.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	49.0	48.5	49.0	53.0	46.5	49.5	49.5	49.0	49.5	56.5	51.5	54.5
2	49.5	48.5	49.0	48.0	47.0	47.5	49.5	49.0	49.0	51.5	51.5	51.5
3	49.5	48.5	49.0	48.0	47.0	47.5	49.0	49.0	49.0	51.5	51.5	51.5
4	49.5	48.5	49.0	48.5	47.0	47.5	49.5	49.0	49.5	54.5	51.5	53.0
5	49.5	49.0	49.0	48.0	47.0	47.5	56.5	49.5	51.0	55.0	51.0	53.5
6	49.5	49.0	49.5	48.5	47.5	48.0	49.5	49.5	49.5	53.0	51.0	52.0
7	49.5	48.5	49.0	49.0	47.0	48.0	49.5	49.5	49.5	52.0	51.0	51.5
8	49.0	48.0	48.5	49.0	47.5	48.0	50.0	49.5	49.5	51.0	51.0	51.0
9	49.5	48.5	49.0	48.5	48.0	48.5	50.0	49.5	49.5	51.0	51.0	51.0
10	49.0	47.5	48.0	48.5	48.0	48.0	49.5	49.5	49.5	53.5	51.0	51.5
11	48.5	47.5	48.0	48.5	48.0	48.0	50.0	49.5	50.0	56.0	51.0	51.5
12	48.0	47.5	48.0	48.5	48.0	48.0	55.5	50.0	50.0	56.5	51.5	54.0
13	48.5	47.5	48.0	50.0	47.5	48.5	55.5	49.0	52.5	54.5	51.0	52.5
14	48.5	47.5	48.0	51.0	47.5	49.0	50.0	49.5	50.0	55.5	51.0	52.5
15	48.5	48.0	48.5	50.0	48.0	49.0	50.0	50.0	50.0	56.5	50.0	53.0
16	48.5	48.0	48.0	49.0	48.0	48.5	50.0	50.0	50.0	56.5	50.0	50.5
17	48.5	47.5	48.0	49.0	48.5	48.5	50.0	50.0	50.0	50.5	50.0	50.5
18	48.0	47.0	47.5	51.0	48.0	49.0	50.0	50.0	50.0	51.5	50.5	51.0
19	47.5	47.0	47.0	49.5	48.5	48.5	50.5	50.0	50.0	51.5	51.0	51.5
20	47.5	46.0	47.0	54.5	48.5	49.0	51.5	49.5	50.5	51.5	51.0	51.5
21	47.0	46.0	46.5	56.5	49.5	53.5	54.0	50.0	50.5	51.5	51.5	51.5
22	47.5	46.0	46.5	51.0	49.0	50.0	56.5	51.0	54.5	51.5	51.5	51.5
23	47.0	45.5	46.5	49.5	49.0	49.5	56.0	52.5	54.5	51.5	51.5	51.5
24	48.5	46.0	46.5	49.5	49.5	49.5	52.5	50.5	51.5	56.5	51.0	52.0
25	50.5	46.0	47.5	49.5	49.5	49.5	50.5	50.0	50.0	56.5	51.0	52.5
26	48.5	46.5	47.5	55.0	49.0	49.5	50.0	50.0	50.0	57.0	51.0	52.0
27	48.0	46.5	47.0	55.5	48.5	50.5	50.5	50.0	50.0	56.5	51.0	51.5
28	47.5	47.0	47.0	56.5	49.0	52.5	50.5	50.5	50.5	51.5	51.0	51.5
29	47.0	46.5	47.0	58.0	54.5	56.0	50.5	50.5	50.5	51.5	51.0	51.5
30	47.5	47.0	47.0	54.5	49.5	52.0	51.0	50.5	50.5	51.5	51.0	51.5
31	48.5	46.5	47.0	---	---	---	55.5	50.5	51.5	56.0	51.0	53.0
MONTH	50.5	45.5	48.0	58.0	46.5	49.5	56.5	49.0	50.5	57.0	50.0	52.0

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	56.5	51.0	51.5	52.5	52.5	52.5	53.5	52.0	52.5	50.5	49.5	50.0
2	57.5	51.0	54.0	53.0	52.5	52.5	52.5	52.0	52.5	50.5	49.5	50.0
3	57.5	51.0	54.0	56.5	52.0	53.5	52.5	52.0	52.0	50.5	49.5	49.5
4	52.5	51.5	52.0	56.5	52.0	53.0	52.0	52.0	52.0	50.0	48.5	49.5
5	56.0	51.5	52.0	56.0	52.0	53.0	52.5	51.5	52.0	49.0	47.5	48.5
6	57.0	51.5	54.5	53.0	52.0	52.5	52.5	51.5	52.0	47.5	43.0	44.5
7	57.5	52.0	55.5	52.5	52.0	52.5	52.5	51.0	51.5	43.5	42.5	43.0
8	55.5	51.5	53.0	53.0	52.5	52.5	51.0	50.5	50.5	44.0	42.0	43.0
9	58.0	51.5	54.5	53.0	52.5	52.5	51.0	50.5	51.0	43.0	42.0	42.5
10	57.5	51.5	54.5	53.0	52.5	52.5	51.5	50.5	51.0	42.5	42.0	42.0
11	57.5	51.5	54.5	52.5	52.5	52.5	51.5	50.5	51.0	43.5	42.0	42.5
12	55.0	51.5	51.5	52.5	52.0	52.5	51.5	51.0	51.0	43.5	42.5	43.0
13	52.0	51.5	52.0	56.0	52.0	52.5	51.5	50.5	51.0	45.0	43.0	44.0
14	55.5	51.5	52.0	56.0	52.0	53.0	51.0	50.0	50.5	45.5	43.5	44.5
15	57.5	52.0	56.0	56.0	52.0	52.5	51.0	50.5	50.5	44.5	43.5	44.0
16	56.0	51.0	53.5	52.5	52.0	52.5	51.5	50.5	51.0	44.0	42.5	43.0
17	56.0	50.5	52.5	52.5	52.0	52.5	51.0	50.5	50.5	43.0	42.0	42.5
18	56.0	51.0	53.5	55.5	52.0	53.0	50.5	50.0	50.0	44.0	42.5	43.0
19	51.5	51.0	51.0	52.5	52.5	52.5	50.5	50.0	50.5	43.5	42.5	43.0
20	52.0	51.5	51.5	52.5	52.5	52.5	51.0	50.0	50.5	43.5	42.0	42.5
21	52.0	51.5	52.0	52.5	52.0	52.5	50.5	50.5	50.5	43.5	41.5	42.5
22	52.0	51.5	51.5	52.5	52.0	52.5	51.5	50.5	51.0	44.5	42.0	43.5
23	57.0	51.0	54.0	52.5	52.0	52.0	51.5	50.5	50.5	44.0	43.0	43.5
24	57.5	51.5	54.5	54.5	52.0	53.0	51.0	50.0	50.5	43.5	42.5	43.0
25	58.5	51.5	55.0	56.5	52.0	53.5	51.0	49.5	50.0	44.0	42.5	43.0
26	57.0	51.5	54.0	55.5	52.0	53.0	50.5	49.0	50.0	44.5	42.5	43.5
27	57.0	51.5	54.0	53.0	52.5	52.5	49.0	48.5	49.0	45.0	43.0	44.0
28	57.5	51.5	54.0	52.5	52.0	52.0	49.5	49.0	49.0	45.0	43.5	44.0
29	---	---	---	52.5	52.0	52.0	50.0	49.0	49.5	45.0	43.5	44.5
30	---	---	---	52.0	51.5	52.0	50.5	49.5	50.0	45.0	43.5	44.0
31	---	---	---	55.5	51.5	53.0	---	---	---	44.5	43.5	44.0
MONTH	58.5	50.5	53.5	56.5	51.5	52.5	53.5	48.5	51.0	50.5	41.5	44.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	44.5	43.0	43.5	46.5	44.5	45.5	48.0	46.5	47.5	47.0	45.0	46.0
2	44.0	42.5	43.0	46.0	45.0	45.5	48.0	47.0	47.5	47.0	45.0	46.0
3	44.5	43.5	44.0	46.0	44.5	45.0	47.5	46.5	47.0	47.0	45.5	46.5
4	45.0	43.5	44.5	46.5	44.5	45.5	48.0	46.5	47.5	47.0	45.5	46.5
5	45.0	44.0	44.5	47.0	45.0	46.0	48.5	47.0	47.5	47.0	45.5	46.0
6	45.0	43.0	43.5	47.0	45.0	46.0	48.5	47.0	48.0	47.0	45.5	46.0
7	43.5	42.5	43.0	47.0	45.5	46.5	48.5	47.5	48.0	47.0	45.0	46.0
8	44.0	42.5	43.0	47.5	45.5	46.5	48.5	47.5	48.0	47.0	45.5	46.0
9	44.0	43.0	43.5	47.5	45.5	46.5	48.5	47.5	48.0	47.0	46.0	46.5
10	44.5	43.0	43.5	47.0	45.5	46.5	48.5	47.5	48.0	46.5	45.5	46.0
11	44.5	43.5	44.0	47.0	45.0	46.0	48.0	47.5	48.0	46.0	45.0	45.5
12	44.0	42.5	43.5	47.5	45.5	46.5	48.0	47.0	47.5	45.5	45.0	45.0
13	44.0	42.5	43.0	48.0	46.0	47.0	47.5	46.5	47.0	45.5	44.5	45.0
14	45.0	43.0	44.0	48.0	46.5	47.0	48.0	46.5	47.5	46.0	44.5	45.5
15	45.5	44.0	44.5	48.0	46.0	47.0	48.5	47.0	48.0	46.0	45.0	45.5
16	45.0	43.5	44.5	48.0	46.5	47.0	48.5	47.0	48.0	46.0	45.0	45.5
17	45.0	43.5	44.5	47.5	46.0	47.0	48.5	47.5	48.0	46.0	45.0	45.5
18	45.0	43.5	44.5	47.5	46.0	46.5	48.0	46.5	47.0	46.0	45.0	45.5
19	45.5	43.5	44.5	48.0	46.0	47.0	47.5	46.0	46.5	46.0	44.5	45.5
20	45.5	44.0	45.0	48.0	46.5	47.0	47.5	46.0	47.0	46.0	45.0	45.5
21	45.5	44.0	45.0	48.0	46.5	47.5	48.0	46.0	47.0	46.0	45.5	46.0
22	46.0	44.0	45.0	48.0	47.0	47.5	47.0	46.5	47.0	46.0	45.0	45.5
23	45.5	44.0	45.0	48.5	47.0	48.0	47.5	46.5	47.0	46.0	45.5	45.5
24	46.0	44.0	45.0	48.5	46.5	47.5	47.5	46.5	46.5	45.5	45.0	45.0
25	46.0	44.0	45.0	47.5	46.5	47.0	47.0	45.5	46.0	45.5	44.5	45.0
26	45.5	44.5	45.0	47.5	46.0	47.0	47.5	45.5	46.5	45.5	44.5	45.0
27	45.5	44.0	45.0	48.0	46.0	47.0	47.5	46.0	46.5	45.5	45.0	45.0
28	45.0	44.0	45.0	47.5	46.5	47.0	47.5	46.0	46.5	45.5	44.5	45.0
29	45.5	44.5	45.0	48.0	46.5	47.5	47.5	45.5	46.5	45.5	44.5	45.0
30	46.5	44.5	45.5	48.0	47.0	47.5	47.0	45.5	46.0	46.0	45.0	45.5
31	---	---	---	48.0	47.0	47.5	46.5	45.0	45.5	---	---	---
MONTH	46.5	42.5	44.5	48.5	44.5	46.5	48.5	45.0	47.0	47.0	44.5	45.5

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'33", long 110°41'26" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank at Wyoming-Montana state line, 400 ft upstream from highway bridge, 0.5 mi downstream from Boiling River (formerly Hot River), 1.5 mi north of Mammoth, and at river mile 2.9.

DRAINAGE AREA.--202 mi^2.

PERIOD OF RECORD.--October 1938 to September 1972, April l984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,623.97 ft (NGVD 29) (levels by National Park Service).

REMARKS.--Records good. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	95	88	88	88	89	86	142	587	342	155	121
2	115	105	92	92	84	88	88	148	566	333	159	119
3	112	106	93	93	86	88	90	163	485	314	169	117
4	112	105	94	88	87	88	93	186	452	292	157	116
5	112	107	88	77	87	88	92	220	460	278	149	115
6	112	106	92	86	86	90	91	259	584	267	145	115
7	115	104	94	87	86	90	97	287	548	259	143	113
8	115	105	94	89	86	90	104	295	509	256	143	113
9	112	106	95	91	86	91	99	353	479	245	143	114
10	113	107	98	92	84	92	95	396	441	255	146	116
11	112	104	101	92	79	90	93	349	417	293	148	117
12	113	101	98	82	94	90	96	294	457	247	149	119
13	115	99	89	83	88	87	106	268	445	230	154	119
14	112	97	97	87	88	88	114	296	398	219	142	117
15	112	98	96	87	72	90	105	384	412	211	137	114
16	115	99	94	91	73	90	106	568	480	204	132	113
17	115	101	93	94	86	89	120	620	500	200	132	118
18	115	95	92	92	88	88	134	506	514	195	147	122
19	112	97	92	93	99	90	121	897	481	189	157	117
20	116	92	87	94	93	91	117	968	480	183	140	113
21	119	74	86	93	90	90	115	1,010	509	179	134	111
22	113	91	75	90	89	90	113	870	521	177	131	112
23	116	100	68	90	85	90	131	903	611	173	134	114
24	113	95	82	88	86	89	158	820	557	170	129	128
25	108	98	92	87	86	89	184	647	492	169	128	122
26	110	97	93	88	86	89	207	554	457	173	126	115
27	112	89	95	88	85	88	200	526	437	166	124	113
28	113	84	94	90	86	91	167	523	422	160	123	112
29	112	61	93	89	---	89	154	531	387	158	121	109
30	110	79	89	89	---	89	146	521	364	157	122	108
31	109	---	92	85	---	86	---	488	---	155	124	---
TOTAL	3,505	2,897	2,826	2,755	2,413	2,767	3,622	14,992	14,452	6,849	4,343	3,472
MEAN	113	96.6	91.2	88.9	86.2	89.3	121	484	482	221	140	116
MAX	119	107	101	94	99	92	207	1,010	611	342	169	128
MIN	108	61	68	77	72	86	86	142	364	155	121	108
AC-FT	6,950	5,750	5,610	5,460	4,790	5,490	7,180	29,740	28,670	13,580	8,610	6,890

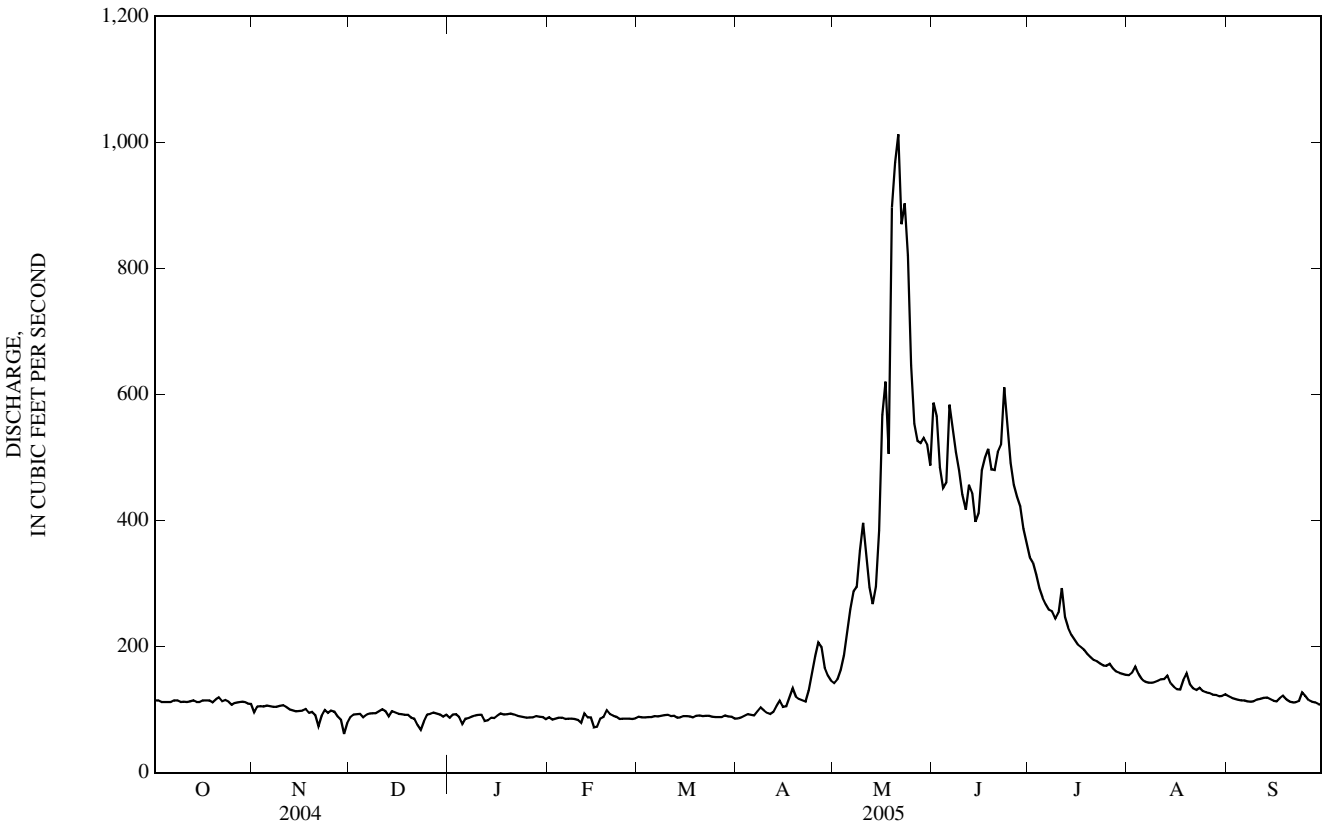
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)*

MEAN	126	112	102	96.8	92.8	93.7	141	507	703	298	161	136
MAX	175	151	135	134	128	128	304	1,067	1,354	662	236	190
(WY)	(1969)	(1998)	(1998)	(1998)	(1998)	(1998)	(1990)	(1997)	(1971)	(1943)	(1943)	(1968)
MIN	94.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4
(WY)	(2002)	(1940)	(1941)	(1941)	(1940)	(1942)	(1945)	(1960)	(1987)	(1988)	(1988)	(1988)

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005*	
ANNUAL TOTAL	61,962		64,893			
ANNUAL MEAN	169		178		214	
HIGHEST ANNUAL MEAN					324	1997
LOWEST ANNUAL MEAN					138	1988
HIGHEST DAILY MEAN	677	Jun 10	1,010	May 21	1,830	May 29, 1956
LOWEST DAILY MEAN	61	Nov 29	61	Nov 29	53	Dec 15, 1988
ANNUAL SEVEN-DAY MINIMUM	80	Mar 2	83	Feb 10	61	Feb 1, 1989
MAXIMUM PEAK FLOW			1,130	May 20	b2,080	Jun 4, 1956
MAXIMUM PEAK STAGE			4.02	May 20	5.03	Jun 2, 1997
INSTANTANEOUS LOW FLOW			a48	Nov 29	c35	Mar 28, 1942
ANNUAL RUNOFF (AC-FT)	122,900		128,700		155,300	
10 PERCENT EXCEEDS	360		454		502	
50 PERCENT EXCEEDS	115		112		121	
90 PERCENT EXCEEDS	85		87		87	

*--During periods of operation (October 1938 to September 1972, April 1984 to current year).
a--Gage height, 1.78 ft, result of freezeup.
b--Gage height, 4.46 ft.
c--Gage height, 1.08 ft.



06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION.--Lat 45°06'43", long 110°47'37" (NAD 27), in NW$^1/_4$ SE$^1/_4$ NW$^1/_4$sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft downstream from county road bridge at Corwin Springs, 1.3 mi upstream from Mol Heron Creek, 7 mi northwest of Gardiner, and at river mile 549.7.

DRAINAGE AREA.--2,619 mi^2.

PERIOD OF RECORD.--August 1889 to November 1893 (published as "at Horr"), September 1910 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1509: 1889-94, 1911, 1913, 1916-18, 1920-21, 1925, 1927. WSP 1559: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,079.09 ft (NGVD 29). Aug. 12, 1889, to Nov. 4, 1893, nonrecording gages at site 2 mi upstream at different elevations. Sept. 2, 1910, to Apr. 19, 1935, nonrecording gages on bridge at present elevation.

REMARKS.--Records good. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lies downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,930	1,440	e1,150	e850	805	849	900	1,940	8,320	7,080	2,980	1,790
2	1,890	1,430	1,170	816	777	860	912	2,000	8,390	6,920	2,990	1,760
3	1,860	1,510	1,150	789	771	860	956	2,110	7,510	6,820	3,050	1,720
4	1,830	1,470	1,090	e800	786	858	1,000	2,330	7,290	6,280	2,940	1,690
5	1,800	1,460	1,080	e750	815	865	1,010	2,790	7,400	6,010	2,820	1,670
6	1,780	1,450	1,060	e700	787	874	973	3,850	9,350	5,820	2,730	1,640
7	1,760	1,440	1,100	e800	804	896	1,020	4,380	9,270	5,660	2,660	1,610
8	1,760	1,430	1,080	858	783	914	1,230	4,110	8,580	5,520	2,610	1,580
9	1,720	1,460	1,060	827	787	933	1,250	4,770	8,260	5,340	2,580	1,550
10	1,720	1,480	1,120	823	770	949	1,140	5,120	7,850	5,210	2,550	1,570
11	1,710	1,450	1,150	819	753	945	1,070	4,730	7,680	5,760	2,560	1,590
12	1,690	1,390	1,150	784	794	955	1,070	4,030	7,880	5,100	2,510	1,570
13	1,650	1,340	1,020	758	805	887	1,160	3,610	8,140	4,820	2,470	1,600
14	1,630	1,320	1,080	e740	818	817	1,430	3,770	7,380	4,660	2,390	1,580
15	1,630	1,290	1,100	e720	780	880	1,340	4,950	7,800	4,490	2,320	1,530
16	1,670	1,310	1,050	e750	744	902	1,280	7,410	9,170	4,330	2,250	1,480
17	1,660	1,380	1,040	790	773	914	1,440	9,220	9,790	4,230	2,210	1,480
18	1,630	1,310	1,050	808	786	860	1,840	6,780	10,600	4,050	2,320	1,540
19	1,650	1,320	1,050	820	806	910	1,730	9,500	9,680	3,940	2,780	1,490
20	1,620	1,250	1,040	822	808	929	1,550	13,500	9,780	3,810	2,440	1,430
21	1,670	1,110	960	830	811	934	1,520	15,300	10,300	3,700	2,270	1,390
22	1,640	1,130	934	814	810	926	1,460	12,900	10,300	3,600	2,190	1,380
23	1,630	1,230	e800	805	804	935	1,660	13,900	11,500	3,530	2,190	1,390
24	1,670	1,240	e820	794	802	907	2,140	12,900	10,800	3,460	2,130	1,510
25	1,570	1,260	e850	779	812	890	2,870	10,200	9,740	3,370	2,070	1,670
26	1,580	1,250	879	783	819	891	3,270	8,760	8,940	3,430	2,010	1,550
27	1,580	1,120	900	796	822	901	2,920	8,550	8,410	3,260	1,960	1,460
28	1,580	1,140	992	806	827	913	2,410	8,890	8,180	3,170	1,920	1,440
29	1,610	e950	986	810	---	939	2,180	9,360	7,740	3,090	1,880	1,400
30	1,570	e1,050	978	802	---	887	2,060	8,780	7,450	3,050	1,850	1,360
31	1,570	---	986	786	---	867	---	8,060	---	3,000	1,830	---
TOTAL	52,260	39,410	31,875	24,629	22,259	27,847	46,791	218,500	263,480	142,510	74,460	46,420
MEAN	1,686	1,314	1,028	794	795	898	1,560	7,048	8,783	4,597	2,402	1,547
MAX	1,930	1,510	1,170	858	827	955	3,270	15,300	11,500	7,080	3,050	1,790
MIN	1,570	950	800	700	744	817	900	1,940	7,290	3,000	1,830	1,360
AC-FT	103,700	78,170	63,220	48,850	44,150	55,230	92,810	433,400	522,600	282,700	147,700	92,070

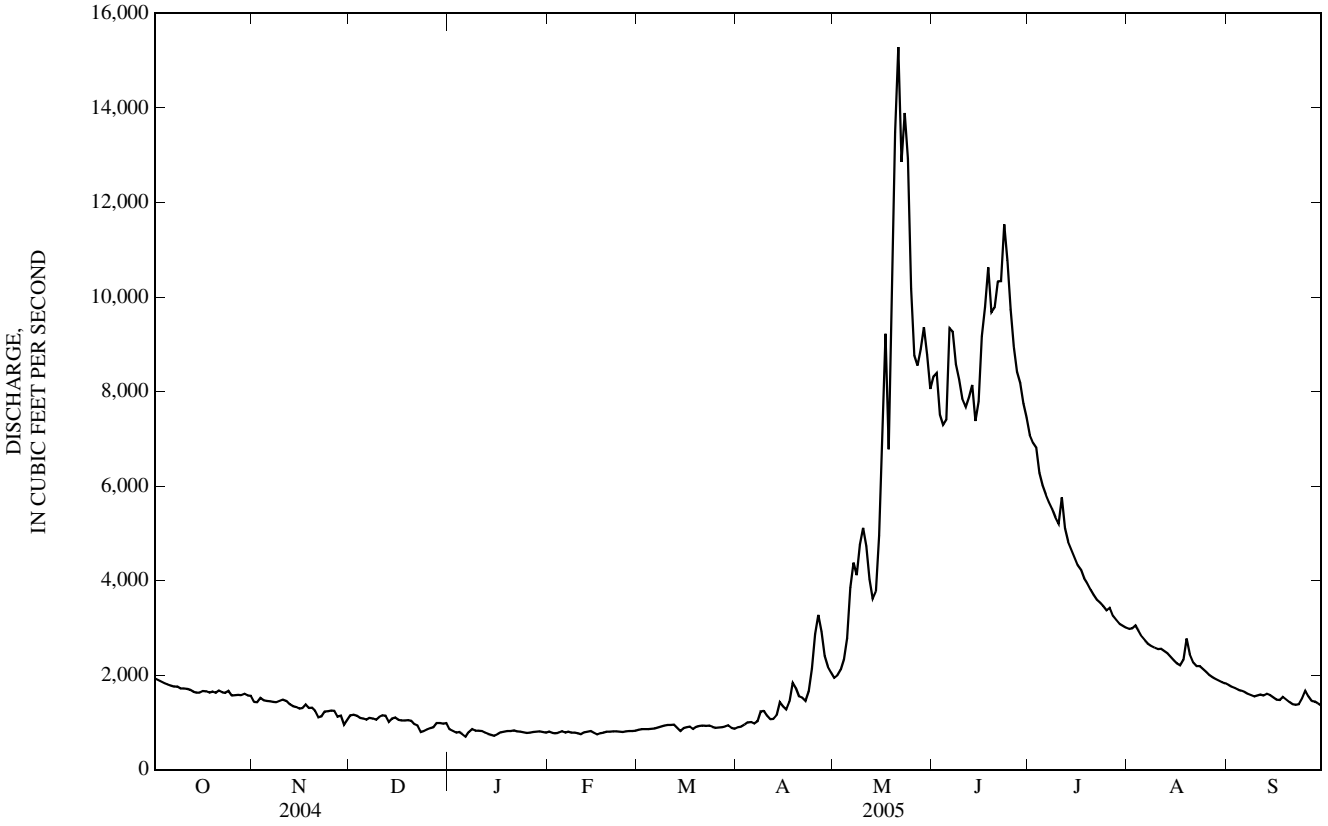
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2005, BY WATER YEAR (WY)*

MEAN	1,515	1,185	961	848	837	919	1,553	6,104	11,400	6,734	3,159	1,942
MAX	2,429	2,058	1,424	1,361	1,340	1,376	3,542	13,590	22,540	13,260	5,688	3,207
(WY)	(1973)	(1928)	(1984)	(1997)	(1997)	(1997)	(1990)	(1928)	(1997)	(1982)	(1982)	(1968)
MIN	781	702	551	448	411	412	576	2,575	4,245	2,025	1,319	938
(WY)	(1989)	(1989)	(1937)	(1937)	(1937)	(1937)	(1937)	(1975)	(1934)	(1919)	(1919)	(1988)

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1889 - 2005*	
ANNUAL TOTAL	899,907		990,441			
ANNUAL MEAN	2,459		2,714		3,105	
HIGHEST ANNUAL MEAN					5,158	1997
LOWEST ANNUAL MEAN					1,903	1934
HIGHEST DAILY MEAN	11,100	Jun 10	15,300	May 21	32,000	Jun 14, 1918
LOWEST DAILY MEAN	660	Jan 5	700	Jan 6	380	Feb 5, 1989
ANNUAL SEVEN-DAY MINIMUM	719	Jan 1	764	Jan 12	393	Feb 4, 1937
MAXIMUM PEAK FLOW			16,800	May 21	a32,200	Jun 10, 1996
MAXIMUM PEAK STAGE			7.86	May 21	11.50	Jun 14, 1918
INSTANTANEOUS LOW FLOW					b343	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	1,785,000		1,965,000		2,249,000	
10 PERCENT EXCEEDS	6,000		7,820		8,460	
50 PERCENT EXCEEDS	1,760		1,530		1,400	
90 PERCENT EXCEEDS	752		805		760	

*--During periods of operation (August 1889 to November 1893, September 1910 to current year).
a--Gage height, 10.92 ft.
b--Gage height, 0.12 ft, result of freezeup.
e--Estimated.



06192500 YELLOWSTONE RIVER NEAR LIVINGSTON, MT

LOCATION.--Lat 45°35'50", long 110°33'55" (NAD 27), in NE$^1/_4$NW$^1/_4$NW$^1/_4$ sec. 12, T.3 S., R.9 E., Park County, Hydrologic Unit 10070002, on right bank 50 ft downstream from bridge on Montana Secondary Highway 540, 2 mi downstream from Suce Creek, 4 mi south of Livingston, and at river mile 501.4.

DRAINAGE AREA.--3,551 mi^2.

PERIOD OF RECORD.--May 1897 to December 1905, August 1928 to September 1932, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1899. WSP 1509: 1902. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,542.49 ft (NGVD 29). May 2, 1897, to Dec. 31, 1905, nonrecording gage on highway bridge at different elevation. Aug. 23, 1928, to Sept. 30, 1932, and Mar. 14, 1938, to Feb. 3, 1951, nonrecording gage on highway bridge at present elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Diversions for irrigation of about 24,200 acres of which about 2,000 acres is downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,300	1,980	1,370	e1,350	1,080	1,120	1,130	2,400	8,950	8,480	3,120	2,080
2	2,300	1,850	1,560	1,190	1,090	1,140	1,160	2,340	9,740	8,210	3,120	2,030
3	2,280	1,940	1,550	1,140	1,060	1,150	1,200	2,370	8,680	8,030	3,190	1,990
4	2,240	1,960	1,500	1,180	1,060	1,140	1,280	2,490	8,300	7,450	3,160	1,970
5	2,210	1,920	1,520	1,100	1,080	1,140	1,340	2,820	8,360	7,080	3,000	1,940
6	2,190	1,910	1,400	e1,100	1,090	1,150	1,300	3,690	9,820	6,810	2,900	1,900
7	2,160	1,900	1,480	e1,250	1,070	1,160	1,290	4,440	11,100	6,570	2,840	1,870
8	2,150	1,880	1,520	1,310	1,070	1,190	1,440	4,490	10,000	6,410	2,790	1,830
9	2,130	1,880	1,490	1,260	1,080	1,210	1,630	4,850	9,400	6,160	2,770	1,800
10	2,160	1,940	1,450	1,260	1,070	1,240	1,550	5,220	8,870	5,980	2,740	1,800
11	2,200	1,950	1,520	1,270	1,050	1,250	1,440	5,230	8,490	6,490	2,760	1,820
12	2,160	1,880	1,550	1,150	1,060	1,240	1,380	4,590	8,570	5,960	2,760	1,830
13	2,130	1,820	1,480	e1,100	1,090	1,250	1,450	4,180	9,200	5,490	2,760	1,830
14	2,100	1,790	1,400	e1,050	1,100	1,120	1,590	4,010	8,340	5,250	2,700	1,840
15	2,090	1,750	1,480	e1,000	1,100	1,130	1,820	4,770	8,590	5,000	2,610	1,820
16	2,110	1,750	1,460	e1,100	e1,100	1,170	1,650	6,530	10,200	4,780	2,530	1,790
17	2,130	1,770	1,410	e1,300	e1,050	1,190	1,660	9,620	11,100	4,650	2,460	1,780
18	2,110	1,800	1,410	e1,350	e1,100	1,180	2,050	7,990	12,200	4,500	2,530	1,800
19	2,120	1,740	1,420	e1,400	1,140	1,140	2,280	8,160	11,400	4,350	2,830	1,800
20	2,100	1,750	1,410	1,330	1,110	1,210	2,030	14,200	11,100	4,190	2,970	1,740
21	2,110	1,610	1,390	1,290	1,100	1,220	1,920	16,200	11,900	4,030	2,630	1,700
22	2,130	1,480	1,320	1,160	1,100	1,210	1,900	14,700	12,300	3,890	2,510	1,690
23	2,100	1,620	e1,250	1,140	1,090	1,210	1,860	15,100	13,700	3,800	2,480	1,710
24	2,150	1,680	e1,100	1,110	1,080	1,210	2,280	14,700	13,100	3,730	2,450	1,790
25	2,080	1,670	e1,150	1,080	1,090	1,150	2,950	12,000	11,900	3,640	2,390	1,930
26	2,020	1,700	1,330	1,070	1,100	1,170	3,510	10,100	10,900	3,640	2,320	1,950
27	2,040	1,610	1,340	1,080	1,100	1,150	3,490	9,720	10,200	3,540	2,250	1,840
28	2,050	1,530	1,370	1,090	1,110	1,180	3,070	9,930	9,750	3,380	2,210	1,810
29	2,130	1,470	1,420	1,100	---	1,220	2,710	10,500	9,230	3,300	2,160	1,790
30	2,060	e1,300	1,380	1,100	---	1,190	2,540	10,000	8,840	3,220	2,130	1,730
31	2,040	---	1,370	1,090	---	1,170	---	9,190	---	3,160	2,110	---
TOTAL	66,280	52,830	43,800	36,500	30,420	36,600	56,900	236,530	304,230	161,170	82,180	55,200
MEAN	2,138	1,761	1,413	1,177	1,086	1,181	1,897	7,630	10,140	5,199	2,651	1,840
MAX	2,300	1,980	1,560	1,400	1,140	1,250	3,510	16,200	13,700	8,480	3,190	2,080
MIN	2,020	1,300	1,100	1,000	1,050	1,120	1,130	2,340	8,300	3,160	2,110	1,690
AC-FT	131,500	104,800	86,880	72,400	60,340	72,600	112,900	469,200	603,400	319,700	163,000	109,500

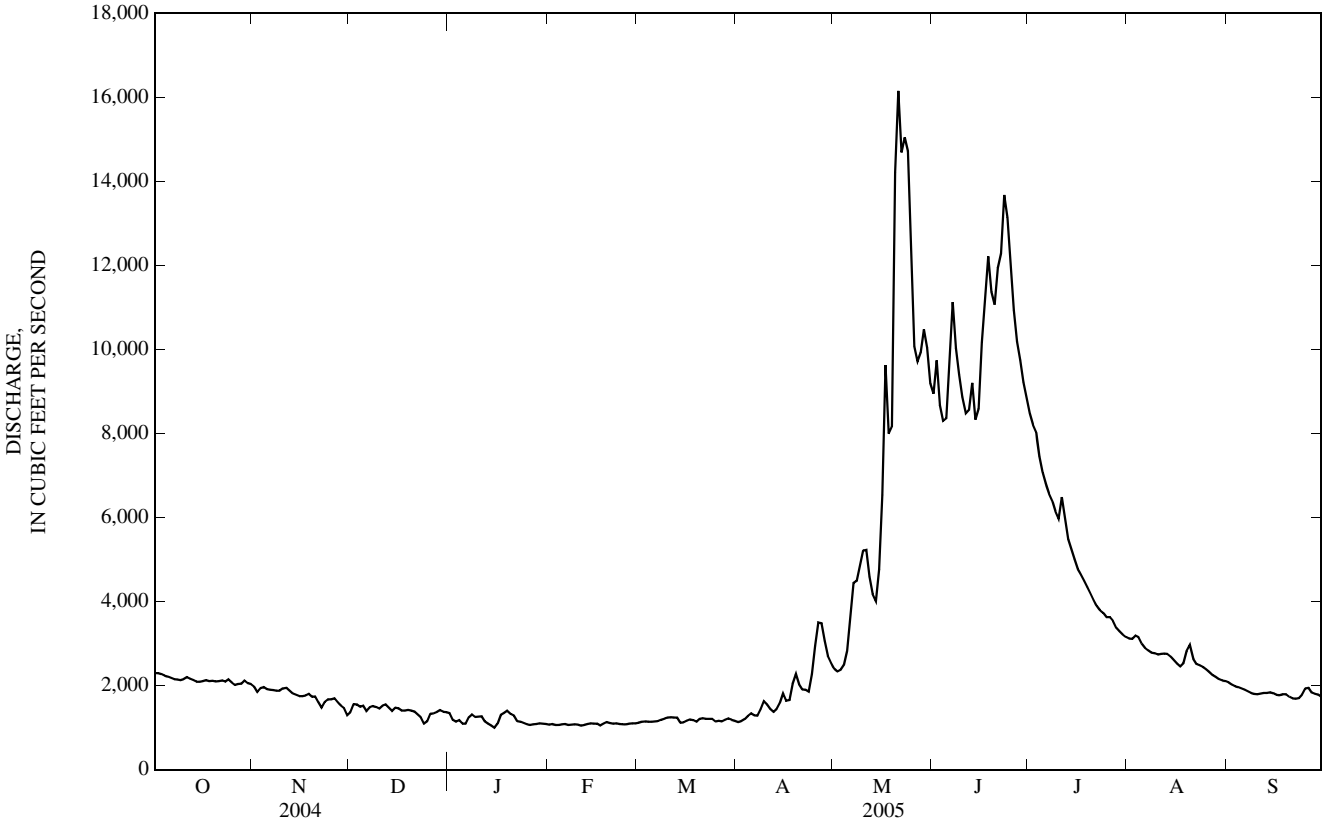
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 - 2005, BY WATER YEAR (WY)*

MEAN	2,013	1,678	1,383	1,220	1,214	1,294	1,968	6,996	13,290	7,626	3,608	2,399
MAX	3,115	2,599	1,984	1,757	1,800	1,901	3,852	13,070	27,140	14,990	6,000	3,806
(WY)	(1973)	(1984)	(1984)	(1984)	(1898)	(1898)	(1990)	(1897)	(1997)	(1975)	(1899)	(1968)
MIN	1,131	1,099	930	727	763	899	1,174	2,751	4,999	2,748	1,713	1,281
(WY)	(1989)	(1932)	(2002)	(1989)	(1989)	(1964)	(1961)	(1905)	(1987)	(1931)	(1988)	(2001)

06192500 YELLOWSTONE RIVER NEAR LIVINGSTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1897 - 2005*	
ANNUAL TOTAL	1,034,723		1,162,640			
ANNUAL MEAN	2,827		3,185		3,722	
HIGHEST ANNUAL MEAN					6,119	1997
LOWEST ANNUAL MEAN					2,395	2001
HIGHEST DAILY MEAN	12,200	Jun 10	16,200	May 21	36,000	Jun 6, 1997
LOWEST DAILY MEAN	900	Jan 5	1,000	Jan 15	540	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	986	Jan 1	1,070	Feb 6	571	Feb 1, 1989
MAXIMUM PEAK FLOW			17,900	May 21	38,000	Jun 6, 1997
MAXIMUM PEAK STAGE			8.04	May 21	10.72	Jun 6, 1997
ANNUAL RUNOFF (AC-FT)	2,052,000		2,306,000		2,697,000	
10 PERCENT EXCEEDS	6,480		8,740		9,740	
50 PERCENT EXCEEDS	2,130		1,880		1,880	
90 PERCENT EXCEEDS	1,050		1,100		1,130	

*--During periods of operation (May 1897 to December 1905, August 1928 to September 1932, and October 1937 to current year).
e--Estimated.



06195600 SHIELDS RIVER NEAR LIVINGSTON, MT

LOCATION.--Lat 45°44'18", long 110°28'45" (NAD 27), in $NE^1/_4SE^1/_4NW^1/_4$ sec.22, T.1 S., R.10 E., Park County, Hydrologic Unit 10070003, on right bank 0.2 mi downstream from private road bridge, 6.5 mi northeast of Livingston, and at river mile 2.0.

DRAINAGE AREA.--852 mi^2.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,420 ft (NGVD 29). Oct. 1, 1978, to Aug. 12, 1980, water-stage recorder at site 0.2 mi upstream at elevation 7.89 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 32,000 acres upstream from station. National Weather Service satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	121	e80	e50	85	71	88	199	345	451	61	69
2	116	116	e85	e55	79	69	88	191	437	470	61	73
3	114	119	e90	e60	80	69	95	182	615	440	72	64
4	112	116	e95	e50	87	70	102	183	836	395	73	61
5	113	112	e90	e45	88	70	112	201	738	354	65	61
6	111	116	e90	e50	e65	74	109	247	804	324	64	58
7	109	115	e95	e50	e55	75	112	336	1,050	301	60	55
8	108	113	95	e50	e60	76	131	385	970	285	62	52
9	108	112	96	e45	e65	78	147	406	791	284	64	50
10	112	111	96	e50	e70	86	140	457	647	285	62	48
11	112	109	100	e55	e75	87	124	608	538	290	66	47
12	110	105	106	e50	e80	88	116	563	509	252	62	49
13	111	100	74	e45	83	82	116	479	682	218	67	51
14	113	97	100	e40	78	77	128	442	609	193	71	50
15	124	94	105	e35	e55	72	143	486	602	166	69	53
16	134	100	89	e50	e50	78	136	619	782	142	67	52
17	129	101	92	e70	e55	81	130	833	881	134	61	56
18	125	96	92	e90	e55	68	160	875	1,000	134	75	69
19	129	103	98	e100	e60	78	185	759	874	122	81	67
20	124	e95	89	e120	e65	80	171	926	750	110	74	64
21	119	e80	78	e140	e65	82	159	1,170	818	99	70	61
22	116	e90	e70	154	63	84	157	1,220	897	88	64	63
23	116	102	e40	134	64	e80	164	1,170	1,020	89	62	75
24	119	102	e45	113	69	e70	181	1,090	846	83	60	120
25	120	107	e50	103	68	e60	201	837	680	92	59	144
26	117	110	e60	102	71	e75	226	646	608	113	59	135
27	115	86	e55	98	68	86	241	530	649	97	61	120
28	119	e80	e55	98	67	98	234	457	587	77	59	110
29	144	e70	e60	93	---	113	213	399	491	69	55	109
30	141	e75	e70	91	---	106	204	389	488	70	58	111
31	131	---	e55	82	---	93	---	357	---	62	63	---
TOTAL	3,682	3,053	2,495	2,368	1,925	2,476	4,513	17,642	21,544	6,289	2,007	2,197
MEAN	119	102	80.5	76.4	68.8	79.9	150	569	718	203	64.7	73.2
MAX	144	121	106	154	88	113	241	1,220	1,050	470	81	144
MIN	108	70	40	35	50	60	88	182	345	62	55	47
AC-FT	7,300	6,060	4,950	4,700	3,820	4,910	8,950	34,990	42,730	12,470	3,980	4,360

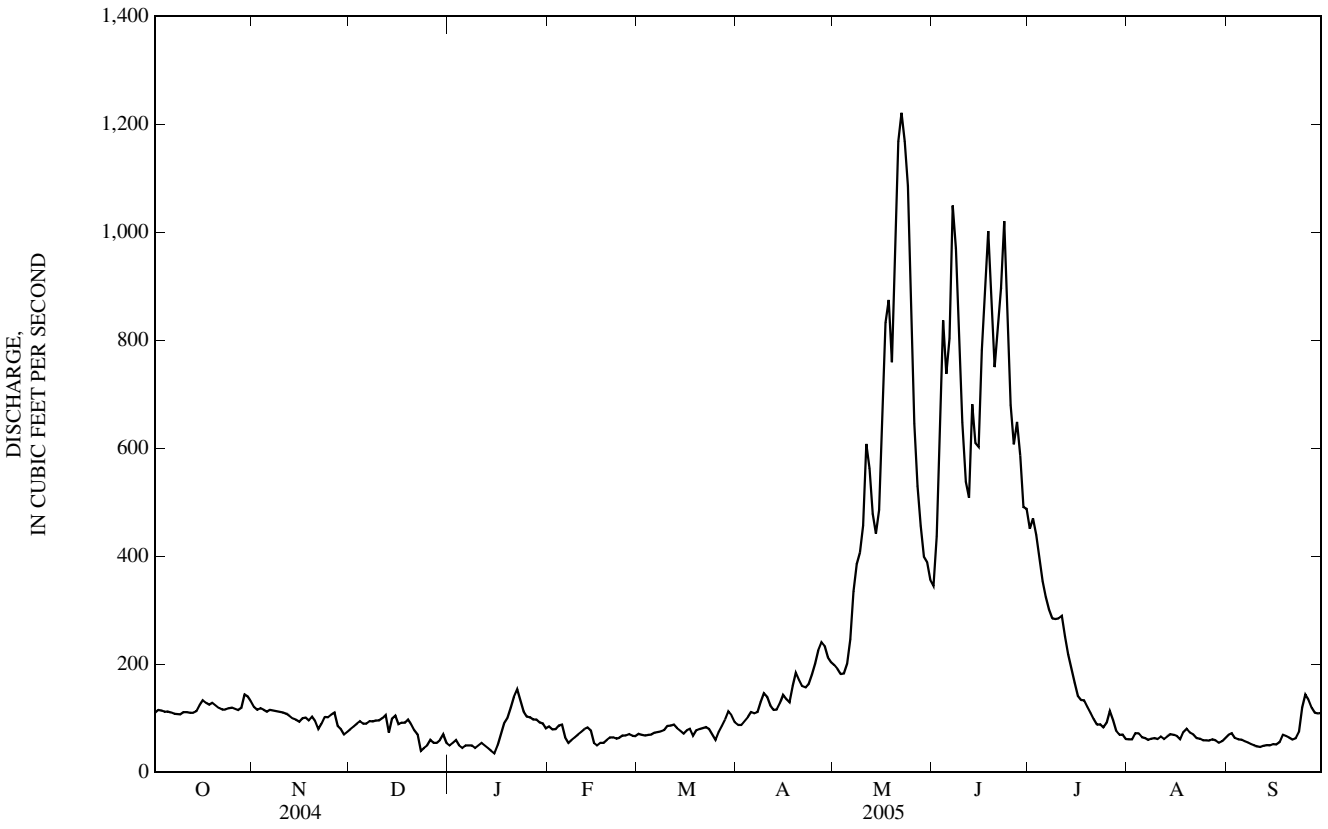
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	145	130	106	100	120	175	361	782	751	305	125	127
MAX	275	195	145	225	363	461	627	1,962	2,260	1,135	677	388
(WY)	(1979)	(1984)	(1990)	(1984)	(1996)	(1997)	(1996)	(1997)	(1997)	(1993)	(1993)	(1993)
MIN	51.5	73.8	73.6	55.5	59.8	76.9	145	127	152	53.6	25.6	31.2
(WY)	(1989)	(1989)	(1988)	(1988)	(1988)	(2002)	(2000)	(2004)	(1985)	(1988)	(1988)	(1988)

06195600 SHIELDS RIVER NEAR LIVINGSTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	51,895		70,191			
ANNUAL MEAN	142		192		269	
HIGHEST ANNUAL MEAN					610	1997
LOWEST ANNUAL MEAN					114	2000
HIGHEST DAILY MEAN	1,910	Jun 12	1,220	May 22	4,760	Jun 20, 1979
LOWEST DAILY MEAN	35	Aug 15	35	Jan 15	20	Aug 21, 1988
ANNUAL SEVEN-DAY MINIMUM	40	Aug 11	46	Jan 9	22	Aug 20, 1988
MAXIMUM PEAK FLOW			1,330	May 21	5,600	Jun 20, 1979
MAXIMUM PEAK STAGE			3.98	May 21	a6.80	Jun 20, 1979
INSTANTANEOUS LOW FLOW					b17	Aug 20, 1988
ANNUAL RUNOFF (AC-FT)	102,900		139,200		195,000	
10 PERCENT EXCEEDS	257		573		667	
50 PERCENT EXCEEDS	102		98		133	
90 PERCENT EXCEEDS	55		55		68	

a--Site and datum then in use.
b--Gage height, 1.44 ft.
e--Estimated.



06200000 BOULDER RIVER AT BIG TIMBER, MT

LOCATION.--Lat 45°50'03", long 109°56'17" (NAD 27), in $SE^1/_4NE^1/_4SE^1/_4$ sec.14, T.1 N., R.14 E., Sweet Grass County, Hydrologic Unit 10070002, on left bank 150 ft upstream from Old Boulder Bridge, 1 mi east of Big Timber, and at river mile 1.6.

DRAINAGE AREA.--523 mi^2.

PERIOD OF RECORD.--April 1947 to December 1953, March 1955 to current year. Monthly discharge only for April 1947, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,056.39 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,300 acres, of which about 250 acres is downstream from station. Several unpublished observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	190	e120	e75	117	104	100	174	1,300	1,880	157	91
2	105	167	e130	e70	115	104	100	164	1,290	1,920	168	85
3	103	190	e130	e80	112	103	102	158	1,100	1,780	183	76
4	102	189	e140	e70	115	103	109	147	1,060	1,540	189	74
5	98	176	e140	e65	116	101	117	137	1,210	1,460	162	73
6	95	178	145	e70	106	100	112	154	1,780	1,420	150	71
7	97	176	149	e80	e80	101	107	262	1,890	1,410	146	68
8	115	175	150	e80	e85	102	108	376	1,490	1,390	143	68
9	115	173	148	e75	e85	100	122	370	1,230	1,330	139	67
10	116	186	150	e80	e90	104	120	439	1,050	1,240	146	65
11	120	198	158	e90	e100	105	117	892	959	1,370	147	66
12	123	192	159	e80	e110	108	112	695	1,020	1,050	142	67
13	143	171	122	e65	119	112	111	550	1,020	860	147	65
14	139	163	150	e60	117	106	116	519	948	819	155	65
15	172	158	160	e60	e95	105	129	545	1,320	703	140	63
16	246	163	137	e80	e85	107	122	715	2,330	606	131	63
17	245	168	137	e120	e80	110	120	1,180	2,780	570	126	63
18	232	164	142	e150	e85	108	145	1,040	3,300	481	137	65
19	215	154	137	e200	e95	109	184	1,110	2,810	389	161	64
20	199	162	135	178	e100	110	167	2,070	2,660	345	157	62
21	197	140	117	164	e110	106	153	2,610	3,340	306	142	60
22	194	146	e90	149	106	106	151	2,350	3,660	275	132	60
23	190	169	e70	147	104	107	143	2,700	4,660	264	129	62
24	205	170	e65	140	105	e95	158	2,500	3,990	257	124	68
25	187	163	e80	130	110	e90	184	1,850	3,250	256	116	87
26	182	164	e100	124	108	107	206	1,490	2,850	264	110	97
27	189	143	e95	122	105	102	244	1,320	2,570	237	104	91
28	196	146	e90	121	103	100	222	1,400	2,380	211	101	87
29	272	e100	e110	119	---	107	198	1,670	2,180	197	97	85
30	223	e105	e100	117	---	106	183	1,590	1,890	176	93	81
31	208	---	e80	113	---	101	---	1,340	---	162	96	---
TOTAL	5,126	4,939	3,836	3,274	2,858	3,229	4,262	32,517	63,317	25,168	4,270	2,159
MEAN	165	165	124	106	102	104	142	1,049	2,111	812	138	72.0
MAX	272	198	160	200	119	112	244	2,700	4,660	1,920	189	97
MIN	95	100	65	60	80	90	100	137	948	162	93	60
AC-FT	10,170	9,800	7,610	6,490	5,670	6,400	8,450	64,500	125,600	49,920	8,470	4,280

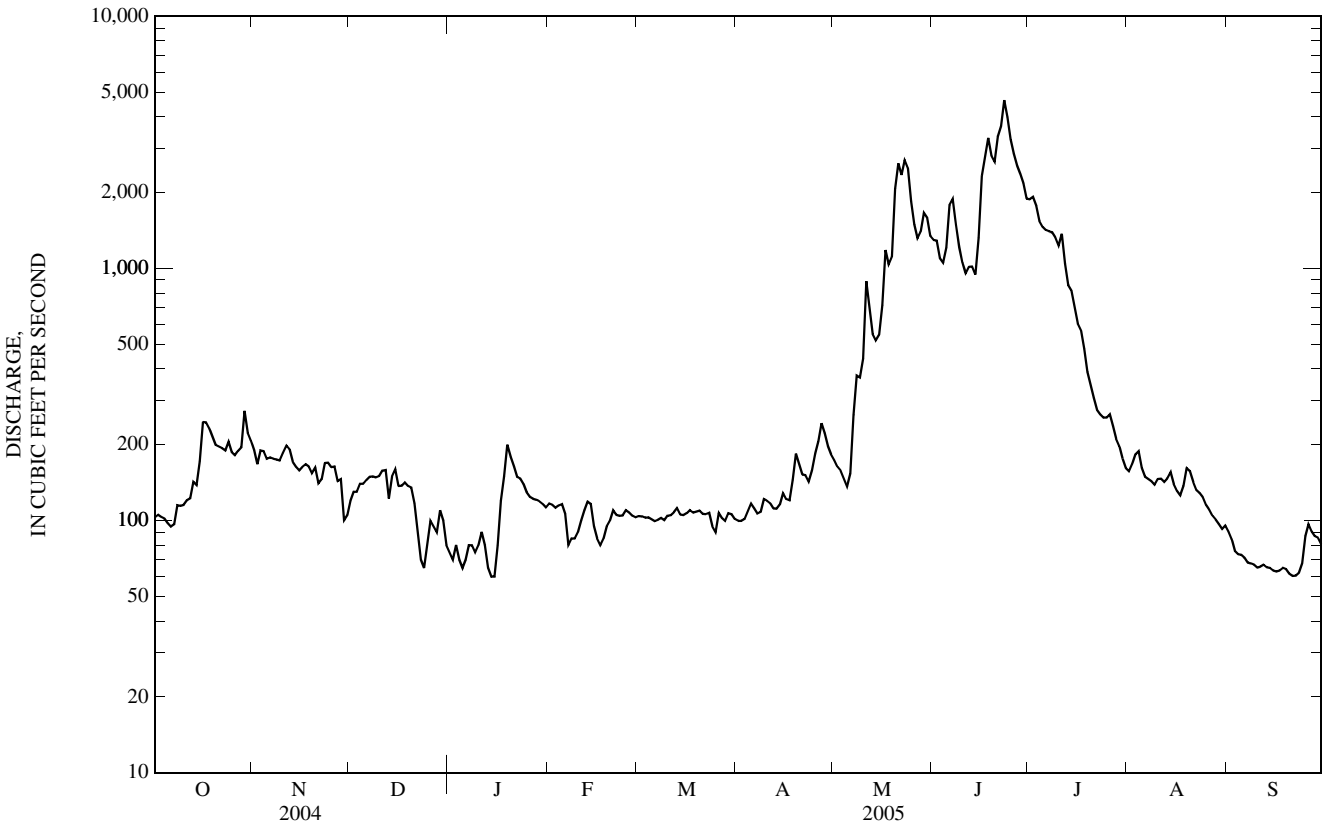
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2005, BY WATER YEAR (WY)*

MEAN	215	189	152	134	126	127	208	1,126	2,725	1,227	234	185
MAX	417	282	214	214	197	179	390	2,241	4,638	4,307	709	534
(WY)	(1973)	(1998)	(1976)	(1984)	(1985)	(1979)	(1962)	(1976)	(1997)	(1975)	(1968)	(1968)
MIN	74.9	108	71.8	54.7	55.2	92.9	66.7	429	894	193	21.9	27.7
(WY)	(2002)	(1988)	(1988)	(2001)	(2001)	(2002)	(1961)	(1953)	(1987)	(1988)	(1961)	(1988)

06200000 BOULDER RIVER AT BIG TIMBER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1948 - 2005*	
ANNUAL TOTAL	123,288		154,955			
ANNUAL MEAN	337		425		556	
HIGHEST ANNUAL MEAN					905	1975
LOWEST ANNUAL MEAN					310	2001
HIGHEST DAILY MEAN	2,900	Jun 10	4,660	Jun 23	8,540	Jul 5, 1975
LOWEST DAILY MEAN	60	Jan 5	60	Jan 14	12	Aug 26, 1961
ANNUAL SEVEN-DAY MINIMUM	65	Sep 8	62	Sep 17	13	Aug 25, 1961
MAXIMUM PEAK FLOW			5,160	Jun 23	b9,940	Jun 5, 1997
MAXIMUM PEAK STAGE			6.41	Jun 23	9.00	Jun 5, 1997
INSTANTANEOUS LOW FLOW			a52	Dec 24	10	Aug 26, 1961
ANNUAL RUNOFF (AC-FT)	244,500		307,400		403,200	
10 PERCENT EXCEEDS	996		1,380		1,710	
50 PERCENT EXCEEDS	140		140		179	
90 PERCENT EXCEEDS	80		80		100	

*--During periods of operation (April 1947 to December 1953, March 1955 to current year).
a--Gage height, 1.06 ft.
b--From rating curve extended above 6,000 ft^3/s.
e--Estimated.



06204000 MYSTIC LAKE NEAR ROSCOE, MT

LOCATION.--Lat 45°13'30", long 109°45'36" (NAD 27), in sec.9, T.7 S., R.16 E., (unsurveyed), Stillwater County, Hydrologic Unit 10070005, at dam on West Rosebud Creek, 15 mi southwest of Roscoe, 25 mi southwest of Absarokee and at river mile 28.8.

DRAINAGE AREA.--46.9 mi^2.

PERIOD OF RECORD.--January 1936 to current year. Records prior to September 1939, published only in WSP 1309. Record of daily elevations since October 1965 are in files of the USGS Water Science Center located in Helena, Montana. Water-stage recorder. Prior to October 1965, only monthend figures furnished.

GAGE.--Elevation of gage is at sea level (levels by The Montana Power Co.).

REMARKS.--Reservoir is formed by thin-section reinforced concrete arch dam completed in 1925. Usable capacity, 21,000 acre-ft between elevation 7,612.00 ft, minimum operating level, and 7,673.50 ft, top of 3.5 ft stop logs. No dead storage. Figures given herein represent usable contents. Water is used for power development and recreation. Records furnished by PPL EnergyPlus, LLC. REVISED RECORDS, WSP 1916: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 21,130 acre-ft, July 10, 1983, elevation, 7,673.8 ft; no storage most days Mar. 23 to May 5, 1981, Apr. 10 to May 19, 1982, May 4,5, 1983, May 14, 1984, Mar. 23,26,27, 1986, Apr. 8-11, 1988, Apr. 18-20, 1999, Apr. 12 to May 1, 2000, and several days in April 2003.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 21,000 acre-ft, July 11, 17, 18, elevation, 7,673.50 ft; minimum observed, 152 ac-ft, Apr. 23 to May 7, elevation 7,612.54 ft.

MONTHEND ELEVATION AND CONTENTS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	7,666.77	18,140	--
October 31	7,655.03	13,580	-4,560
November 30	7,644.96	10,090	-3,490
December 31	7,637.33	7,610	-2,480
Calendar Year 2004	--		-1,250
January 31	7,628.15	4,780	-2,830
February 28	7,619.75	2,260	-2,520
March 31	7,615.26	919	-1,341
April 30	7,612.54	151	-768
May 31	7,633.85	6,520	+6,369
June 30	7,671.77	20,240	+13,720
July 31	7,672.70	20,650	+410
August 31	7,669.62	19,330	-1,320
September 30	7,662.95	16,590	-2,740
Water Year 2005	--	--	-1,550

06204050 WEST ROSEBUD CREEK NEAR ROSCOE, MT

LOCATION.--Lat 45°14'35", long 109°43'50" (NAD 27), in NE$^1/_4$ sec.10, T.7 S., R.16 E., Stillwater County, Hydrologic Unit 10070005, on left bank at Mystic Lake powerplant, 2.0 mi downstream from Mystic Lake, 13.5 mi southwest of Roscoe, and at river mile 26.8.
DRAINAGE AREA.--52.1 mi^2.
PERIOD OF RECORD.--September 1965 to current year.
GAGE.--Water-stage recorder and rectangular weir. Elevation of gage is 6,535.60 ft (NGVD 29).
REMARKS.--Records good. Flow regulated by Mystic Lake (station number 06204000). Several unpublished observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at station.
AVERAGE DISCHARGE.--40 years, 121 ft^3/s, 31.54 in/yr, 87,660 acre-ft/yr, adjusted for change in contents in Mystic Lake.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft^3/s, July 6, 1975, gage height, 4.71 ft; minimum daily, 2.5 ft^3/s, Apr. 3, 4, 6, 7, 1967.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 916 ft^3/s, July 11, gage height, 3.32 ft; minimum daily, 26 ft^3/s, Apr. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	128	75	74	71	37	38	27	95	336	206	172
2	124	128	74	74	71	37	38	27	63	343	205	169
3	106	129	73	73	71	37	38	27	95	376	205	167
4	124	129	74	72	71	36	38	27	96	389	205	166
5	124	127	73	72	71	36	39	28	100	350	202	166
6	124	128	74	72	71	36	40	28	103	296	200	146
7	125	128	74	72	69	36	41	29	100	291	199	102
8	125	128	73	72	69	35	32	41	99	329	196	101
9	126	102	74	72	69	37	26	45	89	444	195	101
10	126	90	73	72	69	37	27	58	118	462	192	102
11	126	90	73	72	69	37	27	50	137	676	196	102
12	126	89	73	72	69	37	27	59	137	592	195	101
13	126	88	73	73	69	37	27	58	111	433	195	101
14	126	88	73	74	69	37	36	61	92	405	193	101
15	126	88	73	72	69	37	40	69	93	402	191	102
16	128	88	73	71	69	37	40	75	95	341	187	101
17	128	89	72	71	65	37	40	74	101	350	186	101
18	128	92	72	71	64	37	41	69	106	368	188	101
19	e128	93	72	71	64	37	41	74	104	334	187	100
20	e128	91	73	72	64	37	41	82	103	303	185	99
21	128	91	73	72	64	37	41	87	105	281	185	100
22	128	90	74	72	64	36	42	78	155	259	185	101
23	129	90	73	72	64	38	42	82	230	251	181	101
24	129	80	72	72	64	38	36	80	231	256	181	101
25	128	76	72	71	46	38	28	44	230	264	180	101
26	128	75	72	71	37	37	28	28	228	261	182	101
27	128	75	72	71	37	37	29	95	227	249	182	101
28	128	76	69	71	37	37	27	94	249	232	179	101
29	129	75	72	71	---	38	28	97	309	218	178	101
30	128	76	72	71	---	38	27	95	341	209	177	101
31	128	---	74	71	---	37	---	94	---	207	175	---
TOTAL	3,909	2,917	2,259	2,229	1,786	1,145	1,045	1,882	4,342	10,507	5,893	3,410
MEAN	126	97.2	72.9	71.9	63.8	36.9	34.8	60.7	145	339	190	114
MAX	129	129	75	74	71	38	42	97	341	676	206	172
MIN	106	75	69	71	37	35	26	27	63	207	175	99
AC-FT	7,750	5,790	4,480	4,420	3,540	2,270	2,070	3,730	8,610	20,840	11,690	6,760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

MEAN	94.7	83.4	74.4	67.3	60.7	54.7	42.7	73.3	214	363	195	121
MAX	167	178	118	148	92.0	124	108	134	558	712	277	183
(WY)	(1977)	(1986)	(1980)	(1980)	(1979)	(1979)	(1979)	(1969)	(1974)	(1975)	(1997)	(1971)
MIN	33.4	31.2	28.4	25.7	28.9	21.7	3.57	16.2	72.9	158	103	38.5
(WY)	(1989)	(1975)	(1979)	(1979)	(1985)	(1987)	(1967)	(1978)	(2004)	(1985)	(1988)	(1988)

ADJUSTED FOR CHANGE IN CONTENTS IN MYSTIC LAKE

MEAN	51.9	38.7	32.7	25.7	18.4	15.1	21.9	164	375	346	212	116
CFSM	1.00	0.74	0.63	0.49	0.35	0.29	0.42	3.15	7.20	6.64	4.07	2.23
IN	1.15	0.83	0.72	0.57	0.37	0.34	0.47	3.63	8.04	7.65	4.68	2.48
AC-FT	3,190	2,300	2,010	1,580	1,020	931	1,301	10,098	22,330	21,250	13,010	6,900

OBSERVED

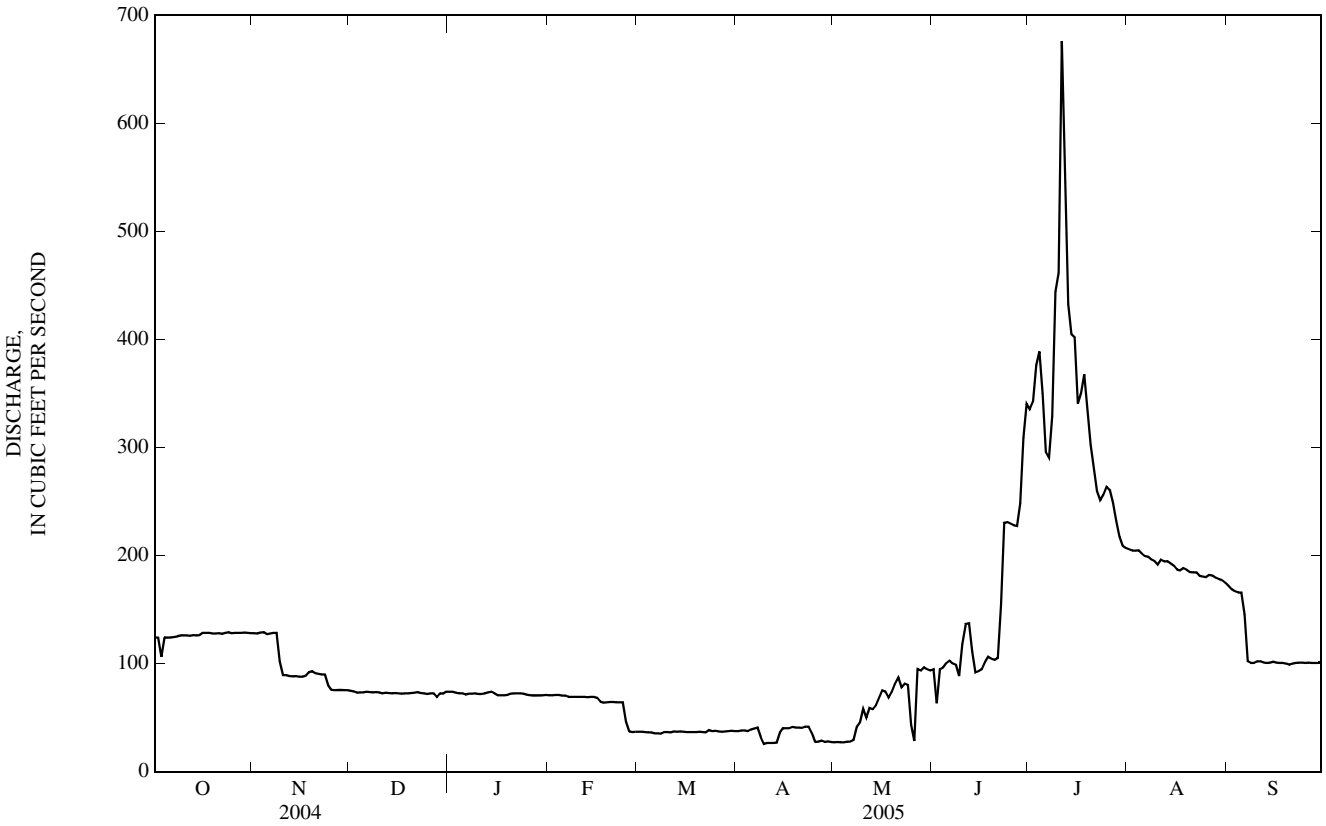
CALENDAR YEAR 2004	TOTAL	37,380	MEAN	102	MAX	357	MIN	31	AC-FT	74,150
WATER YEAR 2005	TOTAL	41,320	MEAN	113	MAX	676	MIN	26	AC-FT	81,970

ADJUSTED

CALENDAR YEAR 2004	TOTAL	39,270	MEAN	107	CFSM	2.05	IN	28.03	AC-FT	77,890
WATER YEAR 2005	TOTAL	41,320	MEAN	119	CFSM	2.28	IN	30.93	AC-FT	85,940

e--Estimated.

06204050 WEST ROSEBUD CREEK NEAR ROSCOE, MT—Continued



06205000 STILLWATER RIVER NEAR ABSAROKEE, MT

LOCATION.--Lat 45°33'04", long 109°23'12" (NAD 27), in NE$^1/_4$NE$^1/_4$NW$^1/_4$ sec.28, T.3 S., R.19 E., Stillwater County, Hydrologic Unit 10070005, on right bank 3 mi downstream from Rosebud Creek, 3.5 mi northeast of Absarokee, 9 mi southwest of Columbus, and at river mile 9.4.

DRAINAGE AREA.--975 mi^2.

PERIOD OF RECORD.--July 1910 to September 1914 (no winter records), March 1935 to September 1995, October 1995 to September 2000 (seasonal records only), October 2000 to current year.

REVISED RECORDS.--WSP 1309: 1911(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,950 ft (NGVD 29). Prior to Oct. 1, 1914, nonrecording gage; Mar. 26, 1935, to July 16, 1942, nonrecording gage at bridge 0.5 mi upstream at different elevations; July 17, 1942 to Mar. 23, 2005, water-stage recorder 1.5 mi downstream at elevation 3,873.8 ft (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partly regulated by Mystic Lake (station number 06204000). Diversions for irrigation of about 24,300 acres, of which 400 acres lies downstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	584	463	e250	e190	258	198	205	315	1,820	2,330	794	549
2	546	435	286	e170	255	195	205	302	1,770	2,410	794	526
3	522	479	327	e180	259	194	203	299	1,540	2,470	829	503
4	498	464	358	e170	266	192	210	303	1,450	2,180	837	491
5	500	456	334	e170	261	192	217	313	1,590	1,970	779	489
6	494	449	297	e180	e250	192	214	358	2,240	1,890	725	477
7	486	434	309	e180	e240	190	210	472	2,510	1,900	708	418
8	491	432	325	e170	e240	204	218	605	2,070	1,990	706	384
9	499	429	320	e170	e240	204	246	589	1,750	2,110	730	358
10	492	392	325	e180	e250	236	227	1,220	1,540	2,190	767	349
11	498	384	344	e200	e250	225	221	4,310	1,440	2,600	812	362
12	492	375	332	e180	e260	227	212	2,360	1,510	2,500	816	371
13	497	361	263	e160	263	213	212	1,680	1,520	2,020	871	394
14	492	363	310	e150	258	202	218	1,770	1,350	1,880	825	391
15	575	357	325	e160	e250	198	226	1,790	1,600	1,830	753	387
16	578	358	290	e200	e240	204	221	1,920	2,660	1,690	712	379
17	551	355	299	e300	e230	207	221	2,340	3,600	1,650	674	389
18	537	352	294	e400	230	201	240	2,050	4,240	1,580	716	402
19	523	364	295	718	239	201	301	2,240	3,650	1,370	895	396
20	521	368	287	561	249	204	306	3,640	3,400	1,260	848	378
21	516	314	252	388	237	208	286	4,630	3,930	1,180	787	379
22	506	344	e240	312	226	e210	293	3,860	4,340	1,110	752	398
23	500	369	e190	311	222	e220	302	3,940	5,370	1,050	734	410
24	521	367	e210	305	225	e210	326	3,890	4,830	1,090	698	495
25	499	351	e240	281	231	e210	349	2,870	4,100	1,070	685	502
26	485	344	e270	270	212	214	371	2,240	3,500	1,120	663	495
27	486	e270	e290	264	196	213	398	1,950	3,010	1,000	641	472
28	486	e260	298	267	194	218	370	2,010	2,770	899	616	482
29	565	e250	292	258	---	213	343	2,340	2,650	825	586	478
30	513	e240	289	255	---	209	330	2,320	2,400	785	567	450
31	485	---	e230	245	---	204	---	1,960	---	764	570	---
TOTAL	15,938	11,179	8,971	7,945	6,731	6,408	7,901	60,886	80,150	50,713	22,890	12,954
MEAN	514	373	289	256	240	207	263	1,964	2,672	1,636	738	432
MAX	584	479	358	718	266	236	398	4,630	5,370	2,600	895	549
MIN	485	240	190	150	194	190	203	299	1,350	764	567	349
AC-FT	31,610	22,170	17,790	15,760	13,350	12,710	15,670	120,800	159,000	100,600	45,400	25,690

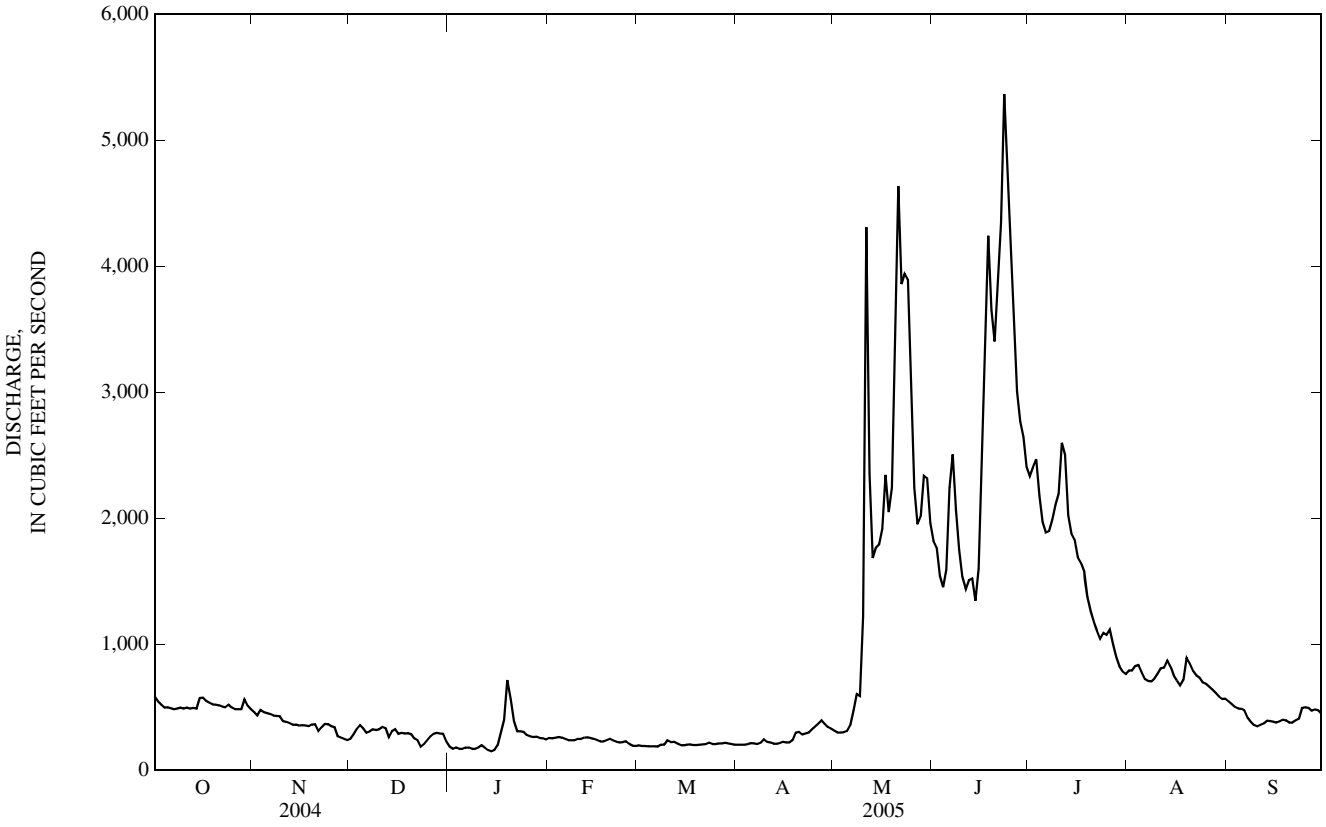
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)*

MEAN	510	400	317	276	264	284	408	1,499	3,427	2,312	865	601
MAX	852	574	430	413	449	565	1,185	2,879	5,776	6,368	1,639	1,099
(WY)	(1942)	(1984)	(1962)	(1942)	(1972)	(1979)	(1943)	(1976)	(1957)	(1975)	(1997)	(1941)
MIN	270	227	184	116	103	162	144	661	1,565	626	280	275
(WY)	(1937)	(1936)	(1937)	(1937)	(1936)	(1936)	(1961)	(1960)	(1939)	(1936)	(1988)	(1939)

06205000 STILLWATER RIVER NEAR ABSAROKEE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005*	
ANNUAL TOTAL	246,011		292,666			
ANNUAL MEAN	672		802		930	
HIGHEST ANNUAL MEAN					1,468	1975
LOWEST ANNUAL MEAN					507	1936
HIGHEST DAILY MEAN	3,760	Jun 10	5,370	Jun 23	10,900	Jun 18, 1974
LOWEST DAILY MEAN	140	Jan 5	150	Jan 14	58	Apr 2, 1936
ANNUAL SEVEN-DAY MINIMUM	200	Jan 1	171	Jan 9	72	Mar 29, 1936
MAXIMUM PEAK FLOW			6,150	Jun 23	12,000	Jun 15, 1967
MAXIMUM PEAK STAGE			5.55	Jun 23	7.17	Jun 15, 1967
INSTANTANEOUS LOW FLOW					a58	Apr 2, 1936
ANNUAL RUNOFF (AC-FT)	488,000		580,500		673,500	
10 PERCENT EXCEEDS	1,740		2,180		2,500	
50 PERCENT EXCEEDS	456		389		443	
90 PERCENT EXCEEDS	250		205		230	

*--During period of operation (1911-12, 1936 to current year. Seasonal records from 1996-2000).
a--Observed.
e--Estimated.



06205450 CLARKS FORK YELLOWSTONE RIVER AT MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT

LOCATION.--Lat 44°57'28", long 109°48'21" (NAD 27), Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 212, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

PERIOD OF RECORD.--August 1975 to October 1977, November 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV													
18...	0845	17	596	11.2	98	7.8	98	-6.0	0.0	46	14.1	2.48	.44
FEB													
01...	0900	11	594	12.4	109	8.2	114	-8.0	0.0	56	17.7	2.74	.43
JUN													
16...	1515	481	588	10.0	114	7.4	46	20.0	9.5	20	5.80	1.21	.26
AUG													
31...	0830	31	596	8.8	93	7.8	89	-1.0	7.0	42	13.3	2.11	.35

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
18...	.1	1.62	7	45	.22	<.1	5.0	5.8	57	.08	2.59	<.04	E.03
FEB													
01...	.1	1.52	6	52	.39	<.2	5.2	6.3	66	.09	1.95	<.04	.10
JUN													
16...	.1	1.15	11	21	E.16	<.1	4.1	3.6	--	--	--	<.04	<.06
AUG													
31...	.1	1.26	6	42	<.20	<.1	3.7	4.5	--	--	--	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
NOV													
18...	<.008	<.02	4	<.20	.3	18	<.06	E4.6	.06	<.8	.045	.8	E4
FEB													
01...	<.008	<.02	2	<.20	.3	18	<.06	E4.0	.17	<.8	.042	.6	E5
JUN													
16...	<.008	<.02	19	<.20	.2	11	<.06	<7.0	.12	<.8	.039	10.4	14
AUG													
31...	<.008	<.02	6	<.20	.2	15	<.06	E4.4	.04	.08	.039	2.2	8

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
NOV												
18...	<.08	<2	1.1	.01	E.2	.10	<.4	<.2	49.0	E1	.8	.11
FEB												
01...	<.08	<2	.7	E.01	<.4	.45	E.3	<.2	51.4	<2	.9	.13
JUN												
16...	.46	<2	1.9	.01	<.4	1.88	<.4	<.2	25.8	<2	7.2	.07
AUG												
31...	E.05	<2	.9	.01	<.4	.64	<.4	<.2	39.8	<2	2.4	.08

E--Estimated.

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53" (NAD 27), in $NW^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi^2.

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,986.24 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 15, 1934, nonrecording gage, and Nov. 15, 1934, to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream from different elevation. July 27, 1951 to Sept. 30, 1953, water-stage recorder at present site at elevation 0.98 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	327	e160	e220	215	206	161	441	1,970	2,440	379	143
2	412	250	e170	e210	211	203	163	421	1,930	2,540	366	132
3	373	340	e200	e220	212	203	171	424	1,680	2,560	526	125
4	351	346	e230	e210	214	200	181	461	1,510	2,280	420	119
5	333	355	e220	e220	212	196	187	499	1,530	2,000	366	117
6	313	350	e230	e230	204	197	182	705	1,860	1,880	334	114
7	292	345	e240	e220	e170	202	179	927	2,330	1,920	308	108
8	282	336	e250	e210	e170	209	258	941	2,160	1,980	285	93
9	264	337	e260	e220	e180	205	309	1,010	1,870	2,040	282	88
10	251	358	e270	e230	e180	211	242	1,290	1,610	2,030	272	87
11	247	361	e260	e220	e190	214	215	2,070	1,430	2,260	275	88
12	229	326	e240	e210	e200	212	201	1,350	1,470	2,310	276	93
13	222	287	e250	e200	219	215	220	1,060	1,590	1,930	276	102
14	215	274	e260	e190	214	183	279	1,120	1,380	1,750	274	108
15	222	275	e260	e180	198	181	301	1,380	1,600	1,670	244	106
16	239	272	e250	e190	e170	211	230	1,870	2,470	1,530	222	99
17	248	278	e260	e200	e170	195	243	2,650	3,280	1,420	213	94
18	249	300	e250	e210	e180	191	337	2,260	4,320	1,270	242	94
19	250	268	e260	e230	e190	182	371	2,660	4,270	1,040	553	95
20	246	276	e250	e260	e200	196	325	4,480	4,400	861	444	93
21	249	221	e230	263	e210	192	313	6,420	4,840	750	350	87
22	252	209	e210	237	206	193	316	5,630	5,010	670	315	86
23	243	261	e200	232	197	193	324	5,700	5,750	630	294	89
24	251	303	e210	232	196	193	455	5,650	5,900	600	278	111
25	247	293	e220	215	202	180	555	4,150	5,080	580	249	188
26	228	294	e230	207	201	190	628	3,020	4,130	675	230	165
27	240	269	e240	208	201	187	614	2,590	3,230	567	205	133
28	240	253	e250	223	202	186	547	2,580	2,990	490	190	143
29	348	e205	e240	226	---	188	495	2,870	2,800	424	173	173
30	262	e160	e230	225	---	187	463	2,650	2,540	383	156	146
31	263	---	e220	220	---	175	---	2,200	---	361	152	---
TOTAL	8,493	8,729	7,250	6,768	5,514	6,076	9,465	71,479	86,930	43,841	9,149	3,419
MEAN	274	291	234	218	197	196	316	2,306	2,898	1,414	295	114
MAX	432	361	270	263	219	215	628	6,420	5,900	2,560	553	188
MIN	215	160	160	180	170	175	161	421	1,380	361	152	86
AC-FT	16,850	17,310	14,380	13,420	10,940	12,050	18,770	141,800	172,400	86,960	18,150	6,780

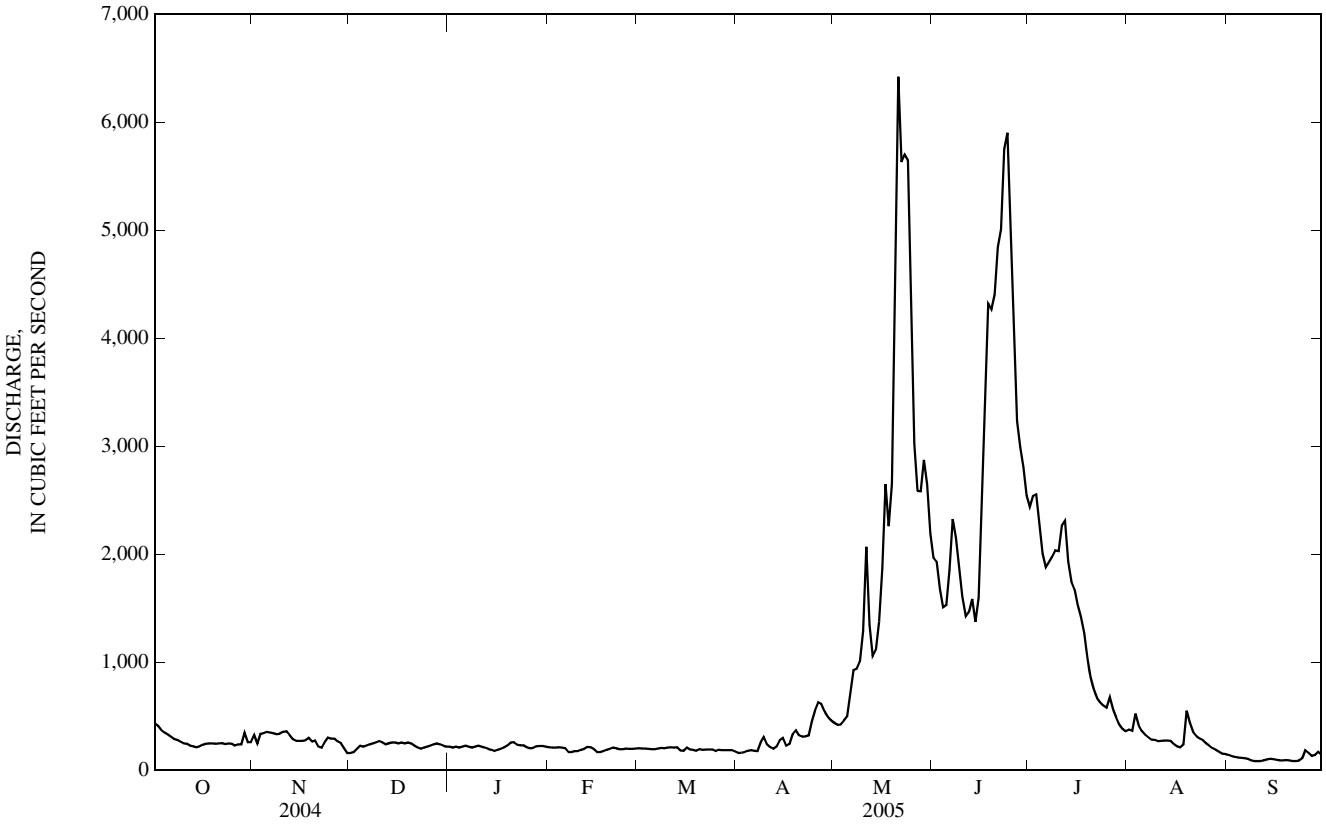
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)

MEAN	276	294	262	231	222	222	426	2,040	4,078	2,173	605	311
MAX	725	648	379	359	329	364	1,167	5,704	7,225	5,744	1,453	834
(WY)	(1931)	(1928)	(1951)	(1997)	(1963)	(1972)	(1943)	(1928)	(1997)	(1975)	(1951)	(1941)
MIN	45.5	115	110	110	100	96.3	110	839	1,607	349	66.5	50.1
(WY)	(1989)	(1989)	(1922)	(1922)	(1922)	(1922)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005	
ANNUAL TOTAL	254,798		267,113			
ANNUAL MEAN	696		732		930	
HIGHEST ANNUAL MEAN					1,485	1997
LOWEST ANNUAL MEAN					547	1977
HIGHEST DAILY MEAN	5,640	Jun 10	6,420	May 21	12,300	Jun 9, 1981
LOWEST DAILY MEAN	160	Jan 5	86	Sep 22	33	Apr 26, 1961
ANNUAL SEVEN-DAY MINIMUM	187	Jan 1	91	Sep 17	37	Oct 8, 1988
MAXIMUM PEAK FLOW			7,090	May 21	14,800	Jun 9, 1981
MAXIMUM PEAK STAGE			6.62	May 21	9.97	Jun 9, 1981
INSTANTANEOUS LOW FLOW			a84	Sep 10	b32	Apr 26, 1961
ANNUAL RUNOFF (AC-FT)	505,400		529,800		673,600	
10 PERCENT EXCEEDS	1,880		2,220		2,860	
50 PERCENT EXCEEDS	298		250		300	
90 PERCENT EXCEEDS	205		170		170	

a--Gage height, 0.38 ft.
b--Result of discharge measurement.
e--Estimated.



06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT

LOCATION.--Lat 45°27'58", long 108°50'35" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.23, T.4 S., R.23 E., Carbon County, Hydrologic Unit 10070006, on right bank 400 ft downstream from county bridge, 0.5 mi east of Edgar, 6 mi upstream from Rock Creek, and at river mile 22.1.

DRAINAGE AREA.--2,022 mi^2.

PERIOD OF RECORD.--July 1921 to September 1969, October 1986 to current year.

REVISED RECORDS.--WSP 1509: 1924, 1932(M). WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,460 ft (NGVD 29). Prior to Aug. 31, 1953, nonrecording gage at same site and elevation.

REMARKS.--Records good except those for the estimated daily discharges, which are poor. Diversions for irrigation of about 41,500 acres, of which about 840 acres lie downstream from the station. In addition, about 6,300 acres of land upstream from the station are irrigated by diversions from the adjoining Rock Creek basin. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year. **Discharge values given herein have the diversions to White Horse Canal subtracted.**

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	704	671	e410	e340	e390	308	273	572	1,900	2,470	224	152
2	736	648	e390	e320	e400	310	261	539	1,800	2,420	221	151
3	698	578	e400	e330	e410	309	263	520	1,720	2,460	233	151
4	662	673	e420	e320	e400	307	272	526	1,460	2,300	434	148
5	637	662	e410	e330	e350	304	286	559	1,330	1,970	383	146
6	629	642	e410	e340	e320	302	287	608	1,460	1,700	314	142
7	600	634	e420	e330	e280	302	277	914	2,020	1,610	268	132
8	569	629	e420	e320	e290	321	285	1,230	2,220	1,650	254	124
9	559	627	e430	e320	e300	321	421	1,120	2,000	1,660	225	119
10	529	622	e440	e340	e320	326	415	1,340	1,740	1,730	223	117
11	520	640	e450	e350	e340	324	346	2,410	1,510	2,180	237	115
12	502	625	e420	e350	e360	325	318	2,500	1,410	2,200	256	123
13	506	589	e400	e330	e340	321	299	1,450	1,670	1,910	313	139
14	513	546	e400	e310	e320	318	318	1,270	1,510	1,580	354	148
15	609	530	e410	e300	e300	290	386	1,390	1,450	1,450	323	154
16	643	542	e400	e320	e290	286	377	1,670	2,040	1,330	273	158
17	628	541	e410	e350	e300	321	328	2,440	2,890	1,230	216	168
18	616	557	e400	e380	e310	303	368	2,550	3,770	1,120	200	174
19	614	556	e410	e410	e320	294	518	2,200	4,150	933	254	176
20	606	533	e390	e430	e330	287	541	3,870	4,120	706	559	156
21	616	509	e350	e410	332	299	513	5,260	4,320	604	490	145
22	619	448	e290	e400	316	297	532	5,700	4,560	480	394	144
23	617	441	e220	e410	312	299	e560	5,250	5,010	434	330	150
24	625	505	e230	e390	305	304	e590	5,450	5,480	382	290	194
25	628	537	e290	e380	305	295	626	4,490	5,160	371	287	312
26	616	521	e340	e380	311	280	681	3,340	4,270	405	268	492
27	613	516	e360	e380	309	286	781	2,730	3,480	489	234	460
28	628	479	e380	e390	308	285	734	2,540	3,050	345	206	424
29	906	e460	e400	e390	---	286	653	2,640	2,960	299	172	427
30	991	e430	e380	e390	---	290	599	2,650	2,620	267	155	483
31	720	---	e360	e380	---	287	---	2,270	---	231	148	---
TOTAL	19,659	16,891	11,840	11,120	9,168	9,387	13,108	71,998	83,080	38,916	8,738	6,124
MEAN	634	563	382	359	327	303	437	2,323	2,769	1,255	282	204
MAX	991	673	450	430	410	326	781	5,700	5,480	2,470	559	492
MIN	502	430	220	300	280	280	261	520	1,330	231	148	115
AC-FT	38,990	33,500	23,480	22,060	18,180	18,620	26,000	142,800	164,800	77,190	17,330	12,150

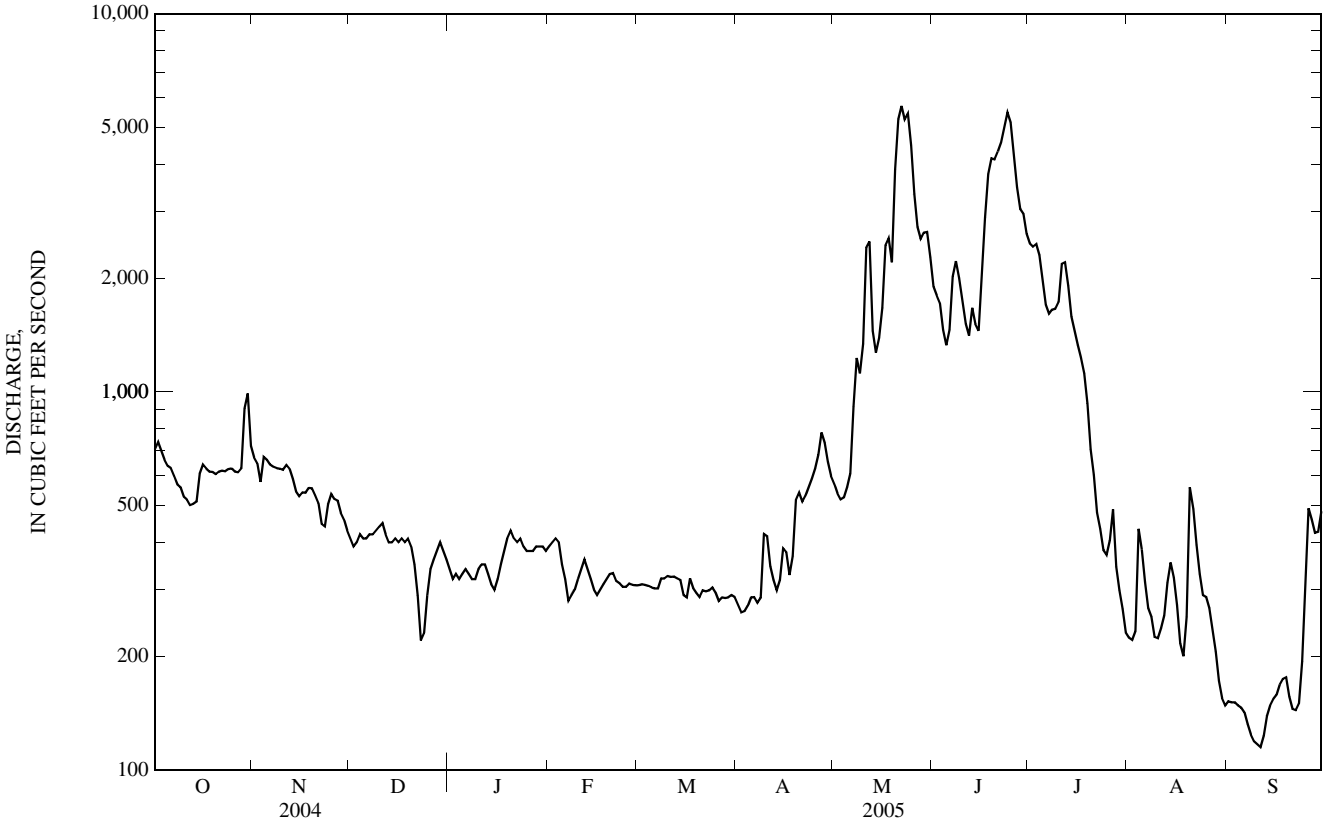
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)*

MEAN	532	502	409	351	350	364	556	2,095	4,034	2,005	603	472
MAX	1,010	777	593	512	584	554	1,398	5,578	7,256	4,771	1,541	1,395
(WY)	(1942)	(1928)	(1996)	(1997)	(1963)	(1943)	(1943)	(1928)	(1996)	(1943)	(1951)	(1941)
MIN	298	310	217	200	180	220	123	757	1,768	290	49.5	156
(WY)	(1956)	(1936)	(1937)	(1922)	(1922)	(1924)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005*	
ANNUAL TOTAL	282,375		300,029			
ANNUAL MEAN	772		822		1,024	
HIGHEST ANNUAL MEAN					1,623	1997
LOWEST ANNUAL MEAN					644	2001
HIGHEST DAILY MEAN	6,360	Jun 11	5,700	May 22	10,600	Jun 2, 1936
LOWEST DAILY MEAN	43	Apr 28	115	Sep 11	37	May 11, 1961
ANNUAL SEVEN-DAY MINIMUM	131	Apr 23	124	Sep 7	43	Apr 18, 1961
MAXIMUM PEAK FLOW			6,260	May 21	11,100	Jun 12, 1997
MAXIMUM PEAK STAGE			7.18	May 21	9.30	Jun 12, 1997
INSTANTANEOUS LOW FLOW					36	Apr 22, 1961
ANNUAL RUNOFF (AC-FT)	560,100		595,100		741,700	
10 PERCENT EXCEEDS	1,810		2,200		2,810	
50 PERCENT EXCEEDS	518		410		467	
90 PERCENT EXCEEDS	290		231		270	

*--During period of operation (water years 1921-69, 1987 to current year).
e--Estimated.



06209500 ROCK CREEK NEAR RED LODGE, MT

LOCATION.--Lat 45°05'10", long 109°19'45" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec.36, T.8 S., R.19 E., Carbon County, Hydrologic Unit 10070006, on left bank 40 ft downstream from county bridge, 6.7 mi south of Red Lodge, and at river mile 49.1.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--April to December 1932, May 1934 to September 1982, May 1985 to September 1986, January 2000 to current year. Monthly discharge only for May 1934, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-00-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft (NGVD 29). Prior to October 1986, water-stage recorder at elevation 6,099.42 ft, levels by U.S. Army Corps of Engineers, at previous site 3.1 mi downstream. Streamflows are equivalent.

REMARKS.--Records fair except those for the estimated daily discharges, which are poor. Flow partly regulated by Glacier Lake. No diversions upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	55	e35	e20	e25	e20	20	27	218	415	220	190
2	99	65	e35	e20	e25	e20	21	26	204	442	228	184
3	94	49	e35	e20	e25	20	21	26	192	419	249	179
4	91	48	e35	e20	e20	20	21	27	192	356	232	175
5	69	47	e35	e20	e20	20	21	30	242	344	216	172
6	65	46	e35	e20	e20	20	21	39	356	357	206	167
7	64	45	e35	e20	e20	20	23	53	337	368	199	162
8	62	45	e35	e20	e20	20	24	53	255	376	195	153
9	61	45	e35	e20	e20	21	23	56	221	394	192	151
10	60	44	e35	e20	e20	21	21	63	202	420	193	152
11	59	43	e35	e20	e20	21	21	62	204	473	202	147
12	59	42	e30	e20	e20	21	22	54	220	407	193	148
13	61	44	e30	e15	e20	21	23	54	207	385	195	144
14	61	43	e30	e20	e25	e20	23	59	231	415	176	138
15	65	42	e30	e20	e20	e20	22	73	333	409	162	132
16	64	40	e30	e20	e20	e20	22	120	480	398	154	127
17	61	41	e30	e20	e20	20	23	214	642	412	150	125
18	60	40	31	e20	e20	e20	25	175	722	366	177	122
19	59	38	30	e25	e20	20	24	516	639	337	191	118
20	59	e35	e30	25	e20	20	24	985	649	320	169	113
21	58	e30	e25	24	e20	20	23	877	684	305	162	110
22	56	e35	e25	24	e20	20	24	710	776	295	165	109
23	56	e35	e20	24	e20	20	26	741	875	295	245	110
24	56	e35	e25	24	e20	e20	30	566	796	293	240	115
25	53	38	e25	23	e20	e25	31	379	668	299	230	114
26	54	36	e25	23	e20	e20	32	302	553	308	221	106
27	54	e35	e25	23	e20	20	31	284	468	264	214	103
28	53	e30	e25	23	e20	21	29	318	473	241	209	103
29	53	e30	e25	23	---	21	28	360	441	228	205	95
30	51	e30	e25	23	---	20	28	272	395	222	203	88
31	50	---	e25	e25	---	20	---	224	---	235	196	---
TOTAL	1,970	1,231	926	664	580	632	727	7,745	12,875	10,798	6,189	4,052
MEAN	63.5	41.0	29.9	21.4	20.7	20.4	24.2	250	429	348	200	135
MAX	103	65	35	25	25	25	32	985	875	473	249	190
MIN	50	30	20	15	20	20	20	26	192	222	150	88
AC-FT	3,910	2,440	1,840	1,320	1,150	1,250	1,440	15,360	25,540	21,420	12,280	8,040

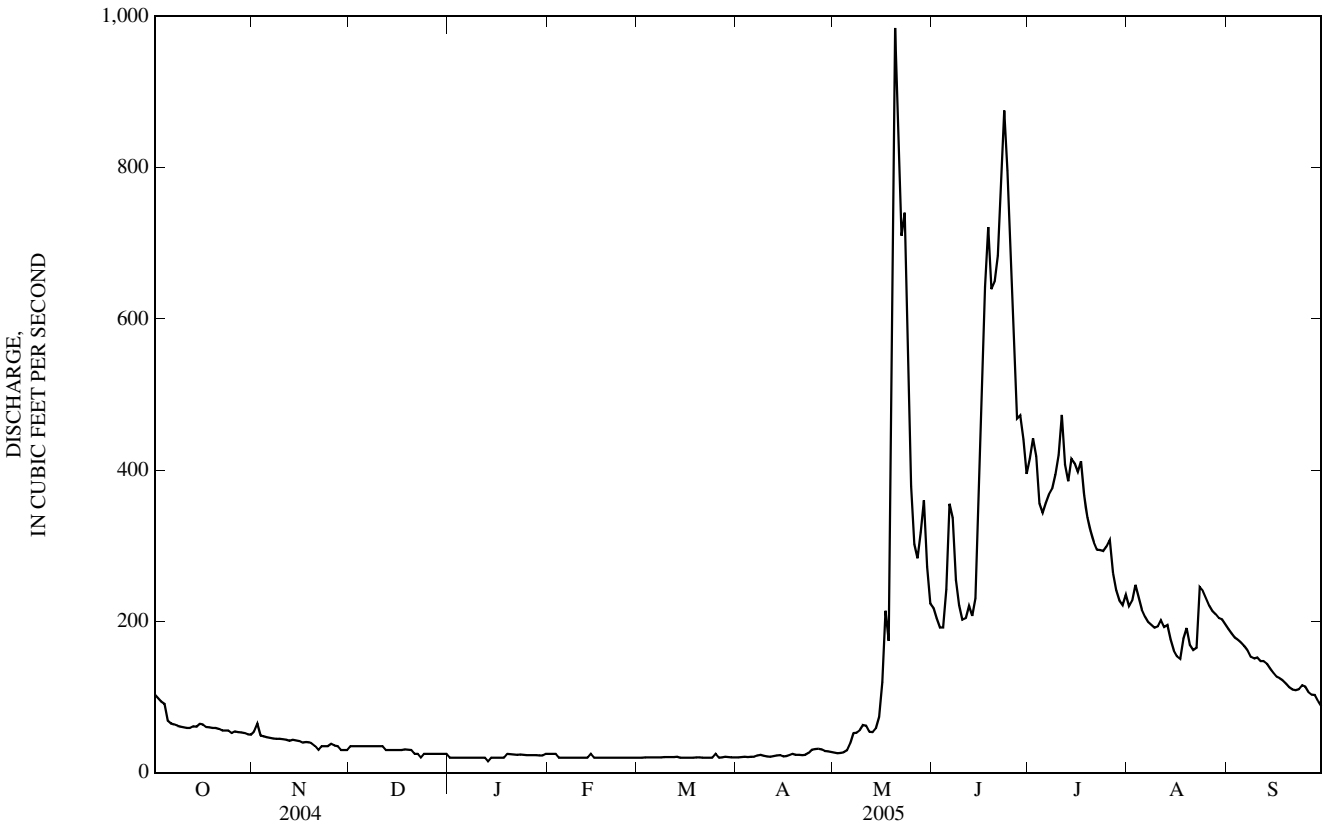
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2005, BY WATER YEAR (WY)*

MEAN	81.1	54.4	41.0	33.6	30.5	29.3	39.6	218	584	486	255	140
MAX	124	77.7	56.1	45.1	42.4	39.7	99.2	460	1,129	1,088	427	219
(WY)	(1968)	(1962)	(1962)	(1942)	(1953)	(1972)	(1943)	(1958)	(1957)	(1975)	(1951)	(1971)
MIN	49.9	36.9	26.6	20.6	19.6	19.6	24.2	78.1	252	220	153	88.6
(WY)	(2004)	(2003)	(1955)	(2002)	(2000)	(2002)	(2005)	(2004)	(2004)	(2001)	(2001)	(1960)

06209500 ROCK CREEK NEAR RED LODGE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1932 - 2005*	
ANNUAL TOTAL	36,640		48,389			
ANNUAL MEAN	100		133		169	
HIGHEST ANNUAL MEAN					251	1943
LOWEST ANNUAL MEAN					97.3	2001
HIGHEST DAILY MEAN	486	Jun 10	985	May 20	2,370	Jun 5, 1957
LOWEST DAILY MEAN	20	Jan 4	15	Jan 13	14	Nov 29, 1954
ANNUAL SEVEN-DAY MINIMUM	21	Jan 22	19	Jan 7	17	Jan 27, 2002
MAXIMUM PEAK FLOW			a1,670	May 20	c3,110	Jun 4, 1957
MAXIMUM PEAK STAGE			b8.32	Jan 3	b8.32	Jan 3, 2005
ANNUAL RUNOFF (AC-FT)	72,680		95,980		122,500	
10 PERCENT EXCEEDS	253		367		478	
50 PERCENT EXCEEDS	50		47		62	
90 PERCENT EXCEEDS	24		20		28	

*--During periods of operation (April 1932 to December 1932, May 1934 to September 1982, May 1985 to September 1986, January 2000 to current year).
a--Gage height, 7.18 ft.
b--Backwater from ice.
c--Gage height, 4.78 ft, previous site and datum.
e--Estimated.



06211000 RED LODGE CREEK ABOVE COONEY RESERVOIR, NEAR BOYD, MT

LOCATION.--Lat 45°26'16", long 109°15'11" (NAD 27), in NE$^1/_4$SE$^1/_4$SE$^1/_4$ sec.33, T.4 S., R.20 E., Carbon County, Hydrologic Unit 10070006, on right bank 0.6 mi upstream from Cooney Reservoir, 9.5 mi west of Boyd, and at river mile 15.0.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--May 1937 to current year (no winter records most years).

REVISED RECORDS.--WSP 1729: Drainage area. WSP 2116: 1937(M), 1942(M), 1943(P), 1944(M), 1948(M), 1952(M), 1957(P), 1962(M), 1963(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,248.0 ft (NGVD 29).

REMARKS.--Seasonal records fair. Some return flow from lands irrigated by water diverted from Rock Creek and East Rosebud Creek basins. Diversions for irrigation of about 5,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				20	43	169	157	53	33	26		
2				20	39	159	159	51	32	26		
3				21	40	147	175	54	29	31		
4				21	41	147	169	60	26	37		
5				21	39	145	156	61	23	47		
6				20	41	147	144	52	22	47		
7				20	55	163	112	48	24	48		
8				21	165	163	111	47	22	49		
9				38	113	162	109	49	23	44		
10				30	480	164	110	46	27	43		
11				23	2,820	155	131	43	27	39		
12				21	924	167	118	46	28	37		
13				18	558	200	112	55	31	37		
14				15	494	171	100	59	32	36		
15				14	473	170	99	50	30	35		
16				14	439	193	92	47	27	34		
17				13	387	223	89	42	27	35		
18				13	366	236	89	41	28	35		
19				27	332	241	84	73	27	35		
20				35	329	237	77	72	25	34		
21				38	297	221	73	66	22	33		
22				46	272	222	71	64	21	34		
23				65	263	207	78	66	21	33		
24				64	263	216	84	59	25	33		
25				53	274	231	82	59	31	33		
26				44	268	188	110	56	29	34		
27				43	227	179	96	51	28	32		
28				47	206	195	84	43	30	31		
29				51	192	180	77	37	30	31		
30				49	195	175	72	33	28	32		
31				---	195	---	59	34	---	32		
TOTAL				925	10,830	5,573	3,279	1,617	808	1,113		
MEAN				30.8	349	186	106	52.2	26.9	35.9		
MAX				65	2,820	241	175	73	33	49		
MIN				13	39	145	59	33	21	26		
AC-FT				1,830	21,480	11,050	6,500	3,210	1,600	2,210		

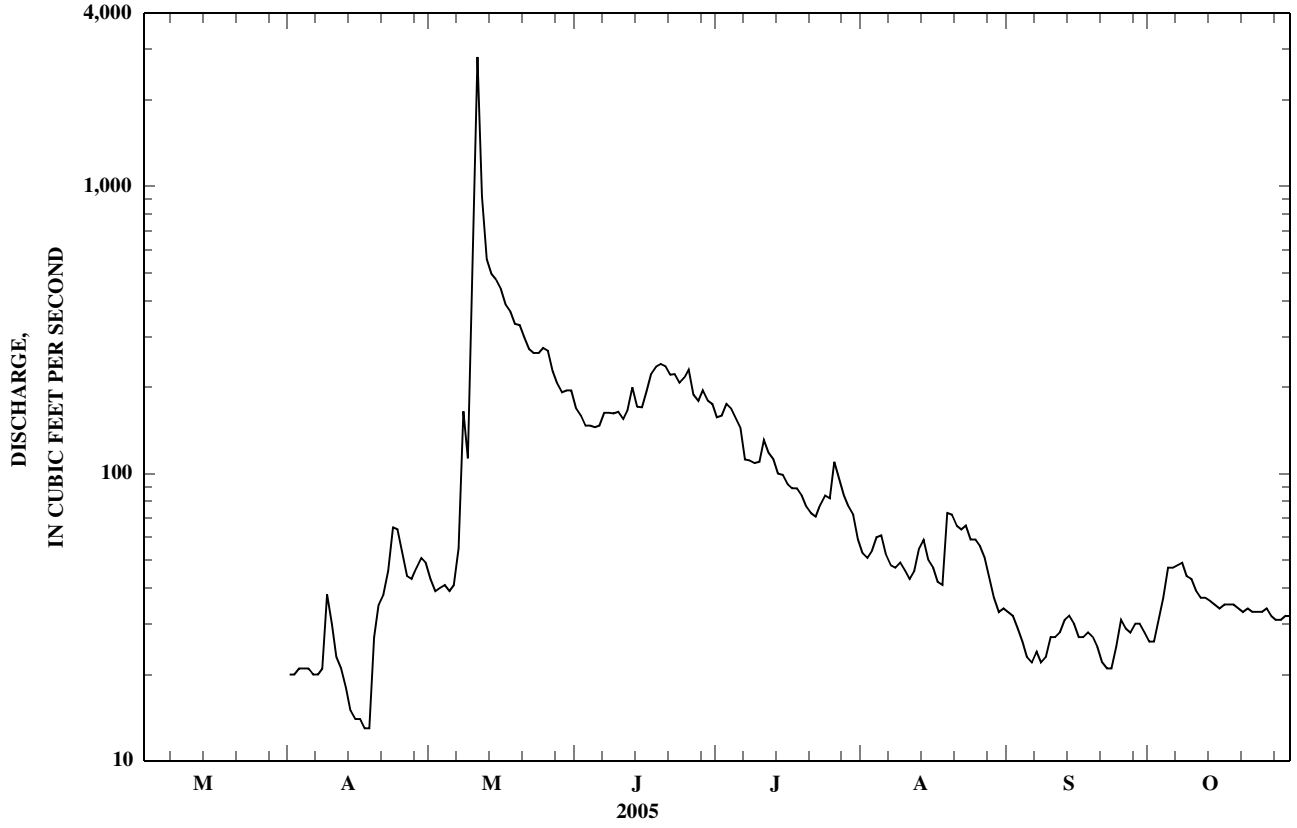
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1937 - 2005*

MEAN	15.4	27.4	36.5	75.3	154	188	89.4	38.0	46.3	46.1	33.3	19.3
MAX	18.8	35.0	62.9	234	616	575	297	90.2	106	119	69.5	33.6
(WY)	(1964)	(1962)	(1962)	(1973)	(1975)	(1967)	(1975)	(1993)	(1941)	(1942)	(1942)	(1958)
MIN	12.1	18.9	17.4	12.7	10.8	15.3	4.90	4.71	4.20	17.5	16.5	14.5
(WY)	(1963)	(1964)	(1964)	(1961)	(1985)	(1954)	(1949)	(1946)	(1949)	(1954)	(1955)	(1946)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1937 - 2005*	
ANNUAL MEAN			58.4	
HIGHEST ANNUAL MEAN			67.1	1963
LOWEST ANNUAL MEAN			49.8	1964
HIGHEST DAILY MEAN	2,820	May 11	2,820	May 11, 2005
LOWEST DAILY MEAN	13	Apr 17	0.00	Aug 1, 1949
MAXIMUM PEAK FLOW	a3,720	May 11	a3,720	May 11, 2005
MAXIMUM PEAK STAGE	7.35	May 11	7.35	May 11, 2005
INSTANTANEOUS LOW FLOW	b11	Apr 15	0.00	Aug 1, 1949
ANNUAL RUNOFF (AC-FT)			42,340	
10 PERCENT EXCEEDS			170	
50 PERCENT EXCEEDS			30	
90 PERCENT EXCEEDS			15	

*--No winter records most years.
a--Result of slope-area measurement of peak flow.
b--Gage height, 1.44 ft.

06211000 RED LODGE CREEK ABOVE COONEY RESERVOIR, NEAR BOYD, MT—Continued



06211500 WILLOW CREEK NEAR BOYD, MT

LOCATION.--Lat 45°25'20", long 109°13'47" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.2, T.5 S., R.20 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.5 mi upstream from Cooney Reservoir, 8 mi west of Boyd, and at river mile 2.1.

DRAINAGE AREA.--53.3 mi^2.

PERIOD OF RECORD.--June 1937 to current year (no winter records except 1963-64).

REVISED RECORDS.--WSP 1729: Drainage area. WSP 2116: 1957, 1962. WDR MT-87-1: 1986.

GAGE.--Water-stage recorder. Elevation of gage is 4,260 ft (NGVD 29). Prior to Apr. 23, 1948, at site 0.5 mi downstream at different elevation.

REMARKS.--Seasonal records fair. Diversions for irrigation of about 1,800 acres upstream from station. Some return flow from lands irrigated by water diverted from Rock Creek basin. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were obtained during the year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				11	21	50	56	47	27	22		
2				14	21	48	58	42	26	22		
3				16	22	47	57	40	25	25		
4				16	22	44	56	41	24	28		
5				17	21	41	55	40	24	30		
6				16	20	41	50	37	24	29		
7				15	22	39	48	37	24	32		
8				16	58	39	49	39	23	34		
9				24	36	40	49	38	23	31		
10				19	80	42	51	36	24	30		
11				14	1,220	41	68	38	24	28		
12				13	475	47	67	41	25	28		
13				12	257	56	57	48	26	27		
14				11	228	44	52	47	25	27		
15				11	170	41	51	42	23	27		
16				9.7	116	43	50	39	23	26		
17				9.1	99	44	49	38	23	26		
18				8.2	91	45	51	41	24	26		
19				13	78	46	50	49	24	25		
20				17	69	44	49	44	23	25		
21				17	66	39	48	40	22	25		
22				21	62	38	50	37	20	24		
23				32	59	40	52	35	21	25		
24				45	58	47	52	33	22	25		
25				28	59	55	53	34	25	24		
26				20	56	55	55	31	24	23		
27				20	53	57	52	30	22	22		
28				22	51	58	51	30	24	22		
29				22	48	59	47	28	23	22		
30				22	47	56	48	27	22	22		
31				---	50	---	48	27	---	21		
TOTAL				531.0	3,735	1,386	1,629	1,176	709	803		
MEAN				17.7	120	46.2	52.5	37.9	23.6	25.9		
MAX				45	1,220	59	68	49	27	34		
MIN				8.2	20	38	47	27	20	21		
AC-FT				1,050	7,410	2,750	3,230	2,330	1,410	1,590		

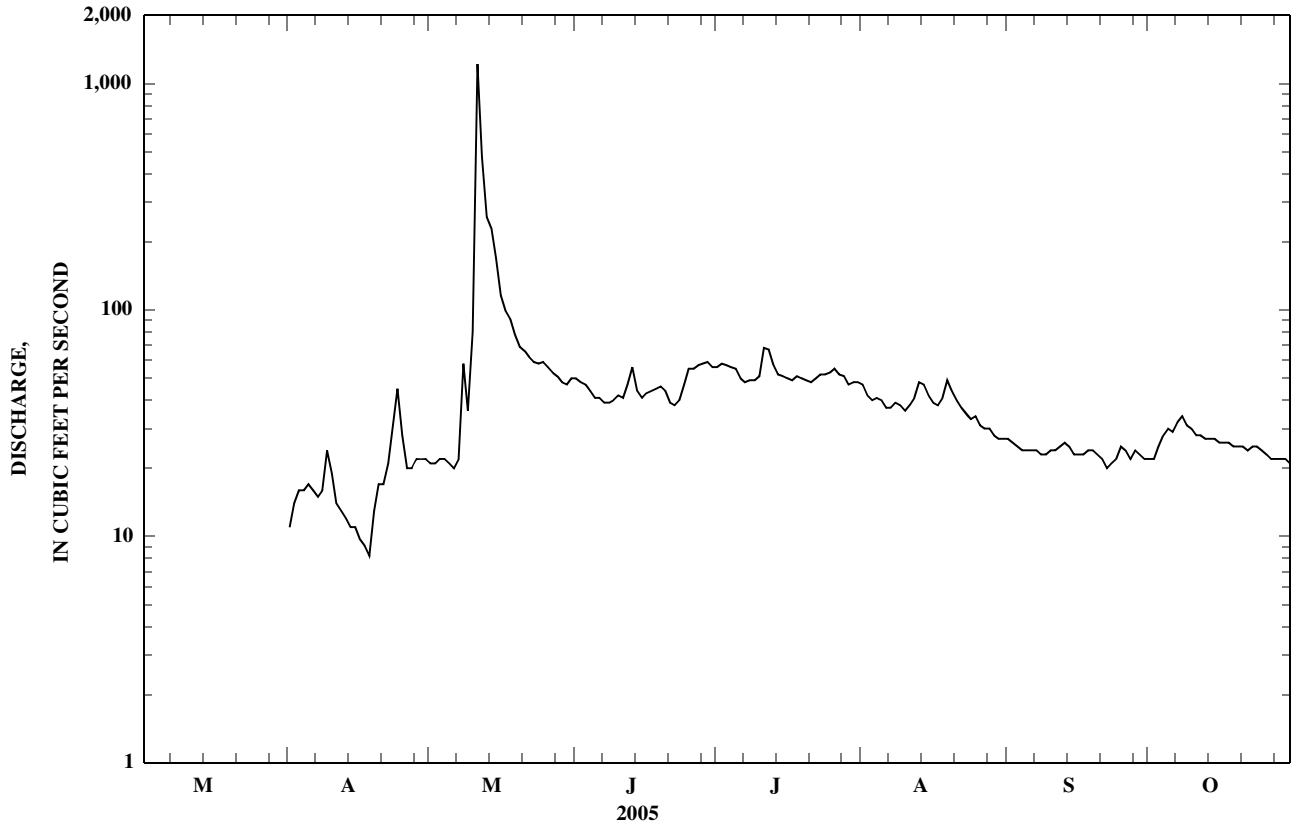
STATISTICS OF MONTHLY MEAN DATA FOR 1963 - 2005*

MEAN	8.00	12.1	15.3	33.1	48.3	54.8	55.6	39.9	36.9	30.2	22.0	17.0
MAX	8.27	17.2	22.5	88.2	215	170	123	75.1	64.3	50.0	31.6	26.6
(WY)	(1963)	(1962)	(1962)	(1973)	(1975)	(1967)	(1978)	(1972)	(1965)	(1972)	(1974)	(1958)
MIN	7.73	5.76	5.89	6.29	3.08	2.05	3.20	11.8	6.02	12.7	14.7	10.6
(WY)	(1964)	(1964)	(1964)	(1961)	(1969)	(1961)	(1960)	(1961)	(1960)	(1940)	(1963)	(1963)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1938 - 2005*	
HIGHEST DAILY MEAN	1,220	May 11	1,220	May 11, 2005
LOWEST DAILY MEAN	8.20	Apr 18	0.00	May 29, 1969
MAXIMUM PEAK FLOW	a2,100	May 11	a2,100	May 11, 2005
MAXIMUM PEAK STAGE	b8.59	May 11	b8.59	May 11, 2005
INSTANTANEOUS LOW FLOW	c6.70	Apr 18	0.00	May 29, 1969

*--Seasonal records except 1963 and 1964 water years.
a--From slope-area measurement of peak flow.
b--From highwater mark.
c--Gage height, 1.71 ft.

06211500 WILLOW CREEK NEAR BOYD, MT—Continued



06214500 YELLOWSTONE RIVER AT BILLINGS, MT

LOCATION.--Lat 45°48'00", long 108°28'00" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.27, T.1 N., R.26 E., Yellowstone County, Hydrologic Unit 10070007, on right bank 0.3 mi downstream from bridge on U.S. Highway 87, 1 mi northeast of Billings, 10 mi upstream from Pryor Creek, and at river mile 360.3.

DRAINAGE AREA.--11,805 mi^2.

PERIOD OF RECORD.--May 1904 to December 1905 (gage heights only January to March, December 1905), August 1928 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as "near Billings" 1904-5.

REVISED RECORDS.--WDR MT 1968: 1967 (M). WSP 1729: Drainage area. WDR-MT-2003-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,080 ft (NGVD 29). May 1904 to December 1905, nonrecording gage at bridge 0.3 ft upstream at different elevation. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 0.3 mi upstream at elevation 2.0 ft higher. July 1, 1932, to Oct. 12, 1937, water-stage recorder at old diversion dam 3.3 mi upstream at different elevation. Oct. 13, 1937, to Jan. 9, 1963 and Dec. 2, 1967 to Sept. 12, 1990, water-stage recorder 0.3 mi upstream at elevation 3,081.36 ft. Jan. 10, 1963 to Dec. 2, 1967, water-stage recorder 2.1 mi upstream at elevation 3,069.9 ft.

REMARKS.--Records good except those for estimated daily discharges and discharges below 2,000 ft^3/s, which are poor. Diversions for irrigation of about 350,000 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,750	4,040	e2,300	e2,000	2,390	1,980	2,110	4,850	16,400	16,400	3,660	2,480
2	3,870	3,910	e2,000	e1,800	2,290	2,010	2,070	4,530	16,000	15,900	3,570	2,480
3	3,780	3,630	2,490	e1,800	2,310	2,010	2,030	4,220	16,100	15,800	3,670	2,460
4	3,630	3,740	3,020	e1,800	2,420	2,030	2,070	4,180	14,700	15,100	4,160	2,420
5	3,540	3,880	2,900	e1,900	2,320	2,040	2,200	4,220	14,300	13,600	4,080	2,380
6	3,450	3,760	2,810	e2,100	1,980	2,040	2,270	4,580	14,800	12,300	3,690	2,410
7	3,380	3,690	2,660	e2,100	e1,800	2,030	2,260	5,940	18,200	11,600	3,410	2,850
8	3,360	3,650	2,690	e1,900	e1,700	2,070	2,130	8,060	19,500	11,400	3,210	2,130
9	3,340	3,590	2,870	e1,900	e1,800	2,130	2,420	8,450	17,400	11,100	3,130	1,930
10	3,330	3,540	2,820	e2,000	2,060	2,150	2,660	8,990	15,800	11,200	3,050	1,910
11	3,380	3,500	2,780	e2,100	2,310	2,210	2,650	17,200	14,600	12,100	3,120	1,900
12	3,450	3,550	2,850	e2,100	2,330	2,240	2,440	24,200	14,100	12,600	3,240	1,960
13	3,410	3,460	2,830	e1,800	2,300	2,260	2,220	15,500	14,700	11,100	3,450	2,110
14	3,500	3,310	2,530	e1,700	2,350	2,240	2,090	13,200	14,900	9,730	3,730	2,180
15	4,120	3,200	2,660	e1,900	2,190	2,170	2,140	12,500	13,700	9,170	3,610	2,160
16	4,470	3,150	2,750	e2,000	1,940	2,050	2,630	13,300	15,500	8,590	3,240	2,190
17	4,340	3,130	2,670	e2,200	1,800	2,120	2,540	16,400	20,000	8,090	2,930	2,230
18	4,300	3,120	2,580	e2,500	1,780	2,170	2,420	20,300	23,200	7,740	2,860	2,300
19	4,210	3,210	2,570	2,680	1,910	2,140	3,410	17,500	25,200	7,110	3,300	2,350
20	4,100	3,130	2,570	3,680	2,110	2,120	4,630	20,600	23,100	6,320	3,870	2,340
21	4,110	3,100	2,480	3,840	2,260	2,130	4,300	29,600	23,500	5,810	4,360	2,230
22	4,020	2,890	2,380	3,650	2,210	2,180	4,010	34,500	25,500	5,330	3,810	2,200
23	4,030	2,830	e2,000	3,540	2,130	2,190	3,880	30,700	27,900	5,080	3,410	2,240
24	4,080	e2,900	e2,000	3,350	2,050	2,260	3,780	32,100	31,100	4,860	3,210	2,730
25	4,070	e3,000	e2,000	3,210	2,020	2,210	4,140	29,300	28,500	4,860	3,050	3,350
26	3,980	e3,100	2,000	2,910	2,010	2,140	4,990	23,400	24,700	5,130	2,920	3,490
27	3,840	3,030	2,330	2,690	1,990	2,100	6,140	19,600	21,900	5,060	2,800	3,680
28	3,910	2,930	2,650	2,630	1,980	2,140	6,500	18,200	20,000	4,760	2,700	3,430
29	4,660	2,580	2,550	2,500	---	2,140	6,000	18,500	19,000	4,300	2,580	3,220
30	5,230	e2,500	2,800	2,470	---	2,200	5,270	19,500	17,500	4,050	2,420	3,200
31	4,410	---	2,210	2,370	---	2,200	---	18,300	---	3,860	2,400	---
TOTAL	121,050	99,050	78,750	75,120	58,740	66,100	98,400	502,420	581,800	280,050	102,640	74,940
MEAN	3,905	3,302	2,540	2,423	2,098	2,132	3,280	16,210	19,390	9,034	3,311	2,498
MAX	5,230	4,040	3,020	3,840	2,420	2,260	6,500	34,500	31,100	16,400	4,360	3,680
MIN	3,330	2,500	2,000	1,700	1,700	1,980	2,030	4,180	13,700	3,860	2,400	1,900
AC-FT	240,100	196,500	156,200	149,000	116,500	131,100	195,200	996,600	1,154,000	555,500	203,600	148,600

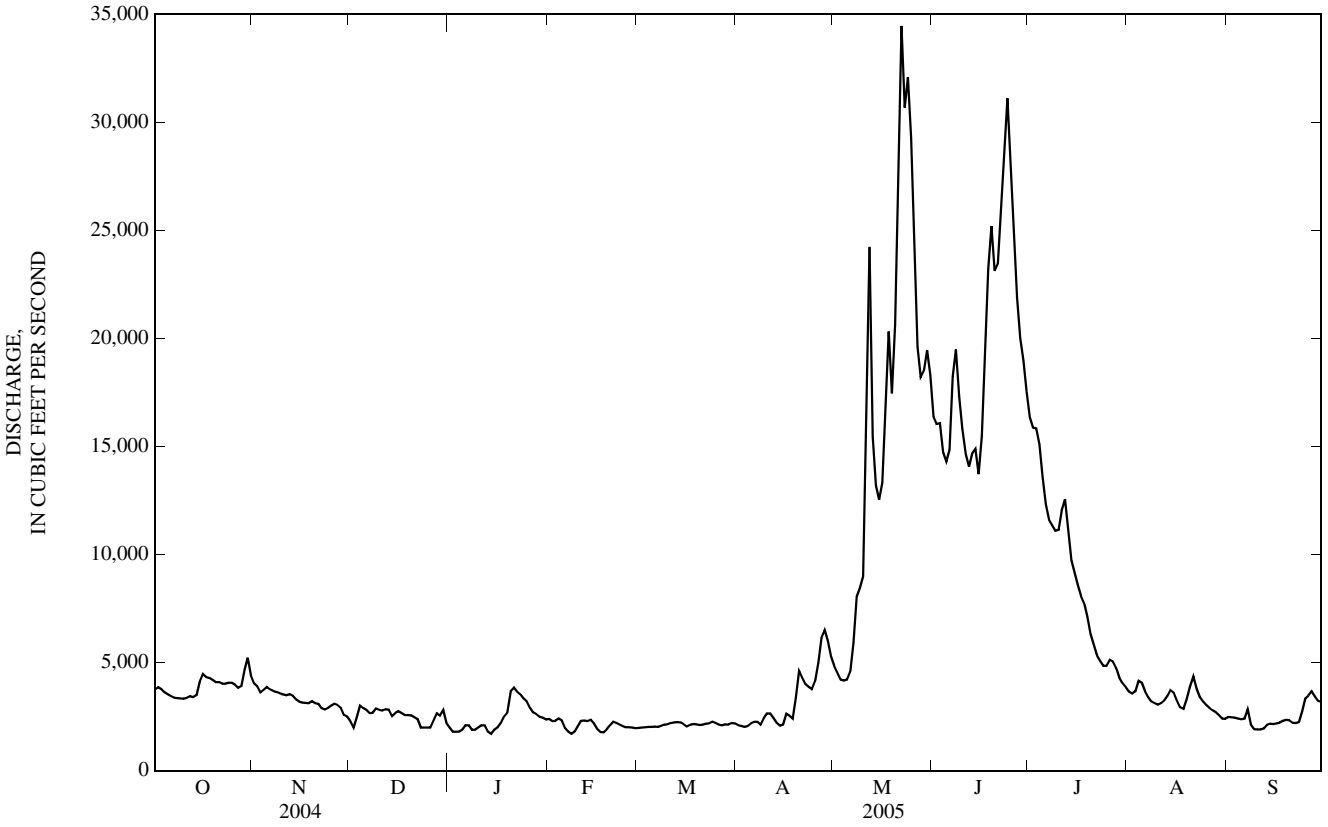
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	3,987	3,534	2,782	2,469	2,634	2,997	4,104	12,680	25,090	13,400	5,087	3,999
MAX	6,803	5,163	4,451	3,834	4,382	5,478	8,799	24,070	53,910	37,180	9,776	7,301
(WY)	(1942)	(1984)	(1976)	(1984)	(1997)	(1979)	(1943)	(1997)	(1997)	(1975)	(1997)	(1968)
MIN	2,128	2,283	1,579	1,363	1,559	1,767	1,438	5,635	9,849	3,410	1,462	1,527
(WY)	(2002)	(1932)	(1933)	(1940)	(1932)	(2002)	(1961)	(1953)	(1934)	(1934)	(2001)	(2001)

06214500 YELLOWSTONE RIVER AT BILLINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	1,668,310		2,139,060			
ANNUAL MEAN	4,558		5,860		6,903	
HIGHEST ANNUAL MEAN					12,100	1997
LOWEST ANNUAL MEAN					3,763	2001
HIGHEST DAILY MEAN	25,700	Jun 11	34,500	May 22	80,100	Jun 12, 1997
LOWEST DAILY MEAN	1,450	Aug 17	1,700	Jan 14	450	Dec 12, 1932
ANNUAL SEVEN-DAY MINIMUM	1,610	Aug 13	1,910	Jan 2	794	Dec 10, 1932
MAXIMUM PEAK FLOW			35,900	May 22	82,000	Jun 12, 1997
MAXIMUM PEAK STAGE			10.13	May 22	15.00	Jun 12, 1997
INSTANTANEOUS LOW FLOW					430	Dec 12, 1932
ANNUAL RUNOFF (AC-FT)	3,309,000		4,243,000		5,001,000	
10 PERCENT EXCEEDS	10,700		16,200		17,500	
50 PERCENT EXCEEDS	3,130		3,150		3,680	
90 PERCENT EXCEEDS	1,900		2,030		2,140	

e--Estimated.



06216000 PRYOR CREEK AT PRYOR, MT

LOCATION.--Lat 45°26'06", long 108°32'01" (NAD 27), in $NE^1/_4NW^1/_4NE^1/_4$ sec.5, T.5 S., R.26 E., Big Horn County, Hydrologic Unit 10070008, on left bank 60 ft upstream from county bridge, 0.5 mi north of Pryor, 1.4 mi downstream from Lost Creek, and at river mile 82.7.

DRAINAGE AREA.--117 mi^2.

PERIOD OF RECORD.--June 1921 to September 1924 (no winter records), November 1966 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-87-1: 1982-83 (M), 1986 (M).

GAGE.--Water-stage recorder. Elevation of gage is 4,007.35 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Oct. 14, 1966, nonrecording gage at approximately same site at different elevation.

REMARKS.--Records good. Diversions for irrigation of about 1,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	12	14	15	14	14	16	18	15	6.2	9.3
2	11	13	13	14	15	14	14	16	18	15	6.4	9.5
3	11	12	13	14	15	14	14	16	18	15	6.5	8.3
4	10	13	13	14	15	14	14	16	17	14	6.6	9.2
5	9.9	13	13	14	15	14	15	16	18	14	6.2	9.7
6	9.8	13	13	14	15	14	15	15	18	14	5.9	11
7	10	12	13	14	15	14	14	17	19	13	5.6	12
8	10	13	13	14	15	15	13	23	20	13	5.6	11
9	11	12	13	14	15	14	20	23	19	11	6.0	9.5
10	10	12	13	14	15	14	18	21	20	12	6.2	8.4
11	11	13	14	14	15	14	16	72	19	14	6.4	9.8
12	11	12	14	14	15	14	15	114	20	13	6.5	12
13	9.8	12	14	14	15	14	15	57	19	9.8	6.6	13
14	11	11	14	14	15	15	15	41	19	8.7	7.2	11
15	14	12	14	14	15	15	15	35	19	8.3	7.5	11
16	13	12	14	14	15	15	15	34	19	8.1	6.8	12
17	12	11	14	14	15	15	14	34	19	8.1	6.1	13
18	12	12	14	15	15	15	15	41	19	8.9	7.1	14
19	12	12	14	16	15	15	21	37	18	9.9	7.2	14
20	12	11	14	16	15	15	21	33	19	9.0	7.6	12
21	12	11	14	15	15	15	20	31	14	8.1	7.3	12
22	12	12	14	14	15	15	21	28	11	7.9	6.9	12
23	12	12	14	15	15	15	22	25	11	8.0	6.9	14
24	13	13	14	15	15	16	23	24	12	7.6	7.2	17
25	13	13	14	16	15	15	21	23	13	8.3	6.8	21
26	13	13	14	15	15	15	19	23	13	8.5	7.0	19
27	12	12	14	15	14	15	19	22	13	8.3	7.0	17
28	13	13	14	15	14	15	17	21	14	7.0	7.0	16
29	19	13	15	15	---	15	18	19	17	7.2	7.7	16
30	16	13	15	15	---	15	17	19	16	8.0	8.4	16
31	14	---	14	15	---	15	---	19	---	6.6	8.9	---
TOTAL	369.5	369	425	450	418	454	510	931	509	319.3	211.3	379.7
MEAN	11.9	12.3	13.7	14.5	14.9	14.6	17.0	30.0	17.0	10.3	6.82	12.7
MAX	19	13	15	16	15	16	23	114	20	15	8.9	21
MIN	9.8	11	12	14	14	14	13	15	11	6.6	5.6	8.3
AC-FT	733	732	843	893	829	901	1,010	1,850	1,010	633	419	753

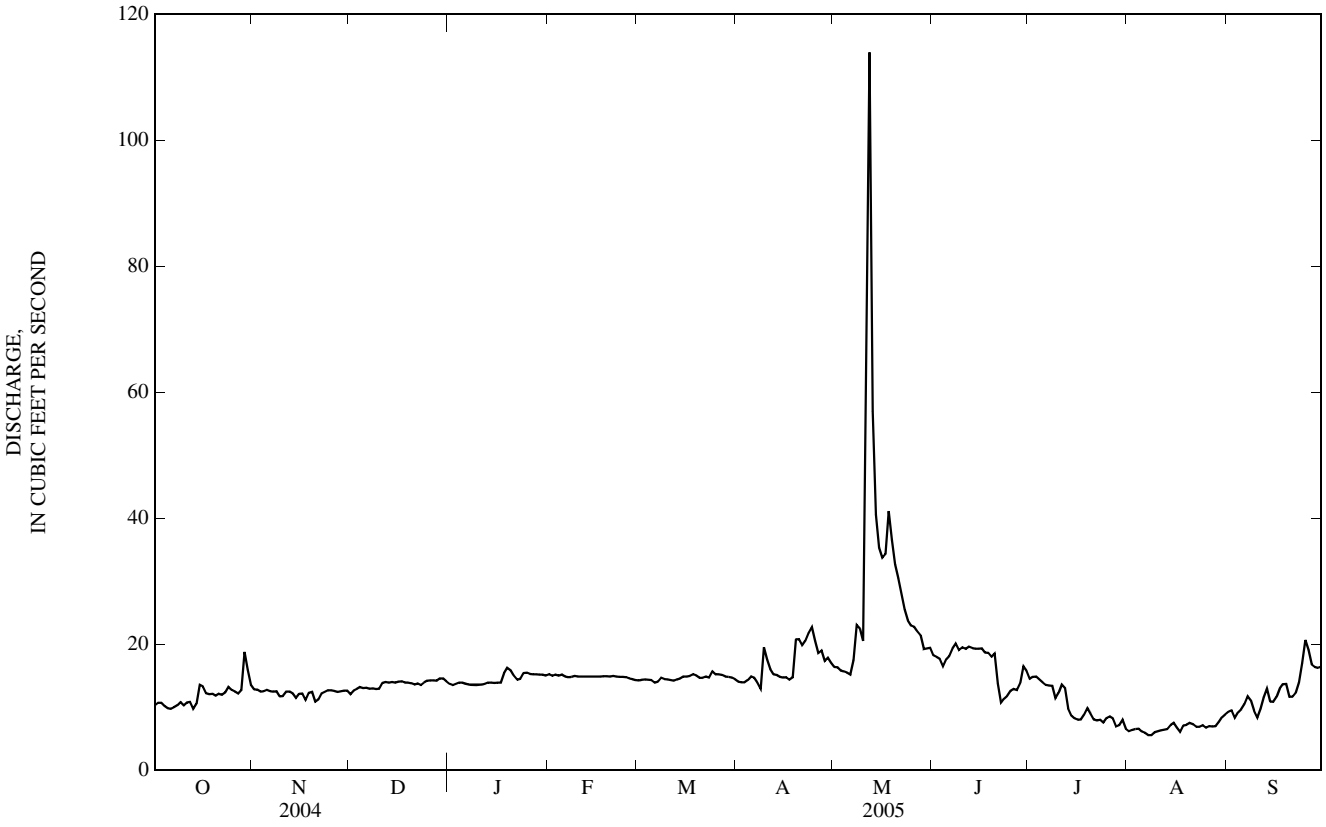
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	30.7	30.4	29.6	28.5	29.3	31.2	31.3	52.8	39.4	22.6	20.5	26.1
MAX	62.9	62.0	69.7	54.3	55.7	70.9	58.8	251	158	69.3	49.5	61.0
(WY)	(1976)	(1976)	(1976)	(1976)	(1976)	(1979)	(1976)	(1978)	(1975)	(1975)	(1975)	(1978)
MIN	11.9	12.3	13.7	14.5	14.9	14.6	12.6	13.7	10.7	6.56	6.15	8.52
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2003)	(2004)	(2004)	(2003)	(2003)	(2003)

06216000 PRYOR CREEK AT PRYOR, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	4,807.9		5,345.8			
ANNUAL MEAN	13.1		14.6		31.0	
HIGHEST ANNUAL MEAN					66.3	1975
LOWEST ANNUAL MEAN					13.7	2003
HIGHEST DAILY MEAN	20	Feb 29	114	May 12	1,700	May 19, 1978
LOWEST DAILY MEAN	5.1	Jul 17	5.6	Aug 7	3.2	Aug 1, 1988
ANNUAL SEVEN-DAY MINIMUM	5.6	Jul 12	6.0	Aug 5	5.1	Jul 29, 2003
MAXIMUM PEAK FLOW			200	May 11	b2,280	May 19, 1978
MAXIMUM PEAK STAGE			4.78	May 11	c8.88	May 19, 1978
INSTANTANEOUS LOW FLOW			a5.3	Aug 5	1.8	Jul 31, 1988
ANNUAL RUNOFF (AC-FT)	9,540		10,600		22,490	
10 PERCENT EXCEEDS	17		19		47	
50 PERCENT EXCEEDS	14		14		27	
90 PERCENT EXCEEDS	7.6		8.1		15	

a--Gage height, 2.61 ft.
b--From rating curve extended above 410 ft^3/s on basis of contracted-opening measurement.
c--From floodmark.



06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44°45'31", long 108°10'51" (NAD 27), in NW$^1/_4$ NE$^1/_4$SW$^1/_4$ sec.9, T.55 N., R.94 W., Big Horn County, Hydrologic Unit 10080010, on right bank 180 ft upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft, 1.3 mi upstream from Five Springs Creek, and 5.9 mi south of Kane.

DRAINAGE AREA.--15,762 mi^2. Area at sites used prior to May 17, 1956, 15,846 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above NGVD of 1929, from topographic map. August 29, 1928 to April 25, 1932, nonrecording gage, and April 25, 1932 to May 16, 1956, water-stage recorder at site 12.5 mi downstream from station at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Some regulation by Boysen Reservoir since October 1951. Diversions for irrigation of about 376,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft, September 30, 1923, site and datum in use April 1932 to May 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,050	924	869	934	811	840	571	1,130	4,670	4,870	1,040	975
2	1,020	907	868	869	818	860	550	1,090	4,580	3,620	1,030	1,000
3	973	887	e860	713	792	853	529	1,030	4,390	3,410	1,090	1,010
4	922	891	e780	680	796	847	656	930	4,350	4,290	1,150	1,020
5	912	900	e780	e620	808	867	629	932	4,340	4,210	1,140	1,020
6	890	905	e760	e660	841	865	592	949	4,560	3,780	1,070	1,010
7	877	895	e800	701	e800	854	729	1,160	5,180	2,740	1,040	924
8	867	883	861	700	e730	810	797	2,820	5,920	2,110	1,040	854
9	864	881	878	e660	e700	784	1,020	3,090	5,280	2,010	1,000	883
10	889	889	878	e640	758	790	1,330	2,030	4,900	1,740	949	902
11	911	884	e860	e640	808	761	1,240	4,890	4,580	1,650	915	950
12	902	885	e780	e660	780	760	1,030	10,200	4,430	1,630	982	986
13	870	882	e720	e700	780	740	1,630	5,770	4,770	1,550	1,030	1,040
14	878	870	e740	e620	e780	733	2,840	2,530	4,780	1,450	1,060	1,140
15	867	863	772	e620	e760	715	1,430	2,150	4,070	1,370	1,100	1,150
16	894	858	e800	e600	e700	732	938	2,010	4,330	1,330	1,020	1,190
17	917	847	e820	e560	e720	734	875	2,400	4,920	1,300	905	1,190
18	917	843	887	e700	741	711	826	4,110	6,260	1,320	913	1,220
19	927	848	893	e800	735	707	862	4,270	6,740	1,320	1,000	1,250
20	907	842	838	926	745	699	1,130	4,630	6,370	1,290	1,060	1,250
21	894	828	e820	959	767	724	1,570	5,870	6,130	e1,050	1,060	1,240
22	907	805	e800	967	784	735	1,770	7,830	5,510	958	1,020	1,260
23	920	820	e740	981	797	687	1,550	6,880	6,130	869	974	1,200
24	932	858	e440	971	791	659	1,260	6,790	6,980	856	951	1,260
25	929	860	e400	930	796	692	1,120	6,540	7,260	904	995	1,460
26	923	855	e560	907	795	675	1,090	5,020	6,870	966	948	1,680
27	914	848	e700	854	795	668	1,060	4,740	6,850	1,140	928	1,570
28	918	e820	e860	818	819	673	1,140	4,480	6,580	1,220	947	1,510
29	934	e770	969	835	---	646	1,200	4,430	6,310	1,160	961	1,490
30	954	e800	952	818	---	600	1,190	4,610	6,380	1,070	935	1,470
31	938	---	1,000	823	---	589	---	4,960	---	1,050	923	---
TOTAL	28,417	25,848	24,685	23,866	21,747	23,010	33,154	120,271	164,420	58,233	31,176	35,104
MEAN	917	862	796	770	777	742	1,105	3,880	5,481	1,878	1,006	1,170
MAX	1,050	924	1,000	981	841	867	2,840	10,200	7,260	4,870	1,150	1,680
MIN	864	770	400	560	700	589	529	930	4,070	856	905	854
AC-FT	56,370	51,270	48,960	47,340	43,140	45,640	65,760	238,600	326,100	115,500	61,840	69,630

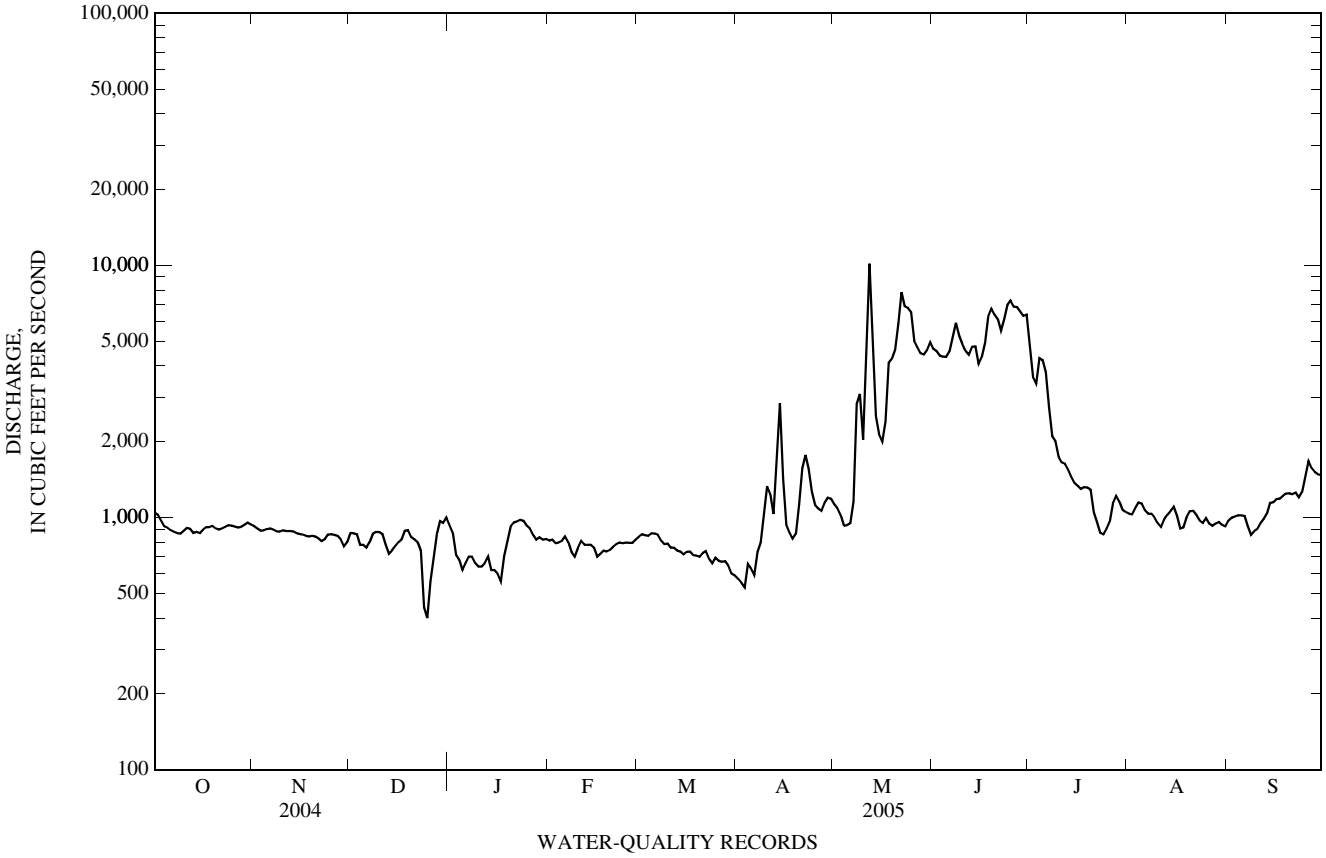
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)*

MEAN	1,762	1,637	1,428	1,341	1,504	1,785	1,769	3,131	5,685	3,069	1,416	1,503
MAX	3,994	2,871	2,506	2,871	3,164	3,171	3,454	7,505	14,680	11,650	6,388	3,673
(WY)	(1983)	(1984)	(1983)	(1972)	(1983)	(1972)	(1943)	(1947)	(1944)	(1967)	(1930)	(1973)
MIN	524	680	627	580	550	740	677	744	1,032	501	305	386
(WY)	(1936)	(2004)	(1961)	(1937)	(1933)	(1989)	(2004)	(2002)	(1934)	(1961)	(1940)	(1935)

06279500 BIGHORN RIVER AT KANE, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005*	
ANNUAL TOTAL	307,099		589,931			
ANNUAL MEAN	839		1,616		2,169	
HIGHEST ANNUAL MEAN					3,524	1947
LOWEST ANNUAL MEAN					781	2002
HIGHEST DAILY MEAN	1,870	Jul 25	10,200	May 12	24,800	Jun 15, 1935
LOWEST DAILY MEAN	390	Jan 6	400	Dec 25	179	Jul 22, 1934
ANNUAL SEVEN-DAY MINIMUM	485	Jan 3	588	Mar 31	184	Jul 18, 1934
MAXIMUM PEAK FLOW			11,700	May 12	a25,200	Jun 16, 1935
MAXIMUM PEAK STAGE			6.95	May 12	a11.1	Jun 16, 1935
ANNUAL RUNOFF (AC-FT)	609,100		1,170,000		1,571,000	
10 PERCENT EXCEEDS	1,070		4,580		3,910	
50 PERCENT EXCEEDS	812		923		1,600	
90 PERCENT EXCEEDS	620		701		740	

*--August 1928 to September 1929 not included in computations, monthly only for selected months.
a--Site and datum then in use.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--1947-1977, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)
NOV										
17...	1330	835	672	--	--	8.0	1,240	19.5	6.5	<.04
JAN										
31...	1520	831	668	11.3	89	8.3	1,070	10.0	.0	.04
JUN										
15...	1720	4,100	660	8.1	100	8.1	654	29.0	18.5	<.04
AUG										
30...	1640	895	664	8.8	110	8.4	900	15.0	19.0	<.04
31...	1805	896	--	--	--	--	--	--	--	--

06279500 BIGHORN RIVER AT KANE, WY—Continued

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
NOV							
17...	.30	<.008	<.02	E4	E1	29	65
JAN							
31...	.39	E.007	<.02	E13	E9	146	328
JUN							
15...	.18	<.008	<.02	270	450	466	5,150
AUG							
30...	.44	E.005	<.02	51	54	--	--
31...	--	--	--	--	--	72	174

E--Estimated.

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44°50'19", long 108°26'04" (NAD 27), in NW$^1/_4$ NE$^1/_4$ NE$^1/_4$ sec.17, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on left bank 20 ft downstream from bridge on County Road 9 and 1.5 mi west of Lovell.

DRAINAGE AREA.--2,350 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above NGVD of 1929, from topographic map. Prior to October 1, 1976, at site 500 ft downstream from station, at datum 2.00 ft higher. October 1, 1976 to September 30, 1980, at site 500 ft downstream from station at datum 1.00 ft higher. October 1, 1981 to November 13, 1986, at site 500 ft downstream from station at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Flow regulated by Buffalo Bill Reservoir. Natural flow of stream affected by storage reservoirs, power development, diversions upstream from station for irrigation of about 143,000 acres, of which about 8,000 acres are downstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	529	361	e500	400	381	346	362	228	1,290	1,800	638	541
2	537	352	e490	397	380	351	352	228	1,250	1,590	579	580
3	507	443	e480	440	379	351	364	142	1,100	2,930	551	626
4	471	428	483	408	379	352	336	222	1,110	3,260	533	694
5	427	435	475	e390	377	351	312	328	1,160	2,270	515	802
6	396	468	474	e400	372	354	274	381	1,270	1,340	520	734
7	372	443	476	e410	370	357	259	392	1,410	901	545	556
8	375	439	478	e410	e360	367	252	1,190	1,940	711	546	496
9	373	430	475	e420	e370	371	349	543	1,900	429	461	520
10	344	410	473	e410	e370	377	312	655	1,890	241	493	576
11	354	422	474	e400	367	379	245	2,730	1,980	284	717	619
12	379	486	482	e400	362	378	239	2,170	2,030	243	620	755
13	375	544	475	e410	365	368	136	652	2,150	188	696	842
14	409	539	e470	e400	369	367	162	513	1,300	150	827	856
15	462	535	479	e380	361	363	292	523	1,170	135	801	866
16	519	518	476	e400	352	372	316	356	1,120	160	663	883
17	485	526	472	e400	353	375	384	377	913	200	574	797
18	557	523	461	e400	364	371	474	709	991	274	537	793
19	576	514	465	e400	354	363	709	442	1,420	198	675	818
20	586	509	466	e390	337	364	774	389	1,440	149	634	738
21	520	489	463	e390	331	372	788	377	1,300	158	673	752
22	483	506	460	e390	332	368	683	354	2,640	193	704	810
23	441	520	418	e390	329	361	924	331	4,130	256	609	768
24	425	528	e390	e390	329	341	605	285	5,390	241	527	935
25	417	510	e420	e390	328	359	358	265	5,670	341	478	1,080
26	394	507	e420	e390	333	366	229	1,120	5,820	474	522	1,040
27	376	496	e410	e390	340	370	194	1,080	5,690	521	525	1,010
28	363	489	e410	e390	342	370	360	634	3,110	500	517	981
29	644	e490	412	e390	---	366	191	914	2,970	504	556	856
30	478	e500	416	e380	---	365	204	1,360	2,480	503	502	722
31	381	---	411	e380	---	364	---	1,290	---	536	506	---
TOTAL	13,955	14,360	14,154	12,335	9,986	11,279	11,439	21,180	68,034	21,680	18,244	23,046
MEAN	450	479	457	398	357	364	381	683	2,268	699	589	768
MAX	644	544	500	440	381	379	924	2,730	5,820	3,260	827	1,080
MIN	344	352	390	380	328	341	136	142	913	135	461	496
AC-FT	27,680	28,480	28,070	24,470	19,810	22,370	22,690	42,010	134,900	43,000	36,190	45,710

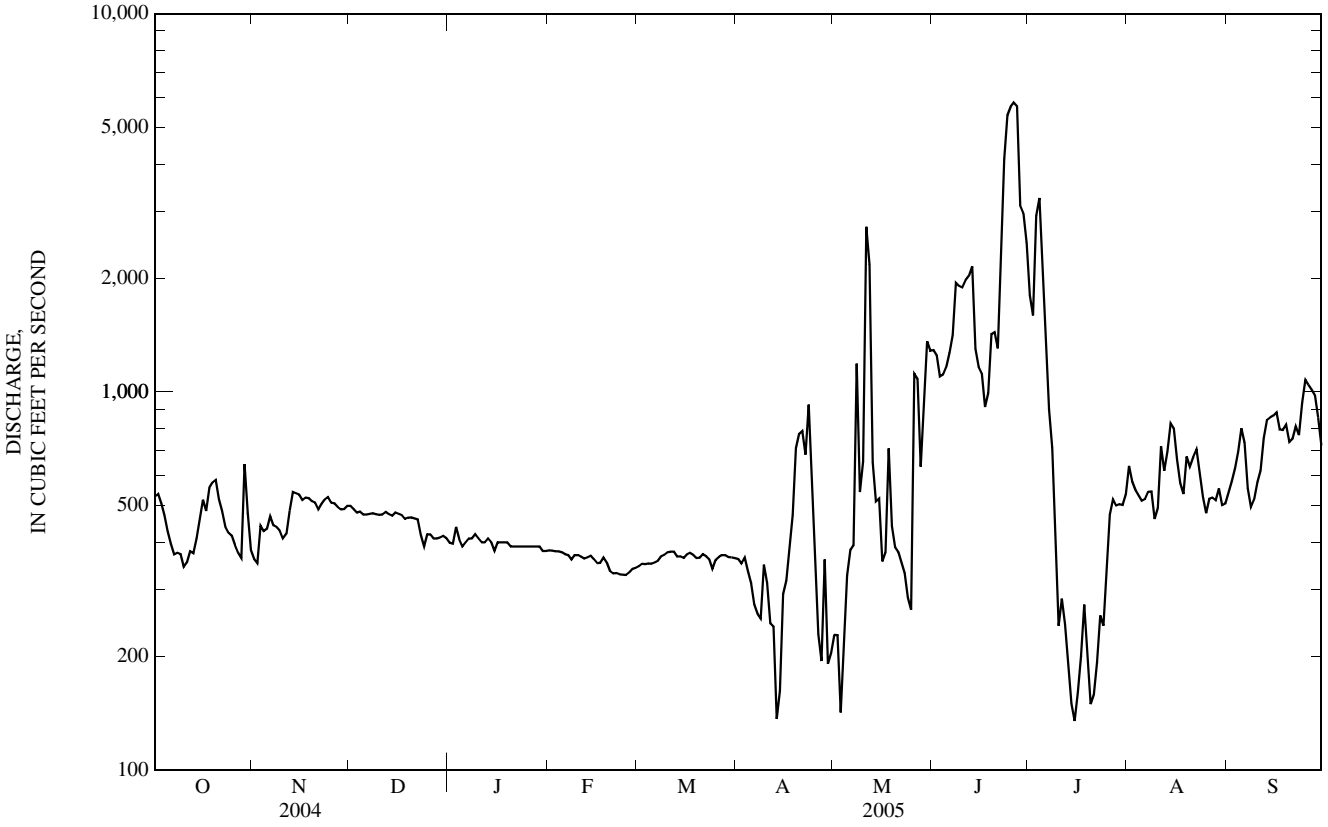
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	743	693	626	560	580	648	764	849	1,834	1,653	715	762
MAX	1,251	1,146	1,168	1,065	1,139	1,951	3,353	2,925	4,935	4,686	1,305	1,354
(WY)	(1972)	(1969)	(1969)	(1973)	(1973)	(1997)	(1997)	(1996)	(1981)	(1982)	(1982)	(1991)
MIN	369	297	306	226	228	243	234	193	203	149	207	245
(WY)	(1989)	(1986)	(1995)	(1991)	(1989)	(1995)	(2004)	(1977)	(1977)	(1977)	(1977)	(1977)

06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005	
ANNUAL TOTAL	141,649		239,692			
ANNUAL MEAN	387		657		870	
HIGHEST ANNUAL MEAN					1,659	1997
LOWEST ANNUAL MEAN					356	2002
HIGHEST DAILY MEAN	726	Aug 27	5,820	Jun 26	15,200	Jun 10, 1981
LOWEST DAILY MEAN	101	Apr 9	135	Jul 15	27	May 31, 1977
ANNUAL SEVEN-DAY MINIMUM	165	Apr 8	181	Jul 14	48	May 30, 1977
MAXIMUM PEAK FLOW			a6,100	Jun 27	c16,400	Jun 10, 1981
MAXIMUM PEAK STAGE			b10.49	Jan 7	11.27	Jun 13, 2001
ANNUAL RUNOFF (AC-FT)	281,000		475,400		630,000	
10 PERCENT EXCEEDS	536		1,140		1,390	
50 PERCENT EXCEEDS	380		460		640	
90 PERCENT EXCEEDS	260		323		310	

a--Gage height, 9.92 ft.
b--Backwater from ice.
c--Gage height, 9.16 ft, site then in use, at present datum.
e--Estimated.



06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-97, October 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to September 1983.
WATER TEMPERATURES: October 1966 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
NOV									
17...	1455	518	669	--	--	8.1	1,070	14.5	8.5
JAN									
31...	1725	378	665	11.5	100	8.5	1,070	6.0	3.5
JUN									
16...	0745	1,170	659	8.6	99	8.0	557	19.5	15.0
AUG									
30...	1440	539	659	10.8	127	8.5	704	15.0	16.0

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
NOV						
17...	<.04	1.34	E.004	<.02	110	65
JAN						
31...	E.04	1.01	.011	<.02	28	22
JUN						
16...	<.04	.85	E.006	.03	780	700
AUG						
30...	<.04	1.53	.010	<.02	300	340

E--Estimated.

06286400 BIGHORN LAKE NEAR ST. XAVIER, MT

LOCATION.--Lat 45°18'27", long 107°57'26" (NAD 27), in $SW^1/_4$ $SE^1/_4$ sec.18, T.6 S., R.30 E., Big Horn County, Hydrologic Unit 10080010, in block 13 of Yellowtail Dam on Bighorn River, 1.3 mi upstream from Grapevine Creek, 15.5 mi southwest of St. Xavier, and at river mile 86.6.

DRAINAGE AREA.--19,626 mi^2.

PERIOD OF RECORD.--November 1965 to current year (monthend contents only). Prior to October 1969, published as "Yellowtail Reservoir." Records of daily elevations and contents are in files located in the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder in powerhouse control room. Elevation of gage is 3,296.5 ft (NGVD 29) (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by thin concrete-arch dam; construction began in 1961; completed in 1967. Storage began Nov. 3, 1965. Usable capacity, 1,312,000 acre-ft, between elevation 3,296.50 ft, river outlet invert, and 3,657.00 ft, top of flood control. Elevation of spillway crest, 3,593.00 ft. Normal maximum operating level, 1,097,000 acre-ft, between elevation, 3,640.00 ft and 3,657.00 ft. Minimum operating level, 483,400 acre-ft, elevation, 3,547.00 ft. Dead storage, 16,010 acre-ft, below elevation 3,296.50 ft. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Figures given herein represent usable contents. Water is used for power production, flood control, irrigation, and recreation.

COOPERATION.--Elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,346,000 acre-ft, July 6, 1967, elevation, 3,656.43 ft; minimum since first filling, 519,400 acre-ft, Mar. 11, 2003, elevation 3,572.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,091,000 acre-ft, July 1, elevation, 3,642.82 ft; minimum, 641,900 acre-ft, Apr. 8, elevation, 3,583.29 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	3,593.63	694,300	--
October 31	3,599.05	723,400	+29,100
November 30	3598.85	722,300	-1,100
December 31	3592.50	688,400	-33,900
Calendar Year 2004	--	--	-69,200
January 31	3,589.03	670,600	-17,800
February 28	3,586.40	657,300	-13,300
March 31	3,584.32	646,900	-10,400
April 30	3,588.21	666,400	+19,500
May 31	3,624.91	897,400	+231,000
June 30	3,642.66	1,089,000	+191,600
July 31	3,635.85	1,004,000	-85,000
August 31	3,633.33	977,100	-26,900
September 30	3634.03	984,500	+7,400
Water Year 2005	--	--	+290,200

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05" (NAD 27), in NW$^1/_4$ NW$^1/_4$ NE$^1/_4$ sec.16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft downstream from Yellowtail dam, 1,500 ft downstream from Lime Kiln Creek, 14 mi southwest of St. Xavier, and at river mile 83.9.

DRAINAGE AREA.--19,667 mi^2. Area at site used prior to Apr. 16, 1963, 19,626 mi^2.

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,158.38 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Apr. 16, 1963, and June 13, 1964, to Mar. 31, 1965, water-stage recorder at site 1.2 mi upstream at different elevation. Apr. 1, 1965, to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present elevation.

REMARKS.--Records fair. **Figures of discharge given herein are sum of river flow and flow of Bighorn Canal**. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake (see preceding page) since Nov. 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,390	1,540	1,670	1,520	1,560	1,590	1,470	1,460	1,920	6,910	2,750	2,720
2	1,460	1,520	1,670	1,510	1,570	1,490	1,490	1,470	2,470	6,920	2,760	2,720
3	1,460	1,550	1,680	1,540	1,580	1,500	1,480	1,470	2,560	6,950	2,770	2,700
4	1,450	1,560	1,680	1,550	1,590	1,480	1,480	1,460	2,540	6,920	2,750	2,700
5	1,440	1,550	1,690	1,560	1,500	1,480	1,470	1,460	2,540	6,950	2,750	2,670
6	1,400	1,540	1,710	1,570	1,500	1,480	1,480	1,460	2,570	6,940	2,710	2,600
7	1,430	1,550	1,710	1,580	1,510	1,480	1,500	1,460	2,680	6,920	2,700	2,570
8	1,490	1,560	1,720	1,580	1,520	1,490	1,500	1,460	2,800	6,970	2,670	2,570
9	1,480	1,560	1,720	1,590	1,530	1,480	1,500	1,460	3,300	6,890	2,660	2,560
10	1,470	1,570	1,730	1,600	1,530	1,480	1,500	1,460	3,800	6,850	2,620	2,540
11	1,470	1,570	1,730	1,610	1,530	1,480	1,490	1,470	4,260	6,490	2,520	2,530
12	1,460	1,580	1,740	1,620	1,530	1,490	1,500	1,470	4,310	5,410	2,450	2,490
13	1,440	1,580	1,740	1,630	1,530	1,480	1,500	1,460	4,340	4,410	2,450	2,470
14	1,440	1,600	1,740	1,640	1,540	1,490	1,580	1,460	4,380	3,790	2,430	2,440
15	1,440	1,590	1,750	1,470	1,540	1,490	1,520	1,460	4,390	3,200	2,430	2,410
16	1,440	1,590	1,750	1,480	1,550	1,480	1,480	1,460	4,400	2,800	2,540	2,380
17	1,440	1,600	1,760	1,480	1,550	1,490	1,480	1,460	4,480	2,780	2,710	2,370
18	1,430	1,600	1,760	1,490	1,540	1,490	1,480	1,460	4,560	2,750	2,830	2,360
19	1,420	1,600	1,770	1,490	1,560	1,490	1,460	1,450	4,640	2,740	2,790	2,310
20	1,420	1,630	1,770	1,510	1,550	1,490	1,480	1,450	4,660	2,720	2,750	2,320
21	1,410	1,630	1,790	1,510	1,560	1,490	1,490	1,450	4,630	2,700	2,730	2,480
22	1,410	1,630	1,800	1,540	1,570	1,490	1,500	1,450	5,140	2,680	2,710	2,720
23	1,400	1,640	1,790	1,530	1,570	1,490	1,500	1,450	5,660	2,860	2,690	2,730
24	1,400	1,630	1,790	1,540	1,570	1,490	1,500	1,450	6,300	2,840	2,800	2,720
25	1,460	1,640	1,810	1,540	1,570	1,490	1,470	1,440	7,050	2,830	2,790	2,730
26	1,490	1,640	1,820	1,530	1,580	1,490	1,480	1,440	7,070	2,860	2,760	2,690
27	1,500	1,650	1,770	1,530	1,590	1,480	1,430	1,450	7,110	2,840	2,740	2,630
28	1,500	1,650	1,670	1,550	1,590	1,480	1,490	1,440	7,200	2,820	2,720	2,570
29	1,510	1,660	1,490	1,560	---	1,480	1,470	1,440	7,290	2,800	2,720	2,530
30	1,530	1,660	1,500	1,560	---	1,480	1,470	1,450	6,940	2,780	2,690	2,500
31	1,530	---	1,510	1,570	---	1,480	---	1,910	---	2,760	2,720	---
TOTAL	45,010	47,870	53,230	47,980	43,410	46,160	44,640	45,590	135,990	137,080	83,110	76,730
MEAN	1,452	1,596	1,717	1,548	1,550	1,489	1,488	1,471	4,533	4,422	2,681	2,558
MAX	1,530	1,660	1,820	1,640	1,590	1,590	1,580	1,910	7,290	6,970	2,830	2,730
MIN	1,390	1,520	1,490	1,470	1,500	1,480	1,430	1,440	1,920	2,680	2,430	2,310
AC-FT	89,280	94,950	105,600	95,170	86,100	91,560	88,540	90,430	269,700	271,900	164,800	152,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)

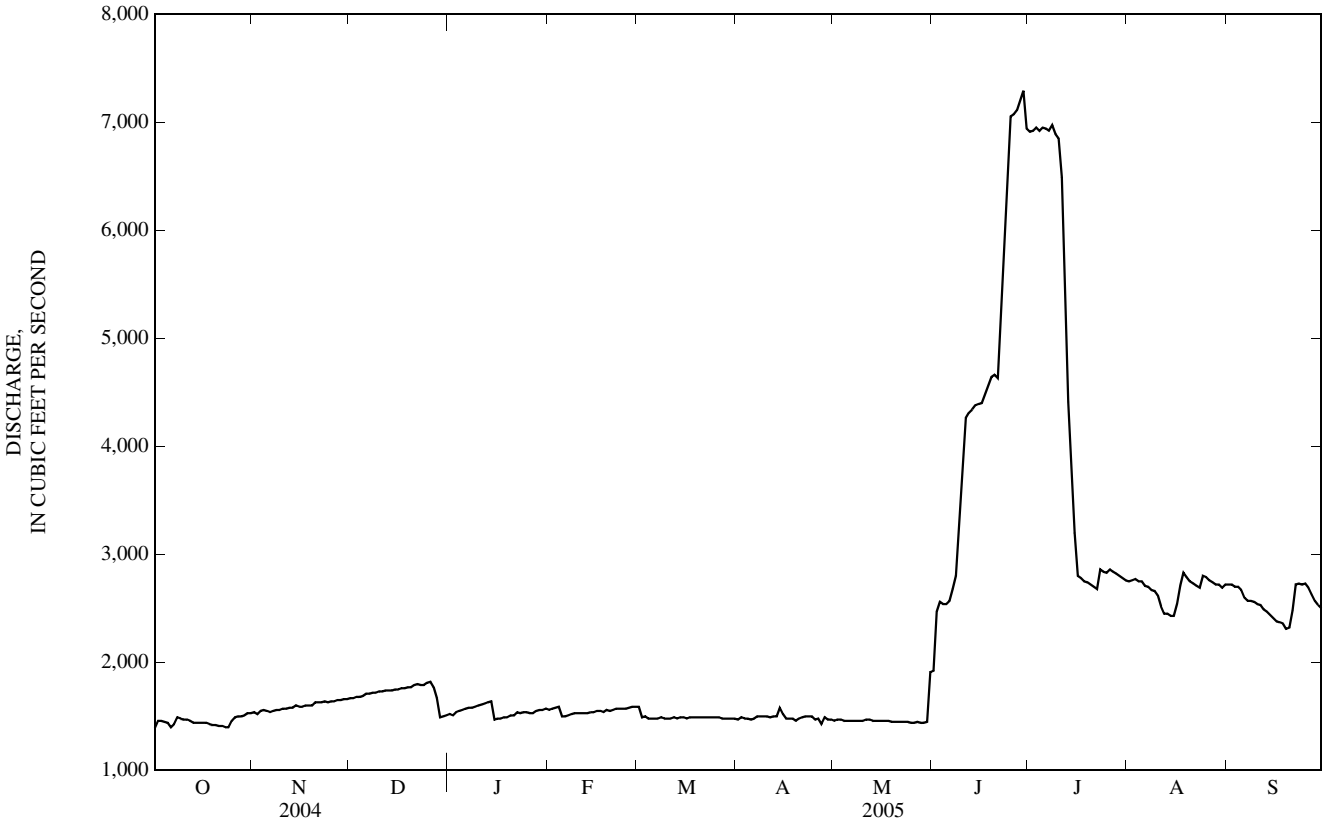
MEAN	2,890	2,849	2,673	2,546	2,609	2,850	2,835	3,735	6,871	5,398	2,844	2,688
MAX	5,142	5,151	4,999	5,267	4,384	4,809	6,675	8,744	17,900	18,890	6,784	4,544
(WY)	(1972)	(1983)	(1968)	(1968)	(1976)	(1976)	(1972)	(1947)	(1935)	(1967)	(1997)	(1973)
MIN	1,224	856	1,095	1,090	888	327	678	900	1,078	1,144	1,260	1,074
(WY)	(1978)	(1966)	(1935)	(1935)	(1936)	(1966)	(1966)	(1966)	(1966)	(1960)	(1966)	(1966)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005	
ANNUAL TOTAL	591,340		806,800			
ANNUAL MEAN	1,616		2,210		3,400	
HIGHEST ANNUAL MEAN					5,059	1947
LOWEST ANNUAL MEAN					1,649	2002
HIGHEST DAILY MEAN	2,140	Jan 25	7,290	Jun 29	37,400	Jun 16, 1935
LOWEST DAILY MEAN	1,270	Sep 6	1,390	Oct 1	112	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	1,340	Sep 24	1,410	Oct 18	195	Mar 25, 1966
MAXIMUM PEAK FLOW			7,600	Jun 29	37,400	Jun 16, 1935
MAXIMUM PEAK STAGE			62.58	Jun 29		
INSTANTANEOUS LOW FLOW					49	Mar 29, 1966
ANNUAL RUNOFF (AC-FT)	1,173,000		1,600,000		2,463,000	
10 PERCENT EXCEEDS	1,800		3,240		5,700	
50 PERCENT EXCEEDS	1,600		1,580		2,770	
90 PERCENT EXCEEDS	1,440		1,460		1,500	

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT—Continued

SUMMARY STATISTICS	WATER YEARS 1935 - 1961*		WATER YEARS 1967 - 2005**	
ANNUAL MEAN	3,426		3,356	
HIGHEST ANNUAL MEAN	5,059	1947	4,839	1999
LOWEST ANNUAL MEAN	1,706	1961	1,649	2002
HIGHEST DAILY MEAN	37,400	Jun 16 1935	24,800	Jul 6, 1967
LOWEST DAILY MEAN	300	Dec 20 1951	112	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	656	Dec 25 1934	518	Mar 25, 1970
MAXIMUM PEAK FLOW	37,400	Jun 19 1935	25,300	Jul 5, 1967
INSTANTANEOUS LOW FLOW	228	Dec 9 1937	a112	Apr 2, 1967
ANNUAL RUNOFF (AC-FT)	2,482,000		2,432,000	
10 PERCENT EXCEEDS	6,640		5,360	
50 PERCENT EXCEEDS	2,450		3,000	
90 PERCENT EXCEEDS	1,370		1,620	

*--Prior to construction of Yellowtail Dam.
**--After completion of Yellowtail Dam.
a--Result of discharge measurement.



06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°36'52" (NAD 27), in $SW^1/_4NW^1/_4$ sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft downstream from county bridge, 0.5 mi north of Wyoming-Montana State line, 1 mi downstream from West Fork, 13 mi southwest of Wyola, and at river mile 115.2.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State Line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft (NGVD 29).

REMARKS.--Records fair. Diversions for irrigation of 163 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year .

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	45	44	29	41	52	48	61	281	200	105	85
2	53	47	48	30	40	52	50	60	272	192	102	84
3	51	53	51	35	40	52	52	61	260	183	102	83
4	50	50	50	34	40	52	52	63	269	174	101	82
5	50	49	48	33	40	52	53	72	277	166	100	82
6	50	49	47	33	37	52	52	102	312	161	97	82
7	50	49	45	35	36	52	54	153	313	158	96	82
8	50	48	45	39	33	53	57	195	289	154	96	82
9	50	49	45	41	40	52	64	148	270	149	96	81
10	50	48	45	40	41	53	57	174	248	148	97	81
11	50	47	45	43	42	52	53	199	241	151	103	82
12	50	44	45	43	42	54	54	170	264	144	99	83
13	53	48	37	41	41	53	55	153	282	138	100	84
14	53	46	46	41	41	52	60	153	261	135	98	83
15	54	45	46	41	39	51	55	170	278	131	94	83
16	53	44	44	41	41	52	54	238	299	128	93	80
17	53	46	44	44	49	52	58	366	343	127	93	79
18	53	46	44	51	49	51	69	325	348	126	94	81
19	50	46	44	51	55	51	63	448	330	121	99	80
20	52	43	44	47	55	50	61	750	317	118	93	80
21	57	36	44	47	55	50	61	903	302	117	91	78
22	55	46	40	45	55	50	58	710	291	115	91	77
23	52	46	24	45	53	50	60	721	302	115	92	77
24	52	46	43	45	53	49	68	624	316	112	91	83
25	47	47	48	44	53	48	77	450	274	114	89	80
26	52	47	47	43	53	48	75	358	267	118	89	78
27	51	41	45	42	52	50	69	324	250	112	87	77
28	52	44	44	42	52	50	65	335	231	109	87	77
29	53	26	44	42	---	51	62	337	224	106	86	74
30	50	35	43	41	---	49	62	297	213	104	86	73
31	51	---	39	40	---	48	---	271	---	105	87	---
TOTAL	1,602	1,356	1,368	1,268	1,268	1,583	1,778	9,391	8,424	4,231	2,934	2,413
MEAN	51.7	45.2	44.1	40.9	45.3	51.1	59.3	303	281	136	94.6	80.4
MAX	57	53	51	51	55	54	77	903	348	200	105	85
MIN	47	26	24	29	33	48	48	60	213	104	86	73
AC-FT	3,180	2,690	2,710	2,520	2,520	3,140	3,530	18,630	16,710	8,390	5,820	4,790

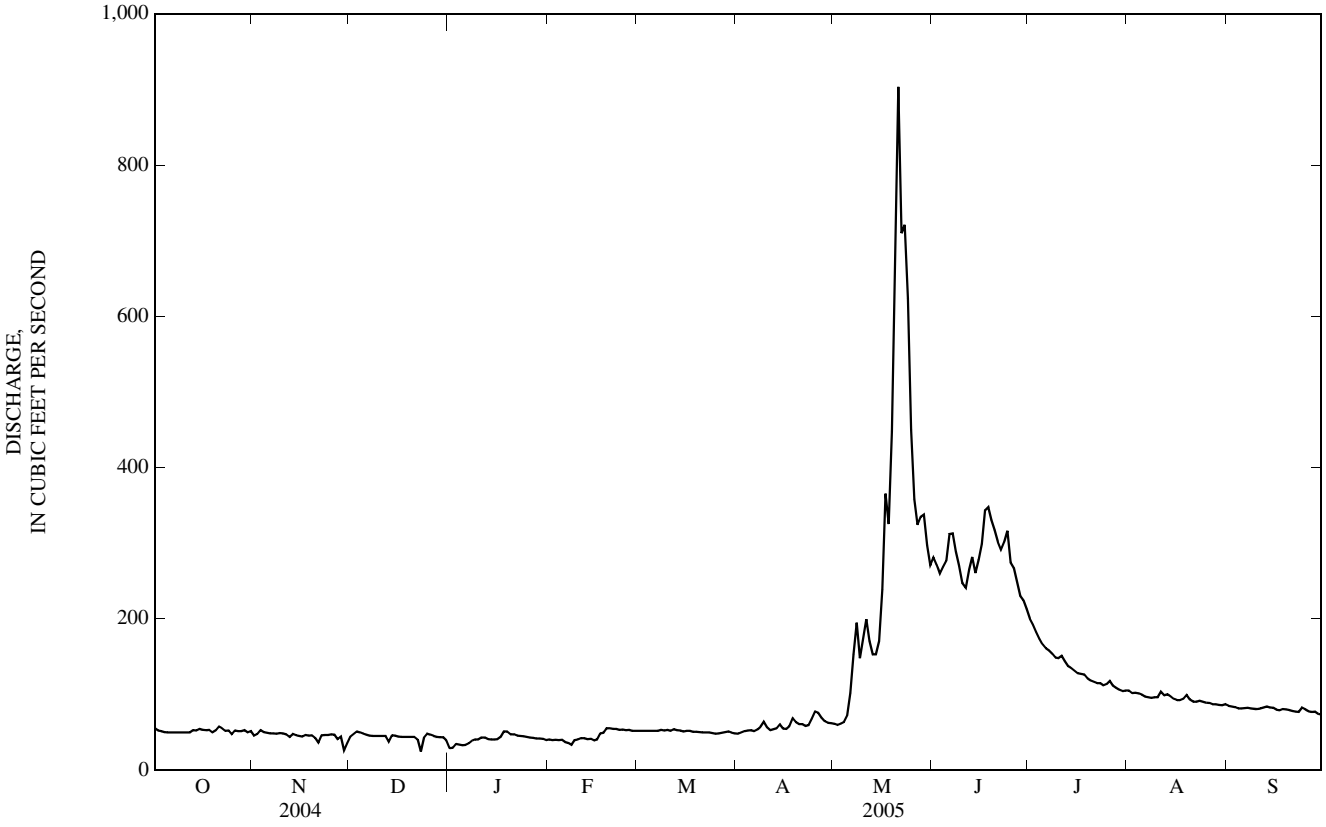
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	85.6	74.8	67.2	62.2	61.1	61.3	84.2	321	507	215	121	96.8
MAX	120	104	91.2	84.9	88.0	86.4	172	533	1,125	689	228	151
(WY)	(1976)	(1942)	(1976)	(1946)	(1946)	(1946)	(1946)	(1977)	(1975)	(1975)	(1975)	(1975)
MIN	51.7	45.2	44.1	40.9	40.2	46.8	50.7	127	135	87.6	62.0	53.9
(WY)	(2005)	(2005)	(2005)	(2005)	(2003)	(2003)	(1961)	(1953)	(2004)	(2004)	(2004)	(2004)

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	26,165		37,616			
ANNUAL MEAN	71.5		103		147	
HIGHEST ANNUAL MEAN					253	1975
LOWEST ANNUAL MEAN					76.0	2004
HIGHEST DAILY MEAN	185	May 8	903	May 21	2,340	Jun 4, 1944
LOWEST DAILY MEAN	24	Dec 23	24	Dec 23	18	Feb 2, 1989
ANNUAL SEVEN-DAY MINIMUM	40	Jan 1	33	Jan 1	27	Dec 18, 1983
MAXIMUM PEAK FLOW			1,180	May 20	a2,730	Jun 3, 1944
MAXIMUM PEAK STAGE			3.75	May 20	b5.93	Jun 9, 1944
INSTANTANEOUS LOW FLOW					18	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	51,900		74,610		106,200	
10 PERCENT EXCEEDS	130		265		328	
50 PERCENT EXCEEDS	59		54		82	
90 PERCENT EXCEEDS	45		41		56	

a--Gage height, 4.97 ft, from rating curve extended above 1,400 ft^3/s.
b--Result of log jam.



06289600 WEST PASS CREEK NEAR PARKMAN, WY

LOCATION.--Lat 44°59'16", long 107°28'56" (NAD 27), in NE$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.21, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank, anchored to concrete headwall of culvert on county road and 7.6 mi northwest of Parkman.

DRAINAGE AREA.--15.4 mi^2.

PERIOD OF RECORD.--October 1982 to current year (no winter records water years 1985-87).

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above NGVD of 1929, from topographic map. Prior to April 2, 1985, at site 100 ft north (on abandoned channel) at datum 4.28 ft lower. April 2, 1985 to March 27, 1986, at site 300 ft upstream from station at datum 0.95 ft higher. April 2, 1985 to September 30, 1998, at same site at datum 1.00 ft lower. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.8	4.9	4.5	4.1	4.0	4.4	6.8	16	9.2	6.8	5.3
2	4.3	4.7	5.1	e4.3	4.1	4.0	4.3	6.8	16	9.2	6.8	5.3
3	4.3	4.9	4.8	e4.2	4.1	4.0	4.4	7.0	15	9.1	7.0	5.3
4	4.3	4.9	5.1	e4.1	4.0	4.0	4.5	7.0	14	8.7	6.8	5.3
5	4.7	4.8	5.3	e3.9	4.1	4.0	4.5	7.3	14	8.3	6.7	5.3
6	4.3	4.7	5.2	e3.8	e3.8	3.9	4.5	7.8	15	8.0	6.6	5.3
7	4.3	4.9	5.2	e4.0	e3.5	3.9	4.6	25	16	7.9	6.6	5.3
8	4.3	4.9	5.2	e4.2	e3.3	4.1	4.9	27	17	8.1	6.5	5.3
9	4.3	5.0	5.1	e4.4	e3.6	4.0	7.3	15	14	7.9	6.4	5.3
10	4.2	4.9	5.2	e4.3	e3.8	4.1	5.4	26	14	8.0	6.4	4.9
11	4.3	4.9	5.3	e4.2	e4.0	3.9	5.3	68	13	7.9	6.4	4.9
12	4.3	4.9	5.6	e4.0	4.1	4.0	5.3	40	13	7.8	6.6	5.0
13	4.2	4.9	e5.4	e3.8	4.1	4.1	5.3	36	17	7.7	6.5	4.9
14	4.5	5.0	5.3	e3.6	4.2	4.0	5.3	31	14	7.6	6.3	4.9
15	4.9	5.1	5.6	e3.8	e4.0	4.1	5.3	29	14	7.5	6.1	4.9
16	4.5	5.1	5.3	e4.0	e3.8	4.3	5.3	29	14	7.4	5.9	4.9
17	4.5	5.1	5.3	e4.2	e3.8	4.3	5.3	34	13	7.3	5.7	4.9
18	5.2	5.1	5.2	e4.4	e3.7	4.1	5.5	33	13	7.6	6.1	5.1
19	4.5	5.1	5.2	e4.7	e3.8	4.1	5.8	30	13	7.2	5.9	4.9
20	4.5	5.2	5.1	4.9	e3.9	4.2	6.2	33	13	7.2	5.7	4.9
21	4.6	e5.0	e5.0	4.7	4.1	4.5	6.6	34	12	7.2	5.7	4.9
22	4.5	5.1	e4.8	4.3	4.0	4.3	8.2	32	11	7.2	5.7	4.9
23	4.5	5.3	e4.6	4.5	4.0	4.1	7.1	31	11	7.1	5.7	4.9
24	4.7	5.0	e4.8	4.4	4.0	4.0	6.9	29	11	7.1	5.6	5.3
25	4.5	5.1	e5.2	4.3	4.0	4.3	6.8	26	10	7.5	5.5	5.1
26	4.5	5.0	5.3	4.3	4.0	4.2	6.7	23	10	7.8	5.5	5.0
27	4.6	e5.0	4.7	4.3	4.0	4.4	7.0	20	10	7.3	5.5	4.9
28	4.7	e4.6	4.8	4.3	4.0	4.3	7.1	19	10	7.1	5.5	5.1
29	5.4	e4.0	4.8	4.2	---	4.3	6.9	18	10	7.1	5.5	5.0
30	4.9	4.7	4.8	4.2	---	4.3	6.9	18	9.7	7.0	5.5	4.9
31	5.0	---	4.6	4.1	---	4.3	---	17	---	7.0	5.3	---
TOTAL	140.8	147.7	157.8	130.9	109.9	128.1	173.6	765.7	392.7	239.0	188.8	151.9
MEAN	4.54	4.92	5.09	4.22	3.92	4.13	5.79	24.7	13.1	7.71	6.09	5.06
MAX	5.4	5.3	5.6	4.9	4.2	4.5	8.2	68	17	9.2	7.0	5.3
MIN	4.2	4.0	4.6	3.6	3.3	3.9	4.3	6.8	9.7	7.0	5.3	4.9
AC-FT	279	293	313	260	218	254	344	1,520	779	474	374	301

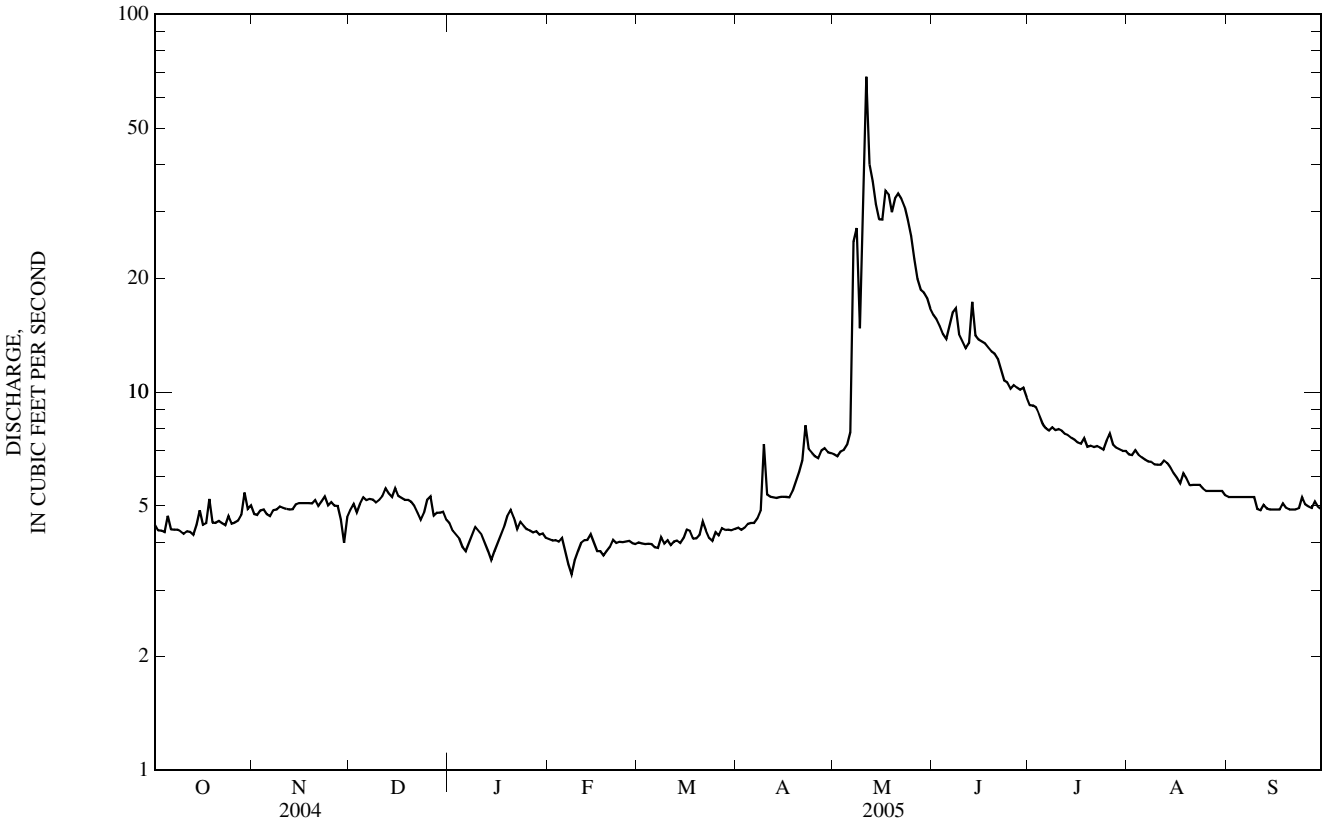
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)*

MEAN	7.39	7.07	6.31	6.11	5.92	7.15	12.5	31.3	23.2	12.2	8.35	7.39
MAX	9.95	9.30	9.02	8.10	7.98	10.5	25.2	79.9	60.6	26.9	14.9	11.6
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	4.54	4.42	4.64	4.22	3.92	4.13	5.79	7.62	6.38	5.21	4.21	4.00
(WY)	(2005)	(2002)	(2003)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(1985)	(2004)	(2004)

06289600 WEST PASS CREEK NEAR PARKMAN, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005*	
ANNUAL TOTAL	1,961.8		2,726.9			
ANNUAL MEAN	5.36		7.47		11.6	
HIGHEST ANNUAL MEAN					21.2	1995
LOWEST ANNUAL MEAN					5.56	2004
HIGHEST DAILY MEAN	9.5	May 13,14	68	May 11	291	May 9, 1995
LOWEST DAILY MEAN	3.7	Aug 27	3.3	Feb 8	a0.00	Dec 25, 1998
ANNUAL SEVEN-DAY MINIMUM	3.8	Sep 4	3.7	Feb 4	0.81	Feb 3, 1989
MAXIMUM PEAK FLOW			114	May 11	b340	May 9, 1995
MAXIMUM PEAK STAGE			3.24	May 11	c4.76	Apr 28, 1984
ANNUAL RUNOFF (AC-FT)	3,890		5,410		8,430	
10 PERCENT EXCEEDS	6.9		14		23	
50 PERCENT EXCEEDS	5.1		5.1		7.6	
90 PERCENT EXCEEDS	4.1		4.0		5.0	

*--For period of operation.
a--Result of channel blockage or diversion upstream.
b--Gage height, 3.97 ft.
c--Backwater from ice, site and datum then in use.
e--Estimated.



06289820 EAST PASS CREEK NEAR DAYTON, WY

LOCATION.--Lat 44°59'26", long 107°25'20" (NAD 27), in NE$^1/_4$ SE$^1/_4$ NE$^1/_4$ sec.24, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank 0.4 mi downstream from bridge on Sheridan County Road 144, 5.0 mi northwest of Parkman, and 11.2 mi northwest of Dayton.

DRAINAGE AREA.--21.7 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft above NGVD of 1929, from topographic map. October 1982 to August 1995, at site 270 ft upstream from station at different datum. August 1995 to April 1996, at site 0.3 mi downstream from station at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several small reservoirs upstream from station, combined capacity, 415 acre-ft, for irrigation. Diversions for irrigation of about 2,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.5	e4.9	4.6	6.2	5.7	5.3	6.4	20	9.8	4.7	3.0
2	5.3	5.2	5.1	4.7	6.1	5.6	5.0	6.3	19	10	4.5	4.4
3	5.3	5.4	5.0	e4.6	6.1	5.6	5.1	6.4	20	11	4.9	5.3
4	5.3	5.6	4.9	e4.5	6.1	5.6	5.4	6.4	17	8.4	4.9	5.0
5	5.3	5.3	4.9	e4.2	6.2	5.6	5.5	6.6	17	8.8	4.7	5.0
6	5.2	5.1	4.7	e4.0	5.7	5.6	5.2	6.8	19	6.8	4.6	5.0
7	5.2	5.0	4.7	e4.2	e5.4	5.6	4.8	14	21	5.4	4.6	4.9
8	5.2	4.9	4.9	e4.6	e5.2	5.8	5.2	50	21	5.5	4.6	4.9
9	5.0	4.9	4.9	e4.9	e5.0	5.6	8.9	35	19	5.1	4.7	4.8
10	4.9	5.2	4.9	e4.8	e5.4	5.7	7.5	34	18	6.2	4.8	4.7
11	4.8	5.1	4.9	e4.6	e5.8	5.5	7.2	98	17	5.0	5.1	4.9
12	4.9	5.3	e4.6	e4.4	6.1	5.5	7.2	78	18	5.3	5.3	5.5
13	5.0	5.0	e4.4	e4.2	6.1	5.6	7.4	55	20	6.7	5.4	5.4
14	4.7	5.0	5.0	e4.0	6.3	5.6	7.5	44	19	6.5	5.2	5.3
15	5.6	4.9	4.9	e4.4	5.9	5.5	7.6	41	19	6.1	5.0	5.2
16	5.1	4.9	4.9	e4.7	e6.0	5.6	7.0	42	16	5.4	4.8	5.1
17	5.1	4.9	4.7	e5.2	e5.8	5.6	6.5	51	16	5.6	4.8	5.3
18	5.2	4.9	4.7	e5.6	e5.8	5.6	6.7	48	14	5.1	5.2	5.5
19	5.0	5.0	4.8	e6.2	e6.0	5.5	7.5	46	13	4.6	5.5	5.4
20	4.9	4.9	e4.9	e7.0	e6.2	5.5	6.7	54	13	4.9	4.5	5.0
21	5.0	4.7	e4.6	7.8	6.0	5.7	6.6	55	13	4.8	4.7	4.7
22	5.0	4.9	e4.2	7.2	5.9	5.7	6.8	52	12	4.9	3.9	4.8
23	5.0	5.2	e4.3	7.2	5.8	5.7	7.1	48	12	4.8	3.5	4.9
24	5.6	5.3	e4.6	7.1	5.9	5.8	6.8	41	12	4.7	4.0	5.3
25	5.3	5.3	e5.2	6.9	6.0	5.5	6.7	37	12	5.2	3.8	5.2
26	5.3	5.3	e5.6	6.8	6.0	5.6	6.7	33	9.9	5.9	3.3	5.0
27	5.3	5.0	6.0	6.6	5.9	5.5	7.1	29	11	5.4	3.0	5.4
28	5.5	e4.9	5.8	6.6	5.8	5.3	6.9	27	10	5.1	3.3	5.6
29	6.6	e4.2	5.8	6.6	---	5.5	6.8	26	10	4.9	3.7	5.3
30	6.0	e4.6	5.7	6.6	---	5.5	6.6	24	11	4.8	3.0	5.2
31	5.8	---	5.4	6.5	---	5.5	---	22	---	4.8	3.7	---
TOTAL	163.0	151.4	153.9	171.3	164.7	173.2	197.3	1,122.9	468.9	187.5	137.7	151.0
MEAN	5.26	5.05	4.96	5.53	5.88	5.59	6.58	36.2	15.6	6.05	4.44	5.03
MAX	6.6	5.6	6.0	7.8	6.3	5.8	8.9	98	21	11	5.5	5.6
MIN	4.7	4.2	4.2	4.0	5.0	5.3	4.8	6.3	9.9	4.6	3.0	3.0
AC-FT	323	300	305	340	327	344	391	2,230	930	372	273	300

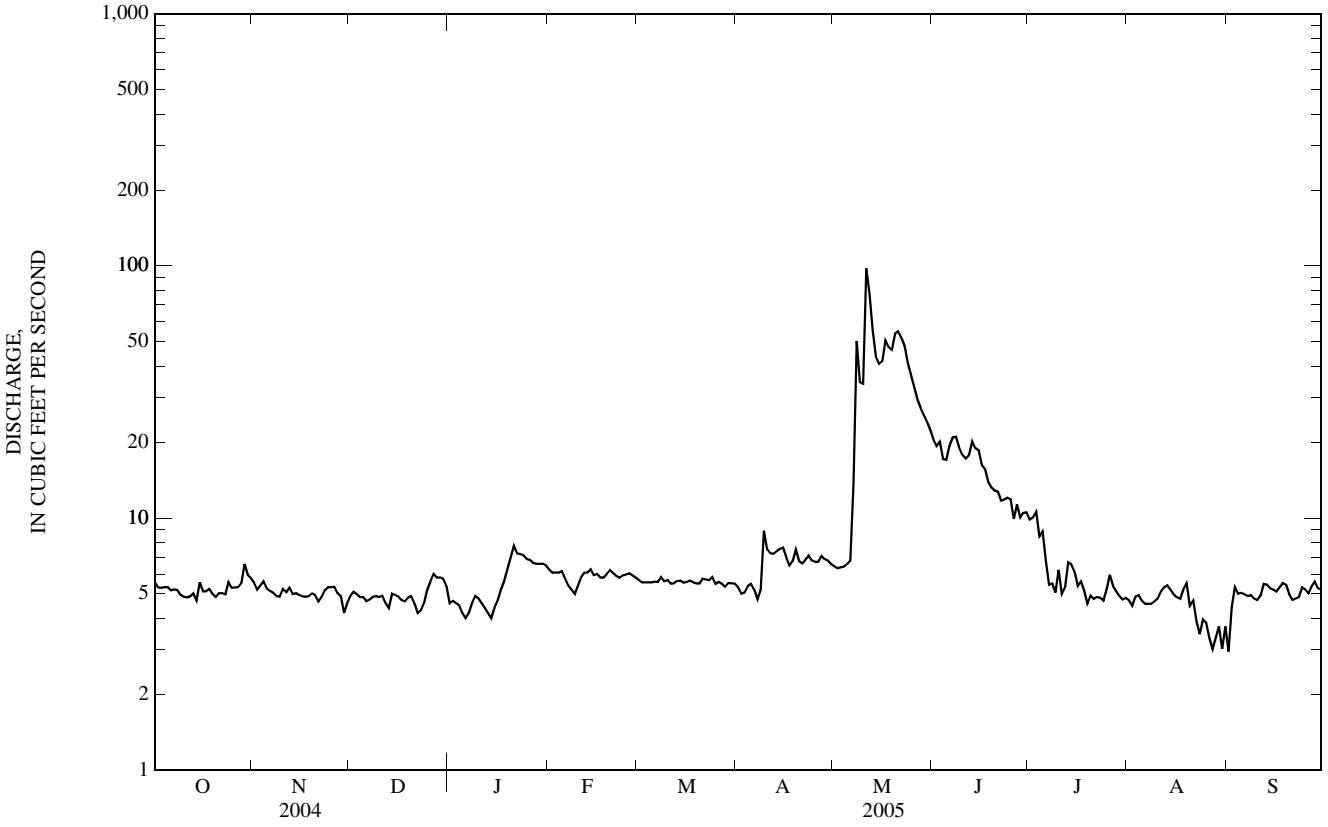
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	8.35	8.48	8.05	8.25	8.21	9.52	15.5	41.1	32.6	12.1	6.80	6.94
MAX	13.9	11.4	10.5	10.5	10.6	14.2	32.4	90.8	82.8	32.9	14.8	14.8
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1992)	(1993)	(1995)
MIN	5.26	5.05	4.96	5.53	5.88	5.59	6.58	8.15	5.86	4.83	2.73	3.92
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(1988)	(2002)

06289820 EAST PASS CREEK NEAR DAYTON, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	2,152.7		3,242.8			
ANNUAL MEAN	5.88		8.88		13.8	
HIGHEST ANNUAL MEAN					23.6	1984
LOWEST ANNUAL MEAN					6.00	2004
HIGHEST DAILY MEAN	13	May 10	98	May 11	304	May 9, 1995
LOWEST DAILY MEAN	3.0	Several days	3.0	Several days	a0.84	Nov 14, 2002
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 14	3.3	Aug 26	1.9	Sep 10, 2002
MAXIMUM PEAK FLOW			128	May 11	b511	May 9, 1995
MAXIMUM PEAK STAGE			6.54	May 11	c9.00	Feb 6, 1996
ANNUAL RUNOFF (AC-FT)	4,270		6,430		10,030	
10 PERCENT EXCEEDS	8.1		17		26	
50 PERCENT EXCEEDS	5.7		5.5		8.8	
90 PERCENT EXCEEDS	4.0		4.6		5.3	

a--Result of pumping upstream.
b--Gage height, 4.47 ft, site and datum then in use, from rating curve extended above 221 ft^3/s.
c--Ice jam, site and datum then in use.
e--Estimated.



06290000 PASS CREEK NEAR WYOLA, MT

LOCATION.--Lat 45°03'23", long 107°21'19" (NAD 27), in NE$^1/_4$NE$^1/_4$SE$^1/_4$ sec.13, T.9 S., R.35 E., Big Horn County, Hydrologic Unit 10080016, on right bank 125 ft downstream from bridge on U.S. Highway 87, 2.0 mi downstream from Twin Creek, 5.5 mi south of Wyola, and at river mile 10.2.

DRAINAGE AREA.--111 mi^2. Drainage area at site used prior to Sept. 30, 1956, 119 mi^2.

PERIOD OF RECORD.--June 1935 to September 1956 (no winter records prior to 1939), October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,920 ft (NGVD 29). Dec. 21, 1950, to Sept. 30, 1956, water-stage recorder, and June 4, 1935, to Dec. 20, 1950, nonrecording gage at site 0.3 mi upstream at different elevation. Flow is equivalent.

REMARKS.--Records fair except those for Oct. 1 to Apr. 23, which are poor. Diversions for irrigation of about 2,500 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--May 19, 1978, 5,560 ft^3/s, gage height, 10.90 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.5	e9.0	e9.0	e5.0	e8.0	e8.0	e9.0	13	40	12	4.7	2.3
2	e1.5	e10	e10	e6.0	e8.0	e8.0	e9.0	12	40	10	4.6	3.1
3	e1.5	e11	e10	e7.0	e8.0	e8.0	e10	12	37	14	4.7	2.3
4	e1.5	e10	e9.0	e7.0	e8.0	e8.0	e10	11	34	12	5.2	2.5
5	e1.5	e10	e9.0	e7.0	e8.0	e8.0	e10	10	32	11	5.2	3.2
6	e1.5	e10	e9.0	e7.0	e7.0	e8.0	e10	10	32	9.4	4.6	3.4
7	e1.5	e10	e8.0	e8.0	e7.0	e8.0	e10	19	42	7.7	4.2	3.5
8	e1.5	e10	e9.0	e8.0	e6.0	e9.0	e10	151	53	6.6	4.1	3.5
9	e1.5	e10	e9.0	e9.0	e7.0	e9.0	e15	104	42	5.6	4.0	3.3
10	e1.0	e10	e9.0	e9.0	e8.0	e9.0	e10	72	39	4.6	3.9	3.7
11	e1.5	e10	e9.0	e9.0	e8.0	e10	e10	345	36	6.3	4.3	3.7
12	e2.0	e9.0	e9.0	e9.0	e8.0	e10	e10	351	35	6.1	5.3	4.4
13	e3.0	e9.0	e8.0	e8.0	e8.0	e10	e10	209	47	5.4	6.8	6.1
14	e2.5	e9.0	e9.0	e8.0	e8.0	e10	e15	153	41	5.2	6.8	5.5
15	e5.0	e9.0	e9.0	e8.0	e8.0	e13	e10	111	36	6.0	6.3	4.5
16	e10	e9.0	e9.0	e8.0	e7.0	e15	e10	97	32	5.4	5.6	5.0
17	e9.0	e9.0	e8.0	e8.0	e8.0	e15	e9.0	101	28	4.8	5.2	4.8
18	e8.0	e9.0	e8.0	e9.0	e8.0	e15	e15	106	26	5.7	5.5	6.1
19	e8.0	e9.0	e8.0	e9.0	e8.0	e15	e10	92	23	5.8	6.2	6.5
20	e8.0	e9.0	e8.0	e10	e8.0	e10	e10	93	22	5.1	5.8	6.3
21	e9.0	e8.0	e8.0	e10	e8.0	e10	e10	93	20	4.2	4.7	5.9
22	e10	e9.0	e8.0	e9.0	e8.0	e10	e10	87	13	4.1	3.4	5.9
23	e10	e9.0	e7.0	e9.0	e8.0	e10	e15	84	13	3.8	3.7	6.4
24	e10	e9.0	e8.0	e9.0	e8.0	e10	21	76	14	3.8	3.5	7.2
25	e9.0	e9.0	e9.0	e9.0	e8.0	e10	19	67	14	3.9	3.0	7.7
26	e10	e9.0	e8.0	e9.0	e8.0	e10	14	60	12	5.6	2.8	7.6
27	e10	e9.0	e8.0	e8.0	e8.0	e10	14	51	14	6.2	2.3	8.6
28	e10	e9.0	e8.0	e8.0	e8.0	e10	14	47	13	5.2	2.0	9.3
29	e11	e7.0	e8.0	e8.0	---	e10	14	44	13	5.4	2.3	9.5
30	e10	e8.0	e8.0	e8.0	---	e10	13	44	12	4.6	2.2	9.3
31	e10	---	e7.0	e8.0	---	e9.0	---	42	---	4.3	2.2	---
TOTAL	180.5	277.0	263.0	254.0	218.0	315.0	356.0	2,767	855	199.8	135.1	161.1
MEAN	5.82	9.23	8.48	8.19	7.79	10.2	11.9	89.3	28.5	6.45	4.36	5.37
MAX	11	11	10	10	8.0	15	21	351	53	14	6.8	9.5
MIN	1.0	7.0	7.0	5.0	6.0	8.0	9.0	10	12	3.8	2.0	2.3
AC-FT	358	549	522	504	432	625	706	5,490	1,700	396	268	320

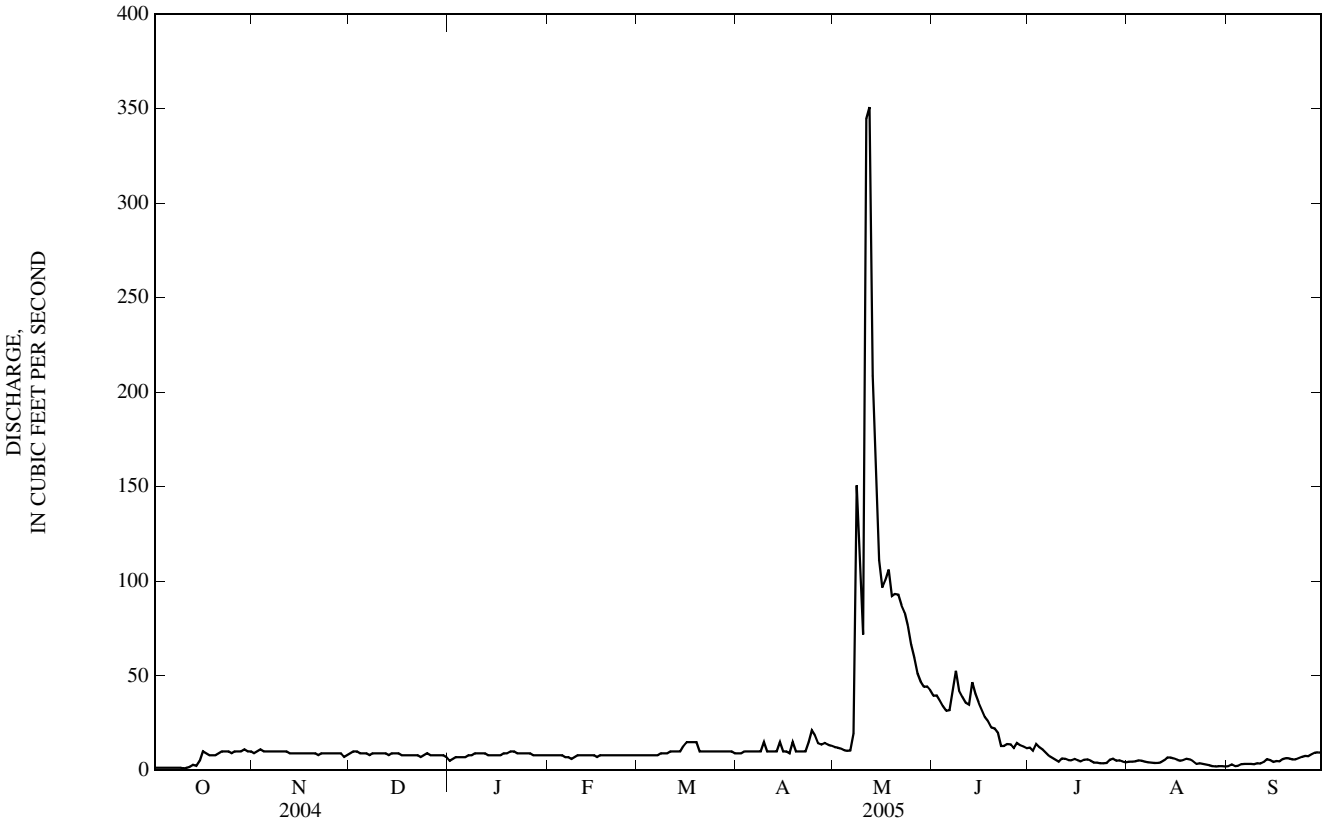
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)*

MEAN	17.0	17.8	16.3	17.4	24.3	37.7	49.6	98.9	84.5	28.2	12.5	12.9
MAX	27.8	27.9	33.6	32.3	57.8	115	106	324	375	92.6	38.5	29.1
(WY)	(1945)	(1946)	(1943)	(1984)	(1948)	(1947)	(1994)	(1984)	(1944)	(1944)	(1944)	(1944)
MIN	5.73	4.76	5.73	6.55	7.79	8.81	11.9	10.2	6.46	4.75	1.08	1.22
(WY)	(1955)	(2004)	(2002)	(2001)	(2005)	(2002)	(2005)	(2004)	(2004)	(2004)	(2004)	(2004)

06290000 PASS CREEK NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005*	
ANNUAL TOTAL	2,968.41		5,981.5			
ANNUAL MEAN	8.11		16.4		34.8	
HIGHEST ANNUAL MEAN					76.8	1944
LOWEST ANNUAL MEAN					8.53	2004
HIGHEST DAILY MEAN	52	Mar 19	351	May 12	1,120	Jun 20, 1947
LOWEST DAILY MEAN	0.70	Aug 18	1.0	Oct 10	0.00	Sep 1, 2002
ANNUAL SEVEN-DAY MINIMUM	0.89	Aug 13	1.4	Oct 4	0.00	Sep 1, 2002
MAXIMUM PEAK FLOW			606	May 11	a1,150	Jun 4, 1944
MAXIMUM PEAK STAGE			5.40	May 11	6.96	May 9, 1995
INSTANTANEOUS LOW FLOW					0.00	Aug 3, 1935
ANNUAL RUNOFF (AC-FT)	5,890		11,860		25,190	
10 PERCENT EXCEEDS	13		34		76	
50 PERCENT EXCEEDS	9.0		9.0		20	
90 PERCENT EXCEEDS	1.0		3.8		7.5	

*--During period of operation (1939-56, 1983 to current year).
a--Gage height, 4.83 ft, from rating curve extended above 400 ft^3/s, previous site and datum.
e--Estimated.



06291500 LODGE GRASS CREEK ABOVE WILLOW CREEK DIVERSION, NEAR WYOLA, MT

LOCATION.--Lat 45°07'35", long 107°36'00" (NAD 27), in $SE^1/_4NE^1/_4NE^1/_4$ sec.24, T.8 S., R.33 E., Big Horn County, Hydrologic Unit 10080016, on left bank 0.2 mi upstream from Willow Creek diversion canal, 1.1 mi downstream from Spring Creek, 10 mi west of Wyola, 17 mi southwest of Lodge Grass, and at river mile 43.0.

DRAINAGE AREA.--80.7 mi^2.

PERIOD OF RECORD.--March 1939 to September 1974, October 1982 to current year.

REVISED RECORDS.--WSP 1559: 1944-47. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,170 ft (NGVD 29). March 1939 to September 1974 recording gage 0.1 mi upstream at different elevation. Flows are equivalent.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 400 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	7.9	3.1	11	8.6	7.9	17	102	77	27	14
2	10	12	8.0	4.4	11	8.8	7.8	17	98	73	27	13
3	11	12	8.8	4.2	11	8.8	7.9	13	91	69	27	13
4	9.6	12	9.1	3.5	11	8.8	7.9	12	100	65	26	12
5	9.5	12	11	4.2	12	8.8	8.3	12	103	61	24	13
6	9.5	11	11	6.5	11	8.9	8.4	12	127	55	22	13
7	9.5	11	11	7.6	e10	8.7	8.6	39	140	52	22	12
8	9.5	11	11	6.8	e7.0	10	9.7	93	125	49	21	12
9	9.3	11	11	6.6	e7.0	9.4	27	68	109	47	22	11
10	8.9	11	11	7.3	7.1	10	16	73	98	48	22	11
11	9.0	11	11	7.0	6.9	9.4	14	183	92	49	23	12
12	9.4	11	12	e8.0	8.0	8.8	12	119	97	46	24	14
13	10	11	10	e8.0	8.5	9.2	12	90	112	45	25	15
14	9.9	11	8.8	e7.0	9.1	9.6	11	78	109	42	24	14
15	13	11	11	e8.0	8.5	8.8	11	77	122	40	22	13
16	12	11	11	e8.0	11	9.0	11	95	140	38	20	13
17	12	11	11	e9.0	13	11	11	151	169	40	19	13
18	12	11	11	e10	13	9.8	12	154	180	39	20	14
19	12	11	11	e10	8.9	9.4	17	159	168	36	22	13
20	12	11	11	e10	9.3	9.2	17	226	156	35	19	11
21	12	10	11	e10	10	9.4	20	266	148	34	18	11
22	13	8.8	10	13	9.9	9.3	26	244	138	36	17	12
23	13	11	6.0	13	10	9.1	20	237	132	35	17	12
24	13	11	6.8	13	9.5	9.5	16	216	122	34	17	15
25	12	11	6.2	12	8.6	9.0	15	174	113	34	17	15
26	12	11	5.9	12	8.7	9.0	16	145	110	36	16	14
27	12	11	5.5	12	8.6	8.3	18	126	106	32	15	13
28	12	10	5.4	12	8.6	8.2	19	120	94	31	15	13
29	16	8.7	5.5	12	---	7.9	19	128	88	30	14	13
30	14	8.4	5.4	11	---	7.8	17	119	82	29	14	12
31	13	---	4.6	11	---	8.2	---	108	---	28	15	---
TOTAL	351.1	326.9	279.9	270.2	268.2	280.7	423.5	3,571	3,571	1,365	633	386
MEAN	11.3	10.9	9.03	8.72	9.58	9.05	14.1	115	119	44.0	20.4	12.9
MAX	16	13	12	13	13	11	27	266	180	77	27	15
MIN	8.9	8.4	4.6	3.1	6.9	7.8	7.8	12	82	28	14	11
AC-FT	696	648	555	536	532	557	840	7,080	7,080	2,710	1,260	766

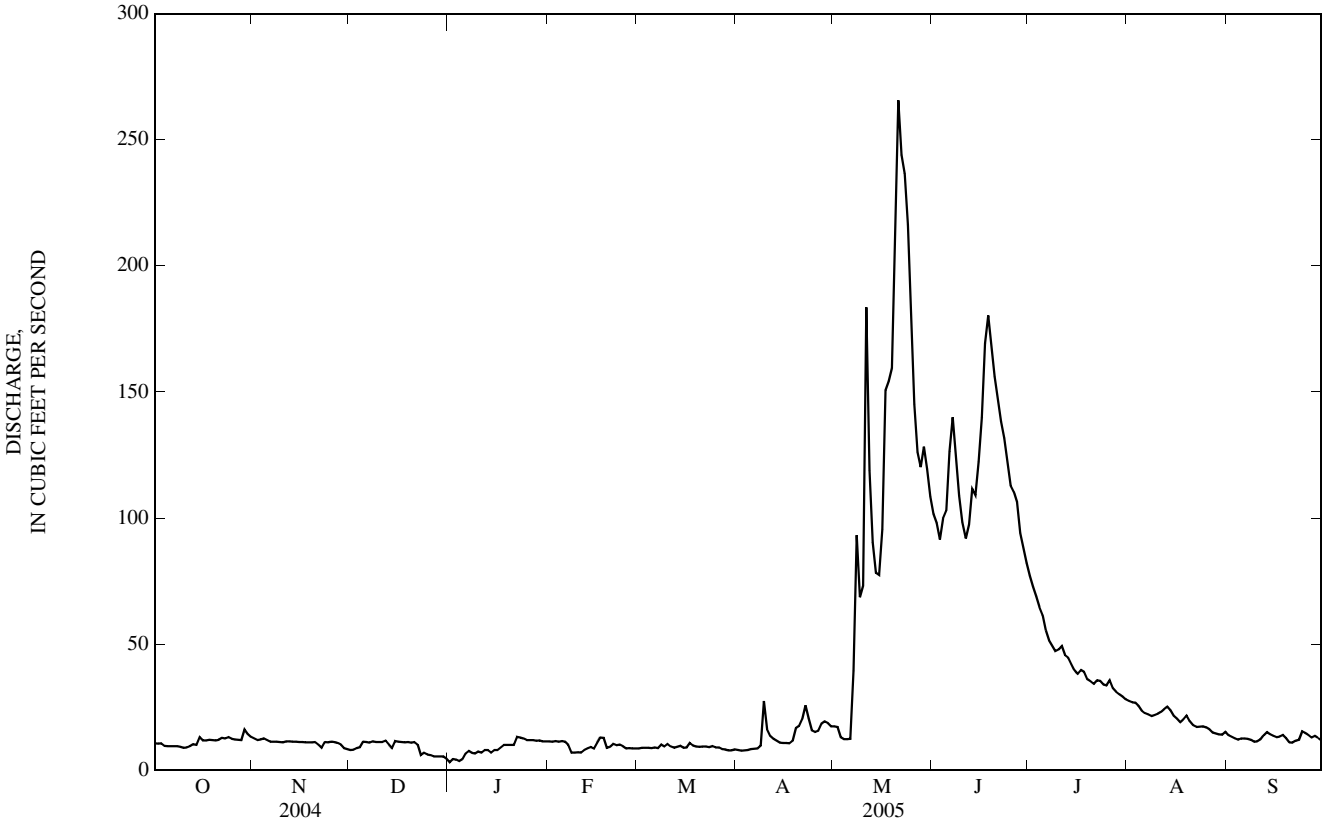
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)*

MEAN	20.8	18.8	16.7	16.4	16.7	20.1	31.1	116	192	62.1	27.4	21.8
MAX	35.5	28.0	25.0	30.3	32.0	36.9	71.4	257	445	176	50.7	40.1
(WY)	(1942)	(1943)	(1969)	(1974)	(1972)	(1972)	(1994)	(1984)	(1964)	(1964)	(1968)	(1964)
MIN	11.3	10.7	8.58	4.87	9.00	9.05	11.2	36.2	52.6	20.1	9.25	6.80
(WY)	(2005)	(1961)	(1950)	(1950)	(1940)	(2005)	(2001)	(1950)	(2001)	(1961)	(2004)	(2002)

06291500 LODGE GRASS CREEK ABOVE WILLOW CREEK DIVERSION, NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005*	
ANNUAL TOTAL	7,168.5		11,726.5			
ANNUAL MEAN	19.6		32.1		46.7	
HIGHEST ANNUAL MEAN					85.6	1970
LOWEST ANNUAL MEAN					21.1	2004
HIGHEST DAILY MEAN	74	Jun 7	266	May 21	908	Jun 9, 1964
LOWEST DAILY MEAN	4.6	Dec 31	3.1	Jan 1	2.7	Apr 6, 2001
ANNUAL SEVEN-DAY MINIMUM	5.5	Dec 25	4.2	Dec 30	3.0	Apr 13, 2001
MAXIMUM PEAK FLOW			282	May 21	a1,130	Jun 9, 1964
MAXIMUM PEAK STAGE			3.56	May 21	6.14	Jun 9, 1964
ANNUAL RUNOFF (AC-FT)	14,220		23,260		33,850	
10 PERCENT EXCEEDS	45		104		112	
50 PERCENT EXCEEDS	14		12		22	
90 PERCENT EXCEEDS	8.1		8.0		12	

*--During period of operation (1940-74, 1983 to current year).
a--From rating curve extended above 600 ft^3/s.
e--Estimated.



06294000 LITTLE BIGHORN RIVER NEAR HARDIN, MT

LOCATION.--Lat 45°44'09", long 107°33'24" (NAD 27), in $SE^1/_4\ NE^1/_4\ NE^1/_4$ sec.19, T.1 S., R.34 E., Big Horn County, Hydrologic Unit 10080016, on left bank 50 ft downstream from bridge on Sarpy Road, 0.2 mi upstream from terminal wasteway of Agency Canal, 0.6 mi upstream from mouth, and 2.3 mi east of Hardin.

DRAINAGE AREA.--1,294 mi^2.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WDR MT-86-1: 1978.

GAGE.--Water-stage recorder. Elevation of gage is 2,882.29 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Oct. 7, 1953, nonrecording gage at site 0.4 mi downstream. Oct. 7, 1953 to May 6, 1963, water-stage recorder at site 0.3 mi downstream. May 6, 1963 to Nov. 6, 1963, nonrecording gage at site 0.4 mi downstream. All at different elevations. Nov. 7, 1963 to Aug. 15, 1976, water-stage recorder at site 35 ft downstream at present elevation. Aug. 15, 1976 to Sept. 30, 1979, water-stage recorders were located on each bank downstream from Sarpy Road bridge and were used depending on control conditions.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partly regulated by Willow Creek Reservoir (capacity 23,000 acre-ft). Diversions for irrigation of 20,980 acres upstream from station. **Discharge values given herein include flow of terminal wasteway of Agency Canal.** U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	115	e70	e60	e55	82	86	102	369	286	39	36
2	78	110	92	e45	e60	81	85	100	384	269	34	37
3	77	107	110	e50	e60	81	84	101	372	252	31	45
4	74	100	106	e50	e70	82	83	99	337	250	31	46
5	74	104	e90	e50	e60	81	82	95	321	243	30	46
6	73	106	e80	e45	e54	81	82	89	317	227	30	48
7	100	103	e90	e50	e52	80	73	90	335	211	34	40
8	90	101	e90	e60	e50	80	68	118	406	196	31	40
9	84	100	e100	e55	e56	81	106	352	417	181	31	39
10	84	96	106	e50	e70	83	120	511	391	165	29	48
11	83	96	115	e50	e70	85	143	456	355	155	29	46
12	72	96	e100	e45	e74	88	133	700	329	149	35	42
13	73	96	e90	e40	e80	87	116	1,060	330	119	46	50
14	80	95	e80	e35	e76	88	103	591	358	105	47	54
15	92	92	e80	e30	e70	90	87	447	344	113	50	63
16	87	95	e90	e35	e70	89	84	391	334	106	57	72
17	102	93	e90	e40	e70	87	84	363	340	101	52	72
18	102	92	e90	e50	e70	91	81	459	345	96	44	77
19	101	92	e90	e60	e70	90	90	527	363	87	36	75
20	100	94	e90	e60	e75	88	139	488	352	56	29	64
21	102	92	e80	e55	e72	86	181	600	341	47	38	67
22	99	89	e60	e50	e70	85	192	788	317	33	39	64
23	103	95	e45	e55	e72	85	168	860	298	28	30	54
24	111	95	e70	e60	e76	89	155	790	301	23	30	56
25	106	96	e80	e60	e80	88	150	776	340	23	29	66
26	102	e90	e80	e60	e76	88	135	668	352	39	32	69
27	100	e90	e75	e55	e80	89	125	527	361	36	36	72
28	97	e70	e75	e50	e80	92	122	456	341	58	38	85
29	110	e60	e80	e55	---	88	116	420	335	56	38	98
30	114	e50	e75	e55	---	88	108	427	306	44	31	91
31	120	---	e70	e50	---	86	---	402	---	39	31	---
TOTAL	2,869	2,810	2,639	1,565	1,918	2,659	3,381	13,853	10,391	3,793	1,117	1,762
MEAN	92.5	93.7	85.1	50.5	68.5	85.8	113	447	346	122	36.0	58.7
MAX	120	115	115	60	80	92	192	1,060	417	286	57	98
MIN	72	50	45	30	50	80	68	89	298	23	29	36
AC-FT	5,690	5,570	5,230	3,100	3,800	5,270	6,710	27,480	20,610	7,520	2,220	3,490

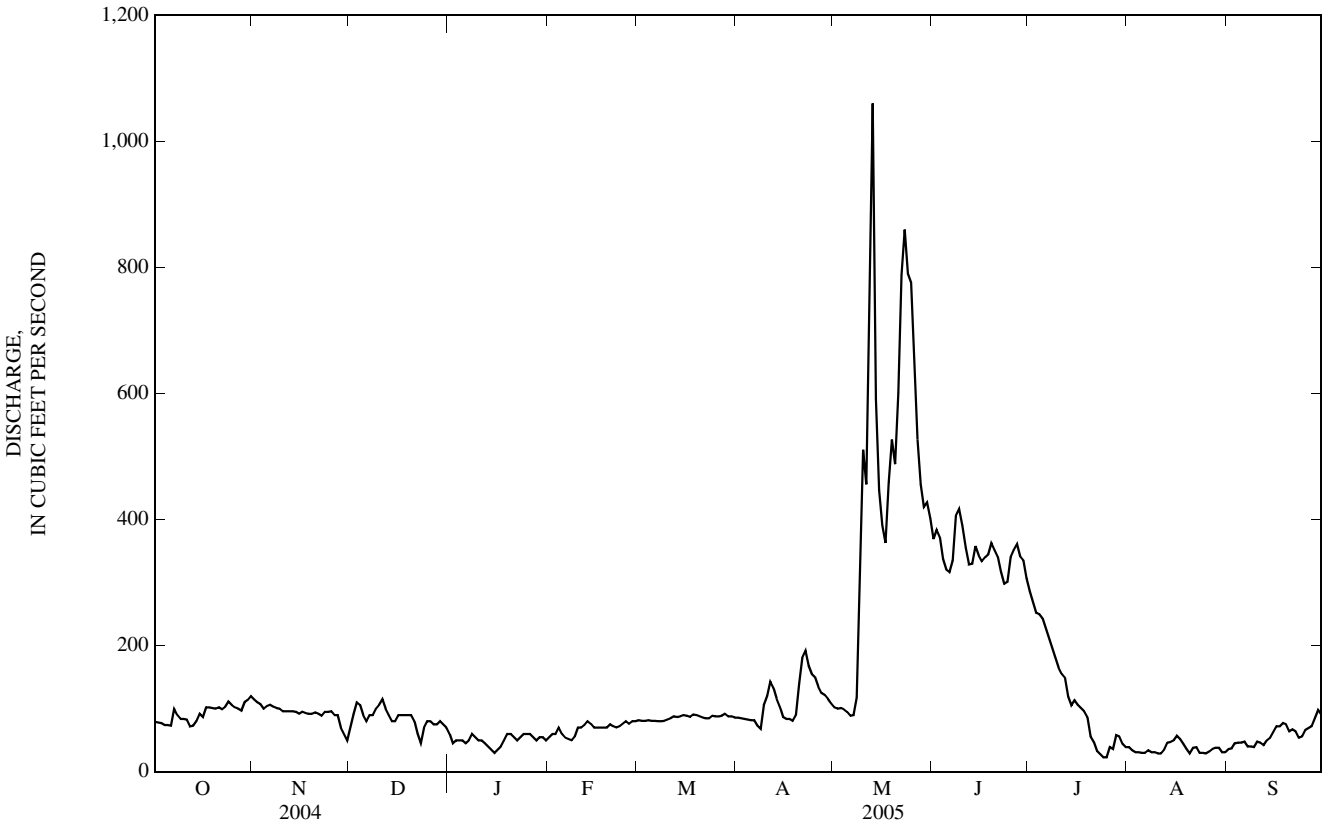
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	152	150	133	138	197	305	305	598	799	257	115	125
MAX	276	248	223	366	610	987	748	2,852	1,981	1,333	382	267
(WY)	(1979)	(1979)	(1979)	(1975)	(1971)	(1972)	(1965)	(1978)	(1968)	(1975)	(1975)	(1978)
MIN	60.7	82.6	65.6	50.5	68.5	71.1	54.8	71.9	117	8.50	2.46	19.1
(WY)	(2002)	(2002)	(2002)	(2005)	(2005)	(2002)	(1961)	(1961)	(1961)	(1961)	(1961)	(1960)

06294000 LITTLE BIGHORN RIVER NEAR HARDIN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1954 - 2005	
ANNUAL TOTAL	37,404		48,757			
ANNUAL MEAN	102		134		273	
HIGHEST ANNUAL MEAN					676	1975
LOWEST ANNUAL MEAN					70.4	1961
HIGHEST DAILY MEAN	403	Feb 26	1,060	May 13	15,800	May 20, 1978
LOWEST DAILY MEAN	25	Jul 24	23	Jul 24	0.30	Aug 5, 1961
ANNUAL SEVEN-DAY MINIMUM	37	May 1	31	Aug 5	0.40	Aug 3, 1961
MAXIMUM PEAK FLOW			1,210	May 13	a22,600	May 19, 1978
MAXIMUM PEAK STAGE			4.55	May 13	b11.78	Mar 20, 1960
INSTANTANEOUS LOW FLOW					c0.20	Aug 7, 1961
ANNUAL RUNOFF (AC-FT)	74,190		96,710		197,600	
10 PERCENT EXCEEDS	161		344		591	
50 PERCENT EXCEEDS	95		85		160	
90 PERCENT EXCEEDS	49		39		71	

a--Gage height, 11.20 ft.
b--Site and datum then in use.
c--Result of discharge measurement.
e--Estimated.



06294500 BIGHORN RIVER ABOVE TULLOCK CREEK, NEAR BIGHORN, MT

LOCATION.--Lat 46°07'29", long 107°28'06" (NAD 27), in SE$^1/_4$ SE$^1/_4$ NE$^1/_4$ sec.3, T.4 N., R.34 E., Treasure County, Hydrologic Unit 10080015, on right bank 1.9 mi upstream from Tullock Creek, 3.6 mi southwest of Bighorn, 4.5 mi southeast of Custer, and at river mile 3.0.

DRAINAGE AREA.--22,414 mi^2. Area at site used Oct. 7, 1955, to Sept. 30, 1981, 22,885 mi^2.

PERIOD OF RECORD.--October 1981 to current year. Previously published as "06294700 Bighorn River at Bighorn, MT" from 1956-81, and as "06294700 Bighorn River near Custer" from 1945-55. Flows are equivalent at all sites.

GAGE.--Water-stage recorder. Elevation of gage is 2,700 ft (NGVD 29). May 11, 1945 to Dec. 6, 1945, nonrecording gage, and Dec. 7, 1945 to Oct. 6, 1955, water-stage recorder 1.7 mi upstream at different elevation. Oct. 7, 1955 to Sept. 30, 1981, at site 2.3 mi downstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Bighorn Lake beginning November 1965 (usable capacity, 1,312,000 acre-ft). Major regulation prior to November 1965 by 14 reservoirs in Wyoming and 1 in Montana with combined usable capacity of about 1,400,000 acre-ft. Diversion for irrigation of about 445,200 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,280	1,590	1,790	1,660	1,810	1,800	1,490	1,480	2,160	7,570	2,360	2,050
2	1,320	1,580	1,830	e1,700	1,790	1,830	1,490	1,440	2,290	7,470	2,260	2,110
3	1,410	1,570	1,870	e1,700	1,770	1,730	1,500	1,320	2,740	7,450	2,310	2,110
4	1,390	1,580	1,910	e1,700	1,790	1,760	1,480	1,400	2,800	7,400	2,290	2,160
5	1,400	1,590	1,910	e1,800	1,810	1,760	1,470	1,370	2,810	7,330	2,250	2,200
6	1,400	1,590	1,900	e1,800	1,710	e1,700	1,460	1,370	2,840	7,300	2,250	2,140
7	1,420	1,580	1,950	e1,800	1,690	e1,700	1,460	1,400	2,960	7,210	2,190	2,080
8	1,390	1,580	2,000	e1,800	1,690	e1,700	1,470	1,430	3,170	7,060	2,150	1,980
9	1,470	1,600	2,020	e1,800	e1,700	e1,700	1,670	1,490	3,340	6,940	2,110	1,970
10	1,440	1,600	2,030	e1,800	1,730	e1,700	1,650	1,900	3,940	6,800	2,070	1,940
11	1,420	1,600	2,060	e1,800	1,730	e1,600	1,620	2,010	4,470	6,930	2,000	1,930
12	1,450	1,610	2,090	e1,800	1,730	e1,600	1,630	2,520	4,940	6,270	1,940	1,930
13	1,430	1,620	2,050	e1,800	1,730	e1,600	1,590	3,220	4,960	5,040	1,950	1,990
14	1,410	1,630	2,050	e1,800	1,730	e1,600	1,540	2,680	4,900	3,900	1,950	1,940
15	1,480	1,640	2,120	e1,700	1,710	e1,600	1,570	2,200	4,830	3,260	1,880	1,920
16	1,470	1,640	2,140	e1,700	1,690	1,610	1,500	1,980	4,670	2,670	1,810	1,880
17	1,440	1,640	2,180	e1,700	1,700	1,590	1,430	1,860	4,960	2,300	1,860	1,840
18	1,460	1,650	2,200	e1,700	1,690	1,580	1,430	1,970	4,840	2,270	2,120	1,860
19	1,450	1,660	2,230	e1,700	1,690	1,570	1,550	2,070	4,810	2,200	2,340	1,850
20	1,440	1,680	2,280	e1,700	1,710	1,560	1,710	1,990	4,870	2,150	2,270	1,810
21	1,440	1,700	2,270	e1,700	1,730	1,540	1,930	1,990	4,770	2,150	2,240	1,770
22	1,450	1,690	2,250	e1,700	1,700	1,550	2,110	2,160	4,710	2,100	2,180	2,250
23	1,430	1,720	e2,200	e1,700	1,690	1,530	2,020	2,350	5,190	2,120	2,120	2,720
24	1,460	1,740	e2,300	e1,800	1,700	1,590	1,870	2,280	5,770	2,320	2,070	2,710
25	1,440	1,750	2,300	e1,800	1,700	1,550	1,750	2,240	6,740	2,310	2,140	2,720
26	1,490	1,770	2,340	e1,800	1,700	1,530	1,620	2,170	7,530	2,400	2,100	2,700
27	1,520	1,770	2,360	e1,800	1,720	1,530	1,570	1,980	7,730	2,380	2,090	2,660
28	1,530	1,780	2,320	e1,800	1,770	1,520	1,500	1,800	7,700	2,410	2,100	2,610
29	1,590	1,770	1,980	e1,800	---	1,510	1,520	1,700	7,970	2,400	2,110	2,550
30	1,580	1,750	1,670	1,770	---	1,500	1,490	1,700	7,880	2,360	2,080	2,460
31	1,580	---	1,640	1,760	---	1,490	---	1,760	---	2,370	2,040	---
TOTAL	44,880	49,670	64,240	54,390	48,310	50,130	48,090	59,230	143,290	134,840	65,630	64,840
MEAN	1,448	1,656	2,072	1,755	1,725	1,617	1,603	1,911	4,776	4,350	2,117	2,161
MAX	1,590	1,780	2,360	1,800	1,810	1,830	2,110	3,220	7,970	7,570	2,360	2,720
MIN	1,280	1,570	1,640	1,660	1,690	1,490	1,430	1,320	2,160	2,100	1,810	1,770
AC-FT	89,020	98,520	127,400	107,900	95,820	99,430	95,390	117,500	284,200	267,500	130,200	128,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

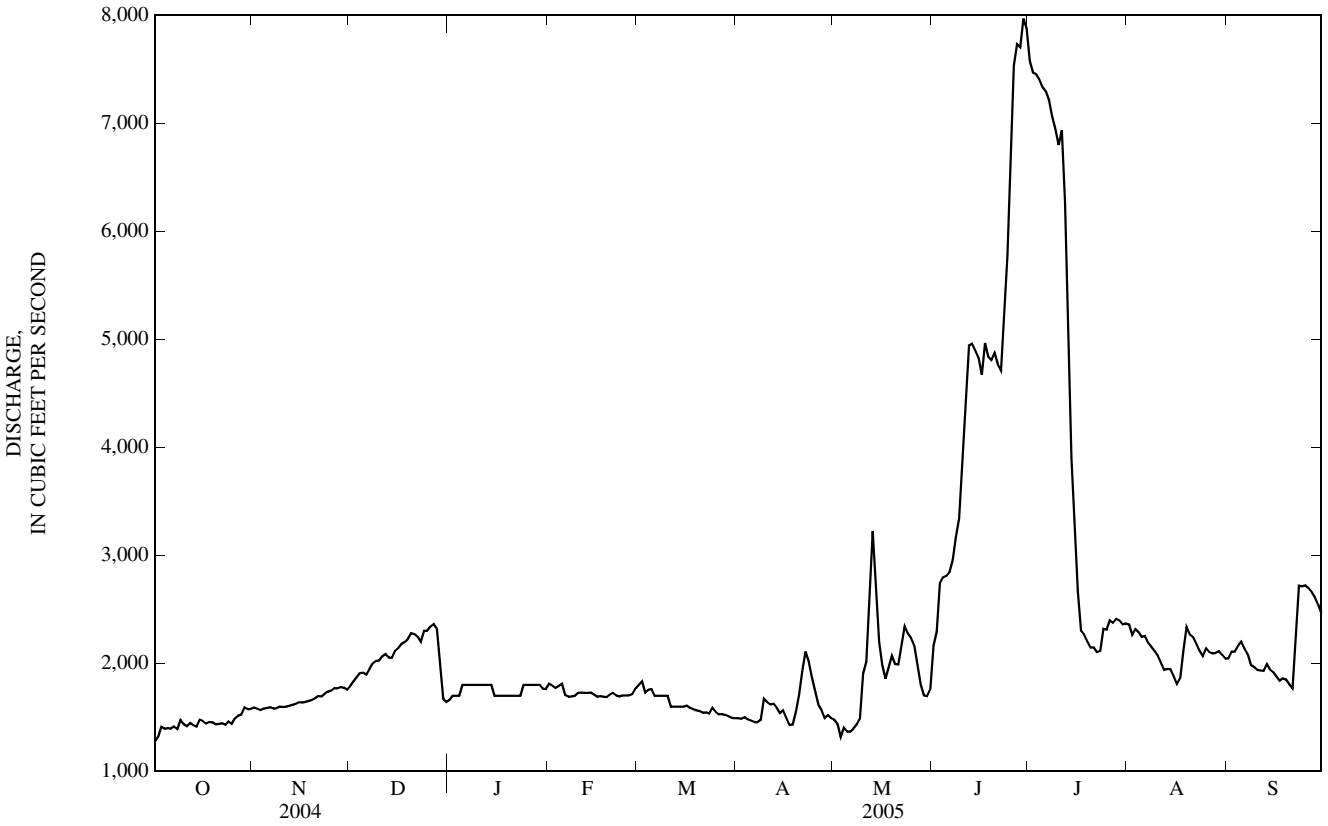
MEAN	3,151	3,224	3,086	2,973	3,133	3,610	3,465	4,275	6,788	5,213	2,804	2,796
MAX	5,546	5,599	4,907	5,478	5,314	6,580	7,881	9,102	15,180	19,090	6,972	4,952
(WY)	(1972)	(1974)	(1968)	(1968)	(1971)	(1972)	(1997)	(1947)	(1948)	(1967)	(1997)	(1973)
MIN	1,103	1,223	1,280	1,382	1,544	908	1,063	1,304	1,050	707	868	1,009
(WY)	(2003)	(1978)	(1961)	(1961)	(2003)	(1966)	(1966)	(1966)	(1966)	(1960)	(1961)	(1966)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	584,800		827,540			
ANNUAL MEAN	1,598		2,267		3,693	
HIGHEST ANNUAL MEAN					5,594	1997
LOWEST ANNUAL MEAN					1,474	2003
HIGHEST DAILY MEAN	2,420	Jun 11	7,970	Jun 29	50,000	May 20, 1978
LOWEST DAILY MEAN	1,060	Sep 1	1,280	Oct 1	400	Apr 4, 1967
ANNUAL SEVEN-DAY MINIMUM	1,120	Aug 26	1,370	Oct 1	528	May 6, 1961
MAXIMUM PEAK FLOW			8,190	Jun 29	a59,200	May 20, 1978
MAXIMUM PEAK STAGE			4.56	Jun 29	b14.21	Apr 2, 1965
INSTANTANEOUS LOW FLOW					275	Nov 15, 1959
ANNUAL RUNOFF (AC-FT)	1,160,000		1,641,000		2,675,000	
10 PERCENT EXCEEDS	1,960		3,290		6,200	
50 PERCENT EXCEEDS	1,560		1,800		3,110	
90 PERCENT EXCEEDS	1,290		1,470		1,610	

06294500 BIGHORN RIVER ABOVE TULLOCK CREEK, NEAR BIGHORN, MT—Continued

SUMMARY STATISTICS	WATER YEARS 1946 - 1961 *		WATER YEARS 1967 - 2005**	
ANNUAL MEAN	3,358		3,707	
HIGHEST ANNUAL MEAN	5,501	1947	5,594	1997
LOWEST ANNUAL MEAN	1,623	1961	1,474	2003
HIGHEST DAILY MEAN	25,700	Jun 23, 1947	50,000	May 20, 1978
LOWEST DAILY MEAN	462	May 12, 1961	400	Apr 4, 1967
ANNUAL SEVEN-DAY MINIMUM	528	May 6, 1961	843	Nov 18, 1977
MAXIMUM PEAK FLOW	c26,200	Jun 24, 1947	f59,200	May 20, 1978
MAXIMUM PEAK STAGE	10.65	May 20, 1947	g14.15	May 20, 1978
INSTANTANEOUS LOW FLOW	d275	Nov 15, 1959		
ANNUAL RUNOFF (AC-FT)	2,578,000		2,686,000	
10 PERCENT EXCEEDS	6,200		6,150	
50 PERCENT EXCEEDS	2,810		3,290	
90 PERCENT EXCEEDS	1,500		1,690	

*Prior to construction of Yellowtail Dam.
**--After completion of Yellowtail Dam.
a--Gage height, 14.15 ft, at different site and datum.
b--About, result of ice jam, at different site and datum.
c--Gage height, 8.79 ft, at different site and datum.
d--About, result of freezeup.
e--Estimated.
f--Gage height, 14.50 ft, at different site and datum.
g--Previous site and datum.



06295000 YELLOWSTONE RIVER AT FORSYTH, MT

LOCATION.--Lat 46°15'58", long 106°41'24" (NAD 27), in $NE^1/_4$ $NW^1/_4$ $NW^1/_4$sec.23, T.6 N., R.40 E., Rosebud County, Hydrologic Unit 10100001, on right bank 0.3 mi downstream from U.S. Highway 12 bridge, at Forsyth, and at river mile 238.2.

DRAINAGE AREA.--40,146 mi^2.

PERIOD OF RECORD.--July 16, 1921 to September 30, 1923 (no winter records), October 1977 to current year. Miscellaneous discharge measurements were made in 1974 to 1976 and are available in files at the USGS Water Science Center located in Helena, Montana.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,504.62 ft (NGVD 29), from nearby elevation determined by City of Forsyth. July 1921 to March 1922, nonrecording gage on discontinued highway bridge 10 ft downstream from gage at different elevation. March 1922 to September 1923, nonrecording gage on discontinued highway bridge 10 ft downstream from gage at elevation 2 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 838,000 acres upstream from station. Flow regulated to some extent by Bighorn Lake, usable capacity, 1,312,000 acre-ft, on Bighorn River. Small diversion dam about 4,200 ft downstream from station. U.S. Geological Survey satellite telemeter at station. Serveral unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1918 reached a stage of about 20 ft, elevation used in 1921, information from local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,510	6,550	4,830	e4,500	e4,400	e3,800	3,710	6,550	20,000	25,200	6,280	e4,470
2	5,550	6,180	4,850	e4,000	e4,300	e3,800	3,680	6,170	18,600	24,200	6,040	e4,480
3	5,730	6,000	4,540	e3,800	e4,300	e3,800	3,600	5,810	18,200	23,800	5,870	e4,600
4	5,700	5,760	4,640	e3,600	e4,200	3,790	3,580	5,520	18,600	23,300	5,890	e4,540
5	5,580	5,680	5,140	e3,600	e4,200	3,760	3,570	5,450	17,300	22,400	6,030	e4,600
6	5,490	5,850	5,220	e3,600	e4,300	3,740	3,620	5,410	16,900	20,800	6,210	e4,510
7	5,410	5,820	5,070	e3,800	e4,200	3,710	3,740	5,750	17,400	19,200	5,940	e4,380
8	5,330	5,720	5,100	e4,000	e3,900	3,690	3,810	6,640	20,800	18,100	5,650	4,400
9	5,320	5,690	5,080	e4,000	e3,600	3,700	4,080	8,550	22,400	17,600	5,400	4,350
10	5,280	5,650	5,220	e3,800	e3,500	3,740	4,550	9,740	20,800	17,200	5,220	3,940
11	5,260	5,600	5,250	e3,800	e3,600	3,730	4,420	10,100	19,900	17,300	5,170	3,880
12	5,260	5,530	5,240	e4,000	e3,900	3,770	4,610	17,400	19,200	18,000	5,080	3,930
13	5,330	5,580	5,250	e4,000	e4,100	3,840	4,410	26,800	19,100	17,600	5,130	4,020
14	5,320	5,570	5,230	e4,000	e4,100	3,850	4,150	19,700	19,400	15,400	5,320	4,140
15	5,400	5,480	5,080	e3,800	e4,100	3,860	3,930	16,300	19,500	13,000	5,560	4,250
16	5,790	5,380	5,120	e3,600	e4,100	3,850	3,930	14,800	18,300	11,800	5,510	4,260
17	6,110	5,340	5,210	e3,700	e4,100	3,740	3,990	15,100	20,300	10,700	5,200	4,240
18	6,050	5,310	5,260	e3,800	e4,000	3,780	4,290	17,500	24,500	9,950	5,070	4,310
19	6,130	5,280	5,210	e4,200	e3,800	3,800	4,110	21,600	27,600	9,440	5,270	4,320
20	6,060	5,290	5,200	e4,400	e3,600	3,790	5,070	19,500	30,300	8,850	5,620	4,360
21	6,000	5,330	5,180	e4,700	e3,800	3,750	6,610	21,400	28,400	8,010	5,980	4,320
22	5,940	5,290	5,220	e5,500	e4,000	3,740	6,680	30,300	28,300	7,470	6,510	4,330
23	5,850	5,200	e4,800	e5,600	e4,000	3,800	6,350	35,400	30,400	7,090	6,260	4,710
24	5,880	5,100	e4,700	e5,500	e4,000	3,820	6,070	32,800	33,200	6,950	5,730	5,040
25	5,910	5,100	e4,300	e5,300	e4,000	3,890	5,960	34,000	37,300	6,910	5,490	5,230
26	5,880	5,250	e4,400	e5,200	e3,900	3,850	5,720	31,700	36,300	6,810	5,420	5,790
27	5,920	5,290	e4,400	e5,100	e3,800	3,770	5,990	25,500	32,900	7,160	5,290	5,960
28	5,830	5,240	e4,500	e5,000	e3,800	3,730	6,740	21,400	30,000	7,160	5,150	6,170
29	5,880	5,180	e4,800	e4,700	---	3,700	7,390	19,700	28,400	7,060	e4,880	6,130
30	6,330	4,890	e5,000	e4,600	---	3,670	7,160	19,800	27,200	6,670	e4,870	5,940
31	6,970	---	e4,600	e4,400	---	3,680	---	20,900	---	6,440	e4,680	---
TOTAL	178,000	165,130	153,640	133,600	111,600	116,940	145,520	537,290	721,500	421,570	171,720	139,600
MEAN	5,742	5,504	4,956	4,310	3,986	3,772	4,851	17,330	24,050	13,600	5,539	4,653
MAX	6,970	6,550	5,260	5,600	4,400	3,890	7,390	35,400	37,300	25,200	6,510	6,170
MIN	5,260	4,890	4,300	3,600	3,500	3,670	3,570	5,410	16,900	6,440	4,680	3,880
AC-FT	353,100	327,500	304,700	265,000	221,400	232,000	288,600	1,066,000	1,431,000	836,200	340,600	276,900

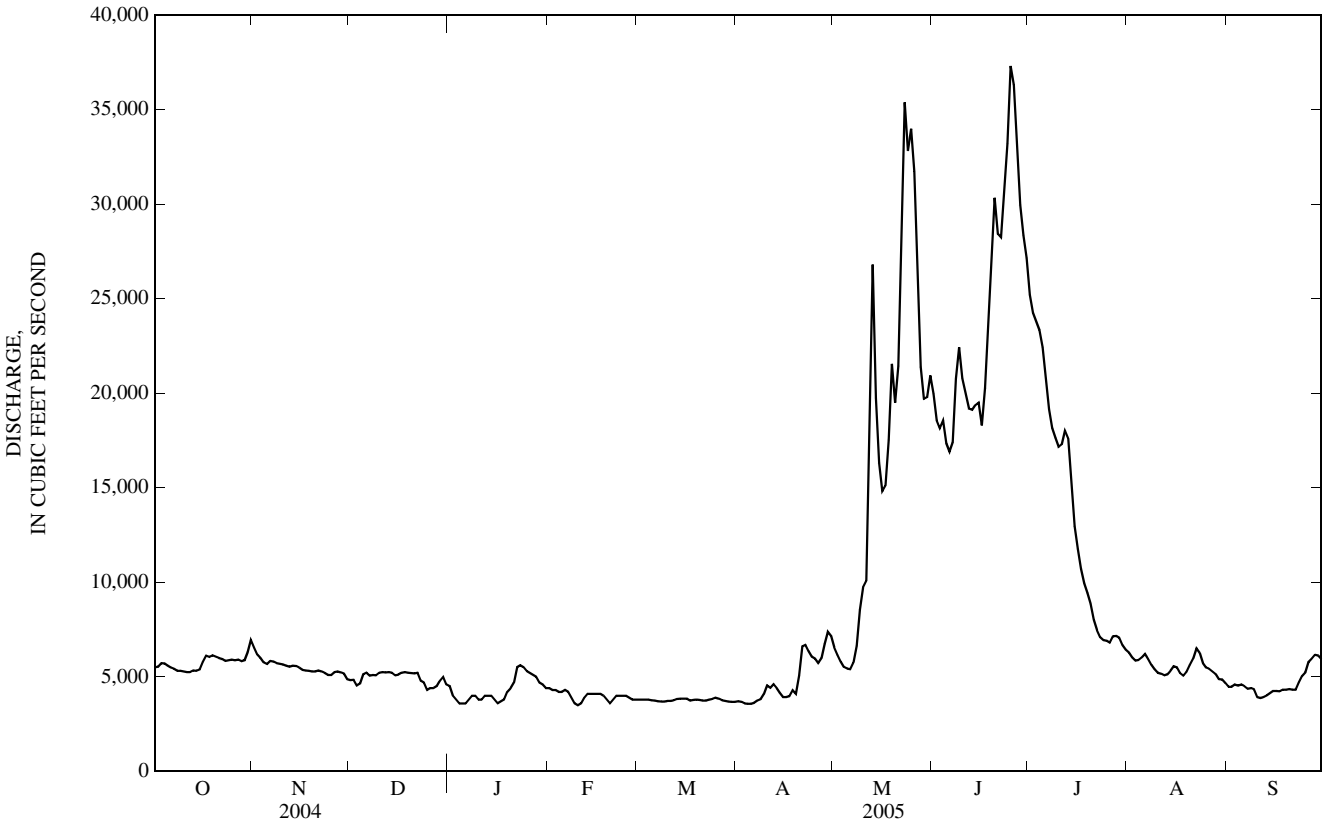
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	7,202	6,757	5,919	5,535	5,900	6,845	7,465	16,780	28,940	17,510	7,768	6,686
MAX	10,720	10,490	8,927	7,796	10,210	15,120	13,270	27,850	63,710	34,430	17,570	11,320
(WY)	(1983)	(1983)	(1983)	(1983)	(1997)	(1979)	(1997)	(1997)	(1997)	(1982)	(1997)	(1978)
MIN	3,519	4,186	3,624	3,242	3,511	3,223	4,220	7,570	14,690	6,135	2,742	2,723
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1981)	(2004)	(1987)	(1988)	(2001)	(2001)

06295000 YELLOWSTONE RIVER AT FORSYTH, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1978 - 2005	
ANNUAL TOTAL	2,342,840		2,996,110			
ANNUAL MEAN	6,401		8,209		10,280	
HIGHEST ANNUAL MEAN					17,590	1997
LOWEST ANNUAL MEAN					6,026	2001
HIGHEST DAILY MEAN	29,200	Jun 12	37,300	Jun 25	97,000	May 21, 1978
LOWEST DAILY MEAN	3,200	Feb 15	3,500	Feb 10	1,400	Nov 23, 1977
ANNUAL SEVEN-DAY MINIMUM	3,350	Aug 19	3,630	Mar 31	2,030	Aug 26, 2001
MAXIMUM PEAK FLOW			38,400	Jun 25	106,000	May 21, 1978
MAXIMUM PEAK STAGE			7.35	Jun 25	14.53	May 21, 1978
ANNUAL RUNOFF (AC-FT)	4,647,000		5,943,000		7,451,000	
10 PERCENT EXCEEDS	11,000		19,800		21,600	
50 PERCENT EXCEEDS	5,220		5,280		7,020	
90 PERCENT EXCEEDS	3,900		3,800		4,200	

e--Estimated.



06295113 ROSEBUD CREEK AT RESERVATION BOUNDARY, NEAR KIRBY, MT

LOCATION.--Lat 45°21'40", long 106°59'23" (NAD 27), in NE$^1/_4$ NE$^1/_4$ SW$^1/_4$ sec.36, T.5 S., R.38 E., Big Horn County, Hydrologic Unit 10100003, on right bank, 0.2 mi upstream from Dry Creek, 0.5 mi north of reservation boundary, 1.9 mi downstream from Cache Creek, 2.0 mi north of Kirby, and at river mile 179.6.

DRAINAGE AREA.-- 123 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 3,780 ft (NGVD 29).

REMARKS.--Water-discharge records poor. Numerous small diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 231 ft^3/s was measured May 9, 1978, at site 1.9 mi upstream from present site. Flow was known to be higher during flood of May 19-21, 1978, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	0.69	e1.0	e0.30	e1.0	1.4	1.7	3.4	6.0	2.1	0.30	0.08
2	1.5	0.65	e1.5	e0.25	e1.0	1.4	1.7	4.2	8.0	2.1	0.27	0.07
3	1.3	0.57	e2.0	e0.30	e1.0	1.4	1.7	4.3	8.8	2.0	0.31	0.05
4	1.2	0.56	e1.0	e0.30	e1.0	1.4	1.8	4.3	8.9	2.1	0.33	0.04
5	1.2	0.59	e0.90	e0.30	e1.0	1.4	1.5	4.1	8.0	1.9	0.34	0.02
6	1.1	0.57	e0.80	e0.30	e1.0	1.4	1.3	4.0	7.4	1.7	0.29	0.01
7	1.1	0.61	e0.70	e0.30	e1.0	1.5	1.3	5.0	7.5	1.7	0.27	0.01
8	0.95	0.65	e0.70	e0.30	e1.0	1.5	1.3	12	8.0	1.6	0.23	0.00
9	0.91	0.73	e0.90	e0.30	e1.0	1.5	2.8	19	7.9	1.4	0.17	0.00
10	0.80	0.81	e1.0	e0.30	e1.0	1.7	3.9	24	8.4	1.3	0.20	0.00
11	0.74	0.85	e0.80	e0.30	e1.0	1.7	2.9	37	10	1.3	0.21	0.00
12	0.70	0.82	e0.70	e0.35	e1.5	1.9	2.3	54	12	1.1	0.25	0.00
13	0.62	0.90	e0.50	e0.40	e1.5	1.9	1.9	116	14	1.0	0.32	0.03
14	0.56	0.94	e0.50	e0.40	e1.5	1.9	1.6	61	12	0.89	0.38	0.06
15	0.80	0.97	e0.60	e0.50	e1.0	1.9	1.4	53	11	0.82	0.35	0.07
16	0.63	0.98	e0.70	e0.50	e0.50	2.0	0.46	50	9.7	0.75	0.31	0.05
17	0.54	1.0	e0.80	e0.60	e0.50	2.1	0.28	27	8.2	0.62	0.20	0.05
18	0.57	1.1	e0.80	e0.70	e0.50	2.2	1.6	19	8.2	0.68	0.22	0.07
19	0.60	1.1	e0.80	e0.70	e0.50	2.2	1.8	15	6.6	0.69	0.41	0.11
20	0.53	1.1	e0.80	e0.80	e0.50	2.1	2.7	13	5.3	0.57	0.35	0.07
21	0.50	1.1	e0.70	e0.90	e0.50	2.2	3.5	12	3.7	0.60	0.29	0.08
22	0.52	1.0	e0.50	e1.0	e1.0	2.3	3.8	9.6	2.6	0.51	0.34	0.10
23	0.56	e0.50	e0.50	e1.0	e1.0	2.3	4.0	7.8	2.4	0.45	0.20	0.06
24	0.59	e0.50	e0.50	e1.0	e1.0	2.3	3.9	6.8	2.5	0.40	0.19	0.14
25	0.56	e0.50	e0.70	e1.0	e1.0	2.2	3.7	6.2	3.1	0.46	0.16	0.15
26	0.57	e0.50	e0.60	e1.0	e1.0	2.3	3.3	5.3	2.3	0.67	0.12	0.13
27	0.50	e0.60	e0.50	e1.0	e1.0	2.2	3.3	4.9	2.2	0.56	0.15	0.13
28	0.52	e0.70	e0.45	e1.0	e1.4	2.2	3.2	4.2	2.2	0.43	0.12	0.20
29	0.76	e0.80	e0.40	e1.0	---	2.2	3.2	3.8	2.0	0.58	0.10	0.26
30	0.61	e0.90	e0.40	e1.0	---	2.0	3.5	3.7	1.8	0.53	0.08	0.22
31	0.73	---	e0.40	e1.0	---	1.8	---	5.5	---	0.42	0.06	---
TOTAL	24.67	23.29	23.15	19.10	26.90	58.5	71.34	599.1	200.7	31.93	7.52	2.26
MEAN	0.80	0.78	0.75	0.62	0.96	1.89	2.38	19.3	6.69	1.03	0.24	0.08
MAX	1.9	1.1	2.0	1.0	1.5	2.3	4.0	116	14	2.1	0.41	0.26
MIN	0.50	0.50	0.40	0.25	0.50	1.4	0.28	3.4	1.8	0.40	0.06	0.00
AC-FT	49	46	46	38	53	116	142	1,190	398	63	15	4.5

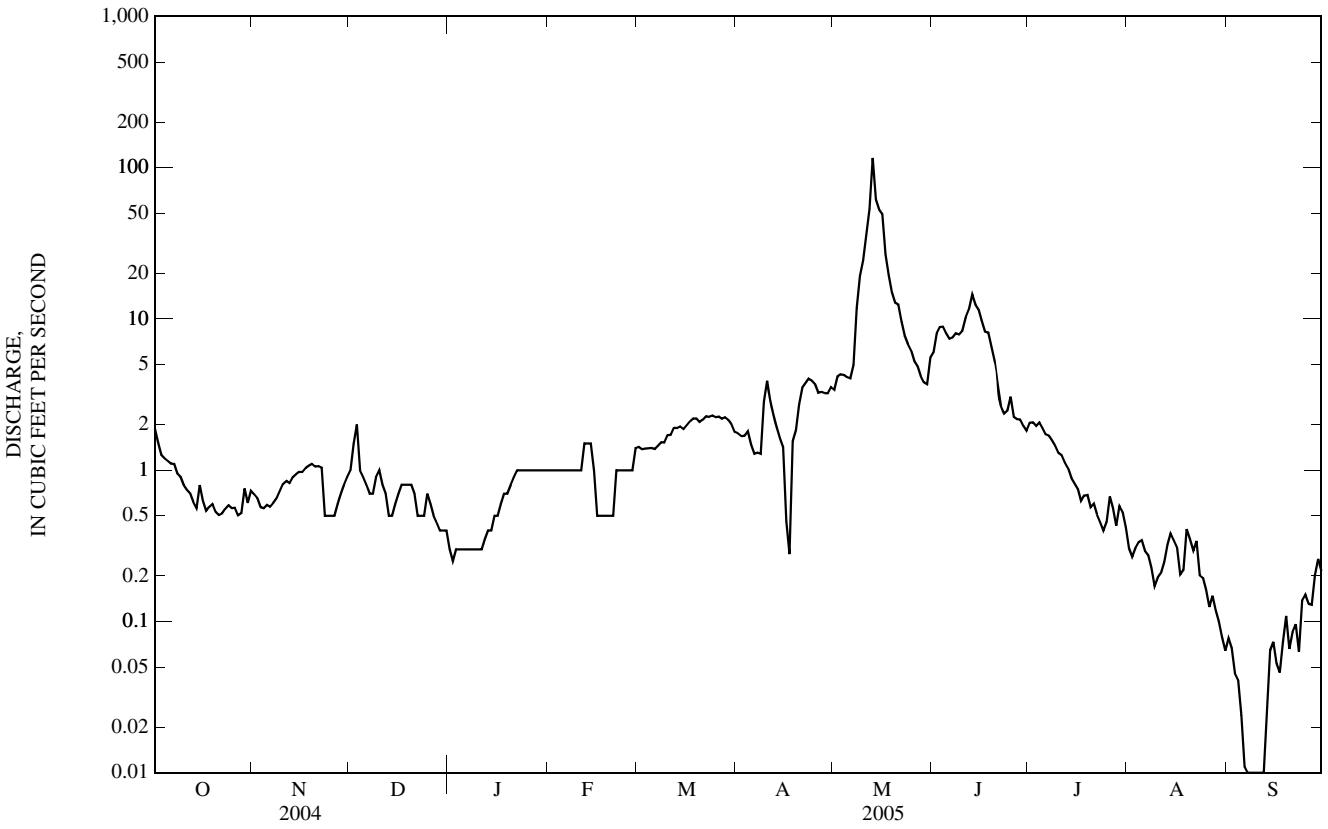
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

MEAN	2.63	2.97	2.99	3.11	5.81	12.4	13.6	12.1	8.08	3.36	1.55	1.49
MAX	8.02	11.7	12.7	10.0	29.0	41.8	40.7	23.9	19.7	11.1	4.60	3.18
(WY)	(1980)	(1980)	(1980)	(1980)	(1996)	(1996)	(1985)	(1984)	(1986)	(1993)	(1993)	(1984)
MIN	0.33	0.37	0.34	0.62	0.96	1.01	1.32	1.31	1.04	0.03	0.01	0.00
(WY)	(2002)	(2002)	(2002)	(2005)	(2005)	(2002)	(2004)	(2004)	(2002)	(2002)	(2002)	(2002)

06295113 ROSEBUD CREEK AT RESERVATION BOUNDARY, NEAR KIRBY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	623.28		1,088.46			
ANNUAL MEAN	1.70		2.98		5.83	
HIGHEST ANNUAL MEAN					11.7	1996
LOWEST ANNUAL MEAN					0.77	2002
HIGHEST DAILY MEAN	8.0	Feb 21	116	May 13	170	Mar 13, 1996
LOWEST DAILY MEAN	0.00	Sep 11	0.00	Sep 8	0.00	Jul 29, 1984
ANNUAL SEVEN-DAY MINIMUM	0.05	Jul 24	0.00	Sep 6	0.00	Sep 26, 2001
MAXIMUM PEAK FLOW			a152	May 13	b219	Mar 17, 1996
MAXIMUM PEAK STAGE			6.52	May 13	c8.28	Mar 13, 1996
INSTANTANEOUS LOW FLOW			0.00	Sep 5	0.00	Sep 6, 1989
ANNUAL RUNOFF (AC-FT)	1,240		2,160		4,230	
10 PERCENT EXCEEDS	4.6		6.1		14	
50 PERCENT EXCEEDS	1.1		1.0		3.1	
90 PERCENT EXCEEDS	0.29		0.20		0.68	

a--From indirect measurement of culvert flow.
b--Gage height, 6.30 ft.
c--Backwater from ice.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980-84, July 2003 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1982 to September 1983, April 2005 to October 2005 (seasonal record).

REMARKS.--Missing daily specific conductance values for Aug. 1 to Sept. 23 due to no flow or the water level was below the probe. The daily specific conductance record is rated good to excellent except for the period Apr. 11 to June 9, which is rated fair and the period Oct. 14-19, 2005, which is rated poor. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,200 microsiemens per centimeter (µS/cm) at 25.0 °C, May 6 and 7, 2005; minimum daily, 569 µS/cm at 25.0 °C, Sept. 26, 2005.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,200 microsiemens per centimeter (µS/cm) at 25.0 °C, May 6 and 7; minimum daily, 569 µS/cm at 25.0 °C, Sept. 26.

06295113 ROSEBUD CREEK AT RESERVATION BOUNDARY, NEAR KIRBY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
14...	0945	.51	666	7.3	72	8.1	1,060	15.0	8.5	570	79.9	91.1	11.2
NOV													
05...	0815	.59	*	*	*	8.3	1,020	3.0	3.0	550	80.2	83.8	9.86
DEC													
03...	0830	E2.0	664	11.8	94	7.9	1,170	5.0	0.0	600	86.9	93.8	9.49
FEB													
08...	0950	E1.0	666	11.3	89	8.0	1,040	-5.0	0.0	550	79.4	85.6	8.29
MAR													
08...	0930	1.5	669	9.8	85	8.0	997	7.0	3.5	530	76.7	83.2	7.89
APR													
05...	0930	1.1	668	7.2	73	8.1	1,070	15.0	10.0	540	75.8	84.3	8.44
MAY													
16...	0945	51	656	7.6	88	8.1	894	24.0	15.0	450	71.3	66.8	10.8
JUN													
09...	1145	8.1	662	7.9	89	8.3	1,010	17.0	14.0	520	72.2	81.9	7.54
JUL													
26...	1000	.81	673	5.3	64	8.1	1,010	16.0	18.0	480	56.3	81.8	8.42
AUG													
24...	0920	.21	663	5.7	66	7.9	1,080	14.5	15.5	540	66.5	90.2	10.9
SEP													
07...	0945	.02	670	7.3	79	8.1	1,110	20.0	13.0	560	67.2	94.5	11.2

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
OCT											
14...	.9	49.2	15	546	4.65	.9	12.7	93.9	671	.91	.92
NOV											
05...	.9	46.0	15	523	4.65	.9	17.0	103	660	.90	1.05
DEC											
03...	.9	52.6	16	565	4.85	.9	19.3	138	745	1.01	E4.02
FEB											
08...	.8	43.2	14	492	4.06	.8	16.3	137	670	.91	E1.81
MAR											
08...	.8	42.7	15	467	3.71	.7	16.1	136	647	.88	2.62
APR											
05...	.9	45.9	15	490	4.01	.8	16.2	138	667	.91	1.98
MAY											
16...	.4	21.8	9	285	2.57	.5	16.9	199	561	.76	77.2
JUN											
09...	.6	30.2	11	407	3.35	.7	9.31	185	635	.86	13.9
JUL											
26...	.9	47.3	17	471	3.45	.9	14.4	129	624	.85	1.37
AUG											
24...	1	52.6	17	508	3.87	.9	11.9	134	676	.92	.38
SEP											
07...	1	52.5	17	490	4.66	.9	8.74	137	677	.92	.04

*--Equipment problems.
E--Estimated.

06295113 ROSEBUD CREEK AT RESERVATION BOUNDARY, NEAR KIRBY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT									
14...	--	<.016	E.001	.40	.015	.041	87	53	.07
NOV									
05...	--	<.016	E.001	.35	.016	.040	53	22	.04
DEC									
03...	--	<.016	E.001	.29	.010	.029	67	30	E.16
FEB									
08...	--	.018	.002	.27	E.004	.029	68	60	E.16
MAR									
08...	E.009	<.016	E.001	.30	.009	.030	88	25	.10
APR									
05...	E.006	<.016	E.001	.50	E.005	.063	71	74	.22
MAY									
16...	--	--	--	--	--	--	96	113	16
JUN									
09...	E.008	E.010	<.002	.48	.007	.034	67	37	.81
JUL									
26...	--	--	--	--	--	--	77	44	.10
AUG									
24...	--	--	--	--	--	--	82	76	.04
SEP									
07...	E.005	<.016	<.002	.54	.026	.072	42	38	.00

Date	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)
MAY													
16...	2	865	1.4	E2	120	132	<.06	.09	--	--	--	--	--
JUN													
09...	6	45	1.3	E1	100	119	<.06	<.06	E.03	<.04	<.8	E.5	4.7
JUL													
26...	5	94	3.3	2	87	89	<.06	<.06	--	--	--	--	--
AUG													
24...	E1	190	2.3	2.4	98	105	<.06	<.06	--	--	--	--	--
SEP													
07...	<1	81	2.0	2.1	94	99	<.06	<.06	<.04	E.02	.04	.17	.9

Date	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
MAY													
16...	--	23	2,340	--	--	78.9	167	--	--	.9	1.1	--	--
JUN													
09...	4.3	28	240	.56	.09	20.0	28	4.70	3.22	E.3	.8	5.5	2
JUL													
26...	--	20	250	--	--	33.1	40	--	--	.5	.6	--	--
AUG													
24...	--	26	350	--	--	40.4	68	--	--	E.2	<.4	--	--
SEP													
07...	1.4	15	260	E.07	.15	17.8	45	1.44	3.23	E.05	.18	1.7	2

E--Estimated.

06295113 ROSEBUD CREEK AT RESERVATION BOUNDARY, NEAR KIRBY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON APRIL 2005 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		APRIL			MAY			JUNE			JULY	
1	---	---	---	1,170	1,150	1,160	1,040	1,020	1,030	980	958	972
2	---	---	---	1,170	1,150	1,160	1,030	1,020	1,020	981	955	968
3	---	---	---	1,180	1,160	1,170	---	---	---	980	964	972
4	---	---	---	1,180	1,160	1,180	1,040	1,020	1,030	983	956	972
5	---	---	---	1,190	1,170	1,180	1,040	1,020	1,030	979	955	967
6	---	---	---	1,200	1,180	1,190	1,090	1,040	1,070	978	952	969
7	---	---	---	1,200	1,080	1,170	1,080	1,040	1,060	983	959	972
8	---	---	---	1,130	1,040	1,080	1,050	1,030	1,040	983	956	974
9	---	---	---	1,140	1,060	1,110	1,060	1,030	1,050	982	963	974
10	---	---	---	1,100	990	1,070	1,050	1,030	1,040	976	962	971
11	---	---	#1,040	990	859	900	1,050	992	1,030	973	957	968
12	1,090	1,050	1,080	989	900	972	994	898	962	975	962	971
13	1,110	1,090	1,100	904	843	866	991	844	922	977	965	973
14	1,120	1,100	1,110	897	849	873	1,020	991	1,010	983	972	977
15	1,120	1,110	1,110	926	884	912	1,030	968	1,000	985	973	980
16	1,120	1,110	1,110	928	850	910	970	936	956	985	973	980
17	1,120	1,110	1,120	950	928	941	993	964	985	985	975	981
18	1,130	1,120	1,130	963	945	955	1,020	993	1,010	992	975	983
19	1,130	1,100	1,120	978	962	971	1,020	995	1,010	998	985	993
20	1,100	1,040	1,080	981	967	976	1,020	992	1,010	1,020	994	1,010
21	1,050	1,030	1,040	974	956	968	1,020	984	1,000	1,010	992	999
22	1,050	1,020	1,040	969	959	964	1,020	983	1,000	1,020	998	1,010
23	1,090	1,030	1,070	---	---	#990	1,010	982	996	1,020	999	1,010
24	1,120	1,090	1,110	1,000	992	998	1,010	954	989	---	---	#1,010
25	1,130	1,100	1,120	1,010	996	1,000	969	917	949	---	---	#1,030
26	1,140	1,100	1,130	1,010	997	1,010	968	919	941	1,040	1,030	1,040
27	1,150	1,130	1,140	1,020	1,000	1,010	948	920	931	---	---	1,030
28	1,150	1,110	1,140	1,030	1,010	1,020	975	941	952	---	---	1,030
29	1,170	1,140	1,160	1,050	1,020	1,040	975	951	963	1,040	1,030	1,040
30	1,170	1,150	1,160	1,050	1,030	1,040	973	956	965	1,040	1,030	1,040
31	---	---	---	1,040	1,030	1,040	---	---	---	---	---	#1,030
MONTH	1,170	1,020	1,110	1,200	843	1,030	1,090	844	998	1,040	952	993
		AUGUST			SEPTEMBER			OCTOBER				
1							797	788	794			
2							803	788	798			
3							801	783	794			
4							851	794	833			
5							839	825	831			
6							833	820	828			
7							853	829	838			
8							880	853	864			
9							913	868	888			
10							990	913	953			
11							1,030	990	1,010			
12							1,040	1,030	1,040			
13							1,060	1,040	1,050			
14							1,070	1,060	1,070			
15							1,080	1,070	1,080			
16							1,100	1,080	1,090			
17							1,120	1,090	1,110			
18							1,160	1,110	1,140			
19							1,170	1,160	1,170			
20							1,170	1,160	1,160			
21							1,160	1,150	1,160			
22							1,160	1,150	1,160			
23							1,160	1,140	1,150			
24			*1080	---	---	#640	1,160	1,140	1,150			
25			---	681	659	673	1,150	1,130	1,140			
26				706	569	638	1,150	1,130	1,140			
27				703	690	697	1,140	1,130	1,140			
28				720	698	707	1,140	1,130	1,140			
29				840	709	764	1,140	1,130	1,140			
30				793	785	791	1,150	1,130	1,140			
31				---	---	---	1,150	1,140	1,150			
MONTH				840	569	701	1,170	783	1,030			

#--Value computed from partial day with greater than 50 percent of day recorded.
*--Instantaneous measurement of specific conductance from water-quality sample.

06295250 ROSEBUD CREEK NEAR COLSTRIP, MT

LOCATION.--Lat 45°46'03", long 106°34'10" (NAD 27), in $SE^1/_4$ $SW^1/_4$ $NE^1/_4$ sec.8, T.1 S., R.42 E., Rosebud County, Hydrologic Unit 10100003, on left bank 100 ft downstream from bridge on FAS Route 315, 1.5 mi downstream from Lee Coulee, 8.4 mi southeast of Colstrip, and at river mile 85.6.

DRAINAGE AREA.--799 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 800 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e1.0	e5.0	4.3	5.5	8.9	16	12	2.1	0.02
2	0.00	0.00	0.00	e1.5	e5.0	4.2	4.5	8.2	17	12	1.7	0.02
3	0.00	0.00	0.00	e1.5	e5.0	4.3	4.1	e7.0	17	13	1.4	0.02
4	0.00	0.00	0.00	e1.5	e5.0	4.4	3.9	e7.0	15	15	1.1	0.02
5	0.00	0.00	0.00	e1.5	e5.0	4.9	3.8	e7.0	15	14	1.3	0.02
6	0.00	0.00	0.00	e1.5	e4.5	4.8	3.7	e6.0	13	13	1.0	0.02
7	0.00	0.00	0.00	e1.5	e4.0	4.7	3.5	e8.0	12	13	0.83	0.01
8	0.00	0.00	0.00	e1.5	e4.0	5.0	3.2	e20	13	12	0.67	0.00
9	0.00	0.00	0.00	e1.5	e3.5	5.6	4.6	e40	13	12	0.70	0.00
10	0.00	0.00	0.00	e1.5	e3.5	5.2	7.3	e35	13	12	0.62	0.00
11	0.00	0.00	0.00	e1.5	e3.5	4.7	12	e20	13	12	0.54	0.00
12	0.00	0.00	0.00	e1.5	e4.0	4.2	15	e30	13	10	0.60	0.00
13	0.00	0.00	0.00	e1.0	e4.0	4.1	11	e40	13	10	0.62	0.00
14	0.00	0.00	0.00	e1.0	e3.5	4.2	9.6	e50	17	10	0.64	0.00
15	0.00	0.00	0.00	e1.5	e3.0	4.2	8.9	e50	15	9.3	0.65	0.00
16	0.00	0.00	0.00	e1.5	e3.5	4.0	8.5	e30	15	8.7	0.53	0.00
17	0.00	0.00	0.00	e2.0	e4.0	3.7	7.7	e30	20	8.1	0.48	0.00
18	0.00	0.00	0.00	e2.5	e4.0	4.4	7.4	e20	24	7.6	0.48	0.00
19	0.00	0.00	0.01	e3.0	e4.0	4.6	7.2	e20	23	7.1	0.49	0.01
20	0.00	0.00	0.01	e3.5	e4.0	4.1	8.5	e20	20	7.0	0.44	0.01
21	0.00	0.00	0.01	e3.0	e4.0	3.8	10	e20	19	6.8	0.33	0.01
22	0.00	0.00	0.01	e2.5	4.2	4.1	14	e30	17	6.0	0.28	0.01
23	0.00	0.00	0.04	e3.5	4.2	4.3	15	e20	16	5.1	0.23	0.02
24	0.00	0.00	0.04	e4.0	4.3	5.3	13	e20	21	4.1	0.23	0.02
25	0.00	0.00	1.1	e5.0	4.2	5.1	12	e20	15	4.2	0.22	0.02
26	0.00	0.00	3.0	e5.0	4.4	4.6	11	e20	13	4.6	0.17	0.01
27	0.00	0.00	3.0	e5.0	4.5	4.3	10	e15	14	4.5	0.12	0.02
28	0.00	0.00	2.9	e5.0	4.5	4.8	9.7	e10	12	4.7	0.10	0.03
29	0.00	0.00	2.8	e5.0	---	5.5	9.7	e10	18	4.5	0.08	0.05
30	0.00	0.00	e2.0	e5.0	---	5.2	9.5	e10	12	3.4	0.05	0.03
31	0.00	---	e1.5	e5.0	---	5.4	---	e10	---	3.0	0.03	---
TOTAL	0.00	0.00	16.42	81.5	116.3	142.0	253.8	642.1	474	268.7	18.73	0.37
MEAN	0.00	0.00	0.53	2.63	4.15	4.58	8.46	20.7	15.8	8.67	0.60	0.01
MAX	0.00	0.00	3.0	5.0	5.0	5.6	15	50	24	15	2.1	0.05
MIN	0.00	0.00	0.00	1.0	3.0	3.7	3.2	6.0	12	3.0	0.03	0.00
AC-FT	0.00	0.00	33	162	231	282	503	1,270	940	533	37	0.7

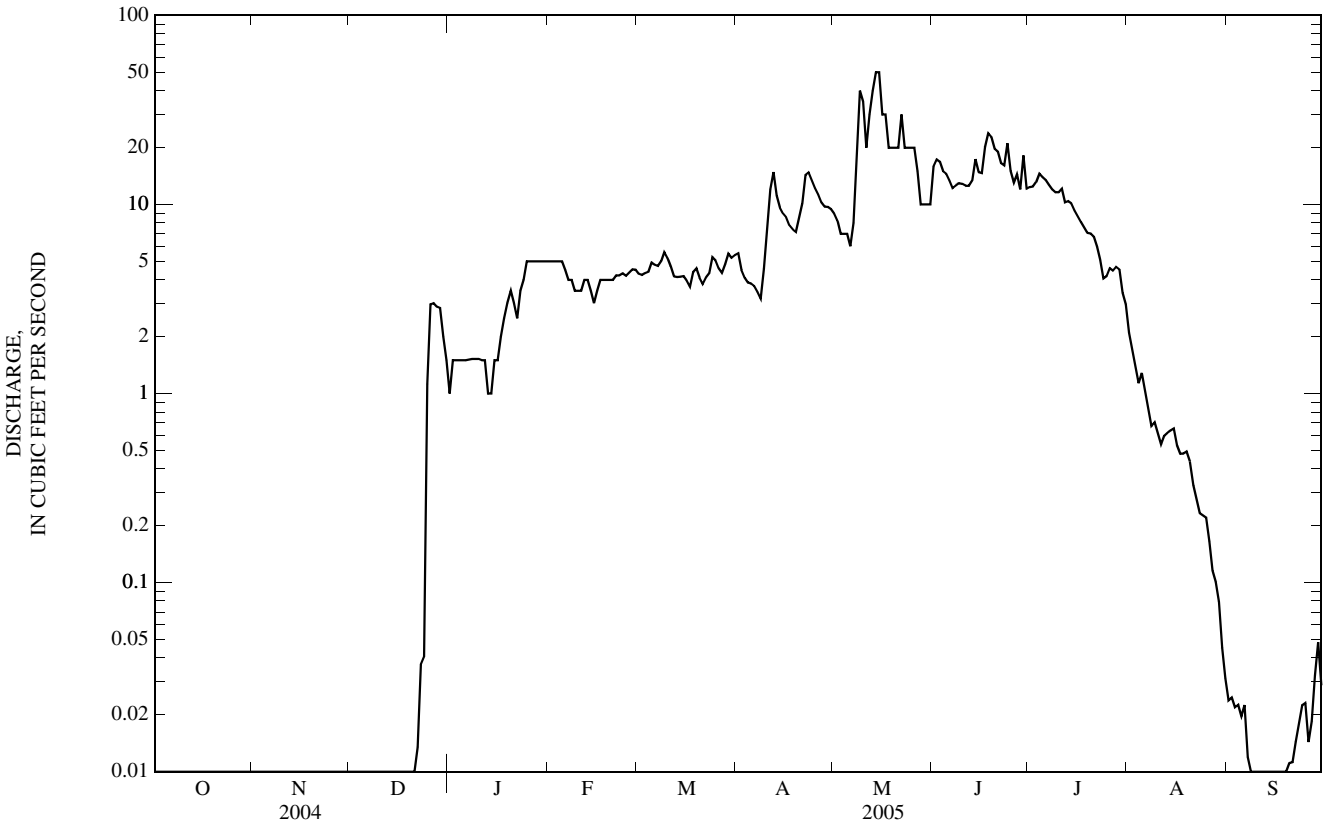
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2005, BY WATER YEAR (WY)

MEAN	8.71	11.2	11.4	13.8	25.5	44.7	37.8	48.1	33.7	17.1	8.35	6.14
MAX	47.5	46.2	46.0	70.3	105	164	185	306	212	104	57.1	55.8
(WY)	(1979)	(1979)	(1979)	(1975)	(1996)	(1994)	(1979)	(1975)	(1978)	(1975)	(1975)	(1978)
MIN	0.00	0.00	0.00	0.00	3.05	4.58	6.65	2.19	0.60	0.00	0.00	0.00
(WY)	(1991)	(2003)	(2003)	(2003)	(2003)	(2005)	(2004)	(2004)	(2004)	(2002)	(2001)	(1983)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975 - 2005	
ANNUAL TOTAL	1,264.20		2,013.92			
ANNUAL MEAN	3.45		5.52		22.2*	
HIGHEST ANNUAL MEAN					95.9	1975
LOWEST ANNUAL MEAN					2.96	2002
HIGHEST DAILY MEAN	80	Feb 20	50	May 14	668	Mar 3, 1994
LOWEST DAILY MEAN	0.00	Jul 17	0.00	Oct 1	a0.00	Aug 31, 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 17	0.00	Oct 1	0.00	Aug 31, 1981
MAXIMUM PEAK FLOW			Unknown		b754	Mar 2, 1994
MAXIMUM PEAK STAGE			Unknown		9.03	May 21, 1978
ANNUAL RUNOFF (AC-FT)	2,510		3,990		16,060	
10 PERCENT EXCEEDS	8.0		15		48	
50 PERCENT EXCEEDS	0.17		3.5		11	
90 PERCENT EXCEEDS	0.00		0.00		0.01	

*--Median of yearly mean discharge, 14.1 ft^3/s, 10,200 acre-ft/yr.
a--No flow many days most years.
b--Gage height, 8.42 ft.
e--Estimated.

06295250 ROSEBUD CREEK NEAR COLSTRIP, MT—Continued



06296003 ROSEBUD CREEK AT MOUTH, NEAR ROSEBUD, MT

LOCATION.--Lat 46°15'53", long 106°28'30" (NAD 27), in SW$^1/_4$ NW$^1/_4$ NE$^1/_4$ sec.21, T.6 N., R.42 E., Rosebud County, Hydrologic Unit 10100003, on left bank 0.4 mi upstream from bridge on Interstate Highway 94, 0.8 mi upstream from mouth, and 1.6 mi southwest of Rosebud.

DRAINAGE AREA.--1,302 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 2,480 ft (NGVD 29).

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	4.0	0.61	e0.05	0.50	0.22	0.15	0.69	12	24	0.51	0.00
2	0.03	1.8	0.69	e0.05	0.47	0.22	0.13	0.78	14	19	0.16	0.00
3	0.03	1.3	0.71	e0.01	0.46	0.21	0.12	0.77	16	15	0.31	0.00
4	0.05	1.1	0.67	0.00	0.44	0.21	0.16	0.64	22	14	0.45	0.00
5	0.07	0.72	0.72	0.00	0.43	0.22	0.25	0.57	17	13	0.44	0.00
6	0.03	0.48	0.67	0.00	0.35	0.22	0.13	0.56	15	6.4	0.46	0.00
7	0.08	0.39	0.66	e0.05	0.25	0.21	0.12	0.75	17	2.9	0.46	0.00
8	0.09	0.41	0.64	e0.05	0.20	0.24	0.13	41	50	1.9	0.54	0.00
9	0.07	0.40	0.64	e0.05	0.18	0.22	0.57	262	159	1.9	0.44	0.00
10	0.06	0.36	0.57	e0.01	0.26	0.20	19	200	150	2.4	0.08	e0.00
11	0.05	0.28	0.50	0.00	0.32	0.16	26	63	40	2.1	0.14	e0.00
12	0.12	0.28	0.47	0.00	0.34	0.17	8.6	83	42	0.70	0.33	e0.00
13	0.13	0.28	0.44	0.00	0.36	0.16	1.1	138	46	0.40	0.45	0.00
14	0.14	0.30	0.24	e0.01	0.36	0.17	1.1	286	41	e0.20	0.37	0.00
15	0.18	0.43	0.17	0.01	0.32	0.19	0.85	297	25	0.19	0.35	0.00
16	0.24	0.53	0.16	e0.05	0.25	0.19	0.78	89	19	0.81	0.32	0.00
17	0.27	0.75	0.16	e0.10	0.27	0.22	0.69	55	e10	0.35	0.29	0.00
18	0.27	0.70	0.17	e1.0	0.26	0.27	0.57	49	e8.0	0.04	0.31	0.00
19	0.32	0.73	0.19	e5.0	0.27	0.27	0.68	50	e7.0	0.11	0.36	0.00
20	0.23	0.72	e0.15	e10	0.24	0.27	0.84	58	e5.0	0.28	0.25	0.00
21	0.33	0.71	e0.10	e20	0.27	0.33	40	53	e4.0	0.72	0.21	0.00
22	0.22	0.84	e0.05	e10	0.26	0.32	62	80	e3.0	0.20	0.16	0.00
23	0.12	0.74	e0.01	16	0.25	0.35	28	50	8.7	0.34	0.16	0.00
24	0.17	0.79	e0.05	7.0	0.26	0.42	6.4	40	5.0	0.62	0.15	0.00
25	0.10	0.79	0.14	2.7	0.29	0.44	1.1	33	e3.0	0.27	0.09	0.00
26	0.10	0.90	0.12	1.4	0.29	0.28	0.50	28	16	0.51	0.12	0.00
27	0.14	0.89	e0.10	0.85	0.27	0.11	0.31	24	35	0.66	0.00	0.00
28	0.16	0.92	0.08	0.82	0.25	0.13	0.30	15	38	0.35	0.00	0.00
29	0.45	0.85	0.04	0.91	---	0.16	0.48	13	147	0.37	0.00	0.00
30	23	0.72	e0.15	0.76	---	0.13	0.63	11	69	0.50	0.00	0.00
31	12	---	e0.10	0.54	---	0.18	---	11	---	0.64	0.00	---
TOTAL	39.26	24.11	10.17	77.42	8.67	7.09	201.69	2,033.76	1,043.7	110.86	7.91	0.00
MEAN	1.27	0.80	0.33	2.50	0.31	0.23	6.72	65.6	34.8	3.58	0.26	0.00
MAX	23	4.0	0.72	20	0.50	0.44	62	297	159	24	0.54	0.00
MIN	0.01	0.28	0.01	0.00	0.18	0.11	0.12	0.56	3.0	0.04	0.00	0.00
AC-FT	78	48	20	154	17	14	400	4,030	2,070	220	16	0.00

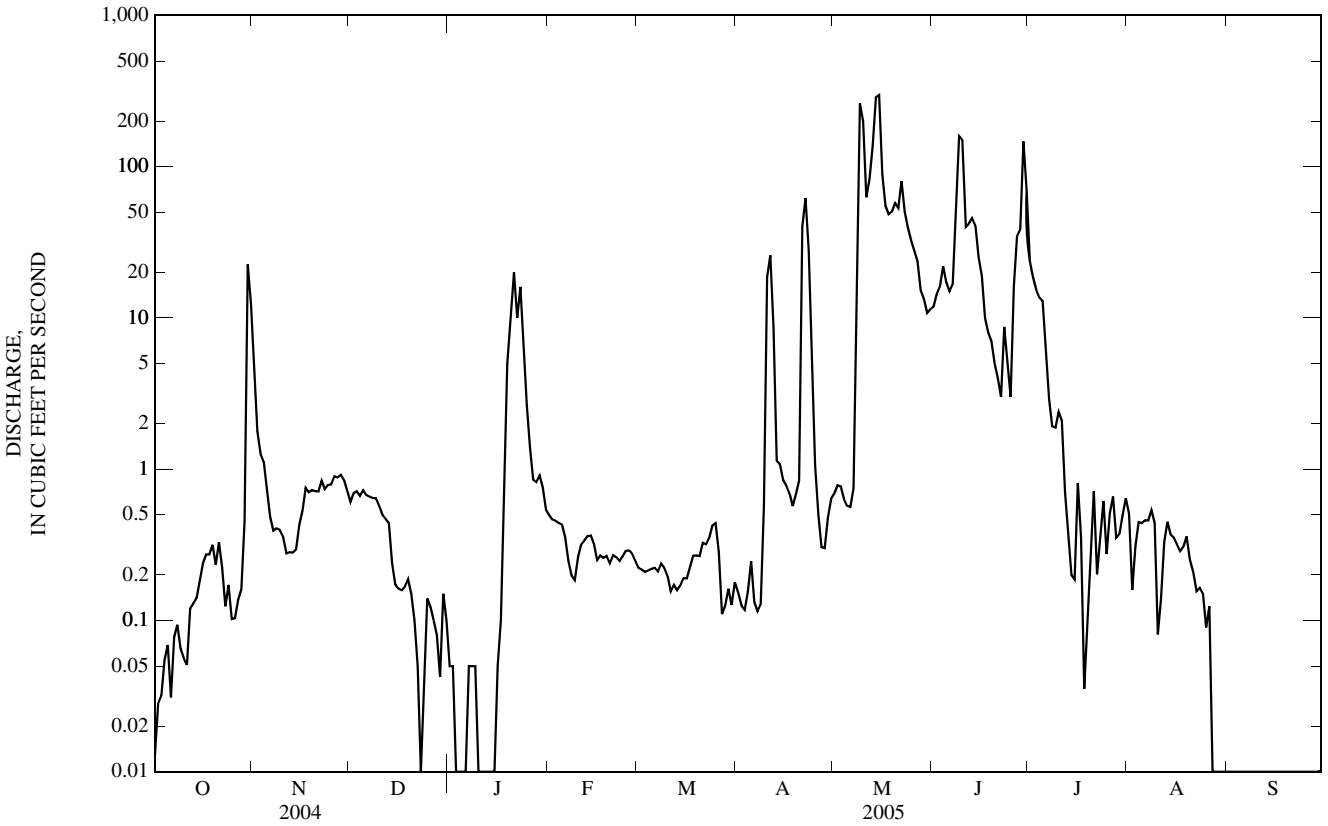
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2005, BY WATER YEAR (WY)

MEAN	7.65	8.55	9.19	17.5	36.0	68.3	39.9	57.7	38.7	16.5	7.43	7.72
MAX	45.7	47.6	47.8	159	187	428	180	478	286	133	47.8	77.3
(WY)	(1979)	(1979)	(1979)	(1999)	(1997)	(1994)	(1979)	(1978)	(1978)	(1993)	(1975)	(1978)
MIN	0.00	0.01	0.03	0.02	0.07	0.04	0.03	0.08	0.48	0.00	0.00	0.00
(WY)	(2002)	(2002)	(2002)	(2004)	(2002)	(2002)	(2004)	(2004)	(1988)	(2002)	(2003)	(1990)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975 - 2005	
ANNUAL TOTAL	1,555.34		3,564.64			
ANNUAL MEAN	4.25		9.77		26.2*	
HIGHEST ANNUAL MEAN					113	1978
LOWEST ANNUAL MEAN					1.00	2002
HIGHEST DAILY MEAN	250	Feb 22	297	May 15	2,800	Mar 4, 1994
LOWEST DAILY MEAN	0.00	Jan 6	0.00	Jan 4	a0.00	Aug 28, 1984
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 15	0.00	Aug 27	0.00	Aug 5, 1988
MAXIMUM PEAK FLOW			468	May 14	3,700	Mar 4, 1994
MAXIMUM PEAK STAGE			3.96	May 14	7.70	Mar 4, 1994
ANNUAL RUNOFF (AC-FT)	3,090		7,070		19,000	
10 PERCENT EXCEEDS	2.3		24		58	
50 PERCENT EXCEEDS	0.09		0.34		6.6	
90 PERCENT EXCEEDS	0.00		0.00		0.07	

*--Median of yearly mean discharge 14.8 ft^3/s, 10,700 acre-ft/yr.
a--No flow many days in 1984, 1990-92, 2000-2005.
e--Estimated.

06296003 ROSEBUD CREEK AT MOUTH, NEAR ROSEBUD, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-86, 1988-93, May 1999 June 2003, May 2005 to August 2005.

REMARKS.--Unable to collect a sample in September due to no flow. Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAY													
10...	0830	226	694	9.5	99	8.3	427	10.0	13.0	35	8.77	3.18	4.24
18...	1340	48	689	8.8	105	8.4	2,100	22.0	18.5	870	102	149	15.4
JUN													
09...	1145	155	693	8.6	92	8.2	597	20.0	14.0	68	15.3	7.11	4.85
JUL													
14...	1145	E.20	--	--	--	8.5	2,770	28.0	28.0	790	79.5	143	12.5
AUG													
03...	1205	.30	701	7.6	95	8.5	3,500	20.0	21.5	940	73.8	183	14.4

E--Estimated.

06296003 ROSEBUD CREEK AT MOUTH, NEAR ROSEBUD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
MAY													
10...	6	76.1	80	118	1.27	.4	8.51	70.9	244	.33	149	--	--
18...	3	203	33	407	12.6	.6	16.5	802	1,550	2.10	201	E.006	<.016
JUN													
09...	5	97.7	74	135	2.03	.4	6.68	154	369	.50	154	--	--
JUL													
14...	6	399	52	434	16.5	.7	4.47	1,120	2,040	2.77	E1.10	--	--
AUG													
03...	8	565	56	450	23.5	.8	.86	1,520	2,650	3.60	2.14	--	--

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by anal ysis, mg/L (62855)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)
MAY													
10...	--	--	--	--	49	57,400	.8	11	23	906	<.06	6.70	--
18...	<.002	<.006	.172	1.11	E2	2,620	1.4	E2	130	150	<.06	.22	<.04
JUN													
09...	--	--	--	--	12	59,800	.8	10	37	1,440	<.06	11.4	--
JUL													
14...	--	--	--	--	3	454	1.5	E1	147	145	<.12	<.12	--
AUG													
03...	--	--	--	--	6	228	1.3	<1	101	115	<.12	<.12	<.08

Date	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)
MAY													
10...	--	--	--	--	--	37	61,300	--	--	2.6	1,030	--	--
18...	.10	1.5	4.0	9.1	15.8	1,630	3,410	<.08	4.02	12.7	194	4.45	10.3
JUN													
09...	--	--	--	--	--	10	70,100	--	--	.8	1,870	--	--
JUL													
14...	--	--	--	--	--	<18	510	--	--	15.4	50	--	--
AUG													
03...	<.08	<.8	E.5	4.4	4.7	<18	260	E.13	.38	.9	44	4.46	5.48

E--Estimated.

06296003 ROSEBUD CREEK AT MOUTH, NEAR ROSEBUD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
MAY							
10...	1.1	2.0	--	--	99	6,620	4,040
18...	.7	1.4	3.5	18	99	253	33
JUN							
09...	1.8	2.7	--	--	99	11,900	4,970
JUL							
14...	.9	1.0	--	--	99	89	E.05
AUG							
03...	1.6	1.9	8.2	6	76	81	.07

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY

LOCATION.--Lat 44°54'01", long 107°01'13" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.20, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank at county bridge, 0.4 mi downstream from South Dry Creek, and 0.9 mi east of Monarch.

DRAINAGE AREA.--478 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 2004 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Numerous diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	82	e64	e52	e62	46	52	112	748	438	92	73
2	70	68	e64	e54	e56	47	49	112	779	406	97	69
3	70	73	e70	e64	e60	48	59	110	704	383	95	64
4	66	84	e74	e62	e60	46	65	123	698	362	111	64
5	65	81	e72	e58	e62	46	65	159	686	341	97	55
6	63	81	e70	e62	e50	47	63	272	746	315	91	54
7	61	77	e68	e66	e52	46	63	590	840	287	89	53
8	56	76	e68	e70	e56	54	84	1,450	842	256	78	53
9	60	78	e68	e72	e60	52	141	747	755	229	61	52
10	59	82	e66	e72	e62	56	118	912	697	219	72	48
11	59	78	e72	e72	e58	54	90	2,660	650	227	163	49
12	62	70	e72	e70	e58	52	79	1,450	644	212	124	57
13	67	59	e60	e60	e60	57	75	877	822	194	125	69
14	73	62	e66	e54	e58	49	112	797	721	178	129	80
15	93	58	e70	e50	e46	47	112	803	705	169	122	76
16	96	55	e70	e54	e54	55	88	939	750	157	109	73
17	86	53	e70	e74	e54	58	99	1,210	850	146	105	71
18	87	59	e68	e70	e56	55	e180	1,190	934	141	123	73
19	87	58	e66	e70	e56	53	170	1,170	872	128	137	73
20	78	57	e66	e70	e56	52	157	1,410	815	116	132	73
21	82	e44	e66	e70	e54	54	155	1,840	765	114	102	68
22	97	e50	e64	e68	e48	54	146	1,710	710	103	100	69
23	89	e60	e50	e68	e49	52	153	1,620	669	103	97	71
24	84	e66	e66	e69	e48	53	183	1,610	658	102	97	76
25	81	e68	e62	e62	e49	50	250	1,300	598	100	96	87
26	70	e72	e60	e62	e49	49	223	1,080	555	134	92	82
27	80	e66	e60	e62	e46	49	188	927	570	140	90	77
28	81	e60	e58	e64	47	53	148	892	496	122	81	75
29	92	e46	e58	e62	---	58	130	891	517	110	75	76
30	93	e60	e56	e62	---	58	117	823	525	99	70	74
31	85	---	e54	e58	---	54	---	773	---	95	70	---
TOTAL	2,364	1,983	2,018	1,983	1,526	1,604	3,614	30,559	21,321	6,126	3,122	2,034
MEAN	76.3	66.1	65.1	64.0	54.5	51.7	120	986	711	198	101	67.8
MAX	97	84	74	74	62	58	250	2,660	934	438	163	87
MIN	56	44	50	50	46	46	49	110	496	95	61	48
AC-FT	4,690	3,930	4,000	3,930	3,030	3,180	7,170	60,610	42,290	12,150	6,190	4,030

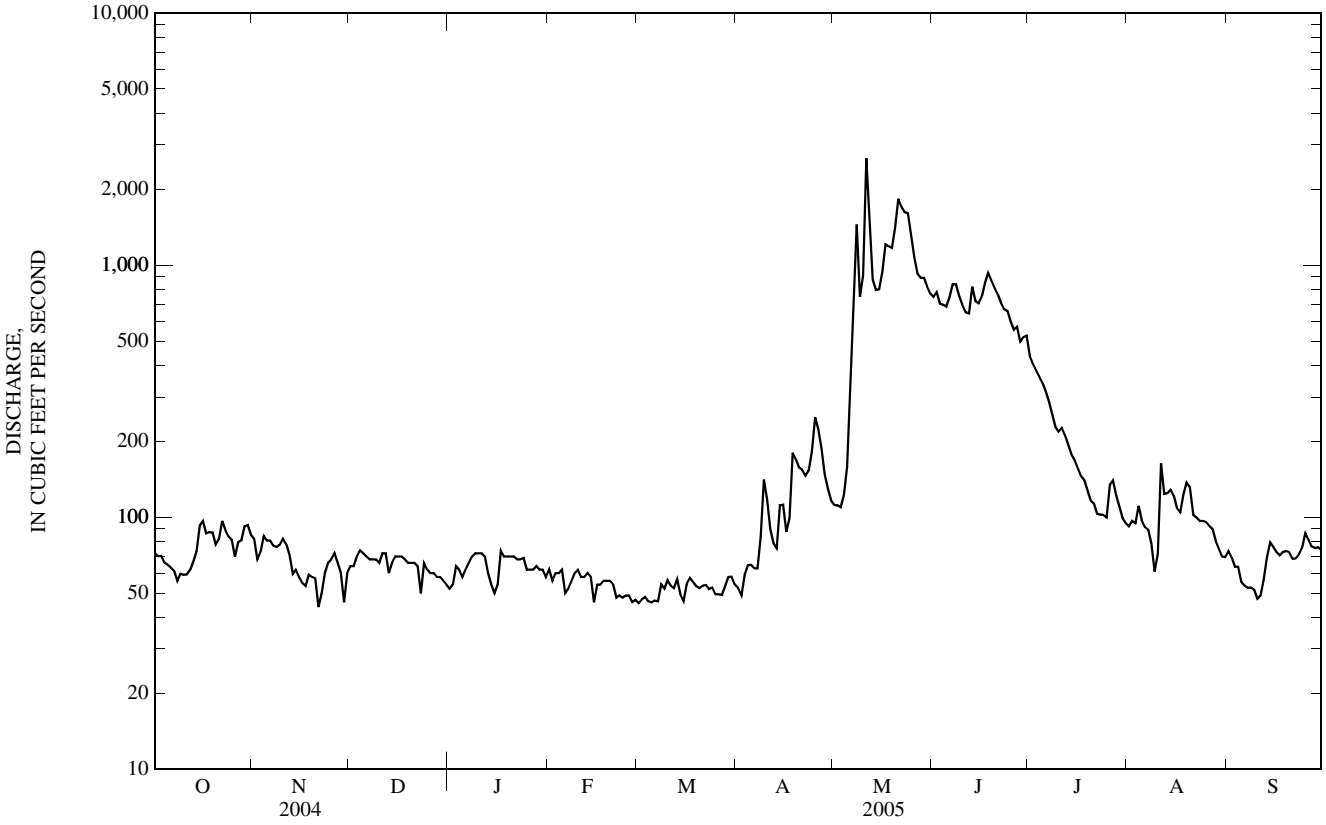
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)*

MEAN	76.3	66.1	65.1	64.0	54.5	51.7	120	580	434	151	70.4	59.1
MAX	76.3	66.1	65.1	64.0	54.5	51.7	120	986	711	198	101	67.8
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	76.3	66.1	65.1	64.0	54.5	51.7	120	174	157	104	40.1	50.4
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2004)

06299980 TONGUE RIVER AT MONARCH, WY—Continued

SUMMARY STATISTICS	FOR 2005 WATER YEAR		WATER YEARS 2004 - 2005*	
ANNUAL TOTAL	78,254			
ANNUAL MEAN	214		214	
HIGHEST ANNUAL MEAN			214	2005
LOWEST ANNUAL MEAN			214	2005
HIGHEST DAILY MEAN	2,660	May 11	2,660	May 11, 2005
LOWEST DAILY MEAN	44	Nov 21	23	Sep 1, 2004
ANNUAL SEVEN-DAY MINIMUM	47	Feb 27	31	Aug 29, 2004
MAXIMUM PEAK FLOW	3,350	May 11	3,350	May 11, 2005
MAXIMUM PEAK STAGE	7.91	May 11	7.91	May 11, 2005
ANNUAL RUNOFF (AC-FT)	155,200		155,300	

*--For period of operation.
e--Estimated.



06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-80, 1982-83, 2004 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2004 to current year (seasonal records).

INSTRUMENTATION.--Specific conductance probe installed in May 2004.

REMARKS.--The daily specific conductance record is rated good to excellent except for the period May 12-17, which is rated poor. Missing data on Apr. 18 due to equipment malfunction. Low-level mercury analysis on July 14; result is reported in nanograms per liter.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 582 microsiemens per centimeter (µS/cm) at 25.0°C, Sept. 4, 2004; minimum, 146 µS/cm at 25.0°C, May 24, 2005.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 455 microsiemens per centimeter (µS/cm) at 25.0°C, Sept.12; minimum, 146 µS/cm at 25.0°C, May 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1700	69	673	11.3	116	8.5	432	14.0	11.0	230	51.0	24.1	1.52
NOV													
04...	1545	88	--	--	--	8.4	400	11.0	6.0	210	50.1	20.4	1.37
DEC													
02...	1630	E64	667	13.4	105	8.2	430	3.0	0.0	210	50.8	21.0	1.32
FEB													
09...	1345	E60	670	15.0	117	8.0	495	13.0	0.0	250	57.7	26.0	1.71
MAR													
09...	1105	52	667	11.6	107	8.3	430	21.0	6.0	220	49.7	22.2	1.53
APR													
06...	1030	60	676	10.4	102	8.3	406	17.0	9.0	210	47.5	21.1	1.36
20...	0815	161	670	9.7	86	7.9	286	2.5	5.0	140	35.1	12.5	1.75
MAY													
03...	1500	128	670	11.5	122	8.4	379	19.0	12.0	190	45.1	18.4	1.39
12...	1600	1,150	668	10.1	88	7.8	347	3.0	4.0	150	34.1	16.4	4.20
JUN													
09...	0930	781	667	9.6	96	7.8	200	13.0	9.5	93	24.5	7.71	.85
23...	0830	676	665	7.2	83	7.9	193	26.0	15.5	94	24.7	7.87	.72
JUL													
14...	1515	174	669	8.5	117	8.5	296	29.0	25.0	130	31.3	11.5	.82
AUG													
04...	1220	112	676	9.0	110	8.4	377	27.5	19.0	190	44.2	19.6	1.66
25...	0820	96	671	7.0	80	8.2	414	13.5	15.5	200	46.6	20.9	1.51

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
OCT								
13...	.4	12.9	11	192	1.37	.2	6.64	48.2
NOV								
04...	.3	10.4	10	180	1.33	.2	7.61	43.7
DEC								
02...	.3	10.9	10	191	1.24	.2	8.58	47.6
FEB								
09...	.4	14.1	11	212	1.85	.2	7.36	63.1
MAR								
09...	.4	11.9	11	181	1.54	.2	4.37	52.9
APR								
06...	.3	10.7	10	175	1.34	.2	4.37	44.9
20...	.2	6.07	9	120	1.11	.1	6.15	24.7
MAY								
03...	.3	9.66	10	154	1.35	.2	4.84	39.5
12...	.5	13.4	16	112	2.31	.1	9.54	55.7
JUN								
09...	.2	3.86	8	89	.71	.1	7.42	15.5
23...	.2	3.46	7	90	.60	E.1	7.70	11.9
JUL								
14...	.2	5.05	8	136	.87	.1	4.84	22.2
AUG								
04...	.3	8.82	9	167	1.11	.2	5.28	35.5
25...	.3	11.0	11	182	1.21	.2	6.88	44.3

Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recoverable, ug/L (71900)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT								
13...	262	.36	48.7	--	<.01	83	11	2.0
NOV								
04...	243	.33	57.8	--	--	80	10	2.4
DEC								
02...	256	.35	E44.2	--	<.01	74	10	E1.73
FEB								
09...	300	.41	E48.6	--	<.01	69	20	E3.24
MAR								
09...	253	.34	35.5	--	--	78	5	.70
APR								
06...				--	--	80	4	.65
20...	159	.22	69.2	--	--	92	6	2.6
MAY								
03...	213	.29	73.5	--	--	92	6	2.1
12...	204	.28	634	--	--	97	266	826
JUN								
09...	114	.15	240	--	--	93	48	101
23...	111	.15	202	--	--	90	40	73
JUL								
14...	158	.21	74.2	1.30	--	97	15	7.0
AUG								
04...	217	.29	65.5	--	--	94	19	5.7
25...	242	.33	62.8	--	--	99	22	5.7

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT												
13...	<.010	<.016	<.002	<.006	.008	.10	<2	27	.4	<2	43	45
DEC												
02...	<.010	.026	.002	<.006	.005	.11	<2	28	.2	<2	45	40
FEB												
09...	E.007	.049	.002	<.006	.008	.16	<2	22	.3	<2	43	48
APR												
06...	E.005	<.016	<.002	<.006	.014	.18	E1	36	.4	<2	48	46
MAY												
12...	.044	.222	.004	.035	.256	1.21	5	2,810	.7	2	45	90
AUG												
04...	<.010	<.016	<.002	<.006	.026	.22	<2	141	.5	<2	45	46
25...	E.005	E.008	E.001	<.006	.032	.25	3	228	.5	.60	42	49

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT												
13...	<.06	<.06	38	<.04	<.04	<2	1.0	1.1	15	60	<.08	E.04
DEC												
02...	<.06	<.06	33	<.04	<.04	<2	.7	1.7	E6	60	<.08	E.05
FEB												
09...	<.06	<.06	37	<.04	<.04	E1	1.0	1.7	14	80	.08	.06
APR												
06...	<.06	<.06	31	<.04	<.04	E1	--	1.0	29	90	--	.08
MAY												
12...	<.06	.32	35	<.04	.12	3	1.6	6.9	31	2,450	E.08	5.43
AUG												
04...	<.06	<.06	31	<.04	<.04	E1	1.0	1.3	16	280	.11	.29
25...	E.03	<.06	32	<.04	<.04	E1	1.8	1.0	17	350	.43	.42

Date	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT										
13...	11.6	1.8	3	1.59	1.36	E.3	.6	217	E.6	<2
DEC										
02...	9.5	2.4	5	.23	1.16	E.2	E.3	203	E.6	<2
FEB										
09...	11.6	2.5	5	1.09	.99	.4	.6	253	1.3	E1
APR										
06...	10.0	9.7	13	--	.90	E.3	E.2	237	--	E1
MAY										
12...	9.2	24.5	87	1.79	5.34	.8	1.2	164	1.1	19
AUG										
04...	8.4	5.6	25	2.08	2.02	<.4	E.4	189	3.3	E1
25...	9.0	6.7	30	2.04	2.31	<.4	<.4	195	3.0	3

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	400	385	395	---	---	---	424	417	421	384	363	373
2	409	399	404	---	---	---	432	421	425	394	369	382
3	414	400	409	---	---	---	437	428	434	392	364	378
4	424	413	420	---	---	---	448	408	432	382	363	373
5	428	421	423	---	---	---	408	387	400	378	340	357
6	423	417	420	---	---	---	405	386	396	340	250	302
7	422	415	419	---	---	---	410	395	403	287	178	216
8	439	417	428	---	---	---	451	373	407	329	245	272
9	440	435	438	---	---	---	375	317	346	323	288	298
10	447	436	442	---	---	---	344	307	326	310	253	272
11	446	430	440	---	---	---	378	342	357	298	183	236
12	449	438	445	---	---	---	406	370	389	380	279	334
13	449	435	445	---	---	---	421	399	410	279	248	258
14	443	433	436	---	---	---	419	373	401	264	253	258
15	433	412	421	446	429	439	373	325	333	260	225	240
16	415	399	406	447	434	444	355	329	342	234	210	220
17	410	400	407	440	431	435	371	355	366	218	194	206
18	412	405	409	441	434	438	---	---	---	218	191	207
19	414	402	410	442	433	438	295	253	271	214	184	196
20	409	401	406	441	437	439	309	279	293	197	162	176
21	424	403	413	441	436	439	335	309	322	175	160	165
22	414	380	399	441	437	440	385	335	359	173	152	162
23	385	377	381	449	433	440	402	356	384	171	155	161
24	400	385	395	449	438	445	370	310	353	165	146	156
25	403	395	399	438	430	433	321	256	294	182	164	173
26	429	398	414	446	434	438	293	260	277	199	179	189
27	441	400	424	448	440	444	324	271	299	207	191	196
28	411	400	406	445	438	443	329	307	318	202	189	195
29	422	398	407	438	428	432	357	327	347	202	184	193
30	422	400	409	429	412	422	377	348	362	212	195	201
31	446	422	438	419	407	413	---	---	---	216	207	212
MONTH	449	377	416	---	---	---	---	---	---	394	146	244
	JUNE			JULY			AUGUST			SEPTEMBER		
1	217	201	212	241	232	238	392	377	384	436	426	430
2	216	200	208	259	239	250	389	377	382	434	427	431
3	215	209	212	255	244	250	391	378	385	437	430	434
4	216	198	206	261	247	255	389	377	383	434	425	430
5	210	196	204	260	248	256	414	389	402	433	424	429
6	205	181	192	263	254	259	411	402	406	441	427	436
7	190	172	180	264	256	260	416	401	407	432	421	426
8	212	181	205	272	256	264	421	402	414	429	418	423
9	211	200	205	280	269	276	446	411	428	430	420	423
10	214	206	209	282	277	279	446	427	439	437	429	432
11	216	207	211	284	275	280	435	378	411	451	436	440
12	213	202	208	289	281	286	428	423	425	455	424	439
13	207	191	200	300	288	296	429	424	427	433	421	426
14	209	200	204	301	299	300	437	423	429	426	409	421
15	211	194	202	308	301	304	434	424	430	414	404	409
16	201	186	192	327	305	311	449	431	440	421	406	414
17	193	166	179	332	314	320	450	438	443	419	410	416
18	176	154	165	326	318	321	442	406	429	418	408	414
19	176	163	170	331	323	327	420	406	413	428	407	414
20	184	166	177	343	327	338	406	389	396	425	409	413
21	185	176	180	350	340	344	420	394	413	417	405	412
22	193	182	188	352	341	346	425	414	421	414	406	411
23	198	188	193	361	345	354	441	422	435	410	402	407
24	201	197	198	363	349	357	433	415	427	417	403	410
25	210	201	206	364	342	355	420	408	415	424	410	418
26	219	210	215	366	346	360	431	408	416	415	407	411
27	218	207	213	365	348	356	419	408	413	421	407	416
28	225	215	223	363	350	359	419	408	414	423	413	418
29	243	225	233	375	363	370	436	417	426	414	406	411
30	232	226	229	380	369	375	434	427	429	448	404	412
31	---	---	---	394	371	383	440	431	434	---	---	---
MONTH	243	154	201	394	232	311	450	377	417	455	402	421

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	448	402	414
2	417	407	413
3	420	403	410
4	417	397	404
5	434	396	406
6	427	406	417
7	449	418	434
8	447	420	433
9	430	414	421
10	436	412	426
11	418	409	413
12	419	405	413
13	415	403	409
14	413	403	407
15	415	404	409
16	415	406	410
17	411	402	407
18	412	401	406
19	409	401	404
20	409	399	404
21	414	400	408
22	416	409	412
23	418	410	414
24	422	413	419
25	432	417	423
26	428	416	422
27	434	417	427
28	431	413	422
29	426	413	419
30	422	413	418
31	425	415	421
MONTH	449	396	415

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44°53'11", long 106°59'18" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $NE^1/_4$ sec.28, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.2 mi north of county road, 1.6 mi south of Acme, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--413 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	81	e54	e40	e60	54	44	54	458	424	49	59
2	83	73	e52	e35	e56	55	41	49	436	366	59	54
3	70	72	e52	e43	e55	55	46	49	406	348	59	55
4	71	81	e57	e38	e56	54	45	48	390	320	68	54
5	66	76	e52	e36	e55	53	48	44	392	283	61	51
6	65	75	e54	e37	e50	53	51	39	455	253	49	52
7	58	76	e52	e40	e47	52	43	143	604	232	41	57
8	59	72	e52	e46	e44	57	45	749	683	218	40	53
9	56	72	e50	e40	e50	59	92	561	581	196	38	50
10	58	72	e48	e45	e55	61	79	642	503	177	50	43
11	57	74	e52	e45	e70	58	44	2,000	470	183	63	33
12	59	70	e49	e46	e60	55	34	1,610	458	174	65	40
13	58	66	e45	e45	e60	61	29	916	670	131	81	59
14	60	69	e40	e44	e55	57	24	771	654	97	87	57
15	80	69	e44	e37	e55	51	26	699	612	83	77	56
16	88	65	e45	e43	e52	55	26	696	709	87	72	55
17	77	64	e48	e50	e60	56	21	753	952	88	69	50
18	73	68	e50	e56	e60	55	22	801	1,220	78	66	55
19	76	66	e53	e65	e65	51	36	786	1,200	68	78	58
20	72	e67	e49	e60	e60	49	46	819	1,140	56	77	58
21	68	e54	e46	e57	e56	50	86	1,040	1,100	45	68	57
22	70	e60	e40	e53	e58	50	103	1,110	906	32	61	60
23	72	e56	e35	e65	e56	49	90	959	811	37	59	60
24	83	e57	e45	e75	e55	49	80	996	770	35	57	68
25	84	e60	e44	e66	e55	48	75	865	702	38	56	81
26	80	e56	e43	e60	57	47	75	719	602	77	65	88
27	82	e54	e40	e54	56	48	76	622	575	88	64	86
28	82	e50	e46	e60	55	51	74	565	472	63	63	87
29	86	e52	e42	e57	---	49	66	555	506	54	58	88
30	90	e54	e44	e54	---	50	60	509	497	46	55	88
31	84	---	e42	e58	---	47	---	475	---	41	59	---
TOTAL	2,256	1,981	1,465	1,550	1,573	1,639	1,627	20,644	19,934	4,418	1,914	1,812
MEAN	72.8	66.0	47.3	50.0	56.2	52.9	54.2	666	664	143	61.7	60.4
MAX	90	81	57	75	70	61	103	2,000	1,220	424	87	88
MIN	56	50	35	35	44	47	21	39	390	32	38	33
AC-FT	4,470	3,930	2,910	3,070	3,120	3,250	3,230	40,950	39,540	8,760	3,800	3,590

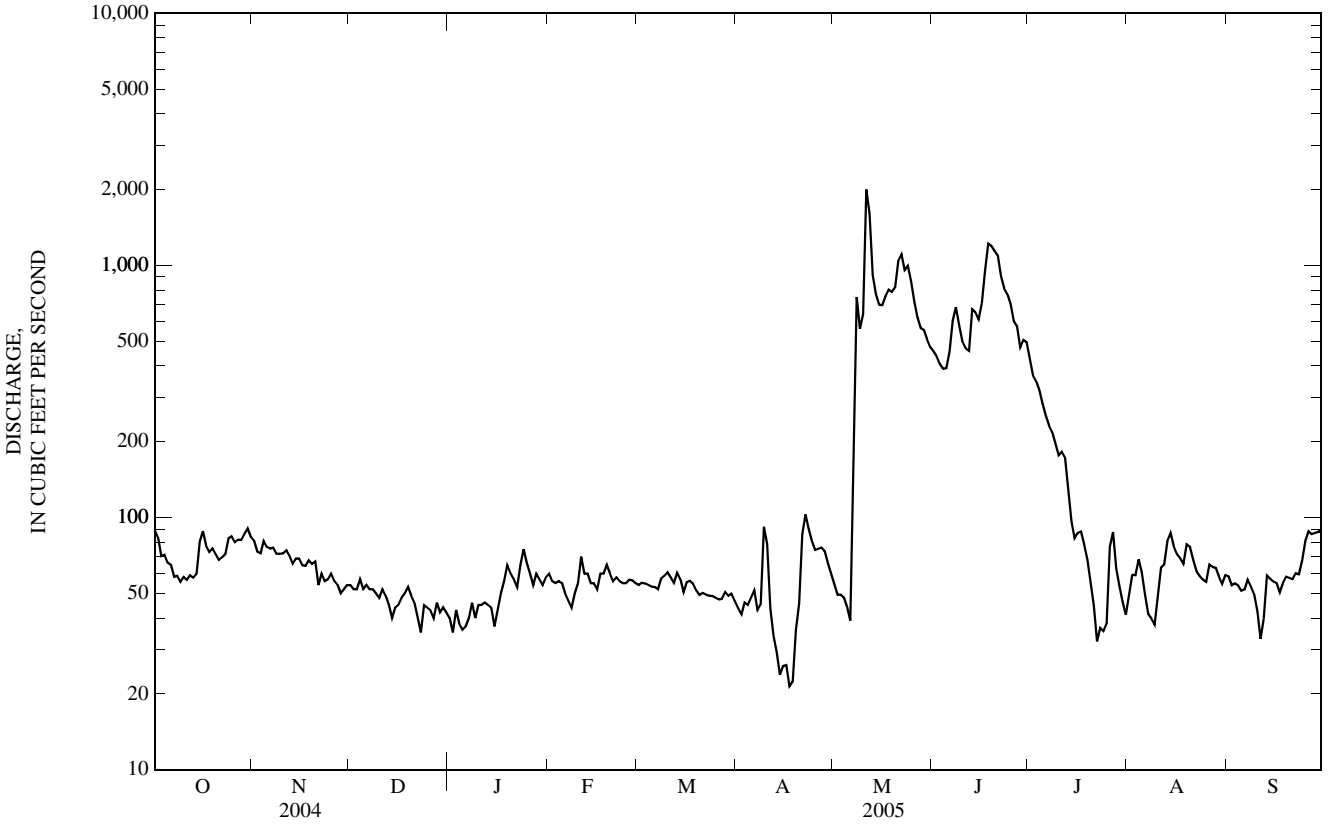
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	95.8	89.3	74.0	67.3	80.6	95.2	126	379	549	141	57.6	81.5
MAX	156	144	107	109	137	185	195	891	1,592	547	157	158
(WY)	(1985)	(1999)	(1996)	(1990)	(1996)	(1994)	(1994)	(1984)	(1995)	(1995)	(1998)	(1998)
MIN	41.6	47.1	42.3	43.5	36.7	46.0	54.2	32.6	39.2	9.51	15.6	28.0
(WY)	(2002)	(2003)	(2002)	(2002)	(1989)	(2002)	(2005)	(2004)	(2001)	(2001)	(1988)	(2001)

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	20,264.1		60,813			
ANNUAL MEAN	55.4		167		148	
HIGHEST ANNUAL MEAN					303	1995
LOWEST ANNUAL MEAN					50.4	2002
HIGHEST DAILY MEAN	176	Jul 6	2,000	May 11	3,040	Jun 17, 1995
LOWEST DAILY MEAN	7.5	May 11	21	Apr 17	3.0	Aug 24, 2001
ANNUAL SEVEN-DAY MINIMUM	10	May 5	26	Apr 12	4.3	Aug 22, 2001
MAXIMUM PEAK FLOW			2,930	May 11	3,330	Jun 17, 1995
MAXIMUM PEAK STAGE			7.02	May 11	a7.65	Feb 25, 1986
ANNUAL RUNOFF (AC-FT)	40,190		120,600		107,000	
10 PERCENT EXCEEDS	84		577		306	
50 PERCENT EXCEEDS	52		59		85	
90 PERCENT EXCEEDS	29		43		37	

a--From floodmarks, backwater from ice.
e--Estimated.



06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-89, 2004 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2004 to current year (seasonal records).

INSTRUMENTATION.--Specific conductance probe installed in April 2004.

REMARKS.--Daily specific conductance records are rated good to excellent except for the period May 28 to June 29, which is rated fair to poor. Low-level mercury sample taken on July 14; results in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 996 microsiemens per centimeter (µS/cm) at 25.0°C, May 11, 2004; minimum, 132 µS/cm at 25.0°C, June 21, 2005.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 958 microsiemens per centimeter (µS/cm) at 25.0°C, Mar. 25; minimum, 132 µS/cm at 25.0°C, June 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
14...	0815	58	669	6.0	62	8.1	772	15.0	10.5	410	76.2	52.6	3.61
DEC													
02...	1545	E52	667	15.9	125	8.3	700	4.5	0.0	350	70.3	42.9	2.57
FEB													
09...	1220	E50	671	14.0	109	8.0	771	4.5	0.0	390	74.8	49.1	2.96
MAR													
09...	1000	57	669	13.1	122	8.4	704	17.0	6.5	360	68.7	45.0	2.72
APR													
06...	1130	50	676	12.6	129	8.5	569	15.0	11.0	280	54.4	34.6	2.30
20...	0915	37	671	9.9	89	8.2	749	1.0	5.5	350	67.0	45.1	3.51
MAY													
03...	1400	43	669	14.4	156	8.7	716	19.0	13.0	320	54.3	43.8	3.74
12...	1455	1,350	670	11.1	98	7.9	423	4.0	4.5	190	36.3	23.6	4.60
JUN													
09...	1050	580	667	9.4	97	7.8	217	15.0	10.5	88	17.9	10.6	1.05
22...	1730	891	675	9.4	109	8.0	130	30.0	16.5	57	13.2	5.76	.83
JUL													
14...	1330	100	669	11.1	154	8.5	588	39.0	25.0	260	52.3	32.1	2.48
AUG													
04...	1045	69	676	7.5	92	8.2	566	18.0	19.0	280	54.1	34.5	3.46

E--Estimated.

06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
14...	.6	30.0	297	6.45	.4	5.80	141	495	.67	77.6	43	23	3.6
DEC													
02...	.6	24.9	274	5.22	.4	11.2	123	447	.61	E62.8	64	60	E8.4
FEB													
09...	.7	30.5	284	11.0	.3	10.2	141	493	.67	E66.6	77	26	E3.5
MAR													
09...	.6	27.6	252	7.33	.3	4.75	135	443	.60	68.1	75	6	.92
APR													
06...	.6	22.0	211	5.97	.3	7.76	99.1	E353	.48	E47.7	86	13	1.8
20...	.7	31.0	238	9.46	.3	6.83	148	453	.62	45.3	96	8	.80
MAY													
03...	1	48.2	219	5.01	.4	1.55	168	457	.62	53.0	89	12	1.4
12...	.5	14.6	126	3.86	.2	11.4	78.5	251	.34	914	88	216	787
JUN													
09...	.3	6.36	78	1.45	.1	8.49	29.7	123	.17	192	86	35	55
22...	.2	3.96	50	.88	E.1	7.96	13.8	77	.10	184	82	50	120
JUL													
14...	.5	19.8	202	6.39	.2	5.62	112	352	.48	95.2	95	7	1.9
AUG													
04...	.5	20.2	194	6.37	.3	6.69	100	343	.47	63.9	96	21	3.9

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT													
14...	0815	E.005	.024	.003	.33	.098	.122	<2	13	.6	<2	60	60
DEC													
02...	1545	.010	.276	.004	.64	.077	.146	<2	156	.4	<2	56	59
FEB													
09...	1220	.017	.521	.005	.88	.115	.194	E1	118	.4	<2	50	61
APR													
06...	1130	.027	.150	.007	.57	.108	.18	2	101	.6	<2	48	52
MAY													
12...	1455	.044	.407	.006	1.32	.053	.112	6	2,090	.7	E2	42	68
JUL													
14...	1330	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
04...	1045	<.010	<.016	<.002	.55	.072	.161	<2	230	.9	<2	50	54

E--Estimated.

06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
14...	<.06	<.06	115	<.04	<.04	<2	1.5	2.0	36	70	E.06	.09	21.8
DEC													
02...	<.06	<.06	80	<.04	<.04	<2	1.3	3.7	16	410	E.04	.44	22.1
FEB													
09...	<.06	<.06	87	<.04	E.03	E2	1.3	2.7	27	430	E.06	.42	18.6
APR													
06...	<.06	<.06	68	<.04	<.04	2	2.2	3.4	30	350	.17	.41	15.7
MAY													
12...	<.06	.22	46	E.02	.10	4	2.0	6.7	37	3,180	.24	3.53	9.4
JUL													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
04...	<.06	<.06	82	<.04	<.04	E2	1.8	1.8	12	470	E.07	.78	12.7

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT											
14...	6.7	9	--	E.01	2.14	2.58	.5	.8	505	2.5	4
DEC											
02...	12.5	57	--	<.01	.57	2.16	.7	.6	454	2.0	5
FEB											
09...	34.2	73	--	<.01	1.91	2.15	.6	.8	504	4.0	6
APR											
06...	67.1	97	--	--	--	1.55	.5	.7	434	--	5
MAY											
12...	35.3	118	--	--	2.23	5.21	1.3	1.6	228	4.3	17
JUL											
14...	--	--	.92	--	--	--	--	--	--	--	--
AUG											
04...	15.6	59	--	--	2.95	3.09	E.4	.4	365	3.1	5

E--Estimated.

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	694	614	659	---	---	---	650	630	637	701	670	685
2	706	677	697	---	---	---	664	650	657	719	693	703
3	721	669	698	---	---	---	664	631	651	735	694	712
4	710	680	696	---	---	---	635	614	623	742	703	723
5	725	688	707	---	---	---	614	587	599	823	721	739
6	734	687	713	---	---	---	587	560	578	790	722	754
7	727	694	710	---	---	---	601	579	586	803	450	734
8	743	710	725	---	---	---	623	601	612	590	392	483
9	747	711	728	---	---	---	615	539	572	400	382	391
10	752	721	736	---	---	---	586	551	567	410	374	393
11	762	726	744	---	---	---	641	586	613	456	376	411
12	762	733	751	---	---	---	680	641	657	423	407	418
13	765	740	752	---	---	---	716	680	696	424	398	415
14	782	748	770	---	---	---	740	716	730	398	362	371
15	766	632	703	925	671	756	746	735	740	368	326	338
16	765	668	738	713	667	693	739	728	735	332	280	298
17	765	733	747	708	683	695	758	732	746	290	252	263
18	738	719	729	700	671	686	774	758	766	257	225	239
19	743	684	709	697	677	690	782	761	776	241	217	227
20	738	711	727	699	683	692	761	705	733	226	186	198
21	745	682	726	704	682	695	731	670	715	191	152	162
22	743	706	727	709	691	700	743	622	701	160	148	153
23	736	705	724	705	694	699	764	736	748	158	144	150
24	738	683	717	702	688	694	785	750	770	152	139	144
25	743	720	733	958	690	782	751	731	742	173	147	160
26	745	700	725	705	689	698	734	684	709	184	165	175
27	721	659	691	693	679	685	684	616	651	191	173	180
28	711	684	699	691	681	687	648	631	640	193	179	186
29	707	675	691	718	678	697	656	633	648	203	189	195
30	708	681	697	678	657	663	670	655	663	210	200	204
31	710	678	693	657	634	643	---	---	---	226	210	216
MONTH	782	614	718	---	---	---	785	539	675	823	139	368
	JUNE			JULY			AUGUST			SEPTEMBER		
1	237	221	227	241	221	232	751	713	742	654	636	648
2	248	232	238	261	241	252	733	678	712	660	641	653
3	243	236	240	267	259	264	684	665	678	649	640	645
4	247	231	240	271	262	265	665	571	637	659	630	649
5	259	233	247	296	270	284	679	654	661	663	630	648
6	238	209	222	318	296	308	718	679	702	649	612	636
7	216	168	188	335	318	326	742	711	728	648	608	635
8	201	169	184	348	335	341	770	742	756	660	596	635
9	222	187	203	373	344	356	782	764	769	658	621	642
10	223	203	213	401	373	387	769	728	752	667	623	647
11	224	215	219	426	400	411	728	560	649	694	653	677
12	230	215	225	435	420	426	700	677	689	724	684	706
13	238	227	233	543	434	484	684	666	673	713	611	677
14	261	235	245	634	542	586	681	651	668	699	662	681
15	252	214	232	708	634	672	673	650	661	677	642	659
16	227	194	207	730	704	718	668	650	660	695	661	673
17	197	158	175	706	680	697	668	642	652	716	695	710
18	160	151	156	680	638	652	670	645	653	732	716	725
19	153	145	148	673	650	664	656	604	635	740	722	733
20	154	142	148	703	666	683	656	623	643	745	736	741
21	144	132	138	740	698	726	663	624	648	754	726	744
22	147	142	145	784	739	757	673	639	656	727	660	704
23	152	142	147	812	783	794	669	646	655	683	669	678
24	147	132	136	828	801	813	669	655	661	676	650	663
25	158	135	143	841	817	826	694	663	679	673	650	665
26	185	158	171	819	581	696	686	664	675	667	626	646
27	183	170	176	716	639	671	669	646	652	636	619	626
28	205	183	195	661	638	648	646	626	635	640	624	633
29	218	199	208	677	656	668	635	623	627	645	635	641
30	221	204	211	717	677	696	625	615	620	650	634	642
31	---	---	---	748	716	734	644	612	630	---	---	---
MONTH	248	132	195	841	221	550	782	560	673	754	596	669

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	660	637	645
2	678	647	662
3	704	678	690
4	727	674	709
5	736	660	702
6	754	736	747
7	770	754	762
8	781	770	777
9	790	763	780
10	791	776	788
11	790	783	787
12	784	772	777
13	783	776	780
14	779	767	774
15	778	766	770
16	768	742	759
17	742	662	688
18	710	679	691
19	701	640	670
20	681	644	664
21	680	662	671
22	681	652	668
23	675	641	658
24	670	638	656
25	679	642	662
26	679	641	662
27	678	653	666
28	682	656	668
29	686	657	671
30	686	658	672
31	686	664	675
MONTH	791	637	708

445700106563101 ASH CREEK AT MOUTH, NEAR ACME, WY

LOCATION.--Lat 44°57'00", long 106°56'31" (NAD 27), SE $^{1}/_{4}$NW$^{1}/_{4}$NW$^{1}/_{4}$ sec.1, T.57N., R.84W., Sheridan County, WY, Hydrologic Unit 10090101, at mouth of Ash Creek on Tongue River, approximately 3.5 mi northeast of Acme, WY and 11 mi northeast of Sheridan, WY.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,540 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
SEP 28...	1140	.10	1,700	11.0	770	123	112	18.3	1	95.0	21	325

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
SEP 28...	33.2	.7	27.4	522	1,130	1.53	.30	<5	<.20	.44	50

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
SEP 28...	<.06	251	E.02	.07	.18	E.34	<.08	81.1	72.7	2.2	.81

Date	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 28...	.94	<.2	728	<.04	.57	21.6	8.85

E--Estimated.

450137106595101 YOUNGS CREEK NEAR RESERVATION BOUNDARY, NEAR DECKER, MT

LOCATION.--Lat 44°01'37", long 106°59'51" (NAD 27), SE$^1/_4$ NW$^1/_4$ SE$^1/_4$sec. 25, T.9s., R.83e., Bighorn County, Hydrologic Unit 10090101, at dirt road crossing about 7 mi upstream from Wyoming Highway 338, 1.5 mi northeast of Pearl School, and 6.5 mi west of Decker.

DRAINAGE AREA.--21.5 mi^2.

PERIOD OF RECORD.-October 2002 to current year.

GAGE.--None. Elevation at sampling site is 3,780 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN 14...	1600	2.3	62	665	7.6	95	8.3	675	24.0	19.0	290	55.1	38.2

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN 14...	4.61	.3	12.8	8	293	1.97	.6	13.8	53.2	356	.48	2.20

445832106551401 YOUNGS CREEK ABOVE MOUTH, NEAR DECKER, MT

LOCATION.--Lat 44°58'32", long 106°55'14" (NAD 27), SW$^1/_4$ NW$^1/_4$ sec. 30, T.58N., R.83W., Sheridan County, WY, Hydrologic Unit 10090101, at Wyoming Highway 338, 1.2 mi upstream from mouth, near Decker.

DRAINAGE AREA.--62.3 mi^2.

PERIOD OF RECORD.-October 2002 to current year.

GAGE.--None. Elevation at sampling site is 3,570 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN 14...	0830	.99	33	671	8.1	86	8.4	1,690	27.5	12.0	880	108	149

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN 14...	14.9	2	112	21	422	4.05	.8	14.8	623	1,280	1.74	3.42

445817106544601 YOUNGS CREEK AT MOUTH, NEAR DECKER, MT

LOCATION.--Lat 44°58'17", long 106°54'46" (NAD 27), NW$^1/_4$ SE$^1/_4$ SE$^1/_4$ sec. 30, T.58N., R.83W., Sheridan County, Hydrologic Unit 10090101, at mouth, approximatley 4 mi southwest of Decker, and 14 mi northeast of Sheridan, WY.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,505 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
SEP 27...	1030	.27	1,260	10.0	620	83.8	99.5	11.9	1	54.5	16	380

Date	Fluoride, water, fltrd, mg/L (00950)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
SEP 27...	.7	5.41	16.9	333	835	1.14	.61	<5	E.13	1.3	78

Date	Chromium, water, fltrd, ug/L (01030)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
SEP 27...	.07	<.06	165	E.03	.230	2.5	<.08	52.3	22.2	2.8	1.34

Date	Zinc, water, fltrd, ug/L (01090)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	1.6	1.2	<.2	878	<.04	3.3	5.01

E--Estimated.

445957106524701 TONGUE RIVER BELOW YOUNGS CREEK, NEAR DECKER, MT

LOCATION.--Lat 44°59'57", long 106°52'47" (NAD 27), in $NE^1/_4NE^1/_4SW^1/_4$ sec. 31, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, 0.20 mi downstream of Montana-Wyoming state line, about 3 mi below the mouth of Youngs Creek, and about 2 miles south of Decker.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--August 2005.

GAGE.--None. Elevation of site is 4,680 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
AUG													
15...	1150	171	48	677	8.2	100	7.8	544	26.5	19.0	270	56.9	31.9

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
AUG												
15...	2.77	.5	20.2	14	210	3.35	.3	8.54	83.3	334	.45	154

445949106524801 DISCHARGE FROM COAL-BED METHANE PRODUCTION FACILITIES, PERMIT NO. MT-0030457-009

LOCATION.--Lat 44°59'49", long 106°52'48" (NAD 27), $SE^1/_4SE^1/_4SW^1/_4$ sec. 31, T.9S., R.40E., Bighorn County, Hydrologic Unit 10090101 discharge on Tongue River, 2 mi downstream of the Montana-Wyoming border, 2.75 mi upstream of Squirrel Creek, and 1.5 mi southwest of Decker.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,480 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
SEP 27...	1315	.26	2,050	18.0	24	5.89	2.19	6.21	42	471	97

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)
SEP 27...	1,130	20.9	4.1	10.6	6.0	1,210	1.64	.83	5	<.20	.26

Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)
SEP 27...	319	<.06	90	.06	.07	E.02	<.40	<.08	129	7.0	<.4

Date	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	.07	.09	<.2	236	<.04	<.10	E.43	<.04

E--Estimated.

450011106522501 DISCHARGE FROM COAL-BED METHANE PRODUCTION FACILITIES, PERMIT NO. MT-0030457-004

LOCATION.--Lat 45°00'10", long 106°52'25" (NAD 27), NW$^{1}/_{4}$ NE$^{1}/_{4}$ SE$^{1}/_{4}$ sec. 31, T.9S., R.40E., Bighorn County, Hydrologic Unit 10090101 discharge on Tongue River, approximately 2 mi upstream of Squirrel Creek and .75 mi southwest of Decker.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,480 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
SEP 27...	1415	.03	1,960	16.5	15	3.70	1.31	5.01	53	467	98	1,090

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
SEP 27...	20.0	3.4	9.27	3.8	1,170	1.59	.11	4	<.20	E.06	386

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
SEP 27...	<.06	78	.04	.08	E.03	<.40	<.08	130	3.0	E.2	.25

Date	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	E.06	<.2	234	<.04	<.10	E.41	<.04

E--Estimated.

06306100 SQUIRREL CREEK NEAR DECKER, MT

LOCATION.--Lat 45°03'05", long 106°55'36" (NAD 27), in NE$^1/_4$ NW$^1/_4$ NW$^1/_4$ sec. 14, T. 9 S., R. 39 E., Bighorn County, Hydrologic Unit 10090101, on left bank 0.4 mi upstream from Powers Cormack ditch, 0.5 mi northwest of CX Ranch, and 4 mi northwest of Decker.

DRAINAGE AREA.--33.6 mi^2.

PERIOD OF RECORD.--October 1975 to June 1985, June 2005.

GAGE--None. Elevation at site is 3,660 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN 16...	0900	.12	2.1	667	7.7	85	7.8	1,570	20.0	14.0	760	99.5	124

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN 16...	9.24	1	77.8	18	470	3.49	.6	21.1	409	1,030	1.40	.33

450047106514201 SQUIRREL CREEK ABOVE MOUTH, AT DECKER, MT

LOCATION.--Lat 45°00'47", long 106°51'42" (NAD 27), NW$^1/_4$ SE$^1/_4$ SW$^1/_4$ sec. 29, T.9S., R.40E., Bighorn County, Hydrologic Unit 10090101 at Montana Highway 314, 2 mi north of Montana-Wyoming state line, 0.7 mi upstream from mouth, and at Decker.

DRAINAGE AREA.--49.3 mi^2.

PERIOD OF RECORD.--October 2002 to current year.

GAGE.--None. Elevation at sampling site is 3,510 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN													
13...	1000	.17	6.8	671	9.7	107	8.3	5,940	21.0	13.0	2,300	153	463

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN												
13...	20.0	8	835	44	590	12.7	.7	7.68	3,330	5,180	7.04	2.38

445955106515801 DISCHARGE FROM COAL-BED METHANE PRODUCTION FACILITIES, PERMIT NO. MT-0030457-005

LOCATION.--Lat 44°59'54", long 106°51'57" (NAD 27), NW$^1/_4$SW$^1/_4$SW$^1/_4$ sec. 32, T.9S., R.83W., Bighorn County, Hydrologic Unit 10090101 discharge on Tongue River, approximately 3 mi upstream of Prairie Dog Creek and 1 mi south of Decker.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,460 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
SEP 27...	1515	.02	1,750	16.0	15	3.65	1.25	4.77	48	417	98	961

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
SEP 27...	22.1	2.7	8.47	28.7	1,070	1.45	.06	4	<.20	<.12	362

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)
SEP 27...	<.06	71	.04	.05	<.04	<.40	<.08	125	3.2	<.4

Date	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	<.06	E.05	<.2	227	<.04	<.10	<.60	<.04

06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21" (NAD 27), in $NE^1/_4SW^1/_4SW^1/_4$ sec. 23, T.58 N., R.83 W., Sheridan County, Hydrologic Unit 10090101, on right bank 600 ft upstream from county bridge, 0.9 mi upstream from mouth, 2.8 mi downstream from Coutant Creek, and 7.6 mi northeast of Acme.

DRAINAGE AREA.--358 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to September 1979, June 2000 to current year. Records for May 1965 to September 1970 in files of Wyoming State Engineer's Office.

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,600 acres upstream from station, of which about 60 acres are downstream from station. Flow supplemented by 3 transbasin diversions from North Piney Creek and South Piney Creek via Prairie Dog Creek ditch, Piney and Cruse ditch, and Mead-Coffeen ditch.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	21	18	e13	e16	e14	11	14	33	46	8.1	38
2	34	20	e18	e13	e16	14	10	13	30	44	13	40
3	36	19	e17	e12	e16	14	10	12	27	38	22	31
4	33	18	e19	e12	e15	14	10	12	26	33	26	26
5	32	18	e17	e11	e15	14	9.7	7.3	23	33	33	27
6	31	18	e16	e11	e15	14	9.5	8.4	22	33	36	29
7	29	19	e14	e12	e14	14	9.0	17	22	33	30	31
8	29	19	e15	e12	e13	14	8.6	41	30	29	31	31
9	29	19	e16	e13	e12	15	9.4	99	40	27	33	32
10	27	19	e17	e15	e13	15	10	122	43	24	35	31
11	25	22	e19	e16	e15	15	15	230	45	22	37	31
12	24	20	e17	e15	e16	15	7.2	354	43	17	36	32
13	23	17	e14	e14	e15	15	4.4	298	50	14	34	34
14	22	16	10	e13	e16	15	3.7	202	64	12	46	35
15	23	e16	e14	e11	e16	14	3.6	152	64	8.6	52	35
16	25	e16	e19	e13	e15	13	4.9	122	60	6.8	50	33
17	27	16	e16	e15	e12	16	5.1	100	60	5.5	49	31
18	25	16	e16	e17	e12	14	6.9	91	57	4.5	46	32
19	23	16	e16	e19	e15	14	9.0	84	55	4.8	46	33
20	22	16	e17	e21	e17	14	13	77	45	5.1	47	35
21	22	e14	e15	e19	e18	14	17	71	44	6.2	47	35
22	21	e13	e12	e18	e17	14	21	66	43	3.8	43	36
23	21	e14	7.7	e22	e17	14	21	62	42	2.2	35	33
24	21	e16	8.0	e25	e16	14	22	58	40	0.95	34	30
25	22	17	e15	e30	e16	13	23	52	40	1.7	41	29
26	22	17	e20	e25	e16	13	19	50	40	3.7	48	30
27	21	e16	e17	e20	e15	14	15	46	43	8.1	50	31
28	20	e13	e15	e16	e15	14	14	41	41	23	46	31
29	21	e12	e17	e19	---	14	14	37	42	14	41	29
30	20	9.9	e15	e17	---	13	14	32	43	8.3	39	30
31	21	---	e15	e17	---	12	---	30	---	6.2	36	---
TOTAL	783	502.9	481.7	506	424	436	350.0	2,600.7	1,257	518.45	1,170.1	961
MEAN	25.3	16.8	15.5	16.3	15.1	14.1	11.7	83.9	41.9	16.7	37.7	32.0
MAX	36	22	20	30	18	16	23	354	64	46	52	40
MIN	20	9.9	7.7	11	12	12	3.6	7.3	22	0.95	8.1	26
AC-FT	1,550	998	955	1,000	841	865	694	5,160	2,490	1,030	2,320	1,910

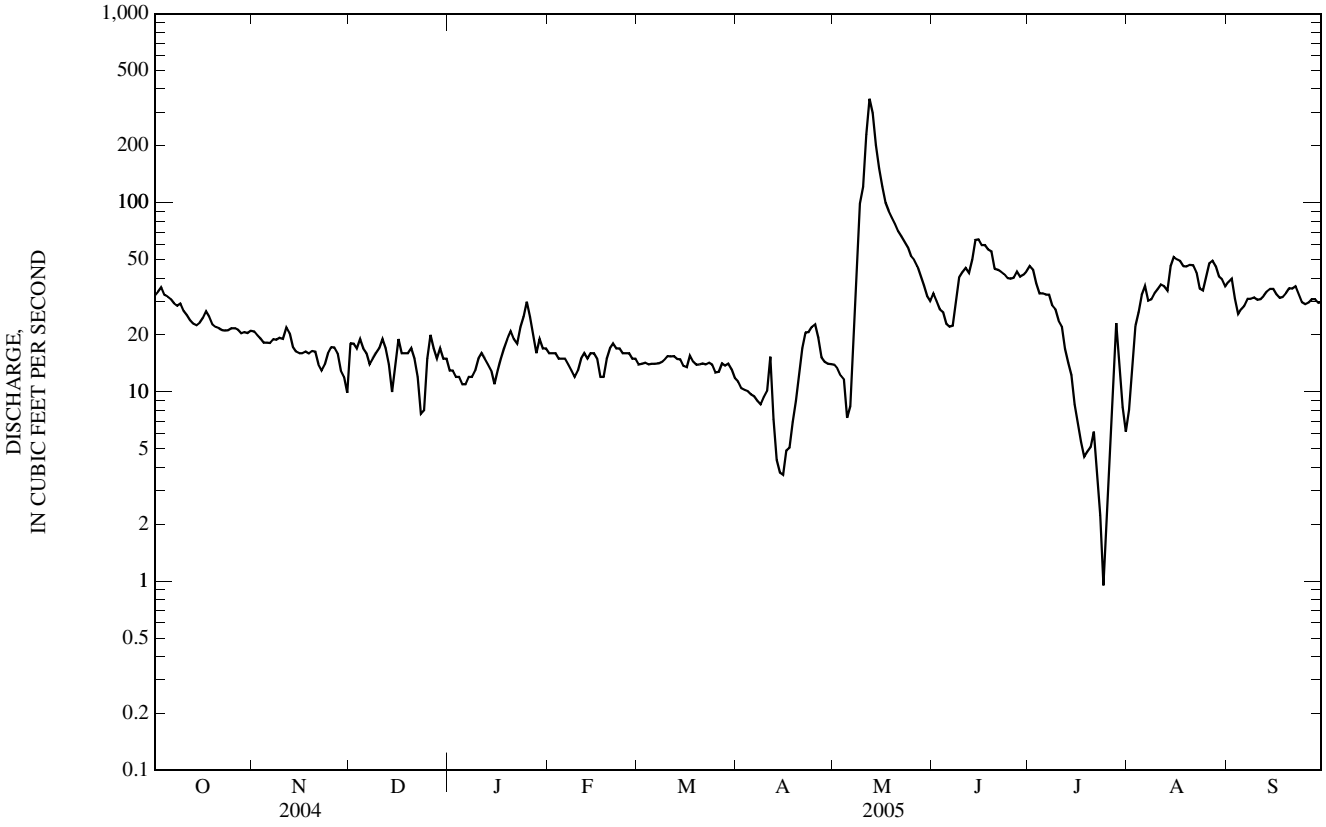
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2005, BY WATER YEAR (WY)*

MEAN	35.5	26.9	21.7	17.4	30.5	68.0	52.6	75.7	33.6	18.7	25.7	37.4
MAX	59.5	43.6	32.3	26.7	82.7	167	101	384	86.2	45.0	45.7	79.0
(WY)	(1974)	(1974)	(1976)	(1974)	(1974)	(1972)	(1971)	(1978)	(1978)	(1975)	(1978)	(1973)
MIN	15.5	12.3	10.9	8.55	9.49	14.1	11.7	5.75	3.09	4.39	3.00	13.4
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2005)	(2005)	(2004)	(2002)	(2001)	(2001)	(2001)

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1971 - 2005*	
ANNUAL TOTAL	5,606.0		9,990.85			
ANNUAL MEAN	15.3		27.4		37.1	
HIGHEST ANNUAL MEAN					72.8	1978
LOWEST ANNUAL MEAN					15.0	2004
HIGHEST DAILY MEAN	36	Oct 3	354	May 12	3,090	May 19, 1978
LOWEST DAILY MEAN	1.0	Jun 9	0.95	Jul 24	0.48	Jul 7, 2001
ANNUAL SEVEN-DAY MINIMUM	1.3	Jun 4	3.4	Jul 20	0.70	Jul 5, 2001
MAXIMUM PEAK FLOW			395	May 12	a3,940	May 18, 1978
MAXIMUM PEAK STAGE			5.80	May 12	b12.60	May 18, 1978
ANNUAL RUNOFF (AC-FT)	11,120		19,820		26,900	
10 PERCENT EXCEEDS	27		46		63	
50 PERCENT EXCEEDS	14		19		26	
90 PERCENT EXCEEDS	4.9		10		10	

*--For period of operation.
a--From rating curve extended above 760 ft^3/s on basis of slope-area determination of peak flow.
b--From floodmarks.
e--Estimated.



06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2004 to current year (seasonal records).

INSTRUMENTATION.--Specific conductance probe installed Apr. 20, 2004.

REMARKS.--Daily specific conductance records are rated good to excellent except for the period May 3 to July 14 and Sept. 7 to Oct. 18, which are rated fair to poor. Low-level mercury sample taken on July 14; results reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,510 microsiemens per centimeter (µS/cm) at 25.0°C, June 10, 2004; minimum, 702 µS/cm at 25.0°C, June 14, 2005.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 2,220 microsiemens per centimeter (µS/cm) at 25.0°C, July 25; minimum, 702 µS/cm at 25.0 C, June 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1545	23	679	11.2	112	8.4	1,160	15.5	10.0	600	123	70.5	5.79
NOV													
03...	1600	19	686	12.3	110	8.3	1,340	13.0	6.0	700	139	85.4	7.23
DEC													
02...	1430	E18	670	14.5	113	8.1	1,430	8.0	0.0	750	151	89.5	7.08
FEB													
09...	0900	E12	677	12.0	93	7.8	1,720	-5.0	0.0	890	174	110	8.55
MAR													
08...	1700	14	675	11.5	109	8.4	1,580	12.5	7.5	840	160	106	8.67
APR													
06...	0815	9.8	682	10.3	94	8.3	1,460	3.5	6.5	720	130	94.2	7.40
19...	1545	9.0	675	10.8	105	8.3	1,600	3.0	8.5	800	155	99.6	8.17
MAY													
03...	1210	12	673	12.6	124	8.4	1,790	14.5	9.0	880	160	116	9.23
17...	0830	102	656	7.5	89	8.1	980	15.5	16.0	440	84.5	56.5	7.22
JUN													
07...	1700	23	665	7.8	91	8.1	1,400	12.0	16.0	660	124	85.7	7.38
22...	1600	44	680	7.9	107	8.2	902	33.0	24.5	420	81.5	52.7	4.89
JUL													
14...	1030	13	673	7.4	99	8.3	1,400	39.0	23.0	620	123	76.1	6.64
AUG													
10...	0835	35	675	7.7	94	8.1	807	20.0	19.0	360	74.8	41.8	4.41

E--Estimated.

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
13...	1	54.9	294	3.03	.3	14.6	343	794	1.13	51.4	92	208	13
NOV													
03...	1	67.7	307	4.11	.3	14.2	443	945	1.33	50.3	88	78	4.0
DEC													
02...	1	61.0	356	3.85	.3	15.8	450	995	1.43	E45.9	82	74	E3.6
FEB													
09...	2	108	396	5.34	.3	15.8	632	1,300	1.84	E32.2	52	52	E1.7
MAR													
08...	1	97.1	331	4.79	.3	11.3	589	1,180	1.72	47.7	97	85	3.2
APR													
06...	1	84.7	328	4.45	.3	10.0	513	1,040	1.48	28.8	82	57	1.5
19...	2	104	306	4.66	.3	10.6	592	1,160	1.69	30.3	62	26	.63
MAY													
03...	2	115	326	5.28	.4	9.28	690	1,300	1.77	42.1	82	53	1.7
17...	1	48.4	220	4.02	.3	13.0	303	651	.95	193	90	431	119
JUN													
07...	1	81.0	298	4.04	.3	15.2	501	997	1.47	67.0	92	118	7.3
22...	.9	43.6	214	2.48	.2	13.9	274	602	.87	75.9	95	229	27
JUL													
14...	1	79.2	277	3.97	.3	14.4	508	978	1.33	34.3	91	120	4.2
AUG													
10...	.8	34.3	201	2.08	.2	12.3	234	526	.72	49.7	96	223	21

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT													
13...	1545	.012	.127	E.001	.68	.013	.159	<2	1,310	1.0	E1	34	52
DEC													
02...	1430	.020	.314	.002	.69	E.005	.035	<2	233	.6	<2	41	38
FEB													
09...	0900	.086	.493	.005	.83	.012	.026	<2	59	.8	<2	44	49
APR													
06...	0815	E.009	<.016	E.001	.29	<.006	.020	2	94	.7	<2	40	40
MAY													
17...	0830	.017	.282	.003	1.48	.020	.33	2	3,890	1.1	3	41	101
JUL													
14...	1030	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
10...	0835	.012	.191	.002	.87	.021	.23	3	2,300	.9	E2	27	65

E--Estimated.

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
13...	<.06	.13	112	<.04	.06	E2	2.5	6.5	8	3,210	<.08	2.02	25.7
DEC													
02...	<.06	<.06	132	<.04	E.03	<2	2.5	9.0	7	480	<.08	.34	32.4
FEB													
09...	<.06	<.06	130	<.04	<.04	3	3.3	6.0	15	200	<.08	.14	43.5
APR													
06...	<.06	<.06	127	<.04	<.04	4	4.6	9.9	E6	240	.13	.14	42.7
MAY													
17...	<.06	.33	81	<.04	.18	9	5.1	14.6	7	8,170	E.06	6.54	20.5
JUL													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
10...	<.06	.28	70	<.04	.10	5	3.2	6.5	E5	4,880	.33	3.55	21.4

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT											
13...	34.9	249	--	<.01	3.54	5.79	1.1	1.3	1,400	1.2	11
DEC											
02...	53.3	83	--	<.01	1.46	4.00	1.4	1.5	1,780	1.6	8
FEB											
09...	85.4	88	--	<.01	2.70	4.22	1.7	1.8	2,090	2.5	3
APR											
06...	95.7	118	--	--	3.55	6.76	1.3	1.4	1,940	E1.6	11
MAY											
17...	24.2	537	--	--	2.98	10.9	1.2	2.0	946	2.2	27
JUL											
14...	--	--	2.06	--	--	--	--	--	--	--	--
AUG											
10...	16.0	402	--	--	3.80	7.62	.7	1.2	920	15.9	16

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	1,110	1,090	1,110	---	---	---	1,590	1,560	1,570	1,690	1,670	1,680
2	1,110	1,040	1,100	---	---	---	1,610	1,460	1,550	1,740	1,690	1,700
3	1,080	1,010	1,040	---	---	---	1,460	1,440	1,450	1,820	1,720	1,760
4	1,130	1,050	1,090	---	---	---	1,460	1,440	1,450	2,160	1,700	1,840
5	1,130	1,080	1,120	---	---	---	1,480	1,440	1,460	1,980	1,770	1,820
6	1,080	1,020	1,060	---	---	---	1,450	1,430	1,440	1,780	1,670	1,770
7	1,030	1,020	1,030	---	---	---	1,500	1,440	1,480	1,670	1,150	1,360
8	1,050	1,030	1,040	---	---	---	1,590	1,490	1,510	1,460	1,200	1,230
9	1,060	1,030	1,050	---	---	---	1,500	1,440	1,480	1,240	1,060	1,170
10	1,080	1,050	1,070	---	---	---	1,440	1,400	1,420	1,160	1,080	1,130
11	1,100	1,080	1,090	---	---	---	1,400	1,060	1,200	1,080	903	971
12	1,130	1,100	1,110	---	---	---	1,370	1,130	1,260	913	795	845
13	1,160	1,120	1,140	---	---	---	1,530	1,370	1,470	942	794	863
14	1,140	1,090	1,120	---	---	---	1,780	1,530	1,620	1,000	942	970
15	1,090	1,050	1,070	1,600	1,550	1,580	1,930	1,780	1,870	1,020	1,000	1,010
16	1,070	1,050	1,060	1,760	1,540	1,650	1,830	1,650	1,770	1,020	975	1,000
17	1,070	1,040	1,060	1,620	1,480	1,550	1,820	1,680	1,770	976	848	919
18	1,100	1,040	1,070	1,550	1,500	1,530	1,830	1,640	1,730	848	770	798
19	1,140	1,100	1,120	1,560	1,470	1,510	1,640	1,510	1,590	776	766	771
20	1,190	1,140	1,170	1,620	1,510	1,560	1,540	1,440	1,490	805	770	784
21	1,210	1,190	1,200	1,540	1,480	1,510	1,450	1,340	1,390	856	805	830
22	1,210	1,200	1,210	1,550	1,510	1,530	1,460	1,330	1,380	857	838	849
23	1,230	1,210	1,220	1,570	1,530	1,560	1,400	1,290	1,350	858	834	847
24	1,230	1,210	1,220	1,540	1,490	1,520	1,470	1,360	1,440	858	849	854
25	1,210	1,200	1,210	1,600	1,520	1,560	1,430	1,330	1,370	900	857	877
26	1,230	1,210	1,220	1,660	1,570	1,600	1,510	1,340	1,430	920	900	909
27	1,230	1,220	1,220	1,660	1,500	1,580	1,620	1,510	1,540	923	888	906
28	1,260	1,230	1,250	1,560	1,520	1,540	1,680	1,590	1,630	979	923	950
29	1,270	1,240	1,260	1,550	1,520	1,530	1,660	1,580	1,630	1,020	979	1,000
30	1,280	1,260	1,260	1,580	1,550	1,570	1,670	1,580	1,630	1,050	1,020	1,030
31	1,290	1,260	1,280	1,590	1,550	1,570	---	---	---	1,100	1,050	1,080
MONTH	1,290	1,010	1,140	---	---	---	1,930	1,060	1,510	2,160	766	1,110
	JUNE			JULY			AUGUST			SEPTEMBER		
1	1,110	1,090	1,100	913	894	903	1,580	1,430	1,500	815	797	806
2	1,140	1,100	1,120	919	891	905	1,430	1,140	1,290	798	781	789
3	1,210	1,140	1,170	960	916	933	1,140	926	1,010	850	780	812
4	1,260	1,210	1,230	1,000	959	983	940	901	928	883	850	869
5	1,340	1,260	1,290	1,010	996	1,000	901	843	863	890	874	884
6	1,400	1,340	1,370	998	984	990	843	816	824	874	840	852
7	1,410	1,320	1,390	985	959	968	855	819	831	878	844	861
8	1,330	964	1,180	1,030	969	995	854	839	847	893	859	872
9	1,120	936	986	1,060	1,020	1,040	840	815	830	874	831	846
10	936	893	911	1,120	1,060	1,090	815	762	793	867	856	861
11	895	834	862	1,190	1,120	1,150	832	799	815	870	850	858
12	852	833	845	1,300	1,190	1,220	841	800	823	889	870	880
13	888	758	842	1,400	1,300	1,340	882	841	858	883	854	869
14	871	702	808	1,490	1,380	1,420	868	830	846	862	837	853
15	789	705	754	1,710	1,490	1,610	864	794	827	855	819	840
16	813	774	797	1,830	1,710	1,760	795	768	782	878	851	868
17	779	762	770	1,960	1,830	1,910	808	777	792	882	860	869
18	775	760	766	2,070	1,960	2,010	806	791	801	884	865	873
19	768	747	754	2,090	2,040	2,070	791	777	784	866	836	853
20	878	768	822	2,040	1,960	2,010	804	788	794	836	812	821
21	891	860	875	1,980	1,900	1,940	798	779	789	832	812	821
22	899	843	879	1,940	1,870	1,900	810	787	795	829	811	817
23	861	832	840	2,110	1,940	2,050	857	809	831	909	816	862
24	857	839	847	2,210	2,110	2,150	884	856	870	969	903	931
25	853	840	848	2,220	2,030	2,170	886	860	880	1,000	969	988
26	841	832	836	2,030	1,880	1,910	860	812	823	1,000	966	983
27	846	813	824	1,960	1,280	1,710	817	762	789	966	954	959
28	886	846	868	1,280	808	915	768	751	758	976	961	968
29	888	864	873	1,050	814	911	799	768	779	987	972	980
30	906	883	894	1,330	1,050	1,190	806	798	801	985	962	970
31	---	---	---	1,610	1,330	1,480	816	800	806	---	---	---
MONTH	1,410	702	945	2,220	808	1,440	1,580	751	863	1,000	780	877

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	991	972	979
2	990	959	977
3	981	958	970
4	982	960	968
5	1,020	944	977
6	969	945	960
7	1,060	959	1,010
8	1,110	1,050	1,090
9	1,110	1,090	1,100
10	1,130	1,100	1,110
11	1,140	1,090	1,120
12	1,160	1,090	1,110
13	1,220	1,150	1,190
14	1,220	1,210	1,210
15	1,230	1,200	1,210
16	1,230	1,210	1,220
17	1,220	1,170	1,200
18	1,170	1,050	1,140
19	1,140	1,030	1,090
20	1,110	1,030	1,060
21	1,060	1,000	1,020
22	1,020	988	1,000
23	992	982	986
24	1,000	985	995
25	1,000	993	996
26	997	969	988
27	999	962	979
28	1,020	983	996
29	995	932	959
30	936	929	933
31	938	931	934
MONTH	1,230	929	1,050

451607106372801 TONGUE RIVER AT PRAIRIE DOG CREEK, NEAR BIRNEY, MT

LOCATION.--Lat 45°16'07", long 106°37'28" (NAD 27), $SE^1/_4NE^1/_4SE^1/_4$ sec. 31, T.6S., R.42E., Rosebud County, Hydrologic Unit 10090102 at mouth of Prairie Dog Creek, 7 mi southwest of Birney, and at river mile 176.1.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--November 1977, November 1978, July 2005.

GAGE.--None. Elevation at sampling site is 3,200 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
AUG													
16...	0945	408	13	679	8.0	99	8.0	363	27.0	20.0	160	37.2	17.0

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
AUG												
16...	1.92	.5	14.7	16	130	1.46	.2	3.61	54.4	209	.28	230

450017106494001 DISCHARGE FROM COAL-BED METHANE PRODUCTION FACILITIES, PERMIT NO. MT-0030457-015

LOCATION.--Lat 45°00'17", long 106°49'40" (NAD 27), $NE^1/_4$ $SE^1/_4$ $NE^1/_4$ sec. 33, T.9S., R.40E., Bighorn County, Hydrologic Unit 10090101 discharge on Tongue River, 3 mi downstream of Prairie Dog Creek and 0.5 mi upstream of station 06306300 Tongue River at state line, near Decker.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,440 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
SEP 27...	1800	2.0	2,440	19.0	20	4.59	1.84	6.41	58	581	98	E1,470

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
SEP 27...	15.2	3.2	11.3	E.7	E1,500	E2.05	E8.1	11	<.20	.12	658

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)
SEP 27...	<.06	125	E.03	.07	.05	<.40	<.08	187	3.5	E.3

Date	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	.24	E.06	<.2	389	<.04	<.10	1.1	E.02

E--Estimated.

450007106495201 DISCHARGE FROM COAL-BED METHANE PRODUCTION FACILITIES, PERMIT NO. MT-0030457-013

LOCATION.--Lat 45°00'07", long 106°49'51" (NAD 27), NW$^1/_4$NE$^1/_4$SE$^1/_4$ sec. 33, T.9S., R.40E., Bighorn County, Hydrologic Unit 10090101 discharge on Tongue River, 2.5 mi downstream of Prairie Dog Creek and .75 mi upstream of station 06306300 Tongue River at state line, near Decker.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--September 2005.

GAGE.--None. Elevation at sampling site is 3,440 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
SEP 27...	1740	.04	1,970	19.0	15	3.55	1.28	5.72	59	512	98

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)
SEP 27...	1,180	19.6	3.1	12.0	<.9	E1,270	E1.72	E.14	10	<.20	<.12

Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)
SEP 27...	594	<.06	154	.06	.08	E.02	<.40	<.08	147	1.5	<.4

Date	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
SEP 27...	.10	<.08	<.2	272	<.04	<.10	.61	<.04

E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45°00'32", long 106°50'08" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $NE^1/_4$ sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi north of Wyoming-Montana State line, 1.4 mi southeast of Decker, 1.6 mi upstream from Badger Creek, and at river mile 200.9.

DRAINAGE AREA.--1,453 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year. Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,429.14 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft. Diversions for irrigation of about 64,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	169	e120	e100	e100	122	117	154	1,330	1,100	136	168
2	173	159	e150	e90	e95	120	112	148	1,330	963	131	175
3	169	147	e140	e80	e90	121	108	144	1,260	863	142	166
4	161	155	e140	e70	e90	121	119	145	1,180	801	148	154
5	157	165	e140	e80	e90	120	122	145	1,160	733	167	152
6	152	161	e130	e90	e85	120	123	164	1,180	654	164	143
7	148	160	e120	e90	e80	119	123	313	1,370	588	154	141
8	139	158	e130	e90	e75	121	118	1,370	1,700	529	144	141
9	137	156	e140	e80	e65	130	145	1,470	1,580	472	134	139
10	133	157	e150	e90	e65	131	208	1,210	1,420	422	127	132
11	134	159	e140	e90	e65	133	172	2,580	1,290	396	158	128
12	132	159	e130	e90	e70	128	133	4,740	1,220	395	225	120
13	136	147	e110	e90	e70	128	115	2,520	1,410	358	199	139
14	138	136	e100	e90	e70	134	106	1,860	1,660	304	212	162
15	153	140	e100	e90	e80	123	124	1,670	1,480	261	223	175
16	179	135	e110	e90	e90	117	122	1,710	e1,500	244	209	168
17	182	132	e110	e90	e90	130	110	1,940	e1,800	235	196	161
18	171	131	e110	e90	e80	132	109	2,140	e2,000	229	190	159
19	165	137	e110	e100	e80	126	177	2,060	e2,200	223	213	161
20	164	136	e110	e110	e80	123	183	2,190	e2,100	206	232	167
21	155	e110	e110	e100	e90	124	190	2,590	e2,000	188	223	164
22	157	e90	e100	e100	e90	123	225	3,070	e1,900	176	198	162
23	164	e110	e100	e110	e90	123	212	2,820	1,830	163	183	161
24	161	e125	e90	e110	e100	123	210	2,760	1,750	157	180	165
25	166	143	e90	e100	e100	119	233	2,620	1,660	154	182	180
26	159	145	e100	e100	e100	116	246	2,180	1,480	155	186	195
27	154	e130	e100	e100	e110	118	230	1,850	1,400	193	193	197
28	160	e110	e100	e100	e120	118	204	1,680	1,260	225	195	191
29	165	e110	e100	e100	---	124	181	1,600	1,130	196	187	188
30	178	e90	e100	e100	---	123	166	1,530	1,240	166	177	192
31	173	---	e100	e100	---	122	---	1,430	---	146	166	---
TOTAL	4,880	4,162	3,580	2,910	2,410	3,832	4,743	52,803	45,820	11,895	5,574	4,846
MEAN	157	139	115	93.9	86.1	124	158	1,703	1,527	384	180	162
MAX	182	169	150	110	120	134	246	4,740	2,200	1,100	232	197
MIN	132	90	90	70	65	116	106	144	1,130	146	127	120
AC-FT	9,680	8,260	7,100	5,770	4,780	7,600	9,410	104,700	90,880	23,590	11,060	9,610

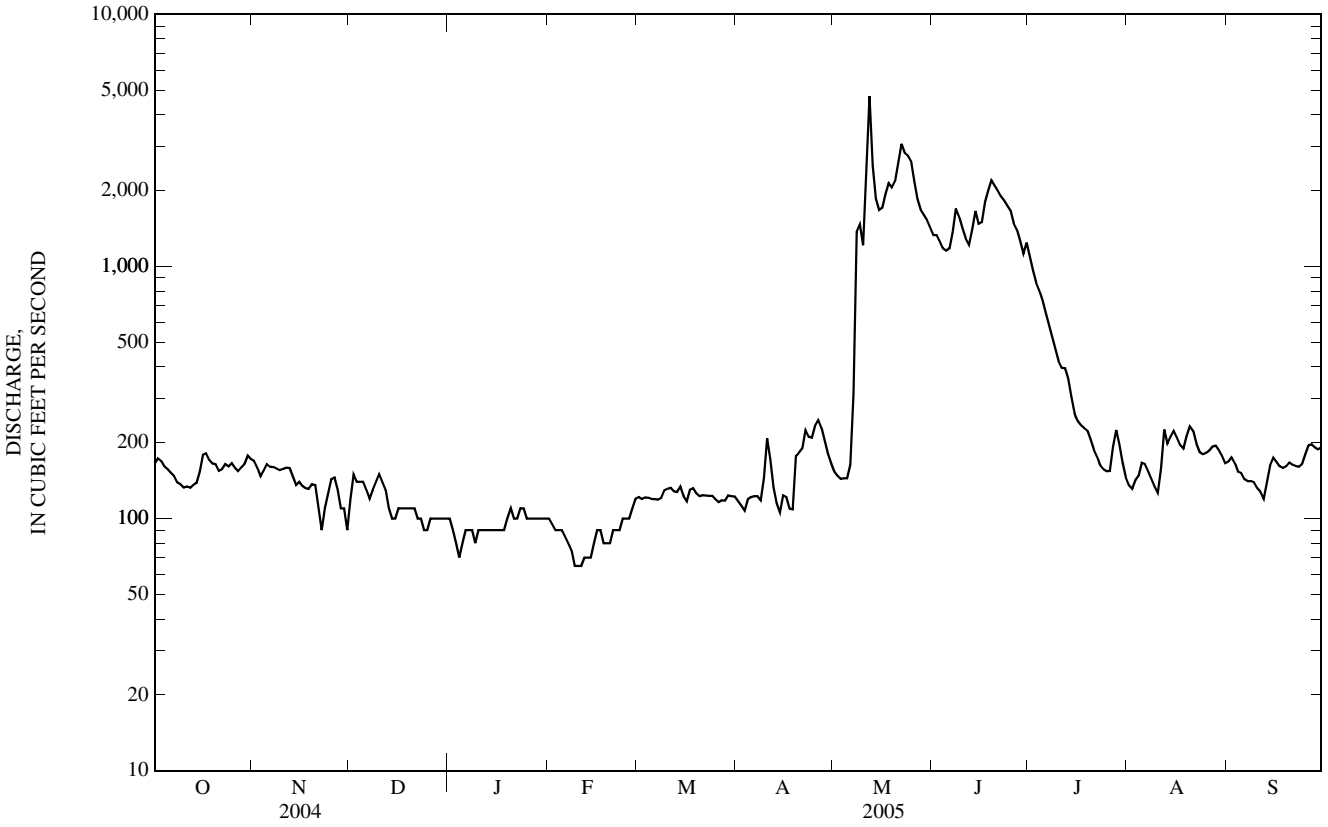
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

MEAN	247	219	176	173	222	299	345	1,124	1,595	448	171	213
MAX	403	324	271	330	672	855	676	3,283	3,570	1,674	475	615
(WY)	(1969)	(1974)	(1976)	(1974)	(1971)	(1972)	(1977)	(1978)	(1978)	(1975)	(1968)	(1968)
MIN	116	126	102	78.7	79.8	88.5	124	192	176	54.7	13.1	73.3
(WY)	(1961)	(2002)	(1985)	(2002)	(2002)	(2002)	(1961)	(2004)	(2001)	(2001)	(2001)	(2001)

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1961 - 2005	
ANNUAL TOTAL	52,095		147,455			
ANNUAL MEAN	142		404		436	
HIGHEST ANNUAL MEAN					862	1978
LOWEST ANNUAL MEAN					138	2002
HIGHEST DAILY MEAN	313	Jul 6	4,740	May 12	15,400	May 19, 1978
LOWEST DAILY MEAN	47	Aug 19	65	Feb 9	5.4	Aug 24, 1961
ANNUAL SEVEN-DAY MINIMUM	49	Aug 16	69	Feb 8	7.2	Aug 22, 1961
MAXIMUM PEAK FLOW			5,440	May 12	17,500	May 12, 1978
MAXIMUM PEAK STAGE			9.19	May 12	14.25	May 12, 1978
INSTANTANEOUS LOW FLOW					3.0	Aug 23, 1961
ANNUAL RUNOFF (AC-FT)	103,300		292,500		315,800	
10 PERCENT EXCEEDS	193		1,450		1,030	
50 PERCENT EXCEEDS	146		150		230	
90 PERCENT EXCEEDS	73		90		110	

e--Estimated.



06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1965 to September 1976, November 1980 to December 1986 (observer daily samples), August 2000 to current year (seasonal electronic records).
WATER TEMPERATURE: October 1965 to September 1976.

INSTRUMENTATION: Specific conductance probe installed Aug. 21, 2000.

REMARKS.--Specific conductance record is rated good to excellent except for periods of ice cover or extreme cold when accuracy is rated fair. Missing conductance data for Nov. 22-23 due to ice conditions and May 14-June 1 and June 16-22 due to electrical problems associated with a severe thunderstorm. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,490 microsiemens per centimeter (µS/cm) at 25.0°C, Aug. 12, 1966, Jan. 11, 1972; minimum, 161 µS/cm at 25.0°C, May 30 and June 1, 2003.
WATER TEMPERATURE: Maximum, 30.5°C, July 16, 1966; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 904 microsiemens per centimeter (µS/cm) at 25.0°C, Nov. 16; minimum, 188 µS/cm at 25.0°C, June 23. A lower minimum may have occurred during the high-flow period on missing days of record in June.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1400	137	681	10.4	105	8.5	707	13.0	10.5	340	66.5	42.0	3.07
NOV													
04...	1330	159	*	*	*	8.5	690	15.0	6.0	330	66.8	38.8	2.84
DEC													
02...	1245	E150	674	14.8	115	8.3	775	8.0	0.0	370	75.5	43.8	3.10
FEB													
09...	1030	E65	678	14.1	108	8.0	792	4.0	0.0	370	73.9	44.4	3.25
MAR													
09...	0830	128	675	10.8	96	8.3	735	7.0	5.0	350	68.4	43.2	3.13
21...	1515	125	670	11.7	121	8.5	757	14.0	11.0	360	69.5	44.3	3.05
APR													
06...	1315	122	680	9.3	100	8.5	661	15.5	13.5	300	57.9	38.6	2.67
20...	1145	181	675	11.6	107	8.3	455	4.0	6.5	210	45.0	22.8	2.28
MAY													
03...	0840	149	678	9.4	89	8.4	633	9.0	7.5	300	60.9	35.8	2.69
12...	1030	5,430	668	9.7	88	7.7	406	7.0	5.5	170	33.5	20.7	7.34
JUN													
08...	1545	1,730	667	9.5	103	8.0	236	17.5	13.0	100	22.2	10.8	1.17
22...	1400	E1,900	675	8.8	106	8.1	186	34.0	18.5	83	20.1	7.84	1.00
JUL													
14...	0915	306	675	5.6	76	8.4	465	37.0	24.0	210	46.0	23.4	1.79
27...	0900	185	676	6.7	80	8.2	553	19.0	18.0	250	51.5	28.5	2.35
AUG													
10...	1025	125	674	7.6	99	8.3	659	23.0	22.0	280	57.7	32.6	3.04
24...	1720	181	670	6.9	90	8.7	629	25.0	22.0	280	55.5	33.5	2.84
SEP													
08...	1030	137	675	9.7	116	8.4	675	24.0	18.0	280	54.2	35.7	2.92
19...	1145	162	676	9.9	106	8.3	634	23.5	13.0	310	62.9	36.6	2.80
**26...	1700	198	--	--	--	--	621	--	--	290	56.5	35.6	2.81
**26...	1900	198	--	--	--	--	623	--	--	290	57.4	34.9	2.88
**26...	2100	198	--	--	--	--	624	--	--	280	56.1	34.5	2.80
**26...	2300	198	--	--	--	--	626	--	--	280	56.3	34.4	2.77
**27...	0100	195	--	--	--	--	629	--	--	280	56.7	34.4	2.81
**27...	0300	198	--	--	--	--	632	--	--	290	57.9	34.6	2.81
**27...	0500	198	--	--	--	--	636	--	--	300	60.2	35.1	2.85
**27...	0700	201	--	--	--	--	638	--	--	290	58.4	34.9	2.88
**27...	0900	201	--	--	--	--	636	--	--	290	59.2	35.0	2.83
**27...	1100	201	--	--	--	--	635	--	--	290	59.7	34.9	2.97
**27...	1300	198	--	--	--	--	630	--	--	290	58.5	35.0	2.84
**27...	1500	198	--	--	--	--	627	--	--	290	56.9	34.9	2.79

*--Equipment problems.
**-Samples collected by an automated pumping sampler as part of a special study.
E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
13...	.8	33.1	235	3.84	.3	5.17	139	434	.60	163	71	44	16
NOV													
04...	.7	30.9	237	3.80	.3	6.51	134	426	.59	186	64	32	14
DEC													
02...	.8	36.0	270	4.81	.3	8.43	150	485	.68	E196	66	31	E12.6
FEB													
09...	1	42.5	276	5.67	.3	6.68	166	510	.71	E89.5	52	27	E4.74
MAR													
09...	.9	39.4	248	4.56	.3	2.80	166	476	.71	181	87	12	4.1
21...	.9	38.5	243	5.14	.3	3.75	167	478	.65	161	85	18	6.1
APR													
06...	1	38.6	234	4.46	.3	2.37	138	E423	E.58	E140	78	35	12
20...	.5	17.9	156	2.42	.2	4.50	76.0	265	.38	137	85	11	5.4
MAY													
03...	.8	32.1	207	3.59	.3	3.15	131	394	.54	158	85	30	12
12...	.6	17.5	108	3.05	.2	9.83	85.1	244	.33	3,580	92	697	10,200
JUN													
08...	.3	7.68	84	1.23	.1	8.27	30.7	133	.18	620	92	90	420
22...	.3	5.74	73	.83	.1	7.90	20.5	108	.15	E554	93	61	E313
JUL													
14...	.6	19.8	170	2.60	.2	5.47	78.7	280	.38	231	97	20	17
27...	.8	27.4	194	3.19	.2	3.09	97.7	330	.47	174	92	37	18
AUG													
10...	.8	32.1	221	3.44	.3	6.62	132	401	.54	135	92	58	20
24...	.8	31.1	197	3.13	.3	6.14	120	371	.52	187	78	66	32
SEP													
08...	.8	30.8	208	3.53	.3	4.89	136	393	.57	155	79	49	18
19...	.7	29.0	204	3.44	.3	4.96	126	389	.56	180	86	35	15
**26...	.7	25.7	185	3.48	--	--	121	356	.48	191	--	--	--
**26...	.7	26.0	210	3.51	--	--	121	372	.51	199	--	--	--
**26...	.7	27.3	211	3.55	--	--	120	371	.50	198	--	--	--
**26...	.7	27.4	204	3.54	--	--	119	367	.50	196	--	--	--
**27...	.7	27.5	207	3.72	--	--	125	375	.51	197	--	--	--
**27...	.7	27.6	226	3.59	--	--	120	383	.52	205	--	--	--
**27...	.7	27.9	213	3.60	--	--	121	379	.51	202	--	--	--
**27...	.7	27.4	219	3.62	--	--	121	380	.52	206	--	--	--
**27...	.7	25.7	194	3.60	--	--	122	364	.50	198	--	--	--
**27...	.7	26.0	202	3.61	--	--	121	370	.50	201	--	--	--
**27...	.7	25.5	210	3.61	--	--	122	375	.51	200	--	--	--
**27...	.7	25.6	188	3.58	--	--	123	360	.49	192	--	--	--

**-Samples collected by an automated pumping sampler as part of a special study.
E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT													
13...	1400	E.007	<.016	<.002	.22	<.006	.029	<2	131	.6	<2	44	47
DEC													
02...	1245	.015	.056	.003	.28	.013	.033	<1	87	.4	<2	57	58
FEB													
09...	1030	.040	.080	.002	.29	E.003	.019	<1	18	.4	<2	54	59
APR													
06...	1315	.011	<.016	E.001	.38	E.003	.044	E1	129	.6	<2	57	60
MAY													
12...	1030	.062	.306	.009	1.99	.057	.53	4	5,810	.9	3	47	155
AUG													
24...	1720	E.005	<.016	E.001	.33	<.006	.049	3	283	.6	.76	50	57
SEP													
**26...	1700	--	--	--	--	--	--	--	--	--	--	--	--
**26...	1900	--	--	--	--	--	--	--	--	--	--	--	--
**26...	2100	--	--	--	--	--	--	--	--	--	--	--	--
**26...	2300	--	--	--	--	--	--	--	--	--	--	--	--
**27...	0100	--	--	--	--	--	--	--	--	--	--	--	--
**27...	0300	--	--	--	--	--	--	--	--	--	--	--	--
**27...	0500	--	--	--	--	--	--	--	--	--	--	--	--
**27...	0700	--	--	--	--	--	--	--	--	--	--	--	--
**27...	0900	--	--	--	--	--	--	--	--	--	--	--	--
**27...	1100	--	--	--	--	--	--	--	--	--	--	--	--
**27...	1300	--	--	--	--	--	--	--	--	--	--	--	--
**27...	1500	--	--	--	--	--	--	--	--	--	--	--	--

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
13...	<.06	<.06	77	<.04	<.04	<2	1.5	2.1	13	290	<.08	.22	20.4
DEC													
02...	<.06	<.06	77	<.04	<.04	<2	1.3	3.3	12	180	<.08	.14	22.8
FEB													
09...	<.06	<.06	69	.05	<.04	E2	1.2	2.2	19	70	<.08	E.06	23.4
APR													
06...	<.06	<.06	67	<.04	<.04	3	2.2	3.8	30	310	E.07	.27	21.8
MAY													
12...	<.06	.75	53	<.04	.35	7	1.7	15.2	43	7,530	E.08	10.8	11.8
JUL													
14..	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
24...	<.06	<.06	62	<.04	<.04	E2	1.5	1.4	9	530	.16	.46	15.6
SEP													
**26...	--	--	64	--	--	--	1.4	--	--	--	--	--	--
**26...	--	--	66	--	--	--	1.1	--	--	--	--	--	--
**26...	--	--	66	--	--	--	.75	--	--	--	--	--	--
**26...	--	--	66	--	--	--	.70	--	--	--	--	--	--
**27...	--	--	67	--	--	--	.73	--	--	--	--	--	--
**27...	--	--	67	--	--	--	.66	--	--	--	--	--	--
**27...	--	--	67	--	--	--	.68	--	--	--	--	--	--
**27...	--	--	68	--	--	--	.64	--	--	--	--	--	--
**27...	--	--	67	--	--	--	.65	--	--	--	--	--	--
**27...	--	--	68	--	--	--	.65	--	--	--	--	--	--
**27...	--	--	67	--	--	--	1.2	--	--	--	--	--	--
**27..	--	--	67	--	--	--	1.2	--	--	--	--	--	--

**-Samples collected by an automated pumping sampler as part of a special study.
E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, unfltrd **ng/L** (50286)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
OCT											
13...	9.2	29	--	<.01	2.13	2.43	.5	1.1	525	4.8	9
DEC											
02...	9.5	22	--	<.01	.22	2.22	.5	.5	530	1.8	3
FEB											
09...	12.7	14	--	<.01	2.05	1.99	.5	.6	567	1.8	E2
APR											
06...	32.7	60	--	--	3.06	1.71	.6	.5	524	--	2
MAY											
12...	27.8	290	--	--	2.56	12.1	1.0	1.6	219	1.3	44
JUL											
14..	--	--	1.3	--	--	--	--	--	--	--	--
AUG											
24...	5.3	50	--	--	2.18	2.42	E.3	<.4	425	3.6	3
SEP											
**26...	.5	--	--	--	.64	--	--	--	464	.81	--
**26...	.5	--	--	--	.63	--	--	--	458	1.5	--
**26...	.4	--	--	--	.65	--	--	--	452	.67	--
**26...	.4	--	--	--	.65	--	--	--	447	.68	--
**27...	.4	--	--	--	.64	--	--	--	460	.68	--
**27...	.5	--	--	--	.64	--	--	--	461	.81	--
**27...	.5	--	--	--	.64	--	--	--	464	.66	--
**27...	.5	--	--	--	.67	--	--	--	461	.85	--
**27...	.6	--	--	--	.66	--	--	--	464	.65	--
**27...	.9	--	--	--	.68	--	--	--	461	.67	--
**27...	1.2	--	--	--	.66	--	--	--	462	E.59	--
**27..	1.2	--	--	--	.62	--	--	--	457	E.55	

**-Samples collected by an automated pumping sampler as part of a special study.
E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			NOVEMBER			DECEMBER			JANUARY		
1	648	633	642	712	689	701	851	789	822	748	698	722
2	653	634	637	721	696	706	797	768	781	840	721	784
3	672	645	658	776	715	733	787	746	766	881	814	859
4	695	661	675	739	691	711	761	706	734	889	823	869
5	698	674	684	708	693	698	775	692	717	848	817	831
6	709	676	691	721	701	709	714	686	704	859	821	846
7	702	678	689	719	696	706	740	699	720	846	814	833
8	726	684	696	717	688	701	770	703	738	819	778	799
9	742	702	716	749	687	710	764	691	731	785	760	769
10	754	714	729	748	683	709	741	689	717	763	732	747
11	795	708	733	725	702	710	721	688	704	734	717	726
12	798	729	742	727	704	719	704	688	696	721	708	716
13	742	712	727	747	723	733	757	653	723	724	705	715
14	746	718	735	871	724	778	748	653	713	728	712	723
15	755	711	729	860	731	768	749	692	734	738	718	727
16	747	688	697	904	734	793	729	659	705	758	724	740
17	703	677	691	855	734	777	786	648	723	741	718	731
18	708	679	695	851	735	767	710	596	674	725	689	712
19	717	698	710	840	732	777	674	543	632	711	683	696
20	708	687	700	808	745	768	703	668	686	691	657	684
21	726	694	711	#854	#745	#785	712	690	698	790	649	708
22	750	687	722	---	---	---	731	693	717	653	590	620
23	751	695	723	---	---	#795	800	722	764	625	618	622
24	744	675	706	791	745	761	844	787	808	644	625	632
25	742	685	715	784	755	764	865	772	826	664	641	652
26	738	691	714	791	749	766	802	729	755	676	656	665
27	787	713	745	753	713	739	778	726	754	687	662	678
28	812	705	754	778	710	729	755	694	727	699	670	686
29	780	694	723	830	720	758	724	674	702	707	674	691
30	705	675	689	880	800	833	701	658	679	710	674	695
31	696	674	684	---	---	---	731	672	707	716	676	696
MONTH	812	633	705	904	683	742	865	543	728	889	590	728
	FEBRUARY			MARCH			APRIL			MAY		
1	719	675	698	807	673	743	777	762	771	651	620	632
2	757	682	716	783	733	748	775	757	766	658	640	649
3	737	670	717	756	742	749	774	745	758	700	638	664
4	730	680	713	760	746	752	747	717	730	699	654	680
5	740	704	716	767	752	757	735	719	726	699	622	653
6	743	728	736	777	755	765	724	693	711	646	602	618
7	772	731	756	778	759	769	697	675	686	625	428	540
8	864	734	792	782	767	774	692	661	683	447	390	423
9	810	768	794	775	759	769	680	624	652	452	409	434
10	803	750	774	780	760	771	630	556	586	456	387	436
11	836	757	794	779	761	770	603	556	584	420	366	388
12	820	745	783	800	776	788	609	558	579	479	414	449
13	778	685	741	798	769	786	608	551	574	540	479	505
14	731	675	701	783	763	773	605	571	589	---	---	---
15	728	649	696	788	737	772	607	554	582	---	---	---
16	755	677	718	798	763	774	590	530	562	---	---	---
17	826	698	760	812	770	790	598	511	563	---	---	---
18	886	708	808	806	770	781	611	583	596	---	---	---
19	865	715	785	778	752	765	613	490	550	---	---	---
20	859	688	750	778	763	770	510	455	479	---	---	---
21	795	679	742	774	751	763	541	506	523	---	---	---
22	771	685	727	775	756	767	632	540	561	---	---	---
23	748	675	722	798	766	785	676	617	647	---	---	---
24	786	665	710	799	779	789	715	645	680	---	---	---
25	804	644	699	789	772	781	718	633	677	---	---	---
26	776	663	711	809	776	786	648	554	597	---	---	---
27	755	672	709	825	786	805	559	542	549	---	---	---
28	792	669	725	829	795	814	568	545	553	---	---	---
29	---	---	---	800	786	793	604	565	587	---	---	---
30	---	---	---	799	779	790	621	599	606	---	---	---
31	---	---	---	785	756	766	---	---	---	---	---	---
MONTH	886	644	739	829	673	774	777	455	624	700	366	544

#--Value computed from partial day with greater than 50 percent of day recorded.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	285	269	277	656	626	646	651	628	640
2	287	277	282	310	285	295	657	628	645	639	627	633
3	297	278	290	321	310	315	657	629	642	653	632	639
4	297	288	294	327	318	322	651	637	642	664	651	658
5	289	284	286	345	327	337	638	620	627	675	656	667
6	284	259	279	366	345	356	628	617	621	673	647	662
7	259	225	246	378	366	371	643	617	629	679	654	667
8	246	219	228	394	377	384	650	631	640	673	659	667
9	257	244	252	417	394	403	659	640	649	685	666	677
10	265	250	261	433	417	423	670	633	656	694	672	685
11	278	265	273	439	422	432	678	632	657	691	683	687
12	276	269	272	451	429	438	669	637	648	715	691	704
13	276	266	270	467	445	454	639	629	632	705	657	688
14	273	257	267	483	467	474	644	630	638	660	635	652
15	265	252	260	500	483	491	645	634	640	657	638	647
16	---	---	#245	513	500	506	649	644	647	647	634	642
17	---	---	---	522	501	510	650	642	647	647	633	640
18	---	---	---	559	522	545	656	643	651	647	633	640
19	---	---	---	578	550	568	648	631	642	642	623	635
20	---	---	---	591	568	574	635	616	625	639	615	628
21	---	---	---	646	576	608	621	613	617	642	623	631
22	---	---	*186	621	571	597	637	620	626	646	628	639
23	196	188	192	605	586	595	651	637	646	648	633	642
24	199	192	195	589	561	576	657	631	648	654	643	649
25	207	198	203	575	555	561	656	625	641	654	639	645
26	231	206	218	593	573	582	632	612	624	648	619	634
27	240	227	231	620	538	574	618	601	612	640	625	631
28	256	231	242	646	593	619	632	618	626	645	625	635
29	263	256	261	600	582	588	641	621	633	638	622	630
30	270	262	266	610	588	595	653	627	642	639	618	628
31	---	---	---	626	608	615	648	633	641	---	---	---
MONTH	297	188	253	646	269	483	678	601	638	715	615	651

	OCTOBER 2005		
1	633	618	627
2	635	625	630
3	632	619	625
4	619	591	608
5	591	565	577
6	611	577	590
7	662	611	637
8	673	662	667
9	675	668	671
10	677	663	669
11	664	651	656
12	671	663	667
13	674	667	670
14	672	651	663
15	665	654	660
16	668	649	659
17	664	653	658
18	661	633	649
19	656	632	643
20	651	636	642
21	654	634	645
22	653	633	642
23	651	639	645
24	657	640	649
25	659	640	649
26	654	638	647
27	659	642	652
28	666	648	657
29	663	642	652
30	648	631	641
31	650	635	642
MONTH	677	565	645

#--Value computed from partial day with greater than 50 percent of day recorded.
*--Instantaneous value from USGS sample.

06307000 TONGUE RIVER RESERVOIR NEAR DECKER, MT

LOCATION.--Lat 45°07'48", long 106°46'13" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $NE^1/_4$ sec.13, T.8 W., R.40 E., Big Horn County, Hydrologic Unit 10090101, at dam on Tongue River, 4 mi upstream from Post Creek, 7 mi northeast of Decker, and at river mile 189.1.

DRAINAGE AREA.--1,770 mi^2.

PERIOD OF RECORD.--December 1938 to current year. Record prior to September 1939, published only in WSP 1309 and those for January, February 1956, published only in WSP 1729.

GAGE.--Nonrecording gage read most days. Elevation of gage is 3,374.40 ft (NGVD29) (levels by Bureau of Reclamation) New capacity table effective September 1, 1996.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in May 1939. Total capacity, 79,070 acre-ft between elevation 3,374.4 ft, bottom of outlet, and 3,428.4 ft, spillway crest. Prior to October 1947, usable contents was 73,950 acre-ft at same elevations, due to sedimentation study. Dead storage, 711 acre-ft below elevation, 3,374.4 ft. Figures given herein represent usable contents. Water is used for irrigation. Records furnished by Montana Department of Natural Resources and Conservation.

REVISED RECORDS.--WSP 1309: 1947-50. WSP 1729: 1951, drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 79,500 acre-ft, June 21, 1999 and June 30, 2003, elevation, 3,428.70 ft; no storage October 1939 to February 1940.

EXTREMES FOR CURRENT YEAR.--Maximum monthend contents, 78,740 acre-ft, May 31, elevation, 3,428.50 ft; minimum monthend contents, 26,620 acre-ft, Oct. 1, elevation, 3,409.30 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	3,409.30	26,620	--
October 31	3,411.70	30,960	+4,340
November 30	3,413.10	33,940	+2,980
December 31	3,414.00	35,940	+2,000
Calendar Year 2004	--	--	-9,130
January 31	3,415.30	38,830	+2,890
February 28	3,416.40	41,420	+2,590
March 31	3,417.20	43,500	+2,080
April 30	3,418.70	47,410	+3,910
May 31	3,428.50	78,740	+31,330
June 30	3,428.40	78,360	-380
July 31	3,424.90	65,990	-12,370
August 31	3,420.50	52,310	-13,680
September 30	3,417.30	43,760	-8,550
Water Year 2005	--	--	+17,140

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT

LOCATION.--Lat 45°08'29", long 106°46'15" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.12, T.8 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 0.5 mi downstream from Tongue River Dam, 4 mi upstream from Post Creek, 8 mi northeast of Decker, 16 mi southeast of Kirby, and at river mile 188.4.

DRAINAGE AREA.--1,770 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,344.40 ft (NGVD 29) (levels by Bureau of Reclamation). Prior to Aug. 5, 1975, at elevation 10.00 ft lower.

REMARKS.--Water-discharge records good except those for the period Aug. 15 to Sept. 30, which are fair. Flow regulated by Tongue River Reservoir (station number 06307000) and many small reservoirs, combined capacity, about 15,000 acre-ft. Diversion for irrigation of about 64,800 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	94	94	73	73	70	70	89	1,350	1,170	400	341
2	93	94	94	73	73	70	70	89	1,320	1,040	404	342
3	94	95	94	73	73	70	70	89	1,280	903	374	345
4	94	96	94	73	74	70	70	90	1,210	860	379	347
5	94	96	94	73	74	69	70	90	1,150	723	384	347
6	94	96	93	73	74	69	70	91	1,060	563	391	346
7	92	96	93	73	75	70	70	95	1,140	505	397	344
8	92	96	92	73	74	70	71	87	1,390	508	405	321
9	92	96	92	73	73	70	71	76	1,470	493	415	303
10	93	96	92	73	73	70	71	78	1,410	452	428	301
11	92	96	92	73	73	70	72	172	1,310	451	434	301
12	90	96	92	73	72	70	72	1,010	1,250	441	441	299
13	90	96	92	74	71	70	72	1,410	1,320	436	444	290
14	89	96	92	73	71	70	72	1,410	1,470	427	449	251
15	90	96	92	73	71	68	73	1,410	1,450	422	454	247
16	89	96	92	73	71	69	73	1,240	1,430	420	424	251
17	89	96	92	73	71	69	73	1,080	1,550	416	397	256
18	90	96	92	73	71	69	76	1,260	1,780	415	397	261
19	90	96	91	73	70	70	81	1,270	2,140	410	395	241
20	90	96	92	73	70	70	89	1,370	2,250	407	392	229
21	90	96	94	73	70	70	106	1,580	2,170	404	389	233
22	91	96	93	73	70	70	105	2,460	2,040	403	383	237
23	90	96	92	73	71	70	105	2,740	1,830	400	377	224
24	90	96	92	73	71	70	109	2,690	1,730	398	369	197
25	91	95	92	73	71	70	114	2,600	1,640	397	359	201
26	90	95	92	73	70	70	114	2,350	1,520	394	360	203
27	92	95	93	73	70	70	102	1,990	1,430	391	360	203
28	92	95	92	73	70	70	88	1,750	1,350	393	358	203
29	93	94	92	73	---	70	88	1,580	1,230	395	356	201
30	94	94	86	73	---	70	88	1,520	1,200	395	352	201
31	93	---	73	73	---	70	---	1,460	---	398	350	---
TOTAL	2,836	2,867	2,842	2,264	2,010	2,163	2,475	35,226	44,870	15,830	12,217	8,066
MEAN	91.5	95.6	91.7	73.0	71.8	69.8	82.5	1,136	1,496	511	394	269
MAX	94	96	94	74	75	70	114	2,740	2,250	1,170	454	347
MIN	89	94	73	73	70	68	70	76	1,060	391	350	197
AC-FT	5,630	5,690	5,640	4,490	3,990	4,290	4,910	69,870	89,000	31,400	24,230	16,000

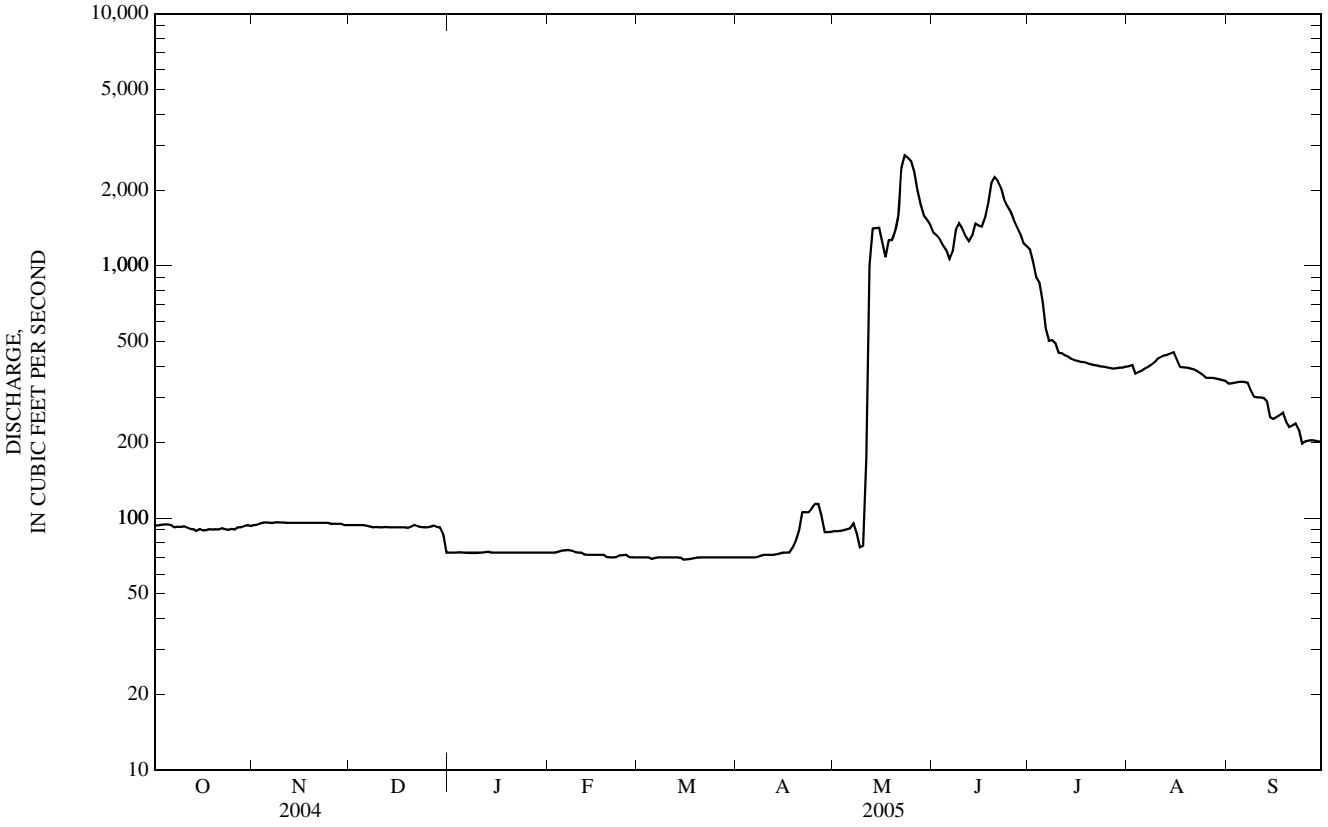
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	266	248	184	169	176	218	351	892	1,409	565	360	304
MAX	665	554	369	287	592	676	958	2,714	3,824	2,083	767	775
(WY)	(1946)	(1942)	(1979)	(1983)	(1971)	(1971)	(1965)	(1978)	(1944)	(1975)	(1975)	(1998)
MIN	71.1	40.6	61.7	73.0	56.9	22.7	14.9	157	183	169	103	107
(WY)	(1989)	(1976)	(1989)	(2005)	(1961)	(1961)	(1940)	(2002)	(2001)	(1956)	(1943)	(2001)

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	57,695		133,666			
ANNUAL MEAN	158		366		430	
HIGHEST ANNUAL MEAN					853	1978
LOWEST ANNUAL MEAN					133	2002
HIGHEST DAILY MEAN	300	Jul 23	2,740	May 23	9,580	May 20, 1978
LOWEST DAILY MEAN	73	Dec 31	68	Mar 15	0.50	Apr 17, 1940
ANNUAL SEVEN-DAY MINIMUM	89	Dec 25	69	Mar 12	0.50	Apr 17, 1940
MAXIMUM PEAK FLOW			2,930	May 24	10,800	May 20, 1978
MAXIMUM PEAK STAGE			15.03	May 24	a20.00	May 20, 1978
INSTANTANEOUS LOW FLOW					b0.00	Nov 12, 1969
ANNUAL RUNOFF (AC-FT)	114,400		265,100		311,400	
10 PERCENT EXCEEDS	261		1,310		897	
50 PERCENT EXCEEDS	120		94		250	
90 PERCENT EXCEEDS	92		70		107	

a--From floodmark in well.
b--Result of dam closure.



06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1976 to 1995, January 2004 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1980 to December 1986 (observer daily samples), May 2004 to current year (seasonal electronic records).

INSTRUMENTATION.--Specific conductance probe was installed in May 2004.

REMARKS.--Daily specific conductance records are rated good to excellent except for the periods Mar. 2-8, Apr. 6, 7, 20, 21, and June 5-8, which are rated fair. The conductance monitor was operated all year in a trial attempt to obtain winter record. The values for Jan. 4 to Feb. 9 were deleted because the probe was frozen in the deployment tube and could not be retrieved for cleaning and calibration. Values for Apr. 7-19 and Apr. 23 to May 2 were deleted due to sedimentation. Low-level mercury analysis on July 13; result is reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 932 microsiemens per centimeter (µS/cm) at 25.0°C, Mar. 12, 14, 1981; minimum daily, 230 µS/cm at 25.0°C, July 1, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 795 microsiemens per centimeter (µS/cm) at 25.0°C, Mar. 6, 7; minimum, 272 µS/cm at 25.0°C, July 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1230	88	685	12.7	141	8.7	683	12.5	15.0	280	52.9	36.5	3.62
NOV													
04...	1200	96	*	*	*	8.6	690	10.5	10.0	300	56.8	38.4	3.94
DEC													
02...	1045	94	678	10.6	91	8.4	696	3.0	4.0	290	55.4	37.8	3.69
FEB													
08...	1530	75	677	13.8	119	8.4	735	-3.0	4.0	350	67.7	43.9	3.52
MAR													
08...	1500	70	676	12.1	110	8.3	753	11.0	6.0	340	66.4	43.0	3.60
21...	1400	70	672	12.3	117	8.4	750	13.0	7.5	340	64.9	43.1	3.51
APR													
05...	1500	70	680	11.9	116	8.4	750	14.5	9.0	320	61.8	41.2	3.49
19...	1345	75	677	10.6	104	8.5	736	5.0	9.0	320	63.7	40.1	3.58
MAY													
02...	1700	90	684	11.2	113	8.6	734	10.5	10.5	330	62.1	41.4	3.53
13...	0835	1,400	678	10.3	103	8.4	718	7.5	10.0	320	60.9	40.3	3.34
JUN													
08...	1340	1,390	670	10.0	111	8.2	362	18.0	14.0	150	30.8	17.2	2.60
22...	0930	2,090	675	8.3	98	8.3	303	33.0	17.5	140	30.7	14.8	1.94
JUL													
13...	1610	441	670	10.9	134	8.1	282	40.0	19.0	120	27.5	12.0	1.48
26...	1600	391	681	8.8	110	8.0	289	22.0	20.5	130	30.6	13.1	1.65
AUG													
09...	1435	420	677	8.5	110	8.0	342	28.5	22.0	150	34.0	14.9	1.84
24...	1430	367	672	11.0	141	8.2	433	25.0	21.0	180	41.2	19.7	2.45
SEP													
07...	1530	345	680	10.3	127	8.3	419	30.0	20.0	180	40.7	19.4	2.32
19...	1300	220	677	9.8	120	8.4	459	25.0	19.0	210	47.5	22.6	2.65

*--Equipment problems.

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
13...	1	44.1	200	4.01	.4	3.80	158	423	.58	161	88	8	1.9
NOV													
04...	1	43.8	219	4.13	.4	4.75	160	443	.60	115	74	5	1.3
DEC													
02...	1	42.7	226	3.90	.4	5.96	158	444	.60	113	47	6	1.5
FEB													
08...	1	44.5	266	4.69	.4	8.80	161	495	.67	100	72	31	6.3
MAR													
08...	1	45.8	255	4.53	.3	7.45	161	485	.66	91.6	59	17	3.2
21...	1	45.8	249	4.55	.4	6.46	161	478	.65	90.4	68	10	1.9
APR													
05...	1	44.3	246	4.67	.4	5.74	158				47	21	4.0
19...	1	43.2	220	4.78	.4	4.50	154	447	.61	90.5	68	19	3.8
MAY													
02...	1	43.1	223	4.81	.4	3.92	157	450	.61	109	52	25	6.1
13...	1	43.0	222	4.82	.3	2.92	149	439	.60	1,660	76	43	163
JUN													
08...	.5	14.4	119	2.08	.2	6.80	62.7	208	.28	781	96	8	30
22...	.4	11.6	107	1.62	.1	6.91	46.4	178	.24	1,010	63	9	51
JUL													
13...	.4	8.96	102	1.23	.1	7.70	38.5	159	.22	189	93	5	6.0
26...	.4	10.2	107	1.22	.1	7.44	40.4	169	.23	178	93	9	9.5
AUG													
09...	.4	12.3	121	1.55	.2	4.38	50.6	192	.26	218	96	6	6.8
24...	.6	18.6	151	2.05	.2	4.48	74.0	254	.35	252	94	4	4.0
SEP													
07...	.6	17.2	147	2.00	.2	3.97	71.6	246	.33	229	86	3	2.8
19...	.6	19.4	160	2.28	.2	5.36	82.7	279	.38	166	92	5	3.0

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT													
13...	1230	E.005	<.016	<.002	.50	<.006	.040	<2	36	1.4	<2	60	62
DEC													
02...	1045	.034	.017	.002	.44	<.006	.022	<2	14	1.2	<2	57	53
FEB													
08...	1530	.148	.101	.005	.51	<.006	.022	<2	11	.9	<2	50	57
APR													
05...	1500	.024	E.013	.002	.40	<.006	.026	<2	16	1.0	<2	54	56
MAY													
13...	0835	E.005	<.016	<.002	.36	<.006	.031	3	79	.8	E1	57	58
JUL													
13...	1610	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
24...	1430	.102	.062	.021	.45	E.003	.025	3	50	1.2	1.2	47	54

E--Estimated.

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
13...	<.06	<.06	79	<.04	<.04	<2	--	2.8	E4	90	--	.09	25.3
DEC													
02...	<.06	<.06	81	<.04	<.04	<2	1.3	3.6	<6	20	<.08	E.03	25.0
FEB													
08...	<.06	<.06	79	<.04	<.04	E2	1.3	2.3	E4	30	<.08	E.03	27.9
APR													
05...	<.06	<.06	75	<.04	<.04	3	1.6	4.3	<6	20	E.07	E.04	27.8
MAY													
13...	E.03	<.06	72	<.04	.12	E2	1.2	2.6	<6	150	.15	.49	21.8
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
24...	<.06	<.06	40	<.04	<.04	<2	2.4	1.0	8	80	.24	.09	10.5

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT											
13...	8.6	43	--	<.01	2.46	2.64	.8	1.1	514	1.3	E1
DEC											
02...	3.5	15	--	<.01	.955	2.54	.6	.6	502	.7	E2
FEB											
08...	73.1	92	--	E.01	2.19	2.08	.5	.7	593	1.3	E2
APR											
05...	5.1	30	--	--	--	1.75	.6	.6	601	3.7	E2
MAY											
13...	2.0	20	--	--	1.77	2.01	E.3	.7	546	3.8	3
JUL											
13...	--	--	1.05	--	--	--	--	--	--	--	--
AUG											
24...	31.9	74	--	--	1.86	1.57	E.2	<.4	282	4.4	<2

E--Estimated.

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			NOVEMBER			DECEMBER			JANUARY		
1	704	687	695	695	686	691	706	698	702	754	746	749
2	695	684	691	697	683	692	717	703	710	757	745	752
3	696	681	690	697	686	693	718	713	716	762	748	755
4	697	680	690	709	685	698	718	712	716	---	---	---
5	694	676	687	709	699	706	719	714	717	---	---	---
6	692	681	688	709	698	705	720	714	718	---	---	---
7	693	679	689	709	699	705	720	714	718	---	---	---
8	694	675	685	709	699	706	722	704	717	---	---	---
9	---	---	---	711	700	706	726	704	723	---	---	---
10	---	---	---	712	704	709	725	718	722	---	---	---
11	---	---	---	711	701	708	726	722	724	---	---	---
12	692	674	682	710	701	707	727	721	724	---	---	---
13	694	678	686	712	703	707	727	721	725	---	---	---
14	---	---	---	712	699	709	727	722	725	---	---	---
15	---	---	---	714	698	710	728	723	725	---	---	---
16	696	685	692	714	705	711	728	721	725	---	---	---
17	697	684	692	714	701	710	728	724	726	---	---	---
18	694	682	690	714	704	711	728	711	719	---	---	---
19	695	682	690	714	706	711	726	713	719	---	---	*726
20	695	684	691	715	703	711	731	719	725	---	---	---
21	694	682	689	716	706	712	732	724	729	---	---	---
22	698	687	694	715	709	713	733	723	729	---	---	---
23	703	681	694	715	709	713	734	728	731	---	---	---
24	703	679	691	714	701	709	739	719	726	---	---	---
25	692	678	687	714	679	711	739	732	736	---	---	---
26	697	681	691	712	700	707	739	733	736	---	---	---
27	695	684	691	713	686	706	741	735	739	---	---	---
28	696	683	691	714	705	711	744	733	740	---	---	---
29	696	687	692	715	705	713	742	730	736	---	---	---
30	694	684	691	716	694	703	745	734	738	---	---	---
31	695	681	690	---	---	---	751	741	747	---	---	---
MONTH	704	674	690	716	679	707	751	698	725	762	745	752
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	775	720	761	748	711	736	---	---	---
2	---	---	---	775	732	754	762	705	736	---	---	*734
3	---	---	---	780	753	765	765	753	760	739	673	723
4	---	---	---	784	755	774	763	737	754	730	665	716
5	---	---	---	788	761	782	754	707	747	726	663	707
6	---	---	---	795	744	781	753	694	736	678	604	650
7	---	---	---	795	749	772	---	---	---	610	575	599
8	---	---	*735	783	760	768	---	---	---	609	590	601
9	---	---	---	765	747	754	---	---	---	598	559	584
10	736	717	728	762	750	755	---	---	---	592	573	580
11	744	717	734	758	750	754	---	---	---	597	576	586
12	743	712	735	758	752	755	---	---	---	721	568	640
13	739	711	731	757	750	754	---	---	---	713	710	711
14	740	731	735	769	749	756	---	---	---	715	710	713
15	740	734	737	770	750	764	---	---	---	720	710	716
16	741	732	737	772	754	765	---	---	---	717	661	702
17	744	730	736	777	763	770	---	---	---	677	601	646
18	752	730	739	778	755	771	---	---	---	676	611	644
19	749	737	742	784	755	773	---	---	*736	679	667	674
20	749	732	741	787	755	773	738	723	733	668	642	654
21	750	742	745	776	755	764	738	727	732	644	578	606
22	755	741	748	762	738	756	733	669	711	606	557	588
23	---	---	---	761	754	759	---	---	---	577	542	560
24	---	---	---	765	760	762	---	---	---	550	514	531
25	767	745	759	766	739	758	---	---	---	534	506	519
26	768	755	761	764	721	748	---	---	---	517	488	503
27	770	761	765	747	691	724	---	---	---	505	471	491
28	770	753	764	722	661	697	---	---	---	508	477	489
29	---	---	---	692	655	673	---	---	---	482	434	463
30	---	---	---	697	655	677	---	---	---	478	432	445
31	---	---	---	744	687	713	---	---	---	450	396	436
MONTH	770	711	743	795	655	753	765	669	738	739	396	603

---Instantaneous value from water-quality sample.

06307500 TONGUE RIVER AT TONGUE RIVER DAM, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	471	390	418	308	297	300	318	303	309	406	402	404
2	416	380	400	308	291	303	315	307	311	406	401	403
3	421	363	400	305	291	299	332	307	323	413	403	407
4	395	358	377	310	294	297	330	316	322	425	411	416
5	382	366	374	300	294	297	329	315	322	445	423	433
6	376	350	365	303	294	299	336	324	329	447	420	428
7	375	349	366	305	291	298	335	327	331	436	419	427
8	370	323	356	294	287	290	347	330	337	435	427	431
9	362	342	352	297	281	290	349	341	345	441	428	435
10	355	337	348	283	274	279	347	334	341	452	431	444
11	352	335	343	287	272	279	345	335	339	452	438	445
12	347	321	333	283	278	281	372	344	357	450	433	441
13	336	316	323	281	277	279	352	331	341	436	429	432
14	318	313	316	283	276	281	342	331	333	437	433	434
15	320	314	318	284	276	279	355	332	342	439	435	437
16	319	311	315	287	281	284	384	355	368	442	436	438
17	328	308	317	291	283	287	394	375	383	467	438	452
18	327	312	319	289	284	287	425	376	405	466	454	458
19	318	311	316	297	288	293	414	384	399	473	459	464
20	316	311	314	301	294	297	413	388	400	467	456	460
21	315	307	311	304	295	299	427	410	419	495	467	480
22	311	304	308	303	298	299	430	414	419	484	473	478
23	309	301	305	315	300	307	425	405	416	498	469	482
24	308	304	306	314	294	305	439	411	430	489	479	483
25	306	298	302	304	294	299	441	419	430	490	482	487
26	301	293	297	308	290	295	435	404	418	484	481	482
27	299	294	297	304	291	299	436	400	422	484	481	483
28	310	295	303	304	296	301	430	399	407	484	480	482
29	306	296	300	313	297	303	421	397	410	488	481	483
30	309	297	301	312	303	306	441	409	428	493	485	487
31	---	---	---	313	302	307	411	403	407	---	---	---
MONTH	471	293	333	315	272	294	441	303	372	498	401	451

	OCTOBER 2005		
1	495	486	490
2	505	492	498
3	518	493	506
4	506	496	499
5	505	502	504
6	504	500	502
7	502	499	501
8	516	501	507
9	529	512	522
10	529	517	523
11	535	522	527
12	539	525	531
13	551	533	538
14	555	538	548
15	557	538	550
16	562	538	549
17	559	538	547
18	574	542	557
19	570	529	543
20	554	534	542
21	557	538	546
22	547	534	540
23	547	538	542
24	542	534	538
25	547	532	539
26	543	535	538
27	563	535	542
28	572	561	567
29	575	556	564
30	578	556	561
31	567	556	561
MONTH	578	486	533

06307570 HANGING WOMAN CREEK BELOW HORSE CREEK, NEAR BIRNEY, MT

LOCATION.--Lat 45°08'02", long 106°29'00" (NAD 27), on section line 17-20, T. 8 S., R. 43 E., Bighorn County, Hydrologic Unit 10090101, at county road bridge, 0.6 mi downstream from Horse Creek, 0.8 mi upstream from Circle Bar Draw, and 13.2 mi southeast of Birney.

DRAINAGE AREA.--321 mi^2.

PERIOD OF RECORD.--Water years 1978-83, 1986-87, June 2005.

GAGE--None. Elevation at site is 3,400 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
JUN													
22...	0900	E.03	10	7.9	5,000	22.5	1,400	140	249	18.3	9	732	53

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN								
22...	492	18.0	.8	4.39	2,450	E3,900	E5.31	E.32

E--Estimated.

451340106295501 HANGING WOMAN CREEK BELOW HAY GULCH, NEAR BIRNEY, MT

LOCATION.--Lat 45°13'40", long 106°29'55" (NAD 27), in $NW^1/_4NW^1/_4SW^1/_4$ sec. 17, T.7 S., R.43 E., Rosebud County, Hydrologic Unit 10090101 at road crossing, 0.5 mi below Hay Gulch, and 8 mi south of Birney.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--June 2005.

GAGE.--None. Elevation of site is 3,270 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
JUN 21...	1030	E.04	8.1	3,870	24.5	1,000	81.8	200	18.0	7	546	53

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN 21...	414	19.2	.8	2.10	1,800	E2,920	E3.97	E.32

E--Estimated.

06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT

LOCATION.--Lat 45°17'44", long 106°30'12" (NAD 27), in $NW^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.19, T.6 S., R.43 E.,Rosebud County, Hydrologic Unit 10090101, on right bank immediately downstream from bridge on Birney-Otter Road, 1.9 mi south of Birney, 0.7 mi downstream from Eadt Fork, and at river mile 3.8.

DRAINAGE AREA.--470 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1973 to September 1984, October 1985 to September 1995, October 2003 to current year.

REVISED RECORDS.--WDR MT-82-1: 1980(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,180 ft (NGVD 29), from topographic map.

REMARKS.--Water-discharge records fair except those for estimated daily discharges and those above 1 ft^3/s, which are poor. Diversion for irrigation of about 1,240 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.13	e0.05	e0.02	e0.10	0.08	0.26	0.24	0.20	0.19	0.00	0.00
2	0.03	0.11	e0.10	e0.02	e0.10	0.08	0.31	0.22	0.24	0.24	0.00	0.00
3	0.03	0.12	0.10	e0.03	e0.10	0.19	0.31	0.24	0.20	0.23	0.00	0.00
4	0.03	0.11	0.11	e0.02	e0.05	0.43	0.32	0.28	0.17	0.14	0.00	0.00
5	0.03	0.12	0.10	e0.03	e0.15	0.42	0.29	0.26	0.15	0.12	0.01	0.00
6	0.03	0.12	0.09	e0.03	e0.10	0.36	0.25	0.26	0.12	0.08	0.00	0.00
7	0.03	0.11	0.08	e0.03	e0.10	0.31	0.26	0.45	0.12	0.06	0.00	0.00
8	0.03	0.12	0.07	e0.03	e0.10	0.29	0.27	1.7	0.13	0.05	0.00	0.00
9	0.03	0.13	0.08	e0.03	e0.05	0.25	0.37	0.96	0.09	0.04	0.00	0.00
10	0.03	0.12	0.08	e0.03	e0.10	0.23	0.33	0.69	0.09	0.04	0.00	0.00
11	0.03	0.11	0.09	e0.05	e0.10	0.22	0.30	1.8	0.09	0.05	0.00	0.00
12	0.04	0.11	0.09	e0.07	e0.10	0.24	0.29	2.2	0.09	0.04	0.00	0.00
13	0.04	0.12	0.08	e0.10	e0.10	0.23	0.28	1.1	0.12	0.02	0.00	0.00
14	0.08	0.12	0.07	e0.10	e0.10	0.22	0.27	0.77	0.10	0.02	0.01	0.00
15	0.12	0.12	0.06	e0.05	e0.05	0.21	0.26	0.61	0.10	0.02	0.01	0.00
16	0.07	0.12	0.06	e0.02	e0.05	0.22	0.25	0.53	0.11	0.02	0.00	0.00
17	0.08	0.12	0.06	e0.05	e0.05	0.21	0.25	0.47	0.12	0.03	0.00	0.00
18	0.08	0.10	0.06	e0.10	e0.05	0.19	0.25	0.46	0.13	0.03	0.00	0.00
19	0.08	0.11	0.06	e0.15	e0.05	0.21	0.26	0.36	0.16	0.04	0.00	0.00
20	0.08	0.13	0.08	e0.15	e0.08	0.22	0.42	0.34	0.17	0.03	0.00	0.00
21	0.08	0.10	e0.10	e0.10	e0.09	0.30	0.74	0.29	0.15	0.03	0.00	0.00
22	0.09	0.11	e0.08	e0.10	0.11	0.35	0.65	0.26	0.12	0.01	0.00	0.00
23	0.09	0.11	e0.07	e0.10	0.10	0.35	0.40	0.24	0.11	0.00	0.00	0.00
24	0.12	0.12	e0.06	e0.05	0.08	0.28	0.32	0.24	0.10	0.00	0.00	0.00
25	0.12	0.14	e0.05	e0.15	0.06	0.27	0.27	0.27	0.10	0.01	0.00	0.00
26	0.11	0.13	e0.03	e0.10	0.07	0.29	0.25	0.25	0.16	0.08	0.00	0.00
27	0.12	0.11	e0.03	e0.10	0.08	0.30	0.25	0.25	0.23	0.08	0.00	0.00
28	0.10	e0.10	e0.02	e0.05	0.09	0.29	0.24	0.23	0.18	0.05	0.00	0.00
29	0.25	e0.05	e0.02	e0.05	---	0.30	0.24	0.19	0.20	0.04	0.00	0.00
30	0.16	e0.05	e0.02	e0.05	---	0.28	0.24	0.21	0.21	0.02	0.00	0.00
31	0.16	---	e0.02	e0.10	---	0.26	---	0.21	---	0.00	0.00	---
TOTAL	2.40	3.37	2.07	2.06	2.36	8.08	9.40	16.58	4.26	1.81	0.03	0.00
MEAN	0.08	0.11	0.07	0.07	0.08	0.26	0.31	0.53	0.14	0.06	0.00	0.00
MAX	0.25	0.14	0.11	0.15	0.15	0.43	0.74	2.2	0.24	0.24	0.01	0.00
MIN	0.03	0.05	0.02	0.02	0.05	0.08	0.24	0.19	0.09	0.00	0.00	0.00
AC-FT	4.8	6.7	4.1	4.1	4.7	16	19	33	8.4	3.6	0.06	0.00

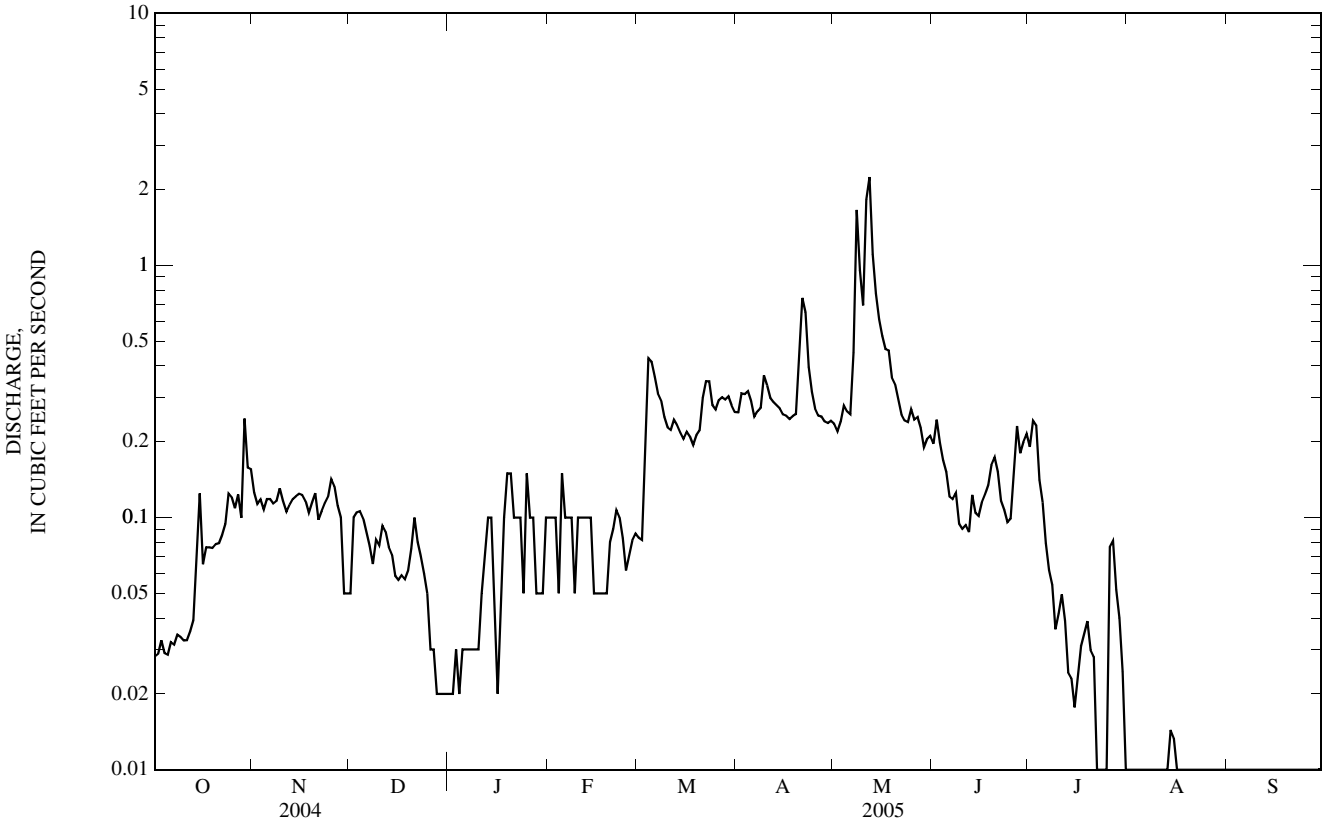
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)*

MEAN	0.63	0.81	0.87	2.36	9.36	8.94	2.69	6.06	3.36	2.61	0.97	0.41
MAX	3.02	3.05	3.11	21.1	71.3	93.2	17.4	98.5	12.9	18.7	7.18	2.33
(WY)	(1976)	(1976)	(1976)	(1974)	(1995)	(1975)	(1975)	(1978)	(1978)	(1992)	(1991)	(1975)
MIN	0.00	0.00	0.05	0.03	0.05	0.17	0.24	0.39	0.13	0.00	0.00	0.00
(WY)	(1989)	(1990)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(1988)	(1983)	(1983)

06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005*	
ANNUAL TOTAL	61.13		52.42			
ANNUAL MEAN	0.17		0.14		d3.23	
HIGHEST ANNUAL MEAN					13.6	1975
LOWEST ANNUAL MEAN					0.14	2005
HIGHEST DAILY MEAN	19	Aug 6	2.2	May 12	1,730	May 19, 1978
LOWEST DAILY MEAN	0.00	Jul 18	0.00	Jul 23	0.00	Aug 13, 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 18	0.00	Aug 6	0.00	Aug 13, 1981
MAXIMUM PEAK FLOW			a4.3	May 11	2,060	May 19, 1978
MAXIMUM PEAK STAGE			b2.65	Jan 5	f11.56	May 19, 1978
INSTANTANEOUS LOW FLOW			c0.00	Jul 15	0.00	most years
ANNUAL RUNOFF (AC-FT)	121		104		2,340	
10 PERCENT EXCEEDS	0.25		0.29		3.9	
50 PERCENT EXCEEDS	0.08		0.10		0.72	
90 PERCENT EXCEEDS	0.00		0.00		0.03	

*--During period of operation (September 1973 to September 1984, October 1985 to September 1995, October 2003 to current year).
a--Gage height, 1.50 ft.
b--Backwater from ice.
c--Many days.
d--Median of yearly mean discharge, 2.17 ft^3/s, 1,570 acre-ft year.
e--Estimated.
f--From rating curve extended to 360 ft^3/s on basis of slope-area measurement of flow, site and datum then in use.



06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-95, July 2003 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1980 to July 1983, October 1985 to September 1987 (observer daily samples); May 2004 to current year (seasonal electronic records).

INSTRUMENTATION.--A specific conductance probe was installed May 19, 2004.

REMARKS.--Daily specific conductance records are rated good to excellent. Specific conductance data not available for July 20 to October 31 due to no flow. Low-level mercury sample taken on July 13; results reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,780 microsiemens per centimeter (µS/cm) at 25.0°C, July 3, 1986; minimum daily, 263 µS/cm at 25.0°C, Feb. 27, 1986.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 2,940 microsiemens per centimeter (µS/cm) at 25.0°C, Apr. 25; minimum, 1,480 µS/cm at 25.0°C, Oct. 19, 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1045	.04	690	9.0	82	8.1	1,660	13.0	7.0	610	91.1	92.0	12.4
DEC													
02...	0900	E.10	683	9.5	73	7.8	2,300	6.0	0.0	800	111	127	16.4
FEB													
08...	1330	E.10	681	6.0	46	7.8	2,080	-5.0	0.0	760	110	118	13.7
MAR													
08...	1325	.32	681	10.1	87	8.0	1,760	12.0	4.0	620	89.2	96.6	11.5
APR													
05...	1300	.32	684	9.1	95	8.1	2,130	18.0	12.0	710	96.3	112	13.7
19...	1150	.25	680	6.4	62	8.1	2,190	3.0	8.5	730	98.3	117	14.8
MAY													
02...	1520	.22	685	10.9	113	8.2	2,280	15.0	11.5	800	103	133	15.0
16...	1500	.54	666	7.8	103	8.1	2,300	29.5	22.0	700	87.3	118	16.4
JUN													
08...	0930	.25	675	3.5	37	7.7	2,320	11.5	12.5	720	79.2	126	14.2
21...	1230	.16	680	7.2	105	8.2	2,170	32.5	28.6	660	77.4	113	12.0
JUL													
13...	1400	.03	677	12.8	184	8.7	1,850	41.0	27.0	540	50.1	101	9.47

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, sieve <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
13...	3	177	535	7.58	1.5	16.9	380	1,100	1.50	.12	81	122	.01
DEC													
02...	4	268	751	11.6	1.7	27.0	642	1,660	2.25	E.35	56	60	E.02
FEB													
08...	4	250	634	10.1	1.4	24.9	584	1,490	2.03	E.40	45	84	E.02
MAR													
08...	4	213	533	8.55	1.2	18.9	495	1,250	1.70	1.08	79	24	.02
APR													
05...	4	265	593	10.6	1.4	17.4	643	1,520	2.06	1.31	78	57	.05
19...	4	273	605	10.6	1.4	15.6	653	1,550	2.10	1.04	55	47	.03
MAY													
02...	5	305	587	10.9	1.4	16.4	716	1,650	2.25	.98	72	69	.04
16...	5	293	522	11.4	1.2	10.4	752	1,600	2.18	2.34	61	50	.07
JUN													
08...	5	282	591	9.93	1.3	12.7	753	1,630	2.22	1.10	34	25	.02
21...	4	259	572	5.70	1.4	16.5	611	1,440	1.96	.62	89	98	.04
JUL													
13...	4	235	539	4.38	1.4	13.4	489	1,230	1.67	.10	88	37	<.01

E--Estimated.

06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT													
13...	1045	<.010	E.012	E.001	.31	<.006	.022	<2	69	1.0	<2	52	55
DEC													
02...	0900	.045	.063	.005	.49	.014	.038	<2	97	1.1	<2	71	65
FEB													
08...	1330	.029	E.008	E.001	.31	E.004	.027	<2	49	1.0	<2	47	56
APR													
05...	1300	.028	E.015	.002	.48	E.004	.055	2	81	1.3	<2	47	49
MAY													
16..	1500	.018	<.016	.002	.57	.009	.046	2	120	1.5	E1	45	43
JUL													
13...	1400	--	--	--	--	--	--	--	--	--	--	--	--

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
13...	<.06	<.06	245	<.04	<.04	<2	2.9	3.8	63	760	<.08	.12	86.0
DEC													
02...	<.06	<.06	294	<.04	<.04	<6	3.2	9.2	58	430	<.08	.12	119
FEB													
08...	<.06	<.06	250	<.04	E.03	4	2.7	4.6	107	420	<.08	.10	101
APR													
05...	<.06	<.06	257	<.04	E.02	6	3.7	11.8	26	500	.12	.17	100
MAY													
16..	<.06	<.06	263	<.04	.20	E6	9.5	10.3	27	340	.09	.19	98.0
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Manga-nese, water, fltrd, ug/L (01056)	Manga-nese, water, unfltrd recover -able, ug/L (01055)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT											
13...	226	234	--	<.01	4.13	4.42	.7	1.0	1,240	1.8	3
DEC											
02...	82.1	83	--	<.01	1.94	5.04	1.0	.9	1,480	3.1	4
FEB											
08...	117	113	--	<.01	3.11	3.55	.7	1.0	1,430	3.3	2
APR											
05...	104	117	--	--	4.31	4.62	1.2	.9	1,430	6.5	5
MAY											
16..	56.0	57	--	--	3.58	5.11	.8	1.2	1,370	5.8	5
JUL											
13...	--	--	1.06	--	--	--	--	--	--	--	--

E--Estimated.

06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	---	---	---	---	---	---	2,340	2,140	2,240	2,560	2,140	2,360
2	---	---	---	---	---	---	2,270	2,110	2,190	2,610	2,350	2,460
3	---	---	---	---	---	---	2,200	2,010	2,110	2,580	2,260	2,370
4	---	---	---	---	---	---	2,220	2,060	2,160	2,370	2,250	2,310
5	---	---	---	---	---	---	2,210	2,080	2,130	2,380	2,220	2,320
6	---	---	---	---	---	---	2,240	2,060	2,160	2,380	2,200	2,300
7	---	---	---	---	---	---	2,350	2,180	2,250	2,340	1,890	2,190
8	---	---	---	---	---	---	2,260	2,160	2,220	2,760	1,790	2,160
9	---	---	---	---	---	---	2,240	2,120	2,160	2,880	2,580	2,710
10	---	---	---	---	---	---	2,300	2,100	2,180	2,640	2,290	2,470
11	---	---	---	---	---	---	2,530	2,300	2,410	2,440	1,900	2,150
12	---	---	---	---	---	---	2,580	2,360	2,490	2,160	1,750	2,010
13	---	---	---	---	---	---	2,560	2,280	2,430	2,290	2,040	2,140
14	1,600	1,520	1,580	---	---	---	2,490	2,320	2,410	2,290	2,040	2,120
15	1,540	1,510	1,520	---	---	---	2,470	2,240	2,360	2,410	2,120	2,210
16	1,550	1,510	1,530	---	---	---	2,370	2,120	2,270	2,450	2,200	2,290
17	1,550	1,520	1,530	---	---	---	2,360	2,140	2,270	2,390	2,290	2,330
18	1,560	1,540	1,550	---	---	---	2,290	2,160	2,220	2,540	2,240	2,300
19	1,590	1,480	1,550	---	---	---	2,380	2,180	2,250	2,500	2,300	2,360
20	1,580	1,540	1,560	---	---	---	2,330	2,000	2,160	2,690	2,320	2,430
21	1,570	1,530	1,550	---	---	---	2,680	2,060	2,230	2,580	2,340	2,400
22	1,570	1,530	1,560	---	---	---	2,810	2,500	2,660	2,630	2,380	2,440
23	1,590	1,540	1,570	2,260	1,970	2,130	2,870	2,570	2,680	2,510	2,380	2,450
24	1,580	1,520	1,560	2,340	2,230	2,280	2,930	2,450	2,650	2,450	2,340	2,380
25	1,590	1,520	1,570	2,430	2,230	2,360	2,940	2,450	2,620	2,500	2,320	2,380
26	1,570	1,520	1,560	2,470	2,220	2,350	2,750	2,290	2,530	2,580	2,360	2,470
27	1,590	1,530	1,560	2,340	2,140	2,240	2,820	2,210	2,420	2,670	2,340	2,520
28	1,580	1,520	1,560	2,220	2,080	2,170	2,650	2,310	2,410	2,670	2,390	2,520
29	1,570	1,520	1,540	2,210	2,010	2,120	2,740	2,180	2,360	2,570	2,420	2,490
30	1,560	1,500	1,540	2,260	2,010	2,190	2,650	2,230	2,360	2,560	2,400	2,460
31	1,560	1,540	1,550	2,280	2,090	2,200	---	---	---	2,440	2,360	2,390
MONTH	1,600	1,480	1,550	2,470	1,970	2,230	2,940	2,000	2,330	2,880	1,750	2,350
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2,480	2,280	2,370	1,950	1,880	1,920	---	---	---	---	---	---
2	2,380	2,260	2,320	1,890	1,850	1,870	---	---	---	---	---	---
3	2,540	2,310	2,410	1,940	1,870	1,890	---	---	---	---	---	---
4	2,610	2,380	2,480	1,940	1,900	1,920	---	---	---	---	---	---
5	2,660	2,410	2,490	1,940	1,880	1,920	---	---	---	---	---	---
6	2,460	2,350	2,410	1,970	1,880	1,940	---	---	---	---	---	---
7	2,400	2,290	2,350	2,040	1,860	1,920	---	---	---	---	---	---
8	2,350	2,290	2,310	1,980	1,830	1,910	---	---	---	---	---	---
9	2,340	2,280	2,320	1,980	1,890	1,930	---	---	---	---	---	---
10	2,400	2,280	2,340	1,960	1,860	1,910	---	---	---	---	---	---
11	2,390	2,240	2,320	1,910	1,790	1,860	---	---	---	---	---	---
12	2,340	2,180	2,260	1,860	1,770	1,830	---	---	---	---	---	---
13	2,230	2,150	2,190	1,900	1,780	1,840	---	---	---	---	---	---
14	2,450	2,150	2,250	1,930	1,780	1,880	---	---	---	---	---	---
15	2,360	2,250	2,280	2,100	1,790	1,940	---	---	---	---	---	---
16	2,310	2,250	2,280	2,370	1,870	2,000	---	---	---	---	---	---
17	2,320	2,230	2,280	2,240	1,930	2,040	---	---	---	---	---	---
18	2,310	2,230	2,260	2,190	1,890	1,990	---	---	---	---	---	---
19	2,280	2,180	2,220	2,130	1,810	1,950	---	---	---	---	---	---
20	2,220	2,150	2,180	---	---	---	---	---	---	---	---	---
21	2,200	2,110	2,130	---	---	---	---	---	---	---	---	---
22	2,120	2,050	2,090	---	---	---	---	---	---	---	---	---
23	2,080	2,010	2,060	---	---	---	---	---	---	---	---	---
24	2,050	2,000	2,030	---	---	---	---	---	---	---	---	---
25	2,010	1,950	1,990	---	---	---	---	---	---	---	---	---
26	2,000	1,870	1,950	---	---	---	---	---	---	---	---	---
27	1,900	1,840	1,870	---	---	---	---	---	---	---	---	---
28	1,890	1,860	1,870	---	---	---	---	---	---	---	---	---
29	1,900	1,850	1,870	---	---	---	---	---	---	---	---	---
30	1,930	1,890	1,910	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	2,660	1,840	2,200	2,370	1,770	1,920	---	---	---	---	---	---

06307600 HANGING WOMAN CREEK NEAR BIRNEY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	---	---	---
6	---	---	---
7	---	---	---
8	---	---	---
9	---	---	---
10	---	---	---
11	---	---	---
12	---	---	---
13	---	---	---
14	---	---	---
15	---	---	---
16	---	---	---
17	---	---	---
18	---	---	---
19	---	---	---
20	---	---	---
21	---	---	---
22	---	---	---
23	---	---	---
24	---	---	---
25	---	---	---
26	---	---	---
27	---	---	---
28	---	---	---
29	---	---	---
30	---	---	---
31	---	---	---
MONTH	---	---	---

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT

LOCATION.--Lat 45°24'42", long 106°27'26" (NAD 27), in $SE^1/_4SW^1/_4SW^1/_4$ sec.8, T.5 S., R.43 E., Rosebud County, Hydrologic Unit 10090102, on left bank, 60 ft upstream from Bureau of Indian Affairs bridge, 0.2 mi east of Birney Day School, 5.5 mi downstream from Cook Creek, 6.5 mi northeast of Birney, and at river mile 144.3.

DRAINAGE AREA.--2,621 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 3,060 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Flow regulated by Tongue River Reservoir (station number 06307000), and many small reservoirs in Wyoming (combined capacity, about 15,000 acre-ft). Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	97	e90	e70	e70	e75	75	89	1,320	1,110	449	335
2	94	95	e90	e70	e70	78	75	88	1,220	1,080	448	336
3	93	96	e90	e70	e70	78	74	88	1,200	964	451	334
4	92	96	e90	e70	e70	77	75	88	1,120	859	408	336
5	92	96	e90	e70	e70	77	76	87	1,040	832	397	332
6	93	96	e90	e70	e70	77	74	88	1,010	698	398	314
7	93	95	e90	e70	e70	76	74	131	936	566	408	313
8	95	96	e90	e70	e70	77	74	178	1,090	549	417	314
9	92	96	e90	e70	e70	77	89	108	1,280	547	415	289
10	93	96	e90	e70	e70	77	82	89	1,300	529	411	292
11	93	95	e90	e70	e70	76	75	131	1,230	513	417	293
12	94	96	e90	e70	e70	77	74	302	1,140	502	411	307
13	96	95	e90	e70	e70	78	74	1,230	1,180	505	425	292
14	93	96	e90	e70	e70	77	73	1,290	1,240	508	425	272
15	102	96	e90	e70	e70	77	72	1,310	1,350	501	422	243
16	98	96	e90	e70	e70	76	74	1,320	1,310	502	417	241
17	95	95	e90	e70	e70	76	74	1,050	1,370	487	382	235
18	96	95	e90	e70	e70	75	74	1,120	1,540	485	371	248
19	96	95	e90	e70	e70	75	77	1,180	1,850	476	378	236
20	94	94	e90	e70	e70	75	102	1,200	2,170	475	364	227
21	96	e90	e90	e70	e70	81	107	1,360	2,180	470	360	217
22	96	e90	e90	e70	e70	79	117	1,840	2,100	452	358	219
23	94	e90	e90	e70	e70	78	105	2,560	1,910	454	361	220
24	96	e90	e90	e70	e70	80	104	2,640	1,730	475	355	213
25	95	94	e90	e70	e70	78	106	2,620	1,620	458	354	195
26	95	95	e90	e70	e70	76	109	2,470	1,520	460	355	192
27	95	92	e90	e70	e70	76	112	2,120	1,390	445	349	194
28	96	e90	e90	e70	e70	76	108	1,800	1,290	461	341	201
29	102	e90	e90	e70	---	77	90	1,590	1,210	455	330	195
30	101	e90	e80	e70	---	76	89	1,420	1,110	451	339	196
31	97	---	e70	e70	---	75	---	1,380	---	456	337	---
TOTAL	2,954	2,823	2,760	2,170	1,960	2,383	2,584	32,967	41,956	17,725	12,053	7,831
MEAN	95.3	94.1	89.0	70.0	70.0	76.9	86.1	1,063	1,399	572	389	261
MAX	102	97	90	70	70	81	117	2,640	2,180	1,110	451	336
MIN	92	90	70	70	70	75	72	87	936	445	330	192
AC-FT	5,860	5,600	5,470	4,300	3,890	4,730	5,130	65,390	83,220	35,160	23,910	15,530

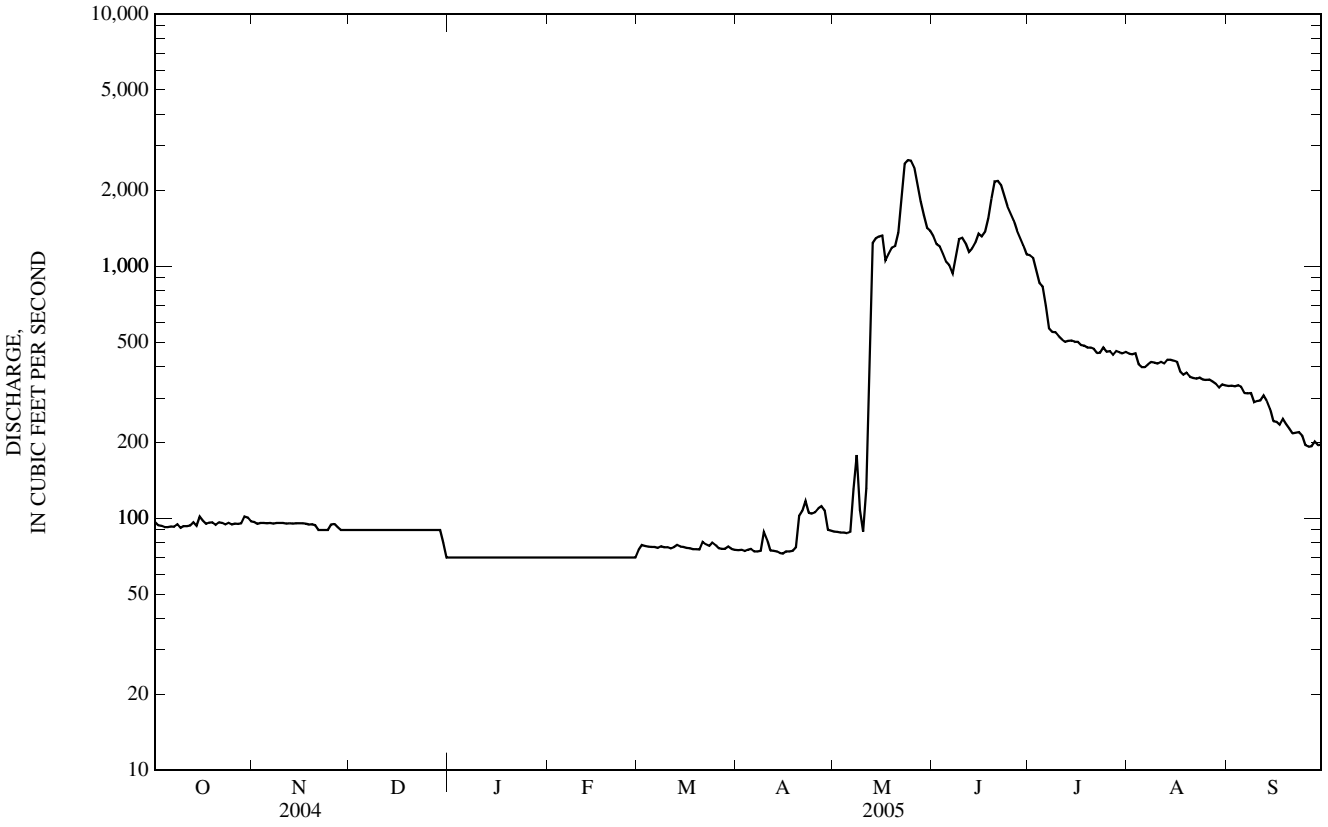
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

MEAN	229	205	169	169	185	219	259	650	1,100	544	389	305
MAX	381	347	260	287	350	434	583	1,769	2,921	1,269	676	694
(WY)	(1996)	(1987)	(1987)	(1983)	(1983)	(1996)	(1996)	(1984)	(1984)	(1995)	(1997)	(1998)
MIN	84.7	65.6	63.5	70.0	70.0	76.9	65.9	144	215	234	159	105
(WY)	(1989)	(1989)	(1989)	(2005)	(2005)	(2005)	(1992)	(2002)	(2004)	(2001)	(2002)	(2004)

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	54,729		130,166			
ANNUAL MEAN	150		357		369	
HIGHEST ANNUAL MEAN					644	1984
LOWEST ANNUAL MEAN					133	2002
HIGHEST DAILY MEAN	290	Jul 23	2,640	May 24	3,740	Jun 14, 1984
LOWEST DAILY MEAN	70	Dec 31	70	Dec 31	28	Apr 6, 1987
ANNUAL SEVEN-DAY MINIMUM	86	Jan 1	70	Dec 31	28	Apr 5, 1987
MAXIMUM PEAK FLOW			a2,690	May 23	c4,520	Jun 14, 1984
MAXIMUM PEAK STAGE			b6.40	Jan 15	b6.92	Feb 8, 1996
ANNUAL RUNOFF (AC-FT)	108,600		258,200		267,200	
10 PERCENT EXCEEDS	248		1,200		663	
50 PERCENT EXCEEDS	110		95		240	
90 PERCENT EXCEEDS	90		70		100	

a--Gage height, 5.19 ft.
b--Backwater from ice.
c--Gage height, 6.43 ft, from rating curve extended above 2,700 ft^3/s.
e--Estimated.



06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980 to 1993, October 2003 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2004 to current year (seasonal records).

INSTRUMENTATION.--Specific conductance probe installed May 1, 2004.

REMARKS.--Daily specific conductance records are rated good to excellent. Several unpublished observations of specific conductance and water temperature were made during the year. Low-level mercury analysis on July 13; result is reported in nanograms per liter.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 693 microsiemens per centimeter at 25.0°C (µS/cm), Sept. 30, 2004; minimum, 548 µS/cm at 25.0°C, Aug. 6, 2004.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 801 microsiemens per centimeter at 25.0°C (µS/cm), Mar. 18; minimum, 289 µS/cm at 25.0°C, June 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
OCT											
13...	0945	96	694	8.7	83	8.4	692	8.5	9.0	280	47.1
NOV											
04...	0930	96	*	*	*	8.4	720	--	4.0	300	54.2
DEC											
08...	1005	E90	669	13.2	103	8.3	807	0.0	0.0	320	59.3
FEB											
08...	1215	E70	684	13.0	99	8.3	805	0.0	0.0	370	69.6
MAR											
08...	1200	79	685	12.3	116	8.4	790	11.0	8.0	350	64.8
21...	1100	83	681	10.7	101	8.3	770	9.5	7.5	330	59.1
APR											
05...	1200	75	685	9.4	99	8.4	773	14.0	12.5	320	55.6
19...	1045	75	683	8.0	83	8.4	760	8.5	12.0	310	54.1
MAY											
02...	1400	87	686	11.2	108	8.4	748	14.5	9.0	360	66.6
16...	1300	1,320	670	9.4	106	8.4	730	31.0	15.0	300	56.2
JUN											
08...	1130	1,080	675	8.9	97	8.2	404	15.5	13.5	160	33.0
21...	1530	2,180	680	7.1	89	8.0	319	33.0	20.5	140	32.0
JUL											
13...	1000	509	680	7.3	102	--	325	39.0	23.0	140	33.3
26...	1330	457	690	7.8	95	8.2	390	21.0	20.0	130	30.4
AUG											
09...	1050	437	684	7.5	95	8.1	360	22.0	21.5	150	34.8
24...	1210	366	681	8.7	108	8.4	437	22.5	20.0	190	41.5
SEP											
07...	1300	319	688	9.3	111	8.5	470	28.0	19.0	200	44.9
19...	1500	236	682	10.3	120	8.5	484	27.0	17.0	220	49.7

*--Equipment problems.
E--Estimated.

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
OCT										
13...	40.3	4.25	1	48.9	27	202	4.14	.4	1.40	168
NOV										
04...	40.5	4.09	1	49.1	26	220	4.26	.4	3.46	170
DEC										
08...	42.7	4.17	1	51.5	25	256	4.46	.4	5.37	184
FEB										
08...	47.0	3.89	1	52.9	24	282	4.84	.4	5.62	178
MAR										
08...	46.0	3.92	1	53.0	24	265	4.83	.4	2.50	173
21...	43.4	3.82	1	49.1	24	247	4.59	.4	2.41	170
APR										
05...	43.1	4.06	1	52.0	26	245	4.83	.4	1.64	172
19...	42.4	4.13	1	51.4	26	227	4.95	.4	1.22	171
MAY										
02...	46.3	2.88	.7	28.6	15	237	7.59	.3	3.96	143
16...	38.2	3.38	1	41.9	23	223	4.83	.3	2.64	154
JUN										
08...	19.1	2.79	.6	16.1	18	128	2.25	.2	6.56	69.5
21...	15.5	2.14	.4	12.3	15	113	1.74	.1	6.83	49.4
JUL										
13...	15.0	1.73	.5	12.7	16	117	1.40	.2	4.93	48.6
26...	13.4	1.73	.4	11.3	16	117	1.25	.2	6.26	46.0
AUG										
09...	15.1	2.03	.5	13.3	16	129	1.52	.2	5.46	53.7
24...	20.8	2.33	.6	19.8	18	155	1.95	.2	3.10	73.5
SEP										
07...	22.3	2.54	.6	21.2	18	160	2.23	.2	2.02	81.7
19...	24.1	2.71	.6	22.0	17	170	2.36	.2	3.50	89.6

Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT						
13...	437	.59	113	85	7	1.8
NOV						
04...	458	.62	119	89	9	2.3
DEC						
08...	506	.69	E123	92	22	E5.3
FEB						
08...	532	.72	E101	86	25	E4.7
MAR						
08...	508	.69	108	91	14	3.0
21...	481	.65	108	81	10	2.2
APR						
05...				86	22	4.5
19...	465	.63	94.2	82	19	3.8
MAY						
02...	441	.60	104	73	13	3.1
16...	435	.59	1,550	81	113	403
JUN						
08...	226	.31	659	76	50	146
21...	188	.26	1,100	76	71	418
JUL						
13...	188	.26	258	89	17	23
26...	181	.25	223	90	38	47
AUG						
09...	203	.28	240	91	41	48
24...	257	.35	254	90	20	20
SEP						
07...	273	.37	235	90	12	10
19...	296	.40	189	90	9	5.7

E--Estimated.

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT												
13...	<.010	<.016	<.002	<.006	.008	.22	<2	24	.8	<2	42	43
DEC												
08...	E.005	<.016	<.002	E.003	.007	.27	E1	18	.8	<2	56	56
FEB												
08...	E.008	<.016	E.001	<.006	.009	.23	<2	11	.7	<2	59	60
APR												
05...	E.008	<.016	<.002	<.006	.018	.31	2	47	.9	<2	63	67
MAY												
16...	E.007	<.016	E.001	<.006	.110	.82	3	605	.9	<2	54	73
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	E.005	E.008	E.001	<.006	.037	.33	4	152	1.0	1.4	48	54

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT												
13...	<.06	<.06	82	<.04	<.04	<2	1.8	4.3	11	60	E.05	E.04
DEC												
08...	<.06	<.06	88	<.04	<.04	<2	3.9	2.9	11	50	<.08	<.06
FEB												
08...	<.06	<.06	82	<.04	<.04	E2	1.2	2.3	23	70	<.08	E.04
APR												
05...	<.06	<.06	85	<.04	<.04	3	2.8	7.2	26	140	.10	.16
MAY												
16...	<.06	E.05	70	<.04	.09	3	4.5	4.6	E4	1,300	.17	1.25
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	<.06	E.04	43	<.04	<.04	E1	5.8	1.5	15	310	.24	.30

Date	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT												
13...	25.6	4.2	7	--	<.01	1.85	2.07	E.4	.6	473	1.2	E1
DEC												
08...	22.4	8.4	11	--	<.01	1.85	2.93	.5	.6	599	1.3	2
FEB												
08...	28.9	17.4	19	--	<.01	2.21	2.23	.4	.7	607	1.3	E1
APR												
05...	29.5	19.0	37	--	--	--	2.02	.6	.4	611	--	2
MAY												
16...	24.8	3.8	157	--	--	2.22	3.41	.5	.9	496	4.5	6
JUL												
13...	--	--	--	1.22	--	--	--	--	--	--	--	--
AUG												
24...	10.9	5.5	54	--	--	1.70	1.90	E.2	<.4	300	4.4	E2

E--Estimated.

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	696	682	688	---	---	---	783	769	776	754	741	745
2	689	674	681	---	---	---	782	771	777	756	733	743
3	695	683	689	---	---	---	780	771	775	746	738	742
4	696	681	688	---	---	---	780	770	775	744	741	743
5	692	680	686	---	---	---	777	763	770	745	740	743
6	692	680	686	---	---	---	775	764	770	745	740	743
7	692	680	686	---	---	---	772	762	767	745	574	706
8	692	679	685	---	---	---	773	761	767	704	560	641
9	694	682	687	---	---	---	763	719	735	694	647	677
10	701	693	696	---	---	---	737	716	727	728	688	709
11	702	684	692	---	---	---	742	699	728	747	677	724
12	694	684	689	---	---	---	746	710	738	765	674	699
13	695	684	690	---	---	---	758	745	752	772	656	729
14	694	685	691	---	---	---	762	750	756	740	720	731
15	695	688	691	---	---	---	762	750	756	721	712	717
16	694	681	685	798	778	788	763	751	757	724	718	721
17	699	687	693	790	781	785	762	751	757	721	673	708
18	699	683	692	801	784	792	759	740	753	675	615	650
19	705	697	700	799	782	791	755	723	747	676	623	649
20	710	705	709	798	777	789	726	696	711	677	660	670
21	710	701	706	784	761	772	699	680	687	660	630	646
22	705	693	698	776	759	767	681	666	672	631	450	583
23	706	699	703	771	762	767	717	681	702	610	587	598
24	710	703	706	772	757	765	737	717	728	592	574	582
25	708	700	704	780	750	765	744	717	733	576	556	566
26	709	703	706	780	754	772	743	728	737	572	547	562
27	708	702	705	777	767	773	746	727	735	558	535	549
28	708	702	705	786	773	780	746	730	738	550	528	541
29	704	689	693	784	772	778	753	739	746	551	509	535
30	700	691	695	782	768	776	756	740	746	521	487	509
31	676	688	693	783	770	777	---	---	---	511	477	487
MONTH	710	674	694	801	750	777	783	666	744	772	450	656
	JUNE			JULY			AUGUST			SEPTEMBER		
1	493	440	476	316	305	310	343	331	338	458	401	435
2	505	428	460	333	301	311	344	331	338	435	401	419
3	457	432	441	324	306	313	390	333	344	432	402	419
4	454	400	432	315	305	311	352	343	348	432	406	422
5	427	389	408	314	303	307	365	345	355	439	417	431
6	407	393	399	321	313	317	359	343	351	448	427	442
7	400	379	387	336	321	326	364	347	356	469	439	456
8	388	367	381	330	316	324	370	352	361	459	438	449
9	378	354	366	329	312	321	367	351	359	460	439	451
10	367	352	361	329	318	323	376	360	368	460	441	453
11	366	352	361	331	309	321	379	359	370	465	453	460
12	365	354	358	321	306	315	373	359	367	472	455	463
13	357	338	349	326	311	319	377	363	371	465	457	461
14	352	333	340	323	308	316	395	362	378	469	451	460
15	336	331	334	320	307	314	375	348	362	467	451	462
16	338	330	334	320	303	313	366	347	357	470	456	464
17	334	326	330	319	308	314	386	359	378	473	459	466
18	333	323	327	320	308	315	410	379	397	474	460	468
19	326	318	321	324	310	316	423	387	409	492	468	481
20	321	314	319	324	313	318	442	401	425	490	476	485
21	324	314	318	330	317	324	427	380	407	499	483	491
22	320	316	319	330	317	324	437	387	416	494	479	488
23	321	314	317	331	317	324	450	405	429	514	494	505
24	318	312	316	352	314	325	453	409	436	509	488	499
25	315	301	307	358	321	336	444	410	430	523	497	508
26	310	296	305	326	323	324	460	415	442	523	513	520
27	309	289	301	335	326	330	456	402	435	521	505	515
28	310	299	304	333	323	329	445	403	430	508	495	502
29	314	306	310	340	329	334	449	401	429	512	499	506
30	319	308	313	337	327	333	435	401	417	515	498	507
31	---	---	---	340	329	336	438	404	429	---	---	---
MONTH	505	289	353	358	301	321	460	331	388	523	401	470

06307616 TONGUE RIVER AT BIRNEY DAY SCHOOL BRIDGE, NEAR BIRNEY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	516	501	509
2	517	502	510
3	513	489	501
4	501	483	495
5	512	475	495
6	518	501	509
7	538	518	528
8	536	518	528
9	533	502	515
10	535	500	516
11	554	530	543
12	532	504	517
13	550	519	536
14	559	529	543
15	558	536	547
16	568	534	551
17	573	543	559
18	571	545	555
19	566	545	558
20	583	537	559
21	578	546	561
22	573	539	558
23	575	566	571
24	567	541	557
25	568	547	559
26	564	542	555
27	566	539	554
28	563	540	554
29	568	545	557
30	588	556	576
31	586	563	577
MONTH	588	475	540

451732106085001 OTTER CREEK BELOW TAYLOR CREEK, NEAR OTTER, MT

LOCATION.--Lat 45°17'32", long 106°08'50" (NAD 27), in $NE^1/_4NE^1/_4NW^1/_4$ sec. 30, T.6 S., R.46 E., Powder River County, Hydrologic Unit 10090102, at county road crossing, 0.5 mi downstream from Taylor Creek, and 6.0 mi north of Otter.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1976 to October 1978, July 2005.

GAGE.--None. Elevation of site is 3,250 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN 29...	0900	.75	5.5	678	7.8	96	7.7	3,470	24.0	19.0	1,200	116	233

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN 29...	19.4	5	418	42	464	9.39	.6	12.9	1,390	2,480	3.37	5.02

452642106091201 OTTER CREEK BELOW TENMILE CREEK, NEAR ASHLAND, MT

LOCATION.--Lat 45°26'42", long 106°09'12" (NAD 27), in $NW^1/_4NW^1/_4SW^1/_4$ sec. 35, T.4 S., R.45 E., Powder River County, Hydrologic Unit 10090102, 0.5 mi downstream from Tenmile Creek, 0.5 mi upstream from Gene Creek, and 8 mi southeast of Ashland.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--June 2005.

GAGE.--None. Elevation of site is 3,100 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN													
28...	1100	.26	4.4	678	6.4	83	8.8	3,600	28.0	21.5	1,100	52.0	246

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN												
28...	19.4	6	475	47	438	12.9	.7	1.16	1,730	2,800	3.81	1.97

06307740 OTTER CREEK AT ASHLAND, MT

LOCATION.--Lat 45°38'18", long 106°15'17" (NAD 27), in NE$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.11, T.3 S., R.44 E.,Rosebud County, Hydrologic Unit 10090102, on left bank 200 ft downstream from bridge on U.S. Highway 212, 0.3 mi southeast of Ashland, and at river mile 2.7.

DRAINAGE AREA.--707 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to November 1985, October 1987 to September 1995, October 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,916.57 ft (NGVD 29).

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Flow regulated by Tongue River Reservoir (station number 06307000), and many small reservoirs in Wyoming (combined capacity, about 15,000 acre-ft). Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.70	e0.70	1.9	1.7	1.7	1.3	2.1	2.1	2.4	1.5	e1.5	0.82
2	e0.50	e1.0	1.9	2.0	1.8	1.3	2.0	2.1	2.8	1.5	e1.0	0.86
3	e0.40	1.6	2.0	2.0	1.8	1.2	2.3	2.1	3.1	1.6	1.1	0.75
4	e0.30	1.7	2.0	2.1	1.7	1.1	2.0	2.0	2.9	1.4	1.1	0.69
5	e0.20	1.7	1.9	2.2	1.7	1.3	1.9	1.9	3.2	1.3	e1.5	0.65
6	e0.10	1.7	1.9	e2.0	1.8	1.3	2.0	1.6	3.2	1.2	1.1	0.58
7	e0.15	2.7	1.9	e2.0	1.7	1.3	1.9	2.4	3.0	1.1	1.0	0.54
8	e0.20	2.5	1.8	2.0	1.7	1.5	1.9	5.8	4.1	1.1	0.90	0.53
9	e0.20	2.2	1.8	1.9	1.7	1.5	2.4	9.1	5.4	1.0	0.88	0.61
10	e0.20	e2.0	1.8	e2.0	1.7	1.6	2.4	12	5.0	1.0	0.94	0.63
11	e0.15	e2.0	1.8	e2.0	1.7	1.7	2.6	9.6	5.1	1.0	0.95	0.58
12	e0.15	e2.0	1.8	e2.0	1.7	1.8	2.4	8.6	4.3	0.98	1.0	0.58
13	e0.10	e2.0	1.7	e2.0	1.7	2.0	3.0	8.4	3.8	0.97	1.2	0.62
14	e0.15	e2.0	1.7	e2.0	1.6	2.1	2.3	7.2	3.6	0.93	1.3	0.63
15	e0.20	e2.0	1.8	e2.0	1.6	1.9	2.0	12	3.2	1.0	1.2	0.68
16	e0.30	1.5	1.8	e2.0	1.5	1.8	1.9	9.2	3.2	0.96	1.1	0.68
17	e0.40	1.7	1.8	e2.0	1.5	5.5	2.0	6.3	3.2	0.92	1.1	0.70
18	e0.50	1.5	1.8	e2.0	1.5	2.8	1.8	5.4	2.9	0.92	1.1	0.72
19	e0.60	1.5	1.8	e2.0	1.5	1.8	1.9	4.9	2.5	1.0	1.3	0.68
20	e0.70	1.7	2.0	e2.0	1.5	2.0	2.6	4.3	2.5	1.0	1.2	0.68
21	e0.80	1.8	1.8	2.1	1.5	e2.0	3.3	3.8	2.2	1.2	1.2	0.70
22	e0.90	1.9	1.8	1.7	1.5	e2.0	3.4	3.8	2.1	1.3	1.0	0.70
23	e1.0	1.9	1.9	1.9	1.4	e2.0	3.2	3.3	1.8	1.4	0.86	0.68
24	e1.0	1.9	1.9	1.8	1.4	e2.0	2.8	3.1	1.7	1.2	0.81	0.71
25	e1.0	1.9	1.9	1.8	1.4	e2.0	2.4	3.1	1.7	1.3	0.82	0.73
26	e1.0	1.9	1.8	1.8	1.4	e1.5	2.1	3.0	1.6	1.7	0.84	0.80
27	e1.0	1.8	1.8	1.8	1.4	e1.5	2.2	2.8	1.7	2.6	0.80	0.73
28	e1.0	1.9	1.8	1.8	1.4	e1.5	2.2	2.6	1.8	2.6	0.77	0.76
29	e1.0	1.9	1.7	1.8	---	e1.5	2.1	2.4	1.7	2.5	0.83	0.75
30	e0.90	1.9	1.8	1.8	---	e1.5	2.1	2.4	1.6	e3.0	0.81	0.82
31	e0.80	---	1.7	1.8	---	e1.5	---	2.3	---	e2.0	0.75	---
TOTAL	16.60	54.50	56.8	60.0	44.5	55.8	69.2	149.6	87.3	43.18	31.96	20.59
MEAN	0.54	1.82	1.83	1.94	1.59	1.80	2.31	4.83	2.91	1.39	1.03	0.69
MAX	1.0	2.7	2.0	2.2	1.8	5.5	3.4	12	5.4	3.0	1.5	0.86
MIN	0.10	0.70	1.7	1.7	1.4	1.1	1.8	1.6	1.6	0.92	0.75	0.53
AC-FT	33	108	113	119	88	111	137	297	173	86	63	41

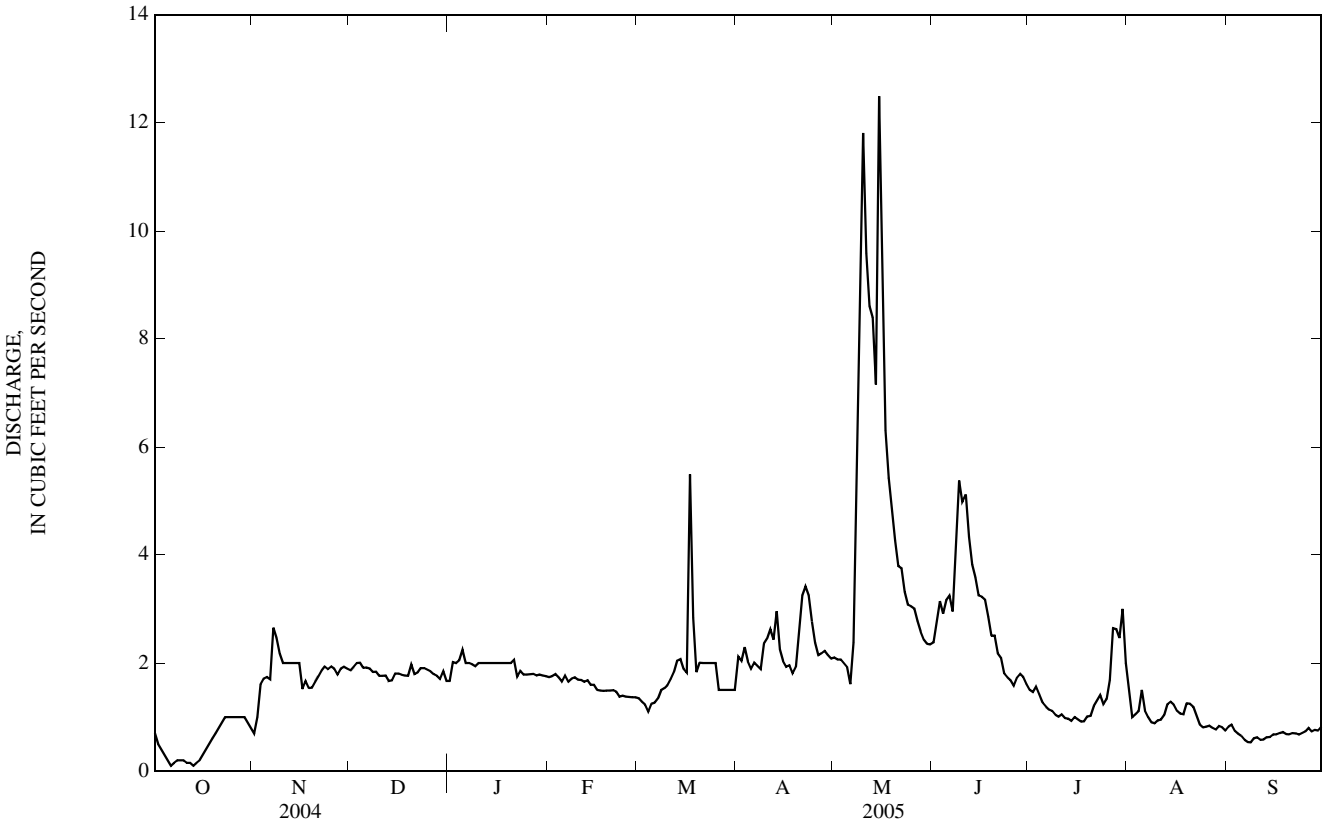
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)*

MEAN	1.36	2.42	2.42	4.61	6.55	14.4	6.17	6.89	4.19	2.19	1.31	0.86
MAX	4.43	6.12	7.03	30.2	34.9	107	28.1	53.1	15.7	8.93	5.53	4.08
(WY)	(1973)	(1980)	(1976)	(1975)	(1974)	(1975)	(1975)	(1978)	(1978)	(1978)	(1982)	(1978)
MIN	0.18	0.71	0.57	0.10	0.36	1.26	0.99	0.71	0.36	0.28	0.00	0.00
(WY)	(1993)	(1992)	(1993)	(1991)	(1993)	(1992)	(1992)	(1992)	(1993)	(1977)	(1992)	(1992)

06307740 OTTER CREEK AT ASHLAND, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005*	
ANNUAL TOTAL	617.04		690.03			
ANNUAL MEAN	1.69		1.89		c4.46	
HIGHEST ANNUAL MEAN					19.0	1975
LOWEST ANNUAL MEAN					0.60	1992
HIGHEST DAILY MEAN	14	Mar 14	12	May 10	350	Mar 6, 1994
LOWEST DAILY MEAN	0.10	Oct 6	0.10	Oct 6	0.00	Oct 14, 1976
ANNUAL SEVEN-DAY MINIMUM	0.16	Oct 6	0.16	Oct 6	0.00	Jun 24, 1977
MAXIMUM PEAK FLOW			a14	May 14	425	Mar 21, 1978
MAXIMUM PEAK STAGE			b4.77	Oct 20	b9.08	Mar 6, 1994
INSTANTANEOUS LOW FLOW					d0.00	Oct 1, 1990
ANNUAL RUNOFF (AC-FT)	1,220		1,370		3,220	
10 PERCENT EXCEEDS	3.6		3.0		8.0	
50 PERCENT EXCEEDS	1.0		1.7		1.9	
90 PERCENT EXCEEDS	0.40		0.70		0.29	

*--During period of operation (1973-85, 1988-95, October 2003 to current year).
a--Gage height, 1.89 ft.
b--Backwater from ice and beaver dam, previous site and datum.
c--Median of yearly mean discharge, 3.3 ft^3/s, 2,390 acre-ft/yr.
d--No flow at times most years.
e--Estimated.



06307740 OTTER CREEK AT ASHLAND, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-85, July 2003 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1980 to August 1985 (observer daily samples), May 2004 to October 2005 (seasonal electronic records).

INSTRUMENTATION.--Specific conductance probe was installed in May 2004.

REMARKS.--Daily specific conductance records are rated good to excellent except for the periods Apr. 18; May 1-4, 12-14; June 3-7, 16-18; and July 11 and 12, which are rated fair, and the period May 15, 16 and June 19-21, which are rated poor. Daily specific conductance data for Sept. 6 to Oct. 4 was deleted due to heavy silt on the probe. Low-level mercury samples collected on July 12 and Aug. 2; results reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,850 microsiemens per centimeter (µS/cm) at 25.0°C, Dec. 3, 1983; minimum daily, 942 µS/cm at 25.0°C, Feb. 19, 1982.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 3,210 microsiemens per centimeter (µS/cm) at 25.0°C, June 21; minimum, 1,760 µS/cm at 25.0°C, Mar. 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
12...	1015	E15	687	8.3	81	8.4	2,260	13.5	9.0	700	59.5	134	18.1
DEC													
08...	1130	1.7	670	13.3	108	8.3	2,950	5.0	1.0	860	86.8	156	20.1
FEB													
09...	0830	1.6	687	13.7	105	8.5	2,500	-3.0	0.0	720	74.4	129	16.3
MAR													
08...	1100	1.8	686	11.9	106	8.5	2,340	9.5	5.5	680	67.3	123	14.8
APR													
05...	1130	1.7	687	8.8	93	8.3	2,990	12.0	12.5	870	83.1	161	18.5
18...	1030	1.8	680	7.6	84	8.3	2,910	14.5	14.0	870	86.4	158	20.7
MAY													
04...	1020	2.1	684	9.2	95	8.5	2,810	7.5	11.5	790	72.2	148	17.9
16...	1030	9.3	676	6.8	81	8.1	2,550	21.5	17.5	740	80.0	130	16.3
JUN													
07...	0930	2.6	678	*	*	8.2	2,890	17.5	18.0	900	86.9	165	18.3
21...	0835	2.2	690	5.1	70	8.2	3,180	36.0	26.0	960	87.3	180	20.1
JUL													
12...	1245	.96	687	*	*	8.5	2,810	30.5	25.5	780	73.0	146	19.6
AUG													
02...	1015	1.0	686	5.4	71	8.4	2,330	31.0	23.5	690	57.5	132	18.8

*--Equipment problems.

06307740 OTTER CREEK AT ASHLAND, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT													
12...	5	325	548	11.5	.9	8.33	799	1,690	2.29	E68.3	86	35	E1.4
DEC													
08...	6	412	666	13.1	1.1	16.6	1,060	2,170	2.95	9.96	72	46	.21
FEB													
09...	5	334	560	10.2	.9	12.5	866	1,780	2.42	7.75	74	45	.20
MAR													
08...	5	321	507	9.36	.9	8.28	844	1,690	2.30	8.23	92	30	.15
APR													
05...	7	443	612	12.0	1.0	10.6	1,150	2,250	3.06	10.3	82	112	.51
18...	7	464	587	11.8	1.0	9.90	1,110	2,220	3.01	10.8	95	93	.45
MAY													
04...	6	408	554	11.3	.9	9.96	1,060	2,060	2.80	11.7	98	114	.65
16...	6	363	406	9.65	.7	14.0	1,040	1,900	2.58	47.6	98	110	2.8
JUN													
07...	6	421	562	11.3	.9	9.60	1,190	2,240	3.05	15.7	64	94	.66
21...	6	442	592	12.3	1.0	14.2	1,260	2,370	3.22	14.1	97	163	.97
JUL													
12...	6	400	550	10.6	.9	16.3	967	1,960	2.67	5.09	81	160	.41
AUG													
02...	5	328	520	9.66	.9	15.0	789	1,660	2.26	4.63	94	148	.41

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT													
12...	1015	E.009	<.016	<.002	.58	<.006	.050	E1	299	1.7	E1	31	36
DEC													
08...	1130	.013	.048	.003	.53	<.006	.025	<3	71	1.4	E2	37	39
FEB													
09...	0830	E.006	.024	.003	.38	<.006	.021	<3	57	1.1	<2	21	25
APR													
05...	1130	E.006	<.016	E.001	.71	<.006	.078	<3	522	1.6	2	36	48
MAY													
16...	1030	.020	E.011	.002	1.09	<.006	.104	2	807	1.5	E1	35	50
JUL													
12...	1245	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
02...	1015	<.010	<.016	E.001	1.29	<.006	.185	E2	1,020	6.5	6	41	65

E--Estimated.

06307740 OTTER CREEK AT ASHLAND, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
12...	<.06	<.06	570	E.02	E.02	<2	5.9	6.2	<18	590	<.08	.63	104
DEC													
08...	<.12	<.12	597	E.04	<.08	<6	11.3	15.1	30	220	<.16	.28	109
FEB													
09...	<.06	<.06	466	E.02	E.02	E5	3.2	7.1	28	240	<.08	.11	120
APR													
05...	<.12	E.06	499	<.08	<.08	9	3.8	20.1	E13	1,120	<.16	1.23	162
MAY													
16...	<.06	.09	392	E.02	.05	7	9.5	14.0	27	2,030	.09	2.16	80.0
JUL													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
02...	<.06	.10	532	E.03	.06	6	3.9	4.8	<18	2,220	.09	2.24	99.0

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT											
12...	9.0	68	--	<.01	2.84	5.04	1.0	1.2	1,280	2.6	5
DEC											
08...	40.8	56	--	<.01	3.06	6.35	1.5	1.8	2,150	2.2	6
FEB											
09...	71.4	75	--	<.01	2.76	3.75	1.6	1.6	1,750	2.8	3
APR											
05...	137	208	--	--	7.94	7.98	1.9	1.5	2,120	5.3	10
MAY											
16...	64.0	187	--	--	5.10	8.61	1.3	2.1	1,720	4.4	13
JUL											
12...	--	--	3.17	--	--	--	--	--	--	--	--
AUG											
02...	11.4	196	4.94	--	4.03	6.45	1.5	1.4	1,440	5.4	10

E--Estimated.

06307740 OTTER CREEK AT ASHLAND, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH			APRIL			MAY		
1	2,410	2,370	2,390	---	---	---	2,620	2,540	2,570	2,990	2,950	2,970
2	2,390	2,350	2,370	---	---	---	2,840	2,610	2,700	2,960	2,860	2,920
3	2,390	2,350	2,370	---	---	---	3,070	2,840	2,950	2,860	2,720	2,820
4	2,390	2,380	2,380	---	---	---	3,110	3,070	3,080	2,790	2,480	2,690
5	2,390	2,380	2,380	---	---	---	3,070	2,910	2,980	2,640	2,480	2,570
6	2,390	2,380	2,380	---	---	---	2,910	2,750	2,850	2,630	2,530	2,600
7	2,410	2,380	2,390	---	---	---	2,780	2,620	2,730	2,630	2,310	2,510
8	2,420	2,410	2,420	---	---	---	2,720	2,630	2,700	2,360	2,200	2,250
9	2,430	2,380	2,400	---	---	---	2,700	2,570	2,620	2,280	2,150	2,220
10	2,390	2,340	2,360	---	---	---	2,630	2,560	2,580	2,730	2,150	2,400
11	2,350	2,320	2,340	---	---	---	2,640	2,590	2,620	2,770	2,680	2,750
12	2,480	2,320	2,380	---	---	---	2,620	2,590	2,600	2,680	2,420	2,510
13	2,430	2,420	2,430	---	---	---	2,620	2,590	2,610	2,670	2,520	2,630
14	2,450	2,430	2,430	---	---	---	2,620	2,600	2,610	2,640	2,380	2,500
15	2,440	2,300	2,340	---	---	---	2,670	2,600	2,630	2,530	2,370	2,440
16	2,300	2,270	2,280	---	---	---	2,820	2,670	2,740	2,740	2,530	2,610
17	2,290	2,260	2,270	---	---	---	2,940	2,820	2,880	2,760	2,670	2,720
18	2,260	2,250	2,260	---	---	---	2,950	2,860	2,930	2,720	2,560	2,690
19	2,260	2,240	2,250	---	---	---	2,860	2,700	2,800	2,670	2,560	2,600
20	2,300	2,250	2,280	---	---	---	2,710	2,580	2,650	2,710	2,560	2,630
21	2,260	2,240	2,250	---	---	---	2,600	2,540	2,570	2,790	2,710	2,760
22	2,260	2,220	2,240	---	---	---	2,540	2,320	2,470	2,780	2,700	2,740
23	2,240	2,230	2,230	2,460	2,400	2,450	2,320	2,210	2,270	2,720	2,660	2,690
24	2,240	2,230	2,240	2,450	2,410	2,430	2,330	2,220	2,290	2,660	2,580	2,630
25	2,270	2,240	2,260	2,480	2,420	2,450	2,580	2,330	2,450	2,620	2,560	2,580
26	2,290	2,270	2,280	2,450	2,230	2,370	2,780	2,580	2,690	2,760	2,620	2,680
27	2,320	2,270	2,290	2,270	1,910	2,140	2,880	2,780	2,830	2,910	2,760	2,830
28	2,340	2,220	2,270	2,010	1,760	1,900	2,980	2,880	2,920	3,010	2,910	2,960
29	2,250	2,120	2,190	2,190	1,790	2,000	3,000	2,970	2,990	3,060	3,010	3,030
30	2,140	2,120	2,130	2,440	2,180	2,360	3,000	2,980	2,990	3,100	3,050	3,080
31	2,130	2,100	2,120	2,550	2,440	2,490	---	---	---	3,160	3,100	3,130
MONTH	2,480	2,100	2,310	2,550	1,760	2,290	3,110	2,210	2,710	3,160	2,150	2,680
	JUNE			JULY			AUGUST			SEPTEMBER		
1	3,190	3,150	3,160	2,610	2,550	2,590	2,350	2,310	2,330	2,380	2,350	2,360
2	3,150	3,120	3,140	2,600	2,490	2,570	2,400	2,340	2,350	2,410	2,370	2,380
3	3,140	3,120	3,130	2,530	2,480	2,510	2,360	2,320	2,340	2,430	2,390	2,400
4	3,120	3,080	3,100	2,540	2,480	2,500	2,510	2,360	2,400	2,440	2,410	2,420
5	3,090	3,010	3,050	2,580	2,510	2,540	2,670	2,510	2,580	2,470	2,440	2,450
6	3,010	2,960	2,980	2,610	2,540	2,580	2,800	2,660	2,730	---	---	---
7	3,030	2,520	2,890	2,630	2,570	2,600	2,870	2,800	2,840	---	---	---
8	2,750	2,630	2,700	2,680	2,610	2,640	2,900	2,850	2,880	---	---	---
9	2,710	2,570	2,640	2,720	2,660	2,690	2,910	2,830	2,880	---	---	---
10	2,780	2,570	2,760	2,740	2,690	2,720	2,890	2,840	2,870	---	---	---
11	2,890	2,750	2,820	2,790	2,710	2,750	2,870	2,800	2,830	---	---	---
12	3,040	2,890	3,000	2,790	2,580	2,720	2,830	2,740	2,780	---	---	---
13	3,020	2,970	2,980	2,670	2,590	2,630	2,740	2,660	2,700	---	---	---
14	3,020	2,970	2,990	2,710	2,630	2,670	2,670	2,570	2,620	---	---	---
15	2,990	2,820	2,930	2,730	2,680	2,710	2,580	2,500	2,540	---	---	---
16	2,820	2,780	2,790	2,750	2,710	2,730	2,530	2,470	2,500	---	---	---
17	2,910	2,780	2,840	2,740	2,720	2,730	2,470	2,430	2,450	---	---	---
18	3,040	2,910	2,970	2,760	2,720	2,740	2,460	2,410	2,430	---	---	---
19	3,100	3,020	3,060	2,760	2,730	2,740	2,420	2,380	2,400	---	---	---
20	3,180	3,090	3,130	2,760	2,710	2,730	2,400	2,320	2,360	---	---	---
21	3,210	2,990	3,140	2,760	2,720	2,730	2,340	2,300	2,310	---	---	---
22	3,100	3,010	3,070	2,770	2,740	2,750	2,330	2,310	2,320	---	---	---
23	3,060	3,000	3,030	2,770	2,660	2,690	2,340	2,310	2,320	---	---	---
24	3,010	2,930	2,980	2,690	2,660	2,670	2,320	2,290	2,300	---	---	---
25	3,000	2,960	2,970	2,670	2,620	2,650	2,320	2,280	2,300	---	---	---
26	2,990	2,920	2,960	2,620	2,580	2,600	2,300	2,280	2,290	---	---	---
27	2,930	2,810	2,890	2,590	2,530	2,550	2,310	2,280	2,290	---	---	---
28	2,870	2,790	2,830	2,540	2,460	2,500	2,310	2,280	2,290	---	---	---
29	2,810	2,780	2,790	2,460	2,410	2,430	2,330	2,290	2,300	---	---	---
30	2,780	2,550	2,700	2,410	2,370	2,390	2,340	2,280	2,320	---	---	---
31	---	---	---	2,400	2,320	2,360	2,360	2,300	2,330	---	---	---
MONTH	3,210	2,520	2,950	2,790	2,320	2,630	2,910	2,280	2,490	2,470	2,350	2,400

06307740 OTTER CREEK AT ASHLAND, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
		OCTOBER	
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	2,020	1,920	1,950
6	2,000	1,930	1,970
7	2,010	1,960	1,990
8	1,960	1,920	1,940
9	1,920	1,860	1,890
10	1,930	1,880	1,900
11	1,940	1,930	1,940
12	1,980	1,940	1,960
13	2,090	1,980	2,020
14	2,220	2,090	2,160
15	2,290	2,210	2,250
16	2,340	2,260	2,300
17	2,350	2,340	2,340
18	2,370	2,340	2,360
19	2,440	2,370	2,400
20	2,540	2,440	2,480
21	2,640	2,540	2,590
22	2,710	2,640	2,680
23	2,730	2,700	2,710
24	2,720	2,670	2,700
25	2,680	2,640	2,650
26	2,640	2,620	2,630
27	2,620	2,590	2,610
28	2,600	2,570	2,590
29	2,570	2,530	2,560
30	2,540	2,520	2,530
31	2,530	2,510	2,520
MONTH	2,730	1,860	2,320

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT

LOCATION.--Lat 45°50'24", long 106°13'22" (NAD 27), in $SE^1/_4$ $SW^1/_4$ $NE^1/_4$ sec.14, T.1 N., R.44 E., Rosebud County, Hydrologic Unit 10090102, on right bank downstream from county bridge, 22 mi north of Ashland, and at river mile 81.3.

DRAINAGE AREA.--3,948 mi^2. Area at site used prior to July 2000, 4,062 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to September 1984, July 2000 to current year.

GAGE--Water-stage recorder. Elevation of gage is 2,760 ft (NGVD 29), from topographic map. October 1973 to September 1984, water-stage recorder at site 6.5 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated by Tongue River Reservoir (station number 06307000), and many small reservoirs in Wyoming combined capacity (about 15,000 acre-ft). Diversions for irrigation for about 73,000 acres above station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	109	e120	e50	e100	98	86	101	1,330	1,120	427	338
2	96	105	e130	e50	e100	96	85	99	1,290	1,100	398	323
3	99	104	e130	e50	e100	98	84	97	1,190	1,140	397	319
4	97	103	e120	e60	e100	92	84	96	1,150	967	408	332
5	97	103	e110	e50	e90	91	83	95	1,090	877	371	338
6	97	102	e90	e60	e70	90	83	94	1,090	834	358	335
7	96	102	e90	e70	e50	89	83	95	1,020	720	368	316
8	96	102	e90	e80	e60	88	82	204	1,050	601	376	318
9	96	103	e100	e80	e60	88	97	306	1,110	561	369	319
10	96	102	e110	e70	e80	88	97	175	1,250	547	377	306
11	94	102	e120	e70	e100	87	98	150	1,260	530	373	309
12	96	103	e110	e60	e110	87	92	203	1,200	507	388	315
13	97	103	e90	e50	e130	89	85	257	1,150	488	397	337
14	98	103	e90	e40	e120	92	82	1,120	1,160	473	412	330
15	103	104	e110	e50	e110	90	80	1,100	1,230	469	412	311
16	103	104	e100	e60	e100	88	79	1,130	1,300	463	422	284
17	107	104	e110	e70	e90	88	80	1,150	1,270	457	419	281
18	106	104	e110	e90	e100	93	79	930	1,320	447	397	277
19	105	104	e110	e100	e100	90	82	1,010	1,460	427	397	286
20	104	104	e110	e110	e110	87	95	1,060	1,680	420	394	276
21	106	102	e100	e90	e100	89	108	1,090	1,880	421	379	271
22	105	106	e80	e70	e100	88	120	1,200	1,870	419	374	253
23	104	103	e60	e80	94	91	118	1,610	1,810	409	361	251
24	103	117	e70	e100	99	94	119	2,080	1,690	412	350	251
25	101	124	e100	e100	103	93	111	2,190	1,580	427	344	255
26	101	118	e90	e100	103	92	106	2,170	1,500	425	342	233
27	101	107	e90	e100	105	89	108	2,060	1,430	419	338	227
28	101	e90	e80	e100	104	88	111	1,840	1,350	402	349	232
29	112	e100	e90	e100	---	91	116	1,640	1,270	405	350	233
30	112	e110	e80	e100	---	90	113	1,480	1,190	406	335	229
31	111	---	e70	e90	---	88	---	1,360	---	417	337	---
TOTAL	3,135	3,147	3,060	2,350	2,688	2,802	2,846	28,192	40,170	17,710	11,719	8,685
MEAN	101	105	98.7	75.8	96.0	90.4	94.9	909	1,339	571	378	290
MAX	112	124	130	110	130	98	120	2,190	1,880	1,140	427	338
MIN	94	90	60	40	50	87	79	94	1,020	402	335	227
AC-FT	6,220	6,240	6,070	4,660	5,330	5,560	5,650	55,920	79,680	35,130	23,240	17,230

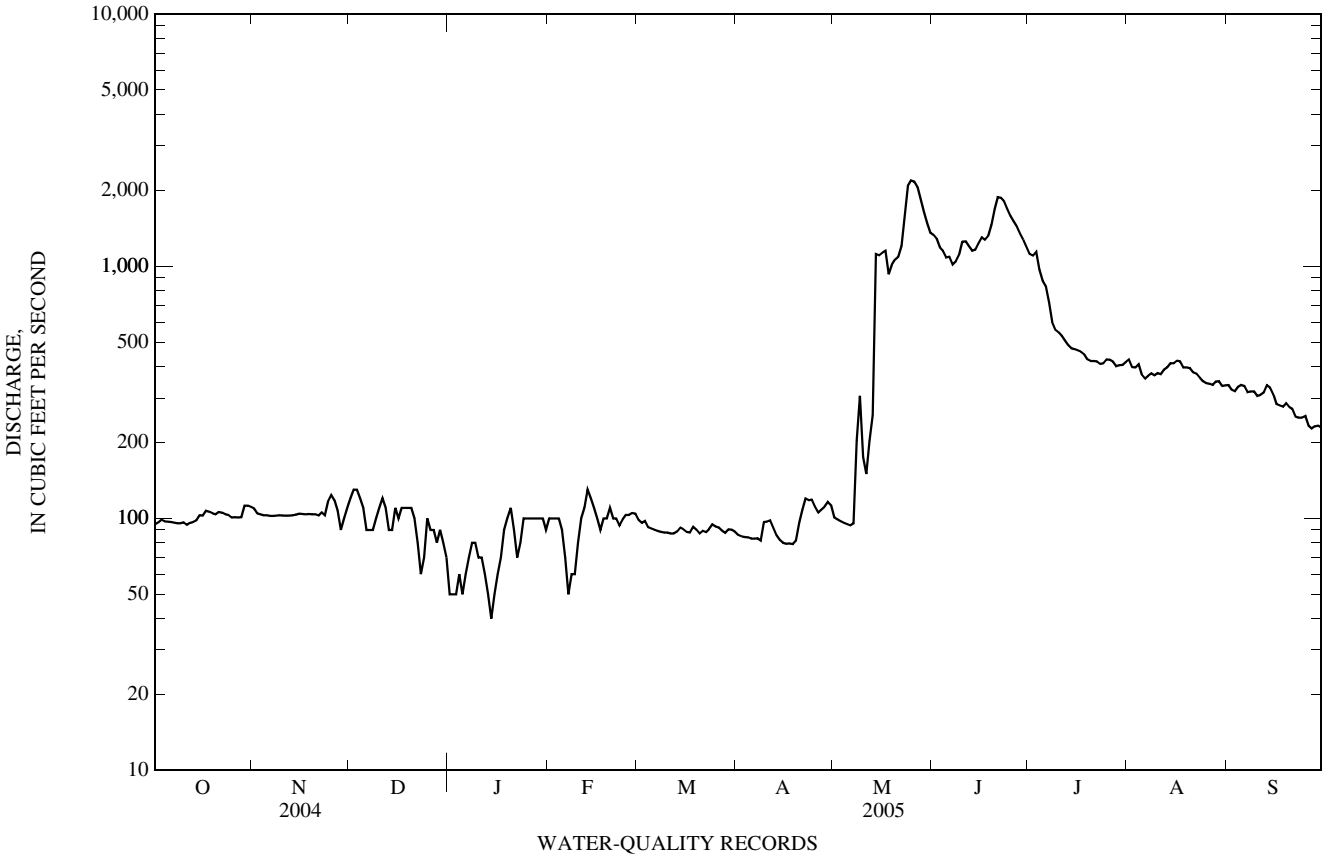
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)*

MEAN	247	197	178	196	208	274	288	769	1,324	626	403	292
MAX	511	388	389	334	406	705	594	2,502	3,452	2,261	915	436
(WY)	(1974)	(1974)	(1979)	(1975)	(1983)	(1975)	(1975)	(1978)	(1978)	(1975)	(1975)	(1979)
MIN	101	84.3	95.5	75.8	90.4	81.3	94.9	111	185	183	125	107
(WY)	(2005)	(1976)	(2002)	(2005)	(2002)	(2002)	(2005)	(2002)	(2004)	(2002)	(2001)	(2004)

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005*	
ANNUAL TOTAL	54,567		126,504			
ANNUAL MEAN	149		347		419	
HIGHEST ANNUAL MEAN					885	1975
LOWEST ANNUAL MEAN					120	2002
HIGHEST DAILY MEAN	280	Aug 6	2,190	May 25	7,600	May 22, 1978
LOWEST DAILY MEAN	60	Jan 5	40	Jan 14	40	Jan 14, 2005
ANNUAL SEVEN-DAY MINIMUM	81	Dec 22	56	Dec 31	53	Nov 25, 1975
MAXIMUM PEAK FLOW			2,220	May 25	a8,280	May 22, 1978
MAXIMUM PEAK STAGE			8.85	May 25	b11.49	Mar 15, 2003
ANNUAL RUNOFF (AC-FT)	108,200		250,900		303,500	
10 PERCENT EXCEEDS	215		1,140		876	
50 PERCENT EXCEEDS	144		107		258	
90 PERCENT EXCEEDS	97		82		102	

*--During period of operation (October 1973 to September 1984, July 2000 to current year).
a--Gage height 9.96 ft, site and datum then in use.
b--Backwater from ice.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-81, June 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 2000 to current year, (seasonal records).
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1981.

INSTRUMENTATION.--Conductance probe installed Aug. 23, 2000.

REMARKS.--Specific conductance data available for periold Oct. 1-31, 2004 and Mar. 16 to Oct. 31, 2005 to provide approved data for the complete period of seasonal operation. Seasonal specific conductance records are rated good to excellent except during the periods May 25-28, June 16-19, and Oct. 30-31, when they were rated fair and May 15-16, 29-31, June 1-7 and 20-21, when they were rated poor. Missing daily specific conductance data for Mar. 21-22 due to equipment problems. Several unpublished observations of water temperature and specific conductance were made during the year. Low-level mercury analysis on Aug. 2; result is reported in nanograms per liter.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,140 microsiemens per centimeter (µS/cm) at 25.0°C, Jan. 2, 3, 2002; minimum, 322 µS/cm at 25.0°C, July 1, 2005.
SEDIMENT CONCENTRATION: Maximum daily mean, 6,400 mg/L July 26, 1979; minimum daily mean, 1 mg/L Oct. 18, 24, 1976.
SEDIMENT LOAD: Maximum daily, 27,200 tons May 19, 1978; minimum daily, 0.47 ton Nov. 15-17, 1975.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 1,020 microsiemens per centimeter (µS/cm) at 25.0°C, Mar. 31 and Apr. 1; minimum, 322 µS/cm, at 25.0°C July 1.

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
12...	1230	95	692	10.1	101	8.5	786	13.0	11.0	320	53.3	46.2	4.95
NOV													
01...	1215	110	698	12.0	104	8.7	768	7.5	5.5	300	52.3	40.5	4.37
DEC													
08...	1300	E90	673	13.1	102	8.4	910	6.5	0.0	360	64.3	48.2	4.84
FEB													
09...	1000	E60	690	13.4	102	8.4	926	1.5	0.0	380	69.8	50.8	4.63
MAR													
10...	1100	92	692	11.1	102	8.5	904	11.0	7.5	370	65.3	50.6	4.91
22...	1300	90	686	11.2	108	8.4	906	15.5	9.0	370	64.5	51.7	4.91
APR													
06...	1130	85	694	10.3	104	8.5	920	17.5	11.5	360	59.3	51.1	5.38
18...	1230	80	686	9.8	111	8.5	919	18.0	16.0	360	59.3	50.9	5.83
MAY													
04...	1220	97	689	10.0	109	8.5	876	20.0	14.5	350	58.7	50.5	4.96
16...	1330	1,130	681	8.3	98	8.3	744	26.5	17.5	310	58.6	38.9	3.67
JUN													
07...	1200	1,000	683	8.4	97	8.1	430	21.0	17.0	190	36.9	22.6	3.36
21...	1100	1,880	694	7.5	96	8.0	337	29.0	23.0	150	32.5	16.2	2.41
JUL													
12...	1445	510	691	--	--	8.6	373	36.0	26.0	170	37.9	18.6	2.24
27...	1230	420	690	8.2	102	8.3	412	33.0	21.0	170	39.0	18.4	2.67
AUG													
02...	1220	396	691	8.0	110	8.3	408	31.0	26.5	180	40.5	19.3	2.49
23...	1545	369	681	8.3	110	8.4	480	32.0	23.5	200	43.0	22.8	3.07
SEP													
06...	1300	336	694	9.0	108	8.5	473	29.0	19.5	210	45.0	23.6	2.87
20...	1100	272	693	9.3	101	8.4	530	25.0	14.5	230	50.8	26.0	3.04

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
12...	2	62.9	228	5.13	.4	4.55	209	524	.71	134	75	34	8.7
NOV													
01...	1	59.2	230	4.89	.4	4.15	197	501	.68	149	89	36	11
DEC													
08...	2	66.2	263	5.39	.4	7.58	222	577	.78	E140	82	68	E16
FEB													
09...	2	68.3	288	5.48	.4	7.47	222	602	.82	E98	88	45	E7.3
MAR													
10...	2	70.9	271	5.59	.4	4.80	220	585	.80	145	90	31	7.7
22...	2	72.7	265	5.42	.4	5.21	223	587	.80	143	90	22	5.3
APR													
06...	2	75.6	269	5.76	.4	4.56	233	597	.81	137	46	218	50
18...	2	80.4	251	5.90	.4	4.13	241	598	.81	129	94	58	13
MAY													
04...	2	69.8	241	5.68	.4	4.05	219	557	.76	146	91	37	9.7
16...	1	44.3	223	4.91	.3	3.14	167	455	.62	1,390	90	513	1,570
JUN													
07...	.7	21.2	137	2.49	.2	6.57	84.7	260	.35	703	91	157	424
21...	.5	13.5	115	1.82	.2	7.17	53.5	196	.27	996	86	271	1,380
JUL													
12...	.7	20.6	137	2.05	.2	6.62	69.6	240	.33	330	90	54	74
27...	.6	19.3	135	1.79	.2	6.88	70.2	239	.33	271	95	71	81
AUG													
02...	.6	18.7	142	1.69	.2	6.59	65.9	240	.33	257	90	40	43
23...	.8	25.6	163	2.30	.2	3.47	87.2	286	.39	285	93	29	29
SEP													
06...	.7	23.7	156	2.51	.2	1.81	89.6	283	.38	257	89	19	17
20...	.8	27.6	182	2.74	.3	3.09	104	327	.44	240	89	13	9.5

E--Estimated.

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)
OCT												
12...	1230	<.010	<.016	<.002	<.006	.013	.23	2	109	.8	<2	58
DEC												
08...	1300	E.005	<.016	E.001	<.006	.018	.30	<2	172	.8	E1	55
FEB												
09...	1000	E.006	<.016	<.002	<.006	.007	.18	<2	46	.6	E1	51
APR												
06...	1130	E.005	<.016	<.002	<.006	.024	.31	E1	119	.8	<2	68
MAY												
16...	1330	E.005	<.016	E.001	<.006	.30	1.36	4	3,550	.8	3	66
AUG												
02...	--	--	--	--	--	--	--	--	--	--	--	--
23...	1545	<.010	<.016	<.002	<.006	.036	.29	4	291	1.1	1.1	49

Date	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT													
12...	59	<.06	<.06	121	<.04	<.04	<2	2.6	2.4	E4	240	<.08	.22
DEC													
08...	58	<.06	<.06	113	<.04	<.04	<2	3.4	5.1	10	360	<.08	.29
FEB													
09...	57	<.06	<.06	109	<.04	<.04	E2	1.5	2.8	15	130	<.08	.10
APR													
06...	69	<.06	<.06	123	<.04	<.04	3	1.9	5.5	8	250	E.06	.27
MAY													
16...	140	<.06	.40	66	<.04	.17	8	3.3	13.1	<6	6,880	.17	6.98
AUG													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	56	<.06	E.05	56	<.04	<.04	E1	1.3	1.5	E4	490	E.08	.48

Date	Lithium water, fltrd, ug/L (01130)	Manga-nese, water, fltrd, ug/L (01056)	Manga-nese, water, unfltrd recover -able, ug/L (01055)	Mercury water unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT												
12...	26.1	7.0	16	--	<.01	1.73	2.93	E.4	E.4	641	1.2	E2
DEC												
08...	24.2	8.9	32	--	<.01	1.60	3.15	E.3	.8	694	.9	3
FEB												
09...	30.6	13.0	16	--	<.01	2.08	2.33	E.3	.6	701	1.1	E2
APR												
06...	42.6	12.5	55	--	--	3.47	2.46	E.4	E.4	787	3.0	3
MAY												
16...	22.3	1.0	397	--	--	2.08	10.7	.5	1.4	553	3.4	27
AUG												
02...	--	--	--	2.02	--	--	--	--	--	--	--	--
23...	14.5	1.4	39	--	--	2.32	2.29	E.2	<.4	346	1.5	2

E--Estimated.

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASONAL DATA FROM OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	795	786	790				1,020	963	993	871	857	864
2	795	789	792				963	925	953	881	871	876
3	796	790	793				951	921	945	882	830	870
4	803	793	796				949	911	939	899	854	882
5	811	802	806				944	903	930	899	883	892
6	811	804	808				959	908	944	916	887	892
7	809	801	805				956	920	947	916	826	877
8	814	804	808				949	933	945	836	739	778
9	814	803	809				939	834	885	780	651	704
10	812	804	808				901	849	880	729	658	677
11	811	805	808				916	901	910	787	729	770
12	812	804	807				915	898	908	855	784	822
13	810	801	805				915	905	909	820	769	790
14	810	802	806				929	915	924	778	670	719
15	806	797	802				930	920	926	759	729	751
16	802	793	797	951	931	941	939	922	934	764	750	758
17	796	786	790	946	935	940	932	924	929	765	756	759
18	791	777	785	937	912	923	944	929	937	784	758	770
19	789	776	783	996	920	947	935	903	928	775	704	743
20	795	789	792	996	972	982	903	856	882	704	554	608
21	795	782	788	---	---	---	859	851	855	571	541	564
22	833	781	800	---	---	*906	855	835	846	566	555	561
23	832	808	816	947	940	944	835	830	832	556	524	542
24	810	802	806	944	921	932	836	829	833	534	522	529
25	815	805	810	931	908	921	841	831	835	523	515	521
26	816	808	812	930	918	923	841	828	835	522	514	518
27	814	804	809	930	922	926	833	824	828	516	508	514
28	814	806	810	926	896	921	843	833	839	517	503	510
29	814	732	773	911	895	905	850	843	846	513	507	510
30	783	748	774	926	900	915	857	845	851	511	501	506
31	782	774	779	1,020	908	946	---	---	---	512	481	499
MONTH	833	732	799	1,020	895	933	1,020	824	898	916	481	696
	JUNE			JULY			AUGUST			SEPTEMBER		
1	481	462	472	355	322	337	401	389	396	499	474	486
2	493	463	478	334	328	331	405	389	399	495	473	482
3	484	450	462	339	328	332	409	396	402	515	493	503
4	471	444	454	363	338	352	419	397	405	509	477	489
5	469	454	462	366	360	363	442	397	419	490	475	483
6	462	413	437	372	363	369	438	423	432	489	475	482
7	458	421	440	402	372	386	447	437	442	500	487	492
8	449	411	438	424	400	408	444	433	438	509	496	501
9	449	427	439	427	419	423	446	428	437	522	503	511
10	428	415	422	422	406	415	453	434	444	523	510	517
11	422	405	414	415	404	409	456	443	449	519	515	517
12	429	413	422	415	407	410	455	443	449	521	511	516
13	438	423	431	418	404	412	460	441	451	517	510	513
14	440	418	429	411	397	406	456	445	450	524	511	517
15	432	414	423	409	395	403	459	446	453	530	516	523
16	417	406	411	402	392	398	477	457	466	539	526	532
17	427	411	418	397	385	393	466	446	458	540	531	535
18	427	354	391	395	381	389	458	444	451	543	532	538
19	357	344	349	400	381	392	472	447	461	539	532	536
20	349	338	343	400	387	394	480	459	469	541	533	536
21	345	341	343	401	386	393	485	459	472	545	535	541
22	345	339	342	400	386	393	503	474	491	568	545	560
23	343	338	340	406	390	399	494	479	486	570	561	566
24	346	337	341	445	393	411	494	463	478	580	566	573
25	342	334	338	403	389	396	503	473	488	579	565	572
26	340	335	338	394	384	390	505	478	492	607	577	594
27	339	333	336	419	384	406	508	492	499	613	595	604
28	341	332	335	407	397	402	513	483	497	614	601	607
29	352	328	339	416	403	411	512	492	502	628	614	620
30	355	344	349	411	395	406	503	481	492	633	619	625
31	---	---	---	408	394	401	502	486	495	---	---	---
MONTH	493	328	398	445	322	391	513	389	457	633	473	536

*--Instantaneous value from water-quality sample.

06307830 TONGUE RIVER BELOW BRANDENBERG BRIDGE, NEAR ASHLAND, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS--CONTINUED
SEASONAL DATA FROM OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	632	613	620
2	630	613	619
3	621	588	599
4	596	557	578
5	557	540	546
6	559	545	553
7	577	551	566
8	599	576	587
9	599	583	590
10	606	584	596
11	607	594	599
12	639	607	623
13	647	630	638
14	657	644	651
15	671	651	662
16	690	666	678
17	709	685	697
18	720	703	711
19	732	716	724
20	736	726	731
21	740	719	730
22	751	709	736
23	761	748	754
24	758	748	754
25	755	742	751
26	745	732	739
27	734	721	729
28	722	712	717
29	714	704	709
30	706	696	701
31	697	686	692
MONTH	761	540	664

06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT

LOCATION.--Lat 46°11'15", long 105°46'46" (NAD 27), in NE$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.13, T.5 N., R.48 E., Custer County, Hydrologic Unit 10090102, on right bank at private bridge, 4.7 mi south of Twelve Mile Diversion Dam 16 mi south of Miles City, and at river mile 28.4.

DRAINAGE AREA.--4,508 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 2,480 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges for Oct. 1-26, which are fair and those for Nov. 27-29 and Dec. 8 to Feb. 27, which are poor. Flow regulated by Tongue River Reservoir (station number 06307000) and many small reservoirs in Wyoming (combined capacity about 15,000 acre-ft). U.S. Geological Survey telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e100	111	93	e60	e90	100	88	98	1,470	1,300	319	275
2	e100	107	109	e50	e90	100	86	89	1,500	1,230	326	271
3	e100	104	155	e50	e90	91	83	80	1,390	1,190	304	265
4	e100	101	140	e60	e90	90	83	78	1,290	1,210	300	266
5	e100	99	104	e50	e80	85	85	77	1,250	1,000	307	278
6	e100	98	82	e60	e60	85	77	75	1,180	911	280	284
7	e100	98	77	e70	e50	79	74	89	1,190	827	263	287
8	e100	98	e80	e70	e60	84	74	277	1,720	711	278	277
9	e100	98	e90	e70	e60	82	79	305	1,420	591	290	270
10	e100	98	e100	e60	e100	82	113	309	1,310	547	289	271
11	e90	98	e110	e60	e120	85	108	212	1,370	524	292	266
12	e90	98	e100	e50	e130	86	96	226	1,360	485	297	271
13	e90	98	e90	e50	e130	89	89	486	1,290	460	323	290
14	e90	99	e90	e40	e130	89	80	998	1,250	425	325	296
15	e100	99	e100	e50	e120	89	80	1,210	1,260	401	331	293
16	e100	99	e90	e60	e110	90	77	1,130	1,350	394	329	283
17	e110	99	e100	e60	e100	89	74	1,150	1,390	392	336	270
18	e110	99	e100	e60	e100	88	72	1,140	1,360	385	330	265
19	e100	99	e100	e70	e100	88	71	931	1,430	367	328	259
20	e100	99	e100	e100	e100	90	103	1,050	1,570	332	324	263
21	e100	98	e90	e100	e100	89	178	1,150	1,790	321	321	258
22	e100	97	e70	e90	e90	90	131	1,150	1,910	315	305	255
23	e100	99	e60	e80	e90	90	110	1,270	1,880	323	297	242
24	e100	104	e70	e90	e90	95	102	1,720	1,830	307	289	240
25	e100	111	e90	e90	e100	95	101	2,030	1,800	314	283	239
26	e100	109	e80	e90	e100	94	100	2,100	1,710	350	279	241
27	97	e100	e80	e90	e100	91	99	2,100	1,720	336	281	227
28	98	e80	e70	e90	101	89	94	2,020	1,580	336	287	221
29	130	e80	e80	e90	---	91	96	1,830	1,680	317	288	219
30	140	85	e80	e90	---	90	94	1,680	1,430	318	271	218
31	116	---	e70	e80	---	87	---	1,540	---	314	266	---
TOTAL	3,161	2,962	2,850	2,180	2,681	2,762	2,797	28,600	44,680	17,233	9,338	7,860
MEAN	102	98.7	91.9	70.3	95.8	89.1	93.2	923	1,489	556	301	262
MAX	140	111	155	100	130	100	178	2,100	1,910	1,300	336	296
MIN	90	80	60	40	50	79	71	75	1,180	307	263	218
AC-FT	6,270	5,880	5,650	4,320	5,320	5,480	5,550	56,730	88,620	34,180	18,520	15,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

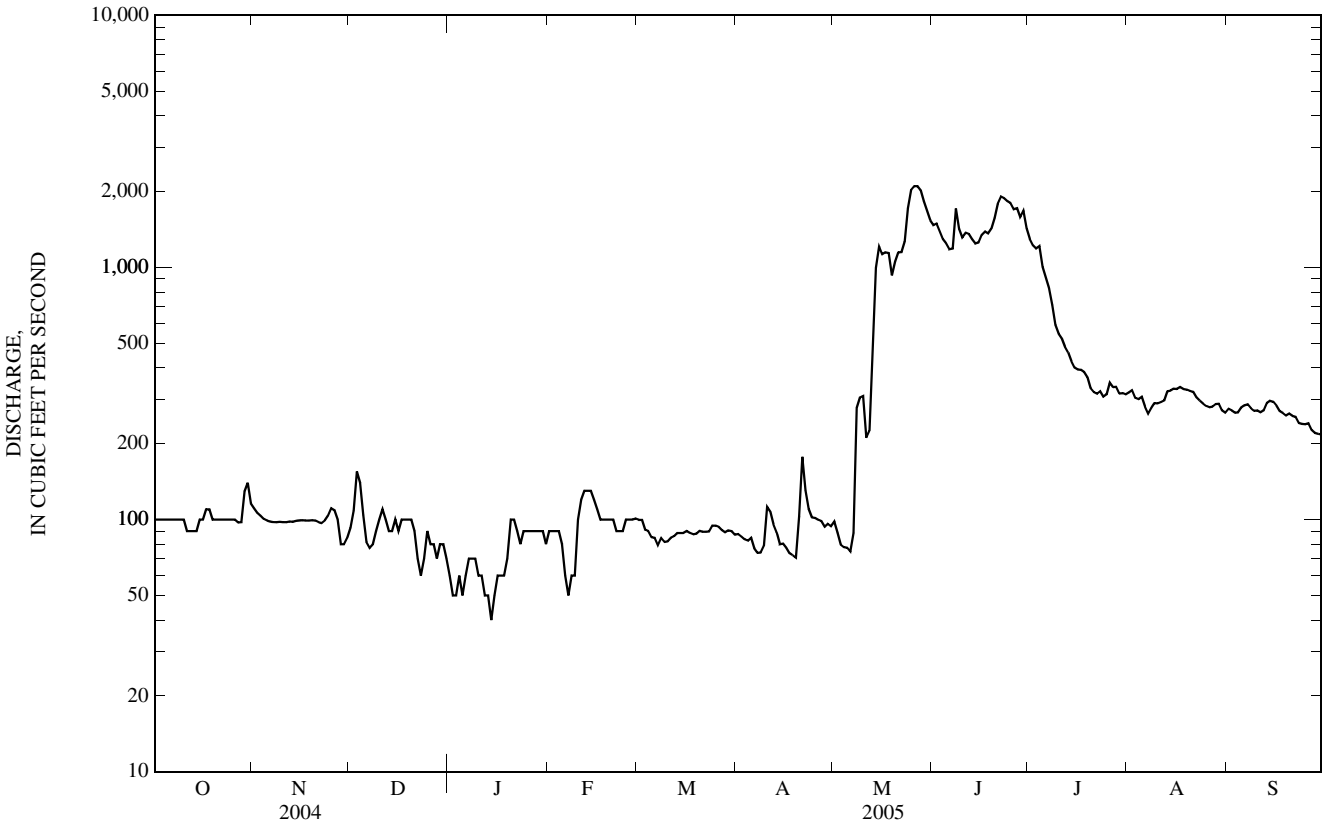
MEAN	102	98.7	91.9	70.3	95.8	89.1	93.2	923	1,489	556	301	262
MAX	102	98.7	91.9	70.3	95.8	89.1	93.2	923	1,489	556	301	262
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	102	98.7	91.9	70.3	95.8	89.1	93.2	923	1,489	556	301	262
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS FOR 2005 WATER YEAR

ANNUAL TOTAL	127,104	
ANNUAL MEAN	348	
HIGHEST DAILY MEAN	2,100	May 26
LOWEST DAILY MEAN	40	Jan 14
ANNUAL SEVEN-DAY MINIMUM	53	Jan 10
MAXIMUM PEAK FLOW	2,140	May 26
MAXIMUM PEAK STAGE	5.88	May 26
ANNUAL RUNOFF (AC-FT)	252,100	
10 PERCENT EXCEEDS	1,250	
50 PERCENT EXCEEDS	100	
90 PERCENT EXCEEDS	77	

e--Estimated.

06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT—Continued



06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2004 to September 2005.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 2005 to October 2005 (seasonal records).

INSTRUMENTATION.--Conductance probe installed March 2005.

REMARKS.--Daily specific conductance records are rated good to excellent, except for July 27, which is rated fair. Missing values for May 14-16, 18-25, 27-30 and June 1-21 due to equipment problems. Low-level mercury sample collected on July 13; results are reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,000 microsiemens per centimeter (µS/cm) at 25.0°C, April 4, 5, 2005; minimum, 319 µS/cm at 25.0°C, June 26, 2005.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE (seasonal records): Maximum, 1,000 microsiemens per centimeter (µS/cm) at 25.0°C, April 4,and 5; minimum, 319 µS/cm at 25.0°C, June 26, may have been lower during missing record on days of high-flow conditions in May and June.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV													
01...	1435	110	705	12.2	108	8.7	841	9.0	6.5	320	56.8	43.0	4.88
DEC													
08...	1530	E80	680	13.3	103	8.4	1,000	5.0	0.0	380	67.0	51.4	5.17
JAN													
19...	1215	E70	696	11.6	87	7.7	990	15.0	0.0	400	74.0	51.9	5.36
FEB													
09...	1230	E60	696	13.4	101	8.4	947	4.0	0.0	360	66.4	47.5	4.45
22...	1030	E90	703	13.3	100	8.3	809	0.5	0.5	370	66.6	50.2	4.71
MAR													
10...	0830	70	698	11.8	101	8.5	939	5.5	5.0	370	62.8	50.3	4.93
22...	1500	89	692	10.9	111	8.4	939	11.0	11.5	370	63.2	52.0	5.09
APR													
06...	1400	76	702	10.5	117	8.5	979	21.5	16.5	350	56.0	51.0	5.59
18...	1530	70	692	9.4	110	8.6	972	16.5	18.0	350	56.5	51.0	6.22
MAY													
04...	1400	76	695	10.0	118	8.6	926	23.0	19.0	340	55.7	49.5	5.09
18...	0830	1,170	687	8.2	94	8.4	738	14.5	16.5	310	60.0	39.6	3.83
JUN													
07...	1500	1,150	689	8.8	109	8.3	434	20.5	20.5	190	36.4	22.8	3.43
21...	1345	1,810	704	7.4	100	8.1	351	33.0	26.5	140	32.0	15.1	2.41
JUL													
13...	0745	466	--	--	--	8.5	419	28.5	25.0	180	39.7	19.6	2.50
27...	1430	337	696	8.4	110	8.6	455	24.5	24.0	180	38.7	19.5	2.61
AUG													
02...	1455	326	698	8.4	118	8.5	453	35.0	28.0	190	41.4	21.0	2.67
23...	1300	296	689	8.2	107	8.4	512	32.0	23.5	210	45.7	23.4	3.23
SEP													
06...	1445	282	700	8.4	105	8.4	525	30.0	22.0	230	47.9	26.1	3.17
20...	1245	265	698	9.8	112	8.5	579	29.5	17.5	260	54.4	29.1	3.43

E--Estimated.

06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV													
01...	2	73.8	241	5.12	.4	5.46	217	551	.75	163	98	208	62
DEC													
08...	2	81.5	280	5.79	.4	8.02	251	639	.87	E138	90	93	E20.1
JAN													
19...	2	82.9	301	5.54	.4	9.40	240	649	.88	E123	99	80	E15.1
FEB													
09...	2	79.1	286	5.60	.4	7.54	238	621	.84	E101	91	46	E7.45
22...	2	78.2	280	5.62	.4	8.45	222	604	.82	E147	90	43	E10.4
MAR													
10...	2	81.2	272	5.74	.4	5.40	241	616	.84	116	88	57	11
22...	2	82.5	268	5.69	.4	5.03	239	614	.84	148	98	25	6.0
APR													
06...	2	89.9	267	6.04	.4	5.30	262	638	.87	131	90	62	13
18...	2	91.7	246	6.21	.4	4.33	267	632	.86	120	97	62	12
MAY													
04...	2	77.9	247	5.94	.4	3.67	241	588	.80	121	99	54	11
18...	1	48.3	219	4.92	.4	3.46	164	457	.62	1,440	92	612	1,930
JUN													
07...	.7	20.9	139	2.49	.2	5.98	84.2	260	.35	808	87	164	509
21...	.5	14.8	118	1.78	.2	6.49	57.0	201	.27	981	89	356	1,740
JUL													
13...	.8	25.1	146	2.32	.2	7.57	82.1	267	.36	336	97	63	79
27...	.8	24.7	148	1.94	.2	6.49	80.1	263	.36	239	97	48	44
AUG													
02...	.7	23.5	152	1.93	.2	6.72	79.8	268	.36	236	94	43	38
23...	.9	31.3	166	2.46	.2	3.88	99.1	310	.42	247	94	27	22
SEP													
06...	.8	29.3	169	2.84	.3	1.76	105	318	.43	242	96	19	14
20...	1	34.9	190	3.02	.3	3.28	119	362	.49	259	89	11	7.9

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
DEC													
08...	1530	E.005	<.016	E.001	.27	<.006	.015	<1	214	.7	<2	58	61
FEB													
09...	1230	E.007	<.016	E.001	.18	<.006	.009	<1	69	.6	<2	47	56
MAR													
10...	0830	<.010	<.016	<.002	.23	<.006	.018	<1	153	.5	<2	55	59
APR													
06...	1400	E.005	<.016	<.002	.31	<.006	.025	2	185	.7	<2	65	68
18...	1530	E.007	<.016	E.001	.39	<.006	.039	2	509	.7	<2	64	68
MAY													
04...	1400	E.007	<.016	<.002	.32	<.006	.033	3	285	.5	<2	58	65
18...	0830	E.006	.025	<.002	1.33	<.006	.37	3	4,820	.7	3	67	165
JUN													
07...	1500	<.010	<.016	<.002	.59	<.006	.139	8	1,600	.7	E1	44	81
21...	1345	E.005	E.013	<.002	.69	<.006	.25	7	3,010	.7	2	40	103
JUL													
27...	1430	<.010	<.016	<.002	.28	<.006	.049	8	410	.8	2	50	51
AUG													
02...	1455	--	--	--	--	--	--	--	--	--	--	--	--
23...	1300	<.010	<.016	<.002	.27	<.006	.030	7	344	.8	1.2	50	58

E--Estimated.

06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
DEC													
08...	<.06	<.06	126	<.04	<.04	<2	4.1	5.0	E4	360	<.08	.35	24.1
FEB													
09...	<.06	<.06	109	<.04	<.04	E2	1.6	3.1	E6	130	<.08	.13	27.5
MAR													
10...	<.06	<.06	121	<.04	<.04	E2	1.4	4.0	7	250	<.08	.32	24.7
APR													
06...	<.06	<.06	136	<.04	<.04	3	2.6	6.4	E4	280	E.08	.35	42.6
18...	<.06	E.05	144	<.04	<.04	3	1.7	5.2	E3	660	E.04	.84	32.1
MAY													
04...	<.06	<.06	124	E.03	<.04	3	2.8	4.2	E6	350	.40	.54	27.2
18...	<.06	.58	72	<.04	.22	10	2.8	15.9	<6	8,480	<.08	9.33	22.8
JUN													
07...	<.06	.17	42	<.04	.06	3	1.9	5.5	6	2,760	.11	2.47	12.3
21...	<.06	.27	32	E.03	.12	5	1.7	10.6	8	5,310	.11	5.09	8.7
JUL													
27...	<.06	E.05	46	E.02	E.03	E1	2.4	2.3	<6	850	.23	.86	12.5
AUG													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	<.06	<.06	60	E.02	E.03	E1	3.4	1.8	<6	500	.10	.51	14.6

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd **ng/L** (50286)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
DEC											
08...	5.7	25	--	E.01	1.86	3.42	.5	.8	741	.8	4
FEB											
09...	10.3	15	--	<.01	2.11	2.34	.4	.6	673	1.8	E2
MAR											
10...	8.5	22	--	--	2.57	2.57	.5	.8	701	.9	3
APR											
06...	6.3	58	--	--	3.51	2.69	.5	.8	798	4.3	3
18...	4.3	83	--	--	3.16	3.57	.7	.9	753	1.0	4
MAY											
04...	5.1	39	--	--	3.11	2.46	E.4	1.0	679	5.0	4
18...	.4	518	--	--	1.81	13.4	.6	1.0	564	1.1	34
JUN											
07...	1.4	138	--	--	2.53	4.36	.6	.9	299	2.0	11
21...	.6	251	--	--	2.80	7.15	.4	.8	238	1.4	17
JUL											
27...	1.9	41	--	--	2.95	2.77	.4	E.3	315	3.5	3
AUG											
02...	--	--	2.17	--	--	--	--	--	--	--	--
23...	1.4	31	--	--	1.49	2.29	<.4	<.4	366	1.8	3

E--Estimated.

06307990 TONGUE RIVER ABOVE T&Y DIVERSION DAM, NEAR MILES CITY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON MARCH 2005 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		MARCH			APRIL			MAY			JUNE	
1	---	---	---	958	950	954	920	870	912	---	---	---
2	---	---	---	958	951	954	929	900	923	---	---	---
3	---	---	---	959	951	955	939	922	929	---	---	---
4	---	---	---	1,000	953	966	944	928	935	---	---	---
5	---	---	---	1,000	985	990	940	933	937	---	---	---
6	---	---	---	987	977	982	945	932	938	---	---	---
7	---	---	---	990	977	985	942	789	897	---	---	*434
8	---	---	---	979	966	972	792	643	712	---	---	---
9	---	---	---	972	921	954	751	729	741	---	---	---
10	---	---	---	951	913	935	797	740	761	---	---	---
11	---	---	---	920	887	902	829	797	818	---	---	---
12	---	---	---	942	904	927	848	829	840	---	---	---
13	---	---	---	947	917	930	---	---	---	---	---	---
14	---	---	---	948	921	934	---	---	---	---	---	---
15	---	---	---	979	946	964	---	---	---	---	---	---
16	966	947	956	985	966	974	---	---	---	---	---	---
17	967	954	960	995	967	976	718	692	704	---	---	---
18	972	956	965	989	962	973	---	---	*738	---	---	---
19	970	955	962	990	946	972	---	---	---	---	---	---
20	964	949	955	946	839	887	---	---	---	---	---	---
21	953	946	948	866	720	771	---	---	---	---	---	*351
22	948	937	943	786	735	748	---	---	---	341	340	341
23	989	943	965	903	786	861	---	---	---	341	335	338
24	988	965	974	915	901	908	---	---	---	338	329	334
25	974	947	959	910	894	901	---	---	---	357	328	338
26	958	944	949	917	889	900	639	568	610	340	319	331
27	958	945	948	897	885	894	---	---	---	351	328	339
28	972	946	964	905	856	898	---	---	---	349	326	337
29	949	938	945	911	866	904	---	---	---	362	326	341
30	953	946	949	912	865	906	---	---	---	342	330	338
31	956	951	954	---	---	---	515	497	505	---	---	---
MONTH	989	937	956	1,000	720	926	945	497	811	362	319	337
		JULY			AUGUST			SEPTEMBER			OCTOBER	
1	341	336	338	449	442	447	538	519	528	619	609	614
2	341	337	340	445	438	442	534	524	528	621	611	616
3	345	339	342	446	437	442	530	517	524	612	590	597
4	348	339	344	456	438	448	521	513	518	590	554	579
5	400	348	376	455	446	450	532	521	526	556	525	536
6	443	398	418	469	449	458	533	509	519	527	508	519
7	459	435	446	493	454	470	518	507	513	508	487	502
8	472	446	459	493	481	486	516	509	512	519	477	497
9	484	459	476	486	481	484	525	515	519	524	449	496
10	470	450	458	483	473	480	527	524	526	501	453	470
11	477	465	471	481	471	476	536	527	531	557	501	538
12	473	464	468	477	471	474	542	522	536	583	557	570
13	465	448	456	476	466	470	529	522	526	620	583	602
14	459	450	457	473	461	467	529	525	526	632	618	625
15	460	447	453	485	469	476	531	525	528	639	627	632
16	449	435	443	476	466	472	537	529	533	649	631	640
17	442	427	435	471	462	467	542	536	538	662	648	655
18	437	428	432	480	466	474	550	542	547	657	647	652
19	449	431	440	480	465	472	556	547	552	669	649	655
20	463	440	451	474	467	471	569	548	559	679	654	669
21	460	446	453	489	468	478	566	558	561	667	656	660
22	446	416	433	508	485	496	559	554	557	668	656	662
23	434	412	423	516	501	507	562	555	558	674	662	666
24	438	417	429	532	503	518	576	562	567	673	664	668
25	437	429	433	532	519	524	579	575	577	677	668	672
26	443	427	434	527	513	519	583	578	580	691	672	681
27	443	425	435	535	520	525	586	580	584	694	688	691
28	439	434	437	536	523	529	602	586	594	693	689	691
29	462	435	453	539	530	534	607	600	604	698	691	694
30	449	444	447	539	523	529	616	600	608	697	692	694
31	454	444	449	540	531	535	---	---	---	693	690	692
MONTH	484	336	430	540	437	485	616	507	546	698	449	617

*--Instantaneous value from water-quality sample.

06308400 PUMPKIN CREEK NEAR MILES CITY, MT

LOCATION.--Lat 46°13'42", long 105°41'24" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $SW^1/_4$ sec.35, T.6 S., R.48 E., Custer County, Hydrologic Unit 10090102, on right bank 12 ft upstream from bridge on U.S.Highway 312, 7.5 mi upstream from mouth, and 16 mi southeast of Miles City.

DRAINAGE AREA.--697 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to November 1985, May 2004 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,475.86 ft (NGVD 29). Prior to May 2004, recording gage at same site at different datum.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Diversion for irrigation of about 3,600 acres above station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	5.2	e0.00	0.00	e0.00	e0.00	e0.10	0.10	0.40	48	0.00	0.00
2	0.07	2.4	e0.00	0.00	e0.00	e0.00	0.22	0.09	133	11	0.00	0.00
3	0.04	1.2	e0.00	0.00	e0.00	e0.00	0.12	0.08	113	10	0.00	0.00
4	0.00	0.75	e0.00	0.00	e0.00	e0.00	0.08	0.06	34	2.7	0.00	0.00
5	0.00	0.47	e0.00	0.00	e0.00	e0.00	0.10	0.05	16	4.4	0.00	0.00
6	0.00	0.34	e0.00	0.00	e0.00	e0.00	0.06	0.03	7.5	3.2	0.00	0.00
7	0.00	0.26	e0.00	0.00	e0.00	e0.00	0.03	11	4.9	2.1	0.00	0.00
8	0.00	0.19	e0.00	0.00	e0.00	e0.00	0.00	117	530	1.5	0.00	0.00
9	0.00	0.15	e0.00	0.00	e0.00	e0.00	0.00	210	692	1.0	0.00	0.00
10	0.00	0.11	e0.00	0.00	e0.00	e0.00	4.5	100	123	0.74	0.00	0.00
11	0.00	0.10	e0.00	0.00	e0.00	e0.00	11	63	67	0.50	0.00	0.00
12	0.00	0.09	e0.00	0.00	e0.00	0.00	4.0	62	36	0.36	0.00	0.00
13	0.00	0.09	e0.00	0.00	e0.00	0.00	2.0	183	28	0.22	0.00	0.00
14	0.00	0.08	e0.00	0.00	e0.00	e0.00	0.87	667	30	0.13	0.00	0.00
15	0.00	0.08	e0.00	0.00	e0.00	e0.00	0.43	179	15	0.10	0.00	0.00
16	0.00	0.07	e0.00	0.01	e0.00	0.00	0.26	118	7.2	0.05	0.00	0.00
17	0.00	0.07	e0.00	0.05	e0.00	0.00	0.16	72	3.9	0.01	0.00	0.00
18	0.41	0.07	e0.00	e1.0	0.00	0.00	0.11	41	2.3	0.00	0.00	0.00
19	6.7	0.05	e0.00	e3.0	0.00	0.00	0.37	16	1.6	0.00	0.00	0.00
20	13	0.05	e0.00	e5.0	0.00	0.00	21	6.2	1.3	0.00	0.00	0.00
21	4.5	0.04	e0.00	e3.0	0.00	0.00	50	5.8	1.3	0.00	0.00	0.00
22	3.3	0.05	0.00	e1.0	0.00	0.00	49	11	1.4	0.00	0.00	0.00
23	2.0	0.04	0.00	e0.10	0.00	e0.00	18	4.2	1.2	0.00	0.00	0.00
24	1.0	0.04	0.00	e0.05	0.00	e0.00	4.4	2.4	0.89	0.00	0.00	0.00
25	0.44	0.07	0.00	e0.00	0.00	e0.00	1.5	1.9	3.6	0.00	0.00	0.00
26	0.32	0.06	0.00	e0.00	e0.00	e0.00	0.80	1.3	3.7	0.00	0.00	0.00
27	0.25	e0.05	0.00	e0.00	e0.00	e0.00	0.46	0.89	11	0.00	0.00	0.00
28	0.18	e0.00	0.00	e0.00	e0.00	e0.00	0.33	0.60	50	0.00	0.00	0.00
29	0.91	e0.00	0.00	e0.00	---	e0.00	0.24	0.48	285	0.00	0.00	0.00
30	27	e0.00	0.00	e0.00	---	e0.00	0.17	0.40	127	0.00	0.00	0.00
31	10	---	0.00	e0.00	---	e0.00	---	0.40	---	0.00	0.00	---
TOTAL	70.21	12.17	0.00	13.21	0.00	0.00	170.31	1,874.98	2,331.19	86.01	0.00	0.00
MEAN	2.26	0.41	0.00	0.43	0.00	0.00	5.68	60.5	77.7	2.77	0.00	0.00
MAX	27	5.2	0.00	5.0	0.00	0.00	50	667	692	48	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.40	0.00	0.00	0.00
AC-FT	139	24	0.00	26	0.00	0.00	338	3,720	4,620	171	0.00	0.00

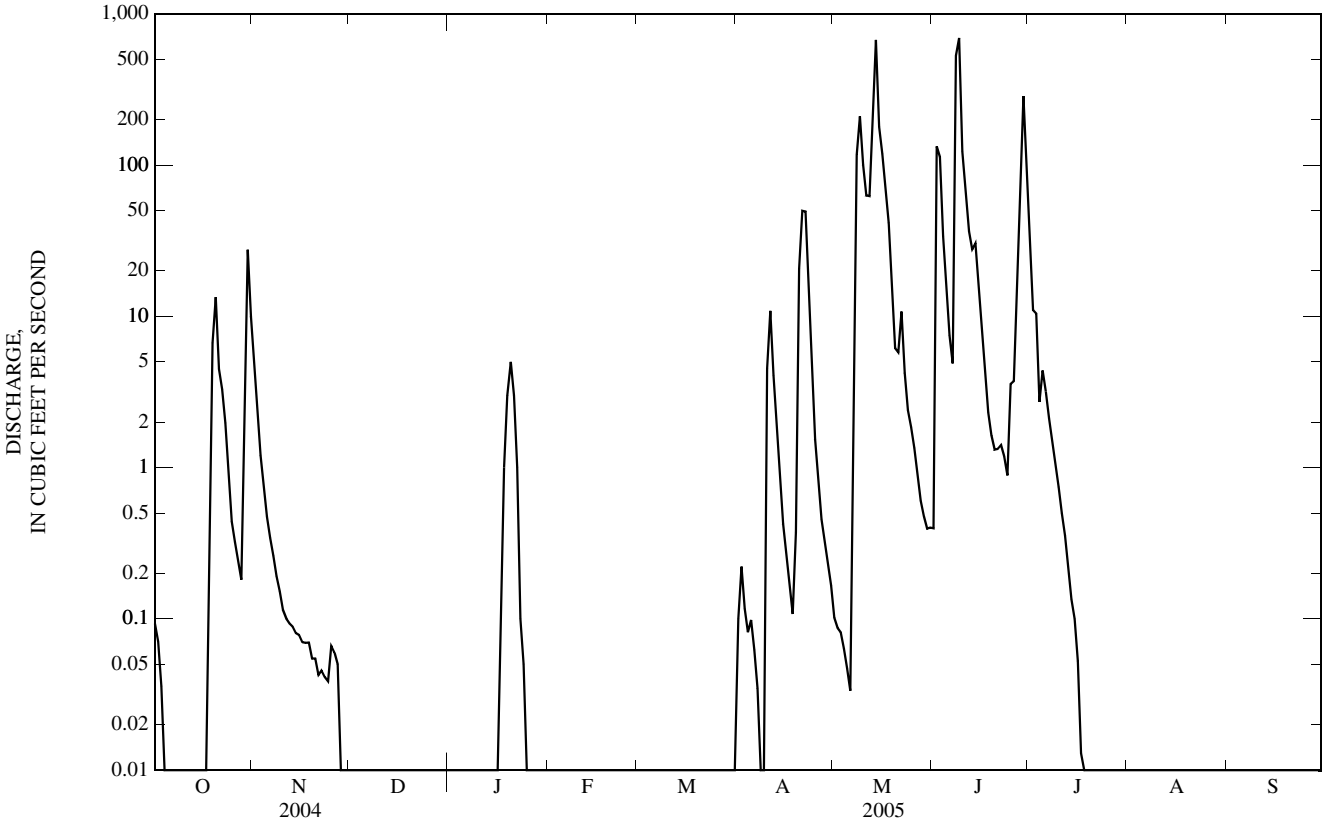
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)*

MEAN	1.41	0.33	0.16	4.36	27.9	49.8	15.8	35.7	19.7	3.85	1.77	5.80
MAX	9.72	2.65	0.74	29.4	134	299	84.0	205	77.7	18.1	16.2	59.8
(WY)	(1983)	(1975)	(1973)	(1983)	(1983)	(1978)	(1979)	(1978)	(2005)	(1978)	(1985)	(1973)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1977)	(1977)	(1975)	(1977)	(1978)	(2005)	(1981)	(1980)	(1977)	(1977)	(1974)	(1974)

06308400 PUMPKIN CREEK NEAR MILES CITY, MT—Continued

SUMMARY STATISTICS	FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005*	
ANNUAL TOTAL	4,558.08			
ANNUAL MEAN	12.5		14.1	
HIGHEST ANNUAL MEAN			49.5	1978
LOWEST ANNUAL MEAN			0.22	1980
HIGHEST DAILY MEAN	692	Jun 9	1,980	May 19, 1978
LOWEST DAILY MEAN	0.00	Oct 4	a0.00	Dec 10, 1972
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 4	0.00	Dec 10, 1972
MAXIMUM PEAK FLOW	1,480	Jun 8	2,890	May 6, 1975
MAXIMUM PEAK STAGE	9.52	Jun 8	12.27	May 6, 1975
ANNUAL RUNOFF (AC-FT)	9,040		10,240	
10 PERCENT EXCEEDS	11		16	
50 PERCENT EXCEEDS	0.00		0.05	
90 PERCENT EXCEEDS	0.00		0.00	

*--During period of operation (1972-1985, May 2004 to current year).
a--No flow at times most years.
e--Estimated.



06308400 PUMPKIN CREEK NEAR MILES CITY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to 1985, March 2004 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2004 to October 2005 (seasonal records).

INSTRUMENTATION.--Specific conductance probe was installed in May 2004.

REMARKS.--No water-quality samples could be collected in on trip taken in October 2004 and after July 2005 due to no flow. Daily specific conductance records are rated good to excellent except for the periods Apr. 9 and 15, May 2-4, 22, and 23, and June 16-19, which are rated fair and the periods Apr. 10-14, May 24 to June 8, and June 20-22, which are rated poor. Missing specific conductance values on May 7 and 8 are due to equipment problems and Oct. 1-19, 2004 and July 16 to Oct. 4, 2005 are due to no flow. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,730 microsiemens per centimeter (µS/cm) at 25.0°C, Sept. 28, 2004; minimum daily, 100 µS/cm at 25.0°C, June 10, 2004.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,330 microsiemens per centimeter (µS/cm) at 25.0°C, June 25 and 26; minimum daily, 259 µS/cm at 25.0°C, May 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV													
02...	1035	2.5	698	11.8	94	8.3	526	13.5	2.5	20	5.42	1.60	3.19
APR													
06...	1700	.06	701	10.6	119	8.8	2,460	22.5	16.5	220	34.8	32.0	7.83
11...	1115	9.7	695	11.5	99	8.4	493	10.0	5.0	37	9.89	2.87	4.51
19...	0800	.23	695	9.2	87	8.3	830	6.5	8.5	28	7.03	2.45	3.73
21...	1215	30	702	11.0	99	8.3	654	7.5	7.0	24	6.10	2.07	3.06
MAY													
04...	1530	.05	698	10.1	121	8.7	925	23.0	19.5	59	15.3	5.16	5.83
09...	1115	197	693	10.0	100	8.2	442	14.5	11.0	20	5.27	1.64	3.69
JUN													
08...	1200	584	687	8.0	84	8.1	570	12.0	13.0	59	14.0	5.75	4.33
22...	1000	1.4	697	7.1	101	8.5	1,040	30.0	28.5	140	32.0	14.5	8.69
JUL													
13...	1040	.23	*	*	*	8.7	1,070	28.5	26.0	140	35.5	13.6	8.52

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV													
02...	11	111	115	1.92	.4	6.02	128	337	.46	2.26	99	9,690	65
APR													
06...	15	510	394	9.89	.6	--	872	1,710	2.32	.28	89	12	.00
11...	10	144	173	2.23	.5	8.41	146	422	.57	11.1	99	20,100	526
19...	14	166	183	1.66	.7	9.12	188	489	.66	.30	99	11,700	7.2
21...	13	141	123	1.54	.5	7.03	172	407	.55	32.9	99	11,800	958
MAY													
04...	10	180	206	2.48	.5	8.75	224	566	.77	.08	99	613	.08
09...	9	93.0	107	1.37	.5	8.01	99.9	277	.38	148	99	12,400	6,580
JUN													
08...	5	90.0	102	1.99	.3	4.83	166	351	.48	554	99	7,890	12,400
22...	7	181	214	3.49	.4	9.93	294	673	.91	2.63	99	118	.46
JUL													
13...	7	189	216	3.44	.5	8.44	325	714	.97	.44	99	70	.04

*--Problems with meter.

06308400 PUMPKIN CREEK NEAR MILES CITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover -able, ug/L (01007)
NOV													
02...	1035	E.009	2.27	.019	7.00	.011	2.60	10	63,900	1.4	29	14	1,310
APR													
06...	1700	E.005	<.016	<.002	.85	<.006	.054	11	124	1.4	<2	72	73
JUN													
08...	1200	E.007	.459	.012	4.79	.009	1.18	15	37,200	1.0	9	35	1,170

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
NOV													
02...	<.06	7.80	141	E.03	2.15	123	11.3	159	45	97,700	.34	181	9.4
APR													
06...	<.06	<.06	261	<.04	<.04	E3	5.4	19.5	<18	110	<.08	.23	38.0
JUN													
08...	<.06	8.73	101	.06	2.20	46	10.8	129	20	44,000	.86	132	8.6

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
NOV										
02...	.7	1,620	.47	7.88	186	3.2	3.2	101	2.0	603
APR										
06...	3.0	26	<.01	5.02	4.71	2.3	1.7	988	2.4	6
JUN										
08...	5.4	1,570	--	6.64	129	1.5	2.7	275	15.3	379

E--Estimated.

06308400 PUMPKIN CREEK NEAR MILES CITY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			APRIL 2005			MAY			JUNE		
1	---	---	---	---	---	---	836	823	828	543	530	537
2	---	---	---	---	---	---	865	832	845	550	503	531
3	---	---	---	---	---	---	890	861	869	503	420	462
4	---	---	---	---	---	---	929	876	901	420	365	389
5	---	---	---	---	---	---	941	914	922	365	353	356
6	---	---	---	---	---	---	974	939	956	412	349	367
7	---	---	---	---	---	---	---	---	*979	440	412	432
8	---	---	---	---	---	---	---	---	*499	465	405	424
9	---	---	---	---	---	---	533	437	486	593	465	543
10	---	---	---	---	---	---	448	385	413	679	593	630
11	---	---	---	---	---	---	474	397	417	791	679	726
12	---	---	---	592	563	574	499	465	485	870	791	838
13	---	---	---	650	591	615	474	440	469	882	870	876
14	---	---	---	737	650	695	440	259	275	903	875	888
15	---	---	---	791	737	762	310	276	298	918	892	903
16	---	---	---	816	791	803	340	296	307	951	915	929
17	---	---	---	851	816	831	377	340	367	962	935	948
18	---	---	---	878	851	866	389	361	370	980	940	958
19	---	---	---	949	878	917	450	389	419	1,000	956	977
20	733	483	587	1,040	876	985	490	450	472	1,020	976	998
21	505	486	494	1,020	552	655	522	488	504	1,050	1,010	1,030
22	511	505	508	738	602	716	572	522	548	1,090	1,040	1,060
23	517	499	504	741	724	731	594	572	586	1,160	1,090	1,130
24	972	517	748	754	720	736	583	543	554	1,240	1,160	1,200
25	1,030	972	990	765	738	750	555	546	551	1,330	1,190	1,260
26	981	911	942	768	752	759	548	521	531	1,330	707	1,210
27	912	859	886	773	760	766	561	523	544	1,060	749	980
28	860	820	842	796	771	780	562	540	557	1,040	1,000	1,020
29	822	437	639	811	789	799	540	508	523	1,030	856	960
30	812	476	663	823	809	815	513	504	509	856	731	784
31	566	476	502	---	---	---	532	510	519	---	---	---
MONTH	1,030	437	692	1,040	552	766	974	259	553	1,330	349	812
	JULY			AUGUST			SEPTEMBER			OCTOBER		
1	731	697	706	---	---	---	---	---	---	---	---	---
2	707	691	699	---	---	---	---	---	---	---	---	---
3	723	705	712	---	---	---	---	---	---	---	---	---
4	763	721	738	---	---	---	---	---	---	---	---	---
5	889	763	815	---	---	---	---	---	---	1,280	319	579
6	966	889	934	---	---	---	---	---	---	1,270	442	701
7	964	949	957	---	---	---	---	---	---	1,150	438	611
8	968	938	953	---	---	---	---	---	---	503	362	426
9	995	947	968	---	---	---	---	---	---	467	316	362
10	1,010	977	992	---	---	---	---	---	---	403	349	376
11	1,080	1,010	1,040	---	---	---	---	---	---	406	384	393
12	1,120	1,070	1,090	---	---	---	---	---	---	429	397	410
13	1,140	1,100	1,120	---	---	---	---	---	---	473	424	442
14	1,170	1,120	1,140	---	---	---	---	---	---	551	473	524
15	1,190	1,160	1,170	---	---	---	---	---	---	981	504	629
16	---	---	---	---	---	---	---	---	---	1,100	782	948
17	---	---	---	---	---	---	---	---	---	802	723	777
18	---	---	---	---	---	---	---	---	---	723	685	697
19	---	---	---	---	---	---	---	---	---	685	677	681
20	---	---	---	---	---	---	---	---	---	685	679	682
21	---	---	---	---	---	---	---	---	---	690	684	688
22	---	---	---	---	---	---	---	---	---	693	688	690
23	---	---	---	---	---	---	---	---	---	695	688	691
24	---	---	---	---	---	---	---	---	---	708	693	701
25	---	---	---	---	---	---	---	---	---	717	706	711
26	---	---	---	---	---	---	---	---	---	718	714	716
27	---	---	---	---	---	---	---	---	---	723	715	719
28	---	---	---	---	---	---	---	---	---	727	723	725
29	---	---	---	---	---	---	---	---	---	735	727	731
30	---	---	---	---	---	---	---	---	---	740	733	736
31	---	---	---	---	---	---	---	---	---	748	739	743
MONTH	1,190	691	936	---	---	---	---	---	---	1,280	316	633

*--Computed from partial record.

06308500 TONGUE RIVER AT MILES CITY, MT

LOCATION.--Lat 46°23'05", long 105°50'41" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SE^1/_4$ sec. 4, T.7 N., R.47 E., Custer County, Hydrologic Unit 10090102, on right bank 1.5 mi south of Miles City and at river mile 2.3.

DRAINAGE AREA.--5,397 mi^2. Area at site used prior to Oct. 4, 1995, 5,379 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to April 1942, April 1946 to current year. Published as "near Miles City" April 1938 to April 1942. Not equivalent to records published as "near Miles City" May 1929 to October 1932. April 1946 to Oct. 4, 1995, at site 2.5 mi upstream from present site. Flows at present site are equivalent with flows at site operated from 1946. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,360 ft (NGVD 29). April 1938 to April 1942, nonrecording gage at site 8 mi upstream from present site at different elevation. April 1946 to Sept. 30, 1963, at elevation 1.00 ft higher than present site. Oct. 4, 1995, gage was moved 2.5 miles downstream.

REMARKS.--Water-discharge records good except estimated daily discharges for July 10, July 27 to Aug. 2, which are fair, and estimated daily discharges for Nov. 22-30, Dec. 9, 10, and Dec. 18 to Mar. 3, which are poor. Flow regulation by Tongue River Reservoir (station 0630700) with capacity of 79,100 acre-feet, and many small reservoirs in Wyoming with combined capacity about 15,000 acre-ft. Diversions for irrigation of about 100,800 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	136	72	e50	e80	e100	99	105	1,410	1,310	e170	123
2	78	127	100	e50	e80	e100	99	107	1,500	1,150	e170	126
3	78	121	138	e50	e80	e110	97	64	1,530	1,110	168	126
4	78	114	146	e60	e80	110	86	17	1,300	1,110	138	129
5	74	111	120	e60	e60	110	86	12	1,210	970	138	134
6	75	110	98	e60	e50	107	90	12	1,140	852	116	158
7	76	109	63	e60	e40	106	80	38	1,130	760	88	170
8	78	109	62	e60	e45	105	68	467	2,040	610	85	182
9	75	109	e80	e60	e45	103	73	752	2,880	513	113	171
10	52	108	e100	e60	e45	102	104	485	1,490	e450	114	173
11	43	109	143	e60	e60	100	128	343	1,420	393	104	183
12	44	109	e120	e50	e80	99	115	320	1,380	322	116	180
13	45	108	105	e40	e100	101	101	584	1,310	301	137	217
14	41	110	95	e40	e90	103	97	1,890	1,240	248	163	223
15	43	109	92	e45	e90	103	92	1,450	1,230	211	167	233
16	44	109	108	e50	e80	103	90	1,330	1,270	181	151	224
17	46	109	140	e60	e90	103	86	1,260	1,340	180	166	219
18	55	109	e140	e70	e90	101	82	1,250	1,300	173	179	207
19	79	109	e130	e90	e90	100	84	1,060	1,280	155	203	207
20	133	109	e100	e100	e90	101	105	1,060	1,430	136	212	200
21	125	110	e80	e70	e100	104	239	1,210	1,650	119	213	194
22	117	e100	e70	e60	e100	102	284	1,180	1,860	106	189	121
23	116	e100	e50	e70	e100	102	169	1,260	1,900	109	207	104
24	115	e80	e70	e90	e110	107	135	1,560	1,840	118	157	96
25	111	e100	e100	e80	e110	106	113	2,050	1,810	113	144	109
26	110	e130	e90	e80	e100	107	115	2,270	1,680	180	139	121
27	109	e120	e80	e80	e100	106	111	2,310	1,820	e170	138	91
28	109	e100	e80	e80	e100	103	108	2,210	1,550	e170	148	83
29	149	e60	e80	e80	---	104	106	1,960	2,000	e160	137	85
30	210	e70	e70	e80	---	104	106	1,740	1,650	e160	131	76
31	168	---	e60	e80	---	102	---	1,570	---	e170	124	---
TOTAL	2,752	3,214	2,982	2,025	2,285	3,214	3,348	31,926	46,590	12,710	4,625	4,665
MEAN	88.8	107	96.2	65.3	81.6	104	112	1,030	1,553	410	149	156
MAX	210	136	146	100	110	110	284	2,310	2,880	1,310	213	233
MIN	41	60	50	40	40	99	68	12	1,130	106	85	76
AC-FT	5,460	6,370	5,910	4,020	4,530	6,370	6,640	63,330	92,410	25,210	9,170	9,250

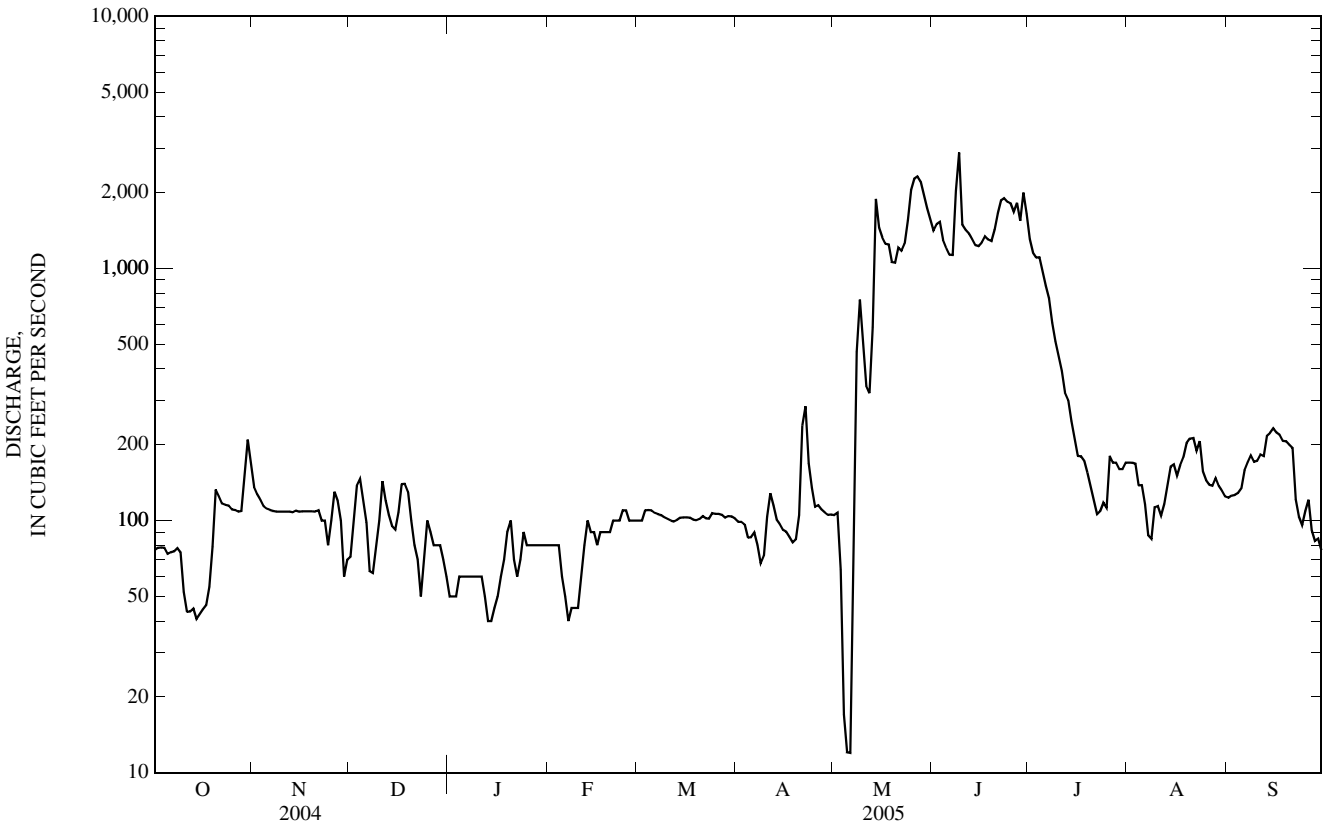
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)*

MEAN	239	248	187	191	272	521	427	682	1,249	456	178	196
MAX	694	585	423	529	1,794	1,783	1,693	2,983	3,825	2,207	700	599
(WY)	(1972)	(1942)	(1950)	(1999)	(1971)	(1971)	(1965)	(1978)	(1978)	(1975)	(1975)	(1968)
MIN	10.3	60.9	68.0	65.3	74.5	74.5	12.5	29.2	41.9	12.6	6.08	2.40
(WY)	(1961)	(1989)	(1990)	(2005)	(2003)	(2002)	(1961)	(1961)	(2002)	(1960)	(1949)	(1938)

06308500 TONGUE RIVER AT MILES CITY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005*	
ANNUAL TOTAL	30,903.4		120,336			
ANNUAL MEAN	84.4		330		400	
HIGHEST ANNUAL MEAN					986	1978
LOWEST ANNUAL MEAN					57.2	1961
HIGHEST DAILY MEAN	500	Mar 10	2,880	Jun 9	9,290	Jun 15, 1962
LOWEST DAILY MEAN	7.6	May 8	12	May 5	0.00	Jul 9, 1940
ANNUAL SEVEN-DAY MINIMUM	8.5	May 3	44	Oct 11	0.00	Jul 9, 1940
MAXIMUM PEAK FLOW			3,750	Jun 9	a13,300	Jun 15, 1962
MAXIMUM PEAK STAGE			7.40	Jun 9	b12.27	Mar 19, 1960
INSTANTANEOUS LOW FLOW					0.00	Jul 9, 1940
ANNUAL RUNOFF (AC-FT)	61,300		238,700		290,100	
10 PERCENT EXCEEDS	163		1,270		906	
50 PERCENT EXCEEDS	79		109		220	
90 PERCENT EXCEEDS	16		60		65	

*--During period of record (April 1938 to April 1942, April 1946 to current year).
a--Gage height, 11.33 ft, at prevous site and datum.
b--Ice jam, at previous site and datum.
e-- Estimated.



06308500 TONGUE RIVER AT MILES CITY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946 to September 1994, October 1977 to December 1985, May 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1965 to September 1981 (observer daily samples), April 29, 2004 to current year (seasonal electronic records).
WATER TEMPERATURE: Sesonal records, April 2000 to September 2003.
SUSPENDED-SEDIMENT DISCHARGE: October 1977 to December 1985.

INSTRUMENTATION.--A specific conductance probe was installed on April 28, 2004.

REMARKS--Specific conductance records are rated good to excellent except during the periods of May 7, 8 and June 20-22, which are rated fair and May 9-18 which are rated poor. Low-level mercury analysis on Aug. 3; result is reported in nanograms per liter. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,520 microsiemens per centimeter (µS/cm) at 25.0°C, May 24, 1981; minimum daily, 215 µS/cm at 25.0°C, Feb. 16, 1971.
WATER TEMPERATURE (seasonal records): Maximum, 37.0°C, Aug. 22, 2001; minimum 0.0°C, Apr. 5, 2002.
SEDIMENT CONCENTRATION: Maximum daily mean, 14,200 mg/L, Aug. 3, 1985; minimum daily mean, 3 mg/L, Dec. 20, 1983.
SEDIMENT LOAD: Maximum daily, 84,400 tons May 18, 1978; minimum daily, .13 tons May 5, 1981.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,320 microsiemens per centimeter (µS/cm) at 25.0°C, May 7; minimum, 375 µS/cm at 25.0°C, June 22.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	1015	45	628	10.5	111	8.5	1,000	10.5	9.0	360	61.1	49.6	5.65
NOV													
02...	1320	128	700	13.0	111	8.6	829	17.0	5.0	280	52.9	37.0	4.79
DEC													
09...	1030	E80	692	13.2	100	8.4	1,070	7.5	0.0	380	67.8	51.4	5.21
FEB													
10...	0800	E45	702	13.0	97	8.3	1,030	2.0	0.0	370	69.0	48.6	4.63
MAR													
09...	1630	98	693	10.7	105	8.5	944	14.0	10.0	370	65.1	50.1	4.99
23...	0830	101	688	11.2	98	8.4	974	3.5	5.0	380	63.5	52.8	5.18
APR													
07...	1100	80	695	10.5	110	8.5	1,050	21.0	13.0	360	56.5	52.7	5.91
18...	1730	80	695	9.4	107	8.6	1,020	17.5	17.0	360	57.9	51.4	6.33
MAY													
04...	1700	13	699	10.3	124	8.5	1,050	22.5	20.0	380	65.5	52.3	6.02
17...	1730	1,250	686	7.6	95	8.3	724	18.0	20.5	290	55.5	35.9	4.43
JUN													
09...	0730	3,560	696	8.0	85	8.2	407	17.0	14.0	57	14.0	5.36	4.20
22...	0715	1,860	700	7.1	94	8.0	354	27.5	25.0	150	31.9	16.4	2.56
JUL													
13...	1300	304	*	*	*	8.7	492	37.0	27.0	190	42.3	21.4	2.97
27...	1600	138	698	8.4	112	8.5	547	30.0	25.0	200	43.5	22.6	3.14
AUG													
03...	1000	175	703	7.9	97	8.3	519	21.0	21.5	210	45.2	23.4	3.12
23...	1110	198	693	6.8	85	8.1	495	28.0	21.5	170	37.4	17.5	4.23
SEP													
06...	1725	164	703	8.6	107	8.5	614	30.0	22.0	250	53.0	29.4	3.63
20...	1415	206	700	10.5	119	8.6	630	29.5	17.0	270	56.5	31.0	3.63

*--Equipment problems.
E--Estimated.

06308500 TONGUE RIVER AT MILES CITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT													
13...	2	97.6	279	5.96	.4	6.68	265	661	.90	80.5	100	123	15
NOV													
02...	2	81.3	245	5.11	.4	5.97	220	555	.75	192	99	796	275
DEC													
09...	2	95.9	306	6.17	.4	8.63	273	693	.94	E150	90	122	E26.4
FEB													
10...	2	88.6	307	5.78	.4	8.14	251	661	.90	E80	88	75	E9.11
MAR													
09...	2	90.8	275	5.73	.4	5.78	246	634	.86	168	98	74	20
23...	2	92.4	281	5.88	.4	5.26	255	649	.88	177	98	47	13
APR													
07...	2	103	283	6.23	.4	5.22	287	688	.94	149	96	99	21
18...	2	105	262	6.33	.4	4.18	282	670	.91	145	99	201	43
MAY													
04...	2	107	279	6.32	.4	5.71	278	689	.94	24.7	94	54	1.9
17...	1	50.0	209	4.76	.4	4.80	167	449	.61	1,520	96	868	2,930
JUN													
09...	4	64.3	111	1.65	.4	7.21	83.1	250	.34	2,400	97	8,110	78,000
22...	.5	14.9	120	1.92	.2	7.05	56.8	204	.28	1,020	88	404	2,030
JUL													
13...	1	30.9	159	2.60	.3	8.46	94.0	298	.41	245	99	55	45
27...	1	33.3	170	2.40	.3	7.44	105	320	.43	119	99	56	21
AUG													
03...	1	33.4	170	2.54	.2	7.54	100	317	.43	150	95	31	15
23...	1	40.9	146	2.30	.3	4.50	105	301	.41	161	99	1,460	783
SEP													
06...	1	39.3	193	3.10	.3	2.35	126	373	.51	165	98	39	17
20...	1	42.0	207	3.31	.3	3.48	131	396	.54	220	96	31	17

Date	Time	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT													
13...	1015	E.005	.106	E.001	.41	<.006	.034	2	935	.6	<2	63	74
DEC													
09...	1030	.021	.070	.002	.36	<.006	.028	E1	819	.6	<2	65	73
FEB													
10...	0800	.012	.066	.002	.27	E.003	.011	<1	153	.6	<2	49	59
APR													
07...	1100	<.010	<.016	E.001	.37	<.006	.060	E1	510	.7	<2	68	75
MAY													
17...	1730	E.007	.034	E.001	1.58	<.006	.41	3	8,280	.8	4	76	220
JUN													
09...	0730	<.010	.594	.010	4.14	.010	2.74	6	38,600	1.1	8	32	1,020
AUG													
03...	1000	--	--	--	--	--	--	--	--	--	--	--	--
23...	1110	E.005	.154	.006	1.37	<.006	.57	7	14,200	.8	3.1	49	252

06308500 TONGUE RIVER AT MILES CITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
OCT													
13...	<.06	.07	162	<.04	<.04	<2	3.0	4.0	<6	1,010	<.08	1.06	26.5
DEC													
09...	<.06	.06	140	<.04	E.03	<2	5.6	6.1	E3	750	<.08	.95	23.2
FEB													
10...	<.06	<.06	120	<.04	<.04	2	1.6	3.5	E4	190	<.08	.23	28.0
APR													
07...	<.06	.07	151	<.04	E.03	4	1.8	7.6	E3	670	<.08	.91	43.1
MAY													
17...	<.06	.95	77	<.04	.30	14	3.1	23.6	<6	12,500	<.08	15.0	21.5
JUN													
09...	<.06	8.14	66	<.04	1.85	48	4.6	120	15	42,400	.23	90.2	9.2
AUG													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	<.06	1.21	72	E.02	.42	20	5.0	30.8	E5	18,600	.14	23.2	12.1

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, unfltrd **ng/L** (50286)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT											
13...	20.3	71	--	E.01	1.99	4.06	E.3	.7	750	1.4	6
DEC											
09...	18.1	44	--	<.01	2.35	4.34	.5	.6	782	1.2	6
FEB											
10...	25.9	32	--	<.01	2.05	2.63	.5	.7	701	1.1	2
APR											
07...	14.3	97	--	--	3.44	3.48	.4	.6	819	1.8	6
MAY											
17...	.4	647	--	--	2.09	20.4	.5	1.3	588	1.3	55
JUN											
09...	1.6	1,430	--	--	4.86	123	1.6	2.5	256	6.0	337
AUG											
03...	--	--	2.17		--	--	--	--	--	--	--
23...	.6	438		--	3.30	30.4	.5	.6	370	5.7	85

E--Estimated.

06308500 TONGUE RIVER AT MILES CITY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			MARCH 2005			APRIL			MAY		
1	946	940	943	---	---	---	1,020	1,000	1,010	987	978	983
2	944	937	939	---	---	---	1,010	1,010	1,010	987	979	984
3	939	934	936	---	---	---	1,010	1,000	1,010	1,030	985	998
4	944	933	937	---	---	---	1,020	1,010	1,010	1,100	1,030	1,080
5	958	943	952	---	---	---	1,020	1,010	1,010	1,210	1,100	1,160
6	960	953	957	---	---	---	1,070	1,020	1,040	1,280	1,210	1,260
7	959	954	956	---	---	---	1,080	1,060	1,070	1,320	946	1,200
8	958	950	954	---	---	---	1,070	1,060	1,070	991	811	884
9	965	953	958	---	---	---	1,080	1,040	1,070	848	816	839
10	1,000	961	976	---	---	---	1,040	1,000	1,020	888	839	854
11	1,040	1,000	1,020	---	---	---	1,030	1,000	1,010	935	888	916
12	1,030	1,020	1,020	---	---	---	1,110	1,000	1,070	943	933	938
13	1,020	1,020	1,020	---	---	---	1,060	1,010	1,030	949	912	939
14	1,030	1,020	1,030	---	---	---	1,030	1,010	1,020	913	444	655
15	1,040	1,030	1,040	---	---	---	1,040	1,020	1,030	614	451	521
16	1,040	1,010	1,030	---	---	---	1,050	1,030	1,040	697	611	654
17	1,020	1,000	1,010	1,030	1,020	1,020	1,070	1,050	1,060	741	697	720
18	1,010	951	993	1,020	1,010	1,020	1,070	1,050	1,060	747	739	743
19	955	864	917	1,030	1,010	1,020	1,060	1,040	1,050	761	745	754
20	909	843	871	1,030	1,010	1,020	1,040	987	1,020	773	759	766
21	1,000	843	909	1,010	1,000	1,010	987	856	911	759	706	737
22	896	863	885	1,010	1,000	1,000	856	803	819	713	691	701
23	901	894	896	1,010	992	1,000	845	802	825	723	713	719
24	899	895	897	992	975	983	912	838	871	718	689	706
25	912	897	905	1,020	988	1,000	960	912	938	689	660	669
26	917	911	914	1,020	1,000	1,010	966	959	963	660	650	652
27	944	917	926	1,000	993	998	967	961	964	657	650	653
28	951	940	945	1,010	999	1,000	966	961	964	660	652	656
29	940	830	889	1,010	998	1,000	974	965	970	658	648	653
30	872	758	813	1,000	991	996	979	972	975	649	646	648
31	902	782	838	1,010	1,000	1,010	---	---	---	648	644	646
MONTH	1,040	758	944	1,030	975	1,010	1,110	802	997	1,320	444	816
	JUNE			JULY			AUGUST			SEPTEMBER		
1	662	644	654	414	411	413	559	550	554	649	632	642
2	660	632	641	411	398	406	554	545	551	647	636	641
3	667	640	651	398	395	396	551	537	544	642	630	636
4	686	599	661	396	389	393	570	540	557	640	624	634
5	599	570	576	396	388	391	575	563	570	633	617	624
6	570	547	555	413	396	402	591	572	582	618	612	615
7	547	531	542	436	413	424	619	587	605	613	598	607
8	531	483	501	451	435	443	644	615	628	598	589	593
9	511	469	481	474	450	460	631	605	619	595	585	591
10	475	469	471	497	468	485	613	602	609	600	590	595
11	482	474	478	523	493	508	615	608	613	610	594	602
12	484	481	482	531	519	524	615	596	607	614	602	608
13	484	481	483	531	511	521	596	583	589	611	602	608
14	482	469	477	526	512	518	584	572	577	605	599	603
15	469	458	464	539	520	529	572	560	566	603	598	600
16	459	445	454	555	534	544	579	560	571	603	594	600
17	446	420	433	542	530	537	578	563	571	607	596	603
18	421	404	410	537	530	533	567	552	559	616	603	611
19	404	397	400	549	531	540	563	551	557	625	611	619
20	397	381	385	560	543	552	561	539	550	637	620	628
21	384	376	381	583	555	570	547	533	542	633	626	630
22	386	375	379	596	576	587	555	536	546	660	630	647
23	383	379	381	601	590	594	556	541	548	666	653	661
24	382	379	381	590	570	578	593	542	565	670	661	667
25	382	377	380	577	567	571	610	586	599	674	666	671
26	386	381	384	567	530	544	620	605	614	676	666	673
27	390	385	387	553	529	540	621	612	615	695	669	684
28	394	382	389	547	531	539	614	609	612	713	691	704
29	431	386	403	535	522	529	622	606	616	711	703	707
30	414	410	412	554	528	541	626	615	622	734	701	720
31	---	---	---	558	542	550	640	620	631	---	---	---
MONTH	686	375	469	601	388	505	644	533	584	734	585	634

06308500 TONGUE RIVER AT MILES CITY, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN
	OCTOBER 2005		
1	733	721	727
2	730	718	722
3	720	693	706
4	694	649	671
5	654	629	642
6	631	623	627
7	630	624	627
8	625	610	617
9	614	580	606
10	580	557	568
11	574	564	570
12	573	566	571
13	580	566	574
14	592	576	584
15	606	588	597
16	633	601	614
17	650	626	637
18	657	644	651
19	706	653	675
20	713	696	706
21	714	706	712
22	716	709	713
23	719	709	715
24	730	717	724
25	732	725	729
26	733	726	731
27	736	726	733
28	738	729	733
29	732	726	730
30	734	727	732
31	735	729	731
MONTH	738	557	667

06309000 YELLOWSTONE RIVER AT MILES CITY, MT

LOCATION.--Lat 46°25'18", long 105°51'38" (NAD 27), in NE$^1/_4$ SW$^1/_4$ NW$^1/_4$ sec.28, T.8 N., R.47 E., Custer County, Hydrologic Unit 10100001, on left bank at upstream side of bridge on State Highway 22 at Miles City, 0.8 mi downstream from Tongue River, and at river mile 184.2.

DRAINAGE AREA.--48,253 mi^2.

PERIOD OF RECORD.--September 1922 to September 1923, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,333.3 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to May 6, 1929, nonrecording gages 1.2 mi downstream at different elevations. May 6, 1929, to Sept. 30, 1931, nonrecording gage, and Oct. 1, 1931, to Nov. 10, 1937, water-stage recorder 300 ft upstream from present site at same elevation. Nov. 11, 1937, to Sept. 30, 1946, water-stage recorder 1.2 mi downstream at different elevation. Oct. 1, 1946, to Mar. 15, 1979, water-stage recorder at site 300 ft upstream at present elevation. Mar. 16, 1979, to Sept. 21, 1979, nonrecording gage at present site and elevation. Sept. 22, 1979, recording gage established at same site and elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by reservoirs on tributary streams. Diversions for irrigation of about 1,100,000 acres upstream from station (does not include flood irrigation). Several unpublished observations of water temperature and specific conductance were obtained during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,250	7,040	4,680	e4,900	e4,600	3,920	3,670	7,010	22,000	e29,000	6,200	4,620
2	5,420	6,420	4,810	e4,700	e4,500	3,900	3,700	6,430	20,600	e27,000	6,020	4,620
3	5,480	6,120	4,730	e4,200	e4,500	3,880	3,640	6,040	19,500	e26,000	5,750	4,710
4	5,650	5,980	4,560	e4,000	e4,400	3,810	3,550	5,600	19,900	e25,000	5,550	4,660
5	5,650	5,760	4,830	e3,800	e4,400	3,760	3,570	5,400	19,000	e24,000	5,620	4,700
6	5,560	5,810	5,300	e3,800	e4,300	3,760	3,530	5,310	18,200	21,600	5,960	4,630
7	5,460	5,910	5,170	e3,500	e4,400	3,700	3,610	5,530	18,200	20,200	5,860	4,440
8	5,390	5,830	5,490	e4,000	e4,300	3,710	3,720	6,510	18,100	18,800	5,530	4,390
9	5,410	5,740	5,180	e4,200	e4,000	3,650	3,820	8,130	25,500	17,900	5,250	4,600
10	5,390	5,710	5,140	e4,200	e3,800	3,670	4,250	10,100	23,500	17,300	4,920	4,340
11	5,280	5,640	5,320	e4,000	e3,600	3,710	4,550	10,200	22,200	17,100	4,790	3,950
12	5,240	5,600	5,300	e4,000	e3,800	3,710	4,460	12,200	21,100	17,500	4,740	3,950
13	5,260	5,570	5,240	e4,200	e4,100	3,770	4,520	25,400	20,700	17,700	4,740	4,070
14	5,380	5,630	5,290	e4,200	e4,300	3,830	4,210	25,000	20,500	16,500	4,900	4,230
15	5,390	5,580	5,230	e4,200	e4,300	3,890	3,890	19,300	20,900	13,800	5,180	4,370
16	5,520	5,460	5,060	e4,000	e4,300	3,890	3,730	16,700	20,100	12,200	5,300	4,520
17	6,000	5,360	5,240	e3,800	e4,300	3,850	3,750	15,800	20,200	11,200	5,160	4,480
18	6,200	5,330	5,320	e3,900	e4,300	3,730	3,910	16,800	24,100	10,300	4,770	4,470
19	6,170	5,290	5,310	e4,100	e4,200	3,800	4,140	20,900	27,500	9,710	4,800	4,540
20	6,180	5,270	5,300	e3,700	e4,100	3,810	4,210	21,900	28,800	9,230	5,150	4,510
21	6,110	5,290	5,190	e4,600	e3,800	3,830	6,060	19,900	e30,000	8,460	5,610	4,570
22	6,030	5,290	e5,400	e5,100	e3,900	3,740	7,280	27,300	e31,000	7,660	6,060	4,360
23	5,990	5,240	e5,400	e5,700	e4,100	3,780	6,840	33,700	e31,000	7,170	6,580	4,490
24	5,950	5,080	e5,000	e5,800	e4,200	3,860	6,390	35,000	e33,000	6,850	5,990	5,010
25	5,950	5,110	4,690	e5,600	e4,200	3,890	6,040	34,100	e38,000	6,780	5,480	5,270
26	5,950	5,180	3,540	e5,500	e4,200	3,950	5,820	34,800	e40,000	6,710	5,400	5,680
27	5,940	5,260	4,410	e5,400	e4,100	3,870	5,730	30,200	e39,000	6,810	5,360	6,230
28	5,960	5,290	e4,600	e5,200	3,970	3,770	6,200	25,100	e35,000	7,090	5,300	6,320
29	6,080	5,180	e4,700	e5,100	---	3,710	7,150	22,100	e32,000	7,070	5,120	6,490
30	6,140	5,030	e5,000	e4,900	---	3,680	7,440	21,100	e31,000	6,790	5,040	6,330
31	6,710	---	e5,300	e4,800	---	3,650	---	21,900	---	6,370	4,760	---
TOTAL	178,090	167,000	155,730	139,100	116,970	117,480	143,380	555,460	770,600	439,800	166,890	143,550
MEAN	5,745	5,567	5,024	4,487	4,178	3,790	4,779	17,920	25,690	14,190	5,384	4,785
MAX	6,710	7,040	5,490	5,800	4,600	3,950	7,440	35,000	40,000	29,000	6,580	6,490
MIN	5,240	5,030	3,540	3,500	3,600	3,650	3,530	5,310	18,100	6,370	4,740	3,950
AC-FT	353,200	331,200	308,900	275,900	232,000	233,000	284,400	1,102,000	1,528,000	872,300	331,000	284,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2005, BY WATER YEAR (WY)*

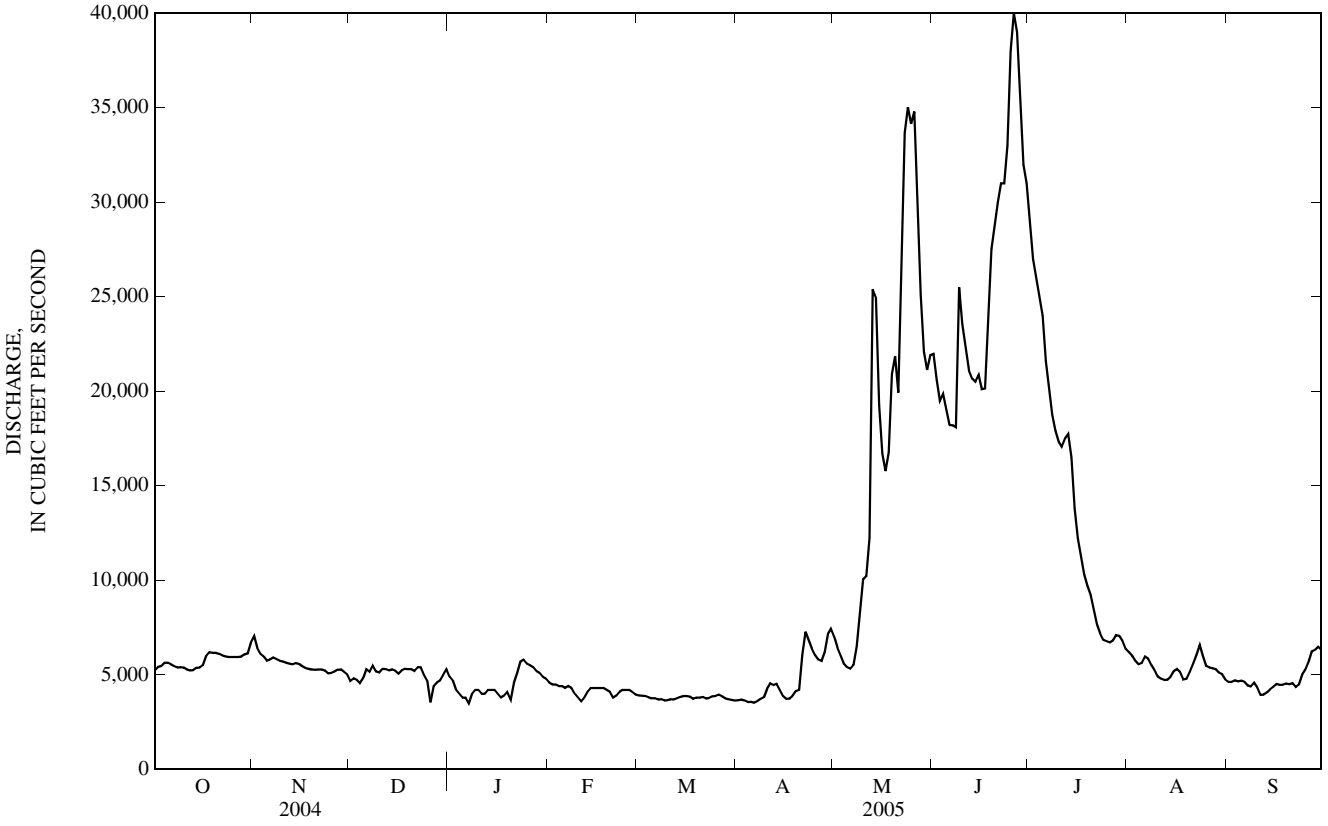
MEAN	7,629	7,042	5,702	5,262	6,112	8,172	8,148	17,140	34,340	19,910	8,033	7,104
MAX	12,970	10,850	9,342	8,897	16,160	18,560	15,210	29,100	61,860	46,310	16,540	13,710
(WY)	(1972)	(1973)	(1983)	(1968)	(1971)	(1929)	(1943)	(1978)	(1997)	(1967)	(1997)	(1941)
MIN	3,857	3,976	2,921	2,034	2,344	3,027	2,729	7,334	13,030	3,988	2,615	2,964
(WY)	(2004)	(1932)	(1933)	(1937)	(1932)	(2002)	(1961)	(1961)	(1934)	(1934)	(1961)	(1934)

06309000 YELLOWSTONE RIVER AT MILES CITY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1922 - 2005*	
ANNUAL TOTAL	2,398,390		3,094,050			
ANNUAL MEAN	6,553		8,477		11,220	
HIGHEST ANNUAL MEAN					17,470	1997
LOWEST ANNUAL MEAN					6,141	1934
HIGHEST DAILY MEAN	30,300	Jun 13	40,000	Jun 26	92,400	May 30, 1923
LOWEST DAILY MEAN	1,900	Jan 6	3,500	Jan 7	996	Dec 14, 1932
ANNUAL SEVEN-DAY MINIMUM	2,030	Jan 3	3,610	Apr 1	1,220	Dec 12, 1932
MAXIMUM PEAK FLOW			unknown		b102,000	May 22, 1978
MAXIMUM PEAK STAGE			a8.97	May 24	c21.70	Mar 20, 1944
INSTANTANEOUS LOW FLOW			3,500	Jan 7	1,800	Mar 7, 1995
ANNUAL RUNOFF (AC-FT)	4,757,000		6,137,000		8,130,000	
10 PERCENT EXCEEDS	11,600		21,100		25,000	
50 PERCENT EXCEEDS	5,300		5,300		7,420	
90 PERCENT EXCEEDS	3,800		3,800		4,000	

SUMMARY STATISTICS	WATER YEARS 1922 - 1961**		WATER YEARS 1967 - 2005***	
ANNUAL MEAN	10,710		11,560	
HIGHEST ANNUAL MEAN	16,600	1943	17,470	1997
LOWEST ANNUAL MEAN	6,141	1934	6,176	2001
HIGHEST DAILY MEAN	92,400	May 30, 1923	82,300	Jun 15, 1997
LOWEST DAILY MEAN	996	Dec 14, 1932	1,640	Nov 25, 1977
ANNUAL SEVEN-DAY MINIMUM	1,220	Dec 12,1932	2,030	Jan 3, 2004
MAXIMUM PEAK FLOW	96,300	Jun 19, 1944	b102,000	May 22, 1978
MAXIMUM PEAK STAGE	c21.70	Mar 20, 1944	c20.78	Mar 15, 1979
ANNUAL RUNOFF (AC-FT)	7,756,000		8,372000	
10 PERCENT EXCEEDS	25,000		24,800	
50 PERCENT EXCEEDS	6,620		8,060	
90 PERCENT EXCEEDS	3,500		4,560	

*--During period of operation (1922-23, 1928 to current year).
**--Prior to construction of Yellowtail Dam, during period of operation (1922-23, 1928-61).
***--After completion of Yellowtail Dam.
a--May have been higher during period of no gage-height record, June 20 to July 6.
b--Gage height, 16.50 ft.
c--Backwater from ice jam.
e--Estimated.



06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°03'28", long 105°52'39" (NAD 27), in SE$^1/_4$ NE$^1/_4$ NE$^1/_4$ sec.18, T.9S., R.48E., Powder River County, Hydrologic Unit 10090207, on left bank 25 ft downstream from bridge on Powder River, 7.3 mi upstream from Buffalo Creek, and at river mile 183.7.

DRAINAGE AREA.--8,086 mi^2; Sept. 13, 1956 to Aug. 27, 2001 published as 8,088 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932 (M). WSP 1729: Drainage area. WDR MT-04-01: 2003, drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,350.6 ft (NGVD 29). Prior to Aug. 28, 1931, nonrecording gage at site 0.8 mi downstream at different elevation. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 0.1 mi upstream at different elevation. Mar. 22 to July 24, 1956, nonrecording gage at site 1.4 mi downstream at different elevation. July 25 to Sept. 12, 1956, nonrecording gage at different site and elevation. Sept. 13, 1956 to Aug. 27, 2001, water-stage recorder during period of gage operation 1.1 mi downstream at different elevation.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 66,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 30, 1923, reached a stage of 19 ft, site and elevation used 1931-56, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	258	e85	e130	e170	e180	182	314	908	861	118	88
2	86	243	e100	e100	e160	e200	183	357	853	744	134	83
3	92	244	e150	e120	e170	e240	184	365	1,070	644	251	78
4	110	243	e200	e130	e170	e230	187	304	978	608	170	67
5	122	254	e200	e100	e150	255	176	270	844	531	144	65
6	123	248	e180	e100	e140	246	170	277	718	452	130	63
7	108	232	e160	e150	e120	234	171	271	689	380	122	62
8	111	231	e150	e150	e110	220	164	323	841	341	111	57
9	116	236	e160	e130	e140	221	172	798	857	278	106	39
10	104	218	e160	e140	e140	206	229	1,190	748	225	114	35
11	102	216	e160	e110	e150	207	270	1,180	683	197	118	33
12	95	214	e160	e100	e170	188	301	2,430	622	189	182	29
13	96	212	e150	e90	e200	186	268	2,900	589	134	177	37
14	95	217	e130	e80	e180	182	250	2,880	887	92	168	37
15	112	223	e100	e70	e150	184	208	2,280	858	85	171	38
16	124	229	e120	e90	e150	191	185	1,930	793	81	189	42
17	131	224	e150	e120	e150	185	172	1,800	866	60	226	40
18	149	226	e150	e160	e140	185	154	1,830	1,010	48	234	37
19	165	227	e150	e200	e150	186	139	1,780	1,300	42	221	40
20	173	221	e140	e180	e170	179	178	1,720	1,320	45	193	45
21	205	233	e130	e160	e170	193	247	1,850	1,300	51	185	42
22	211	230	e120	e150	e150	204	306	2,050	1,320	41	162	36
23	206	232	e100	e170	e160	195	298	2,090	1,270	93	137	27
24	205	286	e110	e160	e170	187	383	2,050	1,350	182	127	28
25	226	325	e130	e150	e170	189	381	2,060	1,460	99	119	31
26	262	277	e150	e150	e180	187	398	1,820	1,330	76	134	35
27	332	e200	e150	e150	e180	193	386	1,530	1,150	68	121	43
28	286	e100	e150	e150	e170	195	311	1,310	995	72	117	55
29	259	e70	e140	e170	---	181	290	1,120	842	118	115	54
30	273	e80	e130	e170	---	165	312	1,010	784	109	106	54
31	275	---	e130	e170	---	169	---	965	---	94	92	---
TOTAL	5,030	6,649	4,395	4,200	4,430	6,163	7,255	43,054	29,235	7,040	4,694	1,420
MEAN	162	222	142	135	158	199	242	1,389	974	227	151	47.3
MAX	332	325	200	200	200	255	398	2,900	1,460	861	251	88
MIN	76	70	85	70	110	165	139	270	589	41	92	27
AC-FT	9,980	13,190	8,720	8,330	8,790	12,220	14,390	85,400	57,990	13,960	9,310	2,820

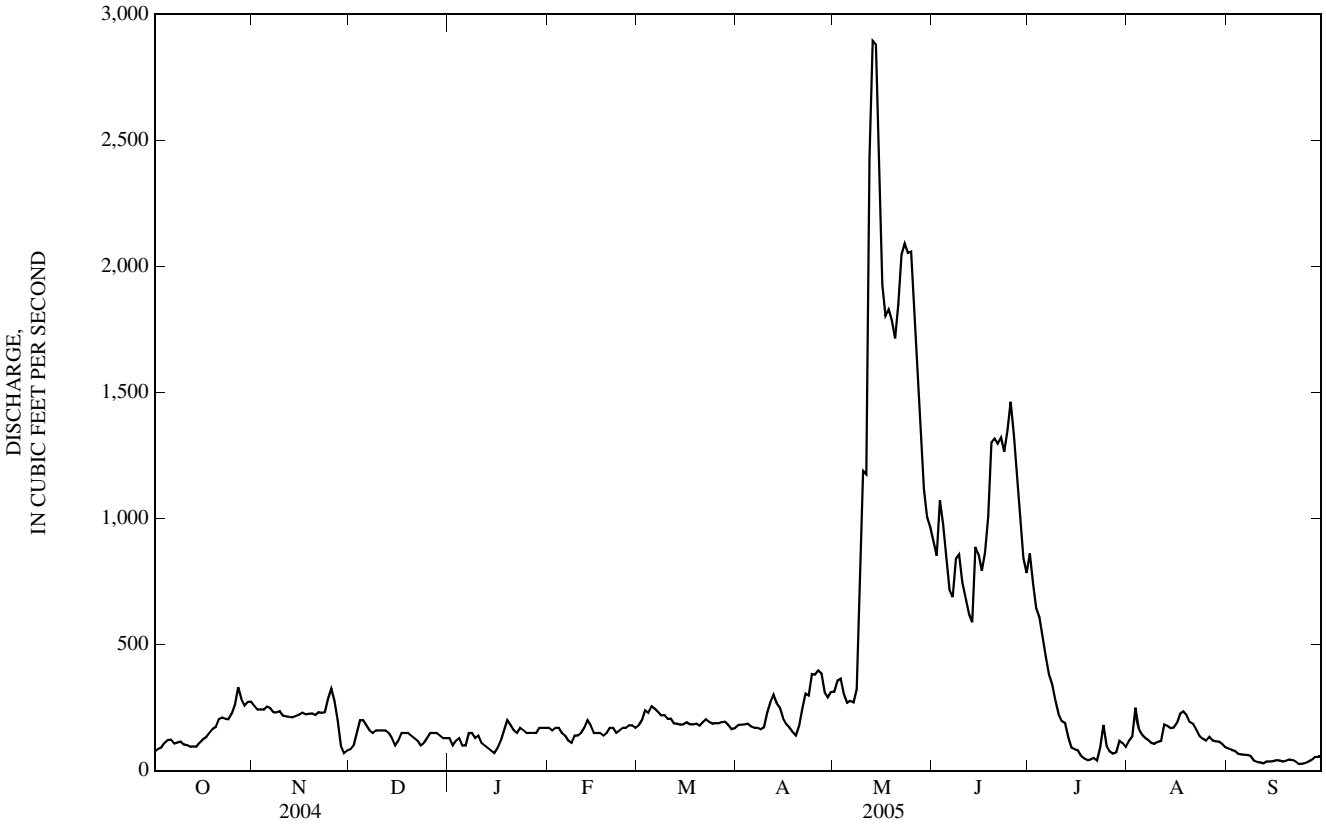
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)*

MEAN	223	223	159	152	282	603	501	1,042	1,333	454	171	142
MAX	897	660	326	445	1,200	2,290	1,314	5,553	4,131	2,500	1,219	686
(WY)	(1995)	(1999)	(1981)	(1981)	(1930)	(1947)	(1965)	(1978)	(1967)	(1937)	(1941)	(1982)
MIN	16.1	80.0	56.2	27.2	20.9	185	117	82.6	31.1	33.9	0.60	1.28
(WY)	(1955)	(1936)	(1933)	(1950)	(1933)	(2002)	(1961)	(1934)	(2004)	(1961)	(1966)	(1960)

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005*	
ANNUAL TOTAL	48,989.8		123,565			
ANNUAL MEAN	134		339		440	
HIGHEST ANNUAL MEAN					1,091	1978
LOWEST ANNUAL MEAN					109	1961
HIGHEST DAILY MEAN	975	Mar 13	2,900	May 13	27,500	May 20, 1978
LOWEST DAILY MEAN	5.0	Aug 24	27	Sep 23	0.00	Jul 15, 1931
ANNUAL SEVEN-DAY MINIMUM	7.8	Aug 19	35	Sep 21	0.00	Sep 4, 1960
MAXIMUM PEAK FLOW			3,610	May 13	b33,000	May 20, 1978
MAXIMUM PEAK STAGE			6.33	May 13	c17.70	Mar 21, 1956
INSTANTANEOUS LOW FLOW			a24	Sep 23	d0.00	Jul 15, 1931
ANNUAL RUNOFF (AC-FT)	97,170		245,100		319,000	
10 PERCENT EXCEEDS	265		895		1,020	
50 PERCENT EXCEEDS	100		173		214	
90 PERCENT EXCEEDS	23		71		45	

*--During period of operation (1930-72, 1975 to current year).
a--Gage height, 2.06 ft.
b--Gage height, 15.24 ft.
c--Ice jam, site and datum then in use.
d--Site and datum then in use.
e--Estimated.



06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-53, 1956-67, 1969-72, 1975-77, 2001 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1986 to November 1989, May 2001 to current year (seasonal operation).
WATER TEMPERATURE: February 1951 to September 1953, October 1955 to September 1957, October 1974 to September 1977, March 1978 to September 1981 (seasonal records only).
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1977, March 1978 to September 1996 (seasonal records only).

INSTRUMENTATION.--Specific conductance probe installed May 20, 2001.

REMARKS.--Specific conductance record is rated good to excellent except for the period June 2-4, which is rated fair, and June 5, 6, 10-29 and July 1-5 and 12, which are rated poor. Missing specific conductance data on May 11-31, July 6-9 and July 24 are due to equipment malfunction or sensor fouling.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE : Maximum daily, 5,920 microsiemens per centimeter (µS/cm) at 25.0°C, July 16, 2002; minimum, 406 µS/cm at 25.0°C, June 24, 2005.
WATER TEMPERATURE: Maximum daily, 33.0°C, July 14, 1981; minimum daily 0.0°C on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 53,500 mg/L May 27, 1980; minimum daily mean, 3 mg/L Sept. 16-18, 1996.
SEDIMENT LOAD: Maximum daily, 2,230,000 tons May 20, 1978; minimum daily, 0.17 ton Aug. 1, 1988 and Sept. 16, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,890 microsiemens per centimeter (µS/cm) at 25.0°C, July 25; minimum, 406 µS/cm at 25.0°C, June 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
12...	1330	97	680	10.5	105	8.4	1,680	11.0	10.0	540	117	59.8	7.36
26...	0955	226	672	13.1	124	8.5	1,790	7.5	7.0	490	109	53.9	8.19
NOV													
03...	1300	268	677	12.2	108	8.4	1,900	17.5	5.0	570	128	59.4	8.43
17...	1720	226	678	11.9	102	8.4	1,910	5.0	3.5	540	118	58.4	7.61
DEC													
01...	1345	E85	678	13.7	106	8.3	2,540	9.0	0.0	680	146	77.1	9.64
23...	1030	E100	679	14.0	108	8.0	1,970	-15.0	0.0	640	151	62.8	8.22
JAN													
18...	1400	E160	675	10.7	83	7.7	2,220	13.0	0.0	700	171	65.9	8.65
26...	1315	150	672	11.8	92	8.3	1,660	7.0	0.0	540	131	53.0	7.47
FEB													
08...	1230	E110	671	13.4	105	8.4	1,870	-2.0	0.0	550	133	53.5	7.20
23...	1610	E160	675	12.6	98	8.4	1,940	6.0	0.0	580	137	58.4	7.20
MAR													
08...	1400	221	674	10.9	104	8.5	2,040	11.0	7.5	560	129	58.6	8.00
28...	1700	205	658	9.7	106	8.4	2,180	16.0	12.5	590	130	65.3	8.63
APR													
05...	1430	180	677	9.8	109	8.4	2,330	14.5	14.5	580	116	71.2	10.4
11...	1200	289	671	10.9	108	8.4	2,200	11.0	9.0	590	123	68.1	8.46
MAY													
05...	1300	275	674	9.1	107	8.5	1,870	21.0	17.0	500	113	54.1	8.21
25...	1540	2,050	680	9.3	102	8.3	500	13.0	14.5	140	33.6	13.8	2.65
JUN													
07...	1340	688	668	7.6	95	8.2	1,270	21.0	19.0	320	74.0	32.8	4.78
14...	1030	985	675	8.6	100	8.4	1,170	21.0	16.5	350	81.1	36.8	4.48
JUL													
07...	1825	382	676	6.6	97	8.3	953	32.5	28.5	270	64.7	26.1	3.41
12...	1445	200	677	7.6	113	8.4	1,170	41.0	29.5	350	79.9	36.1	4.17
AUG													
03...	1430	256	677	7.1	94	8.2	1,810	18.0	23.0	620	152	58.6	8.51
10...	1400	112	679	8.7	123	8.4	1,260	29.5	26.5	500	117	50.6	6.36
SEP													
06...	1730	73	681	9.6	124	8.4	1,150	25.0	22.0	470	102	51.1	5.79
27...	1530	46	675	9.9	117	8.4	1,320	21.0	17.0	530	110	62.5	5.93

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)
OCT													
12...	4	193	43	201	198	106	.4	3.90	547	1,150	1.68	323	1,230
26...	4	215	48	268	204	113	.5	5.41	577	1,210	1.72	773	1,270
NOV													
03...	4	232	47	280	217	117	.6	7.31	642	1,330	1.88	1,000	1,380
17...	4	220	47	285	225	126	.5	7.71	594	1,270	1.82	819	1,340
DEC													
01...	5	329	51	314	305	182	.6	10.2	807	1,750	2.51	E401	1,850
23...	5	265	47	326	327	140	.6	11.9	599	1,440	2.01	E388	1,480
JAN													
18...	4	264	45	354	356	160	.6	13.8	621	1,520	2.15	E657	1,580
26...	4	197	44	278	274	101	.4	10.9	493	1,160	1.62	483	1,190
FEB													
08...	4	226	47	--	253	120	.6	8.89	588	1,290	1.84	E384	1,350
23...	4	245	47	--	260	135	.6	14.1	591	1,350	1.88	E581	1,380
MAR													
08...	5	274	51	296	243	152	.6	7.78	619	1,400	1.93	849	1,420
28...	5	290	51	279	244	165	.6	6.39	664	1,480	2.12	861	1,560
APR													
05...	6	359	57	263	223	173	.6	5.79	761	1,630	2.25	806	1,660
11...	5	280	50	280	216	154	.6	5.13	734	1,500	2.12	1,220	1,560
MAY													
05...	5	257	52	261	208	119	.6	7.06	597	1,280	1.82	994	1,340
25...	2	46.7	41	119	81	18.0	.2	8.83	129	302	.43	1,740	314
JUN													
07...	3	130	46	186	150	54.8	.4	9.91	412	809	1.21	1,650	886
14...	3	123	43	180	153	58.8	.3	9.91	365	772	1.09	2,140	803
JUL													
07...	2	91.3	42	--	126	51.3	.2	7.51	269	589	.85	642	622
12...	3	118	42	154	153	59.0	.3	7.21	350	747	1.07	425	787
AUG													
03...	3	183	39	265	184	74.2	.4	5.99	683	1,280	1.87	951	1,380
10...	2	101	30	131	140	29.1	.3	3.27	476	867	1.27	283	935
SEP													
06...	2	75.7	26	--	139	11.4	.3	3.13	447	780	1.16	168	852
27...	2	87.4	26	156	153	10.0	.2	2.04	543	914	1.43	130	1,050

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)
OCT												
12...	<.010	<.016	<.002	.33	<.006	.033	311	.8	<2	37	<.06	201
26...	E.008	.151	E.001	1.06	<.006	.015	7,530	.7	--	174	.91	--
NOV												
03...	.022	.264	.002	1.19	E.003	.29	14,000	.8	7	164	.84	201
17...	.032	.207	.002	.81	E.004	.24	5,460	.8	--	116	.55	--
DEC												
01...	.059	.322	.004	.64	E.004	.064	1,100	1.3	E1	47	.10	283
23...	.054	.440	.007	.76	<.006	.068	1,600	.6	--	52	.11	--
JAN												
18...	.138	.597	.017	.96	<.006	.083	1,750	.7	E1	67	.15	268
26...	.098	.485	.016	.86	<.006	.166	860	.6	--	44	.08	--
FEB												
08...	.065	.536	.013	.82	E.003	.078	2,660	.9	E1	53	.12	195
23...	.041	.441	.011	.86	E.005	.19	4,150	.7	--	88	.32	--
MAR												
08...	.015	.245	.004	.87	E.005	.32	9,340	1.1	5	153	.53	213
28...	.014	.072	.003	.58	<.006	.25	5,170	1.0	--	116	.39	--
APR												
05...	E.006	.128	.002	.76	<.006	.23	5,050	1.7	4	129	.45	279
11...	.020	.021	E.001	.92	E.004	.40	6,450	1.2	--	165	.64	--
MAY												
05...	E.006	.357	.002	1.38	<.006	.54	7,650	1.2	4	156	1.07	212
25...	.013	.162	E.001	.94	E.003	.97	11,400	.9	--	264	1.30	--
JUN												
07...	E.009	.320	.002	1.53	.007	.56	12,600	.9	9	263	1.43	163
14...	<.010	<.016	E.001	.93	E.003	.44	7,870	.9	--	193	.83	--
JUL												
07...	E.006	<.016	E.001	.51	E.003	.176	1,750	.9	--	60	.18	--
12...	.010	<.016	E.001	.40	<.006	.092	698	1.1	E1	52	.06	125
AUG												
03...	<.010	.081	.004	2.64	<.006	.72	21,600	1.0	13	443	2.59	183
10...	<.010	<.016	<.002	.39	<.006	.035	404	.8	--	53	E.06	--
SEP												
06...	<.010	<.016	<.002	.42	<.006	.023	246	.62	.72	47	<.06	104
27...	<.010	E.011	<.002	.31	<.006	.010	94	.49	--	44	<.06	--

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT												
12...	E.02	E.5	5.7	7	510	.62	5.2	20.4	--	4.53	1.9	4
26...	--	--	--	<6	--	--	.6	--	--	--	2.3	--
NOV												
03...	.40	11.5	24.8	<6	14,400	14.0	1.5	364	--	17.7	2.9	58
17...	--	--	--	<6	--	--	3.0	--	--	--	3.7	--
DEC												
01...	.06	1.4	13.9	<18	1,450	1.35	14.1	44.4	--	7.46	3.6	12
23...	--	--	--	E5	--	--	6.3	--	--	--	3.1	--
JAN												
18...	.08	5.0	12.6	E4	2,580	2.19	6.2	56.0	--	5.79	3.3	15
26...	--	--	--	7	--	--	6.6	--	--	--	2.3	--
FEB												
08...	.08	1.8	8.4	<6	2,060	1.87	6.4	40.1	--	5.30	3.8	12
23...	--	--	--	<30	--	--	4.2	--	--	--	3.9	--
MAR												
08...	.36	8.0	20.7	<6	11,600	11.2	4.0	246	--	14.9	3.5	57
28...	--	--	--	<6	--	--	3.9	--	--	--	2.5	--
APR												
05...	.26	5.6	25.0	<18	8,140	7.94	3.1	187	--	11.5	4.6	43
11...	--	--	--	<18	--	--	2.5	--	--	--	3.6	--
MAY												
05...	.46	8.1	29.5	<6	11,300	14.0	1.6	415	--	19.9	4.7	71
25...	--	--	--	19	--	--	1.3	--	--	--	1.8	--
JUN												
07...	.51	10.5	30.7	9	20,700	18.7	1.3	569	.04	27.3	3.2	105
14...	--	--	--	E4	--	--	3.3	--	--	--	2.0	--
JUL												
07...	--	--	--	8	--	--	1.2	--	--	--	1.1	--
12...	E.04	.9	3.2	E6	1,220	1.20	3.5	54.7	--	5.40	1.7	5
AUG												
03...	1.35	28.4	56.9	<6	47,100	40.9	E.6	902	--	55.3	2.9	179
10...	--	--	--	E5	--	--	4.1	--	--	--	1.7	--
SEP												
06...	E.03	.30	2.6	<6	410	.35	3.9	14.4	--	3.60	1.0	2
27...	--	--	--	<6	--	--	3.0	--	--	--	.38	--

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT			
12...	96	51	13
26...	99	898	548
NOV			
03...	99	927	671
17...	98	571	348
DEC			
01...	97	186	E42.7
23...	83	169	E45.6
JAN			
18...	90	188	E81.2
26...	87	107	E43
FEB			
08...	94	179	E53.2
23...	91	417	E180
MAR			
08...	98	715	427
28...	98	478	265
APR			
05...	99	528	257
11...	98	851	664
MAY			
05...	98	1,100	817
25...	69	1,960	10,900
JUN			
07...	86	1,590	2,950
14...	57	1,560	4,150
JUL			
07...	*	*	*
12...	89	66	36
AUG			
03...	99	3,170	2,190
10...	97	57	17
SEP			
06...	98	52	10
27...	93	18	2.2

*--Sediment sample not collected.
E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER 2004			NOVEMBER			DECEMBER			JANUARY		
1	1,010	945	973	1,800	1,680	1,740	---	---	*2,620	---	---	*2,160
2	1,050	965	1,000	1,880	1,770	1,840	---	---	---	---	---	---
3	1,040	906	971	---	---	*1,950	---	---	---	---	---	---
4	979	912	948	---	---	---	---	---	---	---	---	*2,680
5	1,550	855	1,010	---	---	---	---	---	*2,010	---	---	---
6	1,720	1,550	1,660	---	---	*2,000	---	---	---	---	---	---
7	1,830	1,650	1,720	---	---	---	---	---	---	---	---	*2,170
8	1,870	1,630	1,770	---	---	---	---	---	---	---	---	---
9	1,630	1,550	1,590	---	---	*2,010	---	---	---	---	---	---
10	1,680	1,600	1,620	---	---	---	---	---	*2,150	---	---	---
11	1,680	1,640	1,660	---	---	---	---	---	---	---	---	*2,150
12	1,760	1,680	1,710	---	---	*2,000	---	---	---	---	---	---
13	1,770	1,720	1,740	---	---	---	---	---	---	---	---	---
14	1,720	1,640	1,700	---	---	---	---	---	*2,230	---	---	*2,270
15	1,660	1,570	1,630	---	---	---	---	---	---	---	---	---
16	1,780	1,660	1,720	---	---	*1,980	---	---	---	---	---	---
17	1,820	1,770	1,800	---	---	**1,910	---	---	---	---	---	---
18	1,890	1,820	1,860	---	---	---	---	---	*1,850	---	---	*2,230
19	1,990	1,880	1,960	---	---	*2,060	---	---	---	---	---	---
20	1,930	1,820	1,870	---	---	---	---	---	---	---	---	---
21	2,040	1,820	1,900	---	---	---	---	---	---	---	---	*1,980
22	2,040	1,940	1,980	---	---	---	---	---	*1,940	---	---	---
23	1,940	1,880	1,910	---	---	*2,240	---	---	**1,970	---	---	---
24	1,880	1,720	1,810	---	---	---	---	---	---	---	---	---
25	1,830	1,710	1,760	---	---	---	---	---	---	---	---	*1,640
26	1,820	1,780	1,800	---	---	*1,960	---	---	*1,980	---	---	**1,660
27	2,170	1,800	2,090	---	---	---	---	---	---	---	---	---
28	2,180	2,070	2,150	---	---	---	---	---	---	---	---	---
29	2,070	1,670	1,840	---	---	---	---	---	---	---	---	*1,700
30	1,760	1,620	1,680	---	---	---	---	---	---	---	---	---
31	1,760	1,680	1,720	---	---	---	---	---	---	---	---	---
MONTH	2,180	855	1,660	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	*1,790	2,230	2,210	2,220	2,290	2,160	2,210
2	---	---	*1,660	---	---	---	2,270	2,230	2,250	2,160	1,880	2,030
3	---	---	---	---	---	---	2,270	2,250	2,260	1,880	1,790	1,820
4	---	---	---	---	---	---	2,340	2,260	2,300	1,810	1,780	1,790
5	---	---	*1,700	---	---	*2,050	2,350	2,240	2,320	2,020	1,780	1,900
6	---	---	---	---	---	---	2,320	2,260	2,290	2,190	2,020	2,110
7	---	---	---	---	---	---	2,260	2,220	2,240	2,190	2,080	2,140
8	---	---	---	---	---	---	2,260	2,240	2,250	2,080	2,000	2,020
9	---	---	*2,080	2,150	2,050	2,100	2,260	2,110	2,170	2,100	875	1,730
10	---	---	---	2,130	2,060	2,100	2,300	2,190	2,230	---	---	#767
11	---	---	---	2,140	2,080	2,110	2,280	2,110	2,190	---	---	---
12	---	---	*1,920	2,140	2,090	2,110	2,260	2,100	2,190	---	---	---
13	---	---	---	2,120	2,080	2,100	2,280	1,940	2,150	---	---	---
14	---	---	---	2,120	2,090	2,110	1,960	1,870	1,910	---	---	---
15	---	---	*2,100	2,140	2,090	2,120	1,980	1,940	1,970	---	---	---
16	---	---	---	2,150	2,100	2,130	1,940	1,850	1,890	---	---	---
17	---	---	---	2,170	2,140	2,150	1,850	1,780	1,830	---	---	---
18	---	---	---	2,170	2,120	2,150	1,890	1,750	1,800	---	---	---
19	---	---	*2,000	2,200	2,160	2,180	1,910	1,880	1,900	---	---	---
20	---	---	---	2,180	2,120	2,150	1,950	1,830	1,890	---	---	---
21	---	---	---	2,120	2,070	2,100	1,850	1,640	1,750	---	---	---
22	---	---	---	2,130	2,100	2,110	1,720	1,630	1,680	---	---	---
23	---	---	*2,000	2,140	2,050	2,090	1,840	1,710	1,790	---	---	---
24	---	---	---	2,130	2,070	2,100	2,080	1,830	1,940	---	---	---
25	---	---	---	2,130	2,060	2,080	2,260	2,080	2,170	---	---	**500
26	---	---	*1,880	2,140	2,070	2,100	2,260	1,940	2,090	---	---	---
27	---	---	---	2,160	2,090	2,130	2,010	1,920	1,950	---	---	---
28	---	---	---	2,190	2,130	2,160	2,030	2,000	2,010	---	---	*712
29	---	---	---	2,180	2,140	2,160	2,130	2,030	2,090	---	---	---
30	---	---	---	2,180	2,150	2,160	2,290	2,050	2,170	---	---	---
31	---	---	---	2,220	2,140	2,170	---	---	---	---	---	*952
MONTH	---	---	---	2,220	2,050	2,110	2,350	1,630	2,060	---	---	---

*--Instantaneous value from observer grab sample.
**--Instantaneous value from USGS cross-section sample.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
SEASON OCTOBER 2004 TO OCTOBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	#1,040	813	699	745	1,350	1,250	1,300	1,210	1,190	1,200
2	1,210	1,080	1,140	817	693	749	1,430	1,350	1,390	1,190	1,180	1,190
3	1,390	1,110	1,290	851	760	814	1,880	1,250	1,640	1,200	1,180	1,190
4	1,380	1,270	1,330	876	752	813	1,720	1,540	1,610	1,220	1,180	1,200
5	1,360	1,270	1,320	---	---	813	1,580	1,490	1,540	1,220	1,200	1,210
6	1,380	1,290	1,340	---	---	---	1,490	1,330	1,400	1,210	1,170	1,190
7	1,320	1,270	1,280	---	---	**953	1,340	1,260	1,290	1,170	1,150	1,160
8	1,360	1,060	1,200	---	---	---	1,300	1,270	1,290	1,160	1,140	1,150
9	1,180	1,050	1,100	---	---	---	1,300	1,260	1,280	1,200	1,160	1,170
10	1,170	1,040	1,120	1,130	833	1,030	1,290	1,140	1,260	1,240	1,200	1,220
11	1,240	1,060	1,180	1,180	1,080	1,120	1,270	1,100	1,230	1,260	1,200	1,240
12	1,160	1,070	1,110	1,190	1,080	1,150	2,060	1,260	1,470	1,240	1,230	1,240
13	1,280	1,130	1,160	1,190	1,180	1,190	2,040	1,320	1,590	1,260	1,210	1,220
14	1,280	954	1,060	1,220	1,180	1,200	1,320	1,180	1,230	1,310	1,210	1,250
15	1,100	812	925	---	---	#1,220	1,330	1,190	1,290	1,340	1,260	1,300
16	1,080	915	989	1,260	1,240	1,250	1,420	1,300	1,370	1,350	1,300	1,330
17	1,010	881	970	1,350	1,260	1,320	1,320	1,210	1,260	1,320	1,300	1,310
18	894	752	838	1,470	1,330	1,400	1,810	1,300	1,660	1,350	1,320	1,340
19	765	663	718	1,530	1,400	1,470	1,970	1,560	1,830	1,360	1,340	1,360
20	695	650	676	1,630	1,520	1,570	1,960	1,720	1,830	1,340	1,300	1,340
21	676	541	617	1,570	1,380	1,470	1,880	1,560	1,660	1,320	1,300	1,310
22	545	508	529	1,440	1,400	1,420	1,560	1,480	1,510	1,340	1,260	1,310
23	534	415	502	---	---	#1,470	1,490	1,410	1,450	1,400	1,290	1,340
24	497	406	450	---	---	---	1,410	1,370	1,390	1,370	1,310	1,330
25	784	488	661	2,890	1,600	2,600	1,380	1,340	1,360	1,410	1,290	1,350
26	783	663	751	2,360	1,880	2,010	1,350	1,260	1,300	1,340	1,250	1,290
27	663	595	619	1,890	1,660	1,790	1,290	1,260	1,270	1,310	1,240	1,270
28	647	618	631	1,660	1,580	1,610	1,280	1,250	1,270	1,380	1,250	1,300
29	695	643	663	1,620	1,410	1,540	1,270	1,240	1,260	1,360	1,280	1,320
30	807	677	733	1,410	1,320	1,360	1,270	1,220	1,250	1,370	1,270	1,330
31	---	---	---	1,320	1,280	1,290	1,220	1,190	1,200	---	---	---
MONTH	1,390	406	931	2,890	693	1,320	2,060	1,100	1,410	1,410	1,140	1,270

	OCTOBER 2005		
1	1,370	1,320	1,350
2	1,330	1,260	1,300
3	1,300	1,190	1,230
4	1,190	1,060	1,120
5	1,070	1,030	1,050
6	1,150	1,060	1,120
7	1,290	1,140	1,220
8	1,320	1,290	1,310
9	1,320	1,160	1,250
10	1,510	1,320	1,370
11	2,320	1,510	2,070
12	2,320	1,950	2,140
13	1,950	1,750	1,790
14	1,800	1,760	1,780
15	1,850	1,790	1,830
16	1,790	1,750	1,770
17	1,940	1,750	1,810
18	1,850	1,760	1,810
19	1,830	1,720	1,770
20	1,730	1,700	1,710
21	1,750	1,710	1,730
22	1,770	1,730	1,760
23	1,800	1,770	1,790
24	1,780	1,750	1,760
25	1,770	1,790	1,780
26	1,790	1,760	1,780
27	1,810	1,780	1,790
28	1,820	1,800	1,810
29	1,810	1,750	1,790
30	1,760	1,730	1,750
31	1,770	1,730	1,750
MONTH	2,320	1,030	1,520

#--Value computed from partial day with greater than 50 percent of day recorded.
**--Instantaneous value from USGS sample.

06324710 POWDER RIVER AT BROADUS, MT

LOCATION.--Lat 45°25'37", long 105°24'05" (NAD 27), NE$^1/_4$NE$^1/_4$SE$^1/_4$ sec. 3, T.5S., R.51E., Powder River County, Hydrologic Unit 10090207, on right bank, 40 ft downstream from bridge on U.S. highway 212, 0.4 mi downstream from Doyle Creek, 1.0 mi south of Broadus, and 7.0 mi upstream from Little Powder River.

DRAINAGE AREA.--8,748 mi^2.

PERIOD OF RECORD.--Water years 1976 to September 1992, June 1995, July 2005.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE.--March 1976 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1975 to Stepmber 1978, March 1979 to September 1992 (seasonal records only).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE.--Maximum daily observed 34.0°C, July 12, 1976; minimum daily, 0.0°C, many days during winter.
SEDIMENT CONCENTRATION.--Maximum daily mean, 44,100 mg/L, July 29, 1977; minimum daily mean, 16 mg/L, Sept. 27, 1981.
SEDIMENT LOAD.--Maximum daily, 1,570,000 tons, May 31, 1978; minimum daily, 0.64 tons, Aug. 7, 1988.

GAGE.--None. Elevation at sampling site is 3,016 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUL													
19...	0930	111	18	678	8.2	108	8.3	1,690	33.0	22.5	570	130	59.3

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUL												
19...	6.54	3	188	41	198	72.9	.3	9.86	608	1,190	1.62	358

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10" (NAD 27), in $NW^1/_4SW^1/_4SW^1/_4$sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi upstream from Dry Creek, 5.0 mi south of the Wyoming-Montana State line, and 20 mi north of Weston.

DRAINAGE AREA.--1,237 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 80 acres downstream from station. Flow occasionally affected by contributions from mine dewatering.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.52	0.71	0.80	1.0	e2.2	e2.0	4.8	6.7	5.8	5.1	1.8	0.00
2	e0.52	6.9	0.83	0.90	e2.0	e1.9	3.8	5.5	5.5	4.0	1.3	0.00
3	e0.52	15	0.83	e0.30	e2.3	e1.9	2.9	4.7	4.7	3.2	0.88	0.00
4	e0.30	6.7	0.92	e0.25	2.4	2.1	2.5	4.5	4.3	2.5	3.3	0.00
5	e0.25	3.6	0.94	e0.20	2.1	2.1	2.3	4.5	4.1	2.2	8.7	0.00
6	e0.25	2.4	0.91	e0.30	2.2	2.1	2.2	4.3	3.9	2.9	4.6	0.00
7	e0.25	1.5	0.84	e0.50	1.7	2.0	1.9	4.8	3.8	3.1	2.6	0.00
8	e0.25	1.3	0.93	0.65	1.5	2.1	1.7	7.1	3.8	2.2	1.5	0.00
9	e0.25	1.1	1.0	0.70	1.8	2.0	2.3	39	3.8	1.8	0.68	0.00
10	e0.25	0.86	1.0	0.83	1.8	1.8	2.3	148	3.7	1.4	0.36	0.00
11	e0.25	0.60	1.1	0.88	1.6	1.6	1.8	126	3.3	1.1	0.18	0.00
12	e0.25	0.60	1.1	0.94	1.6	1.7	1.7	158	3.2	0.85	0.05	0.00
13	e0.30	0.55	0.91	e0.80	2.0	1.8	1.5	319	3.8	0.51	0.05	0.01
14	e0.30	0.44	0.84	e0.50	2.3	1.9	1.4	415	3.3	0.72	0.04	0.01
15	e0.30	0.45	1.0	e0.30	1.9	1.9	1.3	264	3.0	0.44	0.04	0.01
16	e0.30	0.40	1.1	e0.25	1.8	1.7	1.2	146	3.1	0.32	0.02	0.01
17	e0.06	0.36	1.1	0.28	1.8	1.8	1.3	101	2.6	0.29	0.02	0.01
18	e0.03	0.34	1.1	0.51	1.7	2.0	1.2	75	2.2	0.16	0.05	0.02
19	0.03	0.40	1.1	0.86	1.7	2.1	1.2	42	1.9	0.11	0.04	0.02
20	0.03	0.41	e1.0	1.0	1.7	1.9	1.7	27	2.0	0.07	0.03	0.02
21	0.03	0.48	e0.90	1.4	1.9	1.9	3.4	21	1.9	0.07	0.02	0.02
22	0.04	0.49	0.96	1.3	1.8	2.1	5.0	15	6.7	0.05	0.01	0.03
23	0.03	0.61	0.73	1.4	e1.7	3.6	31	11	5.2	0.03	0.01	0.03
24	0.03	0.59	0.51	1.5	e1.8	13	88	9.4	3.6	0.03	0.01	0.03
25	0.77	0.72	0.72	3.2	e1.9	8.0	91	9.9	4.1	0.04	0.01	e0.02
26	5.3	0.87	1.1	7.5	e2.0	5.1	65	9.9	4.1	0.22	0.00	e0.02
27	2.6	0.62	1.2	4.9	e1.9	3.9	40	8.6	31	0.10	0.01	e0.04
28	1.4	e0.50	1.2	4.7	e2.0	3.9	22	8.0	13	6.0	0.01	e0.07
29	0.98	e0.60	1.2	4.4	---	18	12	7.1	8.2	5.7	0.00	e0.09
30	0.69	e0.70	e1.2	3.4	---	14	8.5	6.5	6.6	4.2	0.00	e0.11
31	0.74	---	e1.1	e2.4	---	7.5	---	6.3	---	2.5	0.00	---
TOTAL	17.82	50.80	30.17	48.05	53.1	119.4	406.9	2,014.8	156.2	51.91	26.32	0.57
MEAN	0.57	1.69	0.97	1.55	1.90	3.85	13.6	65.0	5.21	1.67	0.85	0.02
MAX	5.3	15	1.2	7.5	2.4	18	91	415	31	6.0	8.7	0.11
MIN	0.03	0.34	0.51	0.20	1.5	1.6	1.2	4.3	1.9	0.03	0.00	0.00
AC-FT	35	101	60	95	105	237	807	4,000	310	103	52	1.1

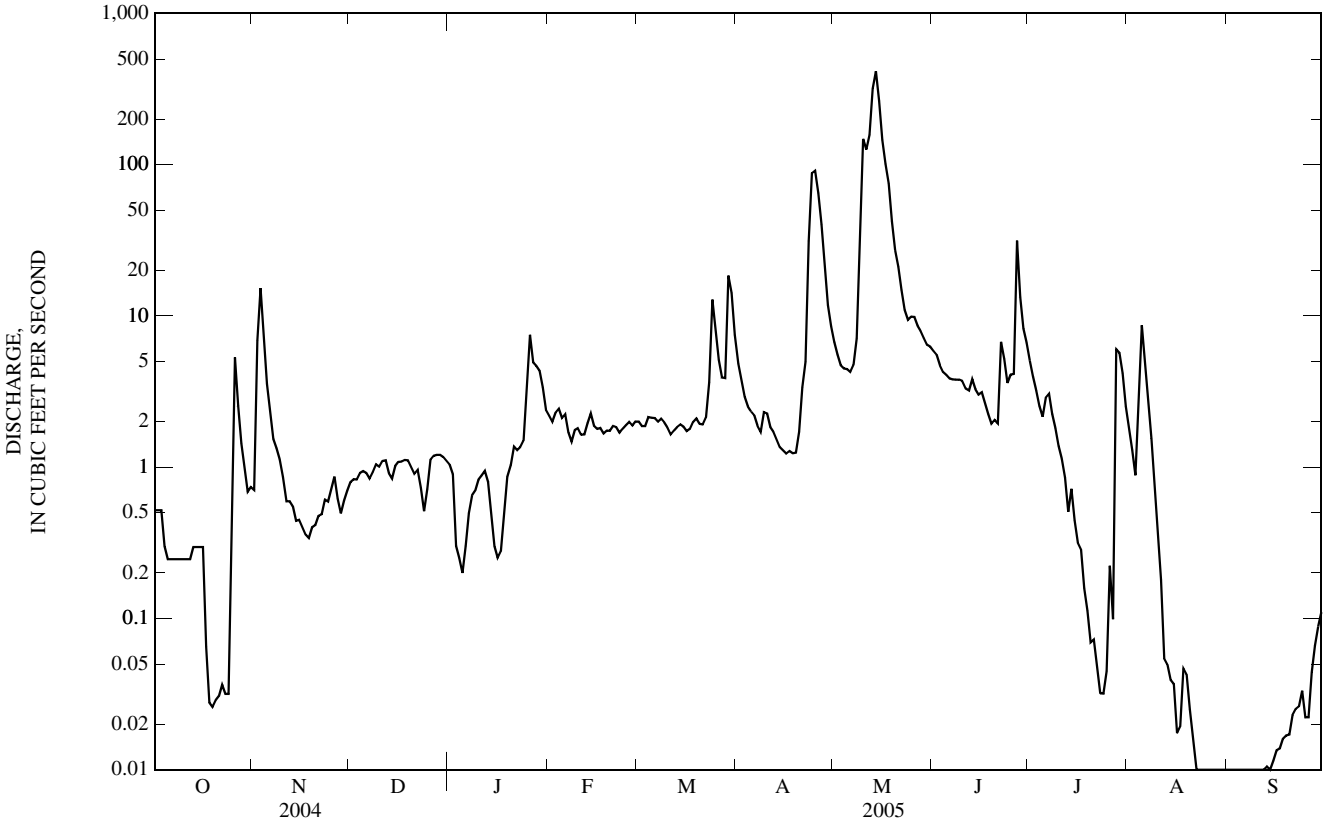
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

MEAN	10.3	3.56	2.40	7.42	34.6	56.6	22.4	55.1	26.2	10.2	5.06	3.64
MAX	172	25.4	9.97	89.0	336	613	99.3	703	187	68.8	44.8	60.8
(WY)	(1995)	(1999)	(1995)	(1974)	(1997)	(1978)	(1999)	(1978)	(1984)	(1982)	(1993)	(1986)
MIN	0.01	0.01	0.21	0.10	0.46	1.34	0.75	1.04	0.23	0.04	0.00	0.00
(WY)	(1992)	(1982)	(1982)	(1991)	(1989)	(1981)	(1981)	(1992)	(2004)	(1980)	(1991)	(1991)

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	790.60		2,976.04		--	
ANNUAL MEAN	2.16		8.15		19.7	
HIGHEST ANNUAL MEAN					127	1978
LOWEST ANNUAL MEAN					1.49	1992
HIGHEST DAILY MEAN	90	Feb 22	415	May 14	5,000	May 19, 1978
LOWEST DAILY MEAN	0.01	Jul 17-22,24	0.00	Many days	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.01	Jul 16	0.00	Aug 29	0.00	Some years
MAXIMUM PEAK FLOW			485	May 14	a5,300	May 19, 1978
MAXIMUM PEAK STAGE	-		6.89	May 14	11.63	Mar 20, 1978
ANNUAL RUNOFF (AC-FT)	1,570		5,900		14,310	
10 PERCENT EXCEEDS	5.1		8.0		32	
50 PERCENT EXCEEDS	0.52		1.4		2.6	
90 PERCENT EXCEEDS	0.05		0.03		0.02	

a--Gage height, 11.62 ft.
e--Estimated.



06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-82, 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
25...	1800	.03	669	6.3	62	8.2	3,290	9.5	8.0	940	183	117	18.6
NOV													
17...	1500	.34	677	12.1	109	8.0	1,540	13.0	5.5	340	70.5	38.6	11.8
DEC													
16...	0930	.88	685	10.9	84	8.0	3,200	.0	.0	890	188	102	19.3
JAN													
26...	1000	6.6	672	12.9	101	8.4	3,290	5.0	.0	840	169	101	20.9
FEB													
23...	1330	1.7	674	13.6	108	8.3	2,870	7.0	.5	690	141	82.4	15.5
MAR													
28...	1500	4.1	658	10.4	107	8.3	2,270	22.0	10.0	460	90.8	55.5	13.3
APR													
11...	1630	1.8	668	11.9	131	8.4	2,070	13.5	13.0	490	102	57.9	12.0
MAY													
25...	1820	9.9	678	8.6	101	8.4	2,820	15.0	17.0	840	145	117	18.8
JUN													
14...	1345	3.3	674	10.5	133	8.3	3,590	24.0	20.5	1,100	189	145	21.4
JUL													
08...	1000	2.4	679	6.4	84	8.0	1,940	32.5	22.5	470	102	53.2	13.6
AUG													
11...	0745	.28	675	4.6	55	8.0	2,290	20.0	18.0	560	109	70.1	16.8
SEP													
28...	0900	E.07	679	8.4	86	8.1	4,240	9.0	10.5	1,400	247	186	25.2

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
25...	6	446	50	412	98.1	.9	10.7	1,320	2,440	3.53	.21	2,600	--
NOV													
17...	5	226	58	218	27.2	.5	8.93	542	1,060	1.47	.99	1,080	--
DEC													
16...	7	480	53	419	43.3	.8	11.0	1,410	2,510	3.63	6.35	2,670	--
JAN													
26...	8	504	56	425	80.0	.9	10.2	1,400	2,540	3.54	46.3	2,600	--
FEB													
23...	7	435	57	367	65.1	.7	8.02	1,130	2,100	2.96	10.2	2,180	--
MAR													
28...	8	370	63	312	36.9	.7	6.25	826	1,590	2.23	18.2	1,640	--
APR													
11...	6	306	57	275	27.2	.6	6.02	797	1,470	2.06	7.36	1,510	--
MAY													
25...	5	353	47	315	72.2	.6	11.0	1,130	2,030	2.94	57.8	2,160	--
JUN													
14...	7	528	51	344	87.9	.7	11.2	1,540	2,730	3.90	25.8	2,870	--
JUL													
08...	5	254	53	248	29.5	.6	7.49	720	1,330	1.87	8.89	1,370	<.04
AUG													
11...	6	326	55	259	49.2	.7	7.15	907	1,640	2.34	1.30	1,720	<.04
SEP													
28...	7	595	48	282	298	.6	6.52	1,960	3,490	5.18	--	3,810	<.04

E--Estimated.

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01042)
OCT													
25...	--	--	--	--	1,450	1.3	E2	74	.14	156	.14	1.7	23.1
NOV													
17...	--	--	--	--	986	.8	<2	48	.09	100	E.03	.9	19.1
DEC													
16...	--	--	--	--	109	.6	<2	61	<.12	193	<.08	<.8	28.9
JAN													
26...	--	--	--	--	261	.9	<2	41	<.12	203	<.08	.8	32.1
FEB													
23...	--	--	--	--	139	.9	<2	34	<.12	167	<.08	E.6	14.9
MAR													
28...	--	--	--	--	2,470	1.2	E1	44	.16	141	.04	1.7	14.5
APR													
11...	--	--	--	--	1,420	1.0	<2	57	.11	121	E.04	1.3	8.9
MAY													
25...	--	--	--	--	1,040	2.3	E2	134	.13	234	E.07	3.1	19.6
JUN													
14...	--	--	--	--	412	1.3	E1	80	<.12	302	E.04	.9	18.6
JUL													
08...	<.06	<.008	2.73	<.02	2,080	1.2	E2	97	.17	111	.05	1.4	6.4
AUG													
11...	<.06	<.008	.79	<.02	2,030	1.3	<2	64	.19	131	.04	1.4	4.9
SEP													
28...	<.06	<.008	.50	<.02	535	.78	--	41	<.12	222	--	--	--

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT											
25...	45	3,430	4.48	508	664	9.10	1.1	26	--	--	--
NOV											
17...	13	930	1.86	105	123	6.14	2.5	10	--	67	.06
DEC											
16...	<18	290	.21	190	186	14.1	1.7	18	--	--	--
JAN											
26...	E17	100	.33	121	119	5.49	1.4	11	--	116	2.1
FEB											
23...	E20	270	.20	122	129	7.88	1.6	7	--	47	.22
MAR											
28...	7	1,430	2.83	143	173	6.90	1.1	14	--	154	1.7
APR											
11...	E6	1,200	2.26	162	218	5.70	1.6	11	--	146	.71
MAY											
25...	<18	1,740	3.41	79.1	172	8.69	1.9	16	97	214	5.7
JUN											
14...	E9	680	.94	160	208	10.0	2.0	10	91	155	1.4
JUL											
08...	<6	1,590	3.24	100	190	5.77	2.2	12	--	--	--
AUG											
11...	<18	1,520	2.44	233	276	8.13	2.1	10	100	148	.11
SEP											
28...	<18	--	--	178	202	--	--	--	98	47	--

E-- Estimated.

06325000 LITTLE POWDER RIVER AT BIDDLE, MT

LOCATION.--Lat 45°06'17", long 105°19'51" (NAD 27), in SE$^1/_4$ sec. 27, T.8 S., R.52 E., Powder River County, Hydrologic Unit 10090208, at highway bridge 0.5 mi downstream from Ranch Creek and 0.8 mi northeast of Biddle.

DRAINAGE AREA.--1,541 mi^2.

PERIOD OF RECORD.--June 2005.

GAGE.--None. Elevation of site is 3,250 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
JUN													
27...	0900	7.6	810	676	6.4	76	7.9	2,720	16.0	17.5	730	152	84.8

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUN												
27...	22.0	6	354	50	246	52.2	.9	7.51	1,240	2,060	2.80	42.1

06325500 LITTLE POWDER RIVER NEAR BROADUS, MT

LOCATION.--Lat 45°23'25", long 105°18'15" (NAD 27), in $NW^1/_4NE^1/_4$ sec. 21, T.5 S., R.52 E., Powder River County, Hydrologic Unit 10090208, 1.5 mi downstream from East Fork, 5.5 mi southeast of Broadus, and 8 mi upstream from mouth.

DRAINAGE AREA.--1,974 mi^2.

PERIOD OF RECORD.--March 2002 to current year. Data collected from April 2001 to February 2002 at station 06325550, Little Powder River at mouth, near Broadus. Site moved to current location in March 2002.

GAGE.--None. Elevation of site is 3,020 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
12...	1100	2.5	686	11.2	107	8.6	1,650	16.5	8.5	110	28.4	10.5	2.53
NOV													
03...	1030	5.9	684	13.6	117	8.3	2,490	15.0	4.0	570	130	60.4	19.7
DEC													
01...	1100	6.4	686	12.8	98	8.3	2,330	3.0	0.0	600	133	64.4	16.6
JAN													
18...	1045	6.2	682	12.7	98	7.8	2,820	10.0	0.0	690	165	67.8	18.6
FEB													
08...	1500	E6.0	679	12.5	97	8.3	2,780	2.5	0.0	730	168	75.9	25.1
MAR													
08...	1630	11	680	10.9	100	8.4	2,670	10.5	6.5	630	140	67.1	16.2
APR													
06...	0900	11	685	9.5	91	8.3	2,870	7.0	8.5	630	134	72.9	17.6
MAY													
05...	1600	7.2	682	8.9	111	8.4	2,490	24.5	20.0	420	94.7	45.2	10.2
JUN													
07...	1100	20	675	7.7	95	8.2	3,010	20.5	19.0	610	120	75.7	15.9
JUL													
12...	1200	7.3	685	8.2	114	8.4	2,460	34.5	26.0	470	92.1	59.3	15.2
AUG													
03...	1130	6.3	685	6.5	85	8.3	3,360	21.0	22.5	830	147	112	25.6
SEP													
06...	1230	1.4	710	8.1	96	8.8	1,690	24.0	20.0	86	19.8	8.95	2.41

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
12...	14	348	87	412	3.95	.3	9.4	435	1,080	1.48	7.32	<.010	.043
NOV													
03...	7	388	59	355	45.8	.7	9.3	970	1,840	2.50	29.3	.056	.084
DEC													
01...	8	461	62	404	45.3	.7	12.0	1,010	1,980	2.70	34.3	.045	.036
JAN													
18...	7	451	58	446	41.5	.8	14.3	1,060	2,090	2.84	35.0	.097	.085
FEB													
08...	6	403	53	352	62.4	1.0	12.3	1,110	2,070	2.82	E33.6	.019	.020
MAR													
08...	7	413	58	375	38.8	.7	10.1	1,050	1,960	2.67	58.3	.017	<.016
APR													
06...	8	470	61	396	45.9	.7	7.0	1,140	2,130	2.89	63.2	E.008	<.016
MAY													
05...	10	454	69	393	24.7	.4	8.9	912	1,790	2.43	34.7	.010	E.013
JUN													
07...	8	427	59	369	41.9	.6	12.9	1,130	2,050	2.79	111	<.010	<.016
JUL													
12...	8	389	63	299	28.3	.6	9.1	938	1,710	2.33	33.7	E.008	<.016
AUG													
03...	8	558	58	244	52.9	.7	7.6	1,540	2,590	3.52	44.0	E.005	<.016
SEP													
06...	15	326	89	391	4.30	.2	5.5	465	1,070	1.45	4.03	<.010	<.016

E--Estimated.

06325500 LITTLE POWDER RIVER NEAR BROADUS, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)
OCT											
12...	.003	.74	<.006	.167	6	103	66	.15	6.5	12.0	7,150
NOV											
03...	.005	.67	E.005	.107	5	77	112	.11	6.6	18.6	4,700
DEC											
01...	.002	.44	E.004	.051	2	45	121	E.04	1.8	22.9	1,850
JAN											
18...	.003	.48	E.003	.038	3	53	123	E.04	2.0	20.8	2,050
FEB											
08...	E.001	.38	<.006	.036	E2	36	149	E.04	1.0	11.0	970
MAR											
08...	<.002	.48	<.006	.186	E1	49	111	E.06	2.1	21.9	2,420
APR											
06...	<.002	.52	<.006	.051	E2	40	138	<.08	1.0	22.0	870
MAY											
05...	.002	3.27	<.006	.75	11	212	101	1.74	46.1	88.2	42,000
JUN											
07...	<.002	.78	<.006	.092	4	89	168	E.06	1.8	19.2	2,340
JUL											
12...	E.001	.75	<.006	.111	3	74	151	.07	2.5	5.8	2,730
AUG											
03...	E.001	.70	<.006	.084	3	80	147	E.04	1.7	6.7	2,260
SEP											
06...	<.002	.50	<.006	.106	4.3	61	83	.09	2.8	7.0	3,740

Date	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT								
12...	7.29	238	10.0	.6	29	87	410	2.8
NOV								
03...	4.32	190	9.31	1.5	18	97	249	4.0
DEC								
01...	1.57	124	7.75	1.1	13	87	117	2.0
JAN								
18...	1.93	230	6.61	.8	14	90	153	2.6
FEB								
08...	.86	114	5.80	1.6	7	84	169	E2.7
MAR								
08...	2.54	362	7.81	1.5	15	95	184	5.5
APR								
06...	1.03	275	5.15	<.8	10	86	149	4.4
MAY								
05...	28.8	2,020	108	2.8	261	99	5,660	110
JUN								
07...	2.42	250	7.71	1.6	15	93	162	8.8
JUL								
12...	3.41	174	7.68	1.7	12	89	198	3.9
AUG								
03...	2.55	153	8.47	2.1	12	99	205	3.5
SEP								
06...	3.47	103	5.49	.18	14	99	181	.68

E--Estmated.

453209105201201 POWDER RIVER BELOW LITTLE POWDER RIVER, NEAR BROADUS, MT

LOCATION.--Lat 45°32'09", long 105°20'12" (NAD 27), $SW^1/_4NE^1/_4NW^1/_4$ sec. 32, T.3S., R.52E., Powder River County, Hydrologic Unit 10090209, about 5 mi below Little Powder River and 10 mi northeast of Broadus.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--July 2005 .

GAGE.--None. Elevation at sampling site is 2,980 ft (NGVD 29).

REMARKS.--Biology samples (aquatic macroinvertebrates and fish) were collected and a habitat assessment was made in conjunction with the water-quality sample. Biology and habitat results were unavailable in time for publication in this report, but will be published at a future date.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
JUL 20...	1230	85	22	684	5.8	84	8.4	1,820	28.5	600	136	62.6	7.37

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
JUL 20...	4	206	43	201	76.1	.3	10.8	664	1,280	1.75	295

06326500 POWDER RIVER NEAR LOCATE, MT

LOCATION.--Lat 46°25'48", long 105°18'34" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SE^1/_4$ sec. 23, T.8 N., R.51 E., Custer County, Hydrologic Unit 10090209, on left bank at downstream side of bridge on U.S. Highway 12, 0.1 mi west of Locate, and 25 mi east of Miles City, and at river mile 29.4.

DRAINAGE AREA.--13,068 mi^2.

PERIOD OF RECORD.--March 1938 to current year.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 926: 1939. WSP 1309: 1938-39 (M). WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,384.79 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to July 11, 1947, nonrecording gage at bridge 1.5 mi upstream, and July 11, 1947 to Sept. 30, 1965, water-stage recorder at site near upstream bridge at different elevation. Oct. 1, 1965 to Oct. 4, 1966, nonrecording gage, and Oct. 5, 1966 to Mar. 21, 1978, water-stage recorder at present site and elevation. Mar. 22, 1978 to Apr. 23, 1981, water-stage recorder 1.5 mi upstream at different elevation, Apr. 24 to Aug. 20, 1981, water-stage recorder at present site and elevation, and Aug. 21, 1981 to Sept. 30, 1981, water-stage recorder 1.5 mi upstream at different elevation. Oct. 1, 1981 to Apr. 5, 1995 water-stage recorder at site 1.5 miles downstream at different elevation. Apr. 7, 1995 to present, water-stage recorders located on each bank and used depending on control conditions.

REMARKS.--Water-discharge records fair except those for estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 101,800 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	190	e30	e60	e210	e250	160	e350	1,250	1,490	60	65
2	39	160	e50	e50	e250	e300	141	e350	1,810	1,180	54	64
3	38	196	e60	e50	e270	e370	127	e350	1,530	1,080	e50	64
4	37	196	e80	e50	e300	e350	120	e300	1,180	1,160	e60	63
5	35	189	e70	e60	e260	349	129	290	1,160	996	e55	63
6	32	177	e70	e60	e200	335	119	291	1,240	776	e50	62
7	37	176	e70	e80	e150	315	115	304	1,170	705	e45	55
8	47	179	e80	e100	e160	292	121	649	3,020	642	e45	54
9	44	182	e90	e90	e190	270	131	665	2,240	583	e50	50
10	34	180	e90	e80	e230	251	215	392	1,350	526	45	50
11	51	172	e100	e70	e250	233	156	377	1,230	472	33	48
12	46	167	e100	e60	e270	229	123	802	1,080	411	29	48
13	52	167	e90	e40	e250	215	131	1,170	1,340	354	31	61
14	46	165	e80	e50	e240	204	137	2,720	1,220	267	45	61
15	57	163	e100	e60	e230	203	132	2,900	996	206	48	60
16	70	155	e90	e70	e230	216	163	2,900	889	183	57	54
17	69	156	e90	e100	e220	224	174	2,720	1,120	180	61	59
18	70	154	e90	e140	e240	207	152	2,470	966	159	67	60
19	110	156	e90	e170	e230	203	170	2,070	1,040	135	60	44
20	126	154	e90	e200	e230	210	215	2,030	1,160	113	63	41
21	110	140	e80	e170	e250	205	292	2,050	1,270	103	78	38
22	111	140	e70	e150	e260	216	239	1,950	1,360	89	77	37
23	123	136	e50	e140	e270	222	196	2,110	1,340	78	88	37
24	137	134	e60	e200	e280	225	214	2,310	1,370	65	89	36
25	139	156	e70	e200	e280	223	242	2,420	1,350	60	100	36
26	147	172	e100	e190	e270	232	e260	2,350	1,450	56	97	35
27	148	154	e90	e200	e260	232	e280	2,270	3,120	53	89	35
28	153	e100	e90	e190	e250	228	e300	1,950	3,390	55	88	36
29	167	e30	e90	e200	---	232	e400	1,670	3,320	66	79	37
30	185	e25	e80	e200	---	224	e400	1,450	2,110	84	72	39
31	214	---	e70	e180	---	190	---	1,350	---	71	69	---
TOTAL	2,713	4,621	2,460	3,660	6,730	7,655	5,754	45,980	47,071	12,398	1,934	1,492
MEAN	87.5	154	79.4	118	240	247	192	1,483	1,569	400	62.4	49.7
MAX	214	196	100	200	300	370	400	2,900	3,390	1,490	100	65
MIN	32	25	30	40	150	190	115	290	889	53	29	35
AC-FT	5,380	9,170	4,880	7,260	13,350	15,180	11,410	91,200	93,370	24,590	3,840	2,960

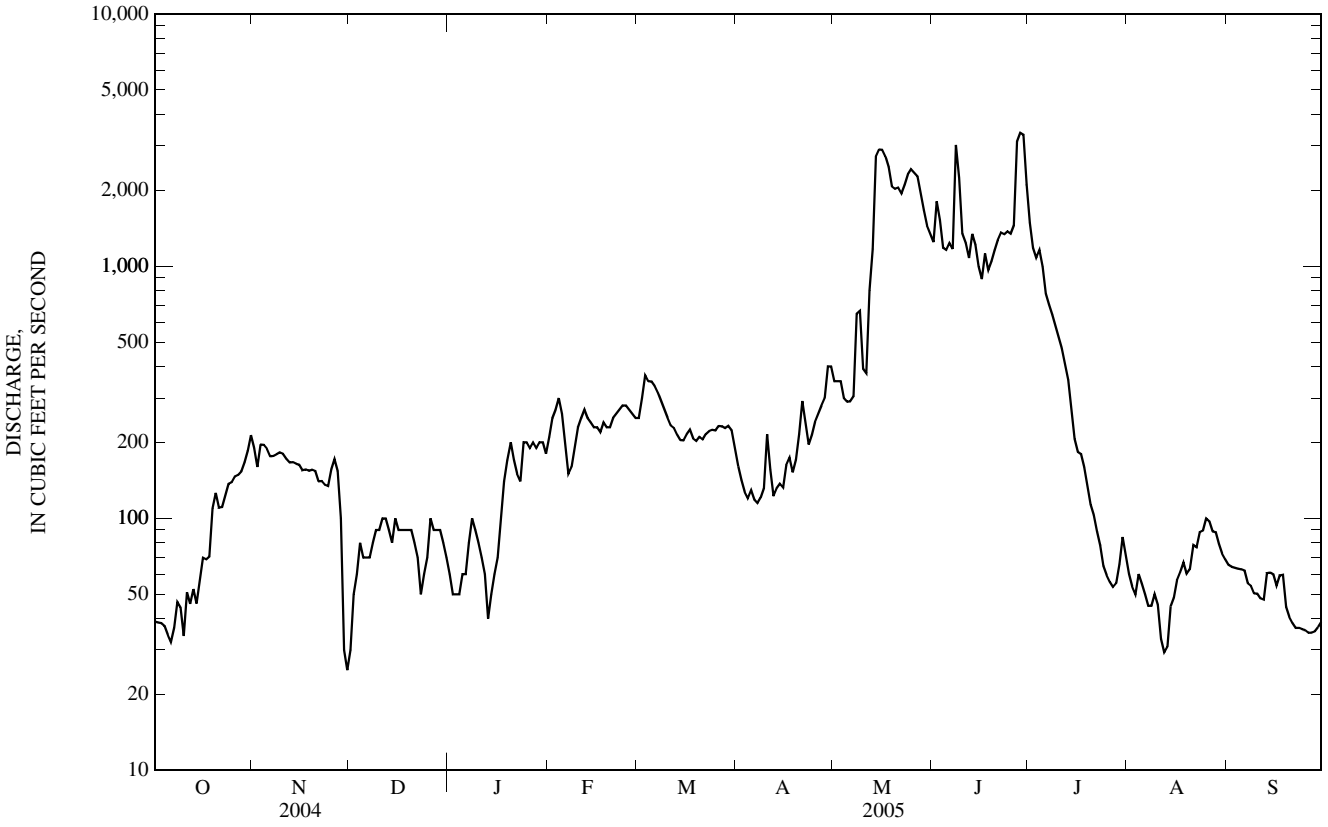
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	246	216	148	142	422	1,201	724	1,132	1,577	554	208	165
MAX	921	790	417	476	3,850	4,627	3,062	5,970	8,045	2,015	1,096	898
(WY)	(1941)	(1999)	(1942)	(1981)	(1943)	(1972)	(1965)	(1978)	(1944)	(1993)	(1941)	(1941)
MIN	1.77	12.5	12.5	4.53	2.82	80.2	109	51.2	25.9	9.34	1.30	0.19
(WY)	(1961)	(1961)	(1961)	(1950)	(1950)	(1950)	(1961)	(2004)	(2004)	(2004)	(1988)	(1960)

06326500 POWDER RIVER NEAR LOCATE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	31,941.8		142,468			
ANNUAL MEAN	87.3		390		561	
HIGHEST ANNUAL MEAN					1,622	1944
LOWEST ANNUAL MEAN					79.1	2004
HIGHEST DAILY MEAN	704	Mar 16	3,390	Jun 28	26,000	Feb 19, 1943
LOWEST DAILY MEAN	2.0	Jul 27	25	Nov 30	0.00	Jan 16, 1950
ANNUAL SEVEN-DAY MINIMUM	2.5	Aug 28	36	Sep 22	0.00	Jan 16, 1950
MAXIMUM PEAK FLOW			4,920	Jun 28	31,000	Feb 19, 1943
MAXIMUM PEAK STAGE			5.65	Jun 28	a12.20	Mar 16, 1978
INSTANTANEOUS LOW FLOW					b0.00	Many days
ANNUAL RUNOFF (AC-FT)	63,360		282,600		406,400	
10 PERCENT EXCEEDS	189		1,240		1,310	
50 PERCENT EXCEEDS	65		159		230	
90 PERCENT EXCEEDS	4.2		48		40	

a--Backwater from ice, previous datum.
b--On many days in 1950, 1960-61, and 1998.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-63, 1975 to September 1994, January 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1951 to September 1962, October 1974 to September 1981, July 1988 to January 1990.
WATER TEMPERATURE: March 1951 to July 1963, October 1974 to Septembre 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1984.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year. Extremes for period of daily record for sediment concentration and sediment load incorrectly published since water year 1998; correct values shown below.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,000 microsiemens per centimeter (µS/cm) at 25.0°C, Apr. 1, 1977; minimum daily, 523 µS/cm at 25.0°C, Mar. 11, 12, 1989.
WATER TEMPERATURE: Maximum, 30°C, July 26, 1959; minimum 0.0°C many days duirng winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 60,000 mg/L Aug. 6, 1953; minimum daily mean, 17 mg/L Dec. 3, 1974.
SEDIMENT LOAD: Maximum daily, 1,020,000 tons May 26, 1952; minimum daily, less than 1 ton on several days during September 1950.

06326500 POWDER RIVER NEAR LOCATE, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
13...	0815	55	626	10.3	99	8.4	1,970	3.0	5.0	590	122	68.9	7.71
NOV													
02...	0815	170	701	13.4	103	8.6	1,850	4.5	1.0	490	107	55.1	7.81
DEC													
09...	0840	E90	690	13.7	105	8.4	2,660	6.0	0.0	670	143	75.5	9.25
JAN													
12...	0830	E60	--	--	--	8.0	2,870	-5.0	0.0	860	197	88.7	10.4
FEB													
22...	1345	E260	--	--	--	8.3	1,770	1.5	0.5	620	146	62.4	8.01
MAR													
09...	0830	277	694	12.1	101	8.4	2,090	5.5	3.5	590	138	59.8	8.15
APR													
07...	0830	120	695	10.4	101	8.4	2,440	9.0	9.5	590	121	68.7	9.59
MAY													
05...	0830	281	697	9.9	101	8.4	2,270	12.5	12.0	560	121	63.4	9.56
JUN													
08...	0830	3,280	687	8.5	91	8.3	838	9.5	13.5	120	29.6	11.8	4.70
JUL													
14...	0815	273	--	--	--	8.5	1,330	26.0	24.0	380	94.9	35.3	5.56
AUG													
03...	0800	E50	701	8.3	100	8.3	2,160	20.0	20.0	560	122	62.0	9.69
SEP													
07...	0745	58	701	9.6	103	8.1	2,050	22.0	14.5	610	133	66.9	9.03

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
13...	4	241	47	--	204	46.4	.3	3.3	792	1,400	1.91	209	<.010
NOV													
02...	5	248	52	312	217	109	.5	5.8	660	1,320	1.80	608	E.006
DEC													
09...	6	350	53	323	291	136	.5	10.6	942	1,840	2.51	E448	.066
JAN													
12...	6	386	49	432	428	184	.6	13.3	923	2,060	2.81	E334	.058
FEB													
22...	4	251	46	282	263	106	.5	8.5	626	1,370	1.86	E960	.028
MAR													
09...	5	294	52	338	252	138	.5	8.8	698	1,500	2.04	1,120	.013
APR													
07...	6	356	56	225	231	146	.5	8.1	862	1,710	2.33	554	E.005
MAY													
05...	6	310	54	320	225	147	.6	7.2	762	1,560	2.12	1,180	.010
JUN													
08...	5	121	67	260	118	30.6	.4	7.4	243	522	.71	4,630	.014
JUL													
14...	4	165	48	--	185	65.0	.3	11.0	488	977	1.33	720	.010
AUG													
03...	6	302	53	205	212	74.8	.4	13.5	819	1,530	2.08	E207	<.010
SEP													
07...	4	254	47	202	186	65.2	.4	9.0	817	1,470	1.99	229	<.010

E--Estimated.

06326500 POWDER RIVER NEAR LOCATE, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)
OCT												
13...	<.016	<.002	.43	<.006	.064	<2	53	150	.05	2.1	8.8	1,740
NOV												
02...	.180	E.001	1.53	<.006	.32	8	204	189	.64	15.6	32.6	21,400
DEC												
09...	.246	.002	.65	E.003	.050	E1	50	234	E.05	3.8	17.6	1,170
JAN												
12...	.531	.007	.89	<.006	.069	<10	64	295	.10	1.6	29.1	1,980
FEB												
22...	.422	.006	.88	<.006	.150	3	71	168	.13	3.9	11.0	4,490
MAR												
09...	.400	.004	1.15	E.003	.40	7	220	223	.61	14.0	30.6	18,700
APR												
07...	<.016	<.002	.33	<.006	.074	E1	51	245	.07	1.2	17.6	1,170
MAY												
05...	.383	E.001	1.69	<.006	.58	4	167	194	.60	10.5	29.4	12,800
JUN												
08...	.771	.009	6.69	.015	5.37	16	1,700	178	3.37	97.3	193	82,400
JUL												
14...	<.016	<.002	.45	E.003	.124	2	90	132	.08	1.6	5.3	3,310
AUG												
03...	<.016	E.001	.28	<.006	.011	<2	74	203	E.02	<.8	3.5	80
SEP												
07...	<.016	<.002	.37	<.006	.032	.86	62	190	E.04	.29	3.9	360

Date	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT									
13...	1.81	68.7	--	6.44	1.1	10	98	185	27
NOV									
02...	19.0	778	--	27.4	2.6	94	98	1,280	586
DEC									
09...	1.12	37.0	--	7.41	3.1	11	90	197	E48
JAN									
12...	1.75	65.0	--	11.7	4.3	17	93	211	E34
FEB									
22...	3.91	123	--	8.79	3.6	21	89	319	E224
MAR									
09...	18.1	520	--	23.2	3.2	88	93	1,180	885
APR									
07...	1.11	42.7	--	4.66	2.0	10	92	132	43
MAY									
05...	16.8	640	--	22.6	4.7	75	94	1,400	1,060
JUN									
08...	117	2,380	--	220	3.1	537	71	18,700	166,000
JUL									
14...	3.01	126	--	7.33	1.7	11	77	161	119
AUG									
03...	.09	11.2	<.01	5.27	1.4	7	85	36	E4.9
SEP									
07...	.33	25.9	--	3.65	1.3	3	96	60	9.4

E--Estimated.

06327500 YELLOWSTONE RIVER AT GLENDIVE, MT

LOCATION.--Lat 47°06'21", long 104°43'07" (NAD 27), in $SE^1/_4NW^1/_4NE^1/_4$ sec. 35, T. 16N., R. 55E., Dawson County, Hydrologic Unit 10100004, on right bank at City of Glendive water treatment plant, 50 feet downstream from Bell Street Bridge, and at river mile 92.4.

DRAINAGE AREA.--65,900 mi^2.

PERIOD OF RECORD.--October 1897 to December 1910, October 1931 to September 1934, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,881.3 ft (NGVD 29) from City of Glendive. October 1897 to December 1910, October 1931 to September 1934 nonrecording gage at different datum.

REMARKS.-- Records good except those for estimated daily discharges, which are poor. Some regulation on tributary streams, notably Bighorn Lake, usable capacity 1,312,000 acre-ft, on the Bighorn River and other tributary streams in Wyoming and Montana. Diversions for irrigation of about 1,200,000 acres upstream of station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were obtained during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,110	6,450	5,090	e5,500	e5,100	e4,300	4,320	7,650	23,600	33,300	5,930	4,520
2	5,020	6,740	4,730	e5,200	e4,900	e4,200	4,300	7,280	22,700	30,400	5,710	4,430
3	5,090	6,180	4,750	e4,900	e4,900	e4,200	4,300	6,700	22,000	27,400	5,580	4,420
4	5,180	5,870	4,710	e4,400	e4,900	e4,300	4,250	6,320	21,200	26,100	5,450	4,480
5	5,320	5,740	4,610	e4,200	e4,800	e4,200	4,190	5,900	21,100	25,500	5,230	4,500
6	5,250	5,590	4,770	e4,000	e4,700	e4,200	4,170	5,660	19,400	24,000	5,280	4,490
7	5,130	5,570	5,130	e3,900	e4,500	e4,400	4,090	5,770	20,800	22,100	5,500	4,480
8	5,050	5,710	4,910	e4,000	e4,600	4,850	4,120	8,360	25,000	20,100	5,490	4,420
9	5,000	5,660	5,120	e4,200	e4,600	4,520	4,240	9,220	30,500	18,700	5,290	4,360
10	4,920	5,590	5,510	e4,400	e4,400	4,440	4,500	9,340	28,200	17,800	6,060	4,450
11	4,920	5,560	5,330	e4,400	e4,200	4,360	5,060	10,900	24,300	17,200	5,430	4,380
12	4,910	5,510	5,290	e4,200	e4,000	4,380	5,290	11,200	22,700	16,900	4,960	4,100
13	4,900	5,460	5,650	e4,200	e4,100	4,350	4,930	20,100	22,200	17,400	4,900	4,130
14	4,920	5,430	5,480	e4,300	e4,400	4,370	4,930	32,600	22,300	17,200	4,900	4,190
15	5,000	5,480	5,400	e4,400	e4,600	4,430	4,650	27,700	21,300	15,500	5,020	4,280
16	5,040	5,450	5,160	e4,300	e4,600	4,490	4,420	23,600	21,300	13,000	5,360	4,420
17	5,180	5,360	5,090	e4,100	e4,600	4,500	4,260	20,000	20,400	11,700	5,900	4,550
18	5,570	5,270	5,160	e4,000	e4,600	4,490	4,300	19,200	21,600	10,700	5,570	4,550
19	5,950	5,270	5,240	e4,100	e4,500	4,380	4,410	19,900	26,000	9,820	4,980	4,570
20	5,840	5,210	5,350	e4,300	e4,500	4,380	4,640	24,200	30,900	9,160	4,930	4,620
21	5,860	5,180	5,450	e4,100	e4,400	4,430	4,740	25,000	33,800	8,690	5,110	4,610
22	5,770	5,250	5,590	e5,000	e4,200	4,450	6,380	23,600	31,700	7,910	5,450	4,630
23	5,650	5,230	e5,600	e5,500	e4,200	4,380	7,600	32,100	31,000	7,200	5,770	4,570
24	5,730	5,190	e5,600	e6,000	e4,400	4,450	7,060	37,500	32,600	6,750	6,180	4,610
25	5,640	5,110	e5,300	e6,100	e4,500	4,510	6,600	36,500	35,100	6,610	5,720	5,060
26	5,620	5,160	e4,900	e6,000	e4,500	4,520	6,270	37,400	40,100	6,410	5,250	5,400
27	5,630	5,180	e3,900	e5,800	e4,500	4,580	6,160	36,000	41,900	6,340	5,120	5,770
28	5,630	5,240	e4,700	e5,700	e4,400	4,540	6,050	30,300	39,900	6,380	5,060	6,240
29	6,170	5,430	e4,800	e5,600	---	4,450	6,470	25,600	40,800	6,640	4,970	6,360
30	6,490	5,610	e5,000	e5,400	---	4,390	7,400	23,000	35,800	6,620	4,830	6,520
31	6,040	---	e5,300	e5,200	---	4,380	---	22,700	---	6,340	4,750	---
TOTAL	167,530	165,680	158,620	147,400	126,600	136,820	154,100	611,300	830,200	459,870	165,680	142,110
MEAN	5,404	5,523	5,117	4,755	4,521	4,414	5,137	19,720	27,670	14,830	5,345	4,737
MAX	6,490	6,740	5,650	6,100	5,100	4,850	7,600	37,500	41,900	33,300	6,180	6,520
MIN	4,900	5,110	3,900	3,900	4,000	4,200	4,090	5,660	19,400	6,340	4,750	4,100
AC-FT	332,300	328,600	314,600	292,400	251,100	271,400	305,700	1,213,000	1,647,000	912,200	328,600	281,900

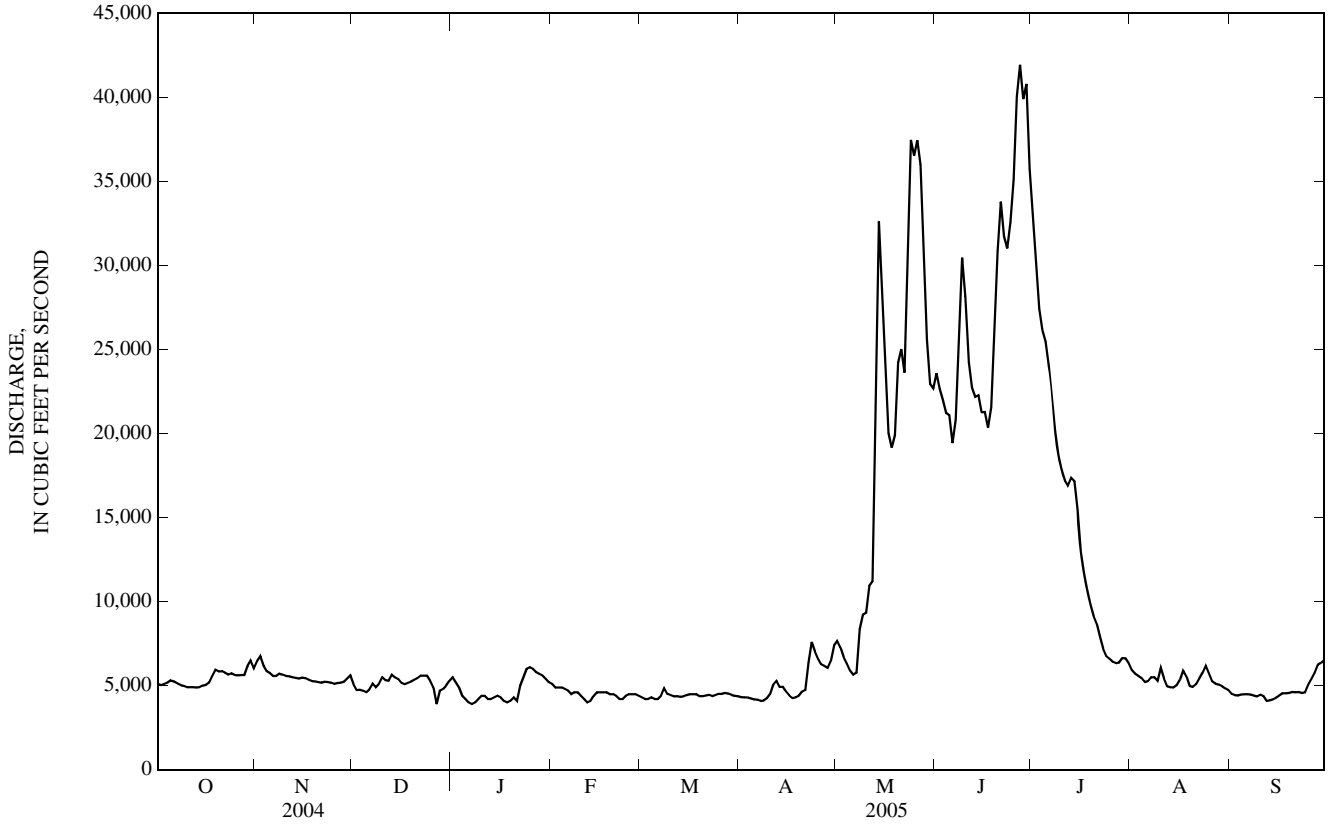
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2005, BY WATER YEAR (WY)*

MEAN	6,426	5,485	4,609	4,486	4,595	8,374	9,148	20,890	44,760	27,840	10,660	7,458
MAX	9,503	7,390	6,670	5,700	5,940	18,790	23,500	44,700	74,220	72,000	24,110	12,100
(WY)	(1909)	(1902)	(1898)	(1904)	(1902)	(1910)	(1899)	(1901)	(1909)	(1899)	(1907)	(1909)
MIN	4,270	4,200	2,924	3,268	3,361	4,414	4,374	8,749	12,950	4,054	2,785	2,856
(WY)	(2004)	(1900)	(1932)	(1932)	(1933)	(2005)	(1905)	(2004)	(1934)	(1934)	(1934)	(1934)

06327500 YELLOWSTONE RIVER AT GLENDIVE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1898 - 2005*	
ANNUAL TOTAL	2,430,720		3,265,910			
ANNUAL MEAN	6,641		8,948		12,960	
HIGHEST ANNUAL MEAN					19,610	1899
LOWEST ANNUAL MEAN					6,061	1934
HIGHEST DAILY MEAN	30,900	Jun 13	41,900	Jun 27	107,000	Jun 9, 1909
LOWEST DAILY MEAN	2,000	Jan 7	3,900	Dec 27	1,060	Dec 14, 1932
ANNUAL SEVEN-DAY MINIMUM	2,160	Jan 5	4,160	Jan 4	1,380	Dec 12, 1932
MAXIMUM PEAK FLOW			45,100	Jun 29	a118,000	Jun 8, 1909
MAXIMUM PEAK STAGE			48.78	Jun 29	b60.16	Mar 16, 2003
INSTANTANEOUS LOW FLOW			3,900	Dec 27	c1,060	Dec 14, 1932
ANNUAL RUNOFF (AC-FT)	4,821,000		6,478,000		9,389,000	
10 PERCENT EXCEEDS	13,200		23,200		33,400	
50 PERCENT EXCEEDS	5,360		5,250		6,490	
90 PERCENT EXCEEDS	4,000		4,300		4,140	

*--During periods of operation (October 1897 to December 1910, October 1931 to September 1934, October 2002 to current year).
a--Observed, gage height, 12.70 ft, datum then in use.
b--Backwater from ice.
c--Observed.
e--Estimated.



06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT
(National Water-Quality Assessment Program)

LOCATION.--Lat 47°40'42", long 104°09'22" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $SW^1/_4$ sec.9, T.22 N., R.59 E., Richland County, Hydrologic Unit 10100004, on left bank at Montana-Dakota Utilities Company powerplant, 0.2 mi downstream from bridge on State Highway 23, 2.5 mi south of Sidney, 3.0 mi downstream from Fox Creek, and at river mile 29.2.

DRAINAGE AREA.--69,083 mi^2. Area at site 4.5 mi upstream, 68,812 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to September 1931 (published as "at Intake"), October 1933 to current year. If monthly figures of diversions to Lower Yellowstone Canal at Intake are added to records at this site, records equivalent to those published as Yellowstone River at Glendive (1898-1910, 1931-34) can be obtained. Monthly discharge only for some periods, published in WSP 1309. Monthly figures of diversions into Lower Yellowstone Canal prior to 1951 published in WSP 1309, 1951-60 published in WSP 1729, 1961-65 published in WSP 1916, 1966-70 published in WSP 2116, and 1971 to current year are published in annual reports.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,881.3 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Jan. 1, 1911, to Sept. 30, 1931, nonrecording gage at site 32 miles upstream at different elevation. Apr. 9, 1934, water-stage recorder at two sites within 500 ft of highway bridge 0.2 mi upstream and May 17, 1945, to Apr. 3, 1952, nonrecording gage on same bridge at elevation 1.36 ft higher. Apr. 4, 1952, to Nov. 19, 1967, water-stage recorder at site 4.5 mi upstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated to some extent by Bighorn Lake, usable capacity, 1,312,000 acre-ft, on the Bighorn River and on other tributary streams in Wyoming and Montana. Diversion for irrigation of about 1,250,000 acres upstream from station. Lower Yellowstone Project Main Canal diverts from left bank in $NW^1/_4$ sec.36, T.18 N., R.56 E., at Lower Yellowstone diversion dam at Intake about 36.6 mi upstream for irrigation of about 52,000 acres of which about one-third lies upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,970	6,720	5,900	e5,500	e5,400	e4,400	4,210	6,850	21,700	32,900	4,960	3,360
2	5,810	7,150	5,380	e4,800	e5,300	e4,400	4,150	6,920	22,000	30,600	4,540	3,180
3	5,750	7,180	5,120	e3,200	e5,200	e4,300	4,150	6,420	20,900	27,500	4,380	3,110
4	5,840	6,680	5,070	e2,400	e5,000	e4,300	4,140	5,840	20,100	25,500	4,350	3,150
5	5,870	6,400	5,030	e2,100	e5,000	e4,300	4,080	5,460	19,800	24,600	4,170	3,220
6	6,000	6,280	4,870	e2,000	e4,900	e4,400	4,030	4,980	19,200	23,600	3,960	3,170
7	5,900	6,090	5,110	e1,800	e4,800	e4,400	4,010	4,800	19,400	21,900	3,980	3,170
8	5,790	6,130	5,390	e1,500	e4,800	e4,600	3,920	5,180	19,300	19,900	4,230	3,170
9	5,700	6,220	5,230	e1,500	e4,700	e5,000	3,980	8,820	27,200	18,100	4,130	3,190
10	5,620	6,130	5,180	e1,600	e4,700	e4,600	4,120	8,460	27,900	16,900	4,090	3,160
11	5,540	6,060	5,610	e1,800	e4,600	4,500	4,490	9,150	24,600	16,100	5,410	3,300
12	5,570	6,050	5,590	e2,400	e4,400	4,420	5,020	10,700	22,300	15,500	4,090	3,200
13	5,590	5,980	5,710	e3,600	e4,200	4,360	5,100	11,600	21,500	15,300	3,730	3,010
14	5,530	5,930	5,690	e4,400	e4,300	4,300	4,790	21,600	22,000	15,900	3,730	3,080
15	5,560	5,910	5,960	e4,400	e4,500	4,350	4,750	26,800	20,600	15,100	3,720	3,190
16	5,650	5,960	5,610	e4,500	e4,700	4,410	4,480	21,900	20,200	13,100	3,800	3,340
17	5,720	5,900	5,800	e4,400	e4,800	4,460	4,250	20,000	19,800	11,300	4,520	3,490
18	5,890	5,800	5,620	e4,300	e4,800	4,420	4,090	18,400	19,200	10,200	4,570	3,620
19	6,320	5,710	5,850	e4,200	e4,800	4,390	4,130	18,000	21,900	9,170	4,210	3,640
20	6,600	5,690	5,840	e4,400	e4,700	4,280	4,300	20,000	25,600	8,320	3,780	3,740
21	6,490	5,630	e5,600	e4,400	e4,600	4,320	4,510	23,400	30,900	7,670	3,740	3,830
22	6,500	5,590	e5,200	e4,500	e4,500	4,370	4,770	22,000	30,700	7,190	3,920	3,830
23	6,390	5,650	4,760	e5,300	e4,300	4,380	6,760	24,600	29,200	6,520	4,210	3,890
24	6,310	5,620	4,250	e5,900	e4,400	4,300	7,440	31,500	29,600	5,840	4,520	3,940
25	6,390	5,580	5,270	e6,200	e4,500	4,360	6,730	34,400	31,300	5,470	4,790	4,160
26	6,250	5,540	5,340	e6,200	e4,600	4,400	5,840	33,400	35,300	5,690	4,290	4,730
27	6,230	5,560	4,820	e6,100	e4,600	4,410	5,720	34,500	39,300	5,290	3,920	5,120
28	6,230	5,540	4,730	e5,900	e4,500	4,480	5,520	31,200	39,600	5,110	3,870	5,550
29	6,670	5,780	4,200	e5,800	---	4,400	5,320	26,100	42,900	5,170	3,770	5,920
30	7,550	5,720	e5,000	e5,700	---	4,290	5,950	22,500	38,100	5,360	3,600	6,030
31	7,000	---	e5,200	e5,600	---	4,230	---	21,200	---	5,280	3,420	---
TOTAL	188,230	180,180	163,930	126,400	131,600	136,530	144,750	546,680	782,100	436,080	128,400	112,490
MEAN	6,072	6,006	5,288	4,077	4,700	4,404	4,825	17,630	26,070	14,070	4,142	3,750
MAX	7,550	7,180	5,960	6,200	5,400	5,000	7,440	34,500	42,900	32,900	5,410	6,030
MIN	5,530	5,540	4,200	1,500	4,200	4,230	3,920	4,800	19,200	5,110	3,420	3,010
AC-FT	373,400	357,400	325,200	250,700	261,000	270,800	287,100	1,084,000	1,551,000	865,000	254,700	223,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2005, BY WATER YEAR (WY)*

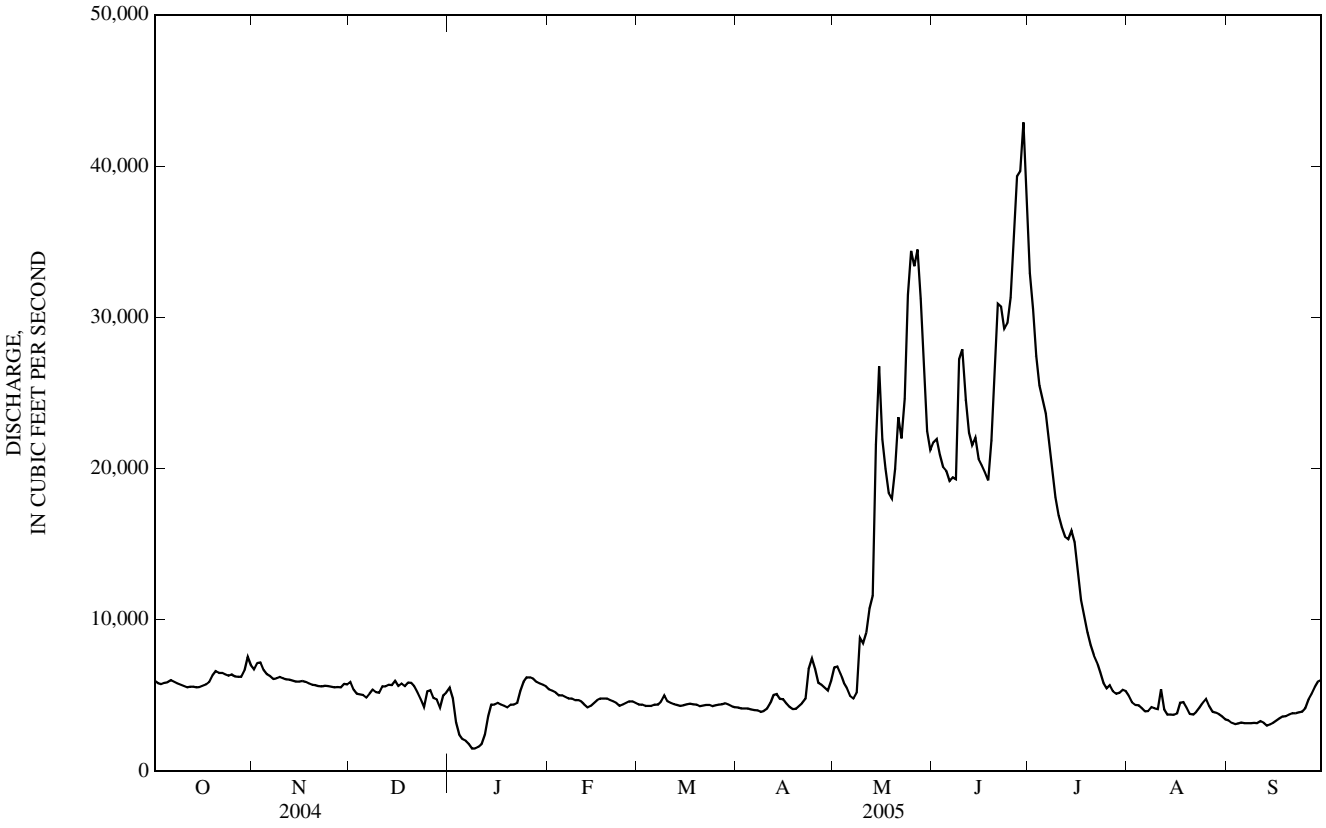
MEAN	8,204	7,277	5,918	5,673	6,790	10,790	10,170	18,090	38,310	22,640	8,548	7,046
MAX	29,130	12,150	9,594	13,110	17,750	25,980	39,160	38,100	77,280	55,000	20,470	16,000
(WY)	(1924)	(1924)	(1976)	(1925)	(1971)	(1972)	(1924)	(1928)	(1918)	(1917)	(1912)	(1941)
MIN	3,726	3,700	3,019	2,087	2,702	3,235	2,821	5,409	11,580	3,311	1,602	2,389
(WY)	(1922)	(1922)	(1961)	(1937)	(1936)	(2002)	(1961)	(1961)	(1919)	(1919)	(1961)	(1934)

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1911 - 2005*	
ANNUAL TOTAL	2,204,390		3,077,370			
ANNUAL MEAN	6,023		8,431		12,470	
HIGHEST ANNUAL MEAN					21,250	1924
LOWEST ANNUAL MEAN					5,673	2004
HIGHEST DAILY MEAN	24,900	Jun 14	42,900	Jun 29	142,000	Jun 21, 1921
LOWEST DAILY MEAN	1,480	Aug 22	1,500	Jan 8	570	May 17, 1961
ANNUAL SEVEN-DAY MINIMUM	1,650	Aug 19	1,760	Jan 5	1,010	Aug 8, 1961
MAXIMUM PEAK FLOW			48,100	Jun 29	a159,000	Jun 21, 1921
MAXIMUM PEAK STAGE			13.49	Jun 29	b24.03	Mar 6, 1994
INSTANTANEOUS LOW FLOW					c470	May 17, 1961
ANNUAL RUNOFF (AC-FT)	4,372,000		6,104,000		9,033,000	
10 PERCENT EXCEEDS	10,100		21,900		27,800	
50 PERCENT EXCEEDS	5,500		5,320		8,000	
90 PERCENT EXCEEDS	2,860		3,740		4,040	

SUMMARY STATISTICS	WATER YEARS 1911 - 1965**		WATER YEARS 1967 - 2005***	
ANNUAL MEAN	12,890		12,100	
HIGHEST ANNUAL MEAN	21,250	1924	19,150	1997
LOWEST ANNUAL MEAN	5,814	1934	5,673	2004
HIGHEST DAILY MEAN	142,000	Jun 21, 1921	104,000	May 23, 1978
LOWEST DAILY MEAN	570	May 17, 1961	800	Jan 2, 1989
ANNUAL SEVEN-DAY MINIMUM	1,010	Aug 8, 1961	1,060	Aug 23, 2001
MAXIMUM PEAK FLOW	a159,000	Jun 21, 1921	d111,000	May 23, 1978
MAXIMUM PEAK STAGE	b21.85	Mar 22, 1947	b24.03	Mar 6, 1994
INSTANTANEOUS LOW FLOW	c470	May 17, 1961		
ANNUAL RUNOFF (AC-FT)	9,341,000		8,695,000	
10 PERCENT EXCEEDS	29,900		25,800	
50 PERCENT EXCEEDS	7,690		8,410	
90 PERCENT EXCEEDS	3,820		4,500	

*--During period of operation 1911-31, 1934 to current year. Published as “At Intake” 1911-31.
**--Prior to Bighorn Lake reaching operational level.
***--After Bighorn Lake reached operational level.
a--Gage height, 12.60 ft, site and datum then in use.
b--Backwater from ice.
c--Gage height, 2.73 ft, site and datum then in use.
d--Gage height, 20.02 ft.
e--Estimated.



06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1981.
WATER TEMPERATURE: January 1951 to September 1985.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1981, October 1982 to September 1991, seasonal records (March to November) only from October 1991 to current year .

REMARKS.--Daily sediment records rated good except for several periods of storm runoff, which are rated poor. Daily sediment data collected during open water; no data available during ice effect from Dec. 1 to Mar. 6. Water-quality samples were collected this year as part of the National Water-Quality Assessment Program (NAWQA) for the Yellowstone River study unit under the direction of the USGS Wyoming Water Science Center. Suspended and bed sediment samples plus the seasonal daily sediment record were obtained as part of the Corps of Engineers program. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,220 microsiemens per centimeter (µS/cm) at 25.0°C, Apr. 6, 1979; minimum daily, 261 µS/cm at 25.0°C, June 4, 1966.
WATER TEMPERATURE: Maximum, 29.0°C July 23, 1960; minimum, 0.0°C on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 26,800 mg/L May 8, 1975; minimum daily mean, 8 mg/L Jan. 9, 1973.
SEDIMENT LOAD: Maximum daily, 3,030,000 tons May 8, 1975; minimum daily, 63 tons Jan. 2, 1989.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (seasonal records): Maximum daily mean, 7,710 mg/L, May 10; minimum daily mean, 24 mg/L, Sept. 7.
SEDIMENT LOAD (seasonal records): Maximum daily, 394,000 tons, June 29; minimum daily, 205 tons, Sep. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
NOV													
22...	1215	5,560	703	13.7	106	8.3	720	5.0	1.5	161	--	--	--
JAN													
11...	1300	1,820	699	13.2	99	8.1	941	-5.0	0.0	223	171	208	.0
MAR													
09...	1230	5,760	704	12.6	94	8.0	761	13.0	0.2	160	175	210	1
MAY													
17...	1330	19,800	697	8.9	97	8.0	587	20.0	15.0	114	104	127	--
JUL													
26...	1300	5,910	718	8.5	103	8.3	531	24.0	21.5	128	104	53	36
SEP													
06...	1430	3,140	719	8.9	104	8.5	671	22.5	19.8	160	145	172	2

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	2Chloro-2',6-'diethyl acetanilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methylaniline water, fltrd, ug/L (61620)
NOV													
22...	12.2	182	<.04	.26	<.008	.44	<.006	.030	<.09	<.006	<.005	<.006	<.004
JAN													
11...	17.3	263	.08	.71	E.005	1.08	<.006	.010	<.09	<.006	<.005	<.006	<.004
MAR													
09...	18.3	211	E.02	.27	<.008	1.27	<.006	.36	<.09	<.006	<.005	<.006	<.004
MAY													
17...	9.50	154	E.02	.45	.010	2.86	.009	.84	<.09	<.006	<.005	<.006	<.004
JUL													
26...	7.45	127	<.04	<.06	<.008	.35	<.006	.091	<.09	<.006	<.005	<.006	<.004
SEP													
06...	9.85	169	<.04	<.06	<.008	.39	<.006	.030	<.09	<.006	<.005	<.006	<.004

E--Estimated.

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	3,4-Dichloroaniline water fltrd, ug/L (61625)	3,5-Dichloroaniline water, fltrd, ug/L (61627)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-Endosulfan, water, fltrd, ug/L (34362)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl oxon, water, fltrd, ug/L (61635)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos oxon, water, fltrd, ug/L (61636)
NOV													
22...	<.004	--	<.006	<.006	<.005	--	<.009	<.07	<.050	<.010	<.041	--	<.06
JAN													
11...	<.004	--	<.006	<.006	<.005	--	<.007	<.07	<.050	<.010	<.041	--	<.06
MAR													
09...	<.004	--	<.006	<.006	<.005	--	<.007	<.07	<.050	<.010	<.041	--	<.06
MAY													
17...	<.004	--	<.006	<.006	<.005	--	.008	<.07	<.050	<.010	<.041	--	<.06
JUL													
26...	<.004	<.004	<.006	E.007	<.005	<.005	<.007	<.07	<.050	<.010	<.041	<.020	<.06
SEP													
06...	<.004	<.004	<.006	<.006	<.005	<.005	<.007	<.07	<.050	<.010	<.041	<.020	<.06

Date	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	cis-Propiconazole, water, fltrd, ug/L (79846)	Cyanazine, water, fltrd, ug/L (04041)	Cyfluthrin, water, fltrd, ug/L (61585)	lambda-Cyhalothrin, water, fltrd, ug/L (61595)	Cypermethrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon oxon, water, fltrd, ug/L (61638)	Diazinon, water, fltrd, ug/L (39572)	Dicrotophos, water fltrd, ug/L (38454)	Dieldrin, water, fltrd, ug/L (39381)
NOV													
22...	<.005	<.006	--	--	<.008	--	<.009	<.003	<.012	<.01	<.005	<.08	<.009
JAN													
11...	<.005	<.006	--	--	<.008	--	<.009	<.003	<.012	<.01	<.005	<.08	<.009
MAR													
09...	<.005	<.006	--	--	<.027	--	<.009	<.003	<.012	<.01	<.005	<.08	<.009
MAY													
17...	<.005	<.006	--	--	<.027	--	<.009	<.003	<.012	<.01	<.005	<.08	<.009
JUL													
26...	<.005	<.006	<.008	<.018	<.027	<.009	<.009	<.003	<.012	--	<.005	<.08	<.009
SEP													
06...	<.005	<.006	<.008	<.018	<.027	<.009	<.009	<.003	<.012	--	<.005	<.08	<.009

Date	Dimethoate, water, fltrd 0.7u GF ug/L (82662)	Disulfoton sulfone water, fltrd, ug/L (61640)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Endosulfan sulfate water, fltrd, ug/L (61590)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenamiphos sulfone water, fltrd, ug/L (61645)	Fenamiphos sulfoxide, water, fltrd, ug/L (61646)	Fenamiphos, water, fltrd, ug/L (61591)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)
NOV													
22...	<.006	--	--	--	--	<.002	<.004	--	<.049	<.04	<.03	<.029	<.013
JAN													
11...	<.006	--	--	--	--	<.002	<.004	--	<.049	<.04	<.03	<.029	<.013
MAR													
09...	<.006	--	--	--	--	<.002	<.004	--	<.049	<.04	<.03	<.029	<.013
MAY													
17...	<.006	--	--	--	--	<.002	<.004	--	<.049	<.04	<.03	<.029	<.013
JUL													
26...	<.006	<.01	<.02	<.014	<.004	<.002	<.004	<.005	<.049	<.04	<.03	<.029	<.013
SEP													
06...	<.006	<.01	<.02	<.014	<.004	<.002	<.004	<.005	<.049	<.04	<.03	<.029	<.013

E--Estimated.

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Hexazinone, water, fltrd, ug/L (04025)	Iprodione, water, fltrd, ug/L (61593)	Isofenphos, water, fltrd, ug/L (61594)	Malaoxon, water, fltrd, ug/L (61652)	Malathion, water, fltrd, ug/L (39532)	Metalaxyl, water, fltrd, ug/L (61596)	Methialthion water, fltrd, ug/L (61598)	Methyl paraoxon, water, fltrd, ug/L (61664)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)
NOV													
22...	<.024	<.016	<.003	<.003	<.013	<.387	<.003	<.030	<.027	<.005	<.006	<.03	<.015
JAN													
11...	<.024	<.016	<.003	<.003	<.013	<.387	<.003	<.030	<.027	<.005	<.006	<.03	<.015
MAR													
09...	<.024	<.016	--	<.003	<.013	<.538	<.003	<.030	<.027	<.010	<.006	<.03	<.015
MAY													
17...	<.024	<.016	--	<.003	<.013	<.538	<.003	<.030	<.027	<.005	<.006	<.03	<.015
JUL													
26...	<.024	<.016	--	<.003	<.013	<.538	<.003	<.030	<.027	<.005	<.006	<.03	<.015
SEP													
06...	<.024	<.016	--	<.003	<.013	<.538	<.003	<.030	<.027	<.005	<.006	<.03	<.015

Date	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Myclobutanil water, fltrd, ug/L (61599)	Oxyfluorfen, water, fltrd, ug/L (61600)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prometon, water, fltrd, ug/L (04037)	Prometryn, water, fltrd, ug/L (04036)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)
NOV													
22...	.009	<.006	--	<.008	--	<.022	<.10	<.011	<.05	<.008	<.01	<.005	<.004
JAN													
11...	<.010	<.006	--	<.008	--	<.022	<.10	<.011	--	<.008	<.01	<.005	<.004
MAR													
09...	<.006	<.006	--	<.008	--	.025	<.10	<.011	<.05	<.008	<.01	<.005	<.004
MAY													
17...	E.003	<.006	--	<.008	--	<.022	<.10	<.011	<.05	<.008	<.01	<.005	<.004
JUL													
26...	.010	<.006	<.003	<.008	<.007	<.022	<.10	<.011	<.05	<.008	<.01	<.005	<.004
SEP													
06...	.011	<.006	<.003	<.008	<.007	<.022	<.10	<.011	<.05	<.008	<.01	<.005	<.004

Date	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Tefluthrin, water, fltrd, ug/L (61606)	Terbufos oxon sulfone water, fltrd, ug/L (61674)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Terbuthylazine, water, fltrd, ug/L (04022)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	trans-Propiconazole, water, fltrd, ug/L (79847)	Tribuphos, water, fltrd, ug/L (61610)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Dichlorvos, water fltrd, ug/L (38775)
NOV													
22...	--	--	<.005	<.02	--	<.07	<.02	<.01	--	--	--	<.009	<.01
JAN													
11...	--	--	<.005	<.02	--	<.07	<.02	<.01	--	--	--	<.009	<.01
MAR													
09...	--	--	<.005	<.02	--	<.07	<.02	<.01	--	--	--	<.009	<.01
MAY													
17...	--	--	<.005	<.02	--	<.07	<.02	<.01	--	--	--	<.009	<.01
JUL													
26...	<.011	<.02	<.005	<.02	<.008	<.07	<.02	<.01	<.010	<.01	<.004	<.009	<.01
SEP													
06...	<.011	<.02	<.005	<.02	<.008	<.07	<.02	<.01	<.010	<.01	<.004	<.009	<.01

E--Estimated.

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV			
22...	95	33	495
JAN			
11...	98	23	113
MAR			
09...	96	664	10,300
MAY			
17...	94	2,670	143,000
JUL			
26...	91	77	1,230
SEP			
06...	97	26	220

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)	Bed sediment, dry svd sve dia percent <.063mm (80164)	Bed sediment, dry svd sve dia percent <.125mm (80165)
MAR									
30...	1145	4,310	900	8.5	94	121	1,410	3	21
JUN									
10...	1130	27,000	455	16.5	93	4,670	340,000	19	68
14...	1000	23,300	435	17.5	88	3,510	221,000	1	11
28...	1230	38,000	347	20.0	85	1,910	196,000	--	--
AUG									
10...	1200	3,960	648	22.5	91	40	428	1	3
23...	1300	4,160	650	24.0	95	64	719	6	18

Date	Bed sediment, dry svd sve dia percent <.25mm (80166)	Bed sediment, dry svd sve dia percent <.5 mm (80167)	Bed sediment, dry svd sve dia percent <1 mm (80168)	Bed sediment, dry svd sve dia percent <2 mm (80169)	Bed sediment, dry svd sve dia percent <4 mm (80170)	Bed sediment, dry svd sve dia percent <8 mm (80171)	Bed sediment, dry svd sve dia percent <16 mm (80172)	Bed sediment, dry svd sve dia percent <32 mm (80173)
MAR								
30...	65	70	71	71	73	79	92	100
JUN								
10...	98	99	100	--	--	--	--	--
14...	98	100	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
AUG								
10...	62	84	84	85	85	89	97	100
23...	50	61	62	63	66	76	91	100

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	65	1,050	695	12,600							---	---
2	55	863	440	8,490							---	---
3	45	699	458	8,880							---	---
4	38	599	328	5,920							---	---
5	42	666	225	3,890							---	---
6	50	810	164	2,780							---	---
7	50	796	205	3,370							431	5,120
8	44	688	289	4,780							535	6,640
9	39	600	292	4,900							726	9,800
10	36	546	220	3,640							541	6,720
11	35	524	155	2,540							260	3,160
12	35	526	118	1,930							200	2,390
13	34	513	105	1,700							169	1,990
14	31	463	90	1,440							122	1,420
15	28	420	77	1,230							107	1,260
16	28	427	73	1,170							93	1,110
17	29	448	74	1,180							80	963
18	29	461	78	1,220							80	955
19	49	836	79	1,220							83	984
20	250	4,460	75	1,150							78	901
21	344	6,030	71	1,080							72	840
22	289	5,070	68	1,030							63	743
23	241	4,160	64	976							56	662
24	205	3,490	60	910							59	685
25	185	3,190	55	829							58	683
26	174	2,940	48	718							68	808
27	158	2,660	44	661							49	583
28	167	2,810	42	628							56	677
29	380	6,840	41	640							72	855
30	1,280	26,100	41	633							109	1,260
31	1,500	28,400	---	---							93	1,060
TOTAL	---	108,085	---	82,135							---	52,269

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

SUSPENDED-SEDIMENT—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	88	1,000	468	8,660	700	41,000	1,640	146,000	46	616	41	372
2	73	818	441	8,240	780	46,300	1,190	98,300	44	539	35	301
3	69	773	308	5,340	520	29,300	1,000	74,200	42	497	32	269
4	80	894	212	3,340	635	34,500	839	57,800	92	1,080	33	281
5	63	694	184	2,710	969	51,800	710	47,200	62	698	32	278
6	48	522	150	2,020	660	34,200	593	37,800	56	599	27	231
7	57	617	157	2,030	1,900	99,500	479	28,300	55	591	24	205
8	54	572	220	3,080	4,200	219,000	363	19,500	54	617	25	214
9	49	527	2,480	59,100	5,350	393,000	286	14,000	52	580	25	215
10	54	601	7,710	176,000	4,800	362,000	250	11,400	49	541	26	222
11	90	1,090	6,320	156,000	2,250	149,000	224	9,740	1,170	17,100	27	241
12	290	3,930	2,800	80,900	1,360	81,900	207	8,660	3,700	40,900	27	233
13	1,370	18,900	2,120	66,400	890	51,700	204	8,430	1,950	19,600	26	211
14	1,470	19,000	4,570	267,000	2,180	129,000	232	9,960	730	7,350	25	208
15	1,060	13,600	4,420	320,000	1,410	78,400	234	9,540	100	1,000	25	215
16	515	6,230	3,500	207,000	700	38,200	223	7,890	75	770	25	225
17	260	2,980	2,770	150,000	459	24,500	194	5,920	400	4,880	26	245
18	168	1,860	3,590	178,000	465	24,100	163	4,490	2,390	29,500	26	254
19	175	1,950	5,530	269,000	671	39,700	132	3,270	350	3,980	27	265
20	200	2,320	2,100	113,000	1,020	70,500	102	2,290	80	816	28	283
21	178	2,170	3,130	198,000	1,730	144,000	79	1,640	72	727	28	290
22	142	1,830	2,180	129,000	1,350	112,000	68	1,320	68	720	27	279
23	304	5,550	2,220	147,000	680	53,600	66	1,160	65	739	27	284
24	960	19,300	2,290	195,000	600	48,000	62	978	73	891	26	277
25	1,390	25,300	2,270	211,000	592	50,000	58	857	79	1,020	28	314
26	921	14,500	1,420	128,000	830	79,100	71	1,090	62	718	37	473
27	510	7,880	1,240	116,000	1,440	153,000	70	1,000	46	487	46	636
28	360	5,370	870	73,300	1,780	190,000	68	938	37	387	53	794
29	318	4,570	730	51,400	3,400	394,000	80	1,120	43	438	60	959
30	317	5,090	589	35,800	3,600	370,000	72	1,040	49	476	67	1,090
31	---	---	520	29,800	---	---	54	770	48	443	---	---
TOTAL	---	170,438	---	3,392,120	---	3,591,300	---	616,603	---	139,300	---	10,364

Total load for year = 8,162,614 tons.

06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD

LOCATION.--Lat 45°32'53", long 103°58'16" (revised), in SW$^1/_4$ sec.2, T.18 N., R.1 E., Harding County, Hydrologic Unit 10110201, on left bank 15 ft upstream from bridge on State Highway 20 at east edge of Camp Crook.

DRAINAGE AREA.--1,970 mi^2, approximately.

PERIOD OF RECORD.--September 1903 to November 1906, May 1956 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1904. WSP 1729: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,108.98 ft above NGVD of 1929. Sept. 2, 1903, to Nov. 30, 1906, nonrecording gage at site 0.5 mi upstream at different datum. May 1956 to Oct. 8, 1957, nonrecording gage at site 15 ft downstream, and Oct. 9, 1957, to Sept. 30, 1976, water-stage recorder at present site both at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1952 reached a stage of about 18 ft, present datum, from local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	14	3.8	e2.8	e2.7	e4.0	2.6	8.3	21	3.7	1.1	1.2
2	1.5	9.1	3.9	e2.8	e2.9	e4.1	2.6	12	13	3.0	0.91	0.82
3	1.6	7.3	4.2	e2.7	e3.0	e4.4	2.3	9.6	13	2.9	1.8	0.58
4	1.6	6.1	4.1	e2.6	e3.1	e4.4	2.2	8.9	8.6	2.7	1.9	0.43
5	1.5	5.1	e3.6	e2.5	e3.2	e4.3	2.9	6.0	7.4	2.6	1.8	0.52
6	1.3	15	e3.5	e2.4	e3.2	e4.2	2.8	4.8	7.4	2.7	1.2	0.56
7	1.2	15	e3.4	e2.3	e3.1	e4.1	2.5	4.5	6.5	2.3	0.80	e0.65
8	0.85	15	e3.3	e2.1	e3.0	e4.1	2.2	5.1	3.8	1.9	1.1	e0.73
9	1.5	12	e3.3	e1.9	e2.9	e4.3	2.2	4.5	5.5	1.3	1.4	e0.64
10	1.6	8.9	e3.3	e1.5	e2.9	e4.6	2.0	12	5.6	1.0	0.85	e0.66
11	1.4	7.1	e3.2	e1.4	e3.0	e4.4	2.2	8.8	6.0	1.2	1.1	e0.45
12	1.8	5.8	e3.2	e1.0	e3.0	e4.1	2.0	27	6.3	1.1	1.4	e0.39
13	2.3	e4.8	e3.2	e0.90	e3.0	e3.8	2.2	110	6.7	0.98	2.0	e0.70
14	2.8	e4.5	e3.2	e0.80	e3.1	e3.5	2.2	259	7.1	1.1	1.4	e0.49
15	3.0	4.4	e3.1	e0.90	e3.2	e3.5	1.9	254	5.9	0.98	1.1	e0.37
16	3.3	4.4	e3.0	e1.1	e3.2	e3.5	1.7	741	5.1	0.93	1.1	e0.36
17	3.5	4.1	e3.0	e1.7	e3.2	e3.6	2.0	424	4.1	1.0	1.0	e0.43
18	3.7	3.9	e2.9	e1.9	e3.3	e3.7	1.8	339	3.3	1.1	1.0	e0.61
19	3.5	3.7	e2.8	e2.0	e3.3	e3.6	2.1	180	2.8	1.2	1.5	e0.88
20	4.1	3.5	e2.6	e2.1	e3.4	e3.5	3.2	113	1.1	1.1	1.1	e0.79
21	4.4	3.4	e2.5	e2.2	e3.5	e3.6	3.5	65	1.5	1.2	1.0	e0.77
22	6.8	e3.4	e2.4	e2.3	e3.6	e3.7	3.3	39	2.0	1.1	0.94	e1.1
23	32	3.5	e2.3	e2.4	e3.7	e3.6	7.5	23	1.9	1.0	1.3	e1.3
24	14	3.7	e2.4	e2.6	e3.8	e4.2	5.2	14	1.7	1.2	2.0	e1.7
25	7.0	4.3	e3.0	e2.7	e3.8	e4.1	3.5	24	1.3	1.8	1.5	e1.5
26	5.5	4.3	e3.3	e2.5	e3.9	3.9	2.5	19	1.5	2.0	2.2	e1.5
27	4.7	3.2	e3.4	e2.4	e3.9	3.8	2.4	14	4.0	2.0	2.8	e1.5
28	4.5	e3.4	e3.5	e2.2	e4.0	3.7	2.2	14	4.3	1.8	3.9	e1.6
29	21	e3.7	e3.1	e2.1	---	4.3	2.2	9.5	5.1	1.5	3.8	e1.2
30	27	3.8	e3.0	e2.4	---	3.6	2.2	10	4.7	1.1	3.0	e1.2
31	24	---	e2.8	e2.7	---	3.0	---	12	---	0.92	2.0	---
TOTAL	194.25	190.4	98.3	63.90	91.9	121.2	80.1	2,775.0	168.2	50.41	50.00	25.63
MEAN	6.27	6.35	3.17	2.06	3.28	3.91	2.67	89.5	5.61	1.63	1.61	0.85
MAX	32	15	4.2	2.8	4.0	4.6	7.5	741	21	3.7	3.9	1.7
MIN	0.85	3.2	2.3	0.80	2.7	3.0	1.7	4.5	1.1	0.92	0.80	0.36
AC-FT	385	378	195	127	182	240	159	5,500	334	100	99	51

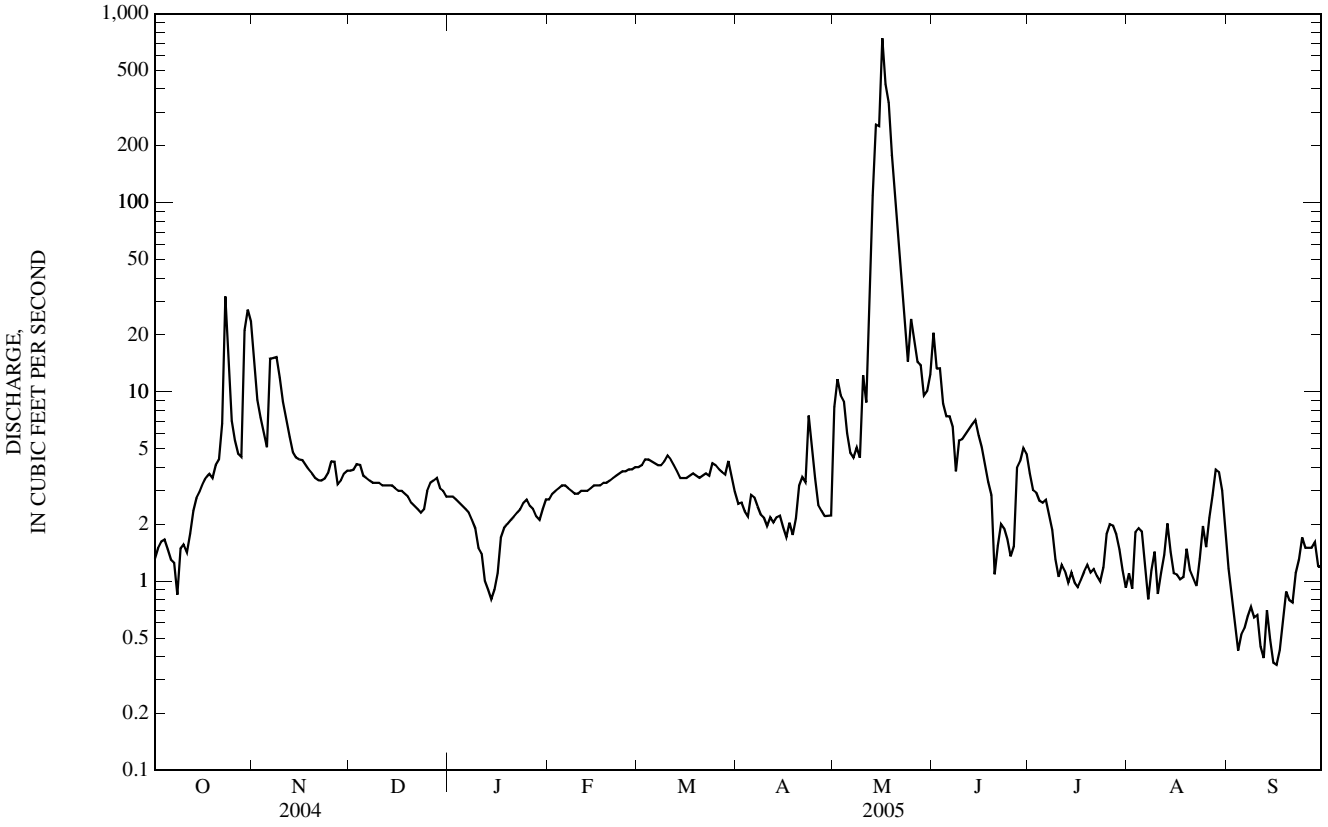
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2005, BY WATER YEAR (WY)*

MEAN	54.2	12.5	6.63	7.21	80.1	330	196	320	244	92.4	40.3	29.0
MAX	876	103	34.9	59.7	1,112	2,121	1,198	1,894	1,107	961	537	244
(WY)	(1972)	(1972)	(1972)	(1974)	(1996)	(1978)	(1971)	(1978)	(1967)	(1905)	(1906)	(1905)
MIN	0.29	0.00	0.00	0.00	0.00	1.95	1.97	1.12	0.11	0.00	0.00	0.61
(WY)	(1905)	(1905)	(1905)	(1905)	(1969)	(1992)	(1981)	(1992)	(1961)	(1961)	(1904)	(1958)

06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1904--2005*	
ANNUAL TOTAL	9,992.75		3,909.29			
ANNUAL MEAN	27.3		10.7		a118	
HIGHEST ANNUAL MEAN					492	1978
LOWEST ANNUAL MEAN					4.68	1961
HIGHEST DAILY MEAN	783	Aug 6	741	May 16	8,560	Mar 24, 1978
LOWEST DAILY MEAN	0.06	Aug 1	0.36	Sep 16	b0.00	Jul 31, 1904
ANNUAL SEVEN-DAY MINIMUM	0.15	Jul 26	0.46	Sep 11	0.00	Jul 31, 1904
MAXIMUM PEAK FLOW			834	May 16	9,420	Mar 24, 1978
MAXIMUM PEAK STAGE			6.32	May 16	16.90	Mar 24, 1978
ANNUAL RUNOFF (AC-FT)	19,820		7,750		85,520	
10 PERCENT EXCEEDS	78		9.3		220	
50 PERCENT EXCEEDS	3.6		3.0		9.5	
90 PERCENT EXCEEDS	1.1		1.0		1.2	

*--During period of operation (1904-1905, 1957 to current year).
a--Median of annual mean discharges, 98 ft^3/s.
b--No flow at times in some years.
e--Estimated.



06336600 BEAVER CREEK NEAR TROTTERS, ND

LOCATION.--Lat 47°09'47", long 103°59'32", in $SW^1/_4SW^1/_4NE^1/_4$ sec.33, T.143 N., R.105 W., Golden Valley County, Hydrologic Unit 10110204, on left bank 100 ft upstream from bridge on county road, 2.4 mi east of Montana-North Dakota State line, 13 mi southwest of Trotters, 17 mi north of Beach, 20 mi upstream from Elk Creek, and 27 mi above mouth.

DRAINAGE AREA.--616 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year (seasonal records only since 1984).

REVISED RECORDS.--1982: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,371.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for discharges less than 1.0 ft^3/s and for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 391 ft^3/s, June 27, gage height, 7.89 ft; minimum daily discharge, 0.52 ft^3/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					e26	7.2	5.2	3.2	26	31	2.9	0.86
2					25	7.4	5.1	3.8	24	44	2.6	0.83
3					23	7.7	4.8	3.9	20	77	3.0	0.91
4					22	8.1	4.6	4.4	17	61	3.7	0.86
5					20	8.3	4.3	4.5	14	46	3.1	0.71
6					19	8.8	4.1	4.4	64	34	2.8	0.76
7					17	e9.0	3.9	4.5	57	25	2.5	0.68
8					13	9.2	3.6	5.2	48	20	2.2	0.73
9					12	9.4	3.3	5.8	91	17	2.1	0.65
10					11	9.5	3.3	6.4	99	14	2.2	0.75
11					11	9.3	3.2	6.2	74	12	2.0	0.74
12					12	e8.3	3.1	6.7	55	10	2.1	0.76
13					12	e7.3	3.0	7.2	53	9.1	1.9	0.85
14					12	6.2	2.8	7.3	53	7.9	1.8	0.87
15					11	6.0	2.9	8.0	45	6.8	1.6	0.78
16					11	5.5	2.7	7.7	33	6.3	1.7	0.77
17					9.5	5.7	2.9	7.4	28	6.0	2.2	0.78
18					9.0	5.7	2.8	7.5	27	5.7	1.9	0.70
19					8.6	5.4	2.8	8.3	22	5.0	1.9	0.73
20					8.3	5.3	3.1	16	17	4.4	1.8	0.61
21					7.9	6.0	3.0	20	12	3.9	1.5	0.62
22					7.6	6.3	3.2	23	11	3.6	1.3	0.63
23					7.4	6.0	3.2	25	9.5	3.8	1.2	0.54
24					7.5	5.3	2.9	32	8.0	3.0	1.1	0.68
25					7.7	5.1	2.7	81	6.6	2.7	1.1	0.68
26					8.0	5.7	2.9	62	88	2.8	1.0	0.69
27					8.0	6.1	3.1	51	269	2.7	1.0	0.52
28					7.5	6.1	3.0	43	86	3.1	1.0	0.64
29					---	5.8	3.0	36	41	3.3	1.1	0.66
30					---	5.2	3.2	30	36	3.5	0.99	0.64
31					---	5.1	---	27	---	3.3	0.92	---
TOTAL					354.0	212.0	101.7	558.4	1,434.1	477.9	58.21	21.63
MEAN					12.6	6.84	3.39	18.0	47.8	15.4	1.88	0.72
MAX					26	9.5	5.2	81	269	77	3.7	0.91
MIN					7.4	5.1	2.7	3.2	6.6	2.7	0.92	0.52
AC-FT					702	421	202	1,110	2,840	948	115	43

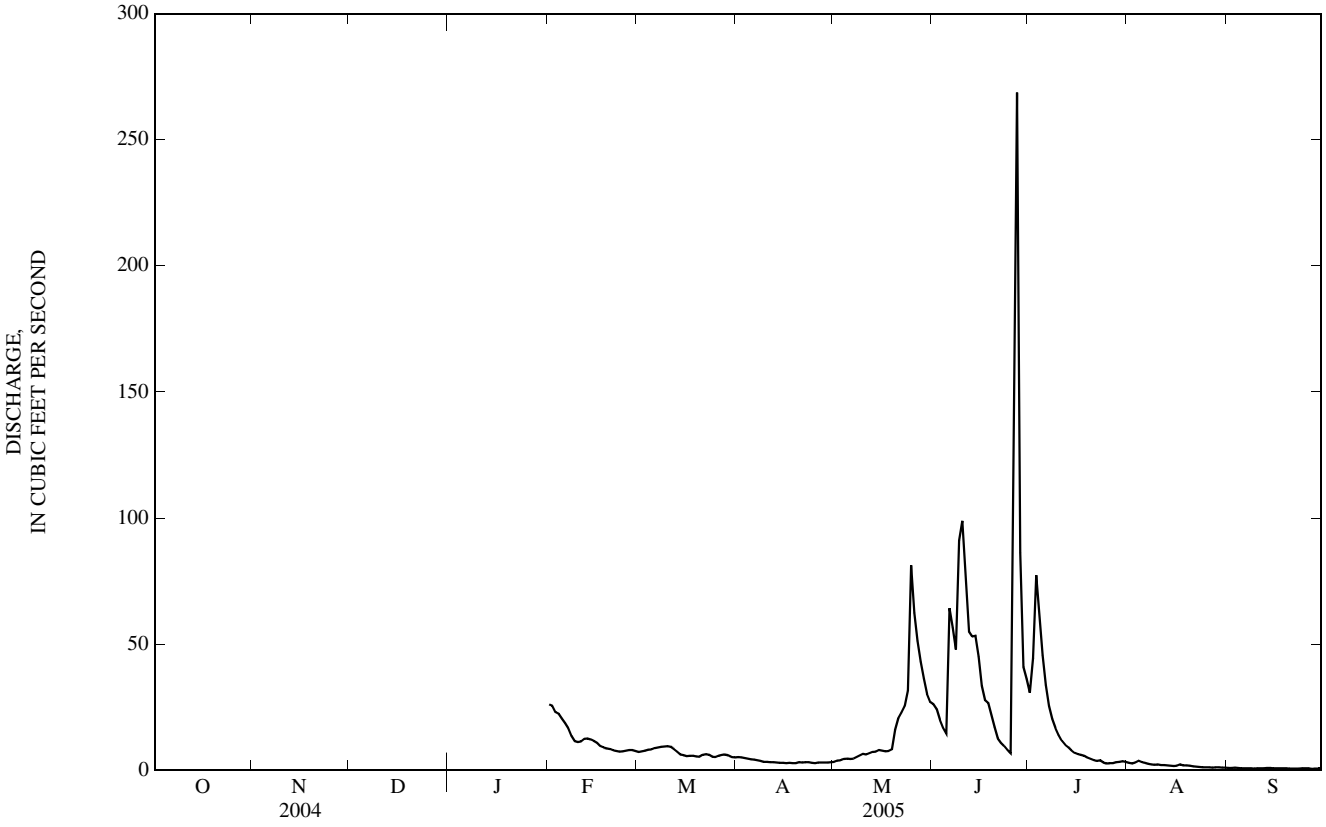
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	1.10	2.62	2.59	4.40	26.0	117	44.2	15.4	18.9	10.3	2.03	0.68
MAX	3.29	6.34	5.13	14.7	141	609	406	50.2	125	64.2	18.4	4.72
(WY)	(1983)	(1983)	(1979)	(1983)	(1983)	(1978)	(1979)	(1999)	(1982)	(1997)	(1993)	(1986)
MIN	0.01	0.01	0.03	0.00	0.00	1.21	1.11	1.05	0.12	0.00	0.00	0.00
(WY)	(1982)	(1982)	(1982)	(1982)	(1989)	(1991)	(1991)	(1981)	(1992)	(1988)	(1985)	(1981)

06336600 BEAVER CREEK NEAR TROTTERS, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1978 - 2005	
ANNUAL MEAN	a33.3	
HIGHEST ANNUAL MEAN	a79.7	1978
LOWEST ANNUAL MEAN	a2.77	1981
HIGHEST DAILY MEAN	2,500	Mar 22, 1978
LOWEST DAILY MEAN	0.00	Aug 1, 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 10, 1981
MAXIMUM PEAK FLOW	b2,720	Mar 29, 1978
MAXIMUM PEAK STAGE	c19.27	Mar 22, 1978
ANNUAL RUNOFF (AC-FT)	a24,110	
10 PERCENT EXCEEDS	51	
50 PERCENT EXCEEDS	2.8	
90 PERCENT EXCEEDS	0.03	

a--Based on complete water years only (1978-83).
b--Gage height, 18.61 ft.
c--Backwater from ice.
e--Estimated.



06336600 BEAVER CREEK NEAR TROTTERS, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
09...	1145	9.2	8.2	8.3	1,600	1,600	7.0	0.0	60.9	48.1	6.00	5	218
AUG													
17...	1020	2.1	8.4	8.4	2,410	2,420	21.0	19.1	68.5	79.9	11.0	7	357

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
09...	57	248	7.0	.17	<2.00	621	1,110	27.7	<50	<1	2.3	15.7	<1
AUG													
17...	60	363	10.2	.25	3.82	989	1,730	9.91	<50	<1	3.5	57.0	<1

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
09...	310	<1	<1	4.9	30	<1	10	2.57	<1	<1	<1	3.9
AUG												
17...	830	<1	11	7.2	60	<1	30	3.89	6.9	<1	<1	2.8

12301300 TOBACCO RIVER NEAR EUREKA, MT

LOCATION.--Lat 48°53'37", long 115°05'13" (NAD 27), in $NW^1/_4SE^1/_4SE^1/_4$ sec.9, T.36 N., R.27 W., Lincoln County, Hydrologic Unit 17010101, on right bank 0.2 mi upstream from Indian Creek, 1.8 mi northwest of Eureka, and 2.8 mi upstream from Lake Koocanusa flow line.

DRAINAGE AREA.--440 mi^2.

PERIOD OF RECORD.--September 1958 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,518.85 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversions for irrigation of about 4,500 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about May 22, 1948, reached a discharge of 2,810 ft^3/s, from slope-area measurement of peak flow at site 1.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	156	169	143	e220	142	174	343	614	416	107	54
2	187	161	164	e143	e200	141	181	317	673	387	107	52
3	180	220	162	e146	e195	139	181	304	740	378	103	51
4	175	206	161	e150	e180	139	179	301	784	361	98	49
5	172	191	158	e140	e177	141	177	307	714	345	88	48
6	167	186	152	e150	e173	147	175	349	718	336	82	48
7	168	192	149	e155	e170	151	183	417	758	324	80	47
8	163	189	148	e148	e167	156	227	530	880	305	78	46
9	161	185	146	e150	e165	166	285	580	888	300	74	46
10	167	182	155	e150	e166	166	277	559	833	291	78	67
11	157	177	246	e160	174	171	265	539	807	284	79	111
12	153	173	309	e170	190	179	258	519	770	268	79	107
13	150	170	292	e165	193	184	251	515	711	254	79	102
14	145	165	280	e150	183	177	242	563	680	241	77	124
15	148	163	275	e150	164	172	232	633	668	231	73	120
16	155	163	249	e155	159	169	221	712	627	230	69	116
17	182	162	231	e170	162	170	237	809	652	236	71	111
18	183	159	215	e195	153	166	269	833	733	225	100	108
19	183	158	211	e230	163	152	265	768	687	214	85	104
20	181	154	201	e300	165	161	257	739	627	202	79	101
21	192	145	186	e380	180	158	258	663	585	193	74	98
22	198	147	179	e410	167	154	268	607	553	191	72	98
23	196	142	153	e380	163	148	297	573	545	195	79	96
24	189	144	163	e350	169	143	340	532	515	188	86	95
25	183	201	166	e325	163	142	406	500	482	166	81	94
26	176	227	166	e300	150	140	455	482	455	160	73	94
27	172	211	166	e280	144	151	485	479	437	152	69	94
28	167	186	158	e265	141	183	460	500	455	131	67	93
29	163	175	155	e240	---	206	413	525	459	123	69	94
30	161	173	152	e235	---	199	374	539	446	107	63	111
31	161	---	147	e230	---	184	---	552	---	102	57	---
TOTAL	5,329	5,263	5,864	6,715	4,796	4,997	8,292	16,589	19,496	7,536	2,476	2,579
MEAN	172	175	189	217	171	161	276	535	650	243	79.9	86.0
MAX	198	227	309	410	220	206	485	833	888	416	107	124
MIN	145	142	146	140	141	139	174	301	437	102	57	46
AC-FT	10,570	10,440	11,630	13,320	9,510	9,910	16,450	32,900	38,670	14,950	4,910	5,120
CFSM	0.39	0.40	0.43	0.49	0.39	0.37	0.63	1.22	1.48	0.55	0.18	0.20
IN.	0.45	0.44	0.50	0.57	0.41	0.42	0.70	1.40	1.65	0.64	0.21	0.22

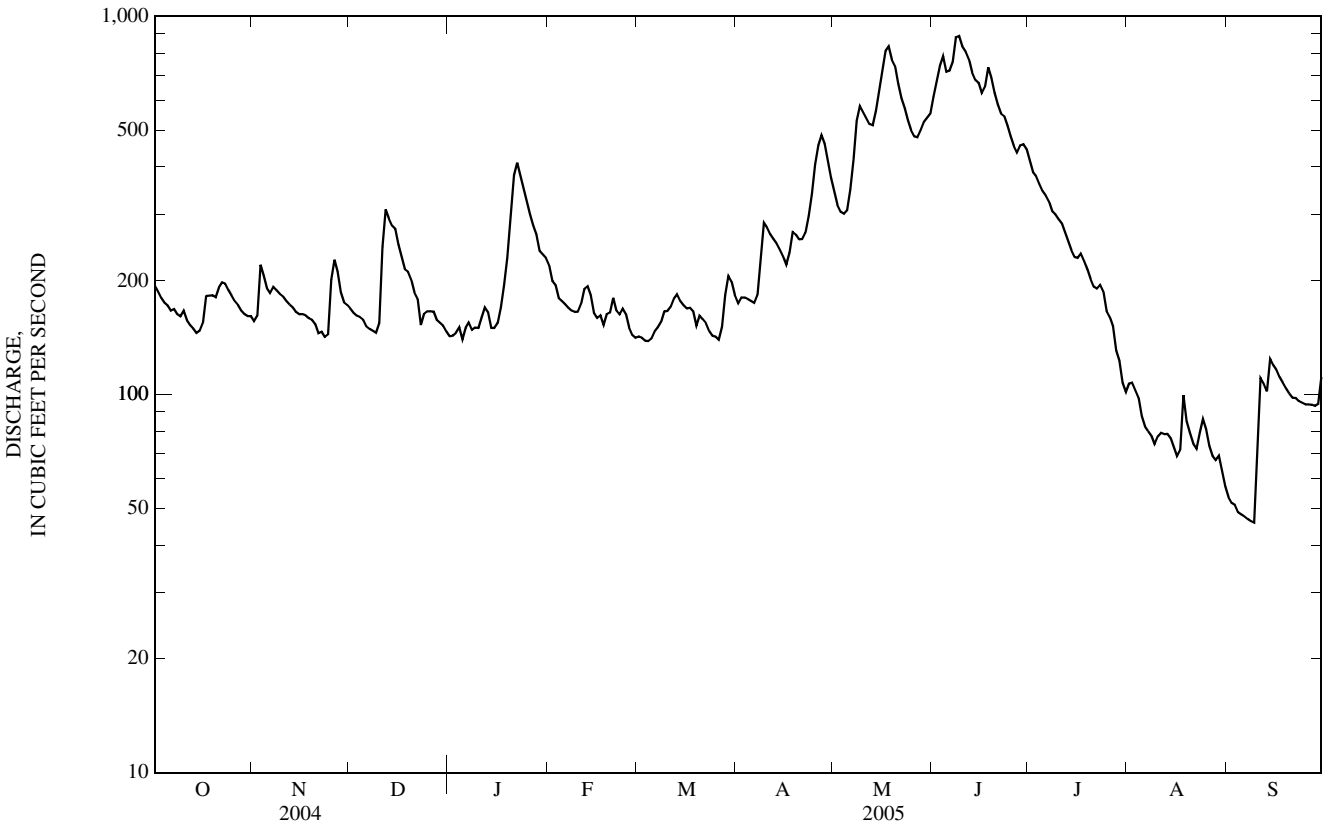
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)

MEAN	113	131	114	103	110	155	421	758	728	303	125	110
MAX	343	368	415	248	492	422	883	1,469	1,498	576	235	253
(WY)	(1960)	(1990)	(1996)	(1974)	(1996)	(1972)	(1996)	(1997)	(1974)	(1974)	(1993)	(2004)
MIN	50.7	56.3	60.3	53.5	49.9	66.6	140	371	196	79.7	36.7	28.9
(WY)	(1995)	(1995)	(2002)	(1989)	(1988)	(2001)	(1970)	(2001)	(1992)	(1977)	(1988)	(2001)

12301300 TOBACCO RIVER NEAR EUREKA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1959 - 2005	
ANNUAL TOTAL	80,170		89,932			
ANNUAL MEAN	219		246		264	
HIGHEST ANNUAL MEAN					496	1996
LOWEST ANNUAL MEAN					109	2001
HIGHEST DAILY MEAN	814	Apr 15	888	Jun 9	2,510	May 13, 1991
LOWEST DAILY MEAN	44	Aug 18	46	Sep 8	20	Jan 11, 1963
ANNUAL SEVEN-DAY MINIMUM	48	Jan 4	48	Sep 3	23	Sep 6, 1988
MAXIMUM PEAK FLOW			943	Jun 9	3,180	May 13, 1991
MAXIMUM PEAK STAGE			4.32	Jun 9	7.16	May 13, 1991
INSTANTANEOUS LOW FLOW			a45	Sep 8	22	Feb 7, 2001
ANNUAL RUNOFF (AC-FT)	159,000		178,400		191,600	
ANNUAL RUNOFF (CFSM)	0.498		0.560		0.601	
ANNUAL RUNOFF (INCHES)	6.78		7.60		8.17	
10 PERCENT EXCEEDS	451		541		698	
50 PERCENT EXCEEDS	177		175		132	
90 PERCENT EXCEEDS	59		91		67	

a--Also occurred on Sept. 9.
e--Estimated.



12301920 LAKE KOOCANUSA NEAR LIBBY, MT

LOCATION.--Lat 48°24'38", long 115°18'47" (NAD 27), in NW$^1/_4$ sec.33, T.31 N., R.29 W., Lincoln County, Hydrologic Unit 17010101, Kootenai National Forest, in block 18 of Libby Dam on Kootenai River, 11 mi east of Libby and at river mile 221.8.

DRAINAGE AREA.--8,985 mi^2, approximately.

PERIOD OF RECORD.--March 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,201.5 (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to July 2, 1973, nonrecording gage on upstream face of dam at same elevation.

REMARKS.--Reservoir and flow completely controlled by gravity type dam with taintor gated spillway; construction began in 1967; completed in 1973. Storage began Mar. 21, 1972. Usable capacity, 5,748,000 acre-ft between elevation 2,201.5 ft, bottom of sluice gate, and 2,459 ft, controlled spillway elevation. Dead storage, 121,200 acre-ft below elevation 2,201.5 ft. Minimum operating level, 768,700 acre-ft, elevation 2,287.0 ft for on-site power generation. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Figures given herein represent usable contents. Water is used for power production, flood control, irrigation, and recreation.

COOPERATION.--Capacity table and elevations provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,753,000 acre-ft, Aug. 6, 1976 and Aug. 16, 1982, maximum elevation, 2,459.12 ft, Aug. 16, 1982; minimum contents observed since normal low operating level reached in May 1972, 139,600 acre-ft, Dec. 16-21, 1972, elevation, 2,226.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 5,719,000 acre-ft, July 10, elevation, 2,458.37 ft; minimum, 3,648,000 acre-ft, Jan. 19, elevation, 2,408.24 ft.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

Elevation	Contents
2,360	2,232,000
2,380	2,765,000
2,400	3,367,000
2,420	4,085,000
2,440	4,899,000
2,460	5,795,000

ELEVATION ABOVE NGVD 1929, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,446.74	2,447.39	2,434.17	2,410.27	2,411.89	2,412.63	2,413.20	2,419.45	2,439.07	2,457.14	2,451.55	2,439.29
2	2,446.69	2,447.01	2,433.17	2,409.87	2,411.92	2,412.61	2,413.22	2,419.88	2,440.06	2,457.40	2,451.14	2,439.02
3	2,446.60	2,446.38	2,432.18	2,409.68	2,412.03	2,412.61	2,413.26	2,420.22	2,440.94	2,457.51	2,450.73	2,438.70
4	2,446.49	2,445.80	2,431.47	2,409.41	2,412.15	2,412.61	2,413.26	2,420.70	2,441.96	2,457.35	2,450.35	2,438.45
5	2,446.42	2,445.14	2,430.95	2,409.21	2,412.23	2,412.59	2,413.23	2,421.07	2,442.97	2,457.64	2,449.84	2,438.17
6	2,446.31	2,444.80	2,430.14	2,409.10	2,412.42	2,412.61	2,413.28	2,421.62	2,444.04	2,457.78	2,449.37	2,438.00
7	2,446.20	2,444.36	2,429.09	2,409.05	2,412.46	2,412.56	2,413.28	2,422.30	2,445.32	2,457.95	2,448.94	2,437.77
8	2,446.10	2,443.79	2,428.08	2,408.98	2,412.52	2,412.63	2,413.28	2,423.30	2,446.54	2,458.15	2,448.53	2,437.59
9	2,445.98	2,443.23	2,427.36	2,408.90	2,412.52	2,412.63	2,413.28	2,424.30	2,447.70	2,458.31	2,448.00	2,437.36
10	2,445.96	2,442.56	2,426.73	2,408.84	2,412.55	2,412.63	2,413.40	2,425.32	2,448.61	2,458.31	2,447.48	2,437.35
11	2,445.96	2,441.90	2,426.48	2,408.72	2,412.63	2,412.66	2,413.45	2,426.16	2,449.26	2,458.19	2,447.07	2,437.16
12	2,446.04	2,441.24	2,426.16	2,408.75	2,412.63	2,412.73	2,413.55	2,427.05	2,449.77	2,457.97	2,446.58	2,437.10
13	2,446.08	2,440.82	2,425.40	2,408.72	2,412.68	2,412.82	2,413.58	2,428.01	2,450.44	2,457.62	2,446.05	2,437.03
14	2,446.14	2,440.39	2,424.17	2,408.61	2,412.70	2,412.84	2,413.60	2,429.00	2,450.79	2,457.36	2,445.57	2,437.03
15	2,446.20	2,439.92	2,423.23	2,408.54	2,412.73	2,412.84	2,413.65	2,430.27	2,451.09	2,457.10	2,445.06	2,437.06
16	2,446.30	2,439.38	2,422.13	2,408.47	2,412.75	2,412.89	2,413.76	2,431.62	2,451.29	2,456.75	2,444.50	2,437.06
17	2,446.50	2,438.89	2,421.25	2,408.35	2,412.82	2,412.94	2,413.79	2,433.35	2,451.36	2,456.44	2,444.10	2,437.10
18	2,446.54	2,438.43	2,420.40	2,408.27	2,412.73	2,413.04	2,413.90	2,435.18	2,451.94	2,456.13	2,443.69	2,437.08
19	2,446.72	2,438.16	2,419.64	2,408.40	2,412.77	2,413.04	2,413.99	2,436.17	2,452.77	2,455.82	2,443.35	2,437.06
20	2,446.75	2,437.88	2,418.91	2,408.77	2,412.75	2,413.04	2,414.07	2,436.90	2,453.44	2,455.44	2,443.01	2,437.06
21	2,446.85	2,437.60	2,418.00	2,409.11	2,412.73	2,413.04	2,414.13	2,437.41	2,453.98	2,455.04	2,442.61	2,437.06
22	2,446.91	2,437.41	2,417.25	2,409.45	2,412.75	2,413.10	2,414.27	2,437.72	2,454.47	2,454.73	2,442.09	2,436.99
23	2,447.04	2,437.17	2,416.39	2,409.72	2,412.72	2,413.10	2,414.50	2,437.66	2,455.08	2,454.52	2,441.88	2,436.89
24	2,447.14	2,436.89	2,415.78	2,410.10	2,412.68	2,413.00	2,414.83	2,437.48	2,455.58	2,454.31	2,441.35	2,436.83
25	2,447.22	2,436.67	2,415.21	2,410.37	2,412.66	2,412.98	2,415.26	2,437.22	2,455.79	2,454.03	2,441.00	2,436.68
26	2,447.30	2,436.47	2,414.68	2,410.68	2,412.66	2,413.00	2,415.90	2,436.95	2,455.93	2,453.70	2,440.70	2,436.62
27	2,447.34	2,436.30	2,413.60	2,410.91	2,412.66	2,413.03	2,416.60	2,436.70	2,455.98	2,453.36	2,440.51	2,436.65
28	2,447.36	2,435.98	2,412.58	2,411.15	2,412.60	2,413.05	2,417.70	2,436.86	2,456.23	2,453.08	2,440.31	2,436.49
29	2,447.36	2,435.73	2,411.76	2,411.31	---	2,413.11	2,418.37	2,437.22	2,456.58	2,452.66	2,440.08	2,436.43
30	2,447.42	2,435.14	2,411.18	2,411.48	---	2,413.14	2,418.96	2,437.78	2,456.91	2,452.33	2,439.79	2,436.62
31	2,447.45	---	2,410.72	2,411.67	---	2,413.20	---	2,438.33	---	2,451.95	2,439.54	---
MEAN	2,446.65	2,440.43	2,422.20	2,409.51	2,412.55	2,412.86	2,414.35	2,430.43	2,450.20	2,456.00	2,444.99	2,437.32
MAX	2,447.45	2,447.39	2,434.17	2,411.67	2,412.82	2,413.20	2,418.96	2,438.33	2,456.91	2,458.31	2,451.55	2,439.29
MIN	2,445.96	2,435.14	2,410.72	2,408.27	2,411.89	2,412.56	2,413.20	2,419.45	2,439.07	2,451.95	2,439.54	2,436.43

CONTENTS IN THOUSANDS OF ACRE-FEET, AT END OF MONTH

5,224	4,694	3,738	3,772	3,806	3,828	4,045	4,828	5,652	5,425	4,880	4,756

CHANGE IN CONTENTS, IN ACRE-FEET

+27,000	-53,000	-956,000	+34,000	+34,000	+22,000	+217,000	+783,000	+824,000	-227,000	-545,000	-124,000

CALENDAR YEAR 2004 . . . . . +39,000
WATER YEAR 2005 . . . . . -441,000

12301933 KOOTENAI RIVER BELOW LIBBY DAM, NEAR LIBBY, MT

LOCATION.--Lat 48°24'03", long 115°19'11" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.33, T.31 N., R.29 W., Lincoln County, Hydrologic Unit 17010101, Kootenai National Forest, on right bank 0.7 mi downstream from Libby Dam, 2.8 mi upstream from Fisher River, 11 mi east of Libby, and at river mile 221.4.

DRAINAGE AREA.--8,985 mi^2, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark). Prior to Feb. 13, 1974, nonrecording gage at site 0.4 mi upstream at same elevation.

REMARKS.--Records good. Flow completely regulated by Lake Koocanusa since Mar. 21, 1972 . Diversions for irrigation of about 13,000 acres, revised, from tributaries upstream from station in Canada and the United States. U.S. Army Corps of Engineers satellite telemetry at station. Several unpublished observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--34 years, 11,020 ft^3/s, 16.65 in/yr, 7,984,000 acre-ft/yr, adjusted for change in contents in Lake Koocanusa since Mar. 21, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft^3/s, Aug. 5, 1974, gage height, 27.50 ft; minimum daily, 1,900 ft^3/s, Jan. 29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,500 ft^3/s, Dec. 14, gage height, 24.21 ft; minimum daily, 3,950 ft^3/s, Feb. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9,820	7,950	24,100	11,000	3,980	4,030	4,050	4,090	17,600	24,200	19,000	11,900
2	9,990	16,000	25,900	9,250	3,980	4,110	4,050	4,090	14,900	24,200	19,000	11,900
3	9,990	19,800	25,900	7,280	3,980	4,100	4,040	4,100	13,900	24,300	19,100	11,900
4	9,840	19,800	20,500	6,050	3,980	4,030	4,050	4,250	13,900	24,200	19,100	11,900
5	9,750	19,800	15,300	5,570	3,980	4,030	4,050	4,090	13,900	19,400	19,000	11,900
6	9,750	14,900	22,600	5,040	3,990	4,020	4,050	4,100	13,900	19,200	19,000	9,150
7	9,760	14,800	26,400	4,490	3,980	4,050	4,050	4,080	13,800	19,200	19,100	9,200
8	9,690	18,300	24,800	3,990	3,970	4,060	4,060	4,080	14,200	19,100	19,100	9,790
9	8,430	20,100	19,100	3,990	3,980	4,030	4,060	4,060	14,100	18,800	19,200	9,810
10	7,800	20,100	15,600	3,990	3,980	4,030	4,060	4,060	16,700	22,700	19,200	9,780
11	6,750	20,100	15,600	4,000	3,970	4,010	4,060	4,080	24,000	24,100	19,200	9,860
12	5,800	20,000	15,700	4,000	3,970	3,990	4,570	4,100	24,100	24,200	19,300	9,770
13	5,310	14,900	23,000	4,000	3,970	3,990	4,060	4,110	21,700	24,100	19,300	7,990
14	4,880	12,300	27,200	4,000	3,960	3,990	4,150	4,080	23,500	24,200	19,200	7,990
15	4,840	15,700	26,900	4,010	3,950	3,970	4,060	4,080	24,500	24,100	19,200	7,980
16	4,840	17,200	26,700	4,010	3,970	3,990	4,070	4,070	24,700	24,200	19,200	7,970
17	4,840	17,200	26,500	4,010	3,970	4,000	4,070	4,060	24,700	24,200	19,100	7,960
18	4,820	14,100	20,600	4,020	3,980	3,990	4,070	5,110	24,000	24,200	16,400	7,980
19	4,830	12,200	20,700	4,020	3,970	3,990	4,060	14,200	24,300	24,200	16,400	8,010
20	4,830	9,950	20,900	3,990	3,960	3,990	4,070	15,300	24,600	24,300	16,400	8,040
21	4,820	9,950	21,100	4,020	3,960	4,000	4,070	19,400	24,300	23,900	16,400	8,010
22	4,810	9,950	21,100	4,020	3,970	3,990	4,120	20,500	24,300	19,200	16,400	8,040
23	4,830	9,950	20,600	4,020	3,970	3,990	4,110	24,600	24,200	19,100	16,500	7,990
24	4,830	9,950	15,500	4,020	4,000	3,990	4,110	25,800	24,400	19,300	16,500	7,970
25	4,830	9,950	15,600	4,020	4,020	4,000	4,110	25,900	24,100	19,300	15,900	8,000
26	4,820	9,960	15,600	4,010	4,030	3,990	4,160	25,900	24,300	19,300	13,700	7,950
27	4,820	9,900	22,500	4,000	4,020	3,990	4,110	24,400	24,300	19,300	11,900	7,010
28	4,850	9,870	25,600	4,000	4,020	4,010	4,090	18,600	24,200	18,900	11,900	7,060
29	4,790	9,900	20,100	3,990	---	3,990	4,130	17,300	24,200	18,900	11,900	7,020
30	4,800	16,700	15,200	3,990	---	4,000	4,100	15,800	24,200	18,900	11,900	6,990
31	4,790	---	12,900	3,990	---	4,030	---	17,600	---	18,900	11,900	---
TOTAL	199,550	431,280	649,800	144,790	111,460	124,380	122,870	339,990	629,500	672,100	529,400	266,820
MEAN	6,437	14,380	20,960	4,671	3,981	4,012	4,096	10,970	20,980	21,680	17,080	8,894
MAX	9,990	20,100	27,200	11,000	4,030	4,110	4,570	25,900	24,700	24,300	19,300	11,900
MIN	4,790	7,950	12,900	3,990	3,950	3,970	4,040	4,060	13,800	18,800	11,900	6,990
AC-FT	395,800	855,400	1,289,000	287,200	221,100	246,700	243,700	674,400	1,249,000	1,333,000	1,050,000	529,200
CFSM	0.72	1.60	2.33	0.52	0.44	0.45	0.46	1.22	2.34	2.41	1.90	0.99
IN.	0.83	1.79	2.69	0.60	0.46	0.51	0.51	1.41	2.61	2.78	2.19	1.10
ADJUSTED FOR CHANGE IN CONTENTS OF LAKE KOOCANUSA												
MEAN	6,876	5,468	5,416	5,224	4,593	4,370	7,742	23,700	34,840	17,990	8,213	6,810
CFSM	.77	.61	.60	.58	.51	.49	.86	2.64	3.88	2.00	.91	.76
IN	.88	.68	.69	.67	.53	.56	.96	3.04	4.33	2.31	1.05	.85
AC-FT	422,800	325,400	333,000	321,200	255,100	268,700	460,700	1,457,400	2,073,000	1,106,000	505,000	405,200

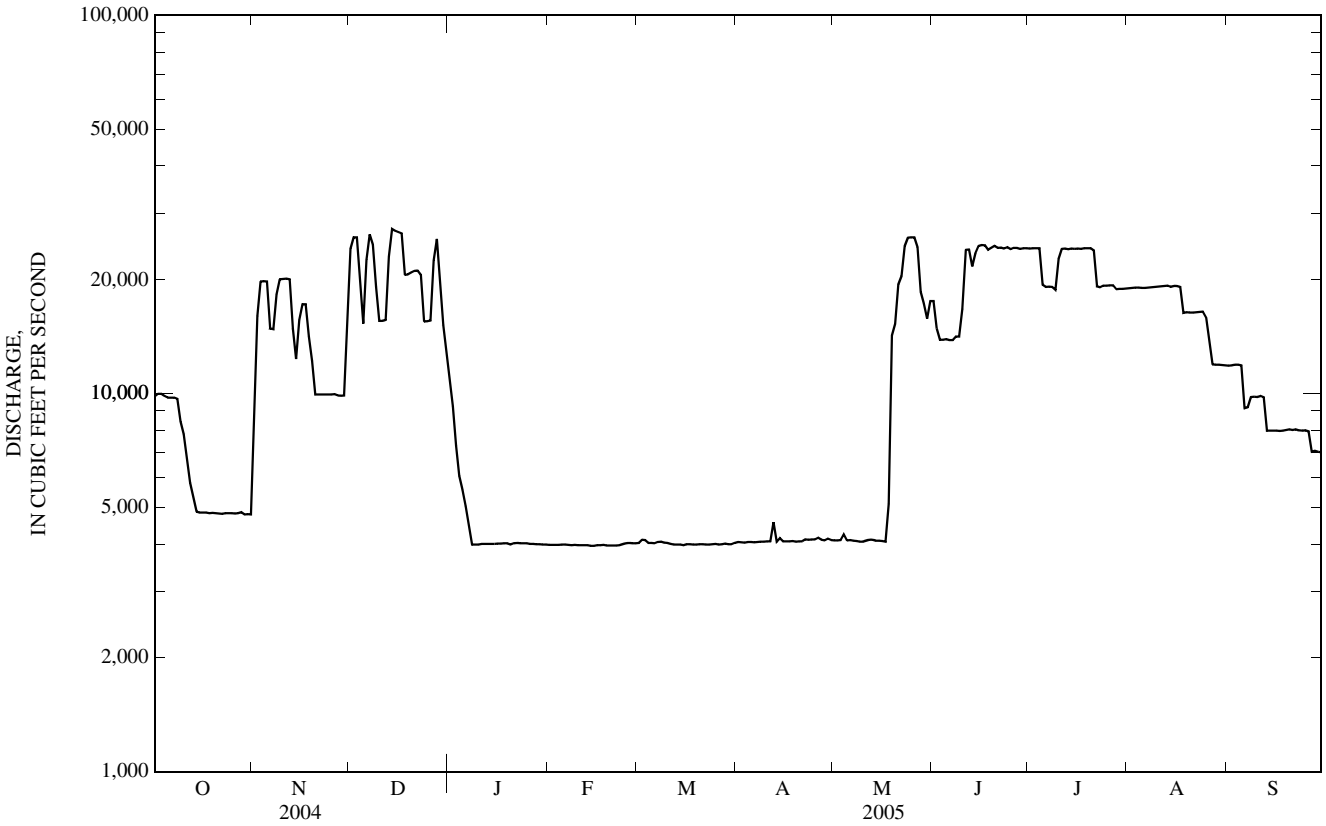
OBSERVED

CALENDAR YEAR 2004	TOTAL	3,556,640	MEAN	9,718	MAX	27,200	MIN	3,940	AC-FT	7,055,000
WATER YEAR 2005	TOTAL	4,221,940	MEAN	11,570	MAX	27,200	MIN	3,950	AC-FT	8,374,000

ADJUSTED

CALENDAR YEAR 2004	TOTAL	3,553,617	MEAN	9,709	CFSM	1.08	IN	14.80	AC-FT	7,094,000
WATER YEAR 2005	TOTAL	3,999,748	MEAN	10,960	CFSM	1.22	IN	16.55	AC-FT	7,933,000

12301933 KOOTENAI RIVER BELOW LIBBY DAM, NEAR LIBBY, MT—Continued



12302055 FISHER RIVER NEAR LIBBY, MT

LOCATION.--Lat 48°21'20", long 115°18'50" (NAD 27), in $NW^1/_4NE^1/_4NW^1/_4$ sec.21, T.30 N., R.29 W., Lincoln County, Hydrologic Unit 17010102, on left bank 0.8 mi upstream from mouth and 11.4 mi east of Libby.

DRAINAGE AREA.--838 mi^2.

PERIOD OF RECORD.--September 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,134.10 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions of about 700 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about May 22, 1948, reached a discharge of 6,560 ft^3/s, by slope-area measurement at site 0.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	141	186	183	409	182	315	547	370	226	88	58
2	107	141	177	180	385	181	335	510	438	210	84	57
3	105	206	170	180	364	178	336	490	518	205	79	57
4	103	214	166	197	352	177	334	482	581	201	77	55
5	101	195	162	162	380	175	330	485	506	192	76	54
6	99	183	158	166	354	177	325	507	489	178	74	55
7	101	175	157	e210	325	182	329	572	471	168	71	56
8	99	169	157	e200	307	190	383	635	536	158	74	56
9	99	164	163	e190	300	198	494	642	546	153	73	55
10	103	160	175	e170	284	207	509	644	473	158	71	63
11	103	157	721	e170	270	209	496	618	429	155	70	72
12	101	154	1,190	e180	272	218	489	570	398	148	71	73
13	99	151	751	e180	267	230	474	549	379	139	78	76
14	99	148	584	e170	260	224	451	573	357	132	77	73
15	97	146	500	e170	236	218	432	590	345	127	72	69
16	98	144	429	e180	213	213	414	646	325	126	71	67
17	126	144	382	e190	218	217	428	716	353	131	68	68
18	169	142	345	e230	214	216	468	641	447	127	70	67
19	167	143	321	e400	225	211	466	567	405	118	73	66
20	157	140	310	e700	225	210	450	545	360	112	69	65
21	155	135	288	e900	202	211	444	527	326	105	67	62
22	183	134	269	933	200	206	448	509	301	102	71	62
23	183	132	236	849	197	203	478	505	287	102	71	62
24	176	130	243	790	193	196	572	464	272	100	70	62
25	165	179	235	711	189	192	734	436	255	97	70	63
26	156	262	227	647	186	189	772	416	241	96	67	63
27	149	239	217	596	182	213	889	405	235	92	64	62
28	144	220	209	549	179	286	834	397	244	89	61	62
29	139	204	203	502	---	319	696	397	244	86	59	62
30	140	195	198	465	---	335	608	390	243	82	58	72
31	148	---	195	433	---	328	---	368	---	80	58	---
TOTAL	3,980	5,047	9,724	11,783	7,388	6,691	14,733	16,343	11,374	4,195	2,202	1,894
MEAN	128	168	314	380	264	216	491	527	379	135	71.0	63.1
MAX	183	262	1,190	933	409	335	889	716	581	226	88	76
MIN	97	130	157	162	179	175	315	368	235	80	58	54
AC-FT	7,890	10,010	19,290	23,370	14,650	13,270	29,220	32,420	22,560	8,320	4,370	3,760
CFSM	0.15	0.20	0.37	0.45	0.31	0.26	0.59	0.63	0.45	0.16	0.08	0.08
IN.	0.18	0.22	0.43	0.52	0.33	0.30	0.65	0.73	0.50	0.19	0.10	0.08

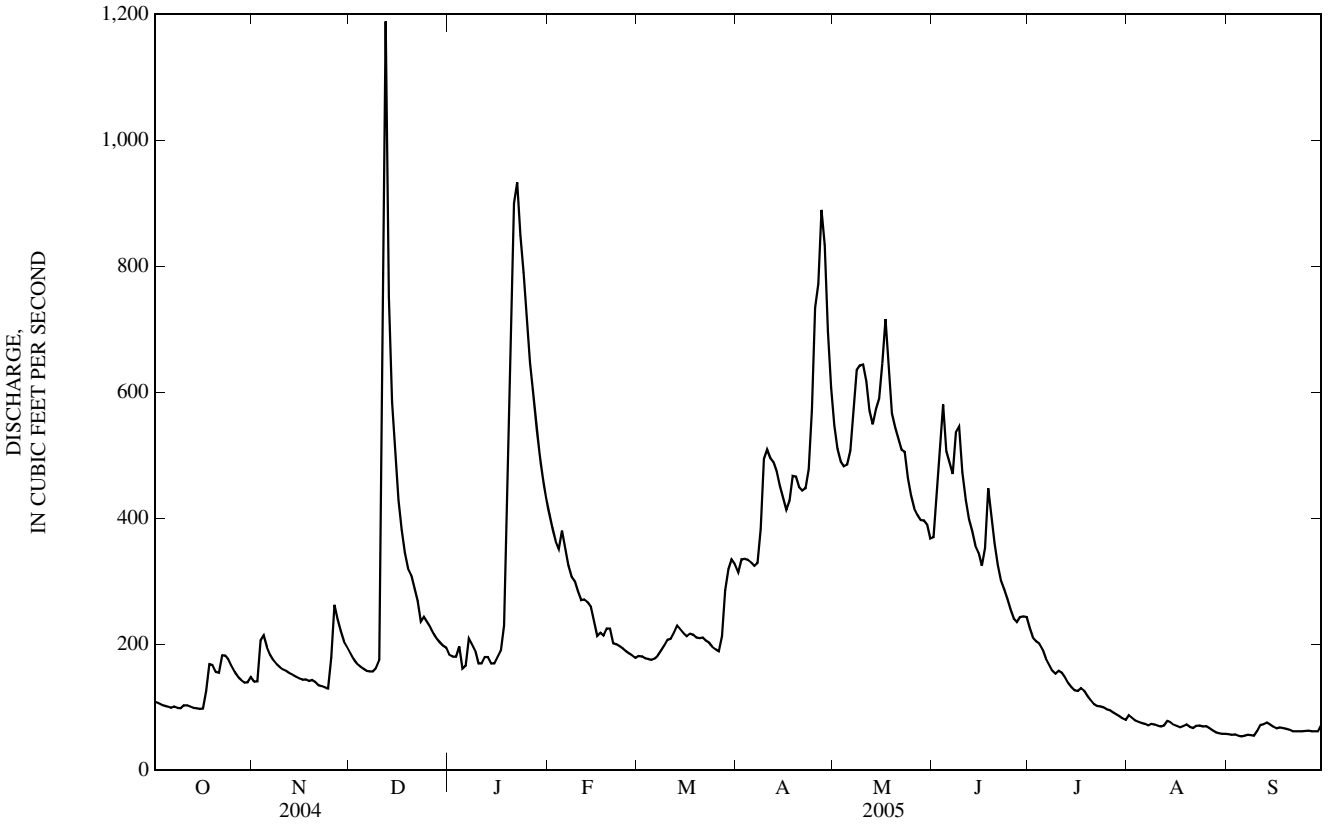
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	133	224	240	254	344	576	1,191	1,357	804	285	136	117
MAX	305	819	1,174	1,272	1,965	2,401	2,752	3,300	1,796	532	244	204
(WY)	(1986)	(1996)	(1996)	(1974)	(1996)	(1972)	(1997)	(1997)	(1974)	(1971)	(1997)	(1968)
MIN	76.4	87.0	90.4	77.9	95.0	134	318	482	221	92.7	56.0	54.6
(WY)	(2002)	(1980)	(1993)	(1979)	(1993)	(2001)	(2001)	(1977)	(1977)	(1977)	(1994)	(2001)

12302055 FISHER RIVER NEAR LIBBY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	117,039		95,354			
ANNUAL MEAN	320		261		472	
HIGHEST ANNUAL MEAN					938	1996
LOWEST ANNUAL MEAN					169	1977
HIGHEST DAILY MEAN	1,340	Apr 15	1,190	Dec 12	7,790	Feb 9, 1996
LOWEST DAILY MEAN	60	Jan 7	54	Sep 5	35	Jan 2, 1977
ANNUAL SEVEN-DAY MINIMUM	71	Jan 3	55	Sep 3	50	Aug 18, 1994
MAXIMUM PEAK FLOW			a1,520	Dec 11	c12,000	Feb 9, 1996
MAXIMUM PEAK STAGE			b5.95	Jan 19	10.35	Feb 9, 1996
INSTANTANEOUS LOW FLOW					29	Jan 2, 1977
ANNUAL RUNOFF (AC-FT)	232,100		189,100		341,600	
ANNUAL RUNOFF (CFSM)	0.382		0.312		0.563	
ANNUAL RUNOFF (INCHES)	5.20		4.23		7.65	
10 PERCENT EXCEEDS	764		545		1,220	
50 PERCENT EXCEEDS	170		195		206	
90 PERCENT EXCEEDS	101		70		96	

a--Gage height, 5.56 ft.
b--Backwater from ice jam.
c--From indirect measurement.
e--Estimated.



12304500 YAAK RIVER NEAR TROY, MT

LOCATION.--Lat 48°33'43", long 115°58'09" (NAD 27), in $NE^1/_4SE^1/_4SE^1/_4$ sec.5, T.32 N., R.34 W., Lincoln County, Hydrologic Unit 17010103, Kootenai National Forest, on right bank 500 ft upstream from bridge on U.S. Highway 2, 0.3 mi upstream from mouth, and 7.7 mi northwest of Troy.

DRAINAGE AREA.--766 mi^2.

PERIOD OF RECORD.--October 1910 to September 1916 (fragmentary record), March 1956 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,839.2 ft (NGVD 29). Oct. 15, 1910, to Sept. 30, 1916, nonrecording gage at several sites within 11 mi of present site at various elevations.

REMARKS.--Records good. Minor diversions for irrigation upstream from station. U.S. Army Corps of Engineers satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May to June 1948 reached a stage of 11.0 ft, from floodmarks; discharge, 12,500 ft^3/s. Flood in May 1954 reached a stage of 11.4 ft, from floodmarks; discharge, 13,400 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	187	296	307	760	331	627	1,310	968	906	222	121
2	136	250	285	244	722	330	743	1,240	1,180	819	215	120
3	133	521	276	268	691	326	729	1,220	1,240	780	207	118
4	132	397	278	252	679	324	698	1,250	1,140	728	200	113
5	129	320	274	210	716	323	672	1,350	1,020	669	195	110
6	128	285	263	234	690	329	649	1,520	1,000	623	188	108
7	133	285	252	293	630	344	676	1,720	1,060	591	182	108
8	129	296	254	e260	576	376	879	1,900	1,500	554	176	105
9	132	287	250	e240	522	398	993	1,950	1,460	576	170	103
10	157	271	271	e230	511	422	943	1,960	1,340	580	168	115
11	143	260	1,790	e220	502	434	912	1,840	1,260	584	171	194
12	138	247	1,890	e230	502	478	900	1,740	1,180	551	172	235
13	132	231	1,150	e250	523	490	859	1,760	1,090	500	169	234
14	128	223	945	e230	e470	473	822	1,830	1,050	460	164	203
15	127	225	831	e210	412	457	792	1,830	1,060	431	160	177
16	129	243	731	218	375	452	770	2,170	1,000	417	154	158
17	187	251	664	254	385	457	901	2,300	1,150	480	152	147
18	198	250	612	308	390	446	977	2,000	1,470	446	190	139
19	209	249	580	e540	409	421	934	2,020	1,380	401	193	136
20	203	234	565	854	402	411	907	1,900	1,220	371	176	129
21	252	215	522	1,000	374	413	932	1,760	1,080	348	160	123
22	284	206	470	e1,040	364	401	1,030	1,660	986	332	150	119
23	289	208	386	1,060	357	388	1,200	1,540	917	325	146	116
24	259	216	408	1,090	350	374	1,420	1,400	851	312	153	115
25	232	526	425	1,050	343	367	1,730	1,310	800	296	151	115
26	214	587	425	989	337	373	1,970	1,220	762	287	146	115
27	200	477	408	938	332	430	2,160	1,180	726	274	139	113
28	190	387	384	903	327	724	1,920	1,150	848	264	133	109
29	182	328	365	858	---	803	1,640	1,110	982	252	127	113
30	191	305	356	813	---	727	1,440	1,040	1,000	240	125	161
31	201	---	350	784	---	645	---	974	---	230	123	---
TOTAL	5,437	8,967	16,956	16,377	13,651	13,667	31,825	49,154	32,720	14,627	5,177	4,072
MEAN	175	299	547	528	488	441	1,061	1,586	1,091	472	167	136
MAX	289	587	1,890	1,090	760	803	2,160	2,300	1,500	906	222	235
MIN	127	187	250	210	327	323	627	974	726	230	123	103
MED	157	255	408	293	441	413	910	1,660	1,060	446	168	119
AC-FT	10,780	17,790	33,630	32,480	27,080	27,110	63,120	97,500	64,900	29,010	10,270	8,080
CFSM	0.23	0.39	0.71	0.69	0.64	0.58	1.38	2.07	1.42	0.62	0.22	0.18
IN.	0.26	0.44	0.82	0.80	0.66	0.66	1.55	2.39	1.59	0.71	0.25	0.20

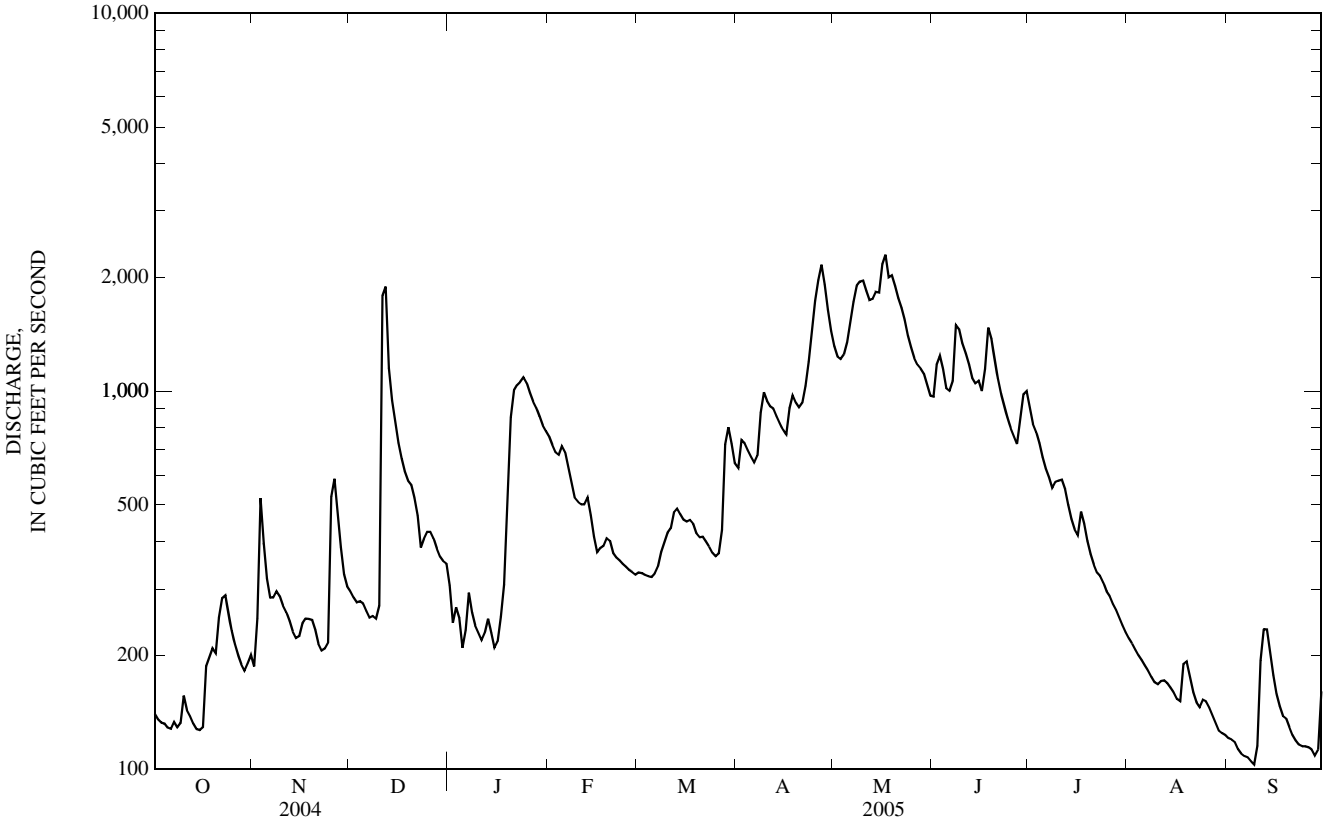
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	195	315	320	294	353	593	1,904	3,418	1,886	490	194	162
MAX	833	1,192	1,630	1,552	1,626	1,872	3,754	6,463	4,992	970	373	506
(WY)	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1969)	(1997)	(1974)	(1969)	(1993)	(1959)
MIN	84.0	93.2	94.0	94.6	83.0	134	421	1,026	377	151	80.9	53.2
(WY)	(1988)	(1980)	(2003)	(1988)	(2001)	(2001)	(2001)	(1977)	(1992)	(1977)	(2001)	(2001)

12304500 YAAK RIVER NEAR TROY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	203,520		212,630			
ANNUAL MEAN	556		583		845	
HIGHEST ANNUAL MEAN					1,562	1974
LOWEST ANNUAL MEAN					278	1977
HIGHEST DAILY MEAN	2,830	Apr 9	2,300	May 17	11,600	May 16, 1997
LOWEST DAILY MEAN	65	Jan 7	103	Sep 9	49	Sep 19, 2001
ANNUAL SEVEN-DAY MINIMUM	76	Jan 2	109	Sep 4	49	Sep 19, 2001
MAXIMUM PEAK FLOW			2,550	Dec 11	b12,600	May 17, 1997
MAXIMUM PEAK STAGE			6.10	Dec 11	c9.70	May 21, 1956
INSTANTANEOUS LOW FLOW			a102	Sep 9	47	Sep 22, 2001
ANNUAL RUNOFF (AC-FT)	403,700		421,800		612,100	
ANNUAL RUNOFF (CFSM)	0.726		0.761		1.10	
ANNUAL RUNOFF (INCHES)	9.88		10.33		14.99	
10 PERCENT EXCEEDS	1,550		1,280		2,500	
50 PERCENT EXCEEDS	252		387		285	
90 PERCENT EXCEEDS	116		136		119	

a--Gage height, 2.94 ft.
b--Gage height, 9.58 ft.
c--Gage height in well, from outside gage.
e--Estimated.



12305000 KOOTENAI RIVER AT LEONIA, ID

LOCATION.--Lat 48°37'04", long 116°02'47", in NW$^1/_4$NW$^1/_4$NW$^1/_4$ sec.20, T.33 N., R.34 W., principal Meridian, Lincoln County, Montana, Leonia quad., Hydrologic Unit l70l0l04, on right bank at Leonia, 450 ft east of Montana-Idaho State line, 0.5 mi upstream from Boulder Creek, and at mile 171.6.

DRAINAGE AREA.--11,740 mi^2, approximately.

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,790.25 ft above NGVD of 1929. Prior to Oct. 1, 1970, at datum 90 ft lower. Prior to Nov. 13, 1928, nonrecording gage on bridge 250 ft upstream at datum 90.41 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Diversions above station for irrigation of about 14,600 acres. Flow regulated by Libby Dam and power plant since Mar. 21, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (1929-71), 123,000 ft^3/s, May 28, 1948, gage height, 33.40 ft; minimum, 996 ft^3/s, Dec. 9, 1936; minimum gage height, 7.56 ft, Dec. 10, 1929. Maximum discharge since regulation began in 1972, 62,000 ft^3/s, Jan. 16, 1974, gage height, 24.15 ft; maximum gage height, 25.06 ft, Feb. 9, 1996; minimum daily discharge, 2,270 ft^3/s, Dec. 9, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1894 and 1916 reached stages of 34.6 and 31.6 ft, respectively, present datum, from information by Great Northern Railway.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 31,500 ft^3/s, Dec. 14; gage height, 19.72 ft; minimum daily, 4,850 ft^3/s, Jan. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,400	6,790	22,700	12,600	7,170	5,530	6,740	8,370	20,100	25,600	18,400	11,700
2	10,500	13,000	26,400	11,000	6,990	5,540	7,010	8,130	19,300	25,400	18,400	11,700
3	10,500	20,800	26,600	9,720	6,880	5,610	6,960	8,110	17,100	25,300	18,400	11,800
4	10,500	20,400	22,600	8,070	6,830	5,550	6,870	8,240	16,800	25,200	18,400	11,800
5	10,300	20,300	17,300	7,190	6,970	5,490	6,790	8,380	16,500	21,800	18,300	11,800
6	10,300	17,000	19,400	6,620	6,860	5,500	6,710	8,720	16,400	19,500	18,300	10,500
7	10,300	15,300	26,800	6,230	6,680	5,550	6,740	9,240	16,200	19,400	18,300	9,540
8	10,300	16,900	27,000	5,730	6,510	5,670	7,170	9,620	16,900	19,400	18,400	9,980
9	9,880	20,200	21,100	5,380	6,360	5,750	7,530	9,840	16,800	19,100	18,400	10,100
10	9,000	20,200	16,500	5,300	6,280	5,790	7,540	9,780	16,500	21,300	18,400	10,200
11	8,350	20,200	24,100	5,300	6,220	5,820	7,490	9,490	25,300	24,800	18,500	10,300
12	7,340	20,200	24,300	5,340	6,190	5,910	7,710	9,220	26,200	24,700	18,500	10,300
13	6,570	16,700	24,500	5,280	6,210	5,970	7,520	9,210	24,300	24,600	18,600	9,470
14	6,030	13,700	31,200	e4,850	6,130	5,940	7,190	9,470	25,000	24,500	18,500	8,800
15	5,760	14,400	30,500	e4,950	5,890	5,890	7,150	9,510	26,600	24,500	18,500	8,740
16	5,750	17,200	29,700	5,080	5,750	5,860	6,990	10,300	26,500	24,600	18,500	8,690
17	6,230	17,400	29,400	5,220	5,720	5,910	7,290	10,500	27,200	24,600	18,500	8,690
18	6,390	15,400	24,500	5,510	5,720	5,890	7,470	9,860	27,400	24,600	16,800	8,670
19	6,310	13,500	22,400	7,150	5,760	5,830	7,390	15,300	27,000	24,500	15,900	8,670
20	6,260	11,600	22,400	9,310	5,750	5,810	7,310	19,600	26,800	24,300	15,900	8,700
21	6,390	10,900	22,600	9,330	5,640	5,800	7,330	21,600	26,400	24,500	15,900	8,640
22	6,510	10,800	22,400	9,360	5,590	5,740	7,490	24,600	26,300	20,400	15,900	8,630
23	6,520	10,800	22,100	9,040	5,580	5,700	7,860	26,700	26,000	18,900	15,900	8,620
24	6,410	10,800	17,900	8,950	5,570	5,640	8,550	29,500	26,000	18,900	15,900	8,590
25	6,300	11,600	16,600	8,700	5,590	5,610	9,610	29,300	25,500	19,000	15,600	8,580
26	6,220	11,900	16,500	8,380	5,570	5,620	10,100	29,200	25,600	18,900	14,100	8,600
27	6,170	11,600	20,100	8,120	5,550	5,880	10,700	29,100	25,500	18,900	12,400	8,090
28	6,110	11,300	27,100	7,900	5,530	6,820	10,100	22,800	25,600	18,500	11,900	7,670
29	6,080	11,200	22,600	7,670	---	7,060	9,310	20,700	25,900	18,400	11,800	7,710
30	6,060	14,000	17,300	7,430	---	6,950	8,780	17,800	25,800	18,400	11,800	7,930
31	6,070	---	14,500	7,280	---	6,770	---	19,800	---	18,300	11,800	---
TOTAL	235,810	446,090	709,100	227,990	171,490	182,400	233,400	471,990	693,500	680,800	514,900	283,210
MEAN	7,607	14,870	22,870	7,355	6,125	5,884	7,780	15,230	23,120	21,960	16,610	9,440
MAX	10,500	20,800	31,200	12,600	7,170	7,060	10,700	29,500	27,400	25,600	18,600	11,800
MIN	5,750	6,790	14,500	4,850	5,530	5,490	6,710	8,110	16,200	18,300	11,800	7,670
AC-FT	467,700	884,800	1,406,000	452,200	340,200	361,800	462,900	936,200	1,376,000	1,350,000	1,021,000	561,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1971, BY WATER YEAR (WY) (UNREGULATED)

MEAN	6,511	5,700	4,765	4,024	4,338	4,896	14,480	38,710	45,100	22,770	9,926	7,020
MAX	15,540	11,280	13,700	11,330	10,630	10,390	39,940	61,770	74,280	47,510	16,910	16,560
(WY)	(1948)	(1934)	(1934)	(1934)	(1951)	(1934)	(1934)	(1956)	(1967)	(1954)	(1954)	(1959)
MIN	3,532	2,748	2,477	1,922	1,994	2,693	4,334	18,630	20,630	9,819	6,142	4,744
(WY)	(1937)	(1937)	(1945)	(1937)	(1936)	(1944)	(1945)	(1944)	(1941)	(1944)	(1941)	(1936)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY) (REGULATED)

MEAN	13,950	16,080	16,400	14,820	12,340	8,715	10,920	15,220	17,570	13,360	11,740	11,070
MAX	31,980	26,400	28,140	28,610	24,790	15,160	25,570	31,670	39,200	29,740	20,310	20,960
(WY)	(1973)	(1992)	(1991)	(1976)	(1990)	(1990)	(1996)	(1997)	(1972)	(2002)	(1976)	(1972)
MIN	5,042	5,004	3,423	3,109	3,724	4,350	5,588	8,352	5,374	4,139	3,956	5,539
(WY)	(2004)	(1972)	(1972)	(1972)	(1973)	(1973)	(2001)	(1977)	(1977)	(1988)	(1975)	(1994)

12305000 KOOTENAI RIVER AT LEONIA, ID—Continued

SUMMARY STATISTICS	WATER YEARS 1929 - 1971*	
ANNUAL TOTAL		
ANNUAL MEAN	14,050	
HIGHEST ANNUAL MEAN	19,240	1956
LOWEST ANNUAL MEAN	7,416	1944
HIGHEST DAILY MEAN	122,000	May 28, 1948
LOWEST DAILY MEAN	1,070	Dec 8, 1936
ANNUAL SEVEN-DAY MINIMUM	1,310	Jan 2, 1937
ANNUAL RUNOFF (AC-FT)	10,180,000	
10 PERCENT EXCEEDS	37,400	
50 PERCENT EXCEEDS	6,710	
90 PERCENT EXCEEDS	3,230	

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005**	
ANNUAL TOTAL	4,301,420		4,850,680			
ANNUAL MEAN	11,750		13,290		13,520	
HIGHEST ANNUAL MEAN					20,400	1996
LOWEST ANNUAL MEAN					7,466	2001
HIGHEST DAILY MEAN	31,200	Dec 14	31,200	Dec 14	56,200	Jan 16, 1974
LOWEST DAILY MEAN	4,510	Jan 19	4,850	Jan 14	2,270	Dec 9, 1972
ANNUAL SEVEN-DAY MINIMUM	4,530	Jan 19	5,150	Jan 11	2,420	Dec 7, 1972
ANNUAL RUNOFF (AC-FT)	8,532,000		9,621,000		9,795,000	
10 PERCENT EXCEEDS	18,200		25,100		24,300	
50 PERCENT EXCEEDS	11,100		10,300		11,800	
90 PERCENT EXCEEDS	4,940		5,750		5,040	

*--Unregulated.
**--Regulated, adjusted.
e--Estimated.

12323230 BLACKTAIL CREEK AT HARRISON AVENUE, AT BUTTE, MT

LOCATION.--Lat 45°59'07", long 112°30'26" (NAD 27), in $NE^1/_4SE^1/_4NE^1/_4$ sec.30, T.3 N., R.7 W., Silver Bow County, Hydrologic Unit 17010201, at culvert on Harrison Avenue near interchange off Interstate 90, at Butte.

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to August 2003, December 2004 to August 2005. Formerly published as 4558531123026.

GAGE.--None. Elevation at site is 4,544 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	0900	3.3	7.7	326	3.5	5.5	130	36.2	9.00	2.0	2	.07	.07
MAR													
09...	0810	2.8	7.8	323	2.0	4.5	130	37.7	9.06	1.3	E1	E.03	E.04
APR													
18...	0910	7.1	7.6	264	0.5	5.0	100	29.4	7.29	2.6	4	.05	.07
MAY													
16...	0900	22	7.7	203	17.0	9.5	74	21.2	5.03	5.8	7	.04	.05
JUN													
01...	1120	25	7.7	161	7.0	9.0	65	19.3	4.09	5.0	7	.06	.07
13...	1030	20	7.8	200	12.0	8.5	83	24.6	5.23	5.9	6	E.04	.04
JUL													
25...	1050	2.8	7.8	335	16.0	12.5	140	39.7	8.88	2.8	3.3	E.04	.04
AUG													
23...	0930	2.3	7.8	333	18.5	12.0	130	38.6	8.48	2.3	3.0	E.03	.05

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	8.9	8.0	49	1,030	2.80	2.74	26.4	55	2.2	11	89	22	.20
MAR													
09...	.9	3.4	54	290	<.08	.41	28.7	29	3.2	5	83	8	.06
APR													
18...	3.4	7.2	201	690	.19	1.24	29.2	46	4.2	12	85	9	.17
MAY													
16...	8.5	12.4	179	540	.24	.92	19.0	28	3.9	7	54	13	.77
JUN													
01...	7.5	14.2	143	810	.25	2.67	23.1	51	6.2	18	71	24	1.6
13...	5.7	8.0	161	360	.12	.62	14.2	23	3.2	4	71	7	.38
JUL													
25...	2.5	3.7	41	200	E.07	.26	32.5	38	3.7	5	87	3	.02
AUG													
23...	1.7	4.1	43	300	<.08	.61	35.4	47	2.2	5	83	9	.06

E--Estimated.

12323240 BLACKTAIL CREEK AT BUTTE, MT

LOCATION.--Lat 45°59'41", long 112°32'09" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $SE^1/_4$ sec.24, T.3 N., R.8 W., Silver Bow County, Hydrologic Unit 17010201, on left bank, 70 feet upstream from George Street culvert in Butte, and 0.2 mi upstream from Silver Bow Creek.

DRAINAGE AREA.--95.4 mi^2.

PERIOD OF RECORD.--October 1988 to current year.

REVISED RECORDS.--WDR-MT-93-1: 1989-92 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,430 ft (NGVD 29).

REMARKS.--Records good except those for November to December, July to September, and those for estimated days, which are fair. Slight regulation by Basin Creek Reservoir. Diversions for irrigation of about 1,400 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.8	6.7	6.9	7.3	6.8	7.3	9.4	31	12	5.1	6.2
2	6.1	6.8	6.9	6.8	7.5	6.9	7.3	8.9	33	10	5.4	5.7
3	6.0	6.7	7.0	6.7	7.8	6.9	7.9	9.1	33	8.9	6.1	6.0
4	6.1	7.1	7.1	6.6	7.5	6.9	9.5	9.2	32	8.5	6.7	5.7
5	6.5	7.1	7.1	6.6	7.5	6.9	10	10	29	8.1	6.2	5.6
6	7.2	7.1	7.5	e6.8	7.2	6.9	9.4	11	29	8.2	5.7	5.5
7	6.3	6.6	7.0	6.5	7.2	6.8	11	11	29	8.3	5.7	5.8
8	6.4	6.5	7.0	6.7	7.3	6.9	14	12	27	7.9	15	9.2
9	6.5	6.3	6.9	6.7	7.2	6.8	13	17	24	7.5	8.7	6.5
10	6.5	6.3	6.9	6.6	7.2	6.8	10	35	22	9.3	7.3	9.6
11	6.6	6.3	7.0	6.7	7.2	6.8	8.9	40	21	9.8	6.5	7.6
12	6.7	6.3	7.0	6.7	7.3	7.0	8.5	42	24	9.5	7.9	6.8
13	6.7	6.5	7.1	6.7	7.5	6.9	8.2	30	24	8.9	6.9	6.7
14	6.8	6.6	7.2	6.7	7.4	6.7	10	27	22	7.7	6.9	6.5
15	7.0	7.3	7.2	e6.8	7.3	6.9	8.8	26	21	7.4	6.5	7.3
16	6.8	6.9	7.1	6.6	7.2	7.0	8.6	32	19	7.3	6.2	5.6
17	7.2	6.9	7.1	6.6	7.3	7.1	9.5	43	18	7.0	7.0	14
18	8.0	7.0	7.1	8.0	7.3	6.8	11	41	17	6.3	6.5	7.2
19	7.3	6.8	7.2	9.9	7.2	7.1	11	34	17	5.5	5.9	7.6
20	7.3	6.9	7.1	7.7	7.0	7.2	9.3	37	16	6.0	5.7	7.8
21	7.3	6.8	7.0	7.9	7.4	7.0	9.1	36	14	4.9	5.9	6.5
22	8.1	6.8	7.0	7.3	7.0	6.8	8.6	31	13	4.8	5.8	6.4
23	6.9	7.1	6.8	7.4	7.2	6.9	10	28	12	4.9	5.8	6.8
24	6.8	7.1	6.7	7.3	7.0	7.1	13	25	11	4.9	5.7	8.7
25	6.7	7.1	7.0	7.2	7.0	7.0	15	22	10	5.6	5.6	8.3
26	6.5	7.0	7.4	7.3	6.9	6.9	14	20	13	5.3	5.6	8.3
27	6.5	6.9	7.4	7.3	6.7	7.2	13	18	16	4.9	5.5	7.7
28	6.5	6.7	7.4	7.4	6.8	7.9	11	17	19	5.2	5.5	7.7
29	6.4	6.6	7.5	7.3	---	7.6	10	16	15	5.1	5.4	7.6
30	6.8	6.7	7.2	7.4	---	8.0	10	15	13	5.1	10	8.0
31	7.0	---	7.0	7.3	---	7.5	---	16	---	5.1	6.0	---
TOTAL	209.7	203.6	219.6	220.4	202.4	218.0	306.9	728.6	624	219.9	204.7	218.9
MEAN	6.76	6.79	7.08	7.11	7.23	7.03	10.2	23.5	20.8	7.09	6.60	7.30
MAX	8.1	7.3	7.5	9.9	7.8	8.0	15	43	33	12	15	14
MIN	6.0	6.3	6.7	6.5	6.7	6.7	7.3	8.9	10	4.8	5.1	5.5
AC-FT	416	404	436	437	401	432	609	1,450	1,240	436	406	434

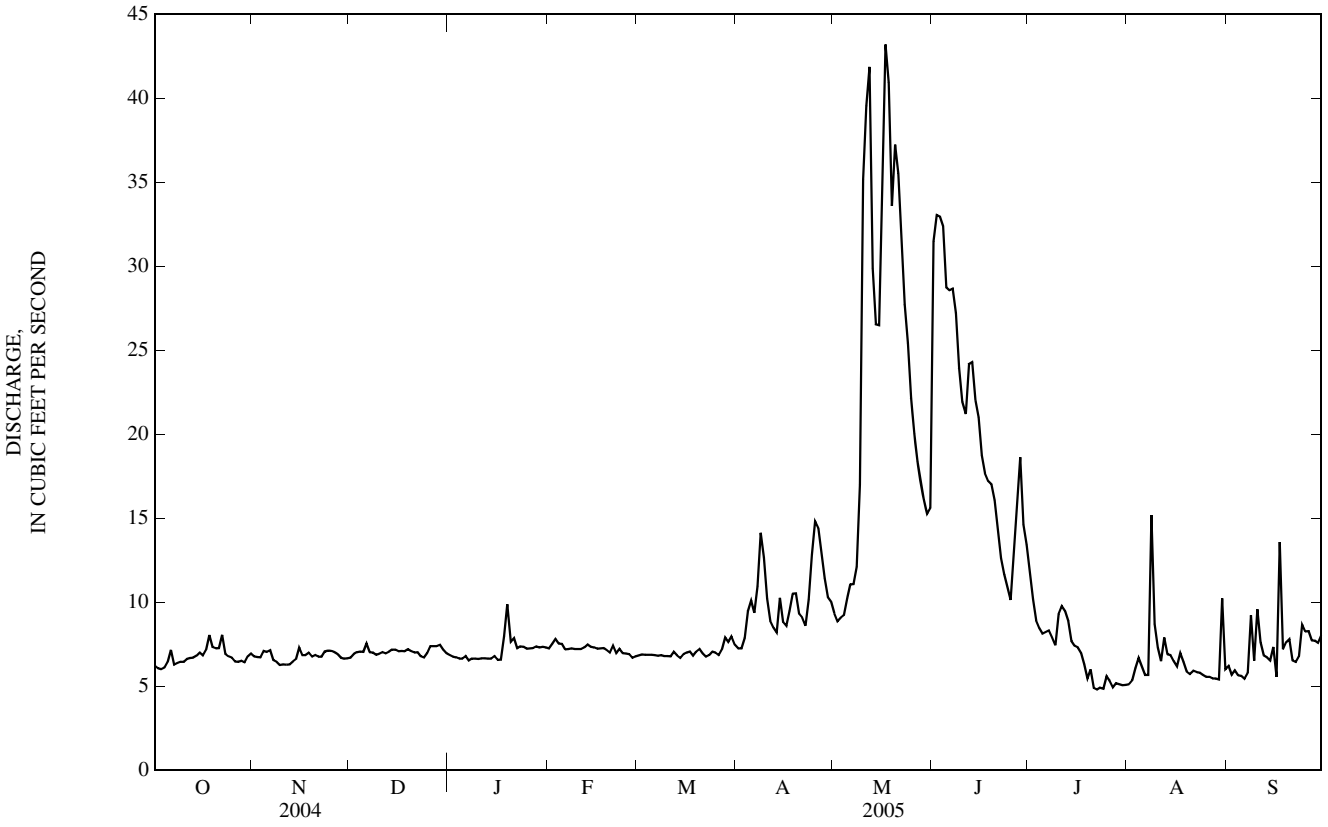
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)

MEAN	9.65	9.58	8.83	8.68	10.4	14.0	16.0	19.2	19.4	11.2	9.34	8.75
MAX	15.0	13.9	12.6	12.6	25.5	29.9	28.6	41.9	61.5	26.0	17.7	13.6
(WY)	(1998)	(1999)	(1999)	(1999)	(1995)	(1997)	(1996)	(1995)	(1995)	(1997)	(1997)	(1995)
MIN	6.76	6.79	6.68	6.49	6.33	7.03	9.36	7.31	8.11	6.07	5.28	5.98
(WY)	(2005)	(2005)	(2004)	(2004)	(1993)	(2005)	(1992)	(1992)	(2000)	(2003)	(2000)	(1992)

12323240 BLACKTAIL CREEK AT BUTTE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005	
ANNUAL TOTAL	2,776.6		3,576.7			
ANNUAL MEAN	7.59		9.80		12.1	
HIGHEST ANNUAL MEAN					19.9	1995
LOWEST ANNUAL MEAN					7.57	2004
HIGHEST DAILY MEAN	32	Jun 26	43	May 17	211	Feb 20, 1995
LOWEST DAILY MEAN	4.9	Jul 29	4.8	Jul 22	4.2	Aug 22, 2000
ANNUAL SEVEN-DAY MINIMUM	5.0	Jul 26	5.0	Jul 21	4.4	Aug 19, 2000
MAXIMUM PEAK FLOW			89	May 17	b303	Feb 19, 1995
MAXIMUM PEAK STAGE			2.65	May 17	5.28	Feb 19, 1995
INSTANTANEOUS LOW FLOW			a4.5	Jul 22	4.1	Jul 28, 2004
ANNUAL RUNOFF (AC-FT)	5,510		7,090		8,750	
10 PERCENT EXCEEDS	11		17		20	
50 PERCENT EXCEEDS	6.9		7.2		9.5	
90 PERCENT EXCEEDS	5.7		6.0		6.6	

a--Gage height, 0.83 ft.
b--From indirect measurement.
e--Estimated.



12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT

LOCATION.--Lat 45°59'47", long 112°33'45" (NAD 27), in $SW^1/_4\ SE^1/_4\ ^1/_4$ sec. 23, T.3 N., R.8 W., Silver Bow County, Hydrologic Unit 17010201, on right bank at Interstate 90 overpass in Butte, 0.8 mi upstream from Whiskey Gulch, 1.3 mi downstream from Blacktail Creek, and at river mile 20.2.

DRAINAGE AREA.--103 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR-MT-92-1: 1984-90 (M). WDR-MT-98-1: Drainage area. WDR-MT-2000-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,409.47 ft (NGVD 29). October 1983 to Sept. 14, 1997, water-stage recorder 150 ft upstream at elevation 1.40 ft higher. Sept. 15, 1997 to Dec. 3, 1997, no gage in operation due to channel reconstruction during EPA Superfund cleanup operations. Dec. 3, 1997 to Aug. 16, 1999, water-stage recorder 0.8 mi downstream at different elevation. Aug. 16, 1999 to May 10, 2000, water-stage recorder 2.1 mi downstream at different elevation.

REMARKS.--Water-discharge records good. Flow slightly regulated by Silver Bow County sewage treatment plant. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	14	15	14	15	15	18	44	21	14	15
2	15	16	15	15	15	15	15	17	41	19	14	15
3	15	16	14	15	15	15	15	17	42	18	15	15
4	15	16	14	15	15	15	18	18	40	18	15	14
5	15	15	14	15	15	14	20	18	36	18	15	15
6	16	15	15	15	15	14	19	19	37	16	14	14
7	15	15	15	15	15	14	19	20	36	16	14	14
8	15	15	15	15	15	14	21	21	34	16	25	15
9	15	15	15	15	15	15	21	28	31	15	18	14
10	15	15	14	15	15	15	18	48	29	17	18	19
11	15	15	14	15	15	14	17	49	29	19	15	17
12	15	15	14	15	14	15	18	54	33	17	17	16
13	15	15	14	15	15	15	17	42	32	16	16	17
14	15	15	14	15	15	15	20	37	29	15	16	17
15	15	16	14	15	15	15	16	37	29	15	15	18
16	15	15	15	15	15	15	17	43	27	e15	15	16
17	15	15	14	15	16	15	18	55	26	e14	16	28
18	17	15	14	17	15	15	20	51	25	14	15	18
19	16	14	14	20	14	15	20	44	25	14	14	18
20	16	14	14	17	15	16	18	46	24	14	14	19
21	16	15	14	17	15	15	17	46	22	13	14	18
22	17	15	14	15	14	15	17	41	20	12	14	17
23	16	15	14	16	15	15	19	37	19	12	14	18
24	16	15	14	16	16	16	22	34	19	12	14	21
25	16	15	14	15	16	16	26	31	18	15	14	19
26	16	15	15	15	15	15	24	29	22	15	14	19
27	15	15	15	15	15	16	23	27	25	14	14	18
28	14	15	15	16	15	18	21	25	31	14	14	18
29	15	14	15	15	---	17	19	23	24	13	14	17
30	16	14	15	14	---	16	19	23	23	13	22	18
31	16	---	15	14	---	16	---	24	---	13	15	---
TOTAL	479	451	446	477	419	471	569	1,022	872	473	478	517
MEAN	15.5	15.0	14.4	15.4	15.0	15.2	19.0	33.0	29.1	15.3	15.4	17.2
MAX	17	16	15	20	16	18	26	55	44	21	25	28
MIN	14	14	14	14	14	14	15	17	18	12	14	14
AC-FT	950	895	885	946	831	934	1,130	2,030	1,730	938	948	1,030

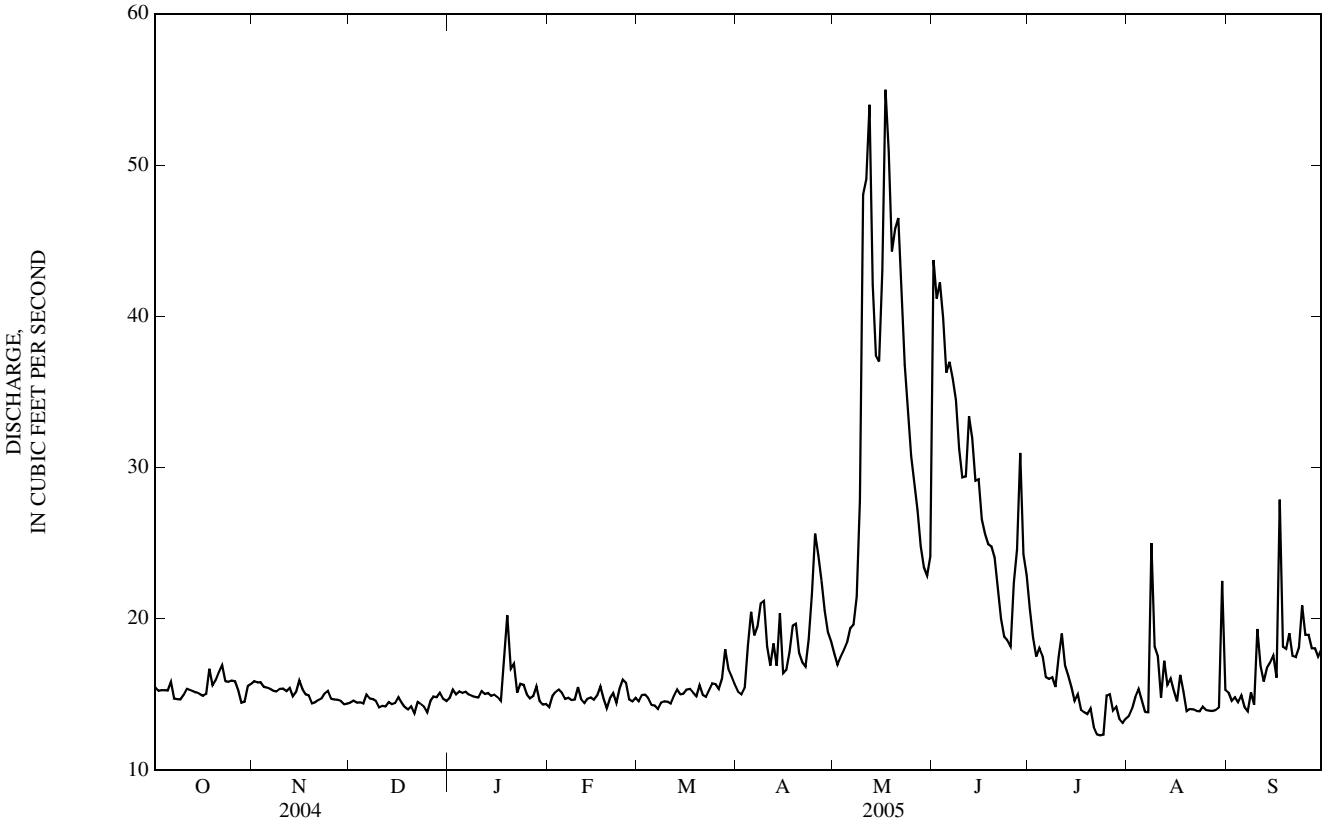
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	19.6	19.3	18.1	17.8	19.6	24.3	27.1	29.8	28.7	21.0	19.8	18.8
MAX	26.7	25.7	24.0	25.6	38.0	40.7	42.2	53.5	75.2	37.0	28.7	25.9
(WY)	(1984)	(1984)	(1998)	(1984)	(1995)	(1997)	(1998)	(1995)	(1995)	(1995)	(1993)	(1995)
MIN	14.7	15.0	14.4	13.4	14.2	15.2	14.9	12.6	15.5	12.4	14.0	14.1
(WY)	(2003)	(2005)	(2005)	(1989)	(2001)	(2005)	(1992)	(1992)	(2000)	(2003)	(2001)	(2000)

12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	5,860		6,674			
ANNUAL MEAN	16.0		18.3		22.0	
HIGHEST ANNUAL MEAN					30.8	1995
LOWEST ANNUAL MEAN					16.1	2004
HIGHEST DAILY MEAN	37	Jun 26	55	May 17	258	Feb 20, 1995
LOWEST DAILY MEAN	13	Jul 10	12	Jul 22	8.0	May 8, 1992
ANNUAL SEVEN-DAY MINIMUM	13	Jul 26	13	Jul 18	11	May 2, 1992
MAXIMUM PEAK FLOW			88	May 17	b447	Jul 30, 1998
MAXIMUM PEAK STAGE			2.43	May 17	c8.11	Jul 30, 1998
INSTANTANEOUS LOW FLOW			a9.5	Jul 22	6.4	Aug 27, 1996
ANNUAL RUNOFF (AC-FT)	11,620		13,240		15,930	
10 PERCENT EXCEEDS	19		27		32	
50 PERCENT EXCEEDS	15		15		19	
90 PERCENT EXCEEDS	14		14		15	

a--Gage height, 1.44 ft.
b--From culvert computation.
c--Site and datum then in use.
e--Estimated.



12323250 SILVER BOW CREEK BELOW BLACKTAIL CREEK, AT BUTTE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1005	16	7.5	554	4.0	6.5	160	44.9	12.1	2.9	3	.97	1.18
MAR													
09...	0935	16	7.6	564	9.0	6.5	170	47.7	12.0	2.3	3	1.18	1.54
APR													
18...	1030	21	7.6	475	1.0	7.0	140	39.4	8.90	3.6	4	.16	.26
MAY													
16...	1025	38	7.6	370	17.0	11.0	110	32.4	7.92	5.7	9	.10	.22
JUN													
01...	1240	67	7.6	238	6.0	9.0	79	23.4	5.02	6.9	19	.12	1.39
13...	0955	34	7.8	361	10.0	9.5	130	38.1	8.44	6.2	7	.09	.20
JUL													
25...	1215	16	7.9	545	17.0	15.0	190	53.2	13.1	5.6	6.5	.12	.18
AUG													
23...	1045	15	7.9	552	22.0	16.5	180	50.9	12.7	5.7	6.4	.10	.14

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	10.2	42.1	38	370	.26	2.27	331	366	277	286	84	10	.43
MAR													
09...	9.1	61.9	37	570	.30	2.73	498	509	284	323	83	9	.39
APR													
18...	11.3	21.8	268	290	.33	1.68	113	129	54.0	68	88	5	.28
MAY													
16...	12.1	22.5	126	460	.37	2.41	70.8	102	27.8	47	86	10	1.0
JUN													
01...	14.0	111	78	2,970	.68	31.0	88.7	340	35.3	230	76	97	18
13...	10.2	18.8	116	420	.26	2.27	58.1	98	27.2	38	86	9	.83
JUL													
25...	11.9	18.4	25	140	.27	1.11	61.3	88	26.7	38	77	5	.22
AUG													
23...	11.6	17.3	32	120	.27	1.09	48.4	70	31.9	43	81	4	.16

12323600 SILVER BOW CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'28", long 112°48'17" (NAD 27), in $SE^1/_4SW^1/_4SE^1/_4$ sec.11, T.4 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 200 ft downstream from Stuart Street bridge, 0.5 mi east of Opportunity, and 1.0 mi upstream from Mill Creek.

DRAINAGE AREA.--363 mi^2. Prior to water year 2001, drainage area published as 284 mi^2.

PERIOD OF RECORD.--July 1988 to current year. Prior to October 1991, seasonal records only.

REVISED RECORDS.--WDR MT-2001-01: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,912.37 ft (NGVD 29).

REMARKS.-Records good except those for estimated daily discharges, which are fair. Numerous diversions upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	e21	e21	23	23	29	38	120	52	21	23
2	20	25	e22	e21	24	23	29	37	133	47	21	23
3	20	26	e22	e21	25	24	30	37	128	43	21	22
4	20	24	e22	e20	23	24	32	39	117	41	21	21
5	20	24	e22	e19	23	23	34	43	108	41	20	22
6	20	24	e22	e18	22	24	33	48	115	36	19	21
7	21	25	e22	e19	e22	25	35	49	121	34	19	20
8	20	25	e22	e20	23	27	40	57	105	33	18	20
9	20	24	e23	e20	e23	28	39	74	99	32	31	21
10	20	25	e25	e21	24	29	35	124	90	32	28	24
11	21	25	e24	e21	25	29	33	132	86	35	23	26
12	21	24	e22	e22	24	30	32	113	98	33	18	24
13	22	24	e22	e21	24	28	33	101	97	33	22	24
14	22	24	e22	e20	24	28	36	99	88	32	20	24
15	22	25	23	e19	24	27	35	101	83	28	18	24
16	23	25	23	e21	e23	28	33	114	86	25	17	24
17	23	24	23	e23	e23	28	35	175	96	25	17	33
18	25	24	24	e26	e24	26	38	145	97	25	19	37
19	25	24	21	e32	e26	27	37	146	88	25	17	28
20	24	23	21	e30	28	29	37	143	80	26	17	28
21	25	20	e20	e29	28	29	36	144	71	23	17	27
22	26	24	e19	e28	27	28	36	132	66	23	18	27
23	26	25	e18	e28	26	e27	38	129	62	22	17	27
24	25	25	e19	e28	26	e27	44	119	57	22	17	32
25	24	25	e20	e28	27	30	48	107	53	23	17	31
26	25	24	e21	e27	23	28	51	99	57	25	17	31
27	25	e21	e23	27	23	29	50	93	70	24	18	30
28	24	e21	e23	28	24	33	44	91	69	20	19	29
29	24	e21	e23	27	---	33	41	93	73	22	19	29
30	24	e21	e23	25	---	30	39	93	60	20	26	30
31	24	---	e22	e24	---	29	---	93	---	21	27	---
TOTAL	701	715	679	734	681	853	1,112	3,008	2,673	923	619	782
MEAN	22.6	23.8	21.9	23.7	24.3	27.5	37.1	97.0	89.1	29.8	20.0	26.1
MAX	26	26	25	32	28	33	51	175	133	52	31	37
MIN	20	20	18	18	22	23	29	37	53	20	17	20
AC-FT	1,390	1,420	1,350	1,460	1,350	1,690	2,210	5,970	5,300	1,830	1,230	1,550

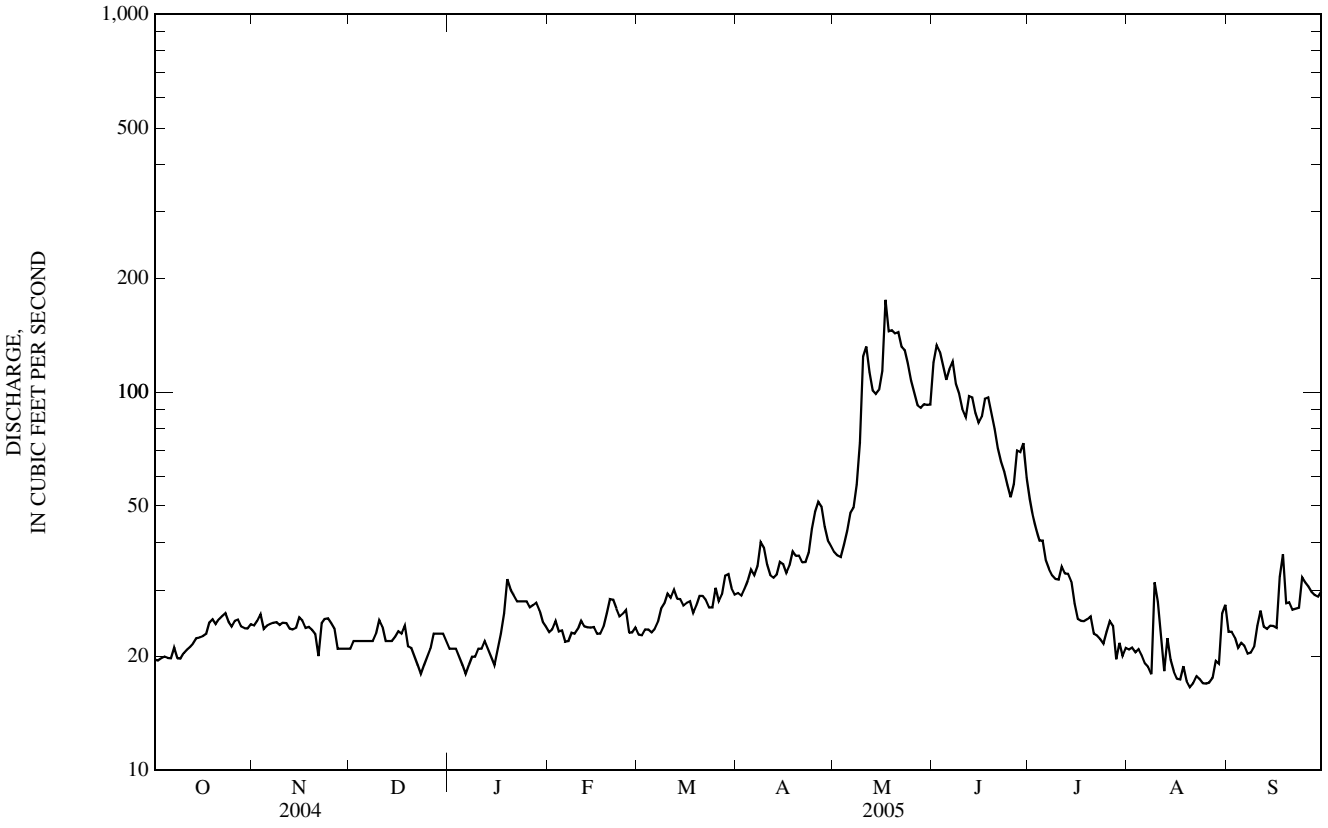
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

MEAN	35.6	35.2	32.5	35.2	48.3	52.8	62.2	93.0	92.9	43.7	28.7	31.0
MAX	55.8	49.5	49.2	68.6	184	86.6	120	261	281	107	69.5	59.8
(WY)	(1998)	(1996)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1995)	(1993)	(1993)
MIN	21.5	23.0	21.9	22.2	21.9	27.5	37.1	31.3	23.6	16.7	14.5	18.2
(WY)	(2004)	(2004)	(2005)	(2001)	(2001)	(2005)	(2005)	(1992)	(2000)	(2003)	(2000)	(2003)

12323600 SILVER BOW CREEK AT OPPORTUNITY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1988 - 2005	
ANNUAL TOTAL	9,881		13,480			
ANNUAL MEAN	27.0		36.9		50.3	
HIGHEST ANNUAL MEAN					99.0	1997
LOWEST ANNUAL MEAN					26.9	2004
HIGHEST DAILY MEAN	68	May 23	175	May 17	d1,300	Feb 11, 1996
LOWEST DAILY MEAN	12	Aug 12	17	Aug 16	11	Aug 2, 2003
ANNUAL SEVEN-DAY MINIMUM	13	Aug 10	17	Aug 19	12	Jul 18, 2003
MAXIMUM PEAK FLOW			a211	May 17	d1,300	Feb 11, 1996
MAXIMUM PEAK STAGE			b4.56	Nov 30	b6.91	Feb 11, 1996
INSTANTANEOUS LOW FLOW			c15	Nov 21	f9.1	Aug 20, 2004
ANNUAL RUNOFF (AC-FT)	19,600		26,740		36,440	
10 PERCENT EXCEEDS	40		89		93	
50 PERCENT EXCEEDS	25		25		38	
90 PERCENT EXCEEDS	18		20		21	

a--Gage height, 4.02 ft.
b--Backwater from ice.
c--Gage height, 2.23 ft.
d--Estimated daily discharge during a period of ice effect.
e--Estimated.
f--Gage height, 2.05 ft.



12323600 SILVER BOW CREEK AT OPPORTUNITY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to August 1995, December 1996 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: March 1993 to September 1995.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 563 mg/L, July 13, 1995; minimum daily mean, 3 mg/L, Sep. 16, 1993; Feb. 3-7, July 22, 1994.
SEDIMENT LOAD: Maximum daily, 495 tons, June 6, 1995; minimum daily, 0.19 ton, Feb. 4-7, 1994.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1635	21	8.4	565	6.0	3.0	200	59.9	13.2	11.0	14	.88	1.21
MAR													
08...	1330	26	8.8	558	19.0	7.5	200	57.4	12.7	12.5	17	.78	1.29
APR													
18...	1505	37	9.0	492	2.5	6.0	180	52.8	11.1	12.4	17	.39	.94
MAY													
17...	0710	165	7.9	316	6.5	6.5	110	34.6	6.44	10.3	46	.57	4.09
JUN													
01...	1720	119	8.2	319	10.0	8.5	120	38.7	6.60	9.5	80	.49	3.87
13...	1210	95	8.6	332	15.0	10.5	130	39.5	7.32	10.8	16	.24	.79
JUL													
26...	0735	27	8.2	493	7.0	11.0	180	52.5	11.3	16.6	19.2	.23	.78
AUG													
24...	0720	17	8.1	597	7.0	10.5	230	66.5	14.9	13.7	18.3	2.72	3.85

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
15...	30.0	81.3	14	460	.40	12.7	359	391	256	315	83	11	.62
MAR													
08...	32.7	93.2	9	550	.30	15.1	489	482	157	263	86	11	.77
APR													
18...	23.1	87.8	9	570	.23	14.5	341	426	65.1	216	80	13	1.3
MAY													
17...	41.0	554	83	4,730	1.49	125	352	829	203	791	66	202	90
JUN													
01...	36.2	472	62	9,190	.93	149	335	1,050	147	1,100	73	93	30
13...	24.0	93.0	63	640	.96	17.6	159	213	77.2	159	89	18	4.6
JUL													
26...	18.5	79.6	23	450	.58	12.3	180	241	63.5	168	90	11	.80
AUG													
24...	60.0	206	13	440	.40	13.0	713	799	611	856	81	14	.64

12323670 MILL CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°04'59", long 112°54'58" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec. 24, T.4 N., R.11 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank 500 ft downstream from private road bridge, 0.1 mi downstream from Cabbage Gulch, 1.0 mi downstream from Silver Creek, 2.8 mi southeast of Anaconda, and at river mile 6.7.

DRAINAGE AREA.--34.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,470 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	13	e10	e9.0	8.8	7.3	9.2	23	153	86	19	11
2	e16	13	e10	e9.5	8.8	7.5	9.8	22	125	85	22	10
3	e16	13	11	e9.0	8.9	7.7	10	22	111	74	20	10
4	e16	13	10	e8.5	9.0	7.5	9.8	24	104	65	19	10
5	e16	13	e9.5	e8.0	8.7	7.5	9.5	28	105	61	18	11
6	e16	13	10	e7.5	e8.0	7.5	10	35	124	61	17	11
7	16	13	10	e8.5	e7.5	7.5	13	40	107	61	16	11
8	16	13	11	e9.0	e7.5	7.6	16	47	95	58	17	11
9	16	12	10	e8.5	e8.0	8.0	13	54	87	58	18	11
10	15	12	11	e8.5	e8.5	8.2	12	89	82	53	18	11
11	15	12	12	9.0	e8.5	8.1	12	94	81	50	17	12
12	15	12	11	8.8	8.2	8.4	12	83	83	46	16	12
13	15	11	e10	8.9	8.1	8.0	12	77	76	45	17	13
14	15	12	11	8.5	e7.5	8.0	13	82	76	43	16	12
15	15	12	10	8.6	e7.5	7.9	12	93	100	38	15	11
16	15	12	10	e8.5	e7.0	7.8	12	117	124	37	14	11
17	15	12	10	9.1	e7.0	8.1	14	148	158	36	14	15
18	16	11	10	10	e7.0	e7.5	14	129	149	33	14	14
19	15	11	10	12	e7.5	8.2	14	164	118	30	14	13
20	15	11	e10	11	7.8	8.8	13	167	118	29	13	12
21	15	e10	e9.5	10	7.6	8.6	13	164	154	28	12	12
22	15	e11	e9.0	10	e7.5	8.2	15	155	178	27	12	12
23	15	12	e8.5	10	e7.0	e7.0	18	158	170	26	12	12
24	14	12	e9.0	10	e7.0	e7.5	21	141	134	25	11	14
25	13	12	e10	9.7	7.3	e8.0	26	124	117	26	11	14
26	14	11	10	9.8	e7.0	e9.0	28	114	118	25	11	13
27	14	e10	9.7	9.8	e7.0	9.4	30	115	113	23	11	12
28	14	e9.0	9.6	9.7	e7.0	12	27	128	112	21	11	12
29	13	e9.0	9.7	9.6	---	10	25	143	100	21	10	11
30	13	e9.5	10	9.4	---	9.1	24	137	91	20	11	11
31	13	---	e9.5	9.0	---	8.8	---	146	---	20	11	---
TOTAL	463	349.5	311.0	287.4	217.2	254.7	467.3	3,063	3,463	1,311	457	355
MEAN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
MAX	16	13	12	12	9.0	12	30	167	178	86	22	15
MIN	13	9.0	8.5	7.5	7.0	7.0	9.2	22	76	20	10	10
AC-FT	918	693	617	570	431	505	927	6,080	6,870	2,600	906	704

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

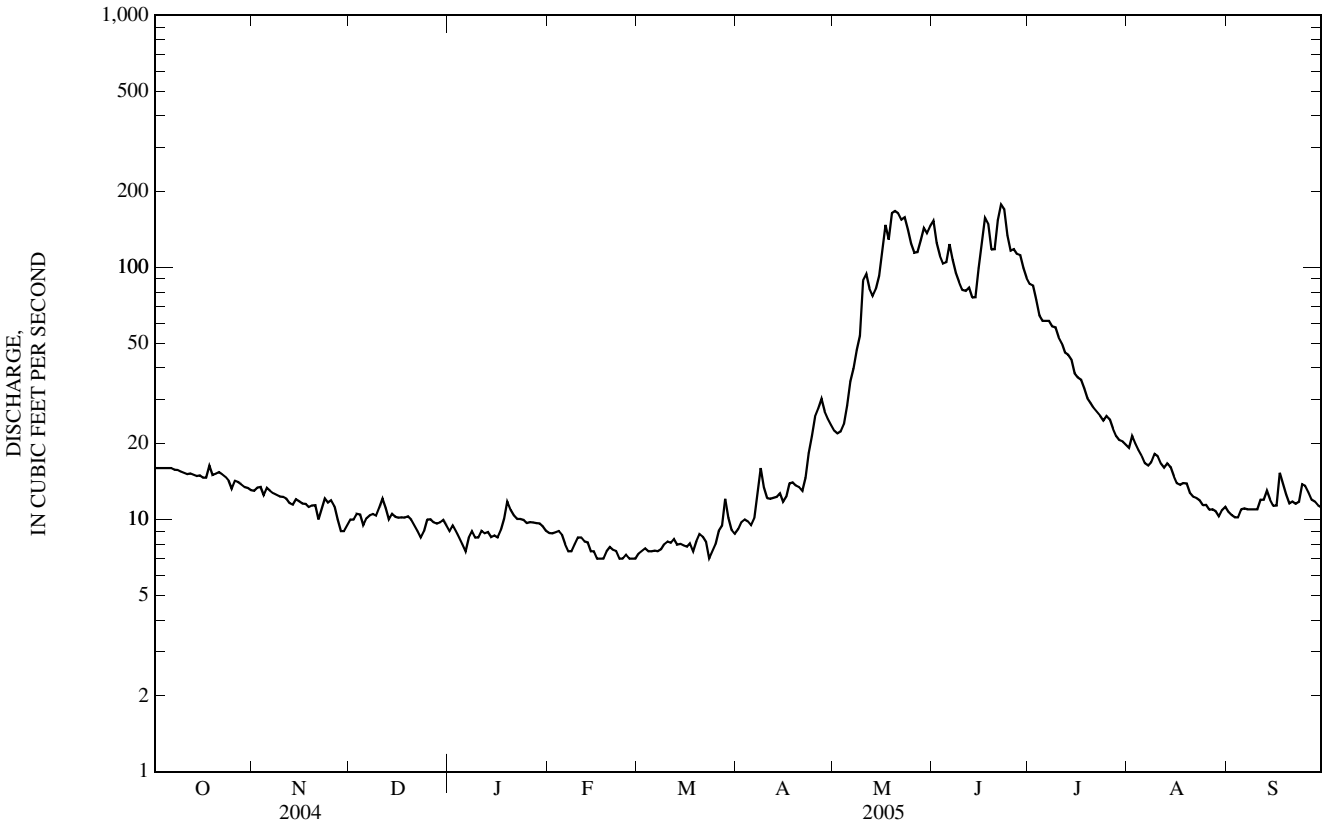
MEAN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
MAX	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	14.9	11.7	10.0	9.27	7.76	8.22	15.6	98.8	115	42.3	14.7	11.8
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS FOR 2005 WATER YEAR

ANNUAL TOTAL	10,999.1	
ANNUAL MEAN	30.1	
HIGHEST DAILY MEAN	178	Jun 22
LOWEST DAILY MEAN	7.0	Feb 16
ANNUAL SEVEN-DAY MINIMUM	7.1	Feb 23
MAXIMUM PEAK FLOW	a202	Jun 23
MAXIMUM PEAK STAGE	b3.67	Dec 24
ANNUAL RUNOFF (AC-FT)	21,820	
10 PERCENT EXCEEDS	102	
50 PERCENT EXCEEDS	12	
90 PERCENT EXCEEDS	8.0	

a--Gage height, 3.62 ft.
b--Backwater from ice.
e--Estimated.

12323670 MILL CREEK NEAR ANACONDA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
DEC										
15...	1330	10	<2.0	8.3	179	4.0	3.0	82	21.7	6.75
MAR										
08...	0940	7.4	<2.0	8.6	195	9.5	3.5	92	24.4	7.58
APR										
18...	1155	14	<2.0	8.2	161	4.0	4.0	72	19.3	5.71
MAY										
16...	1315	113	8.7	7.7	86	10.0	8.0	33	9.40	2.25
JUN										
01...	1410	153	<2.0	8.0	67	11.0	6.0	28	8.29	1.83
22...	1145	165	11	7.8	56	26.5	9.5	24	7.12	1.45
JUL										
25...	1440	27	<2.0	8.2	129	16.5	13.0	58	16.6	4.08
AUG										
23...	1305	12	<2.0	8.5	169	28.5	15.0	78	21.8	5.60

12323670 MILL CREEK NEAR ANACONDA, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover -able, ug/L (01055)
DEC												
15...	9.8	10	.08	.05	1.0	1.3	41	90	.17	.27	6.4	7
MAR												
08...	8.7	9	.11	.05	1.1	1.9	27	90	E.05	.31	7.0	9
APR												
18...	11.3	13	.04	.06	1.6	2.8	42	130	.10	.54	5.8	13
MAY												
16...	19.1	25	.05	.18	4.5	10.3	62	620	.24	3.12	5.9	37
JUN												
01...	11.7	15	.04	.08	3.8	5.7	35	170	.11	.83	3.6	11
22...	7.3	10	.04	.15	2.4	7.2	26	590	.08	2.35	5.1	36
JUL												
25...	23.4	25.5	.05	.08	2.6	4.3	80	170	.22	.59	8.9	17
AUG												
23...	21.3	23.8	.04	.07	1.7	2.9	89	180	.16	.57	6.8	18

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC					
15...	1.2	E1	81	1	.03
MAR					
08...	1.1	E1	75	2	.04
APR					
18...	1.3	E2	78	2	.08
MAY					
16...	2.1	8	64	29	8.8
JUN					
01...	2.4	4	51	6	2.5
22...	1.6	7	57	29	13
JUL					
25...	1.2	3	79	2	.15
AUG					
23...	.8	E2	75	3	.10

E--Estimated.

12323700 MILL CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'52", long 112°49'11" (NAD 27), in $SE^1/_4SE^1/_4NE^1/_4$ sec. 10, T.4N., R.10W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at Opportunity, 0.9 mi upstream from Mill-Willow Bypass, and at river mile 0.9.

DRAINAGE AREA.--43.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. No regulation. Minor diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.1	0.83	1.1	e1.0	1.9	1.6	0.40	0.82	116	66	3.1	1.2
2	e1.1	0.90	1.1	e1.2	1.8	1.4	0.40	0.71	100	66	3.5	0.92
3	e1.1	1.0	1.2	e1.0	1.9	1.2	0.40	0.59	87	57	3.2	1.2
4	e1.0	0.95	1.5	e1.0	1.7	1.0	0.40	0.60	79	49	2.9	1.3
5	e1.0	0.99	1.7	e0.90	1.5	0.86	0.39	0.90	76	41	2.5	1.4
6	e1.0	1.0	1.8	e0.70	e1.2	0.65	0.38	1.5	92	38	2.1	0.92
7	e1.0	0.98	1.7	e0.80	1.5	0.53	0.38	2.6	82	37	2.0	0.82
8	e0.90	0.97	1.7	e0.90	1.7	0.47	0.44	5.0	73	37	1.9	0.77
9	e0.90	0.98	1.7	e0.80	e1.4	0.46	0.39	8.3	65	36	2.1	0.77
10	e0.90	0.98	1.8	e0.90	e1.5	0.45	0.38	31	55	33	2.0	0.97
11	e0.90	1.0	2.1	e0.90	e1.7	0.43	0.38	46	52	29	1.6	1.3
12	e0.80	0.98	1.9	e1.0	1.9	0.47	0.39	44	54	25	1.6	1.4
13	e0.80	0.95	1.2	e0.90	1.9	0.44	0.40	40	49	23	1.7	1.4
14	e0.80	0.87	1.8	e0.80	e1.5	0.42	0.46	40	48	22	1.7	1.5
15	0.85	1.1	2.0	e0.90	e1.2	0.44	0.41	50	65	20	1.5	1.4
16	0.91	1.0	1.6	e1.1	e1.1	0.45	0.41	67	82	18	1.4	1.4
17	0.93	1.2	1.6	1.3	e1.2	0.45	0.40	95	107	16	1.3	2.1
18	1.1	1.4	1.5	1.5	1.3	0.43	0.45	88	109	13	1.3	2.2
19	1.1	1.4	1.4	1.5	1.4	0.44	0.48	107	86	9.4	1.3	2.1
20	0.98	1.4	1.2	1.6	1.6	0.45	0.50	121	83	7.0	1.2	1.9
21	1.0	e0.90	1.1	1.7	1.7	0.45	0.48	128	105	6.1	1.0	1.8
22	1.1	e0.80	e0.90	1.7	e1.5	0.44	0.46	122	122	5.8	1.3	1.9
23	1.1	e0.90	e0.70	1.8	e1.3	e0.40	0.43	122	120	4.5	1.1	1.9
24	1.1	e0.90	e0.80	1.8	e1.4	e0.40	0.43	114	94	4.4	0.94	2.3
25	0.97	e1.0	0.95	1.8	e1.5	e0.40	0.54	104	81	5.1	1.0	2.2
26	0.93	e0.90	1.1	1.8	e1.5	0.43	0.75	92	80	5.3	1.1	2.0
27	0.96	e0.80	1.4	1.9	e1.5	0.44	1.3	85	76	4.8	0.99	2.2
28	0.93	1.0	1.7	1.9	e1.5	0.47	1.2	91	75	4.3	1.0	2.2
29	0.92	0.90	1.8	1.8	---	0.45	1.2	102	67	4.3	1.1	2.1
30	0.91	0.96	1.8	1.9	---	0.42	1.1	99	64	4.5	1.0	1.7
31	0.92	---	e1.5	1.9	---	0.41	---	103	---	4.4	1.1	---
TOTAL	30.01	29.94	45.35	40.70	42.8	17.75	16.13	1,912.02	2,444	695.9	51.53	47.27
MEAN	0.97	1.00	1.46	1.31	1.53	0.57	0.54	61.7	81.5	22.4	1.66	1.58
MAX	1.1	1.4	2.1	1.9	1.9	1.6	1.3	128	122	66	3.5	2.3
MIN	0.80	0.80	0.70	0.70	1.1	0.40	0.38	0.59	48	4.3	0.94	0.77
AC-FT	60	59	90	81	85	35	32	3,790	4,850	1,380	102	94

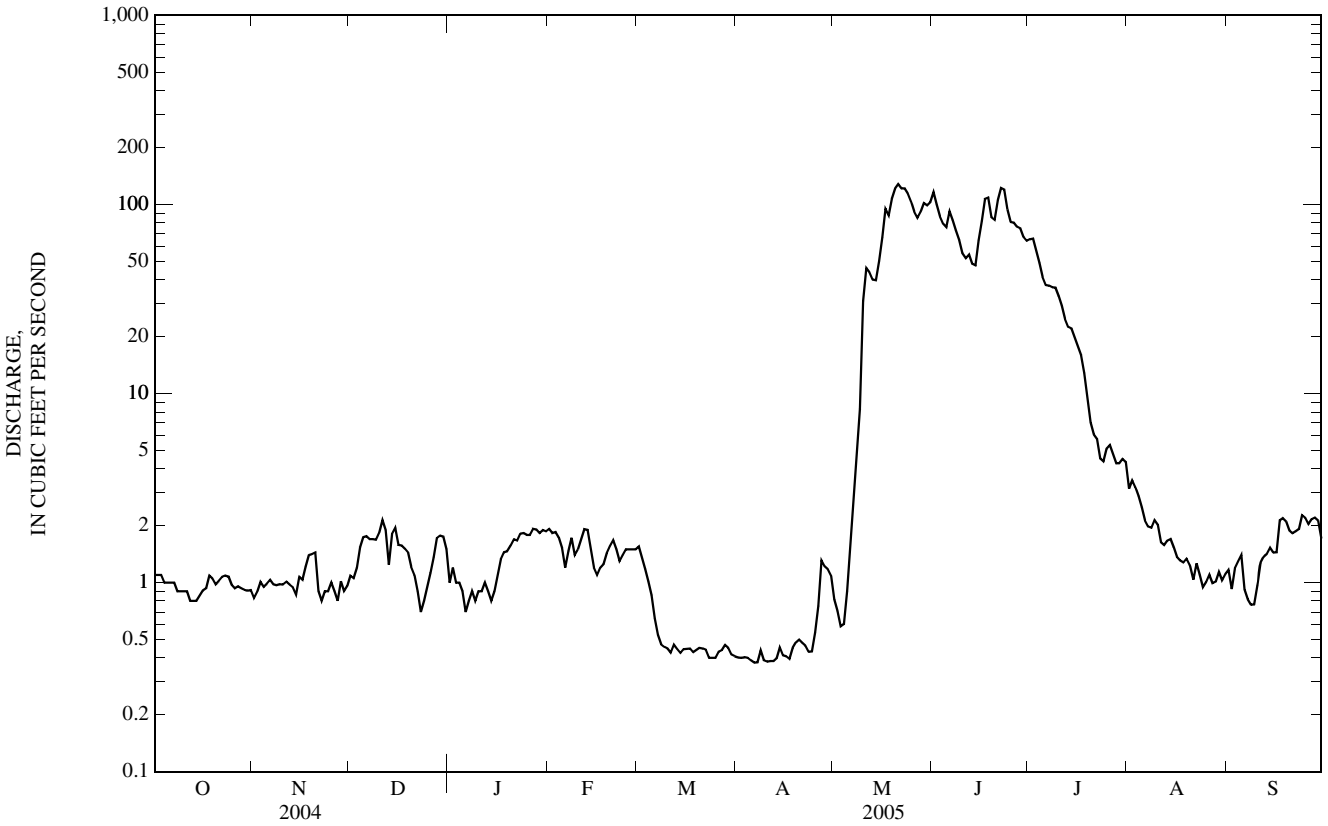
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	1.17	1.38	1.62	1.34	1.82	1.86	6.16	41.6	66.3	13.5	1.87	1.46
MAX	1.38	1.77	1.78	1.37	2.09	3.15	16.2	61.7	85.7	22.4	2.27	1.58
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2005)	(2003)	(2005)	(2003)	(2005)
MIN	0.97	1.00	1.46	1.31	1.53	0.57	0.54	9.44	31.8	7.83	1.66	1.38
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(2005)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	1,944.06		5,373.40			
ANNUAL MEAN	5.31		14.7		10.1	
HIGHEST ANNUAL MEAN					14.7	2005
LOWEST ANNUAL MEAN					5.44	2004
HIGHEST DAILY MEAN	60	Jun 6	128	May 21	260	Jun 1, 2003
LOWEST DAILY MEAN	0.70	Dec 23	0.38	Apr 6	0.38	Apr 6, 2005
ANNUAL SEVEN-DAY MINIMUM	0.85	Oct 9	0.39	Apr 5	0.39	Apr 5, 2005
MAXIMUM PEAK FLOW			141	Jun 23	284	Jun 1, 2003
MAXIMUM PEAK STAGE			2.63	Jun 23	3.34	Jun 1, 2003
INSTANTANEOUS LOW FLOW			a0.34	Apr 6	a0.34	Apr 6, 2005
ANNUAL RUNOFF (AC-FT)	3,860		10,660		7,300	
10 PERCENT EXCEEDS	18		69		32	
50 PERCENT EXCEEDS	1.8		1.4		1.7	
90 PERCENT EXCEEDS	0.96		0.45		0.85	

a--Gage height, 0.88 ft.
e--Estimated.

12323700 MILL CREEK AT OPPORTUNITY, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1515	2.0	8.0	200	6.5	2.0	86	23.6	6.66	18.6	20	.08	.10
MAR													
08...	1150	.48	8.1	214	14.5	5.0	94	25.8	7.12	9.0	10	.07	.07
APR													
18...	1340	.43	7.8	222	10.5	6.5	98	27.0	7.38	10.2	12	.05	.07
MAY													
16...	1600	68	7.8	95	14.5	9.0	36	10.1	2.56	27.0	46	.08	.63
JUN													
01...	1555	117	7.9	72	10.5	7.0	31	8.91	2.04	18.2	24	.07	.29
22...	1405	117	7.9	61	31.0	13.0	25	7.36	1.56	14.7	21	.06	.25
JUL													
25...	1615	5.5	8.2	147	18.0	16.5	65	18.6	4.56	36.6	40.0	.06	.08
AUG													
23...	1500	1.1	8.1	190	29.0	18.5	83	23.9	5.74	25.8	27.9	.05	.06

12323700 MILL CREEK AT OPPORTUNITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC													
15...	1.7	2.2	57	100	.14	.17	14.1	13	5.2	5	77	2	.01
MAR													
08...	1.2	2.2	64	120	<.08	.08	32.8	27	3.9	4	67	1	<.01
APR													
18...	1.5	2.5	70	130	E.06	.15	27.1	30	3.8	4	80	1	<.01
MAY													
16...	6.1	27.8	64	1,510	.31	9.55	7.5	79	4.5	28	65	81	15
JUN													
01...	4.7	9.9	40	490	.15	2.22	4.0	24	3.8	12	26	29	9.2
22...	3.5	12.4	31	710	.14	3.86	4.1	37	2.8	12	44	45	14
JUL													
25...	3.2	4.5	90	140	.23	.40	11.1	14	2.8	3	77	1	.01
AUG													
23...	2.1	3.0	75	120	E.07	.15	15.5	19	1.7	2	90	1	<.01

E--Estimated.

12323710 WILLOW CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°03'53", long 112°53'34" (NAD 27), in $SE^1/_4SE^1/_4SW^1/_4$ sec. 30, T.4 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 1.2 mi downstream from Long Canyon Creek, 4.5 mi southeast of Anaconda, and at river mile 6.5.

DRAINAGE AREA.--13.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2005 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for May to June, which are fair. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							1.6	5.1	28	8.5	2.4	1.4
2							1.9	5.1	26	8.1	2.5	1.4
3							1.9	5.3	22	7.7	2.4	1.3
4							1.9	6.0	23	7.4	2.3	1.2
5							1.7	7.3	22	7.0	2.1	1.5
6							2.0	9.5	22	6.5	2.0	1.4
7							2.7	11	18	6.0	2.0	1.3
8							4.1	17	17	5.6	2.2	1.2
9							2.6	20	17	5.4	2.6	1.2
10							2.2	47	16	5.5	2.6	1.7
11							2.2	68	15	5.2	2.3	1.6
12							2.3	42	16	4.9	2.2	1.5
13							2.4	36	14	4.6	2.4	1.5
14							2.5	37	14	4.4	2.2	1.4
15							2.5	40	13	4.2	2.0	1.3
16							2.4	42	14	4.0	1.8	1.3
17							2.8	52	15	3.9	1.8	2.9
18							2.8	49	14	3.7	1.9	2.0
19							1.7	56	14	3.5	1.8	1.6
20							2.4	57	13	3.3	1.7	1.5
21							2.5	50	12	3.2	1.6	1.5
22							3.0	40	13	3.1	1.6	1.5
23							3.8	38	12	3.0	1.6	1.5
24							6.1	32	12	3.0	1.6	2.0
25							6.6	28	11	3.2	1.6	1.9
26							7.7	26	13	3.1	1.5	1.6
27							8.0	25	12	2.9	1.4	1.5
28							7.6	25	11	2.7	1.4	1.5
29							7.6	25	10	2.6	1.3	1.4
30							5.5	26	9.2	2.5	1.6	1.4
31							---	27	---	2.4	1.6	---
TOTAL							105.0	954.3	468.2	141.1	60.0	46.0
MEAN							3.50	30.8	15.6	4.55	1.94	1.53
MAX							8.0	68	28	8.5	2.6	2.9
MIN							1.6	5.1	9.2	2.4	1.3	1.2
AC-FT							208	1,890	929	280	119	91

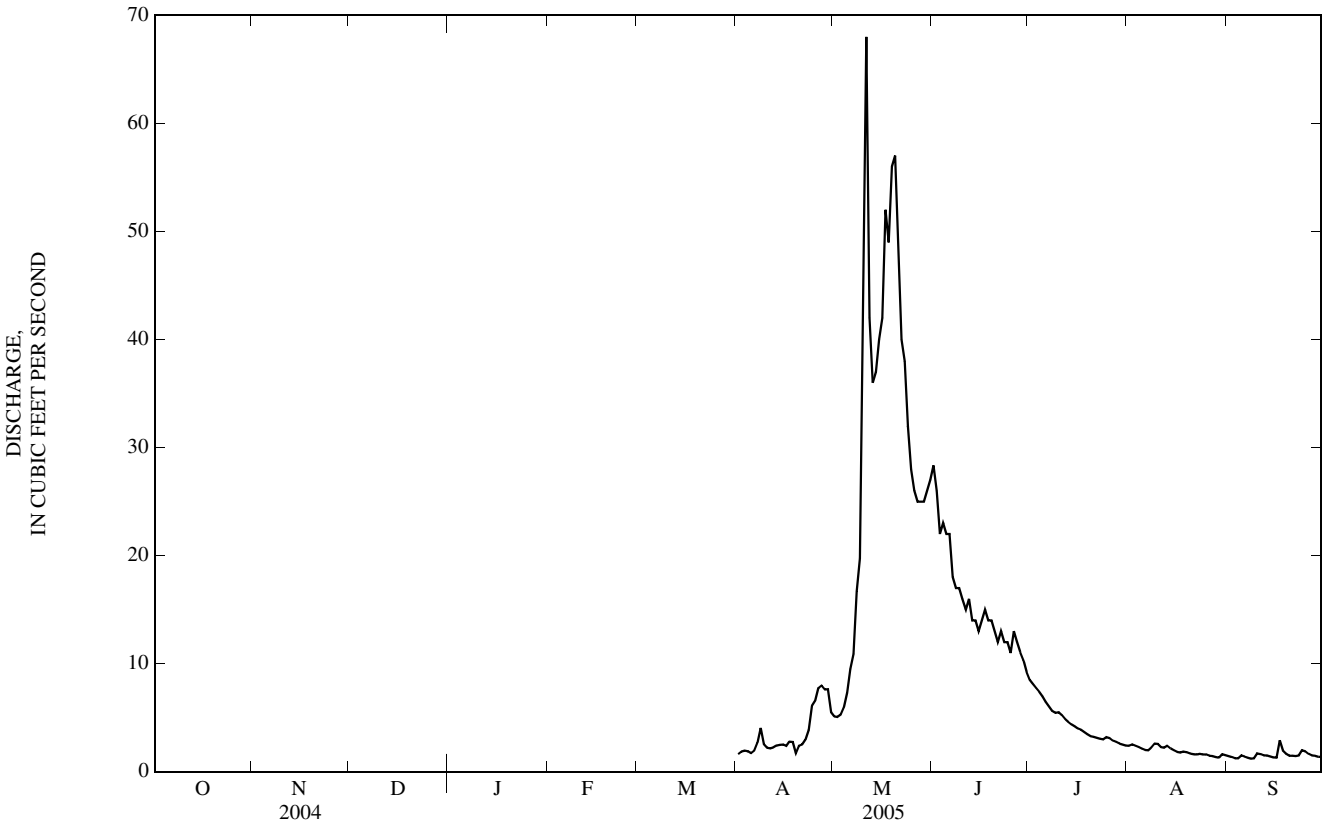
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

MEAN	3.50	30.8	15.6	4.55	1.94	1.53
MAX	3.50	30.8	15.6	4.55	1.94	1.53
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	3.50	30.8	15.6	4.55	1.94	1.53
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS	FOR 2005 WATER YEAR	
HIGHEST ANNUAL MEAN	68	May 11
LOWEST ANNUAL MEAN	1.2	Sep 4
MAXIMUM PEAK FLOW	95	May 10
MAXIMUM PEAK STAGE	2.86	May 10
INSTANTANEOUS LOW FLOW	a0.76	Apr 1

a--Gage height, 1.22 ft.

12323710 WILLOW CREEK NEAR ANACONDA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
DEC												
15...	1145	1.0	<2.0	7.9	113	6.0	0.5	40	13.4	1.65	12.8	13
MAR												
09...	1125	1.0	<2.0	8.2	114	14.0	2.0	41	13.7	1.61	9.9	10
APR												
21...	0750	1.9	2.6	7.7	114	0.0	0.5	42	13.9	1.69	11.1	13
MAY												
16...	1200	39	18	7.5	66	22.0	6.0	23	7.74	.877	16.6	21
JUN												
02...	0745	26	3.5	7.8	80	6.5	5.0	31	10.6	1.04	12.2	14
22...	1015	13	<2.0	7.8	95	23.0	10.0	37	12.8	1.22	12.9	14
JUL												
25...	1340	3.3	<2.0	7.9	102	16.5	11.0	38	13.0	1.30	19.8	20.7
AUG												
23...	1210	1.9	2.8	7.6	108	25.5	13.0	40	13.6	1.41	24.3	27.0

E--Estimated.

12323710 WILLOW CREEK NEAR ANACONDA, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)
DEC										
15...	E.03	E.03	1.2	1.5	43	110	.11	.25	17.8	20
MAR										
09...	E.02	E.03	1.0	1.7	36	90	E.05	.20	13.1	15
APR										
21...	E.03	.06	1.9	2.9	55	190	E.07	.48	18.2	29
MAY										
16...	.04	.19	4.2	10.5	125	1,260	.37	4.08	11.5	49
JUN										
02...	E.03	.06	3.1	4.1	68	270	.15	.75	11.4	19
22...	.05	.04	2.1	2.8	45	130	.12	.35	16.4	19
JUL										
25...	E.03	.06	2.4	3.0	66	170	.16	.47	20.0	30
AUG										
23...	E.04	.07	1.8	3.4	90	290	.18	.84	23.0	49

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC					
15...	1.7	E1	86	4	.01
MAR					
09...	1.1	E1	77	3	.01
APR					
21...	1.5	2	92	4	.02
MAY					
16...	2.5	10	44	93	9.8
JUN					
02...	2.5	3	46	13	.91
22...	1.9	2	76	5	.18
JUL					
25...	3.3	E2	89	4	.04
AUG					
23...	1.4	3	94	9	.05

E--Estimated.

12323720 WILLOW CREEK AT OPPORTUNITY, MT

LOCATION.--Lat 46°06'22", long 112°48'41" (NAD 27), in $NW^1/_4$ $NE^1/_4$ $NW^1/_4$ sec. 14, T4N., R.10W., Deer Lodge County, Hydrologic Unit 17010201, 1,300 ft upstream from Stuart Street culverts, at Opportunity, 1.2 mi upstream from Mill-Willow Bypass, and at river mile 1.2.

DRAINAGE AREA .--30.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,930 ft (NGVD 29).

REMARKS.--Water-discharge records good except those from July to September, which are fair. No regulation. Minor diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.2	5.4	5.1	4.9	5.1	4.5	6.4	47	19	6.6	5.4
2	8.0	7.4	5.5	5.0	4.9	5.1	4.5	6.2	34	15	6.9	5.7
3	7.8	7.7	5.8	5.1	5.1	4.9	4.5	5.9	29	12	6.9	5.5
4	7.8	7.4	5.9	5.0	5.5	4.9	4.6	6.1	23	12	6.8	5.3
5	7.7	7.2	5.9	4.9	5.1	5.0	4.5	6.4	21	11	6.5	5.4
6	7.5	7.4	5.9	4.7	4.8	5.1	4.3	7.3	37	10	6.4	5.4
7	7.6	7.1	5.9	4.7	4.6	4.8	4.3	8.3	34	9.5	6.2	5.8
8	7.4	7.0	5.8	4.7	4.7	4.8	4.7	11	23	8.7	5.7	5.8
9	7.6	7.1	5.6	4.5	4.7	4.6	4.7	17	22	8.3	6.1	5.7
10	7.4	6.8	6.3	4.6	4.6	4.5	4.3	40	20	8.8	6.5	6.4
11	7.7	6.7	7.1	4.7	4.7	4.3	4.3	48	19	9.7	6.7	6.7
12	7.7	6.5	6.4	4.6	4.8	4.4	4.2	42	25	8.8	6.8	6.7
13	8.1	6.2	5.6	4.6	4.9	4.2	4.3	32	22	8.0	7.0	6.9
14	7.7	6.0	5.8	4.5	4.8	4.2	5.0	33	18	7.6	7.0	6.7
15	7.7	6.4	6.2	4.5	4.7	4.4	5.2	36	18	7.6	6.3	6.8
16	7.9	6.7	5.9	4.5	4.5	4.6	4.9	44	18	7.3	6.2	6.7
17	7.9	6.5	5.9	4.6	4.6	4.5	4.8	61	32	7.0	5.9	8.7
18	7.8	6.2	5.9	6.3	4.6	4.3	5.6	50	36	7.1	5.9	9.0
19	7.7	6.1	6.2	6.1	4.5	4.7	6.5	55	28	6.9	6.2	8.2
20	7.7	6.2	5.6	5.1	4.5	5.0	6.3	52	23	6.6	6.1	7.8
21	7.9	5.9	5.3	5.2	4.7	4.9	6.1	51	19	6.5	5.7	7.6
22	8.0	5.9	5.4	5.1	4.6	4.6	5.7	46	21	6.6	5.3	7.6
23	7.9	6.1	5.2	5.3	4.6	4.2	5.4	46	22	6.5	5.5	7.3
24	7.9	6.6	5.1	5.3	4.5	4.6	5.5	41	19	6.3	5.4	8.3
25	7.8	7.1	5.2	5.2	4.6	4.8	6.2	35	20	6.6	5.4	8.2
26	7.8	6.3	5.1	5.2	4.7	4.8	7.0	32	35	6.9	5.2	7.8
27	7.8	5.8	5.1	5.2	4.7	4.9	7.9	28	45	6.5	5.3	7.2
28	7.8	5.7	5.0	5.3	4.8	5.3	7.4	24	40	6.1	5.1	6.6
29	7.8	5.6	5.1	5.1	---	5.1	7.0	21	33	5.8	5.0	6.6
30	7.7	5.4	5.1	5.1	---	4.8	7.0	20	24	6.2	5.5	6.7
31	7.3	---	5.1	4.9	---	4.6	---	24	---	6.5	5.6	---
TOTAL	240.4	196.2	175.3	154.7	132.7	146.0	161.2	935.6	807	261.4	187.7	204.5
MEAN	7.75	6.54	5.65	4.99	4.74	4.71	5.37	30.2	26.9	8.43	6.05	6.82
MAX	8.1	7.7	7.1	6.3	5.5	5.3	7.9	61	47	19	7.0	9.0
MIN	7.3	5.4	5.0	4.5	4.5	4.2	4.2	5.9	18	5.8	5.0	5.3
AC-FT	477	389	348	307	263	290	320	1,860	1,600	518	372	406

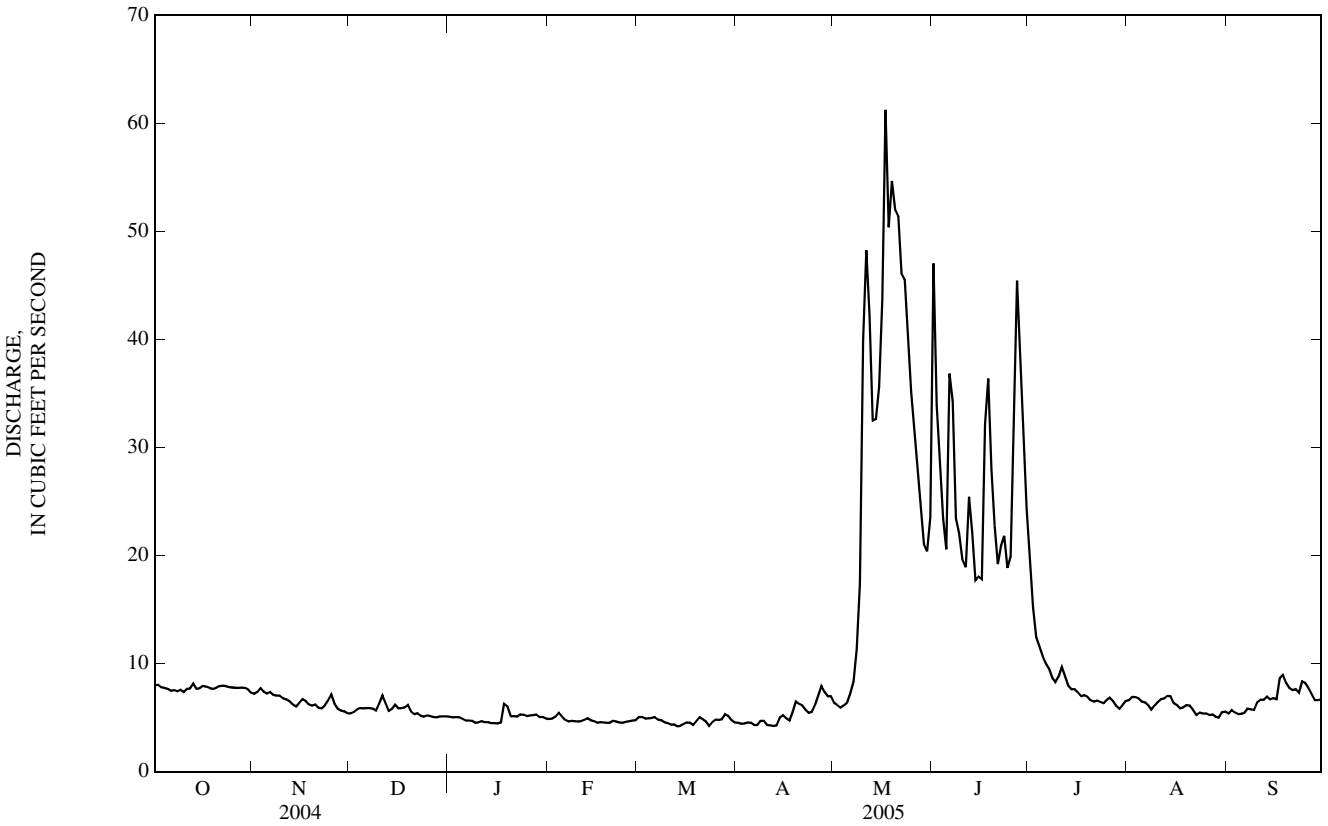
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	6.97	5.93	5.42	4.59	4.53	5.42	8.59	24.6	20.9	7.91	6.37	7.00
MAX	7.75	6.54	5.65	4.99	4.74	6.14	14.5	30.2	26.9	8.61	6.72	7.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2003)	(2003)	(2005)	(2004)	(2004)	(2004)
MIN	6.19	5.33	5.18	4.18	4.32	4.71	5.37	13.4	17.8	6.68	6.05	6.75
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2005)	(2005)	(2004)	(2004)	(2003)	(2005)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	2,883.6		3,602.7			
ANNUAL MEAN	7.88		9.87		8.74	
HIGHEST ANNUAL MEAN					9.87	2005
LOWEST ANNUAL MEAN					7.61	2004
HIGHEST DAILY MEAN	27	Jun 9	61	May 17	61	May 31, 2003
LOWEST DAILY MEAN	4.0	Jan 8	4.2	Mar 13	4.0	Jan 8, 2004
ANNUAL SEVEN-DAY MINIMUM	4.1	Jan 6	4.4	Mar 9	4.1	Jan 6, 2004
MAXIMUM PEAK FLOW			71	May 17	71	May 17, 2005
MAXIMUM PEAK STAGE			5.04	May 17	5.04	May 17, 2005
INSTANTANEOUS LOW FLOW			a3.2	Mar 23	3.1	Jan 31, 2004
ANNUAL RUNOFF (AC-FT)	5,720		7,150		6,330	
10 PERCENT EXCEEDS	15		23		18	
50 PERCENT EXCEEDS	6.6		6.2		6.2	
90 PERCENT EXCEEDS	4.2		4.6		4.5	

a--Gage height, 3.80 ft.

12323720 WILLOW CREEK AT OPPORTUNITY, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
15...	1540	6.2	8.2	305	4.5	5.5	130	37.0	9.31	13.3	14	E.02	.05
MAR													
08...	1225	4.5	8.3	298	14.5	8.5	130	36.5	8.72	11.5	13	E.03	.05
APR													
18...	1410	5.6	8.3	340	4.0	6.0	150	42.0	10.5	18.8	21	E.03	.07
MAY													
16...	1635	47	7.7	210	13.5	12.0	80	23.4	5.18	68.9	84	.06	.52
JUN													
01...	1625	53	8.0	272	10.0	10.0	120	34.8	7.57	117	133	.11	.28
22...	1435	23	8.3	348	33.5	20.5	170	47.3	12.3	164	164	.06	.12
JUL													
25...	1650	6.5	8.5	318	19.5	16.0	160	44.3	10.9	22.2	22.5	E.02	E.04
AUG													
23...	1525	5.4	8.4	312	29.0	16.5	140	39.8	9.00	17.0	18.1	E.03	.04

12323720 WILLOW CREEK AT OPPORTUNITY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
DEC													
15...	2.1	6.4	26	140	.18	1.18	20.1	21	2.9	5	89	5	.08
MAR													
08...	1.9	4.7	20	120	.09	.98	33.0	30	2.3	5	86	4	.05
APR													
18...	2.8	7.7	20	180	.10	1.62	45.7	56	4.2	9	95	4	.06
MAY													
16...	13.0	48.8	111	1,420	.52	14.4	47.7	104	16.7	68	75	84	11
JUN													
01...	21.4	37.0	91	520	.47	5.09	25.8	49	17.9	35	70	27	3.9
22...	11.0	17.0	41	220	.24	1.97	17.0	29	4.6	10	86	10	.62
JUL													
25...	2.9	4.0	8	50	E.06	.47	5.9	8	1.7	2	96	2	.04
AUG													
23...	3.0	4.6	9	60	E.06	.64	5.8	10	1.9	3	81	2	.03

E--Estimated.

12323750 SILVER BOW CREEK AT WARM SPRINGS, MT

LOCATION.--Lat 46°10'46", long 112°46'50" (NAD 27), in $SW^1/_4SE^1/_4SW^1/_4$ sec.18, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 1.0 mi upstream from confluence with Warm Springs Creek, 1.1 mi upstream from county highway bridge, and 0.5 mi east of Warm Springs.

DRAINAGE AREA.--473 mi^2; area at site used prior to May 24, 1994, 483 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1972 to September 1979, April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,800.31 ft (NGVD 29). Prior to May 24, 1994, gage located at sites 0.8 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges and those for July to September, which are fair. Flow is regulated by dam on tailing ponds about 0.2 mi upstream from gage. Diversions for irrigation of about 4,650 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	41	e38	e32	39	38	36	41	261	134	38	22
2	34	42	39	e33	40	38	34	44	251	126	40	23
3	34	40	40	e32	40	37	34	47	238	115	39	23
4	35	39	42	e31	40	37	35	50	234	108	38	22
5	37	40	43	e30	38	37	35	51	227	93	36	23
6	39	41	43	e30	35	37	35	53	249	81	35	23
7	39	39	43	e31	34	36	36	56	245	80	34	23
8	41	38	42	e33	34	36	32	68	217	80	32	22
9	35	38	42	e32	34	36	30	86	204	76	34	20
10	35	38	43	e32	34	36	28	131	186	75	32	21
11	40	39	44	e32	34	35	26	149	177	72	43	23
12	49	39	45	e32	35	34	27	137	185	64	31	22
13	53	39	41	e31	37	34	28	125	178	62	34	23
14	53	38	42	e30	36	34	35	125	169	63	37	24
15	50	39	42	31	36	35	34	143	175	64	36	24
16	47	39	40	32	36	34	34	185	190	62	34	25
17	45	40	39	34	35	34	32	265	227	58	32	35
18	45	40	39	38	34	33	34	249	242	56	30	40
19	44	40	40	38	35	34	35	272	208	54	30	46
20	41	39	39	35	36	35	35	300	195	50	31	43
21	42	e37	37	35	37	36	35	313	210	49	31	38
22	42	38	36	34	36	36	36	298	211	50	31	38
23	41	38	e30	36	36	33	36	301	208	49	32	36
24	40	e40	e31	37	37	35	35	286	178	50	29	39
25	39	e45	32	36	37	35	37	267	157	47	27	41
26	40	e43	32	36	38	37	40	231	162	43	25	42
27	38	e41	32	37	38	37	40	214	174	42	25	40
28	38	e40	32	37	38	38	41	213	169	43	25	38
29	39	e39	33	37	---	39	40	215	157	41	24	40
30	40	e38	36	38	---	36	41	209	145	39	25	40
31	40	---	e34	38	---	35	---	212	---	39	23	---
TOTAL	1,268	1,187	1,191	1,050	1,019	1,107	1,036	5,336	6,029	2,065	993	919
MEAN	40.9	39.6	38.4	33.9	36.4	35.7	34.5	172	201	66.6	32.0	30.6
MAX	53	45	45	38	40	39	41	313	261	134	43	46
MIN	33	37	30	30	34	33	26	41	145	39	23	20
AC-FT	2,520	2,350	2,360	2,080	2,020	2,200	2,050	10,580	11,960	4,100	1,970	1,820

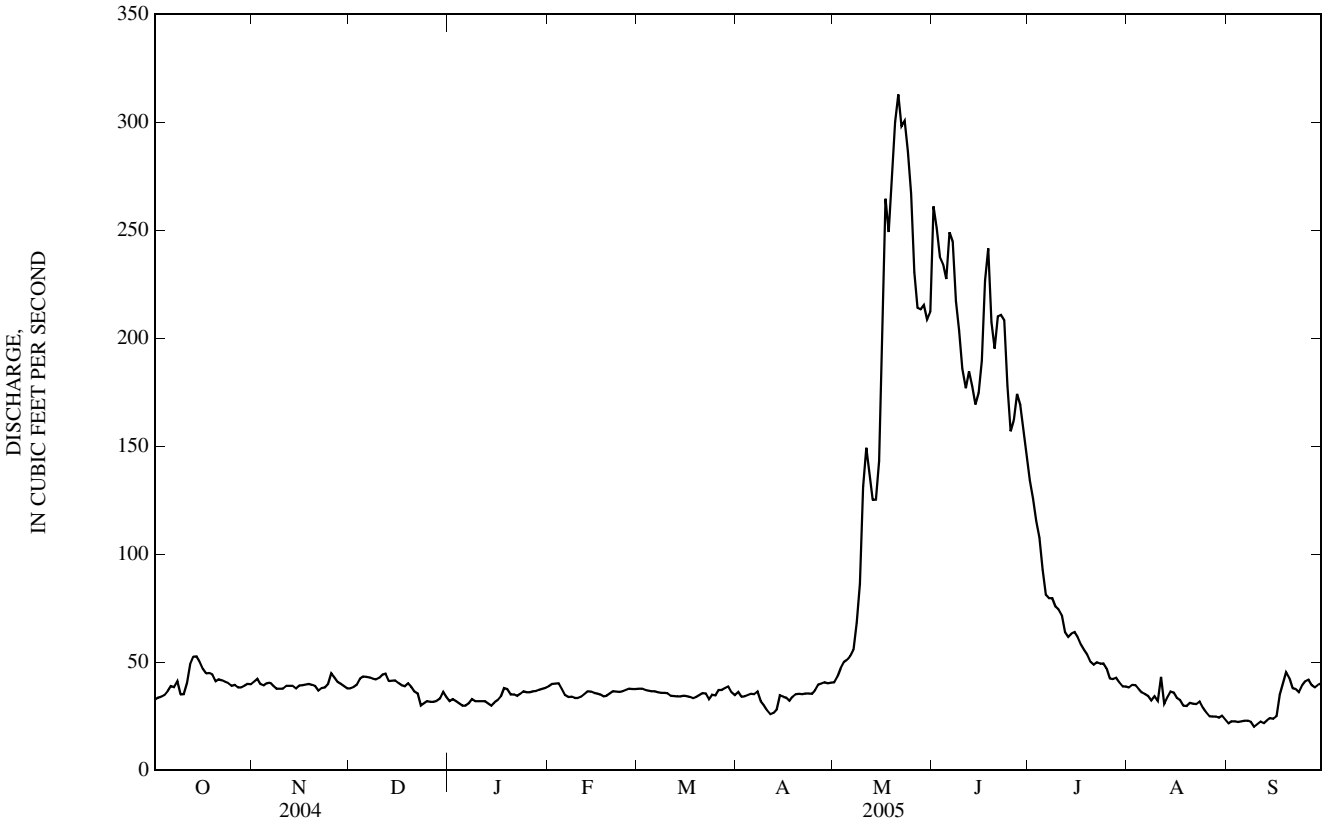
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)*

MEAN	66.4	73.1	68.5	72.2	76.7	103	121	231	260	110	63.0	58.5
MAX	193	161	156	152	130	207	281	586	770	356	201	137
(WY)	(1976)	(1976)	(1976)	(1974)	(1996)	(1976)	(1976)	(1976)	(1975)	(1975)	(1975)	(1975)
MIN	23.3	31.7	30.9	33.9	36.4	35.7	34.5	62.9	57.2	28.8	16.8	20.1
(WY)	(2004)	(2001)	(2002)	(2005)	(2005)	(2005)	(2005)	(2004)	(2000)	(2000)	(2000)	(2000)

12323750 SILVER BOW CREEK AT WARM SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005*	
ANNUAL TOTAL	15,532		23,200			
ANNUAL MEAN	42.4		63.6		108	
HIGHEST ANNUAL MEAN					228	1975
LOWEST ANNUAL MEAN					40.9	2004
HIGHEST DAILY MEAN	102	Jun 6	313	May 21	1,220	Jun 20, 1975
LOWEST DAILY MEAN	20	Aug 7	20	Sep 9	15	Sep 12, 1973
ANNUAL SEVEN-DAY MINIMUM	20	Aug 5	22	Sep 4	16	Aug 4, 2000
MAXIMUM PEAK FLOW			330	May 20	a1,320	Jun 20, 1975
MAXIMUM PEAK STAGE			3.03	May 20	b8.64	Jan 16, 1974
ANNUAL RUNOFF (AC-FT)	30,810		46,020		77,910	
10 PERCENT EXCEEDS	63		178		215	
50 PERCENT EXCEEDS	40		38		73	
90 PERCENT EXCEEDS	26		31		31	

*--During periods of operation (March 1972 to September 1979, April 1993 to current year).
a--Gage height, 7.47 ft, site and datum then in use.
b--Backwater from ice, site and datum then in use.
e--Estimated.



12323750 SILVER BOW CREEK AT WARM SPRINGS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: April 1993 to September 1995.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 429 mg/L, Mar. 15, 1994; minimum daily mean, 1 mg/L, several days in October 1995.
SEDIMENT LOAD: Maximum daily, 302 tons, June 6, 1995; minimum daily, 0.12 ton, several days in August 1995.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0830	39	8.7	638	-1.5	2.0	270	74.7	19.7	15.8	17	.16	.19
MAR													
08...	1435	37	8.9	631	14.0	7.0	270	78.1	18.9	11.1	13	.08	.15
APR													
18...	1615	34	8.6	685	3.5	7.0	310	87.6	21.1	9.8	13	E.03	.08
MAY													
17...	0840	270	8.8	442	8.0	8.0	170	45.5	13.3	36.9	49	E.03	.37
JUN													
02...	0930	249	9.1	356	13.5	8.0	150	41.6	10.1	29.2	34	.04	.12
13...	1250	183	9.0	407	17.0	12.0	180	52.1	10.9	26.2	28	.07	.14
JUL													
26...	0835	42	8.6	512	13.0	13.5	240	68.5	15.7	27.0	28.6	E.03	.06
AUG													
24...	0820	30	8.8	590	12.5	13.5	260	76.3	17.8	31.1	32.5	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	6.6	10.1	E5	110	E.08	.35	78.0	80	6.5	10	79	4	.42
MAR													
08...	4.7	10.2	E6	190	<.08	.58	168	189	4.6	12	87	4	.40
APR													
18...	2.7	7.8	E4	250	E.05	1.09	195	245	4.7	12	82	3	.28
MAY													
17...	6.6	28.8	72	1,000	.25	6.72	175	304	4.3	38	89	37	27
JUN													
02...	6.6	13.4	37	240	.12	1.18	207	265	3.4	14	87	5	3.4
13...	7.7	11.4	22	200	.11	1.06	192	222	6.6	13	88	4	2.0
JUL													
26...	3.3	5.1	16	140	E.07	.58	62.8	135	3.5	5	75	3	.34
AUG													
24...	2.9	4.4	6	120	<.08	.55	55.0	127	3.7	5	72	3	.24

E--Estimated.

12323760 WARM SPRINGS CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°08'01", long 112°54'48" (NAD 27), in $SW^1/_4NW^1/_4NE^1/_4$ sec. 1, T.4N., R.11W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 0.3 mi downstream from Arbiter Bridge on private road, 1.0 mi upstream from Dutchman Creek, 1.2 mi northeast of Anaconda, and at river mile 9.5.

DRAINAGE AREA.--157 mi^2.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,150 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by Storm King Lake. Minor diversions upstream from station for irrigation and municipal use. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	33	23	e22	31	31	29	27	253	265	95	68
2	60	35	23	e22	31	29	29	25	262	259	89	67
3	54	35	23	e20	31	28	28	24	219	240	84	66
4	51	29	26	e20	31	27	27	27	236	221	80	65
5	50	34	23	e19	30	27	32	31	227	204	78	66
6	47	33	22	e18	26	27	37	38	251	194	75	66
7	44	32	22	e20	28	27	31	37	220	187	72	66
8	43	31	24	e23	28	27	34	48	187	176	73	65
9	41	31	29	e24	26	27	32	54	162	155	79	67
10	41	31	32	25	30	27	29	84	149	148	79	73
11	41	31	39	25	28	27	28	79	147	140	77	75
12	40	30	40	24	32	29	28	67	166	129	75	73
13	39	30	35	25	33	28	28	59	152	125	77	75
14	39	31	36	e23	31	28	31	59	144	121	75	76
15	39	35	33	e22	29	27	29	67	196	115	70	74
16	38	35	32	e27	e27	27	30	94	253	111	68	73
17	38	34	32	35	e28	28	35	136	322	115	68	80
18	40	33	32	45	e30	25	35	103	339	111	70	81
19	40	35	32	48	33	29	31	128	280	104	70	79
20	50	34	31	46	35	29	30	151	270	99	67	77
21	41	e25	28	42	35	28	29	145	339	96	64	75
22	40	32	e26	36	31	27	28	139	406	94	63	75
23	38	34	e20	36	27	27	30	160	400	104	68	75
24	37	34	e23	34	28	e25	32	197	356	102	66	81
25	35	31	e25	29	29	e26	32	126	316	104	63	80
26	36	29	e24	30	29	27	33	117	309	102	62	77
27	35	e20	e24	31	29	28	36	121	310	96	65	75
28	35	e23	25	32	30	32	32	147	312	91	66	74
29	34	e21	27	31	---	30	31	182	303	87	65	72
30	33	e22	30	31	---	29	31	175	285	85	67	74
31	33	---	e24	30	---	28	---	172	---	84	68	---
TOTAL	1,304	923	865	895	836	861	927	3,019	7,771	4,264	2,238	2,190
MEAN	42.1	30.8	27.9	28.9	29.9	27.8	30.9	97.4	259	138	72.2	73.0
MAX	72	35	40	48	35	32	37	197	406	265	95	81
MIN	33	20	20	18	26	25	27	24	144	84	62	65
AC-FT	2,590	1,830	1,720	1,780	1,660	1,710	1,840	5,990	15,410	8,460	4,440	4,340

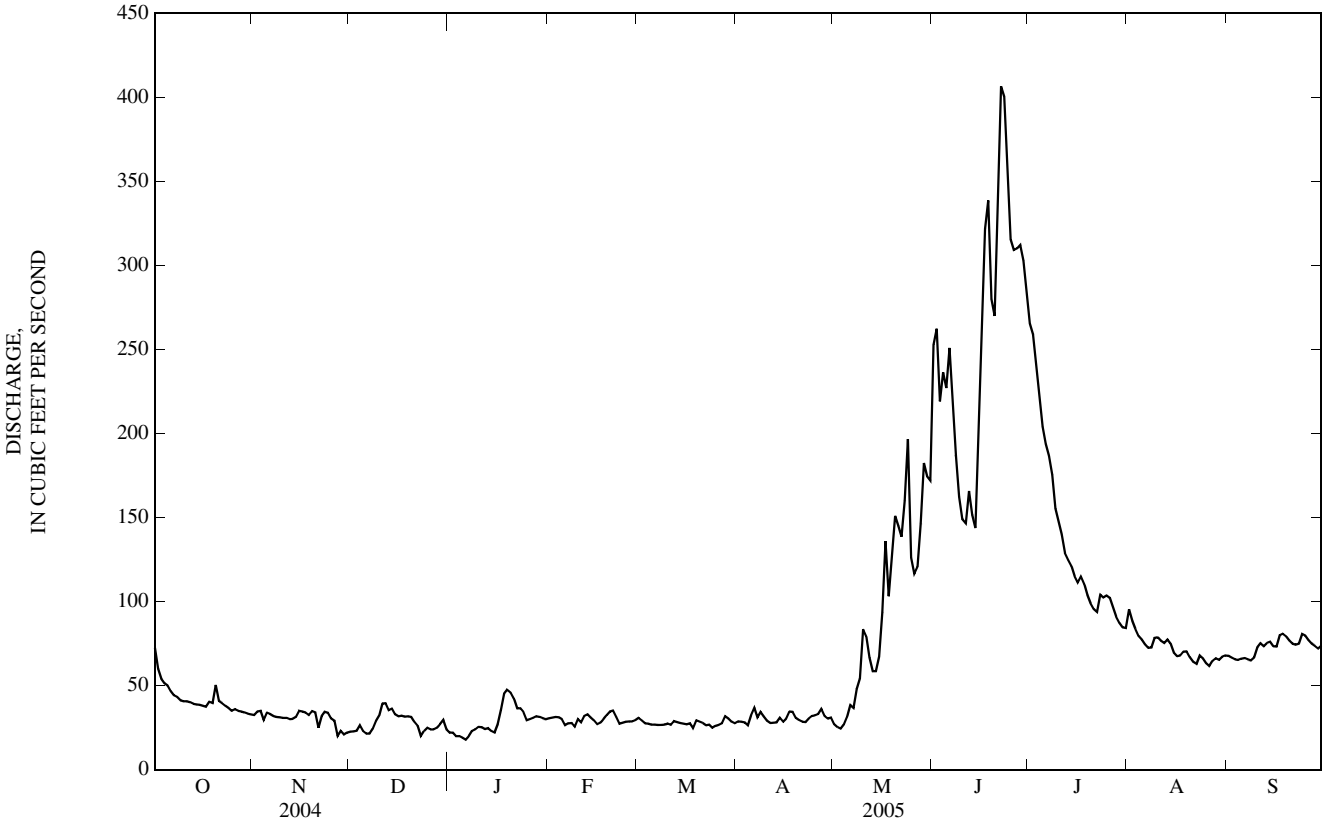
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	72.0	58.2	48.2	47.0	46.3	47.7	52.6	111	192	110	82.4	78.0
MAX	113	99.5	78.6	71.0	68.0	67.3	66.5	159	266	196	99.0	95.1
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(2003)	(1998)	(1999)	(1999)
MIN	42.1	30.8	27.9	28.9	29.9	27.8	30.9	70.0	93.0	65.2	63.2	68.4
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2002)	(2000)	(2000)	(2000)	(2000)

12323760 WARM SPRINGS CREEK NEAR ANACONDA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	21,760		26,093			
ANNUAL MEAN	59.5		71.5		78.8	
HIGHEST ANNUAL MEAN					112	1998
LOWEST ANNUAL MEAN					61.5	2004
HIGHEST DAILY MEAN	179	Jun 11	406	Jun 22	598	May 31, 2003
LOWEST DAILY MEAN	15	Jan 4	18	Jan 6	15	Jan 4, 2004
ANNUAL SEVEN-DAY MINIMUM	18	Jan 3	20	Jan 1	18	Jan 3, 2004
MAXIMUM PEAK FLOW			443	Jun 23	a675	May 31, 2003
MAXIMUM PEAK STAGE			3.76	Jun 23	b4.89	Dec 26, 1998
INSTANTANEOUS LOW FLOW					c10	Jan 6, 2004
ANNUAL RUNOFF (AC-FT)	43,160		51,760		57,120	
10 PERCENT EXCEEDS	93		168		127	
50 PERCENT EXCEEDS	54		36		64	
90 PERCENT EXCEEDS	30		25		39	

a--Gage height, 4.17 ft.
b--Backwater from ice.
c--Gage height, 1.79 ft, result of freezeup.
e--Estimated.



12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT

LOCATION.--Lat 46°10'49", long 112°47'06" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.18, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at I-90 frontage road bridge 0.2 mi southeast of Warm Springs post office, and at river mile 0.9.

DRAINAGE AREA.--163 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. October 1983 to June 26, 2002 at site 200 ft upstream at different datum.

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Numerous diversions upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	21	19	e17	19	20	17	17	152	204	56	38
2	38	23	18	e16	19	20	17	15	176	199	50	37
3	33	24	17	e15	19	19	17	14	154	189	45	35
4	31	22	20	e15	19	19	16	16	169	176	41	31
5	29	23	e17	e15	19	19	17	18	161	162	38	33
6	26	24	18	e14	19	19	20	21	193	154	36	35
7	26	23	18	e12	e18	18	19	22	177	150	34	34
8	27	23	17	e14	18	18	20	27	152	143	34	32
9	27	24	17	e14	e17	18	19	34	135	124	43	34
10	28	23	19	e14	e20	17	18	56	124	110	44	42
11	29	23	23	e15	e20	17	17	55	115	101	43	47
12	28	23	25	e18	21	18	17	37	128	88	40	45
13	26	22	22	e17	22	19	17	31	121	83	42	47
14	26	23	23	e17	21	18	19	33	112	81	41	50
15	27	26	23	e16	e18	18	17	37	146	67	36	47
16	27	24	23	e16	e17	19	17	57	190	53	36	47
17	28	22	23	e22	e19	20	19	93	253	56	36	57
18	29	21	23	e25	e20	18	21	65	281	54	39	60
19	29	25	23	e25	e20	20	20	75	236	47	41	58
20	34	26	22	e26	24	20	18	102	212	41	37	56
21	32	20	20	e24	24	19	18	96	250	41	34	54
22	29	24	e17	23	23	16	17	90	292	38	36	52
23	28	27	e16	22	22	16	17	100	292	43	39	55
24	28	27	e19	22	22	e15	18	129	251	43	38	61
25	26	25	e23	19	20	e16	19	87	229	46	36	61
26	25	24	e25	18	20	16	19	73	213	49	35	52
27	26	18	e25	19	20	16	21	77	221	41	37	46
28	24	e18	e22	19	20	18	20	97	220	36	40	47
29	23	17	e20	19	---	18	19	122	218	40	37	47
30	20	14	e20	19	---	17	19	122	209	39	37	48
31	19	---	e18	18	---	16	---	103	---	44	39	---
TOTAL	866	679	635	565	560	557	549	1,921	5,782	2,742	1,220	1,388
MEAN	27.9	22.6	20.5	18.2	20.0	18.0	18.3	62.0	193	88.5	39.4	46.3
MAX	38	27	25	26	24	20	21	129	292	204	56	61
MIN	19	14	16	12	17	15	16	14	112	36	34	31
AC-FT	1,720	1,350	1,260	1,120	1,110	1,100	1,090	3,810	11,470	5,440	2,420	2,750

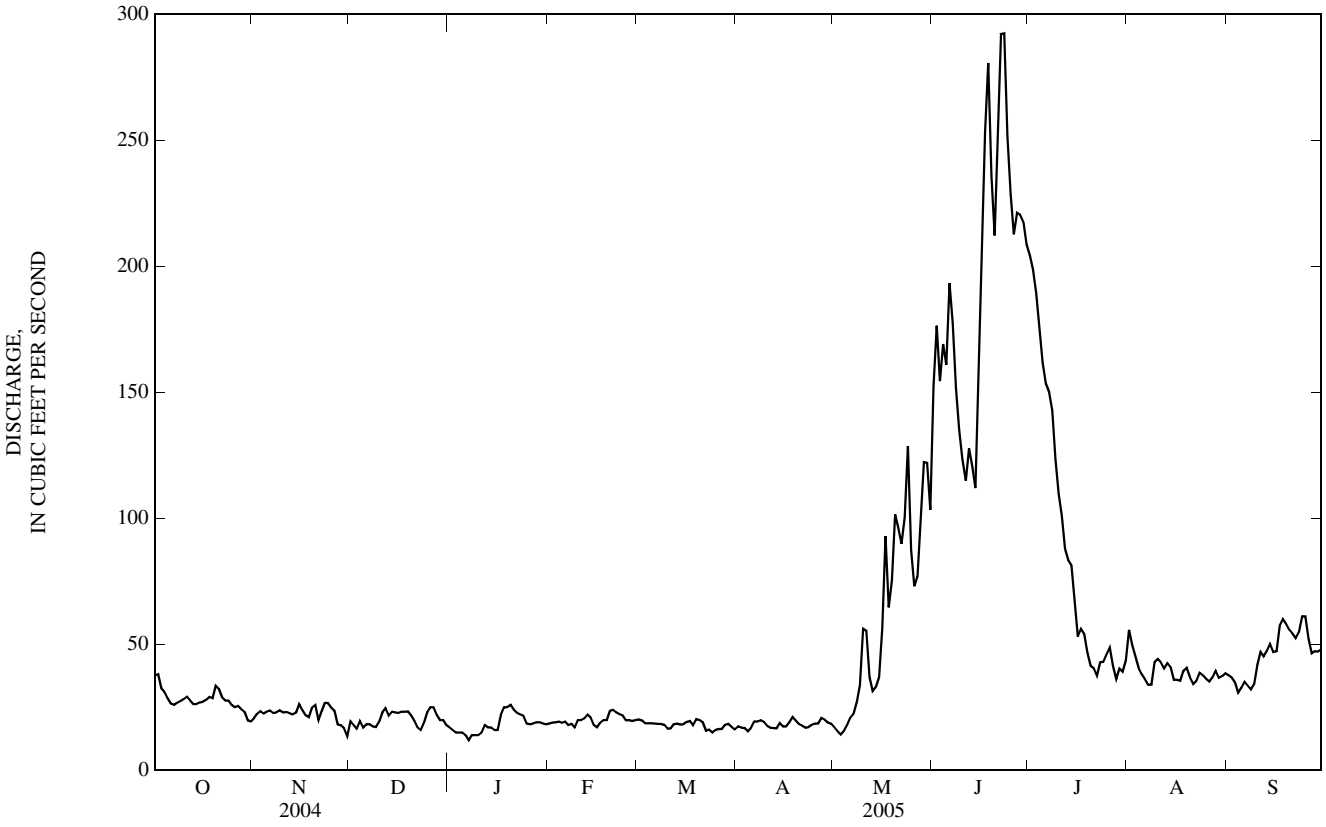
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	42.7	42.5	33.0	35.0	35.1	34.8	41.0	80.4	137	54.7	25.9	32.7
MAX	95.2	84.5	77.8	82.1	63.0	53.5	62.8	196	362	170	125	81.6
(WY)	(1998)	(1998)	(1985)	(1985)	(1986)	(1998)	(1986)	(1997)	(1997)	(1997)	(1997)	(1997)
MIN	10.6	13.1	5.89	4.21	4.54	18.0	13.3	19.3	7.05	0.42	0.46	2.61
(WY)	(1988)	(1993)	(1993)	(1993)	(1993)	(2005)	(1991)	(1992)	(1992)	(1985)	(1988)	(1988)

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	11,599.0		17,464			
ANNUAL MEAN	31.7		47.8		49.5	
HIGHEST ANNUAL MEAN					108	1997
LOWEST ANNUAL MEAN					16.6	1992
HIGHEST DAILY MEAN	112	Jun 11	292	Jun 22	475	Jun 6, 1997
LOWEST DAILY MEAN	8.0	Jan 4	12	Jan 7	0.00	Aug 4, 1988
ANNUAL SEVEN-DAY MINIMUM	8.9	Jan 1	14	Jan 4	0.05	Aug 3, 1988
MAXIMUM PEAK FLOW			321	Jun 22	a494	Jun 5, 1997
MAXIMUM PEAK STAGE			4.81	Jun 22	b5.70	Feb 2, 1986
INSTANTANEOUS LOW FLOW					0.00	Aug 4, 1988
ANNUAL RUNOFF (AC-FT)	23,010		34,640		35,860	
10 PERCENT EXCEEDS	50		124		95	
50 PERCENT EXCEEDS	29		25		36	
90 PERCENT EXCEEDS	17		17		8.0	

a--Gage height, 4.55 ft, site and datum then in use.
b--Backwater from ice.
e--Estimated.



12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: July 2000 to current year.

INSTRUMENTATION.--Temperature recorder installed July 6, 2000.

REMARKS.--Daily water temperature records rated excellent except for the period Jan. 21 to May 20, which is fair. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 23.5°C, July 21, 29, 2000, July 14, 2002; minimum 0.0°C, many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 21.0°C, July 20, 21, 23 and Aug. 5 and 6; minimum 0.0°C, many days November to January.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0815	22	8.3	424	-1.5	0.0	210	64.3	12.4	4.5	5	.05	.08
APR													
18...	1550	22	8.5	430	3.5	5.5	220	67.9	12.8	6.3	7	.04	.08
MAY													
17...	0745	94	8.1	281	7.0	7.0	130	40.2	7.68	8.2	22	.04	.41
JUN													
02...	0855	177	8.0	176	9.5	5.5	84	26.3	4.30	6.1	11	E.03	.17
JUL													
26...	0810	50	8.2	295	12.0	10.0	150	47.0	7.81	6.9	7.6	E.03	.07
AUG													
24...	0800	39	8.3	338	13.5	10.5	170	52.2	8.99	6.5	7.2	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	2.1	7.2	9	70	<.08	.36	394	435	3.0	3	73	9	.53
APR													
18...	3.0	6.6	7	60	<.08	.23	219	242	1.1	2	73	2	.12
MAY													
17...	5.1	108	20	1,700	.10	10.3	160	1,270	2.0	39	60	106	27
JUN													
02...	5.0	45.5	23	670	.09	3.90	65.3	298	7.6	17	63	37	18
JUL													
26...	2.9	8.2	18	90	E.06	.51	217	249	1.5	3	74	4	.54
AUG													
24...	2.6	8.7	16	100	E.05	.55	177	255	1.4	3	67	4	.42

E--Estimated.

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.0	7.5	9.0	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2	11.0	7.0	9.0	5.0	2.0	3.5	1.0	0.0	0.5	0.0	0.0	0.0
3	11.5	7.0	9.0	5.0	3.0	4.5	1.5	0.0	0.5	0.0	0.0	0.0
4	11.5	7.0	9.0	4.0	1.0	2.5	2.0	0.5	1.0	0.0	0.0	0.0
5	11.0	7.0	9.0	5.5	1.0	3.0	1.0	0.0	0.5	0.0	0.0	0.0
6	11.0	6.5	9.0	6.0	3.0	4.5	1.5	0.5	1.0	0.0	0.0	0.0
7	12.0	9.0	10.0	7.0	4.5	5.5	2.5	0.5	1.5	0.0	0.0	0.0
8	11.5	7.0	9.0	6.5	3.0	5.0	1.5	0.0	1.0	0.0	0.0	0.0
9	11.0	8.5	10.0	6.5	3.5	5.0	2.0	0.0	1.0	0.0	0.0	0.0
10	9.5	6.5	8.0	6.0	4.0	5.0	5.0	1.5	3.5	0.0	0.0	0.0
11	9.0	5.0	7.0	5.0	2.0	3.5	5.0	4.0	4.5	0.0	0.0	0.0
12	9.0	6.0	7.5	4.0	1.0	2.5	4.0	1.0	3.0	0.0	0.0	0.0
13	10.0	5.5	7.5	3.5	0.5	2.0	1.5	0.0	0.5	0.0	0.0	0.0
14	10.0	6.0	8.0	2.5	0.5	1.5	2.5	0.5	1.5	0.0	0.0	0.0
15	10.5	8.5	9.5	4.0	0.0	2.0	4.0	1.5	2.5	0.0	0.0	0.0
16	9.5	8.5	9.0	4.5	2.5	3.5	2.5	0.5	1.5	0.0	0.0	0.0
17	9.0	7.0	8.0	4.5	2.0	3.0	3.0	1.0	1.5	0.0	0.0	0.0
18	8.0	6.5	7.0	4.0	1.0	2.5	3.0	0.5	1.5	0.0	0.0	0.0
19	7.5	4.5	6.0	3.0	2.0	2.5	4.0	2.0	3.0	0.0	0.0	0.0
20	8.0	6.0	7.0	2.5	0.0	1.5	2.5	0.5	1.0	0.0	0.0	0.0
21	7.0	5.5	6.5	0.5	0.0	0.0	0.5	0.0	0.0	4.5	0.0	2.5
22	7.5	4.5	6.0	1.5	0.0	1.0	0.0	0.0	0.0	4.0	1.5	3.0
23	6.0	5.0	5.5	3.0	1.5	2.0	0.0	0.0	0.0	4.5	2.5	3.5
24	5.0	3.0	4.0	3.5	2.0	2.5	0.0	0.0	0.0	4.0	2.0	3.0
25	5.0	1.5	3.0	5.0	3.5	4.0	0.0	0.0	0.0	3.5	1.5	2.5
26	6.0	2.5	4.0	4.0	0.5	2.5	0.0	0.0	0.0	3.5	1.5	2.5
27	6.5	3.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0	4.0	2.0	3.0
28	5.5	4.0	5.0	0.5	0.0	0.0	0.0	0.0	0.0	4.5	3.0	3.5
29	5.0	4.0	4.5	0.0	0.0	0.0	0.5	0.0	0.0	4.0	2.5	3.0
30	5.0	4.0	4.5	0.0	0.0	0.0	1.5	0.0	1.0	4.0	3.0	3.0
31	4.0	2.0	3.0	---	---	---	1.0	0.0	0.0	3.5	1.5	2.5
MONTH	12.0	1.5	7.0	7.0	0.0	2.5	5.0	0.0	1.0	4.5	0.0	1.0
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	1.5	2.5	6.0	3.5	4.5	7.5	4.0	5.5	10.5	5.5	8.0
2	3.5	1.5	2.5	6.5	3.0	4.5	8.0	5.0	6.5	11.5	6.5	9.0
3	4.5	2.0	3.0	6.5	2.5	4.5	7.5	5.0	6.5	12.0	8.0	10.0
4	4.5	3.0	4.0	7.0	2.5	4.5	7.5	6.0	7.0	11.0	8.5	10.0
5	4.0	2.0	3.0	7.0	3.0	5.0	9.0	5.0	6.5	12.5	8.5	10.0
6	2.0	1.0	1.5	7.5	4.0	6.0	10.5	5.5	8.0	12.5	9.5	11.0
7	1.5	1.0	1.0	8.0	5.0	6.5	11.0	7.5	9.0	12.5	9.5	11.0
8	2.0	0.5	1.5	8.5	5.5	7.0	10.0	7.5	8.5	11.5	10.0	11.0
9	1.5	0.5	1.0	9.5	6.0	8.0	9.0	6.5	7.5	10.5	9.0	10.0
10	1.5	0.5	1.0	9.5	6.5	8.0	9.5	6.0	7.5	9.5	8.0	9.0
11	2.5	0.5	1.0	9.0	5.0	7.0	8.5	5.0	6.5	8.0	7.0	7.0
12	3.5	1.0	2.0	8.0	4.5	6.0	8.0	5.5	7.0	9.5	6.5	7.5
13	3.5	2.0	3.0	6.0	2.5	4.5	9.0	5.5	7.0	12.0	7.5	9.5
14	2.5	1.0	1.5	6.0	3.0	4.5	8.0	5.0	6.5	12.5	9.0	11.0
15	1.0	0.5	0.5	5.5	3.0	4.5	8.5	4.0	6.5	12.0	10.0	11.0
16	0.5	0.5	0.5	6.0	3.5	4.5	10.5	5.5	7.5	11.0	10.0	10.5
17	0.5	0.5	0.5	5.5	3.5	4.5	9.5	7.0	8.0	10.5	8.0	9.5
18	0.5	0.5	0.5	5.0	2.0	3.5	8.0	6.0	6.5	12.0	7.0	9.5
19	1.0	0.5	0.5	7.5	3.0	5.0	6.0	5.0	5.0	13.0	9.0	11.0
20	2.5	0.5	1.5	8.0	5.5	6.5	5.0	4.0	4.5	11.5	8.5	10.0
21	4.0	1.5	2.5	7.0	5.0	5.5	7.0	4.0	5.0	12.5	7.0	9.5
22	3.0	1.0	1.5	5.5	3.5	4.5	10.5	5.0	7.0	12.0	8.0	10.0
23	3.0	0.5	1.5	4.5	1.5	2.5	10.5	7.0	8.5	13.0	7.0	10.0
24	4.0	0.5	2.0	3.0	1.0	2.0	10.5	7.5	9.0	11.0	7.0	9.0
25	4.5	1.0	2.5	5.5	1.5	3.0	12.0	7.5	9.5	12.5	5.5	9.0
26	4.5	1.0	2.5	4.5	1.5	3.5	12.0	8.5	10.0	15.0	6.0	10.0
27	4.5	1.0	3.0	7.0	3.5	5.0	11.0	7.0	8.0	16.0	7.5	11.5
28	5.0	1.5	3.0	7.0	5.5	6.0	8.5	4.0	6.0	15.5	8.5	12.0
29	---	---	---	6.0	4.0	5.0	8.5	4.0	6.0	14.0	8.0	11.0
30	---	---	---	5.0	3.0	4.0	10.0	5.5	7.5	14.0	7.0	10.5
31	---	---	---	7.0	2.5	4.5	---	---	---	11.0	7.5	9.0
MONTH	5.0	0.5	2.0	9.5	1.0	5.0	12.0	4.0	7.0	16.0	5.5	10.0

12323770 WARM SPRINGS CREEK AT WARM SPRINGS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

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

12323800 CLARK FORK NEAR GALEN, MT

LOCATION.--Lat 46°12'30", long 112°45'59" (NAD 27), in $NE^1/_4NE^1/_4NE^1/_4$ sec.7, T.5 N., R.9 W., Deer Lodge County, Hydrologic Unit 17010201, on right bank at upstream side of bridge on county road, 2.6 mi downstream from Silver Bow Creek and Warm Springs Creek, 2 mi south of Galen, and at river mile 482.7.

DRAINAGE AREA.--651 mi^2, area at site used prior to Oct. 1, 1994, 793 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,749.24 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by Storm and Silver Lakes and settling ponds on Silver Bow Creek near Warm Springs. Numerous diversions upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	62	65	e52	56	59	57	62	401	374	91	60
2	70	67	61	e55	58	59	53	63	428	356	90	60
3	64	65	e62	e52	59	57	53	66	391	334	85	57
4	64	64	64	e52	59	56	54	70	397	314	70	53
5	65	64	e62	e50	55	56	55	74	387	281	64	56
6	65	67	65	e46	51	56	58	79	446	253	62	62
7	64	64	65	e50	51	54	59	85	438	238	59	55
8	66	62	63	e50	51	54	54	100	380	233	57	51
9	61	63	62	e48	e48	55	52	126	351	204	66	53
10	65	63	65	e48	e50	52	48	183	320	188	68	63
11	69	63	70	e50	e50	51	46	216	298	178	81	70
12	78	63	71	e55	55	52	45	191	322	156	67	72
13	82	62	66	e52	58	52	45	174	317	145	71	71
14	83	62	68	e52	58	52	57	174	296	144	75	68
15	80	67	68	e48	51	52	55	197	333	132	71	66
16	72	66	67	e50	e50	53	54	248	392	112	69	66
17	66	64	66	e60	e55	53	54	373	491	109	69	87
18	67	65	66	70	e55	51	58	345	545	105	72	99
19	72	67	68	70	e55	53	58	373	461	96	72	103
20	75	69	64	69	59	54	57	438	415	85	72	99
21	78	e62	58	66	62	55	56	435	466	82	65	94
22	73	e65	e55	59	59	51	55	407	527	78	63	91
23	71	67	e50	58	57	50	55	408	541	81	67	90
24	70	70	e55	58	57	e50	56	420	462	82	65	99
25	67	82	e58	55	58	52	58	361	404	81	63	101
26	65	90	60	54	58	55	60	310	391	78	60	95
27	65	e85	e58	54	58	55	63	296	424	71	61	81
28	64	e80	e56	56	58	58	64	307	424	66	63	70
29	64	e75	54	56	---	61	62	324	411	68	61	71
30	62	e70	58	56	---	57	62	321	392	65	62	73
31	60	---	e55	56	---	54	---	302	---	74	61	---
TOTAL	2,135	2,035	1,925	1,707	1,551	1,679	1,663	7,528	12,251	4,863	2,122	2,236
MEAN	68.9	67.8	62.1	55.1	55.4	54.2	55.4	243	408	157	68.5	74.5
MAX	83	90	71	70	62	61	64	438	545	374	91	103
MIN	60	62	50	46	48	50	45	62	296	65	57	51
AC-FT	4,230	4,040	3,820	3,390	3,080	3,330	3,300	14,930	24,300	9,650	4,210	4,440

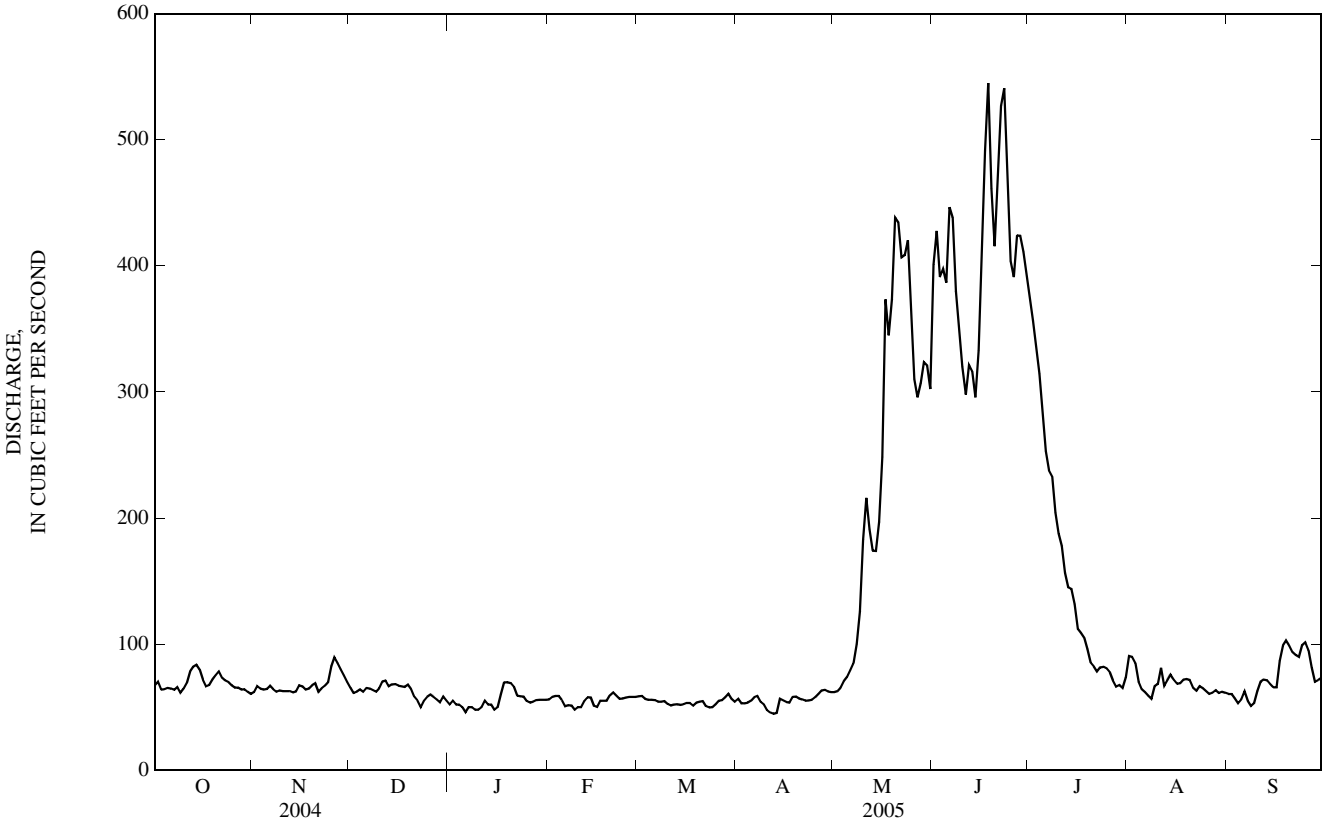
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

MEAN	87.2	92.2	81.2	82.8	90.3	111	131	246	348	135	69.2	70.2
MAX	170	159	132	169	174	167	257	668	974	381	233	184
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1997)	(1997)	(1993)
MIN	40.6	50.7	40.7	42.5	43.5	54.2	55.4	68.6	51.1	21.4	10.2	20.3
(WY)	(1989)	(1993)	(1993)	(1993)	(1993)	(2005)	(2005)	(1992)	(1992)	(1988)	(1988)	(1988)

12323800 CLARK FORK NEAR GALEN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1988 - 2005	
ANNUAL TOTAL	27,131		41,695			
ANNUAL MEAN	74.1		114		130	
HIGHEST ANNUAL MEAN					288	1997
LOWEST ANNUAL MEAN					59.6	1992
HIGHEST DAILY MEAN	202	Jun 11	545	Jun 18	1,210	Jun 7, 1997
LOWEST DAILY MEAN	26	Aug 7	45	Apr 12	9.7	Aug 11, 1988
ANNUAL SEVEN-DAY MINIMUM	28	Aug 7	49	Jan 5	9.8	Aug 15, 1988
MAXIMUM PEAK FLOW			571	Jun 18	1,240	Jun 7, 1997
MAXIMUM PEAK STAGE			3.49	Jun 18	5.07	Jun 7, 1997
INSTANTANEOUS LOW FLOW					a9.0	Aug 9, 1988
ANNUAL RUNOFF (AC-FT)	53,810		82,700		93,950	
10 PERCENT EXCEEDS	111		333		272	
50 PERCENT EXCEEDS	70		65		87	
90 PERCENT EXCEEDS	41		52		44	

a--Gage height, 1.39 ft.
e--Estimated.



12323800 CLARK FORK NEAR GALEN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, 1988 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998, October 2000 to September 2002,

REMARKS.--Sampling conducted since 1988 as part of EPA Superfund program. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE.: Maximum 25.5 °C, June 23, 1991; minimum 0.0 °C, on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1005	65	9.0	569	-2.0	1.0	250	72.3	17.0	11.4	12	.12	.17
MAR													
08...	1550	54	8.7	593	14.0	8.0	280	81.7	17.6	9.1	11	.07	.13
APR													
19...	0745	59	8.2	592	2.0	5.0	280	82.3	18.1	7.3	10	.06	.12
MAY													
17...	0955	383	8.6	401	8.5	9.0	160	44.5	12.1	29.6	50	E.03	.64
JUN													
02...	1050	427	8.8	289	14.0	8.5	120	35.3	6.90	20.4	27	.04	.18
22...	1615	566	8.6	218	29.5	16.5	93	28.7	5.29	21.0	28	E.03	.22
JUL													
26...	0950	77	8.4	390	18.0	13.0	190	58.0	11.7	15.2	16.1	E.04	.06
AUG													
23...	1700	70	9.0	440	24.0	18.0	220	63.9	13.5	20.1	21.5	E.03	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	4.9	9.3	7	90	<.08	.36	158	152	5.3	9	96	2	.35
MAR													
08...	4.8	12.2	E4	180	<.08	.82	176	208	4.4	12	79	6	.87
APR													
19...	4.8	8.2	11	210	E.04	.98	204	274	7.2	12	84	4	.64
MAY													
17...	6.8	89.3	63	2,030	.22	14.3	177	785	3.2	80	67	94	97
JUN													
02...	6.8	31.3	29	520	.10	2.94	116	307	2.8	20	71	20	23
22...	7.8	53.3	18	780	.12	4.95	52.5	251	2.4	24	70	35	53
JUL													
26...	4.0	8.1	13	100	E.06	.57	91.3	152	2.3	5	85	4	.83
AUG													
23...	4.0	9.0	7	120	E.05	.80	41.1	139	1.2	6	76	4	.76

E--Estimated.

12323840 LOST CREEK NEAR ANACONDA, MT

LOCATION.--Lat 46°09'43", long 112°53'30" (NAD 27), in $SE^1/_4NE^1/_4NE^1/_4$ sec. 30, T.5 N., R.10 W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 400 ft upstream from Montana Secondary Highway 273, 700 ft upstream from Gardiner Ditch, 5.2 mi upstream from Dutchman Creek, 2.7 mi northeast of Anaconda, and at river mile 10.2.

DRAINAGE AREA.--26.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 5,100 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges and those for June to August, which are fair. No regulation; numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.50	4.6	3.8	e3.5	3.3	3.1	2.9	2.0	15	12	1.3	0.45
2	e0.50	4.6	4.6	e3.7	3.4	2.9	2.9	1.4	15	11	3.9	0.43
3	e0.50	4.6	5.2	e3.5	3.4	2.9	2.9	2.1	17	11	14	0.39
4	e0.50	4.3	5.2	e3.0	3.4	2.8	2.9	2.3	19	11	14	0.46
5	e0.50	4.6	4.8	e3.0	3.3	2.8	2.8	2.7	21	8.9	13	0.46
6	e0.50	4.5	4.9	e2.5	2.9	2.8	2.8	2.5	28	6.6	13	0.46
7	0.49	4.5	4.8	3.5	3.4	2.8	3.2	2.4	26	6.1	12	0.41
8	0.51	4.6	4.7	4.0	3.4	2.8	3.7	3.5	23	5.6	12	0.39
9	0.61	4.6	4.6	3.9	e3.2	2.8	3.3	4.2	21	5.2	12	0.45
10	1.8	4.5	4.7	3.8	e3.4	2.8	3.7	9.4	18	5.5	12	0.56
11	1.7	4.6	4.8	3.7	e3.6	2.8	3.7	7.0	19	5.1	12	0.61
12	1.8	4.5	4.5	3.7	3.7	3.1	3.6	5.6	19	6.1	12	0.55
13	1.7	4.5	4.0	3.8	3.7	2.9	3.6	5.6	17	6.3	12	0.48
14	1.5	4.4	4.6	3.8	3.8	2.9	4.0	6.6	15	5.3	11	0.44
15	1.4	4.5	4.4	e3.0	e3.5	2.9	3.7	4.9	16	4.8	10	0.40
16	1.4	4.5	4.3	e3.3	e3.0	2.9	3.8	7.7	16	4.2	9.5	0.37
17	1.4	4.6	4.3	3.8	e3.2	2.9	4.0	13	20	4.3	9.5	0.46
18	1.9	4.5	4.3	5.5	e3.3	e3.0	4.1	11	22	4.2	9.3	0.40
19	3.8	4.7	4.3	5.4	e3.4	3.4	3.9	15	20	2.7	8.5	0.40
20	3.8	4.5	4.2	4.6	3.7	3.2	4.0	16	18	1.5	6.7	0.43
21	3.7	3.3	3.4	4.1	3.6	3.1	3.8	17	17	1.1	5.3	0.40
22	3.5	4.6	e3.0	3.8	e3.5	3.0	3.8	15	17	0.98	4.7	0.39
23	4.3	4.9	e2.0	3.7	e3.5	e2.8	3.9	12	19	1.1	3.7	0.38
24	4.8	4.9	2.4	3.6	e3.4	e3.0	4.1	12	17	0.98	3.0	0.59
25	4.8	5.0	3.7	3.5	3.4	e3.2	4.6	11	17	0.89	2.6	0.50
26	4.6	4.7	3.9	3.5	3.3	e3.3	3.2	8.7	17	1.9	2.2	0.38
27	4.6	3.4	3.9	3.5	3.2	3.4	3.3	6.3	17	3.8	1.4	0.35
28	4.6	3.6	3.5	3.5	3.1	3.5	2.7	7.6	16	2.3	1.1	0.35
29	4.5	2.6	4.1	3.4	---	3.2	2.7	9.3	15	2.1	0.48	0.31
30	4.5	2.7	4.7	3.3	---	3.0	2.8	10	14	1.4	0.49	0.27
31	4.5	---	4.2	3.4	---	2.8	---	12	---	1.2	0.51	---
TOTAL	75.21	130.4	129.8	114.3	95.0	92.8	104.4	245.8	551	145.15	233.18	12.92
MEAN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
MAX	4.8	5.0	5.2	5.5	3.8	3.5	4.6	17	28	12	14	0.61
MIN	0.49	2.6	2.0	2.5	2.9	2.8	2.7	1.4	14	0.89	0.48	0.27
AC-FT	149	259	257	227	188	184	207	488	1,090	288	463	26

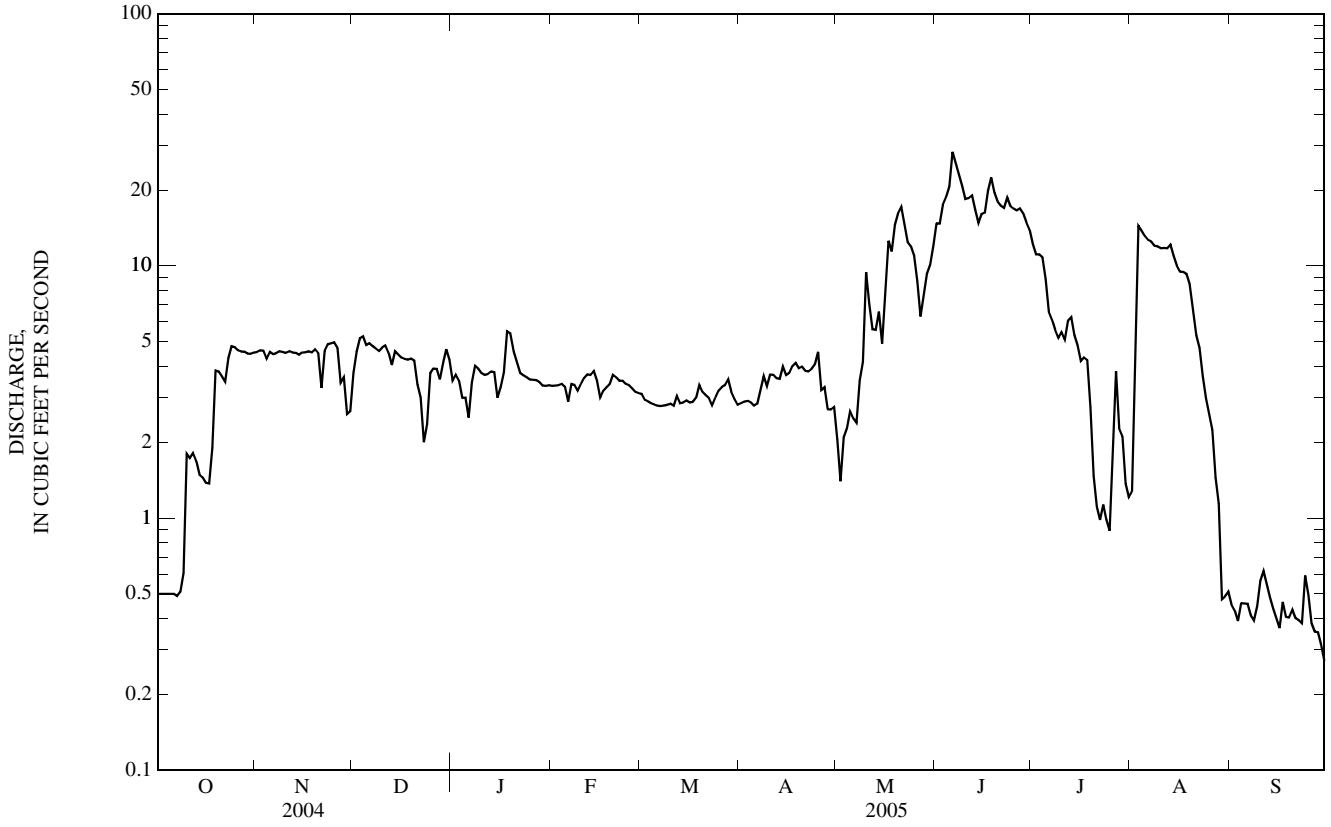
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2005 - 2005, BY WATER YEAR (WY)

MEAN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
MAX	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	2.43	4.35	4.19	3.69	3.39	2.99	3.48	7.93	18.4	4.68	7.52	0.43
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

12323840 LOST CREEK NEAR ANACONDA, MT—Continued

SUMMARY STATISTICS	FOR 2005 WATER YEAR	
ANNUAL TOTAL	1,929.96	
ANNUAL MEAN	5.29	
HIGHEST DAILY MEAN	28	Jun 6
LOWEST DAILY MEAN	0.27	Sep 30
ANNUAL SEVEN-DAY MINIMUM	0.39	Sep 24
MAXIMUM PEAK FLOW	a32	Jun 6
MAXIMUM PEAK STAGE	b4.26	Jan 6
INSTANTANEOUS LOW FLOW	c0.25	Sep 29
ANNUAL RUNOFF (AC-FT)	3,830	
10 PERCENT EXCEEDS	13	
50 PERCENT EXCEEDS	3.7	
90 PERCENT EXCEEDS	0.51	

a--Gage height, 3.66 ft.
b--Backwater from ice.
c--Gage height, 2.16 ft.
e--Estimated.



12323840 LOST CREEK NEAR ANACONDA, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 2004 to August 2005.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
DEC										
15...	1430	4.5	<2.0	8.4	221	8.5	3.0	100	30.8	6.69
MAR										
08...	1100	2.8	<2.0	8.6	221	13.0	4.5	110	31.4	6.79
APR										
18...	1250	4.0	<2.0	8.4	211	4.5	4.5	100	30.3	6.46
MAY										
16...	1400	8.3	E24,200	7.4	163	12.0	8.5	50	15.7	2.71
JUN										
01...	1500	15	2.6	8.2	170	9.5	7.0	84	26.0	4.60
22...	1310	17	2.1	8.2	176	32.0	13.0	87	27.2	4.48
JUL										
25...	1520	.97	<2.0	8.4	227	17.5	13.0	110	35.7	6.16
AUG										
23...	1400	4.0	<2.0	8.3	224	32.0	14.5	110	33.9	6.11

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)
DEC												
15...	2.7	3	E.02	E.02	1.2	1.7	<6	30	<.08	.13	.5	1
MAR												
08...	2.5	2	.05	E.03	1.5	4.5	<6	60	<.08	.38	.8	2
APR												
18...	2.8	3	E.03	E.04	1.5	3.6	E4	60	<.08	.35	.9	3
MAY												
16...	156	3,860	.90	147	90.5	29,100	25	99,700	.18	1,290	42.4	8,830
JUN												
01...	8.0	11	.04	.11	4.5	18.9	15	640	E.06	2.80	2.0	18
22...	10.2	10	.04	.07	3.4	8.2	11	210	E.04	.95	2.3	8
JUL												
25...	9.3	8.9	.04	.04	3.3	4.4	8	20	<.08	.18	1.9	3
AUG												
23...	5.6	6.2	.05	.08	3.6	8.9	<6	160	E.05	.70	1.2	6

E--Estimated.

12323840 LOST CREEK NEAR ANACONDA, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC					
15...	1.2	3	83	3	.04
MAR					
08...	1.0	3	87	11	.08
APR					
18...	1.1	E2	66	2	.02
MAY					
16...	30.0	7,780	97	58,900	1,320
JUN					
01...	1.8	11	30	53	2.1
22...	1.7	4	41	16	.73
JUL					
25...	1.2	2	73	1	.00
AUG					
23...	1.3	4	80	8	.09

E--Estimated.

12323850 LOST CREEK NEAR GALEN, MT

LOCATION.--Lat 46°13'07", long 112°46'23" (NAD 27), in $NW^1/_4SW^1/_4SE^1/_4$ sec. 6, T.5N., R.9W., Deer Lodge County, Hydrologic Unit 17010201, on left bank 40 ft upstream from frontage road bridge, 1.2 mi south of Galen, and at river mile 1.8.

DRAINAGE AREA.--60.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. No regulation. Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	33	42	e40	41	39	40	21	8.2	9.1	1.9	8.9
2	21	32	42	e40	41	40	37	16	11	8.3	2.3	8.8
3	21	35	42	e40	41	39	34	16	10	8.0	2.5	8.7
4	21	33	42	e40	41	37	36	16	8.5	7.9	2.8	8.4
5	21	32	42	e38	41	37	36	17	7.7	7.8	2.8	9.0
6	21	33	42	e36	40	37	36	17	11	7.7	2.7	8.9
7	20	32	42	e40	40	37	35	6.7	10	7.7	2.8	8.5
8	21	33	42	e40	40	37	37	6.5	6.8	7.3	3.3	8.3
9	21	37	42	e38	40	37	38	9.6	5.9	7.1	4.2	8.2
10	21	37	44	e38	40	37	37	26	5.4	7.8	4.0	10
11	21	37	46	e40	39	37	36	37	5.6	8.8	3.5	11
12	22	36	45	e42	39	39	36	27	7.8	7.9	3.4	9.8
13	22	35	43	e40	39	41	35	16	7.8	7.1	4.3	10
14	22	35	43	e40	39	41	39	17	5.9	6.7	4.0	10
15	22	35	44	e38	e38	41	41	18	6.1	6.6	3.4	9.8
16	22	36	44	e40	e36	42	41	12	6.0	7.1	3.3	9.9
17	22	36	43	e45	e37	41	39	19	10	6.8	3.3	18
18	22	36	43	50	e37	41	40	15	18	7.2	3.6	24
19	22	36	44	55	37	41	42	14	14	7.0	3.5	20
20	22	38	43	46	38	41	40	12	12	6.6	3.1	18
21	25	e40	43	45	38	41	40	11	11	6.4	2.8	18
22	29	43	43	43	38	41	38	9.8	11	6.5	3.2	17
23	29	44	e42	44	38	40	37	10	7.6	4.4	6.3	20
24	29	44	e38	43	38	e38	37	8.9	3.6	4.9	4.0	39
25	28	46	e40	42	38	40	36	8.8	1.5	4.2	3.8	37
26	28	45	42	42	38	41	34	8.4	2.1	2.2	4.9	35
27	30	43	41	41	38	42	29	8.0	4.5	1.8	4.3	34
28	38	43	e40	42	38	43	30	5.1	8.0	1.7	4.1	34
29	38	e42	41	42	---	42	29	3.4	11	1.7	3.7	34
30	34	e42	42	41	---	41	27	3.4	9.6	1.7	6.7	34
31	34	---	41	41	---	40	---	3.6	---	1.9	9.4	---
TOTAL	771	1,129	1,313	1,292	1,088	1,231	1,092	419.2	247.6	187.9	117.9	530.2
MEAN	24.9	37.6	42.4	41.7	38.9	39.7	36.4	13.5	8.25	6.06	3.80	17.7
MAX	38	46	46	55	41	43	42	37	18	9.1	9.4	39
MIN	20	32	38	36	36	37	27	3.4	1.5	1.7	1.9	8.2
AC-FT	1,530	2,240	2,600	2,560	2,160	2,440	2,170	831	491	373	234	1,050

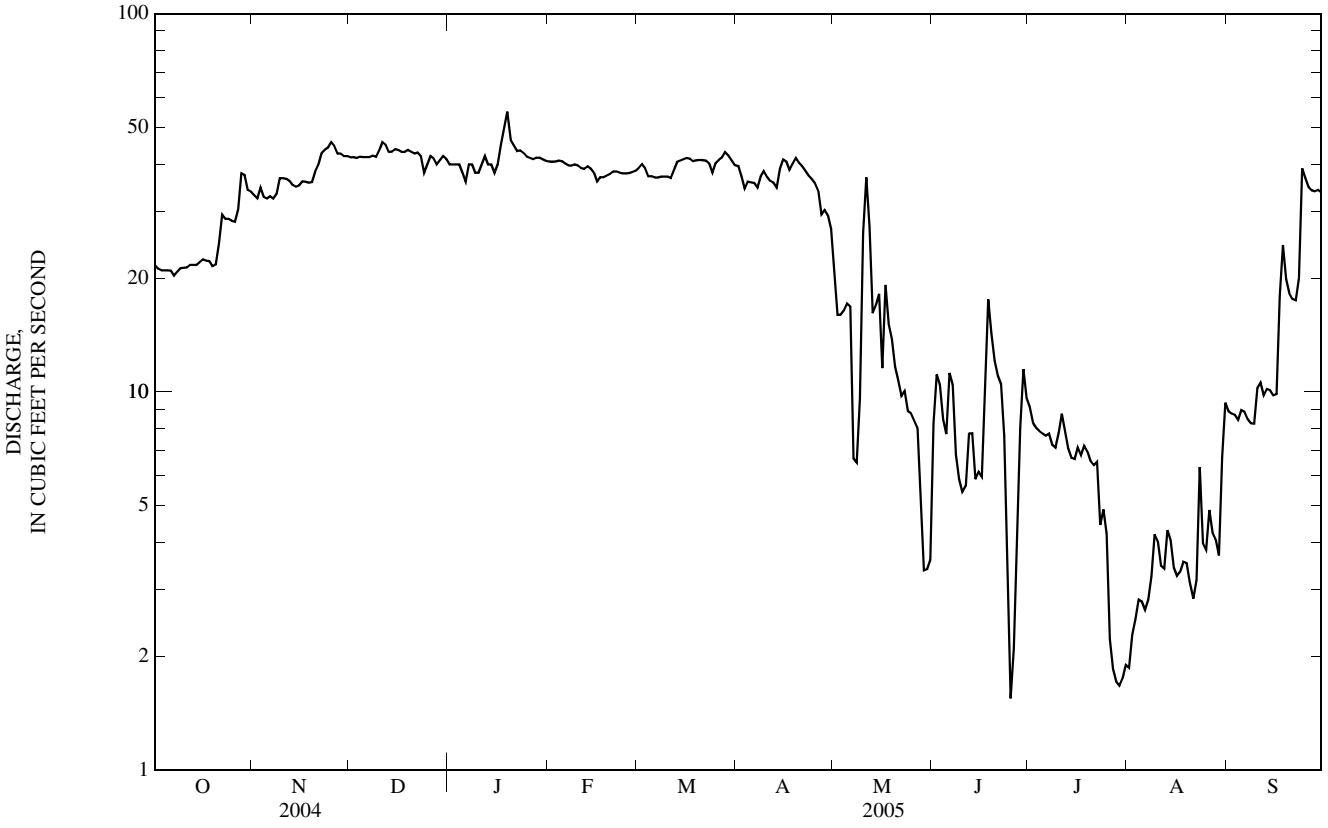
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	26.7	42.1	43.6	41.5	40.7	43.0	32.4	11.6	5.26	3.88	3.14	15.8
MAX	28.6	46.5	44.8	41.7	42.4	46.3	36.4	18.6	8.25	6.06	3.80	18.6
(WY)	(2004)	(2004)	(2004)	(2005)	(2004)	(2004)	(2005)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	24.9	37.6	42.4	41.3	38.9	39.7	26.8	2.58	1.53	1.55	2.75	11.1
(WY)	(2005)	(2005)	(2005)	(2004)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)

12323850 LOST CREEK NEAR GALEN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	8,783.6		9,418.8			
ANNUAL MEAN	24.0		25.8		25.5	
HIGHEST ANNUAL MEAN					25.8	2005
LOWEST ANNUAL MEAN					25.3	2004
HIGHEST DAILY MEAN	54	Mar 9	55	Jan 19	60	Apr 1, 2003
LOWEST DAILY MEAN	1.4	Jun 14	1.5	Jun 25	1.4	Jul 30, 2003
ANNUAL SEVEN-DAY MINIMUM	1.4	Jun 21	1.8	Jul 26	1.4	Jun 21, 2004
MAXIMUM PEAK FLOW			a59	Jan 18	a61	Apr 2, 2003
MAXIMUM PEAK STAGE			b4.38	Jan 7	b5.34	Jan 5, 2004
INSTANTANEOUS LOW FLOW			c1.3	Jun 25	d1.2	Jul 22, 2003
ANNUAL RUNOFF (AC-FT)	17,420		18,680		18,490	
10 PERCENT EXCEEDS	45		42		45	
50 PERCENT EXCEEDS	22		33		30	
90 PERCENT EXCEEDS	1.5		4.2		1.7	

a--Gage height, 2.08 ft.
b--Backwater from ice.
c--Gage height, 1.21 ft.
d--Gage height, 1.16 ft.
e--Estimated.



12323850 LOST CREEK NEAR GALEN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2003 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	0935	43	8.7	618	-2.0	1.5	310	89.0	20.3	8.7	8	E.02	.04
MAR													
08...	1520	37	8.7	627	15.0	9.5	320	95.5	20.9	13.7	14	E.03	.04
APR													
19...	0720	42	8.3	702	2.0	4.0	380	109	25.5	15.9	15	.04	.09
MAY													
17...	0925	20	8.2	934	9.0	8.5	450	122	35.7	36.9	37	E.03	.06
JUN													
02...	1020	11	8.4	705	13.0	8.5	340	97.0	24.6	12.6	14	E.02	.06
22...	1545	11	8.5	663	34.0	22.0	330	93.6	24.4	15.7	15	E.02	E.03
JUL													
26...	0930	2.4	8.0	668	16.0	13.0	310	85.2	24.0	24.6	24.7	.04	.08
AUG													
23...	1630	5.6	8.3	680	25.0	18.0	330	92.9	24.4	23.6	23.4	E.04	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	1.7	4.0	E5	80	<.08	.25	6.1	8	2.4	4	29	29	3.4
MAR													
08...	2.6	7.4	E5	80	<.08	.33	13.5	14	2.3	3	63	10	1.0
APR													
19...	2.9	10.1	10	160	E.04	.63	15.7	24	3.8	7	65	15	1.7
MAY													
17...	5.4	18.7	61	110	E.06	.38	39.5	45	2.8	8	67	7	.38
JUN													
02...	2.6	6.3	14	50	E.05	.12	8.3	10	1.3	2	49	11	.33
22...	3.0	4.4	7	40	<.08	.19	3.8	6	1.2	E1	36	17	.50
JUL													
26...	3.2	6.3	25	80	.11	.45	28.3	32	3.6	3	76	6	.04
AUG													
23...	3.5	6.1	17	80	.10	.39	11.3	17	1.7	2	72	5	.08

E--Estimated.

12324200 CLARK FORK AT DEER LODGE, MT

LOCATION.--Lat 46°23'52", long 112°44'31" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.33, T.8 N., R.9 W., Powell County, Hydrologic Unit 17010201, on left bank 35 ft upstream from Milwaukee Avenue Bridge in Deer Lodge, 0.05 mi upstream from Taylor Creek, 0.24 mi downstream from Tin Cup Joe Creek, and at river mile 461.2.

DRAINAGE AREA.--995 mi^2, area at site used prior to Oct. 1, 1994, 1,005 mi^2. Area used October 1994 to September 2000, 916 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,502.24 ft (NGVD 29).

REMARKS.--Water-discharge records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 31,000 acres. Some regulation by settling ponds on Silver Bow Creek near Warm Springs. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	154	e140	e140	171	158	141	133	403	485	96	109
2	132	160	e160	e140	172	156	141	125	522	462	103	111
3	135	168	171	e140	172	155	139	126	518	436	97	108
4	132	168	172	e130	175	149	140	124	511	404	93	102
5	133	165	175	e120	171	150	141	120	484	372	82	100
6	132	172	179	e110	157	151	142	121	533	319	77	103
7	130	168	178	e130	159	149	144	120	577	294	75	102
8	132	164	177	e150	161	146	146	123	490	292	73	106
9	130	168	178	e150	151	146	148	165	453	268	88	91
10	136	170	183	e150	154	145	140	249	412	243	90	108
11	152	170	195	e150	156	142	134	322	370	241	85	128
12	163	168	196	e160	164	143	131	278	388	213	94	127
13	164	165	183	e150	164	143	129	237	418	187	88	133
14	171	166	189	e140	158	143	147	214	363	175	91	130
15	169	168	189	e130	150	144	153	231	398	166	91	127
16	165	177	185	e150	143	145	150	270	448	145	86	124
17	160	173	185	160	151	146	146	438	598	130	84	149
18	166	173	183	193	157	143	150	438	785	125	86	166
19	163	175	187	250	161	143	158	435	690	116	88	165
20	168	180	187	223	163	148	155	539	572	101	88	162
21	175	169	171	205	159	147	150	550	585	95	90	157
22	169	172	e160	192	153	143	146	520	656	94	85	155
23	165	192	e130	191	152	140	143	507	711	93	96	151
24	162	200	e160	185	153	132	142	504	615	91	94	174
25	158	214	174	178	157	146	141	448	512	91	94	187
26	154	222	e180	173	153	144	142	373	480	98	87	179
27	156	202	e180	172	154	147	144	320	541	92	85	170
28	163	e190	e170	172	154	152	146	313	571	83	89	165
29	168	e170	e170	174	---	157	144	323	558	82	91	168
30	164	e150	176	173	---	150	142	323	529	82	100	166
31	158	---	e150	171	---	143	---	302	---	85	112	---
TOTAL	4,751	5,253	5,413	5,052	4,445	4,546	4,315	9,291	15,691	6,160	2,778	4,123
MEAN	153	175	175	163	159	147	144	300	523	199	89.6	137
MAX	175	222	196	250	175	158	158	550	785	485	112	187
MIN	126	150	130	110	143	132	129	120	363	82	73	91
AC-FT	9,420	10,420	10,740	10,020	8,820	9,020	8,560	18,430	31,120	12,220	5,510	8,180

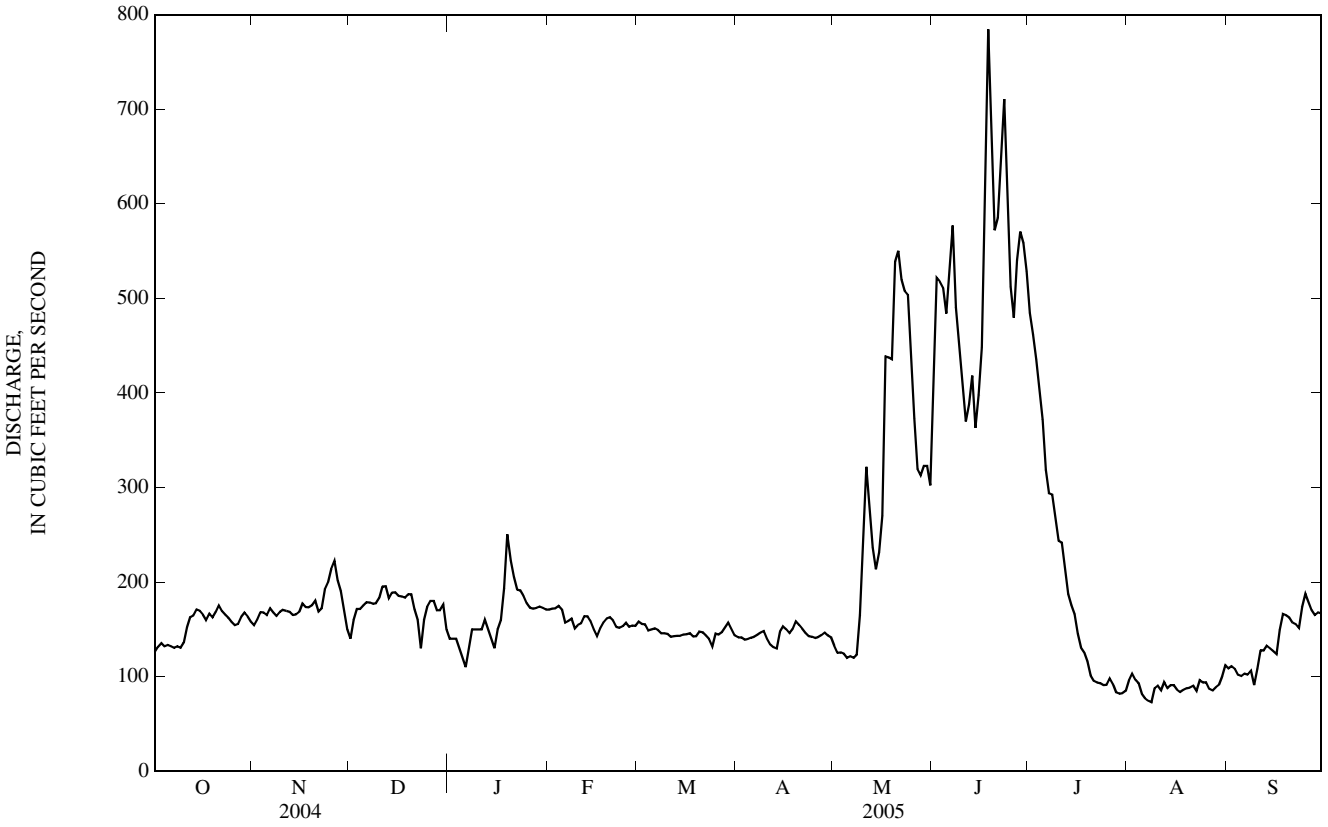
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	233	244	219	219	240	261	272	378	483	211	103	169
MAX	421	384	353	342	481	387	422	971	1,450	593	337	315
(WY)	(1983)	(1981)	(1981)	(1983)	(1982)	(1979)	(1982)	(1981)	(1997)	(1982)	(1997)	(1993)
MIN	115	156	122	140	137	147	144	80.2	57.8	29.9	27.8	57.8
(WY)	(1989)	(1989)	(1993)	(1992)	(1989)	(2005)	(2005)	(1992)	(1992)	(1985)	(1988)	(1988)

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	52,787		71,818			
ANNUAL MEAN	144		197		252	
HIGHEST ANNUAL MEAN					465	1997
LOWEST ANNUAL MEAN					130	1992
HIGHEST DAILY MEAN	267	Mar 9	785	Jun 18	2,390	May 23, 1981
LOWEST DAILY MEAN	27	Aug 15	73	Aug 8	22	Aug 18, 1988
ANNUAL SEVEN-DAY MINIMUM	29	Aug 10	81	Aug 5	23	Aug 9, 1991
MAXIMUM PEAK FLOW			a848	Jun 18	d2,500	May 23, 1981
MAXIMUM PEAK STAGE			b5.02	Nov 30	b5.92	Nov 1, 1991
INSTANTANEOUS LOW FLOW			c67	Aug 8	f21	Aug 6, 1991
ANNUAL RUNOFF (AC-FT)	104,700		142,500		182,800	
10 PERCENT EXCEEDS	198		414		403	
50 PERCENT EXCEEDS	162		158		213	
90 PERCENT EXCEEDS	52		96		91	

a--Gage height, 3.90 ft.
b--Backwater from ice.
c--Gage height, 2.40 ft.
d--Gage height, 5.35 ft.
e--Estimated.
f--Gage height, 2.19 ft.



12324200 CLARK FORK AT DEER LODGE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1969-71, 1979-83, 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1978 to September 1983, October 1991 to September 1998, seasonal records for May 2001 to September 2002.
SUSPENDED-SEDIMENT DISCHARGE: March 1985 through August 1986, April 1987 to March 2003, August 2003 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 24.5°C, July 26, 1998, July 11-14, 2002; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 835 mg/L, Feb. 8, 1996; minimum daily mean, 1 mg/L, Aug. 19, 2002.
SEDIMENT LOAD: Maximum daily, 2,840 tons, Feb. 24, 1986; minimum daily, 0.18 ton, Aug. 19, 2002.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 330 mg/L, May 17; minimum daily mean, 2 mg/L, July 26.
SEDIMENT LOAD: Maximum daily, 390 tons, May 17; minimum daily, 0.53 ton, July 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1105	186	8.4	541	2.0	1.0	240	71.5	16.0	9.1	11	.06	.15
MAR													
08...	1705	146	8.7	565	14.0	8.0	270	78.6	17.2	10.2	12	.06	.13
APR													
18...	1735	152	8.6	605	5.5	7.0	280	82.0	18.7	11.5	13	.05	.14
MAY													
17...	1110	436	8.1	438	11.0	10.0	180	51.6	13.2	18.2	78	E.04	2.06
JUN													
02...	1200	552	8.2	353	9.0	9.5	150	44.3	10.2	20.8	39	.06	.52
23...	0715	698	8.1	259	14.0	15.0	110	35.0	6.53	19.3	31	.07	.43
JUL													
26...	1055	88	8.5	484	16.5	14.5	210	64.0	13.2	16.2	17.1	.06	.06
AUG													
24...	0935	90	8.1	524	13.0	12.0	240	70.6	14.7	14.2	15.9	.06	.07

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	4.4	20.0	6	290	E.04	2.13	47.0	74	8.4	23	78	17	8.5
MAR													
08...	6.0	22.9	7	300	E.06	2.46	66.5	95	4.2	20	79	14	5.5
APR													
18...	5.4	18.8	E4	250	E.06	1.95	51.2	88	5.1	19	84	10	4.1
MAY													
17...	10.6	468	41	6,960	.40	61.7	97.9	1,010	9.3	359	67	387	456
JUN													
02...	12.7	97.6	35	1,690	.20	14.1	35.6	339	8.1	87	58	83	124
23...	11.4	96.8	23	1,740	.19	14.2	18.3	255	7.4	72	37	114	215
JUL													
26...	8.6	11.8	7	40	E.07	.37	13.0	18	5.1	7	82	1	.24
AUG													
24...	8.4	14.2	6	70	E.04	.69	21.6	47	10.8	13	79	3	.73

E--Estimated.

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11	3.7	15	6.2	20	7.6	17	6.4	31	14	16	6.8
2	10	3.6	20	8.6	19	8.2	17	6.4	29	13	16	6.7
3	10	3.6	21	9.5	18	8.3	19	7.2	28	13	15	6.3
4	10	3.6	19	8.6	17	7.9	24	8.4	26	12	15	6.0
5	10	3.6	16	7.1	16	7.6	23	7.5	25	12	15	6.1
6	10	3.6	13	6.0	15	7.2	20	5.9	25	11	15	6.1
7	11	3.9	11	5.0	15	7.2	17	6.0	24	10	15	6.0
8	11	3.9	11	4.9	14	6.7	16	6.5	24	10	14	5.5
9	12	4.2	12	5.4	14	6.7	16	6.5	23	9.4	13	5.1
10	12	4.4	13	6.0	16	7.9	16	6.5	22	9.1	12	4.7
11	14	5.7	14	6.4	19	10	16	6.5	21	8.8	12	4.6
12	17	7.5	14	6.4	20	11	16	6.9	20	8.9	18	6.9
13	18	8.0	14	6.2	20	9.9	16	6.5	20	8.9	23	8.9
14	18	8.3	15	6.7	19	9.7	16	6.0	20	8.5	24	9.3
15	15	6.8	15	6.8	18	9.2	16	5.6	22	8.9	26	10
16	13	5.8	18	8.6	17	8.5	16	6.5	23	8.9	28	11
17	12	5.2	21	9.8	16	8.0	19	8.2	23	9.4	28	11
18	12	5.4	22	10	17	8.4	44	23	23	9.7	28	11
19	12	5.3	22	10	18	9.1	116	78	23	10	25	9.7
20	12	5.4	21	10	19	9.6	73	44	23	10	20	8.0
21	16	7.6	20	9.1	20	9.2	72	40	23	9.9	18	7.1
22	14	6.4	20	9.3	20	8.6	56	29	23	9.5	18	6.9
23	13	5.8	20	10	21	7.4	50	26	22	9.0	18	6.8
24	12	5.2	23	12	21	9.1	39	19	20	8.3	18	6.4
25	11	4.7	26	15	22	10	31	15	19	8.1	19	7.5
26	11	4.6	26	16	24	12	30	14	18	7.4	19	7.4
27	12	5.1	26	14	28	14	30	14	17	7.1	20	7.9
28	12	5.3	24	12	30	14	32	15	16	6.7	20	8.2
29	13	5.9	22	10	27	12	31	15	---	---	19	8.1
30	13	5.8	20	8.1	23	11	31	14	---	---	17	6.9
31	13	5.5	---	---	20	8.1	31	14	---	---	14	5.4
TOTAL	---	163.4	---	263.7	---	284.1	---	473.5	---	271.5	---	228.3

12324200 CLARK FORK AT DEER LODGE, MT—Continued

SUSPENDED-SEDIMENT--CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12	4.6	14	5.0	63	69	14	18	10	2.6	29	8.5
2	10	3.8	12	4.0	90	127	12	15	10	2.8	28	8.4
3	14	5.3	9	3.1	65	91	10	12	16	4.2	24	7.0
4	18	6.8	12	4.0	72	99	8	8.7	19	4.8	20	5.5
5	19	7.2	12	3.9	77	101	7	7.0	19	4.2	20	5.4
6	18	6.9	22	7.2	83	119	6	5.2	18	3.7	22	6.1
7	16	6.2	22	7.1	85	132	5	4.0	17	3.4	24	6.6
8	14	5.5	51	17	33	44	4	3.2	16	3.2	26	7.4
9	15	6.0	60	27	19	23	3	2.2	14	3.3	26	6.4
10	14	5.3	61	41	17	19	3	2.0	12	2.9	26	7.6
11	12	4.3	61	53	22	22	3	2.0	8	1.8	25	8.6
12	12	4.2	62	47	34	36	3	1.7	8	2.0	24	8.2
13	14	4.9	44	28	28	32	3	1.5	6	1.4	24	8.6
14	16	6.4	39	23	15	15	5	2.4	6	1.5	23	8.1
15	23	9.5	44	27	37	40	13	5.8	6	1.5	23	7.9
16	19	7.7	90	66	92	111	21	8.2	5	1.2	22	7.4
17	19	7.5	330	390	205	331	22	7.7	5	1.1	21	8.4
18	15	6.1	155	183	120	254	19	6.4	6	1.4	20	9.0
19	16	6.8	137	161	69	129	15	4.7	8	1.9	19	8.5
20	20	8.4	210	306	82	127	10	2.7	9	2.1	19	8.3
21	20	8.1	145	215	98	155	10	2.6	8	1.9	18	7.6
22	17	6.7	86	121	101	179	11	2.8	6	1.4	18	7.5
23	20	7.7	85	116	102	196	12	3.0	4	1.0	18	7.3
24	21	8.1	78	106	58	96	10	2.5	3	0.76	18	8.5
25	20	7.6	56	68	38	53	6	1.5	7	1.8	18	9.1
26	16	6.1	42	42	35	45	2	0.53	14	3.3	18	8.7
27	14	5.4	46	40	40	58	12	3.0	21	4.8	20	9.2
28	20	7.9	40	34	30	46	28	6.3	25	6.0	20	8.9
29	18	7.0	34	30	25	38	23	5.1	26	6.4	20	9.1
30	14	5.4	35	31	20	29	17	3.8	27	7.3	20	9.0
31	---	---	27	22	---	---	12	2.8	29	8.8	---	---
TOTAL	---	193.4	---	2,228.3	---	2,816	---	154.33	---	94.46	---	236.8

TOTAL LOAD FOR YEAR: 7,407.79 tons

12324590 LITTLE BLACKFOOT RIVER NEAR GARRISON, MT

LOCATION.--Lat 46°31'11", long 112°47'33" (NAD 27), in NE$^1/_4$ NW$^1/_4$ SE$^1/_4$ sec.24, T.9 N., R.10 W., Powell County, Hydrologic Unit 17010201, on right bank 20 ft upstream from bridge on frontage road, 0.7 mi southeast of Garrison, and at river mile 0.5.

DRAINAGE AREA.--407 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,343.97 ft (NGVD 29). Prior to Oct. 1, 1992, at site 3.5 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few minor irrigation holding reservoirs in upper reaches of drainage. Diversions for irrigation of about 11,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	65	e65	e40	68	55	81	173	490	277	68	32
2	66	65	e70	e40	66	58	91	167	871	250	63	31
3	67	72	62	e40	65	61	104	154	1,150	225	56	30
4	67	74	59	e40	65	64	102	155	1,440	218	54	33
5	72	71	e60	e35	64	67	96	171	1,220	203	55	35
6	71	73	e60	e35	e60	75	93	187	1,130	191	52	34
7	69	73	60	e40	e60	84	104	223	1,030	181	51	28
8	68	72	60	e40	e65	90	120	286	877	170	52	31
9	67	71	60	e40	e65	96	127	319	778	156	54	32
10	65	71	60	e40	e65	104	111	449	689	157	50	36
11	64	71	63	e40	e60	92	97	982	621	157	48	40
12	65	69	66	e45	e58	92	96	859	675	157	48	42
13	76	65	e60	e40	59	78	97	723	754	144	51	42
14	74	65	e60	e35	e55	75	108	655	584	136	52	42
15	77	65	62	e35	e50	74	101	631	614	128	51	38
16	75	67	62	e35	e45	73	109	657	561	121	44	39
17	77	68	60	e40	e45	74	128	828	636	118	42	59
18	84	65	60	e50	e50	67	130	787	633	118	30	64
19	79	67	62	e80	e50	67	132	805	516	116	37	58
20	76	67	62	e100	e55	70	129	783	462	110	36	52
21	75	e60	e60	e95	e55	73	123	796	423	106	36	49
22	76	e60	e50	e100	e50	72	124	711	392	100	35	57
23	73	64	e40	e95	e50	e65	130	678	365	87	37	49
24	71	67	e45	e90	e50	e60	145	608	329	90	39	57
25	69	70	e50	e90	e50	64	166	554	310	95	38	61
26	68	72	e50	e85	e52	63	177	509	323	93	37	54
27	67	e65	e45	e85	54	70	189	448	353	87	33	58
28	67	e60	e45	e80	54	113	181	388	389	82	35	54
29	66	e60	e50	e80	---	125	175	362	368	71	35	55
30	64	e55	e55	74	---	96	181	346	316	73	35	61
31	64	---	e45	70	---	82	---	330	---	71	33	---
TOTAL	2,185	2,009	1,768	1,834	1,585	2,399	3,747	15,724	19,299	4,288	1,387	1,353
MEAN	70.5	67.0	57.0	59.2	56.6	77.4	125	507	643	138	44.7	45.1
MAX	84	74	70	100	68	125	189	982	1,440	277	68	64
MIN	64	55	40	35	45	55	81	154	310	71	30	28
AC-FT	4,330	3,980	3,510	3,640	3,140	4,760	7,430	31,190	38,280	8,510	2,750	2,680

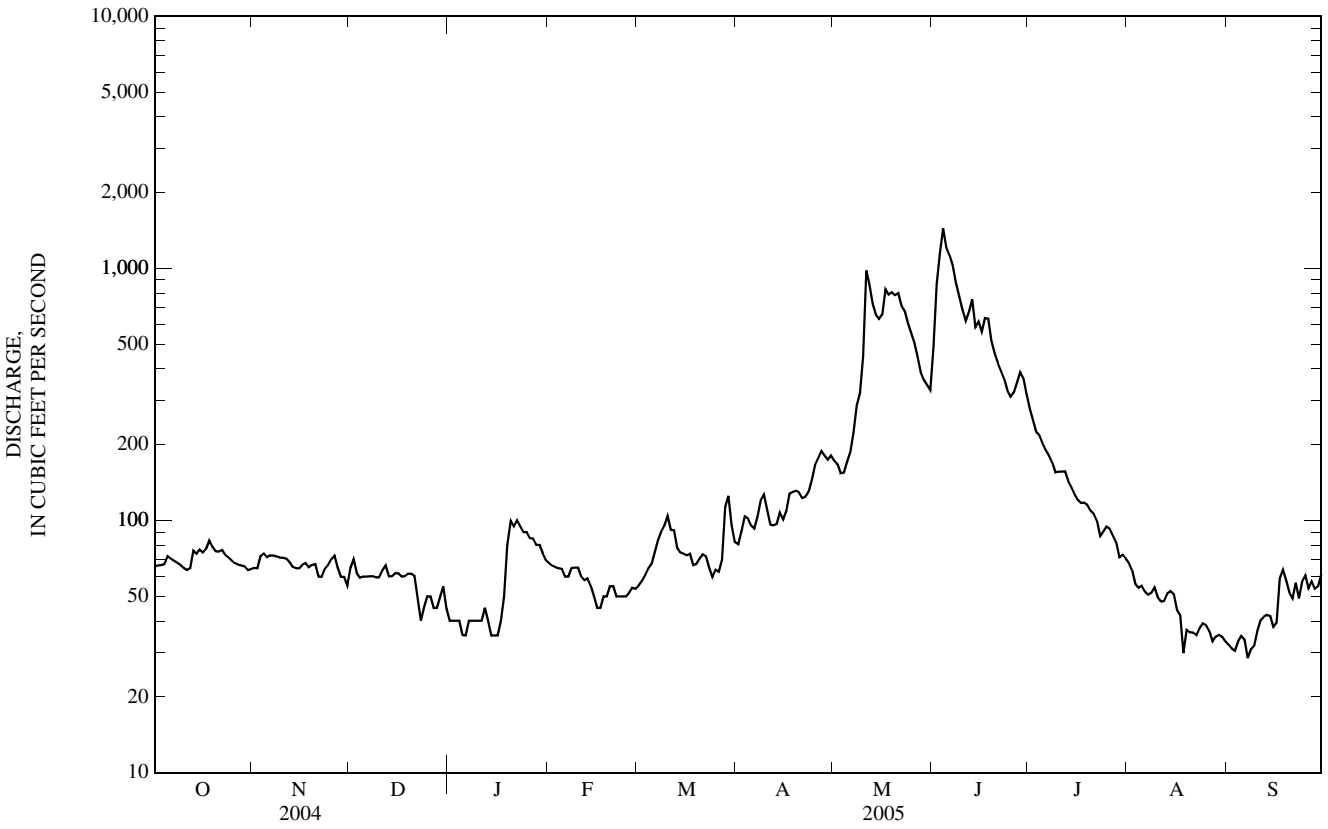
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

MEAN	70.7	69.9	62.9	61.1	81.9	119	223	482	386	132	60.2	56.1
MAX	129	122	199	135	262	271	486	1,460	1,803	410	191	184
(WY)	(1976)	(1976)	(1976)	(1976)	(1996)	(1986)	(1976)	(1981)	(1975)	(1975)	(1975)	(1993)
MIN	35.4	39.8	32.9	36.3	36.4	55.4	88.8	76.9	60.1	23.6	11.9	19.9
(WY)	(1974)	(1988)	(1993)	(1993)	(1989)	(1975)	(1973)	(1992)	(1992)	(1973)	(1977)	(1977)

12324590 LITTLE BLACKFOOT RIVER NEAR GARRISON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005	
ANNUAL TOTAL	34,733		57,578			
ANNUAL MEAN	94.9		158		151	
HIGHEST ANNUAL MEAN					322	1975
LOWEST ANNUAL MEAN					58.4	1973
HIGHEST DAILY MEAN	356	Mar 10	1,440	Jun 4	6,280	May 22, 1981
LOWEST DAILY MEAN	16	Aug 15	28	Sep 7	6.5	Aug 23, 1977
ANNUAL SEVEN-DAY MINIMUM	18	Aug 13	32	Sep 2	6.7	Aug 22, 1977
MAXIMUM PEAK FLOW			1,500	Jun 4	8,650	May 21, 1981
MAXIMUM PEAK STAGE			4.91	Jun 4	b8.79	May 21, 1981
INSTANTANEOUS LOW FLOW			a22	Aug 18	c6.0	Aug 24, 1977
ANNUAL RUNOFF (AC-FT)	68,890		114,200		109,100	
10 PERCENT EXCEEDS	183		454		367	
50 PERCENT EXCEEDS	68		69		74	
90 PERCENT EXCEEDS	41		40		38	

a--Gage height, 0.77 ft.
b--Site and datum then in use.
c--Gage height, 2.94 ft, site and datum then in use.
e--Estimated.



12324680 CLARK FORK AT GOLDCREEK, MT

LOCATION.--Lat 46°35'26", long 112°55'40" (NAD 27), in $SE^1/_4$ $NW^1/_4SW^1/_4$ sec.25, T.10 N., R.11 W., Powell County, Hydrologic Unit 17010201, on right bank at county road bridge, 0.4 mi north of the town of Goldcreek, 1.1 mi downstream from Gold Creek, and at river mile 434.7.

DRAINAGE AREA.--1,760 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 4,172.80 ft (NGVD 29). June 13 to Oct. 21, 1982, nonrecording gage at site 350 ft downstream at same elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by settling ponds on Silver Bow Creek near Warm Springs. Diversion for irrigation of about 40,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	306	e310	e200	306	274	281	373	1,100	1,090	200	205
2	286	309	325	e160	304	278	292	361	1,860	998	215	204
3	291	327	322	e140	303	278	302	348	2,390	919	213	200
4	287	331	324	e150	303	279	303	348	3,000	863	207	195
5	293	326	e310	e140	303	280	298	363	2,590	773	198	190
6	292	333	e320	e130	289	290	294	377	2,470	697	190	192
7	289	332	323	e150	280	304	304	412	2,350	643	185	188
8	291	322	314	e200	290	314	332	473	1,980	616	185	192
9	296	320	312	e220	273	313	342	544	1,700	566	201	193
10	290	322	313	e230	e270	318	320	758	1,500	545	202	201
11	298	321	337	e250	e280	298	299	1,420	1,330	537	199	232
12	307	322	342	e280	289	300	292	1,340	1,380	512	209	250
13	322	323	319	e300	285	283	293	1,110	1,590	455	214	252
14	328	319	317	e300	278	278	330	987	1,310	400	217	252
15	332	310	322	e280	e260	278	334	961	1,360	392	209	246
16	335	323	320	e240	e240	278	328	1,020	1,440	358	201	246
17	335	322	314	e270	e220	281	336	1,420	1,720	334	197	287
18	338	318	314	372	e250	269	346	1,460	2,070	323	190	312
19	333	318	317	451	e260	269	361	1,450	1,780	305	206	305
20	331	321	321	567	298	279	365	1,500	1,500	285	203	297
21	343	305	318	475	282	283	363	1,620	1,390	260	204	288
22	358	300	311	435	270	278	358	1,560	1,430	247	199	296
23	351	326	e240	405	268	265	357	1,520	1,480	236	209	294
24	334	332	e220	389	268	252	351	1,390	1,330	232	217	323
25	322	343	318	377	270	265	349	1,260	1,200	238	213	345
26	316	354	325	354	266	263	362	1,110	1,140	236	206	336
27	313	335	319	341	268	272	381	980	1,230	232	193	330
28	315	e320	279	341	268	316	380	901	1,330	226	188	319
29	318	e300	295	346	---	344	374	878	1,320	202	189	319
30	320	e300	327	326	---	314	382	877	1,240	202	191	324
31	313	---	e270	309	---	289	---	837	---	203	205	---
TOTAL	9,763	9,640	9,618	9,128	7,741	8,882	10,009	29,958	49,510	14,125	6,255	7,813
MEAN	315	321	310	294	276	287	334	966	1,650	456	202	260
MAX	358	354	342	567	306	344	382	1,620	3,000	1,090	217	345
MIN	286	300	220	130	220	252	281	348	1,100	202	185	188
AC-FT	19,360	19,120	19,080	18,110	15,350	17,620	19,850	59,420	98,200	28,020	12,410	15,500

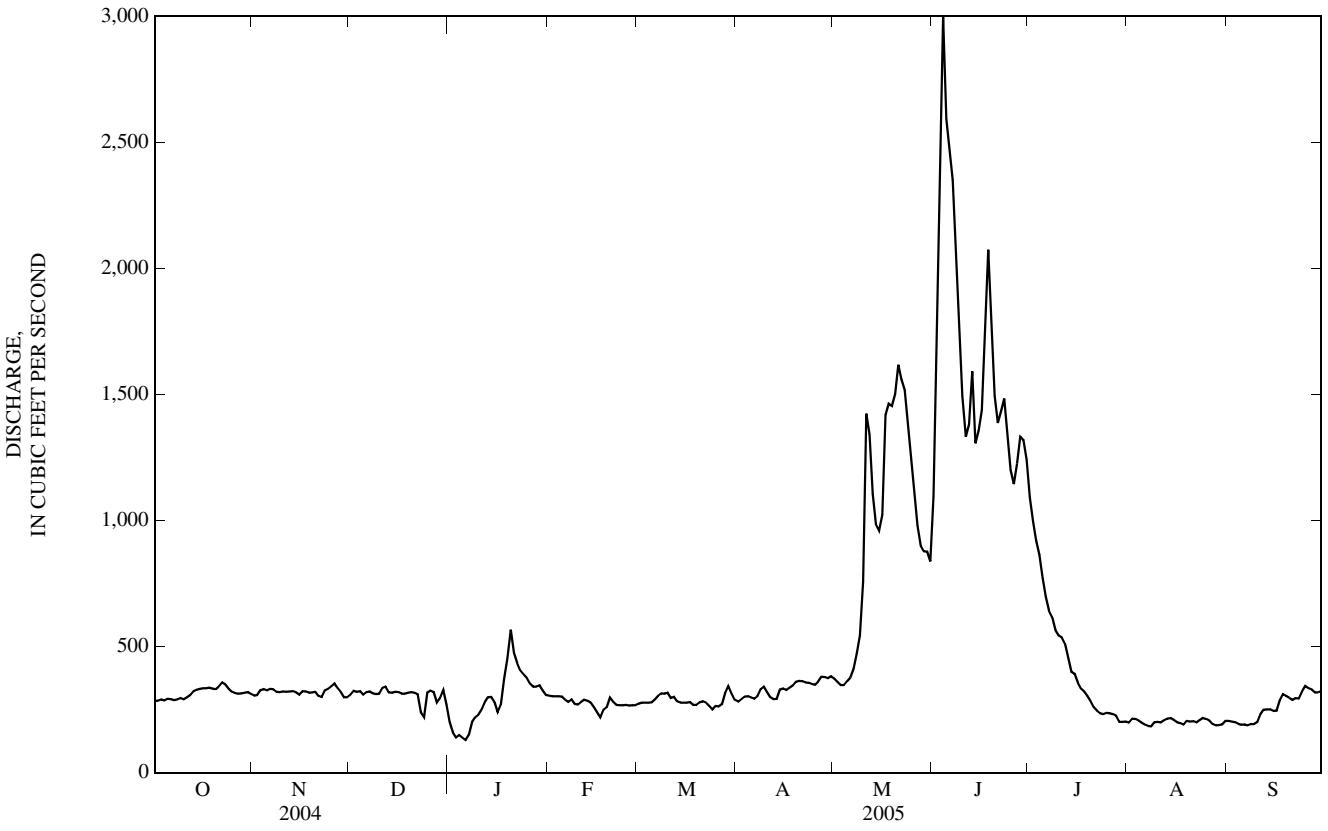
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	387	395	345	343	409	485	589	1,018	1,110	472	228	298
MAX	699	651	622	596	860	721	918	2,914	3,002	1,196	646	707
(WY)	(1983)	(1981)	(1981)	(1984)	(1996)	(1978)	(1996)	(1981)	(1980)	(1982)	(1993)	(1993)
MIN	198	244	193	199	208	287	334	198	138	85.7	67.5	99.8
(WY)	(1989)	(1989)	(1993)	(1988)	(1989)	(2005)	(2005)	(1992)	(1992)	(1985)	(2000)	(1988)

12324680 CLARK FORK AT GOLDCREEK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1978 - 2005	
ANNUAL TOTAL	113,600		172,442			
ANNUAL MEAN	310		472		506	
HIGHEST ANNUAL MEAN					860	1981
LOWEST ANNUAL MEAN					243	1992
HIGHEST DAILY MEAN	905	Jun 11	3,000	Jun 4	9,100	May 23, 1981
LOWEST DAILY MEAN	73	Aug 16	130	Jan 6	55	Sep 4, 1988
ANNUAL SEVEN-DAY MINIMUM	87	Aug 13	153	Jan 1	58	Sep 3, 1988
MAXIMUM PEAK FLOW			3,140	Jun 4	a12,000	May 22, 1981
MAXIMUM PEAK STAGE			7.25	Jun 4	b12.50	Jan 2, 1997
INSTANTANEOUS LOW FLOW					c54	Sep 3, 1988
ANNUAL RUNOFF (AC-FT)	225,300		342,000		366,800	
10 PERCENT EXCEEDS	443		1,250		907	
50 PERCENT EXCEEDS	314		314		370	
90 PERCENT EXCEEDS	169		204		190	

a--From rating curve extended above 6,500 ft^3/s on basis of contracted-opening measurement of peak flow; gage height, 11.17 ft, from floodmark.
b--Backwater from ice.
c--Gage height, 3.73 ft.
e--Estimated.



12324680 CLARK FORK AT GOLDCREEK, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

REMARKS. --Several unpublished observations of specific conductance and water temperature were made during the year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.5°C, July 26, 1995; minimum, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
16...	1255	322	8.8	458	3.5	1.0	210	60.1	13.3	7.2	8	E.03	.10
MAR													
09...	1410	312	8.8	442	19.0	8.0	210	61.0	13.3	7.9	10	.05	.12
APR													
19...	0915	365	8.4	446	4.5	4.5	210	60.7	13.6	7.5	8	E.03	.14
MAY													
17...	1315	1,460	8.2	280	16.5	10.0	110	31.9	7.34	9.6	24	E.03	.60
JUN													
02...	1400	1,880	8.1	286	9.5	8.5	130	36.7	8.19	11.1	22	.05	.43
23...	1015	1,500	8.2	253	16.0	14.5	120	35.7	6.83	12.4	18	.07	.29
JUL													
26...	1225	248	8.5	392	24.0	16.5	190	55.4	11.5	10.5	11.1	E.03	.05
AUG													
24...	1055	221	8.4	431	14.5	13.5	200	58.3	12.3	10.9	11.1	E.03	.04

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
16...	3.1	14.1	E4	200	<.08	1.52	16.8	54	3.4	16	85	10	8.7
MAR													
09...	4.9	21.4	7	390	E.06	2.38	27.0	71	2.7	21	78	19	16
APR													
19...	3.7	17.5	19	330	E.05	2.08	19.5	68	4.5	21	82	14	14
MAY													
17...	6.3	99.5	60	2,690	.33	16.6	23.7	314	4.5	104	74	148	583
JUN													
02...	9.3	74.7	48	2,110	.25	12.2	17.4	257	6.7	89	44	143	726
23...	9.1	62.7	21	940	.19	7.79	12.3	138	5.1	44	61	52	211
JUL													
26...	4.5	6.1	7	50	<.08	.18	10.0	20	1.8	3	72	2	1.3
AUG													
24...	5.0	7.6	E5	70	<.08	.33	7.7	32	2.3	5	74	4	2.4

E--Estimated.

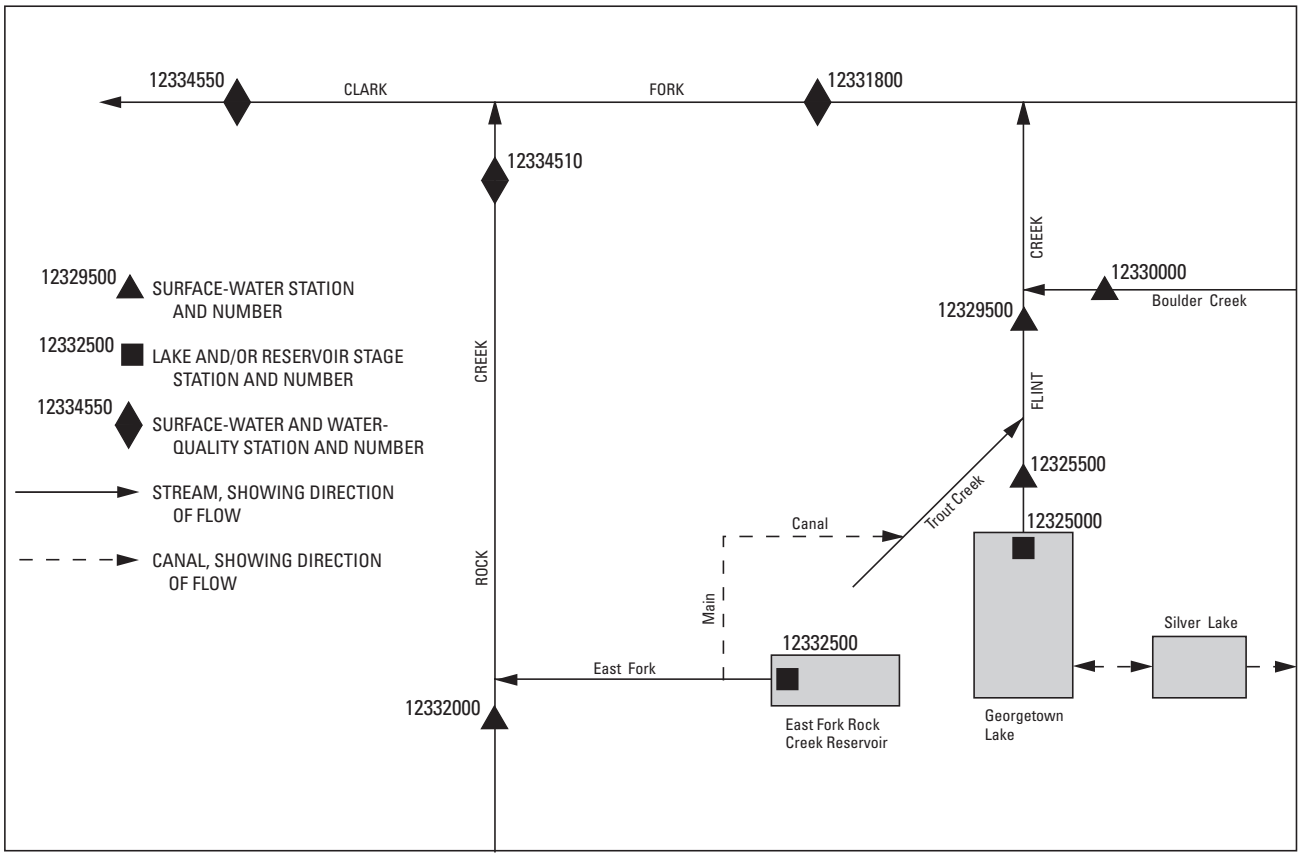


Figure 9. Schematic diagram showing diversions and storage in Flint and Rock Creek basins.

12325500 FLINT CREEK NEAR SOUTHERN CROSS, MT

LOCATION.--Lat 46°13'59", long 113°17'56" (NAD 27), in $SE^1/_4$ $NW^1/_4$ sec.36, T.6 N., R.14 W., Granite County, Hydrologic Unit 17010202, on right wing wall of weir, 0.5 mi downstream from power plant, 2.0 mi downstream from Georgetown Dam, 3.5 mi northwest of Southern Cross, 6.8 mi south of Philipsburg, and at river mile 36.8.

DRAINAGE AREA.--52.6 mi^2.

PERIOD OF RECORD.--October 1940 to September 1998, August 2000 to current year (seasonal records only).

REVISED RECORDS.--WSP 1216: 1942(M). WSP 1246: Drainage area.

GAGE.--Water-stage recorder and sharp-crested, contracted, rectangular weir. Elevation of gage is 5,630 ft (NGVD 29). Prior to June 3, 1982, nonrecording gage at same site and elevation. Prior to Nov. 27, 1973, gage at same site and elevation 0.20 ft higher.

REMARKS.--Seasonal records good. Flow regulated by Georgetown Lake (station number 12325000). Flow may be augmented by interbasin diversion from Silver Lake to Georgetown Lake or reduced by pumping from Georgetown Lake to Silver Lake. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the water year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				7.9	8.1	33	114	33	30	31		
2				7.9	7.9	43	111	32	30	31		
3				7.9	7.9	55	109	32	30	31		
4				7.9	8.0	69	107	32	30	30		
5				7.9	8.0	91	105	32	30	30		
6				7.9	8.1	122	103	32	30	28		
7				7.9	8.1	130	98	32	30	22		
8				8.1	8.4	127	70	32	30	21		
9				7.9	8.2	124	34	32	30	21		
10				7.9	8.7	121	33	48	30	21		
11				7.9	8.8	120	33	56	30	21		
12				7.9	10	128	33	57	30	20		
13				7.9	15	129	33	56	30	18		
14				8.0	16	126	33	56	30	18		
15				7.9	16	124	33	56	30	15		
16				8.0	16	122	33	56	30	13		
17				8.2	16	121	33	55	31	14		
18				8.2	16	121	33	55	30	14		
19				8.2	17	119	33	55	30	14		
20				8.2	17	117	33	55	30	14		
21				8.1	18	116	33	55	30	14		
22				8.2	18	115	33	55	30	14		
23				8.2	19	112	32	55	30	14		
24				8.3	19	111	32	55	31	14		
25				8.2	19	110	32	41	31	14		
26				8.2	20	109	32	33	30	14		
27				8.2	20	108	32	32	30	14		
28				8.2	20	111	32	30	30	14		
29				8.2	21	117	32	30	30	14		
30				8.2	21	116	32	30	30	14		
31				---	22	---	32	30	---	14		
TOTAL				241.6	446.2	3,267	1,568	1,340	903	581		
MEAN				8.05	14.4	109	50.6	43.2	30.1	18.7		
MAX				8.3	22	130	114	57	31	31		
MIN				7.9	7.9	33	32	30	30	13		
AC-FT				479	885	6,480	3,110	2,660	1,790	1,150		

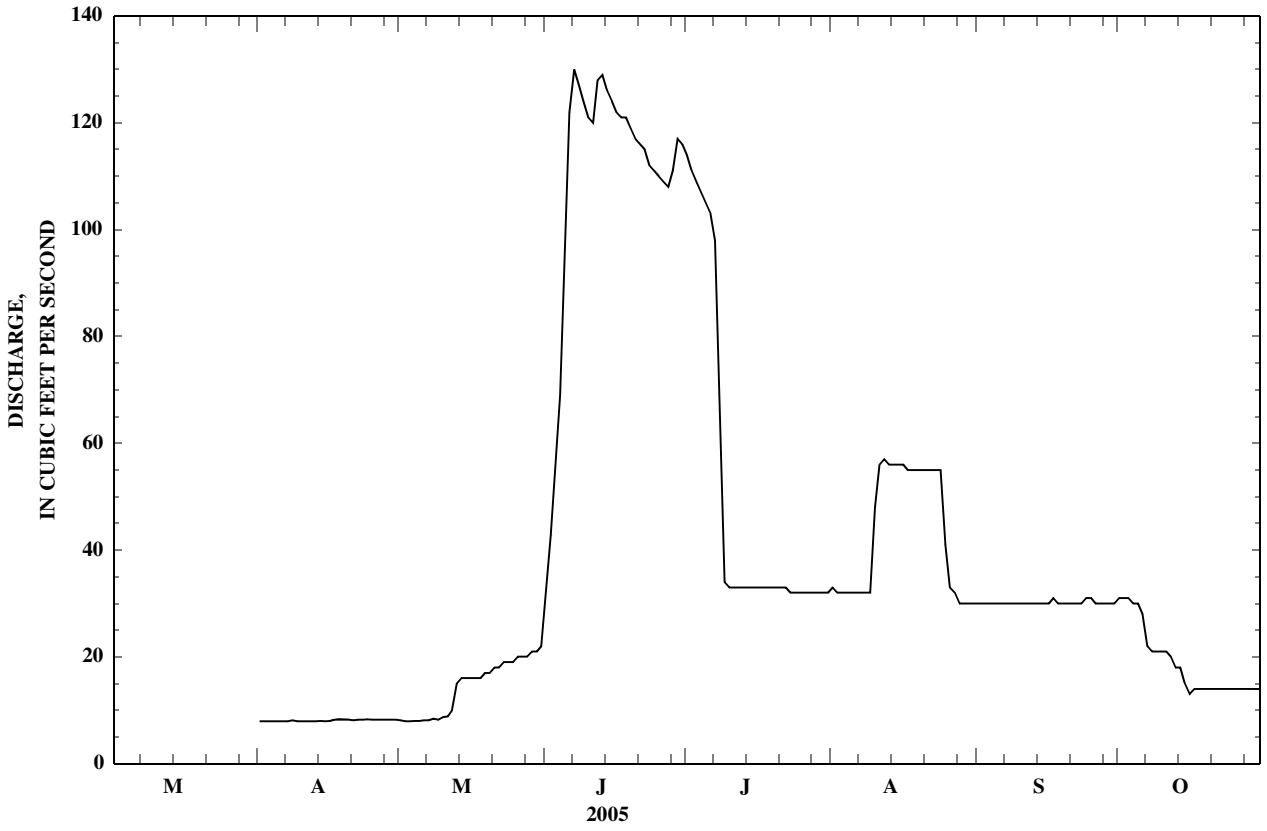
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998 AND SEASONS 2000 - 2005*

MEAN	18.5	19.9	22.1	25.0	32.1	57.1	46.0	33.3	31.0	25.0	21.5	19.8
MAX	37.5	53.8	80.4	121	106	142	131	78.5	74.3	59.2	62.2	50.0
(WY)	(1996)	(1968)	(1943)	(1948)	(1976)	(1948)	(1975)	(1975)	(1993)	(1984)	(1984)	(1976)
MIN	2.86	3.37	4.10	1.62	7.75	25.9	26.4	21.7	13.0	3.90	3.86	2.66
(WY)	(1975)	(1975)	(1975)	(1941)	(1962)	(1955)	(1988)	(1952)	(2000)	(1974)	(1974)	(1975)

12325500 FLINT CREEK NEAR SOUTHERN CROSS, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1941 -1998		SEASONS 2000 - 2005*	
ANNUAL MEAN			29.5			
HIGHEST ANNUAL MEAN			57.9	1976		
LOWEST ANNUAL MEAN			13.2	1962		
HIGHEST DAILY MEAN	130	Jun 7	172	Jun 19, 1980	135	May 31, 2003
LOWEST DAILY MEAN	7.9	Many days	a0.00	Nov 30, 1966	4.9	Oct 20, 2003
ANNUAL SEVEN-DAY MINIMUM			1.4	Mar 8, 1941		
MAXIMUM PEAK FLOW	133	Jun 7	b174	Jun 13, 1942	139	May 31, 2003
MAXIMUM PEAK STAGE	2.17	Jun 7	c2.60	Jun 19, 1980	2.44	May 31, 2003
INSTANTANEOUS LOW FLOW			0.00	Nov 30, 1966		
ANNUAL RUNOFF (AC-FT)			21,370			
10 PERCENT EXCEEDS			50			
50 PERCENT EXCEEDS			28			
90 PERCENT EXCEEDS			6.8			

*--During periods of operation (1941 to current year; seasonal records beginning 2000).
a--Partial days of no flow in several years.
b--Gage height, 1.86 ft.
c--Maximum observed.



12329500 FLINT CREEK AT MAXVILLE, MT

LOCATION.--Lat 46°27'50", long 113°14'20" (NAD 27), in $NE^1/_4SW^1/_4NW^1/_4$ sec.9, T.8 N., R.13 W., Granite County, Hydrologic Unit 17010202, on right bank 0.4 mi west of Maxville and 1.0 mi upstream from Boulder Creek.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--August 1941 to current year. April 1939 to September 1941 at site 0.5 mi upstream; records not equivalent owing to diversions.

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,828.38 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Georgetown Lake. Diversions for irrigation of about 8,200 acres upstream from station. During irrigation season, flow is supplemented by water from East Fork Rock Creek which is diverted in sec.5, T.4 N., R.14 W., 500 ft below Rock Creek Dam, through a canal into Trout Creek, thence into Flint Creek. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	53	e43	e27	45	44	42	53	150	203	126	100
2	65	55	e46	e26	45	43	43	50	145	192	123	92
3	64	56	e45	e27	44	42	44	45	162	181	120	91
4	63	52	e46	e27	45	42	44	46	203	169	109	91
5	62	52	e43	e23	44	42	43	50	194	163	105	90
6	60	52	e43	e25	40	43	42	56	232	158	101	87
7	60	52	e44	e28	42	43	44	60	223	151	102	86
8	59	51	44	e28	43	43	52	74	207	136	104	86
9	59	50	46	e28	e42	43	52	72	197	119	107	83
10	58	51	48	e29	e45	43	48	98	190	112	110	88
11	58	50	51	e29	e46	42	46	124	193	116	113	90
12	58	e46	e48	e30	45	44	46	99	248	105	102	88
13	57	e44	e46	e30	43	41	47	86	266	98	100	95
14	56	e41	e48	e29	e37	42	52	85	228	91	96	97
15	56	e41	46	e28	e34	41	49	93	251	79	94	89
16	55	e41	44	e30	e30	41	55	104	269	76	90	87
17	53	e44	44	34	e35	42	59	142	293	75	94	106
18	55	46	44	54	e35	38	58	120	303	73	103	103
19	54	49	45	88	e34	42	61	131	261	78	101	89
20	56	48	44	72	e33	45	60	146	240	87	94	78
21	57	e47	e39	59	e30	48	63	134	253	94	94	75
22	56	e47	e33	50	e30	44	65	118	252	94	96	75
23	56	49	e32	51	e33	42	63	116	234	98	104	77
24	55	49	e38	49	e35	40	65	94	206	97	109	85
25	54	51	e42	47	e34	44	68	77	170	100	109	91
26	54	e47	e42	46	e45	41	67	72	183	104	105	84
27	54	e42	e40	45	e42	43	70	70	212	106	102	91
28	54	e42	e42	46	e44	48	65	78	235	109	97	91
29	54	e41	e38	45	---	45	62	86	233	105	95	90
30	54	e40	e40	44	---	43	59	83	222	108	95	91
31	55	---	e32	43	---	40	---	85	---	116	99	---
TOTAL	1,777	1,429	1,326	1,217	1,100	1,324	1,634	2,747	6,655	3,593	3,199	2,666
MEAN	57.3	47.6	42.8	39.3	39.3	42.7	54.5	88.6	222	116	103	88.9
MAX	66	56	51	88	46	48	70	146	303	203	126	106
MIN	53	40	32	23	30	38	42	45	145	73	90	75
AC-FT	3,520	2,830	2,630	2,410	2,180	2,630	3,240	5,450	13,200	7,130	6,350	5,290

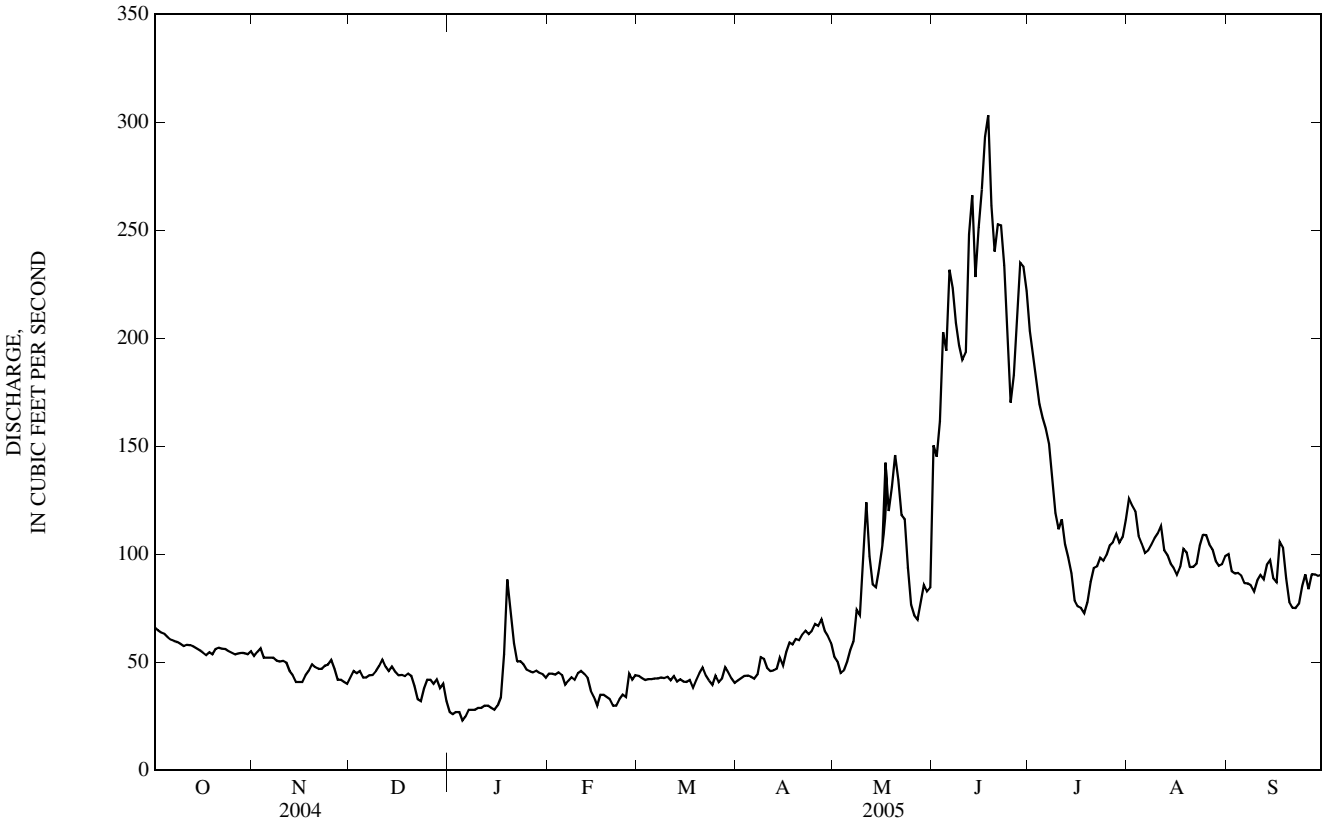
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	83.4	71.4	59.6	53.7	61.2	75.5	104	136	187	126	106	91.3
MAX	148	121	120	88.1	141	186	310	353	455	324	217	151
(WY)	(1976)	(1984)	(1976)	(1976)	(1996)	(1943)	(1948)	(1976)	(1948)	(1975)	(1975)	(1993)
MIN	50.2	41.3	27.7	26.6	27.3	33.5	48.6	50.9	70.7	48.1	30.1	33.6
(WY)	(1992)	(1993)	(1993)	(1993)	(1993)	(1955)	(1961)	(2002)	(1987)	(1973)	(1992)	(1992)

12329500 FLINT CREEK AT MAXVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	22,758		28,667			
ANNUAL MEAN	62.2		78.5		96.3	
HIGHEST ANNUAL MEAN					165	1976
LOWEST ANNUAL MEAN					53.2	1992
HIGHEST DAILY MEAN	216	Jun 11	303	Jun 18	933	Mar 29, 1943
LOWEST DAILY MEAN	24	Jan 5	23	Jan 5	15	Feb 25, 1962
ANNUAL SEVEN-DAY MINIMUM	25	Jan 2	26	Jan 1	19	Dec 31, 1957
MAXIMUM PEAK FLOW			318	Jun 18	a1,680	Mar 28, 1943
MAXIMUM PEAK STAGE			4.01	Jun 18	b8.08	Feb 4, 1963
INSTANTANEOUS LOW FLOW					15	Feb 25, 1962
ANNUAL RUNOFF (AC-FT)	45,140		56,860		69,780	
10 PERCENT EXCEEDS	91		148		166	
50 PERCENT EXCEEDS	57		56		79	
90 PERCENT EXCEEDS	40		40		43	

a--Gage height, 6.79 ft.
b--Backwater from ice.
e--Estimated.



12330000 BOULDER CREEK AT MAXVILLE, MT

LOCATION.--Lat 46°28'20", 1ong 113°13'59" (NAD 27), in $SE^1/_4$ $NE^1/_4$ $SW^1/_4$ sec.4, T.8 N., R.13 W., Granite County, Hydrologic Unit 17010202, on right bank 0.2 mi upstream from mouth and 0.7 mi north of Maxville.

DRAINAGE AREA.--71.3 mi^2.

PERIOD OF RECORD.--April 1939 to current year. Monthly discharge only for some periods, published in WSP 1316.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft (NGVD 29). Apr. 15, 1939, to July 7, 1941, nonrecording gage at site 75 ft upstream at different elevation. July 8-20, 1941, nonrecording gage at site 175 ft upstream at elevation 1.03 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream for irrigation of about 240 acres near the station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	18	e17	e14	17	14	15	20	201	139	28	12
2	26	21	e17	e14	17	14	16	19	191	127	28	12
3	25	21	e18	e13	16	15	16	20	239	116	26	12
4	24	18	e17	e13	17	15	16	21	293	106	24	11
5	25	21	e16	e12	17	15	15	27	265	95	22	11
6	25	20	e17	e13	e15	15	15	41	294	87	20	11
7	25	20	18	e15	e13	15	15	50	230	83	18	10
8	25	20	18	e15	e13	15	13	75	193	78	20	10
9	24	20	18	e15	e14	16	11	82	168	73	22	9.8
10	24	20	18	e15	e12	16	9.3	136	154	72	18	12
11	24	20	19	e15	e12	16	8.3	131	150	72	17	12
12	23	19	e17	e15	e14	16	8.1	96	185	63	16	12
13	23	e19	e17	e15	e9.0	15	12	91	172	57	16	13
14	23	e17	e18	e14	e9.0	15	9.1	101	158	52	16	12
15	23	e17	e18	e14	e8.0	15	8.5	122	182	46	16	11
16	22	e17	e19	e14	e7.0	14	8.7	153	198	41	19	11
17	23	e17	18	e17	e9.0	15	11	197	232	39	24	16
18	24	e16	18	e20	e9.0	15	9.2	152	229	37	23	17
19	23	e16	18	19	e10	15	8.7	212	195	35	20	14
20	23	e16	18	19	e11	15	16	195	185	33	16	12
21	24	e16	e17	19	e9.0	15	19	197	198	32	15	11
22	24	e16	e16	18	e9.0	15	20	166	211	32	15	11
23	23	e18	e16	18	e10	15	22	166	192	31	16	12
24	22	e18	e16	18	e10	21	23	141	166	30	15	17
25	21	e19	e17	17	14	15	20	119	155	30	15	17
26	21	e17	e17	17	15	14	24	112	152	30	14	20
27	21	e16	e16	17	14	15	29	118	154	28	14	21
28	21	e15	e16	17	14	16	25	134	180	27	13	21
29	21	e15	e17	17	---	15	22	148	174	26	13	20
30	21	e15	e17	17	---	15	21	138	160	27	13	20
31	20	---	e15	17	---	15	---	132	---	26	13	---
TOTAL	720	538	534	493	344.0	472	465.9	3,512	5,856	1,770	565	410.8
MEAN	23.2	17.9	17.2	15.9	12.3	15.2	15.5	113	195	57.1	18.2	13.7
MAX	27	21	19	20	17	21	29	212	294	139	28	21
MIN	20	15	15	12	7.0	14	8.1	19	150	26	13	9.8
AC-FT	1,430	1,070	1,060	978	682	936	924	6,970	11,620	3,510	1,120	815

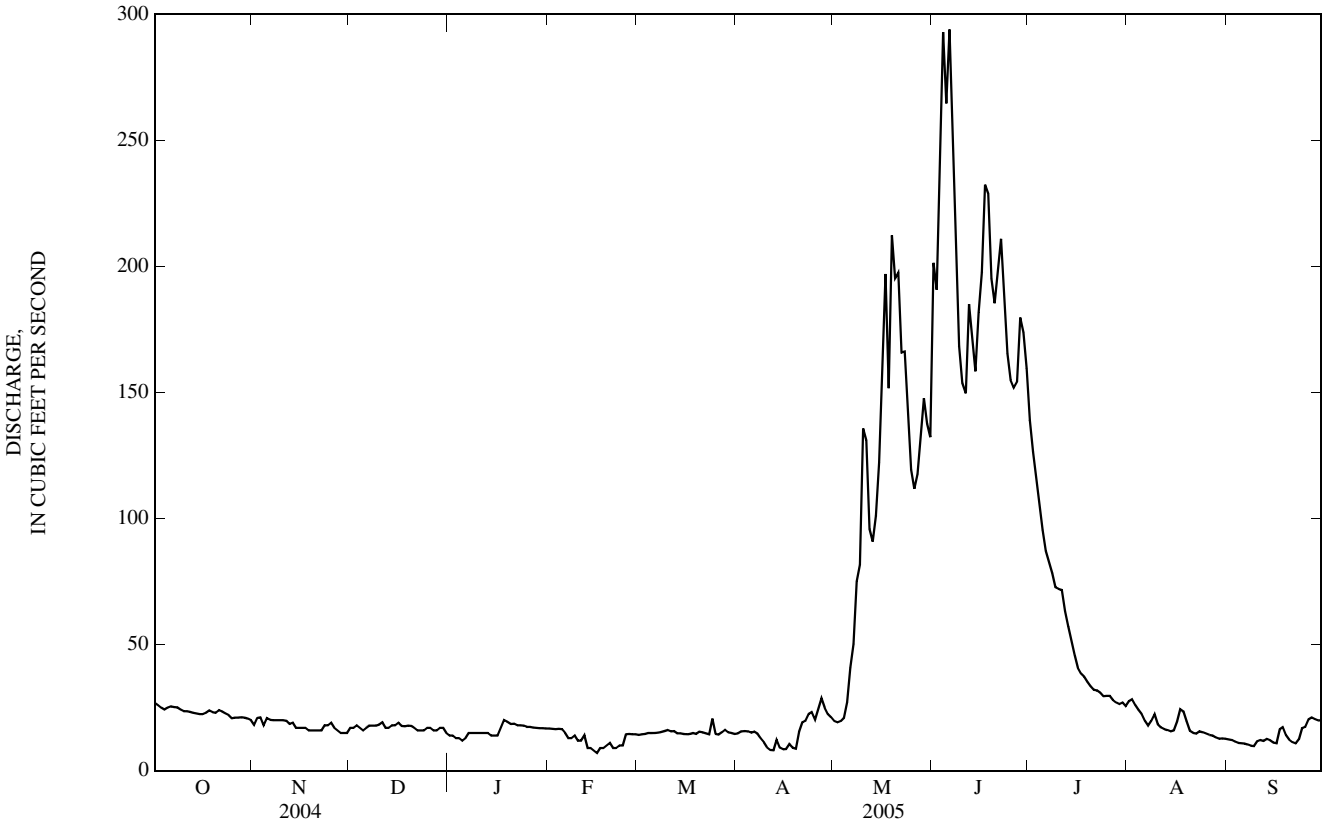
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	22.6	23.1	20.5	18.4	18.2	18.4	28.4	114	174	58.3	20.6	17.8
MAX	51.1	44.8	39.0	32.4	30.5	28.6	56.3	261	376	244	68.4	54.1
(WY)	(1960)	(1976)	(1976)	(1976)	(1951)	(1976)	(1943)	(1976)	(1975)	(1975)	(1975)	(1965)
MIN	3.59	11.8	11.0	8.49	10.0	12.3	10.4	54.7	35.0	12.6	8.14	6.59
(WY)	(1988)	(1988)	(1988)	(1988)	(1941)	(1993)	(1991)	(1977)	(1992)	(1988)	(1988)	(1991)

12330000 BOULDER CREEK AT MAXVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	10,653.2		15,680.7			
ANNUAL MEAN	29.1		43.0		44.6	
HIGHEST ANNUAL MEAN					82.2	1976
LOWEST ANNUAL MEAN					20.4	1992
HIGHEST DAILY MEAN	148	Jun 10	294	Jun 6	1,140	Jun 19, 1975
LOWEST DAILY MEAN	6.8	Aug 15	7.0	Feb 16	2.8	Oct 13, 1991
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 10	8.7	Feb 13	3.4	Oct 8, 1987
MAXIMUM PEAK FLOW			a342	Jun 4	1,460	Jun 19, 1975
MAXIMUM PEAK STAGE			b3.14	Jan 6	4.55	Jun 19, 1975
INSTANTANEOUS LOW FLOW					c2.8	Oct 13, 1991
ANNUAL RUNOFF (AC-FT)	21,130		31,100		32,290	
10 PERCENT EXCEEDS	67		152		109	
50 PERCENT EXCEEDS	19		18		21	
90 PERCENT EXCEEDS	14		12		12	

a--Gage height, 3.10 ft.
b--Backwater from ice.
c--Result of upstream diversion.
e--Estimated.



12331800 CLARK FORK NEAR DRUMMOND, MT

LOCATION.--Lat 46°42'44", long 113°19'48" (NAD 27), in $NE^1/_4$ $SW^1/_4$ $NW^1/_4$ sec. 14, T.11 N., R.14 W., in Granite County, Hydrologic Unit 17010201, on right bank 50 ft upstream from country road bridge, 0.3 mi north of Bearmouth, 4.5 mi east of Bearmouth Chalet, 9.0 mi northwest of Drummond, and at river mile 403.9.

DRAINAGE AREA.--2,501 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,790 ft (NGVD 29).

REMARKS.--Water-discharge records good. Some regulation by settling ponds on Silver Bow Creek near Anaconda and Georgetown Lake (station number 12325000) on Flint Creek. Diversions for irrigation of about 88,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1981 recorded a discharge of about 16,000 ft^3/s, from measurements made upstream at Clark Fork at Drummond (12331600) and at downstream site, Clark Fork at Clinton (12331900).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	523	479	448	249	471	397	406	510	1,200	1,680	268	282
2	516	481	464	189	472	406	406	486	2,030	1,510	285	286
3	512	492	465	173	461	406	423	429	2,530	1,400	278	284
4	507	503	458	189	460	407	431	422	3,270	1,300	264	286
5	506	493	445	e180	462	407	423	430	3,350	1,190	256	280
6	504	495	452	e170	442	413	415	454	3,110	1,090	243	282
7	502	500	468	207	396	428	419	500	3,050	976	228	282
8	493	493	456	248	429	440	441	580	2,700	921	230	279
9	498	488	457	273	414	449	463	685	2,330	852	241	280
10	486	488	452	281	388	447	446	865	2,030	813	251	288
11	485	485	474	308	390	438	421	1,580	1,860	787	247	323
12	499	481	487	339	421	439	406	1,980	1,900	757	244	337
13	513	476	454	358	426	424	401	1,640	2,220	692	256	348
14	526	470	447	359	412	412	450	1,430	1,900	613	255	362
15	525	467	465	337	394	409	456	1,360	1,840	578	257	362
16	523	474	457	297	344	409	450	1,420	2,000	537	247	351
17	518	476	450	333	320	413	461	1,740	2,220	486	245	433
18	523	470	449	393	346	405	470	2,030	2,820	470	254	489
19	528	471	450	544	359	395	485	1,870	2,530	440	261	481
20	521	470	455	628	424	400	502	2,020	2,180	408	263	457
21	530	446	426	686	420	415	508	2,040	2,000	380	258	440
22	534	448	431	601	395	409	493	2,040	1,990	368	254	438
23	521	474	338	575	388	397	481	1,960	2,000	361	261	460
24	511	485	315	537	397	372	487	1,840	1,850	342	273	496
25	505	499	402	510	404	385	490	1,620	1,660	324	282	546
26	498	513	427	500	401	389	514	1,460	1,600	322	282	545
27	491	476	395	493	393	390	554	1,310	1,680	331	281	537
28	492	460	366	497	391	423	557	1,170	1,950	349	269	523
29	496	445	364	492	---	474	538	1,100	1,960	315	268	522
30	495	405	441	493	---	458	527	1,110	1,870	274	261	521
31	487	---	386	474	---	424	---	1,040	---	266	272	---
TOTAL	15,768	14,303	13,444	11,913	11,420	12,880	13,924	39,121	65,630	21,132	8,034	11,800
MEAN	509	477	434	384	408	415	464	1,262	2,188	682	259	393
MAX	534	513	487	686	472	474	557	2,040	3,350	1,680	285	546
MIN	485	405	315	170	320	372	401	422	1,200	266	228	279
AC-FT	31,280	28,370	26,670	23,630	22,650	25,550	27,620	77,600	130,200	41,920	15,940	23,410

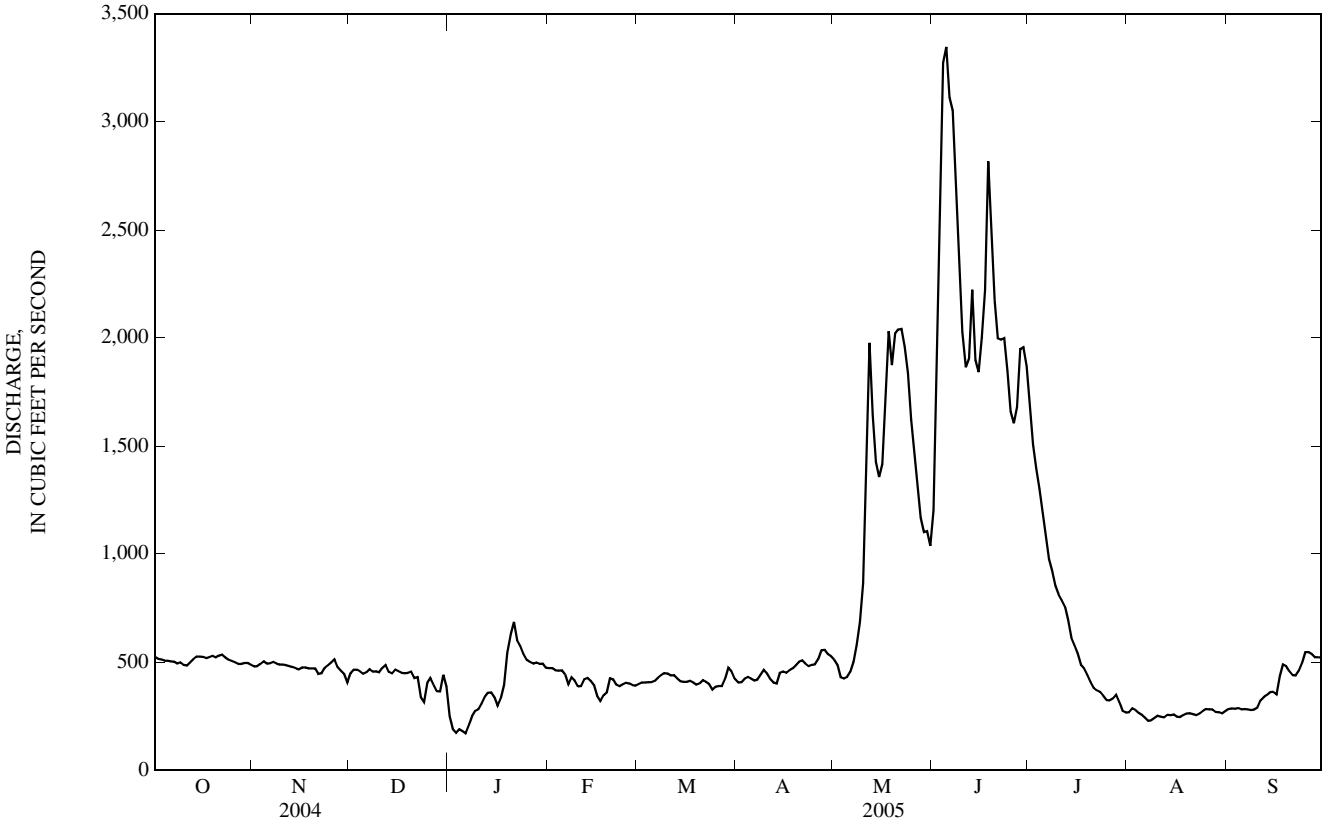
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

MEAN	574	577	500	495	592	686	766	1,126	1,480	692	355	432
MAX	859	810	640	754	1,377	1,048	1,356	2,557	3,560	1,731	895	1,007
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1998)	(1993)	(1993)
MIN	411	448	366	377	375	415	464	298	297	160	112	201
(WY)	(2003)	(2001)	(2001)	(2001)	(2001)	(2005)	(2005)	(2000)	(2000)	(2000)	(2000)	(1994)

12331800 CLARK FORK NEAR DRUMMOND, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	164,188		239,369			
ANNUAL MEAN	449		656		682	
HIGHEST ANNUAL MEAN					1,192	1997
LOWEST ANNUAL MEAN					400	2000
HIGHEST DAILY MEAN	1,370	Mar 9	3,350	Jun 5	8,430	Feb 9, 1996
LOWEST DAILY MEAN	132	Aug 17	170	Jan 6	77	Jul 31, 2000
ANNUAL SEVEN-DAY MINIMUM	143	Aug 12	194	Jan 2	83	Jul 29, 2000
MAXIMUM PEAK FLOW			3,550	Jun 4	9,800	Feb 9, 1996
MAXIMUM PEAK STAGE			6.77	Jun 4	10.03	Feb 9, 1996
INSTANTANEOUS LOW FLOW			a151	Jan 3	b75	Jul 30, 2000
ANNUAL RUNOFF (AC-FT)	325,700		474,800		493,800	
10 PERCENT EXCEEDS	605		1,680		1,200	
50 PERCENT EXCEEDS	456		458		531	
90 PERCENT EXCEEDS	262		274		272	

a--Gage height, 2.31 ft.
b--Gage height, 2.03 ft.
e--Estimated.



12331800 CLARK FORK NEAR DRUMMOND, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1993 to current year.

REMARKS. --Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
20...	0930	451	8.5	487	1.5	3.0	220	63.4	15.7	7.5	8	.30	.10
MAR													
09...	1515	447	8.6	473	20.0	10.0	230	65.5	15.6	8.6	10	.05	.17
APR													
18...	1020	469	8.4	477	7.0	7.5	230	66.2	16.2	9.3	11	E.03	.17
MAY													
17...	1515	1,810	8.2	289	16.0	11.0	120	34.7	8.44	9.5	24	E.03	.55
JUN													
02...	1630	2,210	8.2	312	11.0	9.5	140	39.6	10.1	12.2	30	.07	.82
23...	1150	2,030	8.2	289	20.0	16.0	130	39.7	8.16	12.9	18	.07	.28
JUL													
26...	1340	323	8.5	495	25.0	18.5	240	67.5	16.7	11.5	12.7	E.04	.04
AUG													
24...	1210	270	8.4	536	19.5	15.5	260	72.8	18.1	11.6	11.7	E.03	E.04

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
20...	2.6	12.3	12	220	E.05	1.78	11.5	53	5.0	17	74	14	17
MAR													
09...	4.9	24.5	E5	470	E.07	3.45	20.1	78	3.7	31	78	27	33
APR													
18...	3.8	24.7	E6	510	E.07	4.11	17.8	98	4.0	35	85	26	33
MAY													
17...	6.4	77.7	51	2,280	.40	17.8	23.7	295	4.9	104	80	132	645
JUN													
02...	12.8	146	37	3,320	.29	23.0	18.1	403	9.0	201	61	222	1,320
23...	8.6	48.3	14	880	.18	7.48	14.0	137	5.4	45	69	49	269
JUL													
26...	4.3	6.1	<6	40	E.04	.30	11.7	21	2.9	5	77	5	4.4
AUG													
24...	4.2	6.3	7	50	<.08	.45	7.3	30	2.6	6	72	8	5.8

E--Estimated.

12332000 MIDDLE FORK ROCK CREEK NEAR PHILIPSBURG, MT

LOCATION.--Lat 46°11'05", long 113°30'06" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.17, T.5 N., R.15 W., Granite County, Hydrologic Unit 17010202, on left bank 40 ft downstream from bridge on county highway, 1.2 mi upstream from East Fork, 3.4 mi upstream from West Fork, and 15 mi southwest of Philipsburg.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--September 1937 to current year. Monthly discharges only January to March 1938, published in WSP 1316.

GAGE.--Water-stage recorder. Elevation of gage is 5,444.08 ft (NGVD 29). Prior to Oct. 25, 1990, gage located at several sites 0.8 to 1.0 mi downstream. See WSP 1736 or 1933 for history of changes prior to Oct. 1, 1955.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. A few small diversions for irrigation upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	43	e33	e30	e30	e23	30	60	386	210	75	37
2	59	46	e34	e30	e32	e23	30	59	336	200	74	36
3	58	47	e34	e29	e30	e22	31	60	311	186	68	35
4	57	42	e33	e29	e33	e22	30	63	283	172	63	35
5	56	47	e32	e27	e25	e23	29	70	278	161	59	35
6	55	44	e33	e28	e20	e27	30	84	328	154	57	34
7	54	43	e34	e30	e17	e30	34	102	295	148	55	34
8	54	42	e34	e30	e17	e30	42	129	264	142	54	34
9	53	42	e35	e30	e15	e44	39	160	246	135	57	33
10	52	e41	e37	e31	e14	e43	36	216	226	132	56	38
11	52	e41	e36	e31	e15	e44	35	226	217	128	54	41
12	51	e38	e32	e32	e16	e37	35	190	308	120	53	39
13	51	e38	e32	e32	e14	e33	36	175	282	114	51	38
14	50	e37	e33	e29	e11	e32	38	181	257	110	50	38
15	49	e37	e34	e29	e9.5	e34	34	207	287	104	49	36
16	49	e36	e34	e32	e9.0	e35	38	269	305	99	48	35
17	48	e36	e36	e37	e9.5	e31	42	376	358	95	47	44
18	49	e35	e36	e41	e10	e29	42	333	360	92	49	50
19	50	e35	e38	e44	e11	e33	43	457	310	87	47	43
20	49	e34	e36	e40	e10	e37	40	469	285	83	44	39
21	51	e34	e34	e40	e11	e36	39	445	301	80	43	37
22	50	e36	e31	e37	e12	e31	41	403	328	79	41	38
23	49	e36	e29	e40	e12	e29	45	420	315	79	43	38
24	49	e36	e31	e36	e14	e30	51	372	281	75	42	41
25	45	e37	e34	e36	e16	e29	56	325	261	75	42	42
26	47	e34	e32	e32	e15	e35	62	296	264	72	40	39
27	46	e33	e32	e29	e15	e39	69	293	271	69	39	37
28	46	e33	e31	e31	e17	e38	62	306	266	67	38	36
29	46	e33	e31	e29	---	33	61	323	248	65	37	35
30	45	e32	e33	e27	---	30	63	316	228	64	37	34
31	45	---	e31	e27	---	28	---	308	---	64	38	---
TOTAL	1,576	1,148	1,035	1,005	460.0	990	1,263	7,693	8,685	3,461	1,550	1,131
MEAN	50.8	38.3	33.4	32.4	16.4	31.9	42.1	248	290	112	50.0	37.7
MAX	61	47	38	44	33	44	69	469	386	210	75	50
MIN	45	32	29	27	9.0	22	29	59	217	64	37	33
AC-FT	3,130	2,280	2,050	1,990	912	1,960	2,510	15,260	17,230	6,860	3,070	2,240
CFSM	0.41	0.31	0.27	0.26	0.13	0.26	0.34	2.02	2.35	0.91	0.41	0.31
IN.	0.48	0.35	0.31	0.30	0.14	0.30	0.38	2.33	2.63	1.05	0.47	0.34

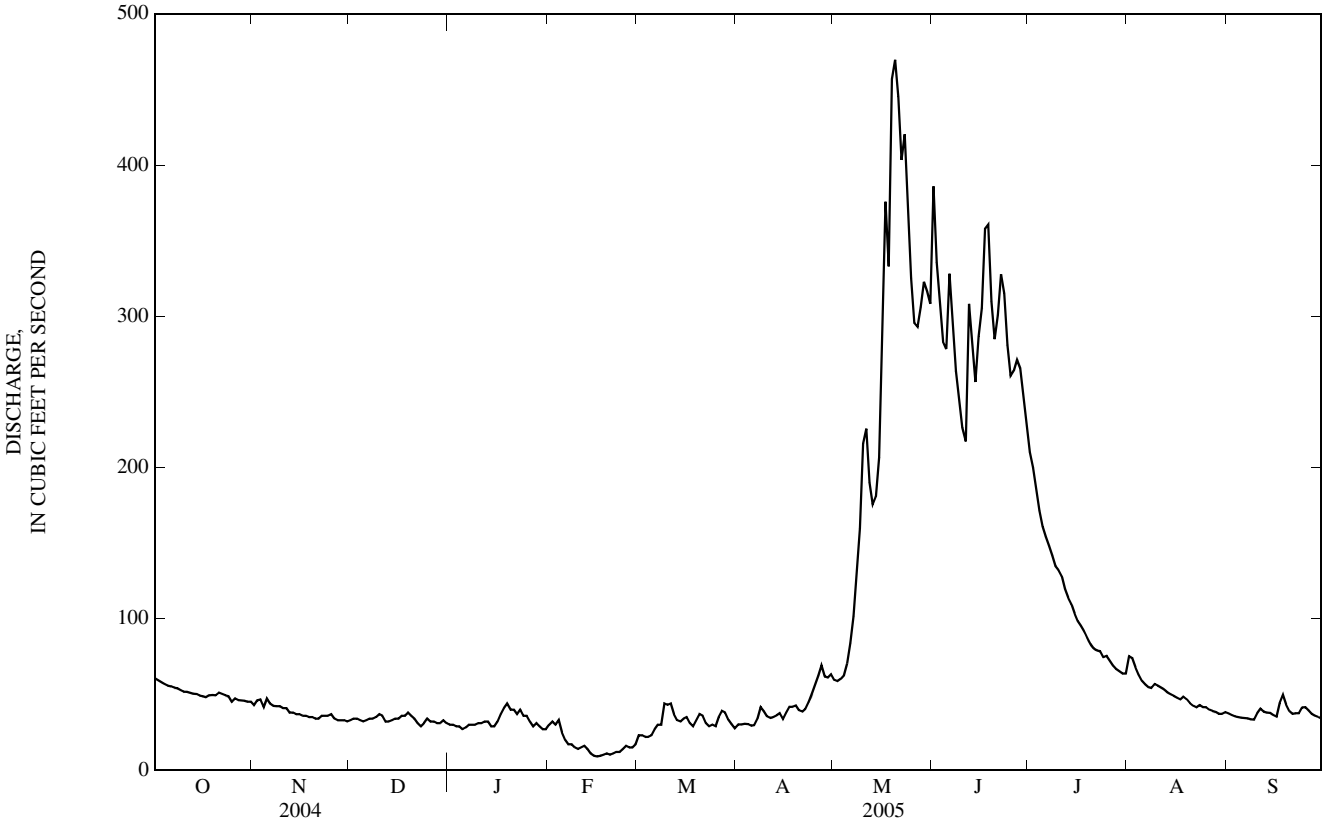
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

MEAN	49.2	42.6	36.2	32.1	32.6	36.2	74.2	332	475	176	69.7	51.6
MAX	201	104	64.1	60.9	60.3	71.2	190	650	914	496	141	98.5
(WY)	(1947)	(1947)	(1947)	(1976)	(1996)	(1986)	(1943)	(1947)	(1972)	(1975)	(1975)	(1946)
MIN	26.9	25.7	23.6	22.0	16.4	22.7	28.1	137	141	48.7	25.8	30.4
(WY)	(1988)	(1980)	(1946)	(1977)	(2005)	(1955)	(1975)	(1953)	(1992)	(1940)	(1940)	(1987)

12332000 MIDDLE FORK ROCK CREEK NEAR PHILIPSBURG, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	31,491		29,997.0			
ANNUAL MEAN	86.0		82.2		117	
HIGHEST ANNUAL MEAN					183	1997
LOWEST ANNUAL MEAN					62.3	1940
HIGHEST DAILY MEAN	450	Jun 10	469	May 20	1,480	Jun 16, 1974
LOWEST DAILY MEAN	25	Jan 5	9.0	Feb 16	5.3	Feb 9, 1953
ANNUAL SEVEN-DAY MINIMUM	28	Jan 1	10	Feb 14	10	Feb 14, 2005
MAXIMUM PEAK FLOW			535	May 19	1,680	Jun 16, 1974
MAXIMUM PEAK STAGE			a3.01	May 19	b5.58	Jun 16, 1974
INSTANTANEOUS LOW FLOW					5.3	Feb 9, 1953
ANNUAL RUNOFF (AC-FT)	62,460		59,500		85,060	
ANNUAL RUNOFF (CFSM)	0.700		0.668		0.955	
ANNUAL RUNOFF (INCHES)	9.52		9.07		12.97	
10 PERCENT EXCEEDS	228		267		319	
50 PERCENT EXCEEDS	50		41		47	
90 PERCENT EXCEEDS	31		29		28	

a--Recorded, may have been higher during period of no gage-height record, Nov. 16 to Feb. 28.
b--Site and datum in use.
e--Estimated.



12334510 ROCK CREEK NEAR CLINTON, MT

LOCATION.--Lat 46°43'21", long 113°40'56" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec.12, T.11 N., R.17 W., Missoula County, Hydrologic Unit 17010202, on left bank 100 ft downstream from private road bridge, 0.2 mi upstream from mouth, and 3.7 mi southeast of Clinton.

DRAINAGE AREA.--885 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,519.46 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by East Fork Rock Creek Reservoir (station number 12332500). During irrigation season water is diverted from East Fork Rock Creek in sec.5, T.4 N., R.14 W., 500 ft below Rock Creek Dam, through a canal into Trout Creek, thence into Flint Creek. Diversions for irrigation of about 16,100 acres. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of 8.52 ft, from floodmark, discharge, 6,500 ft^3/s; local residents report flood of 1927 reached a stage of about 9.5 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	216	144	148	186	166	177	458	1,400	817	307	181
2	284	208	178	e120	182	171	184	432	1,550	767	331	179
3	278	226	184	e100	175	168	191	426	1,610	722	319	178
4	263	223	183	e70	176	171	193	449	1,560	675	300	174
5	260	198	176	e40	181	171	186	483	1,460	642	277	171
6	264	214	177	e60	169	175	178	550	1,500	611	267	166
7	262	217	190	e80	147	181	183	649	1,420	589	260	164
8	261	214	188	e130	163	188	230	731	1,300	562	259	163
9	259	212	196	e120	161	198	260	824	1,200	544	265	164
10	252	213	195	e110	141	207	249	1,080	1,130	540	257	187
11	248	212	203	e100	143	197	237	1,340	1,070	547	250	195
12	246	207	207	e110	152	201	229	1,260	1,220	519	245	193
13	243	197	190	e130	171	193	226	1,130	1,340	490	247	194
14	241	193	179	e150	167	182	250	1,100	1,160	477	249	194
15	238	193	204	e120	155	182	235	1,150	1,130	460	248	191
16	239	205	193	e80	138	177	228	1,270	1,140	453	237	192
17	239	206	182	e90	124	182	254	1,660	1,200	442	226	257
18	249	199	181	e130	132	174	276	1,700	1,300	439	229	302
19	246	195	187	e200	144	165	294	1,760	1,190	424	228	290
20	244	197	190	e220	157	179	287	2,150	1,090	406	220	261
21	243	173	177	e200	167	182	282	1,990	1,040	391	209	240
22	245	151	169	e210	156	177	282	1,860	1,010	385	204	229
23	240	192	121	e200	146	175	306	1,840	987	374	211	229
24	237	209	102	216	150	160	353	1,710	940	361	208	247
25	232	213	158	205	155	162	434	1,550	894	352	196	264
26	221	213	185	202	157	165	501	1,420	879	354	191	256
27	226	185	165	200	157	165	573	1,320	909	340	186	240
28	224	151	141	203	159	198	560	1,270	941	321	183	225
29	224	156	138	200	---	213	516	1,260	960	310	181	218
30	223	127	169	197	---	198	490	1,230	889	299	180	212
31	223	---	172	189	---	185	---	1,200	---	297	181	---
TOTAL	7,644	5,915	5,424	4,530	4,411	5,608	8,844	37,252	35,419	14,910	7,351	6,356
MEAN	247	197	175	146	158	181	295	1,202	1,181	481	237	212
MAX	290	226	207	220	186	213	573	2,150	1,610	817	331	302
MIN	221	127	102	40	124	160	177	426	879	297	180	163
AC-FT	15,160	11,730	10,760	8,990	8,750	11,120	17,540	73,890	70,250	29,570	14,580	12,610
CFSM	0.28	0.22	0.20	0.17	0.18	0.20	0.33	1.36	1.33	0.54	0.27	0.24

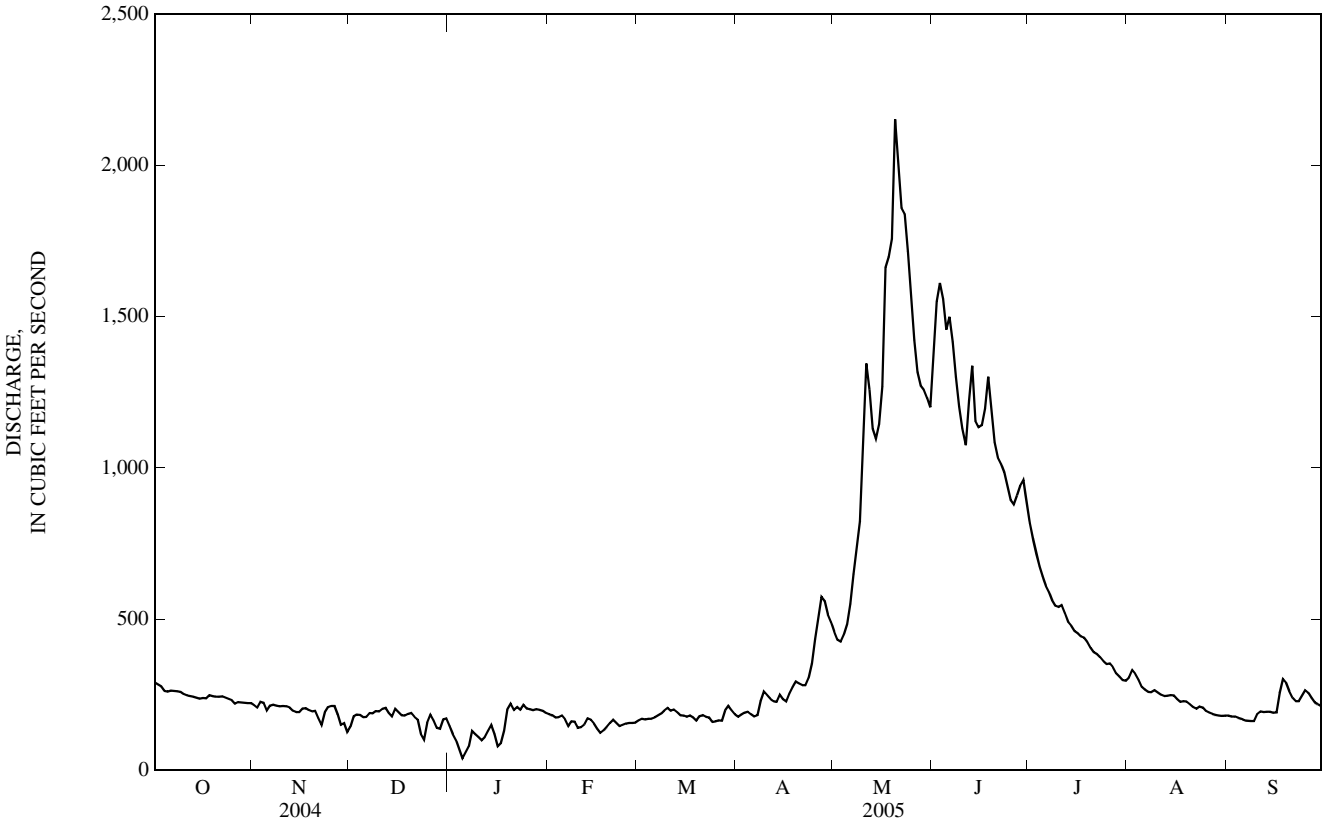
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

MEAN	250	224	195	182	190	243	499	1,444	1,675	662	306	260
MAX	474	430	460	329	426	428	1,022	3,676	3,755	1,908	635	389
(WY)	(1976)	(1976)	(1976)	(1976)	(1996)	(1986)	(1996)	(1976)	(1975)	(1975)	(1975)	(1975)
MIN	157	149	119	106	109	158	236	544	407	267	156	148
(WY)	(1988)	(1988)	(1989)	(1988)	(1993)	(2002)	(1975)	(1977)	(1992)	(1985)	(1988)	(1992)

12334510 ROCK CREEK NEAR CLINTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	135,064		143,664			
ANNUAL MEAN	369		394		512	
HIGHEST ANNUAL MEAN					966	1976
LOWEST ANNUAL MEAN					258	1992
HIGHEST DAILY MEAN	1,260	Jun 11	2,150	May 20	5,480	May 18, 1997
LOWEST DAILY MEAN	65	Jan 6	40	Jan 5	38	Dec 22, 1998
ANNUAL SEVEN-DAY MINIMUM	86	Jan 3	86	Jan 2	65	Jan 3, 1974
MAXIMUM PEAK FLOW			a2,230	May 20	c5,530	May 18, 1997
MAXIMUM PEAK STAGE			b6.28	Jan 2	8.05	Jun 9, 1997
INSTANTANEOUS LOW FLOW					d37	Dec 23, 1998
ANNUAL RUNOFF (AC-FT)	267,900		285,000		370,600	
ANNUAL RUNOFF (CFSM)	0.417		0.445		0.578	
10 PERCENT EXCEEDS	870		1,130		1,210	
50 PERCENT EXCEEDS	260		217		261	
90 PERCENT EXCEEDS	151		154		151	

a--Gage height, 5.91 ft.
b--Backwater from ice.
c--Gage height, 7.81 ft.
c--Gage height, 2.56 ft, may have been less during period of ice effect.
e--Estimated.



12334510 ROCK CREEK NEAR CLINTON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-83, 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: September 1979 to September 1983, April 1995 to September 2002, October 2004 to September 2005.

REMARKS.--Water temperature record is rated excellent. Missing data for Sept. 29 due to equipment error. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 23.0°C, Aug. 1, 2000; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE : Maximum, 22.0°C, Aug. 7; minimum, 0.0°C, on many days during winter period.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	9.0	10.5	4.0	2.5	3.0	0.5	0.0	0.5	0.0	0.0	0.0
2	12.5	8.5	10.0	5.5	3.0	4.0	1.5	0.5	1.0	0.0	0.0	0.0
3	12.0	8.0	10.0	6.0	4.5	5.0	1.5	0.5	1.0	0.0	0.0	0.0
4	12.0	8.0	10.0	4.5	2.5	3.5	1.5	0.5	1.0	0.0	0.0	0.0
5	11.5	8.0	9.5	4.0	2.0	3.0	1.5	0.5	1.0	0.0	0.0	0.0
6	11.0	7.5	9.0	4.5	2.0	3.0	1.5	0.5	1.0	0.0	0.0	0.0
7	12.5	9.5	10.5	5.5	3.0	4.0	2.0	1.0	1.5	0.0	0.0	0.0
8	11.5	8.0	9.5	5.0	3.0	4.0	2.0	0.5	1.0	0.5	0.0	0.0
9	10.5	8.0	9.0	4.0	2.5	3.5	2.0	1.0	1.5	0.5	0.0	0.0
10	8.5	6.5	7.5	5.5	3.5	4.5	3.0	1.5	2.0	0.0	0.0	0.0
11	9.0	5.5	7.0	4.5	3.0	3.5	3.5	2.0	3.0	0.5	0.0	0.0
12	9.0	6.5	7.5	3.5	1.5	2.5	3.0	1.0	2.0	0.5	0.0	0.0
13	9.5	6.0	7.5	3.0	1.5	2.0	1.0	0.5	0.5	0.5	0.0	0.0
14	10.5	7.0	8.5	3.0	2.0	2.5	1.5	0.5	1.0	0.0	0.0	0.0
15	11.0	9.0	10.0	2.5	1.5	2.0	2.5	1.5	2.0	0.0	0.0	0.0
16	10.0	9.5	9.5	3.5	2.0	2.5	2.0	1.0	1.5	0.5	0.0	0.0
17	9.5	8.0	9.0	5.0	3.0	3.5	2.5	1.0	1.5	0.5	0.0	0.5
18	9.5	7.5	8.0	3.0	1.5	2.5	2.0	1.0	1.5	0.5	0.5	0.5
19	8.5	6.0	7.0	2.5	2.0	2.5	3.0	1.5	2.0	1.0	0.5	0.5
20	8.5	6.5	7.5	3.0	1.5	2.0	2.5	1.0	2.0	1.0	0.5	0.5
21	8.0	7.0	7.5	1.5	0.5	1.0	1.5	1.0	1.0	1.0	0.5	0.5
22	7.5	6.0	7.0	2.0	1.0	1.5	1.0	0.0	0.5	1.0	0.5	0.5
23	7.0	6.0	6.5	2.5	2.0	2.0	0.5	0.0	0.5	2.0	0.5	1.0
24	6.0	4.5	5.0	3.0	2.0	2.5	0.5	0.5	0.5	2.0	0.0	0.5
25	6.0	4.0	5.0	4.0	3.0	3.5	0.5	0.5	0.5	2.0	0.0	0.5
26	6.0	3.5	4.5	4.0	1.5	3.0	0.5	0.5	0.5	2.0	0.5	1.0
27	6.0	3.5	4.5	1.5	0.5	1.0	0.5	0.0	0.0	2.5	0.5	1.0
28	6.0	3.5	5.0	1.0	0.5	0.5	0.5	0.0	0.0	2.5	0.5	1.5
29	5.5	4.5	5.0	0.5	0.5	0.5	0.5	0.0	0.5	2.0	0.5	1.0
30	6.0	5.0	5.5	0.5	0.0	0.5	0.5	0.0	0.5	1.5	0.5	1.0
31	5.5	3.5	4.5	---	---	---	0.5	0.0	0.0	2.0	0.5	1.0
MONTH	12.5	3.5	7.5	6.0	0.0	2.5	3.5	0.0	1.0	2.5	0.0	0.5

12334510 ROCK CREEK NEAR CLINTON, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	0.5	1.5	3.5	1.5	2.0	8.5	3.5	5.5	10.5	4.0	7.0
2	2.0	0.5	1.0	5.0	0.5	2.0	9.5	5.5	7.0	11.5	5.5	8.5
3	3.0	0.0	1.0	5.0	0.5	2.5	8.0	5.5	6.5	10.5	7.0	9.0
4	2.0	0.5	1.0	5.0	0.5	2.5	7.5	5.0	6.0	9.0	7.0	8.5
5	2.5	0.5	1.0	5.0	0.5	2.5	8.5	4.0	6.0	11.5	7.0	9.0
6	2.5	0.5	1.0	5.0	0.5	2.5	11.0	4.5	7.0	12.0	8.5	10.5
7	2.0	0.0	0.5	5.0	1.5	3.0	10.0	6.5	8.0	11.0	8.5	9.5
8	2.0	0.5	1.0	5.5	1.5	3.5	9.0	7.0	8.0	10.5	9.0	9.5
9	2.5	0.0	1.0	6.5	1.0	3.5	8.5	6.0	7.0	9.5	8.0	9.0
10	2.5	0.0	1.0	6.5	2.5	4.0	9.0	5.5	7.0	8.5	7.0	8.0
11	2.5	0.0	1.0	6.5	1.0	3.5	7.5	4.5	6.0	7.0	6.0	6.5
12	2.5	0.5	1.0	4.5	2.5	3.5	9.0	5.0	7.0	10.0	6.0	7.5
13	2.5	0.5	1.5	5.0	1.5	3.0	7.0	5.5	6.5	11.0	7.0	9.0
14	1.5	0.0	0.5	5.0	2.0	3.5	6.5	4.0	5.0	11.5	7.5	9.5
15	2.0	0.0	1.0	6.0	2.5	4.0	10.0	3.5	6.5	10.0	8.5	9.0
16	1.5	0.0	0.5	4.5	2.5	3.5	11.5	5.0	8.0	9.5	8.5	9.0
17	1.5	0.0	0.5	5.0	2.0	3.5	9.5	7.0	8.0	9.5	7.5	8.5
18	0.5	0.0	0.5	4.0	1.0	2.5	8.5	5.5	7.0	9.0	7.5	8.0
19	1.0	0.0	0.5	6.5	2.0	4.0	7.0	5.5	6.0	10.0	8.0	9.0
20	1.5	0.5	0.5	6.5	4.0	5.0	6.5	5.0	5.5	10.0	8.0	9.0
21	3.0	0.0	1.5	5.5	3.0	4.5	8.0	4.5	6.0	10.5	7.5	9.0
22	2.5	0.0	0.5	4.5	2.5	4.0	12.0	5.5	8.5	10.0	9.0	9.5
23	2.5	0.0	1.0	3.5	1.0	2.0	11.0	7.0	9.0	10.5	7.5	9.0
24	3.5	0.0	1.0	3.0	0.5	1.5	12.5	8.0	9.5	10.5	7.5	9.0
25	3.5	0.0	1.0	4.0	1.5	2.5	13.5	7.5	10.0	10.5	7.0	9.0
26	3.5	0.0	1.0	5.5	1.5	3.5	13.0	8.0	10.0	12.0	7.5	10.0
27	4.0	0.0	1.5	7.5	3.5	5.5	10.5	5.5	8.0	13.0	8.5	10.5
28	4.0	0.0	1.5	7.5	5.5	6.0	7.5	3.5	5.5	14.0	9.5	11.5
29	---	---	---	6.0	4.0	5.0	8.5	3.0	6.0	13.5	10.0	11.5
30	---	---	---	7.0	3.5	5.0	9.0	4.5	6.5	13.5	9.0	11.0
31	---	---	---	8.0	2.5	5.0	---	---	---	11.5	9.0	10.0
MONTH	4.0	0.0	1.0	8.0	0.5	3.5	13.5	3.0	7.0	14.0	4.0	9.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.5	8.5	9.0	17.5	12.5	15.0	20.0	15.0	17.5	16.5	10.5	13.0
2	8.5	8.0	8.5	17.0	13.0	15.0	19.0	16.0	17.5	16.0	11.0	13.5
3	8.0	7.5	8.0	17.0	11.5	14.0	20.5	14.5	17.5	16.5	12.0	14.0
4	11.5	7.0	9.0	17.5	12.0	14.5	21.0	14.0	17.0	16.5	11.5	14.0
5	11.0	8.5	10.0	19.0	12.5	15.5	21.5	15.0	18.0	16.5	11.0	13.5
6	10.5	8.5	9.5	19.0	13.5	16.0	21.5	15.0	18.0	16.5	11.0	13.5
7	9.0	7.5	8.5	19.5	14.0	16.5	22.0	16.0	18.5	16.5	11.0	13.5
8	8.5	7.0	8.0	20.5	14.0	17.0	19.5	17.0	18.0	16.5	11.0	13.5
9	10.0	7.5	8.5	18.0	13.5	15.5	21.0	15.5	18.0	14.0	11.5	12.5
10	10.5	8.0	9.0	16.0	12.0	14.0	19.5	15.0	17.5	12.5	10.5	11.0
11	11.5	9.0	10.0	19.0	13.0	15.5	20.0	14.5	17.0	13.0	8.0	10.5
12	11.0	9.0	10.0	20.5	13.5	17.0	18.0	14.0	15.5	11.0	8.5	10.0
13	11.5	7.5	9.5	21.0	15.5	18.0	18.5	12.5	15.0	12.0	9.5	10.5
14	12.5	9.0	10.5	20.0	14.0	17.0	18.5	12.0	15.0	13.0	8.5	10.5
15	14.5	10.5	12.5	20.5	14.0	17.0	19.0	12.5	15.5	14.0	9.0	11.0
16	13.0	11.0	11.5	20.5	15.5	17.5	19.0	13.5	16.0	12.5	9.0	11.0
17	11.0	10.0	10.5	18.0	13.5	15.5	16.5	13.5	15.0	11.0	10.0	10.5
18	11.5	9.0	10.0	20.0	13.5	16.5	16.0	12.5	14.0	12.0	9.5	10.5
19	14.5	9.5	11.5	20.5	14.0	17.0	18.0	11.5	14.5	13.5	8.5	10.5
20	16.0	10.5	13.0	20.5	14.0	17.0	19.0	12.0	15.0	14.0	9.0	11.0
21	16.0	12.5	14.0	21.0	14.5	17.5	19.5	13.0	16.0	13.5	9.5	11.0
22	17.5	13.0	15.0	20.0	15.5	17.5	18.5	13.5	16.0	12.5	8.0	10.0
23	17.0	13.0	15.0	21.0	15.0	18.0	18.5	14.5	16.0	10.5	9.0	10.0
24	16.0	12.0	14.5	20.5	14.5	17.5	15.5	13.0	14.0	9.0	8.0	8.5
25	14.5	12.5	13.5	18.5	15.0	16.5	17.0	10.5	13.5	11.5	7.0	9.0
26	13.0	11.5	12.5	19.5	13.0	16.0	17.5	11.0	14.0	12.0	7.0	9.5
27	14.0	11.5	12.5	20.0	13.5	16.5	18.5	12.0	15.0	12.5	8.0	10.0
28	13.0	12.0	12.5	19.5	13.5	16.5	19.0	12.5	15.5	11.5	7.5	9.5
29	13.0	11.5	12.0	20.0	14.5	17.0	18.0	13.0	15.0	10.5	7.5	---
30	16.0	11.0	13.0	21.0	14.5	17.5	15.5	12.5	14.0	13.0	10.0	11.0
31	---	---	---	19.5	15.5	17.0	16.5	10.0	12.5	---	---	---
MONTH	17.5	7.0	11.0	21.0	11.5	16.5	22.0	10.0	16.0	16.5	7.0	11.5

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT

LOCATION.--Lat 46°49'34", long 113°48'48" (NAD 27), in $SW^1/_4NW^1/_4SW^1/_4$ sec. 1, T.12 N., R.18 W., Missoula County, Hydrologic Unit 17010201, on left bank 0.8 mi southeast of Turah, 4 mi southeast of Bonner, and at river mile 370.2.

DRAINAGE AREA.--3,641 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. Water-discharge records for the period March 1985 to September 1985 are available in files at the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder. Elevation of gage is 3,320 ft (NGVD 29), from topographic map. Prior to May 9, 1986, non-recording gage at same site at elevation 2.00 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by settling ponds on Silver Bow Creek near Anaconda and by Georgetown Lake (station number 12325000) on Flint Creek. Diversions for irrigation of about 100,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	863	771	628	591	707	607	666	1,080	2,740	2,690	631	517
2	851	753	683	e400	705	625	667	1,020	3,690	2,410	664	519
3	841	777	701	e320	689	629	682	968	4,340	2,220	660	515
4	827	790	690	e270	690	634	702	951	4,710	2,080	630	513
5	820	762	681	e220	696	636	691	970	4,970	1,950	599	512
6	828	766	684	e230	674	648	675	1,030	4,810	1,830	574	507
7	826	775	698	e280	619	669	676	1,140	4,690	1,700	544	506
8	822	770	703	e400	634	690	737	1,260	4,450	1,600	536	501
9	823	761	713	e420	639	708	797	1,430	4,100	1,530	547	499
10	813	756	699	e420	588	719	793	1,800	3,830	1,490	549	538
11	799	756	717	e440	587	708	762	2,630	3,490	1,450	545	564
12	807	747	740	e480	607	707	734	3,160	3,560	1,410	537	584
13	815	732	717	e540	646	707	720	2,760	3,970	1,330	542	597
14	831	723	668	e560	637	666	782	2,480	3,660	1,240	542	612
15	840	716	725	e500	609	660	783	2,400	3,340	1,170	543	621
16	852	725	707	e400	572	655	760	2,540	3,460	1,120	534	610
17	845	737	687	e460	528	666	797	3,100	3,660	1,050	519	712
18	850	730	684	e550	527	656	836	3,760	4,290	1,010	533	837
19	855	719	686	e750	552	629	871	3,810	4,180	960	537	835
20	842	724	697	926	593	641	888	4,600	3,700	902	533	796
21	851	690	672	968	635	658	896	4,540	3,410	855	517	757
22	858	654	665	892	602	658	883	4,520	3,290	819	505	736
23	845	698	e600	850	584	650	892	4,400	3,260	801	518	758
24	831	746	e500	819	590	618	948	4,060	3,090	778	519	788
25	818	772	e570	778	601	604	1,010	3,710	2,790	750	523	856
26	798	779	652	759	609	622	1,090	3,350	2,680	739	526	859
27	793	744	633	746	604	615	1,200	3,020	2,710	727	514	839
28	789	664	e560	746	600	663	1,230	2,790	3,000	720	506	820
29	787	674	e500	744	---	735	1,160	2,670	3,090	698	500	801
30	788	606	e700	740	---	741	1,110	2,620	2,920	646	498	794
31	781	---	670	722	---	700	---	2,530	---	625	506	---
TOTAL	25,589	22,017	20,630	17,921	17,324	20,524	25,438	81,099	109,880	39,300	16,931	19,903
MEAN	825	734	665	578	619	662	848	2,616	3,663	1,268	546	663
MAX	863	790	740	968	707	741	1,230	4,600	4,970	2,690	664	859
MIN	781	606	500	220	527	604	666	951	2,680	625	498	499
AC-FT	50,760	43,670	40,920	35,550	34,360	40,710	50,460	160,900	217,900	77,950	33,580	39,480

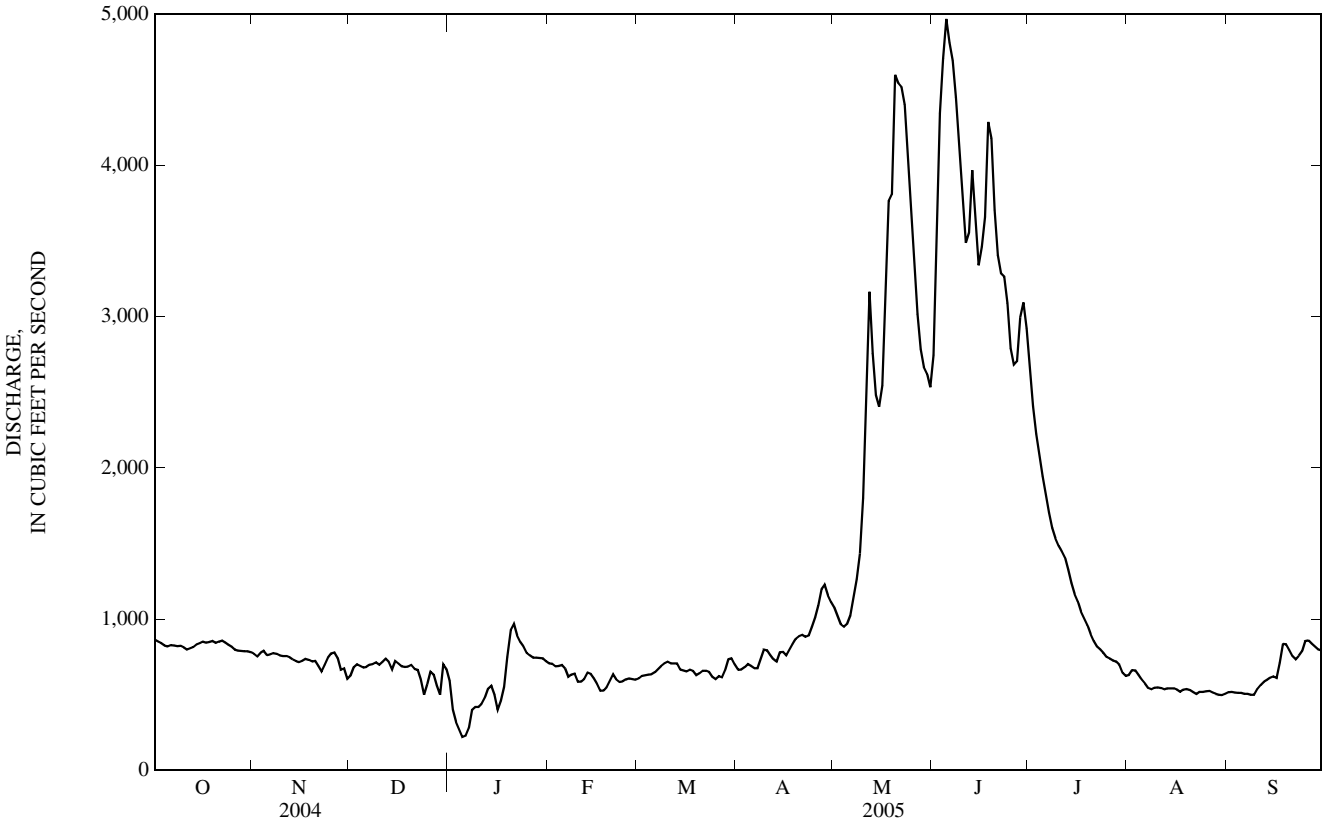
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

MEAN	835	825	719	699	831	1,027	1,449	2,486	2,831	1,225	621	681
MAX	1,287	1,173	1,233	1,149	2,124	1,664	3,072	6,345	7,090	2,920	1,423	1,423
(WY)	(1998)	(1998)	(1996)	(1997)	(1996)	(1986)	(1996)	(1997)	(1997)	(1998)	(1993)	(1993)
MIN	592	616	492	474	472	662	828	915	639	485	271	357
(WY)	(1993)	(1993)	(1993)	(1993)	(1989)	(2005)	(1991)	(1992)	(1992)	(2000)	(2000)	(1988)

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1986 - 2005	
ANNUAL TOTAL	323,912		416,556			
ANNUAL MEAN	885		1,141		1,186	
HIGHEST ANNUAL MEAN					2,219	1997
LOWEST ANNUAL MEAN					686	1992
HIGHEST DAILY MEAN	2,450	Jun 12	4,970	Jun 5	9,530	Jun 2, 1997
LOWEST DAILY MEAN	230	Jan 6	220	Jan 5	a200	Dec 21, 1998
ANNUAL SEVEN-DAY MINIMUM	346	Jan 3	303	Jan 2	224	Aug 15, 1992
MAXIMUM PEAK FLOW			5,180	Jun 5	b12,400	Feb 9, 1996
MAXIMUM PEAK STAGE			6.72	Jun 5	c10.24	Dec 10, 1995
ANNUAL RUNOFF (AC-FT)	642,500		826,200		858,900	
10 PERCENT EXCEEDS	1,410		3,010		2,340	
50 PERCENT EXCEEDS	768		736		828	
90 PERCENT EXCEEDS	530		525		502	

a--Also Dec. 27, 2001.
b--Gage height, 9.05 ft.
c--Backwater from ice.
e--Estimated.



12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998.
SUSPENDED-SEDIMENT DISCHARGE: March 1985 to March 2003, August 2003 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.0°C, Aug. 17, 1992; minimum, 0.0°C, on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,140 mg/L, Feb. 25, 1986; minimum daily mean, 1 mg/L, Sep. 12, 1987.
SEDIMENT LOAD: Maximum daily, 24,400 tons, Feb. 25, 1986; minimum daily 1.1 tons, Sep. 12, 1987.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 193 mg/L, June 4; minimum daily mean, 2 mg/L, July 20-27.
SEDIMENT LOAD: Maximum daily, 2,450 tons, June 4; minimum daily, 2.4 tons, Jan. 5.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
DEC													
20...	1055	702	8.6	390	3.0	2.0	170	48.6	12.7	5.0	5	.10	.06
MAR													
09...	1630	702	8.7	383	15.0	8.5	180	50.2	12.9	5.8	6	E.03	.10
APR													
20...	1530	900	8.5	343	9.0	7.0	160	43.9	11.8	5.2	6	<.04	.10
MAY													
17...	1710	3,340	8.1	186	14.0	11.5	77	21.4	5.63	4.7	10	E.02	.42
JUN													
03...	1045	4,310	8.1	214	10.5	9.0	95	27.3	6.57	7.4	16	E.04	.40
29...	1020	3,130	8.3	263	17.0	13.0	120	35.7	8.01	8.7	11	.05	.16
JUL													
26...	1505	746	8.8	312	27.0	18.5	150	40.1	11.0	5.9	6.1	<.04	E.03
AUG													
24...	1320	520	8.6	360	20.5	14.5	170	48.4	12.9	5.9	6.0	<.04	E.03

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
20...	2.0	6.6	<6	120	<.08	.86	3.0	24	3.1	10	88	7	13
MAR													
09...	3.6	14.6	E3	280	E.04	2.07	7.3	51	2.3	21	82	17	32
APR													
20...	2.4	12.2	6	290	E.05	2.10	5.4	49	2.2	20	81	15	36
MAY													
17...	3.6	48.1	47	1,700	.23	10.3	12.1	221	3.6	81	65	123	1,110
JUN													
03...	6.9	62.8	46	1,700	.24	10.9	7.5	221	5.9	93	68	110	1,280
29...	5.7	25.9	22	550	.12	4.01	8.2	79	4.6	30	66	35	296
JUL													
26...	2.4	3.7	E4	30	<.08	.18	4.4	11	1.3	3	82	2	4.0
AUG													
24...	2.5	4.6	<6	70	<.08	.35	3.9	19	1.6	5	75	5	7.0

E--Estimated.

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8	19	6	12	5	8.5	14	22	10	19	9	15
2	7	16	5	10	5	9.2	10	11	9	17	12	20
3	6	14	4	8.4	6	11	6	5.2	10	19	10	17
4	6	13	3	6.4	6	11	4	2.9	12	22	13	22
5	6	13	3	6.2	6	11	4	2.4	13	24	14	24
6	6	13	3	6.2	6	11	4	2.5	13	24	14	24
7	6	13	4	8.4	6	11	4	3.0	13	22	16	29
8	6	13	4	8.3	6	11	4	4.3	12	21	18	34
9	6	13	4	8.2	6	12	4	4.5	12	21	19	36
10	6	13	4	8.2	6	11	4	4.5	12	19	20	39
11	6	13	4	8.2	5	9.7	4	4.8	12	19	21	40
12	5	11	4	8.1	5	10	4	5.2	11	18	22	42
13	5	11	4	7.9	5	9.7	4	5.8	11	19	19	36
14	6	13	4	7.8	5	9.0	5	7.6	10	17	17	31
15	8	18	4	7.7	5	9.8	5	6.8	10	16	14	25
16	9	21	4	7.8	4	7.6	5	5.4	10	15	14	25
17	8	18	4	8.0	4	7.4	6	7.5	10	14	14	25
18	8	18	4	7.9	4	7.4	13	19	9	13	12	21
19	8	18	4	7.8	5	9.3	30	61	8	12	12	20
20	7	16	4	7.8	7	13	35	88	8	13	15	26
21	7	16	4	7.5	7	13	42	110	8	14	16	28
22	6	14	4	7.1	6	11	21	51	7	11	16	28
23	6	14	4	7.5	6	9.7	13	30	7	11	12	21
24	5	11	5	10	5	6.8	10	22	7	11	9	15
25	5	11	6	13	5	7.7	9	19	6	9.7	9	15
26	4	8.6	7	15	5	8.8	8	16	6	9.9	11	18
27	5	11	6	12	5	8.5	8	16	6	9.8	14	23
28	6	13	6	11	5	7.6	8	16	7	11	18	32
29	6	13	5	9.1	7	9.4	10	20	---	---	23	46
30	6	13	5	8.2	11	21	10	20	---	---	21	42
31	5	11	---	---	14	25	10	19	---	---	14	26
TOTAL	---	432.6	---	261.7	---	328.1	---	612.4	---	451.4	---	845

12334550 CLARK FORK AT TURAH BRIDGE, NEAR BONNER, MT—Continued

SUSPENDED-SEDIMENT--CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13	23	17	50	34	252	18	131	4	6.8	4	5.6
2	15	27	16	44	86	857	15	98	8	14	4	5.6
3	16	29	13	34	139	1,630	14	84	9	16	4	5.6
4	16	30	13	33	193	2,450	12	67	8	14	3	4.2
5	13	24	12	31	165	2,210	11	58	8	13	3	4.1
6	13	24	12	33	112	1,450	8	40	7	11	3	4.1
7	15	27	16	49	91	1,150	7	32	7	10	3	4.1
8	20	40	22	75	69	829	7	30	7	10	3	4.1
9	24	52	32	124	51	565	7	29	7	10	3	4.0
10	19	41	57	277	39	403	6	24	7	10	3	4.4
11	16	33	131	930	36	339	6	23	7	10	3	4.6
12	16	32	165	1,410	35	336	5	19	6	8.7	4	6.3
13	16	31	70	522	51	547	4	14	6	8.8	4	6.4
14	16	34	48	321	39	385	4	13	6	8.8	4	6.6
15	15	32	38	246	30	271	4	13	6	8.8	4	6.7
16	16	33	47	322	36	336	3	9.1	5	7.2	4	6.6
17	23	49	95	795	42	415	3	8.5	5	7.0	10	19
18	24	54	125	1,270	84	973	3	8.2	5	7.2	20	45
19	22	52	108	1,110	65	734	3	7.8	5	7.2	16	36
20	18	43	136	1,690	42	420	2	4.9	5	7.2	12	26
21	17	41	98	1,200	36	331	2	4.6	5	7.0	9	18
22	18	43	101	1,230	30	266	2	4.4	5	6.8	9	18
23	20	48	67	796	30	264	2	4.3	5	7.0	9	18
24	26	67	55	603	26	217	2	4.2	5	7.0	10	21
25	28	76	45	451	25	188	2	4.0	5	7.1	12	28
26	33	97	40	362	23	166	2	4.0	5	7.1	11	26
27	42	136	32	261	21	154	2	3.9	5	6.9	8	18
28	29	96	29	218	25	202	3	5.8	4	5.5	7	15
29	22	69	27	195	32	267	3	5.7	4	5.4	7	15
30	20	60	27	191	25	197	3	5.2	4	5.4	7	15
31	---	---	23	157	---	---	4	6.8	4	5.5	---	---
TOTAL	---	1,443	---	15,030	---	18,804	---	766.4	---	266.4	---	401.0

TOTAL LOAD FOR YEAR: 39,642.0 tons

12334650 BLACKFOOT RIVER BELOW ALICE CREEK, NEAR LINCOLN, MT

LOCATION.--Lat 46°59'21", long 112°30'40" (NAD 27) in $SE^1/_4SE^1/_4SW^1/_4$ sec. 5, T.14 N., R.1 W., Lewis and Clark County, Hydrologic Unit 17010203, at discontinued gage site at road bridge, 0.4 mi upstream from mouth of Hogum Creek, 3.0 mi downstream from Alice Creek, and 8.2 mi northeast of Lincoln.

DRAINAGE AREA.--96.9 mi^2.

PERIOD OF RECORD.--October 1970 to June 1974, September 1995 to May 1997, March 2004 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 4,803 ft (NGVD 29).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1970-75.

REMARKS.--Data for November 2005 included to provide final sample results for project. Several unpublished observations of specific conductance and water temperature were made during the year

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 23.0°C, July 10, 1973; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV												
09...	0830	18	<2.0	640	11.6	99	8.0	251	2.0	1.5	130	31.1
APR												
13...	0900	24	<2.0	638	11.4	100	8.1	221	8.0	2.5	110	25.2
MAY												
10...	0900	386	98	638	13.9	130	7.3	147	5.0	5.0	67	15.2
JUN												
06...	1100	231	4.7	635	9.6	100	8.0	158	15.0	9.0	75	17.5
JUL												
26...	0850	34	<2.0	646	10.2	104	8.0	234	12.0	9.0	130	30.2
AUG												
24...	0845	17	<2.0	638	9.3	97	8.5	244	11.0	9.5	130	30.6
NOV												
01...	0820	18	<2.0	642	9.8	90	8.4	239	2.5	4.5	120	28.0

Date	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
NOV											
09...	12.6	<.010	<.016	<.002	E.05	<.006	.005	<2	<2	E.03	1.2
APR											
13...	10.5	E.009	E.011	E.001	E.05	<.006	.007	E1	<2	.04	2.0
MAY											
10...	7.13	E.008	E.012	E.001	.90	E.003	.43	7	4	1.94	28.9
JUN											
06...	7.64	<.010	E.012	<.002	.10	E.003	.012	4	E1	.23	2.9
JUL											
26...	12.9	<.010	<.016	<.002	E.05	<.006	.004	<2	<2	.05	1.6
AUG											
24...	13.0	E.006	E.014	E.001	.08	<.006	.006	E1	.54	E.03	1.1
NOV											
01...	12.8	<.010	.017	<.002	.06	<.006	E.003	2	.35	E.02	.8

E--Estimated.

12334650 BLACKFOOT RIVER BELOW ALICE CREEK, NEAR LINCOLN, MT—Continued

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005—CONTINUED

Date	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV							
09...	20	<.06	2	13	75	1	.05
APR							
13...	100	.13	5	23	83	1	.06
MAY							
10...	4,610	10.5	1,080	477	63	289	301
JUN							
06...	150	.44	19	94	71	6	3.7
JUL							
26...	40	<.06	4	15	64	1	.09
AUG							
24...	30	<.06	4	10	73	1	.05
NOV							
01...	50	<.06	3	10	86	1	.05

12334680 LANDERS FORK NEAR LINCOLN, MT

LOCATION.--Lat 46°58'40", long 112°33'19" (NAD 27) in $SW^1/_4NE^1/_4SW^1/_4$ sec. 12, T.14 N., R.8 W., Lewis and Clark County, Hydrologic Unit 17010203, at highway bridge crossing, 0.24 mi southeast of Landers Fork Road and 6.0 mi northeast of Lincoln.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--September 1995 to May 1997, March 2004 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 4,750 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV												
09...	1000	51	<2.0	643	11.4	101	8.1	244	4.0	3.0	130	33.5
APR												
13...	1100	74	<2.0	639	10.8	101	8.4	236	7.5	5.0	120	31.4
MAY												
10...	1115	568	260	*	*	*	8.1	194	5.0	4.5	99	25.1
JUN												
06...	1200	550	5.2	637	10.8	109	8.4	204	15.0	8.0	100	26.9
JUL												
26...	1020	98	<2.0	647	9.8	99	8.1	246	18.5	8.5	140	35.9
AUG												
24...	0955	49	<2.0	640	9.0	93	8.4	259	14.0	9.0	150	37.6
NOV												
01...	0930	32	<2.0	642	10.1	94	8.4	252	4.5	5.0	140	34.3

Date	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
NOV											
09...	11.2	<.010	.064	E.001	.18	<.006	.004	3	<2	<.04	.8
APR											
13...	10.6	E.006	.128	E.001	.17	<.006	E.003	3	<2	<.04	.7
MAY											
10...	8.83	E.009	.198	E.001	1.17	E.004	.32	11	9	.46	22.3
JUN											
06...	8.95	<.010	.086	<.002	.17	<.006	.013	6	<2	<.04	1.3
JUL											
26...	12.7	<.010	.081	<.002	.10	<.006	<.004	3	<2	<.04	E.5
AUG											
24...	12.9	<.010	.085	E.001	.14	<.006	E.003	3	.64	<.04	<.6
NOV											
01...	12.6	<.010	.099	<.002	.12	<.006	<.004	3	.75	<.04	E.5

*--Equipment problem.
E--Estimated.

12334680 LANDERS FORK NEAR LINCOLN, MT—Continued

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005--CONTINUED

Date	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV							
09...	10	.08	2	<2	83	2	.28
APR							
13...	30	.16	5	<2	78	4	.80
MAY							
10...	6,300	25.2	813	44	79	749	1,150
JUN							
06...	210	.51	19	E2	72	20	30
JUL							
26...	20	.14	2	<2	79	2	.53
AUG							
24...	20	.07	2	<2	88	2	.26
NOV							
01...	<6	<.06	.5	<2	67	1	.09

E--Estimated.

12334800 BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE, NEAR LINCOLN, MT

LOCATION.--Lat 46°56'42", long 112°44'17" (NAD 27) in NE$^1/_4$NW$^1/_4$NE$^1/_4$ sec. 28, T.14 N., R.9 W., Lewis and Clark County, Hydrologic Unit 17010203, at county road bridge to Dalton Mountain and 3.2 mi southwest of Lincoln.

DRAINAGE AREA.--399 mi^2.

PERIOD OF RECORD.--Water years 1973, 1995-97, March 2004 through November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 4,460 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, OCTOBER 2004 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
NOV										
09...	1130	105	<2.0	650	11.2	102	8.0	305	6.0	4.5
APR										
13...	1200	78	<2.0	645	10.2	101	8.4	301	13.0	7.5
MAY										
10...	1300	762	150	*	*	*	8.2	206	8.0	6.0
JUN										
06...	1345	965	6.8	644	9.9	104	8.2	215	15.0	10.0
JUL										
26...	1130	190	<2.0	654	9.3	100	7.7	292	20.5	11.5
AUG										
24...	1115	103	<2.0	648	9.4	97	8.4	311	10.0	9.5
NOV										
01...	1040	103	<2.0	648	10.1	96	8.3	308	4.0	6.0

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
NOV									
09...	160	45.3	12.6	E.005	.022	<.002	.07	<.006	.006
APR									
13...	160	43.2	11.9	E.007	.027	E.001	E.04	<.006	.006
MAY									
10...	100	26.5	9.17	E.008	.095	E.001	.97	E.003	.30
JUN									
06...	110	28.3	9.01	<.010	.034	<.002	.12	<.006	.020
JUL									
26...	160	43.9	13.4	<.010	.018	<.002	E.06	<.006	E.004
AUG									
24...	170	47.2	13.6	E.005	.027	E.001	.08	<.006	.005
NOV									
01...	160	43.8	13.4	<.010	.035	<.002	.08	<.006	.004

*--Equipment problems.
E--Estimated.

12334800 BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE, NEAR LINCOLN, MT—Continued

WATER-QUALITY DATA, OCTOBER 2004 TO NOVEMBER 2005--CONTINUED

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
NOV											
09...	<2	E1	<.04	.7	30	E.04	3	<2	44	4	1.1
APR											
13...	2	<2	<.04	1.0	60	.12	5	<2	90	2	.42
MAY											
10...	9	6	.46	18.7	4,150	16.1	550	89	84	451	928
JUN											
06...	4	E1	E.03	2.2	310	.67	24	12	67	29	76
JUL											
26...	E1	<2	<.04	E.6	40	.07	5	E1	75	2	1.0
AUG											
24...	E1	1.1	<.04	E.3	40	E.06	5	E1	32	8	2.2
NOV											
01...	3	1.2	<.04	.7	50	E.03	5	<2	82	1	.28

E--Estimated.

12335100 BLACKFOOT RIVER ABOVE NEVADA CREEK, NEAR HELMVILLE, MT

LOCATION.--Lat 46°55'09", long 113°00'53" (NAD 27), in $SW^1/_4SW^1/_4SE^1/_4$ sec. 32, T.14 N., R.11 W., Powell County, Hydrologic Unit 17010203, on right bank 40 ft downstream from county road bridge, 1.9 mi south of Browns Lake, 4.2 mi upstream from Nevada Creek, 4.4 mi northwest of Helmville, and at river mile 72.0.

DRAINAGE AREA.--494 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1999 to current year. Records equivalent to those published as "12335000 Blackfoot River near Helmville," September 1940 to October 1953 at site 13.5 mi upstream.

GAGE.--Water-stage recorder. Elevation of gage is 4,280 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Numerous diversions for irrigation upstream from station. Several observations of water temperature and specific conductance were made during the year. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1953 reached a discharge of 6,040 ft^3/s at 12335000 Blackfoot River near Helmville.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	174	e150	e80	142	124	140	366	878	575	197	150
2	177	173	150	e80	140	124	140	353	1,190	542	195	147
3	180	174	150	e70	140	125	144	343	1,290	511	187	148
4	180	175	149	e80	139	125	146	345	1,320	483	181	144
5	174	171	e140	e60	138	125	144	354	1,310	462	178	144
6	177	170	e140	e60	137	125	142	379	1,330	440	175	143
7	177	168	146	e70	137	127	139	453	1,320	420	170	143
8	174	167	146	e70	147	129	146	557	1,250	399	166	143
9	174	167	144	e70	e145	130	150	634	1,130	386	166	144
10	173	166	145	e80	e130	132	146	702	1,020	382	162	152
11	172	165	157	e90	e130	132	146	1,210	932	377	160	158
12	172	165	161	e100	e140	135	145	1,800	908	361	159	159
13	172	162	155	e80	e130	135	143	1,540	948	345	161	160
14	170	159	149	e70	e120	131	160	1,290	869	330	164	160
15	169	158	148	e60	e110	129	157	1,230	815	322	162	157
16	173	158	147	e70	e110	130	161	1,270	802	314	159	158
17	186	157	145	e90	e120	131	169	1,420	871	304	157	180
18	194	156	144	e120	e130	131	169	1,460	973	296	163	184
19	193	157	144	e200	e130	127	169	1,410	902	288	166	172
20	188	155	145	e400	e130	127	170	1,400	821	273	161	166
21	189	153	144	e350	e130	128	171	1,370	772	264	157	162
22	192	152	e130	e300	e130	129	169	1,320	752	257	154	161
23	190	153	e100	e250	128	128	167	1,270	733	252	153	161
24	190	154	e130	e200	125	126	170	1,230	707	242	154	172
25	188	167	e140	e180	124	125	191	1,130	679	238	154	176
26	185	182	e120	168	124	125	275	1,040	656	236	152	170
27	182	172	e100	156	123	128	356	956	639	235	148	167
28	180	e160	e90	153	124	142	390	904	640	228	145	165
29	178	e150	e100	150	---	160	386	891	621	219	144	164
30	177	e140	e120	146	---	151	372	883	597	212	146	162
31	176	---	e90	143	---	144	---	846	---	205	151	---
TOTAL	5,578	4,880	4,219	4,196	3,653	4,060	5,673	30,356	27,675	10,398	5,047	4,772
MEAN	180	163	136	135	130	131	189	979	922	335	163	159
MAX	194	182	161	400	147	160	390	1,800	1,330	575	197	184
MIN	169	140	90	60	110	124	139	343	597	205	144	143
AC-FT	11,060	9,680	8,370	8,320	7,250	8,050	11,250	60,210	54,890	20,620	10,010	9,470

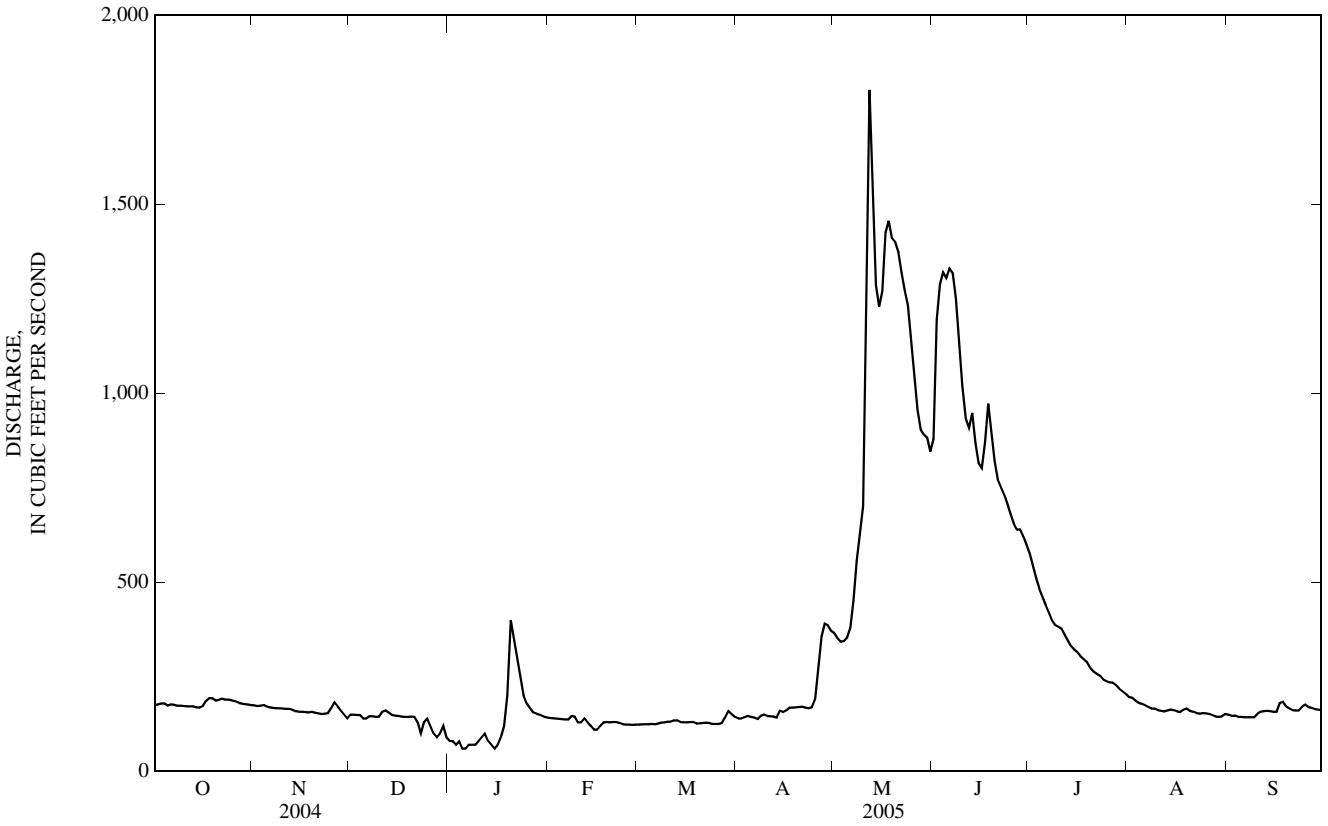
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	164	156	142	137	130	143	246	680	848	341	181	163
MAX	180	180	165	152	151	183	398	979	1,457	538	242	199
(WY)	(2005)	(2000)	(2000)	(2000)	(2003)	(2003)	(2003)	(2005)	(2002)	(2002)	(2002)	(2004)
MIN	142	139	128	129	107	121	139	433	578	262	152	135
(WY)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2000)	(2000)	(2000)	(2001)

12335100 BLACKFOOT RIVER ABOVE NEVADA CREEK, NEAR HELMVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2000 - 2005	
ANNUAL TOTAL	97,098		110,507			
ANNUAL MEAN	265		303		278	
HIGHEST ANNUAL MEAN					328	2002
LOWEST ANNUAL MEAN					215	2001
HIGHEST DAILY MEAN	855	Jun 7	1,800	May 12	1,820	Jun 18, 2002
LOWEST DAILY MEAN	90	Dec 28	60	Jan 5	60	Jan 5, 2005
ANNUAL SEVEN-DAY MINIMUM	109	Dec 25	69	Jan 3	69	Jan 3, 2005
MAXIMUM PEAK FLOW			1,870	May 12	1,890	Jun 19, 2002
MAXIMUM PEAK STAGE			6.86	May 12	6.91	Jun 19, 2002
ANNUAL RUNOFF (AC-FT)	192,600		219,200		201,300	
10 PERCENT EXCEEDS	577		870		629	
50 PERCENT EXCEEDS	178		162		163	
90 PERCENT EXCEEDS	125		125		128	

e--Estimated.



12335100 BLACKFOOT RIVER ABOVE NEVADA CREEK, NEAR HELMVILLE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-November 1995 to August 1998, April 2002 to November 2005, discontinued.

REMARKS.--Data for November 2005 included to provide final sample results for project. Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
13...	1330	150	<2.0	649	10.0	101	8.4	290	12.0	8.5	150	40.8	11.7
MAY													
10...	1500	695	41	*	*	*	8.2	223	9.0	7.5	110	29.3	10.1
JUN													
07...	1300	1,310	13	649	9.8	100	8.2	219	12.0	9.0	110	27.9	8.81
JUL													
26...	1300	237	<2.0	658	9.2	107	8.2	290	23.0	15.5	160	42.7	13.2
AUG													
24...	1315	154	<2.0	652	8.8	99	8.6	297	15.5	13.5	170	43.8	13.6
NOV													
01...	1210	186	<2.0	651	11.3	101	8.6	294	5.5	4.0	160	42.2	13.7

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
APR										
13...	E.006	<.016	<.002	<.006	.007	<.06	<2	E1	<.04	.9
MAY										
10...	E.006	.074	E.001	<.006	.099	.35	3	3	.05	5.6
JUN										
07...	<.010	.025	<.002	<.006	.026	.14	4	E2	E.03	2.9
JUL										
26...	<.010	<.016	<.002	<.006	.006	E.04	E1	<2	<.04	.8
AUG										
24...	<.010	<.016	E.001	<.006	.005	.10	E1	1.4	<.04	1.4
NOV										
01...	<.010	<.016	<.002	<.006	E.002	E.04	E1	1.3	<.04	E.5

Date	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
13...	100	.13	21	<2	92	4	1.6
MAY							
10...	1,280	2.91	89	12	78	132	248
JUN							
07...	440	.92	33	7	71	53	187
JUL							
26...	60	.09	9	<2	94	3	1.9
AUG							
24...	70	.07	10	<2	62	4	1.7
NOV							
01...	70	.07	11	<2	55	14	7.0

*--Equipment problems.
E--Estimated.

12335500 NEVADA CREEK ABOVE RESERVOIR, NEAR HELMVILLE, MT

LOCATION.--Lat 46°46'42", long 112°46'00" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $SW^1/_4$ sec. 20, T.12 N., R.9 W., Powell County, Hydrologic Unit 17010203, on right bank 0.7 mi upstream from Nevada Lake, 1.1 mi downstream from Gallagher Creek, 11 mi southeast of Helmville, and at river mile 34.5.

DRAINAGE AREA.--116 mi^2.

PERIOD OF RECORD.--April 1939 to current year. Prior to October 2001, published as "near Finn."

GAGE.--Water-stage recorder. Elevation of gage is 4,640 ft (NGVD 29). Prior to Apr. 30, 1942, nonrecording gage at site 0.1 mi, downstream at different elevation. Apr. 30, 1942 to July 26, 1953, water-stage recorder at site 0.2 mi downstream at different elevation. July 26, 1953, to Nov. 6, 1978, water-stage recorder at site 0.8 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,900 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	22	e7.0	e11	e12	14	26	109	46	20	5.3
2	12	15	24	e8.0	e11	e12	17	25	194	41	24	5.2
3	11	16	22	e6.0	e12	e12	15	24	222	37	22	5.5
4	11	14	e20	e6.0	e11	e15	16	23	257	35	21	5.2
5	12	e14	e15	e5.0	e11	e15	15	20	243	35	20	5.1
6	12	14	e17	e6.0	e11	e20	13	24	229	33	19	5.2
7	12	14	e20	e10	e10	29	12	29	196	31	17	5.1
8	12	13	e20	e10	e10	31	14	35	163	29	18	5.0
9	12	13	e21	e9.0	e11	25	13	40	136	30	18	5.0
10	11	13	22	e10	e12	25	12	71	117	32	18	7.5
11	11	13	25	e12	e13	17	12	137	107	32	18	7.9
12	12	e11	20	e15	e15	16	12	127	124	28	17	7.1
13	12	e10	e12	e10	e16	13	13	95	104	26	16	7.6
14	12	e10	e20	e8.0	e13	12	19	83	84	26	13	7.4
15	13	e11	19	e5.0	e10	12	19	95	90	27	11	7.1
16	13	12	17	e6.0	e8.0	12	21	114	78	25	7.8	7.2
17	14	12	16	e10	e9.0	12	22	141	111	23	7.5	16
18	15	13	15	e20	e10	11	21	135	117	22	8.1	13
19	14	13	16	e120	e10	12	25	143	78	21	8.4	8.6
20	15	12	15	e90	e12	14	26	128	66	19	7.7	8.8
21	18	e12	13	e80	e12	16	24	137	60	18	7.3	9.9
22	18	14	e10	e70	e10	14	25	115	55	19	7.5	9.5
23	16	13	e6.0	e50	e12	9.6	25	114	47	17	9.5	12
24	16	13	e8.0	e40	e12	11	27	94	45	13	10	17
25	15	17	e15	e30	e12	13	31	81	49	15	7.4	16
26	14	e15	e12	e20	e12	13	32	73	57	16	6.5	13
27	14	e14	e10	e17	e12	25	34	65	69	15	6.2	11
28	15	e13	e9.0	e16	e12	34	33	57	78	15	5.5	9.4
29	15	e13	e12	e15	---	23	29	52	61	16	5.5	12
30	15	e12	e15	e13	---	17	30	51	50	17	5.5	16
31	14	---	e8.0	e12	---	14	---	52	---	18	5.5	---
TOTAL	417	394	496.0	736.0	320.0	516.6	621	2,406	3,396	777	387.9	270.6
MEAN	13.5	13.1	16.0	23.7	11.4	16.7	20.7	77.6	113	25.1	12.5	9.02
MAX	18	17	25	120	16	34	34	143	257	46	24	17
MIN	11	10	6.0	5.0	8.0	9.6	12	20	45	13	5.5	5.0
AC-FT	827	781	984	1,460	635	1,020	1,230	4,770	6,740	1,540	769	537

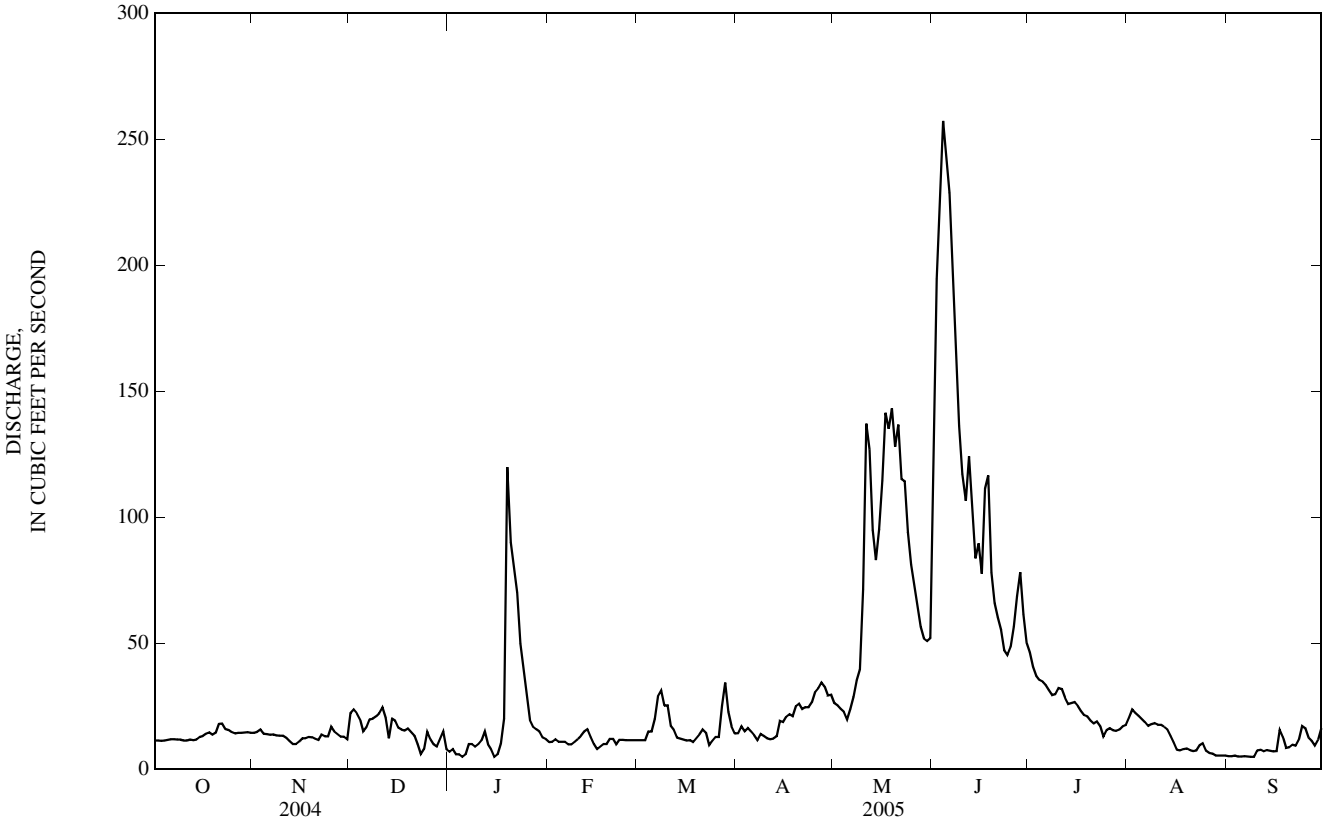
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	13.8	14.4	12.4	11.8	15.6	34.1	65.7	110	89.1	27.2	14.1	10.2
MAX	32.2	28.8	47.4	54.5	84.6	114	196	356	429	96.5	40.5	28.2
(WY)	(1960)	(1976)	(1976)	(1984)	(1986)	(1978)	(1952)	(1976)	(1975)	(1955)	(1975)	(1965)
MIN	5.52	5.73	3.74	3.83	4.17	7.61	10.0	16.0	11.5	6.19	3.89	3.68
(WY)	(1940)	(1989)	(1993)	(1988)	(1944)	(1962)	(1941)	(1977)	(1992)	(1985)	(1961)	(1940)

12335500 NEVADA CREEK ABOVE RESERVOIR, NEAR HELMVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	7,658.4		10,738.1			
ANNUAL MEAN	20.9		29.4		35.1	
HIGHEST ANNUAL MEAN					77.2	1975
LOWEST ANNUAL MEAN					11.8	1988
HIGHEST DAILY MEAN	163	Mar 17	257	Jun 4	1,240	May 22, 1981
LOWEST DAILY MEAN	5.0	Jan 6	5.0	Jan 5	2.0	Jan 11, 1944
ANNUAL SEVEN-DAY MINIMUM	6.5	Aug 16	5.2	Sep 3	2.0	Feb 9, 1944
MAXIMUM PEAK FLOW			a268	Jun 4	c1,800	Jun 2, 1953
MAXIMUM PEAK STAGE			b3.45	Jan 19	d7.40	May 29, 1953
INSTANTANEOUS LOW FLOW					f2.0	Aug 20, 1944
ANNUAL RUNOFF (AC-FT)	15,190		21,300		25,440	
10 PERCENT EXCEEDS	37		78		86	
50 PERCENT EXCEEDS	15		15		15	
90 PERCENT EXCEEDS	9.0		8.0		6.5	

a--Gage height, 3.17 ft.
b--Backwater from ice.
c--Gage height, 6.00 ft, site and datum then in use; from rating curve extended above 400 ft^3/s on the basis of inflow-outflow study of Nevada Lake.
d--Site and datum then in use; backwater from diversion dam.
e--Estimated.
f--Probably less than 2.0 ft^3/s in several years.



12336600 NEVADA CREEK BELOW RESERVOIR, NEAR HELMVILLE, MT

LOCATION.--Lat 46°48'10", long 112°49'00" (NAD 27) in $SW^1/_4SW^1/_4SE^1/_4$ sec. 11, T.12 N., R.10 W., Powell County, Hydrologic Unit 17010203, 0.6 mi downstream of Nevada Lake, 8.3 mi southeast of Helmville and at river mile 31.1.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--Water years 1973, 1995-97, December 2003 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 4,540 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, APRIL 2005 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
APR												
14...	1530	2.3	7.7	650	10.9	105	8.4	252	6.0	7.0	110	31.1
MAY												
11...	1530	37	7.3	650	10.2	101	8.0	236	9.5	8.0	100	27.3
JUN												
08...	1500	204	6.7	645	9.4	103	8.0	208	12.0	12.0	89	23.7
JUL												
27...	1445	72	14	660	9.6	110	7.5	220	29.0	15.0	100	28.4
AUG												
25...	1405	70	14	650	9.4	112	8.8	214	22.5	16.0	110	30.6
NOV												
02...	1250	5.6	6.6	644	10.6	101	8.8	233	7.5	6.0	110	29.2

Date	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
APR											
14...	8.73	.027	.026	.002	.40	.027	.091	<2	5	<.04	1.6
MAY											
11...	7.84	.036	E.011	.002	.45	.026	.087	<2	3	<.04	1.3
JUN											
08...	7.15	.031	E.014	E.001	.50	.026	.066	3	3	<.04	2.2
JUL											
27...	7.49	.127	.122	.009	.72	.125	.23	3	9	<.04	1.5
AUG											
25...	8.17	E.006	<.016	.002	.66	.012	.104	2	4.4	<.04	1.4
NOV											
02...	8.02	E.006	<.016	<.002	.37	.006	.048	E1	3.6	<.04	.9

Date	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
14...	400	.25	473	E1	96	11	.07
MAY							
11...	290	.25	133	E1	90	13	1.3
JUN							
08...	260	.21	74	E2	84	9	5.0
JUL							
27...	710	.44	339	E2	98	17	3.3
AUG							
25...	480	.44	90	E2	98	21	4.0
NOV							
02...	260	.21	87	<2	85	11	.17

E--Estimated.

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT

LOCATION.--Lat 46°53'27", long 113°02'216" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.7, T.13N., R.11W., Powell County, Hydrologic Unit 17010203, on left bank 0.5 mi upstream from private road bridge, 3.8 mi southwest of Browns Lake, 4.0 mi northwest of Helmville, and at river mile 0.7.

DRAINAGE AREA.--308 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,240 ft (NGVD 29). Oct. 1, 2001 to Oct. 2, 2002, water-stage recorder 0.5 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Partial regulation by Nevada lake (station number 12336500). Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	21	e16	32	24	25	20	62	183	21	31
2	18	22	21	e16	31	26	25	20	119	167	23	31
3	18	22	21	e15	e26	27	28	19	195	130	23	29
4	18	25	22	e15	e23	29	31	19	222	102	21	29
5	18	24	e17	e14	24	29	29	20	242	86	21	30
6	21	24	e18	e14	e23	33	27	22	268	75	22	32
7	19	26	20	e15	e22	33	26	23	288	70	22	35
8	19	27	21	e16	e22	34	29	28	312	66	21	36
9	19	25	20	e15	e22	36	31	31	310	49	21	36
10	18	25	20	e16	e21	36	28	33	274	40	17	41
11	18	24	23	e16	e20	33	26	51	234	38	16	51
12	18	24	25	e17	19	32	23	52	208	34	18	50
13	19	21	e18	e16	20	30	16	44	213	31	21	44
14	19	21	e19	e15	e20	29	17	41	199	30	23	40
15	19	22	21	e13	e18	30	21	43	188	26	24	37
16	20	23	22	e14	e16	28	33	48	167	23	23	35
17	21	24	21	e16	e17	29	35	72	172	24	26	43
18	22	22	21	e20	e18	26	29	62	229	26	25	58
19	23	25	23	e25	e18	25	26	66	227	28	27	51
20	23	21	e20	e80	e20	27	27	73	208	28	31	39
21	22	e16	e17	e70	22	27	25	68	176	28	31	37
22	23	e20	e16	e80	e20	28	24	62	138	28	30	34
23	25	28	e14	e60	e21	23	22	61	111	26	33	33
24	25	29	e15	e50	21	e22	20	55	98	23	35	38
25	25	33	e18	e45	21	25	20	48	85	23	34	46
26	24	34	e18	e40	22	23	21	43	88	22	37	44
27	23	e25	e17	e35	22	26	21	39	98	23	40	38
28	23	e20	e16	e30	23	30	20	42	164	22	35	31
29	23	e20	e17	e28	---	32	19	45	200	22	36	28
30	23	e18	e17	e27	---	30	20	45	192	24	36	28
31	22	---	e16	e26	---	27	---	46	---	23	34	---
TOTAL	647	711	595	875	604	889	744	1,341	5,687	1,520	827	1,135
MEAN	20.9	23.7	19.2	28.2	21.6	28.7	24.8	43.3	190	49.0	26.7	37.8
MAX	25	34	25	80	32	36	35	73	312	183	40	58
MIN	18	16	14	13	16	22	16	19	62	22	16	28
AC-FT	1,280	1,410	1,180	1,740	1,200	1,760	1,480	2,660	11,280	3,010	1,640	2,250

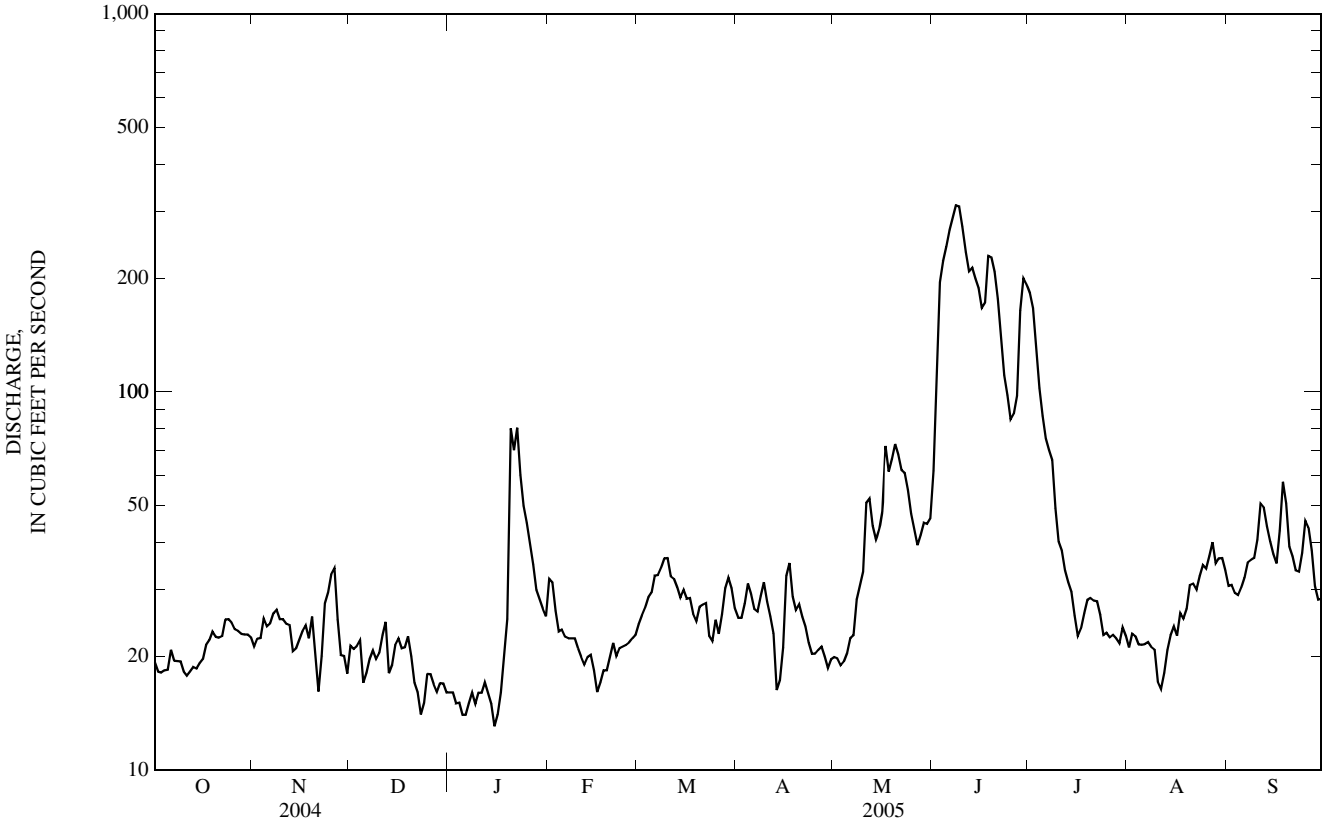
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	21.8	23.9	22.2	23.3	27.0	53.2	58.9	60.4	100	35.8	24.1	30.1
MAX	24.5	24.6	24.5	28.2	47.8	102	112	135	190	49.0	27.7	37.8
(WY)	(2002)	(2003)	(2003)	(2005)	(2003)	(2003)	(2003)	(2003)	(2005)	(2005)	(2002)	(2005)
MIN	19.7	22.8	19.2	15.1	17.8	26.5	24.8	28.7	35.9	24.1	17.8	25.5
(WY)	(2003)	(2004)	(2005)	(2004)	(2004)	(2002)	(2005)	(2004)	(2004)	(2004)	(2004)	(2003)

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005	
ANNUAL TOTAL	9,600.0		15,575			
ANNUAL MEAN	26.2		42.7		40.0	
HIGHEST ANNUAL MEAN					55.7	2003
LOWEST ANNUAL MEAN					26.6	2004
HIGHEST DAILY MEAN	272	Mar 10	312	Jun 8	500	Mar 14, 2003
LOWEST DAILY MEAN	6.0	Jan 6	13	Jan 15	6.0	Jan 6, 2004
ANNUAL SEVEN-DAY MINIMUM	9.6	Jan 5	15	Jan 3	9.6	Jan 5, 2004
MAXIMUM PEAK FLOW			322	Jun 9	a500	Mar 14, 2003
MAXIMUM PEAK STAGE			4.45	Jun 9	b5.86	Feb 2, 2003
ANNUAL RUNOFF (AC-FT)	19,040		30,890		28,990	
10 PERCENT EXCEEDS	39		77		72	
50 PERCENT EXCEEDS	21		25		25	
90 PERCENT EXCEEDS	15		18		18	

a--Estimated daily discharge during period of ice effect.
b--Backwater from ice.
e--Estimated.



12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2001 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 2001 to current year.

INSTRUMENTATION.--Temperature probe installed Oct. 25, 2001.

REMARKS--Water temperature record rated excellent. Missing temperature data for Oct. 5-7 and Feb. 17, 18 due to equipment problems. Water-qualiy sampling discontinued; data for November 2005 included to provide final sample results for project.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 27.5°C, July 13, 2002; minimum, 0.0°C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.0°C, July 13; minimum, 0.0°C, many days November through March.

WATER-QUALITY DATA, WATER YEAR APRIL 2005 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
APR										
13...	1445	15	13	649	10.1	102	8.5	402	10.0	8.5
MAY										
11...	1300	52	20	658	10.4	102	8.4	433	8.5	8.0
JUN										
07...	1045	285	10	649	7.2	79	7.9	318	10.0	12.0
JUL										
26...	1430	22	5.2	658	12.5	158	8.7	396	23.5	19.5
AUG										
25...	1145	35	2.6	658	10.1	113	8.6	444	23.0	13.5
NOV										
01...	1330	39	6.8	651	11.9	107	8.5	436	9.0	4.0

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)
APR									
13...	180	50.8	12.9	.019	<.016	E.001	.073	.144	.33
MAY									
11...	200	55.0	16.3	.010	E.010	.002	.311	.394	.92
JUN									
07...	140	35.3	12.7	E.009	<.016	E.001	.110	.190	.92
JUL									
26...	200	51.7	16.2	<.010	<.016	<.002	.096	.151	.47
AUG									
25...	220	59.7	16.8	E.005	<.016	E.001	.124	.183	.72
NOV									
01...	200	51.8	16.5	<.010	<.016	<.002	.056	.088	.27

E--Estimated.

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR											
13...	<2	5	<.04	1.9	430	.42	178	E2	97	18	.73
MAY											
11...	2	5	E.04	3.0	520	.50	113	3	99	28	3.9
JUN											
07...	3	5	<.04	3.1	440	.36	53	3	98	22	17
JUL											
26...	E1	6	<.04	1.9	150	.18	27	<2	96	7	.42
AUG											
25...	2	5.8	<.04	1.3	130	.12	22	<2	90	4	.38
NOV											
01...	E1	3.9	<.04	1.1	250	.18	22	E1	99	9	.95

E--Estimated.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.5	8.5	10.0	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2	10.5	8.0	9.5	4.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
3	11.0	8.5	10.0	5.0	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
4	11.0	8.5	10.0	3.5	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
5	---	---	---	2.5	0.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0
6	---	---	---	3.5	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
7	---	---	---	5.5	3.5	4.5	0.0	0.0	0.0	0.5	0.0	0.0
8	11.0	9.0	10.0	5.0	3.0	3.5	0.0	0.0	0.0	0.5	0.0	0.0
9	10.5	9.0	10.0	3.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
10	9.5	7.5	8.5	4.0	3.0	3.5	0.5	0.0	0.0	0.5	0.0	0.0
11	8.0	6.0	7.5	3.5	2.0	2.5	2.0	0.5	1.5	0.0	0.0	0.0
12	9.0	7.0	8.0	2.0	0.5	1.0	1.5	0.0	0.5	0.5	0.0	0.0
13	9.0	7.5	8.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
14	10.0	7.5	9.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
15	11.0	9.5	10.0	1.5	0.5	1.0	1.5	0.0	0.5	0.0	0.0	0.0
16	10.0	9.0	9.5	2.0	1.0	1.5	1.5	0.5	1.0	0.0	0.0	0.0
17	9.0	5.5	7.0	3.5	2.0	2.5	1.5	0.0	0.5	0.0	0.0	0.0
18	6.5	4.5	5.5	2.5	0.5	1.5	2.0	0.5	1.0	0.0	0.0	0.0
19	6.5	5.0	5.5	1.5	0.5	1.0	2.5	1.5	2.0	0.0	0.0	0.0
20	6.5	5.0	6.0	1.5	0.5	1.0	2.0	0.0	0.5	0.0	0.0	0.0
21	6.5	6.0	6.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.0	5.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	6.5	5.0	5.5	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
24	5.5	4.0	4.5	3.0	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
25	4.5	3.0	4.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
26	4.0	2.5	3.5	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
27	4.0	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
28	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
29	3.5	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	3.0	1.5	2.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	11.5	1.5	7.0	5.5	0.0	1.5	2.5	0.0	0.2	0.5	0.0	0.0

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	0.0	0.5	4.0	2.0	3.0	7.5	4.0	6.0	13.0	3.5	8.0
2	1.0	0.0	0.5	4.5	0.0	2.5	8.5	5.5	7.5	12.0	5.5	9.0
3	1.5	0.0	0.5	5.0	1.0	3.0	8.0	5.5	6.5	13.5	8.5	11.0
4	1.5	0.0	0.5	5.5	0.5	3.0	7.5	5.0	6.5	13.5	10.0	11.5
5	1.0	0.0	0.5	5.5	0.5	3.0	9.0	4.5	6.5	15.5	9.5	12.5
6	1.0	0.0	0.5	5.5	1.0	3.5	12.0	5.0	8.5	15.5	13.0	14.5
7	0.5	0.0	0.0	5.0	1.0	2.5	12.0	8.5	10.5	15.5	12.0	14.0
8	0.5	0.0	0.0	5.5	1.5	3.5	11.5	8.5	10.0	15.0	12.0	13.0
9	1.0	0.0	0.5	6.5	1.0	3.5	10.0	6.0	8.0	13.0	10.5	11.0
10	1.0	0.0	0.5	5.5	1.0	3.0	10.0	5.5	7.5	11.0	8.5	9.5
11	1.0	0.0	0.5	6.0	0.5	3.0	9.5	5.0	7.0	9.5	6.5	8.0
12	1.5	0.0	0.5	5.0	2.5	3.5	9.5	5.5	7.5	14.0	7.0	10.0
13	1.5	0.5	1.5	4.0	1.5	2.5	9.5	6.0	8.0	16.0	10.5	13.0
14	1.0	0.0	0.5	6.0	1.5	3.5	8.0	3.5	6.0	16.0	10.0	13.5
15	0.5	0.0	0.0	5.5	3.0	4.5	9.5	4.0	7.0	16.5	11.0	14.0
16	0.5	0.0	0.0	5.0	3.0	4.0	13.0	6.0	9.5	16.0	13.0	14.5
17	---	---	---	4.5	2.5	3.5	12.5	8.5	9.5	14.5	10.5	12.5
18	---	---	---	4.5	1.5	3.5	9.5	7.0	8.0	14.5	10.0	12.5
19	0.5	0.0	0.0	4.5	1.0	3.0	8.0	6.0	7.0	15.5	11.0	13.0
20	0.5	0.0	0.0	5.0	3.0	4.0	7.0	5.0	5.5	15.0	10.5	12.5
21	0.5	0.0	0.0	5.0	2.5	4.0	8.0	3.0	5.5	16.0	9.0	12.5
22	0.5	0.0	0.5	4.5	2.0	3.0	13.0	5.5	9.0	15.0	11.0	12.5
23	1.0	0.0	0.5	2.0	0.0	0.5	13.0	9.0	11.5	16.5	8.0	12.0
24	1.5	0.0	1.0	1.0	0.0	0.5	14.0	10.0	12.0	17.0	8.0	12.0
25	2.5	0.0	1.5	3.0	0.0	1.0	16.0	9.5	13.0	18.5	8.0	13.0
26	2.5	0.5	2.0	5.0	0.5	2.5	15.5	11.0	13.0	20.5	9.0	14.5
27	3.0	0.5	2.0	6.5	4.0	5.0	12.5	7.0	9.5	21.0	11.5	16.0
28	4.0	0.5	2.0	6.5	5.5	6.0	9.0	4.0	6.5	21.5	13.0	17.0
29	---	---	---	6.0	3.5	4.5	9.5	3.0	6.5	18.5	13.0	16.0
30	---	---	---	5.5	2.5	4.0	11.0	3.5	7.5	19.0	12.5	16.0
31	---	---	---	7.5	2.5	5.0	---	---	---	17.5	14.0	15.0
MONTH	4.0	0.0	0.6	7.5	0.0	3.3	16.0	3.0	8.2	21.5	3.5	12.7
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.0	10.0	11.5	20.5	16.5	18.5	21.5	17.0	19.0	16.5	10.0	13.5
2	10.5	9.5	10.0	19.5	17.0	18.0	21.0	16.5	19.0	16.5	10.5	14.0
3	11.0	9.0	10.0	19.5	14.5	17.0	22.5	16.0	19.0	17.5	12.0	15.0
4	15.0	10.0	12.0	20.5	14.0	17.5	22.5	15.5	19.0	17.0	12.0	14.5
5	16.0	13.5	15.0	22.0	15.5	18.5	22.0	16.5	19.5	17.0	12.0	14.5
6	15.5	13.5	14.5	21.5	18.0	19.5	22.0	16.0	19.0	17.0	11.0	14.0
7	13.5	11.5	12.5	21.5	18.5	20.0	22.5	17.0	20.0	17.0	11.0	14.0
8	12.5	11.5	12.0	23.0	19.0	21.0	21.0	18.5	20.0	17.0	12.0	14.5
9	12.5	11.5	12.0	22.0	18.5	20.0	22.0	16.5	19.5	16.0	13.0	14.5
10	13.0	11.5	12.5	19.5	16.5	18.0	21.5	18.0	20.0	14.0	11.0	12.5
11	14.0	12.5	13.5	21.5	16.5	19.0	21.5	16.0	18.5	11.5	9.5	10.5
12	14.0	12.5	13.5	24.0	17.5	21.0	18.5	15.0	16.5	10.5	9.0	10.0
13	15.0	10.5	12.5	25.0	20.0	22.5	18.5	14.0	16.0	11.5	9.5	10.5
14	16.5	12.0	14.5	24.5	19.0	22.0	19.0	13.5	16.5	12.5	10.0	11.0
15	19.0	14.5	16.5	24.0	18.5	21.5	20.0	14.5	17.5	13.5	10.0	11.5
16	17.5	15.0	16.0	23.0	20.0	21.5	20.0	15.5	18.0	13.0	10.5	11.5
17	15.0	13.0	14.0	22.0	17.5	20.0	19.0	15.5	17.0	12.0	11.0	11.0
18	15.0	11.5	13.5	23.0	17.0	20.0	17.0	14.0	15.5	13.0	10.5	11.5
19	17.5	13.5	15.0	23.5	17.5	20.5	18.0	13.0	16.0	13.5	10.0	11.5
20	20.0	16.5	18.0	23.0	17.5	20.5	19.0	13.5	16.5	14.5	10.0	12.0
21	21.5	18.5	20.0	24.0	17.5	20.5	20.0	14.5	17.5	14.0	10.5	12.5
22	22.5	19.0	20.5	22.5	19.0	20.5	19.5	15.5	17.5	13.0	9.0	11.5
23	21.5	18.5	20.0	22.5	17.5	20.0	19.0	16.0	17.5	11.5	9.0	10.0
24	20.5	17.5	19.0	22.5	15.0	19.0	17.5	14.5	15.5	9.0	7.0	8.0
25	19.0	16.5	18.0	20.0	15.5	18.0	17.0	11.5	14.5	10.5	7.0	8.5
26	17.5	15.5	16.5	21.0	13.0	17.0	17.0	11.5	14.5	12.0	8.5	10.0
27	18.0	15.0	16.5	22.0	14.5	18.5	18.0	11.5	14.5	12.0	9.0	10.5
28	16.5	15.0	15.5	20.5	15.0	18.5	18.5	12.5	15.5	11.5	7.5	9.5
29	18.0	15.0	16.0	21.5	16.5	19.5	18.0	13.0	15.5	10.5	8.0	9.0
30	19.5	15.0	17.5	23.0	17.5	20.0	15.0	13.0	14.0	11.5	9.5	10.5
31	---	---	---	21.5	17.0	19.0	16.0	10.5	13.0	---	---	---
MONTH	22.5	9.0	14.9	25.0	13.0	19.6	22.5	10.5	17.1	17.5	7.0	11.7

12337820 BLACKFOOT RIVER AT RAYMOND BRIDGE, NEAR OVANDO, MT

LOCATION.--Lat 46°56'00", long 113°06'50" (NAD 27) in $SW^1/_4SE^1/_4SE^1/_4$ sec. 28, T.14 N., R.12 W., Powell County, Hydrologic Unit 17010203, 0.2 mi downstream from Wales Creek, 0.8 mi upstream from Frazier Creek and 6.0 mi south of Ovando.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.-- December 2003 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 4,540 ft (NGVD 29).

REMARKS--Water-qualiy sampling discontinued; data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
APR										
13...	1630	175	3.1	650	11.4	119	8.7	302	6.0	10.0
MAY										
10...	1600	742	41	*	*	*	8.3	243	13.0	9.0
JUN										
07...	1500	1,470	28	652	10.0	106	8.3	238	12.0	11.0
JUL										
26...	1620	267	<2.0	658	11.1	143	8.6	287	25.5	20.5
AUG										
24...	1450	157	<2.0	655	10.7	128	8.9	317	18.0	16.5
NOV										
01...	1500	226	2.2	650	12.3	113	8.7	315	5.0	5.0

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR									
13...	150	41.2	12.0	E.007	<.016	E.001	.09	.008	E.028
MAY									
10...	120	31.4	10.8	E.006	.065	E.001	.47	.012	.115
JUN									
07...	120	29.6	10.2	<.010	.019	<.002	.38	.024	.083
JUL									
26...	160	42.0	14.1	<.010	<.016	<.002	.11	E.005	.015
AUG									
24...	180	46.2	14.8	E.005	<.016	<.002	.23	.010	.026
NOV									
01...	160	42.6	14.1	<.010	<.016	E.001	.10	.011	.018

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR											
13...	--	2	<.04	1.1	130	.18	34	<2	96	5	2.4
MAY											
10...	2	3	.06	5.6	1,240	2.67	106	11	94	108	216
JUN											
07...	4	2	E.04	4.4	690	1.13	52	8	60	79	314
JUL											
26...	E1	2.1	<.04	.8	50	.08	6	<2	91	3	2.2
AUG											
24...	4	2.5	<.04	.6	60	.07	9	E2	92	2	.85
NOV											
01...	2	1.9	<.04	.8	100	.09	10	<2	96	3	1.8

*--Equipment problems.
E--Estimated.

12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT

LOCATION.--Lat 46°58'48", 1ong 113°05'25" (NAD 27), in $NW^1/_4SW^1/_4SW^1/_4$ sec.11, T.14 N., R.12 W., Powell County, Hydrologic Unit 17010203, on right bank 400 ft upstream from county road bridge, 0.9 mi upstream from Dry Gulch, 3.2 mi southeast of Ovando, and at river mile 2.5.

DRAINAGE AREA.--314 mi^2.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft (NGVD 29).

REMARKS.--Records good. Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1964 reached a discharge of 11,800 ft^3/s, from slope-area measurement of peak flow, as determined at North Fork Blackfoot River near Ovando (station 12338000), 9 mi upstream. Flood of about May 22, 1948 reached a discharge of 4,380 ft^3/s, from slope-area measurement of peak flow at same site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	180	149	124	169	144	150	432	983	585	234	167
2	192	181	147	126	169	143	152	415	1,090	551	235	166
3	190	182	145	124	165	143	156	419	1,070	521	229	167
4	189	178	145	120	170	143	161	440	1,120	489	223	165
5	188	181	144	120	167	144	160	498	1,120	462	217	161
6	186	177	145	118	162	147	156	711	1,240	438	214	159
7	184	175	145	126	154	146	167	914	1,140	413	213	158
8	183	175	144	125	165	148	198	1,110	1,020	396	210	156
9	182	175	144	124	161	148	202	1,050	918	387	206	156
10	180	174	146	126	157	149	194	1,170	841	383	203	161
11	179	175	159	130	158	149	194	1,110	799	368	202	162
12	178	173	181	133	160	153	196	958	816	350	202	160
13	174	169	162	131	162	150	207	918	805	335	206	159
14	169	166	167	129	158	148	229	982	756	321	203	157
15	172	166	166	e110	155	149	222	1,180	781	306	197	155
16	181	166	162	124	148	148	219	1,520	821	301	192	154
17	195	167	160	132	147	148	245	1,790	925	301	191	162
18	197	165	158	142	148	144	260	1,540	999	296	192	161
19	192	167	161	168	147	144	262	1,420	887	285	190	156
20	189	165	161	197	150	146	260	1,370	824	278	186	153
21	192	158	158	195	146	143	254	1,290	803	274	182	150
22	192	160	155	191	143	142	249	1,180	823	269	181	149
23	193	159	132	182	143	140	279	1,150	779	265	181	148
24	195	162	143	180	144	137	379	1,060	714	261	179	151
25	192	171	152	175	143	138	548	970	670	258	179	149
26	187	169	152	174	142	137	622	909	640	260	178	147
27	187	157	145	172	143	139	615	880	648	253	176	145
28	186	157	137	170	142	157	557	914	676	248	172	145
29	185	149	139	170	---	169	499	959	654	246	167	143
30	184	147	145	172	---	158	470	944	630	241	165	140
31	183	---	137	169	---	152	---	920	---	237	168	---
TOTAL	5,769	5,046	4,686	4,579	4,318	4,546	8,462	31,123	25,992	10,578	6,073	4,662
MEAN	186	168	151	148	154	147	282	1,004	866	341	196	155
MAX	197	182	181	197	170	169	622	1,790	1,240	585	235	167
MIN	169	147	132	110	142	137	150	415	630	237	165	140
AC-FT	11,440	10,010	9,290	9,080	8,560	9,020	16,780	61,730	51,560	20,980	12,050	9,250

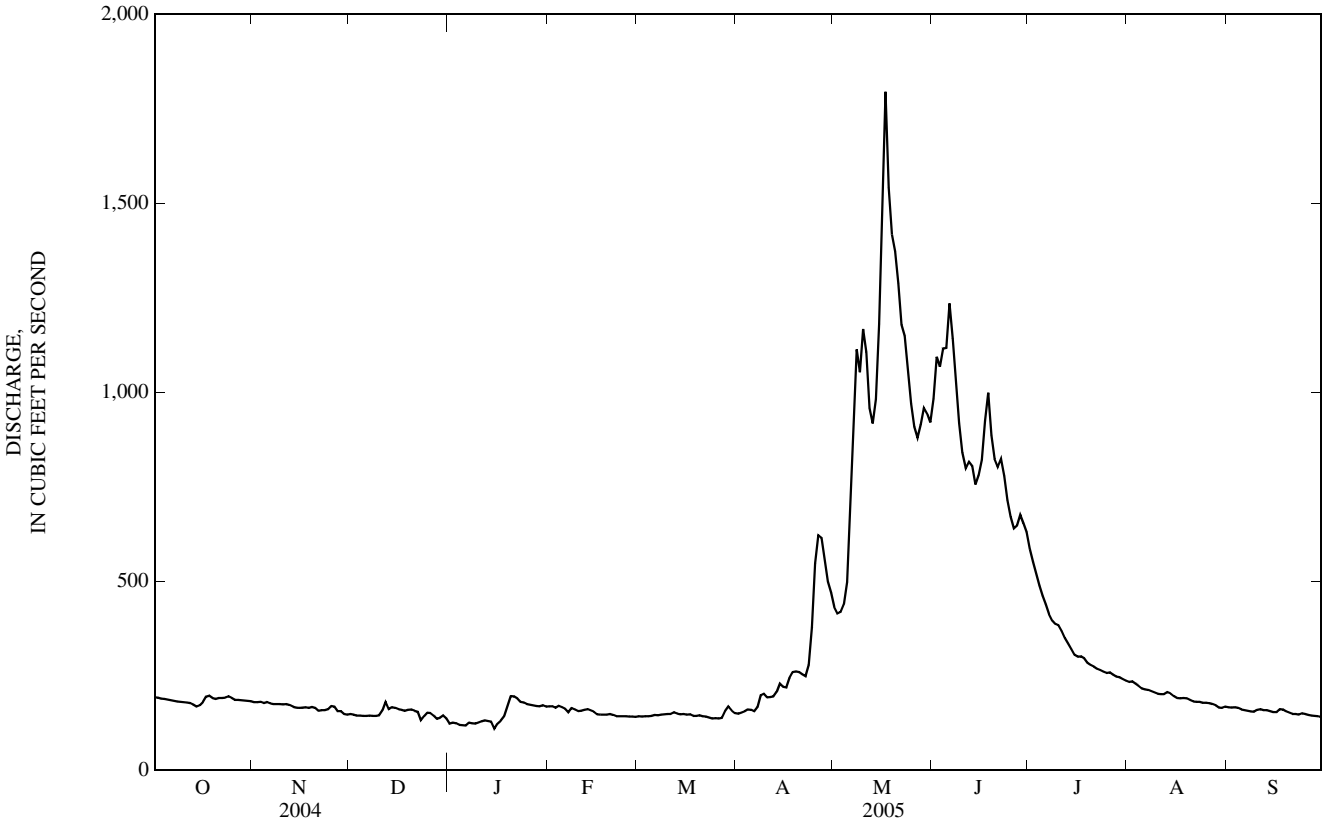
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	158	142	122	106	101	106	352	1,165	1,184	418	219	172
MAX	186	168	151	148	154	147	542	1,372	1,940	626	280	197
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	119	114	99.5	88.3	82.3	77.5	121	801	766	265	167	128
(WY)	(2002)	(2002)	(2002)	(2004)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)

12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	125,909		115,834			
ANNUAL MEAN	344		317		355	
HIGHEST ANNUAL MEAN					456	1999
LOWEST ANNUAL MEAN					242	2001
HIGHEST DAILY MEAN	1,780	May 8	1,790	May 17	3,870	May 26, 1999
LOWEST DAILY MEAN	79	Mar 1	110	Jan 15	72	Mar 18, 2001
ANNUAL SEVEN-DAY MINIMUM	80	Feb 29	122	Jan 3	73	Mar 5, 2001
MAXIMUM PEAK FLOW			1,950	May 17	a4,280	May 26, 1999
MAXIMUM PEAK STAGE			4.80	May 17	5.92	May 20, 2003
INSTANTANEOUS LOW FLOW					b69	Mar 18, 2001
ANNUAL RUNOFF (AC-FT)	249,700		229,800		256,900	
10 PERCENT EXCEEDS	903		883		948	
50 PERCENT EXCEEDS	192		175		164	
90 PERCENT EXCEEDS	86		143		91	

a--Gage height, 5.75 ft.
b--Gage height, 2.35 ft.
e--Estimated.



12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1995 to May 1997, April 2001 to September 2002, March 2003 to November 2005, discontinued.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2001 to September 2002.

REMARKS.--Data for November 2005 included to provide final sample results for project Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum 17.5°C, Aug. 6 and 7, 2001; minimum, 0.0°C, several days in February and March 2002.

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV												
09...	1330	176	<2.0	659	10.6	100	8.3	254	8.0	6.5	140	32.6
APR												
14...	1400	231	<2.0	660	10.8	103	8.3	232	6.5	7.0	120	29.2
MAY												
10...	1730	1,210	11	*	*	*	8.2	168	10.0	6.0	86	21.8
JUN												
07...	1730	1,120	2.3	654	10.4	102	8.3	173	13.0	8.0	88	22.2
JUL												
27...	1315	252	<2.0	661	9.9	111	8.2	250	27.0	14.0	140	33.1
AUG												
24...	1620	179	2.0	659	9.0	99	8.5	262	17.5	13.0	150	34.8
NOV												
01...	1630	138	<2.0	651	10.1	100	8.5	262	5.0	8.0	140	31.2

Date	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
NOV											
09...	13.5	<.010	.079	E.001	.11	.011	E.002	<2	<2	<.04	.6
APR											
14...	11.5	<.010	.057	<.002	.08	<.006	<.004	E1	<2	<.04	.7
MAY											
10...	7.58	<.010	.020	E.001	.16	<.006	.023	12	<2	E.02	1.8
JUN											
07...	7.86	<.010	.019	<.002	E.06	<.006	.005	8	<2	<.04	1.1
JUL											
27...	14.1	<.010	.083	<.002	.11	<.006	<.004	E2	<2	<.04	E.4
AUG											
24...	15.2	<.010	.078	<.002	.14	<.006	<.004	2	.68	<.04	<.6
NOV											
01...	15.3	<.010	.092	<.002	.12	<.006	<.004	2	.78	<.04	E.4

*--Equipment problem.
E--Estimated.

12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT—Continued

WATER-QUALITY DATA, NOVEMBER 2004 TO NOVEMBER 2005—CONTINUED

Date	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV							
09...	30	E.04	2	<2	13	8	3.8
APR							
14...	40	.08	3	<2	74	4	2.5
MAY							
10...	320	.62	17	E2	78	31	101
JUN							
07...	60	.10	4	<2	79	5	15
JUL							
27...	7	<.06	.6	<2	83	1	.68
AUG							
24...	9	<.06	.8	<2	89	1	.48
NOV							
01...	8	<.06	.9	<2	86	1	.37

E--Estimated.

12338690 MONTURE CREEK NEAR OVANDO, MT

LOCATION.--Lat 47°02'44", long 113°11'23" (NAD 27) in NW$^1/_4$SE$^1/_4$NW$^1/_4$ sec. 24, T.15 N., R.13 W., Powell County, Hydrologic Unit 17010203, at bridge on State Highway 200, 3.3 mi northwest of Ovando and at river mile 3.6.

DRAINAGE AREA.--140 mi^2.

PERIOD OF RECORD.-- December 2003 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 3,987 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, APRIL 2005 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
APR										
14...	1245	206	<2.0	663	12.1	105	8.1	125	6.5	3.5
MAY										
11...	0800	492	5.0	663	10.9	98	7.6	92	9.0	5.0
JUN										
08...	1300	439	<2.0	659	11.1	106	8.2	106	12.5	7.0
JUL										
27...	1145	103	<2.0	663	9.8	110	8.2	176	24.0	14.5
AUG										
25...	1005	52	<2.0	665	10.0	100	8.4	179	12.5	9.5
NOV										
02...	0815	49	<2.0	660	11.1	97	8.4	205	1.5	3.5

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR									
14...	62	14.9	6.16	<.010	.054	E.001	.11	<.006	.011
MAY									
11...	46	11.1	4.54	E.005	.046	E.001	.17	<.006	.019
JUN									
08...	51	12.4	4.87	<.010	.021	<.002	.11	E.003	.011
JUL									
27...	91	22.1	8.74	<.010	E.008	<.002	.07	<.006	.005
AUG									
25...	100	23.8	10.2	<.010	E.008	E.001	.11	<.006	.005
NOV									
02...	110	24.3	10.9	<.010	.028	<.002	.13	<.006	E.003

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR											
14...	5	<2	<.04	.7	90	.06	12	<2	70	7	3.9
MAY											
11...	17	E1	<.04	.7	150	.14	12	<2	70	16	21
JUN											
08...	14	E1	<.04	.7	80	.08	8	<2	78	6	7.1
JUL											
27...	3	1.0	<.04	E.3	50	<.06	5	<2	90	1	.28
AUG											
25...	3	.56	<.04	E.3	40	E.04	5	E1	85	1	.14
NOV											
02...	5	.63	<.04	E.4	60	<.06	7	<2	89	1	.13

E--Estimated.

12338700 BLACKFOOT RIVER AT SCOTTY BROWN BRIDGE, NEAR OVANDO, MT

LOCATION.--Lat 47°01'05", long 113°14'22" (NAD 27) in $SE^1/_4NE^1/_4NE^1/_4$ sec. 33, T.15 N., R.13 W., Powell County, Hydrologic Unit 17010203, at county road bridge called Scotty Brown Bridge, 0.9 mi south of Highway 200, 5.0 mi west of Ovando.

DRAINAGE AREA.--1,428 mi^2.

PERIOD OF RECORD.-- September 1995 to May 1997, December 2003 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 3,910 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, APRIL 2005 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
APR												
14...	1045	692	<2.0	663	12.0	104	8.3	219	4.0	3.5	110	26.6
MAY												
11...	1200	E2,500	26	665	10.8	100	8.2	172	9.5	6.0	86	21.8
JUN												
08...	0845	3,120	10	660	10.2	100	8.0	185	10.0	8.0	89	23.1
JUL												
27...	0830	578	<2.0	665	9.0	97	8.2	264	13.0	12.5	150	35.6
AUG												
25...	0820	402	<2.0	666	9.5	95	8.5	268	2.5	9.5	150	36.7
NOV												
02...	0920	450	<2.0	660	11.6	102	8.5	294	4.5	4.0	150	38.0

Date	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
APR											
14...	9.57	<.010	.018	E.001	.09	<.006	.014	2	<2	<.04	.9
MAY											
11...	7.58	<.010	.045	E.001	.31	E.004	.067	8	E2	E.03	3.2
JUN											
08...	7.68	<.010	.016	<.002	.20	.010	.035	7	E2	<.04	1.9
JUL											
27...	14.0	<.010	.026	<.002	.10	<.006	.005	2	<2	<.04	.6
AUG											
25...	14.0	<.010	.020	E.001	.15	<.006	.007	2	1.6	<.04	E.4
NOV											
02...	14.3	<.010	.019	<.002	.11	<.006	E.003	5	1.1	<.04	E.5

Date	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
14...	90	.14	16	E1	82	7	13
MAY							
11...	760	1.49	62	6	86	64	E432
JUN							
08...	350	.56	28	3	83	26	219
JUL							
27...	30	E.04	5	<2	77	3	4.7
AUG							
25...	40	.06	7	<2	92	2	2.2
NOV							
02...	60	E.05	6	<2	77	3	3.6

E--Estimated.

12339500 CLEARWATER RIVER AT CLEARWATER, MT

LOCATION.--Lat 46°58'00", long 113°22'40" (NAD 27) in NE$^1/_4$SW$^1/_4$ sec. 16, T.14 N., R.14 W., Missoula County, Hydrologic Unit 17010203, on left bank 400 ft upstream from mouth and 2.5 mi south of Clearwater Post Office.

DRAINAGE AREA.--391 mi^2.

PERIOD OF RECORD.--December 2003 to November 2005, discontinued.

GAGE.--None. Elevation at sampling site is 3,760 ft (NGVD 29).

REMARKS.--Data for November 2005 included to provide final sample results for project.

WATER-QUALITY DATA, APRIL 2005 TO NOVEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
APR										
14...	0845	747	<2.0	667	12.6	111	8.0	116	1.0	4.5
MAY										
11...	1000	1,070	2.2	670	9.2	94	7.7	115	9.0	10.5
JUN										
08...	1100	753	2.3	663	10.0	108	8.0	120	12.5	12.5
JUL										
27...	1020	96	<2.0	668	9.5	112	8.0	170	23.0	17.0
AUG										
24...	1835	49	<2.0	666	8.6	102	8.8	169	16.5	17.0
NOV										
02...	1100	71	<2.0	664	10.9	102	8.5	163	8.0	6.5

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR									
14...	56	14.8	4.71	<.010	<.016	<.002	.14	<.006	.012
MAY									
11...	56	14.6	4.79	<.010	<.016	E.001	.19	<.006	.013
JUN									
08...	57	15.2	4.71	<.010	E.009	<.002	.16	<.006	.010
JUL									
27...	87	23.8	6.71	<.010	E.011	<.002	.13	<.006	.009
AUG									
24...	92	24.7	7.27	<.010	<.016	<.002	.19	<.006	.010
NOV									
02...	85	22.3	7.01	<.010	E.010	<.002	.14	<.006	.005

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR											
14...	9	<2	<.04	.9	50	E.05	11	<2	80	2	4.0
MAY											
11...	6	<2	<.04	E.5	50	E.05	10	<2	72	3	8.7
JUN											
08...	4	<2	<.04	1.8	40	<.06	9	E1	69	1	2.0
JUL											
27...	3	.89	<.04	E.4	20	<.06	9	<2	83	1	.26
AUG											
24...	3	.75	<.04	1.0	20	<.06	9	<2	75	2	.26
NOV											
02...	6	.57	<.04	E.4	30	<.06	5	<2	83	1	.19

E--Estimated.

12340000 BLACKFOOT RIVER NEAR BONNER, MT

LOCATION.--Lat 46°53'59", long 113°45'20" (NAD 27), in $SE^1/_4SE^1/_4NW^1/_4$ sec.9, T.13 N., R.17 W., Missoula County, Hydrologic Unit 17010203, on right bank 5.0 mi downstream from Union Creek, 5.6 mi northeast of Bonner, and at river mile 7.9.

DRAINAGE AREA.--2,290 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to November 1898, March 1899 to September 1901, May 1903 to January 1905, March to October 1905, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as "at Bonner" 1898-99 and as Big Blackfoot near Bonner 1903-05.

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,344.76 ft (NGVD 29). July 7, 1898 to June 30, 1901, and May 15, 1903, to Oct. 31, 1905, nonrecording gage at site 7 mi downstream at different elevation. Oct. 4, 1939, to Sept. 30, 1955, nonrecording gage at site 1.3 mi downstream at elevation 21.82 ft lower.

REMARKS.--Water-discharge records excellent except those for estimated daily discharges, which are fair. Flow slightly regulated by Nevada Creek Reservoir (station number 12336500). Diversions for irrigation of about 20,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	679	638	618	456	857	565	975	2,430	3,230	2,140	697	489
2	674	631	583	e370	837	571	993	2,280	3,770	2,030	694	480
3	668	639	576	e350	810	575	1,010	2,180	4,070	1,920	687	478
4	667	634	572	e300	795	578	1,060	2,140	4,190	1,800	655	482
5	662	628	554	e330	784	577	1,080	2,170	4,210	1,670	642	479
6	648	626	555	e350	762	584	1,080	2,380	4,370	1,590	625	474
7	655	621	557	e400	715	595	1,100	2,860	4,360	1,480	610	472
8	644	619	556	e470	711	610	1,210	3,440	4,170	1,410	600	471
9	638	633	561	e470	710	635	1,360	3,740	3,900	1,350	589	466
10	627	648	564	e500	690	665	1,420	4,030	3,600	1,320	580	494
11	621	650	609	e530	677	675	1,440	4,200	3,350	1,290	577	512
12	614	647	666	e550	681	724	1,480	4,490	3,240	1,240	578	518
13	607	637	650	e600	679	755	1,480	4,500	3,250	1,180	587	519
14	597	629	635	e550	675	761	1,590	4,170	3,070	1,110	591	510
15	588	620	663	e450	657	760	1,560	4,150	2,960	1,070	580	500
16	602	612	647	e400	606	772	1,510	4,470	2,910	1,020	571	488
17	642	611	641	e450	599	787	1,530	5,140	2,980	1,010	571	537
18	669	604	637	e530	609	779	1,580	5,200	3,290	991	571	571
19	672	604	637	e650	629	772	1,590	4,910	3,200	959	578	561
20	661	605	643	e850	644	763	1,570	4,890	2,970	924	575	532
21	671	577	630	e1,100	606	769	1,560	4,670	2,780	886	571	505
22	673	588	627	1,170	568	759	1,510	4,400	2,680	862	e560	497
23	676	587	538	1,130	570	754	1,520	4,200	2,570	843	e550	509
24	683	605	498	1,080	576	722	1,820	3,990	2,420	817	e540	506
25	685	654	628	1,030	574	724	2,180	3,730	2,300	800	e525	528
26	671	709	654	999	567	713	2,520	3,480	2,240	788	e530	526
27	660	670	638	982	563	737	2,840	3,310	2,220	771	e530	515
28	655	633	e550	968	560	875	2,850	3,220	2,390	750	e515	505
29	652	594	e500	941	---	979	2,750	3,220	2,380	731	e490	500
30	648	587	e550	922	---	998	2,600	3,220	2,270	713	481	503
31	643	---	592	890	---	982	---	3,190	---	702	484	---
TOTAL	20,152	18,740	18,529	20,768	18,711	22,515	48,768	114,400	95,340	36,167	17,934	15,127
MEAN	650	625	598	670	668	726	1,626	3,690	3,178	1,167	579	504
MAX	685	709	666	1,170	857	998	2,850	5,200	4,370	2,140	697	571
MIN	588	577	498	300	560	565	975	2,140	2,220	702	481	466
AC-FT	39,970	37,170	36,750	41,190	37,110	44,660	96,730	226,900	189,100	71,740	35,570	30,000
CFSM	0.28	0.27	0.26	0.29	0.29	0.32	0.71	1.61	1.39	0.51	0.25	0.22
IN.	0.33	0.30	0.30	0.34	0.30	0.37	0.79	1.86	1.55	0.59	0.29	0.25

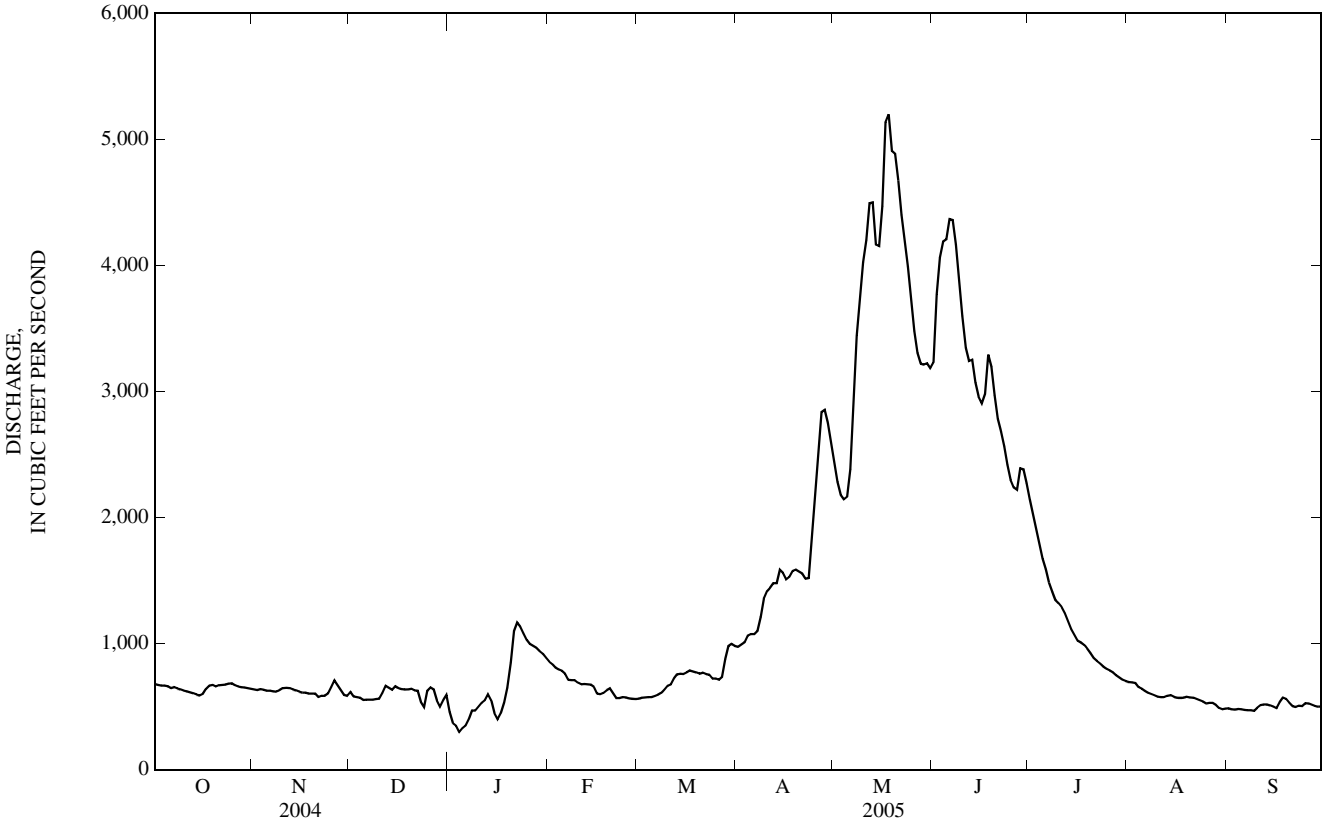
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2005, BY WATER YEAR (WY)*

MEAN	653	649	606	554	599	782	2,052	4,867	4,877	1,844	831	670
MAX	1,547	1,480	1,555	1,069	1,668	2,351	4,727	9,802	13,610	6,557	1,921	1,250
(WY)	(1960)	(1960)	(1996)	(1976)	(1971)	(1986)	(1943)	(1997)	(1899)	(1899)	(1899)	(1899)
MIN	370	369	332	348	359	435	463	1,096	1,158	533	365	363
(WY)	(1988)	(1988)	(1988)	(1988)	(1993)	(1988)	(1905)	(1941)	(1987)	(1977)	(1988)	(1988)

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1898 - 2005*	
ANNUAL TOTAL	454,318		447,151			
ANNUAL MEAN	1,241		1,225		1,567	
HIGHEST ANNUAL MEAN					2,480	1976
LOWEST ANNUAL MEAN					558	1941
HIGHEST DAILY MEAN	4,500	May 9	5,200	May 18	18,000	Jun 10, 1964
LOWEST DAILY MEAN	300	Jan 6	300	Jan 4	200	Jan 4, 1950
ANNUAL SEVEN-DAY MINIMUM	377	Jan 1	365	Jan 1	239	Dec 21, 1983
MAXIMUM PEAK FLOW			5,360	May 17	a19,200	Jun 10, 1964
MAXIMUM PEAK STAGE			6.02	May 17	b16.00	Feb 9, 1996
INSTANTANEOUS LOW FLOW					c156	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	901,100		886,900		1,136,000	
ANNUAL RUNOFF (CFSM)	0.542		0.535		0.684	
ANNUAL RUNOFF (INCHES)	7.38		7.26		9.30	
10 PERCENT EXCEEDS	3,130		3,220		4,070	
50 PERCENT EXCEEDS	664		670		730	
90 PERCENT EXCEEDS	455		508		450	

*--During periods of operation (1900-01, 1904, 1940 to current year).
a--Gage height, 10.89 ft.
b--Backwater from ice.
c--Gage height, 1.20 ft, but may have been less during a period of ice effect.
e--Estimated.



12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-59, 1985 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1955 to September 1959, October 1999 to September 2003, October 2004 to September 2005.
SUSPENDED-SEDIMENT DISCHARGE: July 1986 to April 1987, June 1988 to September 1995.

REMARKS.--Daily water temperature record good. Missing daily water temperature data from Jan. 1-16 due to backwater problems from ice conditions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 22.5°C, July 19, 2003; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 335 mg/L, May 19, 1991; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOAD: Maximum daily, 8,100 tons, May 19, 1991; minimum daily, 0.54 ton, Feb. 8, 1995.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 22.0°C, July 13; minimum, 0.0°C on many days November through February.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
DEC													
20...	1215	641	<2.0	679	12.3	100	8.4	240	3.0	2.0	120	30.2	11.0
APR													
20...	1415	1,570	2.2	678	11.2	102	8.4	185	6.5	6.5	91	23.2	7.99
MAY													
18...	0930	5,250	30	670	9.5	96	8.2	161	11.0	9.0	77	20.2	6.51
JUN													
03...	0845	4,070	13	674	9.2	90	8.3	172	9.0	9.0	89	23.6	7.28
JUL													
27...	0745	772	2.0	681	8.0	89	8.4	247	10.0	15.0	130	32.6	12.3
AUG													
24...	1455	E540	<2.0	678	9.6	109	8.6	257	19.5	16.0	140	33.6	12.7

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)
DEC													
20...	<.010	E.013	E.001	<.006	.006	.09	--	.9	<2	E.02	<.04	E.4	E.3
APR													
20...	<.010	<.016	E.001	E.003	.016	.17	5	.8	<2	<.04	<.04	.9	1.2
MAY													
18...	E.006	.040	<.002	E.005	.064	.33	19	.8	<2	<.04	E.03	1.1	4.8
JUN													
03...	<.010	E.015	<.002	E.003	.042	.18	11	.8	<2	E.02	<.04	.9	2.7
JUL													
27...	<.010	E.011	<.002	<.006	.010	.16	<2	1.2	1.1	<.04	<.04	.6	1.2
AUG													
24...	E.005	E.012	E.001	<.006	.008	.15	<2	1.4	1.5	<.04	<.04	.6	.7

E--Estimated.

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Suspnd. sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC											
20...	<6	30	<.08	<.06	.8	2	<.6	<2	73	2	3.5
APR											
20...	12	100	<.08	.13	1.9	12	.9	<2	81	6	25
MAY											
18...	24	750	E.05	1.34	2.1	54	1.1	6	87	66	936
JUN											
03...	29	400	.09	.62	1.7	33	.6	4	89	33	363
JUL											
27...	E5	50	<.08	.10	1.6	9	.7	E1	82	4	8.3
AUG											
24...	E4	30	<.08	E.04	1.5	6	.6	<2	81	2	E2.9

E--Estimated.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.0	10.0	11.0	4.0	2.5	3.0	0.5	0.0	0.5	---	---	---
2	11.5	9.0	10.5	4.5	3.0	3.5	1.0	0.5	1.0	---	---	---
3	11.0	8.5	10.0	5.5	4.5	5.0	1.5	0.5	1.0	---	---	---
4	11.0	8.5	10.0	4.5	3.5	4.0	1.5	0.5	1.0	---	0.0	---
5	10.5	8.0	9.5	3.5	2.0	3.0	1.0	0.0	0.5	---	0.0	---
6	10.5	8.0	9.5	4.0	2.0	3.0	1.0	0.5	0.5	---	0.0	---
7	12.0	9.5	10.5	5.5	4.0	4.5	1.0	0.5	0.5	---	0.0	---
8	11.0	9.0	10.0	5.0	3.5	4.5	1.5	1.0	1.0	0.0	0.0	0.0
9	10.5	8.5	9.5	4.0	3.0	3.5	1.5	1.0	1.5	0.0	0.0	0.0
10	9.0	7.5	8.0	4.5	3.5	4.0	2.5	1.5	2.0	0.0	0.0	0.0
11	8.5	6.5	7.5	4.0	3.0	3.5	3.5	2.5	3.0	---	0.0	---
12	9.0	7.0	8.0	3.5	2.5	3.0	3.0	1.0	2.5	---	0.0	---
13	9.0	7.0	8.0	2.5	2.0	2.5	1.0	0.0	0.5	---	0.0	---
14	10.0	7.5	9.0	2.5	2.5	2.5	1.5	0.0	0.5	---	0.0	---
15	11.0	9.0	10.0	3.0	2.5	2.5	2.5	1.5	2.0	---	---	---
16	10.5	10.0	10.0	3.0	2.5	3.0	2.5	1.5	2.0	---	0.0	---
17	10.0	8.5	9.0	4.0	3.0	3.5	2.0	1.5	1.5	0.5	0.0	0.0
18	8.5	6.5	7.5	3.0	2.5	2.5	2.0	1.0	1.5	0.5	0.0	0.0
19	7.5	5.5	6.5	3.0	2.0	2.5	3.0	2.0	2.5	0.5	0.0	0.5
20	8.0	6.5	7.0	2.5	1.5	2.0	3.0	2.0	2.5	0.5	0.5	0.5
21	8.0	7.0	7.5	1.5	0.5	1.0	2.0	1.0	1.5	0.5	0.0	0.0
22	7.5	6.5	7.0	2.0	1.0	1.5	1.0	0.0	0.5	0.0	0.0	0.0
23	6.5	6.0	6.5	3.0	2.0	2.5	0.5	0.0	0.0	0.5	0.0	0.0
24	6.0	5.0	5.5	3.5	3.0	3.0	0.5	0.0	0.5	0.5	0.0	0.0
25	5.5	4.0	4.5	4.0	3.5	3.5	0.5	0.0	0.0	0.5	0.0	0.0
26	5.0	3.5	4.5	4.0	2.5	3.0	0.5	0.0	0.0	0.5	0.0	0.5
27	5.0	3.5	4.0	2.5	1.0	1.5	0.0	0.0	0.0	1.0	0.0	0.5
28	5.5	4.0	4.5	1.0	0.0	0.5	0.0	0.0	0.0	1.0	0.5	0.5
29	5.0	4.5	5.0	0.5	0.0	0.5	0.5	0.0	0.0	1.0	0.0	0.5
30	5.0	5.0	5.0	0.5	0.0	0.0	0.5	0.0	0.0	1.0	0.5	1.0
31	5.0	4.0	4.5	---	---	---	0.5	0.0	0.0	2.0	0.0	1.0
MONTH	12.0	3.5	7.5	5.5	0.0	3.0	3.5	0.0	1.0	2.0	0.0	0.0

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	1.5	1.5	4.5	2.5	3.5	7.0	4.5	6.0	9.5	7.0	8.0
2	2.5	1.5	2.0	4.5	2.5	3.5	8.5	6.0	7.0	10.5	7.5	9.0
3	2.0	0.5	1.5	4.5	2.0	3.5	7.5	6.0	6.5	11.0	8.5	9.5
4	2.0	0.5	1.5	4.5	2.0	3.5	7.5	6.0	6.5	10.0	8.5	9.5
5	2.5	1.5	1.5	5.0	2.5	4.0	7.5	5.5	6.5	11.5	9.0	10.0
6	1.5	1.0	1.0	6.0	3.5	5.0	9.0	5.5	7.0	13.0	11.0	11.5
7	1.0	0.0	0.5	6.5	4.0	5.5	9.0	7.0	8.0	12.0	10.5	11.0
8	1.0	0.0	0.5	7.5	4.5	6.0	10.0	8.0	8.5	11.5	10.0	10.5
9	1.5	0.0	1.0	7.5	4.5	6.5	8.5	6.5	7.5	10.0	9.0	9.5
10	1.0	0.0	0.5	8.0	5.5	6.5	8.5	6.5	7.5	9.0	8.5	9.0
11	0.5	0.0	0.5	7.0	4.5	6.0	8.0	6.0	7.0	8.5	8.0	8.0
12	2.0	0.0	1.0	6.5	5.0	5.5	8.5	6.0	7.5	10.0	7.5	8.5
13	2.5	1.5	2.0	5.5	3.5	4.5	7.5	6.0	6.5	10.0	8.5	9.5
14	2.5	1.5	1.5	6.0	3.5	4.5	6.5	4.5	5.5	11.0	9.5	10.5
15	1.5	0.0	1.0	6.0	3.5	5.0	8.0	5.0	6.5	11.0	10.0	11.0
16	0.5	0.0	0.0	5.0	4.0	4.5	9.5	6.0	7.5	11.0	10.5	11.0
17	0.5	0.0	0.0	5.0	3.0	4.0	9.0	8.0	8.5	10.5	9.5	10.0
18	0.0	0.0	0.0	4.5	3.0	4.0	8.0	7.0	7.5	10.0	9.0	9.5
19	0.0	0.0	0.0	5.5	3.0	4.5	8.0	7.0	7.5	11.0	9.5	10.0
20	0.5	0.0	0.0	6.5	4.0	5.0	7.0	6.5	7.0	11.0	9.5	10.0
21	1.5	0.0	0.5	6.0	4.0	5.0	7.5	5.5	6.5	11.0	9.5	10.0
22	1.5	0.0	0.5	5.5	4.0	4.5	10.0	6.5	8.0	11.0	10.0	10.5
23	1.5	0.0	0.5	4.0	2.5	3.0	10.5	8.0	9.5	11.0	9.0	10.0
24	1.5	0.0	1.0	3.0	1.5	2.5	11.5	9.0	10.0	11.0	9.0	10.0
25	2.0	0.0	1.0	4.5	2.5	3.5	12.0	9.0	10.0	11.0	9.5	10.5
26	2.5	0.5	1.5	5.0	3.0	4.0	11.5	9.0	10.0	12.5	10.0	11.5
27	3.0	0.5	2.0	6.0	4.5	5.5	10.5	8.5	9.0	13.0	11.0	12.0
28	3.0	0.5	2.0	7.5	5.5	6.0	8.5	6.5	7.5	14.0	12.0	13.0
29	---	---	---	6.5	5.0	6.0	8.0	5.5	6.5	14.0	12.5	13.0
30	---	---	---	6.0	4.5	5.5	8.5	6.0	7.0	13.5	12.0	12.5
31	---	---	---	6.5	4.5	5.5	---	---	---	13.0	11.5	12.0
MONTH	3.0	0.0	1.0	8.0	1.5	4.5	12.0	4.5	7.5	14.0	7.0	10.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.5	10.0	11.0	18.5	16.0	17.0	21.0	17.0	19.0	15.5	12.0	14.0
2	10.0	9.0	9.5	18.0	16.0	16.5	20.0	17.5	19.0	15.5	12.5	14.5
3	9.5	9.0	9.0	17.5	15.0	16.0	20.5	17.0	19.0	16.0	13.5	15.0
4	12.0	9.5	10.5	18.0	14.5	16.0	21.0	16.5	19.0	16.0	13.5	14.5
5	12.5	11.5	12.0	19.0	15.5	17.0	21.0	17.0	19.0	16.0	13.0	15.0
6	12.5	11.5	11.5	19.5	16.5	18.0	21.0	17.0	19.5	16.0	13.0	14.5
7	11.5	10.0	10.5	20.5	17.5	18.5	21.0	17.5	19.5	16.0	12.5	14.5
8	10.5	10.0	10.0	21.0	17.5	19.0	20.0	18.0	19.0	16.0	12.5	14.5
9	10.5	9.5	10.0	19.5	16.5	18.0	21.0	17.0	19.0	15.0	13.0	14.0
10	11.5	10.0	11.0	17.5	14.5	16.0	20.5	17.5	19.0	13.0	11.5	12.5
11	13.0	11.5	12.0	19.5	15.5	17.0	20.5	17.0	19.0	12.5	10.5	11.5
12	13.0	11.0	12.0	21.0	16.5	18.5	19.0	16.5	17.5	11.5	10.0	11.0
13	12.0	10.0	11.0	22.0	18.0	20.0	18.0	14.5	16.5	12.5	10.5	11.5
14	13.0	11.5	12.5	21.0	17.5	19.0	18.0	14.0	16.0	13.0	10.0	11.5
15	15.5	13.0	14.0	21.0	17.0	19.0	18.0	14.5	16.5	13.5	10.5	12.0
16	15.0	14.0	14.5	20.5	18.5	19.5	18.0	15.0	16.5	12.5	10.5	12.0
17	14.0	12.5	13.0	19.5	16.5	18.0	17.0	15.0	16.0	12.0	11.5	11.5
18	13.0	11.0	12.0	20.0	15.5	18.0	16.5	14.0	15.0	13.0	11.0	12.0
19	14.5	11.5	13.0	20.5	16.5	18.5	17.0	13.0	15.0	13.5	11.0	12.0
20	16.5	14.0	15.0	20.5	16.5	18.5	17.5	13.5	15.5	13.0	10.0	12.0
21	17.5	16.0	16.5	20.5	16.5	18.5	18.5	14.5	16.5	13.0	10.5	12.0
22	18.5	16.0	17.0	20.0	17.5	18.5	18.0	15.0	16.5	12.0	10.0	11.0
23	18.0	16.5	17.5	20.5	17.5	19.0	18.0	16.0	17.0	11.5	10.0	10.5
24	17.0	15.5	16.5	20.5	16.5	18.5	16.5	14.5	15.5	10.0	9.5	10.0
25	16.0	14.5	15.5	19.5	17.0	18.5	16.0	12.5	14.5	11.0	8.5	9.5
26	15.0	14.0	14.5	19.0	15.5	17.5	16.5	12.5	14.5	11.5	8.5	10.0
27	15.0	13.5	14.5	20.0	15.5	17.5	17.0	13.5	15.5	11.5	9.0	10.5
28	14.5	14.0	14.0	19.5	16.0	18.0	17.5	14.0	16.0	11.0	8.5	10.0
29	15.0	13.5	14.0	20.5	16.5	18.5	17.5	14.5	16.0	11.0	9.0	10.0
30	17.5	14.0	15.5	21.0	17.0	19.0	16.0	13.5	14.5	11.5	11.0	11.5
31	---	---	---	20.5	17.0	19.0	15.0	11.5	13.5	---	---	---
MONTH	18.5	9.0	13.0	22.0	14.5	18.0	21.0	11.5	17.0	16.0	8.5	12.0

12340500 CLARK FORK ABOVE MISSOULA, MT

LOCATION.--Lat 46°52'38", long 113°55'53" (NAD 27), in $NW^1/_4NW^1/_4NW^1/_4$ sec.19, T.13 N., R.18 W., Missoula County, Hydrologic Unit 17010204, on right bank 0.2 mi downstream from county road bridge, 2.8 mi east of Missoula, 2.8 mi downstream from Milltown Dam, 3.0 mi downstream from Blackfoot River, and at river mile 361.6.

DRAINAGE AREA.--5,999 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1929 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1042: 1936. WSP 1152: 1942. WSP 1246: 1929-30, 1935, drainage area. WSP 1316: 1932-33.

GAGE.--Water-stage recorder. Elevation of gage is 3,198.30 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to May 27, 1929, nonrecording gage.

REMARKS.--Water-discharge records good except those for Nov. 12 to Dec. 2, and Jan. 1-20, which are fair, and those for estimated daily discharges, which are poor. Diurnal fluctuation caused by powerplant at Milltown. Diversions for irrigation of about 120,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1908 reached a discharge of 48,000 ft^3/s, provided by The Montana Power Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,510	1,370	1,190	e950	1,450	1,100	1,560	3,450	5,700	4,630	1,230	923
2	1,470	1,330	1,250	e700	1,470	1,140	1,560	3,210	7,130	4,250	1,220	940
3	1,460	1,370	1,250	e630	1,420	1,130	1,600	3,040	8,140	3,990	1,220	936
4	1,440	1,350	1,220	e530	1,380	1,130	1,660	2,970	8,800	3,700	1,120	930
5	1,420	1,370	1,210	e500	1,390	1,150	1,670	3,000	9,050	3,510	1,100	899
6	1,420	1,360	1,200	e550	1,370	1,160	1,660	3,240	8,980	3,280	1,090	895
7	1,430	1,330	1,210	e630	1,260	1,170	1,680	3,840	8,890	3,050	1,060	905
8	1,430	1,370	1,230	e800	1,230	1,200	1,830	4,530	8,330	2,820	1,060	911
9	1,390	1,350	1,230	e830	1,270	1,240	2,010	5,090	7,620	2,730	1,030	908
10	1,390	1,350	1,230	e850	1,220	1,320	2,080	5,690	6,940	2,590	1,050	960
11	1,370	1,360	1,280	e900	1,190	1,290	2,080	6,630	6,380	2,580	1,030	1,010
12	1,360	1,350	1,340	e950	1,220	1,340	2,080	7,600	6,310	2,510	1,010	1,050
13	1,360	1,330	1,340	e1,050	1,210	1,390	2,070	7,410	6,780	2,410	1,020	1,050
14	1,360	1,310	1,270	e1,000	1,230	1,340	2,240	6,740	6,320	2,250	1,040	1,070
15	1,360	1,300	1,350	e830	1,200	1,330	2,280	6,660	5,970	2,220	1,040	1,080
16	1,370	1,290	1,330	e700	1,120	1,320	2,110	7,060	5,950	2,070	1,010	1,050
17	1,410	1,310	1,310	e800	1,030	1,360	2,200	8,330	6,130	2,020	990	1,170
18	1,450	1,300	1,290	e1,000	1,030	1,350	2,310	9,070	7,050	1,970	986	1,330
19	1,460	1,270	1,300	e1,250	1,110	1,320	2,360	8,680	7,040	1,910	1,030	1,350
20	1,450	1,290	1,290	e1,500	1,130	1,310	2,370	9,170	6,240	1,810	1,020	1,310
21	1,450	1,260	1,280	e1,900	1,180	1,330	2,380	8,900	5,820	1,690	1,000	1,210
22	1,480	1,170	1,290	e2,100	1,120	1,350	2,320	8,580	5,600	1,660	971	1,190
23	1,460	1,230	e1,100	e2,000	1,100	1,320	2,290	8,200	5,460	1,590	984	1,220
24	1,450	1,300	e900	1,920	1,100	1,280	2,610	7,800	5,170	1,520	977	1,240
25	1,460	1,390	e1,100	1,740	1,100	1,240	2,980	7,150	4,790	1,470	960	1,320
26	1,410	1,440	1,300	1,690	1,110	1,260	3,450	6,600	4,670	1,450	973	1,340
27	1,400	1,400	1,210	1,660	1,110	1,260	3,930	6,070	4,670	1,430	962	1,330
28	1,390	1,260	e1,000	1,650	1,090	1,420	4,000	5,790	5,020	1,430	945	1,300
29	1,380	1,220	e900	1,630	---	1,600	3,840	5,680	5,170	1,380	921	1,280
30	1,380	1,140	e1,100	1,610	---	1,650	3,630	5,640	4,970	1,310	911	1,280
31	1,370	---	e1,200	1,530	---	1,600	---	5,540	---	1,260	907	---
TOTAL	43,940	39,470	37,700	36,380	33,840	40,400	70,840	191,360	195,090	72,490	31,867	33,387
MEAN	1,417	1,316	1,216	1,174	1,209	1,303	2,361	6,173	6,503	2,338	1,028	1,113
MAX	1,510	1,440	1,350	2,100	1,470	1,650	4,000	9,170	9,050	4,630	1,230	1,350
MIN	1,360	1,140	900	500	1,030	1,100	1,560	2,970	4,670	1,260	907	895
AC-FT	87,150	78,290	74,780	72,160	67,120	80,130	140,500	379,600	387,000	143,800	63,210	66,220

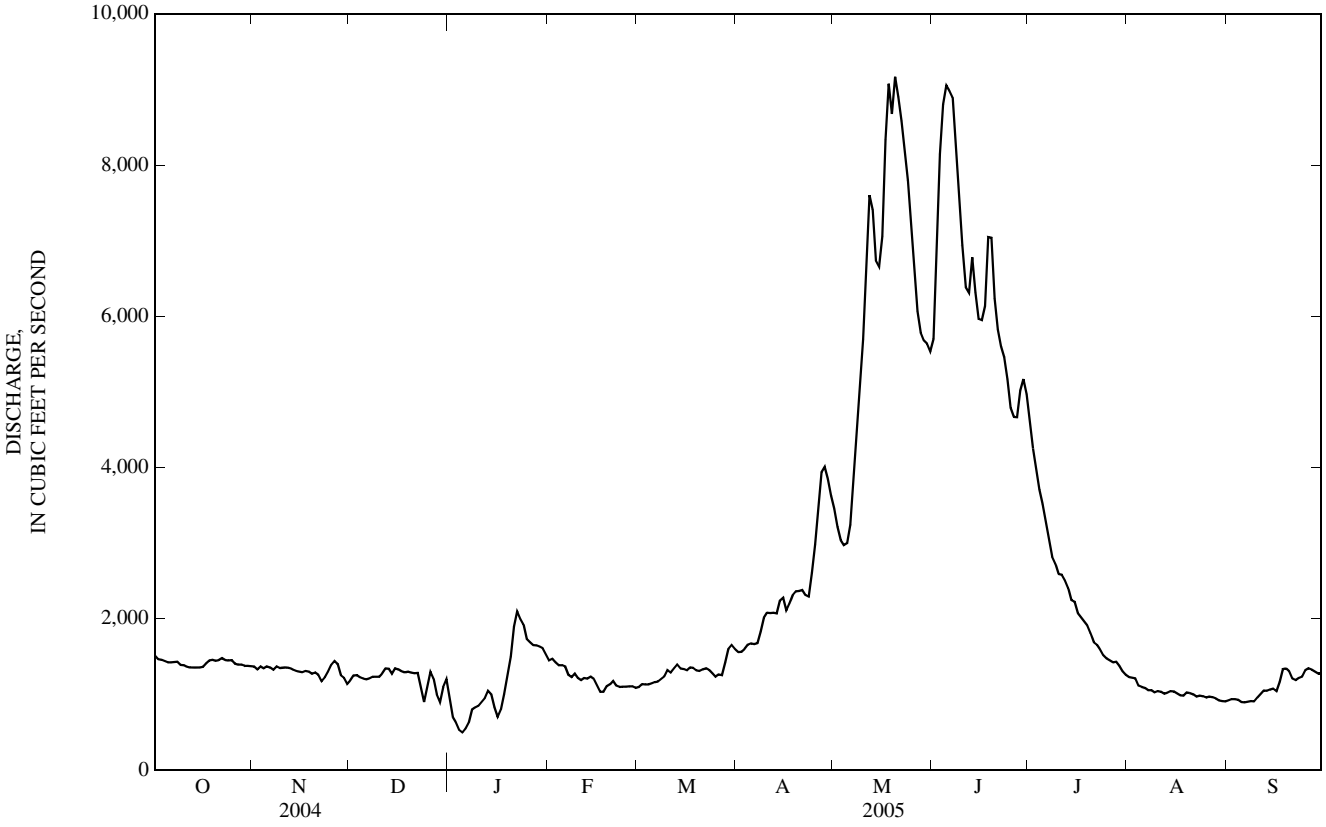
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	1,551	1,548	1,409	1,321	1,465	1,858	3,702	7,824	8,192	3,133	1,476	1,395
MAX	2,987	2,852	3,323	2,546	3,431	4,124	10,080	17,240	19,270	8,759	3,448	2,874
(WY)	(1960)	(1960)	(1976)	(1976)	(1996)	(1986)	(1934)	(1976)	(1975)	(1975)	(1975)	(1965)
MIN	854	882	874	606	674	1,037	1,191	2,005	2,122	868	627	653
(WY)	(1936)	(1938)	(1945)	(1937)	(1933)	(1937)	(1941)	(1941)	(1992)	(1931)	(1988)	(1937)

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	760,300		826,764			
ANNUAL MEAN	2,077		2,265		2,914	
HIGHEST ANNUAL MEAN					5,071	1976
LOWEST ANNUAL MEAN					1,344	1941
HIGHEST DAILY MEAN	6,050	Jun 7	9,170	May 20	30,800	Jun 21, 1975
LOWEST DAILY MEAN	500	Jan 7	500	Jan 5	340	Sep 27, 1937
ANNUAL SEVEN-DAY MINIMUM	721	Jan 4	620	Jan 2	446	Jan 7, 1937
MAXIMUM PEAK FLOW			9,400	May 20	32,300	Jun 21, 1975
MAXIMUM PEAK STAGE			7.09	May 20	13.75	Jun 21, 1975
INSTANTANEOUS LOW FLOW					a115	Oct 25, 1943
ANNUAL RUNOFF (AC-FT)	1,508,000		1,640,000		2,111,000	
10 PERCENT EXCEEDS	4,320		5,870		6,820	
50 PERCENT EXCEEDS	1,380		1,360		1,650	
90 PERCENT EXCEEDS	1,060		981		1,000	

a--Gage height, 0.64 ft.
e--Estimated.



12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-71, 1977-83, 1986 to current year. Water years 1969-71 samples collected 3.4 miles downstream from gaging station.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1977 to September 1983, February 2002 to September 2002.
SUSPENDED-SEDIMENT DISCHARGE: July 1986 to April 1987, June 1988 to January 1996, March 1996 to March 2003, August 2003 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 22.5°C, Aug. 7, 8, 1983, July 13-15, 2002; minimum, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 592 mg/L, May 18, 1997; minimum daily mean, 1 mg/L, on many days from 1990 to 1994, and 1999 to 2001.
SEDIMENT LOAD: Maximum daily, 42,200 tons, May 18, 1997; minimum daily, 1.6 tons, Dec. 27, 1992.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 116 mg/L, May 12; minimum daily mean, 2 mg/L, on many days in November, December, February, August, and September.
SEDIMENT LOAD: Maximum daily, 2,380 tons, May 12; minimum daily, 4.0 tons, Jan. 5.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
DEC										
20...	1350	1,290	<2.0	8.6	323	3.5	3.0	150	40.5	12.2
MAR										
10...	0750	1,280	2.2	8.4	312	4.5	7.0	150	40.3	11.8
APR										
20...	1030	2,360	3.3	8.4	248	7.5	7.0	120	31.2	9.30
MAY										
18...	0715	9,110	37	8.1	170	8.5	9.5	77	20.7	6.11
JUN										
03...	0645	7,960	15	8.2	193	8.5	9.0	91	25.1	6.79
29...	1235	5,180	5.7	8.3	243	17.0	13.5	120	32.9	8.39
JUL										
27...	0900	1,430	<2.0	8.5	276	16.0	18.0	140	37.0	11.6
AUG										
24...	1630	959	<2.0	8.5	306	21.5	16.0	150	39.4	12.3

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)
DEC										
20...	3.2	3	E.03	.04	1.4	3.3	<6	70	<.08	.43
MAR										
10...	3.6	3	<.04	.05	2.1	6.5	7	120	E.05	.73
APR										
20...	2.5	2	<.04	.06	1.4	5.5	13	150	E.05	.83
MAY										
18...	2.7	6	<.04	.22	2.3	26.2	43	1,260	.16	5.91
JUN										
03...	4.0	7	E.03	.21	4.2	31.9	32	930	.17	5.32
29...	5.4	6	E.03	.10	4.3	14.8	16	330	.09	2.23
JUL										
27...	3.8	4.0	<.04	.06	2.4	6.1	9	80	E.05	.52
AUG										
24...	3.7	3.9	<.04	E.03	1.8	4.2	7	80	E.04	.46

E--Estimated.

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC							
20...	7.5	12	2.3	6	86	5	17
MAR							
10...	30.3	34	6.3	9	90	7	24
APR							
20...	14.1	25	1.5	9	92	9	57
MAY							
18...	8.8	121	2.4	44	90	89	2,190
JUN							
03...	8.0	122	3.9	48	90	55	1,180
29...	13.6	49	3.8	19	89	18	252
JUL							
27...	13.8	25	1.3	8	92	5	19
AUG							
24...	14.1	30	1.2	5	84	5	13

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6	24	5	18	3	9.6	3	7.7	6	23	5	15
2	7	28	4	14	3	10	3	5.7	6	24	6	18
3	7	28	3	11	3	10	3	5.1	6	23	4	12
4	6	23	3	11	3	9.9	3	4.3	5	19	5	15
5	5	19	3	11	2	6.5	3	4.0	5	19	5	16
6	5	19	3	11	2	6.5	3	4.5	4	15	6	19
7	5	19	3	11	2	6.5	3	5.1	4	14	6	19
8	6	23	3	11	2	6.6	3	6.5	4	13	6	19
9	5	19	3	11	3	10	4	9.0	3	10	6	20
10	5	19	3	11	3	10	4	9.2	4	13	9	32
11	4	15	2	7.3	4	14	4	9.7	4	13	6	21
12	4	15	2	7.3	3	11	4	10	5	16	6	22
13	5	18	2	7.2	2	7.2	3	8.5	5	16	6	23
14	5	18	2	7.1	2	6.9	3	8.1	5	17	9	33
15	6	22	2	7.0	2	7.3	3	6.7	6	19	8	29
16	6	22	2	7.0	2	7.2	3	5.7	7	21	7	25
17	6	23	3	11	2	7.1	3	6.5	8	22	7	26
18	6	23	3	11	2	7.0	5	14	7	19	9	33
19	5	20	3	10	2	7.0	6	20	6	18	7	25
20	5	20	2	7.0	4	14	12	49	5	15	7	25
21	5	20	2	6.8	4	14	10	51	4	13	7	25
22	4	16	2	6.3	3	10	9	51	3	9.1	6	22
23	4	16	3	10	2	5.9	7	38	2	5.9	7	25
24	4	16	3	11	2	4.9	6	31	2	5.9	4	14
25	3	12	3	11	3	8.9	4	19	2	5.9	6	20
26	3	11	4	16	3	11	4	18	3	9.0	6	20
27	3	11	4	15	3	9.8	4	18	3	9.0	6	20
28	3	11	3	10	3	8.1	5	22	4	12	8	31
29	3	11	3	9.9	3	7.3	5	22	---	---	10	43
30	3	11	3	9.2	3	8.9	5	22	---	---	9	40
31	4	15	---	---	3	9.7	8	33	---	---	10	43
TOTAL	---	567	---	307.1	---	272.8	---	524.3	---	418.8	---	750

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

SUSPENDED-SEDIMENT—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10	42	10	93	18	277	13	163	7	23	3	7.5
2	8	34	10	87	30	578	9	103	6	20	3	7.6
3	9	39	9	74	58	1,270	8	86	6	20	3	7.6
4	8	36	8	64	81	1,920	8	80	5	15	3	7.5
5	8	36	9	73	90	2,200	8	76	4	12	3	7.3
6	8	36	8	70	68	1,650	8	71	4	12	2	4.8
7	8	36	12	124	60	1,440	8	66	4	11	3	7.3
8	8	40	20	245	52	1,170	8	61	5	14	3	7.4
9	12	65	27	371	34	700	9	66	4	11	3	7.4
10	10	56	32	492	26	487	8	56	4	11	3	7.8
11	11	62	48	859	25	431	7	49	4	11	4	11
12	9	51	116	2,380	20	341	6	41	5	14	4	11
13	8	45	114	2,280	28	513	5	33	5	14	5	14
14	8	48	65	1,180	28	478	5	30	5	14	5	14
15	9	55	55	989	22	355	5	30	5	14	4	12
16	10	57	50	953	23	369	5	28	4	11	6	17
17	8	48	66	1,480	23	381	5	27	5	13	4	13
18	10	62	80	1,960	54	1,030	5	27	4	11	6	22
19	9	57	64	1,500	44	836	5	26	4	11	5	18
20	8	51	71	1,760	30	505	5	24	3	8.3	5	18
21	8	51	58	1,390	23	361	5	23	3	8.1	5	16
22	10	63	57	1,320	20	302	5	22	3	7.9	5	16
23	10	62	53	1,170	19	280	5	21	3	8.0	6	20
24	10	70	46	969	15	209	5	21	4	11	5	17
25	9	72	36	695	17	220	5	20	4	10	5	18
26	13	121	31	552	16	202	5	20	3	7.9	5	18
27	21	223	26	426	14	177	6	23	3	7.8	5	18
28	14	151	22	344	16	217	4	15	2	5.1	5	18
29	13	135	18	276	18	251	4	15	2	5.0	5	17
30	12	118	18	274	16	215	4	14	2	4.9	5	17
31	---	---	18	269	---	---	6	20	2	4.9	---	---
TOTAL	---	2,022	---	24,719	---	19,365	---	1,357	---	350.9	---	397.2

Total load for year = 51,051.1 tons.

12342500 WEST FORK BITTERROOT RIVER NEAR CONNER, MT

LOCATION.--Lat 45°43'30", long 114°16'50" (NAD 27), in $SE^1/_4NE^1/_4NW^1/_4$ sec.26, T.1 S., R.22 W., Ravalli County, Hydrologic Unit 17010205, on right bank 0.6 mi downstream from Painted Rocks Lake, 6.4 mi upstream from Nez Perce Creek, 16.1 mi southwest of Conner, and at river mile 19.2.

DRAINAGE AREA.--317 mi^2.

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

REVISED RECORDS.--WSP 1246: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,581.36 ft (NGVD 29) (U.S. Forest Service bench mark).

REMARKS.--Records good. Flow regulated by Painted Rocks Lake (station 12342000). Diversions for irrigation of about 200 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	60	58	60	63	63	65	76	686	252	337	189
2	68	60	58	61	63	63	66	76	659	231	334	159
3	69	60	58	61	63	63	66	78	626	218	333	157
4	69	60	58	61	63	63	66	80	577	210	333	157
5	69	60	58	61	63	63	66	80	542	202	333	157
6	69	60	58	61	63	63	66	80	546	191	333	157
7	69	60	69	61	63	63	66	81	519	184	330	155
8	69	60	70	61	63	63	66	81	488	177	329	154
9	69	60	60	61	63	64	66	82	461	167	330	154
10	69	60	60	61	63	64	67	83	437	171	331	154
11	69	60	60	61	63	64	67	85	430	178	337	154
12	69	60	61	61	63	64	67	85	475	168	342	154
13	64	60	61	61	63	64	68	87	449	158	338	154
14	60	60	61	61	63	64	68	87	420	150	337	151
15	60	60	61	61	63	64	69	87	409	144	333	147
16	60	60	60	61	63	64	69	88	403	136	333	140
17	61	60	60	61	63	64	69	89	417	132	331	140
18	61	59	60	61	63	64	69	384	412	129	329	140
19	61	58	60	61	63	64	71	809	388	169	325	138
20	61	58	60	61	63	64	71	948	365	194	323	137
21	61	58	60	61	63	64	71	972	347	190	320	137
22	61	58	60	61	63	64	71	930	333	190	318	118
23	61	58	60	61	63	64	71	903	318	191	316	93
24	61	58	60	61	63	64	71	843	306	190	274	93
25	61	58	60	61	63	64	72	771	288	265	237	93
26	61	58	60	61	63	64	73	719	284	339	236	93
27	61	58	60	61	63	64	74	679	291	338	232	93
28	61	58	60	62	63	64	74	663	285	338	232	82
29	61	58	60	63	---	64	75	663	284	338	231	74
30	61	58	60	63	---	64	76	662	268	338	228	74
31	60	---	60	63	---	64	---	645	---	338	228	---
TOTAL	1,983	1,775	1,871	1,897	1,764	1,976	2,076	11,996	12,713	6,616	9,503	3,998
MEAN	64.0	59.2	60.4	61.2	63.0	63.7	69.2	387	424	213	307	133
MAX	69	60	70	63	63	64	76	972	686	339	342	189
MIN	60	58	58	60	63	63	65	76	268	129	228	74
AC-FT	3,930	3,520	3,710	3,760	3,500	3,920	4,120	23,790	25,220	13,120	18,850	7,930

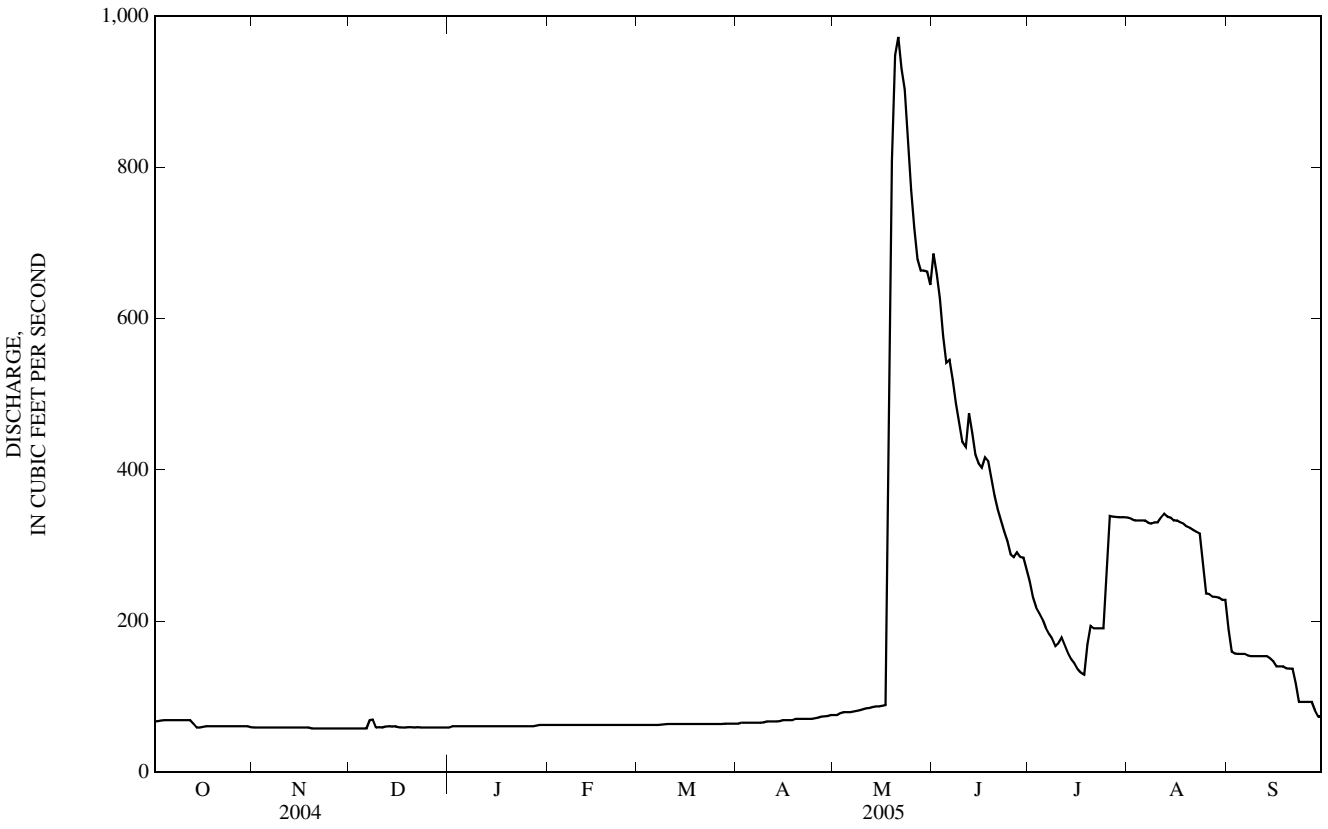
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	153	111	90.0	83.0	79.5	92.8	201	799	901	264	205	178
MAX	484	416	270	243	215	277	719	2,011	1,960	633	439	385
(WY)	(1943)	(1945)	(1960)	(1957)	(1957)	(1952)	(1956)	(1947)	(1964)	(1975)	(1995)	(1973)
MIN	52.3	53.3	27.8	21.4	6.80	7.85	8.65	119	118	127	84.5	62.4
(WY)	(1999)	(1988)	(1958)	(1977)	(1944)	(1944)	(1944)	(1977)	(1987)	(1973)	(1945)	(1944)

12342500 WEST FORK BITTERROOT RIVER NEAR CONNER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	67,216		58,168			
ANNUAL MEAN	184		159		265	
HIGHEST ANNUAL MEAN					457	1976
LOWEST ANNUAL MEAN					120	1977
HIGHEST DAILY MEAN	701	May 23	972	May 21	3,900	May 9, 1947
LOWEST DAILY MEAN	a58	Nov 19	58	Nov 19	b0.60	May 3, 1954
ANNUAL SEVEN-DAY MINIMUM	58	Nov 19	58	Nov 19	0.66	May 1, 1954
MAXIMUM PEAK FLOW			991	May 21	4,060	May 9, 1947
MAXIMUM PEAK STAGE			3.22	May 21	6.18	May 9, 1947
INSTANTANEOUS LOW FLOW					c0.20	Nov 25, 1952
ANNUAL RUNOFF (AC-FT)	133,300		115,400		191,900	
10 PERCENT EXCEEDS	424		340		624	
50 PERCENT EXCEEDS	108		68		115	
90 PERCENT EXCEEDS	60		60		58	

a--Nov. 19 to Dec. 6.
b--May 3-7, 1954.
c--Dam shutdown.



12343400 EAST FORK BITTERROOT RIVER NEAR CONNER, MT

LOCATION.--Lat 45°53'00", long 114°03'53" (NAD 27), in NE$^1/_4$SW$^1/_4$NE$^1/_4$ sec.34, T.2 N., R.20 W., Ravalli County, Hydrologic Unit 17010205, on right bank 10 ft downstream from private bridge, 4.3 mi southwest of Conner, and at river mile 6.1.

DRAINAGE AREA.--381 mi^2.

PERIOD OF RECORD.--March 2001 to current year.

GAGE.--Elevation is 4,191.81 ft (NGVD 29).

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, wat unf by analysis, mg/L (62855)
APR										
20...	1515	167	8.1	111	6.0	5.5	<.016	<.002	.04	.14
MAY										
17...	1200	1,210	7.9	66	10.0	6.5	.081	E.001	.45	.68
JUN										
22...	1215	479	8.1	78	27.5	14.5	<.016	<.002	.06	.16
AUG										
29...	1245	69	8.2	117	25.0	15.0	<.016	E.001	.04	.10

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
20...	<.006	.020	.5	2.7	82	3	1.4
MAY							
17...	.010	.122	6.0	6.2	44	111	363
JUN							
22...	E.005	.030	.8	2.8	56	7	9.1
AUG							
29...	E.004	.021	.4	--	88	3	.56

Date	Time	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR											
20...	1515	44	14.0	2.13	1.09	.3	3.86	47	1.35	.2	13.1
JUN											
22...	1215	32	10.6	1.44	.86	.2	2.46	36	.59	E.1	11.7

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)
APR										
20...	3.5	67	.09	30.3	.3	<2	E.03	<.04	<.8	<.8
JUN										
22...	2.1	51	.07	66.2	.3	<2	E.03	E.03	<.8	E.6

E--Estimated.

12343400 EAST FORK BITTERROOT RIVER NEAR CONNER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
APR								
20...	E.3	E.5	.26	.14	<.06	.29	.8	<2
JUN								
22...	.5	.7	.23	.44	.50	.31	1.0	E2

E--Estimated.

12344000 BITTERROOT RIVER NEAR DARBY, MT

LOCATION.--Lat 45°58'20", long 114°08'26" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $NE^1/_4$ sec.36, T.3 N., R.21 W., Ravalli County, Hydrologic Unit 17010205, on left bank 50 ft upstream from bridge on U.S. Highway 93, 0.3 mi downstream from Chaffin Creek, 4.1 mi southeast of Darby, and at river mile 77.2.

DRAINAGE AREA.--1,049 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1937 to current year. Monthly discharge only for April 1937, published in WSP 1316.

REVISED RECORDS.--WSP 1246: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,942.14 ft (NGVD 29). Prior to Oct. 1, 1987, at elevation 1.00 ft higher. Prior to Aug. 2, 1939, nonrecording gage at highway bridge 45 ft upstream at same elevation.

REMARKS.--Water-discharge records good. Some regulation by Painted Rocks Lake (station number 12342000). Diversions for irrigation of about 5,000 acres upstream from station. Ditch bypassing station irrigates about 500 acres downstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	344	251	228	206	277	233	285	716	2,430	1,010	554	327
2	334	259	266	176	266	229	288	703	2,130	970	567	266
3	327	285	229	e150	262	227	301	728	2,010	884	553	257
4	319	261	222	e140	266	230	308	773	1,830	815	531	252
5	311	248	200	e130	267	232	297	859	1,790	768	518	252
6	303	263	220	e150	230	240	294	1,050	1,890	741	510	249
7	300	266	232	e180	242	249	341	1,300	1,760	717	506	247
8	297	264	243	e190	249	265	479	1,340	1,590	691	506	244
9	290	269	231	e190	204	281	476	1,450	1,460	665	511	242
10	285	275	240	e195	215	307	436	1,840	1,360	641	505	278
11	283	271	295	204	212	324	416	1,690	1,320	642	503	287
12	278	263	317	206	249	341	415	1,440	1,550	603	498	275
13	275	251	277	211	260	325	425	1,350	1,480	568	488	279
14	265	248	269	e200	232	306	430	1,440	1,380	539	483	277
15	264	251	271	e180	208	302	401	1,640	1,430	507	476	269
16	259	260	256	e190	187	295	417	1,890	1,530	482	471	256
17	256	254	240	218	186	290	461	2,440	1,690	460	469	334
18	272	239	245	260	211	256	466	2,130	1,640	432	470	376
19	274	253	253	367	237	286	468	3,090	1,470	429	465	324
20	267	238	248	409	241	283	461	3,280	1,400	467	459	290
21	273	179	230	389	234	279	453	3,140	1,450	445	452	274
22	275	194	226	357	217	267	458	2,920	1,510	438	447	264
23	272	265	168	341	208	267	505	2,890	1,420	432	448	228
24	275	260	185	324	210	233	585	2,630	1,270	420	430	243
25	264	274	250	316	215	266	743	2,370	1,180	436	359	249
26	261	272	242	315	214	245	913	2,250	1,160	548	353	238
27	263	202	198	320	213	283	1,090	2,210	1,140	546	346	230
28	264	208	172	314	216	319	946	2,240	1,160	540	345	224
29	263	161	194	311	---	319	851	2,310	1,150	541	339	208
30	259	161	232	298	---	295	785	2,230	1,080	542	335	204
31	265	---	221	284	---	277	---	2,120	---	542	336	---
TOTAL	8,737	7,345	7,300	7,721	6,428	8,551	15,194	58,459	45,660	18,461	14,233	7,943
MEAN	282	245	235	249	230	276	506	1,886	1,522	596	459	265
MAX	344	285	317	409	277	341	1,090	3,280	2,430	1,010	567	376
MIN	256	161	168	130	186	227	285	703	1,080	420	335	204
AC-FT	17,330	14,570	14,480	15,310	12,750	16,960	30,140	116,000	90,570	36,620	28,230	15,750

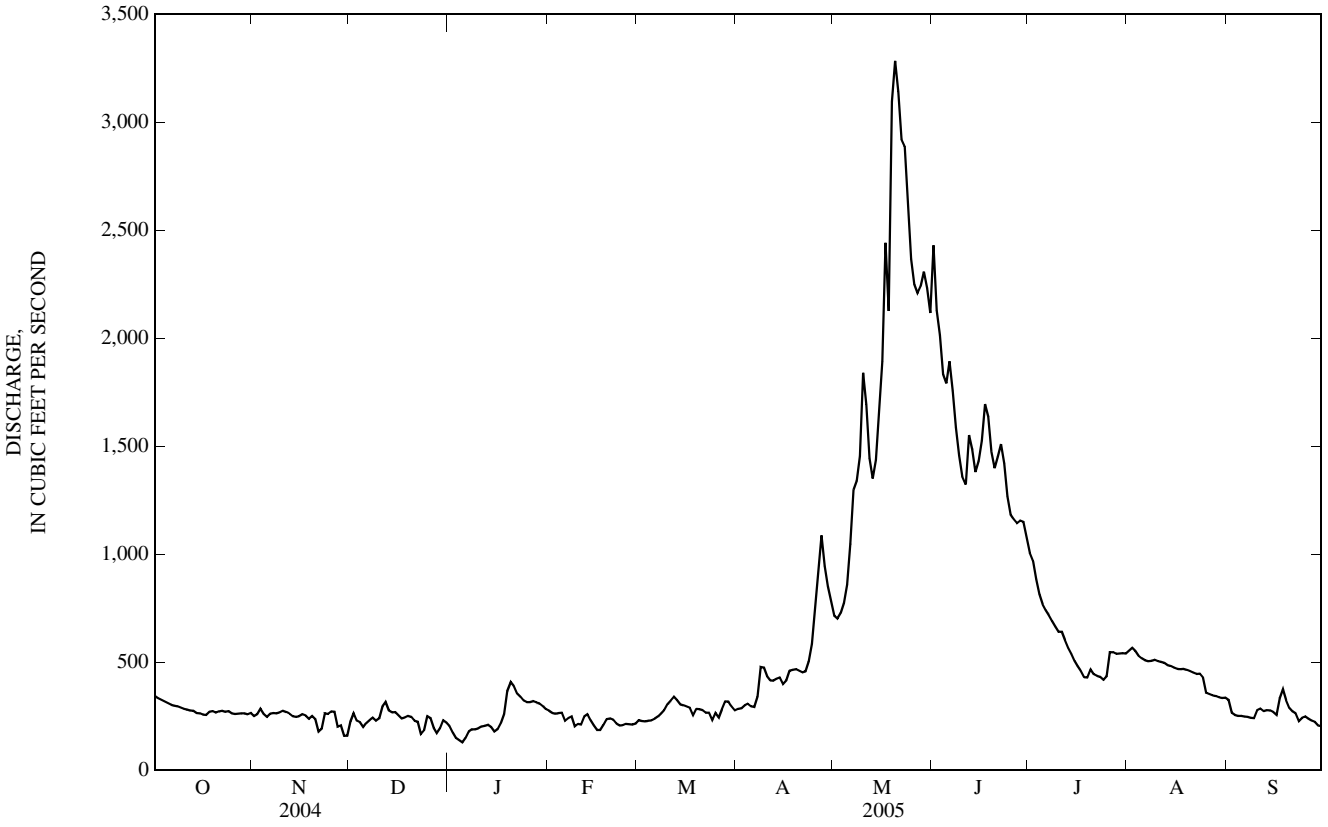
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2005, BY WATER YEAR (WY)

MEAN	353	312	278	249	269	354	967	2,850	3,025	968	411	350
MAX	1,020	788	765	421	791	1,011	2,530	5,995	6,235	2,608	751	634
(WY)	(1947)	(1947)	(1947)	(1947)	(1996)	(1972)	(1943)	(1947)	(1964)	(1975)	(1975)	(1941)
MIN	143	144	138	125	125	139	306	1,110	678	210	141	129
(WY)	(1938)	(1988)	(1988)	(1988)	(1941)	(1944)	(1937)	(1977)	(1987)	(1940)	(1940)	(1937)

12344000 BITTERROOT RIVER NEAR DARBY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1937 - 2005	
ANNUAL TOTAL	243,558		206,032			
ANNUAL MEAN	665		564		872	
HIGHEST ANNUAL MEAN					1,423	1976
LOWEST ANNUAL MEAN					454	1987
HIGHEST DAILY MEAN	2,770	Jun 6	3,280	May 20	11,000	May 9, 1947
LOWEST DAILY MEAN	130	Jan 5	130	Jan 5	80	Feb 9, 1939
ANNUAL SEVEN-DAY MINIMUM	163	Jan 3	159	Jan 2	98	Jan 1, 1988
MAXIMUM PEAK FLOW			3,600	May 19	a11,500	May 9, 1947
MAXIMUM PEAK STAGE			5.00	May 19	8.45	May 31, 2003
INSTANTANEOUS LOW FLOW					b71	Feb 9, 1939
ANNUAL RUNOFF (AC-FT)	483,100		408,700		631,600	
10 PERCENT EXCEEDS	1,750		1,450		2,330	
50 PERCENT EXCEEDS	453		297		367	
90 PERCENT EXCEEDS	190		211		195	

a--Gage height, 8.18 ft, datum then in use.
b--Observed.
e--Estimated.



12344000 BITTERROOT RIVER NEAR DARBY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1997-98, October 2000 to to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Seasonal records, April 2001 to current year.

INSTRUMENTATION.--Temperature probe installed Mar. 27, 2001.

REMARKS.--Daily water temperature records rated good. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (seasonal records): Maximum, 24.5°C, Aug. 8, 2001; minimum, 0.5°C, Apr. 2, 3, 2002.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE (seasonal records): Maximum, 21.5°C, July 13; minimum, 0.0°C, many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR											
20...	1630	453	7.6	78	6.0	5.0	E.010	<.002	.04	<.006	.011
MAY											
17...	1400	2,410	7.6	44	14.0	7.0	.054	<.002	.15	E.005	.059
JUN											
22...	1345	1,500	8.0	49	29.0	14.0	<.016	<.002	.06	<.006	.016
AUG											
29...	1330	346	7.8	77	23.0	16.5	E.008	E.001	.04	<.006	.010

Date	Total nitrogen, wat unf by analysis, mg/L (62855)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR						
20...	.12	.5	2.2	76	4	4.9
MAY						
17...	.44	1.6	4.4	47	54	351
JUN						
22...	.12	.5	2.3	64	5	20
AUG						
29...	.11	.4	--	81	2	1.9

Date	Time	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
APR												
20...	1630	31	9.77	1.54	.91	.2	3.11	33	.80	.2	11.4	2.7
JUN												
22...	1345	13	4.09	.564	.43	.2	1.41	23	.37	.1	8.5	1.6

E--Estimated.

12344000 BITTERROOT RIVER NEAR DARBY, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
APR											
20...	50	.07	61.7	.2	<2	<.04	<.04	<.8	<.8	.5	.8
JUN											
22...	31	.04	125	E.1	<2	.04	E.03	<.8	<.8	1.1	1.1

Date	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
APR						
20...	E.05	.18	<.06	.33	<.6	E1
JUN						
22...	.18	.19	.27	.28	1.8	E2

E--Estimated.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.5	9.5	10.5	4.5	2.0	3.5	1.5	0.0	0.5	0.5	0.0	0.0
2	12.0	8.0	10.0	6.0	3.0	4.5	1.5	0.0	0.5	0.5	0.0	0.0
3	12.0	8.0	10.0	5.5	3.5	5.0	1.5	0.5	0.5	0.0	0.0	0.0
4	12.0	8.0	10.0	4.5	2.0	3.5	1.5	0.5	1.0	0.0	0.0	0.0
5	11.5	8.0	9.5	5.0	2.0	3.0	1.5	0.0	0.5	0.5	0.0	0.0
6	11.0	7.5	9.5	5.5	2.0	3.5	1.5	0.5	1.0	0.5	0.0	0.0
7	12.5	9.5	10.5	6.0	3.0	4.5	2.0	0.5	1.0	0.5	0.0	0.0
8	12.0	8.0	10.0	5.5	3.0	4.0	1.5	0.5	1.0	0.5	0.0	0.5
9	10.0	8.0	9.5	5.0	3.5	4.0	2.0	0.5	1.0	0.5	0.0	0.5
10	9.5	6.0	7.5	6.0	4.0	4.5	3.5	1.5	2.5	0.5	0.0	0.5
11	9.0	5.0	7.0	5.0	3.0	4.0	4.0	3.0	3.5	0.5	0.0	0.5
12	10.0	6.5	8.0	3.5	2.5	3.0	3.5	1.0	2.5	0.5	0.0	0.5
13	9.5	6.0	8.0	4.0	2.5	3.5	1.5	0.5	1.0	1.0	0.0	0.5
14	10.5	6.5	8.5	4.0	2.0	3.0	2.0	0.5	1.5	1.0	0.0	0.5
15	10.5	8.0	9.0	3.5	1.5	2.5	3.0	2.0	2.5	1.0	0.0	0.0
16	10.5	9.0	10.0	4.5	2.5	3.5	2.0	0.5	1.5	0.5	0.0	0.0
17	10.0	8.0	8.5	4.5	2.5	3.5	2.0	0.5	1.0	1.0	0.0	0.5
18	9.0	7.0	8.0	3.0	1.0	2.0	2.0	0.5	1.0	1.0	0.5	0.5
19	8.0	5.0	7.0	3.0	2.0	2.5	3.0	0.5	2.0	1.5	0.5	1.0
20	8.5	6.5	7.5	2.5	1.0	2.0	2.5	1.0	1.5	1.0	0.5	1.0
21	8.0	6.0	7.0	1.5	0.5	1.0	1.0	0.5	0.5	1.5	0.5	0.5
22	8.0	5.5	7.0	1.5	0.5	1.0	1.0	0.0	0.5	1.5	0.0	0.5
23	7.0	6.0	6.5	2.5	1.0	1.5	0.5	0.0	0.0	1.5	0.0	0.5
24	6.5	4.5	5.5	3.5	2.0	3.0	0.5	0.0	0.0	1.5	0.0	0.5
25	5.5	2.5	4.0	4.5	3.5	4.0	1.0	0.0	0.5	1.5	0.0	0.5
26	6.0	3.0	4.5	3.5	1.0	2.5	1.0	0.0	0.5	1.5	0.0	0.5
27	5.5	3.5	4.5	1.5	0.5	1.0	1.0	0.0	0.5	1.5	0.5	1.0
28	6.0	3.5	4.5	1.5	0.0	0.5	0.5	0.0	0.0	2.0	0.5	1.0
29	5.5	4.0	4.5	1.0	0.0	0.0	1.0	0.0	0.5	2.0	1.0	1.5
30	6.0	4.5	5.0	1.0	0.0	0.5	1.0	0.0	0.5	2.5	1.0	1.5
31	4.5	3.0	4.0	---	---	---	0.5	0.0	0.5	1.5	0.0	1.0
MONTH	12.5	2.5	7.5	6.0	0.0	3.0	4.0	0.0	1.0	2.5	0.0	0.5

12344000 BITTERROOT RIVER NEAR DARBY, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	0.0	1.0	5.5	1.5	3.0	6.0	3.0	4.5	9.5	3.5	6.5
2	2.0	0.0	1.0	5.0	1.0	3.0	8.5	3.5	5.5	10.0	4.5	7.5
3	2.5	0.0	1.0	5.0	0.5	2.5	7.0	4.0	5.5	9.5	6.0	8.0
4	2.5	0.5	1.5	5.0	0.5	3.0	5.5	3.5	4.5	8.5	5.5	7.0
5	2.0	0.5	1.5	5.5	1.0	3.0	8.5	3.0	5.5	10.0	6.0	8.0
6	1.5	0.0	0.5	5.5	1.0	3.5	10.5	3.5	7.0	10.0	6.0	8.0
7	1.5	0.0	0.5	6.5	2.5	4.5	10.0	6.0	8.0	9.0	5.0	7.0
8	1.5	0.0	0.5	7.0	3.0	5.0	8.5	6.0	7.0	9.5	6.0	7.5
9	1.5	0.0	0.5	7.0	2.5	5.0	7.0	4.5	5.5	8.5	6.0	7.0
10	1.5	0.0	0.5	8.0	4.0	6.0	8.5	4.0	6.0	6.5	5.0	5.5
11	1.5	0.0	0.5	6.5	2.0	4.5	7.0	3.5	5.5	6.5	4.5	5.5
12	2.0	0.0	1.0	5.5	2.0	4.0	8.5	4.5	6.5	10.0	4.5	7.0
13	2.0	1.0	1.5	4.5	0.5	2.5	7.0	4.5	5.5	10.5	5.5	8.0
14	2.0	0.0	1.0	4.5	1.0	3.0	7.5	3.0	5.0	9.5	6.0	8.0
15	0.5	0.0	0.0	5.0	1.5	3.0	9.0	2.5	5.5	9.0	6.0	7.5
16	0.5	0.0	0.5	4.0	1.0	3.0	10.5	4.0	7.0	7.5	6.5	7.0
17	1.0	0.0	0.5	5.0	2.0	3.0	8.5	6.0	6.5	8.0	5.0	6.5
18	1.0	0.0	0.5	4.0	0.5	2.0	7.5	4.5	6.0	8.5	5.5	7.0
19	1.5	0.0	0.5	6.0	1.0	3.5	6.0	4.0	4.5	10.0	6.5	8.0
20	1.5	0.5	1.0	6.5	3.5	4.5	5.5	3.5	4.5	8.5	6.0	7.5
21	3.5	0.5	1.5	4.5	2.5	3.5	9.0	3.5	6.5	10.5	6.0	8.0
22	3.0	0.0	1.5	4.0	2.0	3.0	11.5	5.0	8.0	9.0	7.0	8.0
23	2.5	0.0	1.0	3.0	0.0	1.5	9.5	6.0	8.0	10.5	6.0	8.0
24	3.0	0.0	1.0	3.0	0.0	1.5	10.5	6.5	8.5	9.5	5.5	7.5
25	3.5	0.0	1.5	5.5	1.0	3.0	11.5	5.5	8.5	11.0	5.5	8.0
26	3.5	0.0	1.5	5.0	1.0	3.0	10.5	5.5	8.0	12.0	6.0	8.5
27	3.5	0.0	1.5	6.0	3.5	4.5	9.0	3.5	5.5	13.0	6.5	9.5
28	3.5	0.0	2.0	7.0	4.0	5.0	7.0	2.0	4.5	13.0	7.5	10.0
29	---	---	---	5.0	2.0	3.5	6.5	2.5	4.5	12.5	7.5	10.0
30	---	---	---	5.5	2.0	3.5	9.0	3.0	5.5	12.5	6.5	9.5
31	---	---	---	7.0	1.5	4.5	---	---	---	10.5	7.5	9.0
MONTH	3.5	0.0	1.0	8.0	0.0	3.5	11.5	2.0	6.0	13.0	3.5	7.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.0	8.0	9.0	17.5	11.0	14.5	17.5	12.0	15.0	17.0	11.5	14.5
2	9.0	7.5	8.5	17.0	12.0	14.5	17.5	12.5	15.0	17.0	11.5	14.5
3	9.5	7.5	8.5	16.5	10.5	13.5	18.5	11.5	15.0	16.5	12.5	14.5
4	13.0	7.0	9.5	17.0	10.5	14.0	18.5	11.0	15.0	17.0	12.0	14.5
5	10.5	8.0	9.5	18.0	11.5	15.0	19.0	12.0	15.5	17.0	12.0	14.5
6	10.0	7.5	9.0	19.0	12.5	15.5	18.0	12.0	15.5	17.0	11.0	14.0
7	10.5	7.0	8.5	19.5	13.0	16.5	19.5	12.5	16.0	17.5	11.5	14.5
8	10.0	7.0	8.5	19.5	13.5	16.5	17.5	13.5	15.5	17.0	12.0	14.5
9	10.0	7.0	8.5	17.5	13.0	15.0	18.5	13.0	15.5	15.5	12.5	14.0
10	12.0	7.5	9.5	14.5	11.5	13.0	18.5	12.5	16.0	14.5	11.0	12.5
11	12.5	8.0	10.0	19.0	12.0	15.5	18.0	12.0	15.0	14.0	8.5	11.5
12	11.0	8.5	10.0	20.5	13.0	16.5	17.0	11.5	14.5	12.5	9.0	11.0
13	12.0	6.5	9.5	21.5	15.0	18.0	17.5	11.5	14.5	13.5	10.5	12.0
14	12.5	8.0	10.5	20.0	14.0	17.0	17.5	11.0	14.5	15.0	9.0	12.0
15	14.5	9.5	12.0	20.5	13.5	17.0	18.0	11.5	15.0	16.0	10.5	13.5
16	12.5	9.0	10.5	20.5	15.5	17.5	17.5	12.0	15.0	13.5	10.5	12.5
17	11.0	9.0	10.0	19.5	13.0	16.0	16.0	12.0	14.5	12.5	11.0	12.0
18	11.5	8.0	9.5	20.0	13.0	16.5	17.0	11.5	14.5	13.0	10.0	11.5
19	13.0	7.5	10.5	20.5	14.5	17.5	18.0	11.5	15.0	14.5	9.0	11.5
20	15.5	9.0	12.0	20.0	14.0	17.0	19.0	12.0	15.5	15.0	10.0	12.5
21	14.5	10.5	12.5	19.5	13.5	17.0	19.5	13.0	16.5	15.0	10.5	12.5
22	16.0	10.5	13.0	19.5	14.0	16.5	18.0	13.5	16.0	13.0	9.0	11.5
23	16.0	11.0	13.5	20.0	14.5	17.5	18.5	13.5	16.0	12.0	9.5	11.0
24	16.0	10.0	13.0	19.5	13.5	16.5	16.5	12.0	14.5	10.0	7.5	9.0
25	14.0	10.5	12.5	18.5	13.5	16.0	17.5	11.0	14.5	13.0	7.5	10.0
26	14.0	11.0	12.5	17.5	10.5	14.5	18.0	12.0	15.0	13.5	7.5	10.5
27	13.5	10.0	12.0	18.0	10.5	14.5	18.5	12.5	15.5	13.5	8.5	11.0
28	13.0	10.5	12.0	16.5	11.0	14.0	19.0	13.0	16.5	13.0	7.5	10.5
29	13.5	10.5	12.0	17.5	11.5	14.5	17.5	13.0	15.5	13.0	8.0	10.5
30	16.0	9.5	13.0	17.0	11.5	14.5	16.0	12.5	14.5	14.0	10.0	12.0
31	---	---	---	18.0	12.0	15.0	17.0	10.5	13.5	---	---	---
MONTH	16.0	6.5	10.5	21.5	10.5	15.5	19.5	10.5	15.0	17.5	7.5	12.5

12350250 BITTERROOT RIVER AT BELL CROSSING, NEAR VICTOR, MT

LOCATION.--Lat 46°26'36", long 114°07'22" (NAD 27), in $NW^1/_4NW^1/_4NE^1/_4$ sec. 20, T.8 N., R.20 W., Ravalli County, Hydrologic Unit 17010205, on right bank 20 ft downstream from highway bridge at Bell Crossing, 1.5 mi northeast of Victor, 2.0 mi upstream from Big Creek, and at river mile 38.3.

DRAINAGE AREA.--1,963 mi^2.

PERIOD OF RECORD.--April 1987 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 3,330 ft (NGVD 29).

REMARKS.--Seasonal records good. Some regulation by Painted Rocks Lake (station number 12342000). Diversions for irrigation of about 80,000 acres upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1							1,660	260	239			
2							1,530	286	236			
3							1,340	301	216			
4							1,160	287	212			
5							1,010	272	209			
6							905	249	208			
7							830	235	203			
8							782	236	199			
9							729	239	202			
10							697	247	237			
11							664	253	266			
12							621	264	269			
13							555	280	286			
14							501	277	299			
15							431	277	309			
16							379	273	314			
17							337	265	411			
18							320	274	494			
19							286	281	482			
20							270	272	454			
21							268	265	430			
22							241	255	418			
23							235	251	410			
24							227	255	428			
25							214	248	450			
26							221	226	437			
27							253	222	426			
28							260	222	403			
29							259	223	400			
30							252	224	394			
31							254	232	---			
TOTAL							17,691	7,951	9,941			
MEAN							571	256	331			
MAX							1,660	301	494			
MIN							214	222	199			
AC-FT							35,090	15,740	19,720			

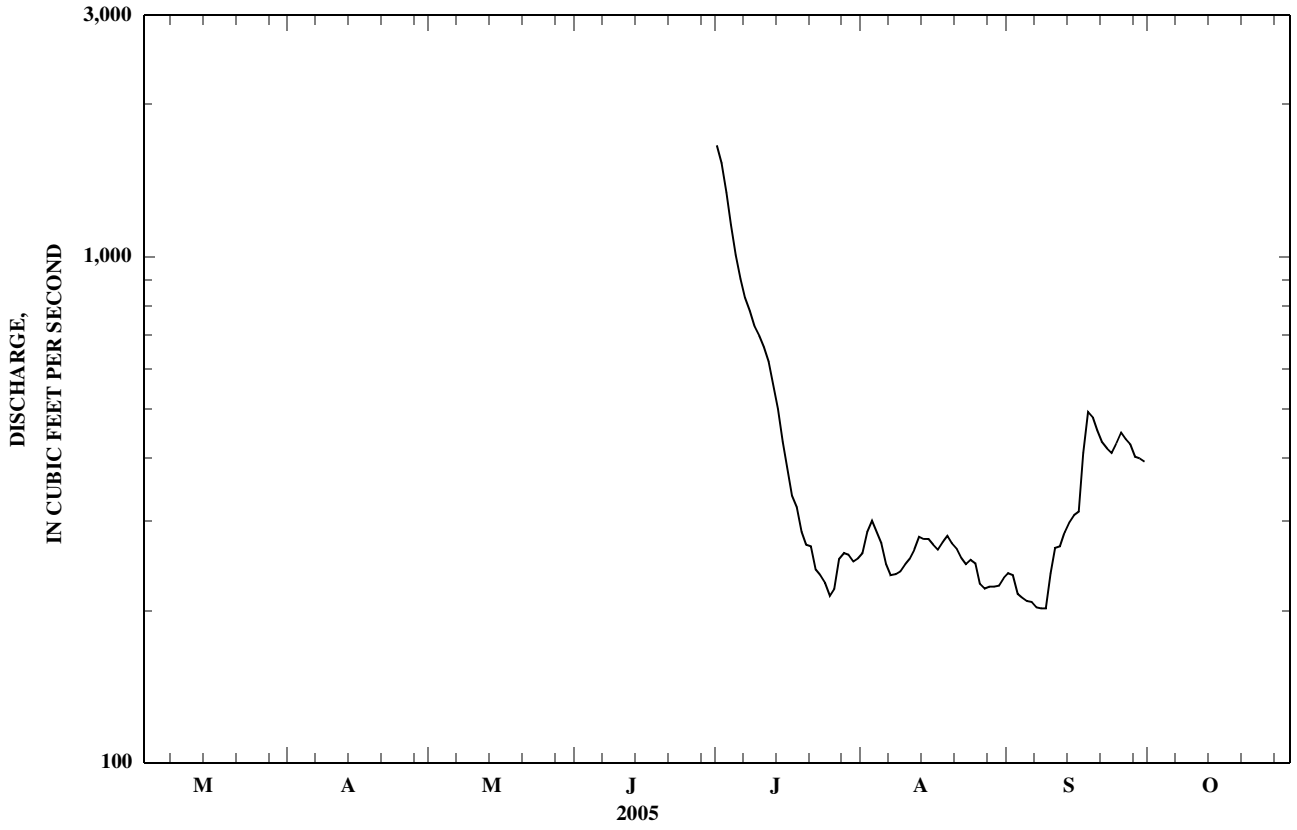
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1987 - 2005

MEAN	1,713	3,769	5,158	1,165	379	404	541	1,798
MAX	3,052	5,177	11,060	2,665	670	890	947	1,798
(WY)	(1990)	(2003)	(1996)	(1996)	(1993)	(2004)	(1996)	(1996)
MIN	747	3,092	1,372	207	95.8	145	397	1,798
(WY)	(1991)	(1987)	(1987)	(1987)	(1988)	(1987)	(1989)	(1996)

SUMMARY STATISTICS	FOR 2005 SEASON		FOR SEASONS 1987 - 2005	
HIGHEST DAILY MEAN	1,660	Jul 1	17,500	Jun 9, 1996
LOWEST DAILY MEAN	199	Sep 8	63	Jul 16, 1987
MAXIMUM PEAK FLOW			a18,700	Jun 9, 1996
MAXIMUM PEAK STAGE			10.82	May 31, 2003
INSTANTANEOUS LOW FLOW			60	Jul 16, 1987

a--Gage height, 10.07 ft.

12350250 BITTERROOT RIVER AT BELL CROSSING, NEAR VICTOR, MT—Continued



12351200 BITTERROOT RIVER NEAR FLORENCE, MT

LOCATION.--Lat 46°38'00", long 114°03'00" (NAD 27), in $SW^1/_4SE^1/_4SE^1/_4$sec. 12, T.10 N., R.20 W., Ravalli County, Hydrologic Unit 17010205, on right bank 85 ft upstream from bridge on State secondary Highway 203, 1.3 mi east of Florence, 240 ft upstream from Eightmile Creek, and at river mile 22.7.

DRAINAGE AREA.--2,354 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1957 to December 1965, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft (NGVD 29). Prior to Jan. 1, 1966, nonrecording gage at different datum.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Some regulation by Painted Rocks Lake (station number 12342000). Diversions for irrigation of about 105,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,260	917	674	731	927	650	780	1,620	5,780	3,060	513	510
2	1,200	901	761	660	888	660	782	1,470	6,050	2,830	536	508
3	1,150	922	801	e550	860	654	785	1,390	5,670	2,480	575	491
4	1,100	946	768	e500	843	654	810	1,460	5,280	2,140	570	476
5	1,070	898	729	e450	835	655	806	1,660	4,770	1,860	550	469
6	1,030	897	711	e430	816	659	735	2,210	5,080	1,650	530	453
7	999	899	730	e500	763	675	732	3,040	4,730	1,540	508	446
8	981	894	758	e600	781	702	870	3,350	4,240	1,440	511	433
9	962	902	772	e630	747	734	1,120	3,540	3,720	1,340	519	431
10	933	918	767	e630	701	772	1,090	4,800	3,390	1,280	526	479
11	920	927	858	e650	690	824	1,020	5,190	3,230	1,210	521	531
12	905	915	1,090	e670	714	886	964	4,190	3,480	1,120	540	551
13	884	902	1,090	683	769	930	964	3,650	3,700	1,010	561	566
14	855	882	1,020	673	756	890	1,040	3,840	3,310	913	568	583
15	835	871	988	e600	701	851	955	4,410	3,430	809	561	601
16	825	875	957	e630	637	824	881	4,930	3,810	743	558	588
17	883	870	919	e670	588	819	919	6,590	4,150	677	549	677
18	906	847	890	792	610	801	1,020	5,880	4,660	648	567	792
19	925	832	886	1,210	657	767	1,020	6,030	4,140	605	574	802
20	920	833	900	1,580	720	780	1,030	8,180	3,940	553	571	759
21	918	797	872	1,510	715	776	974	7,340	4,060	548	548	729
22	930	743	846	1,410	684	761	932	6,740	4,330	517	535	705
23	938	782	748	1,290	640	769	919	6,950	4,300	504	540	693
24	940	833	643	1,210	637	730	1,040	6,220	3,780	489	553	713
25	933	838	776	1,160	642	719	1,450	5,430	3,330	472	560	748
26	915	879	851	1,120	641	724	1,940	4,950	3,170	465	533	726
27	911	837	787	1,090	638	714	2,510	4,850	3,000	502	517	713
28	920	764	682	1,070	636	807	2,600	5,040	3,230	513	514	683
29	925	698	627	1,040	---	907	2,150	5,370	3,500	515	525	665
30	927	635	711	1,010	---	861	1,860	5,460	3,480	514	511	657
31	923	---	784	966	---	808	---	5,180	---	515	507	---
TOTAL	29,723	25,654	25,396	26,715	20,236	23,763	34,698	140,960	122,740	33,462	16,751	18,178
MEAN	959	855	819	862	723	767	1,157	4,547	4,091	1,079	540	606
MAX	1,260	946	1,090	1,580	927	930	2,600	8,180	6,050	3,060	575	802
MIN	825	635	627	430	588	650	732	1,390	3,000	465	507	431
AC-FT	58,960	50,880	50,370	52,990	40,140	47,130	68,820	279,600	243,500	66,370	33,230	36,060

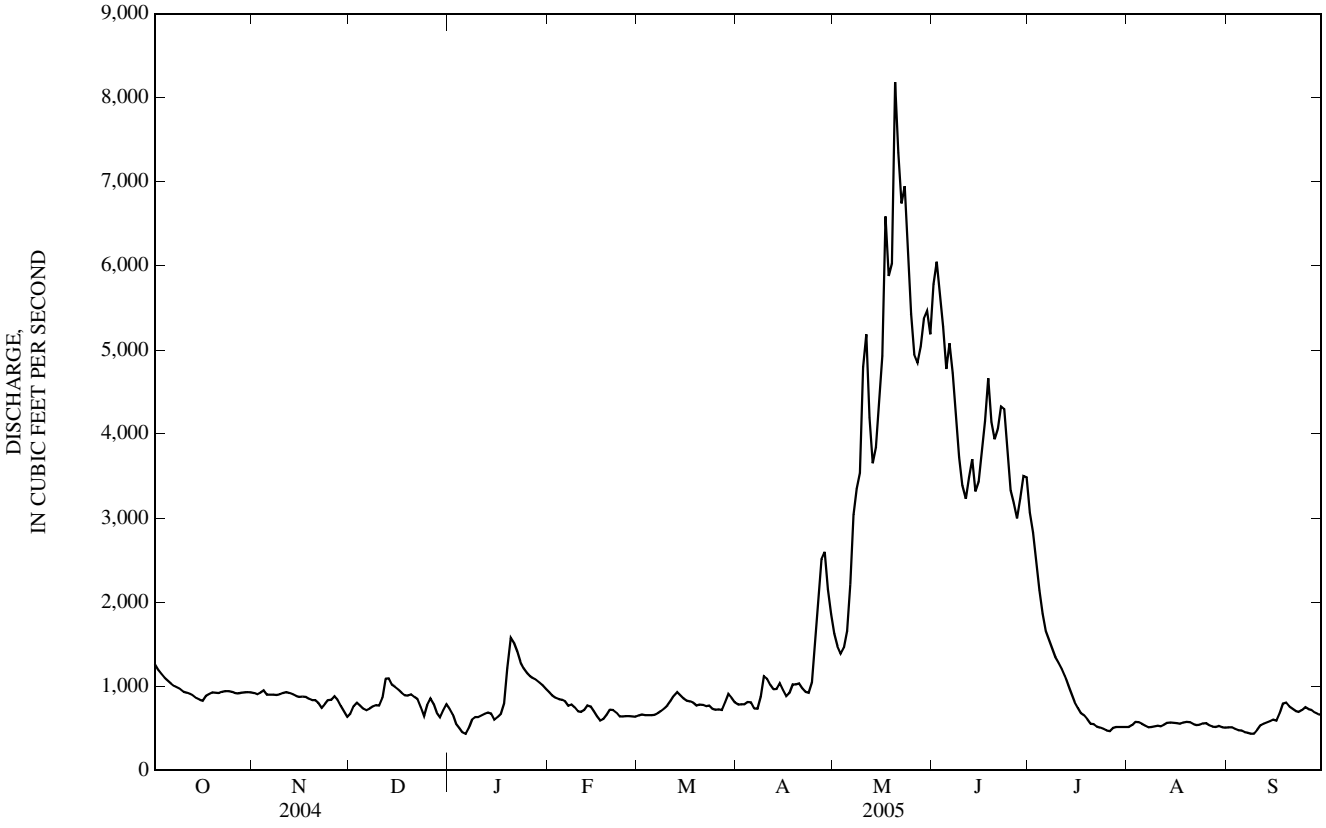
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)*

MEAN	1,164	1,052	950	805	941	1,001	2,261	5,953	8,186	2,031	725	986
MAX	3,025	2,019	1,604	1,365	1,795	1,450	3,599	9,886	13,180	4,060	1,288	2,012
(WY)	(1960)	(1960)	(1959)	(1965)	(1963)	(2003)	(1965)	(1958)	(1964)	(1964)	(1965)	(1965)
MIN	566	585	561	561	607	644	1,157	4,321	4,091	935	399	573
(WY)	(1961)	(2003)	(2003)	(2004)	(2004)	(1964)	(2005)	(1960)	(2005)	(1961)	(1961)	(2003)

12351200 BITTERROOT RIVER NEAR FLORENCE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005*	
ANNUAL TOTAL	613,162		518,276			
ANNUAL MEAN	1,675		1,420		2,164	
HIGHEST ANNUAL MEAN					3,070	1965
LOWEST ANNUAL MEAN					1,420	2005
HIGHEST DAILY MEAN	7,580	Jun 6	8,180	May 20	19,600	Jun 9, 1964
LOWEST DAILY MEAN	300	Jan 7	430	Jan 6	300	Jan 7, 2004
ANNUAL SEVEN-DAY MINIMUM	429	Jan 4	455	Sep 4	372	Aug 17, 1961
MAXIMUM PEAK FLOW			8,570	May 20	b20,300	Jun 9, 1964
MAXIMUM PEAK STAGE			10.09	May 20	13.43	Jun 1, 2003
INSTANTANEOUS LOW FLOW			a424	Sep 8	c365	Aug 20, 1961
ANNUAL RUNOFF (AC-FT)	1,216,000		1,028,000		1,567,000	
10 PERCENT EXCEEDS	4,080		3,820		5,690	
50 PERCENT EXCEEDS	926		838		990	
90 PERCENT EXCEEDS	578		531		574	

*--During period of operation (September 1957 to December 1965, October 2002 to current year).
a--Gage height, 5.41 ft.
b--Gage height, 10.82 ft, from graph based on gage readings, datum then in use.
c--Observed.
e--Estimated.



12351200 BITTERROOT RIVER NEAR FLORENCE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to August 1998, March 2004 to current year.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, wat unf by analysis, mg/L (62855)
APR										
21...	0845	972	7.5	99	6.5	4.0	.042	<.002	.07	.20
MAY										
18...	0845	6,040	7.5	49	11.5	8.5	.055	<.002	.18	.34
JUN										
23...	0915	4,360	7.9	62	17.5	14.5	<.016	<.002	.08	.15
AUG										
29...	1545	533	8.6	178	23.0	18.0	.030	.002	.04	.20

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
21...	<.006	.022	.7	1.9	78	7	18
MAY							
18...	E.004	.051	1.8	3.6	40	63	1,030
JUN							
23...	E.003	.023	.8	2.2	53	13	153
AUG							
29...	E.004	.021	.3	--	84	2	2.9

Date	Time	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR											
21...	0845	41	12.4	2.40	1.14	.3	3.99	44	1.22	.1	11.5
JUN											
23...	0915	23	7.03	1.37	.73	.2	2.21	27	.56	E.1	8.2

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)
APR										
21...	2.9	62	.08	164	.4	<2	E.02	<.04	<.8	<.8
JUN										
23...	1.4	38	.05	444	.3	<2	<.04	<.04	<.8	E.5

E--Estimated.

12351200 BITTERROOT RIVER NEAR FLORENCE, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
APR								
21...	.6	.6	.11	.18	<.06	.26	1.6	E1
JUN								
23...	.7	1.3	.09	.34	.42	.31	1.1	E2

E--Estimated.

12352500 BITTERROOT RIVER NEAR MISSOULA, MT

LOCATION--Lat 46°49'55", long 114°03'11" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $NE^1/_4$ sec. 1, T.12 N., R.20 W., Missoula County, Hydrologic Unit 17010205, on right bank 40 ft downstream from bridge on U.S. Highway 93, 0.5 mi south of Fort Missoula, and at river mile 5.7.

DRAINAGE AREA.--2,814 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1898 to November 1901, May 1903 to December 1904, July 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,110 ft (NGVD 29). Prior to Jan. 1, 1905, nonrecording gage at site 1.5 mi upstream at different elevation.

REMARKS.--Water-discharge records excellent except those for Nov. 12 to Dec. 2, Jan. 15-21, and estimated daily discharges, which are fair. Some regulation by Painted Rocks Lake (station number 12342000). Diversions for irrigation of about 111,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,340	1,000	725	795	1,100	758	983	2,040	6,320	3,590	585	535
2	1,260	988	798	696	1,070	776	979	1,870	6,970	3,290	598	538
3	1,210	997	857	592	1,030	769	983	1,770	6,570	2,970	629	526
4	1,170	1,030	827	537	1,010	767	1,010	1,810	6,320	2,600	e620	501
5	1,140	991	793	e500	1,010	769	1,010	1,990	5,700	2,290	e600	494
6	1,100	971	772	e450	983	778	954	2,450	5,870	2,030	e580	481
7	1,070	978	792	e530	913	794	935	3,250	5,670	1,880	e550	468
8	1,050	970	805	e650	913	825	1,050	3,760	5,150	1,770	e540	456
9	1,040	971	820	e700	910	863	1,280	3,930	4,530	1,640	e570	448
10	1,010	984	821	e720	831	916	1,320	5,150	4,070	1,570	571	486
11	994	993	877	e730	813	965	1,260	6,130	3,810	1,500	567	543
12	981	983	1,090	e770	824	1,020	1,220	5,200	3,970	1,400	576	575
13	973	968	1,140	e800	906	1,080	1,220	4,440	4,360	1,280	596	593
14	956	946	1,080	e770	905	1,060	1,290	4,470	3,930	1,180	613	607
15	938	935	1,070	703	841	1,020	1,240	5,030	3,880	1,070	609	630
16	923	929	1,020	726	758	990	1,160	5,630	4,290	971	603	636
17	970	930	986	793	690	980	1,180	7,030	4,660	885	595	695
18	1,020	917	953	954	693	957	1,300	7,120	5,380	828	608	835
19	1,030	904	948	1,290	738	922	1,330	6,620	4,920	778	615	886
20	1,030	898	959	1,750	821	924	1,340	8,760	4,580	706	614	848
21	1,020	865	942	1,670	837	931	1,300	8,270	4,620	672	596	806
22	1,040	830	910	1,490	804	911	1,260	7,710	4,930	646	579	770
23	1,040	831	827	1,390	754	916	1,240	7,700	5,020	616	584	755
24	1,040	885	714	1,320	737	867	1,350	7,280	4,520	593	585	769
25	1,040	899	799	1,270	749	857	1,680	6,450	3,940	573	595	839
26	1,020	930	905	1,230	748	855	2,180	5,870	3,700	564	580	824
27	1,010	910	854	1,210	745	848	2,730	5,680	3,510	572	555	806
28	1,010	830	756	1,210	741	987	3,040	5,800	3,610	590	548	782
29	1,010	784	690	1,190	---	1,110	2,620	6,090	3,960	596	549	754
30	1,020	715	725	1,160	---	1,090	2,300	6,230	4,060	589	546	747
31	1,010	---	829	1,130	---	1,020	---	6,020	---	585	533	---
TOTAL	32,465	27,762	27,084	29,726	23,874	28,325	42,744	161,550	142,820	40,824	18,089	19,633
MEAN	1,047	925	874	959	853	914	1,425	5,211	4,761	1,317	584	654
MAX	1,340	1,030	1,140	1,750	1,100	1,110	3,040	8,760	6,970	3,590	629	886
MIN	923	715	690	450	690	758	935	1,770	3,510	564	533	448
AC-FT	64,390	55,070	53,720	58,960	47,350	56,180	84,780	320,400	283,300	80,970	35,880	38,940

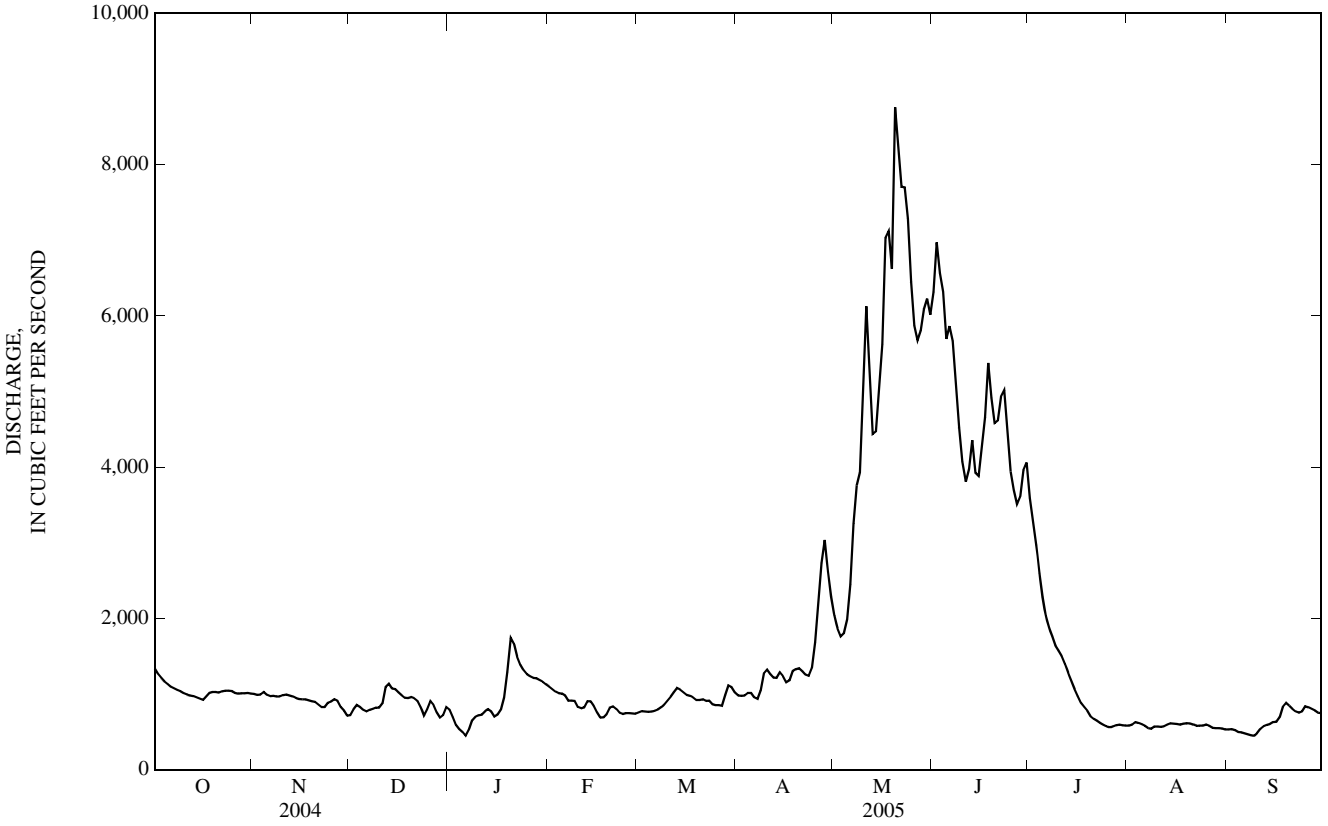
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2005, BY WATER YEAR (WY)*

MEAN	989	1,050	970	884	979	1,256	2,745	6,590	8,195	3,019	1,000	894
MAX	1,570	2,211	3,141	1,791	3,030	2,021	4,944	13,430	21,880	14,510	3,412	1,623
(WY)	(1904)	(1996)	(1996)	(1997)	(1996)	(1997)	(1996)	(1997)	(1899)	(1899)	(1899)	(1899)
MIN	568	614	530	542	477	801	1,336	4,039	2,397	980	503	455
(WY)	(1905)	(1905)	(1905)	(1993)	(1994)	(2002)	(2001)	(1990)	(1992)	(1994)	(2000)	(1904)

12352500 BITTERROOT RIVER NEAR MISSOULA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1898 - 2005*	
ANNUAL TOTAL	688,097		594,896			
ANNUAL MEAN	1,880		1,630		2,373	
HIGHEST ANNUAL MEAN					4,864	1899
LOWEST ANNUAL MEAN					1,366	1992
HIGHEST DAILY MEAN	8,140	Jun 6	8,760	May 20	37,400	Jun 20, 1899
LOWEST DAILY MEAN	320	Jan 7	448	Sep 9	300	Feb 9, 1994
ANNUAL SEVEN-DAY MINIMUM	461	Jan 4	476	Sep 4	370	Sep 16, 1904
MAXIMUM PEAK FLOW			9,100	May 20	b38,300	Jun 20, 1899
MAXIMUM PEAK STAGE			7.94	May 20	13.11	May 18, 1997
INSTANTANEOUS LOW FLOW			a440	Jan 4	300	Feb 9, 1994
ANNUAL RUNOFF (AC-FT)	1,365,000		1,180,000		1,719,000	
10 PERCENT EXCEEDS	4,600		4,520		6,020	
50 PERCENT EXCEEDS	1,020		959		1,090	
90 PERCENT EXCEEDS	650		585		633	

*--During period of operation (July 1898 to November 1901, May 1903 to December 1904, and July 1989 to current year).
a--Gage height, 2.46 ft, also occurred on September 9.
b--Observed gage height, 11.55 ft, site and datum then in use.
e--Estimated.



12352500 BITTERROOT RIVER NEAR MISSOULA, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1997 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1999 to September 2003 (only seasonal records for 2003), October 2004 to September 2005.

REMARKS.--No water temperature data for August 4-9 due to equipment problems; water temperature record rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 24.5°C, Aug. 1, 2000; July 20, 22 and Aug. 1, 2003; minimum, 0.0°C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE : Maximum, 23.5°C, July 21 and Aug. 9, but may have been higher during period of no record (Aug 4-8); minimum, 0.0°C, several days in December and Janaury.

REMARKS.--Missing filtered organic carbon sample for Aug. 29 due to sampling error.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)
APR									
20...	1200	1,350	8.0	103	10.0	7.0	E.009	<.002	.09
MAY									
17...	1715	7,520	7.6	45	17.5	10.5	.047	E.001	.43
JUN									
22...	0930	4,860	7.9	76	24.5	15.5	<.016	<.002	.09
AUG									
29...	0915	546	8.2	181	16.5	17.0	.020	E.001	--

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR								
20...	<.006	.021	.19	.8	2.1	81	6	22
MAY								
17...	E.005	.093	.50	4.8	3.6	34	178	3,610
JUN								
22...	E.003	.024	.15	.7	2.3	62	11	144
AUG								
29...	<.006	.016	.22	.4	--	89	2	2.9

Date	Time	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
APR												
20...	1200	42	12.2	2.76	1.06	.3	3.95	45	1.53	.2	11.3	2.7
JUN												
22...	0930	25	7.46	1.61	.80	.2	2.37	31	.69	E.1	8.3	1.7

E--Estimated.

12352500 BITTERROOT RIVER NEAR MISSOULA, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)
APR											
20...	62	.08	228	.3	<2	E.03	<.04	<.8	<.8	.7	1.0
JUN											
22...	42	.06	546	.3	<2	<.04	<.04	<.8	<.8	.8	1.0

Date	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
APR						
20...	.10	.25	E.04	.44	1.6	E2
JUN						
22...	.08	.25	.39	.25	E.5	E2

E--Estimated.

TEMPERATURE, WATER, DEGREES CELSIUS,
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	12.0	13.0	5.5	4.0	5.0	2.5	1.0	2.0	1.0	0.0	0.5
2	14.0	11.5	12.5	6.0	4.5	5.5	3.5	2.0	3.0	1.0	0.0	0.5
3	14.0	11.0	12.5	7.0	6.0	6.5	3.0	2.5	3.0	1.0	0.0	0.5
4	13.5	11.0	12.5	6.0	4.5	5.0	3.0	2.0	2.5	0.5	0.0	0.0
5	13.5	11.0	12.0	5.0	3.5	4.5	2.5	1.0	2.0	0.5	0.0	0.0
6	12.5	10.5	12.0	5.5	3.5	4.5	3.0	1.5	2.0	0.5	0.0	0.0
7	14.5	12.0	13.0	7.0	5.0	6.0	3.0	2.0	2.5	0.0	0.0	0.0
8	13.5	11.5	12.5	7.0	5.5	6.0	3.5	2.5	3.0	0.0	0.0	0.0
9	12.5	10.5	11.5	5.5	4.5	5.0	4.0	2.5	3.5	0.5	0.0	0.0
10	11.0	9.5	10.0	6.0	4.5	5.0	4.5	4.0	4.5	0.0	0.0	0.0
11	10.5	8.0	9.5	5.5	4.0	5.0	6.5	4.5	5.5	0.0	0.0	0.0
12	11.0	9.5	10.0	4.5	4.0	4.0	5.5	3.0	4.5	0.0	0.0	0.0
13	11.5	9.0	10.0	4.5	4.0	4.0	3.0	2.0	2.5	0.5	0.0	0.0
14	12.0	9.5	10.5	4.5	4.0	4.0	2.5	1.5	2.0	0.5	0.0	0.0
15	13.0	11.0	12.0	4.5	4.0	4.0	3.5	2.5	3.0	0.5	0.0	0.5
16	12.5	11.5	12.0	4.5	4.0	4.5	3.0	2.5	2.5	0.5	0.0	0.5
17	11.5	10.5	11.0	5.5	4.0	4.5	3.0	2.0	2.5	0.5	0.0	0.0
18	11.0	9.5	10.0	4.5	3.5	4.0	2.5	2.0	2.0	0.5	0.0	0.0
19	10.5	8.5	9.5	4.0	3.5	3.5	3.0	2.5	2.5	0.5	0.0	0.0
20	10.5	9.0	9.5	4.0	3.0	3.5	3.0	2.5	3.0	0.5	0.0	0.0
21	10.0	9.0	9.5	3.0	2.0	2.5	2.5	2.0	2.5	2.0	0.0	1.0
22	9.0	8.5	8.5	3.0	2.5	2.5	2.5	1.5	2.0	2.0	1.5	1.5
23	8.5	8.0	8.5	3.5	2.5	3.0	1.5	0.0	0.5	3.0	1.5	2.0
24	8.0	7.0	7.5	4.0	3.5	3.5	1.0	0.0	0.5	3.0	1.5	2.0
25	8.0	6.0	7.0	5.0	4.0	4.5	1.5	0.5	1.0	2.5	1.0	1.5
26	7.5	5.5	6.5	4.5	3.0	4.0	2.0	1.0	1.5	2.5	1.5	2.0
27	7.5	5.5	6.5	3.0	2.0	2.5	1.5	0.0	1.0	3.0	1.5	2.0
28	7.0	5.5	6.0	2.5	1.0	1.5	1.0	0.5	0.5	4.0	2.5	3.0
29	6.0	5.5	5.5	2.0	1.0	1.5	1.0	0.5	1.0	3.5	2.5	3.0
30	7.0	6.0	6.5	2.0	0.5	1.0	2.0	0.5	1.5	3.5	3.0	3.5
31	6.0	5.0	6.0	---	---	---	2.0	0.0	1.0	3.0	2.5	3.0
MONTH	14.5	5.0	10.0	7.0	0.5	4.0	6.5	0.0	2.5	4.0	0.0	1.0

12352500 BITTERROOT RIVER NEAR MISSOULA, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS,
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	2.0	3.0	6.5	4.5	5.5	8.0	6.0	7.5	11.5	7.5	9.5
2	3.0	2.0	2.5	7.0	4.5	5.5	9.0	7.0	8.0	12.5	9.0	10.5
3	3.5	1.5	2.5	7.5	4.5	6.0	9.0	7.5	8.5	13.0	10.0	11.5
4	3.0	2.0	2.5	7.5	4.5	6.0	8.5	7.0	7.5	12.0	10.0	11.0
5	4.0	2.0	3.0	7.5	4.5	6.0	9.5	5.5	7.5	13.0	9.5	11.0
6	3.5	2.0	2.5	8.0	5.0	6.5	11.5	7.0	9.0	13.5	11.0	12.0
7	3.0	1.0	2.0	8.5	6.0	7.5	11.0	9.0	10.0	12.5	10.5	11.5
8	2.5	2.0	2.5	10.0	7.0	8.5	11.5	9.0	10.0	11.5	10.5	11.0
9	3.0	1.5	2.5	10.0	7.5	8.5	10.0	8.5	9.0	11.5	10.5	11.0
10	3.0	1.0	2.0	10.5	8.0	9.0	9.5	7.0	8.5	10.5	8.0	9.0
11	3.0	1.0	2.0	9.5	6.5	8.0	9.5	7.0	8.0	8.5	7.5	8.0
12	3.0	1.5	2.0	8.0	5.5	7.0	9.5	7.0	8.0	10.5	7.5	9.0
13	4.0	2.0	3.0	6.5	4.5	5.5	8.5	7.0	8.0	12.5	10.0	11.5
14	3.0	2.0	2.5	7.5	5.0	6.0	9.0	6.0	7.0	12.5	11.0	12.0
15	3.0	1.5	2.0	7.0	5.0	6.0	10.0	6.0	8.0	12.0	11.0	11.0
16	2.5	0.5	1.5	7.5	5.5	6.5	12.0	7.5	9.5	11.0	10.0	10.5
17	3.0	0.5	1.5	6.5	5.0	5.5	11.5	9.5	10.0	11.0	8.5	9.5
18	3.0	0.5	1.5	6.0	4.5	5.0	10.5	7.5	9.0	11.0	9.5	10.0
19	2.5	1.0	1.5	6.5	4.0	5.5	9.5	8.0	8.5	12.0	9.5	10.5
20	2.5	1.5	2.0	8.0	5.5	6.5	8.5	7.0	7.0	11.5	10.0	10.5
21	4.0	1.5	2.5	8.0	6.0	6.5	9.5	6.0	7.5	11.5	9.0	10.0
22	4.0	2.5	3.0	6.5	5.0	6.0	13.0	8.0	10.0	11.5	10.0	11.0
23	4.5	1.5	3.0	5.0	3.5	4.0	12.5	10.0	11.5	11.0	9.0	10.0
24	5.0	2.0	3.5	4.0	2.0	3.5	13.0	10.5	12.0	11.0	9.5	10.5
25	5.0	2.0	3.5	6.0	3.5	4.5	13.5	10.0	12.0	12.0	9.5	11.0
26	5.5	2.5	4.0	6.5	4.0	5.0	13.0	10.5	12.0	13.5	10.5	12.0
27	5.5	2.5	4.0	8.0	6.0	6.5	12.5	8.0	10.0	14.0	11.5	13.0
28	6.0	3.0	4.5	8.0	6.5	7.5	8.0	5.5	7.0	14.5	12.5	13.5
29	---	---	---	8.0	6.0	6.5	8.5	6.0	7.5	15.0	12.5	14.0
30	---	---	---	7.5	5.5	6.5	10.5	6.5	8.5	14.5	12.0	13.5
31	---	---	---	9.0	5.0	7.0	---	---	---	14.0	11.5	12.5
MONTH	6.0	0.5	2.5	10.5	2.0	6.5	13.5	5.5	9.0	15.0	7.5	11.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.0	10.5	11.0	19.0	16.0	17.0	22.5	18.5	20.5	18.5	14.0	16.5
2	10.5	10.0	10.5	18.5	16.5	17.5	22.5	19.0	21.0	18.5	15.0	16.5
3	10.0	9.5	10.0	18.0	16.0	17.0	23.0	18.0	20.5	19.5	15.5	17.0
4	13.0	9.5	11.0	19.0	15.5	17.5	---	---	---	17.5	15.0	16.5
5	13.5	12.5	13.0	20.0	16.5	18.0	---	---	---	18.5	14.0	16.0
6	12.5	10.5	11.5	20.5	17.5	19.0	---	---	---	18.5	14.0	16.0
7	12.0	10.5	11.0	21.5	18.0	19.5	---	---	---	18.5	14.0	16.5
8	12.0	11.0	11.5	21.5	18.0	20.0	---	---	---	18.5	14.5	16.5
9	11.5	10.5	11.0	20.5	16.5	18.0	23.5	---	---	17.0	15.0	16.0
10	12.5	10.5	11.5	17.5	14.5	16.0	23.0	19.0	21.0	15.0	13.0	13.5
11	15.0	12.5	13.5	20.5	15.5	18.0	21.5	18.0	20.0	15.0	11.5	13.0
12	14.0	12.5	13.5	22.0	17.5	20.0	20.5	17.0	18.5	13.5	12.0	13.0
13	13.5	11.5	12.5	23.0	19.0	21.0	20.0	15.5	17.5	14.5	12.0	13.0
14	14.5	12.0	13.0	22.0	18.0	20.0	20.0	15.5	17.5	15.0	12.0	13.5
15	16.0	13.5	14.5	22.5	18.0	20.0	21.0	16.0	18.5	16.5	13.0	14.5
16	15.5	14.0	14.5	22.0	19.0	20.5	21.0	17.0	18.5	15.5	13.0	14.5
17	14.0	12.5	13.0	21.0	16.5	19.0	19.0	16.5	17.5	14.5	13.0	13.5
18	13.0	11.0	12.0	22.5	17.5	20.0	18.5	15.5	16.5	14.5	12.5	13.5
19	15.0	12.0	13.5	22.5	18.0	20.5	20.0	15.0	17.0	15.5	12.0	14.0
20	17.0	14.0	15.5	23.0	18.0	20.5	20.5	15.5	18.0	16.0	13.0	14.5
21	18.0	15.5	16.5	23.5	18.0	20.5	21.5	17.0	19.0	16.0	13.0	14.5
22	18.0	16.0	17.0	22.0	19.5	20.0	20.5	17.5	19.0	14.5	12.0	13.5
23	18.0	16.0	17.0	23.0	18.0	20.5	19.5	17.0	18.0	13.5	12.0	12.5
24	17.5	15.5	16.5	23.0	18.0	20.5	17.0	15.5	16.0	12.0	10.5	11.0
25	17.0	15.5	16.0	21.0	18.0	19.5	18.5	13.5	16.0	13.5	10.0	11.5
26	15.5	14.0	14.5	22.0	16.5	19.0	19.5	14.5	17.0	14.5	11.0	12.5
27	15.5	13.5	14.5	23.0	17.5	20.0	20.0	15.5	17.5	15.0	11.5	13.0
28	15.0	14.0	14.5	22.0	18.0	20.0	21.0	16.0	18.5	14.5	11.5	13.0
29	15.5	14.0	14.5	22.5	18.0	20.5	20.0	16.5	18.0	13.0	11.5	12.0
30	17.0	13.5	15.0	23.0	18.5	20.5	18.0	15.5	16.5	14.5	12.0	13.0
31	---	---	---	22.5	19.0	21.0	18.5	13.5	16.0	---	---	---
MONTH	18.0	9.5	13.5	23.5	14.5	19.5	23.5	13.5	18.0	19.5	10.0	14.0

12353000 CLARK FORK BELOW MISSOULA, MT

LOCATION.--Lat 46°52'09", long 114°07'33" (NAD 27), in NW$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.21, T.13 N., R.20 W., Missoula County, Hydrologic Unit 17010204, on right bank 1.0 mi downstream from Bitterroot River, 4.5 mi west of Missoula, and at river mile 349.5.

DRAINAGE AREA.--9,003 mi^2.

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 1042: 1931. WSP 1246: Drainage area. WSP 1316: 1932(M), 1935(M), 1946(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,083.88 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by powerplant at Milltown 14.9 mi upstream. Diversions for irrigation of about 235,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,970	2,450	1,960	1,810	2,720	1,940	2,700	5,750	12,400	8,540	1,900	1,450
2	2,870	2,400	2,090	1,440	2,690	2,000	2,680	5,320	14,800	7,820	1,880	1,460
3	2,790	2,430	2,180	1,260	2,630	2,000	2,710	5,040	15,700	7,250	1,910	1,450
4	2,730	2,460	2,120	1,100	2,550	2,000	2,800	4,960	16,300	6,590	1,830	1,420
5	2,670	2,430	2,090	1,020	2,540	2,000	2,810	5,130	15,700	6,020	1,750	1,400
6	2,630	2,420	2,040	1,030	2,510	2,030	2,760	5,840	15,800	5,560	1,730	1,360
7	2,610	2,400	2,070	1,190	2,360	2,060	2,750	7,350	15,500	5,150	1,680	1,370
8	2,590	2,410	2,100	1,490	2,260	2,120	3,000	8,630	14,300	4,820	1,650	1,350
9	2,520	2,390	2,110	1,560	2,330	2,190	3,410	9,450	12,900	4,570	1,620	1,340
10	2,500	2,400	2,130	1,600	2,210	2,330	3,580	11,200	11,700	4,320	1,620	1,430
11	2,450	2,430	2,200	1,660	2,140	2,360	3,510	13,200	10,800	4,220	1,620	1,510
12	2,430	2,400	2,470	1,750	2,170	2,480	3,480	13,300	10,700	4,050	1,600	1,610
13	2,430	2,360	2,560	1,880	2,220	2,600	3,460	12,400	11,600	3,810	1,620	1,640
14	2,400	2,330	2,440	1,820	2,270	2,550	3,670	11,800	10,800	3,550	1,660	1,650
15	2,380	2,310	2,470	1,570	2,190	2,500	3,670	12,200	10,300	3,390	1,650	1,690
16	2,370	2,290	2,440	1,460	2,030	2,440	3,470	13,200	10,600	3,150	1,630	1,690
17	2,460	2,290	2,380	1,620	1,850	2,470	3,530	15,900	11,100	2,980	1,610	1,830
18	2,550	2,290	2,330	2,000	1,840	2,460	3,740	17,000	12,700	2,860	1,590	2,130
19	2,580	2,250	2,330	2,590	1,930	2,390	3,820	15,800	12,400	2,770	1,650	2,220
20	2,560	2,240	2,310	3,450	2,050	2,370	3,850	18,400	11,300	2,600	1,650	2,150
21	2,560	2,200	2,310	3,760	2,130	2,390	3,840	17,900	10,800	2,460	1,610	2,020
22	2,610	2,090	2,270	3,770	2,060	2,380	3,740	17,000	10,900	2,350	1,560	1,960
23	2,590	2,100	1,990	3,530	1,960	2,380	3,700	16,500	10,800	2,290	1,570	1,970
24	2,580	2,220	1,670	3,420	1,950	2,300	4,090	15,700	10,100	2,200	1,580	2,000
25	2,590	2,310	2,000	3,220	1,960	2,220	4,830	14,200	9,080	2,130	1,560	2,120
26	2,530	2,430	2,280	3,160	1,960	2,250	5,820	12,900	8,640	2,090	1,560	2,150
27	2,490	2,390	2,150	3,090	1,960	2,230	6,920	12,100	8,410	2,080	1,530	2,110
28	2,490	2,190	1,820	3,050	1,940	2,510	7,380	11,900	8,820	2,100	1,490	2,070
29	2,480	2,080	1,650	2,990	---	2,840	6,800	12,100	9,390	2,070	1,470	2,020
30	2,490	1,950	1,940	2,940	---	2,900	6,210	12,200	9,350	1,990	1,460	2,010
31	2,460	---	2,140	2,850	---	2,790	---	11,900	---	1,930	1,440	---
TOTAL	79,360	69,340	67,040	69,080	61,410	72,480	118,730	366,270	353,690	117,710	50,680	52,580
MEAN	2,560	2,311	2,163	2,228	2,193	2,338	3,958	11,820	11,790	3,797	1,635	1,753
MAX	2,970	2,460	2,560	3,770	2,720	2,900	7,380	18,400	16,300	8,540	1,910	2,220
MIN	2,370	1,950	1,650	1,020	1,840	1,940	2,680	4,960	8,410	1,930	1,440	1,340
AC-FT	157,400	137,500	133,000	137,000	121,800	143,800	235,500	726,500	701,500	233,500	100,500	104,300

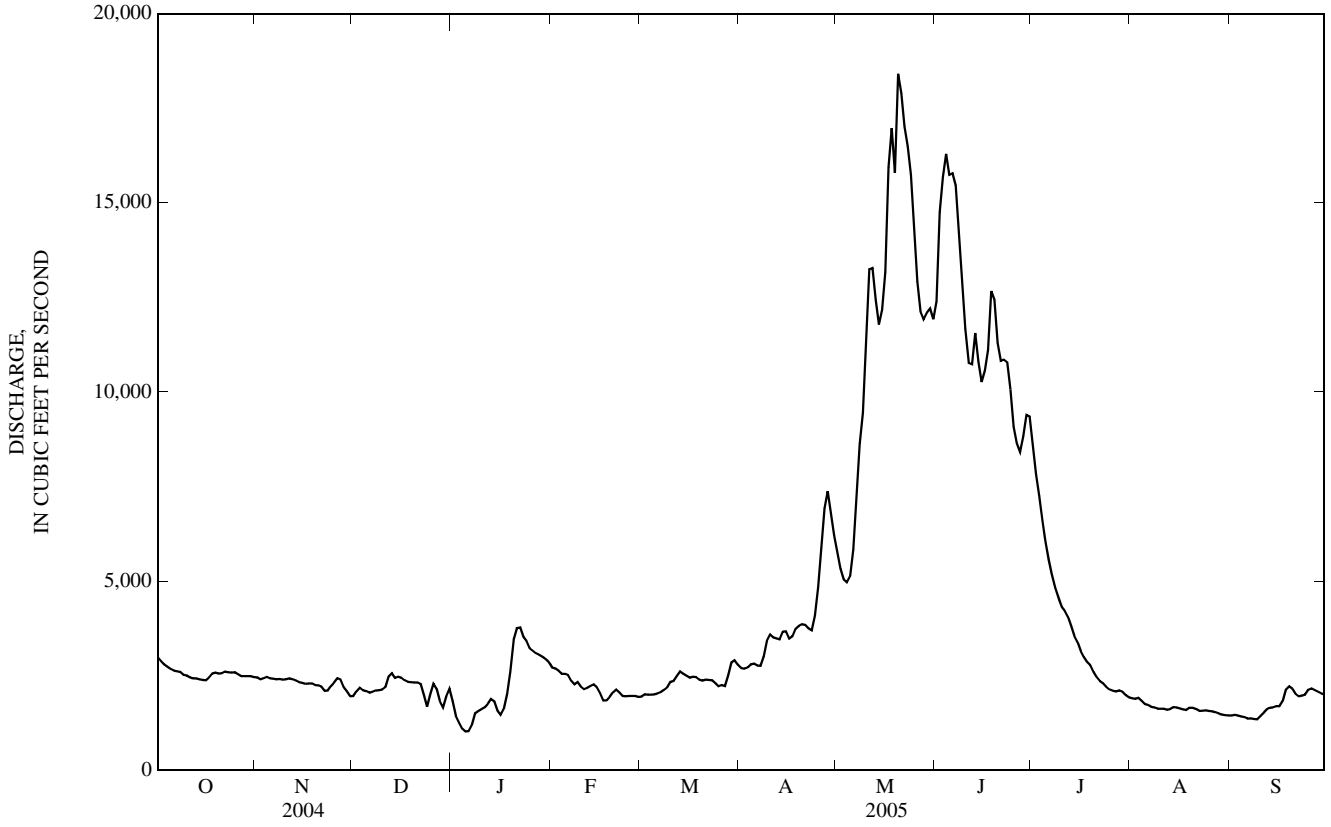
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	2,701	2,714	2,461	2,236	2,481	3,088	6,372	14,690	16,580	5,772	2,282	2,283
MAX	6,617	5,110	6,064	4,401	6,697	7,012	16,500	30,440	33,970	16,320	5,530	5,160
(WY)	(1960)	(1960)	(1996)	(1934)	(1996)	(1972)	(1934)	(1997)	(1972)	(1975)	(1975)	(1965)
MIN	1,393	1,471	1,414	871	1,108	1,743	2,302	5,113	4,619	1,361	810	909
(WY)	(1938)	(1938)	(1988)	(1937)	(1933)	(1937)	(1941)	(1941)	(1987)	(1931)	(1931)	(1937)

12353000 CLARK FORK BELOW MISSOULA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	1,489,244		1,478,370			
ANNUAL MEAN	4,069		4,050		5,307	
HIGHEST ANNUAL MEAN					8,832	1976
LOWEST ANNUAL MEAN					2,582	1937
HIGHEST DAILY MEAN	14,900	Jun 7	18,400	May 20	54,100	May 18, 1997
LOWEST DAILY MEAN	796	Jan 7	1,020	Jan 5	580	Jan 19, 1933
ANNUAL SEVEN-DAY MINIMUM	1,150	Jan 3	1,220	Jan 2	660	Dec 8, 1932
MAXIMUM PEAK FLOW			19,000	May 20	55,100	May 18, 1997
MAXIMUM PEAK STAGE			6.96	May 20	12.18	May 18, 1997
INSTANTANEOUS LOW FLOW			a894	Jan 5	b388	Jan 18, 1933
ANNUAL RUNOFF (AC-FT)	2,954,000		2,932,000		3,845,000	
10 PERCENT EXCEEDS	9,170		11,100		13,200	
50 PERCENT EXCEEDS	2,480		2,410		2,780	
90 PERCENT EXCEEDS	1,750		1,610		1,620	

a--Gage height, 0.39 ft, result of freezeup.
b--Gage height, 0.58 ft, result of freezeup.



12354000 ST. REGIS RIVER NEAR ST. REGIS, MT

LOCATION.--Lat 47°17'49", long 115°07'18", (NAD 27) near center of $NW^1/_4NE^1/_4$ sec.26, T.18 N., R.28 W., Mineral County, on left bank 50 ft downstream from road bridge, 500 ft upstream from Little Joe Creek, 1.2 mi west of St. Regis, and at river mile 1.7.

DRAINAGE AREA.--303 mi^2.

PERIOD OF RECORD.--September 1910 to September 1917 (no winter records), annual maximum, water year 1948, published in WSP 1080, September 1958 to September 1975, February 2002 to current year. Monthly discharge only for some periods, published in WSP 1316, 1736.

REVISED RECORDS.--WSP 1246: water year 1912; WSP 1316: drainage area, 1911.

GAGE.--Water-stage recorder. Elevation of gage is 2,645.00 ft (NGVD 29). September 1910 to September 1917, non-recording gage at site 2 mi upstream at different elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minor diversions for irrigation of hay meadows above station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Dec. 20, 1933, reached a stage of about 14.5 ft, from information by local residents (discharge unknown). Flood of May 19, 1954, reached a discharge of about 11,000 ft^3/s, gage height, 9.4 ft, from rating curve extended above 5,100 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	152	179	219	484	234	552	854	771	238	112	78
2	112	149	173	e200	456	232	574	788	801	227	109	77
3	110	198	168	e192	444	e229	554	e773	773	221	107	75
4	109	186	165	185	438	e225	561	e795	710	213	105	73
5	107	171	160	e172	457	e225	543	945	670	206	103	72
6	106	163	160	e168	e426	e230	529	1,040	651	199	100	72
7	111	158	161	e164	e388	e235	567	1,250	598	193	e98	72
8	109	156	161	e158	399	e240	e663	1,260	565	188	e102	71
9	106	153	164	e158	e378	e280	e704	1,280	527	189	101	70
10	113	151	181	e154	e356	e300	e736	1,410	494	193	99	73
11	108	149	659	e150	e340	e350	e731	1,330	475	185	97	76
12	105	147	881	e147	355	e355	719	1,250	472	176	97	78
13	103	145	663	e142	350	e364	e695	1,200	441	169	108	82
14	102	143	570	e140	328	e357	e666	1,200	420	164	103	80
15	100	141	519	e138	e295	e340	654	1,200	401	158	99	76
16	99	140	460	e158	e264	e328	640	1,260	385	157	96	74
17	112	142	420	e180	e264	334	e666	1,370	431	171	94	74
18	128	140	393	e323	e264	317	e723	1,230	421	157	99	76
19	138	141	375	e524	284	311	e751	1,140	381	148	95	74
20	129	137	365	499	283	e306	775	1,080	355	143	92	72
21	145	134	337	e533	262	e303	786	1,070	330	139	89	71
22	169	133	315	e605	246	305	e850	1,040	314	136	87	70
23	174	131	275	e580	249	302	e930	998	307	136	87	68
24	167	136	284	e583	245	286	1,060	950	295	131	87	69
25	160	235	280	e576	241	e271	e1,230	898	281	128	87	70
26	153	256	270	569	238	271	e1,270	849	272	125	85	69
27	148	216	257	556	235	395	e1,310	834	269	122	82	68
28	144	202	248	540	231	718	1,230	839	268	120	81	67
29	142	189	234	e523	---	e631	e1,100	845	263	117	79	67
30	146	182	232	e505	---	e599	e945	823	255	114	79	114
31	161	---	233	489	---	e572	---	788	---	113	79	---
TOTAL	3,929	4,876	9,942	10,230	9,200	10,445	23,714	32,589	13,596	5,076	2,938	2,228
MEAN	127	163	321	330	329	337	790	1,051	453	164	94.8	74.3
MAX	174	256	881	605	484	718	1,310	1,410	801	238	112	114
MIN	99	131	160	138	231	225	529	773	255	113	79	67
AC-FT	7,790	9,670	19,720	20,290	18,250	20,720	47,040	64,640	26,970	10,070	5,830	4,420
CFSM	0.42	0.54	1.06	1.09	1.08	1.11	2.61	3.47	1.50	0.54	0.31	0.25
IN.	0.48	0.60	1.22	1.26	1.13	1.28	2.91	4.00	1.67	0.62	0.36	0.27

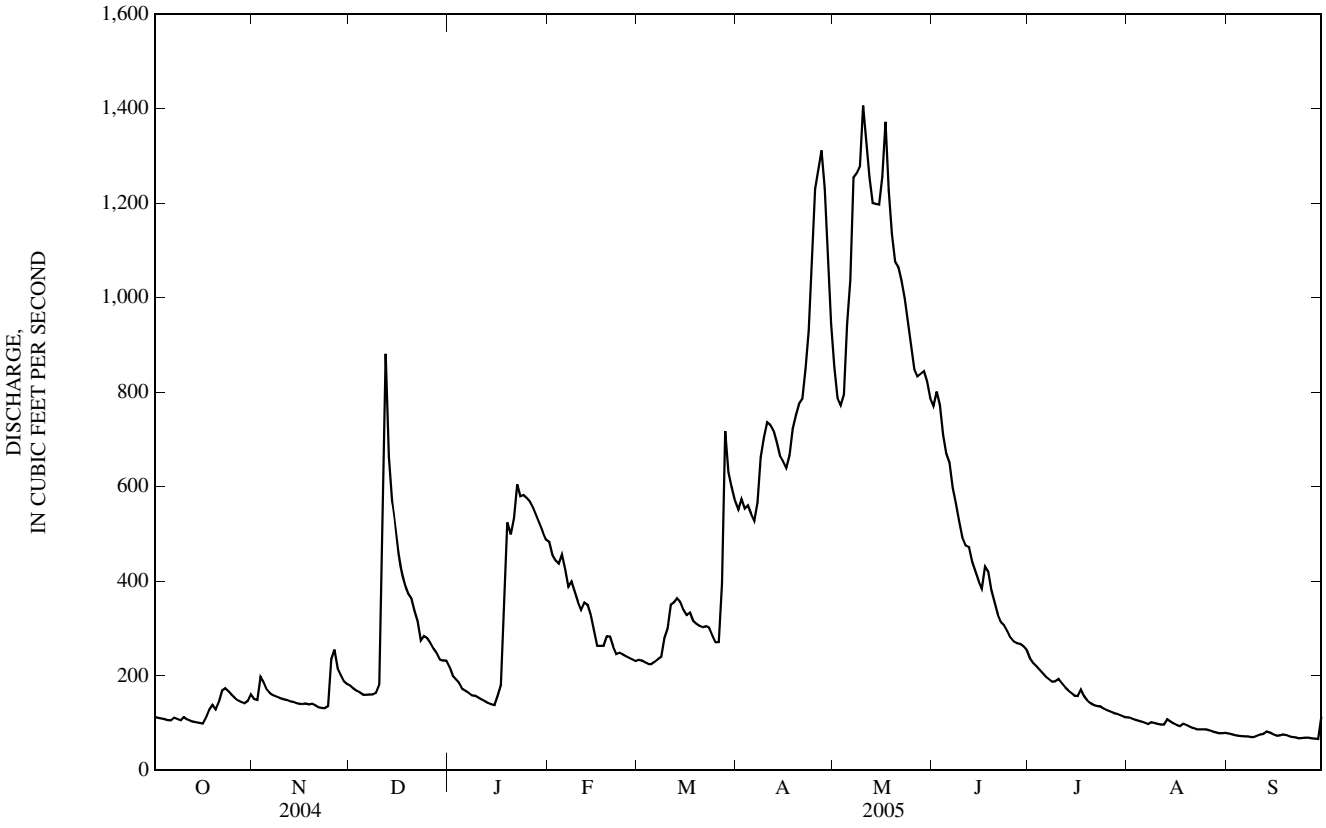
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2005, BY WATER YEAR (WY)*

MEAN	138	221	210	268	295	412	1,218	2,097	1,468	383	160	128
MAX	350	590	555	1,363	759	1,366	2,057	4,700	3,367	1,150	313	204
(WY)	(1960)	(1915)	(1959)	(1974)	(1971)	(1972)	(1916)	(1917)	(1974)	(1916)	(1916)	(1914)
MIN	85.1	101	92.4	89.2	86.6	94.2	349	671	388	155	83.1	74.3
(WY)	(2004)	(1962)	(1964)	(2004)	(1964)	(1964)	(1975)	(1915)	(1915)	(1973)	(1973)	(2005)

12354000 ST. REGIS RIVER NEAR ST. REGIS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1910 - 2005*	
ANNUAL TOTAL	142,467		128,763			
ANNUAL MEAN	389		353		549	
HIGHEST ANNUAL MEAN					938	1974
LOWEST ANNUAL MEAN					256	1973
HIGHEST DAILY MEAN	1,450	Apr 15	1,410	May 10	8,500	Jan 16, 1974
LOWEST DAILY MEAN	64	Jan 6	67	Sep 28	45	Dec 11, 1961
ANNUAL SEVEN-DAY MINIMUM	71	Jan 1	68	Sep 23	59	Dec 5, 1972
MAXIMUM PEAK FLOW			1,480	May 10	a9,640	Jan 16, 1974
MAXIMUM PEAK STAGE			5.37	May 10	7.54	Apr 14, 2002
INSTANTANEOUS LOW FLOW			66	Sep 29	b41	Dec 30, 2001
ANNUAL RUNOFF (AC-FT)	282,600		255,400		397,500	
ANNUAL RUNOFF (CFSM)	1.28		1.16		1.81	
ANNUAL RUNOFF (INCHES)	17.49		15.81		24.60	
10 PERCENT EXCEEDS	1,100		827		1,480	
50 PERCENT EXCEEDS	167		232		212	
90 PERCENT EXCEEDS	103		87		97	

*--During periods of operation [September 1910 to September 1917 (no winter records), September 1958 to September 1975, February 2002 to current year].
a--Gage height, 7.38 ft.
b--Result of freezeup.
e--Estimated.



12354500 CLARK FORK AT ST. REGIS, MT

LOCATION.--Lat 47°18'07", long 115°05'11" (NAD 27), in $NW^1/_4SE^1/_4SW^1/_4$ sec.19, T.18 N., R.27 W., Mineral County, Hydrologic Unit 17010204, on left bank at St. Regis, 0.4 mi downstream from St. Regis River, and at river mile 270.3.

DRAINAGE AREA.--10,709 mi^2.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1246: Drainage area. WSP 1316: 1916-17, 1920, 1929-31(M), 1933(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,600.37 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 29, 1933, nonrecording gage at same site and elevation.

REMARKS.--Records good. Diversions for irrigation of about 244,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,860	3,280	2,760	3,000	4,250	2,860	4,400	9,050	14,700	10,300	2,580	1,890
2	3,750	3,260	2,760	2,580	4,110	2,880	4,350	8,510	16,300	9,460	2,530	1,880
3	3,640	3,290	2,860	2,110	4,050	2,930	4,320	8,140	18,300	8,840	2,500	1,890
4	3,560	3,300	2,930	2,000	3,970	2,920	4,380	7,980	19,100	8,260	2,500	1,870
5	3,500	3,290	2,870	1,770	3,930	2,930	4,430	7,980	18,900	7,620	2,420	1,850
6	3,430	3,250	2,830	1,600	3,860	2,940	4,420	8,450	18,600	7,090	2,340	1,830
7	3,400	3,230	2,810	1,870	3,750	2,980	4,410	9,940	18,500	6,630	2,300	1,790
8	3,370	3,200	2,840	1,880	3,610	3,070	4,630	11,600	17,500	6,220	2,240	1,780
9	3,330	3,220	2,880	2,160	3,520	3,170	4,990	12,800	16,100	5,860	2,210	1,770
10	3,270	3,190	2,890	2,250	3,500	3,330	5,350	14,400	14,700	5,620	2,160	1,800
11	3,230	3,190	3,470	2,370	3,360	3,480	5,450	16,700	13,500	5,390	2,140	1,890
12	3,180	3,210	4,050	2,470	3,320	3,560	5,410	17,300	12,800	5,230	2,140	1,960
13	3,140	3,180	3,980	2,700	3,340	3,710	5,400	16,900	13,100	5,010	2,150	2,050
14	3,120	3,150	3,930	2,710	3,370	3,790	5,470	16,100	13,300	4,740	2,150	2,110
15	3,100	3,110	3,780	2,310	3,350	3,740	5,540	15,900	12,300	4,450	2,190	2,110
16	3,070	3,080	3,740	2,190	3,200	3,690	5,470	16,800	12,100	4,280	2,170	2,140
17	3,130	3,070	3,650	2,210	3,020	3,660	5,450	18,800	12,600	4,070	2,130	2,170
18	3,240	3,070	3,550	2,820	2,850	3,660	5,680	21,100	13,400	3,890	2,120	2,280
19	3,330	3,060	3,480	3,770	2,870	3,640	5,880	20,300	14,500	3,720	2,110	2,540
20	3,330	3,010	3,470	4,380	2,990	3,580	5,940	20,500	13,600	3,580	2,140	2,630
21	3,350	2,990	3,420	5,280	3,060	3,570	5,960	22,200	12,600	3,400	2,130	2,580
22	3,400	2,940	3,390	5,410	3,080	3,570	5,940	21,000	12,300	3,250	2,090	2,470
23	3,430	2,840	3,270	5,320	3,000	3,600	5,960	20,100	12,300	3,150	2,050	2,410
24	3,440	2,860	2,950	5,090	2,920	3,510	6,320	19,700	11,900	3,050	2,040	2,430
25	3,420	3,110	2,750	4,950	2,900	3,420	7,250	18,200	11,100	2,940	2,050	2,490
26	3,390	3,250	2,980	4,770	2,890	3,340	8,390	16,600	10,300	2,860	2,040	2,590
27	3,320	3,280	3,210	4,690	2,890	3,490	9,880	15,600	9,940	2,800	2,010	2,610
28	3,270	3,220	3,060	4,590	2,880	3,980	10,700	15,000	9,880	2,760	1,980	2,580
29	3,270	3,010	2,740	4,520	---	4,330	10,500	14,900	10,400	2,760	1,940	2,540
30	3,290	2,890	2,580	4,430	---	4,560	9,730	15,100	10,700	2,710	1,910	2,570
31	3,320	---	2,870	4,360	---	4,510	---	14,900	---	2,630	1,900	---
TOTAL	103,880	94,030	98,750	102,560	93,840	108,400	182,000	472,550	415,320	152,570	67,360	65,500
MEAN	3,351	3,134	3,185	3,308	3,351	3,497	6,067	15,240	13,840	4,922	2,173	2,183
MAX	3,860	3,300	4,050	5,410	4,250	4,560	10,700	22,200	19,100	10,300	2,580	2,630
MIN	3,070	2,840	2,580	1,600	2,850	2,860	4,320	7,980	9,880	2,630	1,900	1,770
MED	3,330	3,190	2,980	2,710	3,330	3,560	5,470	15,900	13,200	4,280	2,140	2,130
AC-FT	206,000	186,500	195,900	203,400	186,100	215,000	361,000	937,300	823,800	302,600	133,600	129,900
CFSM	0.31	0.29	0.30	0.31	0.31	0.33	0.57	1.42	1.29	0.46	0.20	0.20
IN.	0.36	0.33	0.34	0.36	0.33	0.38	0.63	1.64	1.44	0.53	0.23	0.23

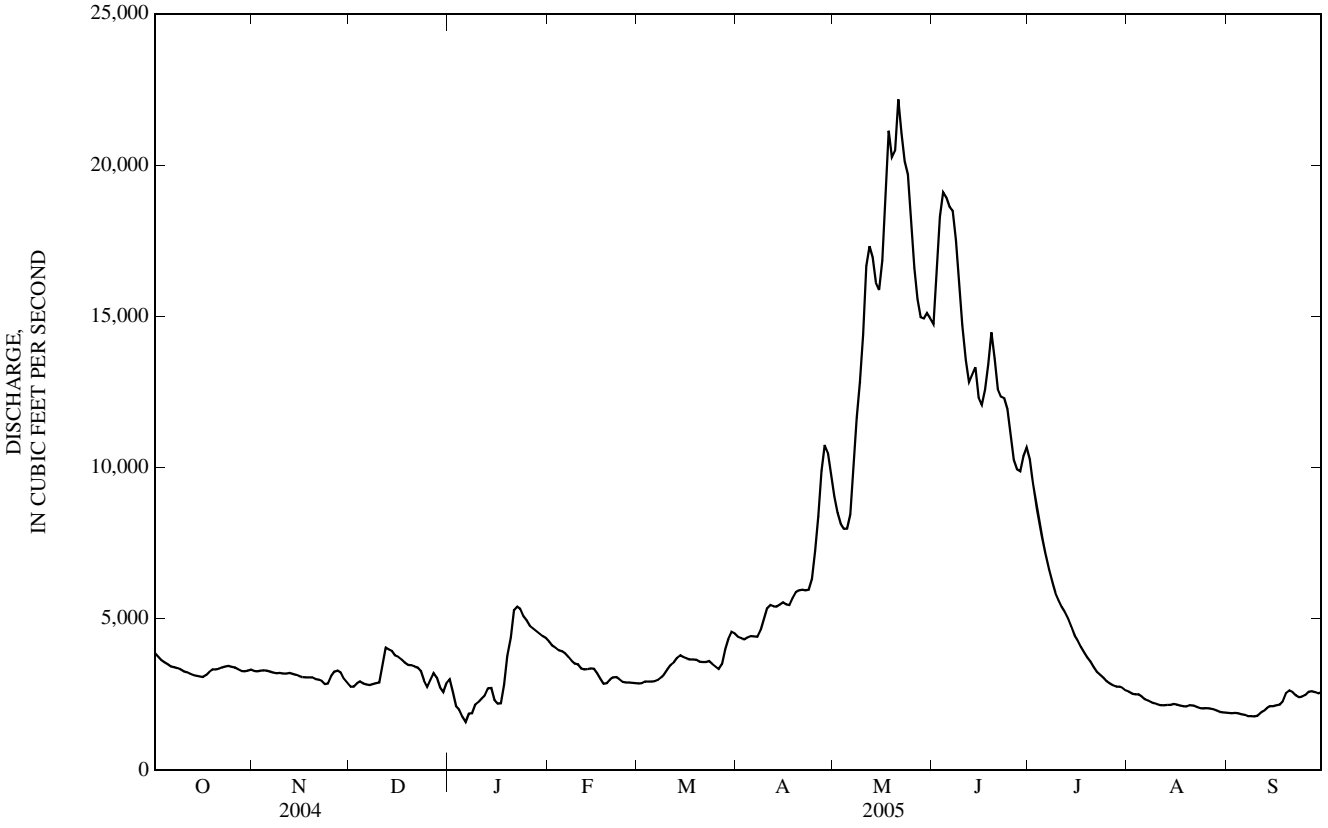
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)*

MEAN	3,389	3,541	3,421	3,102	3,459	4,284	9,206	20,040	21,300	7,581	3,127	2,969
MAX	8,042	7,047	10,710	8,520	10,660	11,490	24,880	42,140	42,410	19,460	6,747	6,252
(WY)	(1960)	(1934)	(1934)	(1934)	(1996)	(1972)	(1934)	(1997)	(1972)	(1975)	(1975)	(1965)
MIN	1,854	1,942	1,909	1,474	1,592	2,199	3,333	7,190	6,021	1,998	1,454	1,351
(WY)	(1938)	(1932)	(1937)	(1937)	(1936)	(1937)	(1937)	(1941)	(1987)	(1931)	(1931)	(1937)

12354500 CLARK FORK AT ST. REGIS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005*	
ANNUAL TOTAL	1,995,256		1,956,760			
ANNUAL MEAN	5,452		5,361		7,122	
HIGHEST ANNUAL MEAN					11,560	1997
LOWEST ANNUAL MEAN					3,420	1941
HIGHEST DAILY MEAN	19,200	Jun 7	22,200	May 21	68,500	May 18, 1997
LOWEST DAILY MEAN	826	Jan 6	1,600	Jan 6	800	Feb 3, 1989
ANNUAL SEVEN-DAY MINIMUM	1,350	Jan 4	1,810	Sep 4	1,130	Jan 31, 1936
MAXIMUM PEAK FLOW			22,700	May 21	a68,900	May 18, 1997
MAXIMUM PEAK STAGE			12.17	May 21	20.27	May 18, 1997
INSTANTANEOUS LOW FLOW			1,350	Jan 6	b702	Jan 6, 2004
ANNUAL RUNOFF (AC-FT)	3,958,000		3,881,000		5,160,000	
ANNUAL RUNOFF (CFSM)	0.509		0.501		0.665	
ANNUAL RUNOFF (INCHES)	6.93		6.80		9.04	
10 PERCENT EXCEEDS	12,400		13,300		17,600	
50 PERCENT EXCEEDS	3,350		3,350		3,660	
90 PERCENT EXCEEDS	2,300		2,140		2,200	

*--Statistics not computed prior to 1930 because the 1924-29 period of record was estimated.
a--Also May 24, 1948, gage height, 19.96 ft.
b--Gage height, 3.58 ft, result of upstream freezeup.



12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA

LOCATION.--Lat 49°00'05", long 114°28'34" (NAD 27), Hydrologic Unit 17010206, on left bank 200 ft north of international boundary at Flathead, British Columbia, 1.6 mi upstream from Sage Creek, 6.5 mi northwest of Trail Creek, MT, and at river mile 216.6.

DRAINAGE AREA.--427 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1929 to June 1995 (no winter records prior to 1952). Prior to 1934, published as Flathead River near Trail Creek, MT. October 1970 to September 1972, published as North Fork Flathead River at Flathead British Columbia. October 1999 to current year gage re-established and operated by USGS at site on left bank in British Columbia.

GAGE.--Water-stage recorder. Elevation of gage is 3,964.95 ft (NGVD 29). Prior to Sept. 1, 1949, nonrecording gage and Sept. 1, 1949 to Oct. 4, 1964, water-stage recorder at site 1,200 ft upstream at elevation 11.01 ft higher. Oct. 5, 1964, to Aug. 1, 1973, water-stage recorder at site on left bank 155 ft upstream at elevation 1.79 ft higher. Aug. 2, 1973 to June 28, 1995 operated by Water Survey Canada at site on right bank at elevation 3.21 ft. higher. October 1999 to current year at site 200 ft upstream from International Border in British Columbia on left bank.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	285	289	e340	781	349	363	1,340	2,370	1,400	379	231
2	460	321	286	e320	745	343	358	1,240	2,810	1,330	371	227
3	442	389	278	e330	707	340	346	1,250	3,290	1,300	359	223
4	428	348	282	e310	685	340	338	1,330	3,110	1,200	349	218
5	414	333	282	e270	685	344	334	1,510	2,860	1,110	338	214
6	398	327	279	e280	609	348	335	1,940	3,120	1,050	327	213
7	389	343	272	e320	546	358	380	2,360	3,490	1,010	318	210
8	379	349	276	e310	514	372	482	3,070	3,400	957	309	206
9	369	342	269	e300	511	385	525	3,010	3,440	914	307	206
10	366	337	279	e290	517	407	523	2,700	3,700	897	312	268
11	356	328	859	e300	501	423	529	2,450	4,360	858	335	344
12	343	304	1,180	e310	479	503	517	2,450	4,310	804	335	326
13	334	290	839	e300	498	513	498	2,670	3,650	761	327	335
14	324	291	756	e280	473	499	483	3,280	3,190	724	308	352
15	327	297	722	e250	417	478	471	3,920	2,890	690	294	417
16	346	305	643	e270	378	473	476	4,480	2,480	682	285	523
17	364	302	591	e330	408	465	568	4,850	2,570	729	287	537
18	361	297	543	e450	396	434	627	4,370	3,320	677	342	489
19	347	297	525	e700	400	402	602	3,870	2,880	622	322	447
20	337	283	514	e1,300	404	406	621	3,480	2,480	586	293	413
21	345	271	466	e1,600	376	392	663	2,910	2,250	558	277	385
22	355	272	e410	e1,500	380	374	786	2,500	2,110	543	268	358
23	364	272	e370	e1,400	374	366	1,070	2,300	2,030	526	273	336
24	347	276	e390	1,400	372	354	1,340	2,130	1,800	502	291	320
25	332	366	e410	1,380	377	343	1,800	1,980	1,670	485	286	306
26	314	374	e420	1,240	361	347	2,260	1,940	1,570	470	270	292
27	297	349	e400	1,110	353	373	2,320	2,000	1,480	452	258	281
28	294	322	e380	1,020	345	479	1,940	2,130	1,550	436	249	275
29	295	339	e350	937	---	442	1,650	2,260	1,660	418	243	283
30	302	347	e380	858	---	397	1,450	2,250	1,510	402	239	990
31	301	---	e370	819	---	367	---	2,200	---	389	236	---
TOTAL	11,112	9,556	14,310	20,824	13,592	12,416	24,655	80,170	81,350	23,482	9,387	10,225
MEAN	358	319	462	672	485	401	822	2,586	2,712	757	303	341
MAX	482	389	1,180	1,600	781	513	2,320	4,850	4,360	1,400	379	990
MIN	294	271	269	250	345	340	334	1,240	1,480	389	236	206
AC-FT	22,040	18,950	28,380	41,300	26,960	24,630	48,900	159,000	161,400	46,580	18,620	20,280
CFSM	0.84	0.75	1.08	1.57	1.14	0.94	1.92	6.06	6.35	1.77	0.71	0.80
IN.	0.97	0.83	1.25	1.81	1.18	1.08	2.15	6.98	7.09	2.05	0.82	0.89

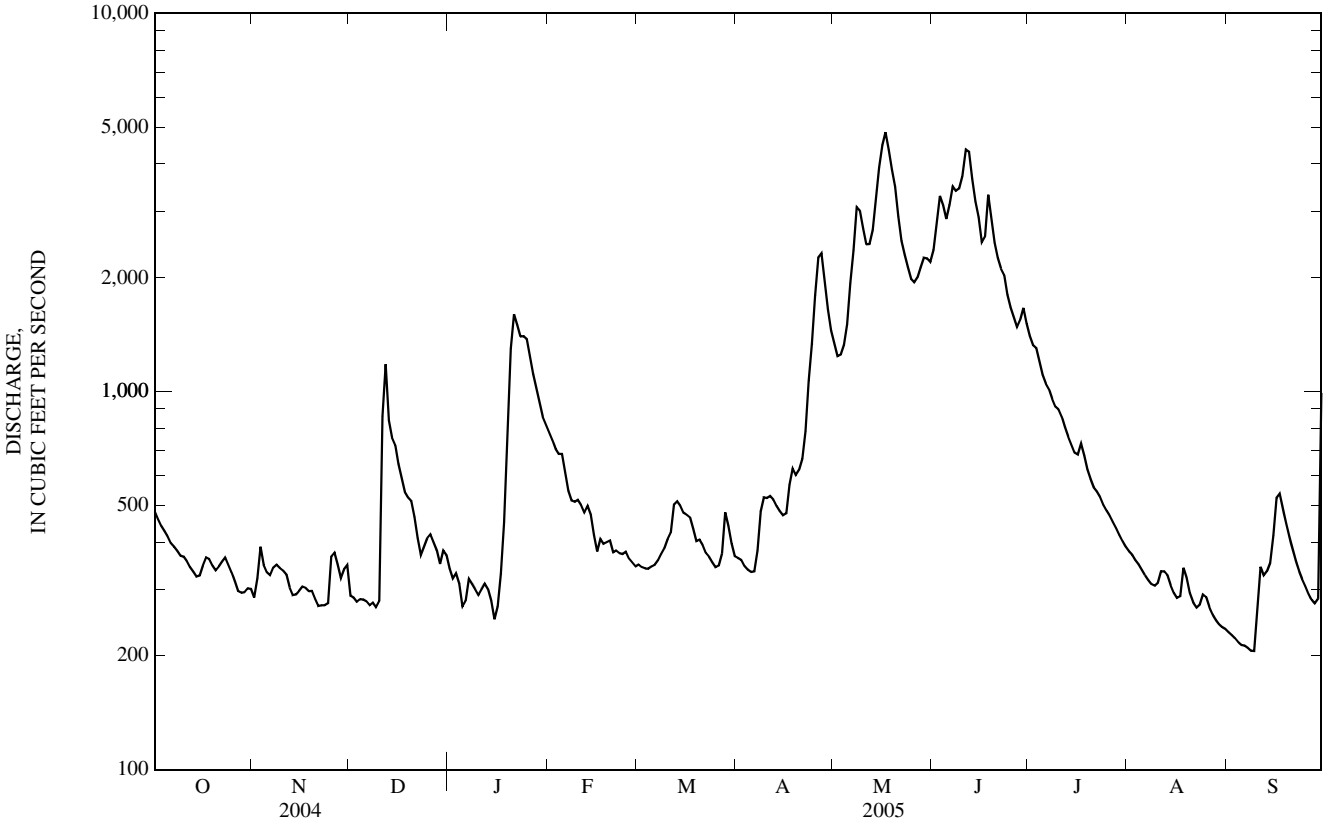
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)*

MEAN	325	343	241	195	177	203	918	3,465	3,061	974	382	295
MAX	1,285	1,261	881	672	485	685	2,957	5,584	6,691	2,418	937	785
(WY)	(1948)	(2000)	(1976)	(2005)	(2005)	(1986)	(1934)	(1948)	(1974)	(1954)	(1976)	(1951)
MIN	127	124	97.0	87.3	83.3	97.7	189	1,540	824	279	188	132
(WY)	(2002)	(1937)	(2001)	(2001)	(2001)	(2001)	(1970)	(1977)	(1977)	(1977)	(1931)	(2001)

12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005*	
ANNUAL TOTAL	268,488		311,079			
ANNUAL MEAN	734		852		897	
HIGHEST ANNUAL MEAN					1,376	1974
LOWEST ANNUAL MEAN					377	2001
HIGHEST DAILY MEAN	3,760	May 4	4,850	May 17	c16,800	Jun 7, 1995
LOWEST DAILY MEAN	90	Jan 6	206	Sep 8	62	Jan 2, 1977
ANNUAL SEVEN-DAY MINIMUM	120	Jan 2	213	Sep 3	71	Dec 31, 1976
MAXIMUM PEAK FLOW			a5,020	May 18	d16,300	Jun 8, 1964
MAXIMUM PEAK STAGE			b9.36	Jan 20	f10.00	May 31, 2002
INSTANTANEOUS LOW FLOW			200	Sep 8	g59	Feb 23, 2003
ANNUAL RUNOFF (AC-FT)	532,500		617,000		649,800	
ANNUAL RUNOFF (CFSM)	1.72		2.00		2.10	
ANNUAL RUNOFF (INCHES)	23.39		27.10		28.54	
10 PERCENT EXCEEDS	1,960		2,340		2,670	
50 PERCENT EXCEEDS	390		402		299	
90 PERCENT EXCEEDS	134		282		135	

*--During period of operation (no winter records prior to 1952)
a--Gage height, 8.44 ft.
b--Result of ice jam.
c--Instantaneous peak flow not determined.
d--Gage height, 8.00 ft, site and datum then in use. Peak flow was known to be higher in 1995.
e--Estimated.
f--At present site and datum. Flood of June 7, 1995 reached a stage of 9.66 ft (site and datum then in use), which is 12.86 ft at present site and datum.
g--Gage height, 3.95 ft.



12355000 FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1965, 1970, 1975-93 and August 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1981.
WATER TEMPERATURE: November 1974 to September 1991.
SUSPENDED-SEDIMENT DISCHARGE: April 1975 to October 1978, August 1985 to June 1991.

REMARKS.--Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 309 microsiemens per centimeter (µS/cm) at 25.0°C, Jan. 12, 28, 1975, Jan. 20, 1980; minimum daily, 130 µS/cm at 25.0°C, May 20, 1976.
WATER TEMPERATURE: Maximum 19.5°C, Aug 2, 1977; minimum 0.0°C on many days during winters.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,310 mg/L, June 20,1975; minimum daily mean, 1 mg/L on many days most years.
SEDIMENT LOAD: Maximum daily, 36,100 tons, June 20, 1975; minimum daily, 0.24 ton, Feb. 1, 23, 1988.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
APR													
28...	0900	2,000	18	7.8	204	1.5	2.0	<.010	.052	.004	.15	.009	.060
JUN													
21...	1045	2,260	4.9	8.3	211	19.0	8.0	<.010	E.011	<.002	E.05	<.006	.018
JUL													
27...	0845	464	<2.0	8.3	272	16.5	10.5	<.010	<.016	<.002	E.03	<.006	E.003
SEP													
06...	0800	215	<2.0	8.2	279	.5	7.5	<.010	<.016	<.002	<.06	<.006	<.004

Date	Organic carbon, water, unfltrd mg/L (00680)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, unfltrd recoverable, ug/L (01051)	Nickel, water, unfltrd recoverable, ug/L (01067)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR											
28...	--	--	--	--	--	--	--	--	68	68	367
JUN											
21...	2.1	<2	.06	<.8	4.8	3.16	.72	4	73	17	104
JUL											
27...	--	--	--	--	--	--	--	--	48	5	6.3
SEP											
06...	1.6	.31	<.04	.19	E.4	<.06	.78	<2	54	17	9.9

E--Estimated.

12355500 NORTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT

LOCATION.--Lat 48°29'44", long 114°07'36" (NAD 27), in NE$^1/_4$SW$^1/_4$NW$^1/_4$ sec.35, T.32 N., R.20 W., Flathead County, Hydrologic Unit 17010206, on right bank 1.5 mi downstream from Canyon Creek, 3.8 mi upstream from Middle Fork, 8.8 mi northeast of Columbia Falls, and at river mile 162.1.

DRAINAGE AREA.--1,548 mi^2.

PERIOD OF RECORD.--September 1910 to September 1917 (no winter records in water years 1913, 1916, 1917), April 1929 to February 1935 (incomplete), June 1935 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as Flathead River near Columbia Falls 1915-17, 1929-70.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1246: 1911, 1912(M), 1915-17(M), 1929 (M), 1938-39(M), 1946(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,145.59 ft (NGVD 29). September 1910 to September 1917 and April to August 1929, nonrecording gages, and May 1, 1930, to Sept. 30, 1962, water-stage recorder, all at site 2.7 mi downstream at different elevations.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions from tributaries for irrigation of hay meadows upstream from station. Bureau of Reclamation satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,910	1,340	1,380	1,160	2,740	1,240	1,910	4,380	7,670	5,110	1,490	939
2	1,800	1,440	1,330	1,170	2,580	1,230	1,920	4,060	8,640	4,870	1,460	919
3	1,710	2,000	1,290	e1,200	2,460	1,220	1,890	3,900	10,200	4,680	1,420	901
4	1,640	1,870	1,270	e1,150	2,360	1,220	1,870	3,910	11,500	4,330	1,380	877
5	1,580	1,720	1,250	e1,070	2,360	1,230	1,870	4,120	11,500	3,990	1,350	859
6	1,520	1,640	1,230	e1,050	2,250	1,250	1,840	4,830	11,600	3,780	1,310	848
7	1,510	1,630	1,210	e1,120	2,010	1,290	2,030	6,130	12,400	3,680	1,270	839
8	1,470	1,640	1,210	e1,100	1,930	1,340	2,500	7,720	13,500	3,580	1,240	823
9	1,420	1,600	1,200	e1,080	1,910	1,390	2,720	8,350	12,200	3,500	1,210	815
10	1,410	1,560	1,210	e1,070	1,830	1,460	2,650	7,930	12,000	3,510	1,220	1,030
11	1,370	1,520	2,120	e1,120	1,790	1,510	2,590	7,440	12,200	3,320	1,300	1,370
12	1,330	1,470	3,700	e1,100	1,730	1,640	2,520	7,080	12,300	3,100	1,280	1,410
13	1,290	1,420	3,210	e1,000	1,780	1,700	2,440	7,240	11,600	2,920	1,260	1,420
14	1,260	1,400	3,130	e900	1,700	1,670	2,500	8,130	10,400	2,790	1,200	1,390
15	1,240	1,380	2,920	e800	1,540	1,640	2,460	9,520	9,540	2,660	1,160	1,430
16	1,290	1,370	2,650	e1,000	1,450	1,630	2,390	10,800	8,580	2,590	1,120	1,530
17	1,510	1,370	2,450	e1,200	1,420	1,660	2,580	11,800	8,440	2,670	1,110	1,640
18	1,510	1,350	2,290	e1,500	1,420	1,600	2,780	11,800	10,700	2,550	1,270	1,620
19	1,520	1,340	2,180	e2,200	1,440	1,490	2,750	10,600	10,300	2,380	1,270	1,550
20	1,520	1,320	2,140	e3,200	1,470	1,480	2,720	10,200	9,340	2,260	1,190	1,480
21	1,550	1,220	2,020	e4,700	1,390	1,480	2,750	9,130	8,590	2,160	1,130	1,410
22	1,680	1,230	1,860	e5,000	1,410	1,410	2,890	8,090	8,180	2,090	1,090	1,350
23	1,750	1,180	1,580	e4,700	1,380	1,380	3,300	7,350	8,090	2,030	1,090	1,300
24	1,700	1,230	1,630	e4,600	1,330	1,310	3,980	6,700	7,580	1,940	1,100	1,240
25	1,600	1,620	1,680	4,490	1,300	1,320	5,040	6,160	6,760	1,880	1,150	1,200
26	1,530	1,840	1,730	4,150	1,280	1,300	6,180	5,860	6,100	1,830	1,110	1,150
27	1,460	1,670	1,570	3,840	1,260	1,520	6,870	5,860	5,630	1,750	1,060	1,110
28	1,410	1,500	1,360	3,560	1,240	2,470	6,360	6,240	5,570	1,680	1,030	1,080
29	1,390	1,410	1,320	3,310	---	2,610	5,520	6,820	5,830	1,620	995	1,060
30	1,390	1,420	1,380	3,080	---	2,220	4,860	7,140	5,470	1,560	971	1,330
31	1,390	---	1,360	2,890	---	2,000	---	7,090	---	1,520	957	---
TOTAL	46,660	44,700	56,860	69,510	48,760	47,910	94,680	226,380	282,410	88,330	37,193	35,920
MEAN	1,505	1,490	1,834	2,242	1,741	1,545	3,156	7,303	9,414	2,849	1,200	1,197
MAX	1,910	2,000	3,700	5,000	2,740	2,610	6,870	11,800	13,500	5,110	1,490	1,640
MIN	1,240	1,180	1,200	800	1,240	1,220	1,840	3,900	5,470	1,520	957	815
AC-FT	92,550	88,660	112,800	137,900	96,720	95,030	187,800	449,000	560,200	175,200	73,770	71,250
CFSM	0.97	0.96	1.18	1.45	1.12	1.00	2.04	4.72	6.08	1.84	0.78	0.77
IN.	1.12	1.07	1.37	1.67	1.17	1.15	2.28	5.44	6.79	2.12	0.89	0.86

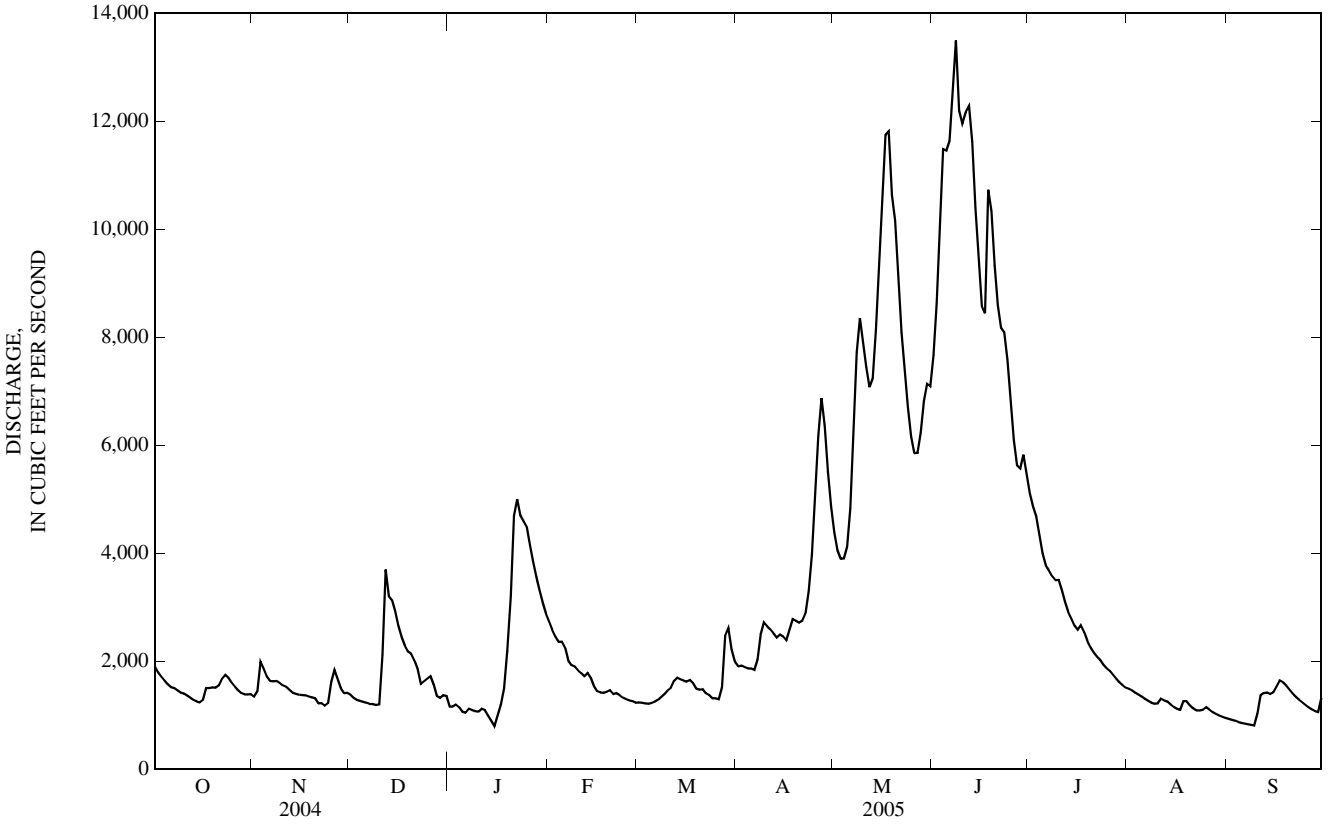
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	1,175	1,193	948	781	751	896	3,305	9,798	10,000	4,050	1,638	1,179
MAX	3,650	3,733	3,388	2,242	2,017	2,597	6,877	15,160	20,780	9,262	3,232	2,653
(WY)	(1952)	(1990)	(1996)	(2005)	(1996)	(1986)	(1943)	(1954)	(1974)	(1954)	(1976)	(1959)
MIN	517	486	433	398	342	406	833	4,986	3,353	1,436	747	552
(WY)	(2002)	(1988)	(2001)	(1988)	(2001)	(1944)	(1975)	(1944)	(1941)	(1977)	(1941)	(2001)

12355500 NORTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	1,002,149		1,079,313			
ANNUAL MEAN	2,738		2,957		2,983	
HIGHEST ANNUAL MEAN					4,721	1974
LOWEST ANNUAL MEAN					1,383	1944
HIGHEST DAILY MEAN	10,500	May 5	13,500	Jun 8	58,000	Jun 9, 1964
LOWEST DAILY MEAN	370	Jan 6	800	Jan 15	200	Nov 24, 1993
ANNUAL SEVEN-DAY MINIMUM	447	Jan 2	852	Sep 3	289	Nov 22, 1993
MAXIMUM PEAK FLOW			14,200	Jun 8	a69,100	Jun 9, 1964
MAXIMUM PEAK STAGE			8.00	Jun 8	b18.60	Jun 9, 1964
INSTANTANEOUS LOW FLOW					c187	Feb 8, 2001
ANNUAL RUNOFF (AC-FT)	1,988,000		2,141,000		2,161,000	
ANNUAL RUNOFF (CFSM)	1.77		1.91		1.93	
ANNUAL RUNOFF (INCHES)	24.08		25.94		26.18	
10 PERCENT EXCEEDS	6,350		7,500		8,450	
50 PERCENT EXCEEDS	1,720		1,640		1,220	
90 PERCENT EXCEEDS	537		1,130		560	

a--From rating curve extended above 30,000 ft^3/s, on basis of slope-area measurement of peak flow.
b--From floodmark.
c--Gage height, 0.87 ft, result of freezeup.
e--Estimated.



12358500 MIDDLE FORK FLATHEAD RIVER NEAR WEST GLACIER, MT

LOCATION.--Lat 48°29'43", long 114°00'33" (NAD 27), in $S^1/_2$ $SW^1/_4$ $NE^1/_4$ sec.34, T.32 N., R.19 W., Flathead County, Hydrologic Unit 17010207, on left bank 0.8 mi downstream from McDonald Creek, 1.3 mi west of West Glacier, and at river mile 3.8.

DRAINAGE AREA.--1,128 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1947, published as "near Belton."

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,128.72 ft (NGVD 29). Prior to Nov. 22, 1950, nonrecording gage at present site and elevation.

REMARKS.--Records excellent except those for estimated daily discharges, which are poor. Bureau of Reclamation satellite at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	1,470	1,170	1,050	2,290	897	1,440	3,500	6,570	4,400	1,210	626
2	1,380	1,470	1,140	1,030	2,170	901	1,480	3,250	7,560	4,240	1,190	618
3	1,300	1,920	1,110	1,050	2,040	894	1,440	3,170	9,000	3,910	1,150	609
4	1,230	1,980	1,090	983	1,970	886	1,420	3,250	12,100	3,550	1,100	600
5	1,160	1,900	1,070	886	1,960	887	1,440	3,580	11,100	3,320	1,050	584
6	1,110	1,810	1,040	876	1,850	906	1,430	4,450	11,600	3,240	1,010	574
7	1,100	1,770	1,020	945	1,690	932	1,560	5,800	11,200	3,220	991	562
8	1,080	1,720	1,020	912	1,630	956	2,170	7,190	11,100	3,120	975	549
9	1,040	1,680	996	885	1,600	990	2,690	7,030	9,740	3,010	961	541
10	1,030	1,640	1,020	878	1,550	1,040	2,610	6,650	9,320	2,870	938	630
11	994	1,620	2,000	905	1,480	1,060	2,500	6,390	9,100	2,670	935	768
12	955	1,580	4,400	893	1,430	1,150	2,420	5,900	8,890	2,530	950	774
13	922	1,510	3,620	780	1,400	1,250	2,360	5,850	8,730	2,490	944	761
14	897	1,460	3,090	e700	1,370	1,250	2,450	6,620	7,770	2,400	891	783
15	932	1,430	2,850	e600	1,290	1,230	2,330	7,780	7,230	2,270	839	840
16	1,080	1,400	2,560	e750	1,200	1,210	2,230	8,960	7,000	2,220	807	845
17	2,040	1,350	2,360	e850	1,140	1,220	2,400	11,200	7,330	2,240	795	832
18	2,200	1,300	2,180	e970	1,090	1,180	2,660	10,500	7,990	2,070	895	819
19	2,090	1,280	2,060	e1,500	1,070	1,110	2,700	8,760	7,100	1,980	869	800
20	1,970	1,250	2,030	e3,800	1,090	1,080	2,690	8,030	6,590	1,920	817	768
21	1,950	1,180	1,920	4,070	1,050	1,070	2,630	7,390	6,400	1,830	782	738
22	2,020	1,150	1,810	4,070	1,010	1,030	2,620	6,740	6,710	1,760	764	712
23	2,040	1,110	1,560	3,730	984	982	2,880	6,190	6,750	1,680	752	694
24	1,980	1,090	1,560	3,660	970	938	3,470	5,710	5,970	1,620	749	681
25	1,870	1,330	1,620	3,570	950	918	4,770	5,350	5,240	1,550	753	676
26	1,770	1,490	1,580	3,350	932	897	5,620	5,160	4,820	1,460	717	657
27	1,670	1,410	1,450	3,150	915	1,020	5,580	5,280	4,560	1,380	690	640
28	1,630	1,320	1,300	2,950	900	1,490	5,010	5,690	4,760	1,330	681	623
29	1,580	1,240	1,190	2,750	---	1,670	4,380	6,220	4,890	1,300	679	608
30	1,550	1,200	1,250	2,570	---	1,600	3,900	6,280	4,630	1,270	661	1,510
31	1,550	---	1,160	2,420	---	1,500	---	6,140	---	1,240	647	---
TOTAL	45,590	44,060	54,226	57,533	39,021	34,144	83,280	194,010	231,750	74,090	27,192	21,422
MEAN	1,471	1,469	1,749	1,856	1,394	1,101	2,776	6,258	7,725	2,390	877	714
MAX	2,200	1,980	4,400	4,070	2,290	1,670	5,620	11,200	12,100	4,400	1,210	1,510
MIN	897	1,090	996	600	900	886	1,420	3,170	4,560	1,240	647	541
MED	1,470	1,440	1,560	1,030	1,330	1,040	2,550	6,190	7,280	2,240	869	678
AC-FT	90,430	87,390	107,600	114,100	77,400	67,720	165,200	384,800	459,700	147,000	53,940	42,490
CFSM	1.30	1.30	1.55	1.65	1.24	0.98	2.46	5.55	6.85	2.12	0.78	0.63
IN.	1.50	1.45	1.79	1.90	1.29	1.13	2.75	6.40	7.64	2.44	0.90	0.71

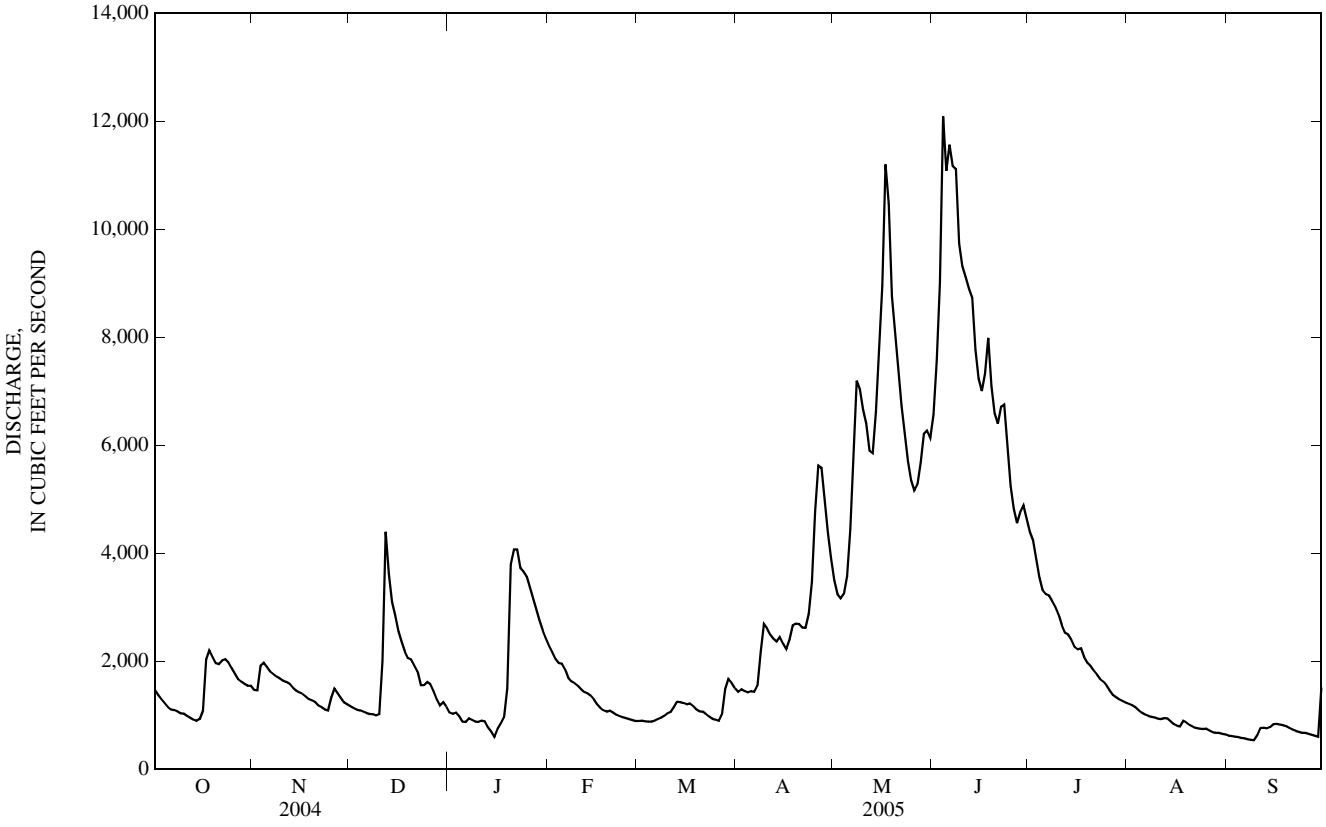
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	1,042	1,159	915	714	715	865	3,224	9,471	9,964	3,911	1,350	953
MAX	3,004	5,598	3,750	2,420	2,686	2,779	7,093	14,670	19,870	8,162	2,364	2,510
(WY)	(1960)	(1990)	(1996)	(1974)	(1971)	(1986)	(1943)	(1957)	(1964)	(1954)	(1976)	(1968)
MIN	367	279	262	282	244	307	664	5,259	3,576	1,249	576	420
(WY)	(1940)	(1953)	(1953)	(2001)	(2001)	(1944)	(1975)	(1941)	(1941)	(1944)	(1941)	(1988)

12358500 MIDDLE FORK FLATHEAD RIVER NEAR WEST GLACIER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	976,658		906,318			
ANNUAL MEAN	2,668		2,483		2,862	
HIGHEST ANNUAL MEAN					4,071	1974
LOWEST ANNUAL MEAN					1,437	1941
HIGHEST DAILY MEAN	10,900	May 5	12,100	Jun 4	92,700	Jun 9, 1964
LOWEST DAILY MEAN	228	Jan 28	541	Sep 9	189	Nov 27, 1952
ANNUAL SEVEN-DAY MINIMUM	346	Jan 23	574	Sep 3	205	Nov 26, 1952
MAXIMUM PEAK FLOW			12,800	Jun 4	a140,000	Jun 9, 1964
MAXIMUM PEAK STAGE			6.50	Jun 4	36.46	Jun 9, 1964
INSTANTANEOUS LOW FLOW			540	Sep 8	b173	Nov 27, 1952
ANNUAL RUNOFF (AC-FT)	1,937,000		1,798,000		2,074,000	
ANNUAL RUNOFF (CFSM)	2.37		2.20		2.54	
ANNUAL RUNOFF (INCHES)	32.21		29.89		34.48	
10 PERCENT EXCEEDS	6,280		6,320		8,320	
50 PERCENT EXCEEDS	1,680		1,480		1,100	
90 PERCENT EXCEEDS	420		778		436	

a--About 140,000 ft^3/s, from rating extended above 31,000 ft^3/s, on basis of a contracted opening measurement at gage height, 19.42 ft, and flood volume-hydrographic comparison.
b--Stage below intakes.
e--Estimated.



12359800 SOUTH FORK FLATHEAD RIVER ABOVE TWIN CREEK, NEAR HUNGRY HORSE, MT

LOCATION.--Lat 47°58'45", long 113°33'36" (NAD 27), in $NE^1/_4NW^1/_4NE^1/_4$ sec.36, T.26 N., R.16 W., Flathead County, Hydrologic Unit 17010209, Flathead National Forest, on left bank 0.1 mi downstream from Tin Creek, 0.4 mi upstream from Twin Creek, 36.3 mi southeast of Hungry Horse, and at river mile 42.2.

DRAINAGE AREA.--1,160 mi^2.

PERIOD OF RECORD.--October 1964 to September 1982, October 1984 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 3,575 ft (NGVD 29), from river-profile map.

REMARKS.--Seasonal records excellent except those for Apr. 1 to May 5, which are fair. No known regulation or diversions upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1964, reached a stage of 20.87 ft, from high-water profile; discharge, 50,900 ft^3/s, by slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				1,090	2,790	6,310	2,970	695	368	1,260	645	
2				1,140	2,590	6,870	2,810	684	361	1,400	883	
3				1,120	2,530	8,130	2,610	663	352	1,090	858	
4				1,160	2,630	9,760	2,350	642	344	934	803	
5				1,170	2,900	8,550	2,180	617	336	829	752	
6				1,160	3,850	8,850	2,080	593	330	743	713	
7				1,350	5,560	7,690	2,020	573	324	699	670	
8				1,980	7,110	6,480	1,960	558	317	665	655	
9				2,120	6,670	5,490	1,870	543	314	629	613	
10				2,000	6,170	4,920	1,790	531	360	595	583	
11				1,910	5,650	4,660	1,660	519	390	568	598	
12				1,840	4,970	4,810	1,530	560	385	543	633	
13				1,810	4,930	4,910	1,460	626	373	535	621	
14				1,860	5,570	4,560	1,410	562	360	534	635	
15				1,720	6,610	4,670	1,350	530	346	511	587	
16				1,680	8,000	5,120	1,300	503	334	491	576	
17				1,910	10,200	5,430	1,330	487	342	477	568	
18				2,020	8,930	5,600	1,230	507	345	461	548	
19				1,970	7,430	4,870	1,150	502	333	453	534	
20				1,900	6,860	4,500	1,100	474	322	519	524	
21				1,840	6,370	4,590	1,050	454	314	626	507	
22				1,800	5,830	5,010	1,010	442	307	622	509	
23				2,000	5,550	4,940	963	432	304	601	489	
24				2,530	5,210	4,280	922	439	310	580	468	
25				3,610	4,860	3,730	893	443	308	557	455	
26				4,300	4,790	3,400	894	427	302	538	527	
27				4,360	5,040	3,230	843	413	297	542	518	
28				3,930	5,580	3,280	802	401	294	547	498	
29				3,440	6,180	3,280	770	390	294	547	433	
30				3,090	6,240	3,190	740	382	404	541	446	
31				---	6,020	---	714	376	---	534	---	
TOTAL				63,810	173,620	161,110	45,761	15,968	10,070	20,171	17,849	
MEAN				2,127	5,601	5,370	1,476	515	336	651	595	
MAX				4,360	10,200	9,760	2,970	695	404	1,400	883	
MIN				1,090	2,530	3,190	714	376	294	453	433	
AC-FT				126,600	344,400	319,600	90,770	31,670	19,970	40,010	35,400	
CFSM				1.83	4.83	4.63	1.27	0.44	0.29	0.56	0.51	
IN.				2.05	5.57	5.17	1.47	0.51	0.32	0.65	0.57	

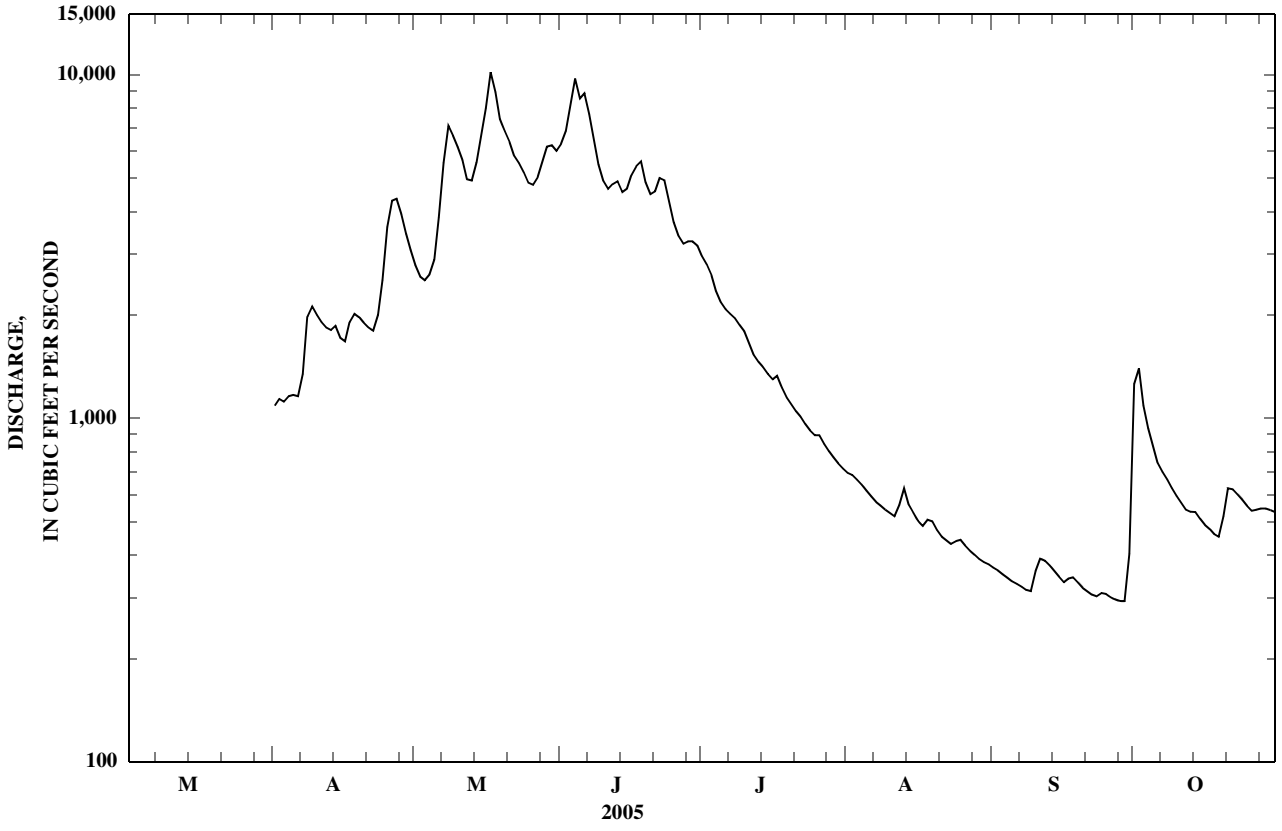
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1982 AND FOR SEASONS 1985 - 2005*

MEAN	479	520	588	2,501	7,624	8,272	2,668	772	576	576	699	514
MAX	1,197	2,285	1,342	4,490	12,580	15,910	5,904	1,331	1,853	1,878	3,098	1,323
(WY)	(1974)	(1971)	(1972)	(1990)	(1997)	(1974)	(1975)	(1972)	(1985)	(1986)	(1990)	(1976)
MIN	207	201	252	464	4,738	2,522	844	339	245	225	204	249
(WY)	(1980)	(1980)	(1980)	(1975)	(1977)	(1987)	(1977)	(1988)	(1988)	(1988)	(1988)	(1972)

12359800 SOUTH FORK FLATHEAD RIVER ABOVE TWIN CREEK, NEAR HUNGRY HORSE, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		FOR 1985 - 2005 SEASONS		WATER YEARS 1965 - 1982*	
ANNUAL MEAN					2,310	
HIGHEST ANNUAL MEAN					2,988	1971
LOWEST ANNUAL MEAN					1,175	1977
HIGHEST DAILY MEAN	10,200	May 17	29,800	May 17, 1997	29,500	Jun 16, 1974
LOWEST DAILY MEAN	a294	Sep 28	176	Nov 30, 1987	135	Jan 29, 1980
ANNUAL SEVEN-DAY MINIMUM					155	Jan 26, 1980
MAXIMUM PEAK FLOW	10,800	May 17	29,100	May 17, 1997	30,200	Jun 16, 1974
MAXIMUM PEAK STAGE	10.67	May 17	15.01	May 17, 1997	15.20	Jun 16, 1974
INSTANTANEOUS LOW FLOW					b127	Nov 30, 1979
ANNUAL RUNOFF (AC-FT)					1,673,000	
ANNUAL RUNOFF (CFSM)					1.99	
ANNUAL RUNOFF (INCHES)					27.06	
10 PERCENT EXCEEDS					7,420	
50 PERCENT EXCEEDS					646	
90 PERCENT EXCEEDS					290	

*--During periods of operation. Seasonal records only from October 1984 to current year.
a--Also Sept. 29.
b--Gage height, 4.13 ft.



12362000 HUNGRY HORSE RESERVOIR NEAR HUNGRY HORSE, MT

LOCATION.--Lat 48°20'28", long 114°00'48" (NAD 27), in NE$^1/_4$ NE$^1/_4$ NW$^1/_4$ sec.27, T.30 N., R.19 W., Flathead County, Hydrologic Unit 17010209, in block 14 of Hungry Horse Dam on South Fork Flathead River, 3.8 mi southeast of Hungry Horse, and at river mile 5.3.

DRAINAGE AREA.--1,654 mi^2.

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

GAGE.--Water-stage recorder equipped with remote indicator in power house. Elevation of gage is 3,196 ft (NGVD 29) (levels by U.S. Bureau of Reclamation). During construction and prior to May 1, 1953, various types of nonrecording gages were used.

REMARKS.--Reservoir and flow completely controlled by concrete arch-gravity dam; construction began in 1948; completed in 1952. Storage began Sept. 21, 1951. Usable capacity, 3,451,000 acre-ft, top of 1.0 ft flash-boards; 3,427,000 acre-ft between elevations 3,196 ft, lowest outlet, and 3,560 ft, controlled spillway elevation. Dead storage, 39,730 acre-ft below elevation 3,196 ft. Minimum operating level, 445,400 acre-ft, elevation, 3,336 ft for on-site power generation. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Water is used for power production, flood control, irrigation and recreation. Controlled spillway is an adjustable ring gate with 1.0 ft flashboards. Figures given herein represent usable contents. Capacity table in use is dated August 1969.

COOPERATION.--Capacity table and daily elevations provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,461,000 acre-ft, July 3, 4, 1955, Aug. 6, 1956; maximum elevation observed, 3,561.40 ft, July 3, 4, 1955; minimum contents observed since normal low operating level reached in May 1952, 607,700 acre-ft, Jan. 13, 1953, elevation, 3,362.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,424,000 acre-ft, June 30, elevation, 3,559.86 ft; minimum, 2,918,000 acre-ft, Sept. 28, elevation, 3,537.46 ft.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FT)

Elevation	Contents
2,500	2,185,000
3,530	2,761,000
3,560	3,427,000

ELEVATION ABOVE NGVD 1929, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 2359 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,539.93	3,541.52	3,541.12	3,542.22	3,544.56	3,545.86	3,548.81	3,546.67	3,555.67	3,559.80	3,551.21	3,539.57
2	3,539.93	3,541.63	3,541.10	3,542.19	3,544.72	3,545.85	3,548.93	3,546.40	3,556.28	3,559.73	3,550.85	3,539.43
3	3,539.93	3,541.68	3,541.08	3,542.15	3,544.86	3,545.85	3,549.07	3,546.20	3,556.80	3,559.63	3,550.47	3,539.29
4	3,539.93	3,541.65	3,541.09	3,542.11	3,544.94	3,545.84	3,549.23	3,546.04	3,557.33	3,559.49	3,550.09	3,539.18
5	3,539.92	3,541.68	3,541.06	3,542.07	3,545.13	3,545.82	3,549.39	3,545.95	3,557.73	3,559.36	3,549.71	3,539.07
6	3,539.88	3,541.60	3,541.02	3,541.98	3,545.19	3,545.84	3,549.53	3,545.99	3,558.09	3,559.20	3,549.32	3,538.92
7	3,539.90	3,541.59	3,541.05	3,541.88	3,545.27	3,545.81	3,549.72	3,546.29	3,558.31	3,559.01	3,548.94	3,538.76
8	3,539.88	3,541.53	3,541.04	3,541.86	3,545.36	3,545.83	3,550.03	3,546.78	3,558.41	3,558.85	3,548.54	3,538.61
9	3,539.86	3,541.45	3,540.96	3,541.80	3,545.44	3,545.91	3,550.33	3,547.19	3,558.39	3,558.65	3,548.14	3,538.51
10	3,539.83	3,541.37	3,541.07	3,541.73	3,545.48	3,545.98	3,550.61	3,547.52	3,558.33	3,558.45	3,547.73	3,538.48
11	3,539.81	3,541.32	3,541.34	3,541.68	3,545.54	3,546.03	3,550.77	3,547.75	3,558.22	3,558.27	3,547.34	3,538.47
12	3,539.78	3,541.22	3,541.57	3,541.55	3,545.61	3,546.16	3,550.75	3,547.91	3,558.20	3,558.03	3,546.96	3,538.44
13	3,539.75	3,541.14	3,541.75	3,541.56	3,545.72	3,546.30	3,550.63	3,548.09	3,558.18	3,557.77	3,546.58	3,538.40
14	3,539.65	3,541.02	3,541.96	3,541.45	3,545.77	3,546.43	3,550.36	3,548.32	3,558.32	3,557.55	3,546.17	3,538.36
15	3,539.68	3,540.94	3,542.04	3,541.32	3,545.81	3,546.55	3,550.03	3,548.73	3,558.62	3,557.28	3,545.77	3,538.32
16	3,539.75	3,540.92	3,542.04	3,541.16	3,545.85	3,546.66	3,549.65	3,549.29	3,558.83	3,557.03	3,545.37	3,538.29
17	3,539.94	3,540.84	3,541.99	3,541.14	3,545.85	3,546.79	3,549.38	3,550.15	3,559.00	3,556.82	3,544.93	3,538.24
18	3,540.11	3,540.83	3,542.04	3,541.19	3,545.85	3,546.90	3,549.06	3,550.74	3,558.95	3,556.51	3,544.58	3,538.23
19	3,540.24	3,540.76	3,542.11	3,541.42	3,545.83	3,546.98	3,548.75	3,551.20	3,558.85	3,556.04	3,544.19	3,538.17
20	3,540.38	3,540.73	3,542.10	3,541.75	3,545.85	3,547.09	3,548.45	3,551.52	3,558.84	3,555.57	3,543.77	3,538.14
21	3,540.56	3,540.70	3,542.14	3,542.19	3,545.86	3,547.16	3,548.08	3,551.84	3,559.01	3,555.10	3,543.37	3,538.09
22	3,540.77	3,540.70	3,542.18	3,542.61	3,545.85	3,547.22	3,547.76	3,552.06	3,559.20	3,554.65	3,542.94	3,538.01
23	3,540.91	3,540.64	3,542.23	3,542.99	3,545.86	3,547.25	3,547.47	3,552.25	3,559.37	3,554.28	3,542.49	3,537.96
24	3,541.01	3,540.78	3,542.19	3,543.27	3,545.86	3,547.28	3,547.30	3,552.52	3,559.45	3,553.93	3,542.13	3,537.90
25	3,541.12	3,540.94	3,542.28	3,543.48	3,545.87	3,547.31	3,547.25	3,552.76	3,559.50	3,553.61	3,541.71	3,537.81
26	3,541.18	3,541.05	3,542.25	3,543.67	3,545.87	3,547.37	3,547.23	3,553.00	3,559.50	3,553.36	3,541.29	3,537.73
27	3,541.25	3,541.08	3,542.29	3,543.83	3,545.87	3,547.61	3,547.31	3,553.29	3,559.60	3,553.03	3,540.92	3,537.61
28	3,541.31	3,541.08	3,542.29	3,543.94	3,545.86	3,547.95	3,547.24	3,553.68	3,559.68	3,552.68	3,540.59	3,537.46
29	3,541.37	3,541.12	3,542.23	3,544.13	---	3,548.23	3,547.09	3,554.13	3,559.79	3,552.29	3,540.24	3,537.52
30	3,541.40	3,541.10	3,542.25	3,544.31	---	3,548.46	3,546.92	3,554.59	3,559.86	3,551.95	3,540.01	3,537.58
31	3,541.48	---	3,542.26	3,544.46	---	3,548.63	---	3,555.04	---	3,551.59	3,539.77	---
TOTAL	109750.44	106234.61	109794.12	109813.09	99275.53	109948.95	106467.13	110043.89	106756.31	110249.51	109906.12	106150.55
MEAN	3,540.34	3,541.15	3,541.75	3,542.36	3,545.55	3,546.74	3,548.91	3,549.80	3,558.54	3,556.44	3,545.36	3,538.35
MAX	3,541.48	3,541.68	3,542.29	3,544.46	3,545.87	3,548.63	3,550.77	3,555.04	3,559.86	3,559.80	3,551.21	3,539.57
MIN	3,539.65	3,540.64	3,540.96	3,541.14	3,544.56	3,545.81	3,546.92	3,545.95	3,555.67	3,551.59	3,539.77	3,537.46

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT END OF MONTH

3,005	2,997	3,022	3,070	3,102	3,164	3,125	3,311	3,424	3,231	2,968	2,920

CHANGE IN CONTENTS, IN ACRE-FEET

+33,000	-8,000	+25,000	+48,000	+32,000	+62,000	-39,000	+186,000	+113,000	-193,000	-263,000	-48,000

CALENDAR YEAR 2004 . . . . . .+356,000
WATER YEAR 2005. . . . . -52,000

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT

LOCATION.--Lat 48°21'24", long 114°02'12" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.16, T.30 N., R.19 W., Flathead County, Hydrologic Unit 17010209, on right bank 1.7 mi downstream from Hungry Horse Dam, 6.8 mi east of Columbia Falls, and at river mile 3.5.

DRAINAGE AREA.--1,663 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1910 to January 1911 (discharge measurements only), February 1911 to September 1913 (no winter records), October 1913 to August 1916 (scattered daily discharge only), water years 1917-22 (annual maximum), April 1923 to November 1924 (no winter records), July to October 1925, May to November 1927, May 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1316: 1923-24(M), 1926-27(M), 1932(M), 1935-36(M). WSP 1636: 1958 (adjusted runoff).

GAGE.--Water-stage recorder. Elevation of gage is 3,040 ft (NGVD 29) (levels by the U.S. Bureau of Reclamation). September 1910 to September 1916, nonrecording gage, Apr. 23, 1923, to Sept. 30, 1928, water-stage recorder at site 3 mi downstream at different elevation. Oct. 1, 1928, to Sept. 30, 1952, water-stage recorder at site 1.5 mi downstream at different elevation.

REMARKS.--Water-discharge records excellent . Flow regulated by Hungry Horse Reservoir since Sept. 21, 1951 (see preceding page). U.S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--77 years (water years, 1929-2005), 3,491 ft^3/s, 28.51 in/yr, 2,529,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir since Oct. 1, 1951.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 46,200 ft^3/s, June 19, 1916, gage height, 16.6 ft, site and elevation then in use, from rating curve extended above 20,000 ft^3/s; minimum observed, 7.3 ft^3/s, Sept. 24, 1951, gage height, 0.52 ft, dam closure, site and elevation then in use; minimum daily, 7.3 ft^3/s, Sept. 24, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft^3/s, June 8, gage height, 10.70 ft; minimum daily, 506 ft^3/s, Mar. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,670	1,320	1,370	1,500	1,140	1,170	616	7,420	3,740	4,880	5,320	2,550
2	1,330	1,330	1,390	1,480	1,120	1,170	603	7,400	4,760	4,940	5,330	2,040
3	1,330	1,900	1,400	1,450	1,040	1,180	593	6,660	7,860	4,940	5,330	1,780
4	1,340	2,430	1,410	1,460	1,030	1,220	601	6,260	9,020	4,910	5,350	1,590
5	1,320	2,410	1,420	1,560	1,040	1,230	617	6,270	8,880	4,910	5,350	1,660
6	1,320	2,410	1,410	1,700	1,030	1,230	618	6,270	9,370	4,900	5,330	1,650
7	1,310	2,410	1,400	1,730	1,040	1,220	617	6,270	10,600	4,900	5,340	1,740
8	1,310	2,410	1,470	1,720	1,010	1,000	605	6,280	10,100	4,850	5,320	1,750
9	1,310	2,410	1,430	1,740	e900	850	626	6,270	9,890	4,860	5,330	1,760
10	1,300	2,410	1,440	1,750	e900	735	624	6,250	9,820	4,850	5,360	1,710
11	1,280	2,410	1,430	1,740	998	626	1,760	6,250	9,480	4,820	5,360	1,470
12	1,320	2,410	1,440	1,700	934	600	3,660	6,230	9,450	4,890	5,350	1,170
13	1,310	2,430	1,480	1,760	902	506	5,670	6,230	8,460	4,900	5,360	967
14	1,320	2,400	1,440	2,020	e800	529	7,050	6,240	5,570	4,890	5,360	1,010
15	1,320	2,410	1,930	2,190	e800	508	7,360	6,270	4,270	4,870	5,360	1,010
16	1,320	2,110	2,600	2,510	e860	531	7,360	6,260	5,250	4,900	5,340	928
17	1,330	1,930	2,610	2,300	e990	544	7,390	6,300	6,950	4,900	5,360	871
18	1,300	1,880	2,220	1,840	e1,100	557	7,450	6,300	9,070	5,490	5,360	849
19	1,360	1,880	1,710	1,380	e1,110	549	7,430	6,300	9,050	7,230	5,370	838
20	1,330	1,420	1,490	1,800	e1,100	660	e7,160	6,270	6,780	7,280	5,390	849
21	1,330	1,420	1,460	1,320	e1,100	675	e7,220	6,260	4,960	7,280	5,370	935
22	1,330	1,390	1,440	1,090	e1,200	734	e7,210	6,260	4,910	6,970	5,400	1,080
23	1,330	1,410	1,410	1,080	e1,150	829	7,410	6,180	4,880	5,350	5,380	1,100
24	1,310	1,410	1,420	1,620	1,070	926	7,410	4,580	4,910	5,340	5,390	1,200
25	1,310	1,410	1,420	2,170	1,070	939	7,420	4,410	4,880	5,330	5,410	1,270
26	1,300	1,400	1,430	2,170	1,090	1,010	7,460	4,370	4,880	4,050	5,420	1,320
27	1,320	1,390	1,410	2,180	1,150	953	7,400	4,070	4,300	5,220	4,840	1,450
28	1,310	1,400	1,430	2,170	1,180	736	7,380	3,670	3,650	5,340	4,260	1,560
29	1,310	1,380	1,430	1,170	---	613	7,420	3,670	3,650	5,310	3,730	1,520
30	1,310	1,370	1,430	1,130	---	620	7,400	3,650	4,370	5,290	3,480	1,420
31	1,310	---	1,430	1,150	---	629	---	3,660	---	5,320	3,090	---
TOTAL	41,200	56,700	48,200	52,580	28,854	25,279	142,140	178,780	203,760	163,910	158,740	41,047
MEAN	1,329	1,890	1,555	1,696	1,030	815	4,738	5,767	6,792	5,287	5,121	1,368
MAX	1,670	2,430	2,610	2,510	1,200	1,230	7,460	7,420	10,600	7,280	5,420	2,550
MIN	1,280	1,320	1,370	1,080	800	506	593	3,650	3,650	4,050	3,090	838
MED	1,320	1,890	1,430	1,720	1,040	735	7,180	6,260	6,180	4,910	5,350	1,370
AC-FT	81,720	112,500	95,600	104,300	57,230	50,140	281,900	354,600	404,200	325,100	314,900	81,420
CFSM	0.80	1.14	0.93	1.02	0.62	0.49	2.85	3.47	4.08	3.18	3.08	0.82
IN.	0.92	1.27	1.08	1.18	0.65	0.57	3.18	4.00	4.56	3.67	3.55	0.92

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR

MEAN	1,866	1,756	1,961	2,477	1,607	1,824	4,082	8,792	8,692	2,148	844	562
CFSM	1.12	1.06	1.18	1.49	0.97	1.10	2.45	5.29	5.23	1.29	0.51	0.34
IN.	1.29	1.18	1.36	1.72	1.01	1.26	2.74	6.10	5.83	1.49	0.59	0.38
AC-FT	114,720	104,500	120,600	152,300	89,230	112,140	242,900	540,600	517,200	132,100	51,900	33,420

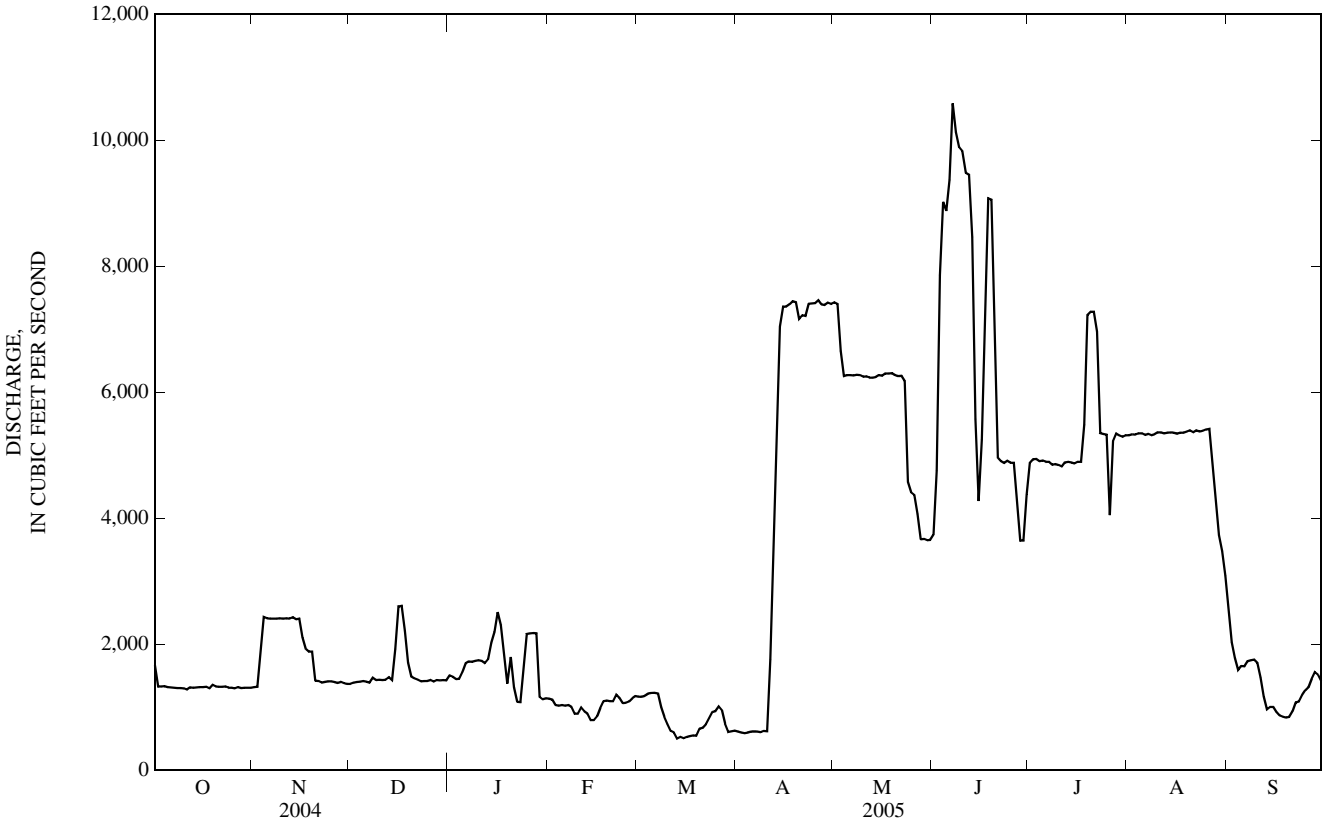
OBSERVED

CALENDAR YEAR 2004	TOTAL	1,046,065	MEAN	2,858	MAX	6,180	MIN	937	AC-FT	2,075,000
WATER YEAR 2005	TOTAL	1,141,190	MEAN	3,127	MAX	10,600	MIN	506	AC-FT	2,264,000

ADJUSTED

CALENDAR YEAR 2004	TOTAL	1,225,581	MEAN	3,349	CFSM	2.01	IN	27.41	AC-FT	2,431,000
WATER YEAR 2005	TOTAL	1,115,004	MEAN	3,055	CFSM	1.84	IN	24.94	AC-FT	2,212,000

e--Estimated.



12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1964 to September 1968, March 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Mar. 30, 1979.

REMARKS.--Prior to March 1979, thermograph records furnished by Montana Department of Fish, Wildlife, and Parks. Daily temperature record is excellent for season.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 19.0°C Aug. 9-11, 1966, Aug. 2-6, 1968, Aug. 6, 2003; minimum, 2.0°C on many days during winter most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 17.5°C, Aug. 9; minimum, 3.5°C, many days during January through April.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.5	12.0	12.0	4.5	4.0	4.0	4.5	4.5	4.5	4.0	4.0	4.0
2	12.0	11.5	11.5	5.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0
3	12.0	11.5	11.5	5.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0
4	12.0	11.5	11.5	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.0	4.0
5	12.0	11.5	11.5	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.0	4.0
6	12.0	11.5	12.0	4.5	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0
7	12.0	11.5	11.5	4.5	4.0	4.5	4.5	4.0	4.5	4.0	3.5	4.0
8	11.5	11.0	11.5	4.5	4.0	4.0	5.0	4.5	5.0	4.0	3.5	4.0
9	11.5	11.0	11.5	4.5	4.5	4.5	5.0	4.5	5.0	4.0	4.0	4.0
10	11.5	11.0	11.0	4.5	4.5	4.5	5.0	5.0	5.0	4.0	3.5	3.5
11	11.5	11.0	11.0	4.5	4.0	4.5	5.0	4.5	4.5	3.5	3.5	3.5
12	11.5	11.0	11.0	4.5	4.0	4.5	5.0	4.0	4.5	4.0	3.5	3.5
13	11.5	11.0	11.0	4.5	4.0	4.5	4.5	4.0	4.0	4.0	3.5	4.0
14	11.5	11.0	11.0	4.5	4.0	4.5	4.5	4.0	4.0	4.0	3.5	3.5
15	11.5	10.5	11.0	4.5	4.0	4.5	4.5	4.0	4.0	4.0	3.5	3.5
16	11.0	10.5	11.0	5.0	4.5	4.5	4.5	4.0	4.5	4.0	3.5	4.0
17	11.0	9.5	10.0	5.0	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0
18	10.0	7.0	8.5	5.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0
19	7.0	4.5	5.5	5.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0
20	4.5	4.5	4.5	5.0	4.5	4.5	4.5	4.0	4.5	4.0	3.5	4.0
21	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.0	3.5	4.0
22	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0
23	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0
24	4.5	4.0	4.0	4.5	4.5	4.5	4.5	4.0	4.5	4.0	3.5	4.0
25	4.5	4.0	4.0	5.0	4.5	4.5	4.5	4.0	4.0	4.0	3.5	4.0
26	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.0	4.0	4.0
27	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0
28	4.5	4.0	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.0	4.0	4.0
29	4.5	4.0	4.5	4.5	4.0	4.0	4.5	4.0	4.5	4.0	4.0	4.0
30	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0
31	4.5	4.0	4.5	---	---	---	4.0	4.0	4.0	4.0	4.0	4.0
MONTH	12.5	4.0	8.5	5.0	4.0	4.5	5.0	4.0	4.5	4.0	3.5	4.0

12362500 SOUTH FORK FLATHEAD RIVER NEAR COLUMBIA FALLS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
6	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
7	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
8	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
9	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
10	4.0	3.5	4.0	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0
11	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
12	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
13	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
14	4.0	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
15	4.0	4.0	4.0	4.5	4.0	4.0	4.0	3.5	4.0	4.5	4.0	4.0
16	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
17	4.0	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0
18	4.0	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0
19	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.0	4.0	4.0
20	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.5	4.0	4.0
21	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
22	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
23	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
24	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
25	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
26	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
27	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
28	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
29	---	---	---	4.0	4.0	4.0	4.5	4.0	4.0	4.5	4.0	4.0
30	---	---	---	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.5
31	---	---	---	4.5	4.0	4.0	---	---	---	4.5	4.0	4.0
MONTH	4.0	3.5	4.0	4.5	3.5	4.0	4.5	3.5	4.0	4.5	4.0	4.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.0	4.0	4.0	12.5	11.5	12.0	16.5	15.5	16.0	15.0	13.5	14.0
2	4.0	4.0	4.0	12.5	10.5	11.5	16.5	15.0	16.0	15.0	14.5	14.5
3	4.5	4.0	4.0	12.5	11.0	11.5	16.5	15.0	15.5	15.0	14.0	14.5
4	4.5	4.0	4.0	12.5	11.5	12.0	16.0	14.5	15.5	15.0	14.0	14.5
5	4.5	4.0	4.0	13.5	12.0	13.0	16.0	15.0	15.5	15.0	13.5	14.5
6	4.5	4.0	4.5	14.0	12.5	13.5	16.5	15.0	15.5	15.0	14.0	14.5
7	4.5	4.0	4.0	13.5	11.5	12.5	17.0	15.5	16.0	14.5	13.5	14.0
8	4.5	4.0	4.0	14.0	12.5	13.0	16.5	15.5	16.0	15.0	14.0	14.5
9	4.5	4.0	4.5	13.0	11.5	12.5	17.5	15.5	16.5	15.0	13.5	14.5
10	4.5	4.0	4.5	14.0	12.0	13.5	16.0	12.5	15.0	14.5	12.5	13.5
11	4.5	4.0	4.5	14.0	13.0	13.5	14.5	12.5	13.5	13.5	12.5	13.0
12	4.5	4.0	4.5	14.5	13.5	14.0	16.5	13.5	15.0	14.0	13.0	13.5
13	4.5	4.0	4.0	14.0	11.0	12.5	17.0	15.0	16.5	14.0	13.5	14.0
14	4.5	4.0	4.5	13.0	12.0	12.5	16.5	15.0	15.5	14.0	13.5	14.0
15	4.5	4.0	4.5	14.0	12.5	13.0	16.0	14.5	15.0	14.0	13.5	13.5
16	4.5	4.0	4.5	14.0	11.5	13.0	16.0	14.5	15.0	13.5	12.5	13.5
17	4.5	4.5	4.5	14.0	13.0	13.5	16.5	15.0	15.5	14.0	13.0	13.5
18	4.5	4.0	4.5	15.0	13.0	14.0	15.0	12.0	13.5	13.0	12.0	12.5
19	4.5	4.5	4.5	15.0	13.0	14.0	15.5	14.0	15.0	13.5	13.0	13.0
20	4.5	4.0	4.5	14.5	13.5	14.0	16.0	14.0	15.0	13.5	12.0	13.0
21	4.5	4.0	4.5	15.0	13.0	14.0	16.0	14.5	15.0	13.0	12.0	13.0
22	8.0	4.0	6.0	14.5	13.5	14.0	16.0	13.5	14.5	13.0	12.5	13.0
23	10.5	7.5	9.0	14.5	12.5	13.5	14.5	12.5	14.0	13.0	11.0	12.0
24	10.5	9.0	10.5	14.5	13.5	14.0	15.0	12.0	13.5	12.5	10.5	11.5
25	12.0	10.5	11.0	15.5	13.0	14.0	15.0	13.5	14.0	13.0	12.0	12.5
26	12.5	11.5	12.0	16.5	15.0	15.5	15.0	14.0	14.5	13.0	12.5	12.5
27	13.0	12.5	12.5	16.5	15.0	15.5	15.5	14.0	15.0	13.0	11.0	12.5
28	13.0	12.0	12.5	16.0	15.5	16.0	15.5	14.5	15.0	12.5	11.5	12.0
29	12.5	11.5	12.0	16.0	15.5	15.5	15.5	12.0	14.0	12.5	12.0	12.5
30	12.5	11.5	12.0	17.0	14.0	15.5	14.5	11.5	13.0	12.5	12.5	12.5
31	---	---	---	16.5	15.5	16.0	14.0	12.0	13.0	---	---	---
MONTH	13.0	4.0	6.5	17.0	10.5	13.5	17.5	11.5	15.0	15.0	10.5	13.5

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT

LOCATION.--Lat 48°21'43", long 114°11'02" (NAD 27), in $NW^1/_4NW^1/_4SE^1/_4$ sec.17, T.30 N., R.20 W., Flathead County, Hydrologic Unit 17010208, on right bank 200 ft downstream from county road bridge at Columbia Falls, 5.7 mi downstream from South Fork, and at river mile 143.0.
DRAINAGE AREA.--4,464 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1922 to September 1923 (fragmentary), June 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.
REVISED RECORDS.--WSP 1092: 1923. WSP 1216: Drainage area. WSP 1636: 1958 (adjusted runoff).
GAGE.--Water-stage recorder. Elevation of gage is 2,977.67 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 12, 1928, nonrecording gage on bridge 200 ft upstream at elevation 0.19 ft higher.
REMARKS.--Water-discharge records excellent. South Fork Flathead River, which contributes about one-third of flow, is completely regulated by Hungry Horse Reservoir 10.9 mi upstream since Sept. 21, 1951 (see station number 12362000). Bureau of Reclamation satellite telemeter at station.
AVERAGE DISCHARGE.--77 years, 9,578 ft^3/s, 29.14 in/yr, 6,937,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir since Oct. 1, 1951.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176,000 ft^3/s, June 9, 1964, gage height, 25.58 ft, from floodmarks, from rating curve extended above 95,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 798 ft^3/s, Dec. 8, 1929, gage height, -0.08 ft.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of 22.7 ft, from floodmarks, discharge, 142,000 ft^3/s, from rating curve extended above 95,000 ft^3/s on basis of slope-area measurement of peak flow in 1964.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,600 ft^3/s, June 8, gage height, 11.96 ft; minimum daily, 3,190 ft^3/s, Mar. 20, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,290	4,260	4,100	3,740	6,420	3,390	4,100	15,800	18,500	15,400	8,260	4,480
2	4,800	4,220	4,020	3,750	6,100	3,390	4,100	15,200	21,100	15,100	8,230	3,890
3	4,560	5,520	3,980	3,710	5,750	3,370	4,060	14,300	26,300	14,600	8,140	3,560
4	4,420	6,520	3,920	3,680	5,550	3,400	4,000	13,800	32,400	13,900	8,060	3,290
5	4,280	6,260	3,910	3,520	5,520	3,410	4,030	14,300	31,900	13,300	7,980	3,280
6	4,160	6,050	3,860	3,500	5,350	3,460	3,990	15,500	32,500	12,900	7,880	3,260
7	4,100	5,960	3,810	3,850	4,960	3,500	4,140	17,900	34,100	12,800	7,800	3,300
8	4,040	5,910	3,850	3,710	4,720	3,390	4,950	20,900	35,800	12,500	7,730	3,300
9	3,960	5,850	3,790	3,690	4,630	3,270	6,080	21,800	32,500	12,300	7,710	3,290
10	3,900	5,760	3,780	3,700	4,500	3,260	6,070	21,100	31,500	12,200	7,690	3,520
11	3,810	5,690	4,570	3,710	4,400	3,200	6,690	20,500	31,000	11,700	7,780	3,940
12	3,760	5,620	9,280	3,870	4,240	3,320	8,420	19,700	31,000	11,400	7,780	3,740
13	3,690	5,520	8,950	3,570	4,190	3,450	10,200	19,500	29,600	11,000	7,770	3,440
14	3,630	5,410	8,010	3,630	4,110	3,460	11,900	20,900	25,300	10,700	7,710	3,350
15	3,600	5,340	7,890	3,520	3,870	3,400	12,200	23,200	21,900	10,300	7,600	3,450
16	3,710	5,090	8,170	3,810	3,660	3,380	12,000	25,800	21,600	10,100	7,490	3,470
17	4,700	4,800	7,700	3,940	3,680	3,460	12,300	28,900	22,800	10,300	7,470	3,530
18	5,180	4,660	7,070	4,110	3,760	3,360	12,900	29,400	27,900	10,300	7,640	3,490
19	5,140	4,610	6,290	4,470	3,780	3,230	12,900	26,400	27,100	12,100	7,760	3,420
20	4,970	4,180	5,900	7,630	3,840	3,190	12,900	25,100	23,800	11,900	7,640	3,290
21	4,940	3,960	5,660	9,980	3,700	3,250	12,900	23,500	20,900	11,800	7,510	3,250
22	5,130	3,870	5,350	11,100	3,690	3,190	12,900	21,900	20,500	11,500	7,460	3,310
23	5,260	3,820	4,740	10,300	3,540	3,220	13,400	20,600	20,400	9,400	7,440	3,300
24	5,180	3,850	4,550	10,400	3,460	3,220	14,600	18,200	19,500	9,190	7,430	3,260
25	4,980	4,350	4,830	10,600	3,420	3,220	16,700	16,900	18,000	9,030	7,510	3,320
26	4,770	4,990	4,900	10,100	3,390	3,240	18,800	16,300	16,900	7,680	7,480	3,290
27	4,600	4,730	4,660	9,600	3,400	3,430	19,700	16,100	15,800	8,600	6,900	3,310
28	4,470	4,440	4,320	9,090	3,410	4,460	19,100	16,200	15,000	8,600	6,290	3,440
29	4,390	4,190	4,090	7,740	---	5,140	17,800	17,200	15,400	8,490	5,710	3,390
30	4,350	4,160	4,090	7,080	---	4,690	16,600	17,800	15,400	8,370	5,450	3,790
31	4,360	---	4,080	6,710	---	4,320	---	17,700	---	8,320	4,950	---
TOTAL	138,130	149,590	164,120	181,810	121,040	108,670	320,430	612,400	736,400	345,780	230,250	103,950
MEAN	4,456	4,986	5,294	5,865	4,323	3,505	10,680	19,750	24,550	11,150	7,427	3,465
MAX	5,290	6,520	9,280	11,100	6,420	5,140	19,700	29,400	35,800	15,400	8,260	4,480
MIN	3,600	3,820	3,780	3,500	3,390	3,190	3,990	13,800	15,000	7,680	4,950	3,250
AC-FT	274,000	296,700	325,500	360,600	240,100	215,500	635,600	1,215,000	1,461,000	685,900	456,700	206,200
CFSM	1.00	1.12	1.19	1.31	0.97	0.79	2.39	4.43	5.50	2.50	1.66	0.78
IN.	1.15	1.25	1.37	1.52	1.01	0.91	2.67	5.10	6.14	2.88	1.92	0.87

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR

MEAN	4,993	4,852	5,700	6,645	4,730	4,513	10,030	22,780	26,450	8,016	3,150	2,659
CFSM	1.12	1.09	1.28	1.49	1.06	1.01	2.25	5.10	5.93	1.80	0.71	0.60
IN.	1.29	1.21	1.47	1.72	1.14	1.17	2.51	5.88	6.61	2.07	0.81	0.66
AC-FT	307,000	288,700	350,500	408,600	272,100	277,500	596,600	1,401,000	1,574,000	492,900	193,700	158,200

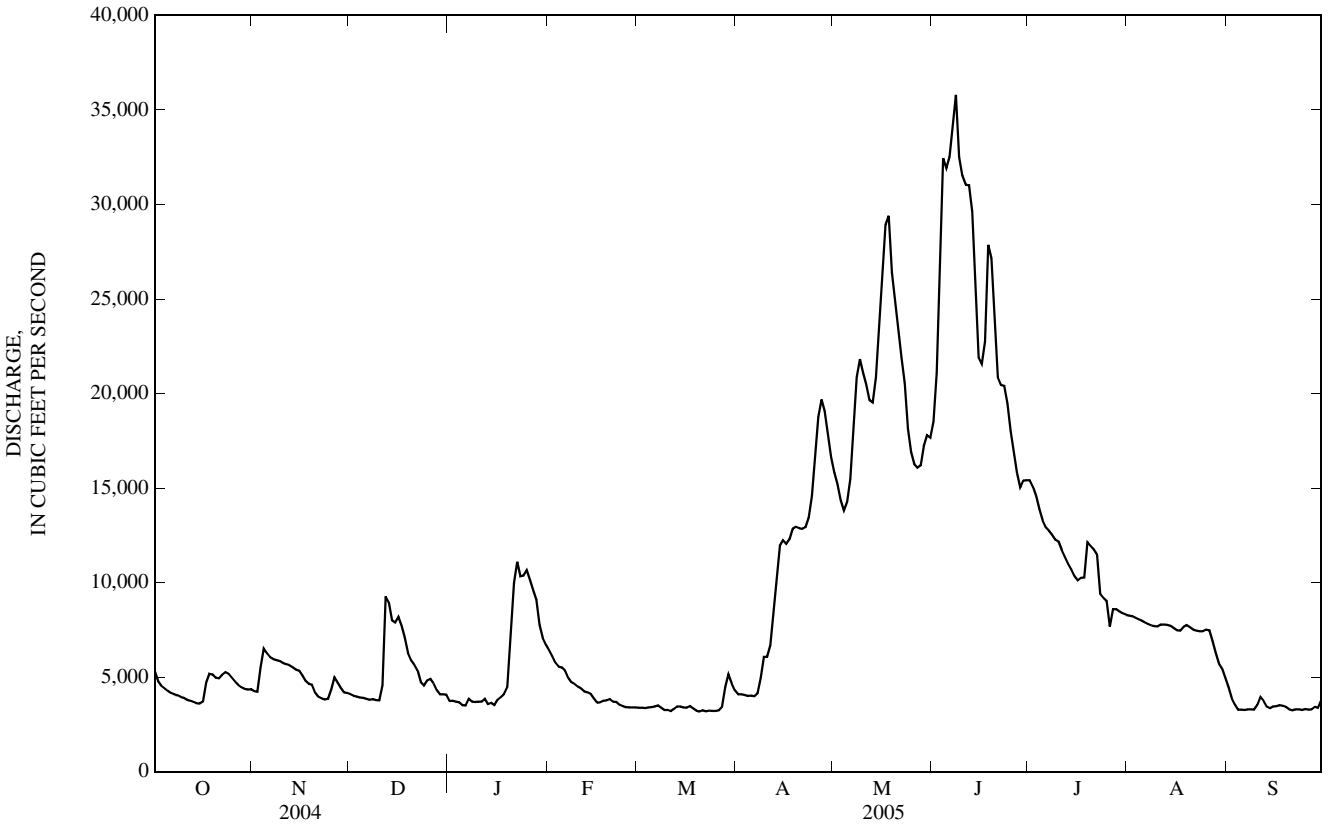
OBSERVED

CALENDAR YEAR 2004	TOTAL	3,080,800	MEAN	8,441	MAX	26,000	MIN	3,300	AC-FT	6,111,000
WATER YEAR 2005	TOTAL	3,212,570	MEAN	8,778	MAX	35,800	MIN	3,190	AC-FT	6,372,000

ADJUSTED

CALENDAR YEAR 2004	TOTAL	3,260,298	MEAN	8,932	CFSM	2.00	IN	27.16	AC-FT	6,467,000
WATER YEAR 2005	TOTAL	3,186,690	MEAN	8,707	CFSM	1.95	IN	26.55	AC-FT	6,320,000

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1963-67, 1970, 1979 to September 1994. March 2002 to current year. Water years 1968-69 published as Flathead River near Kalispell (station 12363500) 15 mi downstream. No appreciable inflow or outflow occurs between the two points.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, March 1979 to September 1981.
WATER TEMPERATURE: January 1949 to September 1950, August 1963 to September 1969, March 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1965 to September 1969.

INSTRUMENTATION.--Temperature recorder since Mar. 27, 1979.

REMARKS.--Daily water temperature records are rated excellent. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 290 microsiemens per centimeter (µS/cm) at 25.0°C, April 6, 1980; minimum daily, 121 µS/cm at 25.0°C, May 28, 1979.
WATER TEMPERATURE: Maximum daily, 21.0°C, Aug. 23, 1963, Aug. 8, 1968; minimum, 0.0°C on many days during winter periods most years.
SEDIMENT CONCENTRATION: Maximum daily mean, 980 mg/L, May 21, 1967; Minimum daily mean, 1 mg/L on several days most years.
SEDIMENT LOAD: Maximum daily, 140,000 tons, May 23, 1967; minimum daily, 4 tons, Mar. 4-6, 1967.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 19.0°C, Aug. 9; minimum, 0.0°C, on many days December through March.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)
APR										
25...	1230	16,800	8.2	163	20.5	6.5	<.010	.124	<.002	.26
JUN										
21...	1515	20,600	8.2	155	26.0	11.0	<.010	.076	E.001	.12
JUL										
27...	1300	8,560	8.2	158	26.0	16.0	<.010	.044	E.001	.10
SEP										
07...	0930	3,300	8.1	182	12.0	13.0	E.006	.031	<.002	.08

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Suspnd. sedi-ment, percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
APR					
25...	<.006	.031	94	39	1,770
JUN					
21...	E.003	.010	80	11	612
JUL					
27...	<.006	<.004	75	1	23
SEP					
07...	<.006	<.004	64	1	8.9

E--Estimated.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	11.5	10.0	10.5	4.5	3.5	4.0	2.5	2.5	2.5	0.5	0.0	0.0
2	11.5	9.5	10.5	4.5	3.5	4.0	3.0	2.5	2.5	0.5	0.0	0.0
3	11.5	9.5	10.5	5.0	4.5	4.5	3.0	2.5	3.0	1.0	0.0	0.5
4	11.5	9.5	10.5	4.5	4.0	4.0	3.5	3.0	3.0	1.0	0.0	0.5
5	11.5	9.5	10.5	4.5	3.5	4.0	3.5	3.0	3.0	0.5	0.0	0.0
6	10.5	9.5	10.0	5.0	4.0	4.5	3.0	2.5	2.5	1.0	0.0	0.5
7	11.5	9.5	10.5	5.5	4.5	5.0	2.5	2.5	2.5	0.5	0.0	0.0
8	11.0	9.5	10.0	5.0	4.0	4.5	3.0	2.5	3.0	0.5	0.0	0.0
9	10.0	9.5	9.5	4.5	3.5	4.0	3.5	2.5	3.0	0.5	0.0	0.0
10	10.0	9.0	9.5	5.0	4.0	4.5	4.0	3.0	3.0	1.0	0.5	0.5
11	10.0	8.5	9.0	4.5	3.5	4.0	4.5	3.0	4.0	1.5	0.5	1.0
12	11.0	9.0	9.5	3.5	3.5	3.5	3.0	1.0	2.0	1.0	0.0	1.0
13	11.0	9.0	10.0	3.5	3.0	3.0	1.0	0.5	1.0	0.5	0.0	0.5
14	11.0	9.5	10.0	3.5	3.0	3.5	2.0	1.0	1.5	0.5	0.0	0.0
15	10.5	9.5	10.0	4.0	3.5	3.5	3.5	2.0	3.0	1.0	0.0	0.5
16	10.0	9.5	10.0	4.5	3.5	4.0	3.5	3.0	3.5	1.5	1.0	1.5
17	9.5	6.0	7.5	5.0	4.5	4.5	3.5	3.0	3.5	2.0	1.5	1.5
18	6.5	5.0	6.0	4.5	4.0	4.0	3.5	3.5	3.5	1.5	1.5	1.5
19	7.0	5.5	6.0	4.0	3.5	4.0	4.0	3.5	3.5	1.5	0.5	1.0
20	6.0	5.5	5.5	4.0	3.0	3.5	3.5	2.5	3.0	0.5	0.0	0.5
21	6.5	5.5	6.0	3.0	2.5	2.5	2.5	2.0	2.0	1.0	0.0	0.5
22	5.5	5.5	5.5	3.0	2.5	3.0	2.0	1.0	1.5	2.0	0.5	1.5
23	5.5	5.5	5.5	3.5	3.0	3.0	1.0	0.0	0.5	2.5	1.5	2.0
24	5.5	4.5	5.0	3.5	3.0	3.0	1.5	0.5	1.0	2.0	1.5	2.0
25	5.5	4.5	5.0	4.0	3.5	4.0	1.5	1.5	1.5	2.5	2.0	2.0
26	5.5	4.0	4.5	3.5	3.0	3.5	2.5	1.5	2.0	2.5	2.0	2.5
27	5.0	3.5	4.5	3.0	2.5	3.0	1.5	1.0	1.5	2.5	2.0	2.5
28	5.0	3.5	4.5	2.5	1.5	2.0	2.0	1.5	1.5	3.0	2.5	3.0
29	4.5	4.0	4.5	2.0	1.5	2.0	2.0	1.5	1.5	3.0	2.5	2.5
30	5.5	4.5	4.5	2.5	2.0	2.0	1.5	0.5	1.0	3.0	2.5	3.0
31	4.5	4.0	4.0	---	---	---	0.5	0.0	0.0	3.5	3.0	3.0
MONTH	11.5	3.5	7.5	5.5	1.5	3.5	4.5	0.0	2.5	3.5	0.0	1.0

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	2.5	3.0	4.0	2.5	3.5	4.5	3.5	4.0	6.5	5.0	5.5
2	3.5	3.0	3.0	4.5	2.5	3.5	5.0	3.5	4.0	6.5	5.0	6.0
3	3.5	2.5	3.0	5.0	2.5	3.5	5.0	3.5	4.0	7.0	5.5	6.0
4	3.0	2.5	2.5	5.0	2.5	3.5	5.0	4.0	4.5	7.0	6.0	6.5
5	3.0	2.0	2.5	5.0	3.0	4.0	6.0	4.0	5.0	7.5	6.0	6.5
6	2.5	1.5	2.0	6.0	3.0	4.5	7.0	4.0	5.5	7.5	7.0	7.5
7	1.5	0.5	1.0	5.5	4.0	4.5	7.5	5.5	6.5	7.0	6.5	7.0
8	1.5	1.0	1.0	5.5	4.0	4.5	7.0	6.0	6.5	7.0	6.0	6.5
9	2.5	1.5	2.0	5.0	4.0	4.5	6.0	5.0	5.5	7.0	6.0	6.5
10	2.5	1.0	1.5	6.0	3.5	4.5	6.5	4.5	5.5	6.5	6.0	6.0
11	2.5	1.0	1.5	6.5	3.5	5.0	6.0	4.5	5.0	7.0	5.5	6.5
12	2.5	1.0	2.0	6.0	4.5	5.0	4.5	4.0	4.0	8.0	6.0	7.0
13	3.0	2.0	2.5	5.5	3.5	4.5	4.5	3.5	4.0	8.0	7.0	7.5
14	2.0	1.5	1.5	5.0	3.5	4.0	4.5	4.0	4.0	8.0	7.0	7.5
15	2.0	0.5	1.0	6.0	3.5	4.5	5.0	3.5	4.5	8.0	6.5	7.5
16	1.5	0.0	1.0	4.5	4.0	4.0	6.0	4.5	5.0	8.0	7.0	7.5
17	2.5	0.0	1.0	4.0	2.0	3.0	6.0	5.0	5.5	7.5	6.5	7.0
18	2.5	0.0	1.0	4.0	1.0	3.0	5.5	4.5	5.0	7.0	6.0	6.5
19	1.5	0.5	1.0	1.5	0.5	1.0	6.0	4.5	5.5	7.5	6.5	7.0
20	2.5	0.5	1.0	2.5	0.0	1.5	5.5	5.0	5.0	7.5	6.5	6.5
21	2.5	1.0	1.5	4.5	2.0	3.0	6.0	5.0	5.5	7.5	6.0	6.5
22	3.0	0.5	1.5	3.5	2.0	3.0	6.5	5.0	5.5	7.5	6.5	6.5
23	3.0	0.5	1.5	3.0	1.5	2.0	7.0	5.5	6.0	7.5	6.0	7.0
24	3.0	0.5	2.0	4.0	1.5	2.5	7.5	6.0	6.5	7.5	6.5	7.0
25	3.5	1.0	2.0	4.0	2.5	3.0	7.5	6.5	7.0	8.0	7.0	7.5
26	3.5	1.0	2.5	4.5	2.5	3.5	7.0	6.0	6.5	9.0	7.0	8.0
27	4.0	1.5	2.5	4.0	3.5	4.0	6.5	5.5	6.0	10.0	8.0	9.0
28	4.0	1.5	2.5	4.0	3.5	3.5	5.5	4.0	5.0	10.5	9.0	9.5
29	---	---	---	4.0	3.0	3.5	5.5	4.0	4.5	10.5	9.0	10.0
30	---	---	---	3.5	3.0	3.5	6.0	4.0	5.0	10.0	9.0	9.5
31	---	---	---	5.5	3.0	4.0	---	---	---	10.0	9.0	9.5
MONTH	4.0	0.0	2.0	6.5	0.0	3.5	7.5	3.5	5.0	10.5	5.0	7.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.0	7.5	8.0	14.0	12.5	13.0	18.0	16.5	17.0	16.0	12.5	14.0
2	7.5	7.0	7.0	13.5	12.0	13.0	17.0	16.0	16.5	16.0	13.5	14.5
3	7.5	7.0	7.5	13.0	11.5	12.0	17.5	15.5	16.5	16.5	14.0	15.0
4	8.5	7.0	7.5	14.0	12.0	13.0	17.0	15.0	16.0	17.0	14.0	15.5
5	9.0	7.5	8.5	14.5	13.0	13.5	18.0	15.0	16.5	16.5	14.0	15.0
6	9.0	7.5	8.0	15.0	14.0	14.5	17.5	15.5	16.5	16.0	12.5	14.0
7	7.5	6.0	7.0	14.5	13.5	14.0	18.0	16.0	17.0	15.5	12.5	14.0
8	6.5	6.0	6.0	15.5	13.5	14.5	18.0	16.0	17.0	16.0	13.0	14.5
9	7.0	6.5	7.0	14.5	13.0	14.0	19.0	15.5	17.0	14.5	13.5	14.0
10	8.0	7.0	7.5	14.0	12.5	13.0	17.5	15.5	16.5	13.5	11.0	12.0
11	8.5	7.5	8.0	14.5	13.0	13.5	16.0	13.5	15.0	11.0	9.5	10.0
12	8.5	7.0	7.5	16.0	13.5	14.5	15.5	14.0	14.5	10.5	9.0	9.5
13	8.0	7.0	7.5	16.0	14.0	15.0	17.0	14.5	15.5	12.0	10.0	10.5
14	8.5	7.5	8.0	15.5	13.5	14.5	16.5	14.0	15.5	13.0	11.0	12.0
15	9.0	8.0	8.5	16.0	13.5	14.5	16.5	14.5	15.5	14.0	11.5	12.5
16	9.5	8.0	8.5	15.5	13.5	14.5	16.5	14.5	15.5	13.0	11.5	12.0
17	9.5	8.0	9.0	15.0	13.5	14.0	16.0	15.0	15.5	14.0	11.5	12.5
18	8.5	8.0	8.0	16.0	14.0	15.0	15.0	13.0	14.0	14.0	11.5	12.5
19	9.5	8.0	9.0	16.0	14.5	15.5	16.5	12.5	14.5	13.5	11.0	12.0
20	10.5	8.5	9.5	16.0	14.5	15.0	16.0	14.0	15.0	13.5	11.0	12.0
21	12.0	10.0	11.0	16.0	14.5	15.0	17.0	14.5	15.5	13.0	10.5	11.5
22	13.0	11.0	12.0	15.5	14.5	15.0	15.5	14.5	15.5	12.5	10.0	11.5
23	12.5	11.0	12.0	16.0	14.5	15.0	14.5	14.0	14.0	11.5	10.0	11.0
24	12.0	10.5	11.0	16.5	14.0	15.0	14.0	13.0	13.5	11.5	8.5	10.0
25	12.0	11.0	11.5	15.5	13.5	14.5	15.5	13.0	14.0	12.0	9.5	10.5
26	12.0	11.0	12.0	17.5	14.5	16.0	16.0	13.5	14.5	12.5	9.5	11.0
27	12.5	11.5	12.0	17.5	15.0	16.0	16.5	14.0	15.0	12.0	10.0	11.0
28	12.5	11.5	12.0	17.5	15.5	16.5	16.5	14.5	15.5	12.0	9.0	10.5
29	12.5	11.0	12.0	18.0	15.5	16.5	16.5	13.5	15.0	11.0	10.5	10.5
30	13.5	12.0	12.5	17.5	15.5	16.5	14.5	12.5	13.5	12.0	11.0	11.5
31	---	---	---	18.0	16.0	17.0	15.0	12.5	13.5	---	---	---
MONTH	13.5	6.0	9.0	18.0	11.5	14.5	19.0	12.5	15.5	17.0	8.5	12.0

12365000 STILLWATER RIVER NEAR WHITEFISH, MT

LOCATION.--Lat 48°19'08", long 114°23'11" (NAD 27), in $NE^1/_4SW^1/_4$ sec.34, T.30 N., R.22 W., Flathead County, Hydrologic Unit 17010210, on right bank 600 ft downstream from road bridge, 6.2 mi southwest of Whitefish, 14.8 mi upstream from Whitefish River, and at river mile 16.2.

DRAINAGE AREA.--524 mi^2.

PERIOD OF RECORD.--October and November 1930 (monthly discharge only, published in WSP 1316), December 1930 to September 1950, October 1972 to September 1985, April 1986 to September 1999 (seasonal records only), October 1999 to current year.

REVISED RECORDS.--WSP 1736: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,953.26 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. Diversions for irrigation of about 200 acres upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	148	e130	e142	e190	e155	243	535	458	616	192	110
2	160	144	e128	e140	e185	e160	243	511	511	590	185	106
3	155	147	132	e140	e180	e155	244	488	597	558	179	103
4	150	154	131	e145	e170	e150	245	469	694	526	170	101
5	144	158	131	e145	e180	e150	245	455	767	499	164	98
6	140	159	130	e140	e180	e150	244	447	818	472	158	95
7	137	161	127	e140	e170	e155	245	459	854	449	153	92
8	135	160	129	e130	e180	155	255	494	894	425	149	91
9	134	160	130	e140	e180	160	279	544	971	403	146	90
10	132	158	131	e140	e180	168	314	583	1,050	391	144	99
11	130	156	e130	e145	e170	175	341	608	1,090	383	147	123
12	129	152	e135	e145	e160	184	361	613	1,080	371	146	152
13	126	147	e130	e145	e170	196	373	604	1,050	357	145	165
14	123	147	e125	149	e180	200	379	593	1,030	337	146	167
15	122	145	e135	136	e180	202	376	584	988	317	142	164
16	123	144	e140	147	e170	203	367	584	934	303	138	159
17	127	143	e145	e140	e160	207	360	599	884	298	137	157
18	140	143	e150	e142	e160	209	366	620	878	293	138	156
19	150	143	e150	e145	e170	208	383	647	885	285	141	150
20	154	140	e155	e140	e170	206	391	684	878	271	143	144
21	156	135	e155	e150	e170	208	395	691	853	257	140	137
22	156	128	e153	e150	e170	203	398	672	814	251	139	131
23	159	131	e150	e160	e170	194	402	643	769	243	136	126
24	165	130	e140	e170	e160	190	414	601	731	232	134	122
25	166	135	e150	e170	e165	183	436	562	694	222	133	118
26	163	140	e160	e175	e160	179	471	534	661	217	130	114
27	160	142	e155	e180	e160	183	506	506	632	212	128	111
28	155	136	e155	e170	e155	201	539	478	615	208	125	109
29	150	e135	e153	e180	---	222	556	456	624	205	121	106
30	147	e130	e150	e180	---	239	552	443	626	201	118	108
31	146	---	e145	e190	---	244	---	436	---	195	113	---
TOTAL	4,502	4,351	4,360	4,711	4,795	5,794	10,923	17,143	24,330	10,587	4,480	3,704
MEAN	145	145	141	152	171	187	364	553	811	342	145	123
MAX	168	161	160	190	190	244	556	691	1,090	616	192	167
MIN	122	128	125	130	155	150	243	436	458	195	113	90
AC-FT	8,930	8,630	8,650	9,340	9,510	11,490	21,670	34,000	48,260	21,000	8,890	7,350
CFSM	0.28	0.28	0.27	0.29	0.33	0.36	0.69	1.06	1.55	0.65	0.28	0.24
IN.	0.32	0.31	0.31	0.33	0.34	0.41	0.78	1.22	1.73	0.75	0.32	0.26

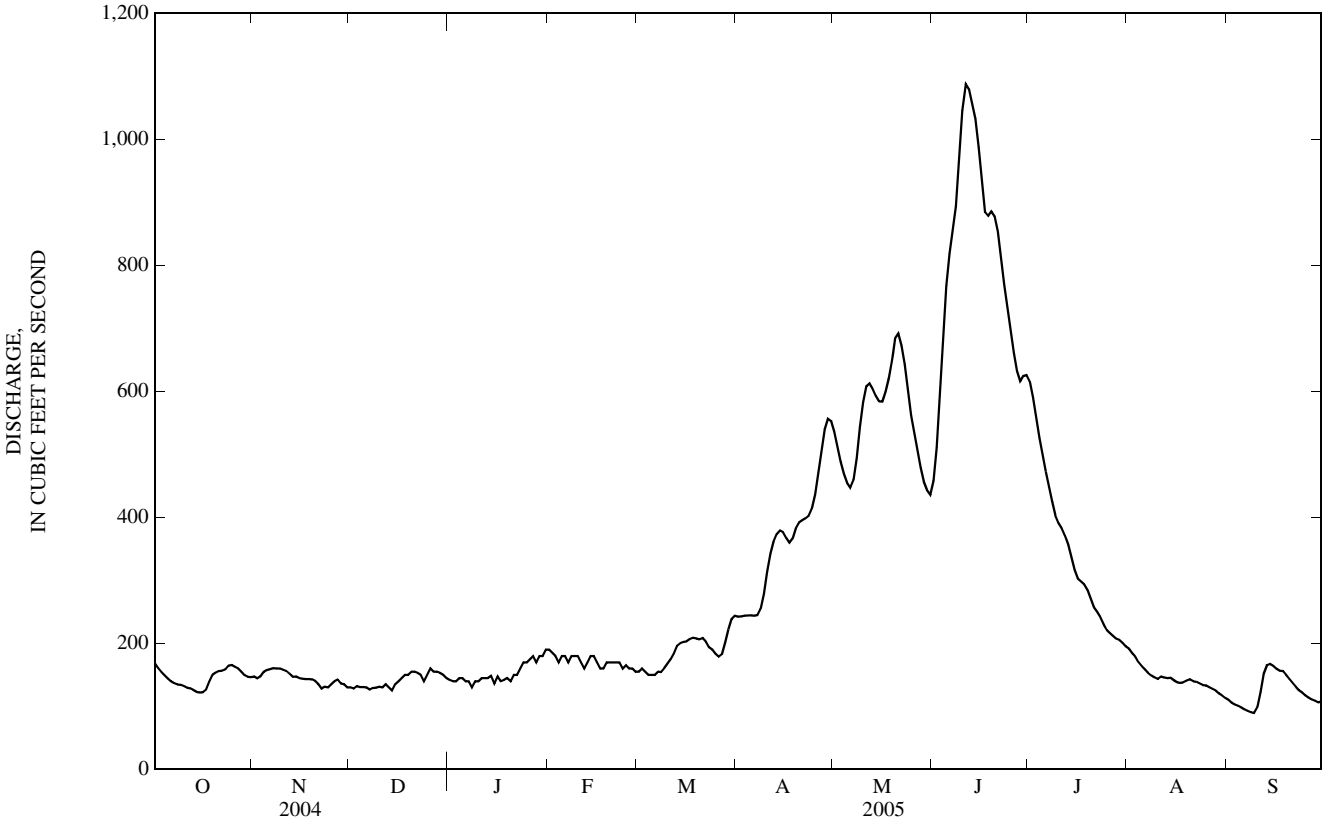
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2005, BY WATER YEAR (WY)*

MEAN	113	126	119	113	116	160	652	1,153	853	372	174	125
MAX	271	300	582	495	588	548	1,857	3,125	1,916	952	505	315
(WY)	(1948)	(1990)	(1996)	(1934)	(1996)	(1996)	(1996)	(1997)	(1974)	(1993)	(1993)	(1993)
MIN	46.5	53.9	50.7	59.2	60.1	76.7	138	265	235	94.5	55.5	43.1
(WY)	(2002)	(1945)	(1945)	(1940)	(1993)	(1977)	(1945)	(1944)	(1977)	(1977)	(1941)	(2001)

12365000 STILLWATER RIVER NEAR WHITEFISH, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1931 - 2005*	
ANNUAL TOTAL	84,799		99,680			
ANNUAL MEAN	232		273		335	
HIGHEST ANNUAL MEAN					747	1996
LOWEST ANNUAL MEAN					124	1944
HIGHEST DAILY MEAN	892	Apr 17	1,090	Jun 11	4,560	May 18, 1997
LOWEST DAILY MEAN	42	Jan 6	90	Sep 9	17	Aug 17, 1992
ANNUAL SEVEN-DAY MINIMUM	50	Jan 3	95	Sep 4	37	Sep 6, 1988
MAXIMUM PEAK FLOW			1,090	Jun 11	b4,570	May 18, 1997
MAXIMUM PEAK STAGE			8.68	Jun 11	c20.90	May 26, 1948
INSTANTANEOUS LOW FLOW			a89	Sep 9	d2.9	Aug 18, 1992
ANNUAL RUNOFF (AC-FT)	168,200		197,700		242,800	
ANNUAL RUNOFF (CFSM)	0.442		0.521		0.640	
ANNUAL RUNOFF (INCHES)	6.02		7.08		8.69	
10 PERCENT EXCEEDS	532		606		929	
50 PERCENT EXCEEDS	150		164		140	
90 PERCENT EXCEEDS	68		130		70	

*--During periods of operation; October and November 1930 (monthly discharge only, published in WSP 1316), December 1930 to September 1950, October 1972 to September 1985, April 1986 to September 1999 (seasonal record only), October 1999 to current year.
a--Gage height, 1.43 ft.
b--Gage height, 20.20 ft.
c--From floodmark.
d--Result of upstream mudslide.
e--Estimated.



12366000 WHITEFISH RIVER NEAR KALISPELL, MT

LOCATION.--Lat 48°19'13", long 114°16'39" (NAD 27), in $SW^1/_4SE^1/_4NW^1/_4$ sec.34, T.30 N., R.21 W., Flathead County, Hydrologic Unit 17010210, on right bank 160 ft upstream from road bridge, 8.0 mi north of Kalispell, and at river mile 12.8.

DRAINAGE AREA.--170 mi^2.

PERIOD OF RECORD.--July to November 1928, April 1929 to September 1950, annual maximum 1964, October 1972 to September 1985, April 1986 to September 1995, October 1995 to September 1999 (seasonal record only), October 1999 to current year. Prior to 1964, published as Whitefish Creek near Kalispell.

GAGE.--Water-stage recorder. Elevation of gage is 2,969.83 ft (NGVD 29). Prior to Oct. 16, 1930, nonrecording gage at site 200 ft downstream at elevation 10.00 ft lower. Oct. 16, 1930, to Sept. 30, 1950, water-stage recorder on left bank at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Whitefish Lake. Diversion for irrigation of about 650 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	140	136	e140	160	126	198	283	463	419	128	61
2	174	139	135	e130	162	125	198	283	505	400	124	61
3	171	144	134	e120	163	125	196	283	540	383	121	61
4	168	147	133	e120	163	125	197	282	583	365	118	61
5	166	145	132	e110	164	125	198	282	586	352	115	60
6	163	144	131	e110	163	125	198	284	597	341	112	58
7	161	143	131	e120	161	123	200	298	613	324	109	58
8	158	142	127	e125	158	123	221	314	659	310	107	57
9	155	142	127	e120	156	126	245	326	666	300	100	57
10	152	142	129	e110	155	127	239	336	660	290	96	65
11	150	141	134	e120	154	128	234	349	652	279	95	82
12	147	137	142	e125	154	133	229	354	649	267	94	84
13	144	135	141	e110	153	138	228	363	645	255	91	84
14	142	134	142	e96	152	140	243	384	630	243	89	83
15	138	132	142	e100	e146	140	247	415	611	233	86	82
16	138	131	144	e110	e140	140	242	440	588	225	85	80
17	145	131	144	e120	e137	149	242	462	570	219	85	81
18	148	131	146	e130	e133	153	247	481	589	213	87	81
19	151	129	147	e130	e132	153	244	495	586	204	89	79
20	149	129	149	e140	134	154	241	503	572	196	86	78
21	147	127	149	e140	e132	156	237	508	556	186	87	76
22	149	127	149	e135	131	156	235	508	539	179	86	74
23	151	126	144	e140	e129	151	241	508	521	172	84	73
24	152	127	142	e140	129	148	248	501	503	165	82	72
25	150	135	144	e150	128	149	252	493	484	158	81	71
26	148	149	144	e140	127	148	259	482	467	152	80	70
27	147	147	144	e150	127	157	267	475	446	147	81	68
28	143	144	142	e150	126	192	278	466	444	143	78	67
29	141	141	142	e155	---	211	282	457	449	139	71	67
30	140	138	142	156	---	206	283	452	436	136	66	67
31	140	---	e140	156	---	200	---	447	---	132	63	---
TOTAL	4,704	4,119	4,328	3,998	4,069	4,552	7,069	12,514	16,809	7,527	2,876	2,118
MEAN	152	137	140	129	145	147	236	404	560	243	92.8	70.6
MAX	176	149	149	156	164	211	283	508	666	419	128	84
MIN	138	126	127	96	126	123	196	282	436	132	63	57
AC-FT	9,330	8,170	8,580	7,930	8,070	9,030	14,020	24,820	33,340	14,930	5,700	4,200
CFSM	0.89	0.81	0.82	0.76	0.85	0.86	1.39	2.37	3.30	1.43	0.55	0.42
IN.	1.03	0.90	0.95	0.87	0.89	1.00	1.55	2.74	3.68	1.65	0.63	0.46

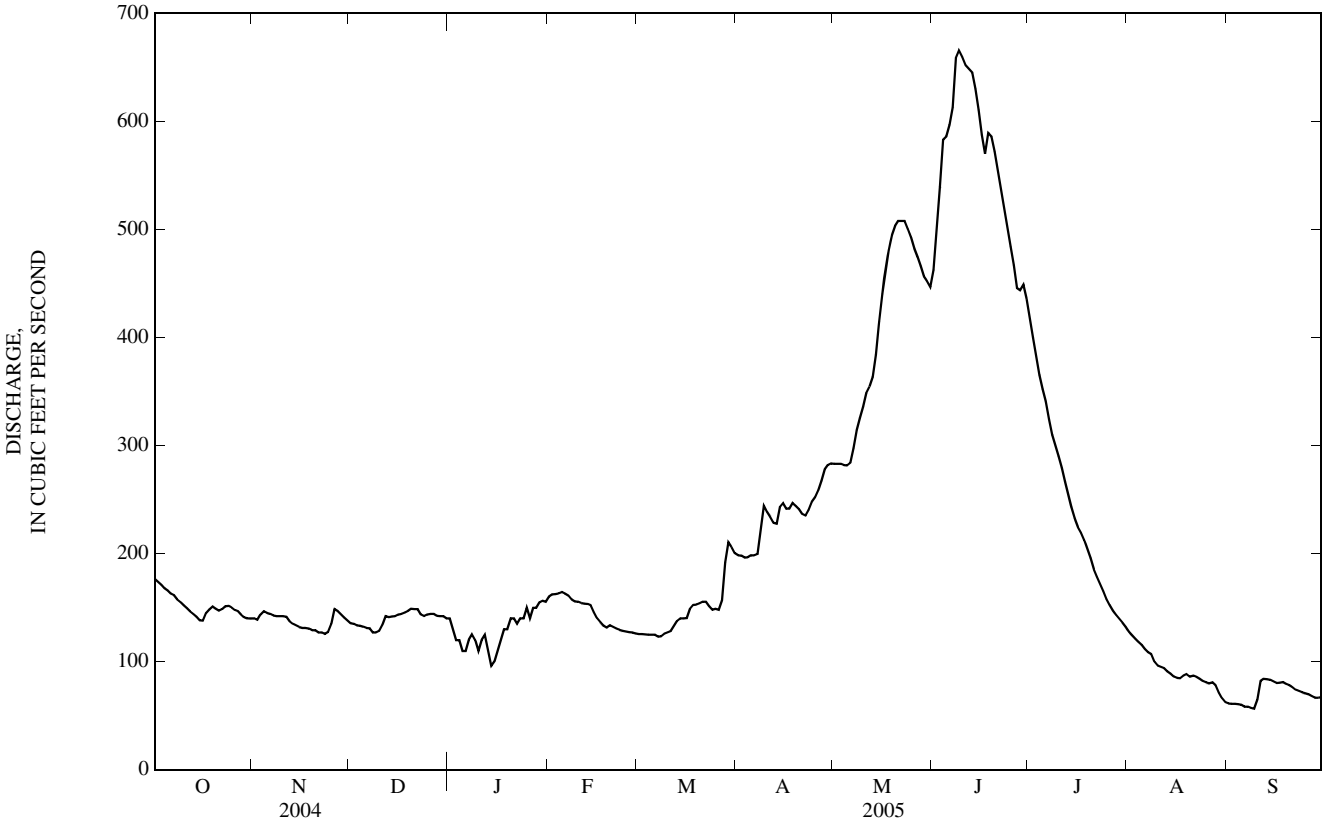
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)*

MEAN	69.5	71.9	72.1	67.8	66.4	95.5	227	527	603	273	110	81.6
MAX	152	177	231	209	157	212	549	895	1,194	695	238	152
(WY)	(2005)	(1934)	(1934)	(1934)	(1934)	(1936)	(1934)	(1997)	(1974)	(1974)	(1993)	(2004)
MIN	9.98	20.1	23.0	13.9	15.5	48.2	83.4	214	211	88.5	29.5	23.9
(WY)	(1931)	(1937)	(1936)	(1938)	(1938)	(2001)	(2001)	(1944)	(1977)	(1941)	(1931)	(1931)

12366000 WHITEFISH RIVER NEAR KALISPELL, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005*	
ANNUAL TOTAL	66,437		74,683			
ANNUAL MEAN	182		205		186	
HIGHEST ANNUAL MEAN					320	1974
LOWEST ANNUAL MEAN					88.9	2001
HIGHEST DAILY MEAN	482	May 11	666	Jun 9	1,580	Jun 23, 1974
LOWEST DAILY MEAN	32	Jan 7	57	Sep 8	5.0	Oct 17, 1934
ANNUAL SEVEN-DAY MINIMUM	38	Jan 3	59	Sep 3	5.3	Oct 15, 1934
MAXIMUM PEAK FLOW			a666	Jun 8	1,580	Jun 24, 1974
MAXIMUM PEAK STAGE			b3.49	Jan 6	4.91	Jun 24, 1974
INSTANTANEOUS LOW FLOW			55	Sep 9	4.5	Oct 18, 1934
ANNUAL RUNOFF (AC-FT)	131,800		148,100		134,700	
ANNUAL RUNOFF (CFSM)	1.07		1.20		1.09	
ANNUAL RUNOFF (INCHES)	14.54		16.34		14.86	
10 PERCENT EXCEEDS	426		464		501	
50 PERCENT EXCEEDS	141		146		93	
90 PERCENT EXCEEDS	47		84		43	

*--During periods of operation [July to November 1928, April 1929 to September 1950, annual maximum 1964, October 1972 to September 1985, April 1986 to September 1995, October 1995 to September 1999 (seasonal record only), October 1999 to current year.]
a--Gage height, 3.37 ft.
b--Backwater from ice.
e--Estimated.



12370000 SWAN RIVER NEAR BIGFORK, MT

LOCATION.--Lat 48°01'28", long 113°58'44" (NAD 27), near center of $S^1/_2SW^1/_4$ sec.11, T.26 N., R.19 W., Lake County, Hydrologic Unit 17010211, on left bank 0.2 mi downstream from Johnson Creek, 0.4 mi downstream from Swan Lake, 5.1 mi southeast of Bigfork, and at river mile 14.0.

DRAINAGE AREA.--671 mi^2.

PERIOD OF RECORD.--October 1910 to May 1911 (gage heights only), April 1922 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1246: 1923-24(M), 1930. WSP 1316: 1923.

GAGE.--Water-stage recorder. Elevation of gage is 3,062.6 ft (NGVD 29) (from river-profile survey). Oct. 10, 1910, to May 22, 1911, nonrecording gage at site 10 mi upstream at different elevation. Apr. 28, 1922, to Oct. 14, 1930, nonrecording gage at site 800 ft upstream at elevation 1.9 ft higher.

REMARKS.--Records good. Diversions for irrigation of about 360 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	739	715	642	561	956	498	1,350	1,650	2,290	2,150	669	400
2	703	706	621	526	925	501	1,290	1,540	2,650	2,060	656	393
3	673	716	602	509	885	498	1,260	1,450	3,200	1,990	636	381
4	651	728	587	491	852	501	1,230	1,380	3,910	1,890	633	377
5	628	719	578	473	826	501	1,210	1,340	4,680	1,780	609	369
6	609	699	559	446	806	501	1,180	1,360	4,700	1,680	597	365
7	588	684	555	429	779	512	1,140	1,470	4,470	1,580	581	363
8	586	674	560	427	742	520	1,150	1,720	4,100	1,520	559	362
9	561	650	543	442	729	546	1,210	2,040	3,630	1,460	552	356
10	551	637	559	448	710	579	1,250	2,240	e3,170	1,420	529	379
11	542	620	581	454	680	610	1,260	2,320	e2,860	1,370	521	427
12	523	614	629	461	660	638	1,240	2,280	e2,690	1,320	538	451
13	517	603	689	472	653	672	1,230	2,230	e2,500	1,240	543	459
14	507	598	712	462	645	693	1,280	2,160	2,360	1,200	538	453
15	503	584	730	438	634	704	1,310	2,150	2,250	1,150	525	446
16	527	577	746	417	622	706	1,300	2,240	2,190	1,110	510	423
17	573	566	744	417	592	717	1,280	2,470	2,220	1,110	502	413
18	671	563	740	449	567	728	1,300	2,810	2,330	1,100	501	411
19	753	558	720	503	551	714	1,300	2,940	2,380	1,050	510	409
20	e810	561	699	591	543	720	1,280	2,830	2,330	1,010	500	397
21	878	557	706	746	546	718	1,250	2,680	2,290	973	487	385
22	938	540	707	940	533	709	1,210	2,560	2,290	943	473	379
23	956	533	682	1,080	522	700	1,190	2,430	2,360	914	461	368
24	943	556	620	1,180	515	669	1,170	2,320	2,430	902	452	368
25	922	606	611	1,220	512	653	1,240	2,220	2,390	830	456	367
26	894	701	623	1,210	509	640	1,430	2,110	2,280	814	453	366
27	858	744	613	1,180	505	693	1,610	2,020	2,180	786	444	352
28	814	729	609	1,140	501	881	1,740	1,980	2,110	764	435	355
29	785	700	575	1,090	---	1,150	1,780	2,020	2,170	737	422	355
30	754	677	565	1,050	---	1,330	1,730	2,100	2,190	715	402	367
31	729	---	577	1,000	---	1,380	---	2,200	---	694	402	---
TOTAL	21,686	19,115	19,684	21,252	18,500	21,582	39,400	65,260	83,600	38,262	16,096	11,696
MEAN	700	637	635	686	661	696	1,313	2,105	2,787	1,234	519	390
MAX	956	744	746	1,220	956	1,380	1,780	2,940	4,700	2,150	669	459
MIN	503	533	543	417	501	498	1,140	1,340	2,110	694	402	352
AC-FT	43,010	37,910	39,040	42,150	36,690	42,810	78,150	129,400	165,800	75,890	31,930	23,200
CFSM	1.04	0.95	0.95	1.02	0.98	1.04	1.96	3.14	4.15	1.84	0.77	0.58
IN.	1.20	1.06	1.09	1.18	1.03	1.20	2.18	3.62	4.63	2.12	0.89	0.65

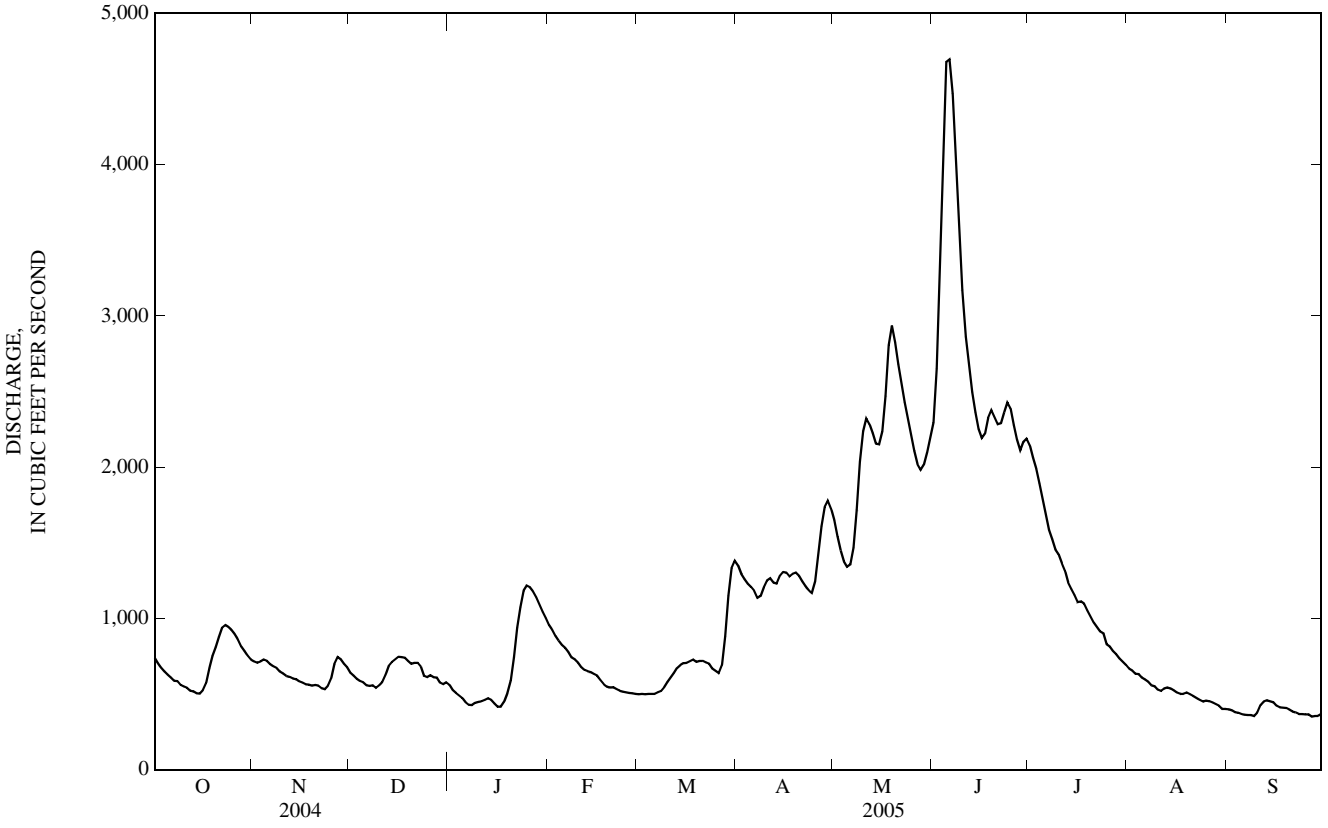
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2005, BY WATER YEAR (WY)

MEAN	548	591	565	496	498	628	1,513	2,806	3,275	1,620	691	535
MAX	1,682	1,514	1,796	1,298	1,627	1,813	3,228	5,469	5,803	3,310	1,225	1,096
(WY)	(1960)	(1928)	(1934)	(1934)	(1971)	(1986)	(1925)	(1928)	(1974)	(1950)	(1950)	(1965)
MIN	308	290	307	271	236	244	675	1,670	1,433	609	322	285
(WY)	(1938)	(1937)	(1937)	(1930)	(1930)	(1930)	(1937)	(1941)	(1941)	(1941)	(1941)	(1988)

12370000 SWAN RIVER NEAR BIGFORK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1922 - 2005	
ANNUAL TOTAL	352,666		376,133			
ANNUAL MEAN	964		1,031		1,148	
HIGHEST ANNUAL MEAN					1,860	1928
LOWEST ANNUAL MEAN					607	1941
HIGHEST DAILY MEAN	3,030	Jun 8	4,700	Jun 6	8,800	Jun 21, 1974
LOWEST DAILY MEAN	272	Jan 7	352	Sep 27	193	Jan 26, 1930
ANNUAL SEVEN-DAY MINIMUM	288	Jan 4	361	Sep 24	195	Jan 26, 1930
MAXIMUM PEAK FLOW			4,860	Jun 5	8,890	Jun 20, 1974
MAXIMUM PEAK STAGE			5.45	Jun 5	7.34	Jun 20, 1974
INSTANTANEOUS LOW FLOW			322	Sep 27	a193	Jan 26, 1930
ANNUAL RUNOFF (AC-FT)	699,500		746,100		832,000	
ANNUAL RUNOFF (CFSM)	1.44		1.54		1.71	
ANNUAL RUNOFF (INCHES)	19.55		20.85		23.25	
10 PERCENT EXCEEDS	1,940		2,230		2,820	
50 PERCENT EXCEEDS	710		704		631	
90 PERCENT EXCEEDS	334		443		362	

a--Jan. 26-29, 1930; site and datum then in use.
e--Estimated.



12371550 FLATHEAD LAKE AT POLSON, MT

LOCATION.--Lat 47°41'49", long 114°09'41" (NAD 27), in SW$^1/_4$ SE$^1/_4$ NE$^1/_4$ sec.4, T.22 N., R.20 W., Lake County, Hydrologic Unit 17010208, at Polson.

DRAINAGE AREA.--7,086 mi^2.

PERIOD OF RECORD.--October 1, 1998 to current year. April to August 1900, daily lake elevations only, at site near Holt, 6 mi east of Somers (elevation unknown). August 1908 to November 1909 (fragmentary), January 1910 to Sept.30, 1998 published as "at Somers". Monthend contents only for some periods, published in WSP 1316. Prior to April 1923, published as "at Polson." Oct. 1, 1941 to Sept. 30, 1998, unpublished daily lake elevations at Polson are available in files of the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above local (Somers) datum of 2,799 ft (NGVD 29). July 1 to Dec. 12, 1923, nonrecording gage at Somers site.

REMARKS--Natural storage in Flathead Lake increased by construction of Kerr Dam 4 mi downstream from natural lake outlet; storage began Apr. 11, 1938. Usable capacity, 1,791,000 acre-ft at controlled spillway elevation 2,893.00 ft. Dead storage unknown below 2,878 ft, elevation of natural outlet. Minimum operating level, 572,300 acre-ft, elevation 2,883.00 ft for on-site power generation. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Water is used for power production, flood control, recreation, and irrigation. Figures given herein represent usable contents. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,208,000 acre-ft, June 19, 1933, elevation, 2,896.26 ft; minimum, 347,000 acre-ft, Dec. 5, 1936, elevation, 2,881.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,791,000 acre-ft, July 25, elevation, 2,893.00 ft; minimum, 1,069,000 acre-ft, Jan. 19, 20, elevation, 2,887.15 ft.

CAPACITY TABLE (ELEVATION, IN FEET AND CONTENTS, IN ACRE-FT)

Elevation	Contents
2,883	572,300
2,886	930,300
2,888	1,172,000
2,890	1,417,000
2,892	1,665,000
2,894	1,917,000

ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,892.53	2,891.15	2,890.72	2,888.51	2,887.99	2,887.31	2,887.87	2,890.38	2,892.11	2,892.86	2,892.76	2,892.61
2	2,892.43	2,891.09	2,890.63	2,888.32	2,888.00	2,887.28	2,887.91	2,890.42	2,892.28	2,892.82	2,892.72	2,892.59
3	2,892.34	2,891.08	2,890.55	2,888.18	2,888.01	2,887.25	2,887.99	2,890.44	2,892.50	2,892.82	2,892.73	2,892.54
4	2,892.28	2,891.08	2,890.52	2,888.09	2,887.98	2,887.23	2,888.01	2,890.46	2,892.72	2,892.80	2,892.72	2,892.52
5	2,892.23	2,891.08	2,890.41	2,887.96	2,887.95	2,887.22	2,888.05	2,890.49	2,892.85	2,892.81	2,892.70	2,892.50
6	2,892.17	2,891.09	2,890.33	2,887.82	2,888.02	2,887.22	2,888.11	2,890.51	2,892.91	2,892.80	2,892.71	2,892.53
7	2,892.14	2,891.12	2,890.28	2,887.79	2,888.03	2,887.23	2,888.14	2,890.60	2,892.83	2,892.80	2,892.70	2,892.51
8	2,892.13	2,891.11	2,890.18	2,887.72	2,888.01	2,887.27	2,888.18	2,890.73	2,892.75	2,892.81	2,892.72	2,892.49
9	2,892.06	2,891.11	2,890.11	2,887.61	2,888.00	2,887.27	2,888.25	2,890.89	2,892.68	2,892.79	2,892.76	2,892.48
10	2,892.03	2,891.12	2,890.07	2,887.52	2,888.00	2,887.30	2,888.31	2,891.06	2,892.64	2,892.78	2,892.78	2,892.54
11	2,891.99	2,891.13	2,889.94	2,887.47	2,887.99	2,887.31	2,888.37	2,891.14	2,892.62	2,892.78	2,892.78	2,892.60
12	2,891.95	2,891.13	2,889.96	2,887.41	2,887.96	2,887.36	2,888.45	2,891.15	2,892.64	2,892.77	2,892.82	2,892.59
13	2,891.91	2,891.11	2,889.93	2,887.41	2,887.93	2,887.36	2,888.57	2,891.16	2,892.63	2,892.74	2,892.77	2,892.59
14	2,891.84	2,891.11	2,889.88	2,887.35	2,887.92	2,887.37	2,888.67	2,891.16	2,892.64	2,892.72	2,892.75	2,892.60
15	2,891.84	2,891.10	2,889.86	2,887.28	2,887.91	2,887.39	2,888.86	2,891.19	2,892.57	2,892.72	2,892.76	2,892.61
16	2,891.76	2,891.09	2,889.82	2,887.24	2,887.88	2,887.36	2,889.02	2,891.26	2,892.56	2,892.72	2,892.76	2,892.65
17	2,891.83	2,891.08	2,889.78	2,887.20	2,887.85	2,887.43	2,889.17	2,891.35	2,892.54	2,892.76	2,892.72	2,892.64
18	2,891.72	2,891.05	2,889.74	2,887.18	2,887.80	2,887.51	2,889.32	2,891.53	2,892.63	2,892.77	2,892.80	2,892.61
19	2,891.73	2,891.03	2,889.62	2,887.15	2,887.76	2,887.56	2,889.50	2,891.57	2,892.72	2,892.78	2,892.76	2,892.60
20	2,891.71	2,891.03	2,889.55	2,887.15	2,887.74	2,887.55	2,889.58	2,891.62	2,892.75	2,892.84	2,892.76	2,892.63
21	2,891.66	2,890.99	2,889.51	2,887.20	2,887.66	2,887.54	2,889.62	2,891.60	2,892.76	2,892.91	2,892.77	2,892.65
22	2,891.60	2,890.97	2,889.46	2,887.31	2,887.63	2,887.65	2,889.69	2,891.58	2,892.74	2,892.94	2,892.77	2,892.64
23	2,891.54	2,890.94	2,889.34	2,887.43	2,887.59	2,887.67	2,889.73	2,891.51	2,892.76	2,892.92	2,892.75	2,892.65
24	2,891.51	2,890.89	2,889.24	2,887.53	2,887.55	2,887.62	2,889.78	2,891.51	2,892.85	2,892.95	2,892.75	2,892.62
25	2,891.53	2,890.88	2,889.16	2,887.64	2,887.50	2,887.59	2,889.83	2,891.52	2,892.90	2,893.00	2,892.76	2,892.56
26	2,891.50	2,890.87	2,889.07	2,887.73	2,887.45	2,887.59	2,889.93	2,891.53	2,892.91	2,892.94	2,892.75	2,892.54
27	2,891.45	2,890.89	2,888.97	2,887.81	2,887.41	2,887.65	2,890.10	2,891.57	2,892.91	2,892.89	2,892.75	2,892.60
28	2,891.39	2,890.87	2,888.86	2,887.87	2,887.36	2,887.67	2,890.16	2,891.64	2,892.92	2,892.87	2,892.74	2,892.55
29	2,891.32	2,890.84	2,888.76	2,887.92	---	2,887.72	2,890.23	2,891.78	2,892.93	2,892.84	2,892.72	2,892.48
30	2,891.22	2,890.79	2,888.68	2,887.95	---	2,887.75	2,890.32	2,891.84	2,892.91	2,892.80	2,892.67	2,892.49
31	2,891.19	---	2,888.65	2,887.97	---	2,887.84	---	2,891.97	---	2,892.79	2,892.62	---
MAX	2,892.53	2,891.15	2,890.72	2,888.51	2,888.03	2,887.84	2,890.32	2,891.97	2,892.93	2,893.00	2,892.82	2,892.65
MIN	2,891.19	2,890.79	2,888.65	2,887.15	2,887.36	2,887.22	2,887.87	2,890.38	2,892.11	2,892.72	2,892.62	2,892.48

CONTENTS IN THOUSANDS OF ACRE-FEET, AT THE END OF MONTH

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1,565	1,515	1,251	1,168	1,095	1,153	1,457	1,661	1,780	1,765	1,743	1,727

CHANGE IN CONTENTS, IN ACRE-FEET

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
-182,000	-50,000	-264,000	-83,000	-73,000	58,000	304,000	204,000	119,000	-15,000	-22,000	-16,000

CALENDAR YEAR 2004 . . . . . .+90,000
WATER YEAR 2005 . . . . . -20,000

12372000 FLATHEAD RIVER NEAR POLSON, MT

LOCATION.--Lat 47°40'49", long 114°14'45" (NAD 27), in $SW^1/_4$ $NE^1/_4SE^1/_4$ sec. 11, T.22 N., R.21 W., Lake County, Hydrologic Unit 17010212, on left bank 0.5 mi downstream from Kerr Dam, 4.0 mi west of Polson, 5.0 mi downstream from Flathead Lake, and at river mile 71.5.

DRAINAGE AREA.--7,096 mi^2.

PERIOD OF RECORD.--July 1907 to current year.

REVISED RECORDS.--WSP 652: 1926. WSP 752: 1932. WSP 1182: 1948. WSP 1216: Drainage area. WSP 1246: 1928(M). WSP 1636: 1958 (adjusted runoff).

GAGE.--Water-stage recorder. Elevation of gage is 2,692.70 ft (NGVD 29) (levels by The Montana Power Co.). Prior to Oct. 1, 1941, nonrecording gages or water-stage recorder at several sites near highway bridge at old site of Michell's ferry 6 mi downstream from present site, all at elevation 2,629.20 ft (from river-profile survey).

REMARKS.--Records excellent. Flow regulated by Flathead Lake (Kerr Dam) since April 1938 (station number 12371500) and Hungry Horse Reservoir (station number 12362000) since September 1951. Diversions upstream from station for irrigation of about 10,000 acres. Flathead project pumps can divert up to 12,000 acre-ft per month when required for irrigation of lands downstream from station. U.S.Geological Survey satellite telemeter at station. Two unpublished observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--98 years, 11,470 ft^3/s, 21.95 in/yr, 8,310,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir and Flathead Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,800 ft^3/s, May 29, 1928, gage height, 17.2 ft, site and elevation then in use; minimum probably less than 5.0 ft^3/s, Apr. 13, 1938; minimum daily, 32 ft^3/s, Apr. 12, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of about 21 ft, present elevation; discharge, about 110,000 ft^3/s, from lake elevation-discharge study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,400 ft^3/s, June 7, gage height, 15.40 ft; minimum daily, 3,530 ft^3/s, Sept. 21, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,700	8,670	9,550	12,300	7,620	7,550	3,760	14,800	14,000	20,200	10,900	7,000
2	11,600	8,670	9,950	12,200	7,650	7,090	3,790	14,800	16,500	18,800	10,300	6,130
3	10,300	8,030	9,940	12,300	7,740	6,210	3,790	14,800	19,200	18,200	9,440	5,150
4	9,200	7,250	9,960	12,400	7,680	5,300	3,780	14,800	25,700	17,000	9,060	4,290
5	7,880	6,840	9,950	11,700	7,210	4,540	3,790	14,900	34,200	15,200	8,460	3,770
6	7,530	6,850	10,000	10,900	6,790	4,030	3,770	15,000	40,900	14,500	8,020	3,790
7	7,530	6,840	10,100	9,980	6,780	3,780	3,790	15,000	47,500	14,500	7,990	3,790
8	7,520	6,840	10,100	9,570	6,700	3,750	3,810	15,000	47,400	14,500	7,750	3,800
9	7,530	6,850	10,100	8,950	6,710	3,750	4,110	15,000	43,800	14,500	7,650	3,820
10	7,540	6,820	10,500	8,040	6,780	3,760	4,550	16,000	38,700	14,500	7,660	3,820
11	7,650	6,800	10,900	7,560	6,800	3,760	5,050	18,700	36,400	14,400	7,510	3,860
12	7,740	6,830	10,800	7,600	6,720	3,740	5,180	21,200	35,000	14,100	7,490	3,870
13	7,740	6,810	11,000	7,750	6,720	3,730	5,210	22,700	35,000	13,700	7,660	3,750
14	7,730	6,830	11,100	7,860	6,740	3,740	5,230	22,700	33,800	12,500	7,620	3,570
15	7,660	6,830	11,600	7,730	7,210	3,740	5,270	22,600	29,000	11,100	7,680	3,580
16	7,670	6,810	12,100	7,810	7,740	3,750	5,510	22,600	25,900	10,300	7,680	3,560
17	7,730	6,810	12,100	7,760	7,750	3,770	6,040	23,600	24,500	9,960	7,770	3,540
18	7,760	6,850	12,100	7,680	7,740	3,750	6,980	26,600	24,800	10,000	7,780	3,540
19	8,280	6,870	12,100	7,630	7,690	3,760	7,890	28,700	28,200	10,000	7,790	3,580
20	8,700	6,880	12,100	6,980	7,680	3,770	8,850	28,800	27,400	10,000	7,820	3,560
21	8,690	6,880	12,100	6,180	7,660	3,780	9,720	28,800	25,000	10,100	7,750	3,530
22	8,690	6,850	12,300	5,820	7,640	3,750	11,500	28,700	23,100	10,000	7,910	3,530
23	8,730	6,920	12,100	5,810	7,630	3,760	13,200	26,400	20,100	10,000	7,800	3,830
24	8,780	6,970	12,200	5,820	7,650	3,750	13,700	22,500	19,000	10,000	7,680	4,230
25	8,770	7,020	12,200	6,420	7,620	3,790	13,700	20,600	19,900	10,600	7,630	4,280
26	8,730	7,030	12,300	7,370	7,670	3,810	13,700	18,200	20,000	11,000	7,620	4,270
27	8,750	6,980	12,300	7,730	7,610	3,810	14,000	15,300	18,800	11,000	7,620	4,270
28	8,770	6,970	12,100	7,780	7,610	3,810	14,700	13,300	18,700	11,000	7,500	4,270
29	8,680	7,480	12,100	7,680	---	3,800	14,800	12,600	20,200	10,900	7,530	4,280
30	8,660	8,570	12,200	7,630	---	3,790	14,800	12,500	21,000	10,900	7,630	4,290
31	8,650	---	12,200	7,650	---	3,780	---	12,500	---	11,100	7,600	---
TOTAL	262,890	213,650	350,150	260,590	205,540	128,900	233,970	599,700	833,700	394,560	248,300	122,550
MEAN	8,480	7,122	11,300	8,406	7,341	4,158	7,799	19,350	27,790	12,730	8,010	4,085
MAX	11,700	8,670	12,300	12,400	7,750	7,550	14,800	28,800	47,500	20,200	10,900	7,000
MIN	7,520	6,800	9,550	5,810	6,700	3,730	3,760	12,500	14,000	9,960	7,490	3,530
AC-FT	521,400	423,800	694,500	516,900	407,700	255,700	464,100	1,190,000	1,654,000	782,600	492,500	243,100
CFSM	1.20	1.00	1.59	1.18	1.03	0.59	1.10	2.73	3.92	1.79	1.13	0.58
IN.	1.38	1.12	1.84	1.37	1.08	0.68	1.23	3.14	4.37	2.07	1.30	0.64
AC-FT†	-149,000	-58,000	-239,000	-35,000	-41,000	+120,000	+265,000	+390,000	+232,000	-208,000	-285,000	-64,000

12372000 FLATHEAD RIVER NEAR POLSON, MT—Continued

ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE

MEAN	6,056	6,147	7,408	7,837	6,603	6,110	12,250	25,700	31,690	9,345	3,375	3,010
CFSM	0.86	0.87	1.05	1.11	0.93	0.86	1.73	3.64	4.48	1.32	0.48	0.43
IN.	0.99	0.97	1.21	1.28	0.97	1.00	1.93	4.19	5.00	1.52	0.55	0.48
AC-FT	372,400	365,800	455,500	481,900	366,700	375,700	729,100	1,580,000	1,886,000	574,600	207,500	179,100

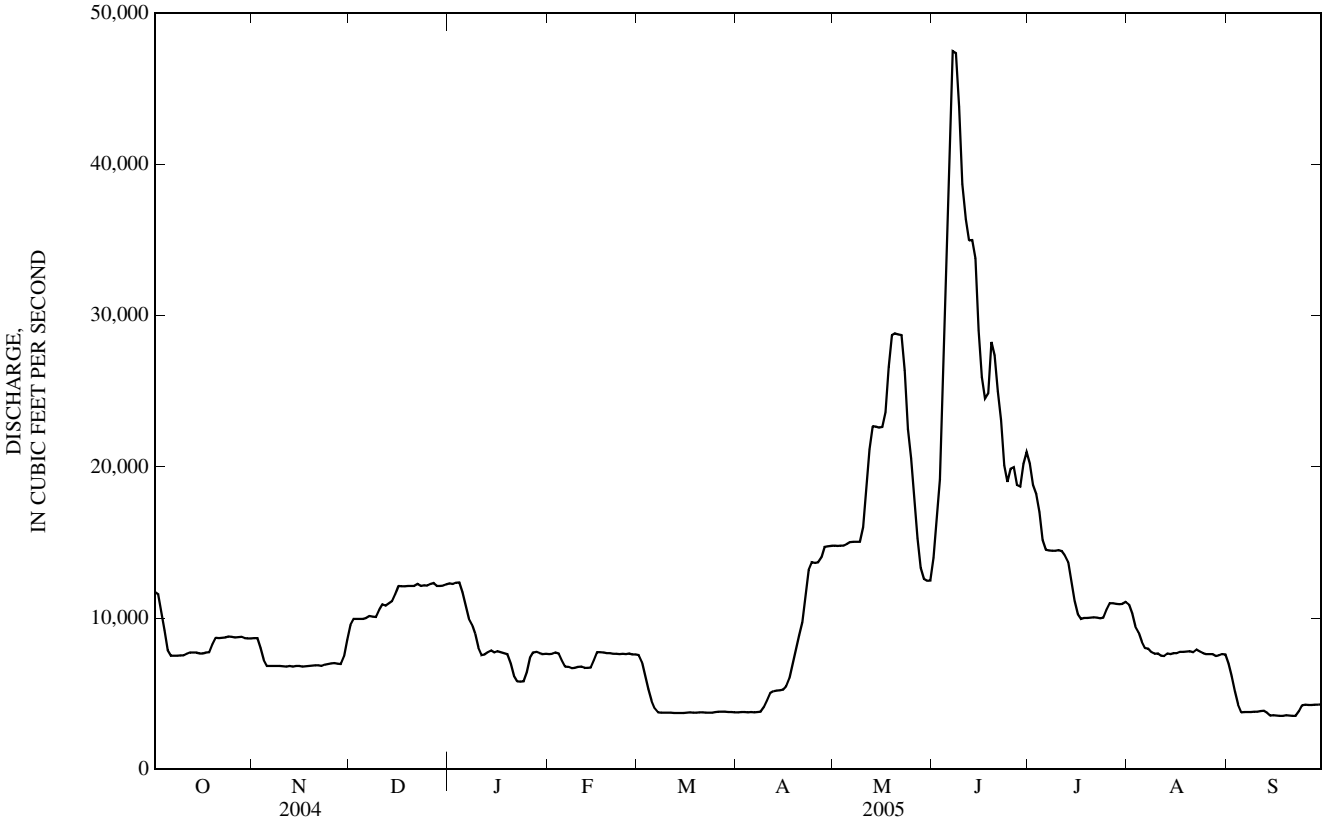
OBSERVED

CAL YR 2004	TOTAL	3,566,020	MEAN	9,743	MAX	22,100	MIN	3,320	AC-FT	7,073,000 † +446,000
WTR YR 2005	TOTAL	3,854,500	MEAN	10,560	MAX	47,500	MIN	3,530	AC-FT	7,645,000 † -72,000

ADJUSTED

CAL YR 2004	TOTAL	3,811,999	MEAN	10,420	CFSM	1.47	IN	19.49	AC-FT	7,519,000
WTR YR 2005	TOTAL	3,818,654	MEAN	10,460	CFSM	1.48	IN	20.09	AC-FT	7,573,000

† Change in contents in acre-feet, in Hungry Horse Reservoir and Flathead Lake.



12374250 MILL CREEK ABOVE BASSOO CREEK, NEAR NIARADA, MT

LOCATION.--Lat 47°49'47", long 114°41'48" (NAD 27), in $SE^1/_4NW^1/_4NE^1/_4$ sec.20, T.24 N., R.24 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 0.3 mi upstream from Bassoo Creek, and 4.1 mi northwest of Niarada.

DRAINAGE AREA.--19.6 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,000 ft (NGVD 29). Prior to Sept. 23, 1987, at site 305 ft downstream at different elevation. Prior to July 23, 1991, at site 275 ft downstream at different elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	e2.0	e1.8	1.8	2.4	e2.3	2.9	8.9	7.0	5.1	2.8	2.0
2	1.9	e2.1	1.9	1.9	2.3	e2.3	3.4	8.8	8.0	4.8	2.8	2.0
3	1.9	e2.2	1.9	1.9	e2.5	e2.3	3.2	8.4	8.4	5.1	2.6	2.0
4	1.9	e2.1	1.9	2.0	e2.6	e2.3	3.3	8.4	8.0	4.9	2.5	2.0
5	1.9	e2.1	e1.8	1.8	e2.5	e2.3	3.2	7.7	7.3	4.7	2.4	2.0
6	1.9	e2.1	1.9	e1.9	e2.4	e2.3	3.1	7.7	8.0	4.4	2.4	2.0
7	1.9	e2.1	1.9	e2.0	e2.3	e2.3	3.3	7.7	8.4	4.0	2.4	1.9
8	1.9	e2.1	1.9	e2.2	e2.2	e2.4	3.9	8.7	8.4	3.8	2.3	2.0
9	1.8	e2.1	2.0	e2.1	e2.0	e2.4	3.9	8.4	8.4	3.7	2.3	1.9
10	1.8	e2.1	2.5	e1.9	e1.9	e2.5	3.7	8.4	8.1	4.1	2.3	2.8
11	1.8	e2.1	3.8	e2.0	e1.7	2.8	3.7	8.8	7.7	4.2	2.3	3.3
12	1.8	e2.1	4.8	e2.1	e1.8	2.9	4.0	9.6	7.7	4.0	2.4	3.2
13	1.7	e2.1	11	e2.0	e2.1	2.6	4.3	9.8	7.7	3.8	2.7	3.1
14	1.7	e2.1	8.5	1.8	e2.1	2.5	4.6	9.6	7.3	3.7	2.8	3.0
15	1.7	e2.0	2.2	e1.7	e2.0	2.5	4.2	9.6	7.3	3.6	2.5	2.6
16	1.8	e2.0	3.3	1.8	e1.9	2.6	4.2	10	6.4	3.5	2.4	2.5
17	2.2	e2.0	2.5	1.9	e1.9	2.6	4.4	11	7.2	3.9	2.3	2.6
18	2.5	e1.9	2.4	2.1	e1.9	2.5	4.5	11	6.7	4.0	2.6	2.6
19	e1.9	1.8	2.0	6.2	e2.1	2.7	4.6	11	6.6	3.6	2.8	2.5
20	e1.9	1.7	2.0	10	e2.1	2.5	4.6	11	6.1	3.5	2.5	2.4
21	e2.0	e1.7	2.0	4.6	e2.1	2.5	4.6	11	6.0	3.4	2.3	2.3
22	e2.0	1.8	e1.7	4.6	e2.1	e2.4	4.5	10	5.8	3.3	2.2	2.3
23	e2.0	1.9	e1.6	3.5	e2.1	e2.2	4.6	10	5.5	3.2	2.1	2.3
24	e2.0	1.9	e1.9	3.5	e2.1	e2.1	6.1	9.6	5.5	3.0	2.1	2.3
25	e2.0	2.0	e2.1	3.0	e2.1	2.3	5.9	9.6	5.5	3.0	2.6	2.4
26	e2.0	1.9	e2.0	2.8	e2.2	2.3	6.7	9.2	5.5	3.0	2.5	2.4
27	e2.0	e1.7	2.0	2.8	e2.2	3.0	7.8	8.8	5.7	3.0	2.3	2.4
28	e2.0	e1.7	1.9	2.7	e2.2	4.2	8.3	8.4	6.0	2.8	2.2	2.4
29	e2.0	e1.6	1.9	2.6	---	3.6	8.7	8.0	6.0	2.9	2.1	2.4
30	e2.0	e1.7	1.9	2.5	---	3.2	8.9	7.7	5.5	2.8	2.0	2.4
31	e2.0	---	1.9	2.4	---	3.0	---	7.3	---	2.8	2.0	---
TOTAL	59.8	58.7	82.9	86.1	59.8	80.4	143.1	284.1	207.7	115.6	74.5	72.0
MEAN	1.93	1.96	2.67	2.78	2.14	2.59	4.77	9.16	6.92	3.73	2.40	2.40
MAX	2.5	2.2	11	10	2.6	4.2	8.9	11	8.4	5.1	2.8	3.3
MIN	1.7	1.6	1.6	1.7	1.7	2.1	2.9	7.3	5.5	2.8	2.0	1.9
AC-FT	119	116	164	171	119	159	284	564	412	229	148	143
CFSM	0.10	0.10	0.14	0.14	0.11	0.13	0.24	0.47	0.35	0.19	0.12	0.12
IN.	0.11	0.11	0.16	0.16	0.11	0.15	0.27	0.54	0.39	0.22	0.14	0.14

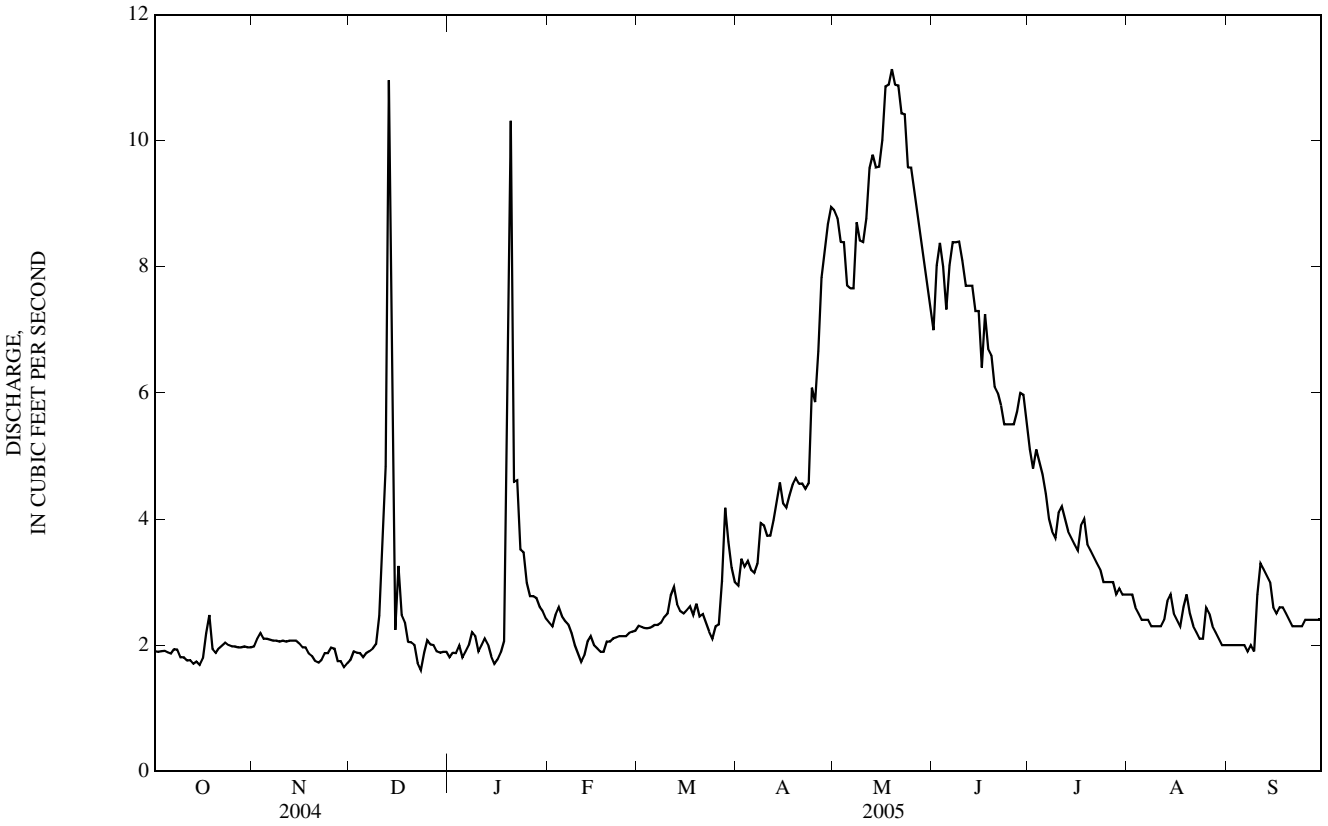
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	2.56	3.34	3.48	3.21	3.72	7.00	19.0	24.0	14.9	5.53	3.01	2.45
MAX	5.05	8.60	16.9	9.83	13.6	35.1	49.7	86.8	37.7	13.0	5.61	3.39
(WY)	(1986)	(1986)	(1996)	(1990)	(1996)	(1986)	(1996)	(1997)	(1997)	(1991)	(1997)	(1996)
MIN	1.67	1.96	2.12	1.94	1.71	2.55	4.77	9.16	4.89	2.50	1.88	1.53
(WY)	(2004)	(2005)	(1988)	(1985)	(1994)	(1985)	(2005)	(2005)	(1987)	(1994)	(2001)	(2001)

12374250 MILL CREEK ABOVE BASSOO CREEK, NEAR NIARADA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	1,769.7		1,324.7			
ANNUAL MEAN	4.84		3.63		7.68	
HIGHEST ANNUAL MEAN					18.8	1997
LOWEST ANNUAL MEAN					3.63	2005
HIGHEST DAILY MEAN	25	May 31	11	Dec 13	155	Apr 28, 1997
LOWEST DAILY MEAN	1.0	Jan 5	1.6	Nov 29	1.0	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	1.7	Jan 1	1.8	Oct 9	1.3	Sep 21, 2001
MAXIMUM PEAK FLOW			a14	Jan 20	c173	Apr 28, 1997
MAXIMUM PEAK STAGE			b2.15	Feb 25	d6.83	May 20, 1991
INSTANTANEOUS LOW FLOW					f0.85	Jan 6, 1988
ANNUAL RUNOFF (AC-FT)	3,510		2,630		5,560	
ANNUAL RUNOFF (CFSM)	0.247		0.185		0.392	
ANNUAL RUNOFF (INCHES)	3.36		2.51		5.32	
10 PERCENT EXCEEDS	11		8.0		18	
50 PERCENT EXCEEDS	2.5		2.5		3.2	
90 PERCENT EXCEEDS	1.9		1.9		2.0	

a--Gage height, 1.81 ft.
b--Backwater from ice.
c--Gage height, 2.60 ft.
d--Site and datum then in use.
e--Estimated.
f--Gage height, 5.00 ft, site and datum then in use.



12375900 SOUTH CROW CREEK NEAR RONAN, MT

LOCATION.--Lat 47°29'30", long 114°01'33" (NAD 27), in $NW^1/_4NE^1/_4SW^1/_4$ sec.16, T.20 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 200 ft upstream from Pablo Feeder Canal, 2.2 mi northeast of Kicking Horse Reservoir, 4.5 mi southeast of Ronan, and at river mile 2.6.

DRAINAGE AREA.--7.57 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,320 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversion upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	11	e6.5	12	7.2	9.6	22	121	65	15	10
2	15	14	11	e7.0	12	7.2	9.6	22	193	62	15	10
3	15	15	10	e6.5	12	7.0	9.6	22	357	61	15	9.9
4	15	15	10	e6.5	11	6.9	9.6	25	322	55	14	9.9
5	14	15	9.7	e6.0	11	7.0	9.6	26	173	50	14	9.8
6	14	14	9.0	e5.5	10	7.3	9.6	33	162	46	14	9.7
7	14	13	8.8	6.9	9.6	7.5	9.6	41	102	45	13	9.6
8	14	13	8.8	6.9	9.4	7.5	21	49	74	44	13	9.6
9	14	12	8.6	6.6	9.0	7.5	20	49	67	42	13	9.6
10	14	12	8.5	6.6	8.7	7.7	17	49	59	40	13	10
11	13	12	9.3	6.5	8.5	7.8	15	43	54	36	13	10
12	13	12	11	6.4	8.3	7.9	14	39	60	33	13	10
13	13	11	11	6.4	8.2	8.1	14	39	60	32	13	10
14	12	11	10	6.0	8.1	8.1	15	43	55	30	12	9.9
15	12	11	10	6.0	7.9	7.9	15	42	54	28	12	9.6
16	12	11	10	7.6	7.8	7.8	15	54	58	27	12	9.4
17	14	11	9.8	7.8	7.5	7.7	19	92	68	27	12	9.8
18	16	11	9.3	7.9	7.5	7.8	20	77	84	26	12	9.8
19	16	10	9.1	11	7.5	7.8	19	65	74	24	12	9.5
20	16	10	8.8	19	7.5	7.8	17	56	68	23	12	9.3
21	18	10	8.6	20	7.5	8.0	16	52	71	22	12	9.3
22	19	10	8.5	18	7.5	7.8	15	49	85	21	11	9.2
23	18	10	8.4	17	7.3	7.8	18	47	85	20	11	9.1
24	18	10	8.2	17	7.2	7.5	36	41	74	19	11	9.2
25	17	14	8.5	16	7.2	7.5	40	37	65	19	11	9.2
26	16	15	8.4	15	7.2	7.5	38	37	61	18	11	9.0
27	15	13	8.1	15	7.2	7.5	40	38	64	17	11	9.0
28	15	12	8.0	15	7.2	8.8	33	42	72	17	11	8.9
29	15	11	7.8	14	---	10	27	49	79	16	10	9.0
30	15	11	7.7	13	---	9.9	24	54	71	16	10	9.9
31	15	---	7.5	13	---	9.6	---	59	---	15	10	---
TOTAL	463	363	283.4	322.6	241.8	243.4	575.2	1,393	2,992	996	381	287.2
MEAN	14.9	12.1	9.14	10.4	8.64	7.85	19.2	44.9	99.7	32.1	12.3	9.57
MAX	19	15	11	20	12	10	40	92	357	65	15	10
MIN	12	10	7.5	5.5	7.2	6.9	9.6	22	54	15	10	8.9
AC-FT	918	720	562	640	480	483	1,140	2,760	5,930	1,980	756	570
CFSM	1.97	1.60	1.21	1.37	1.14	1.04	2.53	5.94	13.2	4.24	1.62	1.26
IN.	2.28	1.78	1.39	1.59	1.19	1.20	2.83	6.85	14.70	4.89	1.87	1.41

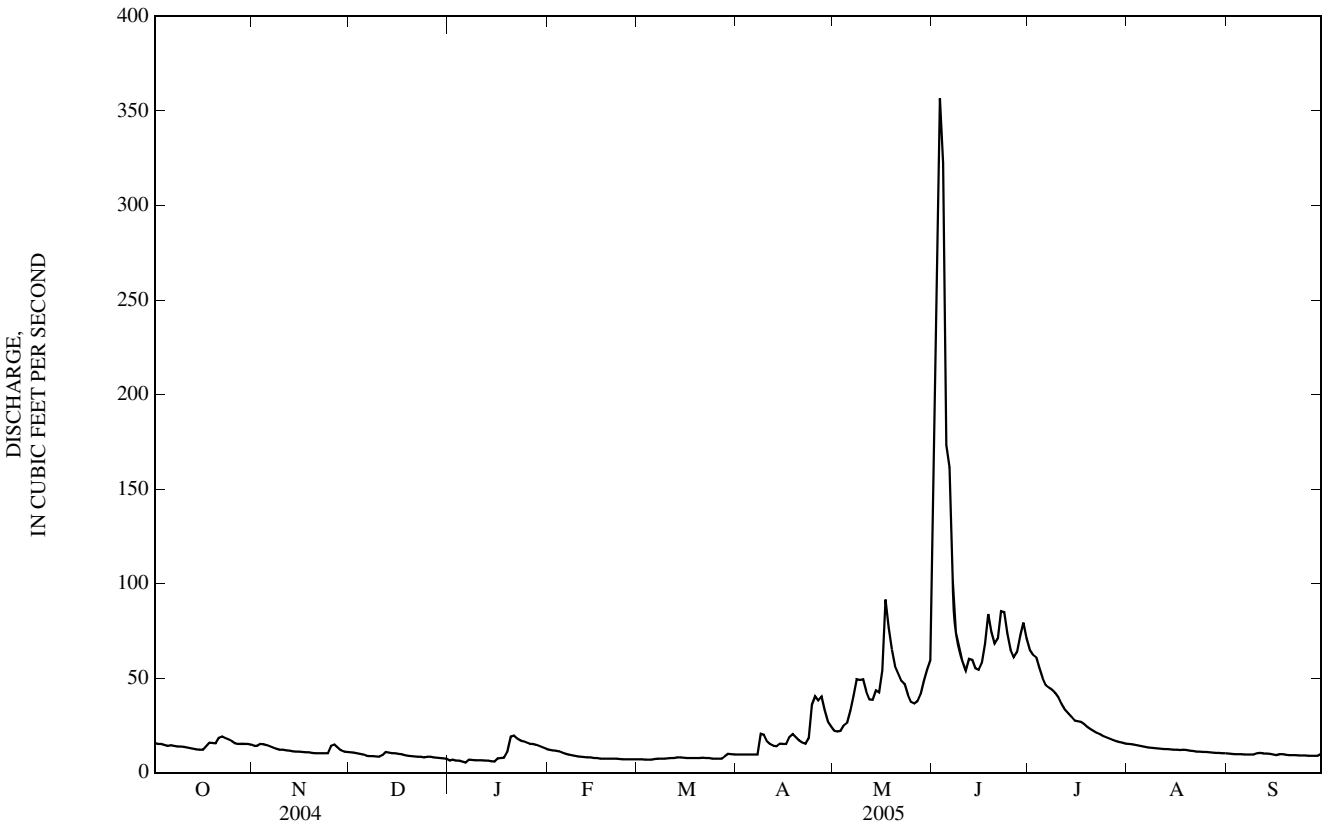
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	9.19	9.40	7.80	7.20	6.74	7.80	16.1	44.7	69.6	35.6	13.5	9.87
MAX	14.9	19.2	15.2	11.0	9.97	12.9	25.2	68.6	104	73.6	21.6	19.6
(WY)	(2005)	(1990)	(1990)	(1984)	(1986)	(1986)	(1990)	(1993)	(1984)	(1983)	(1983)	(1985)
MIN	6.06	5.75	5.20	5.45	5.03	4.86	8.80	25.3	35.9	15.5	7.87	6.88
(WY)	(2002)	(2003)	(2003)	(2000)	(1993)	(2002)	(1995)	(1999)	(1987)	(1988)	(1988)	(1988)

12375900 SOUTH CROW CREEK NEAR RONAN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	7,334.8		8,541.6			
ANNUAL MEAN	20.0		23.4		19.8	
HIGHEST ANNUAL MEAN					27.2	1983
LOWEST ANNUAL MEAN					13.7	1992
HIGHEST DAILY MEAN	106	May 29	357	Jun 3	357	Jun 3, 2005
LOWEST DAILY MEAN	4.0	Jan 5	5.5	Jan 6	3.0	Feb 24, 2003
ANNUAL SEVEN-DAY MINIMUM	4.8	Jan 2	6.4	Jan 9	4.1	Feb 23, 2003
MAXIMUM PEAK FLOW			608	Jun 3	608	Jun 3, 2005
MAXIMUM PEAK STAGE			4.96	Jun 3	4.96	Jun 3, 2005
INSTANTANEOUS LOW FLOW					a2.0	Oct 30, 2002
ANNUAL RUNOFF (AC-FT)	14,550		16,940		14,350	
ANNUAL RUNOFF (CFSM)	2.65		3.09		2.62	
ANNUAL RUNOFF (INCHES)	36.04		41.97		35.56	
10 PERCENT EXCEEDS	48		55		52	
50 PERCENT EXCEEDS	14		12		9.6	
90 PERCENT EXCEEDS	5.8		7.5		6.1	

a--Result of freezeup.
e--Estimated.



12377150 MISSION CREEK ABOVE RESERVOIR, NEAR ST. IGNATIUS, MT

LOCATION.--Lat 47°19'23", long 113°58'43" (NAD 27), in NW$^1/_4$ SW$^1/_4$ NE$^1/_4$ sec.14, T.18 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 0.2 mi southwest of upper BIA campground, 0.5 mi upstream from Mission Reservoir, and 5.3 mi east of St. Ignatius.

DRAINAGE AREA.--12.4 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,460 ft (NGVD 29).

REMARKS.--Records good except those for estimated discharges, which are poor. No known regulation or diversions upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	30	19	e13	16	11	13	40	244	232	60	23
2	43	30	18	e13	16	11	13	37	315	220	60	22
3	42	31	17	e13	15	11	13	37	477	167	57	21
4	40	29	17	e12	15	11	13	39	327	148	53	21
5	39	27	16	e12	15	12	13	41	221	147	50	21
6	37	26	16	e11	14	12	13	56	250	158	50	20
7	38	26	16	13	e13	12	15	80	e165	177	49	20
8	37	25	16	e12	13	13	23	107	e108	168	48	19
9	36	24	16	e12	13	13	24	117	e75	168	47	19
10	35	24	17	e12	13	14	22	118	e85	133	45	23
11	34	24	18	e12	13	13	20	101	e95	111	44	22
12	32	24	18	12	13	15	19	83	e105	113	42	20
13	31	23	17	e12	13	16	19	80	e100	132	40	21
14	30	23	17	e12	12	15	22	89	e95	131	37	19
15	31	22	19	e13	12	15	20	108	e110	114	35	18
16	40	22	18	e13	e12	14	20	150	e130	115	34	18
17	63	22	16	e14	e11	14	24	220	e150	116	34	23
18	60	21	16	16	e11	14	25	150	e140	102	35	22
19	52	22	16	24	11	13	23	118	e140	98	33	20
20	46	21	15	29	11	14	21	107	e170	100	32	18
21	47	20	15	29	11	14	20	98	e200	94	30	e18
22	44	21	e15	27	e11	13	19	90	e240	88	30	e18
23	41	20	e15	26	11	13	21	86	e260	89	31	e17
24	39	22	16	24	11	12	42	80	e230	88	31	17
25	37	30	15	22	11	12	58	74	192	80	29	16
26	35	26	14	21	11	12	64	74	171	72	27	16
27	34	22	14	20	11	13	74	85	178	67	25	15
28	33	20	13	20	11	15	62	106	265	64	24	15
29	32	19	13	19	---	15	51	134	287	63	24	15
30	32	19	14	18	---	15	44	146	273	63	25	17
31	32	---	e14	17	---	14	---	147	---	61	24	---
TOTAL	1,218	715	496	523	350	411	830	2,998	5,798	3,679	1,185	574
MEAN	39.3	23.8	16.0	16.9	12.5	13.3	27.7	96.7	193	119	38.2	19.1
MAX	63	31	19	29	16	16	74	220	477	232	60	23
MIN	30	19	13	11	11	11	13	37	75	61	24	15
AC-FT	2,420	1,420	984	1,040	694	815	1,650	5,950	11,500	7,300	2,350	1,140
CFSM	3.17	1.92	1.29	1.36	1.01	1.07	2.23	7.80	15.6	9.57	3.08	1.54
IN.	3.65	2.15	1.49	1.57	1.05	1.23	2.49	8.99	17.39	11.04	3.56	1.72

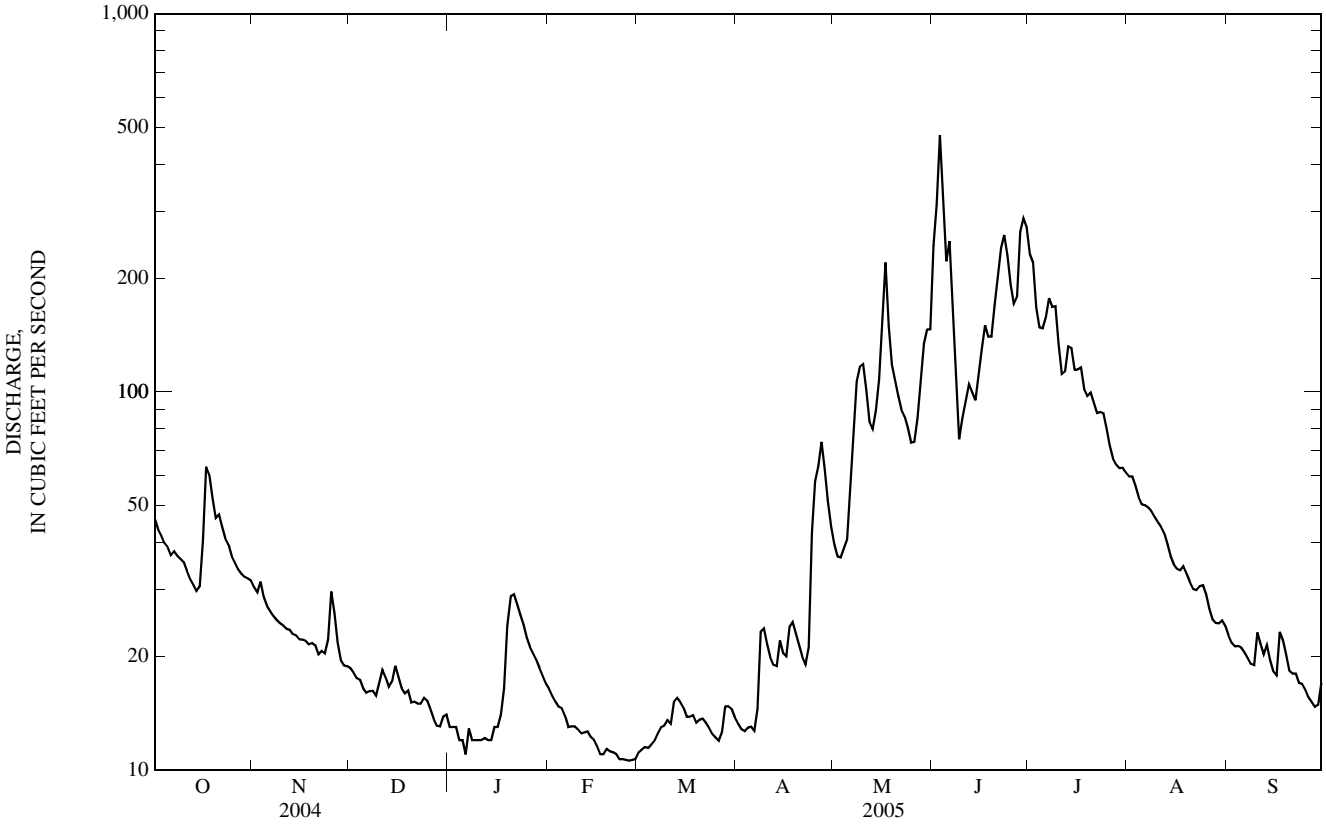
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	25.3	19.2	13.2	10.7	9.14	10.6	25.5	101	174	114	49.0	30.6
MAX	39.3	28.5	21.3	16.9	12.6	15.4	43.9	168	222	181	75.2	67.4
(WY)	(2005)	(1990)	(1990)	(2005)	(1986)	(1986)	(1990)	(1993)	(1997)	(1983)	(2004)	(1985)
MIN	14.1	11.7	9.58	8.20	6.71	7.23	10.6	54.0	104	53.4	25.2	15.8
(WY)	(2002)	(2003)	(2003)	(2000)	(1985)	(2002)	(2002)	(1984)	(1987)	(1988)	(1988)	(1988)

12377150 MISSION CREEK ABOVE RESERVOIR, NEAR ST. IGNATIUS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	19,169.2		18,777			
ANNUAL MEAN	52.4		51.4		48.6	
HIGHEST ANNUAL MEAN					61.0	1997
LOWEST ANNUAL MEAN					35.6	1988
HIGHEST DAILY MEAN	393	Jun 11	477	Jun 3	477	Jun 3, 2005
LOWEST DAILY MEAN	6.0	Jan 6	11	Jan 6	5.5	Feb 28, 2001
ANNUAL SEVEN-DAY MINIMUM	7.3	Jan 3	11	Feb 17	6.3	Feb 15, 1985
MAXIMUM PEAK FLOW			572	Jun 3	a892	Jun 30, 1991
MAXIMUM PEAK STAGE			4.38	Jun 3	b5.16	Jun 30, 1991
INSTANTANEOUS LOW FLOW					4.4	Dec 28, 2001
ANNUAL RUNOFF (AC-FT)	38,020		37,240		35,200	
ANNUAL RUNOFF (CFSM)	4.22		4.15		3.92	
ANNUAL RUNOFF (INCHES)	57.51		56.33		53.24	
10 PERCENT EXCEEDS	125		133		136	
50 PERCENT EXCEEDS	34		24		22	
90 PERCENT EXCEEDS	8.8		13		9.0	

a--Gage height, 4.72 ft.
b--Backwater from debris dam.
e--Estimated.



12381400 SOUTH FORK JOCKO RIVER NEAR ARLEE, MT

LOCATION.--Lat 47°11'44", long 113°50'59" (NAD 27), in $NE^1/_4NW^1/_4NE^1/_4$ sec.35, T.17 N., R.18 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 600 ft upstream from confluence with Jocko River and Twin Campground and 12 mi northeast of Arlee, MT.

DRAINAGE AREA.--56.0 mi^2.

PERIOD OF RECORD.--October 1982 to current year. Records published as "near Jocko" 1912-16 and in WSP 1246, 1316 are not equivalent.

GAGE.--Water-stage recorder. Elevation of gage is 3,970 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several unpublished observations of water temperature and specific conductance were made during the year. No known regulation or diversion upstream from station. U.S. Geological Survey telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	24	e19	e17	35	23	38	141	353	142	53	30
2	28	24	e19	e16	34	22	39	137	465	134	52	30
3	27	26	e20	e14	33	22	39	137	564	131	51	29
4	27	25	20	e16	33	22	41	142	571	124	50	28
5	26	24	e18	e16	33	22	39	145	471	118	48	28
6	26	23	19	e16	31	23	40	172	435	112	47	27
7	26	23	20	e16	27	24	45	222	372	108	46	27
8	26	23	19	e16	e24	26	58	257	326	104	45	26
9	25	23	19	e15	e22	29	60	266	294	100	44	26
10	25	22	20	e15	e24	35	60	290	274	99	44	32
11	25	22	25	e15	e26	34	60	289	262	96	43	31
12	24	22	26	e15	e25	40	60	270	276	92	43	29
13	24	21	25	e15	e24	39	59	266	268	88	44	30
14	23	21	25	e14	e24	36	60	278	248	85	43	29
15	24	21	24	e13	e23	35	58	305	236	82	41	27
16	28	21	21	e14	e22	34	57	326	227	81	39	26
17	35	21	21	e16	e21	34	64	398	235	84	39	30
18	31	21	20	e21	e20	33	66	353	229	78	40	30
19	29	21	21	e22	e22	33	66	324	208	74	39	27
20	27	21	20	e23	e25	33	66	316	197	71	37	25
21	27	24	e19	e22	e22	32	65	334	193	69	36	25
22	26	21	e18	e24	e21	31	65	313	188	67	35	24
23	26	20	e18	e31	e21	31	76	306	182	64	35	24
24	28	22	e18	e33	e22	32	144	282	174	63	36	26
25	27	e22	e19	40	e22	31	168	268	168	61	36	26
26	26	e21	e20	40	e22	30	180	262	162	60	34	24
27	25	e21	18	41	e20	31	194	259	161	58	33	23
28	25	e19	22	40	e21	47	177	264	161	57	32	23
29	25	e17	e20	39	---	43	164	269	160	56	31	23
30	24	e18	e19	38	---	41	151	267	152	55	31	23
31	24	---	e17	36	---	39	---	272	---	54	31	---
TOTAL	818	654	629	709	699	987	2,459	8,130	8,212	2,667	1,258	808
MEAN	26.4	21.8	20.3	22.9	25.0	31.8	82.0	262	274	86.0	40.6	26.9
MAX	35	26	26	41	35	47	194	398	571	142	53	32
MIN	23	17	17	13	20	22	38	137	152	54	31	23
AC-FT	1,620	1,300	1,250	1,410	1,390	1,960	4,880	16,130	16,290	5,290	2,500	1,600
CFSM	0.47	0.39	0.36	0.41	0.45	0.57	1.46	4.68	4.89	1.54	0.72	0.48
IN.	0.54	0.43	0.42	0.47	0.46	0.66	1.63	5.40	5.46	1.77	0.84	0.54

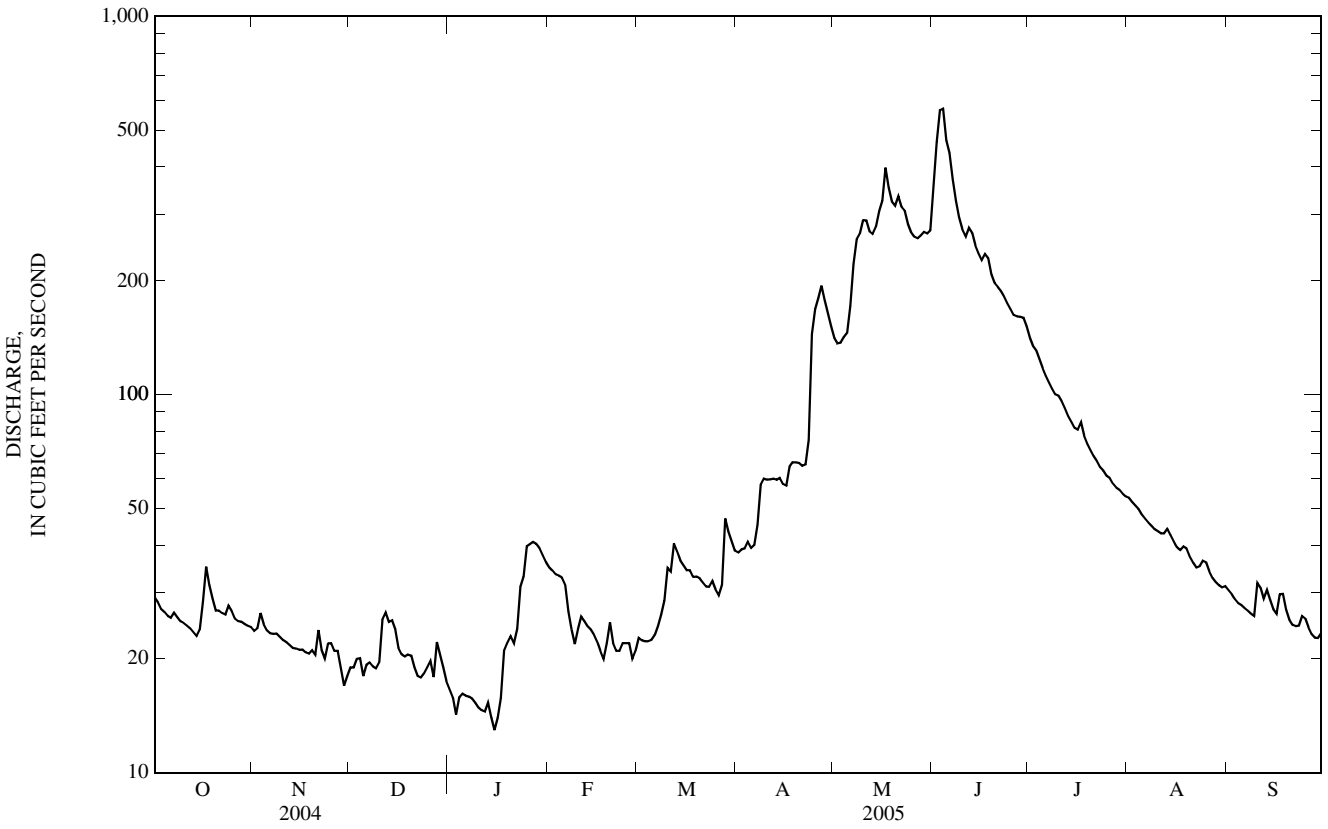
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	21.8	18.0	14.5	12.2	11.1	15.9	56.8	196	195	76.6	37.8	26.4
MAX	42.2	26.3	37.4	22.9	25.0	56.0	113	459	446	140	53.5	44.5
(WY)	(1986)	(1986)	(1996)	(2005)	(2005)	(1986)	(1990)	(1997)	(1997)	(1997)	(1997)	(1985)
MIN	13.0	11.1	9.29	3.66	4.45	7.68	24.8	119	70.2	37.0	21.6	15.8
(WY)	(1988)	(1988)	(2004)	(1985)	(1985)	(1985)	(1995)	(1995)	(1992)	(1992)	(1992)	(1987)

12381400 SOUTH FORK JOCKO RIVER NEAR ARLEE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	18,405.9		28,030			
ANNUAL MEAN	50.3		76.8		57.0	
HIGHEST ANNUAL MEAN					108	1997
LOWEST ANNUAL MEAN					35.0	1992
HIGHEST DAILY MEAN	226	Jun 6	571	Jun 4	1,060	May 17, 1997
LOWEST DAILY MEAN	4.0	Jan 6	13	Jan 15	2.0	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	5.4	Jan 2	14	Jan 10	2.6	Feb 1, 1989
MAXIMUM PEAK FLOW			718	Jun 4	a1,220	May 17, 1997
MAXIMUM PEAK STAGE			3.68	Jun 4	b4.98	Feb 15, 1989
ANNUAL RUNOFF (AC-FT)	36,510		55,600		41,290	
ANNUAL RUNOFF (CFSM)	0.898		1.37		1.02	
ANNUAL RUNOFF (INCHES)	12.23		18.62		13.83	
10 PERCENT EXCEEDS	144		258		156	
50 PERCENT EXCEEDS	28		31		23	
90 PERCENT EXCEEDS	9.0		20		9.5	

a--Gage height, 4.31 ft.
b--Backwater from ice.
e--Estimated.



12383500 BIG KNIFE CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°08'51", long 113°58'24" (NAD 27), in $NW^1/_4SW^1/_4NW^1/_4$ sec.14, T.16 N., R.19 W., Lake County, Hydrologic Unit 17010212, Flathead Indian Reservation, on left bank, 150 ft upstream from S Canal, 1 mi upstream from mouth, and 5.5 mi east of Arlee.

DRAINAGE AREA.--6.88 mi^2.

PERIOD OF RECORD.--August 1910 to September 1916 (no winter records), October 1982 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as "near Jocko" 1910-16 and in WSP 916, and as "above Big Knife Canal, near Jocko" in WSP 1246, 1316.

REVISED RECORDS.--WSP 1246: 1916. WSP 1316: 1910-12, 1915-16.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,720 ft (NGVD 29). Prior to July 28, 1998, at site 38 ft upstream at different elevation.

REMARKS.--Records good. No known regulation or diversion upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	7.8	6.7	6.0	6.0	4.8	5.2	12	44	41	17	11
2	9.7	7.8	6.6	6.0	6.0	4.8	5.3	11	53	40	17	11
3	9.4	7.9	6.6	5.8	6.0	4.7	5.3	11	61	39	16	11
4	9.3	7.8	6.6	5.7	6.0	4.7	5.5	11	67	37	16	11
5	9.3	7.7	6.6	5.6	6.0	4.7	5.3	11	60	35	16	11
6	9.0	7.5	6.6	5.5	5.8	4.7	5.2	12	55	33	16	11
7	9.3	7.5	6.6	5.4	5.7	4.9	5.5	18	51	32	15	11
8	9.0	7.5	6.6	5.4	5.7	4.8	6.4	23	47	31	15	10
9	8.9	7.5	6.6	5.3	5.7	5.0	6.3	23	44	30	15	10
10	8.9	7.5	6.6	5.2	5.7	5.0	6.3	26	43	29	15	12
11	8.7	7.5	6.6	5.2	5.7	5.0	6.2	26	42	28	15	11
12	8.7	7.4	6.6	5.1	5.7	5.6	6.4	23	45	27	15	11
13	8.6	7.3	6.5	5.3	5.8	5.3	6.6	21	44	26	15	11
14	8.6	7.2	6.5	5.0	5.6	5.3	6.8	21	43	25	14	10
15	8.6	7.2	6.7	5.0	5.5	5.2	6.4	24	43	24	14	9.9
16	8.6	7.2	6.6	5.0	5.5	5.0	6.4	29	43	24	14	9.8
17	8.7	7.2	6.6	4.9	5.5	5.2	7.4	42	46	24	14	12
18	9.0	7.2	6.5	5.3	5.4	5.1	7.0	40	46	23	14	11
19	8.5	7.2	6.5	5.7	5.4	5.1	7.2	35	44	22	14	9.9
20	8.3	7.2	6.4	5.7	5.3	5.2	6.8	31	43	22	13	9.5
21	8.4	7.0	6.4	6.2	5.2	5.2	6.8	35	44	21	13	9.3
22	8.2	7.1	6.3	6.1	5.2	5.1	6.8	38	46	21	13	9.3
23	8.2	7.0	6.3	6.3	5.1	5.0	7.4	33	46	21	13	9.4
24	8.6	7.2	6.3	6.3	5.0	5.0	10	29	45	20	13	9.5
25	8.3	7.3	6.3	6.3	5.0	5.0	12	26	43	20	13	9.3
26	8.2	7.1	6.3	6.2	4.9	5.0	13	25	42	19	12	9.0
27	8.2	6.9	6.3	6.3	4.8	5.1	16	26	42	19	12	8.9
28	8.0	6.9	6.2	6.2	4.8	6.1	15	28	42	18	12	8.8
29	8.0	6.8	6.2	6.1	---	5.6	13	31	42	18	12	8.7
30	8.1	6.8	6.3	6.0	---	5.4	13	33	42	18	12	8.7
31	7.9	---	6.2	6.0	---	5.2	---	35	---	17	12	---
TOTAL	268.9	219.2	200.7	176.1	154.0	157.8	236.5	789	1,398	804	437	305.0
MEAN	8.67	7.31	6.47	5.68	5.50	5.09	7.88	25.5	46.6	25.9	14.1	10.2
MAX	9.7	7.9	6.7	6.3	6.0	6.1	16	42	67	41	17	12
MIN	7.9	6.8	6.2	4.9	4.8	4.7	5.2	11	42	17	12	8.7
AC-FT	533	435	398	349	305	313	469	1,560	2,770	1,590	867	605
CFSM	1.26	1.06	0.94	0.83	0.80	0.74	1.15	3.70	6.77	3.77	2.05	1.48
IN.	1.45	1.19	1.09	0.95	0.83	0.85	1.28	4.27	7.56	4.35	2.36	1.65

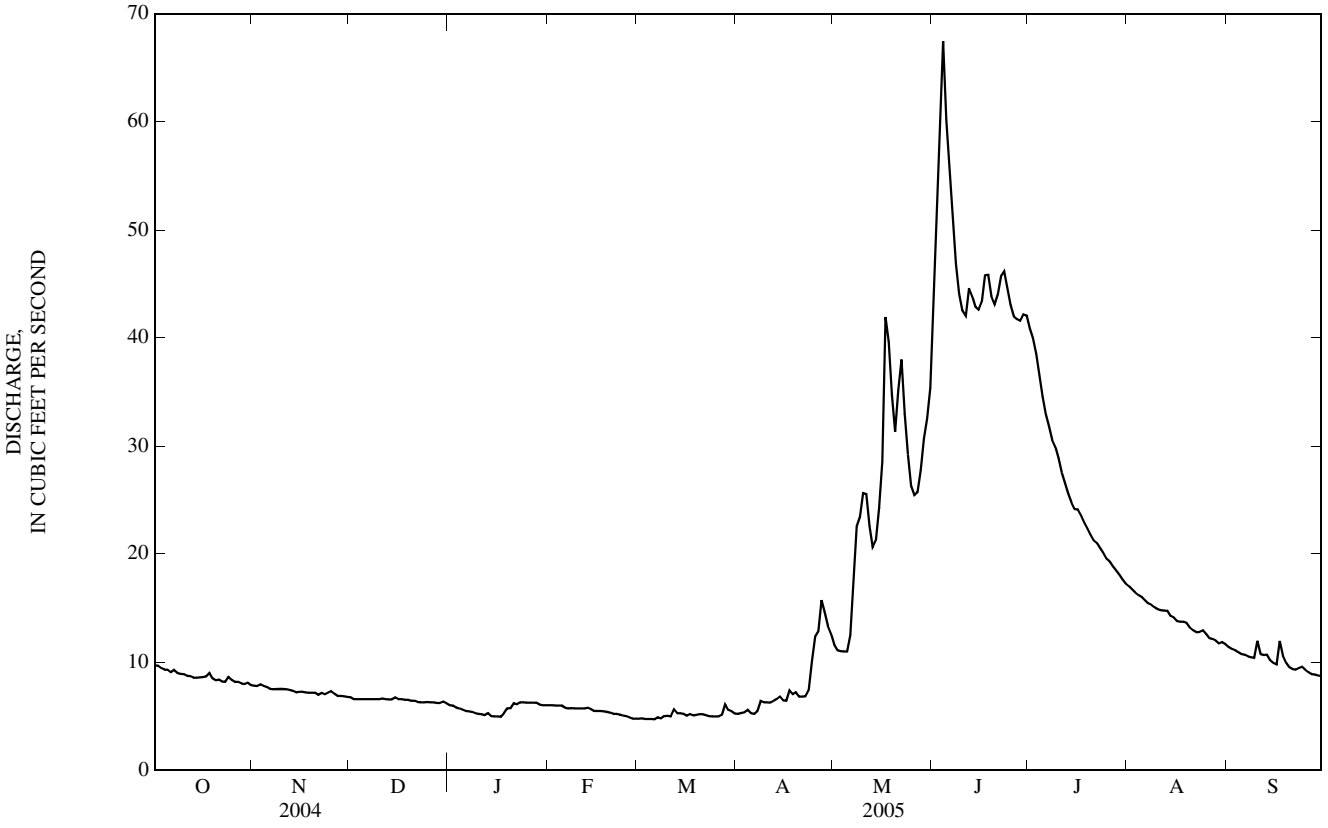
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	8.04	6.84	5.78	5.08	4.54	4.53	6.19	15.7	26.1	18.3	12.8	9.79
MAX	10.3	8.95	7.38	6.33	6.49	7.07	8.93	28.0	48.4	29.2	16.9	12.0
(WY)	(1983)	(1986)	(1985)	(1985)	(1986)	(1986)	(1986)	(1997)	(1997)	(1984)	(1983)	(1984)
MIN	5.27	4.47	4.05	3.65	2.96	2.96	3.92	9.23	8.49	9.60	8.06	6.55
(WY)	(1993)	(1993)	(1993)	(1989)	(1989)	(1989)	(1991)	(1995)	(1992)	(1992)	(1992)	(1992)

12383500 BIG KNIFE CREEK NEAR ARLEE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	3,210.6		5,146.2			
ANNUAL MEAN	8.77		14.1		10.3	
HIGHEST ANNUAL MEAN					14.6	1997
LOWEST ANNUAL MEAN					6.60	1992
HIGHEST DAILY MEAN	31	Jun 6	67	Jun 4	67	Jun 4, 2005
LOWEST DAILY MEAN	3.4	Jan 5	4.7	Mar 3	1.7	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	3.5	Feb 29	4.7	Feb 28	2.0	Feb 1, 1989
MAXIMUM PEAK FLOW			70	Jun 4	b78	Jun 30, 1916
MAXIMUM PEAK STAGE			6.45	Jun 4	5.91	Jun 29, 2002
INSTANTANEOUS LOW FLOW			a4.5	Mar 5	c1.3	Feb 4, 1989
ANNUAL RUNOFF (AC-FT)	6,370		10,210		7,480	
ANNUAL RUNOFF (CFSM)	1.28		2.05		1.50	
ANNUAL RUNOFF (INCHES)	17.36		27.83		20.40	
10 PERCENT EXCEEDS	16		37		20	
50 PERCENT EXCEEDS	7.7		8.3		7.5	
90 PERCENT EXCEEDS	3.6		5.2		4.1	

a--Also occurred on Mar. 6 and 7; gage height, 5.17 ft.
b--Gage height, 3.65 ft; site and datum then in use.
c--Result of freezeup.



12387450 VALLEY CREEK NEAR ARLEE, MT

LOCATION.--Lat 47°10'13", long 114°13'47" (NAD 27), in $NE^1/_4SE^1/_4SE^1/_4$ sec.3, T.16 N., R.21 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 1.4 mi upstream from East Fork, 6.7 mi west of Arlee, and 7.4 mi southwest of Ravalli.

DRAINAGE AREA.--15.3 mi^2.

PERIOD OF RECORD.--October 1982 to current season (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft (NGVD 29).

REMARKS.--Seasonal records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				e7.5	23	29	20	12	9.2	9.7		
2				e7.5	22	35	20	12	9.1	9.1		
3				e7.5	21	53	19	12	9.1	8.7		
4				e7.5	21	51	19	12	9.0	9.7		
5				e7.5	22	50	19	11	8.9	8.6		
6				7.3	27	51	18	11	8.8	8.4		
7				8.2	38	44	18	11	8.7	8.4		
8				9.7	46	39	18	11	8.6	8.3		
9				9.5	44	35	17	11	8.6	8.0		
10				9.2	44	31	17	11	9.9	8.0		
11				9.2	39	30	17	11	9.2	7.9		
12				9.4	36	29	17	11	9.1	7.9		
13				9.8	34	28	16	11	9.2	7.9		
14				10	34	27	15	11	8.8	7.9		
15				9.6	38	26	15	11	8.7	7.6		
16				9.7	40	26	15	11	8.6	7.6		
17				12	45	26	14	11	9.2	7.6		
18				12	40	26	14	11	8.8	7.6		
19				12	38	26	14	11	8.6	7.7		
20				12	35	25	14	10	8.4	8.0		
21				12	33	24	13	10	8.4	7.9		
22				12	31	24	13	9.9	8.3	7.7		
23				12	31	23	13	9.8	8.4	7.7		
24				15	29	23	13	9.9	8.6	7.6		
25				18	28	22	13	9.8	8.5	7.6		
26				22	27	22	13	9.5	8.3	7.6		
27				29	27	22	13	9.5	8.0	8.0		
28				28	27	22	13	9.4	8.0	7.8		
29				26	29	22	13	9.3	8.0	7.8		
30				24	29	21	12	9.2	8.4	7.6		
31				---	28	---	12	9.2	---	8.4		
TOTAL				385.1	1,006	912	477	328.5	261.4	250.3		
MEAN				12.8	32.5	30.4	15.4	10.6	8.71	8.07		
MAX				29	46	53	20	12	9.9	9.7		
MIN				7.3	21	21	12	9.2	8.0	7.6		
AC-FT				764	2,000	1,810	946	652	518	496		
CFSM				0.84	2.12	1.99	1.01	0.69	0.57	0.53		
IN.				0.94	2.45	2.22	1.16	0.80	0.64	0.61		

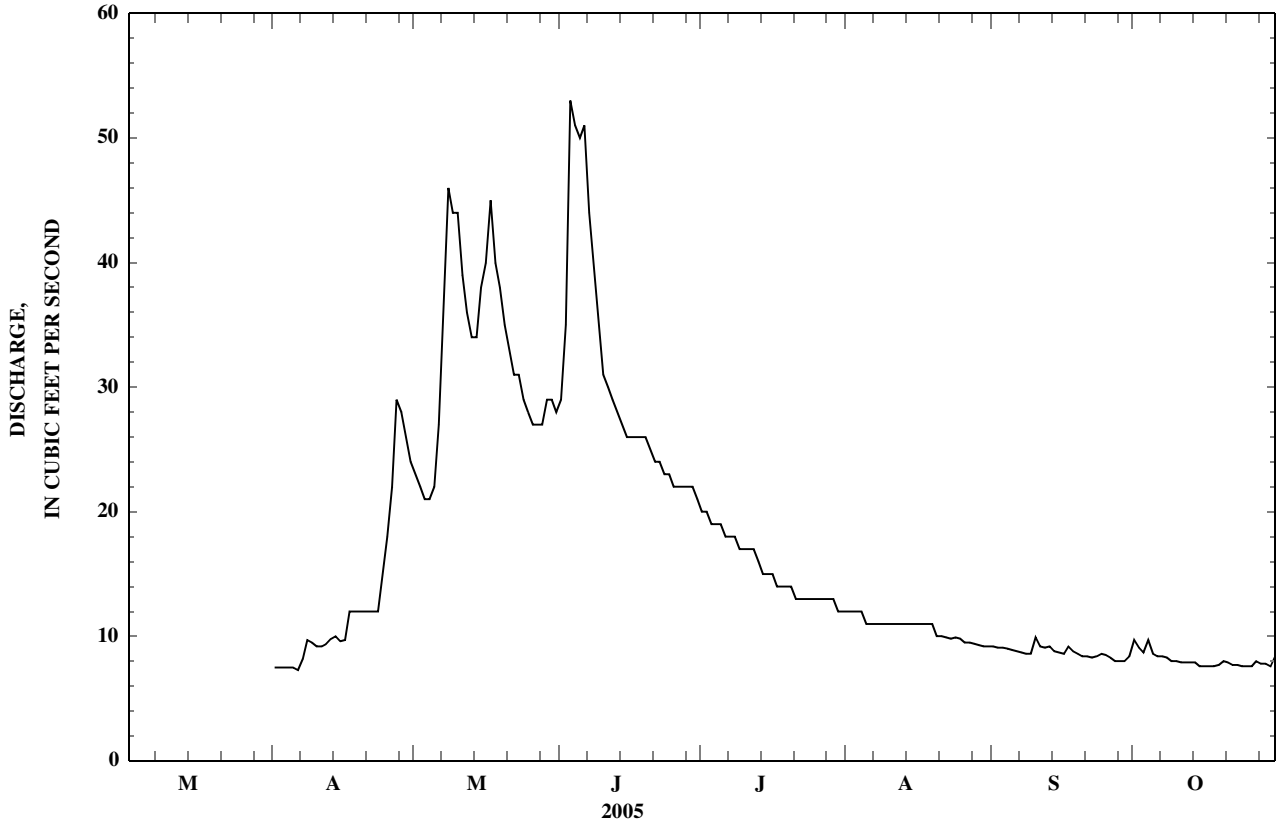
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1983 - 2005

MEAN	7.70	14.2	32.0	28.2	14.5	10.5	9.02	8.46	8.22
MAX	8.67	30.3	75.5	66.7	31.8	19.6	14.0	12.2	11.5
(WY)	(1998)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1998)	(1998)
MIN	6.37	6.27	21.5	11.6	8.47	6.72	6.21	5.97	5.85
(WY)	(1984)	(2002)	(1988)	(1987)	(2001)	(2001)	(2001)	(1989)	(2002)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1983 - 2005	
HIGHEST DAILY MEAN	53	Jun 3	110	May 17, 1997
LOWEST DAILY MEAN	7.3	Apr 6	5.0	Nov 22, 1994
MAXIMUM PEAK FLOW	63	Jun 5	116	May 16, 1997
MAXIMUM PEAK STAGE	2.45	Jun 4	3.04	May 16, 1997

e--Estimated.

12387450 VALLEY CREEK NEAR ARLEE, MT—Continued



12388200 JOCKO RIVER AT DIXON, MT

LOCATION.--Lat 47°18'43", long 114°17'48" (NAD 27), in $NW^1/_4NW^1/_4NE^1/_4$ sec. 20, T.18 N., R.21 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 38 ft downstream from State Highway 212 bridge, 0.8 mi east of Dixon, and at river mile 0.8.

DRAINAGE AREA.--380 mi^2.

PERIOD OF RECORD.--April 1990 to current year. Miscellaneous measurements made at this site 1977 and 1987 water years.

GAGE.--Water-stage recorder. Elevation of gage is 2,521.87 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation and diversion upstream from gage for irrigation. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	220	e194	163	252	164	199	380	675	627	173	162
2	233	216	e191	149	246	163	200	357	931	594	170	160
3	231	216	e189	140	239	163	200	348	1,420	559	167	165
4	227	216	e189	e138	236	163	207	353	1,890	530	165	167
5	222	214	e189	e136	235	163	207	346	1,720	505	164	163
6	218	211	e189	e132	229	164	202	370	1,680	467	164	162
7	216	207	e187	e127	214	167	206	471	1,460	445	164	161
8	214	206	e187	116	218	170	230	543	1,300	424	163	160
9	212	205	e186	119	217	173	243	575	1,150	411	161	162
10	209	204	e185	e120	206	185	239	605	1,040	397	159	191
11	207	201	e187	120	202	185	237	618	1,020	376	162	192
12	204	200	e187	127	205	207	237	590	1,070	343	167	183
13	201	197	e187	e134	205	214	246	563	1,040	318	173	189
14	200	197	e186	e140	198	204	261	564	965	296	168	188
15	201	194	e191	e144	188	200	255	593	900	278	163	186
16	205	194	e194	e147	177	196	238	636	833	267	162	187
17	341	190	e195	e149	165	196	255	789	872	274	166	210
18	301	188	193	151	166	193	269	805	900	261	173	214
19	274	190	193	222	167	194	261	728	887	251	177	201
20	258	187	191	272	178	192	257	681	843	239	170	193
21	254	183	193	264	170	192	250	697	834	226	165	190
22	252	186	191	260	164	189	245	676	840	218	164	190
23	246	195	175	257	159	190	246	664	792	213	168	192
24	249	196	174	266	163	184	311	634	739	204	170	201
25	246	e196	e175	268	165	185	403	604	685	200	173	202
26	238	e192	e175	267	163	180	405	578	652	189	166	195
27	233	e186	e173	278	163	180	486	563	650	177	166	191
28	228	e194	e175	280	162	199	466	565	709	169	164	189
29	227	e195	173	272	---	211	434	583	699	176	163	188
30	223	e194	e171	265	---	206	405	587	677	176	165	188
31	221	---	e168	258	---	201	---	583	---	171	163	---
TOTAL	7,228	5,970	5,733	5,881	5,452	5,773	8,300	17,649	29,873	9,981	5,158	5,522
MEAN	233	199	185	190	195	186	277	569	996	322	166	184
MAX	341	220	195	280	252	214	486	805	1,890	627	177	214
MIN	200	183	168	116	159	163	199	346	650	169	159	160
AC-FT	14,340	11,840	11,370	11,660	10,810	11,450	16,460	35,010	59,250	19,800	10,230	10,950

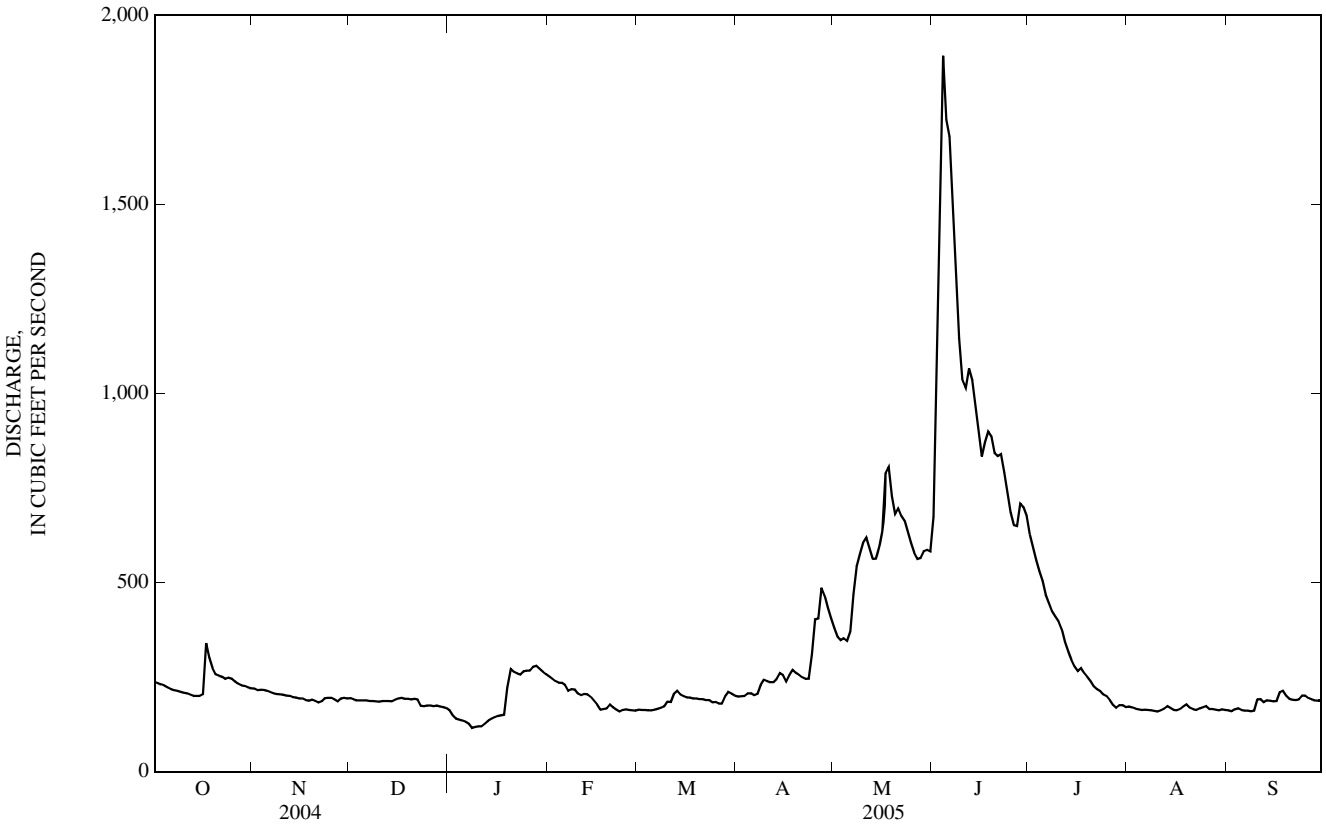
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

MEAN	185	174	158	135	134	149	214	419	554	258	167	181
MAX	233	227	265	190	208	246	390	1,303	1,537	512	222	244
(WY)	(2005)	(1996)	(1996)	(2005)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2004)
MIN	138	138	123	102	108	118	130	203	149	140	131	137
(WY)	(2004)	(1995)	(1993)	(1995)	(1993)	(1994)	(1995)	(1992)	(1992)	(1994)	(1994)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1991 - 2005	
ANNUAL TOTAL	73,517		112,520			
ANNUAL MEAN	201		308		227	
HIGHEST ANNUAL MEAN					445	1997
LOWEST ANNUAL MEAN					157	1992
HIGHEST DAILY MEAN	641	Jun 12	1,890	Jun 4	2,540	May 18, 1997
LOWEST DAILY MEAN	90	Jan 7	116	Jan 8	74	Feb 2, 1996
ANNUAL SEVEN-DAY MINIMUM	97	Jan 6	123	Jan 6	82	Jan 3, 1995
MAXIMUM PEAK FLOW			1,990	Jun 4	2,710	May 17, 1997
MAXIMUM PEAK STAGE			4.01	Jun 4	4.68	May 17, 1997
ANNUAL RUNOFF (AC-FT)	145,800		223,200		164,800	
10 PERCENT EXCEEDS	337		651		372	
50 PERCENT EXCEEDS	186		202		169	
90 PERCENT EXCEEDS	107		163		121	

e--Estimated.

12388200 JOCKO RIVER AT DIXON, MT—Continued



12388400 REVAIS CREEK BELOW WEST FORK, NEAR DIXON, MT

LOCATION.--Lat 47°15'59", long 114°24'21" (NAD 27), in $SE^1/_4NE^1/_4NW^1/_4$ sec.4, T.17 N., R.22 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank, 0.3 mi downstream from West Fork, 7.3 mi southwest of Dixon, and at river mile 5.2.

DRAINAGE AREA.--23.4 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,420 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	6.8	6.7	e5.9	e7.4	7.3	9.7	45	61	24	9.0	5.5
2	7.6	6.9	6.7	e5.8	e7.2	7.0	10	41	68	23	8.8	5.5
3	7.5	7.1	6.7	e5.8	e7.0	7.0	10	40	82	22	8.4	5.4
4	7.4	6.8	6.4	e5.6	e7.2	6.9	11	43	77	20	8.1	5.4
5	7.3	6.7	6.4	e5.4	e7.0	6.9	10	46	73	19	7.9	5.3
6	7.3	6.7	6.4	e5.2	e6.8	6.9	10	62	74	19	7.7	5.2
7	7.4	6.8	6.4	e5.0	e7.2	7.2	11	79	70	18	7.6	5.2
8	7.3	7.0	6.4	e5.4	e7.0	7.3	15	85	66	17	7.4	5.1
9	7.3	7.0	6.3	e5.6	e6.8	7.7	16	80	61	17	7.3	5.1
10	7.2	6.8	e6.5	5.7	e7.2	8.6	15	97	56	17	7.1	6.8
11	7.1	6.7	e6.6	5.9	e7.0	7.8	15	93	53	16	7.1	6.1
12	7.0	6.7	e6.7	6.0	e7.2	9.3	15	79	50	15	7.3	5.7
13	7.0	6.7	7.0	5.8	e6.8	8.8	16	74	45	15	7.7	6.0
14	6.9	6.7	7.0	e5.6	e7.2	8.7	16	74	42	14	7.2	5.5
15	7.0	6.7	7.0	e5.6	e6.8	8.7	15	81	39	14	7.0	5.3
16	7.2	6.7	7.0	e5.6	e6.6	8.7	15	92	37	14	6.8	5.3
17	7.5	6.7	7.0	e5.6	e6.6	8.6	20	107	38	14	6.8	6.3
18	7.5	6.7	7.0	e5.6	e6.4	8.3	22	87	38	13	7.0	5.8
19	7.3	6.7	6.4	e6.0	e6.8	8.4	22	75	36	13	6.8	5.5
20	7.2	6.7	6.3	e6.4	e6.9	8.4	21	70	34	12	6.5	5.3
21	7.7	6.5	6.2	e6.6	e7.2	8.3	20	68	32	11	6.3	5.2
22	7.5	6.7	6.2	e6.8	e7.2	8.1	20	66	31	11	6.2	5.2
23	7.2	6.7	e6.4	e7.0	e7.2	8.1	21	65	29	11	6.2	5.3
24	7.4	6.7	e6.7	e7.0	e7.2	9.4	26	63	28	11	6.4	5.6
25	7.3	7.0	6.4	e7.2	e7.1	7.7	36	58	27	11	6.3	5.5
26	7.1	7.0	6.2	e7.3	7.3	7.7	45	54	27	10	6.0	5.3
27	7.0	6.7	6.1	e7.4	7.1	9.0	67	53	27	9.9	5.9	5.1
28	7.0	6.7	5.9	e7.6	7.1	11	63	55	28	9.8	5.8	5.0
29	7.0	6.7	5.9	e7.4	---	11	55	60	27	9.5	5.7	5.0
30	7.1	e6.7	5.9	e7.4	---	10	49	62	25	9.1	5.7	5.9
31	7.1	---	6.1	e7.6	---	9.6	---	60	---	9.1	5.7	---
TOTAL	225.1	203.0	200.9	192.8	196.5	258.4	696.7	2,114	1,381	448.4	215.7	164.4
MEAN	7.26	6.77	6.48	6.22	7.02	8.34	23.2	68.2	46.0	14.5	6.96	5.48
MAX	7.7	7.1	7.0	7.6	7.4	11	67	107	82	24	9.0	6.8
MIN	6.9	6.5	5.9	5.0	6.4	6.9	9.7	40	25	9.1	5.7	5.0
AC-FT	446	403	398	382	390	513	1,380	4,190	2,740	889	428	326
CFSM	0.31	0.29	0.28	0.27	0.30	0.36	0.99	2.91	1.97	0.62	0.30	0.23
IN.	0.36	0.32	0.32	0.31	0.31	0.41	1.11	3.36	2.20	0.71	0.34	0.26

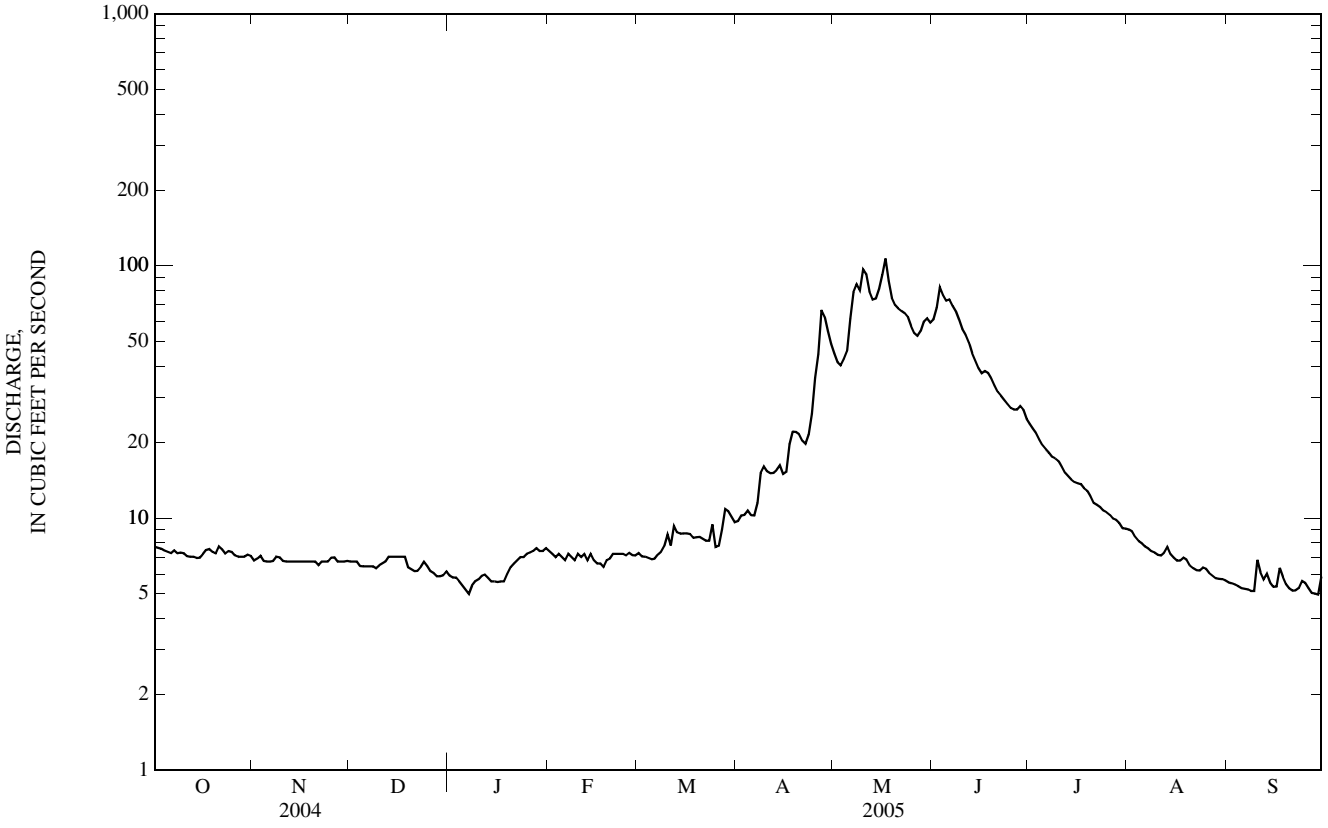
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	6.27	6.63	6.44	5.32	5.63	7.82	22.7	66.7	54.7	16.2	7.92	6.31
MAX	12.5	14.8	27.9	12.3	19.9	23.7	56.4	165	134	25.9	11.0	10.9
(WY)	(1986)	(1986)	(1996)	(1996)	(1996)	(1986)	(1996)	(1997)	(1997)	(1991)	(1997)	(1985)
MIN	3.79	3.92	3.82	3.53	3.49	3.97	9.07	44.9	18.6	10.2	5.47	4.19
(WY)	(2004)	(2004)	(2002)	(2004)	(1993)	(2001)	(2001)	(1992)	(1987)	(1986)	(1988)	(1988)

12388400 REVAIS CREEK BELOW WEST FORK, NEAR DIXON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	5,605.3		6,296.9			
ANNUAL MEAN	15.3		17.3		17.8	
HIGHEST ANNUAL MEAN					35.2	1997
LOWEST ANNUAL MEAN					11.6	1992
HIGHEST DAILY MEAN	106	May 28	107	May 17	316	Jun 1, 1997
LOWEST DAILY MEAN	2.7	Jan 6	5.0	Jan 7	2.5	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	3.2	Jan 4	5.2	Sep 3	2.7	Feb 2, 1989
MAXIMUM PEAK FLOW			a116	May 17	c382	Jun 1, 1997
MAXIMUM PEAK STAGE			b4.26	Jan 5	6.93	Dec 5, 1984
ANNUAL RUNOFF (AC-FT)	11,120		12,490		12,860	
ANNUAL RUNOFF (CFSM)	0.654		0.737		0.759	
ANNUAL RUNOFF (INCHES)	8.91		10.01		10.31	
10 PERCENT EXCEEDS	43		55		47	
50 PERCENT EXCEEDS	7.4		7.2		7.3	
90 PERCENT EXCEEDS	3.6		5.7		4.0	

a--Gage height, 3.75 ft.
b--Backwater from ice.
c--Gage height, 4.36 ft.
e--Estimated.



12388700 FLATHEAD RIVER AT PERMA, MT

LOCATION.--Lat 47°22'03", long 114°35'03" (NAD 27), in $SE^1/_4NE^1/_4NE^1/_4$ sec.36, T.19 N., R.24 W., Sanders County, Hydrologic Unit 17010212, Flathead Indian Reservation, on right bank 0.3 mi north of Perma, 0.4 mi downstream from Camas Creek, and at river mile 10.9.

DRAINAGE AREA.--8,795 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 2,469.31 ft (NGVD 29).

REMARKS.--Water-discharge records excellent except those for estimated discharges, which are fair. Flow affected by regulation from Hungry Horse Reservoir (station no. 12362000) and by Flathead Lake (station no. 12371500). Diversions for irrigation of about 160,500 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,800	8,910	8,860	12,100	7,790	7,550	4,170	14,700	13,300	21,300	11,100	7,760
2	11,800	8,920	9,820	12,100	7,740	7,590	4,170	14,600	16,000	19,700	11,000	6,940
3	11,600	8,940	9,840	12,100	7,810	6,890	4,180	14,700	19,100	18,500	10,000	6,220
4	9,880	8,120	9,870	12,300	7,840	6,080	4,220	14,700	23,800	18,100	9,250	5,330
5	9,070	7,340	9,850	e12,000	7,830	5,310	4,190	14,700	33,300	16,200	9,120	4,600
6	7,950	7,170	9,960	e11,200	7,120	4,740	4,170	15,000	38,800	14,800	8,280	4,270
7	7,890	7,160	10,100	e10,200	6,880	4,260	4,180	15,200	45,900	14,500	8,110	4,230
8	7,840	7,140	10,100	e9,880	6,890	4,120	4,260	15,300	47,600	14,400	8,060	4,200
9	7,770	7,130	10,100	e9,090	6,800	4,090	4,310	15,300	46,700	14,400	7,720	4,170
10	7,710	7,130	10,000	e8,230	6,820	4,090	4,590	15,500	41,100	14,400	7,710	4,310
11	7,770	7,100	10,800	e7,730	6,860	4,100	4,990	17,400	37,900	14,400	7,610	4,400
12	7,900	7,130	10,800	e7,730	6,870	4,120	5,430	19,900	35,400	14,200	7,550	4,370
13	7,910	7,140	10,600	e7,970	6,850	4,130	5,570	22,100	35,200	13,700	7,710	4,390
14	7,950	7,100	10,900	e8,040	6,850	4,100	5,800	22,500	35,000	13,400	7,720	4,220
15	7,860	7,150	11,100	e7,920	6,800	4,120	5,830	22,500	32,600	11,900	7,750	4,030
16	7,860	7,070	11,800	e7,920	7,500	4,110	5,780	22,600	27,000	11,000	7,840	3,980
17	7,950	7,020	12,000	e7,810	7,730	4,180	5,960	23,000	26,000	10,300	7,840	4,020
18	8,100	7,120	11,900	e7,800	7,710	4,130	6,640	25,100	23,900	10,100	7,900	4,030
19	8,030	7,090	12,000	e7,660	7,700	4,110	7,410	28,200	26,400	10,100	7,940	3,960
20	8,810	7,070	12,100	e7,020	7,670	4,120	8,400	28,800	29,400	10,000	7,910	3,990
21	8,980	7,020	12,000	e6,490	7,660	4,160	9,380	29,100	25,700	10,100	7,940	3,950
22	8,970	7,050	12,100	6,420	7,630	4,140	10,300	29,100	24,900	10,100	7,940	3,900
23	9,010	7,010	12,000	6,180	7,610	4,140	12,300	28,800	22,200	10,100	8,060	3,910
24	9,060	7,060	12,000	6,140	7,620	4,120	13,500	24,500	19,700	10,000	7,920	4,240
25	9,070	7,140	12,000	6,120	7,610	4,130	13,600	21,900	19,500	10,000	7,790	4,530
26	9,000	7,240	12,000	6,860	7,620	4,170	13,700	20,000	20,500	10,800	7,820	4,560
27	8,970	7,150	12,200	e7,640	7,530	4,190	13,900	17,300	19,500	11,000	7,800	4,550
28	8,990	7,090	12,000	7,870	7,620	4,240	14,500	14,900	18,500	11,000	7,740	4,520
29	8,990	7,050	12,000	7,940	---	4,210	14,700	13,500	19,700	11,000	7,700	4,550
30	8,960	7,810	12,000	7,850	---	4,240	14,700	13,200	20,600	10,900	7,740	4,610
31	8,970	---	12,000	7,820	---	4,190	---	13,100	---	11,100	7,790	---
TOTAL	272,420	220,570	344,800	264,130	206,960	141,870	234,830	607,200	845,200	401,500	254,360	136,740
MEAN	8,788	7,352	11,120	8,520	7,391	4,576	7,828	19,590	28,170	12,950	8,205	4,558
MAX	11,800	8,940	12,200	12,300	7,840	7,590	14,700	29,100	47,600	21,300	11,100	7,760
MIN	7,710	7,010	8,860	6,120	6,800	4,090	4,170	13,100	13,300	10,000	7,550	3,900
AC-FT	540,300	437,500	683,900	523,900	410,500	281,400	465,800	1,204,000	1,676,000	796,400	504,500	271,200

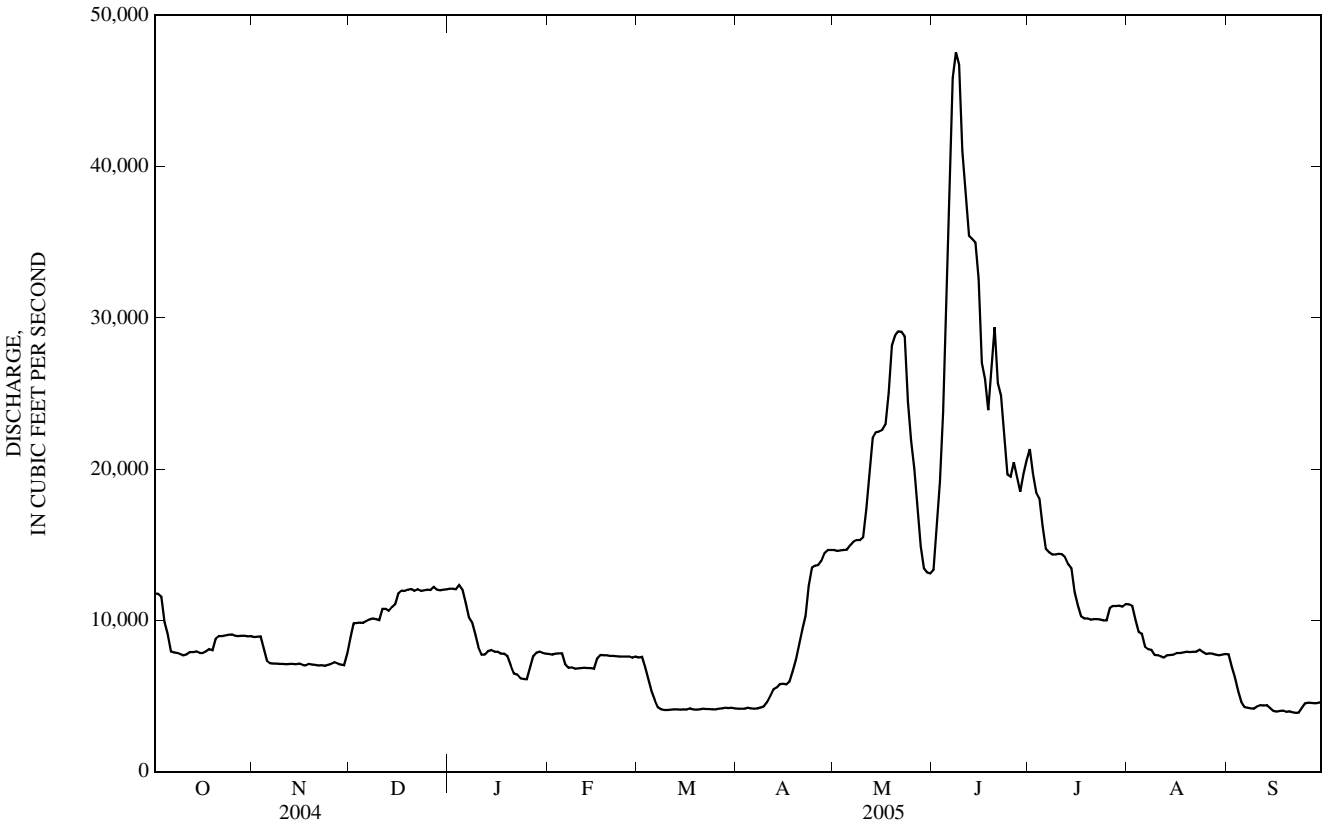
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	8,463	10,360	11,000	10,210	9,556	9,000	10,030	15,660	22,850	13,160	8,128	7,880
MAX	12,070	13,150	17,260	15,200	18,340	23,420	23,370	36,930	45,490	22,780	12,690	13,090
(WY)	(1992)	(2000)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1997)	(1991)	(1996)	(1989)
MIN	4,042	4,052	6,160	4,626	4,234	4,121	4,397	5,877	9,092	6,279	4,164	3,987
(WY)	(2004)	(2002)	(2002)	(2003)	(2001)	(2001)	(2001)	(1995)	(1987)	(1994)	(1994)	(2003)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	3,644,200		3,930,580			
ANNUAL MEAN	9,957		10,770		11,360	
HIGHEST ANNUAL MEAN					18,030	1996
LOWEST ANNUAL MEAN					7,040	2001
HIGHEST DAILY MEAN	22,500	Jun 1	47,600	Jun 8	53,400	Jun 6, 1997
LOWEST DAILY MEAN	3,990	Apr 13	3,900	Sep 22	2,670	May 29, 1984
ANNUAL SEVEN-DAY MINIMUM	4,050	Apr 10	3,970	Sep 17	3,110	May 25, 1984
MAXIMUM PEAK FLOW			48,000	Jun 7	54,700	Jun 7, 1997
MAXIMUM PEAK STAGE			20.17	Jun 7	21.65	Jun 7, 1997
ANNUAL RUNOFF (AC-FT)	7,228,000		7,796,000		8,227,000	
10 PERCENT EXCEEDS	16,100		20,200		17,200	
50 PERCENT EXCEEDS	8,620		7,940		10,100	
90 PERCENT EXCEEDS	6,100		4,190		5,300	

e--Estimated.

12388700 FLATHEAD RIVER AT PERMA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD--Water years 1971-73, 1997 to 2003.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Seasonal records, April 2001 to September 2003, April 2005 to September 2005.

INSTRUMENTATION.--Temperature recorder since Mar. 30, 1979.

REMARKS.--Seasonal daily water temperature record rated excellent. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (seasonal records): Maximum, 30.0°C, Sept. 5-7, 2003; minimum, 2.5°C, Apr. 2, 2002.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE (seasonal records): Maximum, 26.0°C, Aug. 9; minimum, 4.5°C, Apr. 5.

12388700 FLATHEAD RIVER AT PERMA, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
SEASON APRIL 2005 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		APRIL			MAY			JUNE			JULY	
1	8.0	5.0	6.5	11.0	8.5	9.5	14.0	13.5	14.0	19.0	17.5	18.5
2	9.0	5.0	7.0	11.5	9.0	10.0	14.0	13.0	13.5	18.5	17.5	18.0
3	9.0	5.5	7.0	11.0	10.0	10.5	13.0	13.0	13.0	19.0	17.0	18.0
4	7.5	6.0	6.5	10.5	9.5	10.0	14.5	12.5	13.5	19.0	17.5	18.5
5	8.5	4.5	6.5	11.5	9.5	10.5	14.0	12.5	13.0	20.0	18.0	19.0
6	12.5	5.5	8.0	11.5	10.5	10.5	13.0	11.5	12.5	20.5	18.5	19.5
7	10.5	7.0	8.5	11.0	10.0	10.5	12.5	10.5	11.0	21.0	19.0	20.0
8	11.5	7.0	9.0	12.0	10.5	11.0	11.0	10.0	10.5	21.5	19.0	20.0
9	9.5	6.0	8.0	12.0	11.0	11.5	11.5	10.5	11.0	20.0	18.0	19.0
10	10.5	6.5	8.0	11.5	11.0	11.0	12.0	10.5	11.5	19.5	18.0	18.5
11	9.5	7.5	8.5	12.5	10.5	11.5	13.0	11.5	12.0	20.5	18.5	19.5
12	8.0	7.0	7.5	12.5	11.0	11.5	13.0	12.0	12.5	21.5	19.0	20.0
13	7.5	7.0	7.5	12.5	11.5	12.0	13.0	12.0	12.5	22.0	20.0	20.5
14	9.0	6.0	7.5	12.0	11.5	12.0	13.5	12.0	13.0	22.0	19.5	20.5
15	10.5	6.5	8.5	12.0	11.0	11.5	14.5	12.5	13.5	23.0	20.0	21.5
16	11.5	8.0	9.5	12.0	11.5	11.5	14.0	13.0	13.5	22.0	20.0	21.0
17	10.5	9.0	10.0	12.0	10.5	11.5	14.0	13.0	13.5	23.0	19.0	20.5
18	10.5	8.0	9.0	12.0	10.5	11.0	14.0	13.0	13.5	23.5	20.0	22.0
19	10.5	8.0	9.0	12.0	10.5	11.0	15.5	13.0	14.0	23.5	20.5	22.0
20	10.0	8.5	9.5	11.5	10.0	10.5	16.0	14.0	15.0	23.5	20.0	22.0
21	10.5	8.0	9.5	11.5	10.0	10.5	16.5	15.0	16.0	24.0	20.5	22.0
22	12.0	8.5	10.0	11.0	10.0	10.5	17.5	16.0	16.5	22.5	21.0	21.5
23	11.5	9.5	10.5	11.0	9.5	10.5	17.5	16.0	16.5	23.5	20.0	22.0
24	12.5	9.5	11.0	11.0	9.5	10.5	17.5	16.0	17.0	23.5	20.5	22.0
25	12.5	10.0	11.5	12.0	10.0	11.0	17.0	16.5	17.0	23.0	20.5	21.5
26	13.0	10.5	11.5	12.5	10.5	11.5	17.0	16.5	17.0	23.5	20.0	22.0
27	11.5	10.0	11.0	13.5	11.5	12.5	17.0	16.5	16.5	24.0	20.5	22.0
28	11.5	9.0	10.0	14.5	12.0	13.0	17.5	16.5	17.0	23.5	21.0	22.5
29	10.0	8.5	9.5	16.0	13.0	14.0	17.5	16.5	17.0	24.0	21.0	22.5
30	10.5	8.5	9.5	16.5	13.5	15.0	19.0	16.5	17.5	24.5	21.0	22.5
31	---	---	---	15.5	14.0	15.0	---	---	---	24.5	21.5	23.0
MONTH	13.0	4.5	9.0	16.5	8.5	11.5	19.0	10.0	14.0	24.5	17.0	20.5

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

12389000 CLARK FORK NEAR PLAINS, MT

LOCATION.--Lat 47°25'47", long 114°51'18" (NAD 27), in $E^1/_2SW^1/_4$ sec.1, T.19 N., R.26 W., Sanders County, Hydrologic Unit 17010213, on right bank 2.4 mi southeast of Plains, 6.0 mi downstream from Flathead River, and at river mile 239.0.

DRAINAGE AREA.--19,958 mi^2.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1246: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,449.11 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Nov. 28, 1911, nonrecording gage at site 50 ft upstream at same elevation.

REMARKS.--Records good. Flow partly regulated by Hungry Horse Reservoir (station number 12362000) and by Flathead Lake (station number 12371500). Diversions for irrigation of about 335,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15,000	12,100	10,900	15,100	12,100	10,500	8,120	24,000	27,300	32,000	13,900	9,630
2	15,000	12,100	11,700	15,100	11,900	10,500	8,190	23,400	30,500	29,800	13,900	9,010
3	14,800	12,100	12,400	14,400	11,800	10,100	8,220	23,000	36,000	27,900	13,300	8,270
4	13,300	11,500	12,700	14,200	11,800	9,330	8,250	22,800	41,800	27,000	12,500	7,450
5	12,300	10,700	12,900	14,400	11,800	8,510	8,290	22,700	51,800	24,800	12,000	6,720
6	11,200	10,300	12,800	14,400	11,300	7,800	8,320	23,200	58,500	22,500	11,400	6,190
7	10,900	10,300	12,800	12,700	10,800	7,400	8,350	24,600	66,000	21,700	10,900	6,120
8	10,900	10,200	13,000	12,200	10,600	7,130	8,360	26,500	68,900	21,000	10,700	6,090
9	10,800	10,200	13,000	12,100	10,400	7,130	8,450	27,700	66,800	20,600	10,500	6,070
10	10,700	10,200	13,000	12,100	10,300	7,160	8,620	29,300	59,500	20,400	10,300	6,140
11	10,800	10,200	13,200	12,100	10,300	7,220	8,940	32,900	54,100	20,300	10,200	6,220
12	10,800	10,100	14,000	11,300	10,200	7,280	9,340	36,700	50,400	19,900	10,200	6,280
13	10,900	10,200	14,500	10,200	10,200	7,350	9,710	39,000	49,700	19,200	10,100	6,330
14	10,900	10,100	14,800	10,600	10,100	7,430	10,100	39,100	49,900	18,600	10,100	6,380
15	10,900	10,100	14,900	10,000	10,100	7,500	10,400	38,800	46,900	16,800	10,100	6,340
16	10,800	10,100	15,300	8,930	10,100	7,550	10,700	39,400	40,800	15,700	10,100	6,260
17	10,900	10,000	15,700	9,070	10,300	7,590	11,000	41,400	39,400	15,100	10,000	6,230
18	11,100	9,980	15,600	9,720	10,400	7,610	11,200	45,700	38,100	14,700	10,000	6,240
19	11,300	10,000	15,500	10,700	10,500	7,620	11,900	48,700	41,100	14,500	9,990	6,290
20	11,600	10,000	15,500	11,800	10,500	7,620	12,600	49,400	44,000	14,300	9,980	6,360
21	12,200	9,980	15,500	12,400	10,600	7,620	13,400	51,800	39,800	14,100	9,950	6,400
22	12,300	9,960	15,500	12,200	10,600	7,620	15,200	50,800	38,100	13,900	9,940	6,430
23	12,300	9,870	15,500	11,600	10,600	7,620	17,500	49,900	35,300	13,700	9,920	6,410
24	12,300	9,820	15,200	11,300	10,600	7,620	19,400	45,400	32,300	13,600	9,900	6,410
25	12,400	9,990	14,900	11,100	10,600	7,560	20,500	40,800	31,100	13,500	9,810	6,650
26	12,400	10,300	14,900	11,100	10,600	7,500	21,600	37,200	31,100	13,500	9,770	6,910
27	12,300	10,400	15,400	11,400	10,500	7,480	23,300	33,300	30,100	13,700	9,750	7,080
28	12,200	10,400	15,400	11,900	10,500	7,520	24,800	29,900	28,800	13,800	9,720	7,140
29	12,200	10,200	15,000	12,200	---	7,660	25,300	28,000	29,900	13,800	9,540	7,170
30	12,100	10,200	14,800	12,300	---	7,840	24,700	27,700	31,400	13,900	9,550	7,170
31	12,100	---	14,900	12,200	---	8,010	---	27,500	---	13,900	9,650	---
TOTAL	369,700	311,600	441,200	370,820	300,100	244,380	394,760	1,080,600	1,289,400	568,200	327,670	202,390
MEAN	11,930	10,390	14,230	11,960	10,720	7,883	13,160	34,860	42,980	18,330	10,570	6,746
MAX	15,000	12,100	15,700	15,100	12,100	10,500	25,300	51,800	68,900	32,000	13,900	9,630
MIN	10,700	9,820	10,900	8,930	10,100	7,130	8,120	22,700	27,300	13,500	9,540	6,070
AC-FT	733,300	618,100	875,100	735,500	595,200	484,700	783,000	2,143,000	2,558,000	1,127,000	649,900	401,400
CFSM	0.60	0.52	0.71	0.60	0.54	0.39	0.66	1.75	2.15	0.92	0.53	0.34
IN.	0.69	0.58	0.82	0.69	0.56	0.46	0.74	2.01	2.40	1.06	0.61	0.38

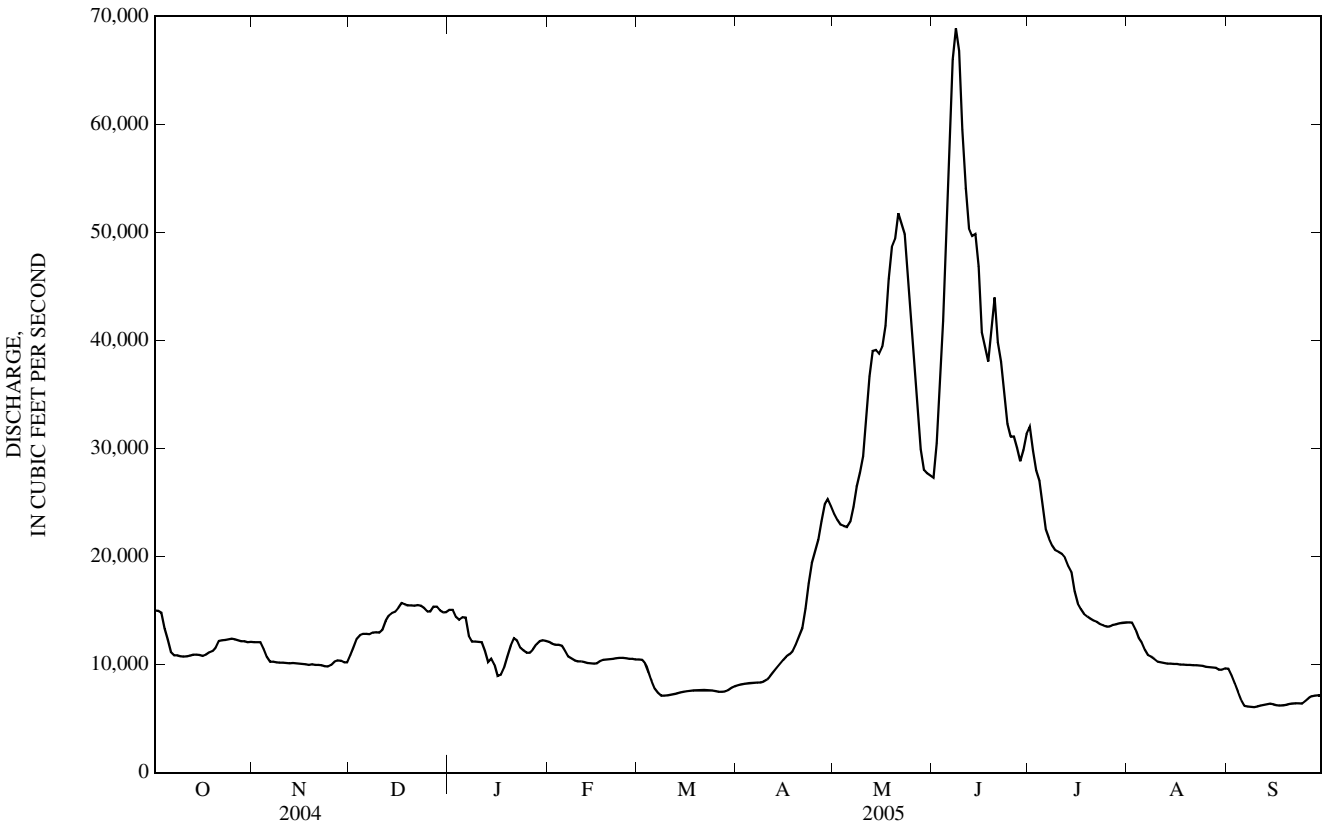
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2005, BY WATER YEAR (WY)

MEAN	10,500	11,450	12,040	11,950	11,790	11,850	19,270	44,110	54,390	25,590	11,000	9,619
MAX	23,550	21,170	27,630	22,320	30,070	31,390	47,830	89,760	101,600	76,930	24,840	16,920
(WY)	(1960)	(1928)	(1996)	(1934)	(1996)	(1996)	(1934)	(1928)	(1948)	(1916)	(1916)	(1985)
MIN	4,760	4,588	4,075	3,344	3,940	4,636	6,112	13,010	13,560	7,843	5,656	4,768
(WY)	(1932)	(1937)	(1937)	(1937)	(1937)	(1937)	(1937)	(1941)	(1977)	(1940)	(1988)	(1931)

12389000 CLARK FORK NEAR PLAINS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1911 - 2005	
ANNUAL TOTAL	5,458,810		5,900,820			
ANNUAL MEAN	14,910		16,170		19,480	
HIGHEST ANNUAL MEAN					29,420	1996
LOWEST ANNUAL MEAN					8,845	1941
HIGHEST DAILY MEAN	40,400	May 29	68,900	Jun 8	133,000	May 31, 1948
LOWEST DAILY MEAN	7,810	Jan 16	6,070	Sep 9	a3,200	Feb 8, 1936
ANNUAL SEVEN-DAY MINIMUM	8,010	Jan 15	6,160	Sep 6	3,250	Jan 11, 1937
MAXIMUM PEAK FLOW			69,800	Jun 7	134,000	Jun 5, 1948
MAXIMUM PEAK STAGE			13.08	Jun 7	19.17	Jun 5, 1948
INSTANTANEOUS LOW FLOW			6,070	Sep 8	b3,200	Dec 10, 1940
ANNUAL RUNOFF (AC-FT)	10,830,000		11,700,000		14,110,000	
ANNUAL RUNOFF (CFSM)	0.747		0.810		0.976	
ANNUAL RUNOFF (INCHES)	10.17		11.00		13.26	
10 PERCENT EXCEEDS	28,300		34,100		44,100	
50 PERCENT EXCEEDS	11,900		11,600		13,100	
90 PERCENT EXCEEDS	9,460		7,490		6,500	

a--Estimated during period of ice-effected gage-height record.
b--Gage height, 2.85 ft.



12389500 THOMPSON RIVER NEAR THOMPSON FALLS, MT

LOCATION.--Lat 47°35'31", long 115°13'43" (NAD 27), in $NW^1/_4NE^1/_4SE^1/_4$ sec.7, T.21 N., R.28 W., Sanders County, Hydrologic Unit 17010213, Lolo National Forest, on right bank 1.2 mi upstream from mouth and 5.5 mi east of Thompson Falls.

DRAINAGE AREA.--642 mi^2.

PERIOD OF RECORD.--March to September 1911, October 1911 to September 1916 (occasional gage heights, discharges, and discharge measurements), April 1956 to current year. Records for January and February 1911, published in WSP 916, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1246: 1911. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 2,429.97 ft (NGVD 29) (Bureau of Public Roads bench mark). October 1911 to September 1916, nonrecording gage at site 0.2 mi upstream at different elevation.

REMARKS.--Records good. Minor diversions upstream from station for irrigation, acreage unknown. Diversion from headwaters of Alder Creek in $SW^1/_4$ sec.16, T.23 N., R.25 W., to supplement water supply for storage in Upper Dry Fork Reservoir in Little Bitterroot River basin. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May to June 1948 reached a discharge of 6,190 ft^3/s, by slope-area measurement of peak flow at site 0.2 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	135	131	139	222	154	201	513	445	265	144	115
2	133	135	132	127	210	155	203	471	527	251	143	114
3	133	143	130	120	205	152	202	449	627	251	140	113
4	133	139	129	131	211	152	203	440	661	241	139	111
5	132	136	127	e80	214	150	199	435	627	235	137	111
6	132	136	129	114	206	149	194	449	617	226	134	110
7	134	134	131	140	186	151	201	494	578	220	132	109
8	131	134	131	134	186	155	247	572	543	213	130	109
9	133	134	130	131	190	160	278	651	505	210	128	108
10	132	134	145	113	176	166	277	695	474	212	128	114
11	131	134	242	129	167	164	268	689	453	208	126	120
12	131	132	300	136	178	166	263	650	442	200	126	121
13	129	131	234	e134	184	165	262	612	418	191	130	122
14	129	131	230	e128	179	161	269	603	396	186	130	119
15	127	131	218	e125	162	161	257	611	384	182	128	116
16	129	131	199	e125	149	160	249	633	365	184	124	113
17	135	129	189	e126	149	161	263	711	402	190	123	118
18	141	129	181	127	149	158	282	701	419	184	124	115
19	140	131	178	167	160	157	288	668	391	179	124	114
20	140	128	176	222	163	158	287	630	369	172	122	111
21	150	123	170	271	156	158	284	616	348	168	120	111
22	154	122	166	312	152	154	289	594	332	167	119	109
23	153	122	133	285	150	154	308	565	326	166	120	109
24	151	124	146	280	151	149	404	533	314	163	120	109
25	146	135	169	268	152	150	571	507	304	160	121	109
26	142	136	163	e266	152	148	615	479	295	159	120	110
27	140	130	157	261	154	170	767	459	292	156	117	107
28	139	125	155	255	152	214	749	453	291	154	117	107
29	137	124	149	241	---	224	650	449	284	151	115	107
30	137	129	152	237	---	219	571	442	280	149	115	128
31	136	---	155	227	---	206	---	434	---	146	115	---
TOTAL	4,244	3,937	5,177	5,551	4,865	5,101	10,101	17,208	12,709	5,939	3,911	3,389
MEAN	137	131	167	179	174	165	337	555	424	192	126	113
MAX	154	143	300	312	222	224	767	711	661	265	144	128
MIN	127	122	127	80	149	148	194	434	280	146	115	107
AC-FT	8,420	7,810	10,270	11,010	9,650	10,120	20,040	34,130	25,210	11,780	7,760	6,720
CFSM	0.21	0.20	0.26	0.28	0.27	0.26	0.52	0.86	0.66	0.30	0.20	0.18
IN.	0.25	0.23	0.30	0.32	0.28	0.30	0.59	1.00	0.74	0.34	0.23	0.20

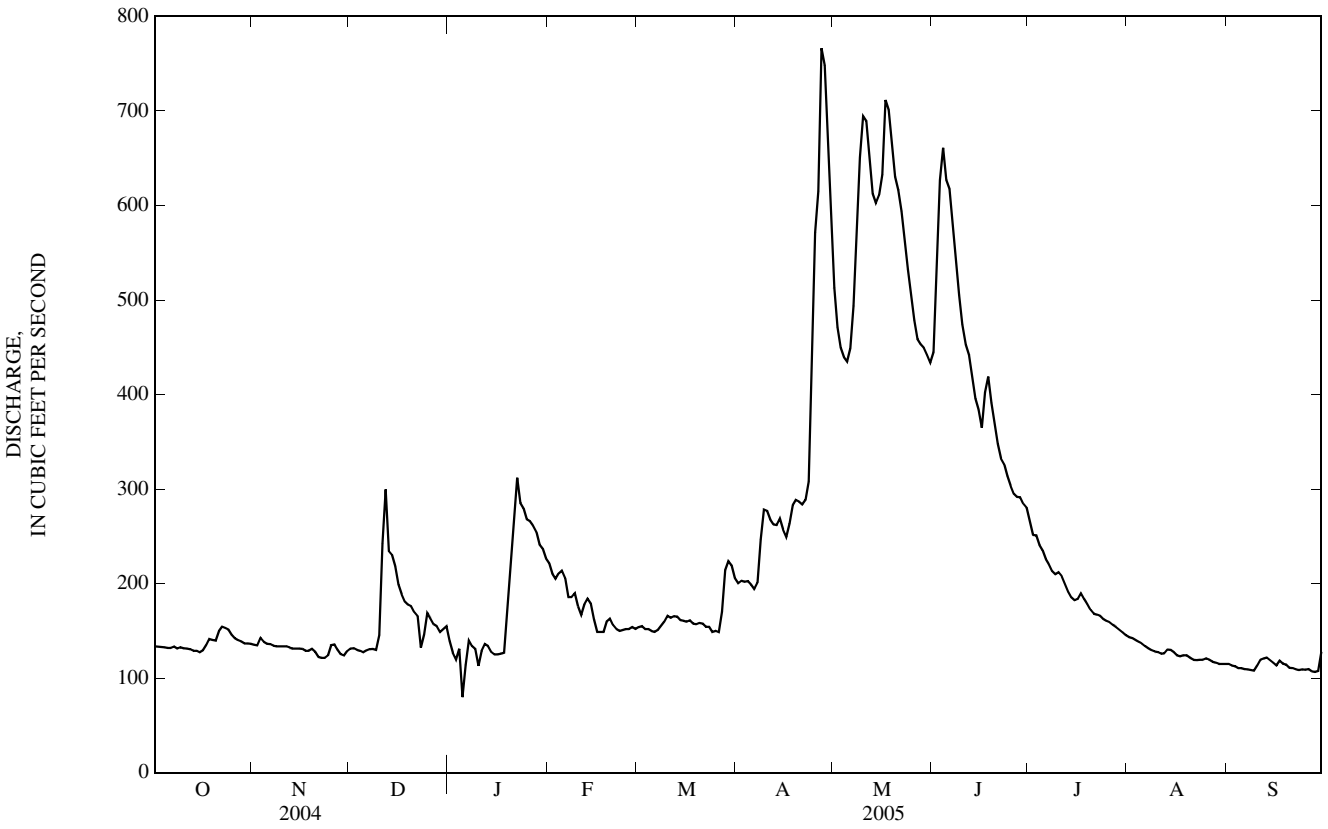
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	180	196	205	204	249	347	753	1,280	999	397	234	190
MAX	343	501	880	719	1,226	1,344	1,674	3,154	2,369	724	382	288
(WY)	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1996)	(1997)	(1974)	(1974)	(1997)	(1997)
MIN	112	115	101	109	103	120	238	374	244	140	113	105
(WY)	(1995)	(1988)	(1993)	(2004)	(1994)	(1964)	(1977)	(1977)	(1977)	(1977)	(1977)	(1994)

12389500 THOMPSON RIVER NEAR THOMPSON FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	103,343		82,132			
ANNUAL MEAN	282		225		436	
HIGHEST ANNUAL MEAN					804	1997
LOWEST ANNUAL MEAN					176	1977
HIGHEST DAILY MEAN	1,250	May 28	767	Apr 27	5,360	Jun 9, 1964
LOWEST DAILY MEAN	70	Jan 6	80	Jan 5	67	Nov 24, 1993
ANNUAL SEVEN-DAY MINIMUM	86	Jan 1	108	Sep 23	73	Dec 31, 1994
MAXIMUM PEAK FLOW			798	Apr 27	6,080	Jun 9, 1964
MAXIMUM PEAK STAGE			3.68	Apr 27	8.53	Jun 9, 1964
INSTANTANEOUS LOW FLOW					a48	Dec 4, 1992
ANNUAL RUNOFF (AC-FT)	205,000		162,900		316,200	
ANNUAL RUNOFF (CFSM)	0.440		0.350		0.680	
ANNUAL RUNOFF (INCHES)	5.99		4.76		9.24	
10 PERCENT EXCEEDS	644		472		1,060	
50 PERCENT EXCEEDS	157		155		234	
90 PERCENT EXCEEDS	122		120		131	

a--Gage height, 2.02 ft, result of freezeup.
e--Estimated.



12390000 THOMPSON FALLS RESERVOIR AT THOMPSON FALLS, MT

LOCATION--Lat 47°35'42", long 115°21'36" (NAD 27), in NE$^1/_4$ sec.7, T.21 N., R.29 W., Sanders County, Hydrologic Unit 17010213, at dam on Clark Fork at Thompson Falls, at river mile 208.0.

DRAINAGE AREA.--20,968 mi^2.

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

REMARKS.--Reservoir is formed by two concrete dams, first generator installed July 1915. Usable capacity, 14,970 acre-ft between elevation 2,380.0 ft, spillway crest, and 2,396.0 ft, top of flashboards. Dead storage unknown. Elevation of gage is 2,380 ft (NGVD29). Figures given herein represent usable contents. Nonrecording gage is read several times daily but only midnight readings supplied. Water is used for power development and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD.--Maximum monthend contents observed, 16,420 acre-ft, May 12, 1997, elevation, 2,396.95 ft; no storage July 31, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 15,610 acre-ft, June 7, elevation, 2,396.42 ft; minimum observed, 13,990 acre-ft, June 2, elevation, 2,395.32 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,396.31	15,440	--
October 31	2,395.80	14,680	-760
November 30	2,395.94	14,880	+200
December 31	2,395.80	14,680	-200
Calendar Year 2004	--	--	+260
January 31	2,395.61	14,400	-280
February 28	2,395.81	14,690	+290
March 31	2,395.85	14,770	+80
April 30	2,395.36	14,040	-730
May 31	2,396.25	13,880	-160
June 30	2,396.19	15,260	+1,380
July 31	2,395.85	14,750	-510
August 31	2,395.86	14,770	+20
September 30	2,395.91	14,840	+70
Water Year 2005	--	--	-600

12390700 PROSPECT CREEK AT THOMPSON FALLS, MT

LOCATION.--Lat 47°35'10", long 115°21'15" (NAD 27), in lot 12, $SE^1/_4SE^1/_4SE^1/_4$ sec.7, T.21 N., R.29 W., Sanders County, Hydrologic Unit 17010213, on right bank 500 ft downstream from Dry Creek, 0.5 mi upstream from mouth, and 0.7 mi south of Thompson Falls.

DRAINAGE AREA.--182 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,382.40 ft (NGVD 29).

REMARKS.--Records good. No known regulation or diversions upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	50	60	104	271	e109	195	374	272	101	62	46
2	49	50	64	100	253	107	205	345	280	99	61	46
3	49	51	68	97	240	106	210	331	277	99	61	45
4	49	50	71	95	232	104	215	325	261	96	60	44
5	48	50	72	90	236	104	213	325	250	94	59	44
6	48	49	73	88	220	103	210	351	239	92	59	44
7	49	49	74	89	208	103	215	406	226	91	58	43
8	49	49	75	90	197	104	251	437	214	89	57	43
9	49	49	76	87	188	105	307	440	202	90	57	42
10	49	49	83	85	179	107	309	469	190	89	56	43
11	49	49	120	83	172	108	299	468	180	87	56	43
12	48	49	314	83	166	113	295	447	172	84	57	43
13	48	49	292	81	167	117	283	426	165	82	57	43
14	48	49	253	76	160	121	278	427	158	81	56	41
15	48	49	228	68	152	124	261	432	151	79	55	40
16	48	50	203	73	144	126	249	451	144	79	54	40
17	50	49	186	73	138	130	257	498	155	79	54	40
18	51	50	174	91	134	128	264	482	148	77	54	40
19	50	50	167	141	132	126	269	450	138	75	52	39
20	49	50	163	352	129	126	268	423	131	73	52	38
21	51	50	154	425	127	124	266	401	126	72	51	38
22	51	50	146	455	123	122	268	382	121	72	51	38
23	51	51	137	432	121	119	286	366	118	71	51	37
24	51	53	133	404	118	116	342	346	116	69	51	37
25	51	57	130	385	116	113	433	328	114	68	50	37
26	51	56	126	372	113	111	487	310	111	67	49	36
27	51	56	121	357	e112	121	546	298	111	66	48	36
28	50	58	117	338	e110	146	530	292	109	65	48	36
29	50	59	113	319	---	177	472	289	109	64	47	36
30	51	59	110	299	---	200	417	284	105	63	47	45
31	51	---	108	285	---	196	---	276	---	63	47	---
TOTAL	1,536	1,539	4,211	6,117	4,658	3,816	9,100	11,879	5,093	2,476	1,677	1,223
MEAN	49.5	51.3	136	197	166	123	303	383	170	79.9	54.1	40.8
MAX	51	59	314	455	271	200	546	498	280	101	62	46
MIN	48	49	60	68	110	103	195	276	105	63	47	36
AC-FT	3,050	3,050	8,350	12,130	9,240	7,570	18,050	23,560	10,100	4,910	3,330	2,430
CFSM	0.27	0.28	0.75	1.08	0.91	0.68	1.67	2.11	0.93	0.44	0.30	0.22
IN.	0.31	0.31	0.86	1.25	0.95	0.78	1.86	2.43	1.04	0.51	0.34	0.25

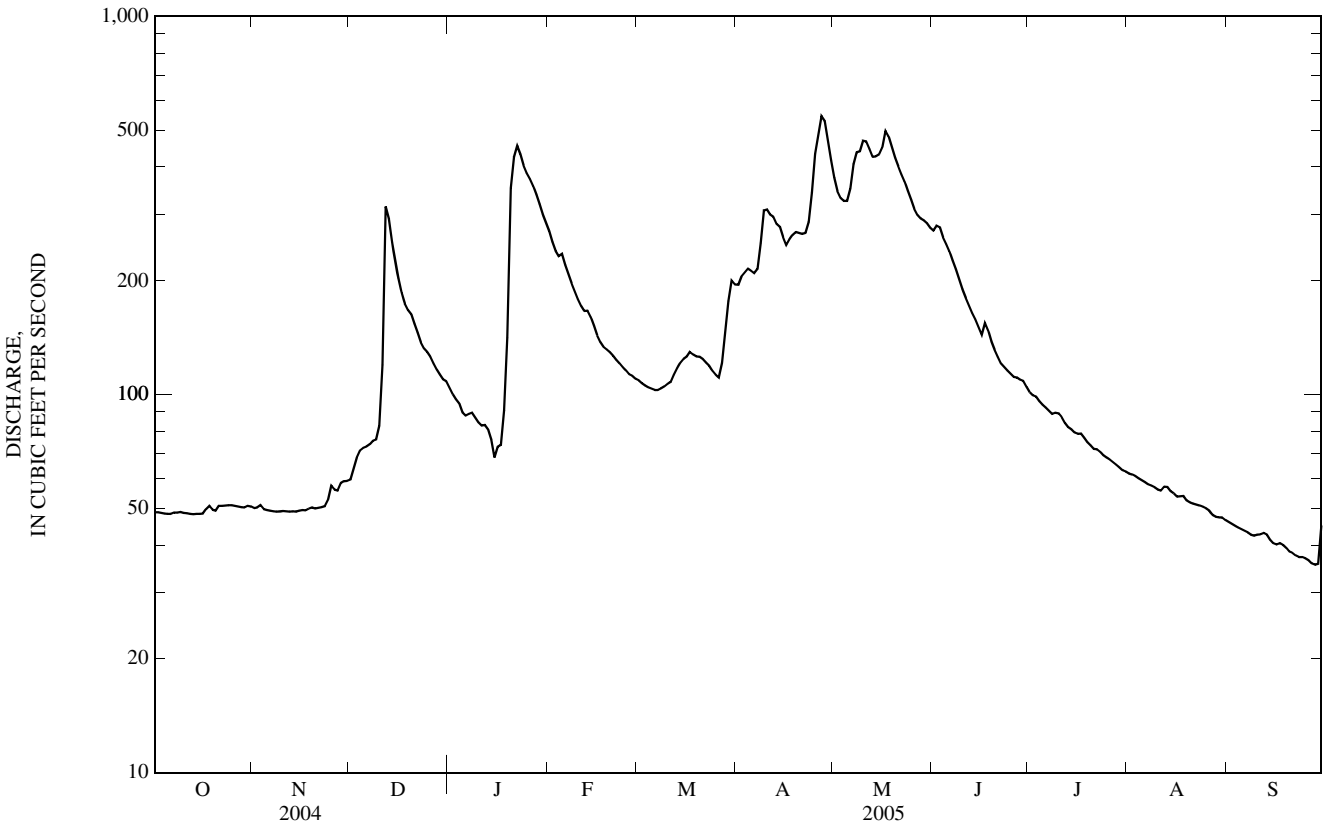
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	54.1	79.0	112	117	159	218	473	774	526	159	82.6	61.0
MAX	168	469	701	735	875	828	877	1,425	1,468	317	109	79.9
(WY)	(1960)	(1996)	(1996)	(1974)	(1996)	(1972)	(1969)	(1997)	(1974)	(1997)	(1982)	(1959)
MIN	28.7	28.8	29.9	29.1	26.4	31.8	84.5	297	142	73.7	48.5	35.8
(WY)	(2002)	(2002)	(1988)	(2001)	(2001)	(2001)	(2001)	(1977)	(1987)	(1977)	(1977)	(2001)

12390700 PROSPECT CREEK AT THOMPSON FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	57,208		53,325			
ANNUAL MEAN	156		146		235	
HIGHEST ANNUAL MEAN					441	1974
LOWEST ANNUAL MEAN					85.8	2001
HIGHEST DAILY MEAN	594	Apr 15	546	Apr 27	4,960	Jan 16, 1974
LOWEST DAILY MEAN	25	Jan 6	36	Sep 26	25	Feb 19, 2001
ANNUAL SEVEN-DAY MINIMUM	37	Jan 2	36	Sep 23	25	Feb 27, 2001
MAXIMUM PEAK FLOW			563	Apr 27	5,490	Jan 16, 1974
MAXIMUM PEAK STAGE			3.25	Apr 27	9.86	Jan 16, 1974
INSTANTANEOUS LOW FLOW			a35	Sep 26	22	Feb 8, 2001
ANNUAL RUNOFF (AC-FT)	113,500		105,800		169,900	
ANNUAL RUNOFF (CFSM)	0.859		0.803		1.29	
ANNUAL RUNOFF (INCHES)	11.69		10.90		17.51	
10 PERCENT EXCEEDS	425		340		634	
50 PERCENT EXCEEDS	70		104		100	
90 PERCENT EXCEEDS	44		48		43	

a--Also occurred on September 27-29.
e--Estimated.



12391300 NOXON RAPIDS RESERVOIR NEAR NOXON, MT

LOCATION.--Lat 47°57'38", long 115°44'00" (NAD 27), in NE$^1/_4$ SW$^1/_4$ SW$^1/_4$ sec.33, T.26 N., R.32 W., Sanders County, Hydrologic Unit 17010213, at dam on Clark Fork, 3 mi southeast of Noxon, 7.2 mi upstream from Bull River, and at river mile 169.7.

DRAINAGE AREA.--21,833 mi^2.

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

REMARKS.--Reservoir is formed by concrete and earthfill dam, construction began in 1955, completed in 1959. Storage began Apr. 3, 1959. Usable capacity, 334,600 acre-ft between elevation 2,270.00 ft, minimum operating level, and 2,331.00 ft. Prior to October 1962, published as "Noxon Reservoir." Records of daily elevations are on file at the USGS Montana Water Science Center located in Helena, Montana. Water-stage recorder, midnight readings. Elevation of gage is 2,270 ft (NGVD29). Figures given herein represent usable contents. Water is used for power production, flood control, and recreation. Records furnished by the Avista Corporation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 335,400 acre-ft, Apr. 7, 1960, elevation, 2,331.10 ft; minimum since first filling, 26,380 acre-ft, May 10, 1967, elevation, 2,277.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 331,500 acre-ft, June 5, elevation, 2,330.61 ft; minimum, 301,600 acre-ft, Apr. 15, elevation, 2,326.73 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, SEPTEMBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
September 30	2,328.28	313,400	--
October 31	2,329.90	325,900	+12,500
November 30	2,328.53	315,300	-10,600
December 31	2,328.70	316,600	+1,300
Calendar Year 2004	--	--	+5,800
January 31	2,329.12	319,900	+3,300
February 28	2,329.69	324,300	+4,400
March 31	2,329.99	326,600	+2,300
April 30	2,329.18	320,300	-6,300
May 31	2,328.94	318,500	-1,800
June 30	2,329.00	318,900	+400
July 31	2,329.53	323,000	+4,100
August 31	2,329.36	321,700	-1,300
September 30	2,329.74	324,700	+3,000
Water Year 2005	--	--	+11,300

12391400 CLARK FORK BELOW NOXON RAPIDS DAM, NEAR NOXON, MT

LOCATION.--Lat 47°57'40", long 115°43'58" (NAD 27), in SW$^1/_4$ sec.33, T.26 N., R. 32 W., Sanders County, Hydrologic Unit 17010213, at Noxon Rapids Dam, 1 mi upstream from Rock Creek, 3 mi southeast of Noxon, and at river mile 169.7.

DRAINAGE AREA.--21,833 mi^2.

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Plant generator rating or discharge through powerplant. Water-stage recorder on reservoir determines head on taintor gates. Elevation of gage is 2,320 ft (NGVD 29) (levels by The Washington Water Power Co.).

REMARKS.--Records good. Flow regulated by Hungry Horse Reservoir (station 12362000) and Flathead Lake (station 12371500). Diversions for irrigation of about 350,000 acres upstream from station. Some sub-surface flow indicated by comparison with records for adjacent gaging stations. Figures of discharge given herein are combined flows through turbines and spillway. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--Records collected by the Avista Corporation, under general supervision of the Geological Survey, in connection with a Federal Power Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

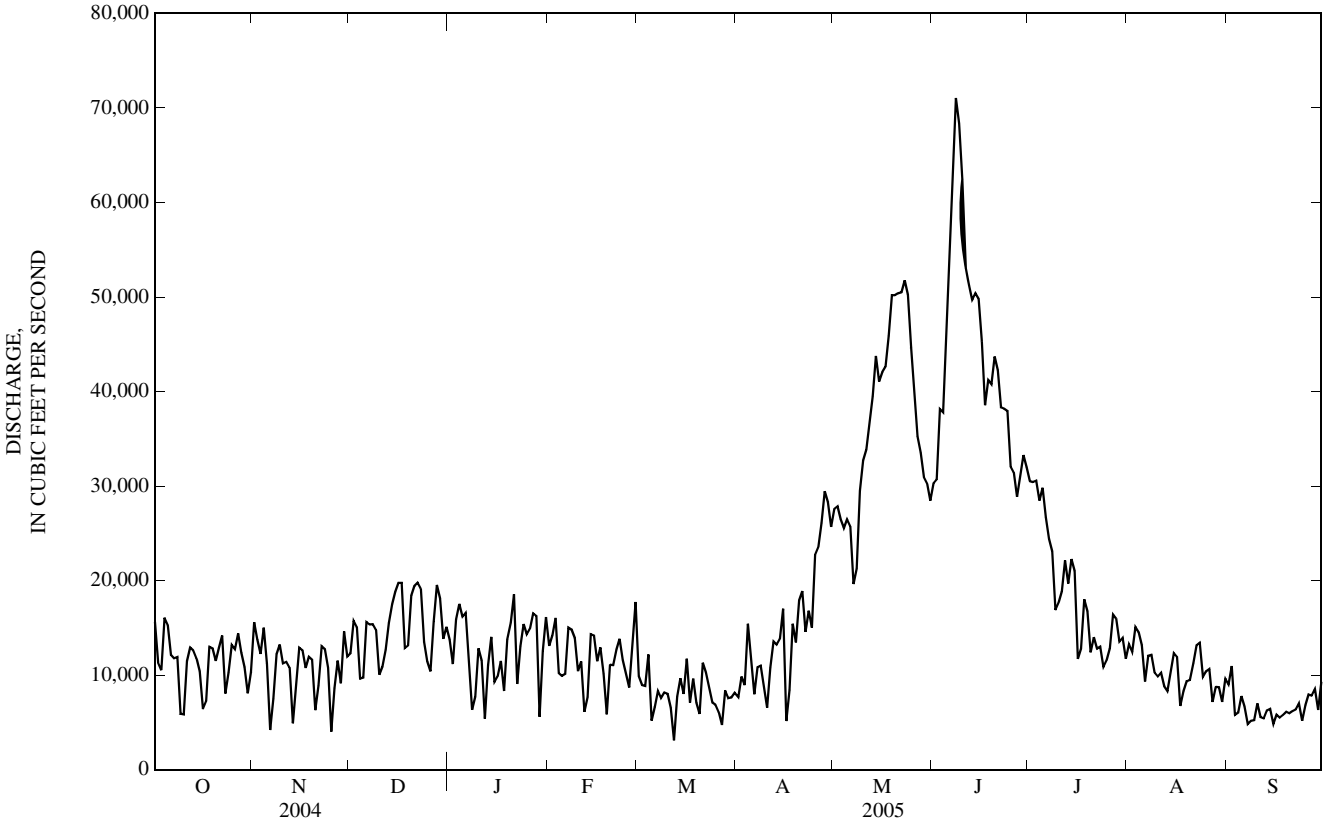
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15,700	15,600	12,300	13,800	13,100	9,880	7,700	27,600	30,300	30,500	13,300	9,030
2	11,300	13,700	15,800	11,200	14,200	8,990	9,840	27,900	30,700	30,400	12,500	11,000
3	10,500	12,200	15,100	15,900	16,100	8,870	8,930	26,500	38,100	30,600	15,100	5,790
4	16,100	15,000	9,640	17,500	10,200	12,200	15,400	25,600	37,800	28,500	14,600	6,030
5	15,300	11,200	9,750	16,200	9,910	5,180	11,500	26,500	46,100	29,800	13,200	7,780
6	12,100	4,210	15,600	16,600	10,100	6,640	7,990	25,800	57,500	26,700	9,340	6,650
7	11,800	7,510	15,400	11,300	15,000	8,370	10,800	19,600	65,400	24,400	12,000	4,830
8	11,900	12,200	15,400	6,340	14,800	7,590	11,000	21,300	71,100	23,100	12,200	5,190
9	5,920	13,200	14,800	7,730	13,900	8,150	8,780	29,500	68,400	16,900	10,300	5,250
10	5,840	11,200	10,000	12,800	10,400	8,010	6,550	32,700	62,500	17,700	9,850	7,010
11	11,500	11,400	10,900	11,500	11,400	6,530	10,800	33,800	53,000	18,800	10,200	5,560
12	12,900	10,800	12,700	5,360	6,120	3,120	13,600	36,600	51,300	22,100	8,840	5,420
13	12,600	4,910	15,500	11,100	7,690	7,760	13,200	39,500	49,700	19,700	8,340	6,260
14	11,800	9,300	17,500	14,000	14,300	9,690	13,800	43,800	50,400	22,300	10,200	6,420
15	10,400	12,900	18,800	9,280	14,200	8,020	17,000	41,100	49,800	21,000	12,300	4,840
16	6,430	12,700	19,800	9,870	11,500	11,800	5,160	42,000	45,300	11,700	11,900	5,800
17	7,240	10,800	19,800	11,500	12,900	7,100	8,430	42,600	38,600	12,800	6,750	5,520
18	13,000	12,000	12,800	8,320	10,200	9,660	15,400	45,900	41,200	18,000	8,310	5,780
19	12,800	11,600	13,100	13,800	5,850	7,070	13,500	50,200	40,800	16,800	9,330	6,130
20	11,500	6,290	18,400	15,600	11,100	5,890	17,900	50,200	43,700	12,400	9,460	5,950
21	12,900	8,890	19,500	18,500	11,100	11,300	18,900	50,400	42,200	14,000	11,300	6,180
22	14,200	13,100	19,800	9,060	12,700	10,300	14,600	50,500	38,300	12,800	13,200	6,360
23	8,040	12,800	19,200	13,100	13,800	8,670	16,800	51,800	38,200	13,000	13,400	7,010
24	10,300	10,800	13,500	15,400	11,600	7,100	15,000	50,200	38,000	10,900	9,800	5,190
25	13,200	4,030	11,400	14,300	10,200	6,890	22,700	44,700	32,100	11,600	10,400	6,790
26	12,800	8,640	10,400	14,900	8,710	6,100	23,500	40,400	31,400	12,800	10,600	7,960
27	14,400	11,500	15,600	16,500	13,400	4,730	26,100	35,300	28,900	16,400	7,170	7,840
28	12,400	9,130	19,500	16,300	17,700	8,380	29,500	33,600	31,000	16,000	8,780	8,520
29	10,800	14,600	18,100	5,600	---	7,600	28,300	31,000	33,300	13,500	8,730	6,330
30	8,110	12,000	13,800	12,600	---	7,650	25,700	30,300	32,000	14,000	7,170	9,310
31	10,300	---	15,100	16,100	---	8,120	---	28,500	---	11,700	9,650	---
TOTAL	354,080	324,210	468,990	392,060	332,180	247,360	448,380	1,135,400	1,317,100	580,900	328,220	197,730
MEAN	11,420	10,810	15,130	12,650	11,860	7,979	14,950	36,630	43,900	18,740	10,590	6,591
MAX	16,100	15,600	19,800	18,500	17,700	12,200	29,500	51,800	71,100	30,600	15,100	11,000
MIN	5,840	4,030	9,640	5,360	5,850	3,120	5,160	19,600	28,900	10,900	6,750	4,830
AC-FT	702,300	643,100	930,200	777,700	658,900	490,600	889,400	2,252,000	2,612,000	1,152,000	651,000	392,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	11,520	13,020	14,130	14,130	14,860	16,010	22,370	40,190	50,020	22,960	10,610	10,160
MAX	16,160	19,890	31,480	22,230	34,640	33,700	46,450	88,150	92,590	40,730	17,720	16,410
(WY)	(1976)	(1996)	(1996)	(1974)	(1996)	(1996)	(1996)	(1997)	(1974)	(1982)	(1997)	(1985)
MIN	6,172	6,830	8,606	7,141	6,185	6,925	4,873	14,460	13,400	8,330	5,350	4,838
(WY)	(1961)	(2002)	(2002)	(2003)	(2001)	(2001)	(1977)	(1973)	(1977)	(1977)	(1988)	(1973)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	5,915,510		6,126,610			
ANNUAL MEAN	16,160		16,790		20,000	
HIGHEST ANNUAL MEAN					31,870	1996
LOWEST ANNUAL MEAN					11,170	1977
HIGHEST DAILY MEAN	48,800	May 30	71,100	Jun 8	125,000	Jun 12, 1964
LOWEST DAILY MEAN	4,030	Nov 25	3,120	Mar 12	60	Jan 29, 1989
ANNUAL SEVEN-DAY MINIMUM	7,460	Jan 7	5,650	Sep 7	2,250	Aug 30, 1963
ANNUAL RUNOFF (AC-FT)	11,730,000		12,150,000		14,490,000	
10 PERCENT EXCEEDS	30,800		37,100		40,100	
50 PERCENT EXCEEDS	13,200		12,700		14,900	
90 PERCENT EXCEEDS	8,220		6,430		7,230	

12391400 CLARK FORK BELOW NOXON RAPIDS DAM, NEAR NOXON, MT—Continued



SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA

All elevations listed for the following reservoirs are referenced to the National Geodetic Vertical Datum of 1929.

CAMAS RESERVOIRS.--A group of four reservoirs in the Little Bitterroot River basin operated for irrigation and recreation. Nonrecording gages are read on the last day of the month. Figures given herein represent usable contents. Records furnished by Bureau of Indian Affairs. May to July 1948 scattered daily contents for individual reservoirs, published in WSP 1080.

12372500 LITTLE BITTERROOT LAKE.

LOCATION.--Lat 48°05'34", long 114°41'51" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.16, T.27 N., R.24 W., Flathead County, Hydrologic Unit 17010212, at dam on Little Bitterroot River, 2 mi southwest of Marion and at river mile 70.3.

DRAINAGE AREA.--31.8 mi^2.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1918. Usable capacity, 26,400 acre-ft between elevation 3,897.98 ft and 3,906.48 ft. Dead storage is unknown; reservoir was a natural lake. Prior to 1960, usable capacity, 24,000 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 27,570 acre-ft, Apr. 30, 1997, elevation, 3,906.74 ft; no storage at times in 1939-46.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 5,000 acre-ft, July 31, elevation, 3,900.18 ft; minimum observed, 2,800 acre-ft, Oct 31, Nov. 30, and Dec. 31, elevation, 3,899.28 ft.

12373500 HUBBART RESERVOIR

LOCATION.--Lat 47°55'43", long 114°43'53" (NAD 27), in $SE^1/_4$ $NE^1/_4$ sec.18, T.25 N., R.24 W., Flathead County, Hydrologic Unit 17010212, at dam on Little Bitterroot River, 9 mi northwest of Niarada and at river mile 55.8.

DRAINAGE AREA.--114 mi^2.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by concrete variable-radius dam; storage began in 1924. Usable capacity, 12,120 acre-ft between elevation 3,140.0 ft and 3,210.0 ft. No dead storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 13,050 acre-ft, May 31, 1959, elevation, 3,220.92 ft; no storage September to December 1959, Sept. 30, Oct. 1, 1973, October through November 1987, October 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 2,670 acre-ft, May 31, elevation, 3,189.58 ft; minimum observed, no storage, Oct. 31.

12375000 UPPER DRY FORK RESERVOIR

LOCATION.--Lat 47°44'55", long 114°40'53" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SW^1/_4$ sec. 16, T.23 N., R.24 W., Sanders County, Hydrologic Unit 17010212, at dam on Dry Fork Creek, 4 mi northwest of Lonepine.

DRAINAGE AREA.--8.53 mi^2.

PERIOD OF RECORD. --April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1940. Usable capacity, 2,810 acre-ft between elevation 2,900.0 ft and 2,928.5 ft. No dead storage. Prior to 1960, usable capacity, 2,700 acre-ft. Natural flow of Alder Creek in Thompson River basin is diverted in $SW^1/_4$ sec 16, T.23 N., R.25 W., and carried by transbasin canal to upper Dry Fork Creek for storage in this reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,140 acre-ft, May 31, 1980, elevation, 2,929.5 ft; no storage at times in 1940, 1942, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,610 acre-ft, June 30, elevation, 2,923.80 ft; minimum, 477 acre-ft, Oct. 31, elevation, 2,915.80 ft.

12375500 LOWER DRY FORK RESERVOIR

LOCATION.--Lat 47°42'00", long 114°40'02" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.3, T.22 N., R.24 W., Sanders County, Hydrologic Unit 17010212, at dam on Dry Fork Creek, 1 mi west of Lonepine.

DRAINAGE AREA.--17.8 mi^2.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year. Records published in WSP 1316 were listed in error and should not be used.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1921. Usable capacity, 3,890 acre-ft, between elevation 2,830.5 ft and 2,856.3 ft. Prior to 1960, usable capacity, 4,000 acre-ft. Water also supplied by transbasin diversion from Little Bitterroot River and Mill Creek. No dead storage. Reservoir is also known as Lonepine Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 4,270 acre-ft, May 31, 1980, elevation, 2,857.4 ft; no storage Aug. 31, 1944, Aug. 31, Sept. 30, 1946, Oct. 31, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,790 acre-ft, June 30, elevation, 2,849.10 ft; minimum observed, 625 acre-ft, Aug. 31, elevation, 2,841.90 ft.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

CAMAS RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Little Bitterroot	Hubbert	Upper Dry Fork	Dry Fork	Total of 4
Oct. 31	2,800	0	477	740	4,020
Nov. 30	2,800	169	502	752	4,220
Dec. 31	2,800	169	502	752	4,220
Jan. 31	3,000	586	628	816	5,030
Feb. 28	3,000	804	671	842	5,320
Mar. 31	3,500	1,130	704	867	6,200
Apr. 30	4,100	1,670	799	880	7,450
May 31	4,200	2,670	1,300	1,340	9,510
June 30	4,000	2,620	1,610	1,790	10,020
July 31	5,000	962	1,320	790	8,070
Aug. 31	4,000	444	740	625	5,810
Sept. 30	3,750	755	511	636	5,650

MISSION VALLEY RESERVOIRS.--A group of eight reservoirs, in an area east of and tributary to Flathead River and between Flathead Lake and Jocko River, Lake County, Hydrologic Unit 17010212, is operated for irrigation. Nonrecording gages are read on the last day of the month. Figures given herein represent usable contents. Records furnished by Bureau of Indian Affairs. April to July 1948 monthend contents and daily maximum for individual reservoirs, published in WSP 1080.

12371000 TURTLE LAKE

LOCATION.--Lat 47°40'19", long 114°04'32" (NAD 27), in $SW^1/_4\ NW^1/_4\ NE^1/_4$ sec.18, T.22 N., R.19 W., at outlet works 4 mi southeast of Polson.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1932. Prior to October 1968, published as "Twin Reservoir." Usable capacity, 899 acre-ft between elevation 3,061.0 ft and 3,090.5 ft. Dead storage is unknown; reservoir was a natural lake. Reservoir has a natural watershed and fed by Hell Roaring Creek and Bisson Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,000 acre-ft, June 30, 1996, elevation, 3,092.02 ft; no storage at times in July 1941, August and September 1944, October 1957, July, August and September 1977, July through October 1992, March 1994, October through December 1994, August 2001, August 2003, and July through August 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 900 acre-ft, June 30, elevation, 3,090.55 ft; minimum observed, 122 acre-ft, Mar. 31, elevation 3,069.50.

12376700 LOWER CROW RESERVOIR

LOCATION.--Lat 47°30'09", long 114°13'35" (NAD 27), in $SW^1/_4\ SE^1/_4\ SE^1/_4$ sec.11, T.20 N., R.21 W., at outlet works on Crow Creek, 5.2 mi northwest of Charlo, at river mile 3.44.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1933. Usable capacity 10,350 acre-ft between elevation 2,800 ft and 2,877.0 ft. No dead storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 10,770 acre-ft, May 21, 22, 1948, elevation, 2,878.2 ft; no storage Sept. 30, 1963, Oct. 31, Nov. 30, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 10,320 acre-ft, June 30, elevation, 2,876.91 ft; minimum observed, 5,980 acre-ft, Sept. 30, elevation 2,861.40 ft.

12377200 MISSION RESERVOIR

LOCATION.--Lat 47°18'54", long 114°01'15" (NAD 27), in $NW^1/_4\ SW^1/_4\ SE^1/_4$ sec.15, T.18 N., R.19 W., at outlet works on Mission Creek, 4 mi east of St. Ignatius and at river mile 16.7.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1935. Usable capacity 8,130 acre-ft between elevation 3,340.7 ft and 3,406.0 ft. Prior to 1993, usable capacity, 7,250 acre-ft. No dead storage.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

EXTREMES FOR PERIOD OF RECORD.-- Maximum contents observed, 8,400 acre-ft, June 30, 2002, elevation, 3,409.86 ft; no storage at times during September 1949, February, March, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 8,140 acre-ft, June 30, elevation, 3,409.00 ft; minimum observed, 584 acre-ft, Sept. 30, elevation, 3,375.10 ft.

12377300 ST. MARYS LAKE

LOCATION.--Lat 47°15'58", long 113°56'08" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $NE^1/_4$ sec.6, T.17 N., R.18 W., at outlet works on Dry Creek, 8 mi southwest of St. Ignatius.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1919. Prior to October 1968, published as "Tabor Reservoir." Usable capacity, 23,500 acre-ft between elevation 3,911.5 ft and 4,025.0 ft, not including contents of natural lake., Prior to 1993, usable capacity, 23,300 acre-ft. Reservoir is fed by Dry Creek and also by a transbasin diversion from Jocko River.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 23,510 acre-ft, June 30, 1976, June 30, 1978, elevation, 4,025.7 ft; no storage Sept. 30, 1969, Feb. 28, 1995, and December 2001 through March, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 23,140 acre-ft, June 30, elevation, 4,024.40 ft; minimum observed, 2,370 acre-ft, Sept. 30, elevation, 3,926.70 ft, estimated.

12377900 PABLO RESERVOIR

LOCATION.--Lat 47°38'25", long 114°08'33" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $NE^1/_4$ sec.27, T.22 N., R.20 W., at outlet works 3 mi south of Polson, 3 mi northwest of Pablo.

DRAINAGE AREA.--Off-channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1914. Usable capacity, 28,400 acre-ft between elevation 3,179 ft, gate sill, and 3,210.2 ft. Prior to 1994 water year, published as usable capacity, 27,100 acre-ft. No dead storage. Reservoir is fed entirely by Pablo feeder canal, some water supplied by Flathead pumping plant. Reservoir was under repair and emptied from September 2004 through March 2005.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 28,760 acre-ft, June 30, 1998, elevation, 3,211.07 ft; no storage at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 28,700 acre-ft, June 30, elevation, 3,211.43 ft; no contents, October through March (reservoir under repair).

12378200 McDONALD RESERVOIR

LOCATION.--Lat 47°25'31", long 113°59'27" (NAD 27), in $SE^1/_4$ $NE^1/_4$ $NE^1/_4$ sec.10, T.19 N., R.19 W., at outlet works on Post Creek, 9 mi east of Charlo, and at river mile 12.4.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1919. Usable capacity, 8,220 acre-ft (revised), not including contents of natural lake. Prior to 1993, usable capacity, 8,220 acre-ft and 7,2000 ac-ft from 1993 to 2002. Dead storage unknown.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 8,330 acre-ft, June 30, 1983, elevation, 3,598.5 ft; no storage Aug. 31, 1961, Aug. 30, 1966, Oct. 31, 1971, Apr. 30, 1972, October 1994 through April 1995, August 1999 to Apr. 30, 2000, December 2001 through February 2002.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 8,220 acre-ft, June 30, elevation, 3,597.97 ft; minimum observed, 720 acre-ft, Sept. 30, elevation, 3,552.00 ft.

12378300 KICKING HORSE RESERVOIR

LOCATION.--Lat 47°27'25", long 114°04'35" (NAD 27), in $SE^1/_4$ $NE^1/_4$ $NE^1/_4$ sec.36, T.20 N., R.20 W., at outlet works 4 mi northeast of Charlo.

DRAINAGE AREA.--Off channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1930. Usable capacity, 9,200 acre-ft between elevation 3,042.00 ft and 3,061.94 ft. Prior to 1993, usable capacity, 8,350 acre-ft. Dead storage, 70 acre-ft below elevation 3,042.0 ft. Reservoir is fed entirely by canals leading from South Crow Creek and Post Creek. Formerly published as 12379700 Kicking Horse Reservoir prior to 1988 water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 10,320 acre-ft, June 30, 1976, May 31, 1980, elevation, 3,064.4 ft; no storage Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 9,160 acre-ft, June 30, elevation, 3,062.95 ft; minimum observed, 1,540 acre-ft, Sept. 30, elevation, 3,050.07 ft.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

12378400 NINEPIPE RESERVOIR

LOCATION.--Lat 47°27'20", long 114°08'08" (NAD 27), in $NE^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.34, T.20 N., R.20 W., at outlet works 2 mi northeast of Charlo.

DRAINAGE AREA.--Off channel storage reservoir.

PERIOD OF RECORD.--December 1939, April 1940, September 1940 to current year.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1911. Usable capacity 15,000 acre-ft between elevation 2,895.4 ft and 3,010.0 ft. Prior to 1993, usable capacity, 14,870 acre-ft. No dead storage. Reservoir is fed entirely from Kicking Horse Reservoir and water can be pumped from Crow Creek by the Crow pump. Formerly published as 12380000 Ninepipe Reservoir prior to 1988 water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 16,950 acre-ft, June 30, 1974, elevation, 3,012.3 ft; no storage Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 14,870 acre-ft, June 30, elevation, 3,010.00 ft; minimum observed, 1,350 acre-ft, Sept. 30, elevation, 2,996.69 ft.

MISSION VALLEY RESERVOIRS MONTHEND CONTENTS, IN ACRE-FEET,
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Turtle	Lower Crow	Mission	St. Mary's	Pablo	McDonald	Kicking Horse	Ninepipe	Total of 8
Oct. 31	173	9,660	5,840	5,390	0	5,690	7,400	4,590	38,740
Nov. 30	130	9,100	3,760	5,080	0	4,660	8,080	7,870	38,680
Dec. 31	130	9,160	3,470	4,900	0	4,700	8,880	7,870	39,110
Jan. 31	159	9,610	3,610	4,900	0	5,080	8,520	8,480	40,360
Feb. 28	159	9,520	3,640	4,320	0	5,010	8,320	8,910	39,880
Mar. 31	122	9,810	3,840	4,230	0	4,840	3,660	12,990	39,490
Apr. 30	256	10,160	4,050	6,220	11,220	1,440	4,550	13,390	51,290
May 31	791	9,420	4,340	20,720	22,980	7,100	8,920	14,080	88,350
June 30	900	10,320	8,140	23,140	28,700	8,220	9,160	14,870	103,450
July 31	666	8,460	7,250	15,040	16,300	6,610	7,350	10,400	72,080
Aug. 31	401	6,490	1,450	4,060	2,020	1,680	3,220	3,900	23,220
Sept. 30	460	5,980	584	2,370	6,500	720	1,540	1,350	19,500

12380000 UPPER JOCKO LAKE

LOCATION.--Lat 47°11'34", long 113°42'44" (NAD 27), in $NE^1/_4$ $NW^1/_4$ sec. 36, T. 17 N., R. 17 W., Missoula County, Hydrologic Unit 17010212, at dam on Jocko River, 17.3 mi southeast of Arlee, and at river mile 41.8.

DRAINAGE AREA.--2.99 mi^2.

PERIOD OF RECORD.--April 1968 to current year. Nonrecording gage read at end of month. U.S. Geological Survey began publishing data October 1988.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1967. Was previously known as "Black Lake" prior to dam construction. Usable capacity, 5,200 acre-ft, between elevation 4,390.0 ft, outlet sill, and 4,440.0 ft, spillway elevation. Prior to 1993, usable capacity, 4,440 acre-ft. Dead storage, 763 acre-ft. Transbasin diversion takes water from Placid Creek in Clearwater River basin in $SW^1/_4$ sec. 29, T. 17 N., R. 16 W., to Upper Jocko Lake, thence to Lower Jocko Lake. The emergency spillway returns water to the Clear Water River Basin over the basin divide. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 4,290 acre-ft, May 31, 1971, elevation, 4,439.1 ft; no storage at times each year.

EXTREMES FOR CURRENT YEAR.-- Maximum contents observed, 1,760 acre-ft, May 31, elevation, 4,422.80 ft; no storage most of year.

12380500 LOWER JOCKO LAKE

LOCATION.--Lat 47°12'10", long 113°45'35" (NAD 27), in $NW^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.27, T.17 N., R.17 W., Missoula County, Hydrologic Unit 17010212, at dam on Jocko River, 15 mi east of Arlee, and at river mile 39.3.

DRAINAGE AREA.--7.39 mi^2.

PERIOD OF RECORD.--December 1939, April 1940, September, 1940, to current year (no winter records most years since 1947). Records for November 1957, published only in WSP 1736. May to July 1948 scattered daily contents, published in WSP 1080. Nonrecording gage read at end of month.

REMARKS.--Reservoir is formed by earthfill dam; storage began in 1937. Usable capacity, 6,380 acre-ft between elevation 4,267.0 ft and 4,340.0 ft. Prior to 1960, usable capacity, 7,600 acre-ft at elevation 4,350 ft and 1960-1992, usable capacity, 5,380 acre-ft. Dead storage unknown below elevation 4,267 ft, sill of outlet conduit. Some water may then be diverted to St. Mary's Lake for use in the Mission Valley. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Indian Affairs.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 6,700 acre-ft, June 9, 1948, elevation, 4,342.7 ft; no storage at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,760 acre-ft, June 30, elevation, 4,315.20 ft; no storage most of year.

SMALLER RESERVOIRS IN PEND OREILLE RIVER BASIN IN MONTANA—Continued

UPPER AND LOWER JOCKO RESERVOIR MONTHEND CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Upper Jocko Lake	Lower Jocko Lake
Oct. 31	0	0
Nov. 30	0	0
Dec. 31	0	0
Jan. 31	0	0
Feb. 28	0	0
Mar. 31	0	0
Apr. 30	567	1,380
May 31	1,760	3,030
June 30	1,500	3,760
July 31	0	3,270
Aug. 31	0	361
Sept. 30	0	0

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID

LOCATION.--Lat 48°05'18", long 116°04'16" (NAD 27), in $SW^1/_4SW^1/_4NW^1/_4$ sec.27, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 0.7 mi downstream from Cabinet Gorge Dam at cableway, 2.1 mi downstream from Blue Creek, 6.1 mi southeast of Clark Fork, and at mile 149.2.

DRAINAGE AREA.--22,067 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,060.00 ft (NGVD 29) (levels by Washington Water Power Co). See WSP 1933 for history of changes made prior to Sept. 30, 1952. Water-stage recorder at site 0.4 mi upstream at elevation 60.00 ft lower Oct. 1, 1952, to Sept. 30, 1964, and at present elevation Oct. 1, 1964, to May 21, 1973.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134,000 ft^3/s, May 18, 1997, gage height, 29.14 ft; minimum daily, 3,330 ft^3/s, Feb. 8, 1998.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 79,300 ft^3/s, June 7, gage height, 21.78 ft; minimum daily, 5,070 ft^3/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15,900	15,400	12,700	13,900	14,100	10,700	7,890	29,500	32,900	33,900	14,300	8,420
2	11,600	14,300	17,200	12,100	14,400	9,530	10,600	30,000	32,400	31,200	11,800	10,400
3	11,800	12,400	15,600	16,200	17,100	9,160	11,300	27,600	39,300	32,200	14,700	5,650
4	16,600	15,800	9,560	18,000	10,300	12,200	14,800	26,800	41,300	31,400	14,300	5,970
5	17,500	12,000	11,400	16,800	10,700	5,170	12,000	28,300	46,500	29,900	14,600	8,860
6	11,800	5,430	14,400	17,900	10,900	6,200	8,050	27,800	59,200	29,000	11,200	7,370
7	12,800	5,710	14,900	10,400	15,900	8,000	11,600	20,600	66,500	25,900	10,500	5,420
8	12,100	12,000	16,000	7,830	15,400	8,330	10,900	22,600	72,100	23,100	12,400	5,440
9	6,120	13,500	15,000	7,480	15,000	7,870	9,420	31,600	68,300	18,200	10,900	5,240
10	6,110	11,600	11,400	11,900	10,500	7,820	6,940	34,600	63,300	18,300	10,500	5,540
11	13,400	11,700	12,700	11,700	12,400	7,540	11,000	36,200	55,500	21,600	9,870	5,120
12	13,100	11,300	14,000	5,740	6,660	5,150	14,700	37,800	53,800	21,500	9,170	5,180
13	13,100	5,210	16,600	11,900	9,100	5,710	13,700	41,800	52,000	19,500	7,930	5,220
14	11,800	8,970	19,300	13,100	13,200	10,000	14,900	46,600	52,500	23,900	9,620	6,290
15	12,100	13,000	20,900	9,340	14,400	8,510	16,200	44,400	52,100	23,400	14,400	5,140
16	5,780	12,200	21,700	10,300	12,200	11,200	7,740	44,700	48,800	12,200	11,100	5,070
17	7,610	11,300	21,100	12,300	14,000	6,080	8,080	45,500	40,400	11,900	6,220	5,430
18	14,000	11,600	13,600	9,510	9,770	12,000	15,300	48,600	43,500	17,400	8,050	5,680
19	13,100	12,000	13,900	13,200	6,470	6,480	14,100	53,200	43,400	18,300	10,400	5,680
20	12,800	5,680	19,300	16,400	11,200	6,680	18,900	53,100	46,600	12,100	9,030	5,720
21	14,100	9,600	19,800	20,400	12,100	9,290	19,200	53,200	45,800	16,100	11,000	5,970
22	14,900	14,000	21,500	10,700	12,400	11,200	15,300	53,300	39,200	12,000	13,900	5,920
23	8,640	12,800	18,800	14,900	13,700	8,660	18,000	54,500	40,400	13,500	12,500	7,060
24	11,000	10,900	15,600	15,900	11,900	7,300	16,000	52,800	40,900	11,800	10,100	5,430
25	17,100	6,330	11,400	15,200	10,500	7,140	24,000	48,100	34,800	11,200	11,200	6,710
26	11,700	7,650	12,500	16,300	9,720	6,260	25,800	42,700	33,200	13,400	10,600	7,030
27	14,300	12,100	14,900	18,300	13,500	5,650	27,400	39,100	33,600	15,600	6,330	7,630
28	12,900	10,700	19,800	17,500	17,400	6,880	31,900	36,200	30,500	17,400	10,200	8,180
29	12,000	13,900	17,800	5,550	---	9,180	30,800	33,400	33,700	12,900	6,860	7,070
30	7,890	12,400	15,200	13,900	---	7,690	28,800	31,900	33,800	14,700	7,550	9,460
31	11,600	---	15,500	16,900	---	7,940	---	31,600	---	12,500	9,930	---
TOTAL	375,250	331,480	494,060	411,550	344,920	251,520	475,320	1,208,100	1,376,300	606,000	331,160	193,300
MEAN	12,100	11,050	15,940	13,280	12,320	8,114	15,840	38,970	45,880	19,550	10,680	6,443
MAX	17,500	15,800	21,700	20,400	17,400	12,200	31,900	54,500	72,100	33,900	14,700	10,400
MIN	5,780	5,210	9,560	5,550	6,470	5,150	6,940	20,600	30,500	11,200	6,220	5,070
AC-FT	744,300	657,500	980,000	816,300	684,100	498,900	942,800	2,396,000	2,730,000	1,202,000	656,900	383,400

CAL YR 2004	TOTAL	6,256,610	MEAN	17,090	MAX	52,400	MIN	5,180	AC-FT	12,410,000
WTR YR 2005	TOTAL	6,398,960	MEAN	17,530	MAX	72,100	MIN	5,070	AC-FT	12,690,000

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1984 to October 2002, July to September 2003, April to September 2004, April to September 2005.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May to July 1998, April to September 2000, November 2001 to October 2002, July to September 2003, April 2004 to March 2005.

INSTRUMENTATION.--Temperature recording data logger.

REMARKS.--Water-quality data previously published as Clark Fork at Whitehorse Rapids near Cabinet, ID (sta 12392000). Daily temperature data for Oct. 1-25 missing due to lost equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.4°C, Aug. 14, 2004; minimum, 0.5°C, Jan. 17, 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 12.9°C, Oct. 27; minimum, 0.5°C, Jan. 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	E coli, modif. m-TEC, water, col/ 100 ml (90902)	Ammonia water fltrd mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)
APR													
13...	1530	6560	1,570	8.1	10.0	6.3	<2.0	11.6	102	<1	<.010	.32	E.015
MAY													
09...	1600	35700	160	7.8	17.0	10.6	<2.0	10.0	98	S2	E.009	.11	.020
JUN													
06...	1540	62200	151	8.0	15.0	13.6	<2.0	11.0	115	S1	E.006	E.09	.031
JUL													
11.	1530	27300	172	8.1	23.5	17.9	<2.0	8.3	95	S2	<.010	E.09	E.010
AUG													
02...	1030	5720	185	8.2	21.0	20.6	<2.0	8.0	96	S1	<.010	.12	E.015
SEP													
13...	0950	5090	188	8.3	12.0	16.5	2.9	8.5	94	S1	E.009	.21	.033

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat unf fixed end pt, field, mg/L (00440)	Carbonate, wat unf fixed end pt, field, mg/L (00445)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Sulfate water, fltrd, mg/L (00945)
APR												
13...	<.006	.009	--	--	--	--	--	--	--	--	--	--
MAY												
09...	<.006	.011	--	--	--	--	--	--	--	--	--	--
JUN												
06...	E.003	.014	--	--	--	--	--	--	--	--	--	--
JUL												
11.	<.006	.011	--	--	--	--	--	--	--	--	--	--
AUG												
02...	<.006	.012	--	--	--	--	--	--	--	--	--	--
SEP												
13...	.006	.039	93	26.6	6.42	2.60	6	.75	111	.0	91	5.4

E--Estimated.
S--Most probable value.

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005--CONTINUED

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration mg/L (80154)
APR				
13...	--	--	--	1
MAY				
09...	--	--	--	6
JUN				
06...	--	--	--	3
JUL				
11.	--	--	--	2
AUG				
02...	--	--	--	1
SEP				
13...	1.00	E.1	7.6	2

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	12.4	10.6	8.7	5.3	7.2	2.6	6.7	1.5	8.1	2.9
2	---	---	11.8	10.3	8.6	5.3	7.3	2.6	7.0	1.3	8.2	2.8
3	---	---	11.5	9.8	8.4	5.3	6.8	2.1	6.5	1.2	8.2	2.8
4	---	---	11.7	9.5	8.7	5.3	6.5	1.5	6.5	1.3	7.9	2.8
5	---	---	11.7	9.3	8.9	5.0	6.8	1.3	6.5	1.2	9.3	6.7
6	---	---	11.0	10.1	8.6	4.8	7.8	1.3	6.4	1.2	9.2	3.4
7	---	---	10.9	9.9	8.6	4.7	7.0	1.5	5.9	1.2	8.1	3.2
8	---	---	11.5	8.9	8.4	4.5	7.5	2.0	6.4	1.3	9.5	3.6
9	---	---	10.6	8.7	8.7	4.8	7.8	1.5	6.5	1.3	9.5	3.6
10	---	---	11.2	8.4	7.9	4.3	7.5	1.2	6.5	1.5	9.2	3.7
11	---	---	10.6	8.1	8.4	4.2	7.0	1.3	6.4	1.6	7.8	3.6
12	---	---	10.9	7.8	7.8	4.6	7.2	1.8	6.4	2.1	10.9	5.7
13	---	---	9.5	8.7	7.5	4.0	7.3	1.5	6.8	2.0	10.4	3.8
14	---	---	10.6	7.3	7.2	3.1	6.5	1.2	6.5	2.1	7.3	3.7
15	---	---	10.1	7.5	7.0	3.1	6.8	1.2	6.4	2.3	7.3	3.7
16	---	---	9.8	7.3	6.8	3.1	7.5	0.8	6.7	2.4	7.0	3.9
17	---	---	9.8	7.3	7.6	3.4	6.7	0.5	6.5	2.3	7.3	3.9
18	---	---	9.9	7.3	7.2	3.2	6.8	0.7	6.8	2.3	6.1	3.6
19	---	---	10.3	7.2	7.3	3.2	7.0	0.7	7.2	2.8	6.8	3.7
20	---	---	9.5	8.2	7.2	3.1	7.2	0.8	6.8	2.4	8.1	3.6
21	---	---	9.5	6.7	6.5	3.2	7.0	1.5	6.7	2.4	7.2	3.6
22	---	---	9.6	6.7	7.5	3.1	7.0	1.5	6.4	2.4	6.8	3.6
23	---	---	9.6	7.0	6.5	3.1	6.5	1.5	6.4	2.6	6.5	3.7
24	---	---	10.4	6.4	7.5	2.9	7.2	1.3	6.4	2.4	6.5	4.0
25	---	---	9.3	6.7	6.8	3.1	7.2	1.5	6.5	2.6	7.3	4.0
26	12.7	11.5	9.3	6.2	7.5	2.8	7.0	1.3	6.5	2.8	6.7	4.7
27	12.9	11.2	9.0	6.1	6.5	3.1	7.0	1.2	8.6	2.8	6.8	5.0
28	12.4	11.0	8.9	5.8	6.4	2.8	6.8	1.3	7.9	2.9	8.4	5.1
29	12.7	11.0	9.3	6.1	7.3	2.8	6.8	4.3	---	---	6.5	5.1
30	12.7	10.9	9.6	5.4	6.7	2.8	6.8	1.3	---	---	6.5	5.1
31	12.1	10.9	---	---	7.0	2.8	6.7	1.5	---	---	7.2	5.3
MONTH	---	---	12.4	5.4	8.9	2.8	7.8	0.5	8.6	1.2	10.9	2.8

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID

LOCATION.--Lat 48°05'30", long 116°07'00" (NAD 27), in NW$^1/_4$ sec.30, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 3.0 mi downstream from Cabinet Gorge Dam, 4.5 mi southeast of Clark Fork, and at mile 146.9.

DRAINAGE AREA.--22,073 mi^2.

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1952, published as "near Heron, Mont."

REVISED RECORDS.--WSP 1182: 1936. WSP 1736: 1931, 1936(m), 1937. WRD-ID-1973-1: 1972(M). WDR-ID-1973-1: 1972(M).

REMARKS.--Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres. Discharge measurements made at Whitehorse Rapids indicate about 600 ft^3/s ground-water inflow between the measuring cableway for Clark Fork River below Cabinet Gorge Dam (12391950) and Whitehorse Rapids. Records given herein represent flow at Whitehorse Rapids, computed by adding this 600 ft^3/s to observed flows at 12391950, and are considered comparable to records at former site near Heron, except for minor surface inflow from additional drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft^3/s, May 29 to June 1, 1948; maximum gage height, 50.97 ft, May 31, 1948, site and elevation then in use; minimum observed, 270 ft^3/s, Aug. 12, 1952 (discharge measurement), at sites in use since October 1952, during filling of Cabinet Gorge Reservoir; minimum daily since reservoir filled, 762 ft^3/s, Sept. 2, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a discharge of 195,000 ft^3/s from floodmark, elevation of 2,137.1 ft, at site about 4 mi upstream and 0.1 mi below "near Heron" site.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 72,700 ft^3/s, June 8; minimum daily, 5,670 ft^3/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16,500	16,000	13,300	14,500	14,700	11,300	8,490	30,100	33,500	34,500	14,900	9,020
2	12,200	14,900	17,800	12,700	15,000	10,100	11,200	30,600	33,000	31,800	12,400	11,000
3	12,400	13,000	16,200	16,800	17,700	9,760	11,900	28,200	39,900	32,800	15,300	6,250
4	17,200	16,400	10,200	18,600	10,900	12,800	15,400	27,400	41,900	32,000	14,900	6,570
5	18,100	12,600	12,000	17,400	11,300	5,770	12,600	28,900	47,100	30,500	15,200	9,460
6	12,400	6,030	15,000	18,500	11,500	6,800	8,650	28,400	59,800	29,600	11,800	7,970
7	13,400	6,310	15,500	11,000	16,500	8,600	12,200	21,200	67,100	26,500	11,100	6,020
8	12,700	12,600	16,600	8,430	16,000	8,930	11,500	23,200	72,700	23,700	13,000	6,040
9	6,720	14,100	15,600	8,080	15,600	8,470	10,000	32,200	68,900	18,800	11,500	5,840
10	6,710	12,200	12,000	12,500	11,100	8,420	7,540	35,200	63,900	18,900	11,100	6,140
11	14,000	12,300	13,300	12,300	13,000	8,140	11,600	36,800	56,100	22,200	10,500	5,720
12	13,700	11,900	14,600	6,340	7,260	5,750	15,300	38,400	54,400	22,100	9,770	5,780
13	13,700	5,810	17,200	12,500	9,700	6,310	14,300	42,400	52,600	20,100	8,530	5,820
14	12,400	9,570	19,900	13,700	13,800	10,600	15,500	47,200	53,100	24,500	10,200	6,890
15	12,700	13,600	21,500	9,940	15,000	9,110	16,800	45,000	52,700	24,000	15,000	5,740
16	6,380	12,800	22,300	10,900	12,800	11,800	8,340	45,300	49,400	12,800	11,700	5,670
17	8,210	11,900	21,700	12,900	14,600	6,680	8,680	46,100	41,000	12,500	6,820	6,030
18	14,600	12,200	14,200	10,100	10,400	12,600	15,900	49,200	44,100	18,000	8,650	6,280
19	13,700	12,600	14,500	13,800	7,070	7,080	14,700	53,800	44,000	18,900	11,000	6,280
20	13,400	6,280	19,900	17,000	11,800	7,280	19,500	53,700	47,200	12,700	9,630	6,320
21	14,700	10,200	20,400	21,000	12,700	9,890	19,800	53,800	46,400	16,700	11,600	6,570
22	15,500	14,600	22,100	11,300	13,000	11,800	15,900	53,900	39,800	12,600	14,500	6,520
23	9,240	13,400	19,400	15,500	14,300	9,260	18,600	55,100	41,000	14,100	13,100	7,660
24	11,600	11,500	16,200	16,500	12,500	7,900	16,600	53,400	41,500	12,400	10,700	6,030
25	17,700	6,930	12,000	15,800	11,100	7,740	24,600	48,700	35,400	11,800	11,800	7,310
26	12,300	8,250	13,100	16,900	10,300	6,860	26,400	43,300	33,800	14,000	11,200	7,630
27	14,900	12,700	15,500	18,900	14,100	6,250	28,000	39,700	34,200	16,200	6,930	8,230
28	13,500	11,300	20,400	18,100	18,000	7,480	32,500	36,800	31,100	18,000	10,800	8,780
29	12,600	14,500	18,400	6,150	---	9,780	31,400	34,000	34,300	13,500	7,460	7,670
30	8,490	13,000	15,800	14,500	---	8,290	29,400	32,500	34,400	15,300	8,150	10,100
31	12,200	---	16,100	17,500	---	8,540	---	32,200	---	13,100	10,500	---
TOTAL	393,850	349,480	512,700	430,140	361,730	270,090	493,300	1,226,700	1,394,300	624,600	349,740	211,340
MEAN	12,700	11,650	16,540	13,880	12,920	8,713	16,440	39,570	46,480	20,150	11,280	7,045
MAX	18,100	16,400	22,300	21,000	18,000	12,800	32,500	55,100	72,700	34,500	15,300	11,000
MIN	6,380	5,810	10,200	6,150	7,070	5,750	7,540	21,200	31,100	11,800	6,820	5,670
AC-FT	781,200	693,200	1,017,000	853,200	717,500	535,700	978,500	2,433,000	2,766,000	1,239,000	693,700	419,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	11,840	13,170	14,400	14,270	14,740	15,680	24,620	48,690	56,690	26,210	11,680	10,530
MAX	25,670	21,970	34,850	28,020	38,150	36,480	59,140	93,830	115,800	57,650	19,680	18,300
(WY)	(1960)	(1996)	(1996)	(1934)	(1996)	(1996)	(1934)	(1997)	(1948)	(1950)	(1997)	(1985)
MIN	5,466	5,008	4,732	3,527	4,217	5,122	6,165	16,450	15,480	9,214	6,320	5,448
(WY)	(1937)	(1937)	(1937)	(1937)	(1936)	(1937)	(1977)	(1941)	(1977)	(1940)	(1994)	(1994)

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	6,476,220		6,617,970			
ANNUAL MEAN	17,690		18,130		21,880	
HIGHEST ANNUAL MEAN					34,250	1996
LOWEST ANNUAL MEAN					10,180	1941
HIGHEST DAILY MEAN	53,000	May 30	72,700	Jun 8	153,000	May 30, 1948
LOWEST DAILY MEAN	5,780	Sep 11	5,670	Sep 16	762	Sep 2, 1962
ANNUAL SEVEN-DAY MINIMUM	7,880	Jan 7	5,910	Sep 7	2,710	Feb 10, 1936
ANNUAL RUNOFF (AC-FT)	12,850,000		13,130,000		15,850,000	
10 PERCENT EXCEEDS	33,900		39,700		47,600	
50 PERCENT EXCEEDS	14,400		13,400		15,500	
90 PERCENT EXCEEDS	8,720		6,910		7,180	

BEAVERHEAD COUNTY

SITE IDENTIFICATION.--450937112393701. Local number 08S09W01CCCC01.

LOCATION.--Lat 45°09'37", long 112°39'37" (NAD 27), Hydrologic Unit 10020002. Owner: U.S. Geological Survey.

HYDROGEOLOGIC UNIT.--Tertiary sediments.

WELL CHARACTERISTICS.--Drilled in 1966, casing diameter 6 in., depth 47 ft.

INSTRUMENTATION.--Graphical water-level recorder from April 1967 to January 1981. Digital water-level recorder set to record every hour from July 1991 to current year.

DATUM.--Elevation of land-surface is 5,240 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 2.15 ft above land-surface datum. Reference point established May 16, 2003: rebar 20 ft west of well casing at base of power pole, 1.34 ft below measuring point.

REMARKS.--Water levels affected by irrigation. All water levels reported below land-surface datum.

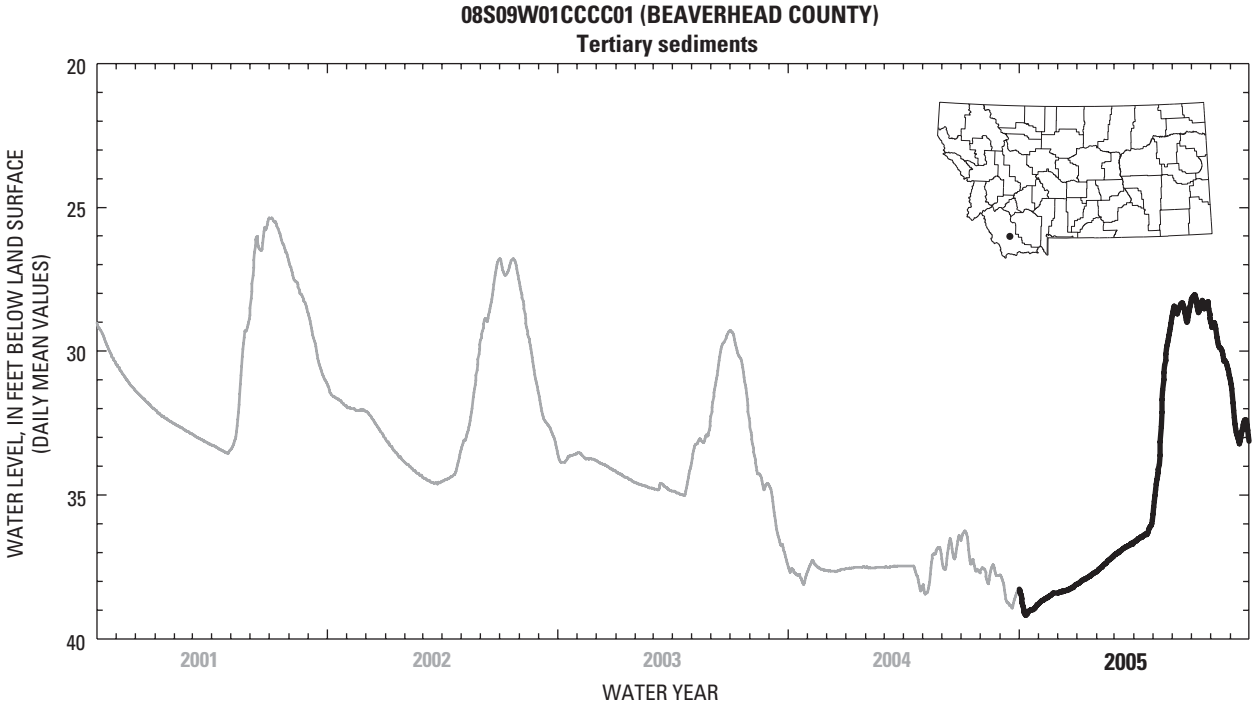
PERIOD OF RECORD.--August 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.43 ft, Aug. 10, 1971 (from recorder); lowest, 39.11 ft, Oct. 11, 2004 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 28.12 ft, July 6 (from recorder); lowest, 39.11 ft, Oct. 11 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Jan. 19	37.85
Mar. 17	36.85
Aug. 1	28.95



BEAVERHEAD COUNTY

SITE IDENTIFICATION.--450524112380701. Local number 08S08W31CCAA01.

LOCATION.--Lat 45°05'24", long 112°38'07" (NAD 27), Hydrologic Unit 10020002. Owner: Matador Cattle Company.

HYDROGEOLOGIC UNIT.--Tertiary sediments.

WELL CHARACTERISTICS.--Drilled in December 1992, casing diameter 5 in., depth 217 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every 4 hours from November 1997 to Aug. 1, 2003. Pressure transducer, data logger, and satellite transmitter, with data recorded every hour and transmitted every 4 hours, from Aug. 1, 2003 to current year.

DATUM.--Elevation of land surface is 5,520.7 ft (NGVD 29). Measuring point: top of PVC cap, 2.00 ft above land-surface datum. Prior to Feb. 3, 2000, measuring point was top of PVC casing, 2.20 ft above land-surface datum. Reference point established May 20, 1999: top of steel rod near well casing along fence line, 8.71 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum. Recorder was inoperable and being repaired from May 12 to Aug. 1.

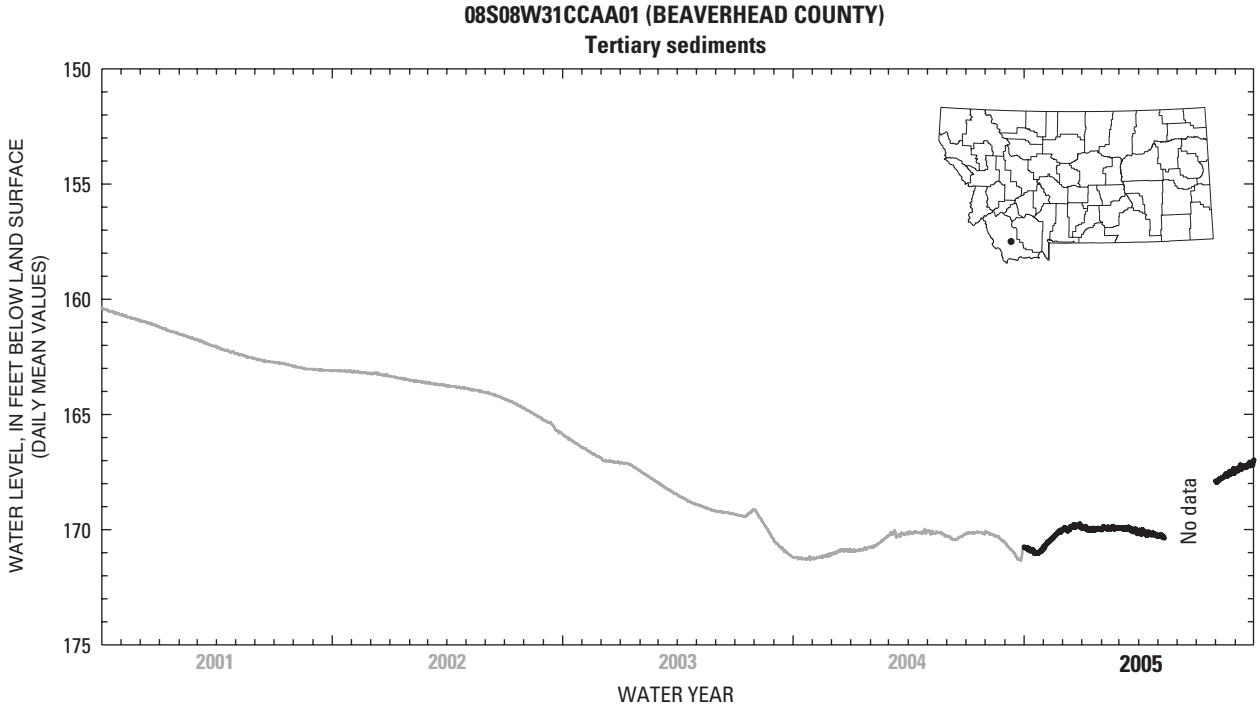
PERIOD OF RECORD.--Measured periodically December 1992 to November 1997 and continuously recorded every 4 hours from November 1997 to Aug. 1, 2003; data collected hourly from Aug. 1, 2003 to current year. Recorder was inoperable and being repaired from May 12, 2005 to Aug. 1, 2005.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 138.72 ft, Oct. 23, 1995 (measured); lowest, 171.50 ft, Oct. 29, 2003 (from recorder)

EXTREMES FOR CURRENT YEAR.--Highest water level 166.88 ft, Sept. 30 (from recorder); lowest 171.15 ft, Oct. 18 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Nov. 1	170.82	May 12	170.03
Jan. 19	169.98	Aug. 1	167.93
Mar. 17	169.93		



CASCADE COUNTY

SITE IDENTIFICATION.--473031111185001. Local number 20N03E11ABAD01.

LOCATION.--Lat 47°30'31", long 111°18'50" (NAD 27), Hydrologic Unit 10030102. Owner: R. Volk.

HYDROGEOLOGIC UNIT.--Mississippian Madison Group.

WELL CHARACTERISTICS.--Drilled in October 1959, casing diameter 8 in. to depth of 206 ft and 6 in. to depth of 369 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every 4 hours from Dec. 19, 2001 to current year.

DATUM.--Elevation of land surface is 3,320 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.80 ft above land-surface datum. Reference point established June 25, 2003: top of steel rod 10 ft north northeast of well casing, 2.16 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

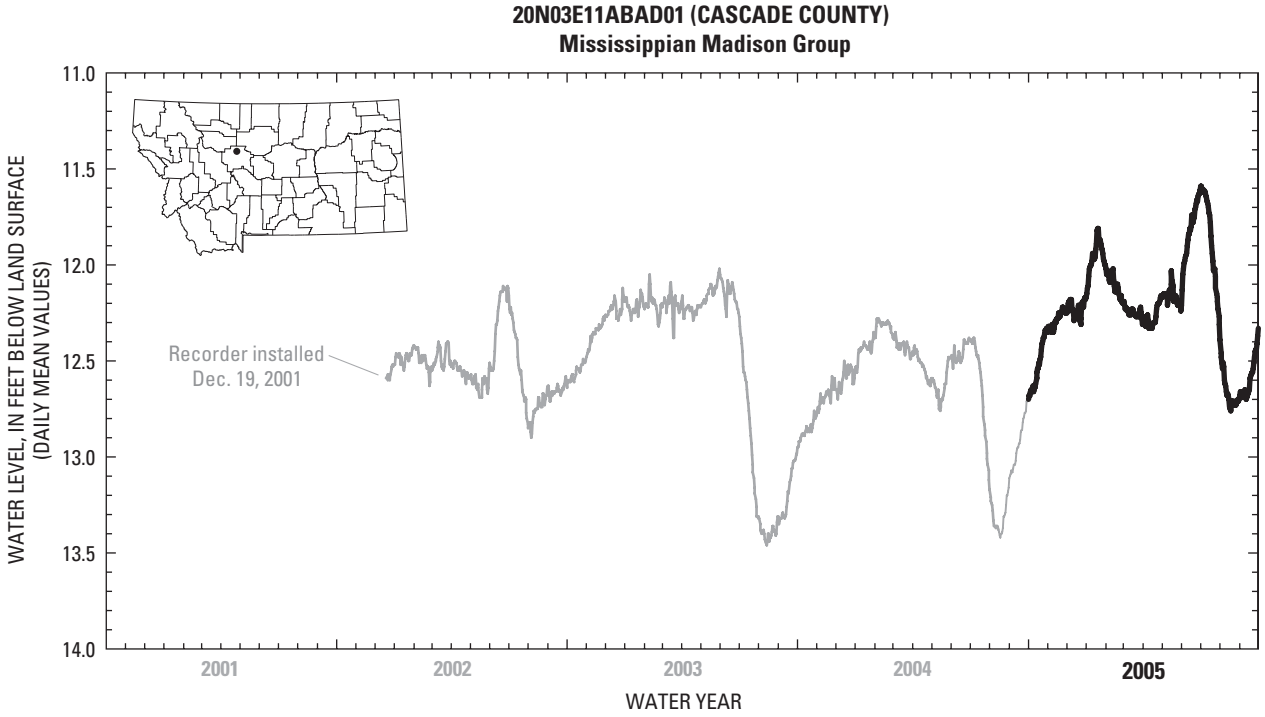
PERIOD OF RECORD.--December 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.59 ft, July 1 and 2, 2005 (from recorder); lowest, 13.46 ft, at various times Aug. 13-15, 2003 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 11.59 ft, July 1 and 2 (from recorder); lowest, 12.76 ft, Aug. 17-19 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 14	12.58	May 20	12.22
Mar. 1	12.17	Aug. 16	12.75
May 17	12.07		



CASCADE COUNTY

SITE IDENTIFICATION.--472203111112602. Local number 19N04E26CACC02.

LOCATION.--Lat 47°22'03", long 111°11'26" (NAD 27), Hydrologic Unit 10030102. Owner: E. Chartier.

HYDROGEOLOGIC UNIT.--Lower Cretaceous Kootenai Formation.

WELL CHARACTERISTICS.--Drilled in spring of 1983, casing diameter 4 in., depth 198 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every 4 hours from Dec. 16, 1998 to current year (Montana Bureau of Mines and Geology operated site from May 1987 to October 1998).

DATUM.--Elevation of land surface is 3,817 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.10 ft above land-surface datum. Reference point established Apr. 26, 1999: top of steel rod near well casing, 0.19 ft above measuring point.

REMARKS.--All water levels reported below land-surface datum.

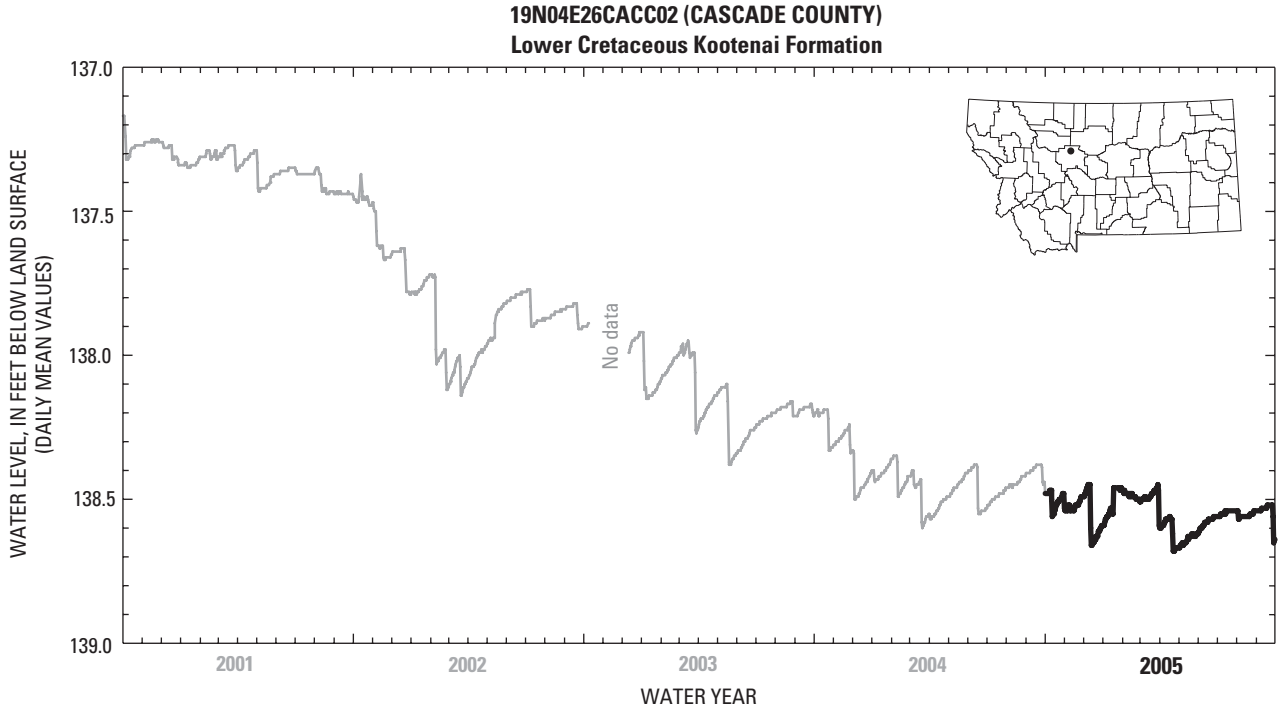
PERIOD OF RECORD.--August 1984 to May 1987 and December 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 137.03 ft, at various times Apr. 8-13, 1999 (from recorder); lowest, 138.68 ft, Apr. 22-25, 2005 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 138.44 ft, Dec. 10 and 11 (from recorder); lowest, 138.68 ft, Apr. 22-25 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 14	138.55	Mar. 1	138.51
Jan. 18	138.55	May 17	138.63



GALLATIN COUNTY

SITE IDENTIFICATION.--454809111095401. Local number 01N04E25DCDD01.

LOCATION.--Lat 45°48'09", long 111°09'54" (NAD 27), Hydrologic Unit 10020008. Owner: U.S. Geological Survey.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in August 1951, casing diameter 6 in. to depth of 400 ft. Well filled with gravel to within 101 ft of land surface.

INSTRUMENTATION.--Graphic recorder from May 1954 to August 1977. Digital water-level recorder set to record every hour from May 1991 to current year.

DATUM.--Elevation of land surface is 4,385 ft (NGVD 29) (from topographic map). Measuring point: top of casing 1.60 ft above land-surface datum. Reference point established Sept. 17, 2003: top of steel rod, 2 ft southwest of well near east fence post, 1.05 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

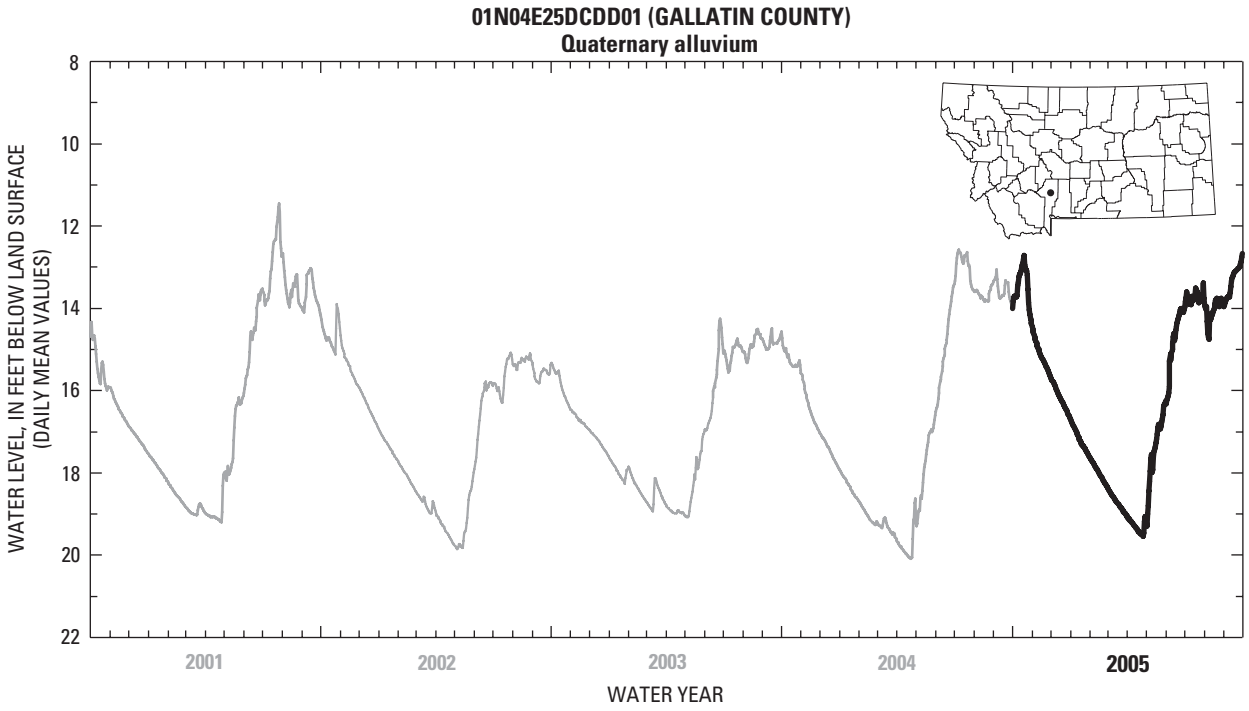
PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 5.91 ft, Aug. 13, 1968 (from recorder); lowest, 20.10 ft, Apr. 23-25, 2004 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 12.63 ft, Sept. 30 (from recorder); lowest, 19.55 ft, Apr. 26 and 27 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 18	12.76	Apr. 27	19.43
Jan. 25	17.42	July 27	13.63



GARFIELD COUNTY

SITE IDENTIFICATION.--470709106061401. Local number 16N44E25BBAC01.

LOCATION.--Lat 47°07'09", long 106°06'14" (NAD 27), Hydrologic Unit 10040104. Owner: Burlington Northern Santa Fe Railroad.

HYDROGEOLOGIC UNIT.--Paleocene Tongue River Member of Fort Union Formation.

WELL CHARACTERISTICS.--Drilled in October 1980, casing diameter 4 in., depth 103 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every 4 hours from Apr. 13, 1998 to current year.

DATUM.--Elevation of land surface is 2,645 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.10 ft above land-surface datum. Reference point established Oct. 12, 1999: top of steel rod near casing, 2.99 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

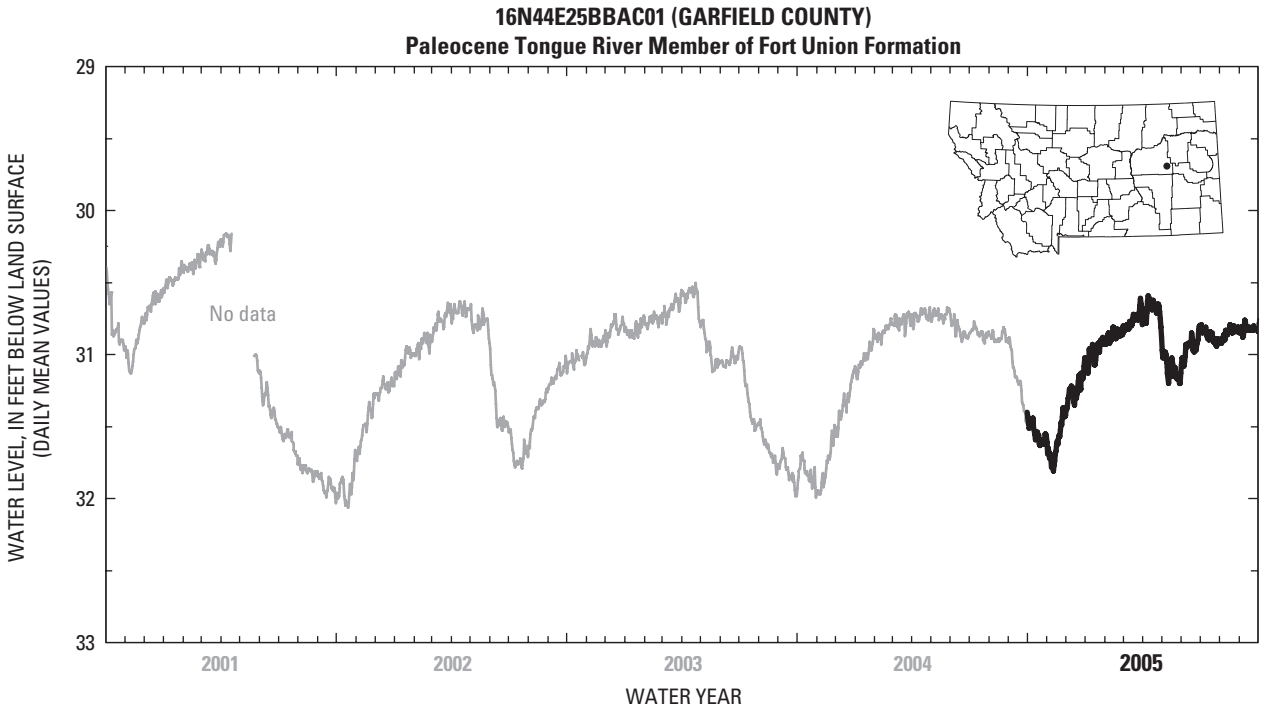
PERIOD OF RECORD.--Measured annually from 1984 to 1992 and recorded every 4 hours from Apr. 13, 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.73 ft, Apr. 13, 1999 (from recorder); lowest, 32.08 ft, Oct. 20, 2001 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 30.55 ft, Apr. 9 (from recorder); lowest, 31.83 ft, Nov. 10 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Nov. 9	31.73
Mar. 30	30.67
Aug. 1	30.91



LAKE COUNTY

SITE IDENTIFICATION.--470946114013201. Local number 16N19W08ACBD01.

LOCATION.--Lat 47°09'46", long 114°01'32" (NAD 27), Hydrologic Unit 17010212. Owner: Makepeace.

HYDROGEOLOGIC UNIT.--Pleistocene alluvium.

WELL CHARACTERISTICS.--Drilled in August 1988, casing diameter 6 in. to depth of 322 ft and 5 in. from 322 ft to 398 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every hour from Sept. 13, 1990 to current year.

DATUM.--Elevation of land surface is 3,300 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.50 ft above land-surface datum. Reference point established July 14, 2003: top of steel rod 1.0 ft southeast of well casing, 1.12 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

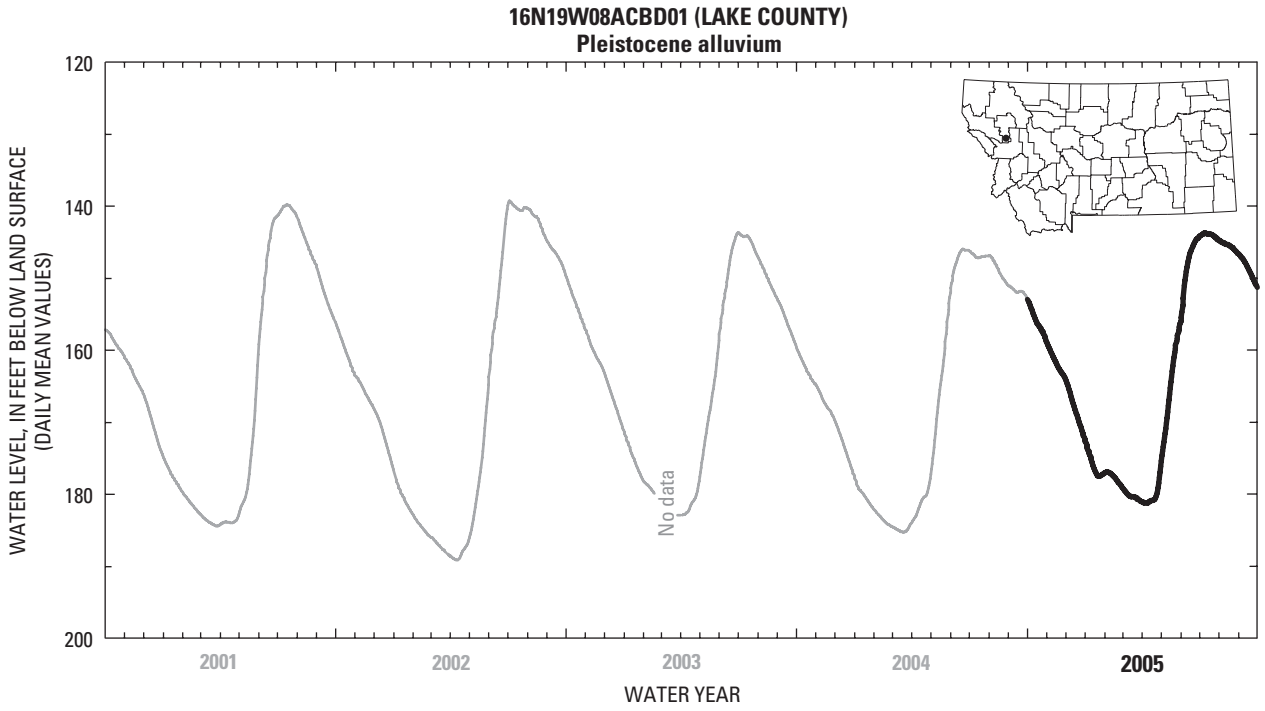
PERIOD OF RECORD.--Annually from 1988 to 1990 and recorded every hour from Sept. 13, 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 137.92 ft, July 14, 1993 (from recorder); lowest, 189.22 ft, Apr. 11 and 12, 2002 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 143.73 ft, July 8 (from recorder); lowest, 181.32 ft, Apr. 7 and 9 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Nov. 16	161.79	May 24	159.56
Mar. 23	180.50	Sept. 8	147.39



MC CONE COUNTY

SITE IDENTIFICATION.--480034105195401. Local number 26N49E13ACAB01.

LOCATION.--Lat 48°00'34", long 105°19'54" (NAD 27), Hydrologic Unit 10060002. Owner: U.S. Geological Survey and Bureau of Land Management.

HYDROGEOLOGIC UNIT.--Upper Cretaceous Hell Creek Formation and Fox Hills Sandstone.

WELL CHARACTERISTICS.--Drilled in August 1981, casing diameter 4 in., depth 180 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every 6 hours from April 1998 to Aug. 3, 1999. Electronic water-level recorder set to record every 4 hours from Aug. 3, 1999 to current year.

DATUM.--Elevation of land surface is 2,040 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.60 ft above land-surface datum. Reference point established May 11, 1999: top of steel rod near well casing, 0.15 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

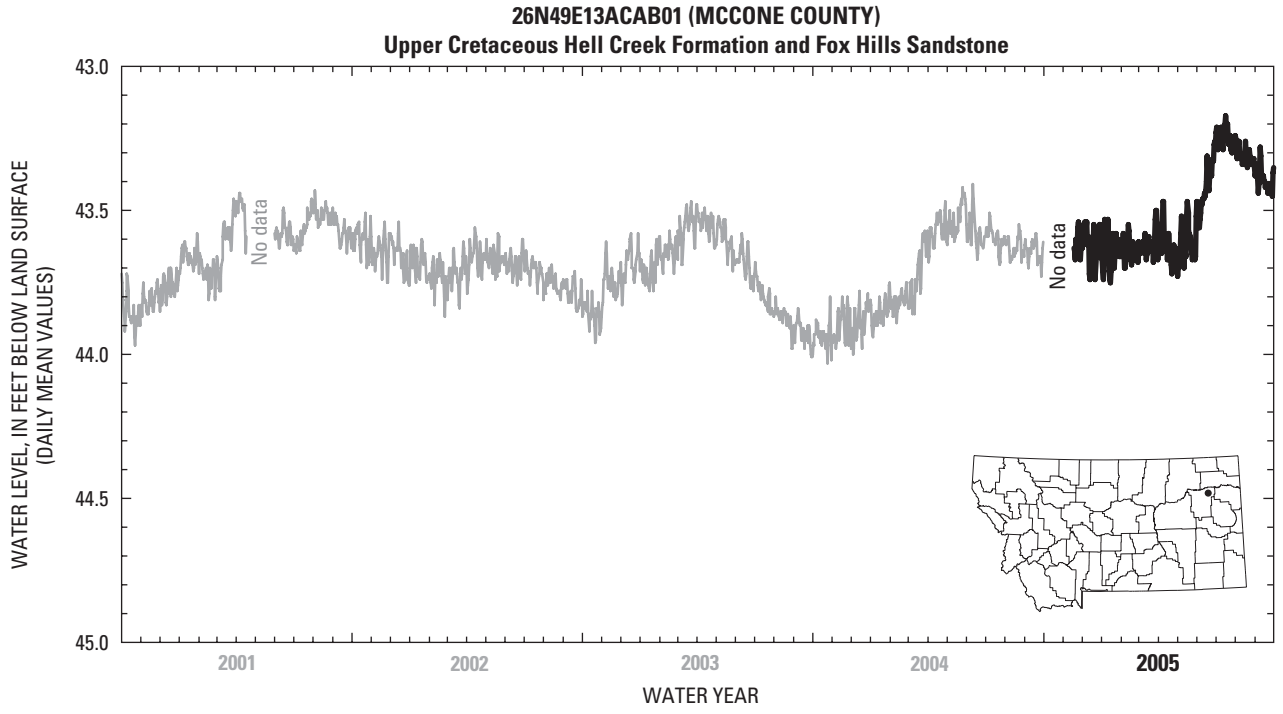
PERIOD OF RECORD.--Measured annually from 1982 to 1992, recorded every 6 hours from Apr. 14, 1998 to Aug. 3, 1999 and recorded every 4 hours from Aug. 3, 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.37 ft, Aug. 28, 1992 (measured); lowest, 44.12 ft, Oct. 31, 2003 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 43.15 ft, July 13 (from recorder); lowest, 43.77 ft, Dec. 22 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Nov. 8	43.69
Nov. 17	43.67
July 20	43.26



POWDER RIVER COUNTY

SITE IDENTIFICATION.--453107106110601. Local number 04S45E04BDDB01.

LOCATION.--Lat 45°31'07", long 106°11'06" (NAD 27), Hydrologic Unit 10090102. Owner: U.S. Geological Survey.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1979, casing diameter 4 in., depth 68 ft.

INSTRUMENTATION.--Graphical water-level recorder from April 1980 to October 1982. Digital water-level recorder set to record every 12 hours from October 1982 to November 1996, and reset to record every 4 hours from November 1996 to current year.

DATUM.--Elevation of land surface is 3,020 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.70 ft above land-surface datum. Reference point established Sept. 16, 2003: top of steel rod 21 ft northeast of well casing, 1.66 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

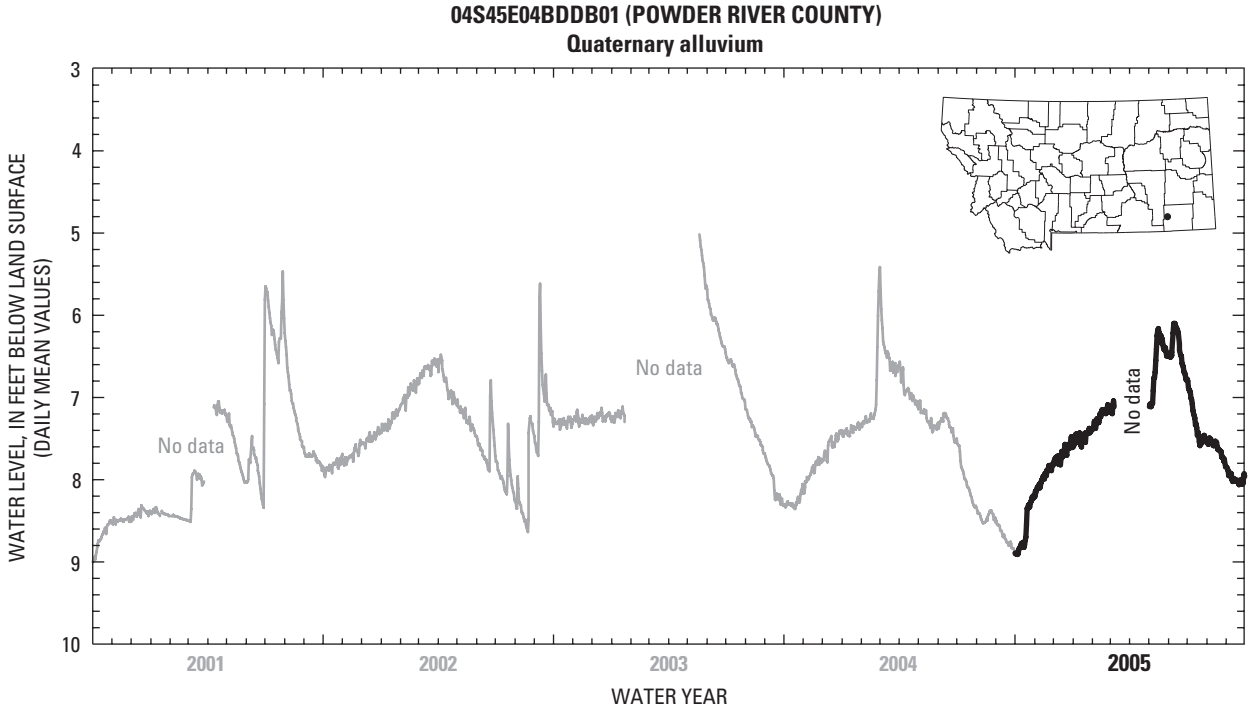
PERIOD OF RECORD.--Measured intermittently from December 1979 to April 1980 and recorded April 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.67 ft, Apr. 11, 1997 (from recorder); lowest, 11.45 ft, Oct. 5, 1992 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 6.09 ft, June 10 and 11 (from recorder); lowest, 8.95 ft, Oct. 5 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19	8.40	May 1	7.13
Apr. 27	7.15	Sept. 20	8.02



POWELL COUNTY

SITE IDENTIFICATION.--470049113035401. Local number 15N12W36BCDD01.

LOCATION.--Lat 47°00'49", long 113°03'54" (NAD 27), Hydrologic Unit 17010203. Owner: Montana Department of Transportation.

HYDROGEOLOGIC UNIT.--Cenozoic rocks.

WELL CHARACTERISTICS.--Drilled in September 1964, casing diameter 6 in., depth 206 ft.

INSTRUMENTATION.--Digital water-level recorder installed April 1991 and set to record every hour from April 1991 to current year.

DATUM.--Elevation of land surface is 4,278 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.0 ft above land-surface datum. Reference point established July 15, 2003: top of steel rod 40 ft northwest of well by fence corner, 3.14 ft above measuring point.

REMARKS.--All water levels reported below land-surface datum.

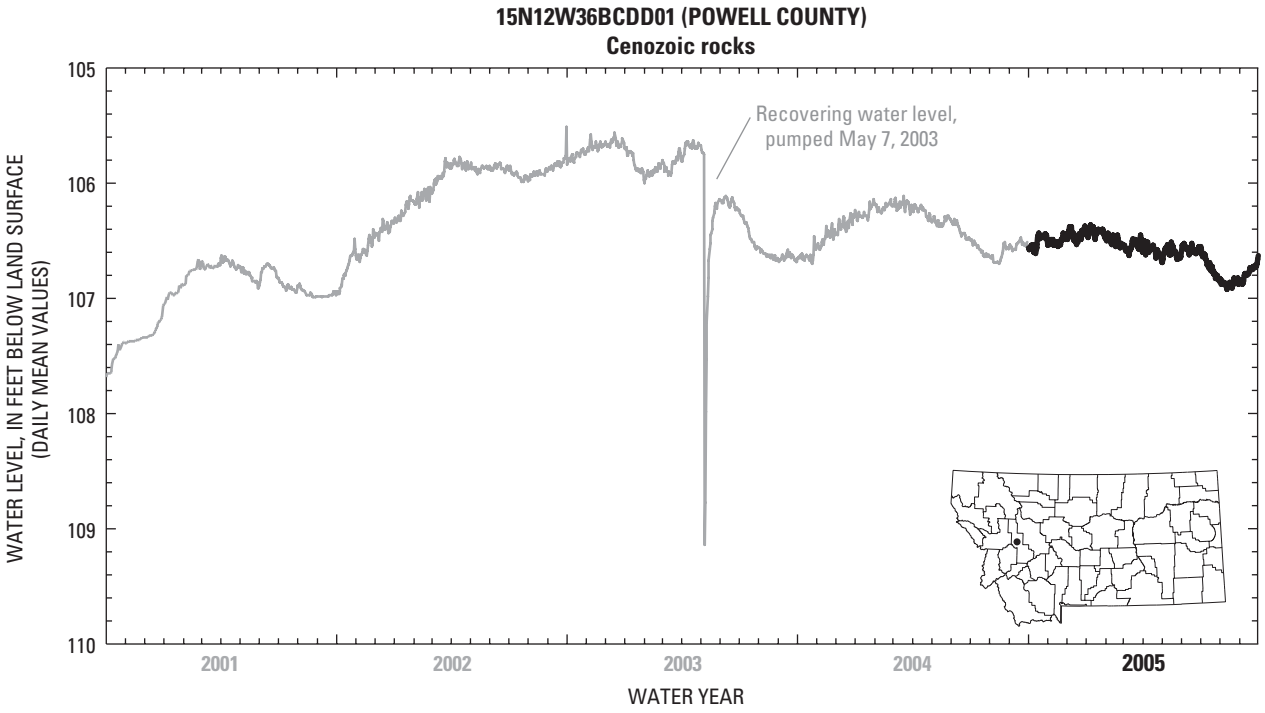
PERIOD OF RECORD.--Measured periodically from 1975 to 1991 and continuously recorded every hour from April 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 95.90 ft, Dec. 12, 1991 (measured); lowest, 126.72 ft, Oct. 11, 1984 (measured).

EXTREMES FOR CURRENT YEAR.--Highest water level, 106.33, Jan. 8 (from recorder); lowest, 106.93 ft, Aug. 12 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Dec. 28	106.46
May 3	106.65
July 12	106.73



RAVALLI COUNTY

SITE IDENTIFICATION.--463750114033001. Local number 10N20W13BBA 01.

LOCATION.--Lat 46°37'50", long 114°03'30" (NAD 27), Hydrologic Unit 17010205. Owner: Bonneville Power Administration.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in September 1959, casing diameter 6 in., depth 50 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every hour from April 1991 to current year.

DATUM.--Elevation of land surface is 3,204 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 2.00 ft above land-surface datum. Reference point established July 14, 2003: top of steel rod 45 ft east of well in southwest corner of concrete pad, 0.58 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

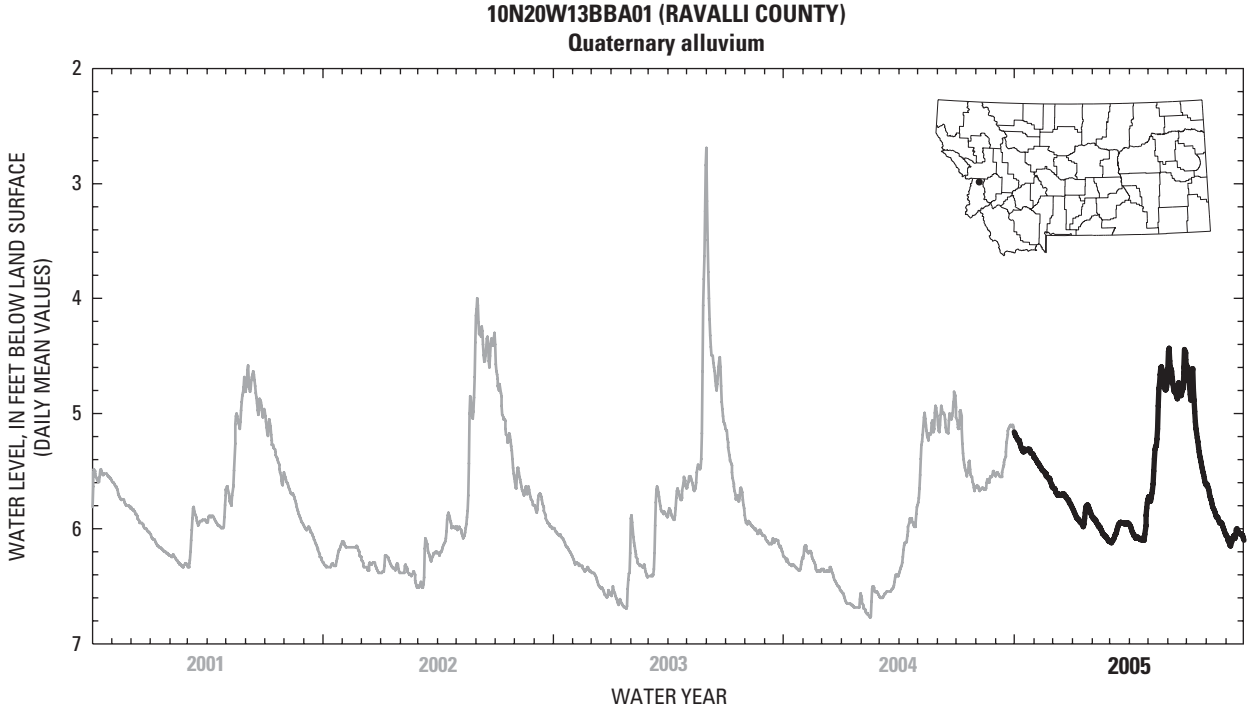
PERIOD OF RECORD.--Measured periodically from 1959 to 1982 and recorded every hour from April 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.48 ft, June 15, 1959 (measured); lowest, 7.21 ft, Sept. 21, 1977 (measured).

EXTREMES FOR CURRENT YEAR.--Highest water level, 4.36 ft, June 6 (from recorder); lowest, 6.16 ft, Sept. 9 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 13	5.31	June 17	4.79
Dec. 1	5.64	July 21	5.31
Feb. 2	5.91	Sept. 21	6.00
Mar. 23	5.95		



RAVALLI COUNTY

SITE IDENTIFICATION.--461518114090802. Local number 06N20W19CCCC02.

LOCATION.--Lat 46°15'18", long 114°09'08" (NAD 27), Hydrologic Unit 17010205. Owner: Bonneville Power Administration.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in September 1970, casing diameter 6 in., depth 40 ft.

INSTRUMENTATION.--Graphic recorder from September 1970 to January 1985. Digital water-level recorder set to record every hour from January 1985 to current year.

DATUM.--Elevation of land surface is 3,558.3 ft (NGVD 29). Measuring point: top of casing, 1.30 ft above land-surface datum. Reference point established July 14, 2003: north plug of 4 in. round ring on fire hydrant, 0.57 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

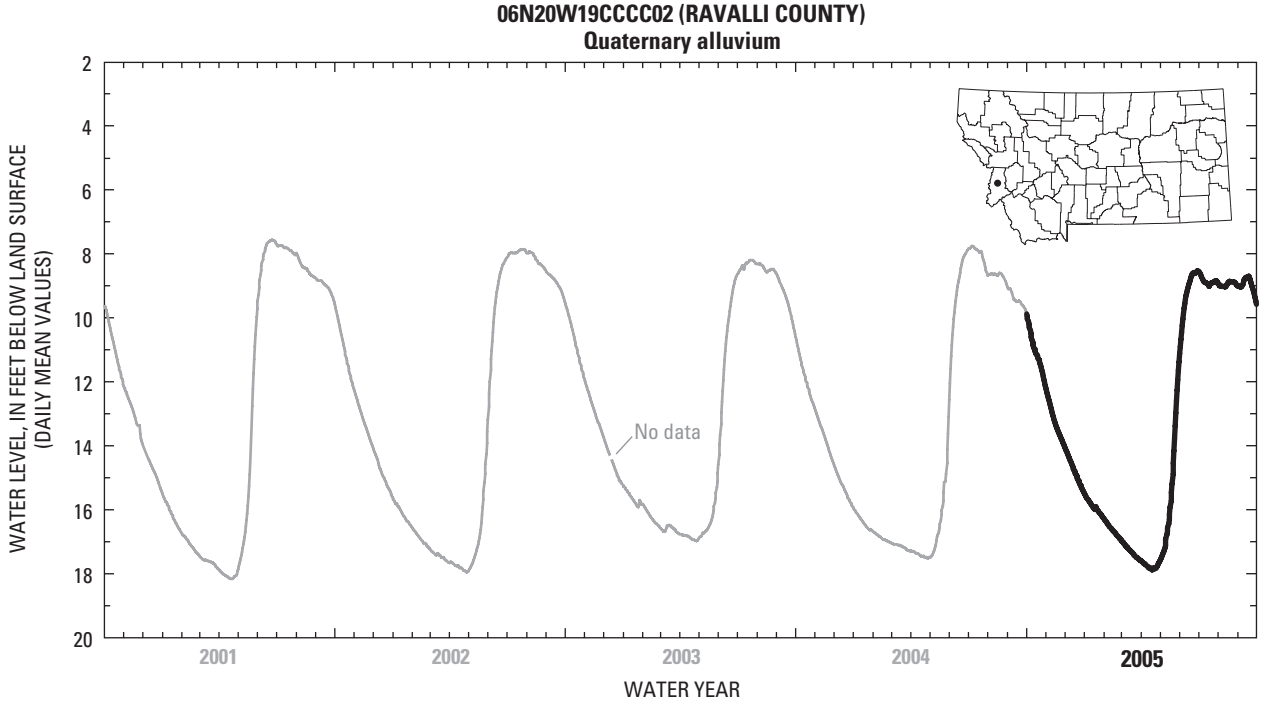
PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.48 ft, Sept. 2, 1979 (from recorder); lowest, 18.32 ft, May 1, 1985 (measured).

EXTREMES FOR CURRENT YEAR.--Highest water level, 8.53 ft, June 28-30 (from recorder); lowest, 17.88 ft, Apr. 18 and 19 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 13	10.95	June 17	8.91
Dec. 2	14.16	July 19	8.99
Feb. 2	16.36	Sept. 20	8.85
Mar. 23	17.49		



ROSEBUD COUNTY

SITE IDENTIFICATION.--451746106301101. Local number 06S43E19DDBA02.

LOCATION.--Lat 45°17'46", long 106°30'11" (NAD 27), Hydrologic Unit 10090101. Owner: U.S. Geological Survey and Art Hayes.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in October 1986, casing diameter 4 in., depth 67 ft.

INSTRUMENTATION.--Digital water-level recorder from April 1989 to current year.

DATUM.--Elevation of land surface is 3,170 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 1.40 ft above land-surface datum. Reference point established Sept. 16, 2003: top of steel rod 1.0 ft south of southwest corner of recorder box, 1.13 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

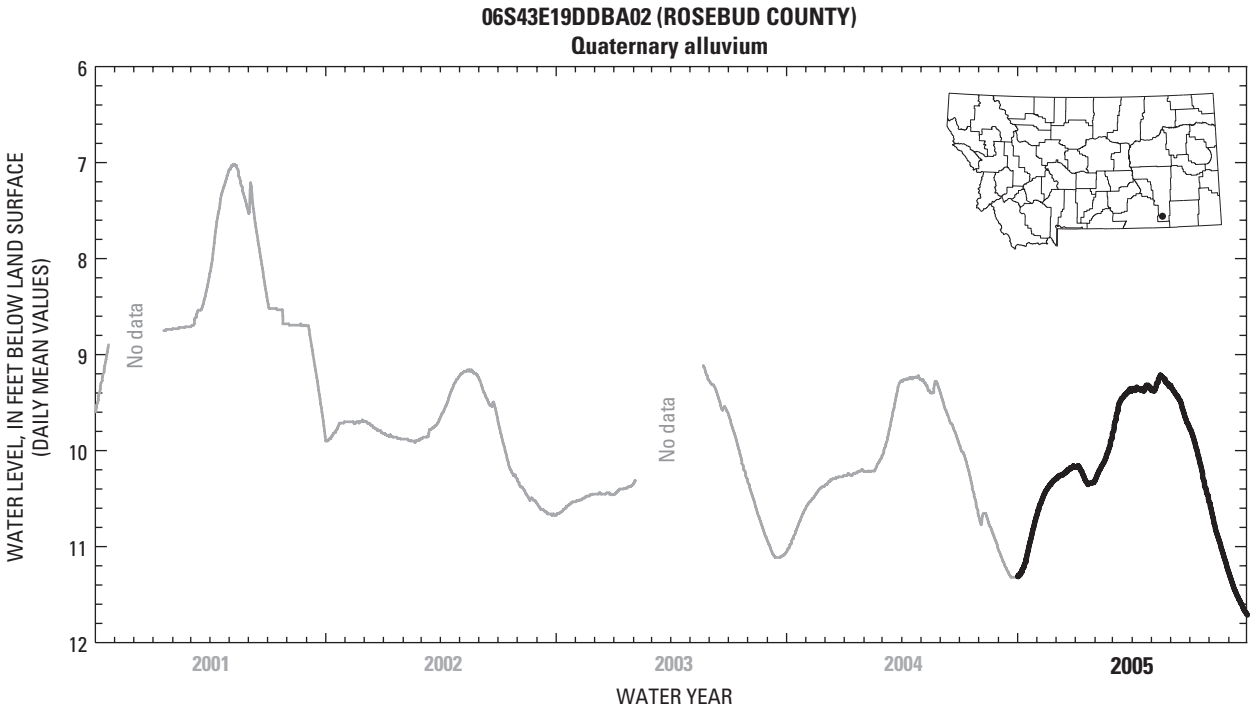
PERIOD OF RECORD.--April 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.47 ft, Apr. 7, 1987 (measured); lowest, 11.71 ft, Sept. 30, 2005 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 9.21 ft, May 16 and 17 (from recorder); lowest, 11.71 ft, Sept. 30 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Oct. 19	11.05
Apr. 27	9.33
Sept. 20	11.61



SANDERS COUNTY

SITE IDENTIFICATION.--474251114385201. Local number 23N24W34ADAA01.

LOCATION.--Lat 47°42'51", long 114°38'52" (NAD 27), Hydrologic Unit 17010212. Owner: Bureau of Indian Affairs.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in February 1941, casing diameter 20 in. from 1.00 ft above land surface to 300 ft below land surface, and 18 in. from 300 ft to 377 ft.

INSTRUMENTATION.--Graphical water-level recorder from January 1971 to January 1985. Digital water-level recorder set to record every hour from January 1985 to current year.

DATUM.--Elevation of land surface is 2,878.57 ft (NGVD 29). Measuring point: top of casing, 1.00 ft above land-surface datum. Reference point established Oct. 29, 2003: rebar 3 ft northeast of well shelter outside of northeast corner of shelter fence, 1.79 ft below measuring point.

REMARKS.--Water levels affected by pumpage. All water levels reported below land-surface datum. No data from Feb. 1 through Mar. 9, 2004. No data Sept. 13-20, 2004 while Montana Bureau of Mines and Geology collected water-quality samples.

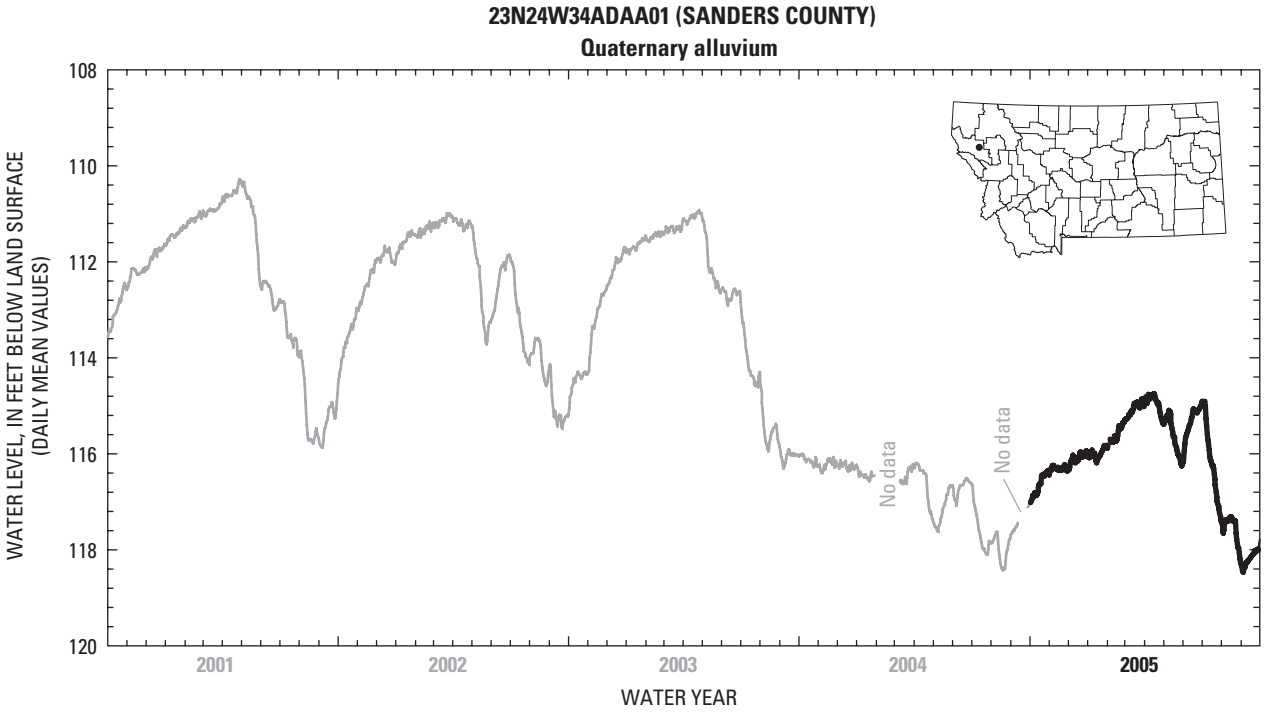
PERIOD OF RECORD.--March to May 1943, October 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 102.43 ft, Mar. 20, 1981 (from recorder); lowest, 119.96 ft, Sept. 6, 1995 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 114.72 ft, Apr. 13 (from recorder); lowest, 118.52 ft, Sept. 4 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 19	116.28	Mar. 22	114.91
Nov. 17	116.32	May 13	115.33
Feb. 2	115.85	Aug. 16	117.38



SHERIDAN COUNTY

SITE IDENTIFICATION.--483650104084001. Local number 33N58E17ADDD01.

LOCATION.--Lat 48°36'50", long 104°08'40" (NAD 27), Hydrologic Unit 10060006. Owner: Vern Guenther.

HYDROGEOLOGIC UNIT.--Pleistocene outwash.

WELL CHARACTERISTICS.--Drilled in 1984, casing diameter 4 in., depth 130 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every hour from Apr. 21, 1985 to Oct. 18 1985, every 12 hours from Oct. 19, 1985 to Apr. 7, 1993, and every 4 hours from Apr. 8, 1993 to current year.

DATUM.--Elevation of land surface is 1,992 ft (NGVD 29) (from topographic map). Measuring point: top of casing, 2.10 ft above land-surface datum. Reference point established Sept. 15, 2003: top of steel rod 3 ft north of well, 0.77 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

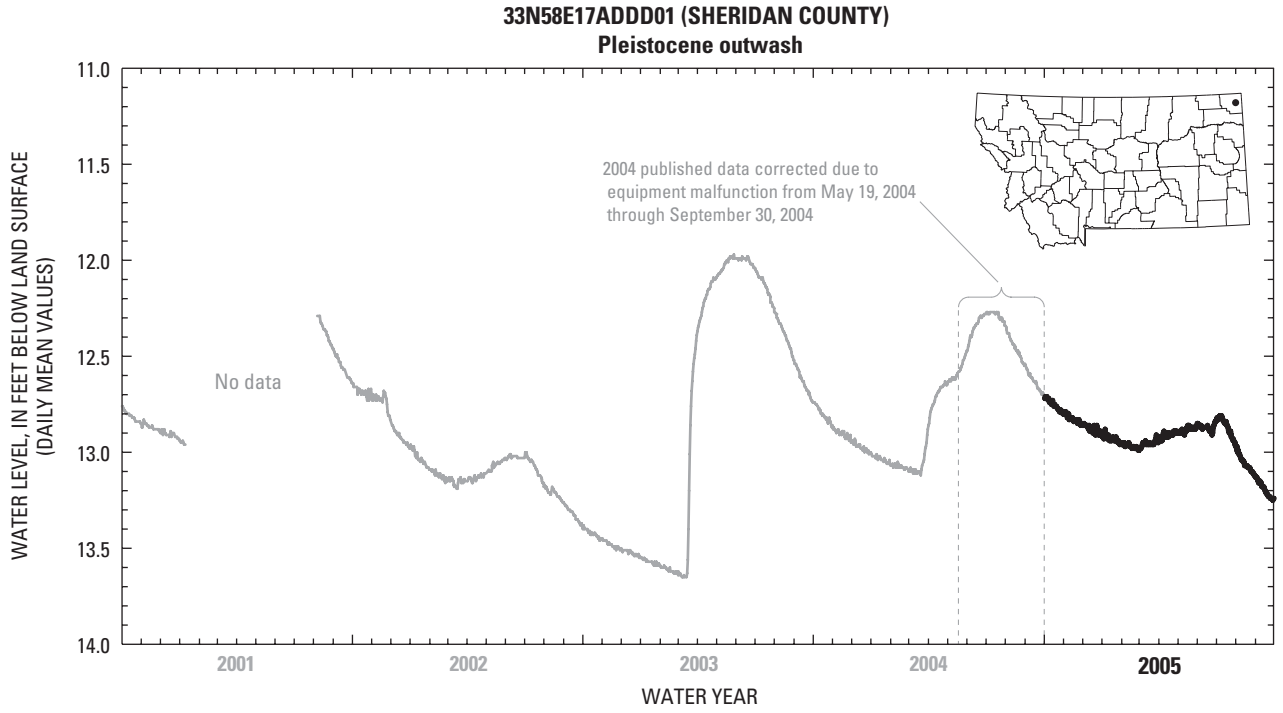
PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.73 ft, June 19-26, 1999 (from recorder); lowest, 15.51 ft, Aug. 20-23, 1992 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 12.70 ft, Oct. 1 (from recorder); lowest, 13.26 ft, Sept. 28 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL
Nov. 3	12.80
Apr. 28	12.89



SHERIDAN COUNTY

SITE IDENTIFICATION.--483318104105402. Local number 32N58E04DBBD02.

LOCATION.--Lat 48°33'18", long 104°10'54" (NAD 27), Hydrologic Unit 10060006. Owner: U.S. Fish and Wildlife Service.

HYDROGEOLOGIC UNIT.--Pleistocene outwash.

WELL CHARACTERISTICS.--Drilled in July 1984, casing diameter 4 in., depth 143 ft.

INSTRUMENTATION.--Graphical water-level recorder from August 1984 through May 1985. Digital water-level recorder set to record every 24 hours from May 1985 to April 1996. Digital recorder set to record every 4 hours from April 1996 to current year.

DATUM.--Elevation of land surface is 1,977 ft (NGVD 1929) (from topographic map). Measuring point: top of recorder shelf, 2.20 ft above land-surface datum. From August 1984 to April 1994, measuring point was top of PVC casing, 1.50 ft above land-surface datum. Reference point established Sept. 15, 2003: top of steel rod 4 ft north of northeast fence post, 1.37 ft below measuring point.

REMARKS.--All water levels reported below land-surface datum.

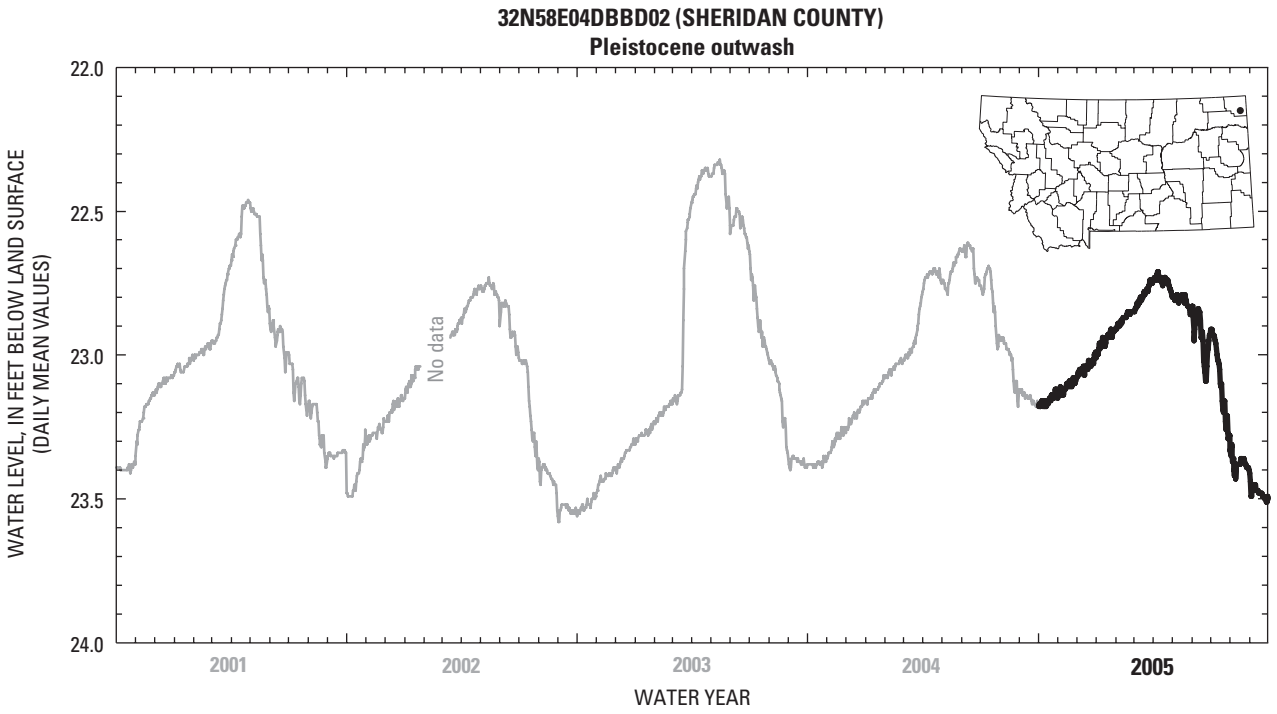
PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.32 ft, at various times May 13-16, 2003 (from recorder); lowest, 25.90 ft, Aug. 18 and 19, 1992 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 22.71 ft, Apr. 7-9 (from recorder); lowest, 23.52 ft, Sept. 28 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Nov. 3	23.10	July 27	23.20
Apr. 18	22.76	Sept. 8	23.45



TETON COUNTY

SITE IDENTIFICATION.--474005111583803. Local number 22N03W15BAAD03.

LOCATION.--Lat 47°40'05", long 111°58'38" (NAD 27), Hydrologic Unit 10030104. Owner: Marvin Klinker.

HYDROGEOLOGIC UNIT.--Pleistocene terrace deposits.

WELL CHARACTERISTICS.--Drilled in 1991, casing diameter 4 in., depth 47 ft.

INSTRUMENTATION.--Digital water-level recorder set to record every hour from November 1991 to current year.

DATUM.--Elevation of land surface is 3,937.97 ft (NGVD 29). Measuring point: top of casing, 1.90 ft above land-surface datum from November 1991 to Mar. 12, 2001 and 1.80 ft above land-surface datum from Mar. 12, 2001 to current year. Reference point established June 14, 2003: top of steel rod at base of large stump 36 ft northwest of well, 1.24 ft below measuring point.

REMARKS.--Water levels affected by irrigation. All water levels reported below land-surface datum.

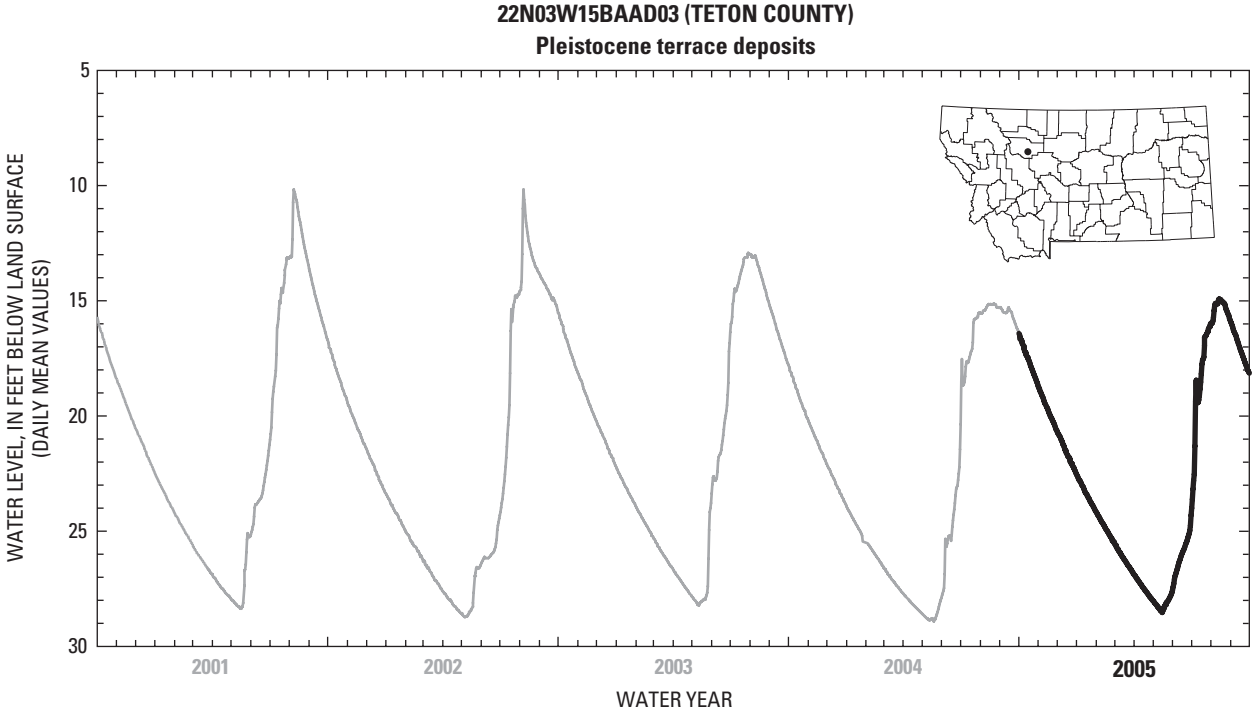
PERIOD OF RECORD.--November 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.69 ft, Aug. 8, 2002 (from recorder); lowest, 28.92 ft, May 19, 2004 (from recorder).

EXTREMES FOR CURRENT YEAR.--Highest water level, 14.86 ft, Aug. 13 (from recorder); lowest, 28.53 ft, May 16 (from recorder).

MEASURED WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM,
WATER YEAR OCTOBER 2004 THROUGH SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 14	17.49	May 17	28.48
Jan. 18	23.56	Aug. 16	14.95
Mar. 1	25.25		



PERIODIC WATER LEVELS IN SELECTED OBSERVATION WELLS IN MONTANA, WATER YEAR 2005

[Local number--composed of township, range, section, position within a section, and a sequence number. Depth of well--in feet below land surface. Water level--in feet below or above (+) land surface. --, no data]

Local number	Station no.	Depth of well	Hydrogeologic unit	Date of measurement	Water level
			MINERAL COUNTY		
18N28W24DCBA01	471804115060501	199	Quaternary alluvium	11-17-04	+21.41
				02-15-05	+21.18
				06-22-05	+27.68
				08-08-05	+19.10
18N27W19CBBD01	471814115052901	58	Quaternary alluvium	11-17-04	12.48
				02-15-05	12.20
				06-22-05	9.35
				08-08-05	12.65
18N27W30ABBA01	471751115045001	192	Quaternary alluvium	11-17-04	145.78
				02-15-05	145.58
				06-22-05	141.46
				08-08-05	145.98
17N26W30DAAD01	471207114555401	318	Quaternary alluvium	11-17-04	192.03
				02-15-05	191.98
				06-22-05	186.58
				08-08-05	191.78
			SANDERS COUNTY		
26N34W03BDAD01	480248115574901	400	Quaternary alluvium	12-01-04	226.85
				02-02-05	230.80
				04-26-05	226.60
				08-16-05	226.80
25N31W30DCCC01	475316115381901	282	Quaternary alluvium	12-01-04	223.30
				02-02-05	223.40
				04-26-05	223.90
				08-16-05	223.50
22N29W32ACDD01	473717115201501	308	Quaternary alluvium	02-02-05	239.80
				05-13-05	232.32
				08-16-05	222.60
20N26W22CBBA01	472837114540201	50	Quaternary alluvium	12-01-04	17.76
				02-02-05	17.73
				05-13-05	19.40
				08-16-05	18.98
19N25W07CDDA01	472448114495201	--	Quaternary alluvium	12-01-04	+14.87
				05-13-05	+12.50
19N25W28BABB01	472257114473701	369	Middle Proterozoic Belt Supergroup	12-01-04	18.87
				02-02-05	18.32
				05-13-05	11.05
				08-16-05	15.50

462905112035401 MCBEATH RESIDENCE NEAR CLANCY, MT (MT07)

(National trends network)

LOCATION.--Lat 46°29'05", long 112°03'54" (NAD 27), in $NE^1/_4NW^1/_4NE^1/_4$ sec.2, T.8 N., R.4 W., Jefferson County, Hydrologic Unit 10030101, at National Forest boundary fence at private residence on Lump Gulch Road, 5.1 mi west of Clancy and 10 mi south of Helena.

PERIOD OF RECORD.--Water years 1981-1982, 1984 to current year. Prior to Oct. 1984, published as 462905112034001.

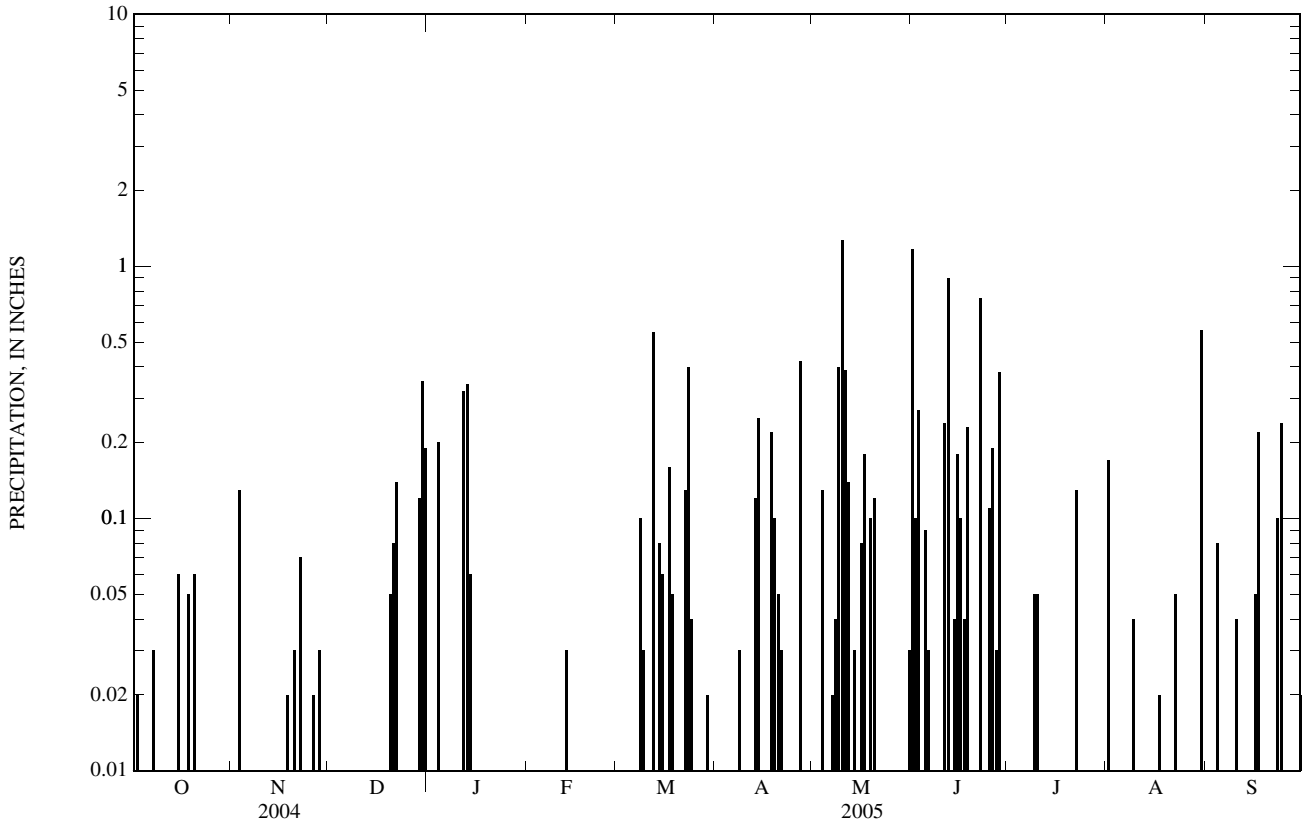
EQUIPMENT.--The sample collector is an Aerochem Metrics Model 301 precipitation collector. An automatic sensor detects occurrences of precipitation, activating a motor which removes a cover from the wetfall collection vessel. When precipitation ceases, the cycle is reversed. The sampling vessel is polyethylene and has a collection diameter of 28.6 cm and a capacity of 13 liters. Precipitation is measured using a Belfort Universal rain gage, series 5-780 with an event recorder. (The use of the brand name in this report is for identifiction purposes only and does not imply endorsement by the U.S. Geological Survey.) Snowfall precipitation is measured as a water equivalent.

REMARKS.--Missing precipitation data for Dec.23 and Jan.1-3, 6-7, and 9-10 are due to equipment problems resulting from freezing air temperatures. Water-quality concentrations are available at http://nadp.sws.uiuc.edu/sites/siteinfo.asp?net=NTN&id=MT07.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	<0.01	0.00	0.00	---	0.00	0.00	<0.01	0.00	1.17	<0.01	0.17	0.00
2	0.02	0.00	0.00	---	0.00	0.00	<0.01	0.00	0.10	0.00	<0.01	0.00
3	0.00	0.13	0.00	---	0.00	0.00	0.01	0.00	0.27	0.00	0.00	0.00
4	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.08
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
6	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
7	0.03	0.00	0.00	---	0.00	0.01	0.00	0.02	0.00	0.00	<0.01	0.00
8	0.00	0.00	0.00	0.00	0.00	0.10	0.03	0.04	0.00	0.00	0.01	0.00
9	0.00	0.00	0.00	---	0.00	0.03	0.00	0.40	<0.01	0.05	0.04	0.01
10	0.00	0.00	0.00	---	0.00	0.00	0.00	1.27	<0.01	0.05	<0.01	0.04
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.24	0.00	0.00	0.00
12	0.00	0.00	0.00	0.32	0.00	0.55	0.00	0.14	0.90	0.00	<0.01	0.00
13	0.00	0.00	0.00	0.34	0.03	0.01	0.12	<0.01	0.00	0.00	0.00	<0.01
14	<0.01	0.00	0.00	0.06	0.01	0.08	0.25	0.03	0.04	0.00	0.00	0.00
15	0.06	0.00	0.00	<0.01	0.00	0.06	0.00	0.00	0.18	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.10	0.01	0.00	0.05
17	0.00	0.00	0.00	0.01	0.00	0.16	0.00	0.18	0.04	0.00	0.02	0.22
18	0.05	0.02	0.00	0.01	0.00	0.05	0.22	0.00	0.23	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.00
20	0.06	0.03	0.05	0.00	0.00	0.00	0.05	0.12	0.01	0.00	0.00	0.00
21	0.01	0.00	0.08	0.00	0.00	0.00	0.03	<0.01	0.00	0.00	0.00	0.00
22	0.00	0.07	0.14	0.00	0.00	0.13	0.00	0.01	0.75	0.13	0.05	0.00
23	0.00	0.00	---	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.10
24	<0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	<0.01	0.00	0.24
25	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00	0.00	0.00
26	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.19	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.03	0.00	0.00	0.00
28	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.38	0.00	0.00	0.00
29	0.00	0.00	0.12	0.00	---	0.02	0.00	0.00	0.00	0.00	0.00	0.00
30	<0.01	0.00	0.35	0.00	---	0.00	0.00	0.00	0.00	0.00	0.56	0.02
31	0.01	---	0.19	0.00	---	0.00	---	0.03	---	0.00	0.00	---
TOTAL	0.28	0.31	---	---	0.04	1.65	1.26	2.97	4.88	0.26	0.89	0.77
MEAN	0.01	0.01	---	---	0.00	0.05	0.04	0.10	0.16	0.01	0.03	0.03
MAX	0.06	0.13	---	---	0.03	0.55	0.42	1.27	1.17	0.13	0.56	0.24
MIN	0.00	0.00	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

462905112035401 MCBEATH RESIDENCE NEAR CLANCY, MT (MT07)—Continued



482958109475101 NORTHERN MONTANA AGRICULTURAL RESEARCH CENTER NEAR HAVRE, MT (MT98)

(National trends network)

LOCATION.--Lat 48°29'58", long 109°47'51" (NAD 27), in NE$^1/_4$SW$^1/_4$SW$^1/_4$ sec.28, T.32 N., R.15 E., Hill County, Hydrologic Unit 10050004 at Northern Montana Agricultural Research Center Experiment Station, 3/4 mile south of U.S. Highway 87, 5.7 miles southwest of Havre.

PERIOD OF RECORD.--Water years 1986 to current year.

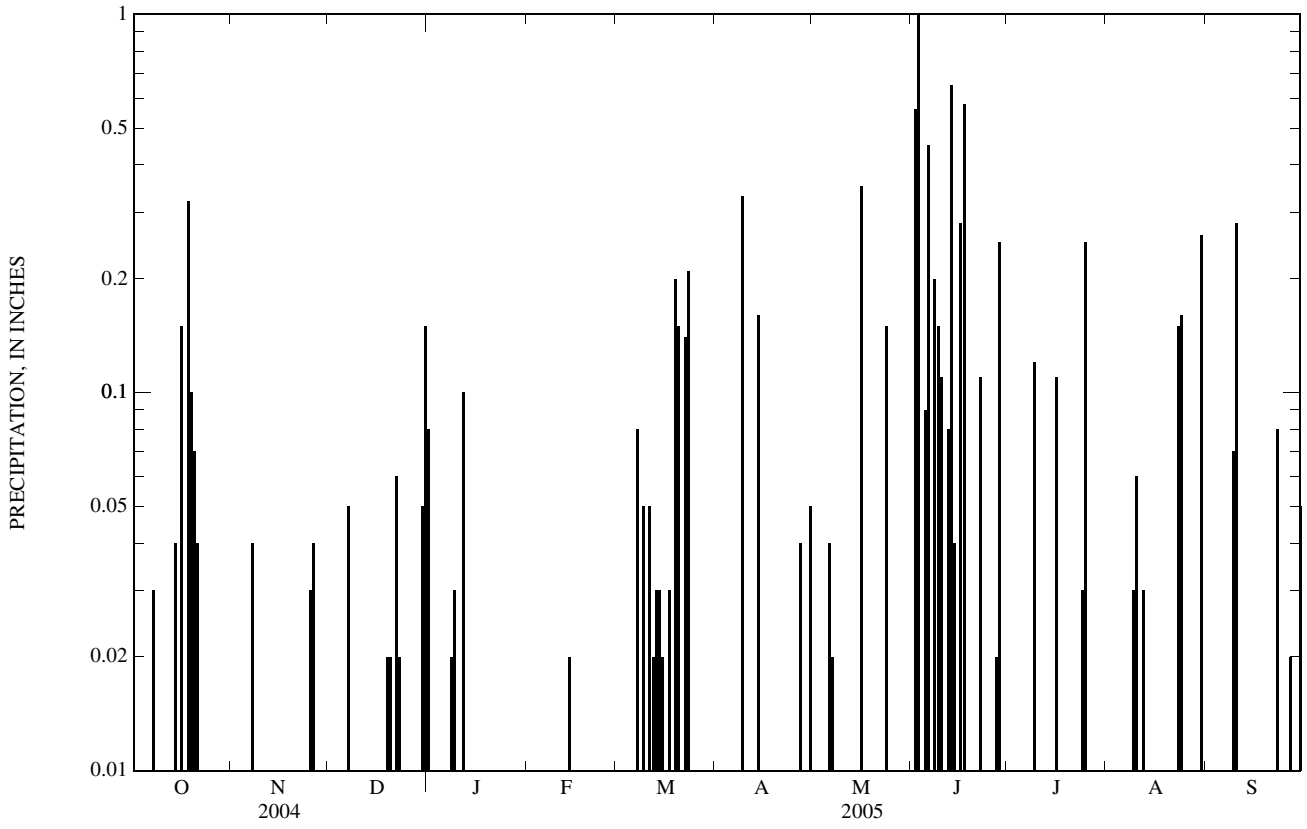
EQUIPMENT.--The sample collector is an Aerochem Metrics Model 301 precipitation collector. An automatic sensor detects occurrences of precipitation, activating a motor which removes a cover from the wetfall collection vessel. When precipitation ceases, the cycle is reversed. The sampling vessel is polyethylene and has a collection diameter of 28.6 cm and a capacity of 13 liters. Precipitation is measured using a Belfort Universal rain gage, series 5-780 with an event recorder. (The use of the brand name in this report is for identifiction purposes only and does not imply endorsement by the U.S. Geological Survey.) Snowfall accumulation is measured as a water equivalent.

REMARKS.--Missing precipitation data May 18-23 due to equipment problems resulting from freezing air temperatures. Water-quality concentrations are available at *http://nadp.sws.uiuc.edu/sites/siteinfo.asp?net=NTN&id=MT98*

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	<0.01	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	<0.01	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.45	<0.01	0.00	0.00
7	0.03	0.04	0.05	0.00	0.00	0.08	0.00	0.02	0.01	0.00	0.00	0.00
8	0.00	0.00	<0.01	0.02	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
9	0.00	0.00	0.00	0.03	0.00	0.05	0.33	0.00	0.15	0.12	0.03	0.07
10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.11	0.00	0.06	0.28
11	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	<0.01	0.00	0.01	0.00
12	0.00	0.00	0.00	0.10	0.00	0.02	0.00	0.00	0.08	0.00	0.03	0.00
13	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.65	0.00	0.00	0.00
14	0.04	0.00	0.00	0.00	0.02	0.03	0.16	0.00	0.04	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	<0.01	<0.01	0.00	0.00
16	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.28	0.11	0.00	0.00
17	0.00	0.00	0.00	0.01	0.00	0.03	<0.01	0.00	0.58	0.00	0.01	0.00
18	0.32	0.00	0.00	0.01	0.00	0.00	<0.01	---	0.00	0.00	0.00	0.00
19	0.10	0.00	0.02	0.00	0.00	0.20	0.00	---	0.00	0.00	0.00	0.00
20	0.07	0.00	0.02	0.00	0.00	0.15	0.00	---	0.00	0.00	0.00	0.00
21	0.04	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00
22	0.00	0.00	0.06	0.00	0.00	0.14	0.00	---	0.11	0.00	0.00	0.00
23	0.00	0.00	0.02	0.00	0.00	0.21	0.00	---	<0.01	<0.01	0.15	0.08
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.03	0.16	<0.01
25	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.00	0.00	0.02
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	<0.01
30	0.00	0.00	0.05	0.00	---	<0.01	0.05	0.00	0.00	0.00	0.26	0.05
31	0.00	---	0.15	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.75	0.11	0.38	0.26	0.02	1.02	0.61	---	4.64	0.55	0.71	0.52
MEAN	0.02	0.00	0.01	0.01	0.00	0.03	0.02	---	0.15	0.02	0.02	0.02
MAX	0.32	0.04	0.15	0.10	0.02	0.21	0.33	---	1.00	0.25	0.26	0.28
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00

482958109475101 NORTHERN MONTANA AGRICULTURAL RESEARCH CENTER NEAR HAVRE, MT (MT98)—Continued



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