Water Resources Data
Montana
Water Year 2005

Volume 1. Hudson Bay and Upper Missouri River Basins

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

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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 125 streamflow-gaging stations; stage or content records for 17 lakes and reservoirs; and water-quality records for 68 streamflow stations (37 ungaged), 12 reservoir or lake sites, and 13 ground-water wells. 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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[Letter after station name designates types of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevations or contents]

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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.

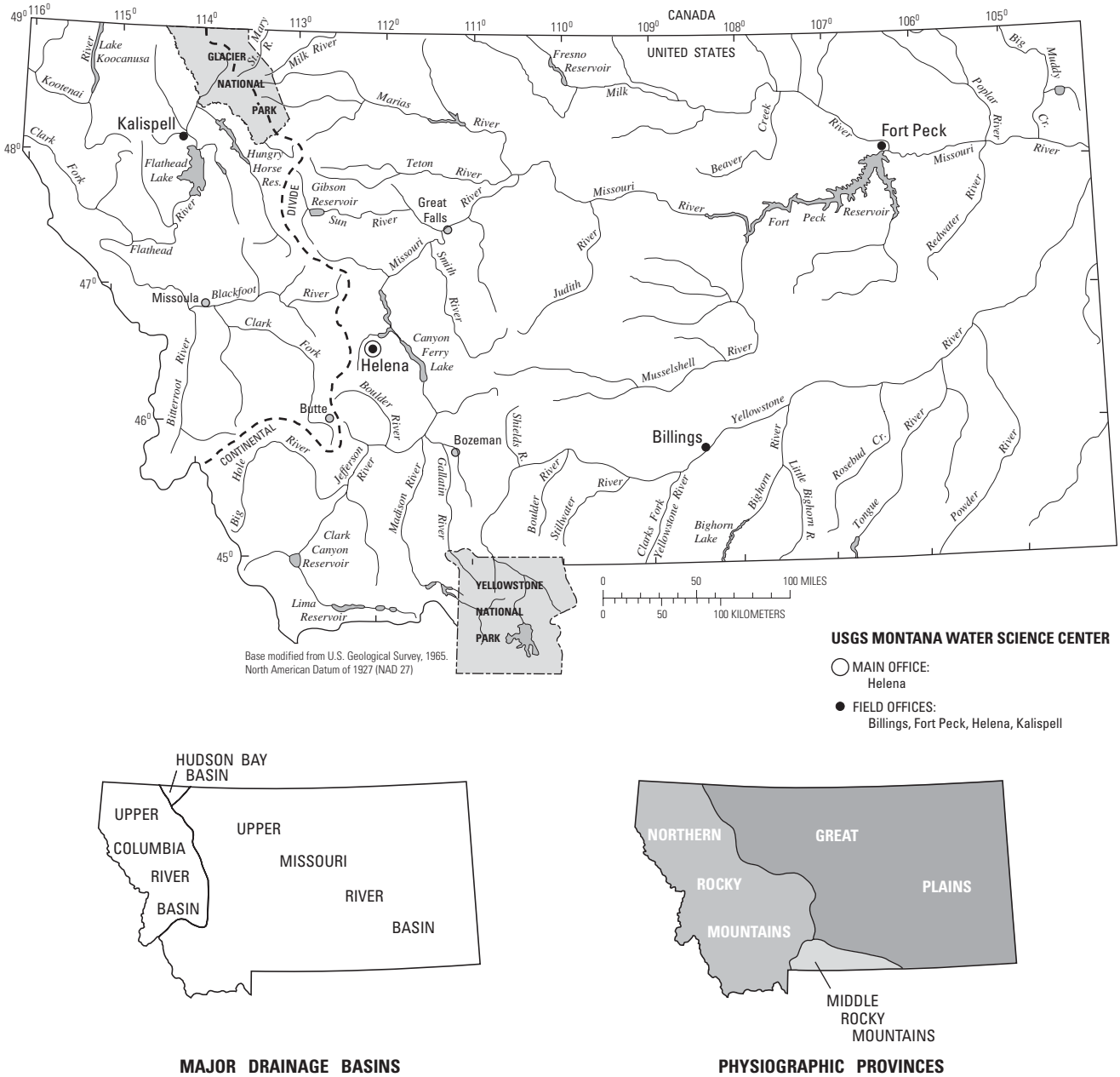


Figure 1. General geographic features of Montana.

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.

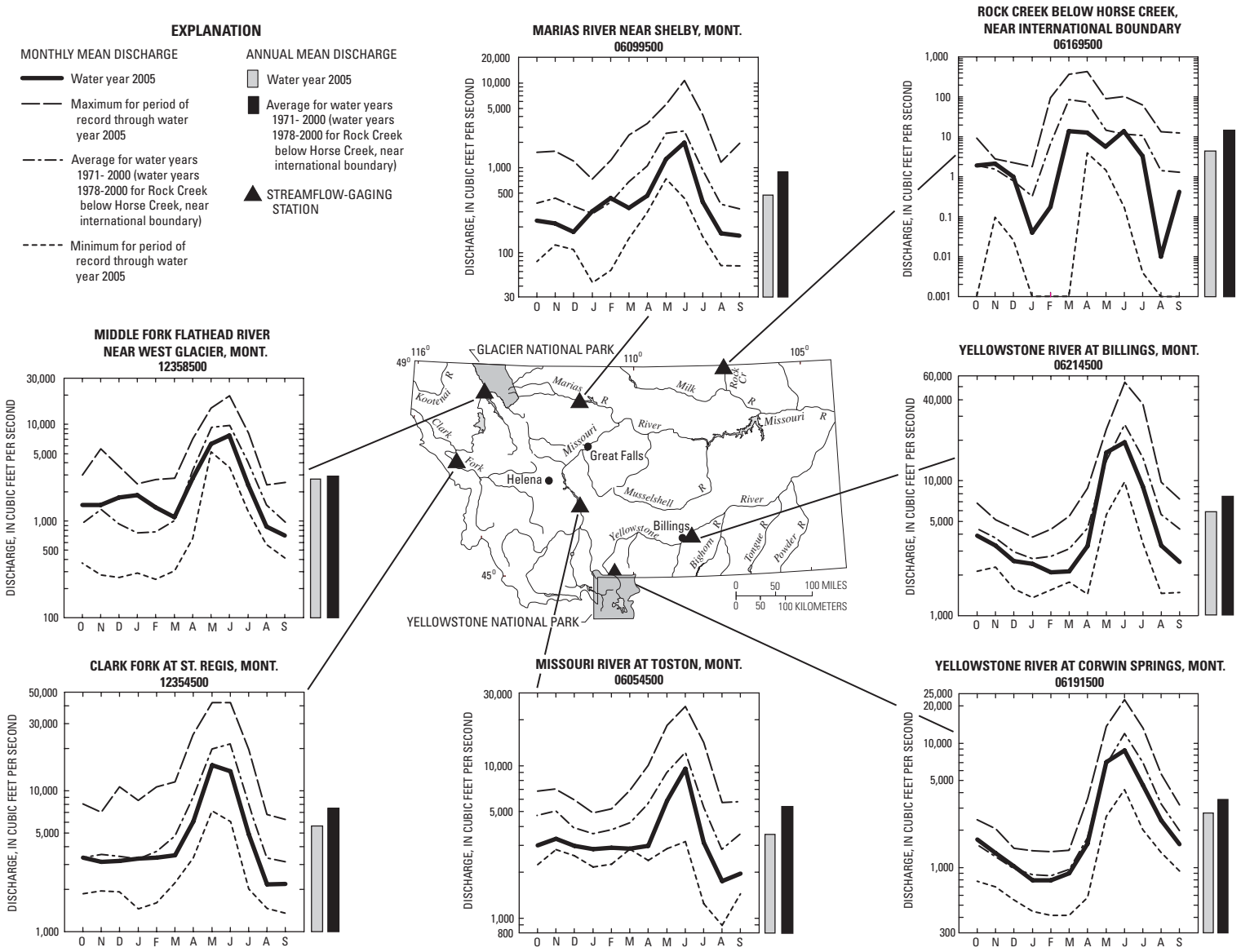


Figure 2. Streamflow data for water year 2005 compared to long-term data at selected streamflow-gaging stations in Montana.

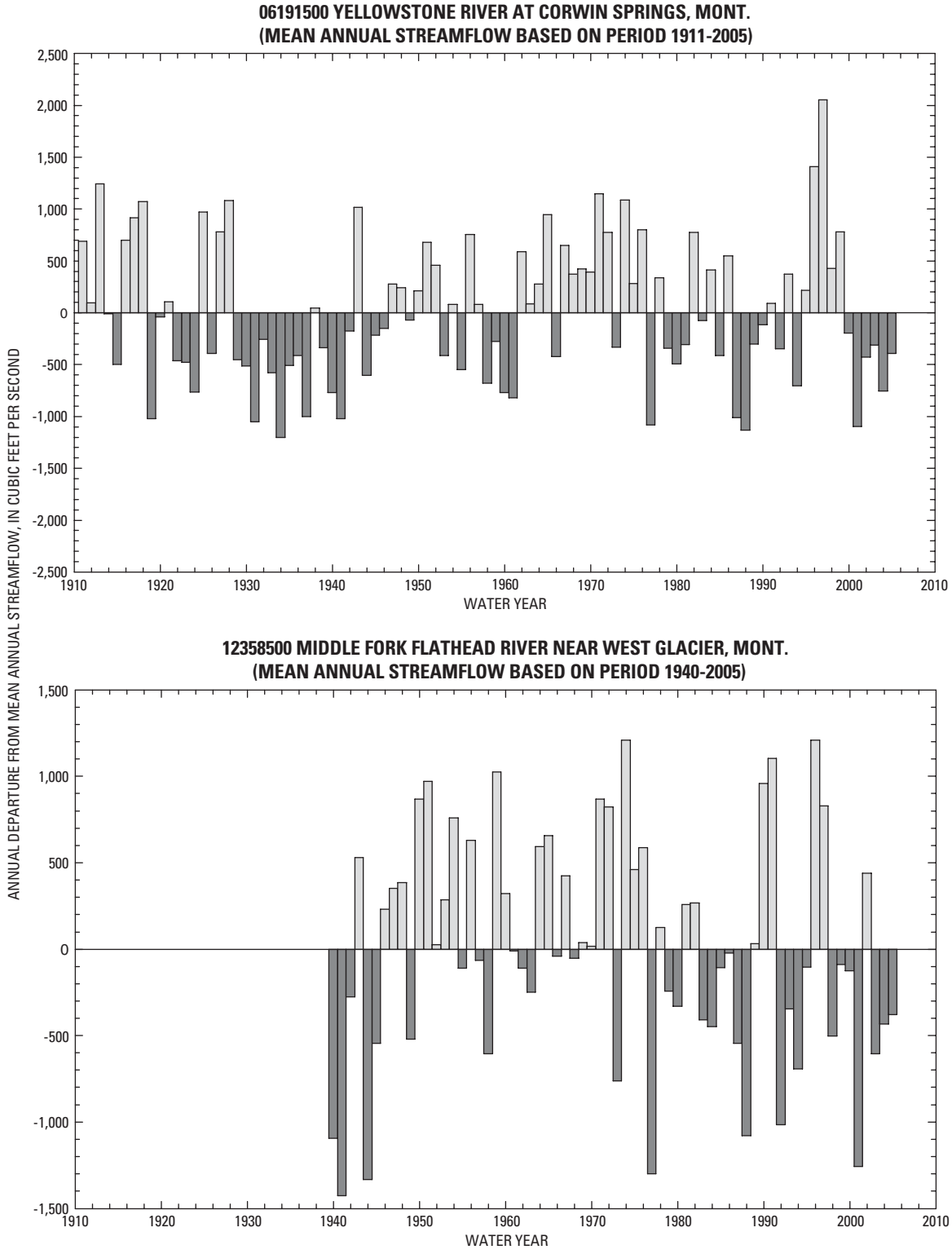


Figure 3. Annual departure from mean annual discharge at two streamflow-gaging stations on unregulated streams in Montana.

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

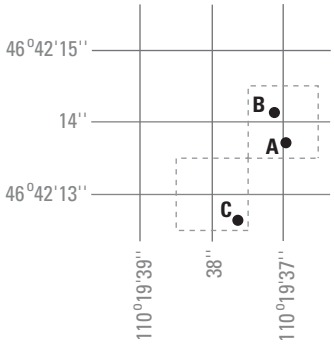
DOWNSTREAM ORDER AND STATION NUMBER

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.

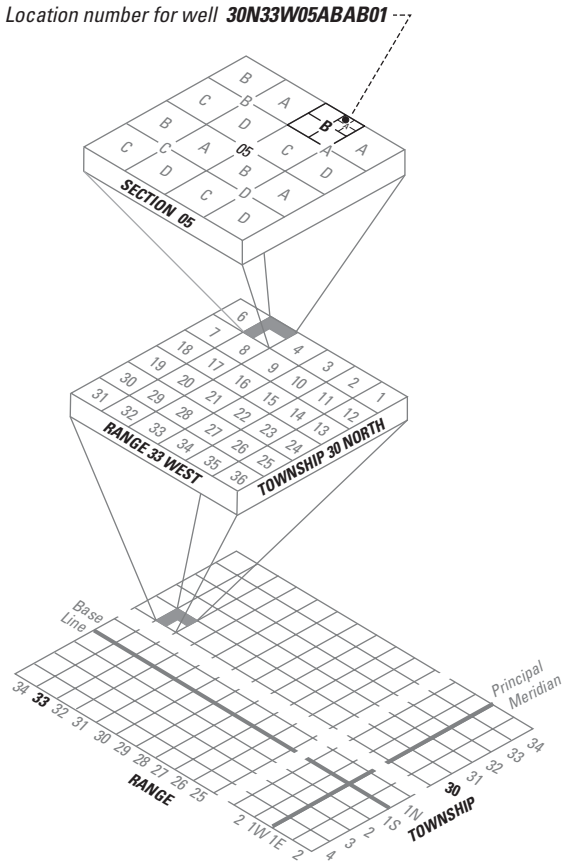


Figure 5. System for numbering wells and miscellaneous sites (township and range).

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

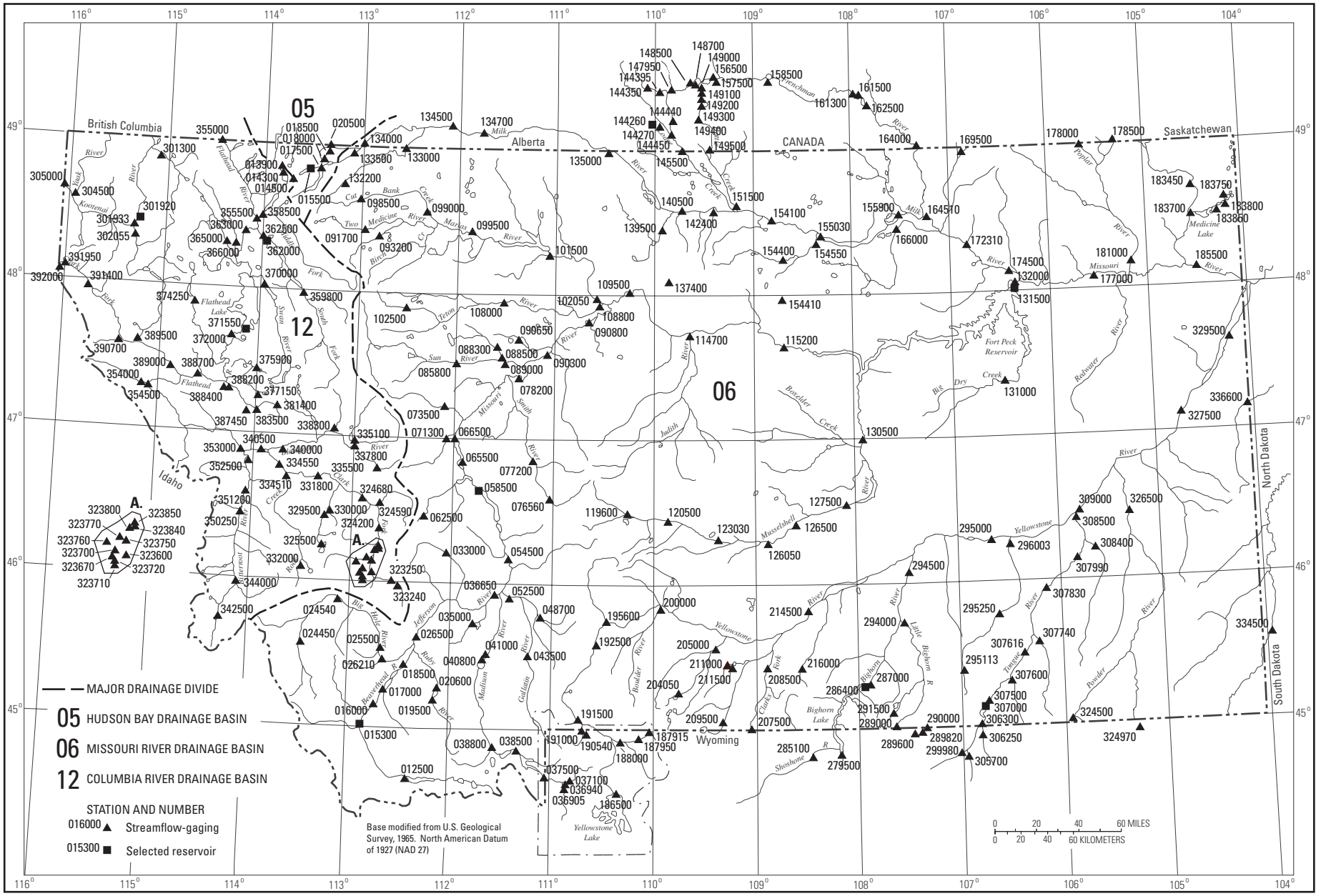


Figure 6. Location of streamflow-gaging and selected reservoir stations in Montana and adjacent areas, water year 2005.

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

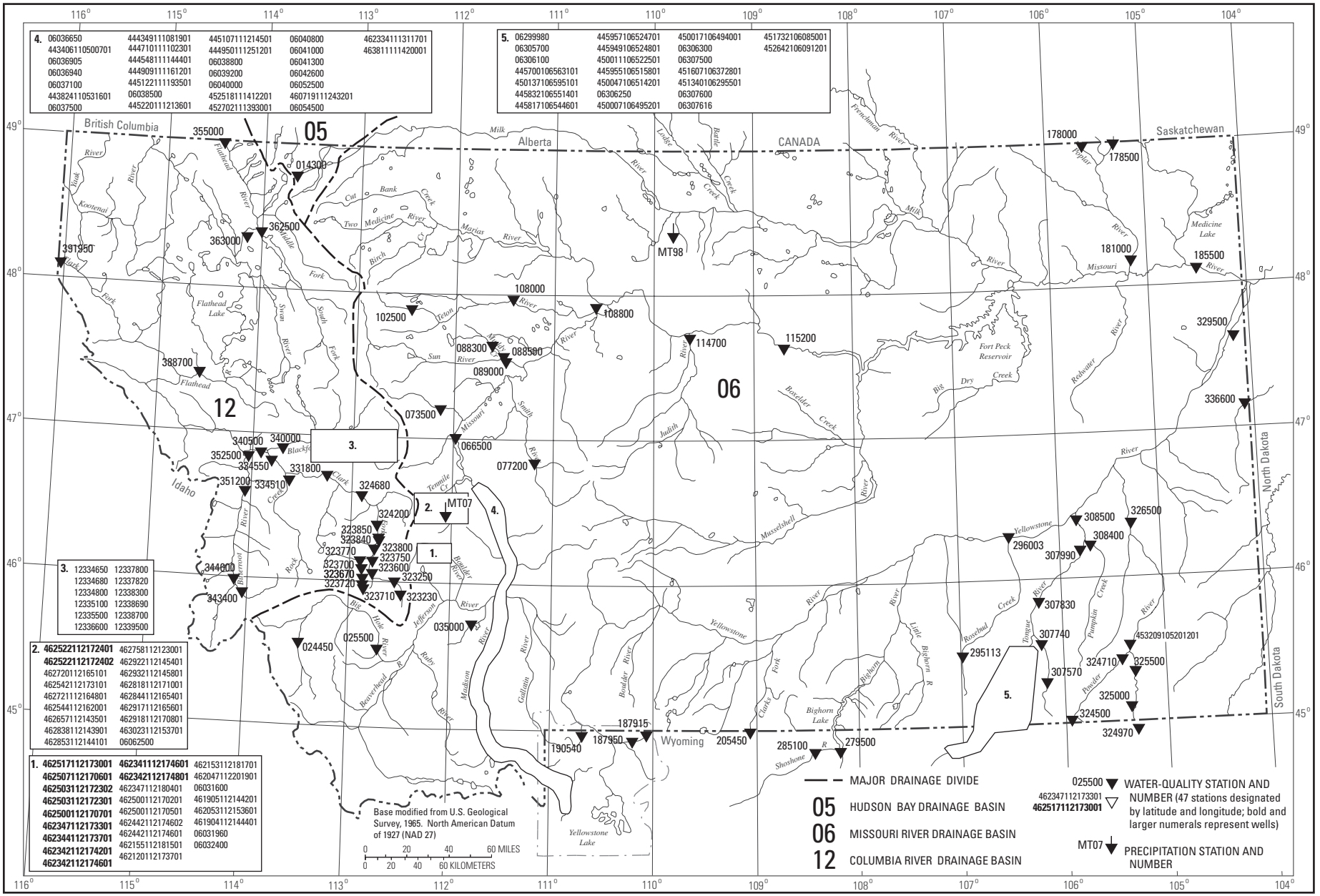


Figure 7. Location of water-quality and precipitation stations in Montana and adjacent areas, water year 2005.

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.

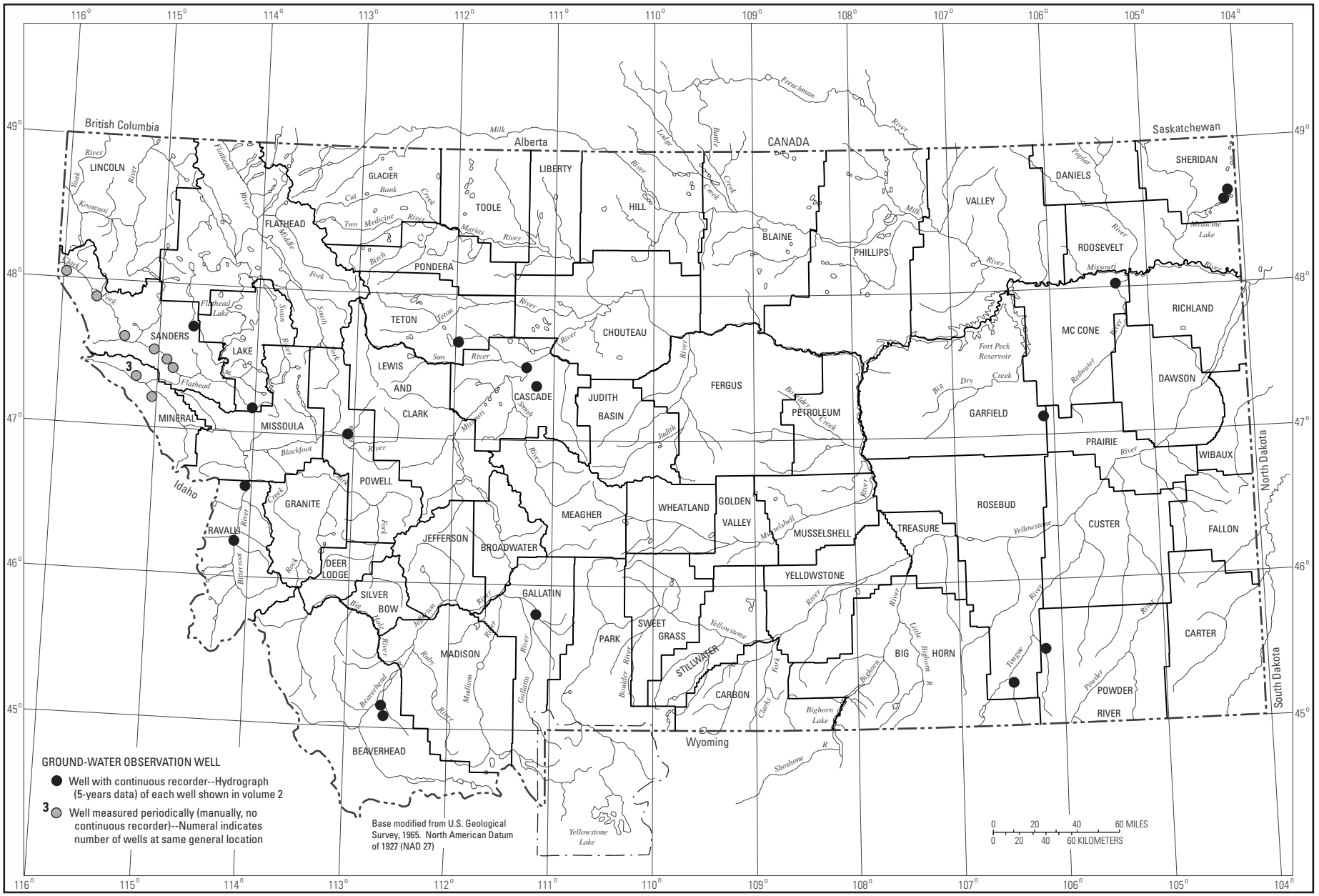


Figure 8. Location of ground-water observation wells in Montana, water year 2005.

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)							
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					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	--	--	--	--	--	--

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							
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	--

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Station number	Station name	Drainage area (square miles)	Period of record (by water year)							
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					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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			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	--	--	--	--	--	--

SASKATCHEWAN RIVER BASIN

05013900 GRINNELL CREEK AT GRINNELL GLACIER, NEAR MANY GLACIER, MT

LOCATION.--Lat 48°45'28", long 113°43'29" (NAD 27), in SW$^1/_4$ sec.29, T.35 N., R.16 W., Glacier County, Hydrologic Unit 10010002, Glacier National Park, on left bank 0.2 mi downstream from outlet of Grinnell Glacier, 0.4 mi upstream from Grinnell Falls, 4 mi southwest of Many Glacier, and 15 mi southwest of Babb.

DRAINAGE AREA.--1.1 mi^2, approximately.

PERIOD OF RECORD.--July 1959 to September 1971, July 2004 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,322 ft (NGVD 29).

REMARKS.--Data for water year 2004 which were not available for publication in last year's report are included this year. Records good except those for estimated daily discharges, which are fair. No regulation or diversion 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, JULY 2004 TO OCTOBER 2005
DAILY MEAN VALUES

DAY	JUL 2004	AUG	SEP	OCT	NOV 2004 - JUN 2005	JUL 2005	AUG	SEP	OCT
1	e44	28	21	6.8		32	27	12	64
2	e42	27	19	5.7		26	24	12	23
3	e40	27	15	6.0		22	21	13	12
4	e38	27	14	5.7		22	21	13	9.7
5	e36	26	14	6.1		25	23	11	7.6
6	e38	24	12	6.7		28	23	9.3	6.4
7	e40	37	12	e7.0		30	23	9.0	8.3
8	e38	27	11	7.6		26	26	9.1	7.0
9	e36	21	12	7.8		27	25	9.7	e6.0
10	e34	20	10	8.0		23	29	15	e5.0
11	e32	21	14	6.2		20	26	13	4.5
12	e32	22	18	5.6		23	25	10	4.2
13	e30	24	19	5.6		31	17	8.4	6.2
14	e32	25	27	e8.0		30	15	11	5.3
15	e34	27	24	e12		28	16	11	5.2
16	e34	29	21	e14		35	18	9.0	9.6
17	e32	32	15	e11		31	20	7.9	25
18	e31	40	14	e10		28	20	8.1	23
19	e36	29	12	e9.0		30	14	8.2	15
20	e33	29	10	e9.0		30	16	7.2	22
21	e30	40	8.0	e8.0		28	19	5.9	14
22	e28	29	7.7	e9.0		25	19	4.9	9.5
23	e27	42	10	e9.0		26	16	4.6	7.9
24	e28	51	13	e8.0		23	16	6.1	7.0
25	e27	64	14	e7.0		21	14	3.2	6.2
26	e25	45	12	e6.0		18	15	2.5	6.5
27	e24	29	9.7	e7.0		21	15	2.5	6.7
28	e24	29	9.0	e6.0		23	15	2.3	5.9
29	26	26	8.6	e6.0		26	15	6.0	5.6
30	27	22	8.8	e6.0		27	13	126	e5.0
31	29	21	---	e6.0		27	12	---	e4.5
TOTAL	1,007	940	414.8	235.8		812	598	370.9	347.8
MEAN	32.5	30.3	13.8	7.61		26.2	19.3	12.4	11.2
MAX	44	64	27	14		35	29	126	64
MIN	24	20	7.7	5.6		18	12	2.3	4.2
AC-FT	2,000	1,860	823	468		1,610	1,190	736	690

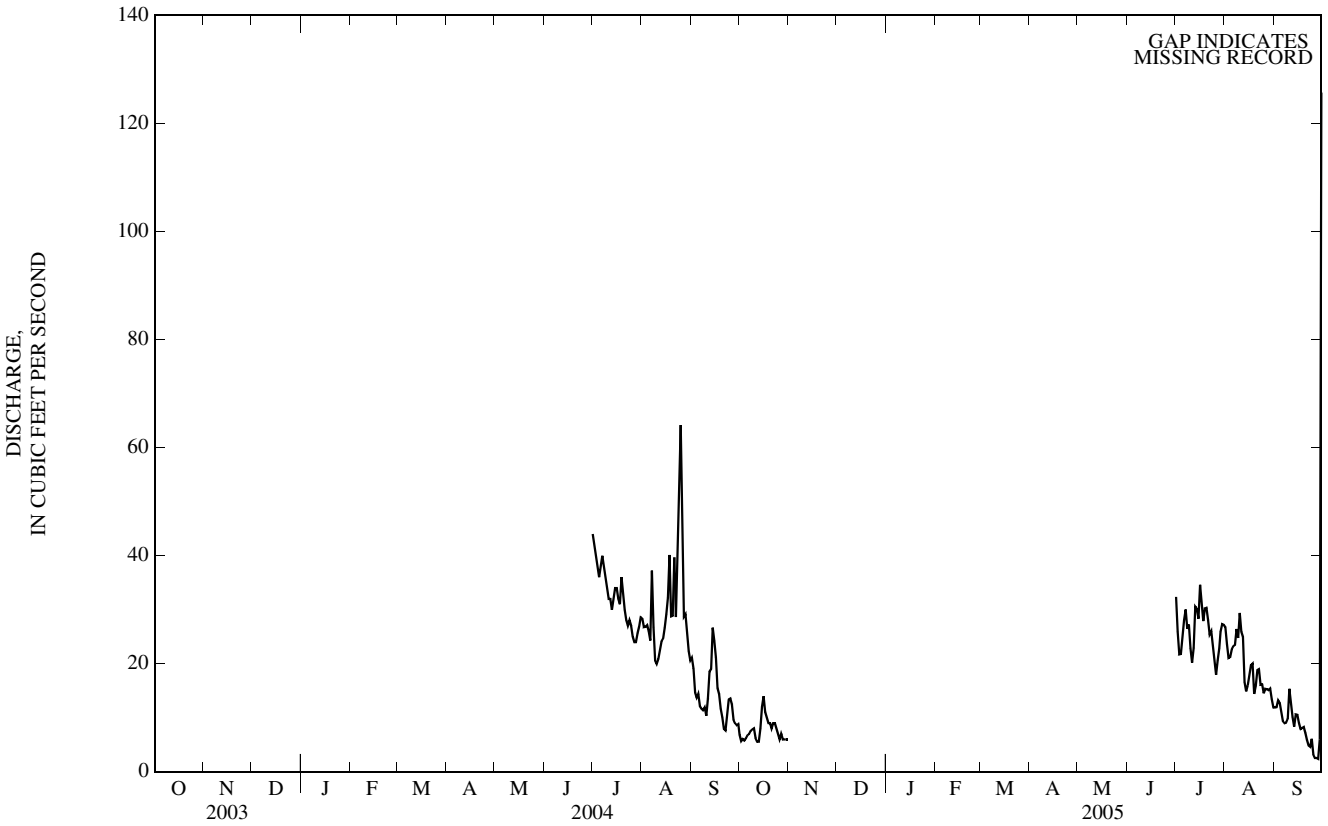
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1959 - 2005*

MEAN	39.9	30.3	16.1	8.12	39.0	29.6	15.9	8.34
MAX	47.0	38.6	31.6	19.3	47.0	38.6	31.6	19.3
(WY)	(1967)	(1971)	(1968)	(1962)	(1967)	(1971)	(1968)	(1962)
MIN	32.5	25.2	6.93	4.83	26.2	19.3	6.93	4.83
(WY)	(2004)	(1964)	(1965)	(1967)	(2005)	(2005)	(1965)	(1967)

SUMMARY STATISTICS	FOR 2004 SEASON		FOR 2005 SEASON		SEASONS 1959 - 2005*	
HIGHEST DAILY MEAN	64	Aug 25	126	Sep 30	126	Sep 30, 2005
LOWEST DAILY MEAN	5.6	Oct 13	2.3	Sep 28	0.00	Nov 29, 1961
MAXIMUM PEAK FLOW	74	Aug 21	229	Sep 30	229	Sep 30, 2005
MAXIMUM PEAK STAGE	3.10	Aug 21	4.43	Sep 30	4.43	Sep 30, 2005

*--For periods of seasonal records July 1959 to September 1971, July 2004 to current year.
e--Estimated.

05013900 GRINNELL CREEK AT GRINNELL GLACIER, NEAR MANY GLACIER, MT—Continued



05014300 SWIFTCURRENT CREEK ABOVE SWIFTCURRENT LAKE, AT MANY GLACIER, MT

(Hydrologic Network Benchmark station)

LOCATION.--Lat 48°47'43", long 113°40'45" (NAD 27), in NE$^1/_4$ sec.15, T.35 N., R.16 W., Glacier County, Hydrologic Unit 10010002, Glacier National Park, on left bank 0.7 mi upstream of inlet to Swiftcurrent Lake at Many Glacier, and 12 mi southwest of Babb.

DRAINAGE AREA.--14.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1, 2003 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 4,920 ft (NGVD 29).

REMARKS.--Seasonal water-discharge records good except those for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

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				e21	56	172	117	26	14	245		
2				e22	50	226	111	25	14	205		
3				e21	47	437	95	24	13	128		
4				e20	52	434	81	23	12	97		
5				e19	68	318	77	21	12	75		
6				e18	105	296	80	20	12	62		
7				e23	148	265	84	20	12	81		
8				e30	164	219	81	20	11	85		
9				e50	145	190	80	20	10	75		
10				e47	135	175	77	23	16	65		
11				e44	118	182	63	25	19	57		
12				e42	115	189	57	23	17	52		
13				e45	128	168	60	21	18	57		
14				e46	160	145	61	19	20	52		
15				e43	233	131	55	17	24	51		
16				e34	275	124	57	16	28	59		
17				e37	296	150	58	18	29	97		
18				e38	218	190	50	25	28	136		
19				e38	194	160	47	23	26	122		
20				38	173	141	46	22	22	138		
21				39	148	136	42	21	21	140		
22				44	130	152	40	21	21	116		
23				57	118	180	37	21	20	96		
24				76	110	141	36	23	18	80		
25				111	106	110	35	22	17	68		
26				126	109	96	32	19	15	61		
27				117	121	88	28	18	13	57		
28				100	135	101	27	17	14	52		
29				80	147	121	26	17	13	47		
30				65	145	118	26	15	97	42		
31				---	144	---	26	15	---	38		
TOTAL				1,491	4,293	5,555	1,792	640	606	2,736		
MEAN				49.7	138	185	57.8	20.6	20.2	88.3		
MAX				126	296	437	117	26	97	245		
MIN				18	47	88	26	15	10	38		
AC-FT				2,960	8,520	11,020	3,550	1,270	1,200	5,430		

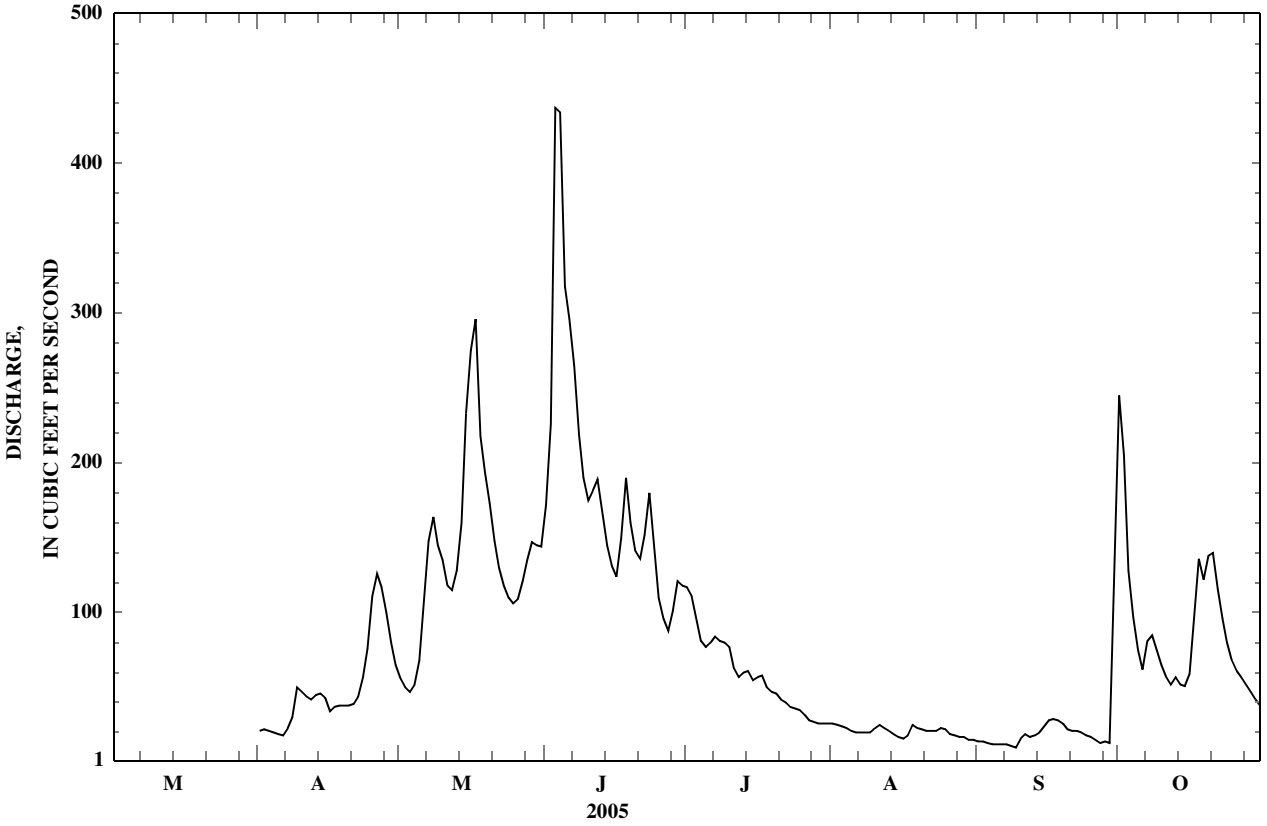
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 2003 - 2005

MEAN				68.6	156	185	74.3	36.7	27.7	44.8		
MAX				87.5	175	196	96.6	66.7	52.0	88.3		
(WY)				(2004)	(2003)	(2003)	(2004)	(2004)	(2004)	(2005)		
MIN				87.5	154	174	68.5	22.6	10.9	16.5		
(WY)				(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)		

SUMMARY STATISTICS	FOR 2005 SEASON		FOR SEASONS 2003 - 2005	
HIGHEST DAILY MEAN	437	Jun 3	700	May 26, 2003
LOWEST DAILY MEAN	10	Sep 9	6.6	Oct 8, 2003
MAXIMUM PEAK FLOW	491	Jun 3	a900	May 26, 2003
MAXIMUM PEAK STAGE	2.91	Jun 3	a3.76	May 26, 2003

a--About, from highwater mark.
e--Estimated.

05014300 SWIFTCURRENT CREEK ABOVE SWIFTCURRENT LAKE, AT MANY GLACIER, MT--Continued



05014300 SWIFTCURRENT CREEK ABOVE SWIFTCURRENT LAKE, AT MANY GLACIER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2001 to current year (data not published for 2001-04).

REMARKS--Data collected under the direction of the USGS Water Science Center in Denver, Colorado. Several unpublished observations of water temperature and specific conductance were made during the year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt Gran, lab, mg/L as CaCO3 (29803)
OCT													
20...	1200	42	124	--	--	65	17.4	5.20	.189	.0	.59	2	61.5
20...	1215	42	126	--	--	67	17.4	5.67	.198	.0	.66	2	61.4
NOV													
15...	1150	26	124	--	--	61	15.6	5.27	.185	.0	.71	2	57.6
JAN													
04...	1130	24	122	--	--	61	16.0	5.22	.215	.0	.88	3	60.0
FEB													
17...	0930	22	125	--	0.0	67	17.6	5.51	.201	.0	.73	2	60.7
MAR													
24...	1145	14	125	--	1.5	65	17.1	5.45	.183	.0	.74	2	60.2
APR													
15...	1220	29	113	10.0	4.0	57	15.2	4.76	.183	.0	.64	2	54.4
19...	0010	34	107	--	--	54	14.1	4.58	.200	.0	.67	3	52.3
26...	0010	127	107	--	--	53	14.0	4.39	.189	.0	.52	2	52.2
MAY													
03...	0010	49	116	--	--	61	16.2	4.96	.195	.0	.54	2	58.1
10...	0010	143	118	--	--	61	16.4	4.88	.196	.0	.48	2	58.5
16...	1240	274	116	--	7.0	60	15.8	5.01	.186	.0	.42	1	57.9
16...	1241	274	125	--	--	66	18.2	4.90	.16	.0	.48	2	62.0
16...	1320	274	118	--	7.0	61	16.3	4.97	.178	.0	.42	1	59.1
23...	1240	117	118	--	--	64	17.7	4.78	.172	.0	.47	2	58.4
30...	1240	143	124	--	--	67	18.9	4.88	.184	.0	.42	1	61.9
JUN													
03...	0040	315	114	--	--	61	17.0	4.41	.24	.0	.37	1	55.9
03...	1215	466	88	--	5.5	45	11.2	4.00	.229	.0	.35	2	42.7
10...	1210	174	102	--	7.0	51	13.8	4.15	.148	.0	.34	1	49.5
17...	1345	147	116	--	--	62	17.3	4.50	.150	.0	.57	2	57.1
24...	1345	139	116	--	--	61	17.4	4.20	.181	.0	.42	1	57.4
JUL													
01...	1105	119	113	--	12.0	59	16.3	4.47	.133	.0	.45	2	54.5
14...	1625	60	113	--	--	61	17.1	4.37	.169	.0	.51	2	55.0
26...	1430	33	111	--	18.0	59	16.4	4.42	.139	.0	.60	2	55.2
26...	1445	32	112	--	18.0	59	16.3	4.33	.133	.0	.49	2	55.3
AUG													
28...	1800	16	119	--	16.0	62	17.0	4.85	.144	.0	.63	2	57.8
SEP													
22...	1210	21	132	--	9.0	65	17.2	5.45	.144	.0	.71	2	62.3
22...	1225	21	130	--	9.0	69	18.6	5.35	.133	.0	.64	2	62.3

05014300 SWIFTCURRENT CREEK ABOVE SWIFTCURRENT LAKE, AT MANY GLACIER, MT--Continued

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

Date	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Total nitrogen, wat flt by analysis, mg/L (62854)	Organic carbon, water, fltrd, mg/L (00681)
OCT										
20...	.10	1.98	4.48	67	.09	7.64	E.006	.074	.15	.8
20...	.10	2.14	5.27	69	.09	7.82	E.006	.091	.14	.7
NOV										
15...	.09	2.59	4.77	64	.09	4.53	<.010	.105	.13	.6
JAN										
04...	.12	2.85	3.69	66	.09	4.17	<.010	.136	.18	.6
FEB										
17...	.11	2.67	3.49	67	.09	3.92	<.010	.170	.19	.5
MAR										
24...	.11	2.40	3.60	66	.09	2.45	--	.135	.20	.4
APR										
15...	.10	2.41	2.93	59	.08	4.61	--	.138	.18	.8
19...	.09	2.36	2.66	57	.08	5.19	--	.117	.50	--
26...	.11	2.43	2.20	56	.08	19.2	--	.181	.27	--
MAY										
03...	.09	2.44	2.53	63	.09	8.34	--	.153	.30	--
10...	.07	2.35	2.22	62	.08	24.1	--	.188	.28	--
16...	.08	2.33	2.20	62	.08	45.6	--	.193	.26	1.2
16...	.09	2.28	2.07	66	.09	49.0	--	.210	.33	--
16...	.07	2.31	2.17	63	.09	46.4	--	.193	.23	1.1
23...	.08	2.27	2.07	63	.09	20.0	--	.166	.23	--
30...	.08	2.02	2.08	66	.09	25.6	--	.139	.23	--
JUN										
03...	.08	1.98	1.91	60	.08	51.2	--	.120	.17	--
03...	.07	2.36	1.90	46	.06	58.4	--	.151	.21	1.8
10...	.06	2.29	2.37	53	.07	25.0	--	.125	.16	.8
17...	.07	1.96	2.15	61	.08	24.3	--	.086	.20	--
24...	.07	1.68	2.06	61	.08	22.7	--	.064	.12	--
JUL										
01...	.11	1.64	2.8	59	.08	19.0	--	.077	.15	.7
14...	.07	1.48	3.0	60	.08	9.71	--	.041	.09	.6
26...	.03	1.36	3.18	59	.08	5.22	--	.034	.33	.6
26...	.06	1.29	2.93	59	.08	5.04	--	.027	.08	.6
AUG										
28...	.08	1.71	4.4	64	.09	2.77	--	.045	.10	.9
SEP										
22...	.07	1.82	5.1	68	.09	3.87	--	.051	.12	.6
22...	.07	1.74	4.8	69	.09	3.92	--	.036	.09	.6

E--Estimated.

05014500 SWIFTCURRENT CREEK AT MANY GLACIER, MT

LOCATION.--Lat 48°47'57", long 113°39'21" (NAD 27), in SE$^1/_4$ sec.11, T.35 N., R.16 W., Glacier County, Hydrologic Unit 10010002, Glacier National Park, on right bank 100 ft upstream from outlet of Swiftcurrent Lake at Many Glacier, and 11 mi southwest of Babb.

DRAINAGE AREA.--30.9 mi^2.

PERIOD OF RECORD.--June 1912 to current year (records incomplete most years prior to 1959). Published as "at McDermott Lake" 1912-14. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1508: 1918(M), 1943. WDR -75-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,876.78 ft (NGVD 29). Prior to May 23, 1916, nonrecording gage on left bank of lake opposite present gage and at present elevation, and May 23, 1916, to June 15, 1918, nonrecording gage at present site and elevation.

REMARKS.--Records good. No regulation or diversion 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	75	67	42	37	83	26	34	114	339	257	78	47
2	68	68	40	37	77	27	36	100	432	248	77	47
3	63	92	38	37	67	27	34	92	758	217	75	45
4	60	89	38	35	60	27	34	92	871	185	71	42
5	56	87	39	31	64	26	32	108	714	170	66	42
6	55	68	39	27	64	27	31	159	640	174	64	42
7	53	71	40	29	57	30	36	243	561	185	64	41
8	54	69	40	30	52	32	56	305	462	187	64	38
9	55	69	39	29	48	33	75	288	372	179	65	36
10	58	71	45	27	44	36	78	270	333	175	71	48
11	56	70	150	26	42	36	77	242	350	153	77	61
12	53	67	231	26	39	40	74	224	383	134	76	59
13	52	63	197	27	39	42	70	237	360	137	71	56
14	51	60	162	30	38	43	72	294	304	142	63	55
15	62	56	137	31	36	42	69	441	272	137	57	58
16	85	55	110	31	33	40	59	556	255	136	53	65
17	134	56	92	29	32	41	64	647	283	148	56	68
18	146	55	79	37	31	39	71	536	377	134	73	67
19	129	53	75	122	32	36	73	436	354	120	72	64
20	115	51	75	301	32	35	73	392	303	120	66	56
21	109	44	71	343	29	34	73	331	291	115	62	54
22	116	43	66	281	28	32	76	281	318	112	63	53
23	103	43	53	226	27	30	92	246	396	104	64	52
24	97	41	50	227	27	29	119	218	348	94	67	49
25	81	58	54	224	25	27	172	203	266	92	67	46
26	76	64	53	199	26	25	222	203	221	86	61	42
27	72	56	47	171	26	28	228	227	196	78	56	35
28	69	50	46	146	26	39	196	259	202	74	55	39
29	70	44	45	124	---	44	161	293	252	73	55	36
30	71	43	44	106	---	42	133	299	261	74	50	170
31	70	---	39	93	---	38	---	295	---	77	49	---
TOTAL	2,414	1,823	2,276	3,119	1,184	1,053	2,620	8,631	11,474	4,317	2,008	1,613
MEAN	77.9	60.8	73.4	101	42.3	34.0	87.3	278	382	139	64.8	53.8
MAX	146	92	231	343	83	44	228	647	871	257	78	170
MIN	51	41	38	26	25	25	31	92	196	73	49	35
AC-FT	4,790	3,620	4,510	6,190	2,350	2,090	5,200	17,120	22,760	8,560	3,980	3,200
CFSM	2.52	1.97	2.38	3.26	1.37	1.10	2.83	9.01	12.4	4.51	2.10	1.74
IN.	2.91	2.19	2.74	3.75	1.43	1.27	3.15	10.39	13.81	5.20	2.42	1.94

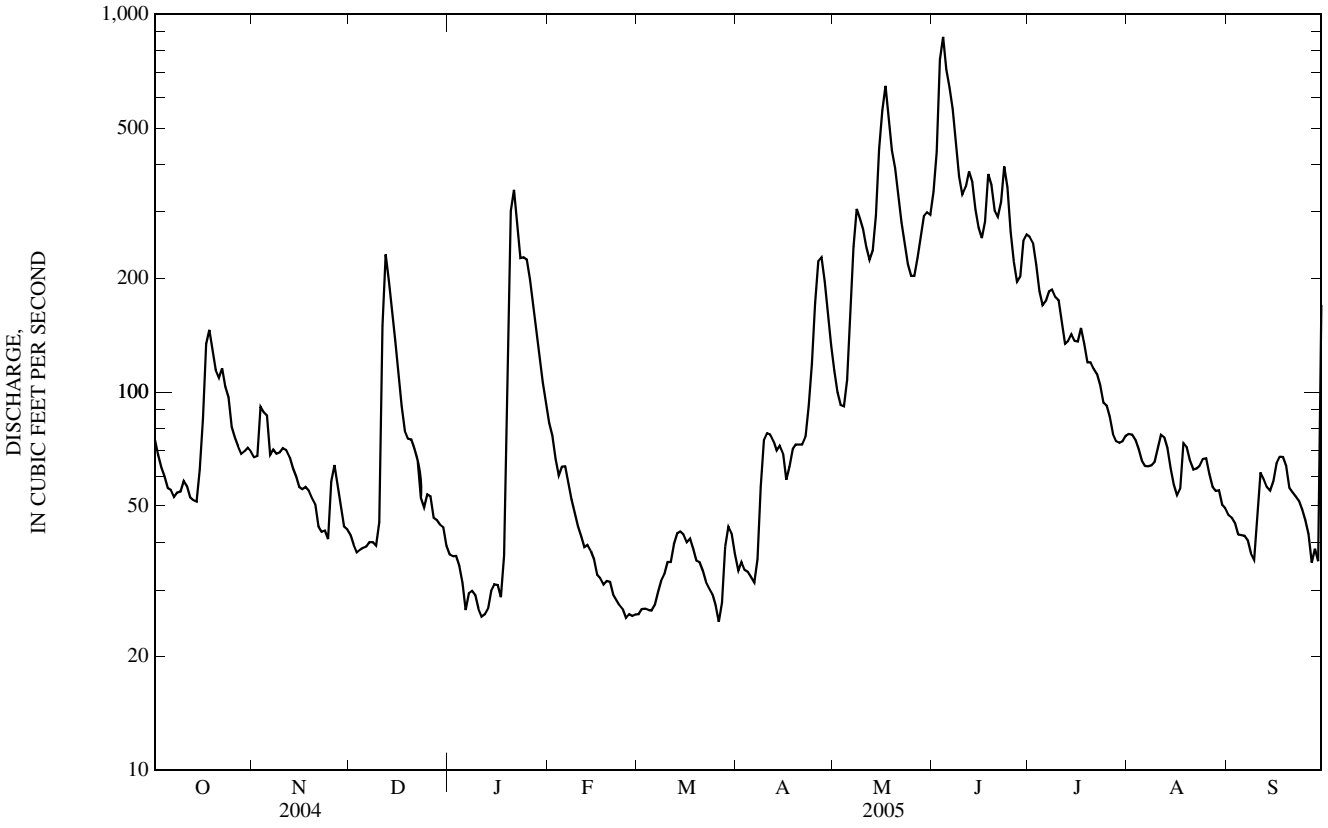
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2005, BY WATER YEAR (WY)*

MEAN	83.4	70.5	37.4	33.7	27.0	30.5	105	375	487	259	117	85.9
MAX	243	237	99.8	177	68.4	96.2	340	656	822	519	207	236
(WY)	(1948)	(2000)	(1981)	(1918)	(1995)	(1986)	(1934)	(1928)	(1975)	(1916)	(1916)	(1968)
MIN	19.5	13.0	13.6	10.1	6.93	9.71	16.9	205	193	114	57.4	32.5
(WY)	(1988)	(1988)	(1979)	(1979)	(1985)	(1975)	(1975)	(1955)	(1926)	(1944)	(1988)	(2001)

05014500 SWIFTCURRENT CREEK AT MANY GLACIER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1912 - 2005**	
ANNUAL TOTAL	51,246		42,532			
ANNUAL MEAN	140		117		140	
HIGHEST ANNUAL MEAN					184	1991
LOWEST ANNUAL MEAN					86.4	2001
HIGHEST DAILY MEAN	712	Aug 26	871	Jun 4	4,130	Jun 8, 1964
LOWEST DAILY MEAN	10	Jan 29	25	Feb 25	a0.00	Nov 14, 1976
ANNUAL SEVEN-DAY MINIMUM	12	Jan 28	26	Feb 23	4.6	Nov 13, 1976
MAXIMUM PEAK FLOW			894	Jun 4	b6,700	Jun 8, 1964
MAXIMUM PEAK STAGE			4.26	Jun 4	c10.00	Jun 8, 1964
ANNUAL RUNOFF (AC-FT)	101,600		84,360		101,500	
ANNUAL RUNOFF (CFSM)	4.53		3.77		4.53	
ANNUAL RUNOFF (INCHES)	61.69		51.20		61.58	
10 PERCENT EXCEEDS	346		285		384	
50 PERCENT EXCEEDS	88		67		65	
90 PERCENT EXCEEDS	15		32		18	

*--Only for complete months of operation (records incomplete most years prior to 1959).
**--For complete water years only.
a--Result of pumping operations, Nov. 14-16, 1976.
b--From rating curve extended above 1,100 ft^3/s, on basis of flow over dam computation.
c--From floodmarks.



05015500 LAKE SHERBURNE AT SHERBURNE, MT
(International gaging station)

LOCATION.--Lat 48°49'42", long 113°31'16" (NAD 27), in $SE^1/_4SE^1/_4SE^1/_4$ sec.35, T.36 N., R.15 W., Glacier County, Hydrologic Unit 10010002, Blackfeet Indian Reservation, in gatehouse at dam on Swiftcurrent Creek, 4.5 mi southwest of Babb.

DRAINAGE AREA.--64.1 mi^2.

PERIOD OF RECORD.--May 1915 to September 1923 (fragmentary), May 1924 to September 1925, November 1925 to June 1926 September 1926 to March 1936 (no winter records some years), May 1936 to September 1952 (monthend contents and daily elevations). October 1952 to current year (monthend contents only). Monthend contents for some periods, published in WSP 1308. Published as Sherburne Lake Reservoir at Sherburne 1915, 1917-28, 1931-52, and as Sherburne Lake Reservoir near Babb 1929-30.

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,709.45 ft (NGVD 29). Prior to May 7, 1931, nonrecording gage at present site, and May 8, 1931, to Sept. 30, 1974, water-stage recorder at present site, all at elevation 9.45 ft lower.

REMARKS.--Reservoir is formed on a natural lake by earthfill dam completed in 1921. Prior to 1919, flashboards on a temporary dam provided limited storage. Storage behind main dam began in l9l9. The following capacity figures are from capacity table effective Jan. 1, 1983; see previous reports for superseded figures. Usable capacity, 64,790 acre-ft between gage height 29.3 ft, 9.3 ft, above lowest outlet gage sill, and 88.00 ft, spillway crest. Streambed above gates prevents withdrawal of storage to sill elevation. Dead storage, 3,060 acre-ft below gage height, 29.30 ft. Figures given herein represent usable contents. Water is used for irrigation on Milk River project of Bureau of Reclamation. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 65,480 acre-ft, June 30, 1986, gage height, 88.40 ft; no usable contents at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 58,320 acre-ft, July 5, gage height, 84.07 ft; minimum, 5,440 acre-ft, Sept. 10, gage height, 37.60 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	49.56	15,570	--
October 31	56.44	22,460	+6,890
November 30	60.90	27,310	+4,850
December 31	66.23	33,460	+6,150
Calendar year 2004			+21,460
January 31	73.04	42,070	+8,610
February 28	75.50	45,490	+3,420
March 31	76.27	46,590	+1,100
April 30	60.31	26,660	-19,930
May 31	65.16	32,200	+5,540
June 30	83.78	57,860	+25,660
July 31	74.77	44,460	-13,400
August 31	48.01	14,130	-30,330
September 30	42.19	9,030	-5,100
Water year 2005	--	--	-6,540

05017500 ST. MARY RIVER NEAR BABB, MT

LOCATION.--Lat 48°50'00", long 113°25'08" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.34, T.36 N., R.14 W., Glacier County, Hydrologic Unit 10010002, Blackfeet Indian Reservation, on right bank 0.7 mi upstream from outlet of Lower St. Mary Lake and 2.0 mi southeast of Babb.

DRAINAGE AREA.--276 mi^2.

PERIOD OF RECORD.--July 1901 to October 1902, May 1910 to September 1925, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1308. Published as "at Main" in 1901-02, and as "below Swiftcurrent Creek, at Babb" 1910-15. Records published as "near Babb" for April 1902 to September 1915, May 1929 to September 1950 at sites about 1.5 mi downstream not equivalent because flow of Swiftcurrent Creek not included 1902-15 and because diversion by St. Mary Canal not included 1929-50.

REVISED RECORDS.--WSP 1308: 1913-14, 1920, 1922-24. WSP 1508: 1902.

GAGE.--Water-stage recorder. Elevation of gage is 4,468.13 ft (NGVD 29). Prior to Oct. 1, 1915, water-stage recorder or nonrecording gages at several sites about 3.8 mi downstream at different elevations. Oct. 1, 1915, to Sept. 30, 1925, water-stage recorder or nonrecording gages at several sites within 1.5 mi downstream at different elevations.

REMARKS.--Records good. Entire flow of Swiftcurrent Creek below Lake Sherburne is diverted into Lower St. Mary Lake upstream from station. Flow of Swiftcurrent Creek regulated by Lake Sherburne (station number 05015500) since 1919. October 1950 to September 1976, monthly discharge and runoff figures adjusted for change in contents in Lake Sherburne. 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	392	253	152	177	343	113	348	997	1,450	1,500	934	768
2	372	266	151	171	386	111	398	976	1,700	1,500	918	763
3	350	251	159	163	400	109	449	924	2,020	1,470	907	751
4	333	249	155	158	376	106	490	876	2,230	1,420	909	736
5	317	254	139	153	358	105	545	848	2,310	1,360	901	714
6	299	236	127	149	330	104	586	840	2,400	1,310	890	694
7	282	221	120	142	300	103	602	878	2,490	1,250	872	655
8	269	214	116	142	274	103	621	959	2,420	1,230	863	604
9	256	200	116	139	256	103	623	1,070	2,210	1,210	852	543
10	249	194	117	133	240	106	629	1,170	2,030	1,190	868	547
11	245	189	144	131	226	107	637	1,180	1,840	1,150	879	559
12	235	187	156	e125	210	113	641	1,100	1,730	1,110	904	466
13	225	185	177	e120	203	119	652	1,070	1,680	1,060	893	394
14	218	188	191	e115	193	122	690	1,090	1,590	1,080	860	340
15	225	198	159	e110	184	124	683	1,210	1,510	1,110	826	300
16	224	195	206	e115	175	126	686	1,420	1,430	1,130	801	279
17	245	200	269	120	168	128	686	1,660	1,410	1,140	804	267
18	268	187	297	128	161	128	685	1,820	1,460	1,130	846	263
19	289	179	327	137	153	129	691	1,860	1,500	1,110	849	257
20	307	174	319	164	150	129	690	1,780	1,500	1,100	843	246
21	323	180	297	207	144	130	685	1,740	1,490	1,070	826	238
22	346	176	277	265	139	129	686	1,670	1,490	1,050	808	227
23	352	163	257	334	133	130	682	1,540	1,530	1,050	795	221
24	345	160	219	376	129	130	687	1,460	1,590	1,010	808	215
25	335	160	176	412	125	129	704	1,410	1,600	1,010	806	209
26	317	161	179	451	122	157	743	1,340	1,540	994	783	202
27	303	156	188	476	119	188	841	1,300	1,470	998	754	192
28	289	152	188	478	116	212	918	1,270	1,470	995	733	189
29	283	160	187	471	---	225	971	1,280	1,480	978	726	185
30	280	159	186	405	---	233	992	1,330	1,500	957	739	204
31	266	---	183	308	---	266	---	1,370	---	942	764	---
TOTAL	9,039	5,847	5,934	6,975	6,113	4,217	19,941	39,438	52,070	35,614	25,961	12,228
MEAN	292	195	191	225	218	136	665	1,272	1,736	1,149	837	408
MAX	392	266	327	478	400	266	992	1,860	2,490	1,500	934	768
MIN	218	152	116	110	116	103	348	840	1,410	942	726	185
AC-FT	17,930	11,600	11,770	13,830	12,130	8,360	39,550	78,230	103,300	70,640	51,490	24,250

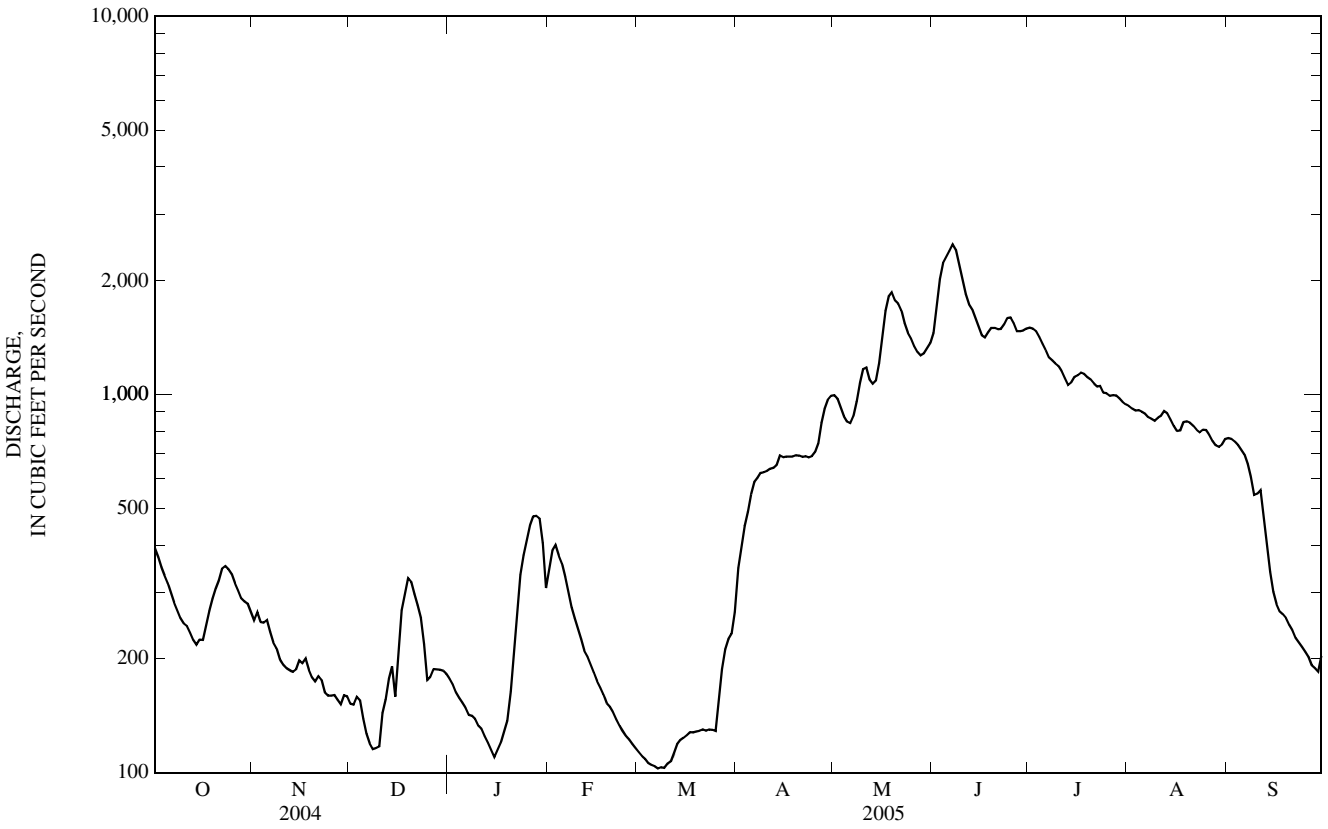
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)*

MEAN	372	254	148	111	105	156	489	1,623	2,433	1,588	1,014	712
MAX	1,323	1,281	722	302	249	457	977	2,573	4,807	2,697	1,413	1,291
(WY)	(1952)	(2000)	(1996)	(1981)	(1996)	(1981)	(1988)	(1957)	(1975)	(1954)	(1976)	(1959)
MIN	67.4	45.0	33.5	37.2	33.8	38.6	85.0	670	1,289	687	320	119
(WY)	(2002)	(1988)	(1953)	(2001)	(2001)	(2001)	(1975)	(1955)	(1992)	(1977)	(1988)	(1988)

05017500 ST. MARY RIVER NEAR BABB, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005*	
ANNUAL TOTAL	251,060		223,377			
ANNUAL MEAN	686		612		753	
HIGHEST ANNUAL MEAN					1,073	1951
LOWEST ANNUAL MEAN					442	2001
HIGHEST DAILY MEAN	2,050	Jun 7	2,490	Jun 7	15,600	Jun 9, 1964
LOWEST DAILY MEAN	45	Jan 1	103	Mar 7	27	Jan 3, 1953
ANNUAL SEVEN-DAY MINIMUM	47	Feb 26	104	Mar 4	28	Dec 30, 1952
MAXIMUM PEAK FLOW			2,530	Jun 7	a16,500	Jun 9, 1964
MAXIMUM PEAK STAGE			4.50	Jun 7	b12.96	Jun 9, 1964
INSTANTANEOUS LOW FLOW					27	Jan 3, 1953
ANNUAL RUNOFF (AC-FT)	498,000		443,100		545,400	
10 PERCENT EXCEEDS	1,610		1,460		1,860	
50 PERCENT EXCEEDS	362		345		357	
90 PERCENT EXCEEDS	54		129		74	

*--During periods of operation (October 1950 to current year).
a--From rating curve extended above 6,000 ft^3/s on basis of slope-area measurement of peak flow.
b--From highwater mark in well.
e--Estimated.



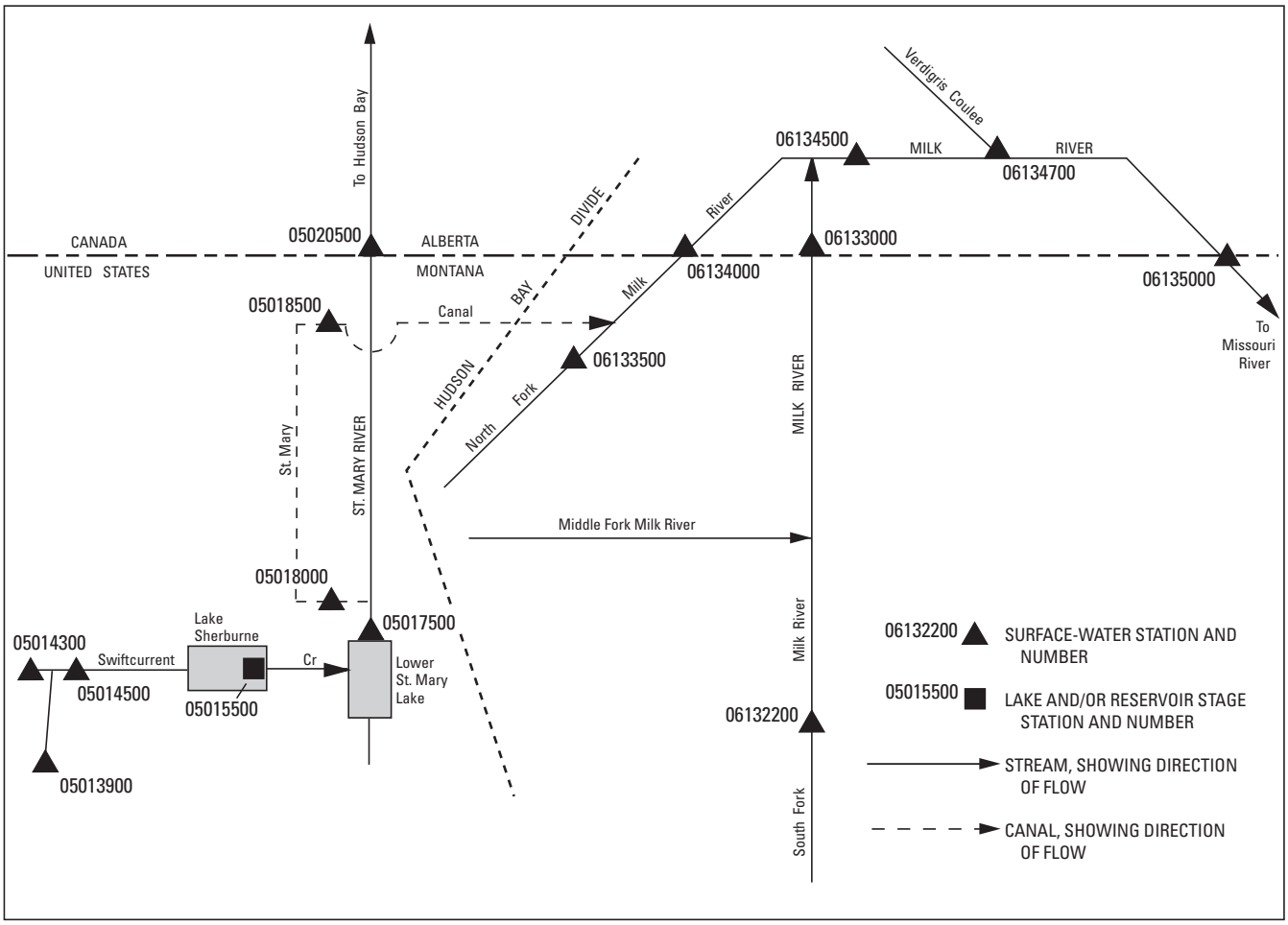


Figure 9. Schematic diagram showing diversion from St. Mary River in Part 5 to Milk River in Part 6.

05018000 ST. MARY CANAL AT INTAKE, NEAR BABB, MT

LOCATION.--Lat 48°51'10", long 113°24'57" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $NE^1/_4$ sec.27, T.36 N., R.14 W., Glacier County, Hydrologic Unit 10010002, Blackfeet Indian Reservation, on right bank of canal 500 ft upstream from St. Mary intake structure, and 1.0 mi east of Babb.

PERIOD OF RECORD.--July 1918 to November 1951, May 1997 to current season (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 4,470 ft (NGVD 29). Prior to April 17, 1919, staff gage at site 300 ft upstream at different elevation.

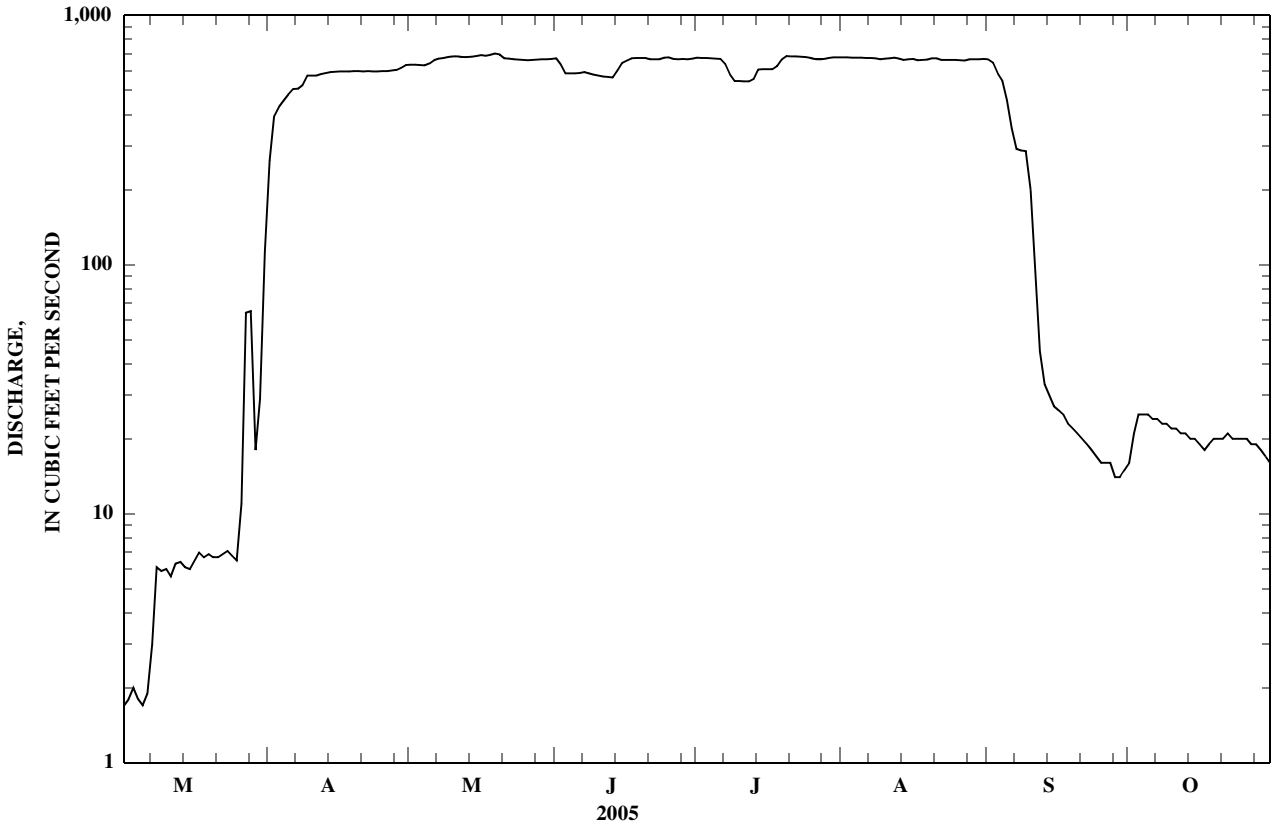
REMARKS.--Records good. Canal diverts water from left bank of St. Mary River near Babb and discharges into North Fork Milk River. This water flows in the natural channel of Milk River through Canada and then back into Montana where it is used for irrigation in Milk River Valley downstream from Havre, Montana. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 871 ft^3/s, May 26, 27, 1936; no flow at times most seasons.

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			1.7	262	634	673	676	679	667	16		
2			1.8	395	634	634	675	678	647	21		
3			2.0	430	632	585	674	677	586	25		
4			1.8	457	630	586	673	677	546	25		
5			1.7	482	642	586	671	676	458	25		
6			1.9	507	660	587	669	675	353	24		
7			3.0	508	670	592	639	674	291	24		
8			6.1	525	675	586	580	673	287	23		
9			5.9	573	680	578	545	667	285	23		
10			6.0	573	684	573	545	670	200	22		
11			5.6	574	685	568	544	672	91	22		
12			6.3	582	681	566	544	676	45	21		
13			6.4	588	680	563	557	671	33	21		
14			6.1	592	682	602	606	663	30	20		
15			6.0	594	687	646	609	666	27	20		
16			6.5	596	692	659	609	668	26	19		
17			7.0	596	688	672	609	661	25	18		
18			6.7	596	695	674	627	663	23	19		
19			6.9	597	704	675	667	664	22	20		
20			6.7	597	696	674	687	673	21	20		
21			6.7	596	673	666	685	673	20	20		
22			6.9	597	671	666	684	662	19	21		
23			7.1	596	667	667	683	662	18	20		
24			6.8	596	664	676	680	663	17	20		
25			6.5	597	663	679	676	662	16	20		
26			11	597	660	669	669	660	16	20		
27			64	602	662	667	669	659	16	19		
28			65	605	665	669	669	666	14	19		
29			18	617	666	667	675	666	14	18		
30			29	633	667	670	678	667	15	17		
31			112	---	668	---	678	668	---	16		
TOTAL			429.1	16,660	20,757	18,975	19,852	20,731	4,828	638		
MEAN			13.8	555	670	632	640	669	161	20.6		
MAX			112	633	704	679	687	679	667	25		
MIN			1.7	262	630	563	544	659	14	16		
AC-FT			851	33,050	41,170	37,640	39,380	41,120	9,580	1,270		

05018000 ST. MARY CANAL AT INTAKE, NEAR BABB, MT—Continued



05018500 ST. MARY CANAL AT ST. MARY CROSSING, NEAR BABB, MT
(International gaging station)

LOCATION.--Lat 48°56'50", long 113°22'28" (NAD 27), in $NE^1/_4SW^1/_4SW^1/_4$ sec.19, T.37 N., R.13 W., Glacier County, Hydrologic Unit 10010002, Blackfeet Indian Reservation, on left bank 50 ft upstream from inlet of St. Mary siphon, 6.6 mi northeast of Babb, and 9 mi downstream from intake.

PERIOD OF RECORD.--July 1918 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1308, 1728.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,450 ft (NGVD 29). Prior to June 14, 1951, water-stage recorder at several sites 0.8 mi downstream at different elevations.

REMARKS.--Records excellent. Canal diverts water from left bank of St. Mary River near Babb and discharges into North Fork Milk River. This water flows in the natural channel of Milk River through Canada and then back into Montana where it is used for irrigation in Milk River Valley downstream from Havre, . Bureau of Reclamation satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

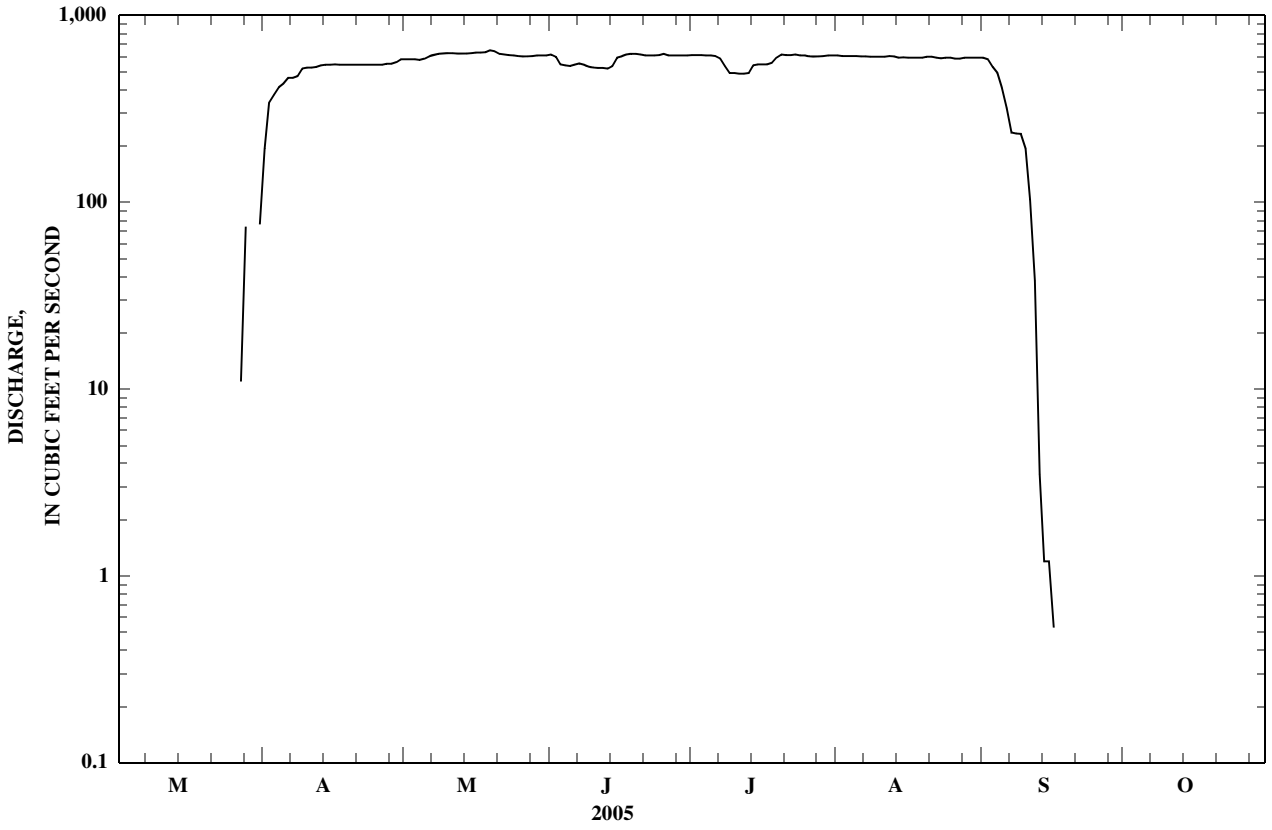
COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 767 ft^3/s, June 19, 28, 1936; no flow at times each season.

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			0.00	194	583	618	614	611	593	0.00		
2			0.00	343	583	600	614	607	583	0.00		
3			0.00	378	583	547	614	607	530	0.00		
4			0.00	413	579	540	611	607	491	0.00		
5			0.00	431	586	537	611	607	410	0.00		
6			0.00	463	604	544	607	604	320	0.00		
7			0.00	463	614	554	590	604	236	0.00		
8			0.00	473	622	544	537	600	233	0.00		
9			0.00	519	625	533	491	600	232	0.00		
10			0.00	526	629	526	491	600	194	0.00		
11			0.00	526	629	523	487	600	103	0.00		
12			0.00	530	625	523	487	607	38	0.00		
13			0.00	540	625	519	491	604	3.5	0.00		
14			0.00	544	625	537	540	593	1.2	0.00		
15			0.00	544	629	593	547	597	1.2	0.00		
16			0.00	547	632	604	547	593	0.53	0.00		
17			0.00	544	632	618	547	593	0.00	0.00		
18			0.00	544	636	622	558	593	0.00	0.00		
19			0.00	544	650	622	597	593	0.00	0.00		
20			0.00	544	643	618	618	600	0.00	0.00		
21			0.00	544	622	611	614	600	0.00	0.00		
22			0.00	544	618	611	614	593	0.00	0.00		
23			0.00	544	614	611	618	590	0.00	0.00		
24			0.00	544	611	614	611	593	0.00	0.00		
25			0.00	544	607	622	611	593	0.00	0.00		
26			0.00	544	604	611	604	586	0.00	0.00		
27			11	551	604	611	604	586	0.00	0.00		
28			74	551	607	611	604	593	0.00	0.00		
29			0.00	562	611	611	607	593	0.00	0.00		
30			0.00	583	611	611	611	593	0.00	0.00		
31			76	---	611	---	611	593	---	0.00		
TOTAL			161.00	15,121	19,054	17,446	17,908	18,533	3,969.43	0.00		
MEAN			5.19	504	615	582	578	598	132	0.00		
MAX			76	583	650	622	618	611	593	0.00		
MIN			0.00	194	579	519	487	586	0.00	0.00		
AC-FT			319	29,990	37,790	34,600	35,520	36,760	7,870	0.00		

05018500 ST. MARY CANAL AT ST. MARY CROSSING, NEAR BABB, MT—Continued



05020500 ST. MARY RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'43", long 113°17'57" (NAD 27), in $NE^1/_4$ sec.5, T.1, R.25 W., fourth meridian, in Alberta, Hydrologic Unit 10010002, on left bank 1.0 mi north of international boundary, 3.6 mi downstream from Boundary Creek, 6.5 mi southwest of Kimball, Alberta, and 13 mi northeast of Babb.

DRAINAGE AREA.--465 mi^2.

PERIOD OF RECORD.--September 1902 to current year. Monthly discharge only for some periods, published in WSP 1308. Published as "near Cardston, Alberta" and "at Cook's Ranch, Alberta" 1902-12 and as "near Kimball, Alberta" 1913-55.

REVISED RECORDS.--WSP 1308: 1902, 1908-12. WSP 1508: 1902, 1908-9. W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,087.40 ft (NGVD 29) based upon levels from elevation established at previous site 1.1 mi upstream by Prairie Farm Rehabilitation Administration. Prior to Jan. 1, 1913, nonrecording gages at two sites within 0.3 mi of previous site at different elevations. Jan. 1, 1913, to Oct. 25, 1955, water-stage recorder at several sites about 7 mi downstream from present site at various elevations. Oct. 26, 1955, to Mar. 23, 1965, water-stage recorder at site 200 ft upstream from previous site at elevation 2 ft higher. Mar. 24, 1965, to Sept. 8, 1975, water-stage recorder at site 100 ft upstream from previous site at same elevation. Water-stage recorder at site 1.1 miles upstream June 22, 1975 to Oct. 31, 1999.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1917, St. Mary Canal has diverted water from the river near Babb, to North Fork Milk River. Some regulation by Lake Sherburne on Swiftcurrent Creek. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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	455	327	e190	e220	359	153	202	535	1,010	1,120	400	269
2	436	356	e190	e200	437	147	129	518	1,520	1,100	384	287
3	410	351	e180	e190	429	142	145	463	3,300	1,090	370	343
4	391	340	e200	e180	428	139	136	417	3,200	1,010	371	381
5	371	351	196	e170	410	140	166	375	2,830	944	359	472
6	350	330	189	e170	383	142	164	340	2,880	886	345	560
7	336	307	167	e160	360	133	183	374	3,350	850	332	603
8	320	297	e160	e160	e330	134	203	507	3,180	896	325	509
9	304	265	e160	e160	e320	140	150	683	2,670	908	320	423
10	297	248	e170	e150	e300	139	153	859	2,300	887	359	528
11	289	241	e180	e150	288	139	160	812	2,020	854	358	826
12	279	231	e210	e140	269	148	162	680	1,910	807	437	743
13	269	233	e230	e140	256	151	161	657	1,830	739	394	638
14	289	237	287	e130	242	157	201	695	1,600	679	361	500
15	320	250	251	e130	e225	161	206	858	1,370	725	321	469
16	310	247	264	e130	e220	163	205	971	1,220	740	295	471
17	328	e240	352	e140	e215	159	221	1,320	1,220	756	302	459
18	351	242	398	e145	e210	159	214	1,630	1,310	727	358	404
19	365	239	442	e160	e200	e160	220	1,670	1,280	651	353	367
20	383	241	445	e180	e190	e160	222	1,530	1,240	608	335	346
21	400	e230	432	e220	e180	e160	218	1,400	1,210	584	318	335
22	421	e230	415	e280	e180	e160	213	1,300	1,200	568	306	326
23	449	e220	e380	e360	e170	e160	211	1,160	1,250	570	301	309
24	432	230	e350	e440	e165	e160	216	1,040	1,300	517	343	300
25	415	227	318	e480	e160	e160	239	993	1,270	517	355	286
26	392	224	252	e520	e155	167	272	907	1,190	504	325	272
27	377	e200	e240	526	e150	198	353	855	1,130	502	293	261
28	369	e190	e260	549	e150	170	450	823	1,180	492	257	252
29	360	e180	e260	537	---	231	527	846	1,170	466	248	243
30	370	e190	e250	502	---	231	515	882	1,170	436	252	272
31	349	---	e230	366	---	206	---	919	---	409	266	---
TOTAL	11,187	7,694	8,248	7,985	7,381	4,969	6,817	27,019	53,310	22,542	10,343	12,454
MEAN	361	256	266	258	264	160	227	872	1,777	727	334	415
MAX	455	356	445	549	437	231	527	1,670	3,350	1,120	437	826
MIN	269	180	160	130	150	133	129	340	1,010	409	248	243
AC-FT	22,190	15,260	16,360	15,840	14,640	9,860	13,520	53,590	105,700	44,710	20,520	24,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2005, BY WATER YEAR (WY)

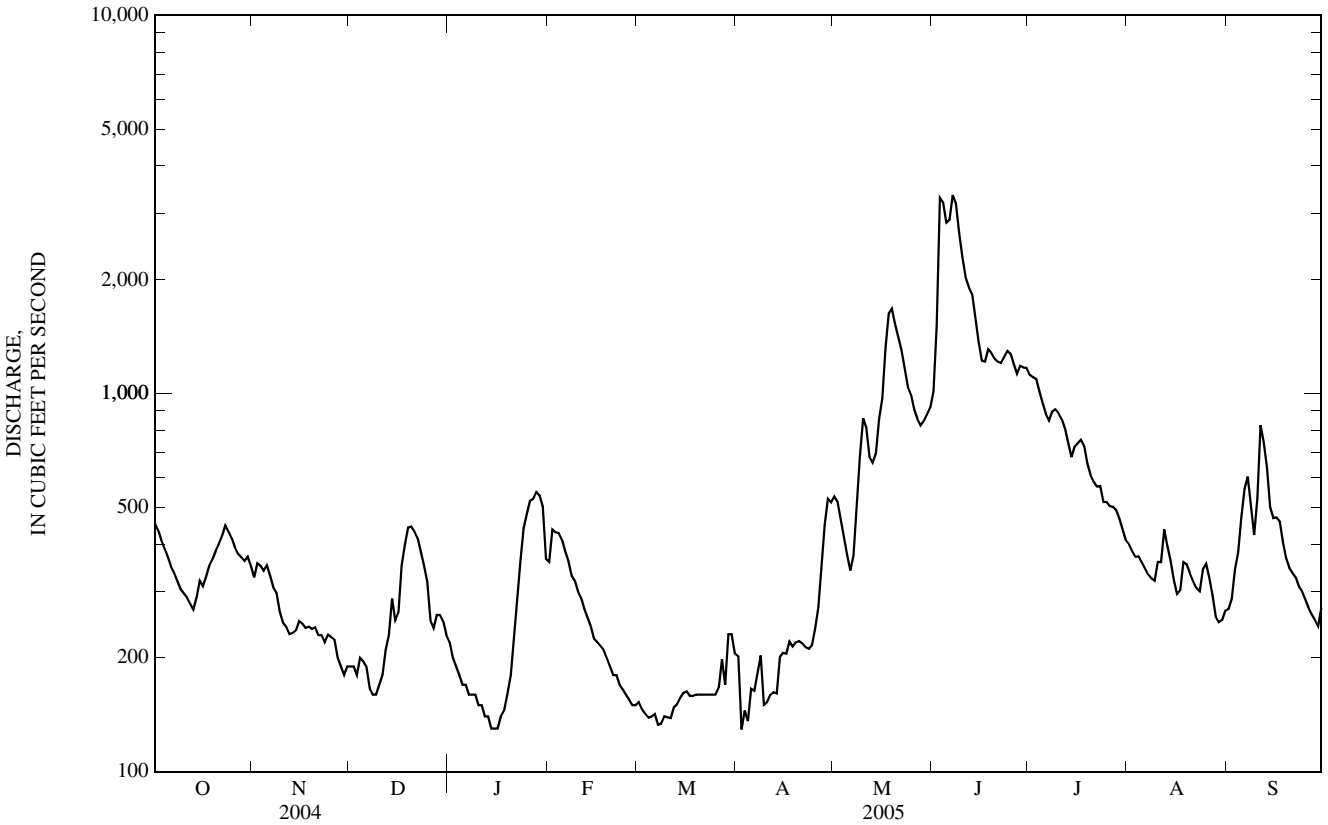
MEAN	447	337	202	154	151	189	469	1,658	2,578	1,318	594	488
MAX	1,588	1,423	844	729	411	512	1,330	3,565	5,941	3,032	1,065	1,511
(WY)	(1952)	(2000)	(1996)	(1918)	(1934)	(1972)	(1934)	(1928)	(1975)	(2002)	(1995)	(1927)
MIN	88.4	80.3	64.3	55.5	41.6	54.7	136	678	694	496	246	153
(WY)	(2002)	(1988)	(2001)	(1944)	(1936)	(2001)	(1975)	(1941)	(1941)	(1988)	(1988)	(1988)

05020500 ST. MARY RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1902 - 2005	
ANNUAL TOTAL	192,242		179,949			
ANNUAL MEAN	525		493		717	
HIGHEST ANNUAL MEAN					1,353	1908
LOWEST ANNUAL MEAN					316	1941
HIGHEST DAILY MEAN	1,780	Jun 7	3,350	Jun 7	28,000	Jun 5, 1908
LOWEST DAILY MEAN	58	Jan 2	129	Apr 2	16	Nov 29, 1936
ANNUAL SEVEN-DAY MINIMUM	65	Jan 1	136	Jan 12	27	Nov 26, 1936
MAXIMUM PEAK FLOW			3,980	Jun 3	a40,000	Jun 5, 1908
MAXIMUM PEAK STAGE			6.95	Jun 3	b13.46	Jun 21, 1975
ANNUAL RUNOFF (AC-FT)	381,300		356,900		519,300	
10 PERCENT EXCEEDS	1,240		1,120		1,810	
50 PERCENT EXCEEDS	388		330		357	
90 PERCENT EXCEEDS	74		160		110	

SUMMARY STATISTICS	WATER YEARS 1902 - 1916*		WATER YEARS 1917 - 2005**	
ANNUAL MEAN	1,002		672	
HIGHEST ANNUAL MEAN	1,353	1908	1,285	1927
LOWEST ANNUAL MEAN	646	1905	316	1941
HIGHEST DAILY MEAN	28,000	Jun 5, 1908	17,000	Jun 9, 1964
LOWEST DAILY MEAN	70	Feb 5, 1914	16	Nov 29, 1936
ANNUAL SEVEN-DAY MINIMUM	75	Feb 1, 1914	27	Nov 26, 1936
MAXIMUM PEAK FLOW	a40,000	Jun 5, 1908	23,300	Jun 21, 1975
MAXIMUM PEAK STAGE	b12.75	Jun 5, 1908	b13.46	Jun 21, 1975
ANNUAL RUNOFF (AC-FT)	726,000		486,800	
10 PERCENT EXCEEDS	2,470		1,670	
50 PERCENT EXCEEDS	538		336	
90 PERCENT EXCEEDS	150		105	

*--Before St. Mary Canal diversions.
**--Post operation of St. Mary Canal.
a--From rating curve extended above 6,000 ft^3/s.
b--From floodmarks at site and datum then in use.
e--Estimated.



06012500 RED ROCK RIVER BELOW LIMA RESERVOIR, NEAR MONIDA, MT

LOCATION.--Lat 44°39'22", long 112°22'14" (NAD 27), in $NE^1/_4SE^1/_4SE^1/_4$ sec.31, T.13 S., R.6 W., Beaverhead County, Hydrologic Unit 10020001, on right bank just downstream from Lima Reservoir, 7 mi northwest of Monida, and at river mile 2,542.1.

DRAINAGE AREA.--570 mi^2.

PERIOD OF RECORD.--January 1911 to December 1918, April 1919, May 1925 to October 1933, April 1934 to September 1935, May 1936 to October 1938, May 1939 to September 1969, seasonal records only June 1974 to September 1982 and April 1985 to current year. Monthly discharge only for some periods, published in WSP 1309. Prior to October 1950, published as "below Red Rock Reservoir".

REVISED RECORDS.--WSP 1309: 1935. WSP 1389: 1912, 1934. WSP 1559: Drainage area.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 6,530 ft (NGVD 29), estimated from spillway elevation based on Montana Department of Natural Resources and Conservation elevation. Prior to Oct. 1, 1978, at elevation 1.00 ft higher. See WSP 1709 for history of nonrecording gage changes prior to May 8, 1939.

REMARKS.--Seasonal records good except those for estimated daily discharges, which are fair. Flow regulated by Lima Reservoir (station number 06012000). No storage during 1934. Diversions for irrigation of about 10,000 acres upstream from reservoir. Bureau of Reclamation satellite telemeter at station. Several observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1984 reached a discharge of 1,500 ft^3/s, gage height, 5.15 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				0.00	121	512	439	336	305	19		
2				0.00	121	525	423	335	332	19		
3				0.00	121	524	400	335	332	19		
4				0.00	121	523	383	335	331	19		
5				0.00	121	524	383	335	330	19		
6				0.00	120	521	383	347	328	18		
7				0.00	121	516	381	361	326	18		
8				0.00	121	479	380	361	325	19		
9				0.00	121	424	380	361	324	18		
10				0.00	121	409	379	361	322	18		
11				e10	146	453	379	364	322	19		
12				e23	201	482	378	364	315	18		
13				e23	263	482	377	366	289	18		
14				e23	323	466	376	365	289	19		
15				e35	322	440	374	366	288	25		
16				e46	322	470	374	365	287	29		
17				e46	323	488	360	340	286	29		
18				e46	359	487	331	321	285	29		
19				e46	434	486	331	321	285	29		
20				e50	420	486	330	321	268	30		
21				e55	392	486	329	321	248	30		
22				e60	394	485	326	320	247	30		
23				87	396	486	325	304	247	30		
24				88	399	486	324	290	167	29		
25				88	400	485	322	289	18	29		
26				88	401	485	321	288	18	29		
27				89	452	460	320	287	18	32		
28				89	482	449	320	288	18	33		
29				89	479	448	330	287	18	33		
30				103	474	448	336	286	19	33		
31				---	483	---	337	285	---	32		
TOTAL				1,184.00	9,074	14,415	11,131	10,205	7,187	771		
MEAN				39.5	293	480	359	329	240	24.9		
MAX				103	483	525	439	366	332	33		
MIN				0.00	120	409	320	285	18	18		
AC-FT				2,350	18,000	28,590	22,080	20,240	14,260	1,530		

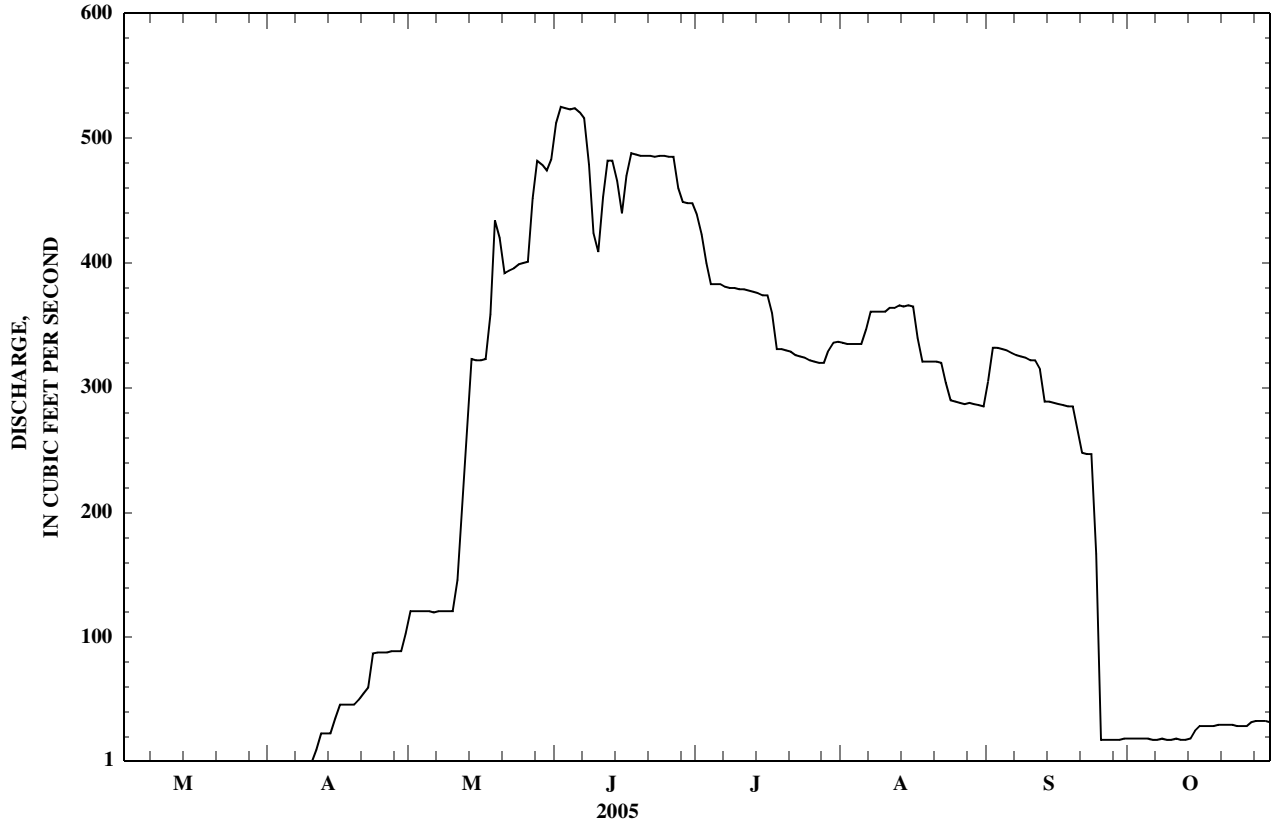
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1969 AND SEASONS 1974 - 2005*

MEAN	21.5	19.9	18.8	68.2	298	535	324	219	143	55.4	54.0	28.0
MAX	57.9	55.3	48.0	571	948	754	652	513	384	430	353	97.6
(WY)	(1928)	(1928)	(1918)	(1913)	(1917)	(1917)	(1982)	(1982)	(1995)	(1917)	(1913)	(1926)
MIN	0.00	0.00	0.00	0.00	26.2	4.62	0.63	0.00	0.00	0.00	0.00	0.00
(WY)	(1932)	(1932)	(1932)	(1980)	(1934)	(1934)	(1934)	(1934)	(1937)	(1932)	(1932)	(1932)

06012500 RED ROCK RIVER BELOW LIMA RESERVOIR, NEAR MONIDA, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1911 - 1969*		SEASONS 1974 - 2005*	
ANNUAL MEAN			143			
HIGHEST ANNUAL MEAN			271	1913		
LOWEST ANNUAL MEAN			59.5	1935		
HIGHEST DAILY MEAN	525	Jun 1	a2,500	May 15, 1933	946	May 28, 1975
LOWEST DAILY MEAN	.00	Apr 1	0.00	Oct 1, 1931	.00	Oct 9, 1978
ANNUAL SEVEN DAY MINIMUM			0.00	Oct 1, 1931		
MAXIMUM PEAK FLOW	542	Jun 1	a2,500	May 15, 1933	b946	May 28, 1975
MAXIMUM PEAK STAGE	3.32	Jun 1	6.4	May 15, 1933	4.00	Jun 26, 1981
ANNUAL RUNOFF (AC-FT)			103,300			
10 PERCENT EXCEEDS			449			
50 PERCENT EXCEEDS			56			
90 PERCENT EXCEEDS			8.0			

*--During periods of operation (January 1911 to December 1918, April 1919, May 1925 to October 1933, April 1934 to September 1935, May 1936 to October 1938, May 1939 to September 1969, June 1974 to September 1982, April 1985 to current year; seasonal records beginning water year 1974).
a--Observed, estimated by dam tender; released to prevent dam failure.
b--Gage height, 3.38 ft, datum then in use.
e--Estimated.



06015300 CLARK CANYON RESERVOIR NEAR GRANT, MT

LOCATION.--Lat 44°59'59", long 112°51'34" (NAD 27), in $SE^1/_4$ $SW^1/_4$ sec 32, T.9 S., R.10 W., Beaverhead County, Hydrologic Unit 10020001, in shaft house near left end of dam on Beaverhead River, 1.5 mi upstream from Clark Canyon Creek, 10 mi east of Grant, and at river mile 2,483.9.

DRAINAGE AREA.--2,321 mi^2.

PERIOD OF RECORD.--May 1964 to current year (monthend contents only). Records of daily elevations are in files of the USGS Water Science Center located in Helena, Montana.

GAGE.--Water-stage recorder in shaft house. Elevation of gage is 5,455 ft (NGVD 29) (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by zoned earthfill dam with concrete control works and spillway completed in October 1964. Storage began Aug. 28, 1964 (uncontrolled storage began June 10, 1964). Capacity table effective Oct. 1, 2001. Elevations are referenced to the National Geodetic Vertical Datum of 1929. Usable capacity, 253,400 acre-ft between elevation 5,470.60 ft, invert of outlet works, and 5,560.40 ft, top of flood control. Dead storage, 1,060 acre-ft, below elevation 5,470.60 ft. Normal operating level, 174,400 acre-ft at elevation 5,546.10 ft. Minimum operating level, 1,060 acre-ft at elevation 5,470.60 ft. Figures given herein represent usable contents. Total contents published in previous water-supply papers and annual reports for May 1964 to September 1975. Water is used for irrigation, flood control, and recreation.

COOPERATION.--Elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 283,000 acre-ft, June 25, 1984, elevation, 5,564.70 ft; minimum since normal operating level was reached, 9,660 acre-ft, Aug. 18, 19, 2003, elevation, 5,490.01 ft

EXTREMES FOR CURRENT YEAR.--Maximum contents, 65,310 acre-ft, May 24, 25, elevation, 5,519.98 ft; minimum, 23,810 acre-ft, Oct. 1, elevation, 5,501.32 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	5,501.23	23,670	--
October 31	5,504.08	28,440	+4,770
November 30	5,507.66	35,180	+6,740
December 31	5,510.82	41,820	+6,640
Calendar Year 2004	--	--	+7,140
January 31	5,513.45	47,880	+6,060
February 28	5,515.71	53,480	+5,600
March 31	5,517.56	58,400	+4,920
April 30	5,518.83	61,960	+3,560
May 31	5,519.25	63,170	+1,210
June 30	5,519.07	62,650	-520
July 31	5,511.72	43,840	-18,810
August 31	5,508.27	36,410	-7,430
September 30	5,511.32	42,930	+6,520
Water Year 2005	--	--	+19,260

06016000 BEAVERHEAD RIVER AT BARRETTS, MT

LOCATION.--Lat 45°06'59", long 112°44'59" (NAD 27), in $SE^1/_4SW^1/_4SE^1/_4$ sec.19, T.8 S., R.9 W., Beaverhead County, Hydrologic Unit 10020002, on left bank 1.4 mi upstream from Barretts, 2.2 mi downstream from Grasshopper Creek, 8.9 mi southwest of Dillon, and at river mile 2,469.2.

DRAINAGE AREA.--2,737 mi^2.

PERIOD OF RECORD.--August 1907 to September 1986, October 1986 to current year (seasonal records only). Monthly discharge only for some periods, published in WSP 1309. Prior to October 1963, published as "at Barratts".

REVISED RECORDS.--WSP 1279: 1908(M), 1910-12(M), 1929(M), 1935-36. WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,268.17 ft (NGVD 29). Prior to Oct. 19, 1934, nonrecording gages at same site and elevation.

REMARKS.--Seasonal records good. Some regulation by Lima Reservoir (station number 06012000) and nearly complete regulation by Clark Canyon Reservoir (station number 06015300) since August 1964. Diversions for irrigation of about 90,000 acres above station. Bureau of Reclamation satellite telemeter at station. Several 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			95	95	86	492	351	690	166	85		
2			97	96	86	458	327	647	153	88		
3			97	97	87	394	315	614	153	88		
4			97	100	88	351	309	586	151	90		
5			98	98	89	342	338	547	143	96		
6			101	96	99	346	409	545	144	89		
7			103	99	103	343	427	568	155	88		
8			105	104	106	330	455	549	144	95		
9			107	102	120	284	519	527	146	97		
10			108	97	145	254	526	464	158	92		
11			104	95	221	244	509	376	159	92		
12			104	94	171	265	471	342	155	95		
13			98	94	155	289	458	343	148	99		
14			90	98	151	238	493	344	134	99		
15			95	96	151	211	531	333	126	99		
16			96	95	167	250	550	308	125	98		
17			95	95	229	264	568	294	133	97		
18			89	100	210	292	624	296	130	96		
19			94	102	188	307	697	282	129	99		
20			98	104	180	310	736	262	130	95		
21			98	104	185	336	773	261	128	95		
22			96	102	169	422	818	257	122	95		
23			97	101	167	478	881	246	107	97		
24			93	101	194	512	864	233	100	98		
25			94	104	216	528	866	217	101	98		
26			93	101	223	543	856	181	96	100		
27			95	99	261	563	814	162	83	103		
28			100	94	307	462	775	169	83	102		
29			98	91	352	421	754	169	85	96		
30			96	89	385	394	703	173	85	99		
31			91	---	433	---	706	172	---	100		
TOTAL			3,022	2,943	5,724	10,923	18,423	11,157	3,872	2,960		
MEAN			97.5	98.1	185	364	594	360	129	95.5		
MAX			108	104	433	563	881	690	166	103		
MIN			89	89	86	211	309	162	83	85		
AC-FT			5,990	5,840	11,350	21,670	36,540	22,130	7,680	5,870		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 1908 - 1986 AND SEASONS 1987 - 2005*

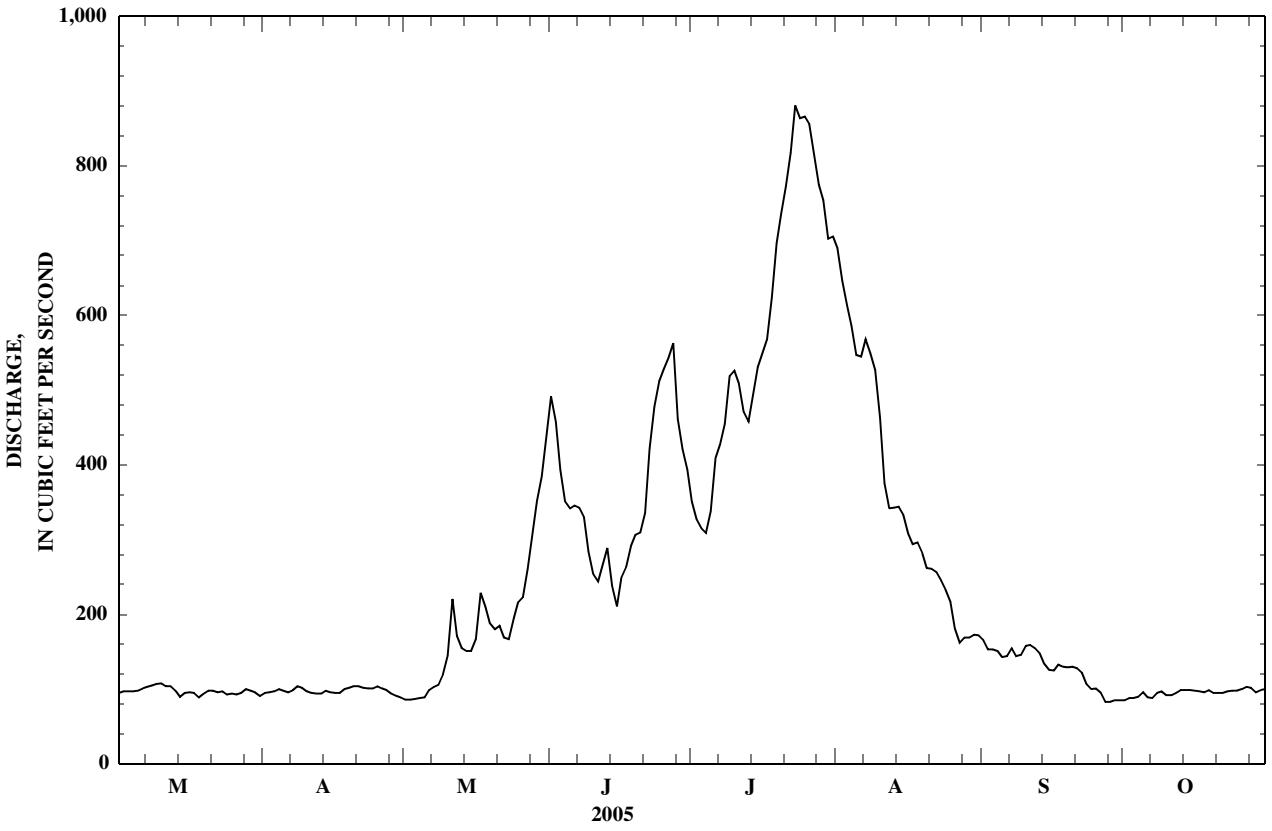
MEAN	293	290	321	434	605	795	565	457	340	347	409	346
MAX	547	513	934	1,347	1,913	2,608	2,147	1,929	1,645	1,093	889	685
(WY)	(1984)	(1984)	(1910)	(1913)	(1917)	(1908)	(1984)	(1984)	(1984)	(1985)	(1913)	(1984)
MIN	120	132	97.5	98.1	131	146	95.5	96.1	76.2	76.8	138	133
(WY)	(1932)	(1975)	(2005)	(2005)	(1934)	(1934)	(1934)	(1934)	(2002)	(2003)	(1975)	(1975)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1987 - 2005		WATER YEARS 1908 - 2005*	
ANNUAL MEAN					441	
HIGHEST ANNUAL MEAN					1,101	1984
LOWEST ANNUAL MEAN					168	1934
HIGHEST DAILY MEAN	881	Jul 23	1,640	Jul 26, 1995	3,640	Jun 19, 1908
LOWEST DAILY MEAN	83	Sep 27	64	Sep 11, 2002	64	Sep 11, 2002
ANNUAL SEVEN-DAY MINIMUM					64	Sep 10, 2002
MAXIMUM PEAK FLOW	891	Jul 23	1,650	Jul 25, 1995	3,720	Jun 20, 1908
MAXIMUM PEAK STAGE	2.28	Jul 23	3.25	Jul 25, 1995	6.10	Jun 20, 1908
INSTANTANEOUS LOW FLOW	a74	Mar 15			b61	Sep 15, 2002
ANNUAL RUNOFF (AC-FT)					319,200	
10 PERCENT EXCEEDS					836	
50 PERCENT EXCEEDS					347	
90 PERCENT EXCEEDS					182	

06016000 BEAVERHEAD RIVER AT BARRETTS, MT—Continued

SUMMARY STATISTICS	WATER YEARS 1908 - 1986**		WATER YEARS 1908 - 1964***		WATER YEARS 1965 - 1986****	
ANNUAL MEAN	441		401		543	
HIGHEST ANNUAL MEAN	1,101	1984	738	1913	1,101	1984
LOWEST ANNUAL MEAN	168	1934	168	1934	293	1967
HIGHEST DAILY MEAN	3,640	Jun 19, 1908	3,640	Jun 23, 1908	2,930	Jun 23, 1984
LOWEST DAILY MEAN	80	Jan 22, 1962	80	Jan 22, 1962	110	Jan 29, 1975
ANNUAL SEVEN-DAY MINIMUM	81	Sep 11, 1934	81	Sep 11, 1934	119	Jan 28, 1975
MAXIMUM PEAK FLOW	3,720	Jun 2, 1908	3,720	Jun 20, 1908	3,000	Jun 22, 1984
MAXIMUM PEAK STAGE	6.10	Jun 2, 1908	6.10	Jun 20, 1908	5.04	Jun 22, 1984
INSTANTANEOUS LOW FLOW	c69	Jun 30, 1939	c69	Jan 30, 1939		
ANNUAL RUNOFF (AC-FT)	319,200		290,500		393,700	
10 PERCENT EXCEEDS	830		676		1,000	
50 PERCENT EXCEEDS	344		330		454	
90 PERCENT EXCEEDS	177		179		190	

*--Seasonal records after 1986 water year.
**--Annual record.
***--Prior to Clark Canyon Dam construction.
****--After Clark Canyon Dam construction.
a--Gage height, 0.49 ft.
b--Gage height, 0.33 ft.
c--Gage height, 0.76 ft.



06017000 BEAVERHEAD RIVER AT DILLON, MT

LOCATION.--Lat 45°13'05", long 112°39'18" (NAD 27), in $NW^1/_4NE^1/_4NW^1/_4$ sec.24, T.7 S., R.9 W., Beaverhead County, Hydrologic Unit 10020002, on right bank 0.2 mi downstream from West Side Canal and county road bridge, at Dillon, and at river mile 2,456.1.

DRAINAGE AREA.--2,895 mi^2.

PERIOD OF RECORD.--August to September 1907 (gage heights only), October 1950 to September 1952, September 1963 to September 1971, April 2002 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 5,100 ft (NGVD 29). Prior to Sept. 30, 1952, nonrecording gages at same site at different elevation.

REMARKS.--Seasonal records good. Some regulation by Lima Reservoir (station number 06012000) and nearly complete regulation by Clark Canyon Reservoir (station number 06015300) since August 1964. Diversions for irrigation of about 125,500 acres, of which about 23,000 acres lies downstream 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				84	86	138	73	211	106	70		
2				84	84	142	85	202	98	73		
3				83	78	111	82	180	90	76		
4				83	79	86	78	176	93	79		
5				87	76	81	75	162	95	85		
6				83	78	85	92	150	94	89		
7				81	81	95	99	173	88	90		
8				82	82	105	108	180	76	97		
9				80	91	85	136	176	69	100		
10				77	93	70	142	170	74	96		
11				76	144	69	146	168	84	95		
12				76	103	79	131	166	83	95		
13				78	79	126	109	175	77	98		
14				80	85	95	109	179	74	106		
15				84	77	60	115	189	66	124		
16				93	78	64	107	178	55	124		
17				92	118	70	98	168	60	124		
18				99	127	62	117	169	59	124		
19				122	112	66	131	154	52	129		
20				135	101	65	137	148	51	132		
21				127	104	33	151	146	52	127		
22				114	93	63	167	146	60	126		
23				109	78	79	212	149	62	126		
24				111	60	102	213	142	68	128		
25				113	48	108	226	137	69	129		
26				105	31	122	245	127	71	128		
27				94	33	161	210	106	67	129		
28				93	38	137	210	98	65	131		
29				94	70	104	212	95	68	125		
30				89	87	94	212	100	68	125		
31				---	98	---	202	105	---	126		
TOTAL				2,808	2,592	2,757	4,430	4,825	2,194	3,406		
MEAN				93.6	83.6	91.9	143	156	73.1	110		
MAX				135	144	161	245	211	106	132		
MIN				76	31	33	73	95	51	70		
AC-FT				5,570	5,140	5,470	8,790	9,570	4,350	6,760		

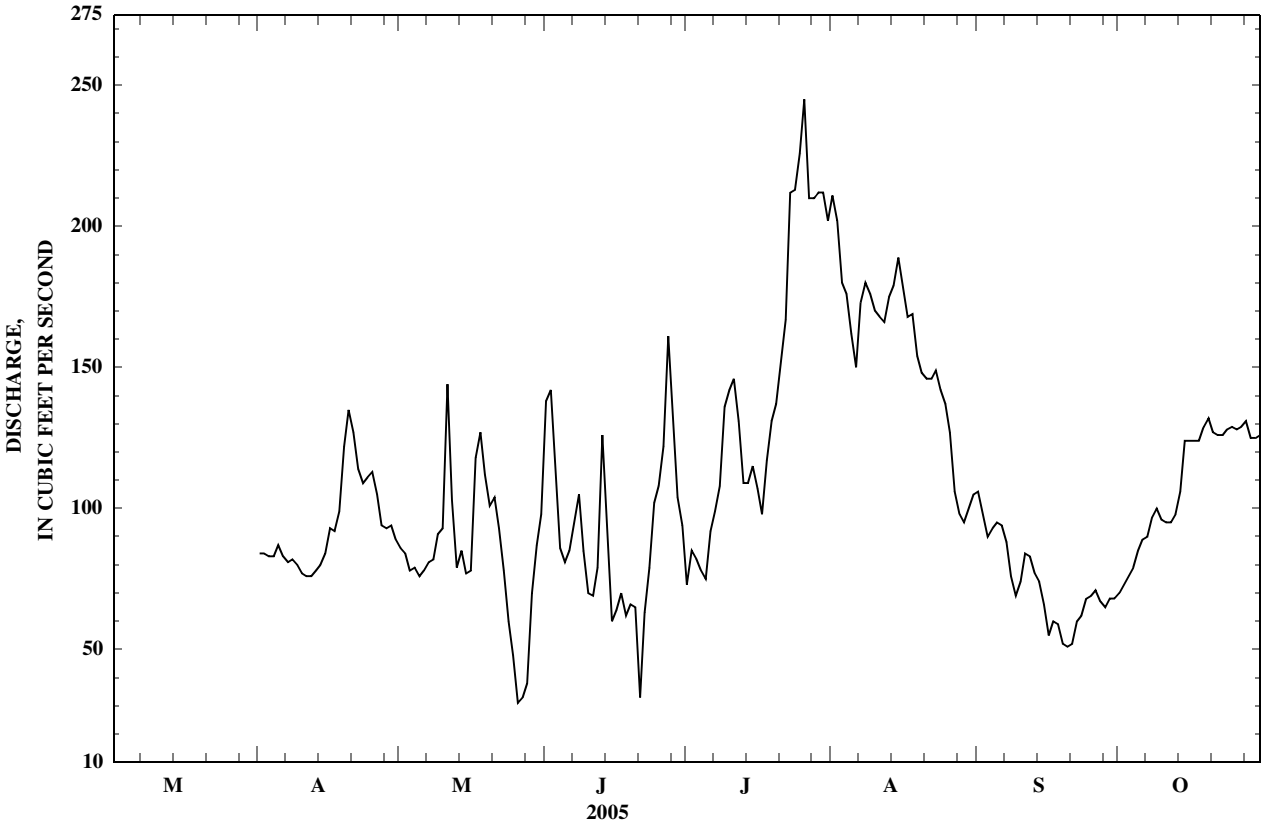
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 -1971 AND SEASONS 2002 - 2005*

MEAN	372	385	388	357	268	335	230	218	282	268	457	429
MAX	462	539	606	1,078	742	1,157	493	475	796	680	700	613
(WY)	(1971)	(1971)	(1969)	(1969)	(1969)	(1964)	(1971)	(1965)	(1965)	(1966)	(1966)	(1966)
MIN	221	218	204	90.0	83.6	91.9	67.1	114	65.1	81.7	230	226
(WY)	(1967)	(1967)	(1967)	(2004)	(2005)	(2005)	(1951)	(2004)	(2004)	(2005)	(1965)	(1967)

06017000 BEAVERHEAD RIVER AT DILLON, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 2002 - 2005		WATER YEARS 1951 - 1971*	
ANNUAL MEAN					370	
HIGHEST ANNUAL MEAN					523	1971
LOWEST ANNUAL MEAN					183	1967
HIGHEST DAILY MEAN	245	Jul 26	288	Jul 21, 2003	1,700	Jun 21, 1964
LOWEST DAILY MEAN	31	May 26	31	May 26, 2005	18	Jun 19, 1952
ANNUAL SEVEN-DAY MINIMUM					32	Jul 27, 1951
MAXIMUM PEAK FLOW	256	Jul 26	317	Jul 21, 2003	1,740	Jun 21, 1964
MAXIMUM PEAK STAGE	4.17	Jul 26	4.56	Jul 21, 2003	6.63	Jun 21, 1964
INSTANTANEOUS LOW FLOW					a18	Jun 19, 1952
ANNUAL RUNOFF (AC-FT)					267,800	
10 PERCENT EXCEEDS					615	
50 PERCENT EXCEEDS					357	
90 PERCENT EXCEEDS					134	

*--During periods of operation [October 1950 to September 1952, September 1963 to September 1971, April 2002 to current year (seasonal records only)].
a--Observed.



06018500 BEAVERHEAD RIVER NEAR TWIN BRIDGES, MT

LOCATION.--Lat 45°23'01", long 112°27'07" (NAD 27), in $SW^1/_4NW^1/_4SE^1/_4$ sec.22, T.5 S., R.7 W., Madison County, Hydrologic Unit 10020002, on left bank at downstream side of bridge on State Highway 41, 11.5 mi upstream from Ruby River, 12.7 mi southwest of Twin Bridges, 14.5 mi northeast of Dillon, and at river mile 2,430.4.

DRAINAGE AREA.--3,619 mi^2.

PERIOD OF RECORD.--August 1935 to current year. Prior to October 1968, published as "at Blaine."

REVISED RECORDS.--WSP 1309: 1938(M), 1945(M). WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,809.15 ft (NGVD 29). Prior to Feb. 17, 1949, nonrecording gage at bridge 0.5 mi upstream at different elevation. Feb. 17, 1949, to June 28, 1951, nonrecording gage at present site and elevation.

REMARKS.--Records good. Flow partly regulated by Lima Reservoir (station number 06012000) and Clark Canyon Reservoir (station number 06015300) since August 1964. Diversions upstream from station for irrigation of about 135,400 acres of which about 5,000 acres are irrigated by imported water from Birch and Willow Creeks and of which about 9,200 acres lies downstream from station including 600 acres in Ruby River drainage. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and 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	125	208	e180	e170	208	207	138	138	98	93	139	84
2	131	195	202	e180	207	209	139	134	148	83	127	102
3	128	203	193	e180	208	208	131	119	137	89	116	82
4	124	210	193	e180	212	206	131	99	101	83	104	80
5	118	206	196	e170	212	206	123	101	97	71	106	95
6	115	204	197	e170	204	206	120	99	100	63	99	101
7	118	205	207	e170	203	208	110	99	117	55	108	99
8	114	201	206	e180	201	208	114	112	112	48	114	86
9	109	202	206	e180	201	195	113	126	129	62	124	69
10	107	202	202	e180	198	191	114	149	129	92	117	81
11	109	208	210	e190	201	189	111	181	119	101	106	105
12	108	208	216	e190	205	187	111	221	120	110	88	103
13	113	207	217	e180	202	189	99	167	166	86	99	119
14	122	200	215	e180	203	188	105	148	198	74	107	136
15	120	202	214	e180	194	182	115	132	152	65	120	140
16	127	205	214	e200	197	185	136	129	116	56	101	125
17	136	205	213	244	204	167	135	148	114	35	93	108
18	139	202	e210	253	220	159	150	172	111	23	97	106
19	143	209	e210	219	199	160	192	167	101	23	94	108
20	150	206	e200	212	197	157	241	149	102	26	90	95
21	160	201	e190	212	199	161	228	141	76	25	91	104
22	166	196	e180	217	195	147	208	137	60	22	95	106
23	171	214	e160	220	201	148	187	124	64	32	104	116
24	170	220	e180	219	201	152	183	101	68	68	107	142
25	169	226	194	215	205	155	182	89	57	78	107	162
26	170	228	199	217	211	150	175	75	65	122	96	152
27	171	e200	196	216	211	149	161	53	85	136	89	156
28	177	e200	e190	220	212	151	158	46	127	117	89	146
29	211	e190	201	216	---	148	155	49	123	124	81	134
30	214	e180	210	211	---	151	149	59	108	125	73	140
31	217	---	e190	210	---	142	---	68	---	124	78	---
TOTAL	4,452	6,143	6,191	6,181	5,711	5,461	4,414	3,732	3,300	2,311	3,159	3,382
MEAN	144	205	200	199	204	176	147	120	110	74.5	102	113
MAX	217	228	217	253	220	209	241	221	198	136	139	162
MIN	107	180	160	170	194	142	99	46	57	22	73	69
AC-FT	8,830	12,180	12,280	12,260	11,330	10,830	8,760	7,400	6,550	4,580	6,270	6,710

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

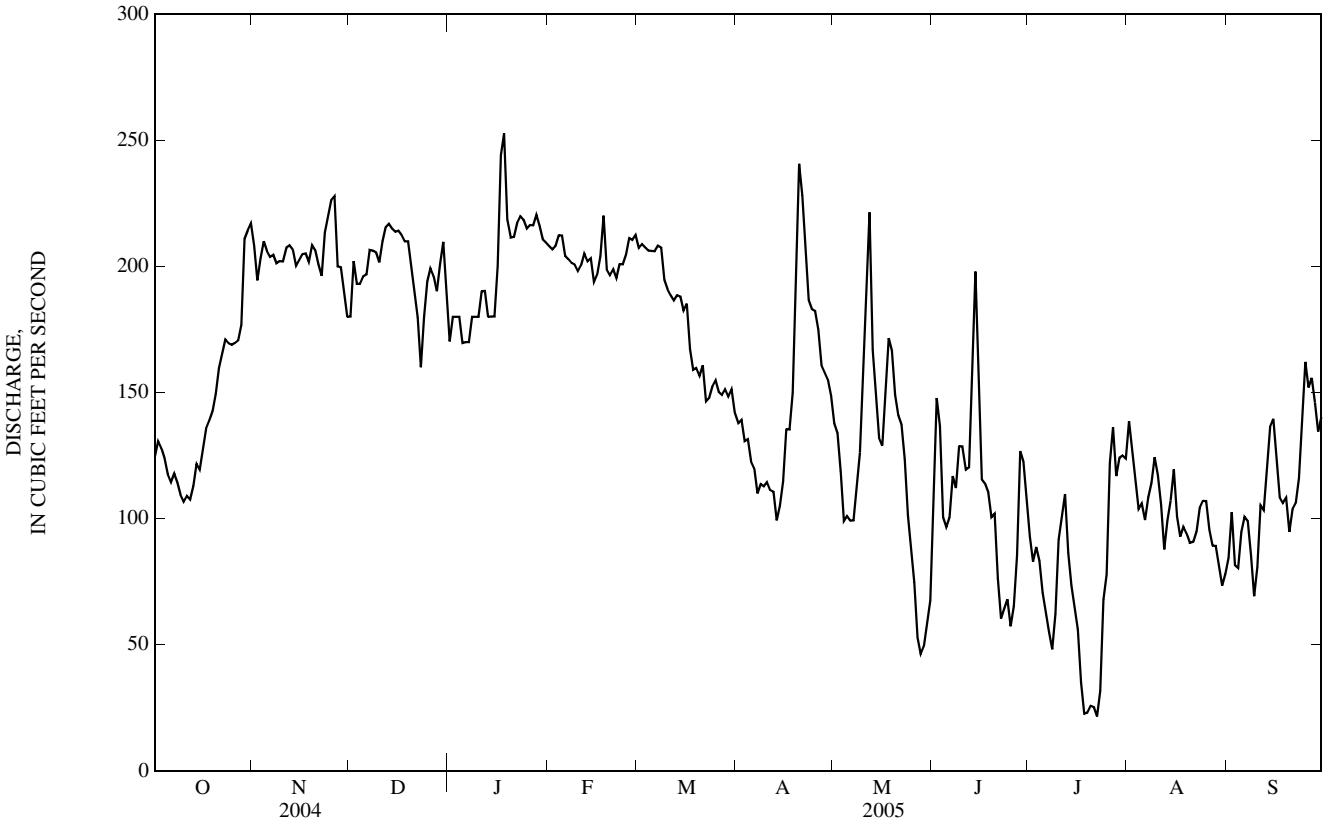
MEAN	436	540	476	402	416	465	466	307	377	275	243	374
MAX	1,328	1,065	852	725	707	799	1,251	1,117	1,615	1,586	1,581	1,691
(WY)	(1985)	(1985)	(1984)	(1976)	(1984)	(1972)	(1969)	(1984)	(1984)	(1984)	(1984)	(1984)
MIN	32.4	205	200	173	191	176	95.5	40.8	24.2	28.0	25.8	28.1
(WY)	(1938)	(2005)	(2005)	(1937)	(2004)	(2005)	(1961)	(1937)	(1940)	(1937)	(1937)	(1937)

06018500 BEAVERHEAD RIVER NEAR TWIN BRIDGES, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005	
ANNUAL TOTAL	51,035		54,437			
ANNUAL MEAN	139		149		398	
HIGHEST ANNUAL MEAN					1,097	1984
LOWEST ANNUAL MEAN					142	2004
HIGHEST DAILY MEAN	228	Mar 20	253	Jan 18	3,130	Jun 12, 1944
LOWEST DAILY MEAN	38	Sep 12	22	Jul 22	7.0	May 25, 1940
ANNUAL SEVEN-DAY MINIMUM	49	Sep 10	27	Jul 17	8.7	May 13, 1954
MAXIMUM PEAK FLOW			a263	Feb 17	d3,130	Jun 12, 1944
MAXIMUM PEAK STAGE			b4.46	Dec 18	7.88	Jun 25, 1984
INSTANTANEOUS LOW FLOW			c17	Jul 18	f7.0	May 25, 1940
ANNUAL RUNOFF (AC-FT)	101,200		108,000		288,300	
10 PERCENT EXCEEDS	206		210		713	
50 PERCENT EXCEEDS	136		149		378	
90 PERCENT EXCEEDS	66		83		96	

SUMMARY STATISTICS	WATER YEARS 1935 - 1964*		WATER YEARS 1965 - 2005**	
ANNUAL MEAN	391		403	
HIGHEST ANNUAL MEAN	642	1984	1,097	1984
LOWEST ANNUAL MEAN	170	1937	142	2004
HIGHEST DAILY MEAN	3,130	Jun 12, 1944	2,180	Jun 25, 1984
LOWEST DAILY MEAN	7.0	May 25, 1940	22	Jul 22, 2005
ANNUAL SEVEN-DAY MINIMUM			27	Jul 17, 2005
MAXIMUM PEAK FLOW	3,130	Jun 12, 1944	2,200	Jun 25, 1984
MAXIMUM PEAK STAGE	6.76	Jun 12, 1944	7.88	Jun 25, 1984
INSTANTANEOUS LOW FLOW	f7.0	May 25, 1940	c17	Jul 18, 2005
ANNUAL RUNOFF (AC-FT)	283,100		291,900	
10 PERCENT EXCEEDS	648		772	
50 PERCENT EXCEEDS	410		346	
90 PERCENT EXCEEDS	60		115	

*--Prior to construction of Clark Canyon Dam.
**--After construction of Clark Canyon Dam.
a--Gage height, 4.30 ft.
b--Backwater from ice.
c--Gage height, 2.94 ft.
d--Observed, gage height, 6.76 ft, site and datum then in use.
e--Estimated.
f--Observed, site and datum then in use.



06019500 RUBY RIVER ABOVE RESERVOIR, NEAR ALDER, MT

LOCATION.--Lat 47°11'57", long 112°05'44" (NAD 27), in $NW^1/_4SE^1/_4SW^1/_4$ sec.30, T.7 S., R.4 W., Madison County, Hydrologic Unit 10020003, on right bank at county road bridge, 0.7 mi downstream from Mormon Creek, 4.2 mi upstream from Ruby Dam, 9.3 mi south of Alder, and at river mile 52.1.

DRAINAGE AREA.--534 mi^2.

PERIOD OF RECORD.--May 1938 to current year. Monthly discharge only for May 1938, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1938(M). WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft (NGVD 29). Prior to Oct. 1, 1938, nonrecording gage at bridge 2.0 mi upstream at different elevation. Oct. 1, 1938, to Aug. 5, 1955, water-stage recorder at site 2.2 mi upstream at different elevation. Aug. 6, 1955 to Sept. 30, 1997, water-stage recorder 2.3 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion for irrigation of about 3,000 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	118	107	95	94	92	91	88	144	456	325	153	118
2	115	105	97	e90	89	89	91	146	472	303	147	119
3	114	116	97	e85	92	88	95	157	417	286	157	118
4	114	117	96	e90	91	89	107	173	424	273	145	114
5	115	111	100	e85	92	89	106	199	405	261	137	115
6	114	115	96	e80	85	90	103	259	482	244	136	116
7	113	113	96	e90	91	90	114	333	543	239	137	112
8	115	113	96	e95	90	91	149	346	613	240	143	109
9	112	116	97	e90	90	93	132	399	592	234	145	106
10	115	115	98	e85	88	98	113	436	522	233	145	111
11	119	115	101	e90	88	96	106	376	496	287	140	124
12	116	112	104	e90	92	100	108	298	639	239	137	120
13	116	107	101	e90	92	91	119	258	667	221	145	121
14	116	105	100	e85	91	89	141	257	560	212	140	129
15	114	106	100	e85	87	92	120	323	590	204	130	130
16	113	111	98	e90	e85	91	117	457	652	195	117	121
17	113	109	97	e95	e85	90	122	904	670	188	116	123
18	117	103	99	e100	e86	84	156	584	728	187	114	134
19	120	106	98	95	88	92	144	556	631	169	115	127
20	118	104	96	95	90	96	132	817	536	159	112	122
21	119	93	90	94	91	95	125	846	516	145	110	121
22	118	93	e85	94	89	97	118	714	543	147	111	123
23	117	102	e80	93	88	97	124	811	514	151	118	126
24	119	105	e85	93	89	88	145	724	514	152	115	133
25	110	107	e90	92	90	89	192	528	454	155	112	135
26	114	106	e92	92	89	89	210	449	415	156	112	129
27	120	95	e92	93	88	88	227	421	402	153	109	126
28	121	99	93	93	89	92	186	427	382	150	109	123
29	133	93	92	92	---	88	160	459	396	146	108	122
30	124	85	94	92	---	90	155	420	355	144	115	122
31	119	---	95	88	---	85	---	380	---	144	121	---
TOTAL	3,621	3,184	2,950	2,815	2,497	2,827	4,005	13,601	15,586	6,342	3,951	3,649
MEAN	117	106	95.2	90.8	89.2	91.2	134	439	520	205	127	122
MAX	133	117	104	100	92	100	227	904	728	325	157	135
MIN	110	85	80	80	85	84	88	144	355	144	108	106
AC-FT	7,180	6,320	5,850	5,580	4,950	5,610	7,940	26,980	30,910	12,580	7,840	7,240

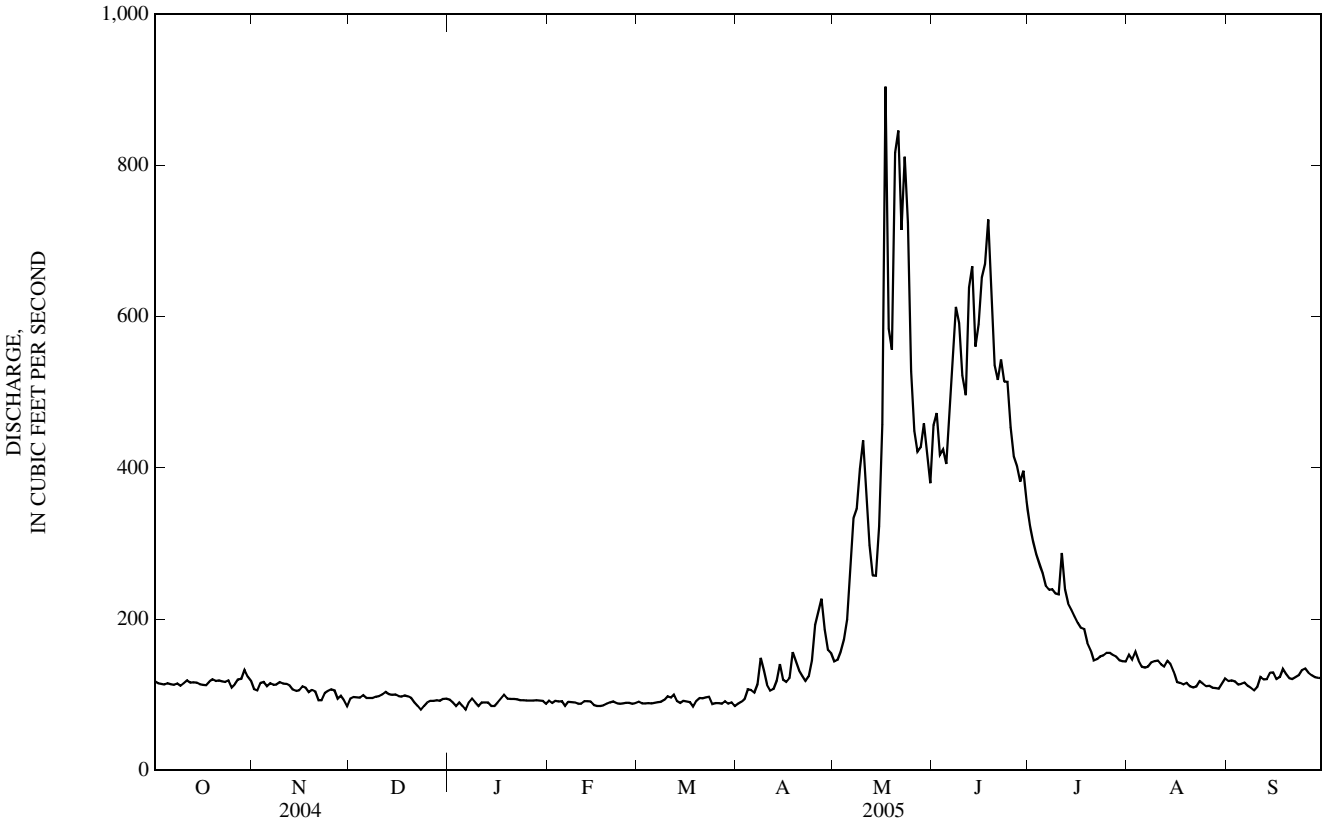
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

MEAN	122	122	111	103	102	110	164	416	469	193	120	115
MAX	185	177	170	158	135	181	288	1,010	1,117	482	235	171
(WY)	(1984)	(1984)	(1948)	(1948)	(1971)	(1960)	(1962)	(1984)	(1984)	(1975)	(1975)	(1984)
MIN	83.4	87.8	80.3	69.8	79.2	84.3	94.6	187	136	74.8	59.3	73.3
(WY)	(1940)	(1940)	(1940)	(1943)	(1942)	(1945)	(1945)	(2002)	(1987)	(1961)	(1940)	(1988)

06019500 RUBY RIVER ABOVE RESERVOIR, NEAR ALDER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	48,970		65,028			
ANNUAL MEAN	134		178		179	
HIGHEST ANNUAL MEAN					336	1984
LOWEST ANNUAL MEAN					119	1961
HIGHEST DAILY MEAN	604	Jun 11	904	May 17	2,940	May 16, 1984
LOWEST DAILY MEAN	78	Aug 14	80	Dec 23	35	Jan 23, 1962
ANNUAL SEVEN-DAY MINIMUM	83	Aug 10	87	Feb 14	38	Aug 14, 1992
MAXIMUM PEAK FLOW			1,070	May 17	3,810	May 16, 1984
MAXIMUM PEAK STAGE			5.15	May 17	a6.24	May 16, 1984
INSTANTANEOUS LOW FLOW					b34	Aug 14, 1992
ANNUAL RUNOFF (AC-FT)	97,130		129,000		129,700	
10 PERCENT EXCEEDS	233		425		350	
50 PERCENT EXCEEDS	108		115		119	
90 PERCENT EXCEEDS	90		89		90	

a--Site and datum then in use.
b--Gage height, 1.99 ft, site and datum then in use.
e--Estimated.



06020600 RUBY RIVER BELOW RESERVOIR, NEAR ALDER, MT

LOCATION.--Lat 45°14'32", long 112°06'36" (NAD 27), in $SE^1/_4SE^1/_4NE^1/_4$ sec.8, T.7 S., R.4 W., Madison County, Hydrologic Unit 10020003, on right bank 0.2 mi downstream from Ruby Dam, 5.7 mi south of Alder, and at river mile 47.8.

DRAINAGE AREA.--596 mi^2.

PERIOD OF RECORD.--December 1962 to current year.

REVISED RECORDS.--1985 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,286.63 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good. Flow regulated by Ruby River Reservoir (station number 06020500). Diversions for irrigation of about 3,500 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.

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	78	54	43	29	30	21	33	46	448	390	393	276
2	65	50	40	29	30	21	33	46	485	356	381	267
3	57	50	38	29	30	21	33	53	455	341	380	265
4	58	50	38	29	31	21	33	59	443	315	375	264
5	59	50	38	29	31	21	33	61	437	303	381	263
6	59	50	38	29	28	21	33	111	451	288	395	261
7	60	49	38	29	25	21	33	211	518	259	398	264
8	60	49	38	29	25	21	33	295	586	250	328	265
9	61	49	39	29	25	21	33	360	588	239	288	277
10	61	44	39	29	22	21	33	414	558	233	269	282
11	61	40	39	29	21	21	34	416	529	277	262	281
12	62	41	33	29	21	21	33	367	578	272	303	281
13	62	40	28	29	21	21	34	307	645	266	323	280
14	61	41	28	29	21	21	33	261	601	272	308	278
15	61	41	28	29	21	21	33	293	572	274	312	277
16	61	41	28	29	21	21	33	361	614	251	324	276
17	60	41	28	29	21	21	33	644	640	230	322	275
18	60	41	29	29	21	21	33	695	683	263	312	273
19	60	41	29	29	21	22	33	558	677	296	310	260
20	61	41	29	29	21	22	33	686	605	332	307	250
21	61	42	29	29	21	22	33	761	555	362	307	229
22	61	42	29	29	21	22	36	726	553	390	304	202
23	61	42	28	30	21	28	39	705	540	392	301	202
24	61	42	29	30	21	34	39	705	533	398	299	202
25	61	42	29	30	21	33	38	591	512	390	297	183
26	61	42	29	30	21	33	38	499	475	387	295	168
27	61	42	29	30	21	33	42	454	459	387	294	168
28	61	41	29	30	21	33	45	435	436	386	293	168
29	61	41	29	30	---	33	45	439	433	385	291	168
30	61	42	29	30	---	33	45	437	423	382	290	168
31	61	---	29	30	---	33	---	419	---	382	288	---
TOTAL	1,898	1,321	1,006	908	655	759	1,062	12,415	16,032	9,948	9,930	7,273
MEAN	61.2	44.0	32.5	29.3	23.4	24.5	35.4	400	534	321	320	242
MAX	78	54	43	30	31	34	45	761	683	398	398	282
MIN	57	40	28	29	21	21	33	46	423	230	262	168
AC-FT	3,760	2,620	2,000	1,800	1,300	1,510	2,110	24,630	31,800	19,730	19,700	14,430

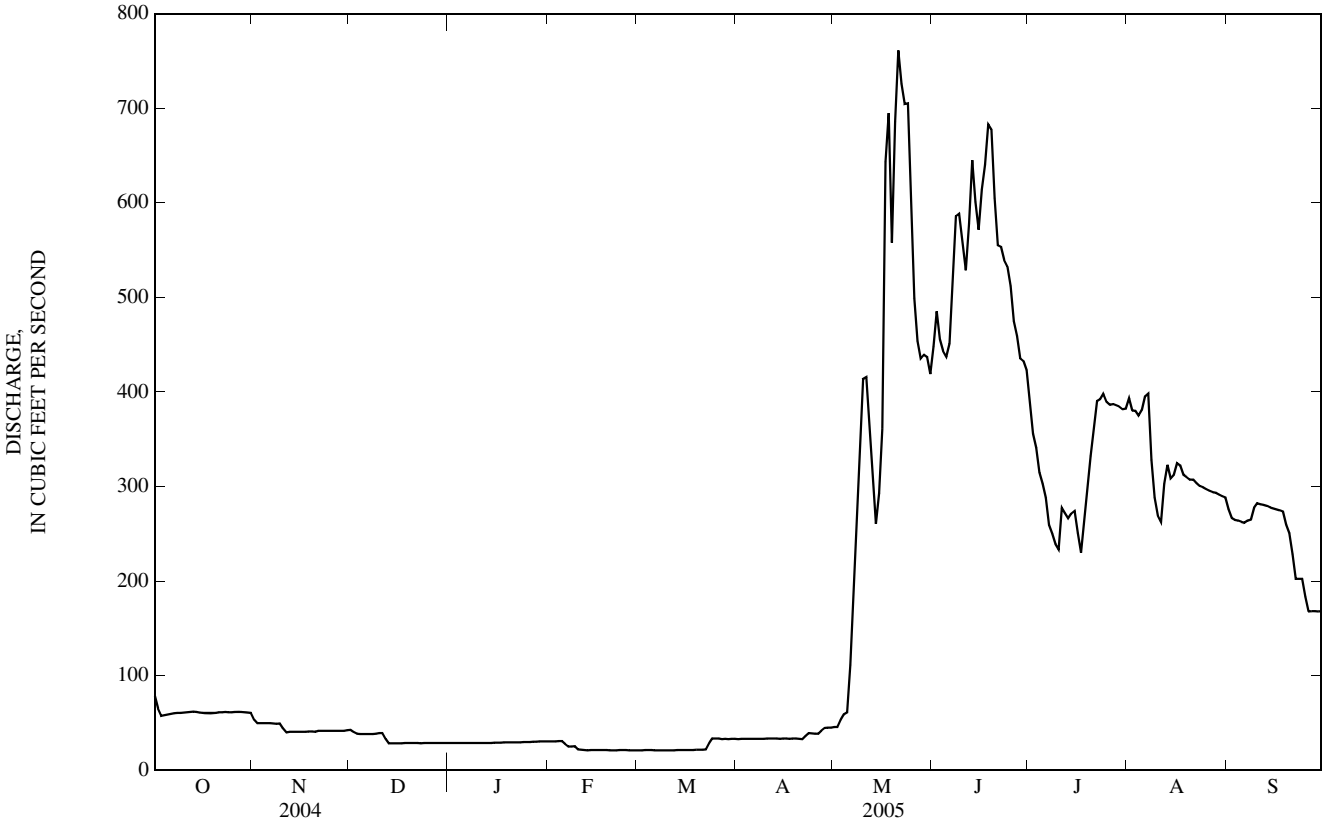
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2005, BY WATER YEAR (WY)

MEAN	118	71.7	53.6	49.5	44.7	55.4	87.9	416	582	349	352	247
MAX	244	222	142	139	92.4	174	192	1,035	1,209	559	473	399
(WY)	(1965)	(1985)	(1984)	(1984)	(1971)	(1998)	(1965)	(1984)	(1984)	(1975)	(1970)	(1975)
MIN	38.0	28.9	23.6	20.9	21.4	19.3	30.5	189	281	197	222	59.4
(WY)	(1986)	(2003)	(2003)	(1989)	(1991)	(1991)	(1991)	(1963)	(2004)	(1992)	(1985)	(1994)

06020600 RUBY RIVER BELOW RESERVOIR, NEAR ALDER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1963 - 2005	
ANNUAL TOTAL	50,204		63,207			
ANNUAL MEAN	137		173		204	
HIGHEST ANNUAL MEAN					352	1984
LOWEST ANNUAL MEAN					128	2002
HIGHEST DAILY MEAN	507	May 12	761	May 21	2,500	May 17, 1984
LOWEST DAILY MEAN	27	Jan 1	21	Feb 11	15	Feb 17, 1995
ANNUAL SEVEN-DAY MINIMUM	27	Jan 1	21	Feb 11	16	Jan 3, 1989
MAXIMUM PEAK FLOW			822	May 21	3,010	May 16, 1984
MAXIMUM PEAK STAGE			4.90	May 21	a8.52	May 16, 1984
INSTANTANEOUS LOW FLOW					b1.4	Dec 5, 1974
ANNUAL RUNOFF (AC-FT)	99,580		125,400		147,800	
10 PERCENT EXCEEDS	328		445		448	
50 PERCENT EXCEEDS	54		53		108	
90 PERCENT EXCEEDS	28		22		31	

a--From floodmark.
b--Dam closure, result of discharge measurement. May have been less on Oct. 1, 2004, but discharge was not verified.



06024450 BIG HOLE RIVER BELOW BIG LAKE CREEK, AT WISDOM, MT

LOCATION.--Lat 45°37'07", long 113°27'25" (NAD 27), in $SW^1/_4SW^1/_4NE^1/_4$ sec.33, T.2 S., R.15 W., Beaverhead County, Hydrologic Unit 10020004, on downstream side of State Highway 43 bridge, 0.3 mi west of Wisdom, 0.6 mi downstream from Big Lake Creek, and at river mile 116.0.

DRAINAGE AREA.--575 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1988 to current year (seasonal records only).

REVISED RECORDS.--WDR--95-1: 1991 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6,040 ft (NGVD 29).

REMARKS.--Seasonal water-discharge records good. Diversions for irrigation of about 66,900 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

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				e90	65	331	157	42	19	32		
2				e100	59	658	110	44	19	41		
3				111	58	535	82	51	19	50		
4				111	65	388	67	54	19	54		
5				97	69	276	57	44	18	52		
6				95	79	233	56	38	18	47		
7				115	96	335	59	37	17	47		
8				144	93	345	64	42	16	48		
9				134	113	277	68	49	15	53		
10				109	161	254	81	56	18	52		
11				95	220	202	109	50	21	54		
12				93	194	381	99	45	22	67		
13				91	127	835	83	42	24	67		
14				95	81	490	80	42	25	61		
15				95	68	260	77	39	25	56		
16				108	79	212	69	33	24	53		
17				110	175	255	58	29	28	51		
18				127	233	335	57	27	36	49		
19				115	250	325	56	27	35	48		
20				104	416	250	53	25	36	48		
21				113	440	195	55	19	30	47		
22				122	382	186	54	18	29	47		
23				102	342	202	52	20	29	46		
24				59	338	200	51	21	34	45		
25				62	250	172	49	21	43	45		
26				66	175	161	51	23	44	45		
27				89	127	197	49	22	40	45		
28				98	114	242	42	22	36	50		
29				100	98	279	46	20	34	51		
30				86	98	230	47	18	33	51		
31				---	111	---	42	19	---	47		
TOTAL				3,036	5,176	9,241	2,080	1,039	806	1,549		
MEAN				101	167	308	67.1	33.5	26.9	50.0		
MAX				144	440	835	157	56	44	67		
MIN				59	58	161	42	18	15	32		
AC-FT				6,020	10,270	18,330	4,130	2,060	1,600	3,070		

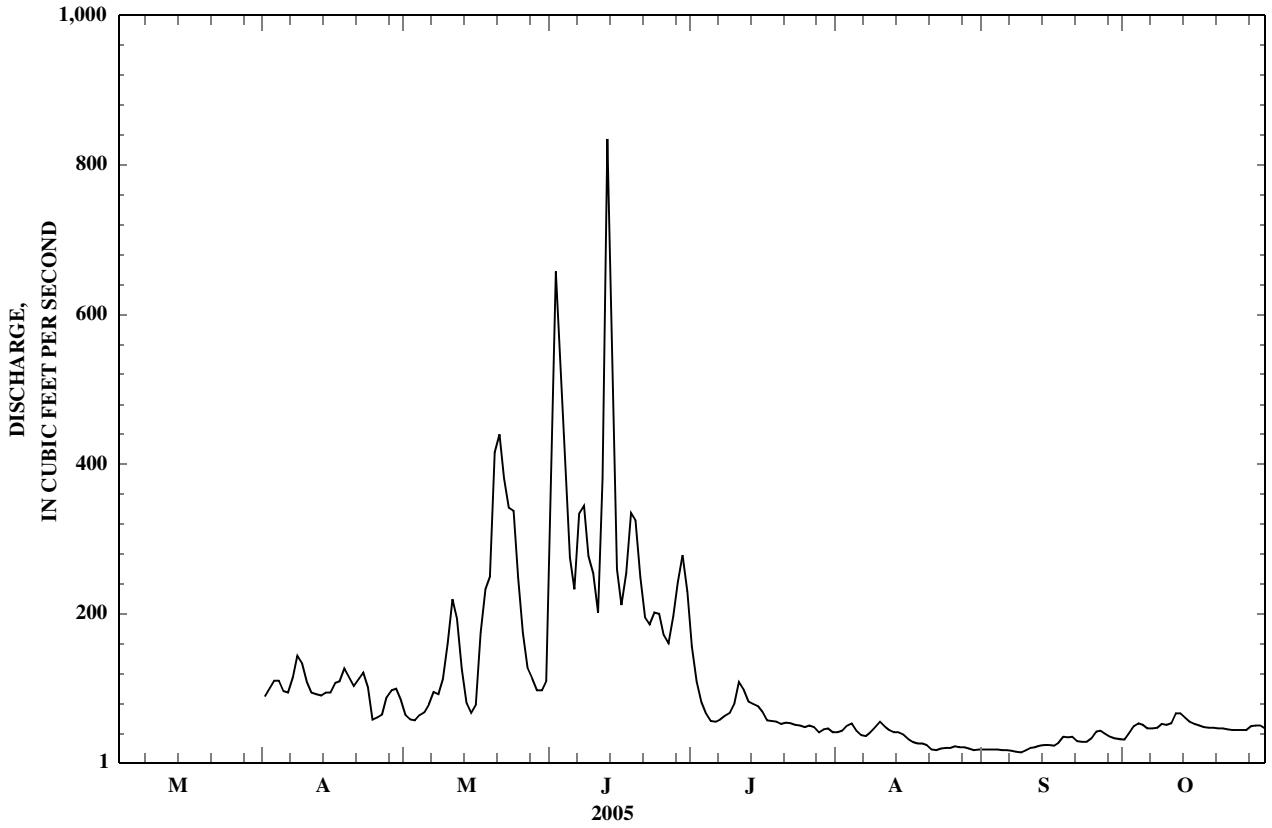
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1988 - 2005

MEAN	359	449	532	203	59.7	38.6	65.1
MAX	614	1,476	1,797	739	215	95.4	139
(WY)	(1996)	(1997)	(1997)	(1995)	(1997)	(1997)	(1998)
MIN	86.5	45.4	68.9	21.4	1.11	2.42	23.5
(WY)	(2004)	(2004)	(1994)	(1988)	(1988)	(1988)	(2004)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1988 - 2005	
HIGHEST DAILY MEAN	835	Jun 13	3,830	Jun 7 1991
LOWEST DAILY MEAN	15	Sep 9	b.00	Aug 28 1988
MAXIMUM PEAK FLOW	918	Jun 13	4,200	Jun 6 1995
MAXIMUM PEAK STAGE	4.51	Jun 13	6.37	Jun 6 1995
INSTANTANOUS LOW FLOW	a14	Sep 10	b.00	Aug 28 1988

a--Gage height, 2.35 ft.
b--No flow many days in August and September 1988.
e--Estimated.

06024450 BIG HOLE RIVER BELOW BIG LAKE CREEK, AT WISDOM, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 1988 to current year (seasonal records only).

INSTRUMENTATION.--Temperature recorder since Apr. 27, 1988.

REMARKS.--Daily water temperatures record 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, 26.5°C, July 12, 2002, minimum, 0.0°C many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE (seasonal records): Maximum, 24.5°C, July 13, 21, 23, and Aug. 7; minimum, 0.0°C, Apr. 1.

06024450 BIG HOLE RIVER BELOW BIG LAKE CREEK, AT WISDOM, 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
		APRIL			MAY			JUNE			JULY	
1	4.0	0.0	2.0	14.5	4.0	8.5	12.5	9.0	10.5	21.0	13.5	17.0
2	5.5	0.5	3.0	13.5	5.0	9.0	10.5	9.0	9.5	20.5	13.5	17.0
3	5.5	1.5	3.0	11.5	5.5	8.5	10.0	8.0	9.0	20.0	12.0	16.0
4	4.0	1.5	2.5	12.0	5.5	9.0	16.0	7.0	11.0	22.0	12.0	17.0
5	7.5	0.5	3.5	13.0	5.5	9.0	15.0	11.0	13.0	23.0	13.5	18.0
6	10.5	1.5	6.0	14.0	7.0	10.5	11.5	9.0	10.5	22.5	14.5	18.5
7	10.0	4.0	7.0	14.5	7.0	10.5	10.5	7.5	9.0	24.0	14.5	19.0
8	8.0	4.0	6.0	13.5	8.5	11.0	11.5	8.0	9.5	22.5	15.5	19.0
9	6.5	2.5	4.5	12.0	7.5	9.0	11.5	8.0	10.0	20.0	15.5	18.0
10	8.0	1.5	4.0	10.0	5.5	7.5	16.5	9.0	12.0	17.0	14.0	15.5
11	8.5	1.5	4.5	6.5	4.5	5.5	14.5	9.5	12.0	22.0	13.0	17.0
12	8.0	2.5	5.0	9.5	3.5	6.0	11.5	9.0	10.0	24.0	14.5	19.5
13	8.0	4.0	6.0	15.5	4.5	9.5	16.0	7.0	11.0	24.5	17.0	20.5
14	8.0	1.5	4.5	15.0	7.5	11.5	16.0	11.0	13.5	24.0	15.5	19.5
15	10.0	0.5	5.0	12.0	8.0	10.0	19.0	12.0	15.0	23.5	15.5	19.5
16	12.0	3.0	7.5	11.5	8.5	10.0	15.5	12.0	13.5	23.5	17.0	20.0
17	8.5	5.0	6.5	12.0	7.0	9.0	13.5	11.5	12.5	22.0	13.5	18.0
18	5.5	3.5	4.5	10.0	7.5	9.0	15.5	10.0	12.5	23.5	14.5	19.0
19	5.5	2.0	3.5	13.0	8.0	10.0	18.0	10.5	14.0	23.0	15.5	19.0
20	6.0	1.5	4.0	12.0	9.0	10.5	20.5	12.0	16.0	23.5	15.0	19.0
21	8.5	1.5	5.0	14.5	8.0	11.0	20.5	13.5	17.0	24.5	15.0	19.5
22	13.0	4.0	8.0	15.5	10.5	12.5	20.5	13.5	17.0	22.5	17.0	20.0
23	11.0	5.5	8.5	16.0	8.5	12.0	21.5	14.0	17.5	24.5	16.5	20.5
24	12.5	4.0	8.0	14.0	9.5	11.5	21.0	13.5	17.0	22.5	15.0	19.0
25	14.5	5.0	9.5	15.5	7.0	11.0	19.5	14.0	16.0	21.5	15.5	18.5
26	14.5	5.0	9.5	17.5	8.0	12.5	16.5	12.5	14.5	22.5	13.0	17.5
27	10.5	3.0	6.0	19.5	9.0	14.0	15.5	12.0	13.5	23.5	14.0	18.5
28	10.0	1.5	5.0	20.5	10.5	15.0	15.0	11.5	13.0	19.5	14.5	16.0
29	9.0	1.5	5.5	18.5	11.0	14.5	15.0	12.0	13.5	20.0	12.0	16.0
30	11.0	2.5	6.5	19.0	9.5	14.0	20.0	11.0	15.0	22.5	14.0	18.5
31	---	---	---	14.0	9.5	12.0	---	---	---	23.5	16.5	19.0
MONTH	14.5	0.0	5.5	20.5	3.5	10.5	21.5	7.0	13.0	24.5	12.0	18.5

		AUGUST			SEPTEMBER	
1	22.5	15.0	18.5	19.0	9.0	14.0
2	23.0	15.5	19.0	19.0	10.0	14.5
3	23.0	14.5	19.0	18.5	11.0	15.0
4	23.5	14.5	19.0	19.0	10.5	14.5
5	24.0	15.5	20.0	18.0	10.5	14.5
6	23.5	15.5	19.0	19.5	9.5	14.0
7	24.5	15.0	19.0	19.0	10.5	14.5
8	21.5	16.0	18.0	19.0	10.0	14.5
9	22.5	15.0	18.5	16.5	11.0	13.5
10	21.0	14.5	18.0	14.0	8.0	11.0
11	22.0	14.5	18.5	14.0	6.5	10.0
12	20.0	13.5	16.5	11.5	6.5	9.0
13	19.5	12.5	15.0	12.0	8.0	9.5
14	21.0	11.5	16.0	15.0	6.0	10.0
15	22.0	12.5	17.0	15.0	8.5	11.5
16	21.0	13.5	17.0	14.0	8.5	11.0
17	19.0	13.0	16.0	11.5	9.0	10.0
18	19.5	12.5	16.0	12.0	8.5	9.5
19	21.0	11.5	16.0	14.5	6.0	10.0
20	22.0	12.0	17.0	15.5	7.5	11.5
21	23.5	13.0	18.0	15.0	9.0	11.5
22	21.0	14.5	17.5	14.0	7.0	10.5
23	19.5	12.5	16.0	15.5	9.5	11.5
24	18.0	11.0	14.5	10.5	7.5	9.0
25	19.5	9.5	14.0	13.5	6.5	9.5
26	19.0	10.5	14.5	14.0	6.0	10.0
27	20.5	11.0	15.5	13.5	7.5	10.0
28	21.5	11.5	16.5	13.5	6.0	9.5
29	19.5	12.0	16.0	13.0	6.0	9.5
30	15.5	12.0	13.5	13.5	9.0	11.0
31	18.5	8.0	13.0	---	---	---
MONTH	24.5	8.0	17.0	19.5	6.0	11.5

06024540 BIG HOLE RIVER BELOW MUDD CREEK, NEAR WISDOM, MT

LOCATION.--Lat 45°48'27", long 113°18'45" (NAD 27), in $SE^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.26, T.1 N., R.14 W., Beaverhead County, Hydrologic Unit 10020004, on right bank at bridge on Montana Highway 43, 0.5 mi downstream from Mudd Creek, 15.0 mi northeast of Wisdom, 17.3 mi west of Wise River, and at river mile 91.6.

DRAINAGE AREA.--1,267 mi^2.

PERIOD OF RECORD.--October 1997 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 5,880 ft (NGVD 29).

REMARKS.--Seasonal records good except those for July to October, which are fair. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductances 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				233	312	937	684	193	63	111		
2				241	294	1,460	515	198	63	147		
3				264	287	1,560	395	189	61	163		
4				275	305	1,340	326	184	59	172		
5				253	284	1,080	290	176	60	172		
6				241	300	1,040	266	160	57	166		
7				265	359	1,190	247	142	57	158		
8				333	400	1,210	228	152	55	161		
9				360	443	1,100	216	166	55	171		
10				309	640	979	225	173	81	170		
11				268	812	857	285	181	79	168		
12				255	786	1,120	299	165	82	199		
13				258	665	1,650	268	153	87	203		
14				279	573	1,650	237	150	89	192		
15				272	548	1,090	234	146	90	178		
16				278	600	875	221	134	84	171		
17				297	894	989	200	119	98	164		
18				327	1,170	1,090	192	107	129	158		
19				327	1,220	1,080	189	105	132	154		
20				306	1,450	915	178	98	121	155		
21				295	1,620	731	170	93	114	154		
22				293	1,490	642	174	85	124	150		
23				303	1,350	591	181	78	109	149		
24				296	1,280	548	174	79	116	145		
25				307	1,090	502	172	75	133	142		
26				342	953	580	181	79	144	142		
27				386	813	636	187	78	143	146		
28				411	734	806	179	77	129	164		
29				368	671	832	177	76	119	172		
30				348	619	820	201	69	111	169		
31				---	619	---	203	53	---	161		
TOTAL				8,990	23,581	29,900	7,694	3,933	2,844	5,027		
MEAN				300	761	997	248	127	94.8	162		
MAX				411	1,620	1,650	684	198	144	203		
MIN				233	284	502	170	53	55	111		
AC-FT				17,830	46,770	59,310	15,260	7,800	5,640	9,970		

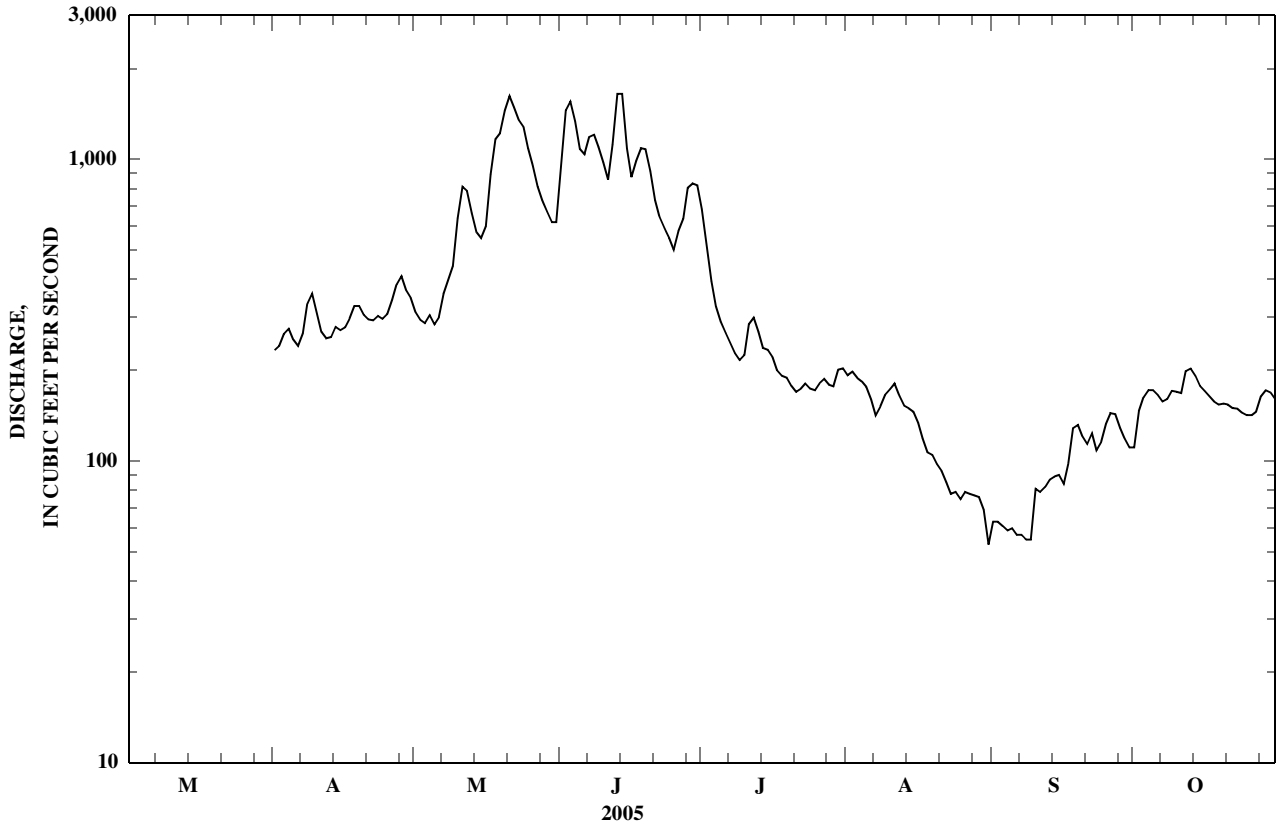
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1998 - 2005

MEAN	734	1,153	1,297	336	123	116	171
MAX	1,086	2,306	2,272	961	244	209	258
(WY)	(2003)	(1998)	(1999)	(1998)	(1998)	(2004)	(1998)
MIN	300	670	506	113	48.5	75.6	104
(WY)	(2005)	(2004)	(2000)	(2000)	(2000)	(2000)	(2004)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1998 - 2005	
HIGHEST DAILY MEAN	1,650	Jun 13	4,810	Jun 1, 2003
LOWEST DAILY MEAN	53	Aug 31	38	Aug 28, 2000
MAXIMUM PEAK FLOW	1,840	Jun 14	4,900	Jun 1, 2003
MAXIMUM PEAK STAGE	4.22	Jun 14	5.97	Jun 1, 2003
INSTANTANEOUS LOW FLOW	a31	Aug 31	a31	Aug 31, 2005

a--Gage height, 2.31 ft.

06024540 BIG HOLE RIVER BELOW MUDD CREEK, NEAR WISDOM, MT—Continued



06025500 BIG HOLE RIVER NEAR MELROSE, MT

LOCATION.--Lat 45°31'36", long 112°42'03" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.34, T.3 S., R.9 W., Madison County, Hydrologic Unit 10020004, on left bank 50 ft downstream from bridge, on frontage road east of Interstate 15, 0.1 mi downstream from Rock Creek, 7 mi south of Melrose, and at river mile 31.1.

DRAINAGE AREA.--2,476 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 5,032.87 ft (NGVD 29). Prior to June 14, 1927, water-stage recorder, and July 17, 1927, to Sept. 30, 1931, nonrecording gage, at site 1.7 mi upstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 136,000 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	496	471	e270	e260	e300	294	415	562	2,470	1,810	281	187
2	483	468	e300	e260	e310	280	429	520	2,850	1,590	306	177
3	463	502	e330	e270	e310	293	435	494	2,980	1,370	310	174
4	457	502	e360	e270	e310	296	461	487	2,810	1,200	294	169
5	459	467	e340	e260	e300	306	454	537	2,490	1,070	279	173
6	453	495	e340	e260	e290	325	429	581	2,480	965	277	176
7	440	507	e350	e270	e290	333	436	680	2,640	883	268	174
8	436	502	e360	e280	e300	371	511	805	2,530	827	265	171
9	433	508	e370	e270	e290	420	581	986	2,400	788	276	170
10	430	513	e380	e270	e280	486	566	1,220	2,190	780	299	177
11	429	513	e420	e280	e280	553	496	1,790	1,990	789	315	192
12	427	496	e410	e290	291	617	442	1,620	2,010	805	311	200
13	426	459	e400	e300	291	557	427	1,390	2,560	767	307	209
14	428	419	e400	e280	285	496	469	1,260	2,760	682	299	221
15	429	391	e400	e260	e260	464	458	1,240	2,430	622	275	221
16	430	389	e390	e280	e260	433	444	1,360	2,150	580	261	219
17	434	431	e380	e300	e265	435	475	2,100	2,350	545	245	249
18	440	440	e370	e320	271	369	528	2,390	2,820	509	223	280
19	472	386	e390	e330	269	387	550	2,590	2,660	471	214	299
20	484	400	e370	e350	284	421	525	3,110	2,400	438	206	319
21	511	320	e350	e360	275	439	496	3,290	2,250	405	199	320
22	509	e240	e340	e350	266	454	477	3,160	2,330	393	189	309
23	502	332	e250	e330	274	459	490	3,080	2,390	394	187	310
24	495	428	e220	e320	276	337	522	2,930	2,130	381	185	324
25	479	462	e240	e310	277	269	560	2,570	1,900	376	182	331
26	477	491	e260	e310	279	420	611	2,250	1,900	378	178	336
27	489	e320	e270	e310	280	418	654	2,070	1,970	359	177	339
28	499	e280	e260	e320	279	468	662	1,990	2,130	318	177	341
29	509	e260	e270	e310	---	523	627	2,010	2,110	319	175	337
30	509	e250	e280	e305	---	534	593	2,000	1,980	294	186	329
31	500	---	e270	e300	---	443	---	1,910	---	275	191	---
TOTAL	14,428	12,642	10,340	9,185	7,942	12,900	15,223	52,982	71,060	21,383	7,537	7,433
MEAN	465	421	334	296	284	416	507	1,709	2,369	690	243	248
MAX	511	513	420	360	310	617	662	3,290	2,980	1,810	315	341
MIN	426	240	220	260	260	269	415	487	1,900	275	175	169
AC-FT	28,620	25,080	20,510	18,220	15,750	25,590	30,190	105,100	140,900	42,410	14,950	14,740

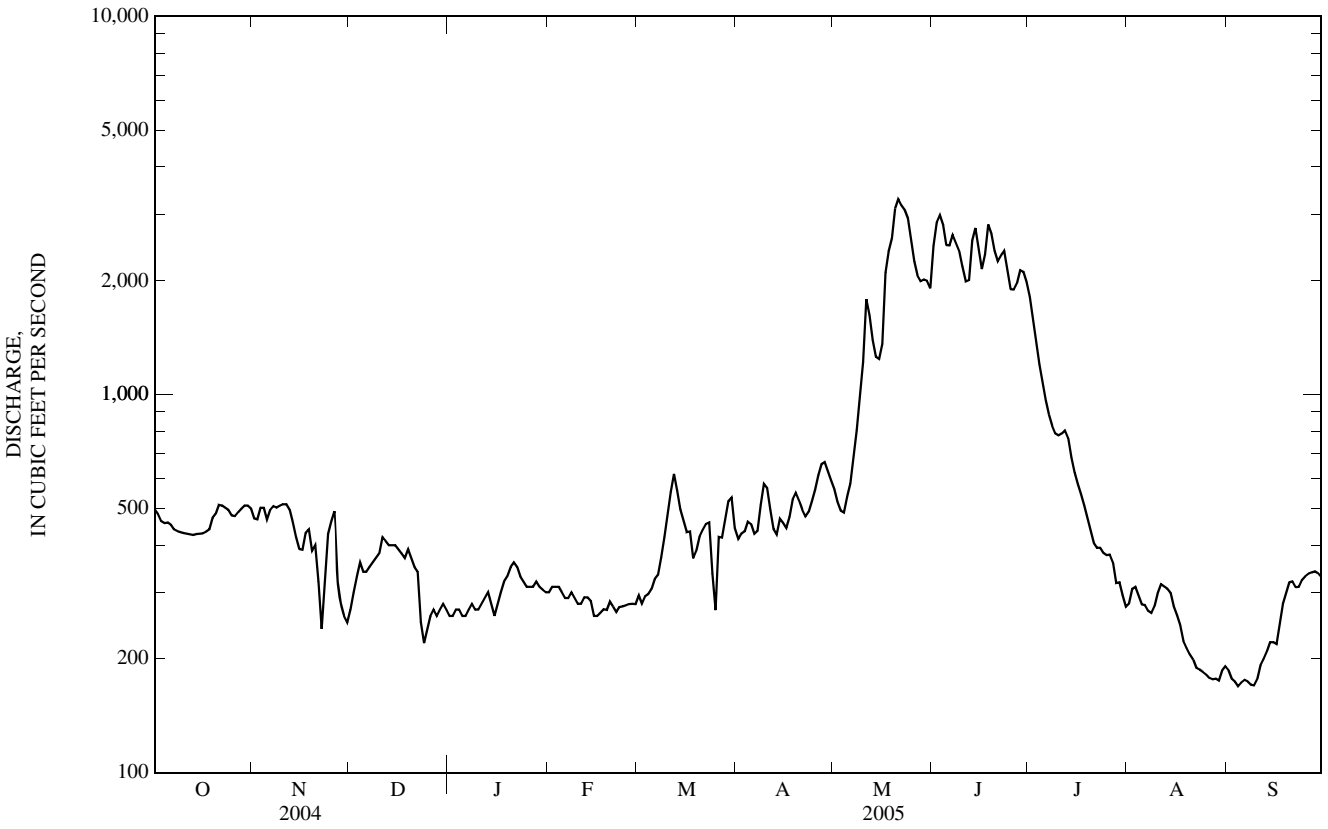
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2005, BY WATER YEAR (WY)

MEAN	489	488	390	346	359	476	1,470	3,223	3,885	1,283	458	369
MAX	1,109	1,037	763	716	800	958	3,515	8,294	8,380	4,120	1,457	870
(WY)	(1947)	(1928)	(1976)	(1928)	(1971)	(1986)	(1943)	(1976)	(1965)	(1975)	(1975)	(1965)
MIN	184	255	223	143	143	247	490	1,108	814	254	87.6	114
(WY)	(1936)	(1938)	(1933)	(1937)	(1937)	(1937)	(1975)	(1977)	(1992)	(1931)	(1988)	(1988)

06025500 BIG HOLE RIVER NEAR MELROSE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1924 - 2005	
ANNUAL TOTAL	217,341		243,055			
ANNUAL MEAN	594		666		1,104	
HIGHEST ANNUAL MEAN					2,024	1976
LOWEST ANNUAL MEAN					486	1931
HIGHEST DAILY MEAN	2,180	Jun 12	3,290	May 21	13,800	Jun 4, 1948
LOWEST DAILY MEAN	157	Aug 16	169	Sep 4	49	Aug 17, 1931
ANNUAL SEVEN-DAY MINIMUM	176	Aug 12	172	Sep 3	55	Aug 30, 1988
MAXIMUM PEAK FLOW			3,430	May 21	b23,000	Jun 14, 1927
MAXIMUM PEAK STAGE			3.93	May 21	14.00	Jun 14, 1927
INSTANTANEOUS LOW FLOW			a161	Sep 4	c49	Aug 17, 1931
ANNUAL RUNOFF (AC-FT)	431,100		482,100		799,600	
10 PERCENT EXCEEDS	1,260		2,010		2,940	
50 PERCENT EXCEEDS	430		405		470	
90 PERCENT EXCEEDS	270		250		255	

a--Gage height, 0.99 ft.
b--When Wise River Reservoir dam failed; maximum discharge unaffected by dam failure, 14,300 ft3/s, June 10, 1972.
c--Observed, gage height, 0.70 ft, site and datum then in use.
e--Estimated.



06025500 BIG HOLE RIVER NEAR MELROSE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 1956 to September 1957, August 1960 to September 1964, June 1977 to current year.
SUSPENDED-SEDIMENT DISCHARGE: August 1956 to September 1957, August 1960 to September 1964.

INSTRUMENTATION.--Temperature recorder since June 1977.

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, 24.0°C, June 25, 1988, July 12, and 19-22, 2003; minimum, 0.0°C on many days during winter most years.
SEDIMENT CONCENTRATION (water years 1956-57, 1960-64): Maximum daily mean, 200 mg/L, June 29, 1961; minimum daily mean, 1 mg/L, on many days in 1960-64.
SEDIMENT LOAD (water years 1956-57, 1960-64): Maximum daily, 4,300 tons, June 9, 1964; minimum daily, less than 0.5 ton on several days in 1961.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 23.0°C, July 23; minimum, 0.0°C many days November through March.

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	11.0	2.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
2	13.0	8.5	11.0	3.5	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
3	13.0	9.0	11.0	4.0	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
4	12.5	9.0	10.5	3.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
5	12.5	8.5	10.5	4.0	0.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
6	12.0	8.0	10.0	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
7	13.0	10.0	11.5	4.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
8	12.5	8.5	10.5	4.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
9	11.5	9.0	10.5	5.5	3.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
10	10.5	8.0	9.5	4.5	3.0	4.0	0.5	0.0	0.0	0.0	0.0	0.0
11	10.5	6.5	8.5	4.5	2.5	3.5	1.0	0.0	0.5	0.0	0.0	0.0
12	10.0	7.0	8.5	3.5	1.5	2.5	1.5	0.5	1.0	0.0	0.0	0.0
13	10.0	6.5	8.5	3.0	0.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0
14	11.0	7.0	9.0	2.0	0.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0
15	11.0	9.0	10.0	2.0	0.0	1.0	1.5	0.0	0.5	0.0	0.0	0.0
16	11.0	9.0	10.0	2.5	0.5	1.5	0.5	0.0	0.5	0.0	0.0	0.0
17	10.0	8.0	9.0	2.5	0.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0
18	8.0	7.0	7.5	2.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0
19	8.0	5.0	6.5	2.0	0.0	1.0	1.0	0.0	0.5	0.0	0.0	0.0
20	7.5	6.5	7.0	1.0	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
21	7.0	5.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	7.5	4.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	6.5	5.5	6.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
24	6.0	3.5	4.5	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
25	4.5	2.0	3.5	3.5	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
26	5.5	3.0	4.0	2.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
27	6.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	5.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
29	5.0	4.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
30	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
31	3.5	2.0	3.0	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
MONTH	13.0	2.0	8.0	5.5	0.0	1.5	1.5	0.0	0.0	0.5	0.0	0.0

06025500 BIG HOLE RIVER NEAR MELROSE, 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	0.5	0.0	0.0	5.0	2.0	3.5	7.0	3.0	5.0	11.5	5.5	8.0
2	0.5	0.0	0.0	5.0	1.5	3.5	9.5	4.5	6.5	13.0	6.5	9.5
3	0.5	0.0	0.0	5.5	1.5	3.5	8.0	5.0	7.0	12.0	8.0	10.0
4	0.5	0.0	0.0	5.5	1.5	3.5	7.0	5.0	6.0	11.5	8.5	10.0
5	0.5	0.0	0.0	5.5	1.5	3.5	8.5	3.0	5.5	13.0	9.0	11.0
6	0.5	0.0	0.0	5.5	2.0	4.0	11.0	4.5	7.5	14.5	9.5	12.0
7	0.0	0.0	0.0	5.0	2.0	3.5	11.0	7.0	9.0	13.5	10.0	12.0
8	0.5	0.0	0.0	6.5	2.5	4.5	9.5	7.0	8.0	13.5	11.0	12.0
9	0.0	0.0	0.0	7.5	3.0	5.5	9.0	5.5	7.0	11.5	9.5	10.5
10	0.0	0.0	0.0	8.0	3.5	5.5	10.0	5.0	7.5	9.5	8.0	9.0
11	0.5	0.0	0.0	6.5	2.5	4.5	9.5	5.0	7.0	8.0	6.0	7.0
12	0.5	0.0	0.0	4.5	1.5	3.0	10.0	5.5	7.5	7.5	5.0	6.0
13	1.0	0.0	0.5	3.5	0.0	2.0	10.5	6.0	8.5	11.5	6.0	8.5
14	1.0	0.0	0.5	3.5	0.5	2.0	9.0	5.5	7.5	12.5	9.0	10.5
15	0.0	0.0	0.0	4.0	0.5	2.0	10.0	4.0	7.0	12.0	10.5	11.5
16	0.0	0.0	0.0	4.0	1.0	2.5	12.0	5.5	8.5	12.0	11.0	11.5
17	0.0	0.0	0.0	4.5	2.0	3.0	11.0	8.0	9.5	11.0	9.0	10.0
18	0.0	0.0	0.0	4.0	0.0	2.0	9.5	5.5	7.0	10.0	8.5	9.5
19	0.5	0.0	0.0	5.5	2.0	3.5	7.0	5.0	5.5	13.0	9.5	11.0
20	1.5	0.0	0.5	6.0	3.5	4.5	6.5	4.0	5.5	11.0	9.5	10.5
21	3.5	1.0	2.0	6.5	4.0	5.0	7.5	4.0	6.0	11.5	8.5	10.0
22	2.5	0.0	1.0	4.5	2.0	3.5	12.0	5.0	8.0	12.5	10.0	11.5
23	2.5	0.0	1.0	4.0	0.0	2.0	12.0	7.5	10.0	13.0	10.5	12.0
24	3.0	0.0	1.5	2.0	0.0	1.0	14.0	8.0	10.5	12.5	10.5	11.5
25	3.5	0.0	2.0	3.5	0.0	1.5	14.5	8.5	11.5	12.0	9.5	11.0
26	4.0	0.0	2.0	5.0	0.0	2.5	13.0	9.0	11.0	13.5	9.5	11.5
27	4.0	0.0	2.0	5.5	3.0	4.0	11.5	7.0	9.0	15.0	11.0	12.5
28	4.0	0.0	2.0	6.5	4.0	5.0	9.0	4.5	6.5	15.5	12.0	13.5
29	---	---	---	4.5	3.0	4.0	8.5	3.0	6.0	15.0	12.5	13.5
30	---	---	---	4.5	2.0	3.0	9.0	4.0	6.5	14.5	11.0	13.0
31	---	---	---	6.5	1.0	3.5	---	---	---	12.5	10.5	11.5
MONTH	4.0	0.0	0.5	8.0	0.0	3.5	14.5	3.0	7.5	15.5	5.0	10.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.5	9.0	10.0	17.5	13.5	15.5	19.5	15.5	17.5	18.0	12.0	15.0
2	9.0	8.5	9.0	18.5	15.0	16.5	20.5	16.5	18.5	17.5	12.5	15.5
3	10.5	8.5	9.5	18.0	13.5	15.5	21.5	16.5	18.5	17.0	13.5	15.5
4	12.0	9.0	10.5	19.0	13.5	16.0	21.5	16.0	19.0	16.5	13.0	15.0
5	14.0	11.0	12.5	20.0	14.5	17.0	22.0	16.5	19.5	15.5	12.5	14.5
6	12.5	9.5	11.0	19.5	15.5	17.5	21.0	17.0	19.0	17.5	12.0	14.5
7	10.5	8.5	9.5	21.0	15.5	18.5	21.5	16.5	19.0	18.0	12.5	15.5
8	10.0	8.5	9.5	21.0	16.5	19.0	19.5	17.0	18.5	17.5	13.0	15.5
9	10.5	8.5	9.5	19.0	16.5	17.5	20.0	16.5	18.0	17.0	13.5	15.5
10	11.0	8.5	10.0	17.5	14.5	16.0	19.5	16.0	18.0	14.5	11.5	12.5
11	12.0	10.0	11.0	20.0	13.5	16.5	21.0	15.5	18.0	14.0	9.0	11.5
12	11.5	10.0	11.0	22.0	15.5	18.5	18.5	15.5	17.0	13.0	9.5	11.5
13	13.5	9.0	11.0	22.5	17.0	19.5	17.5	13.0	15.0	13.0	9.0	11.0
14	15.0	11.5	13.0	22.5	16.0	19.0	19.5	13.0	16.0	14.5	8.5	11.5
15	16.0	13.0	14.5	22.5	16.5	19.5	20.0	14.0	17.0	15.5	10.5	12.5
16	16.0	14.0	14.5	22.5	17.5	19.5	19.5	15.0	17.0	14.5	10.5	12.5
17	14.5	12.0	13.5	21.5	15.5	18.5	18.0	15.0	16.5	12.5	10.5	11.5
18	12.5	11.0	11.5	22.0	15.5	18.5	18.5	14.0	16.0	13.5	9.5	11.5
19	14.5	10.5	12.5	22.5	16.5	19.0	19.5	13.0	16.0	14.0	8.5	11.0
20	16.0	12.5	14.0	22.5	16.5	19.5	20.0	14.0	17.0	14.5	9.5	12.0
21	16.5	14.0	15.5	22.5	16.5	19.5	21.0	14.5	17.5	13.5	11.0	12.0
22	18.0	14.5	16.0	21.5	17.5	19.5	20.0	16.0	18.0	13.5	9.0	11.5
23	18.0	15.0	16.5	23.0	17.5	20.0	20.0	15.0	17.5	12.5	10.5	11.0
24	18.0	14.0	16.0	21.5	16.5	19.0	18.0	13.5	16.0	10.5	8.5	9.0
25	16.5	13.5	15.0	19.5	16.5	17.5	18.0	12.0	15.0	12.5	8.5	10.0
26	14.5	12.5	13.5	20.5	14.0	17.0	18.5	12.5	15.5	13.0	8.0	10.5
27	15.5	12.0	13.5	22.0	15.0	18.5	19.0	13.5	16.0	13.5	10.0	11.5
28	14.5	12.5	13.0	19.5	15.5	17.0	19.0	14.5	17.0	12.5	8.5	10.5
29	14.5	12.5	13.5	18.5	14.0	16.5	18.5	14.0	16.5	12.0	8.0	10.0
30	16.5	12.5	14.0	21.0	15.0	18.0	16.5	13.0	14.5	12.5	10.0	11.5
31	---	---	---	20.0	16.5	18.5	17.0	11.0	14.0	---	---	---
MONTH	18.0	8.5	12.5	23.0	13.5	18.0	22.0	11.0	17.0	18.0	8.0	12.5

06026210 BIG HOLE RIVER NEAR GLEN, MT

LOCATION.--Lat 45°26'26", long 112°33'20" (NAD 27), in $NW^1/_4SW^1/_4SE^1/_4$ sec.35, T.4 S, R.8 W, Madison County, Hydrologic Unit 10020004, on left bank 50 ft downstream from private suspension bridge, 0.1 mi downstream from Sandy Hollow, 7.0 mi southeast of Glen, and at river mile 17.2.

DRAINAGE AREA.--2,655 mi^2.

PERIOD OF RECORD.--October 1997 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 4,850 ft (NGVD 29).

REMARKS.--Seasonal records good. Figures of discharge for seasons 1998-99 are the sum of river flow, Fred Bryan Ditch on left bank, and Upper and Lower Raffety Ditches on right bank. 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				402	558	2,190	1,750	263	190	337		
2				411	511	2,700	1,560	288	178	353		
3				411	478	2,850	1,350	312	170	388		
4				448	468	2,730	1,200	301	166	420		
5				448	496	2,380	1,090	290	168	420		
6				421	550	2,310	986	278	169	419		
7				412	629	2,530	896	271	167	417		
8				472	756	2,410	829	271	168	424		
9				557	937	2,290	796	266	170	440		
10				549	1,150	2,080	792	285	182	430		
11				488	1,650	1,870	794	308	192	432		
12				435	1,600	1,880	810	311	195	435		
13				410	1,380	2,340	783	331	198	452		
14				448	1,230	2,600	692	320	209	461		
15				449	1,190	2,350	623	306	207	454		
16				424	1,270	2,040	573	277	211	444		
17				436	1,880	2,170	518	260	252	429		
18				509	2,270	2,690	487	236	286	420		
19				545	2,380	2,580	446	228	306	416		
20				534	3,030	2,290	408	217	313	408		
21				498	3,200	2,100	381	203	313	404		
22				466	3,180	2,150	354	191	301	403		
23				467	3,010	2,290	341	174	306	395		
24				493	2,880	2,030	332	170	342	395		
25				528	2,490	1,820	339	177	342	396		
26				575	2,130	1,790	355	179	352	391		
27				635	1,910	1,890	332	177	361	386		
28				658	1,810	1,990	304	175	362	403		
29				619	1,810	2,020	286	171	358	427		
30				577	1,810	1,900	277	176	346	437		
31				---	1,760	---	262	191	---	443		
TOTAL				14,725	50,403	67,260	20,946	7,603	7,480	12,879		
MEAN				491	1,626	2,242	676	245	249	415		
MAX				658	3,200	2,850	1,750	331	362	461		
MIN				402	468	1,790	262	170	166	337		
AC-FT				29,210	99,970	133,400	41,550	15,080	14,840	25,550		

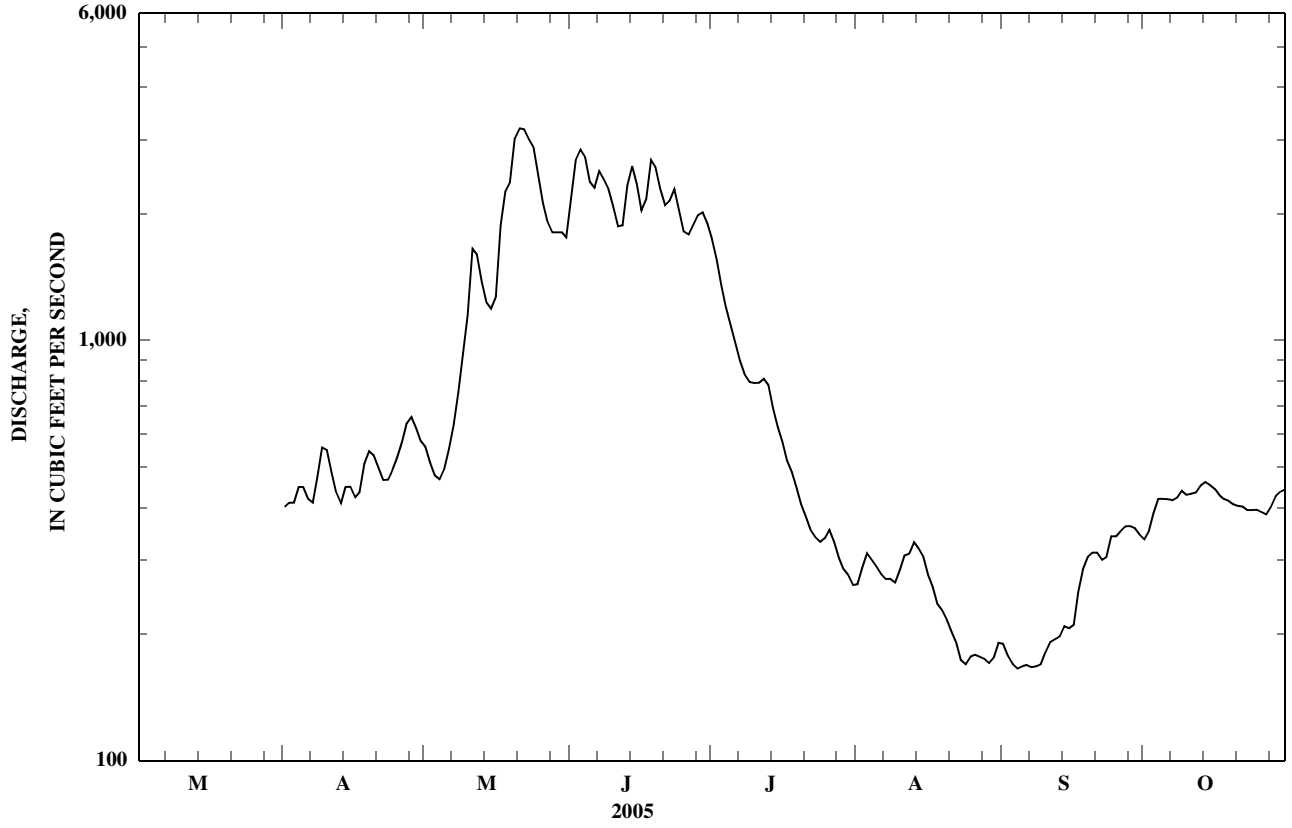
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1998 - 2005

MEAN	1,125	2,058	2,665	859	302	293	452
MAX	1,572	3,829	4,432	2,138	565	398	708
(WY)	(2003)	(1998)	(1999)	(1998)	(1998)	(2004)	(1998)
MIN	491	1,133	1,274	399	149	207	318
(WY)	(2005)	(2004)	(2004)	(2000)	(2000)	(2001)	(2004)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1998 - 2005	
HIGHEST DAILY MEAN	3,200	May 21	10,000	Jun 1, 2003
LOWEST DAILY MEAN	166	Sep 4	122	Aug 29, 2000
MAXIMUM PEAK FLOW	3,420	May 21	10,500	May 31, 2003
MAXIMUM PEAK STAGE	4.48	May 21	7.05	May 31, 2003
INSTANTANEOUS LOW FLOW	a150	Aug 29	119	Aug 28, 2000

a--Gage height, 1.98 ft.

06026210 BIG HOLE RIVER NEAR GLEN, MT—Continued



06026500 JEFFERSON RIVER NEAR TWIN BRIDGES, MT

LOCATION.--Lat 45°36'45", long 112°19'47" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.34, T.2 S., R.6 W., Madison County, Hydrologic Unit 10020005, on left bank 0.4 mi upstream from Hells Canyon Creek, 4.8 mi north of Twin Bridges, and at river mile 2,399.7.

DRAINAGE AREA.--7,632 mi^2.

PERIOD OF RECORD.--August 1940 to September 1943, October 1957 to September 1972, May 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,560 ft (NGVD 29). August 1940 to September 1943, nonrecording gage at site 500 ft downstream at different elevation. October 1957 to June 3, 1972, water-stage recorder at site 250 ft downstream and June 4 to September 30, 1972, nonrecording gage 6.5 mi downstream at different elevations.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Clark Canyon, Lima and Ruby River Reservoirs. Diversion for irrigation of about 310,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of specific conductance and water temperature 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	828	942	660	e500	729	647	670	797	2,430	2,430	436	375
2	816	911	717	e500	712	647	672	751	3,250	2,180	461	391
3	811	923	746	e500	725	640	676	699	3,440	1,950	489	393
4	800	950	800	e500	731	638	694	671	3,340	1,750	442	375
5	800	924	813	e500	714	636	707	656	2,950	1,560	421	390
6	783	910	786	e500	672	642	683	689	2,830	1,380	402	392
7	789	926	790	e550	707	644	657	704	3,290	1,230	392	390
8	788	936	787	e550	670	651	664	878	3,280	1,110	404	380
9	787	934	813	e550	673	672	735	1,150	3,230	1,100	403	357
10	775	942	812	e600	653	716	752	1,460	3,080	1,190	403	365
11	772	938	880	e600	641	754	733	1,970	2,790	1,150	421	439
12	779	922	902	e600	651	802	695	2,200	2,770	1,130	412	453
13	784	905	858	e550	649	818	645	1,930	3,240	1,070	444	459
14	793	869	835	e500	642	795	661	1,660	3,660	967	456	495
15	801	842	890	e450	598	757	707	1,520	3,540	858	443	493
16	804	844	831	e500	606	728	702	1,550	3,080	752	441	492
17	810	848	819	e600	608	705	703	2,030	3,160	659	430	507
18	832	871	804	e650	620	683	778	2,780	3,760	616	422	559
19	859	861	832	e700	641	654	869	2,940	3,850	562	402	573
20	889	840	818	e800	635	677	908	3,480	3,470	520	404	571
21	923	789	742	e900	642	697	879	3,780	3,090	493	385	579
22	924	738	776	e1,000	628	715	829	3,990	3,050	473	368	599
23	916	758	572	e900	622	692	803	3,790	3,310	459	344	611
24	912	843	549	e850	630	695	794	3,680	2,990	433	325	701
25	904	893	676	e800	637	627	798	3,250	2,660	435	313	738
26	889	928	726	e800	645	647	818	2,690	2,590	471	323	746
27	905	861	e650	783	641	665	860	2,300	2,740	485	326	753
28	914	767	e600	773	637	689	896	2,020	2,760	463	315	743
29	988	677	e600	750	---	732	865	1,920	2,850	451	319	735
30	982	636	e600	742	---	763	830	1,940	2,680	443	317	719
31	972	---	e550	719	---	723	---	1,860	---	434	367	---
TOTAL	26,329	25,928	23,234	20,217	18,359	21,551	22,683	61,735	93,160	29,204	12,230	15,773
MEAN	849	864	749	652	656	695	756	1,991	3,105	942	395	526
MAX	988	950	902	1,000	731	818	908	3,990	3,850	2,430	489	753
MIN	772	636	549	450	598	627	645	656	2,430	433	313	357
AC-FT	52,220	51,430	46,080	40,100	36,420	42,750	44,990	122,500	184,800	57,930	24,260	31,290

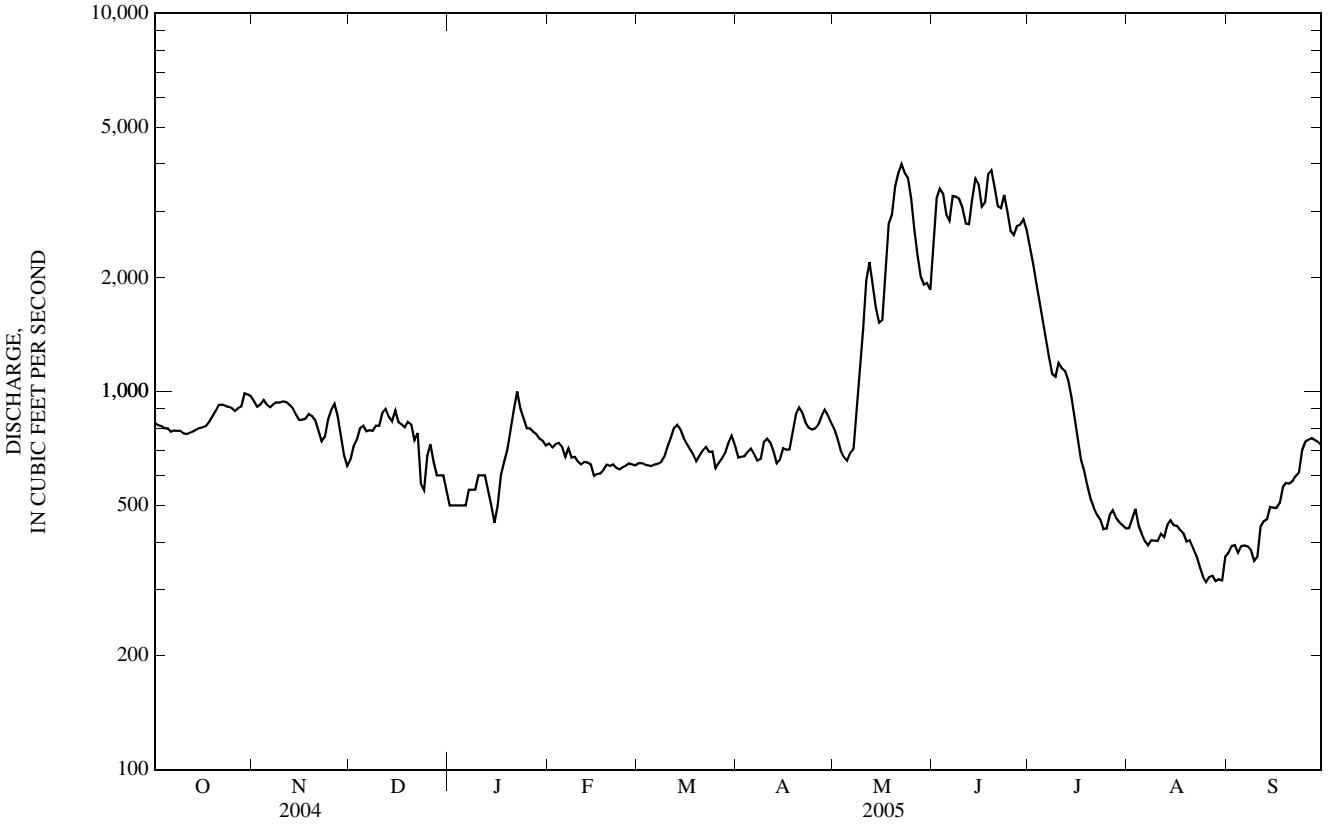
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)*

MEAN	1,284	1,420	1,207	1,025	1,097	1,265	2,236	3,640	5,432	1,924	804	964
MAX	2,052	2,025	1,864	1,424	1,690	2,092	4,634	7,025	9,816	4,477	1,700	2,114
(WY)	(1966)	(1966)	(1996)	(1996)	(1971)	(1972)	(1943)	(1997)	(1997)	(1995)	(1995)	(1965)
MIN	632	775	708	506	627	622	756	1,303	1,296	527	208	288
(WY)	(2004)	(2004)	(2002)	(2004)	(2002)	(2002)	(2005)	(2004)	(1994)	(1966)	(1961)	(1994)

06026500 JEFFERSON RIVER NEAR TWIN BRIDGES, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005*	
ANNUAL TOTAL	318,818		370,403			
ANNUAL MEAN	871		1,015		1,884	
HIGHEST ANNUAL MEAN					2,824	1997
LOWEST ANNUAL MEAN					845	2004
HIGHEST DAILY MEAN	2,520	Jun 12	3,990	May 22	14,900	Jun 9, 1997
LOWEST DAILY MEAN	235	Aug 17	313	Aug 25	165	Aug 19, 1961
ANNUAL SEVEN-DAY MINIMUM	252	Aug 12	320	Aug 24	176	Aug 16, 1961
MAXIMUM PEAK FLOW			a4,100	May 22	d16,500	Jun 10, 1964
MAXIMUM PEAK STAGE			b8.78	Jan 2	12.60	Jun 8, 1995
INSTANTANEOUS LOW FLOW			c291	Aug 30	f82	Aug 17, 1966
ANNUAL RUNOFF (AC-FT)	632,400		734,700		1,365,000	
10 PERCENT EXCEEDS	1,400		2,670		4,020	
50 PERCENT EXCEEDS	794		742		1,280	
90 PERCENT EXCEEDS	499		436		658	

*--During periods of operation (August 1940 to September 1943, October 1957 to September 1972, May 1994 to current year).
a--Gage height, 6.96 ft.
b--Backwater from ice.
c--Gage height, 3.11 ft.
d--Gage height, 9.04 ft, site and datum then in use.
e--Estimated.
f--Gage height, 1.61 ft, site and datum then in use.



462517112173001 08N06W25AABB01 (LUTTRELL WELL EPA-1)

LOCATION.--Lat 46°25'17", long 112°17'30" (NAD 83), in NW$^1/_4$NE$^1/_4$NE$^1/_4$ sec.25, T.8 N., R.6 W., Jeffferson County, Hydrologic Unit 10030101.

HYDROGEOLOGIC UNIT.--Tertiary volcanics.

WELL CHARACTERISTICS.--Drilled in May 1999, casing diameter 4 in., depth 108 ft.

DATUM.--Measuring point, top of PVC casing, 1.20 ft above land surface datum. Elevation of land-surface datum is 7,565.63 ft (NGVD 29).

PERIOD OF RECORD.--October 2001 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	70.00	July 18	58.59
Nov. 9	72.49	Sept. 20	68.99
May 25	65.67	Sept. 30	69.78
June 17	54.41		

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)
MAY									
25...	1100	.3	--	3.9	138	5.5	<1	.21	.071
JUN									
17...	1100	.5	.9	3.8	152	6.0	1	.32	.110
SEP									
20...	1100	.6	.1	3.7	142	6.5	<1	.25	.087

Date	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
MAY									
25...	4.72	2	3.21	50	<2	.29	<.1	56.0	44.3
JUN									
17...	5.10	1	3.29	48	<2	.43	<.1	54.5	50.0
SEP									
20...	5.21	1	3.37	49	<2	.30	<.1	56.6	45.1

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
MAY								
25...	3,950	.4	.57	1.2	216	7.72	4.7	153
JUN								
17...	4,550	.3	.57	2.9	245	12.7	5.0	171
SEP								
20...	3,530	1.3	.50	1.4	262	6.84	5.4	177

462507112170601 08N05W30BBCD01 (LUTTRELL WELL EPA-6)

LOCATION.--Lat 46°25'07", long 112°17'06" (NAD 83), in $SW^1/_4NW^1/_4NW^1/_4$ sec.30, T.8 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Boulder batholith quartz monzonite.

WELL CHARACTERISTICS.--Drilled in June 2000, casing diameter 2 in., depth 84.5 ft.

DATUM.--Measuring point, top of PVC casing, 2.60 ft above land surface datum. Elevation of land-surface datum is 7,689.44 ft (NGVD 29).

PERIOD OF RECORD.--June 2000 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	36.01	July 18	32.11
Nov. 9	36.74	Aug. 17	34.80
June 16	44.24	Sept. 30	36.99

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
JUN 16...	1200	6.2	1.6	6.7	109	8.0	35	8.29	3.35	1.38
AUG 17...	1300	--	.4	6.4	107	7.5	41	10.3	3.72	1.50

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN 16...	.4	4.90	23	41	44	.26	.3	27.5	8.5	84	.11
AUG 17...	.3	4.42	18	42	46	.24	.3	28.7	8.3	89	.12

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 16...	E1	E.1	<.04	E.2	3,120	<.08	328	6.1
AUG 17...	2	<.2	<.04	<.4	4,040	<.08	326	6.1

E--Estimated.

462503112172302 08N06W25ADAC02 (LUTTRELL WELL EPA-4S)

LOCATION.--Lat 46°25'03", long 112°17'23" (NAD 83), in $NE^1/_4SE^1/_4NE^1/_4$, sec.25, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Tertiary volcanics.

WELL CHARACTERISTICS.--Drilled in June 2000, casing diameter 2 in., depth 98.5 ft.

DATUM.--Measuring point, top of PVC casing, 1.60 ft above land surface datum. Elevation of land-surface datum is 7,521.47 ft (NGVD 29).

PERIOD OF RECORD.--June 2000 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	23.00	June 15	14.21
Nov. 9	22.06	July 18	17.84
May 20	14.72	Aug. 16	19.54
May 24	14.08	Sept. 30	20.61

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
MAY										
24...	1100	230	--	4.9	65	8.0	5	1.44	.232	4.00
JUN										
15...	1400	--	4.6	4.7	51	9.0	4	1.20	.177	3.75
AUG										
16...	1100	--	3.4	4.7	60	10.0	4	1.22	.201	3.83

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
MAY											
24...	1	5.87	57	<2	1	4.79	<.1	33.5	14.9	66	.09
JUN											
15...	1	4.31	52	--	<2	4.08	<.1	33.8	16.8	E65	E.09
AUG											
16...	1	5.64	58	<5	<2	4.53	<.1	32.1	16.4	E65	E.09

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
MAY								
24...	191	E.1	.12	3.0	24	46.8	11.7	83.8
JUN								
15...	307	<.2	.12	2.6	422	43.5	13.0	76.9
AUG								
16...	362	<.2	.12	2.7	22	53.0	9.7	104

E--Estimated.

462503112172301 08N06W25ADAC01 (LUTTRELL WELL EPA-4)

LOCATION.--Lat 46°25'03", long 112°17'23" (NAD 83), in $NE^1/_4SE^1/_4NE^1/_4$ sec.25, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Boulder batholith quartz monzonite.

WELL CHARACTERISTICS.--Drilled in May 1999, casing diameter 4 in., depth 170 ft.

DATUM.--Measuring point, top of PVC casing, 3.0 ft above land surface datum. Elevation of land-surface datum is 7,521.1 ft (NGVD 29).

PERIOD OF RECORD.--October 2001 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	37.23	June 15	29.79
Nov. 9	38.64	July 18	31.41
May 20	32.27	Aug. 16	36.24
May 24	31.43	Sept. 30	36.12

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
MAY										
24...	1200	140	--	6.9	125	6.5	34	9.64	2.53	5.51
JUN										
15...	1500	--	2.1	6.8	123	7.0	40	11.5	2.72	6.01
AUG										
16...	1200	--	2.7	6.5	127	8.0	41	11.8	2.78	6.08

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
MAY											
24...	.4	5.41	22	19	19	.34	.2	40.0	34.3	111	.15
JUN											
15...	.3	3.71	15	19	19	.38	.2	42.1	34.2	114	.15
AUG											
16...	.2	3.43	13	18	17	.28	.2	39.7	33.5	109	.15

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
MAY								
24...	<2	1.3	<.04	E.3	1,330	.14	150	6.9
JUN								
15...	<2	.9	<.04	E.3	1,540	<.08	142	7.3
AUG								
16...	E1	.6	<.04	1.1	1,360	.08	141	10.5

E--Estimated.

462500112170701 08N05W30BCBD01 (LUTTRELL WELL EPA-5)

Lat 46°25'00", long 112°17'07" (NAD 83), in $NW^1/_4SW^1/_4NW^1/_4$ sec.30, T.8 N., R.5 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Boulder batholith quartz monzonite.

WELL CHARACTERISTICS.--Drilled in June 1999, casing diameter 4 in., depth 110 ft.

DATUM.--Measuring point, top of PVC casing, 0.8 ft above land surface datum. Elevation of land-surface datum is 7,577.99 ft (NGVD 29).

PERIOD OF RECORD.--October 2001 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	28.25	July 18	26.60
Nov. 9	29.00	Aug. 16	29.30
May 20	25.13	Sept. 30	30.45
June 16	24.01		

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
JUN 16...	1400	66	2.0	6.3	67	6.0	18	3.17	2.52	1.07
AUG 16...	1400	--	1.0	6.2	66	5.5	18	3.11	2.50	1.04

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN 16...	.5	5.31	37	25	22	.38	.3	33.1	8.0	68	.09
AUG 16...	.6	5.51	38	25	20	.28	.3	31.6	7.5	64	.09

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 16...	3	.2	<.04	E.3	55	<.08	105	5.5
AUG 16...	2	.2	<.04	.5	38	<.08	93.5	7.8

E--Estimated.

462347112173301 08N06W36DCAA01 (BUCKEYE WELL BTMW-9)

LOCATION.--Lat 46°23'47", long 112°17'33", (NAD 27) in NE$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 15.3 ft.

DATUM.--Measuring point, top of protective casing, 2.7 ft above land surface datum. Elevation of land-surface datum is 7,040 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	0.30
Aug 24	2.75

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

Date	Time	Pump or flow period prior to sampling, minutes (72004)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)
JUN 13...	1000	5	--	6.0	904	3.0	460	140	27.8	6.42
AUG 24...	0900	3	6.9	6.1	911	5.0	490	147	30.7	7.19

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN 13...	.2	12.2	38	39	.85	E.1	40.4	431	689	.94
AUG 24...	.2	11.3	49	45	.81	E.1	44.6	436	708	.96

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 13...	4	2.5	23.4	7.9	2,880	.96	1,580	1,530
AUG 24...	<1.6	1.1	23.5	3.4	650	.16	1,380	1,210

E--Estimated.

462344112173701 08N06W36DCAC01 (BUCKEYE WELL BTMW-1)

LOCATION.--Lat 46°23'44", long 112°17'37", (NAD 27) in NE$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 10.6 ft.

DATUM.--Measuring point, top of PVC casing, 2.8 ft above land surface datum. Elevation of land-surface datum is 7,040 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	0.18
Aug 24	3.32

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

Date	Time	Pump or flow period prior to sampling, minutes (72004)	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)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Chloride, water, fltrd, mg/L (00940)
JUN 13...	1040	5	4.2	518	3.0	170	53.8	9.11	2.40	.3	8.22	<2	.67
AUG 24...	0930	3	4.0	575	7.0	190	57.3	10.3	2.88	.2	7.48	--	.74

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 13...	.4	41.6	235	6,200	.7	45.1	698	436	74.4	5,220	5,210
AUG 24...	.3	39.8	259	4,860	.6	27.9	426	1,240	81.5	5,770	3,880

462342112174201 08N06W36DCBD02 (BUCKEYE WELL BTMW-3)

LOCATION.--Lat 46°23'42", long 112°17'42", (NAD 27) in NW$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 10.5 ft.

DATUM.--Measuring point, top of PVC casing, 3.0 ft above land surface datum. Elevation of land-surface datum is 7,035 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	3.27
Aug 24	4.33

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

Date	Time	Pump or flow period prior to sampling, minutes (72004)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)
JUN										
13...	1120	5	--	6.1	575	4.0	190	54.0	13.4	1.37
AUG										
24...	1000	3	.6	5.9	456	6.5	160	46.1	10.8	1.01

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN									
13...	.3	8.62	31	.90	.1	43.0	234	425	.58
AUG									
24...	.2	6.85	34	.49	.3	37.1	192	358	.49

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN								
13...	43	4,190	3.73	<8.4	43,300	1.25	1,830	1,260
AUG								
24...	67	2,930	3.34	1.0	37,300	1.97	1,700	1,310

462342112174601 08N06W36DCBC01 (BUCKEYE WELL BTMW-6)

LOCATION.--Lat 46°23'42", long 112°17'46", (NAD 27) in NW$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 10 ft.

DATUM.--Measuring point, top of PVC casing, 3.2 ft above land surface datum. Elevation of land-surface datum is 7,035 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	1.02
Aug 24	3.27

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

Date	Time	Pump or flow period prior to sampling, minutes (72004)	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)
JUN 13...	1130	5	6.7	381	4.0	150	44.3	10.1	3.30
AUG 24...	1100	3	6.5	360	10.0	180	54.2	11.9	3.70

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN 13...	.4	11.2	83	79	.46	.1	17.2	86.2	224	.30
AUG 24...	.2	7.46	106	96	.41	.1	19.9	89.6	250	.34

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 13...	<2	1.9	.14	.8	53	<.08	3,220	6.6
AUG 24...	4	9.9	<.04	3.1	1,180	.38	3,700	5.2

462341112174601 08N06W36DCCB01 (BUCKEYE WELL BTMW-7)

LOCATION.--Lat 46°23'41", long 112°17'46", (NAD 27) in $SW^1/_4SW^1/_4SE^1/_4$ sec.36, T.8N., R.6W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 11 ft.

DATUM.--Measuring point, top of PVC casing, 2.9 ft above land surface datum. Elevation of land-surface datum is 7,035 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	2.05
Aug. 24	2.91

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

Date	Time	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
JUN									
13...	1200	--	6.6	318	5.0	97	27.2	7.04	1.58
AUG									
24...	1030	1.0	6.3	314	10.5	100	28.9	7.25	1.80

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN											
13...	.2	5.15	10	21	58	.43	.3	27.2	94.0	224	.30
AUG											
24...	.2	5.37	10	18	54	.38	.3	31.0	96.1	231	.31

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN								
13...	5	443	<.04	.8	24,100	.30	2,300	5.4
AUG								
24...	6	538	<.04	.6	24,500	.41	2,400	6.1

462342112174801 08N06W36DCBC02 (BUCKEYE WELL BTMW-8)

LOCATION.--Lat 46°23'42", long 112°17'48", (NAD 27) in NW$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006.

HYDROGEOLOGIC UNIT.--Quaternary alluvium.

WELL CHARACTERISTICS.--Drilled in December 1998, casing diameter 2 in., depth 10.5 ft.

DATUM.--Measuring point, top of PVC casing, 2.8 ft above land surface datum. Elevation of land-surface datum is 7,035 ft (NGVD 29).

PERIOD OF RECORD.--December 1998 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL
June 13	4.23
Aug 24	5.53

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

Date	Time	Pump or flow period prior to sampling, minutes (72004)	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)
JUN 13...	1210	5	6.7	306	4.0	110	33.4	7.63	1.45
AUG 24...	1200	3	6.8	281	7.5	120	33.7	7.54	1.85

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN 13...	.2	5.74	77	92	.66	.3	30.2	55.7	204	.28
AUG 24...	.2	4.89	91	104	.54	.2	27.7	33.5	184	.25

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN 13...	47	65.3	.10	.5	10,700	E.04	1,040	2,210
AUG 24...	10	87.7	<.04	E.3	11,300	E.06	771	184

E--Estimated.

462347112180401 BASIN CREEK BELOW BUCKEYE MINE, NEAR LOGGING ROAD, NEAR BASIN, MT

LOCATION.--Lat 46°23'47", long 112°18'04" (NAD 27), in $SW^1/_4SE^1/_4NW^1/_4$ sec.36, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, at old logging road crossing, 0.5 mi downstream from the Buckeye Mine, and 8.7 mi north of Basin.

DRAINAGE AREA.--2.54 mi^2.

PERIOD OF RECORD.--January 2000 to current year.

GAGE.--None. Elevation at site is 6,940 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)
MAY											
04...	1410	2.4	6.8	80	10.0	1.0	34	10.0	2.17	43.8	56
24...	0830	10	7.6	43	4.0	1.5	18	5.16	1.18	10.2	13
AUG											
03...	0900	.76	7.4	75	14.0	8.0	29	8.48	2.00	13.9	14
SEP											
21...	0900	.89	7.6	82	4.0	3.5	35	10.2	2.21	15.5	20.5

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY											
04...	.70	.75	7.3	8.4	1.35	3.42	133	128	71	3	.02
24...	.26	.29	3.6	4.6	.94	3.23	41.6	45	71	4	.11
AUG											
03...	.11	.10	1.6	1.6	.29	.58	27.3	30	48	2	<.01
SEP											
21...	.06	.13	.9	1.7	.20	2.15	23.7	24	55	2	<.01

462500112170201 UNNAMED STREAM (LAD 1) DRAINING LUTTRELL REPOSITORY AREA, NEAR RIMINI

LOCATION.--Lat 46°25'00", long 112°17'03" (NAD 83), in $NE^1/_4SW^1/_4NW^1/_4$ sec.30, T.8 N., R.5 W., Jeffferson County, Hydrologic Unit 10020006.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June 2004.

GAGE.--None. Elevation at sampling location is 7,560 ft (NGVD 29).

REMARKS.--No flow during September 2005 sampling trip.

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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
JUN 15...	1115	.01	5.7	67	10.0	3.5	19	5.42	1.44	.65	.4

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	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)
JUN 15...	3.68	28	.30	<.1	10.8	22.8	98	.9	<2	.05	.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)
JUN 15...	2.3	2.8	38	40	E.07	.08	4.4	4	3.9	4

E--Estimated.

462500112170501 UNNAMED STREAM (LAD 2) DRAINING LUTTRELL REPOSITORY AREA, NEAR RIMINI

LOCATION.--Lat 46°25'00", long 112°17'06" (NAD 83), in $NE^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.30, T.8 N., R.5 W., Jeffferson County, Hydrologic Unit 10020006.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.-- June 2004.

GAGE.--None. Elevation at sampling location is 7,560 ft (NGVD 29).

REMARKS.--No flow during September 2005 sampling trip.

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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
JUN 15...	1045	.01	5.9	82	10.0	3.0	21	5.67	1.77	.90	.5	5.43

Date	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
JUN 15...	34	7	.54	<.1	11.3	27.4	57	.08	.00	57	1.4	E1

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
JUN 15...	.07	.07	2.2	2.5	28	30	E.04	E.05	1.2	1	6.2	6

E--Estimated.

462442112174602 UNNAMED TRIBUTARY TO GRUB CREEK AT MOUTH, SS NO. 6, NEAR RIMINI, MT

LOCATION.--Lat 46°24'42", long 112°17'46" (NAD 27), $SW^1/_4NW^1/_4SE^1/_4$ sec.25, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, 30 ft upstream from Grub Creek and 5.9 mi south of Rimini.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.-July 2003 to current year.

GAGE.--None. Elevation at sampling site is 7,320 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, 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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
JUN													
15...	1245	1.8	9.7	6.7	76	--	7.5	24	6.97	1.52	2.27	.2	2.21
JUL													
29...	1100	.06	--	6.4	120	19.0	10.0	38	10.9	2.55	3.27	.3	4.79
AUG													
22...	1300	.02	8.8	6.2	114	22.5	10.5	38	10.6	2.71	3.41	.3	3.60

Date	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
JUN												
15...	15	7	1.14	E.1	8.07	23.1	50	.07	.24	69	1.1	2
JUL												
29...	20	11	1.84	E.1	12.5	35.2	78	.11	.01	16	.5	<2
AUG												
22...	16	13	1.66	E.1	14.1	33.4	77	.11	.00	19	.6	.86

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
JUN												
15...	.36	.38	5.7	6.9	91	290	.25	1.97	73.9	73	73.0	70
JUL												
29...	.21	.20	2.3	2.4	62	170	.11	.36	99.7	98	48.5	50
AUG												
22...	.11	.10	1.4	1.6	64	180	.13	.51	80.5	80	31.5	33

E--Estimated.

462442112174601 GRUB CREEK ABOVE MOUTH OF UNNAMED TRIBUTARY (GC03), NEAR RIMINI, MT

LOCATION.--Lat 46°24'42", long 112°17'46" (NAD 27), $NE^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.25, T.8 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, 1.1 mi upstream from Basin Creek and 5.9 mi south of Rimini.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--None. Elevation at sampling site is 7,290 ft (NGVD 29).

REMARKS.--Only one sample available this water year due to no flow on July 29 and Aug. 23 sampling trips.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)
JUN 15...	1300	1.8	9.4	6.5	27	6.5	10	2.82	.65	.52	.2	1.15

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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)
JUN 15...	7	.32	E.1	7.95	5.1	23	.03	.11	146	.9	2	<.04	.32

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)
JUN 15...	1.7	17.1	31	60	.24	.22	1.1	2	E1.6	56

E--Estimated.

462155112181501 JACK CREEK ABOVE BULLION MINE TRIBUTARY, NEAR BASIN, MT

LOCATION.--Lat 46°21'55", long 112°18'15" (NAD 27), in $NW^1/_4SW^1/_4SW^1/_4$ sec.12, T.7 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, 0.2 mi upstream of Bullion Mine tributary, 2.4 mi upstream of Basin Creek, and 7.1 mi north of Basin.

DRAINAGE AREA.--2.55 mi^2.

PERIOD OF RECORD.--October 1996 to August 1999, March 2003 to current year.

GAGE.--None. Elevation at site is 6,580 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)
MAY											
02...	1400	.78	7.7	118	7.0	0.0	52	15.5	3.23	4.0	4
24...	1130	7.7	7.4	58	6.0	2.0	25	7.21	1.60	4.0	5
AUG											
03...	1100	.94	7.4	86	17.5	9.0	36	10.9	2.20	6.1	6
SEP											
21...	1200	.73	7.2	98	12.0	5.0	43	13.0	2.54	5.2	5.3

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY											
02...	.16	.16	2.8	3.3	<.08	.12	27.0	26	41	2	<.01
24...	.06	.07	4.2	25.6	.11	.93	9.0	12	46	4	.08
AUG											
03...	.10	.08	2.8	2.4	<.08	.11	12.7	14	50	1	<.01
SEP											
21...	.21	.21	3.0	3.3	<.08	.07	31.5	31	43	1	<.01

462120112173701 BULLION MINE ADIT NEAR BASIN, MT

LOCATION.--Lat 46°21'20", long 112°17'37" (NAD 27), in $NW^1/_4SW^1/_4SE^1/_4$ sec.13, T.7 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, at PVC pipe draining the Bullion mine adit about 400 ft upstream from the Bullion mine tributary, 2 mi upstream from Jack Creek, and 6.3 mi northwest of Basin.

DRAINAGE AREA.--Indeterminate (subsurface).

PERIOD OF RECORD.--October 1999 to current year.

GAGE.--None. Elevation at site is 7,360 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
NOV													
09...	0930	<.01	2.9	1,540	8.0	4.5	290	71.0	27.4	--	--	--	--
MAY													
04...	1300	<.01	3.3	1,350	15.5	6.5	370	94.2	33.3	3.50	.1	5.90	3
24...	1030	.01	3.5	1,570	4.5	6.5	350	83.9	33.1	5.13	.2	6.79	4
JUL													
12...	1100	.01	3.4	2,630	24.0	6.0	910	222	85.7	7.61	.2	11.2	3
AUG													
03...	1030	.01	2.6	2,520	12.0	5.0	330	81.7	30.9	2.64	.1	4.25	3
SEP													
21...	1045	.01	2.8	2,000	10.0	4.5	300	75.4	28.3	--	--	--	--

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)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
NOV									
09...	--	--	--	--	--	--	521	300	--
MAY									
04...	.51	.4	43.6	733	10,500	16.3	1,650	378	1.1
24...	<1.00	.4	36.4	900	10,300	17.2	3,840	376	1.0
JUL									
12...	1.25	.5	114	1,440	24,000	39.0	5,320	630	3.7
AUG									
03...	1.14	.5	40.0	1,260	21,000	29.0	2,920	523	3.2
SEP									
21...	--	--	--	--	--	--	1,210	410	--

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV								
09...	4,870	--	295	--	--	--	--	33,000
MAY								
04...	3,540	195,000	298	20,400	<.01	63.9	.4	37,000
24...	3,370	210,000	301	19,800	<.01	79.9	E.1	47,600
JUL								
12...	18,700	300,000	664	29,000	E.01	129	E7	82,200
AUG								
03...	13,700	251,000	536	25,800	<.01	110	.6	56,000
SEP								
21...	9,100	--	433	--	--	--	--	38,800

E--Estimated.

462153112181701 BULLION MINE TRIBUTARY AT MOUTH, NEAR BASIN, MT

LOCATION.--Lat 46°21'53", long 112°18'17" (NAD 27), in $SE^1/_4NW^1/_4NW^1/_4$ sec.13, T.7 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, near confluence with Jack Creek, 2.2 mi upstream from Basin Creek, and 6.7 mi northwest of Basin.

DRAINAGE AREA.--1.19 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--None. Elevation at site is 6,595 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)
NOV													
09...	0830	.17	6.2	185	4.0	0.0	66	18.6	4.75	1.0	4	24.2	22.9
MAY													
02...	1430	.30	7.5	147	7.0	0.0	54	15.6	3.70	2.0	17	12.1	12.7
24...	1200	3.6	7.2	60	6.0	3.0	22	6.36	1.46	5.1	28	3.11	3.20
JUL													
12...	1200	1.1	7.2	118	25.0	11.0	39	11.4	2.58	2.2	38	17.1	18.1
AUG													
03...	1130	.37	4.5	218	17.5	11.0	70	20.1	4.76	2.1	41	36.4	35.5
SEP													
21...	1130	.25	4.0	290	12.0	6.0	92	26.2	6.40	1.5	22.3	49.9	51.2

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)	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)
NOV									
09...	115	197	.32	2.68	2,530	2,760	96	3	<.01
MAY									
02...	40.0	137	.64	7.15	1,350	1,480	56	5	<.01
24...	36.5	53.4	1.98	18.2	340	370	37	13	.13
JUL									
12...	112	294	.34	5.11	1,950	2,080	97	4	.01
AUG									
03...	604	659	4.39	9.78	4,240	4,510	97	16	.02
SEP									
21...	760	866	8.95	12.5	5,120	5,740	99	11	.01

462047112201901 JACK CREEK AT MOUTH, NEAR BASIN, MT

LOCATION.--Lat 46°20'47", long 112°20'19" (NAD 27), in NW$^1/_4$SE$^1/_4$SE$^1/_4$ sec.22, T.7 N., R.6 W., Jefferson County, Hydrologic Unit 10020006, at Basin Creek road crossing, 7 mi northwest of Basin.

DRAINAGE AREA.--8.55 mi^2.

PERIOD OF RECORD.--January 2000 to current year.

GAGE.--None. Elevation at site is 6,260 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)
MAY													
02...	1220	4.9	7.6	92	4.0	0.5	35	9.93	2.44	4.1	11	1.58	2.04
24...	0945	22	7.4	52	6.0	2.0	20	5.83	1.40	4.3	13	.80	.96
AUG													
03...	1000	2.3	7.4	99	16.5	9.0	36	10.3	2.46	4.4	7	3.76	3.56
SEP													
21...	1000	1.8	7.6	107	9.5	4.5	40	11.6	2.69	2.6	4.7	3.16	3.54

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)	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)
MAY									
02...	17.6	33.2	.63	4.34	226	261	70	7	.09
24...	14.1	21.0	.44	4.26	93.3	109	34	12	.72
AUG									
03...	23.9	40.5	.35	1.09	414	434	87	2	.01
SEP									
21...	13.6	27.0	.08	.32	406	423	91	1	<.01

06031600 BASIN CREEK AT BASIN, MT

LOCATION.--Lat 46°16'16", long 112°15'42" (NAD 27), in $NE^1/_4NW^1/_4SW^1/_4$ sec.17, T.6 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, at county bridge on old Interstate 15 in Basin.

DRAINAGE AREA.--41.1 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--None. Elevation at site is 5,340 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)
MAY											
02...	1100	24	7.7	76	4.0	1.0	28	8.14	1.87	4.1	6
23...	1315	131	7.4	42	13.0	6.0	15	4.22	.975	4.2	7
AUG											
03...	1300	7.3	7.8	85	23.0	17.0	31	8.76	2.13	6.9	7
SEP											
21...	1330	4.8	8.0	103	14.5	10.5	40	11.7	2.61	4.9	5.4

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY											
02...	.28	.33	5.3	7.2	.36	1.21	56.7	62	46	6	.40
23...	.29	.38	6.7	9.2	.37	3.28	36.4	48	53	11	3.9
AUG											
03...	.24	.23	4.6	4.8	.16	.30	31.9	37	89	1	.02
SEP											
21...	.22	.22	3.8	3.0	.13	.17	37.2	35	57	1	.01

461905112144201 CATARACT CREEK ABOVE UNCLE SAM GULCH, NEAR BASIN, MT

LOCATION.--Lat 46°19'05", long 112°14'42" (NAD 27), in $SE^1/_4SE^1/_4NE^1/_4$ sec.32, T.7 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, 100 ft upstream from Uncle Sam Gulch and 3.4 mi northeast of Basin.

DRAINAGE AREA.--22.2 mi^2.

PERIOD OF RECORD.--October 1996 to September 2003, May to August 2005.

GAGE.--None. Elevation at site is 6,320 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)
MAY													
04...	1100	16	7.8	84	10.0	1.0	36	11.0	2.08	2.0	2	.17	.20
24...	1400	85	7.6	47	9.5	4.0	19	5.63	1.14	2.5	4	.17	.25
AUG													
04...	1030	3.5	7.9	110	17.0	10.0	48	15.0	2.51	3.0	3	.21	.20
SEP													
22...	1115	2.8	7.6	120	11.5	4.0	53	16.7	2.80	2.4	2.6	.22	.24

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY									
04...	6.0	6.8	.29	1.05	45.5	44	73	2	.09
24...	6.6	9.1	.33	2.58	40.7	49	46	9	2.1
AUG									
04...	4.3	4.3	.19	.33	43.7	42	60	3	.03
SEP									
22...	3.6	3.7	.09	.20	54.4	53	80	1	.01

462053112153601 CRYSTAL MINE ADIT NEAR BASIN, MT

LOCATION.--Lat 46°20'53", long 112°15'36" (NAD 27), in NE$^1/_4$SW$^1/_4$NW$^1/_4$ sec.20, T.7 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, adit discharge from Cyrstal Mine, about 3 mi upstream from the mouth of Uncle Sam Gulch, and 5.25 mi north of Basin.

DRAINAGE AREA.--Indeterminate (subsurface).

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--None. Elevation at site is 7,600 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
NOV													
09...	1130	.04	4.0	809	10.0	5.0	200	51.5	16.8	--	--	--	--
MAY													
04...	0900	.03	4.1	639	6.0	4.5	210	55.9	17.2	E1.17	.1	4.07	--
26...	0915	.06	3.7	682	--	4.5	190	49.7	16.1	2.48	.1	4.06	4
JUL													
12...	1000	.07	4.6	836	20.0	5.5	230	62.3	17.1	1.51	.1	3.30	3
AUG													
04...	1130	.08	4.4	836	--	7.0	230	61.9	17.7	1.42	.1	3.60	3
SEP													
22...	1230	.06	4.5	790	20.0	5.5	200	54.5	16.0	--	--	--	--

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)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)
NOV													
09...	--	--	--	--	--	--	--	--	--	76.2	607	--	5,260
MAY													
04...	.41	E.1	22.5	341	E442	E.60	E.03	1,810	1.39	57.3	642	<.8	4,420
26...	.38	E.1	21.1	353	E447	E.61	E.06	1,830	.96	37.0	588	<.8	4,300
JUL													
12...	.79	.1	22.1	494	E605	E.82	E.07	6,090	2.59	213	630	<.8	8,630
AUG													
04...	.78	.2	22.3	495	E603	E.82	E.08	5,930	2.55	159	622	<.8	7,740
SEP													
22...	--	--	--	--	--	--	--	--	--	110	586	--	5,170

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV							
09...	--	37.5	--	--	--	--	43,600
MAY							
04...	42,000	18.7	14,600	<.01	31.6	.9	50,000
26...	20,100	22.1	12,400	<.01	37.5	<.2	44,300
JUL							
12...	47,800	51.9	11,800	<.01	38.1	<.2	50,500
AUG							
04...	51,800	67.4	12,500	<.01	38.0	<.2	46,900
SEP							
22...	--	56.8	--	--	--	--	34,800

E--Estimated.

461904112144401 UNCLE SAM GULCH AT MOUTH, NEAR BASIN, MT

LOCATION.--Lat 46°19'04", long 112°14'44" (NAD 27), in $SE^1/_4SE^1/_4NE^1/_4$ sec.32, T.7 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, at confluence with Cataract Creek, 3.4 mi northeast of Basin.

DRAINAGE AREA.--3.06 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--None. Elevation at site is 6,315 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)
NOV											
09...	1230	.55	6.3	142	11.0	2.0	55	16.2	3.42	3.9	4
MAY											
04...	1020	1.0	7.5	112	10.0	2.0	44	13.1	2.63	4.9	9
24...	1445	7.0	7.1	57	9.0	4.5	20	6.00	1.25	7.2	66
JUL											
12...	0830	1.6	7.8	101	18.0	8.5	37	11.1	2.18	5.5	18
AUG											
04...	1000	.74	7.7	*142	17.0	8.5	58	17.7	3.29	6.5	8
SEP											
22...	1045	.81	7.3	162	11.5	3.5	64	19.6	3.69	4.0	5.5

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
NOV											
09...	19.5	18.3	54.3	60.0	.33	.99	1,740	1,850	50	1	<.01
MAY											
04...	12.5	12.5	60.9	71.2	.63	3.90	1,180	1,200	75	2	.01
24...	5.12	7.17	70.1	176	1.17	38.2	452	578	35	40	.76
JUL											
12...	12.6	13.4	75.8	107	1.03	6.47	1,200	1,310	83	2	.01
AUG											
04...	22.7	21.0	82.8	95.2	.99	2.48	1,960	1,990	62	1	<.01
SEP											
22...	21.9	23.4	61.2	80.2	.41	1.41	1,970	1,950	80	1	<.01

*--Laboratory measurement of specific conductance.

06031960 CATARACT CREEK AT BASIN, MT

LOCATION.--Lat 46°16'17", long 112°14'28" (NAD 27), in $NE^1/_4NW^1/_4SW^1/_4$ sec.16, T.6 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, at county bridge, 0.1 mi upstream from the Boulder River, and 1 mi east of Basin.

DRAINAGE AREA.--29.3 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--None. Elevation at site is 5,270 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)
MAY											
02...	1000	7.4	7.8	104	5.5	0.5	44	13.4	2.59	2.7	4
23...	1230	118	7.6	47	9.5	4.5	19	5.61	1.13	2.9	11
AUG											
03...	1400	5.1	7.8	123	21.0	17.0	53	16.6	2.91	5.3	5
SEP											
22...	0930	3.3	7.8	145	6.0	4.5	66	20.3	3.60	3.7	3.9

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY											
02...	1.34	1.49	12.8	15.9	.56	2.23	160	167	63	3	.06
23...	.67	.98	15.7	25.9	.52	7.57	77.8	102	34	17	5.4
AUG											
03...	2.07	1.90	11.1	12.1	.25	.76	155	177	82	2	.03
SEP											
22...	2.56	2.66	8.7	8.6	.15	.29	245	245	75	1	.01

06032400 BOULDER RIVER BELOW LITTLE GALENA GULCH, NEAR BASIN, MT

LOCATION.--Lat 46°14'58", long 112°10'27" (NAD 27), in $NE^1/_4NE^1/_4NW^1/_4$ sec.25, T.6 N., R.5 W., Jefferson County, Hydrologic Unit 10020006, at county bridge, 0.2 mi downstream from Little Galena Gulch, and 2.5 mi northeast of Basin.

DRAINAGE AREA.--318 mi^2.

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--None. Elevation at site is 5,020 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)
MAY											
02...	0830	82	7.7	111	2.0	1.0	43	12.8	2.64	3.3	4
23...	0930	703	7.5	60	10.5	5.5	22	6.48	1.43	4.0	8
AUG											
04...	0830	32	7.9	140	12.0	13.5	55	16.7	3.27	5.8	5
SEP											
22...	0830	27	7.6	158	1.5	5.5	61	18.4	3.77	4.5	5

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY											
02...	.29	.32	6.6	8.0	.28	.76	55.5	62	83	4	.88
23...	.23	.38	8.1	15.7	.38	4.41	35.2	53	53	26	49
AUG											
04...	.45	.45	7.1	7.5	.14	.32	65.4	77	76	2	.17
SEP											
22...	.46	.55	5.2	6.1	E.07	.39	92.6	99	80	2	.15

E--Estimated.

06033000 BOULDER RIVER NEAR BOULDER, MT

LOCATION.--Lat 46°12'40", long 112°05'27" (NAD 27), in $SE^1/_4NE^1/_4SW^1/_4$ sec.3, T.5 N., R.4 W., Jefferson County, Hydrologic Unit 10020006, on left bank 40 ft downstream from county bridge, 1.1 mile downstream from Muskrat Creek, 2.0 mi southeast of Boulder, and at river mile 44.1.

DRAINAGE AREA.--381 mi^2.

PERIOD OF RECORD.--May 1929 to December 1932, March 1934 to September 1972, October 1984 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1931.

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft (NGVD 29). Prior to Aug. 29, 1946, nonrecording gage at present site and elevation.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversions for irrigation of about 3,500 acres upstream from station. Several unpublished 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 May 22, 1981, reached a discharge of 7,000 ft^3/s, gage height, 12.3 ft, from floodmarks.

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	28	22	22	e18	25	21	34	94	409	273	35	19
2	28	34	24	e15	25	21	39	88	522	239	33	17
3	29	34	25	e16	24	22	45	91	797	214	36	16
4	29	24	27	e17	24	22	56	99	1,020	193	34	16
5	29	26	25	e15	25	23	47	123	914	176	31	16
6	31	36	23	e17	23	24	47	174	996	166	28	15
7	30	33	24	e18	22	26	69	226	851	154	28	15
8	32	32	24	e17	23	31	106	274	696	141	28	15
9	34	34	25	e16	23	37	89	292	604	128	36	14
10	31	35	25	e16	22	47	71	521	540	127	30	15
11	30	28	29	e17	21	47	55	544	515	127	29	17
12	30	23	30	e18	21	50	57	425	604	113	26	18
13	31	20	23	e15	22	31	65	363	619	98	27	18
14	31	24	24	e13	22	33	84	390	522	89	27	18
15	32	26	28	e13	21	34	66	434	531	85	27	18
16	32	32	26	e15	e18	31	71	522	507	82	26	18
17	30	30	24	e20	e18	30	91	786	585	80	23	19
18	32	24	25	e25	e18	21	107	655	519	76	21	27
19	33	28	27	e22	19	30	89	742	448	66	19	26
20	34	26	26	22	19	31	77	745	390	60	17	23
21	36	18	24	28	19	29	68	756	354	57	17	20
22	39	18	23	26	20	26	63	635	327	53	17	20
23	39	28	e15	26	20	e22	90	618	340	55	19	19
24	36	33	e17	32	20	e20	123	522	270	49	19	23
25	28	37	22	30	20	e22	148	442	244	47	18	25
26	29	31	24	30	20	25	164	397	273	50	17	25
27	32	20	23	30	20	32	159	374	385	46	16	24
28	36	20	22	29	20	39	119	366	394	42	16	23
29	35	23	22	28	---	48	107	364	354	40	15	24
30	36	22	22	27	---	47	108	336	322	39	16	24
31	33	---	e20	26	---	35	---	312	---	36	19	---
TOTAL	995	821	740	657	594	957	2,514	12,710	15,852	3,201	750	587
MEAN	32.1	27.4	23.9	21.2	21.2	30.9	83.8	410	528	103	24.2	19.6
MAX	39	37	30	32	25	50	164	786	1,020	273	36	27
MIN	28	18	15	13	18	20	34	88	244	36	15	14
AC-FT	1,970	1,630	1,470	1,300	1,180	1,900	4,990	25,210	31,440	6,350	1,490	1,160

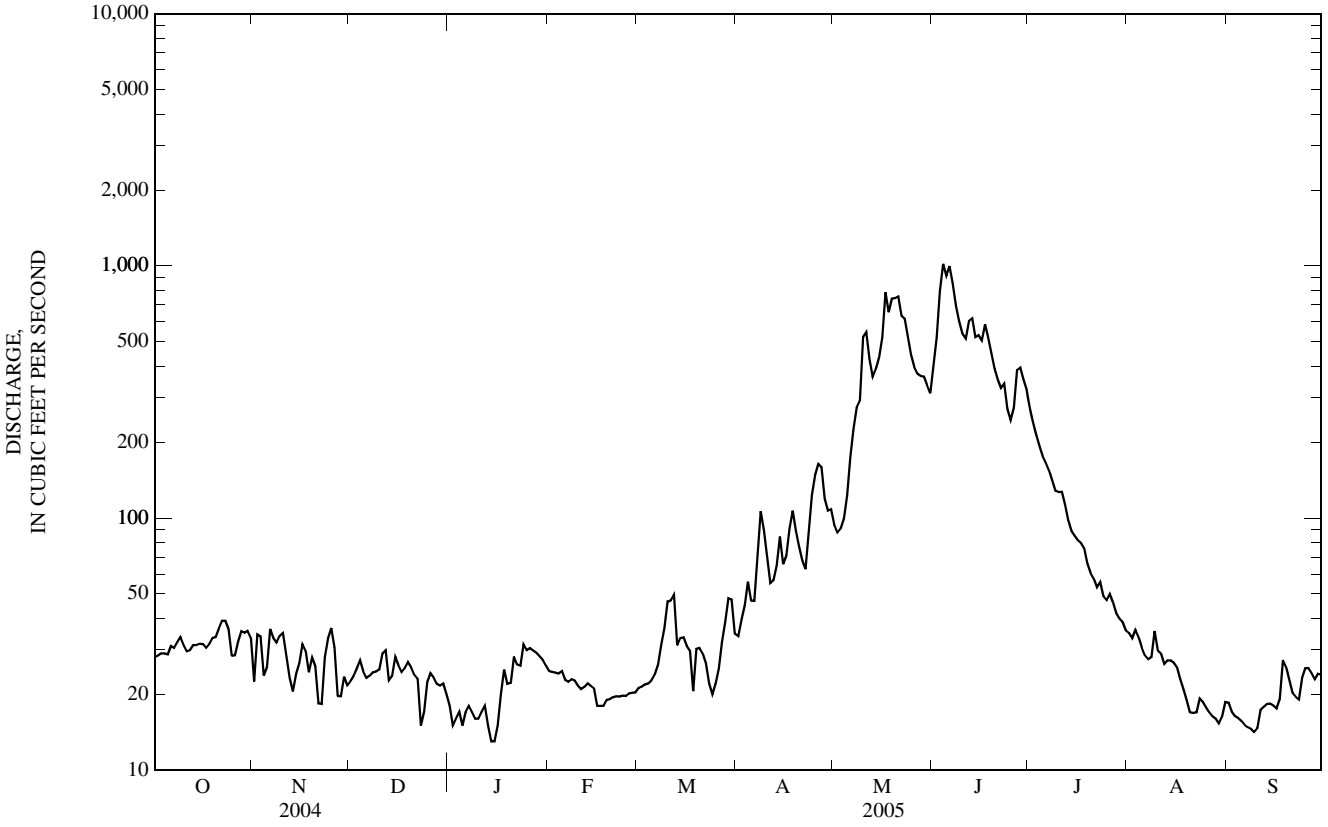
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)*

MEAN	36.2	34.5	28.4	26.2	30.3	47.9	165	457	404	93.9	30.8	28.3
MAX	113	71.2	53.0	42.1	68.5	121	511	961	1,027	374	194	156
(WY)	(1966)	(1966)	(1996)	(1969)	(1971)	(1986)	(1930)	(1948)	(1965)	(1938)	(1993)	(1993)
MIN	5.85	9.09	7.45	10.1	7.71	20.7	46.0	126	70.4	10.9	7.11	5.69
(WY)	(1936)	(1936)	(1936)	(1937)	(1937)	(1937)	(1967)	(1992)	(2000)	(1931)	(1931)	(1935)

06033000 BOULDER RIVER NEAR BOULDER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005*	
ANNUAL TOTAL	27,634.9		40,378			
ANNUAL MEAN	75.5		111		116	
HIGHEST ANNUAL MEAN					211	1965
LOWEST ANNUAL MEAN					48.2	2000
HIGHEST DAILY MEAN	478	Jun 11	1,020	Jun 4	2,400	May 22, 1948
LOWEST DAILY MEAN	9.2	Aug 17	13	Jan 14	0.00	Jul 15, 1931
ANNUAL SEVEN-DAY MINIMUM	11	Aug 16	15	Sep 4	1.0	Jan 21, 1930
MAXIMUM PEAK FLOW			1,110	Jun 4	3,490	Jun 9, 1964
MAXIMUM PEAK STAGE			7.82	Jun 4	10.90	Jun 9, 1964
INSTANTANEOUS LOW FLOW					0.00	Jul 15, 1931
ANNUAL RUNOFF (AC-FT)	54,810		80,090		83,830	
10 PERCENT EXCEEDS	206		390		334	
50 PERCENT EXCEEDS	30		30		36	
90 PERCENT EXCEEDS	18		18		16	

*--During periods of operation (May 1929 to December 1932, March 1934 to September 1972, October 1984 to present).
e--Estimated.



06035000 WILLOW CREEK NEAR HARRISON, MT

LOCATION.--Lat 46°43'23", long 111°44'25" (NAD 27), in $SE^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.28, T.1 S., R.1 W., Madison County, Hydrologic Unit 10020005, on right bank 2.2 mi upstream from Willow Creek Dam, 2.5 mi northeast of Harrison, and at river mile 13.6.

DRAINAGE AREA.--83.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to September 1982, October 1982 to October 2002, March 2004 to current year (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1559: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,750 ft (NGVD 29). Prior to Oct. 8, 1946, water-stage recorder at elevation 0.22 ft higher, with different concrete control.

REMARKS.--Seasonal water-discharge records good except those for Mar. 1 to May 10, which are fair, and those for estimated daily discharges, which are poor. Diversions for irrigation of about 12,500 acres of which 3,500 acres are in Norwegian Creek drainage. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the season.

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						21	25	27	131	121		
2						e18	24	26	114	113		
3						e16	18	25	97	98		
4						e15	19	25	90	86		
5						e15	20	23	81	78		
6						16	19	27	102	74		
7						16	15	32	100	68		
8						18	16	41	98	60		
9						21	14	46	102	51		
10						21	12	109	94	50		
11						19	12	159	90	46		
12						21	11	97	124	35		
13						e19	12	82	116	32		
14						e17	14	76	91	28		
15						e18	11	77	95	25		
16						20	11	94	121	20		
17						20	14	131	166	15		
18						e18	23	125	203	15		
19						21	26	140	188	13		
20						21	28	153	185	7.9		
21						30	28	172	200	5.1		
22						26	31	154	249	5.4		
23						24	34	172	295	5.6		
24						e22	30	152	288	5.1		
25						e20	28	129	250	5.5		
26						e25	29	110	227	6.9		
27						34	31	103	203	5.8		
28						35	30	96	189	4.9		
29						30	27	84	159	6.0		
30						26	30	85	134	5.9		
31						e23	---	77	---	4.9		
TOTAL						666	642	2,849	4,582	1,097.0		
MEAN						21.5	21.4	91.9	153	35.4		
MAX						35	34	172	295	121		
MIN						15	11	23	81	4.9		
AC-FT						1,320	1,270	5,650	9,090	2,180		

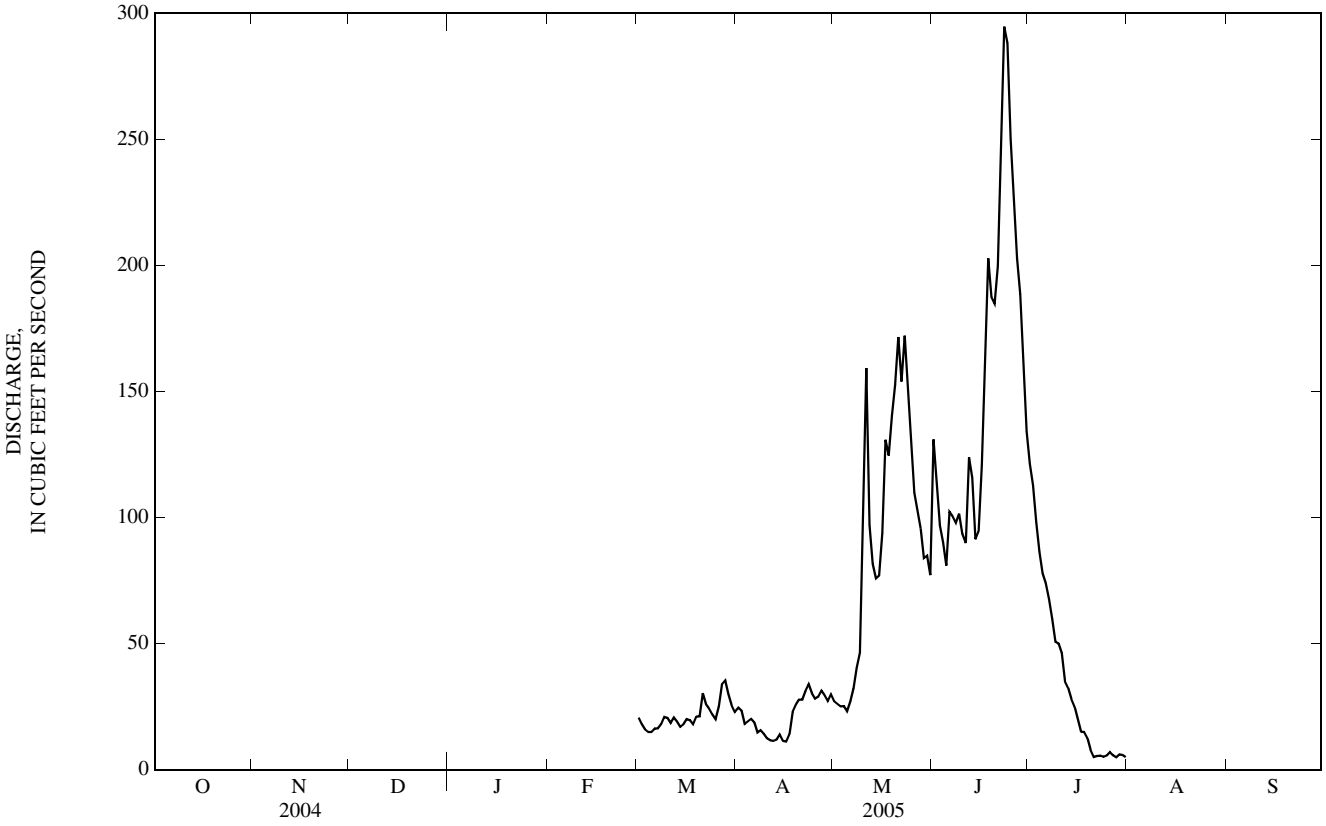
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)*

MEAN	29.1	33.7	29.9	24.7	27.4	31.3	40.9	62.3	111	60.0	12.3	18.9
MAX	80.1	56.5	47.4	43.6	60.9	44.7	72.5	167	300	278	61.0	62.4
(WY)	(1983)	(1947)	(1948)	(1976)	(1963)	(1974)	(1996)	(1984)	(1995)	(1975)	(1993)	(1965)
MIN	2.01	9.40	11.5	10.0	12.0	18.0	11.1	11.1	10.1	1.52	1.12	2.01
(WY)	(1989)	(1955)	(1955)	(1940)	(1940)	(1940)	(1961)	(2002)	(1966)	(1988)	(1988)	(1956)

06035000 WILLOW CREEK NEAR HARRISON, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1938 - 2002*		SEASONS 1983 - 2005*	
ANNUAL MEAN			40.7			
HIGHEST ANNUAL MEAN			76.0	1975		
LOWEST ANNUAL MEAN			19.2	1954		
HIGHEST DAILY MEAN	295	Jun 23	591	Jun 27, 1944	423	Jun 6, 1995
LOWEST DAILY MEAN	4.9	Jul 28	1.6	Sep 16, 1952	0.59	Jul 23, 1988
ANNUAL SEVEN-DAY MINIMUM			1.6	Sep 16, 1952		
MAXIMUM PEAK FLOW	305	Jun 24	813	Feb 3, 1963	448	Jun 6, 1995
MAXIMUM PEAK STAGE	2.63	Jun 24	4.24	Feb 3, 1963	3.38	Jun 6, 1995
INSTANTANEOUS LOW FLOW	a4.5	Jul 21	b1.4	Sep 17, 1956	c0.32	Jul 21, 1988
ANNUAL RUNOFF (AC-FT)			29,480			
10 PERCENT EXCEEDS			88			
50 PERCENT EXCEEDS			30			
90 PERCENT EXCEEDS			6.9			

*--During periods of operation (April 1938 to September 1982; October 1982 to October 2002, March 2004 to current year, seasonal records only).
a--Gage height, 0.41 ft.
b--Gage height, 0.39 ft.
c--Gage height, 0.26 ft.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2002 to September 2002, March to July 2004, April to July 2005 (seasonal records only).

INSTRUMENTATION.--Temperature probe installed Apr. 23, 2002.

REMARKS.--Daily water temperatures record rated fair. 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, 29.5°C, July 13,14, 2002, minimum, 0.0°C Oct. 24-27,2002 and Mar. 2-7 and 11, 2004.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: During period of seasonal operation, maximum, 26.5°C, July 23; minimum, 0.0°C, many days in March.

06035000 WILLOW CREEK NEAR HARRISON, 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
		MARCH			APRIL			MAY			JUNE	
1	6.0	0.5	2.5	8.0	1.0	4.0	13.0	2.5	7.5	9.0	7.0	8.0
2	6.0	0.0	2.5	11.0	2.5	6.5	13.5	3.5	8.0	9.0	6.5	7.5
3	6.0	0.0	2.5	9.0	3.0	6.0	13.5	4.5	8.5	11.0	7.0	8.5
4	6.5	0.0	2.5	6.0	4.0	5.0	14.0	5.5	9.5	16.0	7.5	11.5
5	7.0	0.0	3.0	10.0	2.0	5.5	14.0	7.0	10.5	15.0	8.0	11.5
6	6.5	1.0	3.5	13.0	2.5	7.0	15.0	7.5	11.0	11.0	8.0	9.5
7	5.5	0.5	2.5	13.0	5.0	8.5	13.5	8.0	10.5	11.5	6.5	8.5
8	7.5	1.5	4.5	8.5	6.0	7.5	12.0	8.5	10.0	10.5	7.0	8.5
9	9.5	3.0	5.5	9.0	3.5	6.0	10.5	7.0	8.0	11.0	6.5	8.5
10	9.5	2.5	5.5	10.5	2.5	6.0	8.0	6.0	7.0	12.5	6.5	9.5
11	8.0	1.5	4.5	10.0	1.5	6.0	6.0	4.5	5.5	12.5	7.5	10.0
12	4.5	1.5	3.0	12.5	3.5	8.0	7.5	3.5	5.0	10.5	8.0	9.0
13	3.5	0.0	1.5	14.5	5.0	9.5	12.5	4.0	8.0	14.5	6.5	10.0
14	3.0	0.0	1.5	9.5	4.5	6.5	14.0	6.5	10.0	16.5	8.5	12.0
15	5.0	0.0	2.0	13.0	1.5	6.5	11.5	8.0	10.0	16.0	10.0	13.0
16	4.5	0.5	2.5	15.0	3.0	8.5	10.5	8.0	9.5	14.5	9.5	12.0
17	3.0	0.5	1.5	14.0	5.5	9.5	9.0	6.5	8.0	13.0	9.5	11.5
18	5.5	0.0	2.0	9.0	4.0	5.5	11.0	5.0	8.0	11.5	7.5	10.0
19	3.5	0.5	2.0	5.0	2.5	3.5	11.0	7.0	9.0	14.0	7.0	10.5
20	5.5	0.5	2.5	5.0	2.0	3.5	10.5	6.5	8.5	16.0	8.5	12.0
21	7.0	1.5	4.0	7.5	2.0	4.5	13.0	6.0	9.0	14.0	9.0	12.0
22	5.5	2.0	3.5	13.5	4.0	7.5	14.5	6.0	10.0	15.5	10.0	12.5
23	2.5	0.0	0.5	12.5	4.5	8.5	13.0	7.0	10.0	15.5	9.5	12.5
24	2.0	0.0	0.5	12.5	5.0	9.0	9.5	6.5	8.0	15.0	8.5	11.5
25	4.0	0.0	1.0	15.5	5.0	10.0	12.0	4.5	8.0	13.0	8.5	11.0
26	4.5	0.0	1.5	11.5	6.5	8.5	13.0	5.0	9.0	11.5	8.0	10.0
27	7.5	0.5	3.5	8.0	3.0	5.5	14.0	6.0	10.0	12.5	8.0	10.5
28	6.0	3.0	4.5	7.5	1.5	4.0	15.0	6.5	10.5	12.0	8.0	10.0
29	7.5	1.5	4.0	11.0	0.5	5.5	13.5	6.5	10.0	12.0	8.5	10.0
30	5.0	0.5	2.5	12.0	2.5	6.5	13.0	5.5	9.0	15.0	8.0	11.5
31	8.5	0.0	3.5	---	---	---	10.5	6.0	8.0	---	---	---
MONTH	9.5	0.0	3.0	15.5	0.5	6.5	15.0	2.5	9.0	16.5	6.5	10.5

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

06036650 JEFFERSON RIVER NEAR THREE FORKS, MT

LOCATION.--Lat 45°53'52", long 111°35'45" (NAD 27), in $SW^1/_4SW^1/_4NW^1/_4$ sec.27, T.2 N., R.1 E., Broadwater County, Hydrologic Unit 10020005, on left bank 50 ft downstream from bridge on U.S. Highway 10, 2.5 mi northwest of Three Forks, and at river mile 2,329.3.

DRAINAGE AREA.--9,532 mi^2.

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

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Elevation of gage is 4,076.76 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Some regulation by Ruby River Reservoir (station number 06020500) and Clark Canyon Reservoir (station number 06015300). Diversions for irrigation of about 390,000 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	912	1,240	e800	e600	e900	799	917	981	2,490	3,460	335	297
2	916	1,200	e900	e600	e850	792	859	905	3,440	3,160	299	295
3	919	1,200	e1,000	e600	e850	792	845	846	4,030	2,880	342	293
4	907	1,210	1,060	e600	e850	789	866	780	4,320	2,640	357	299
5	886	1,240	e1,050	e600	e850	783	902	714	4,320	2,400	333	301
6	865	1,190	e1,110	e600	e800	786	901	660	4,150	2,170	297	298
7	881	1,180	1,100	e650	e850	788	874	662	4,310	1,940	286	291
8	880	1,200	1,110	e650	e900	797	849	693	4,510	1,750	274	275
9	875	1,210	1,100	e650	e900	812	891	946	4,320	1,470	277	257
10	877	1,200	1,110	e700	e900	833	976	1,420	4,160	1,460	282	243
11	882	1,210	1,070	e700	e900	891	978	2,090	3,890	1,500	291	256
12	898	1,210	1,100	e700	e900	971	929	2,820	3,800	1,400	289	290
13	911	1,180	1,040	e650	e900	1,020	868	2,770	4,050	1,330	302	331
14	922	1,160	e1,050	e600	908	1,030	834	2,430	4,390	1,220	323	352
15	933	1,120	1,070	e550	906	1,010	860	2,170	4,470	1,060	358	371
16	944	1,090	1,050	e600	854	966	898	2,120	4,250	912	350	367
17	963	1,090	1,010	e700	880	943	878	2,460	4,090	758	332	362
18	986	1,100	991	e850	869	894	935	3,380	4,380	652	342	400
19	1,010	1,130	1,010	e1,000	830	873	1,040	3,900	4,690	565	330	441
20	1,060	1,100	1,010	e1,100	883	831	1,100	4,200	4,470	475	321	458
21	1,090	1,040	978	e1,200	823	894	1,120	4,660	4,090	410	312	500
22	1,170	979	931	e1,100	803	911	1,070	4,890	3,810	390	298	500
23	1,180	1,000	e650	e1,100	776	933	1,010	4,780	3,890	366	283	541
24	1,190	981	e650	e1,000	775	871	963	4,610	3,920	330	259	674
25	1,170	1,090	e680	e1,000	784	874	964	4,320	3,510	333	247	877
26	1,190	1,140	e750	e1,000	794	801	977	3,750	3,300	326	245	897
27	1,170	1,130	e700	e1,000	797	835	1,020	3,200	3,430	318	238	889
28	1,190	e1,000	e650	e950	791	866	1,110	2,810	3,640	341	241	886
29	1,210	e900	e700	e900	---	900	1,120	2,500	3,710	334	241	860
30	1,270	e750	e700	e900	---	960	1,070	2,450	3,690	315	248	848
31	1,270	---	e650	e900	---	974	---	2,330	---	309	267	---
TOTAL	31,527	33,470	28,780	24,750	23,823	27,219	28,624	77,247	119,520	36,974	9,199	13,949
MEAN	1,017	1,116	928	798	851	878	954	2,492	3,984	1,193	297	465
MAX	1,270	1,240	1,110	1,200	908	1,030	1,120	4,890	4,690	3,460	358	897
MIN	865	750	650	550	775	783	834	660	2,490	309	238	243
AC-FT	62,530	66,390	57,090	49,090	47,250	53,990	56,780	153,200	237,100	73,340	18,250	27,670

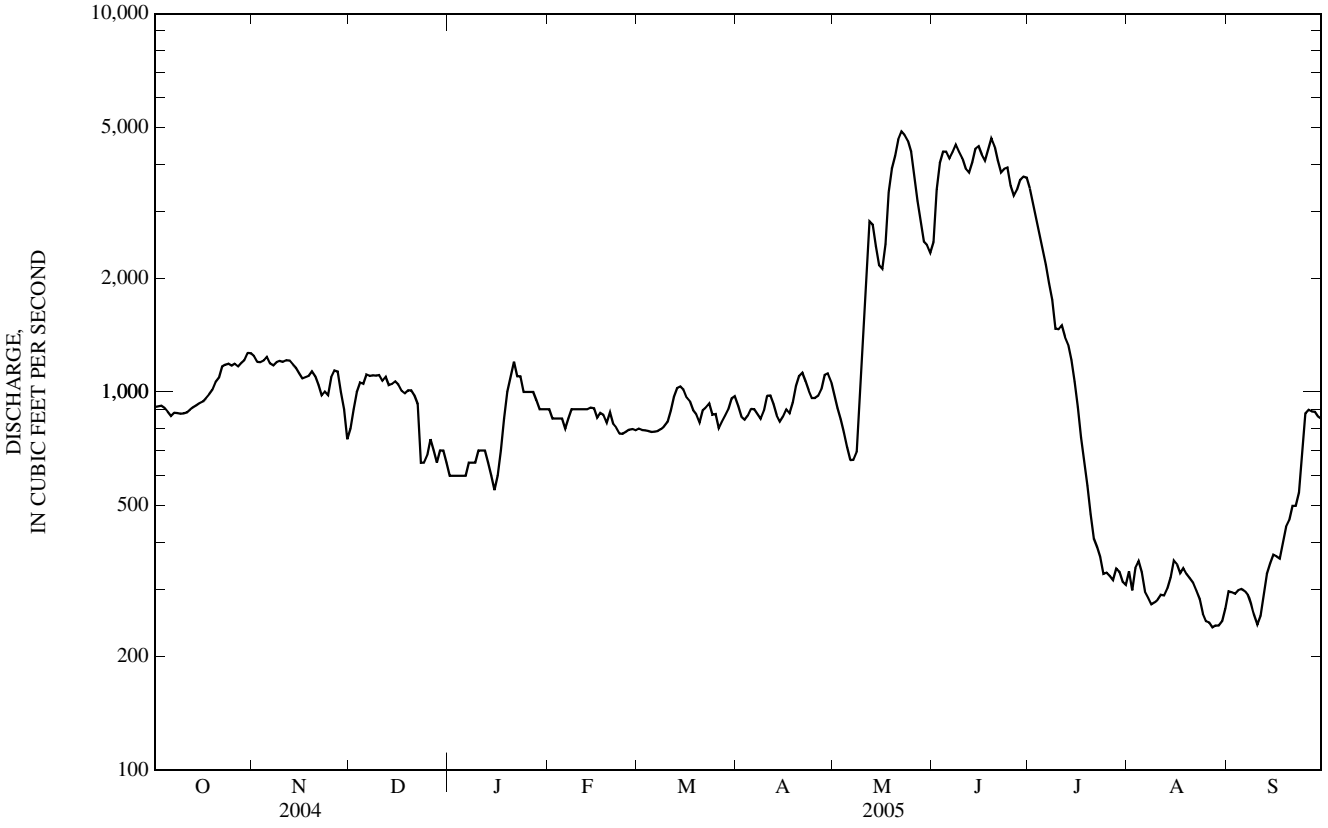
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	1,529	1,591	1,311	1,182	1,259	1,500	2,289	3,627	4,930	1,958	847	1,085
MAX	3,163	2,805	1,993	1,929	1,964	2,295	4,444	7,679	11,420	5,505	3,030	3,303
(WY)	(1985)	(1984)	(1999)	(1983)	(1984)	(1996)	(1996)	(1997)	(1997)	(1995)	(1984)	(1984)
MIN	698	1,039	805	553	728	824	954	990	988	352	59.1	262
(WY)	(2004)	(1989)	(1993)	(2004)	(2004)	(2002)	(2005)	(1992)	(1992)	(1988)	(1988)	(1994)

06036650 JEFFERSON RIVER NEAR THREE FORKS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1978 - 2005	
ANNUAL TOTAL	354,708		455,082			
ANNUAL MEAN	969		1,247		1,925	
HIGHEST ANNUAL MEAN					3,650	1984
LOWEST ANNUAL MEAN					936	2004
HIGHEST DAILY MEAN	3,000	Jun 12	4,890	May 22	16,800	Jun 9, 1995
LOWEST DAILY MEAN	141	Aug 16	238	Aug 27	44	Aug 19, 1988
ANNUAL SEVEN-DAY MINIMUM	156	Aug 12	246	Aug 24	48	Aug 19, 1988
MAXIMUM PEAK FLOW			5,040	May 22	b17,000	Jun 9, 1995
MAXIMUM PEAK STAGE			5.64	May 22	c9.88	Jan 3, 1997
INSTANTANEOUS LOW FLOW			a223	Aug 30	d43	Aug 19, 1988
ANNUAL RUNOFF (AC-FT)	703,600		902,700		1,394,000	
10 PERCENT EXCEEDS	1,670		3,430		3,720	
50 PERCENT EXCEEDS	904		901		1,400	
90 PERCENT EXCEEDS	427		322		576	

a--Gage height, 1.92 ft.
b--Gage height, 9.00 ft.
c--Backwater from ice.
d--Gage height, 1.31 ft.
e--Estimated.



06036650 JEFFERSON RIVER NEAR THREE FORKS, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980-81, 1986-87, May 1999-July 2003, September 2005, discontinued.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1980 to September 1981, October 1999 to September 2003.

REMARKS--Mercury concentrations are in nanograms per unit volume or mass. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum 28.0°C, July 19-21, 2003, minimum, 0.0°C, 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, water, deg C (00010)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP												
12...	1100	290	8.5	509	12.0	2.5	3.4	.43	.88	17.4	.56	.01

443406110500701 FIREHOLE RIVER BELOW LOWER GEYSER BASIN, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'06", long 110°50'07 (NAD 27)", Teton County, Wyoming, Hydrologic Unit 10020007.

PERIOD OF RECORD.--August 2005, discontinued.

GAGE.--None, elevation at site, 7,150 ft (NGVD 27).

REMARKS.--Mercury concentrations are in nanograms per unit volume or mass.

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

Date	Time	Instan-taneous dis-charge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
AUG 31...	1545	195	8.6	554	22.0	.6	5.7

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methyl-mercury water fltrd, **ng/L** (50285)	Methyl-mercury water unfltrd **ng/L** (50284)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
AUG 31...	4.44	20.2	1,100	.16	.19	.20	.11

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°37'13", long 110°51'44" (NAD 27), Yellowstone National Park, Hydrologic Unit 10020007, on right bank 1.6 mi south of Madison Junction, 12 mi east of West Yellowstone, and at river mile 1.8.

DRAINAGE AREA.--282 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to March 1996, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft (NGVD 29).

REMARKS.--Water-discharge records good. No regulation or 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	250	258	252	261	247	246	251	288	533	290	263	247
2	248	262	250	258	243	244	255	297	562	283	261	245
3	247	268	251	260	244	244	271	308	443	275	259	243
4	247	266	251	257	246	245	281	332	409	271	252	243
5	248	263	250	257	250	242	262	365	402	268	251	242
6	247	262	249	256	249	244	258	386	528	267	248	242
7	247	260	256	260	250	244	290	411	462	263	245	242
8	247	260	257	272	245	245	310	406	401	259	246	242
9	246	263	254	268	245	251	281	412	385	259	248	245
10	256	265	254	265	243	256	266	466	372	270	252	256
11	255	266	266	263	243	255	262	448	355	271	259	251
12	249	260	262	253	248	257	273	393	427	261	258	257
13	248	258	254	240	246	249	308	368	421	255	250	255
14	248	255	256	248	259	245	322	406	367	248	250	252
15	250	256	258	256	249	246	283	466	362	248	248	250
16	252	254	254	263	244	246	287	604	372	243	247	250
17	249	258	252	261	248	247	316	621	364	243	255	263
18	267	254	251	260	247	246	346	495	348	244	285	266
19	266	260	252	263	250	252	304	778	333	242	368	254
20	287	255	250	267	253	252	297	810	322	241	269	251
21	288	245	246	263	253	249	292	782	320	242	258	252
22	270	249	244	257	250	251	285	653	329	242	255	253
23	278	252	237	254	248	258	320	638	372	247	255	258
24	280	252	249	251	247	260	346	585	372	254	250	287
25	269	256	251	250	247	253	374	512	321	266	248	271
26	272	254	249	250	246	248	366	459	304	255	248	259
27	278	255	248	250	244	250	367	441	325	247	245	258
28	283	253	251	251	244	263	319	435	321	245	244	256
29	275	239	254	250	---	270	302	433	319	247	243	256
30	274	252	259	248	---	264	295	419	304	251	243	254
31	272	---	268	245	---	250	---	407	---	273	248	---
TOTAL	8,093	7,710	7,835	7,957	6,928	7,772	8,989	14,824	11,455	7,970	7,951	7,600
MEAN	261	257	253	257	247	251	300	478	382	257	256	253
MAX	288	268	268	272	259	270	374	810	562	290	368	287
MIN	246	239	237	240	243	242	251	288	304	241	243	242
AC-FT	16,050	15,290	15,540	15,780	13,740	15,420	17,830	29,400	22,720	15,810	15,770	15,070

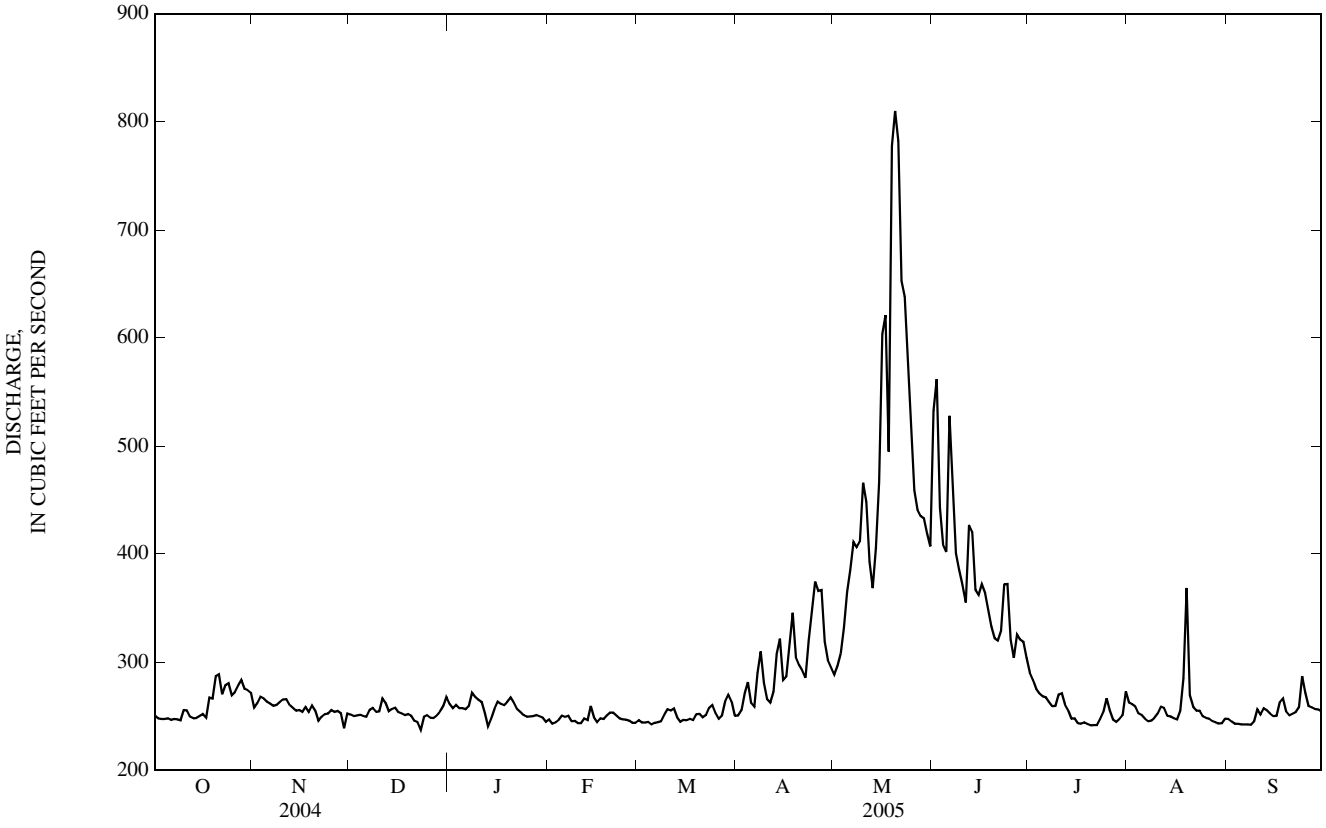
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)*

MEAN	276	273	266	262	260	269	327	482	422	291	270	270
MAX	356	348	316	298	304	336	398	613	756	415	371	368
(WY)	(1984)	(1984)	(1984)	(1985)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)
MIN	225	227	220	223	226	239	276	367	273	221	212	217
(WY)	(1989)	(1993)	(1993)	(1993)	(1993)	(1992)	(1993)	(1987)	(1992)	(1988)	(1994)	(1988)

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005*	
ANNUAL TOTAL	103,705		105,084			
ANNUAL MEAN	283		288		305	
HIGHEST ANNUAL MEAN					399	1986
LOWEST ANNUAL MEAN					264	1988
HIGHEST DAILY MEAN	579	May 29	810	May 20	1,240	May 31, 1986
LOWEST DAILY MEAN	226	Mar 6	237	Dec 23	201	Dec 4, 1992
ANNUAL SEVEN-DAY MINIMUM	235	Mar 1	242	Jul 16	205	Aug 15, 1994
MAXIMUM PEAK FLOW			1,070	May 20	b2,050	May 18, 1996
MAXIMUM PEAK STAGE			4.75	May 20	c6.10	May 18, 1996
INSTANTANEOUS LOW FLOW			a220	Dec 23	d190	Dec 4, 1992
ANNUAL RUNOFF (AC-FT)	205,700		208,400		221,000	
10 PERCENT EXCEEDS	371		378		416	
50 PERCENT EXCEEDS	258		256		271	
90 PERCENT EXCEEDS	240		245		234	

*--During periods of operation (October 1983 to March 1996, October 2002 to current year).
a--Gage height, 2.93 ft.
b--From rating curve extended above 1,540 ft^3/s.
c--From floodmark.
d--Gage height, 3.03 ft.



06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to 1993, October 2002 to current year.

PERIOD OF DAILY RECORD.--
SEPCIFIC CONDUCTANCE: August 1983 to September 1986, October 1987 to September 1988.
WATER TEMPERATURE: October 1983 to September 1993, October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 18, 2002.

REMARKS.--Daily water temperature records excellent except those for May 30 to June 15, which are good. Several unpublished observations of specific conductance and water temperature were made during the year. Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 633 microsiemens per centimeter (µS/cm) at 25.0°C, Apr. 1, 1988; minimum daily, 140 µS/cm at 25.0°C, June 5, 1986.
WATER TEMPERATURE: Maximum daily, 30.0°C, June 24, 1988; minimum daily, 0.5°C Dec. 21, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 29.0°C, July 12, 14, and 21; minimum, 3.0°C, Dec. 23 and Jan. 13.

WATER-QUALITY DATA, SEPTEMBER 2004 TO AUGUST 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
SEP 2004							
15...	0930	297	8.3	484	13.0	--	--
AUG 2005							
31...	1745	247	8.6	517	22.5	.7	1.9

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water fltrd, **ng/L** (50285)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 2004								
15...	4.87	14.8	466	.15	.24	.33	.39	.05
AUG 2005								
31...	3.19	15.2	370	--	--	--	.42	.05

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, 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	19.0	15.0	17.0	11.0	8.0	9.5	8.5	7.0	7.5	10.0	7.5	8.5
2	20.0	14.5	17.5	13.0	9.0	11.0	9.5	8.0	8.5	10.5	7.5	9.0
3	20.0	14.5	17.5	13.0	11.0	12.0	10.0	7.5	8.5	11.0	9.5	10.0
4	19.0	14.5	17.0	15.0	10.5	12.5	11.0	8.0	9.5	10.5	7.0	9.0
5	20.0	14.5	17.0	14.0	10.5	12.5	9.0	7.0	8.0	9.5	6.5	8.0
6	19.5	14.5	17.0	14.0	10.0	12.0	8.5	7.0	8.0	8.0	6.5	7.0
7	18.0	15.0	16.5	14.5	10.0	12.0	8.0	7.0	7.5	8.5	6.5	7.5
8	18.5	13.5	16.0	14.5	10.0	12.5	8.5	7.5	7.5	8.5	5.5	7.0
9	18.0	14.0	16.0	16.5	13.0	14.5	10.0	7.5	9.0	9.0	7.5	8.0
10	16.5	14.5	15.5	15.0	13.0	14.0	11.5	9.5	10.5	11.5	9.0	10.0
11	18.0	14.0	15.5	15.0	12.5	13.5	11.5	10.0	11.0	11.0	9.5	10.0
12	17.0	14.5	15.5	14.0	11.0	12.5	12.5	9.5	11.5	9.5	4.0	7.0
13	17.5	12.5	15.0	13.5	10.5	12.0	11.0	8.5	9.5	5.5	3.0	4.0
14	17.5	13.0	15.5	12.5	10.5	11.5	12.0	10.5	11.0	5.5	4.0	4.5
15	16.5	14.5	15.5	13.0	10.5	11.5	12.0	10.5	11.0	8.0	4.0	5.5
16	16.0	13.5	14.5	13.0	9.5	11.5	11.5	10.0	10.5	9.5	6.0	8.0
17	15.5	12.5	14.0	14.5	12.0	13.5	11.0	9.0	10.0	12.0	9.0	10.5
18	14.5	10.0	12.5	12.5	10.5	12.0	12.0	10.5	11.0	11.5	10.5	11.0
19	14.5	10.0	12.0	11.5	9.5	10.5	11.0	9.5	10.5	13.0	11.0	12.0
20	14.0	12.5	13.0	10.5	8.5	10.0	10.5	6.0	7.5	14.5	10.5	12.5
21	13.5	13.0	13.5	10.0	7.5	8.5	8.5	6.5	7.5	13.5	11.0	12.5
22	14.0	11.5	13.0	10.5	7.5	9.0	8.0	5.5	6.5	13.0	10.0	11.5
23	12.5	10.5	11.5	11.5	10.0	10.5	6.5	3.0	5.0	13.0	9.5	11.5
24	12.5	9.5	11.0	10.0	9.0	9.5	8.5	6.0	7.0	12.0	8.5	10.5
25	13.0	9.0	11.0	10.5	9.0	10.0	10.5	8.0	9.0	11.5	8.0	10.0
26	13.5	10.5	12.0	10.5	8.0	9.5	11.0	8.0	9.5	12.5	9.0	10.5
27	15.5	12.5	13.5	10.0	8.0	8.5	12.0	10.0	11.0	12.5	10.0	11.0
28	14.0	12.5	13.5	8.5	5.5	7.0	13.0	11.5	12.5	13.5	12.0	12.5
29	13.0	11.5	12.0	7.0	4.0	5.5	13.0	11.0	12.0	13.5	11.0	12.0
30	11.5	10.5	11.0	8.0	5.5	7.0	11.0	6.0	8.0	12.5	10.0	11.5
31	12.0	9.5	11.0	---	---	---	9.0	7.0	8.0	11.0	7.5	9.5
MONTH	20.0	9.0	14.5	16.5	4.0	11.0	13.0	3.0	9.0	14.5	3.0	9.5
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	9.5	11.0	15.5	11.5	12.5	16.0	9.5	12.5	19.5	11.0	15.0
2	11.5	7.5	9.5	15.0	9.0	12.0	17.5	11.0	14.0	18.5	12.5	15.5
3	12.5	8.0	10.0	15.0	9.5	12.0	15.0	12.0	14.0	19.5	13.5	16.0
4	12.0	8.5	10.5	15.5	10.0	12.5	14.5	12.5	13.5	21.0	14.0	17.0
5	11.0	8.0	9.5	15.5	9.5	12.5	15.5	12.0	13.5	18.0	15.0	16.5
6	11.0	7.5	9.0	15.5	10.0	12.5	20.0	11.0	15.0	18.5	13.5	16.0
7	12.5	9.0	10.5	13.5	10.0	12.0	19.5	13.0	16.0	17.0	12.5	14.5
8	10.5	8.0	9.0	16.5	10.5	13.0	15.5	13.0	14.0	16.5	13.5	15.0
9	11.0	8.0	9.0	17.0	12.0	14.5	16.0	11.5	13.5	15.5	13.5	14.5
10	11.5	7.0	9.5	17.0	12.0	14.5	16.5	11.5	14.0	14.5	12.0	13.5
11	11.5	6.5	9.0	16.0	10.5	13.5	17.5	10.5	14.0	14.0	10.5	12.5
12	12.5	10.5	11.0	13.5	9.5	12.0	18.0	12.5	15.0	15.5	11.5	13.5
13	11.0	7.5	9.0	12.5	8.0	10.0	18.5	12.0	15.0	19.0	12.5	15.5
14	10.5	7.5	8.5	11.5	7.5	9.5	14.0	8.0	11.0	20.0	13.0	17.0
15	9.5	5.0	7.0	12.5	8.5	10.5	18.0	9.0	13.0	18.0	12.0	15.0
16	9.0	4.0	7.0	13.0	10.0	11.5	19.5	11.0	15.0	15.5	12.0	13.0
17	10.0	4.5	7.5	12.5	7.0	9.5	19.0	12.0	15.5	13.5	9.5	11.5
18	11.0	6.0	8.5	12.0	8.0	10.0	15.5	12.0	13.5	14.5	10.5	12.5
19	12.5	10.0	11.0	15.0	10.0	12.5	15.0	11.5	13.0	15.0	10.5	13.5
20	13.5	11.0	12.0	15.0	12.5	13.5	17.0	10.5	13.5	16.5	10.0	13.0
21	12.5	9.5	11.0	14.5	11.0	12.5	15.5	12.5	14.0	16.0	11.5	13.5
22	13.5	9.5	11.5	15.0	11.5	13.0	21.0	12.5	16.5	17.0	11.5	14.5
23	13.0	8.0	10.5	14.0	10.5	13.0	19.5	13.0	16.0	17.5	13.0	15.5
24	13.5	7.5	10.5	13.5	7.5	10.5	19.5	13.0	16.0	16.0	12.0	14.0
25	14.0	8.0	11.0	15.5	9.5	12.0	19.0	11.5	15.0	16.5	11.5	14.0
26	13.5	8.0	11.0	14.5	10.0	12.0	18.0	11.5	15.0	19.0	12.0	15.5
27	13.5	8.0	11.0	12.5	10.5	11.5	16.0	11.5	13.5	20.0	13.0	16.5
28	14.0	8.5	11.0	15.0	11.0	13.0	17.5	9.5	13.0	19.0	14.5	17.0
29	---	---	---	13.5	9.5	11.0	16.5	10.0	13.0	19.0	15.5	17.0
30	---	---	---	14.5	9.5	11.5	17.0	11.5	14.0	18.0	14.0	16.0
31	---	---	---	16.0	8.5	12.0	---	---	---	17.0	13.0	15.0
MONTH	14.0	4.0	10.0	17.0	7.0	12.0	21.0	8.0	14.0	21.0	9.5	15.0

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, 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	16.5	11.5	14.0	25.5	18.5	22.0	25.0	19.5	22.0	23.5	16.0	19.5
2	15.0	10.0	12.0	24.0	19.0	21.0	26.5	21.5	23.5	23.0	16.0	19.5
3	15.5	13.0	14.5	24.5	17.5	20.5	26.0	20.5	23.0	22.5	17.5	20.0
4	18.5	14.5	16.0	25.5	18.0	22.0	27.0	19.5	23.5	23.0	17.5	20.0
5	19.5	15.0	17.5	26.5	19.0	23.0	26.5	19.5	23.5	22.5	17.0	19.5
6	18.5	13.0	15.0	26.5	19.5	23.0	26.5	20.0	23.5	23.0	16.5	19.5
7	14.0	11.5	12.5	27.0	20.0	23.5	26.5	20.5	23.5	23.0	16.0	19.5
8	15.5	11.0	13.0	27.5	20.5	24.0	26.0	20.5	23.0	23.0	17.0	20.0
9	16.0	13.5	14.5	26.5	20.5	23.5	25.5	20.0	23.0	20.5	18.0	19.5
10	17.0	13.5	15.5	23.5	21.0	22.0	25.5	20.5	22.5	19.0	16.0	17.0
11	18.5	14.5	16.5	27.5	19.5	23.0	23.5	19.5	21.5	17.0	14.5	15.5
12	18.5	14.5	16.0	29.0	20.0	24.5	23.0	18.5	20.5	17.0	15.0	16.0
13	19.0	13.0	15.5	28.5	21.5	25.0	24.0	17.5	20.5	17.5	14.0	15.5
14	21.0	14.5	17.5	29.0	21.5	25.0	24.0	17.5	20.5	20.0	13.5	16.5
15	23.0	17.5	20.0	28.5	21.5	25.0	25.5	17.5	21.5	20.5	14.5	17.5
16	21.5	17.0	19.5	25.0	21.5	23.0	22.0	18.0	20.0	20.5	14.5	17.5
17	23.0	17.0	19.5	26.5	19.0	22.5	22.0	19.0	20.5	17.0	15.5	16.5
18	20.5	17.5	19.0	26.5	19.0	23.0	20.5	18.5	19.5	17.5	14.5	16.0
19	23.0	16.0	19.5	26.5	19.5	23.0	22.5	16.0	19.0	19.5	13.5	16.5
20	24.0	18.0	21.0	27.5	20.0	23.5	25.5	17.5	21.5	20.0	14.5	17.0
21	24.0	19.0	21.5	29.0	20.5	24.5	27.0	18.5	23.0	19.0	17.0	18.0
22	25.0	18.5	21.5	26.5	23.5	25.0	26.0	19.5	23.0	19.5	15.5	17.5
23	25.0	18.5	21.5	28.0	21.0	24.0	25.0	20.0	22.0	19.0	17.0	17.5
24	25.0	18.0	21.5	27.5	20.5	24.0	23.0	19.0	20.5	17.5	16.0	16.5
25	24.5	18.5	21.5	25.0	20.5	22.5	23.5	16.5	20.0	17.0	14.5	15.5
26	22.0	19.0	20.5	26.5	18.5	22.0	23.5	16.5	20.0	19.5	13.0	16.0
27	22.5	17.0	19.5	26.5	19.0	23.0	24.5	17.0	20.5	17.5	15.5	16.5
28	20.0	17.5	19.0	24.5	19.5	22.5	25.0	18.0	21.5	20.0	14.5	17.0
29	22.0	17.5	19.5	24.0	20.0	21.5	24.5	17.5	21.0	20.0	14.0	17.0
30	24.5	18.5	21.0	26.0	20.0	23.0	21.0	17.5	19.0	17.5	15.0	16.0
31	---	---	---	24.0	20.0	22.0	22.5	14.5	18.5	---	---	---
MONTH	25.0	10.0	18.0	29.0	17.5	23.0	27.0	14.5	21.5	23.5	13.0	17.5

06036940 TANTALUS CREEK AT NORRIS JUNCTION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°43'59", long 110°42'49" (NAD 27), Yellowstone National Park, Hydrologic Unit 10020007, on right bank 0.9 mi northwest of Norris Junction, Yellowstone National Park, and at river mile 0.3.

DRAINAGE AREA.--1.29 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 2004 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,460 ft (NGVD 29).

REMARKS.--Water-discharge records good. 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	2.7	3.0	4.1	5.1	4.1	4.3	4.4	3.0	6.7	3.6	3.5	3.5
2	2.6	3.5	4.0	4.6	4.0	4.3	4.6	3.2	4.3	3.6	4.1	3.5
3	2.6	3.9	4.2	5.1	4.2	4.2	5.4	3.3	4.0	3.3	3.9	3.5
4	2.7	3.6	4.7	4.9	4.8	4.1	5.5	3.2	3.9	3.2	3.4	3.5
5	2.7	3.6	4.4	4.8	4.9	4.1	4.1	3.5	4.3	3.3	3.4	3.4
6	2.5	3.7	4.0	5.0	4.6	4.2	4.3	3.4	6.4	3.4	3.5	3.5
7	2.5	3.7	4.4	5.1	4.7	4.3	5.0	3.7	4.6	3.3	3.5	3.4
8	2.4	3.9	4.6	5.8	4.3	4.1	5.7	3.4	4.5	3.2	3.5	3.6
9	2.6	3.8	3.9	5.3	4.1	4.2	5.0	4.1	4.4	3.2	3.4	4.1
10	2.9	3.4	4.2	5.2	4.2	4.1	4.2	4.0	4.0	5.3	4.3	3.9
11	2.5	3.7	4.6	5.6	4.6	4.3	4.2	3.3	4.0	3.9	3.8	3.7
12	2.5	3.7	4.4	4.5	4.9	4.8	4.4	3.8	5.9	3.5	3.8	4.3
13	2.5	3.6	3.9	4.7	4.7	4.2	4.4	3.0	4.6	3.5	3.7	3.9
14	2.8	3.4	4.5	4.4	5.1	4.4	4.1	3.0	4.1	3.4	3.7	3.7
15	3.2	3.6	4.3	4.1	4.1	4.6	4.1	3.3	3.9	3.4	3.5	3.7
16	3.3	3.6	4.0	4.8	4.2	4.6	4.3	4.5	4.2	3.4	3.6	3.9
17	3.1	3.5	4.2	4.8	4.4	4.8	4.5	3.6	4.0	3.3	4.1	4.7
18	3.6	3.8	4.2	5.2	4.8	4.6	5.2	3.5	3.6	3.3	5.6	4.1
19	3.2	4.0	4.6	5.2	5.1	5.0	4.7	4.2	3.3	3.3	4.0	3.6
20	4.0	3.6	4.4	5.5	4.9	4.7	4.7	3.7	3.2	3.2	3.6	3.7
21	3.5	3.5	4.0	5.0	4.8	4.2	4.9	3.2	3.6	3.2	3.7	4.1
22	3.4	3.7	3.9	4.7	4.4	4.7	4.4	3.2	4.4	3.3	4.1	4.0
23	4.8	3.7	4.0	4.6	4.3	5.0	4.3	3.3	4.8	3.2	4.0	4.4
24	3.9	4.2	4.1	4.7	4.4	4.5	4.2	3.3	4.1	3.3	3.7	5.3
25	3.8	4.8	4.5	4.7	4.5	4.5	3.7	3.1	3.8	3.8	3.4	3.8
26	3.7	4.1	4.4	4.7	4.4	4.0	3.6	3.2	3.9	3.4	3.4	3.8
27	3.8	4.4	4.2	4.7	4.3	4.6	4.2	3.3	4.2	3.4	3.6	4.1
28	4.2	3.7	4.4	4.6	4.3	5.5	3.6	3.4	4.0	3.4	3.6	3.7
29	3.8	3.6	5.1	4.4	---	5.1	3.2	3.2	3.9	3.5	3.7	4.0
30	4.1	4.0	5.0	4.2	---	5.0	3.1	3.2	3.6	3.4	3.6	3.9
31	3.8	---	5.5	4.2	---	3.9	---	3.3	---	3.5	3.5	---
TOTAL	99.7	112.3	134.7	150.2	126.1	138.9	132.0	106.4	128.2	107.0	116.2	116.3
MEAN	3.22	3.74	4.35	4.85	4.50	4.48	4.40	3.43	4.27	3.45	3.75	3.88
MAX	4.8	4.8	5.5	5.8	5.1	5.5	5.7	4.5	6.7	5.3	5.6	5.3
MIN	2.4	3.0	3.9	4.1	4.0	3.9	3.1	3.0	3.2	3.2	3.4	3.4
AC-FT	198	223	267	298	250	276	262	211	254	212	230	231

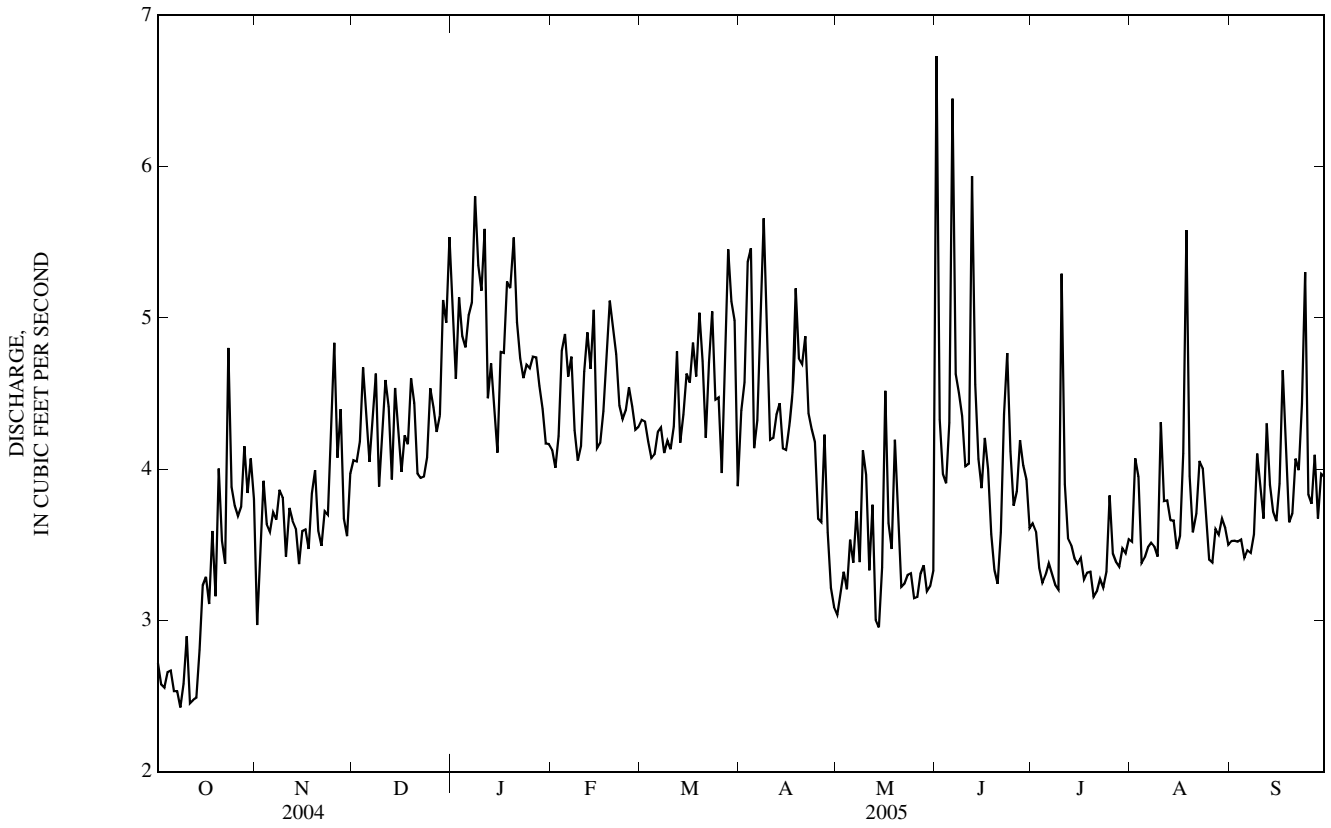
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY)

MEAN	3.22	3.74	4.35	4.85	4.50	4.48	4.40	3.43	4.27	3.70	3.86	4.11
MAX	3.22	3.74	4.35	4.85	4.50	4.48	4.40	3.43	4.27	3.95	3.97	4.33
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)
MIN	3.22	3.74	4.35	4.85	4.50	4.48	4.40	3.43	4.27	3.45	3.75	3.88
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS	FOR 2005 WATER YEAR		WATER YEARS 2004 - 2005	
ANNUAL TOTAL	1,468.0			
ANNUAL MEAN	4.02		4.02	
HIGHEST ANNUAL MEAN			4.02	2005
LOWEST ANNUAL MEAN			4.02	2005
HIGHEST DAILY MEAN	6.7	Jun 1	9.7	Sep 14, 2004
LOWEST DAILY MEAN	2.4	Oct 8	2.4	Oct 8, 2004
ANNUAL SEVEN-DAY MINIMUM	2.6	Oct 6	2.6	Oct 6, 2004
MAXIMUM PEAK FLOW	18	Jul 10	b22	Jul 3, 2004
MAXIMUM PEAK STAGE	2.39	Jul 10	b2.60	Jul 3, 2004
INSTANTANEOUS LOW FLOW	a2.0	Oct 8	b2.0	Oct 8, 2004
ANNUAL RUNOFF (AC-FT)	2,910		2,910	
10 PERCENT EXCEEDS	4.9		4.9	
50 PERCENT EXCEEDS	4.0		4.0	
90 PERCENT EXCEEDS	3.2		3.2	

a--Gage height, 1.34 ft.
b--For period of U.S. Geological Survey record only.

06036940 TANTALUS CREEK AT NORRIS JUNCTION, YELLOWSTONE NATIONAL PARK—Continued



06036940 TANTALUS CREEK AT NORRIS JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 2004 to current year.

REMARKS.--Daily water temperature records rated excellent, except those for Feb. 1-28 and May 15 to Sept. 30, which are fair, and those for Mar. 1-May 14, which are poor. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 37.5°C, July 16, 2004; minimum, 11.0°C, Jan. 13, 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 37.0°C, July 21; minimum, 11.0°C, Jan. 13.

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	28.0	22.5	24.0	22.5	15.0	17.5	19.5	16.5	17.5	19.5	16.5	18.5
2	29.5	22.0	24.0	23.0	16.5	19.5	18.0	15.0	17.0	22.5	15.5	19.0
3	31.0	22.0	24.5	24.0	20.5	21.5	19.5	15.5	17.5	22.0	19.5	20.5
4	30.0	22.5	24.5	27.0	19.0	22.0	23.5	18.5	20.0	20.5	16.5	18.5
5	29.5	22.5	24.5	25.5	20.0	21.5	21.5	17.0	18.5	21.5	17.0	18.5
6	29.0	22.0	24.0	25.0	19.0	21.5	19.5	14.5	17.5	18.0	15.5	17.0
7	27.0	22.0	23.5	26.5	20.0	22.0	17.5	15.5	16.5	20.5	17.0	18.5
8	28.0	21.0	23.5	28.0	20.0	23.5	18.0	15.0	17.0	19.5	13.0	17.0
9	26.5	21.5	23.5	28.5	23.0	25.0	19.5	14.0	17.5	19.5	16.0	18.5
10	25.0	21.0	23.0	25.0	22.5	23.5	21.5	18.0	19.5	22.5	17.0	20.0
11	29.0	21.5	24.0	28.0	21.5	23.5	22.0	17.5	19.0	23.0	19.0	21.0
12	25.0	21.5	23.0	27.5	21.0	23.0	23.0	17.0	20.0	19.5	14.5	17.5
13	27.0	20.0	23.0	27.0	21.0	23.0	22.5	16.5	19.5	17.5	11.0	15.5
14	25.5	21.5	23.0	25.5	19.5	21.5	23.0	19.5	21.5	19.0	12.0	16.0
15	26.5	23.0	24.5	25.0	19.0	21.5	21.5	19.5	20.5	21.0	15.0	16.5
16	25.5	20.5	24.0	25.5	20.0	22.0	21.5	19.5	20.0	20.0	16.5	18.5
17	25.5	22.0	23.0	25.0	21.0	22.5	22.5	19.5	20.5	20.5	17.5	19.0
18	23.0	18.5	20.5	26.0	18.0	21.0	22.5	19.0	20.5	21.5	18.0	19.0
19	24.0	19.5	22.0	23.5	18.5	21.0	22.0	15.0	20.0	23.0	18.5	21.0
20	24.0	22.0	23.0	20.5	17.0	19.5	19.0	14.5	17.0	26.5	22.0	23.5
21	24.0	20.5	22.0	22.5	16.5	18.5	20.0	15.5	17.5	25.0	21.0	22.5
22	23.5	17.0	20.5	23.0	18.0	19.5	19.0	13.0	16.5	26.5	20.5	22.5
23	21.0	17.5	19.5	20.0	18.5	19.0	17.5	13.5	15.5	26.5	20.5	22.5
24	21.5	17.0	19.5	20.0	16.5	18.5	18.0	14.5	17.0	27.0	20.0	22.0
25	24.5	18.5	21.0	20.5	17.5	19.0	20.5	16.5	19.0	26.0	19.5	22.0
26	25.5	19.5	22.0	20.5	16.0	18.0	23.0	18.5	20.5	26.5	20.5	22.5
27	28.5	22.0	24.0	22.0	16.5	19.0	24.5	19.5	21.5	25.5	20.5	23.0
28	25.5	20.0	22.5	18.0	14.0	16.5	22.5	20.5	21.5	24.5	22.5	23.5
29	23.5	18.5	21.0	19.5	12.5	15.5	24.0	17.5	22.0	26.5	21.0	23.0
30	21.0	15.5	19.0	18.0	15.5	16.5	20.0	14.0	17.5	23.0	19.5	21.5
31	23.5	17.0	19.5	---	---	---	21.0	15.5	19.5	24.5	18.5	20.5
MONTH	31.0	15.5	22.5	28.5	12.5	20.5	24.5	13.0	19.0	27.0	11.0	20.0

06036940 TANTALUS CREEK AT NORRIS JUNCTION, 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	25.0	19.0	21.0	24.0	18.5	21.0	26.0	18.5	21.0	30.0	20.5	24.0
2	24.5	18.5	20.5	27.0	19.0	22.0	25.0	18.5	21.5	31.5	21.0	25.0
3	26.0	18.0	21.5	27.0	19.0	22.0	26.0	20.0	22.5	31.0	21.5	25.0
4	25.5	20.0	21.5	27.5	19.0	22.0	25.0	21.0	22.5	29.0	22.5	25.0
5	21.5	16.0	18.5	27.0	19.0	22.0	24.5	20.5	22.0	29.5	24.0	26.5
6	22.5	18.0	20.0	25.0	18.5	21.0	31.0	21.0	25.0	30.0	24.5	26.5
7	24.5	18.5	20.5	23.5	19.0	20.5	30.0	22.5	25.0	29.5	24.0	26.0
8	21.0	17.0	19.0	25.0	18.0	21.5	26.0	22.0	24.0	28.0	24.5	25.5
9	20.0	17.5	18.5	26.0	20.5	22.5	27.0	22.5	24.0	29.0	24.5	26.0
10	23.5	17.0	19.5	27.0	20.5	23.0	27.5	22.0	24.0	28.5	22.0	25.5
11	26.0	17.0	20.5	25.5	19.5	22.0	26.5	21.0	23.0	25.5	20.0	22.0
12	23.0	19.0	21.0	23.0	15.0	20.5	27.5	22.5	24.0	30.0	20.5	23.0
13	20.0	15.0	18.0	24.0	17.0	19.5	27.5	19.5	24.0	31.0	21.0	24.5
14	21.0	15.0	17.5	22.5	17.5	19.5	22.5	15.5	18.5	34.0	23.0	26.5
15	21.5	15.0	17.0	21.0	17.0	19.0	28.5	19.5	23.0	29.0	22.5	25.0
16	22.5	14.5	17.5	22.5	15.5	18.5	29.0	21.0	24.0	29.0	24.0	26.0
17	23.5	15.0	18.5	21.5	13.5	18.5	28.0	23.0	24.5	25.5	19.0	23.0
18	24.5	16.5	19.5	23.0	17.0	19.5	27.5	23.0	25.0	24.0	19.0	22.0
19	23.5	19.0	21.0	24.5	19.5	21.5	25.5	19.5	22.5	27.0	21.5	23.5
20	22.5	17.5	20.5	24.0	18.5	21.5	27.0	19.5	22.5	30.0	22.5	25.5
21	22.5	18.0	19.5	24.0	19.0	21.0	26.0	22.5	24.0	28.5	21.0	24.0
22	26.5	19.0	21.5	23.5	20.5	22.0	31.5	22.0	26.0	30.0	20.5	25.0
23	26.5	17.0	20.5	26.0	17.0	21.5	31.0	23.0	26.0	30.5	20.0	25.0
24	27.0	17.5	21.0	23.0	16.0	19.5	29.5	22.0	25.5	27.5	21.5	24.0
25	26.5	18.0	21.0	28.5	19.0	22.0	31.5	22.5	25.5	30.5	21.0	24.5
26	27.0	18.0	21.0	24.0	16.5	20.0	28.0	23.0	25.0	33.0	21.5	25.5
27	26.0	17.5	20.5	20.5	16.5	18.5	26.5	20.5	23.5	35.0	22.0	27.5
28	26.0	18.0	20.5	23.0	13.0	19.5	29.0	17.0	22.5	34.0	24.5	28.0
29	---	---	---	21.0	15.0	19.0	28.5	19.0	22.5	32.5	22.0	26.5
30	---	---	---	23.0	18.0	20.0	28.5	20.0	23.0	32.5	22.0	25.5
31	---	---	---	25.0	16.5	19.5	---	---	---	28.5	23.0	25.5
MONTH	27.0	14.5	20.0	28.5	13.0	20.5	31.5	15.5	23.5	35.0	19.0	25.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	19.0	23.5	32.5	23.0	28.0	33.0	26.0	29.0	32.0	23.0	26.5
2	26.5	21.0	23.0	31.5	20.0	25.5	36.0	24.5	29.5	32.0	23.0	26.0
3	27.5	22.0	24.5	32.5	23.5	27.0	35.5	26.5	29.5	31.0	23.0	25.5
4	31.5	23.5	26.5	33.5	24.0	27.5	35.5	25.5	30.0	30.5	21.0	25.0
5	31.5	24.0	27.0	34.5	24.5	28.5	34.5	26.0	29.5	29.5	23.0	25.0
6	27.5	22.0	25.5	33.5	25.5	28.5	34.5	26.0	29.5	31.5	22.0	25.5
7	30.0	19.5	24.5	33.5	25.0	28.5	35.5	24.5	29.5	32.0	22.0	25.5
8	26.5	20.0	22.5	34.5	26.0	29.0	34.0	26.0	29.5	31.0	23.0	26.0
9	27.5	20.5	24.5	32.5	24.0	28.0	35.0	25.0	29.0	28.5	21.0	25.5
10	29.0	23.5	25.5	29.5	24.5	26.5	36.0	20.0	29.0	25.0	20.5	22.5
11	31.5	24.5	26.5	34.5	26.5	29.5	34.0	25.0	28.0	25.5	21.0	22.5
12	27.0	23.5	25.5	36.5	25.5	30.0	34.5	22.5	26.5	28.5	21.5	24.0
13	30.0	22.0	26.0	36.0	24.5	29.5	31.5	23.0	26.0	28.0	22.5	24.0
14	33.0	24.0	27.5	36.0	27.0	30.0	33.5	23.5	27.0	28.5	21.0	24.0
15	31.0	24.0	27.5	34.0	26.5	30.0	34.5	23.5	27.5	28.0	21.5	24.0
16	34.0	24.5	28.0	30.5	22.0	27.0	32.0	24.0	26.5	30.5	22.5	24.5
17	31.5	23.0	27.5	35.0	22.0	28.0	29.5	20.5	26.5	26.5	21.0	24.0
18	31.0	23.0	25.5	31.5	24.5	27.5	29.0	24.0	26.5	26.0	22.5	24.0
19	32.5	23.5	27.0	31.5	24.5	27.5	31.0	25.0	27.5	27.0	19.5	23.5
20	31.0	24.5	27.5	33.0	24.5	28.0	33.0	24.0	28.0	28.5	20.5	24.0
21	34.5	24.5	28.5	37.0	25.0	30.5	35.5	24.5	29.5	28.0	23.0	25.0
22	33.0	21.5	28.0	34.0	24.5	29.5	35.0	25.5	28.5	27.5	22.0	25.0
23	32.5	22.5	28.5	33.0	25.0	29.0	32.0	23.0	27.5	29.0	23.5	25.0
24	33.0	22.0	28.0	33.5	25.5	28.5	28.0	23.0	25.5	27.0	23.0	25.0
25	32.0	24.5	28.0	34.5	23.0	27.5	31.0	22.5	25.5	24.0	21.0	23.0
26	30.0	21.5	27.0	35.0	25.5	28.5	30.5	22.5	26.0	29.0	22.0	24.5
27	32.0	23.0	27.0	33.0	24.5	28.5	33.0	23.5	27.0	28.5	21.5	24.5
28	30.0	23.0	26.5	32.0	25.0	28.0	33.0	23.5	27.0	30.0	22.0	24.5
29	30.0	24.0	26.5	33.0	26.0	28.0	32.5	23.5	26.5	29.5	22.0	24.5
30	32.0	25.5	27.5	36.5	26.5	29.5	26.5	21.5	24.5	27.0	22.0	24.0
31	---	---	---	34.0	26.5	29.0	32.0	21.5	26.0	---	---	---
MONTH	34.5	19.0	26.5	37.0	20.0	28.5	36.0	20.0	27.5	32.0	19.5	24.5

06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°38'26", long 110°51'38" (NAD 27), Yellowstone National Park, Hydrologic Unit 10020007, on left bank 40 ft downstream from highway bridge, 0.4 mi south of Madison Junction, 14 mi east of West Yellowstone, and at river mile 0.2.

DRAINAGE AREA.--126 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2001 to September 2001, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft (NGVD 29).

REMARKS.--Water-discharge records good. No regulation or 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	94	95	92	95	85	83	81	117	195	133	100	92
2	92	100	91	91	81	81	82	120	250	129	101	90
3	91	103	91	93	82	81	87	127	197	125	106	89
4	91	100	92	92	84	81	93	142	170	120	99	89
5	91	99	90	86	87	80	88	166	164	117	96	89
6	90	98	88	93	83	81	84	190	238	115	95	88
7	90	99	92	92	86	82	95	207	218	112	95	88
8	91	99	94	97	84	81	107	226	196	e110	95	88
9	91	101	94	95	83	82	99	230	195	e110	95	89
10	95	103	92	95	81	84	91	267	181	e120	99	92
11	98	102	99	95	81	84	88	249	164	e125	104	92
12	94	98	98	89	85	86	90	206	197	e120	99	94
13	93	94	88	90	86	81	101	189	241	e115	99	95
14	93	94	94	90	88	79	115	179	193	e115	97	92
15	94	94	93	e82	e80	83	102	197	165	106	95	90
16	100	92	90	89	e78	83	100	258	156	104	94	89
17	97	94	90	91	e80	84	115	295	165	102	97	96
18	103	92	90	94	82	80	140	233	150	102	112	100
19	103	96	90	94	84	86	123	312	144	101	129	93
20	108	92	90	95	85	85	114	328	137	99	104	90
21	118	84	84	94	85	83	110	298	133	98	99	89
22	108	89	85	90	84	83	105	248	142	98	98	90
23	108	92	e80	89	81	85	122	228	175	97	102	94
24	114	92	85	86	82	82	147	211	178	96	97	105
25	105	96	88	85	83	82	182	192	146	98	95	103
26	105	96	87	87	82	80	185	172	136	103	94	93
27	105	90	87	88	81	80	178	160	139	99	93	92
28	108	94	88	88	81	84	149	153	153	97	92	91
29	108	e85	89	87	---	84	133	146	154	98	91	89
30	104	91	93	86	---	85	123	140	145	99	92	89
31	107	---	94	81	---	78	---	136	---	98	93	---
TOTAL	3,089	2,854	2,798	2,799	2,324	2,553	3,429	6,322	5,217	3,361	3,057	2,760
MEAN	99.6	95.1	90.3	90.3	83.0	82.4	114	204	174	108	98.6	92.0
MAX	118	103	99	97	88	86	185	328	250	133	129	105
MIN	90	84	80	81	78	78	81	117	133	96	91	88
AC-FT	6,130	5,660	5,550	5,550	4,610	5,060	6,800	12,540	10,350	6,670	6,060	5,470

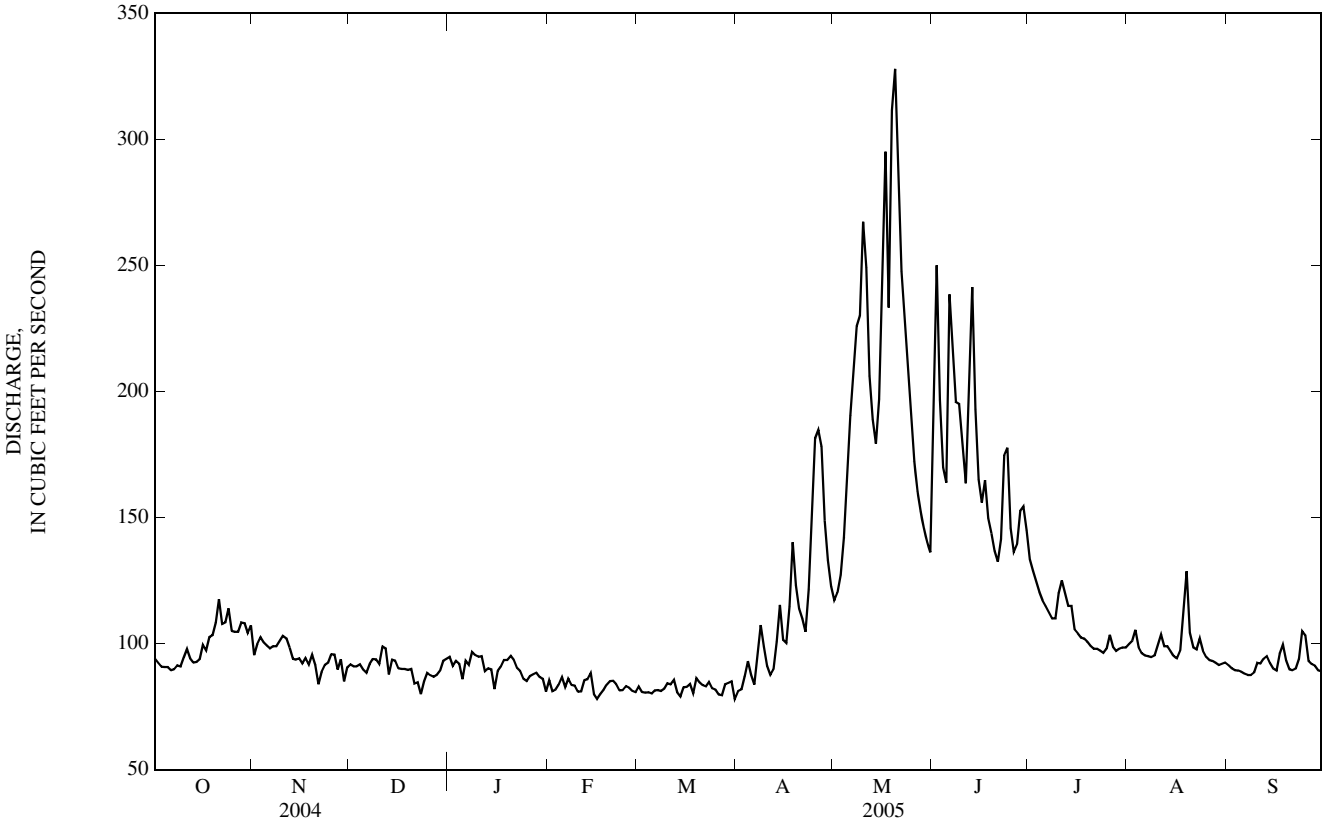
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)*

MEAN	95.4	90.8	89.8	89.1	88.1	89.1	134	239	169	110	93.8	92.6
MAX	99.6	95.1	92.5	94.2	93.6	93.6	152	315	216	114	98.6	104
(WY)	(2005)	(2005)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2005)	(2004)
MIN	89.9	84.7	86.7	82.9	83.0	82.4	114	190	137	108	87.7	82.6
(WY)	(2004)	(2004)	(2004)	(2004)	(2005)	(2005)	(2005)	(2004)	(2001)	(2004)	(2001)	(2001)

06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005*	
ANNUAL TOTAL	40,528		40,563			
ANNUAL MEAN	111		111		116	
HIGHEST ANNUAL MEAN					129	2003
LOWEST ANNUAL MEAN					109	2004
HIGHEST DAILY MEAN	301	May 23	328	May 20	584	May 16, 2001
LOWEST DAILY MEAN	75	Jan 5	78	Feb 16	75	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	79	Jan 16	81	Mar 2	79	Jan 16, 2004
MAXIMUM PEAK FLOW			373	May 20	674	May 16, 2001
MAXIMUM PEAK STAGE			5.08	May 20	5.93	May 16, 2001
INSTANTANEOUS LOW FLOW			a74	Mar 31	b72	Dec 18, 2003
ANNUAL RUNOFF (AC-FT)	80,390		80,460		84,300	
10 PERCENT EXCEEDS	159		173		182	
50 PERCENT EXCEEDS	96		95		95	
90 PERCENT EXCEEDS	83		83		84	

*--During periods of operation (April 2001 to September 2001, October 2002 to current year).
a--Gage height, 3.93 ft.
b--Gage height, 3.93 ft, but may have been lower during period of ice effect.
e--Estimated.



06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2002 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 19, 2002.

REMARKS.--Daily water temperature records rated excellent. Missing daily water temperature data for July 8-14 due to equipment problems. Several unpublished observations of specific conductance and water temperature were made during the year. Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.5°C, July 21, 2003; minimum, 0.0°C, several days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.0°C, July 14, 15, and 21; minimum, 0.0°C, several days November through February.

WATER-QUALITY DATA, SEPTEMBER 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
SEP 2004							
15...	1130	151	7.0	463	9.5	--	--
SEP 2005							
01...	0745	93	7.2	439	11.5	.7	3.0

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water fltrd, **ng/L** (50285)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 2004								
15...	6.07	31.5	148	.22	.34	.17	.71	.02
SEP 2005								
01...	2.53	6.52	717	--	--	--	.28	.07

06037100 GIBBON RIVER AT MADISON JUNCTION, 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
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	11.0	13.0	6.0	2.5	4.5	3.5	0.5	2.0	5.0	4.0	4.5
2	15.0	10.0	12.5	7.5	4.0	5.5	4.5	3.0	3.5	4.5	3.0	4.0
3	16.0	10.0	12.5	8.0	6.0	7.0	4.0	2.5	3.5	5.0	4.0	4.5
4	14.5	10.0	12.5	9.0	5.0	7.0	5.0	2.5	3.5	4.5	1.0	3.0
5	15.0	9.5	12.0	9.0	5.5	7.0	3.5	1.0	2.5	2.5	0.5	1.5
6	15.0	9.0	12.0	8.5	5.0	6.5	4.0	1.5	3.0	2.5	1.5	2.0
7	14.5	10.5	12.0	8.5	4.5	6.5	4.0	3.5	3.5	3.5	1.0	2.0
8	14.5	9.0	11.5	8.5	5.0	7.0	4.5	4.0	4.0	3.0	1.5	2.5
9	14.0	9.0	11.5	11.0	7.5	9.0	5.0	3.0	4.0	5.0	2.5	3.5
10	12.5	10.0	11.0	10.5	8.5	9.5	7.5	5.0	6.5	6.5	4.0	5.0
11	14.0	9.0	11.0	10.0	7.0	8.5	8.0	7.0	7.0	6.0	3.5	4.5
12	12.5	9.0	11.0	9.0	5.5	7.5	8.0	4.5	7.0	3.5	1.0	2.5
13	12.5	8.0	10.5	8.0	5.0	6.5	5.0	2.5	4.0	1.5	0.0	1.0
14	13.5	8.0	10.5	7.0	4.5	6.0	6.5	4.0	5.5	1.5	0.0	0.5
15	12.5	9.5	11.0	8.0	5.5	6.5	7.0	5.5	6.5	1.0	0.0	0.5
16	12.0	10.0	11.0	8.0	4.5	6.5	6.5	5.5	5.5	4.5	0.5	2.0
17	11.0	8.0	9.5	9.5	7.0	8.5	6.5	4.5	5.5	6.5	4.0	5.0
18	10.0	7.5	9.0	8.0	5.0	6.5	6.5	5.5	6.0	6.0	5.5	6.0
19	10.0	7.0	8.5	6.5	5.0	6.0	6.0	4.5	5.5	8.5	6.0	7.0
20	10.0	8.5	9.0	6.0	3.5	5.0	6.0	2.5	3.5	9.0	5.5	7.5
21	9.5	8.5	9.0	4.5	1.5	3.0	3.0	1.0	2.0	8.5	6.0	7.5
22	9.5	7.5	8.5	5.5	2.0	3.5	2.5	0.0	1.5	7.5	4.0	6.0
23	8.0	6.0	7.0	6.0	4.5	5.0	0.5	0.0	0.0	7.0	4.0	5.5
24	8.5	5.5	6.5	5.0	4.5	4.5	1.5	0.5	1.0	6.0	2.5	4.5
25	7.0	3.5	5.5	6.5	5.0	5.5	4.5	1.5	3.5	5.5	2.0	4.0
26	9.0	5.5	7.0	6.0	3.0	4.5	5.0	2.0	3.5	7.0	3.0	4.5
27	10.5	7.5	8.5	4.5	2.5	3.5	6.5	4.0	5.5	7.0	3.5	5.5
28	9.0	8.0	8.5	3.5	0.5	2.5	7.5	6.5	7.0	8.0	6.5	7.0
29	8.5	6.5	7.5	1.0	0.0	0.5	8.0	6.0	6.5	8.0	5.5	7.0
30	7.5	6.5	7.0	1.5	0.5	1.0	6.5	4.0	5.0	7.5	4.5	6.5
31	7.5	4.5	6.5	---	---	---	4.5	4.0	4.0	5.5	2.0	4.0
MONTH	16.0	3.5	10.0	11.0	0.0	5.5	8.0	0.0	4.0	9.0	0.0	4.0
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	4.0	5.0	9.5	5.5	7.0	11.0	4.0	7.5	15.0	6.5	10.0
2	5.5	1.5	3.5	9.5	3.0	6.0	13.0	6.5	9.5	13.5	7.5	10.5
3	6.5	1.5	4.0	9.5	3.5	6.5	11.5	7.5	9.5	14.5	8.0	11.0
4	7.0	2.5	4.5	10.5	4.0	7.0	10.5	8.0	9.0	15.5	9.5	12.0
5	5.5	2.0	4.5	10.5	4.0	7.0	11.0	7.5	9.0	12.5	10.5	11.5
6	5.5	1.5	3.5	10.5	4.5	7.5	15.0	6.0	10.5	13.5	8.5	11.0
7	6.5	3.5	4.5	8.5	4.5	6.5	15.0	8.0	11.5	11.5	8.5	10.0
8	5.5	2.5	4.0	11.5	5.0	8.0	11.5	9.0	10.0	11.0	9.0	9.5
9	5.5	2.5	4.0	12.5	7.0	9.5	12.0	7.5	9.5	10.0	8.5	9.5
10	5.5	0.5	3.0	13.0	7.5	10.0	12.0	8.0	9.5	9.5	8.0	9.0
11	5.5	0.0	3.0	11.0	5.5	8.5	13.0	6.0	9.5	10.0	6.5	8.0
12	6.5	4.5	5.5	9.0	5.0	7.5	14.0	8.0	11.0	10.0	7.0	8.5
13	6.0	4.5	5.5	8.0	2.5	5.0	15.5	8.0	11.5	13.5	7.5	10.5
14	5.5	3.0	4.0	7.0	2.0	4.5	11.5	6.5	8.5	15.5	10.0	12.5
15	3.0	0.0	1.5	8.0	4.0	5.5	13.5	5.0	8.5	13.5	10.5	12.0
16	2.0	0.0	1.0	8.5	5.0	7.0	15.5	6.5	11.0	12.0	11.0	11.5
17	3.0	0.0	1.5	8.0	4.0	6.0	15.5	8.0	11.5	11.0	9.0	9.5
18	5.0	0.0	2.5	7.0	3.0	5.5	11.5	8.0	9.5	10.5	8.5	9.0
19	7.0	4.0	5.5	11.0	5.5	8.0	11.0	7.0	9.0	13.5	10.0	11.5
20	8.5	6.0	7.0	10.0	8.0	9.0	11.5	6.0	8.5	14.5	11.0	12.5
21	9.0	5.5	7.0	10.5	7.0	8.5	11.5	7.5	9.0	15.0	11.0	13.0
22	9.0	4.0	6.0	10.5	7.5	8.5	16.5	7.5	11.5	16.5	10.5	13.5
23	8.0	2.0	5.0	9.5	6.5	8.5	15.5	9.0	12.0	16.0	12.5	14.0
24	8.0	1.5	5.0	8.5	4.0	6.0	15.5	9.0	12.0	14.0	11.0	12.5
25	8.5	2.0	5.0	11.0	4.5	7.5	15.0	8.0	11.0	14.5	9.0	11.5
26	8.5	2.0	5.0	10.0	5.5	7.5	12.0	7.5	9.5	17.0	9.0	12.5
27	8.5	2.0	5.0	7.5	6.5	7.0	10.0	7.0	8.5	18.5	10.0	14.0
28	8.5	2.5	5.5	11.5	7.0	8.0	12.5	4.5	8.0	19.0	11.5	15.0
29	---	---	---	9.0	5.0	7.0	12.0	5.0	8.5	18.0	13.0	15.5
30	---	---	---	9.5	4.5	6.5	12.0	6.5	9.0	17.5	11.5	14.0
31	---	---	---	10.5	2.5	6.5	---	---	---	15.5	10.5	13.0
MONTH	9.0	0.0	4.5	13.0	2.0	7.0	16.5	4.0	10.0	19.0	6.5	11.5

06037100 GIBBON RIVER AT MADISON JUNCTION, 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
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.5	8.5	11.0	21.5	14.0	17.5	21.5	15.0	18.0	19.5	11.0	15.0
2	12.5	7.5	9.5	20.0	14.5	17.0	23.0	17.0	19.0	19.5	11.5	15.5
3	14.0	9.5	11.0	20.0	12.5	16.0	24.0	16.0	19.5	19.5	13.0	16.0
4	15.5	11.0	13.0	21.5	13.5	17.5	24.5	15.5	19.5	18.5	12.5	15.5
5	17.5	11.5	14.5	22.0	14.0	18.0	24.0	15.5	19.5	18.5	12.0	15.5
6	14.5	10.5	12.0	22.5	14.5	18.5	22.5	15.5	19.5	19.0	11.5	15.5
7	11.5	9.0	10.0	23.0	15.5	19.5	22.5	15.5	19.0	19.0	11.5	15.0
8	12.0	8.0	10.0	---	16.0	---	23.0	15.5	19.0	19.5	12.0	15.5
9	12.5	9.0	10.5	---	---	---	21.5	16.0	19.0	18.0	13.5	15.5
10	15.0	10.0	12.0	---	---	---	20.5	16.5	18.5	15.5	12.0	13.5
11	15.0	11.0	13.0	---	---	---	20.0	15.0	17.5	13.0	11.0	11.5
12	13.5	10.5	11.5	---	---	---	19.0	14.0	16.5	13.0	10.0	11.5
13	15.0	9.0	11.5	---	---	---	21.0	13.0	16.5	13.5	9.0	11.0
14	18.0	10.5	14.0	25.0	---	---	20.5	12.5	16.5	15.5	9.0	12.0
15	19.5	13.5	16.5	25.0	16.5	20.5	22.0	13.0	17.5	16.5	9.5	13.0
16	18.0	13.0	15.5	22.5	17.5	20.0	18.0	13.5	16.0	16.5	10.0	13.0
17	20.0	13.0	16.0	23.0	15.0	18.5	19.5	15.0	16.5	13.0	11.0	12.0
18	18.0	14.0	15.5	23.0	14.5	18.5	16.5	14.5	15.5	13.0	10.0	11.5
19	19.5	12.0	15.5	23.0	14.5	19.0	20.5	12.5	16.0	16.0	9.0	12.0
20	21.0	13.0	17.0	23.5	15.5	19.5	22.0	13.5	17.5	16.5	9.5	13.0
21	20.5	14.5	17.5	25.0	16.0	20.0	23.5	14.0	18.5	15.0	13.0	14.0
22	21.5	15.0	18.0	23.0	18.5	20.5	21.5	15.0	18.0	16.5	10.5	13.5
23	20.5	15.0	17.5	24.5	17.0	20.5	21.5	15.0	18.0	15.5	11.5	13.5
24	21.5	14.5	18.0	23.0	15.5	19.5	20.0	15.0	17.0	13.0	11.5	12.5
25	21.0	14.5	17.5	21.0	16.0	18.0	19.5	12.0	15.5	12.5	10.0	11.0
26	18.0	14.5	16.5	22.5	13.0	17.5	20.0	12.0	16.0	15.5	8.5	12.0
27	18.0	13.0	15.5	23.0	14.0	18.5	21.0	12.5	16.5	13.5	11.0	12.0
28	16.5	13.0	15.0	21.5	14.5	18.0	21.0	13.0	17.0	15.5	9.5	12.0
29	17.5	13.0	15.0	20.0	15.0	17.0	21.0	13.0	17.0	15.5	9.0	12.5
30	19.5	14.0	16.5	23.0	15.0	18.5	17.5	13.5	15.5	14.0	10.0	12.0
31	---	---	---	20.0	15.5	18.0	18.5	10.0	14.0	---	---	---
MONTH	21.5	7.5	14.0	25.0	12.5	18.5	24.5	10.0	17.5	19.5	8.5	13.5

443824110531601 MADISON RIVER NEAR MADISON JUNCTION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°38'24", long 110°53'16" (NAD 27), Teton County, Wyoming, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004 and August 2005, discontinued.

GAGE.--None, elevation at site, 6,780 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, SEPTEMBER 2004 TO AUGUST 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
SEP 2004							
15...	1230	433	7.4	490	13.0	--	--
AUG 2005							
30...	1400	335	7.5	514	18.0	.8	1.7

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water fltrd, **ng/L** (50285)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 2004								
15...	5.05	19.5	179	.18	.16	.34	.47	.02
AUG 2005								
30...	2.62	10.1	737	--	--	--	.20	.10

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°39'25", long 111°04'03" (NAD 27), in $NE^1/_4$ $NW^1/_4$ $SW^1/_4$ sec.36, T.13 S., R.5 E., Gallatin County, Hydrologic Unit 10020007, Yellowstone National Park, on left bank 0.7 mi downstream from Montana-Wyoming stateline, 1.5 mi east of West Yellowstone, 16.4 mi downstream from Gibbon River, and at river mile 132.7.

DRAINAGE AREA.--420 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, October 1988 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft (NGVD 29). Prior to Oct. 20, 1918, nonrecording gage, and Oct. 20, 1918 to June 29, 1930, nonrecording gage or water-stage recorder at sites 2.5 mi upstream at different elevations. Supplementary nonrecording gage at site 0.3 mi downstream at different elevation used at time during 1927-30.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. No regulation or 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	390	395	382	389	370	380	383	494	705	466	419	363
2	387	393	381	381	367	375	387	506	901	454	405	362
3	384	400	381	381	367	377	402	525	734	436	404	358
4	381	401	381	381	369	375	421	566	675	430	395	358
5	381	396	380	378	372	374	410	605	639	424	392	358
6	385	395	379	385	370	371	394	671	750	418	380	358
7	387	392	384	387	378	372	417	710	795	411	375	356
8	387	390	388	402	375	371	459	738	697	405	375	357
9	387	392	389	403	378	375	440	762	687	403	375	358
10	389	396	387	398	377	381	415	832	666	411	385	369
11	400	397	396	398	377	381	405	865	612	453	398	369
12	392	392	398	391	385	383	405	807	655	426	394	370
13	387	388	387	372	386	378	435	783	761	406	387	374
14	387	382	385	e350	395	372	481	768	667	399	383	369
15	387	378	387	e370	388	373	444	820	611	397	375	363
16	392	379	384	e390	e380	377	430	950	602	397	372	363
17	389	380	381	384	e385	381	452	1,130	579	395	378	371
18	400	378	379	385	386	383	499	1,040	540	395	411	391
19	409	380	375	387	388	389	482	1,070	522	393	526	372
20	423	381	376	393	389	388	459	1,160	496	389	420	364
21	438	371	370	392	389	386	453	1,080	484	387	393	363
22	420	372	362	386	387	385	436	951	496	387	387	363
23	417	375	e350	381	384	391	461	890	568	387	388	369
24	431	375	e360	378	381	396	498	841	587	387	383	396
25	412	375	e370	373	383	390	546	779	523	388	375	409
26	411	375	372	372	382	386	562	715	490	404	375	377
27	413	372	369	372	381	381	577	674	495	396	369	370
28	420	375	374	374	378	394	536	655	512	392	363	369
29	418	e360	375	373	---	406	505	648	509	392	363	367
30	411	e380	381	375	---	404	500	625	492	392	363	363
31	410	---	391	369	---	388	---	607	---	401	363	---
TOTAL	12,425	11,515	11,754	11,850	10,647	11,863	13,694	24,267	18,450	12,621	12,071	11,049
MEAN	401	384	379	382	380	383	456	783	615	407	389	368
MAX	438	401	398	403	395	406	577	1,160	901	466	526	409
MIN	381	360	350	350	367	371	383	494	484	387	363	356
AC-FT	24,640	22,840	23,310	23,500	21,120	23,530	27,160	48,130	36,600	25,030	23,940	21,920

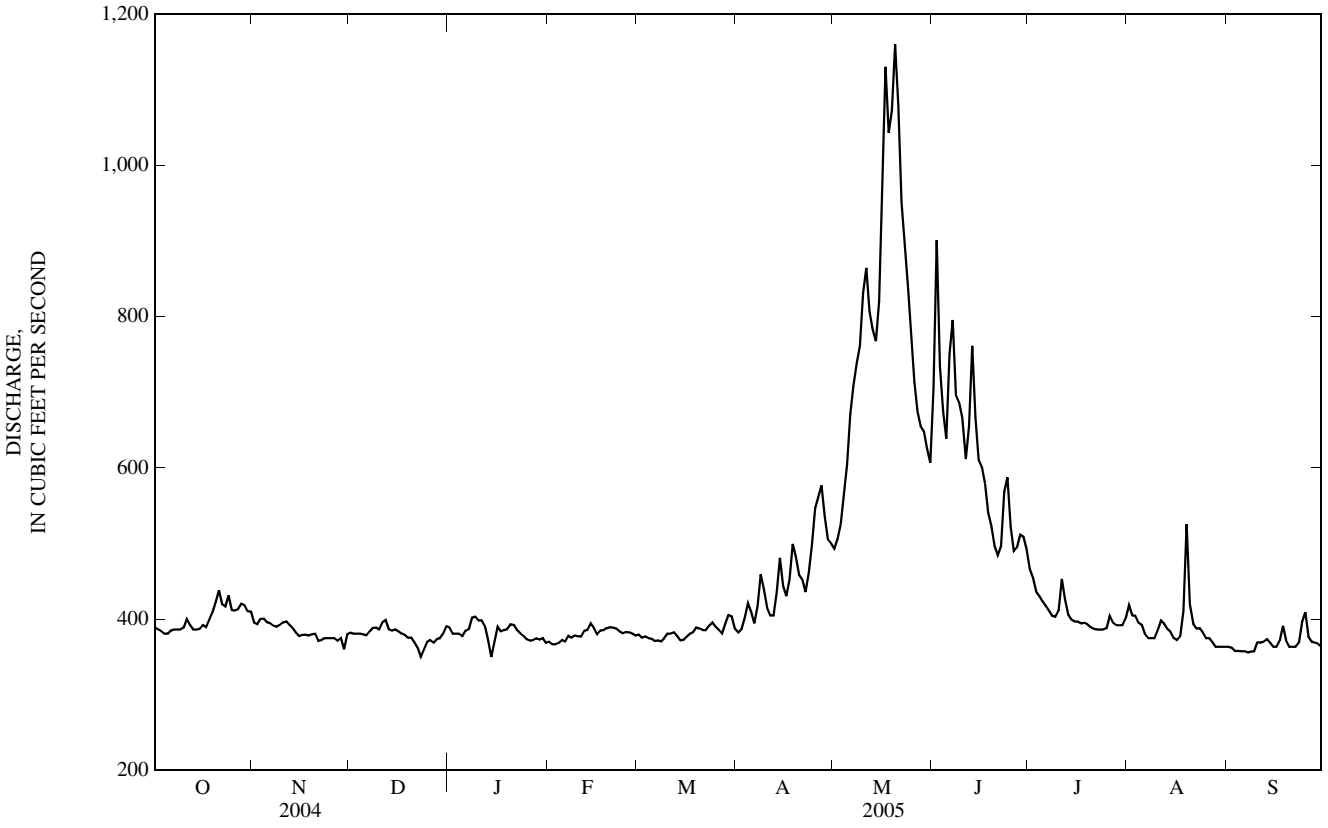
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2005, BY WATER YEAR (WY)*

MEAN	432	423	414	403	398	405	495	847	806	496	432	425
MAX	710	697	641	586	572	539	671	1,725	1,479	917	759	704
(WY)	(1914)	(1914)	(1997)	(1997)	(1914)	(1917)	(1925)	(1997)	(1997)	(1913)	(1913)	(1913)
MIN	297	297	304	304	303	313	369	388	341	282	273	282
(WY)	(1935)	(1932)	(1932)	(1932)	(1932)	(1943)	(1941)	(1934)	(1931)	(1931)	(1934)	(1934)

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1913 - 2005*	
ANNUAL TOTAL	155,270		162,206			
ANNUAL MEAN	424		444		497	
HIGHEST ANNUAL MEAN					789	1997
LOWEST ANNUAL MEAN					337	1934
HIGHEST DAILY MEAN	864	May 23	1,160	May 20	2,750	May 18, 1996
LOWEST DAILY MEAN	250	Jan 6	350	Dec 23	245	Jan 1, 1942
ANNUAL SEVEN-DAY MINIMUM	311	Jan 5	358	Sep 3	267	Aug 6, 1931
MAXIMUM PEAK FLOW			1,260	May 20	a2,820	May 18, 1996
MAXIMUM PEAK STAGE			2.68	May 20	b10.00	Jan 8, 1937
INSTANTANEOUS LOW FLOW					c100	Feb 7, 1933
ANNUAL RUNOFF (AC-FT)	308,000		321,700		359,900	
10 PERCENT EXCEEDS	570		643		739	
50 PERCENT EXCEEDS	389		389		430	
90 PERCENT EXCEEDS	341		370		339	

*--During periods of operation (June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, October 1988 to current year).
a--Gage height, 3.78 ft.
b--About, backwater from ice.
c--Result of freezeup.
e--Estimated.



06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1989-95, October 2003 to September 2004, discontinued.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1983 to July 1986.
WATER TEMPERATURE: July 1983 to July 1986.

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 558 microsiemens per centimeter (µS/cm) at 25.0°C, Mar. 24, 25, 1986; minimum, 78 µS/cm at 25.0°C, May 30, 1986.
WATER TEMPERATURE: Maximum, 25.5°C, Aug. 6, 9, 1983; minimum, 0.0°C, many days during winter months.

WATER-QUALITY DATA, APRIL 2004 TO SEPTEMBER 2004

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)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water fltrd, **ng/L** (50285)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
APR 2004													
19...	1045	482	8.1	470	--	4.99	26.3	--	--	--	--	--	--
AUG													
04...	1200	375	--	491	16.5	3.79	9.79	--	.20	--	--	--	--
04...	1400	381	8.3	492	19.5	3.25	9.06	--	.27	--	--	--	--
04...	1600	381	8.4	496	22.5	3.55	8.50	--	.26	--	--	--	--
04...	1800	381	8.4	498	22.5	3.70	8.89	--	.24	--	--	--	--
04...	2000	381	8.4	497	21.5	3.60	9.33	--	.27	--	--	--	--
04...	2200	381	8.3	492	20.5	3.52	8.71	--	.19	--	--	--	--
04...	2359	381	8.3	493	19.5	2.93	8.94	--	.22	--	--	--	--
05...	0200	381	8.2	496	19.0	3.64	8.86	--	.21	--	--	--	--
05...	0445	381	8.2	494	18.0	3.12	9.12	--	.15	--	--	--	--
05...	0600	381	8.2	495	18.0	3.67	9.38	--	.14	--	--	--	--
05...	0800	381	8.3	495	17.5	2.87	9.06	--	.15	--	--	--	--
05...	1100	381	8.4	498	20.0	3.24	9.05	--	.23	--	--	--	--
05...	1300	381	8.4	498	22.0	3.34	9.96	--	.20	--	--	--	--
SEP 2004													
14...	1630	516	8.3	466	13.0	4.30	17.4	175	.19	.23	.39	.51	.04

444349111081901 HEBGEN LAKE, MADISON ARM NEAR GRAYLING, MT

LOCATION.--Lat 44°43'49", long 111°08'19 (NAD 27)", in $SE^1/_4SW^1/_4NE^1/_4$ sec.5, T.13 S., R.5 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,535 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 30...	1000	187	<.13	.62	.02

444548111144401 UPPER HEBGEN LAKE NEAR GRAYLING, MT

LOCATION.--Lat 44°45'48", long 111°14'44 (NAD 27)", in $SE^1/_4NE^1/_4NW^1/_4$ sec.28, T.12 S., R.4 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,535 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 30...	1100	741	<1.35	.06	.12

444710111102301 HEBGEN LAKE, GRAYLING ARM NEAR GRAYLING, MT

LOCATION.--Lat 44°47'10", long 111°10'23 (NAD 27)", in NW$^1/_4$NW$^1/_4$SW$^1/_4$ sec.18, T.12 S., R.5 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,535 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 30...	1130	70.5	<.37	.22	.13

444909111161201 MIDDLE HEBGEN LAKE NEAR GRAYLING, MT

LOCATION.--Lat 44°49'09", long 111°16'12 (NAD 27)", in NE$^{1}/_{4}$SW$^{1}/_{4}$NW$^{1}/_{4}$ sec.5, T.12 S., R.4 E, Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,534 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004					
30...	1230	571	<1.23	.07	.11

445122111193501 LOWER HEBGEN LAKE NEAR GRAYLING, MT

LOCATION.--Lat 44°51'22", long 111°19'35 (NAD 27)", in $NE^1/_4SE^1/_4SW^1/_4$ sec.23, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,534 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 30...	0900	745	<1.99	.04	.16

06038500 MADISON RIVER BELOW HEBGEN LAKE, NEAR GRAYLING, MT

LOCATION.--Lat 44°52'00", long 111°20'15" (NAD 27), NE$^1/_4$ NE$^1/_4$ NE$^1/_4$ sec.22, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007, Gallatin National Forest, on right bank 1,500 ft downstream from Hebgen Dam, 8 mi northwest of Grayling, 17 mi upstream from West Fork, and at river mile 108.8.

DRAINAGE AREA.--905 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1909 to current year. Prior to October 1938 adjusted runoff only, published in WSP 1309. Prior to October 1949, published as "below Hebgen Reservoir".

REVISED RECORDS.--WSP 1509: 1948. WSP 1559: Drainage area. WSP 1629: 1943. WSP 1709: 1959. WSP 1729: 1943.

GAGE.--Water-stage recorder. Elevation of gage is 6,448.47 ft (after 1959 earthquake) (NGVD 29). Prior to July 13, 1943, nonrecording gage in stilling well.

REMARKS.--Water-discharge records excellent. Flow completely regulated by Hebgen Lake (station number 06038000). Diversions for irrigation of about 1,100 acres upstream from station. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--96 years, 1,017 ft^3/s, 15.26 in/yr, 736,800 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s, Aug. 17, 1959, caused by wave over Hebgen Dam during earthquake, gage height, 5.3 ft, from floodmark, from rating curve extended above 3,500 ft^3/s on basis of slope-area measurement of peak flow; maximum observed unaffected by wave over dam, 5,090 ft^3/s, June 3, 1943, gage height, 3.69 ft; minimum daily, 5.0 ft^3/s, May 9-12, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,180 ft^3/s, June 15, gage height, 2.56 ft; minimum daily, 789 ft^3/s, July 6.

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	906	888	887	873	865	846	835	843	928	879	1,030	1,020
2	904	886	886	872	860	842	833	844	983	879	1,030	1,010
3	900	869	884	872	857	841	832	847	1,050	879	1,030	1,010
4	898	843	883	874	853	841	835	850	1,050	879	1,030	1,010
5	898	841	880	870	850	841	841	849	1,050	837	1,030	1,010
6	898	838	879	870	850	841	836	850	1,130	789	1,030	1,020
7	898	835	879	869	850	841	832	850	1,310	793	1,030	1,020
8	898	862	879	871	851	841	832	850	1,440	793	1,030	965
9	898	898	880	873	850	840	833	851	1,440	793	1,030	918
10	898	898	879	874	850	842	832	857	1,440	794	1,030	919
11	897	897	880	872	850	841	832	866	1,430	794	1,030	918
12	895	895	879	871	850	841	831	869	1,430	794	1,030	918
13	894	894	879	872	850	841	831	869	1,590	795	1,030	918
14	891	892	879	869	850	841	834	869	1,750	795	1,030	918
15	890	890	879	869	850	841	832	869	1,950	795	1,030	918
16	889	888	879	869	850	841	832	870	2,120	797	1,030	918
17	888	888	879	869	850	841	832	878	2,110	795	1,030	918
18	888	888	879	869	850	841	838	879	2,110	797	1,030	918
19	888	888	879	869	850	840	840	880	2,110	836	1,030	918
20	888	888	879	869	850	840	841	891	2,100	918	1,030	917
21	888	888	879	869	850	841	841	898	2,100	958	1,030	911
22	888	888	878	869	850	840	841	899	1,980	1,010	1,030	906
23	888	888	877	869	850	840	841	903	1,750	1,060	1,030	905
24	888	888	875	869	850	840	840	909	1,560	1,050	1,030	907
25	888	888	876	869	849	840	841	912	1,450	1,040	1,030	904
26	887	888	873	869	849	839	841	917	1,430	1,040	1,030	899
27	887	888	871	869	849	837	841	918	1,350	1,040	1,030	898
28	887	888	871	869	847	837	841	918	1,170	1,040	1,020	898
29	888	888	871	869	---	837	842	923	1,040	1,040	1,020	898
30	887	888	873	869	---	838	841	927	939	1,040	1,020	898
31	888	---	872	869	---	837	---	928	---	1,040	1,020	---
TOTAL	27,668	26,446	27,223	26,975	23,830	26,050	25,094	27,283	45,290	27,789	31,890	28,105
MEAN	893	882	878	870	851	840	836	880	1,510	896	1,029	937
MAX	906	898	887	874	865	846	842	928	2,120	1,060	1,030	1,020
MIN	887	835	871	869	847	837	831	843	928	789	1,020	898
AC-FT	54,880	52,460	54,000	53,500	47,270	51,670	49,770	54,120	89,830	55,120	63,250	55,750

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

MEAN	1,341	1,379	978	896	839	839	922	851	1,255	1,025	1,077	1,126
MAX	2,477	2,535	2,838	1,407	1,905	1,574	2,343	2,494	2,940	2,058	1,722	1,688
(WY)	(1962)	(1960)	(1960)	(1944)	(1943)	(1947)	(1948)	(1996)	(1943)	(1965)	(1939)	(1982)
MIN	215	501	410	180	181	291	217	45.5	96.0	503	662	368
(WY)	(1942)	(1941)	(1940)	(1940)	(1940)	(1941)	(1961)	(1962)	(1960)	(1978)	(1960)	(1941)

06038500 MADISON RIVER BELOW HEBGEN LAKE, NEAR GRAYLING, MT—Continued

ADJUSTED FOR CHANGE IN CONTENTS IN HEBGEN LAKE

MEAN†	728	744	722	746	684	697	888	1,968	1,668	864	747	715
CFSM†	0.80	0.82	0.80	0.82	0.76	0.77	0.98	2.17	1.84	0.95	0.83	0.79
IN†	0.93	0.92	0.92	0.95	0.79	0.89	1.10	2.51	2.06	1.10	0.95	0.88
AC-FT†	44,780	44,260	44,400	45,900	37,970	42,870	52,870	121,020	99,230	53,120	45,950	42,550

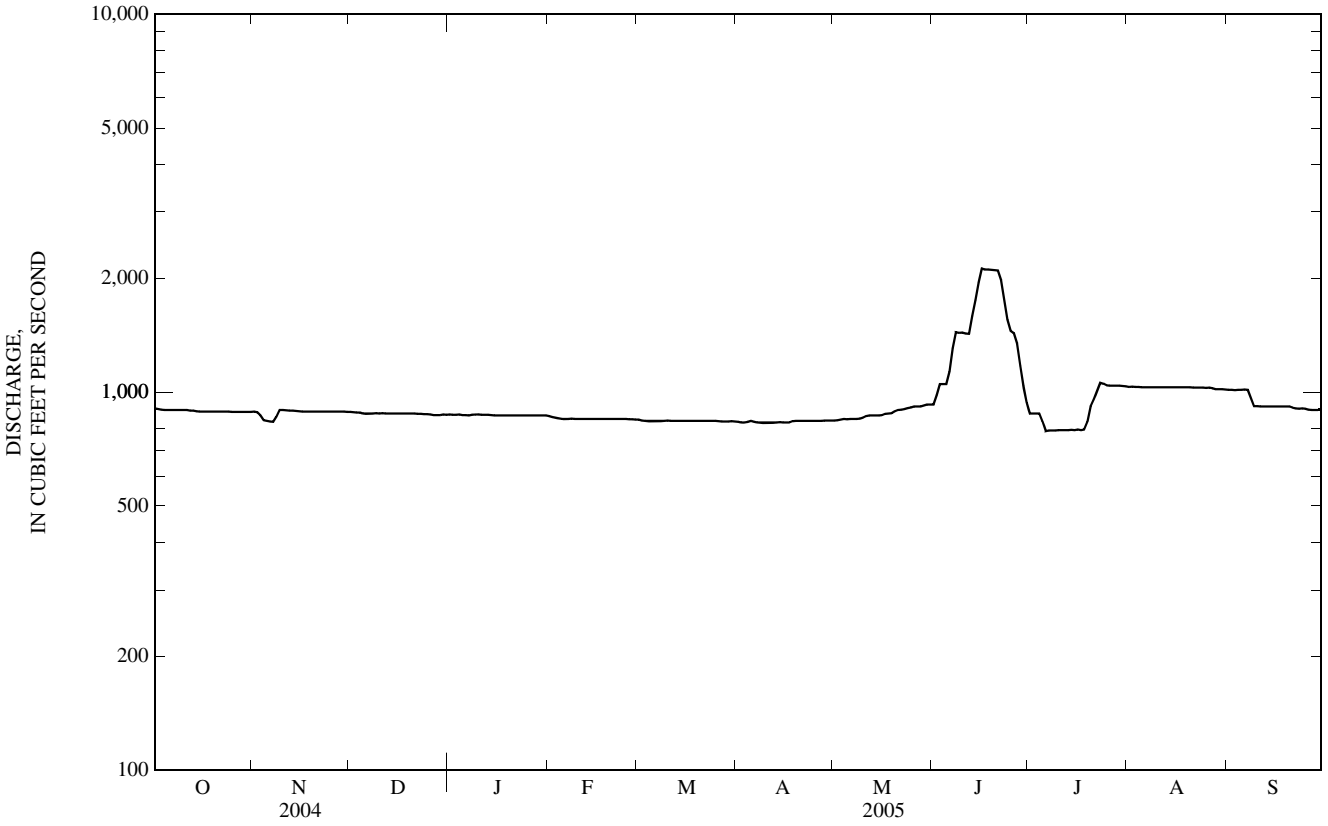
OBSERVED

CALENDAR YEAR 2004	TOTAL	293,181	MEAN	801	MAX	1,170	MIN	406	AC-FT	581,500
WATER YEAR 2005	TOTAL	343,643	MEAN	941	MAX	2,120	MIN	789	AC-FT	681,600

ADJUSTED

CALENDAR YEAR 2004	TOTAL	309,150	MEAN	845	CFSM	0.93	IN	12.70	AC-FT	613,200
WATER YEAR 2005	TOTAL	340,257	MEAN	932	CFSM	1.03	IN	13.98	AC-FT	674,900

†--Adjusted for change in contents in Hebgen Lake.



06038500 MADISON RIVER BELOW HEBGEN LAKE, NEAR GRAYLING, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986-88, 1990-95, October 2003 to current year, discontinued.

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass. Several unpublished observations of specific conductance and water temperature were made during the year.

WATER-QUALITY DATA, APRIL 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
APR 2004							
19...	1200	758	7.9	352	--	--	--
SEP							
14...	1400	918	8.3	283	15.0	--	--
SEP 2005							
15...	1210	918	8.5	254	15.5	1.9	4.6

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water fltrd, **ng/L** (50285)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
APR 2004								
19...	1.54	2.11	--	--	--	--	--	--
SEP								
14...	.79	1.02	30.9	.07	.06	.55	.56	.02
SEP 2005								
15...	.59	.81	15.4	--	.07	--	.74	.01

445107111214501 UPPER QUAKE LAKE NEAR GRAYLING, MT

LOCATION.--Lat 44°51'07", long 111°21'45 (NAD 27)", in $NE^1/_4NW^1/_4NE^1/_4$ sec.28, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,388 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004					
		Sample from upper 2 inches of core			
29...	1430	24.4	3.16	.26	.06
		Sample from lower 7-9 inches of core			
29...	1445	30.1	.59	.53	.07

445220111213601 BEAVER CREEK NEAR MOUTH, NEAR GRAYLING, MT

LOCATION.--Lat 44°52'20", long 111°21'36" (NAD 27), in $SW^1/_4NE^1/_4SE^1/_4$ sec.16, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2005, discontinued.

GAGE.--None, elevation at site, 6,500 ft (NGVD 27)

REMARKS.--Mercury concentrations are in nanograms per unit volume or mass.

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

Date	Time	Instan-taneous dis-charge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP												
14...	1630	39	8.3	121	10.5	.6	1.5	.22	.33	19.3	.52	.04

444950111251201 LOWER QUAKE LAKE NEAR GRAYLING, MT

LOCATION.--Lat 44°49'50", long 111°25'12" (NAD 27), in $NW^1/_4NE^1/_4SE^1/_4$ sec.36, T.11 S., R.2 E., Madison County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 6,388 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 29...	1600	364	<1.11	.07	.09

06038800 MADISON RIVER AT KIRBY RANCH, NEAR CAMERON, MT

LOCATION.--Lat 44°53'22", long 111°34'46" (NAD 27), in NE$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.10, T.11 S., R.1 E., Madison County, Hydrologic Unit 10020007, 75 ft upstream from county bridge, 0.2 mi upstream from West Fork Madison River, and 22 mi south of Cameron, and at river mile 89.8.

DRAINAGE AREA.--1,065 mi^2.

PERIOD OF RECORD.--September 1959 to September 1963, May 1978 to September 1994 (seasonal records only), October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,860 ft (NGVD 29). Aug. 31, 1959 to Oct. 2, 1959, nonrecording gage 75 ft downstream at elevation 0.96 ft lower. Oct. 3, 1959 to September 1963, water-stage recorder at present site and elevation. May 1978 to September 1994, nonrecording gage 75 ft downstream at present elevation.

REMARKS.--Records good. Flow regulated by Hebgen Lake (station 06038000). Diversions for irrigation of about 1,500 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.

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	960	945	927	e925	922	913	871	933	1,410	1,250	1,160	1,080
2	960	951	930	922	919	909	873	935	1,400	1,230	1,170	1,070
3	956	952	933	921	919	908	877	948	1,420	1,210	1,180	1,070
4	953	930	934	e920	921	902	882	959	1,400	1,160	1,150	1,070
5	948	918	928	e915	928	904	878	986	1,400	1,130	1,140	1,070
6	939	914	928	915	926	907	874	1,030	1,520	1,070	1,140	1,070
7	942	915	934	914	926	916	879	1,050	1,670	1,050	1,130	1,060
8	943	918	937	926	924	911	886	1,050	1,820	1,050	1,130	1,050
9	936	950	937	922	924	913	884	1,080	1,810	1,040	1,130	980
10	938	959	938	916	922	908	875	1,110	1,780	1,050	1,130	981
11	938	961	940	914	923	900	869	1,090	1,760	1,070	1,130	968
12	938	959	944	e915	930	898	873	1,050	1,800	1,030	1,130	963
13	935	955	935	913	932	886	877	1,020	1,830	1,010	1,130	967
14	935	952	930	913	933	878	890	1,030	2,030	1,010	1,120	958
15	937	958	937	e910	e930	875	885	1,070	2,160	1,010	1,120	967
16	945	954	937	907	e925	877	881	1,190	2,560	980	1,110	964
17	942	952	932	907	e930	877	893	1,420	2,640	972	1,120	974
18	941	950	931	910	930	873	930	1,330	2,660	962	1,140	981
19	943	947	934	912	932	876	918	1,420	2,630	960	1,130	961
20	956	947	927	914	924	886	905	1,600	2,620	1,010	1,110	963
21	955	933	928	913	934	886	896	1,660	2,660	1,080	1,110	964
22	953	932	925	913	931	882	890	1,630	2,660	1,100	1,110	958
23	973	942	922	914	913	884	897	1,680	2,550	1,170	1,100	e970
24	964	953	e920	914	916	883	914	1,610	2,270	1,190	1,090	e960
25	956	954	920	915	915	875	952	1,500	2,040	1,180	1,090	e950
26	955	949	920	915	913	875	982	1,410	1,940	1,170	1,090	e950
27	957	943	921	915	912	876	984	1,390	1,860	1,170	1,090	e950
28	958	935	922	917	914	883	961	1,410	1,680	1,160	1,080	940
29	965	927	928	911	---	879	945	1,460	1,520	1,160	1,080	938
30	959	927	931	914	---	876	939	1,440	1,350	1,160	1,080	938
31	959	---	927	914	---	870	---	1,400	---	1,160	1,080	---
TOTAL	29,439	28,282	28,837	28,366	25,868	27,586	27,060	38,891	58,850	33,954	34,700	29,685
MEAN	950	943	930	915	924	890	902	1,255	1,962	1,095	1,119	990
MAX	973	961	944	926	934	916	984	1,680	2,660	1,250	1,180	1,080
MIN	935	914	920	907	912	870	869	933	1,350	960	1,080	938
AC-FT	58,390	56,100	57,200	56,260	51,310	54,720	53,670	77,140	116,700	67,350	68,830	58,880

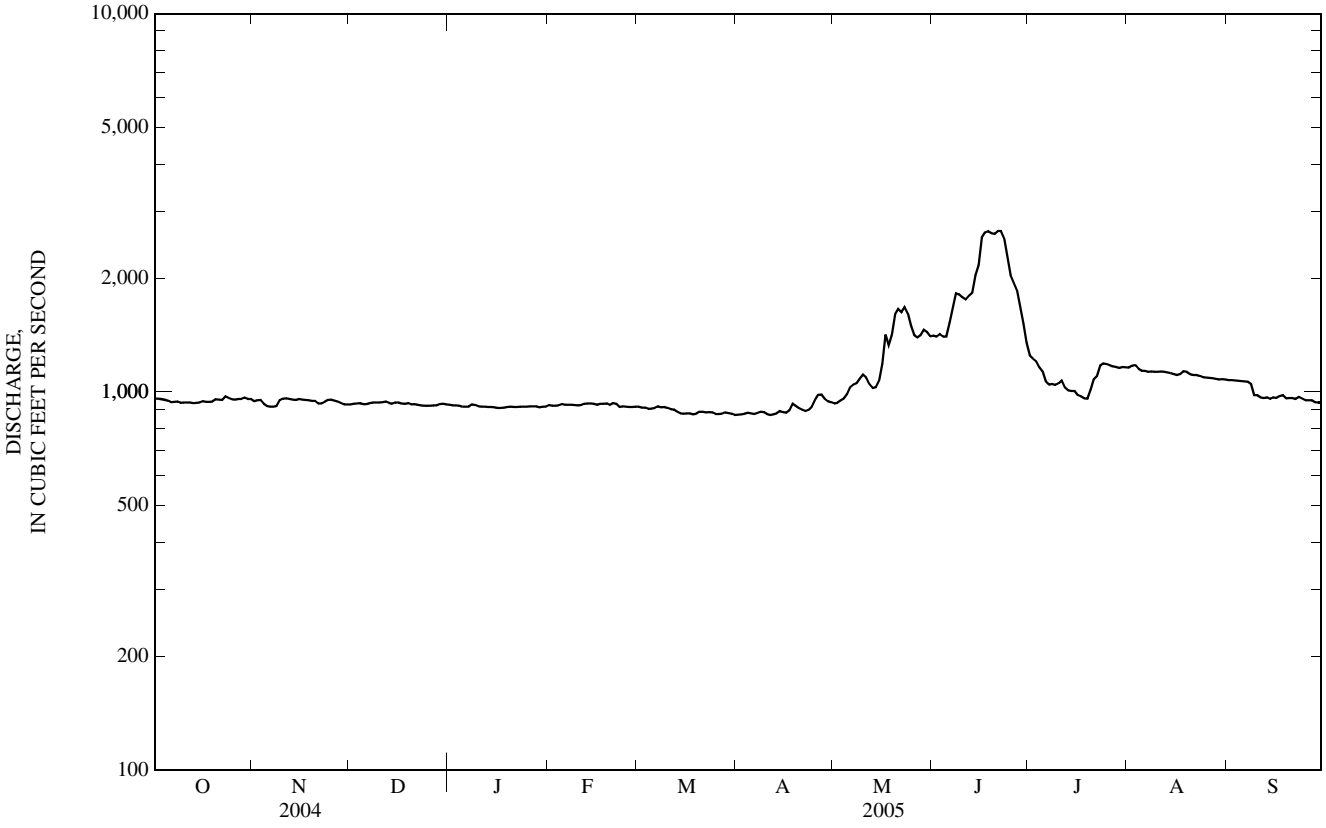
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)*

MEAN	1,473	1,469	1,171	1,019	1,011	1,015	987	1,353	1,839	1,312	1,122	1,144
MAX	2,570	2,780	3,005	1,449	1,521	1,611	1,527	2,865	3,862	2,125	1,672	1,567
(WY)	(1962)	(1960)	(1960)	(1999)	(1999)	(1999)	(1995)	(1997)	(1997)	(1982)	(1997)	(1996)
MIN	854	736	739	737	626	525	370	445	619	716	734	732
(WY)	(2004)	(1961)	(1961)	(1961)	(1963)	(1963)	(1961)	(1961)	(1960)	(1979)	(1960)	(1960)

06038800 MADISON RIVER AT KIRBY RANCH, NEAR CAMERON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1959 - 2005*	
ANNUAL TOTAL	342,046		391,518			
ANNUAL MEAN	935		1,073		1,254	
HIGHEST ANNUAL MEAN					1,896	1997
LOWEST ANNUAL MEAN					733	1961
HIGHEST DAILY MEAN	1,440	Jul 8	2,660	Jun 18	5,030	May 31, 1993
LOWEST DAILY MEAN	662	May 15	869	Apr 11	139	Sep 1, 1959
ANNUAL SEVEN-DAY MINIMUM	700	May 13	875	Mar 31	152	Sep 1, 1959
MAXIMUM PEAK FLOW			2,720	Jun 22	b5,030	May 30, 1993
MAXIMUM PEAK STAGE			3.01	Jun 22	3.97	Jun 7, 1996
INSTANTANEOUS LOW FLOW			a860	Mar 31	c139	Sep 1, 1959
ANNUAL RUNOFF (AC-FT)	678,400		776,600		908,700	
10 PERCENT EXCEEDS	1,020		1,410		1,990	
50 PERCENT EXCEEDS	940		948		1,120	
90 PERCENT EXCEEDS	808		892		740	

*--During periods of operation (September 1959 to September 1963; May 1978 to September 1994 (seasonal records only), October 1994 to current year).
a--Gage height, 1.80 ft.
b--Observed, gage height, 3.15 ft; previous site at present datum.
c--Observed, present site and datum.
e--Estimated.



06038800 MADISON RIVER AT KIRBY RANCH, NEAR CAMERON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1994-2002, October 2003 to September 2005, discontinued.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1994 to 2002.

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD:
WATER TEMPERATURE: Maximum 21.5°C, July 2, 3, 2001, July 12, 2002; mimimum, 0.0°C many days during winter months.

WATER-QUALITY DATA, APRIL 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
APR 2004							
19...	1315	892	8.3	356	--	--	--
SEP							
14...	1130	982	8.4	273	12.5	--	--
SEP 2005							
15...	1045	971	8.5	258	13.0	1.6	1.9

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
APR 2004							
19...	1.10	1.87	--	--	--	--	--
SEP							
14...	.64	.99	6.83	--	.20	.60	.03
SEP 2005							
15...	.42	.71	6.15	.04	--	.72	.01

06039200 WEST FORK MADISON RIVER NEAR CAMERON, MT

LOCATION.--Lat 44°53'15", long 111°34'55" (NAD 27),in $SW^1/_4NE^1/_4SE^1/_4$ sec.10, T.11 S., R.1 E., Madison County, Hydrologic Unit 10020007, on bridge 0.25 mi upstream from mouth and 22 mi southeast of Cameron.

DRAINAGE AREA.--220 mi^2.

PERIOD OF RECORD.--Water years 1986 and 1988, September 2005, discontinued.

GAGE.--None. Elevation at site is 5,870 ft (NGVD 29).

REMARKS.--Data for water years 1986 and 1988 published in Open-File Reports 87-124 and 88-722 respectively. Mercury concentrations are in nanograms per unit volume or mass.

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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP												
14...	1330	53	8.7	230	9.0	1.0	3.6	.25	.39	11.5	.44	.06

06040000 MADISON RIVER NEAR CAMERON, MT

LOCATION.--Lat 45°14'00", long 111°45'00" (NAD 27), at center of south line of sec.8, T.7 S., R.1 W., Madison County, Hydrologic Unit 10020007, at site of former gaging station, 30 ft downstream from Varney Bridge, 1.8 mi downstream from Wigwam Creek, and 4.1 mi northwest of Cameron.

DRAINAGE AREA.--1,669 mi^2.

PERIOD OF RECORD.--Water years 1988, 1993-1995, 2004-2005, discontinued.

GAGE.--None. Elevation at site is 5,135 ft (NGVD 29).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, SEPTEMBER 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
SEP 2004								
14...	0830	1,090	8.2	270	7.0	11.0	--	--
SEP 2005								
15...	0800	1,020	8.3	260	--	10.0	1.8	2.0

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 2004							
14...	.67	.90	12.7	--	1.04	.25	.09
SEP 2005							
15...	.18	.67	6.47	<.04	--	.62	.02

452518111412201 UPPER ENNIS LAKE NEAR ENNIS, MT

LOCATION.--Lat 45°25'18", long 111°41'22" (NAD 27), in $NE^1/_4NE^1/_4NW^1/_4$ sec.11, T.5 S., R.1 W., Madison County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 4,815 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 29...	1200	14.6	<.13	.61	.02

452702111393001 LOWER ENNIS LAKE NEAR ENNIS, MT

LOCATION.--Lat 45°27'02", long 111°39'30" (NAD 27), in $NW^1/_4NW^1/_4NW^1/_4$ sec.31, T.4 S., R.1 E., Madison County, Hydrologic Unit 10020007.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 4,815 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 29...	1100	64.7	<.68	.12	.10

06040800 MADISON RIVER ABOVE POWERPLANT, NEAR MCALLISTER, MT

LOCATION.--Lat 45°29'12", long 111°37'59" (NAD 27), in NW$^1/_4$ NE$^1/_4$ SW$^1/_4$ sec.17, T.4 S., R.1 E., Madison County, Hydrologic Unit 10020007, on right bank 160 ft upstream from Madison powerplant, 1.4 mi downstream from Ennis Lake, 5.6 mi northeast of McAllister, and at river mile 38.9.

DRAINAGE AREA.--2,186 mi^2.

PERIOD OF RECORD.--April 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,690 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Hebgen Lake (station number 06038000) and Ennis Lake (station number 06040500). Diversions for irrigation of about 23,000 acres upstream from station. Flow through Madison Powerplant bypasses the 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	113	421	139	e98	210	102	173	222	1,030	966	97	94
2	114	344	139	98	209	103	212	222	1,310	681	273	94
3	240	338	139	98	154	103	212	223	1,100	693	105	96
4	219	291	138	e98	101	145	212	224	866	695	99	95
5	222	256	138	e98	102	208	214	225	755	569	107	94
6	222	256	138	e97	102	208	214	215	721	230	201	98
7	258	254	138	97	102	207	217	209	949	189	198	102
8	305	253	140	e96	102	172	218	216	1,810	251	153	103
9	302	253	141	e97	102	103	215	221	1,660	251	135	97
10	299	379	142	98	102	169	215	236	1,280	253	142	93
11	255	417	193	99	103	203	214	340	1,170	307	108	93
12	215	382	325	99	103	188	212	492	1,190	537	109	93
13	216	380	339	e98	179	152	211	484	1,370	390	109	93
14	215	378	314	e98	417	153	212	452	1,850	269	110	92
15	217	375	314	e98	549	152	210	444	1,700	274	110	94
16	218	372	313	e98	543	152	210	340	1,910	240	101	98
17	218	370	313	99	486	128	212	360	2,610	112	95	102
18	223	368	312	227	346	97	214	663	2,890	345	99	100
19	223	366	312	319	148	97	216	808	2,860	142	101	100
20	224	363	311	396	106	98	216	897	2,350	164	101	101
21	225	361	308	534	107	99	217	1,310	2,340	286	99	101
22	226	358	306	524	199	99	218	1,750	e2,700	210	90	101
23	226	357	301	469	321	98	210	1,860	e2,900	148	85	100
24	227	356	295	462	280	99	205	1,840	2,930	134	85	101
25	305	355	170	372	218	100	216	1,580	2,180	87	87	102
26	448	353	95	309	163	99	218	1,020	1,800	89	89	105
27	498	351	96	308	101	96	218	694	1,800	90	89	105
28	495	e350	96	308	101	95	219	702	1,480	101	91	103
29	495	e350	96	307	---	94	221	711	1,380	145	92	101
30	492	e280	128	306	---	93	222	722	1,500	98	94	101
31	484	---	e150	275	---	92	---	729	---	100	98	---
TOTAL	8,639	10,287	6,479	6,780	5,756	4,004	6,393	20,411	52,391	9,046	3,552	2,952
MEAN	279	343	209	219	206	129	213	658	1,746	292	115	98.4
MAX	498	421	339	534	549	208	222	1,860	2,930	966	273	105
MIN	113	253	95	96	101	92	173	209	721	87	85	92
AC-FT	17,140	20,400	12,850	13,450	11,420	7,940	12,680	40,490	103,900	17,940	7,050	5,860

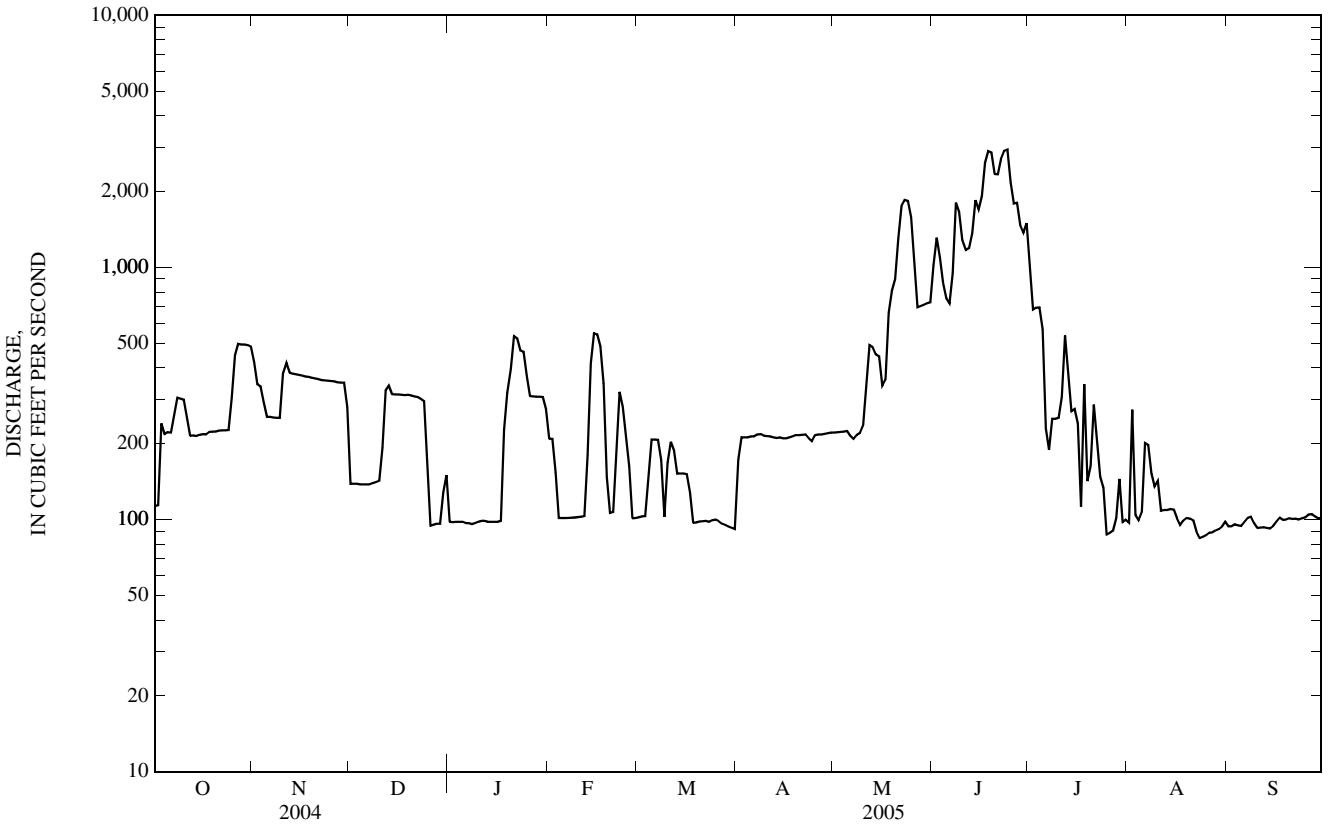
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	260	236	131	169	140	120	252	562	1,093	416	160	154
MAX	279	343	209	219	206	129	351	1,031	1,746	560	203	247
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2002)	(2003)	(2005)	(2002)	(2002)	(2002)
MIN	229	110	85.7	113	103	111	213	216	615	292	115	98.4
(WY)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2005)	(2004)	(2004)	(2005)	(2005)	(2005)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	91,495		136,690			
ANNUAL MEAN	250		374		304	
HIGHEST ANNUAL MEAN					374	2005
LOWEST ANNUAL MEAN					217	2004
HIGHEST DAILY MEAN	2,140	Jun 11	2,930	Jun 24	3,540	May 31, 2003
LOWEST DAILY MEAN	80	Jan 5	85	Aug 23	73	Dec 27, 2002
ANNUAL SEVEN-DAY MINIMUM	86	Jan 3	88	Aug 22	77	Dec 22, 2002
MAXIMUM PEAK FLOW			3,080	Jun 23	3,940	Jun 2, 2002
MAXIMUM PEAK STAGE			8.57	Jun 23	9.42	Jun 2, 2002
ANNUAL RUNOFF (AC-FT)	181,500		271,100		220,100	
10 PERCENT EXCEEDS	427		831		639	
50 PERCENT EXCEEDS	208		215		152	
90 PERCENT EXCEEDS	95		97		93	

e--Estimated.

06040800 MADISON RIVER ABOVE POWERPLANT, NEAR MCALLISTER, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to September 2004, discontinued.

REMARKS.-- Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass. Several unpublished observations of water tempeature and specific conductance were made during the year.

WATER-QUALITY DATA, APRIL 2004 TO SEPTEMBER 2004

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)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
APR 2004												
19...	1545	233	8.5	362	--	--	.79	1.71	--	--	--	--
SEP 2004												
13...	1600	1,180	8.8	285	13.5	15.0	1.02	.87	1.59	<.13	.62	.01

06041000 MADISON RIVER BELOW ENNIS LAKE, NEAR MCALLISTER, MT

LOCATION.--Lat 45°29'25", long 111°38'00" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $NW^1/_4$ sec.17, T.4 S., R.1 E., Madison County, Hydrologic Unit 10020007, on right bank 500 ft downstream from Madison powerplant, 1.5 mi downstream from Ennis Lake, 5.7 mi northeast of McAllister, and at river mile 38.8.

DRAINAGE AREA.--2,186 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1901 to December 1905, October 1906 to current year. Prior to October 1938 adjusted monthly runoff only, published in WSP 1309. Published as "below Madison Reservoir" 1938-49. Records published as "near Red Bluff" 1890-94 and as "near Norris" 1910 are not equivalent and are published as "near Norris" in WSP 1309.

REVISED RECORDS.--WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,689.03 ft (levels by U.S. Army Corps of Engineers) (NGVD 29). Prior to May 7, 1941, nonrecording gage in wooden stilling well at present site at different elevation. May 7, 1941, to Jan. 13, 1945, nonrecording gages in concrete stilling well at present site and elevation.

REMARKS.--Water-discharge records excellent. Flow regulated by Hebgen Lake (station number 06038000) and Ennis Lake (station number 06040500). Diversions for irrigation of about 23,000 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	1,210	1,500	1,230	1,210	1,300	1,210	1,230	1,310	2,330	2,270	1,340	1,310
2	1,210	1,420	1,230	1,210	1,300	1,210	1,210	1,310	2,620	2,010	1,360	1,310
3	1,310	1,420	1,230	1,210	1,250	1,220	1,210	1,310	2,380	2,020	1,410	1,310
4	1,300	1,380	1,230	1,210	1,210	1,250	1,210	1,310	2,160	2,020	1,340	1,310
5	1,300	1,340	1,230	1,210	1,210	1,320	1,210	1,340	2,080	1,910	1,360	1,310
6	1,300	1,340	1,230	1,200	1,210	1,340	1,220	1,340	2,050	1,600	1,450	1,320
7	1,330	1,340	1,230	1,200	1,210	1,340	1,280	1,340	2,250	1,560	1,430	1,350
8	1,380	1,340	1,230	1,200	1,210	1,310	1,320	1,350	3,130	1,620	1,390	1,380
9	1,390	1,340	1,230	1,210	1,210	1,250	1,320	1,360	2,970	1,620	1,370	1,280
10	1,390	1,420	1,240	1,210	1,210	1,290	1,320	1,520	2,560	1,620	1,380	1,230
11	1,350	1,450	1,280	1,210	1,210	1,300	1,310	1,720	2,440	1,670	1,380	1,230
12	1,310	1,460	1,410	1,200	1,210	1,290	1,250	1,860	2,470	1,880	1,400	1,230
13	1,310	1,460	1,420	1,210	1,280	1,260	1,200	1,850	2,660	1,750	1,400	1,180
14	1,310	1,450	1,390	1,210	1,320	1,260	1,200	1,820	3,180	1,630	1,390	1,140
15	1,310	1,440	1,390	1,210	1,330	1,260	1,200	1,810	3,020	1,630	1,400	1,160
16	1,310	1,450	1,390	1,200	1,340	1,250	1,200	1,710	3,250	1,600	1,400	1,240
17	1,310	1,450	1,390	1,200	1,330	1,230	1,200	1,730	3,990	1,480	1,390	1,300
18	1,320	1,450	1,380	1,320	1,290	1,200	1,210	2,000	4,310	1,620	1,440	1,250
19	1,320	1,430	1,380	1,410	1,240	1,200	1,300	2,120	4,290	1,390	1,460	1,250
20	1,320	1,440	1,380	1,480	1,200	1,200	1,330	2,200	3,740	1,400	1,460	1,270
21	1,320	1,440	1,380	1,620	1,210	1,200	1,310	2,600	3,730	1,510	1,460	1,290
22	1,320	1,430	1,380	1,610	1,290	1,200	1,320	3,090	4,130	1,450	1,350	1,290
23	1,320	1,430	1,370	1,560	e1,410	1,210	1,310	3,210	4,310	1,440	1,250	1,290
24	1,320	1,430	1,360	1,550	1,370	1,230	1,290	3,200	4,350	1,370	1,240	1,290
25	1,390	1,420	1,240	1,460	1,320	1,240	1,300	2,910	3,570	1,300	1,250	1,290
26	1,530	1,430	1,180	1,400	1,270	1,230	1,300	2,320	3,120	1,300	1,270	1,330
27	1,580	1,380	1,180	1,390	1,200	1,220	1,300	2,030	3,130	1,300	1,270	1,370
28	1,560	1,360	1,180	1,390	1,210	1,220	1,310	2,040	2,770	1,410	1,270	1,340
29	1,580	1,420	1,180	1,390	---	1,220	1,310	2,050	2,660	1,450	1,260	1,320
30	1,570	1,360	1,220	1,390	---	1,220	1,310	2,060	2,790	1,380	1,320	1,320
31	1,570	---	1,250	1,360	---	1,200	---	2,060	---	1,380	1,370	---
TOTAL	42,350	42,420	40,040	40,840	35,350	38,580	37,990	59,880	92,440	49,590	42,260	38,490
MEAN	1,366	1,414	1,292	1,317	1,262	1,245	1,266	1,932	3,081	1,600	1,363	1,283
MAX	1,580	1,500	1,420	1,620	1,410	1,340	1,330	3,210	4,350	2,270	1,460	1,380
MIN	1,210	1,340	1,180	1,200	1,200	1,200	1,200	1,310	2,050	1,300	1,240	1,140
AC-FT	84,000	84,140	79,420	81,010	70,120	76,520	75,350	118,800	183,400	98,360	83,820	76,340

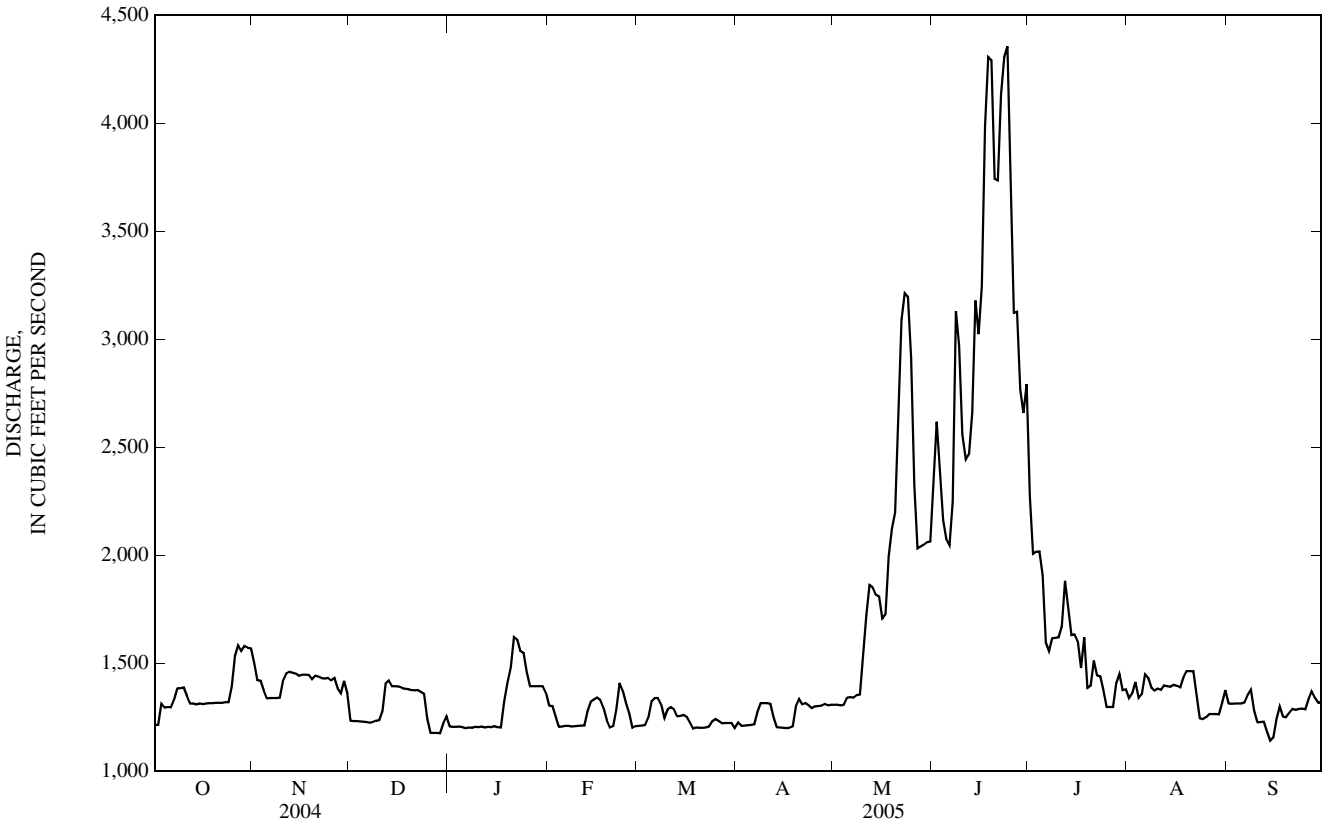
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	1,908	1,977	1,512	1,387	1,392	1,442	1,546	2,003	2,969	1,850	1,520	1,607
MAX	2,963	3,318	3,243	2,061	2,336	2,087	3,008	4,189	6,135	3,454	2,339	2,298
(WY)	(1960)	(1960)	(1960)	(1999)	(1943)	(1939)	(1948)	(1969)	(1997)	(1965)	(1971)	(1972)
MIN	810	961	974	767	781	891	717	859	1,122	972	1,044	934
(WY)	(1942)	(1941)	(1940)	(1940)	(1940)	(1941)	(1941)	(1961)	(1992)	(1961)	(1961)	(1941)

06041000 MADISON RIVER BELOW ENNIS LAKE, NEAR MCALLISTER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	485,910		560,230			
ANNUAL MEAN	1,328		1,535		1,759	
HIGHEST ANNUAL MEAN					2,530	1997
LOWEST ANNUAL MEAN					1,047	1941
HIGHEST DAILY MEAN	3,160	Jun 11	4,350	Jun 24	9,210	Jun 11, 1970
LOWEST DAILY MEAN	1,110	Apr 29	1,140	Sep 14	210	Aug 25, 1959
ANNUAL SEVEN-DAY MINIMUM	1,120	Apr 29	1,200	Dec 26	390	Aug 23, 1959
MAXIMUM PEAK FLOW			4,470	Jun 23	9,550	Jun 12, 1970
MAXIMUM PEAK STAGE			5.48	Jun 23	8.01	Jun 12, 1970
ANNUAL RUNOFF (AC-FT)	963,800		1,111,000		1,274,000	
10 PERCENT EXCEEDS	1,510		2,140		2,680	
50 PERCENT EXCEEDS	1,310		1,340		1,550	
90 PERCENT EXCEEDS	1,130		1,210		1,100	

e--Estimated.



06041000 MADISON RIVER BELOW ENNIS LAKE, NEAR MCALLISTER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1977 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1977 to current year.

INSTRUMENTATION.--Temperature recorder since June 21, 1977.

REMARKS.--Daily water temperature records 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, 24.5°C, July 22 and 23, 2003; minimum, 0.0°C several to many day during winter months most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 22.5°C, July 16, 20-25, and Aug. 7, 8; minimum, 0.0°C, Nov. 28, 29.

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	13.5	12.5	13.0	4.5	4.0	4.0	0.5	0.5	0.5	1.0	1.0	1.0
2	13.0	12.5	12.5	4.0	3.5	3.5	1.0	0.5	0.5	1.5	1.0	1.0
3	13.0	12.5	12.5	3.5	3.0	3.0	1.0	1.0	1.0	1.5	1.0	1.0
4	13.0	12.5	12.5	3.0	2.5	3.0	1.5	1.0	1.0	1.0	1.0	1.0
5	13.0	13.0	13.0	3.5	3.0	3.0	1.5	1.5	1.5	1.0	1.0	1.0
6	13.0	12.5	13.0	3.5	3.0	3.5	1.5	1.5	1.5	1.0	1.0	1.0
7	13.5	13.0	13.0	3.5	3.5	3.5	2.0	1.5	1.5	1.0	1.0	1.0
8	13.0	13.0	13.0	3.5	3.5	3.5	2.0	1.5	1.5	1.0	1.0	1.0
9	13.0	12.5	13.0	4.0	3.5	4.0	1.5	1.5	1.5	1.0	0.5	1.0
10	12.5	12.0	12.0	4.0	4.0	4.0	2.0	1.5	2.0	1.0	1.0	1.0
11	12.0	11.5	11.5	4.5	4.0	4.5	2.0	1.5	2.0	1.0	1.0	1.0
12	11.5	11.0	11.5	5.0	4.5	5.0	1.5	1.0	1.5	1.0	1.0	1.0
13	11.5	11.0	11.0	5.0	4.5	4.5	1.5	1.0	1.5	1.0	0.5	0.5
14	11.0	11.0	11.0	4.5	4.5	4.5	1.5	1.5	1.5	1.0	0.5	0.5
15	11.0	11.0	11.0	4.5	3.5	4.0	1.5	1.5	1.5	1.0	1.0	1.0
16	11.0	10.5	10.5	4.0	3.5	4.0	1.5	1.5	1.5	1.5	1.0	1.0
17	10.5	9.5	10.0	4.0	3.5	3.5	2.0	1.5	2.0	1.5	1.0	1.0
18	9.5	9.0	9.5	3.5	3.0	3.5	2.0	2.0	2.0	1.5	1.0	1.5
19	9.0	9.0	9.0	3.5	3.0	3.0	2.0	2.0	2.0	1.5	1.0	1.5
20	9.0	8.5	8.5	3.0	2.0	2.5	2.0	2.0	2.0	1.5	1.5	1.5
21	8.5	8.0	8.5	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5
22	8.5	8.0	8.5	2.0	1.0	1.5	2.0	1.5	2.0	2.0	1.5	1.5
23	8.0	7.5	8.0	1.5	1.0	1.0	2.0	1.5	1.5	2.0	1.5	2.0
24	7.5	7.0	7.5	1.0	1.0	1.0	1.5	1.5	1.5	2.0	1.5	2.0
25	7.0	6.0	6.5	1.0	1.0	1.0	2.0	1.5	1.5	2.0	2.0	2.0
26	6.0	6.0	6.0	1.0	1.0	1.0	2.0	1.5	1.5	2.5	2.0	2.0
27	6.0	6.0	6.0	1.0	0.5	0.5	1.5	1.5	1.5	2.5	2.0	2.5
28	6.0	5.5	6.0	0.5	0.0	0.5	1.5	1.5	1.5	2.5	2.0	2.5
29	5.5	5.0	5.5	0.5	0.0	0.0	2.0	1.5	1.5	2.5	2.0	2.5
30	5.0	5.0	5.0	0.5	0.5	0.5	2.0	1.5	1.5	2.5	2.0	2.5
31	5.0	4.5	5.0	---	---	---	1.5	1.0	1.0	2.5	2.0	2.0
MONTH	13.5	4.5	10.0	5.0	0.0	3.0	2.0	0.5	1.5	2.5	0.5	1.5

06041000 MADISON RIVER BELOW ENNIS LAKE, NEAR MCALLISTER, 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	2.0	2.0	5.0	4.5	4.5	4.0	3.0	3.5	7.0	5.5	6.5
2	2.5	2.0	2.0	5.0	4.0	4.5	5.0	4.0	4.0	7.5	6.5	7.0
3	2.5	2.0	2.0	5.0	4.0	4.5	5.0	4.5	5.0	8.5	7.5	8.0
4	2.5	2.0	2.5	5.0	4.5	5.0	5.0	5.0	5.0	9.5	8.5	9.0
5	2.5	2.5	2.5	5.0	4.5	5.0	5.0	4.5	5.0	10.5	9.5	10.0
6	2.5	2.5	2.5	5.0	4.5	5.0	6.0	5.0	5.5	10.5	10.0	10.5
7	2.5	2.5	2.5	5.0	5.0	5.0	7.0	6.0	6.5	11.0	10.5	11.0
8	3.0	2.5	2.5	5.5	5.0	5.0	7.0	6.5	7.0	11.5	11.0	11.0
9	3.0	2.5	3.0	6.0	5.0	5.5	7.5	7.0	7.0	12.0	11.5	11.5
10	3.0	2.5	3.0	6.0	5.0	5.5	7.5	7.0	7.0	12.0	11.5	12.0
11	3.5	3.0	3.0	5.0	4.5	4.5	7.5	7.0	7.5	11.5	8.5	10.5
12	3.5	3.0	3.0	5.0	4.0	4.5	8.5	7.5	8.0	9.5	9.0	9.5
13	3.0	3.0	3.0	4.0	2.0	3.0	9.0	8.5	8.5	9.5	9.0	9.0
14	3.0	3.0	3.0	2.5	1.5	2.0	9.0	7.5	8.5	11.0	8.5	9.5
15	3.0	2.5	2.5	2.5	2.0	2.0	8.0	7.5	7.5	12.5	11.0	12.0
16	3.0	2.5	3.0	3.0	2.5	2.5	8.0	7.5	8.0	12.5	12.0	12.0
17	3.5	3.0	3.0	3.0	2.5	2.5	8.5	8.0	8.5	12.0	11.5	11.5
18	3.5	3.0	3.5	2.5	2.0	2.0	8.0	7.0	7.5	11.5	11.0	11.5
19	4.0	3.5	3.5	2.0	1.5	2.0	7.0	7.0	7.0	12.0	11.5	11.5
20	4.0	3.5	4.0	3.0	2.0	2.5	7.0	5.5	6.0	12.5	12.0	12.0
21	4.0	3.5	4.0	3.0	2.5	2.5	6.0	6.0	6.0	13.0	12.0	12.5
22	---	---	---	3.0	3.0	3.0	7.5	6.0	6.5	13.5	12.5	13.0
23	---	---	---	3.0	2.0	2.5	8.5	6.5	7.5	14.0	13.0	13.5
24	3.5	3.0	3.0	2.0	1.0	1.5	8.5	8.0	8.5	13.0	12.5	13.0
25	4.0	3.0	3.5	1.5	1.0	1.0	9.0	8.0	8.5	14.5	12.5	13.5
26	4.0	3.5	4.0	2.0	1.0	1.5	9.5	8.5	9.0	14.0	13.0	13.5
27	4.5	4.0	4.0	2.5	2.0	2.5	9.5	8.5	9.0	14.0	12.5	13.0
28	4.5	4.0	4.5	3.0	2.5	3.0	8.5	8.0	8.5	14.5	12.5	13.5
29	---	---	---	3.0	3.0	3.0	8.5	7.0	7.5	15.0	13.0	14.5
30	---	---	---	3.0	3.0	3.0	7.5	6.0	6.5	15.0	14.0	14.5
31	---	---	---	3.0	2.5	3.0	---	---	---	15.0	14.5	14.5
MONTH	4.5	2.0	3.0	6.0	1.0	3.5	9.5	3.0	7.0	15.0	5.5	11.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.5	13.5	14.0	18.0	17.0	17.5	21.5	21.0	21.0	17.5	17.0	17.5
2	13.5	12.5	13.0	17.5	17.0	17.5	21.0	19.5	20.5	17.5	17.0	17.5
3	12.5	12.5	12.5	18.5	17.0	17.5	20.5	20.0	20.5	17.5	17.0	17.0
4	14.0	12.0	12.5	19.0	17.5	18.0	21.0	20.0	20.5	17.5	17.0	17.5
5	14.5	13.0	13.5	19.5	19.0	19.0	22.0	20.5	21.0	17.0	17.0	17.0
6	14.0	13.0	13.0	20.5	19.0	19.5	22.0	21.5	22.0	17.0	16.5	17.0
7	13.0	12.5	12.5	21.0	20.5	20.5	22.5	21.5	22.0	17.5	16.5	17.0
8	13.0	12.5	13.0	21.0	20.5	20.5	22.5	21.5	22.0	18.0	17.0	17.5
9	13.0	12.5	13.0	21.0	20.5	20.5	21.5	21.0	21.0	18.0	17.5	18.0
10	14.0	13.0	13.0	20.5	20.0	20.0	21.5	21.0	21.0	17.5	16.0	16.5
11	14.5	13.5	14.0	21.0	20.0	20.0	21.0	20.5	21.0	16.0	15.0	15.5
12	14.0	13.0	13.5	22.0	20.5	21.0	20.5	20.0	20.5	15.0	14.5	14.5
13	14.0	12.5	13.0	22.0	21.5	21.5	20.0	18.5	19.0	14.5	14.0	14.5
14	15.0	13.5	14.0	21.5	21.0	21.5	18.5	18.0	18.0	14.5	14.0	14.5
15	15.0	14.5	14.5	22.0	21.0	21.5	18.5	17.5	18.0	15.0	14.5	14.5
16	16.0	14.5	15.0	22.5	21.5	22.0	18.5	18.0	18.0	15.0	14.5	15.0
17	16.0	15.5	16.0	21.5	21.0	21.0	18.5	18.0	18.0	14.5	14.0	14.0
18	16.0	15.0	15.5	21.5	20.5	21.0	18.0	17.5	18.0	14.0	13.5	14.0
19	16.5	15.0	15.5	22.0	21.5	21.5	18.0	17.5	18.0	14.0	13.5	14.0
20	17.5	15.0	16.0	22.5	21.5	22.0	19.0	18.0	18.5	14.0	13.5	13.5
21	18.0	16.0	17.0	22.5	21.5	22.0	19.5	19.0	19.0	14.0	13.5	13.5
22	17.5	16.5	17.0	22.5	22.0	22.5	19.5	19.0	19.0	13.5	13.0	13.5
23	18.0	17.0	17.0	22.5	22.0	22.0	19.5	19.0	19.5	13.5	13.0	13.5
24	18.5	16.5	17.5	22.5	22.0	22.0	19.0	18.5	19.0	13.0	12.0	12.5
25	18.0	17.0	17.5	22.5	21.0	21.5	18.5	18.0	18.0	12.0	11.5	11.5
26	17.5	17.0	17.5	21.0	20.0	20.5	19.0	18.0	18.5	11.5	11.0	11.5
27	18.0	16.5	17.0	21.0	20.0	20.5	19.0	18.5	18.5	12.0	11.5	11.5
28	17.5	16.5	17.0	21.5	20.5	21.0	19.5	18.5	19.0	11.5	11.0	11.5
29	16.5	16.0	16.5	20.5	20.0	20.5	19.0	19.0	19.0	11.5	11.0	11.5
30	18.0	16.0	16.5	21.0	20.0	20.5	19.0	17.5	18.0	12.0	11.5	11.5
31	---	---	---	21.0	20.5	20.5	17.5	17.0	17.0	---	---	---
MONTH	18.5	12.0	15.0	22.5	17.0	20.5	22.5	17.0	19.5	18.0	11.0	14.5

06041300 HOT SPRINGS CREEK NEAR NORRIS, MT

LOCATION.--Lat 45°35'07", long 111°35'38" (NAD 27), in $NE^1/_4SW^1/_4SW^1/_4$, sec.10, T.3 S., R.1 E., Madison County, Hydrologic Unit 10020007, 0.1 mi south of State Highway 84, 0.2 mi upstream from mouth, and 5.5 mi northeast of Norris.

DRAINAGE AREA.--72.5 mi^2.

PERIOD OF RECORD.--Water year 1986, June 1993 to May 1994, September 2005, discontinued.

GAGE.--None. Elevation at site is 4,500 ft (NGVD 29).

REMARKS.--Data for for water year 1986 published in Open-File Report 87-124. Mercury concentrations are in nanograms per unit volume or mass.

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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 14...	1100	2.9	8.5	536	9.5	3.4	7.8	1.65	12.6	883	.28	.05

06042600 MADISON RIVER AT THREE FORKS, MT

LOCATION.--Lat 44°54'05", long 111°31'29" (NAD 27), in $SE^1/_4NE^1/_4NW^1/_4$, sec.30, T.2 N., R.2 E., Gallatin County, Hydrologic Unit 10020007, at bridge on old U.S. Highway 10, 1.5 mi east of Three Forks, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--2,531 mi^2.

PERIOD OF RECORD.--Water years 1986-87, 1993-95, 2004-2005, discontinued.

GAGE.--None. Elevation at site is 4,050 ft (NGVD 27).

REMARKS.--Data for water years 1986-87 published in Open-File Reports 87-124 and 87-697. Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, APRIL 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
APR 2004							
19...	1720	--	8.5	361	--	--	--
SEP							
13...	1130	1,080	8.3	292	13.0	--	--
SEP 2005							
12...	1500	1,090	8.9	274	14.0	2.0	5.7

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
APR 2004							
19...	.73	2.10	--	--	--	--	--
SEP							
13...	.48	.87	13.8	--	.20	.51	.02
SEP 2005							
12...	.43	.63	6.06	.10	--	.64	.02

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION.--Lat 45°29'51", long 111°16'11" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.7, T.4 S., R.4 E., Gallatin County, Hydrologic Unit 10020008, on left bank 0.3 mi downstream from Spanish Creek, 7.3 mi south of Gallatin Gateway and at river mile 47.7.

DRAINAGE AREA.--825 mi^2.

PERIOD OF RECORD.--August 1889 to September 1894, June 1930 to September 1969, annual maximum, water years 1970-71, October 1971 to September 1981, October 1984 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as West Gallatin River near Bozeman 1889-94.

REVISED RECORDS.--WSP 1389: 1892(M), 1893-94. WSP 1559: Drainage area. WDR -85-1 (M), WDR -02-1: 1970-71 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,167.67 ft (NGVD 29). Prior to Oct. 20, 1932, nonrecording gages at several different sites and elevations within 0.8 mi of present site.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversions for irrigation of about 1,400 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and 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	416	323	259	260	255	255	248	449	2,360	1,930	657	441
2	410	333	261	264	254	257	264	453	2,200	1,880	656	427
3	404	353	260	262	247	255	275	468	2,040	1,780	733	417
4	401	350	238	269	255	251	283	516	2,040	1,600	642	411
5	395	349	247	242	265	255	281	590	2,120	1,500	603	408
6	389	355	249	223	244	258	274	744	2,620	1,450	582	405
7	391	346	266	e230	252	263	311	889	2,440	1,420	570	397
8	399	352	278	e240	256	262	360	986	2,390	1,410	578	390
9	382	365	287	e250	249	272	340	1,140	2,230	1,340	591	384
10	399	372	289	e250	242	284	305	1,230	2,100	1,340	588	409
11	401	358	311	264	235	276	285	1,150	2,060	1,410	586	420
12	395	345	312	266	244	281	298	988	2,360	1,200	558	405
13	389	325	266	e240	263	258	342	890	2,390	1,120	580	405
14	382	317	278	e230	267	255	404	925	2,310	1,080	552	400
15	382	326	313	e220	242	259	345	1,110	2,710	1,010	528	391
16	379	344	295	e230	210	262	340	1,480	3,240	974	511	388
17	372	339	286	e250	227	264	378	2,080	3,570	934	506	395
18	378	314	289	e270	234	249	485	1,690	3,650	884	539	413
19	380	335	299	e280	245	263	428	2,150	3,240	842	567	394
20	381	315	295	282	257	272	386	2,950	3,230	810	509	375
21	388	234	277	279	265	274	371	3,390	3,440	779	487	369
22	378	282	265	268	256	267	356	3,110	3,820	759	481	371
23	381	327	220	260	248	265	408	3,630	3,850	751	512	388
24	381	325	234	257	239	247	468	3,380	3,370	725	485	460
25	339	323	231	246	245	235	588	2,700	3,040	724	465	426
26	364	326	281	249	247	255	639	2,320	2,770	729	458	392
27	382	261	280	257	246	260	613	2,270	2,500	691	447	381
28	381	286	275	266	248	280	534	2,390	2,340	666	441	372
29	415	219	285	270	---	269	489	2,630	2,220	654	431	367
30	382	223	300	272	---	260	473	2,490	2,000	646	443	363
31	372	---	279	260	---	244	---	2,290	---	635	461	---
TOTAL	11,988	9,622	8,505	7,906	6,937	8,107	11,571	53,478	80,650	33,673	16,747	11,964
MEAN	387	321	274	255	248	262	386	1,725	2,688	1,086	540	399
MAX	416	372	313	282	267	284	639	3,630	3,850	1,930	733	460
MIN	339	219	220	220	210	235	248	449	2,000	635	431	363
AC-FT	23,780	19,090	16,870	15,680	13,760	16,080	22,950	106,100	160,000	66,790	33,220	23,730

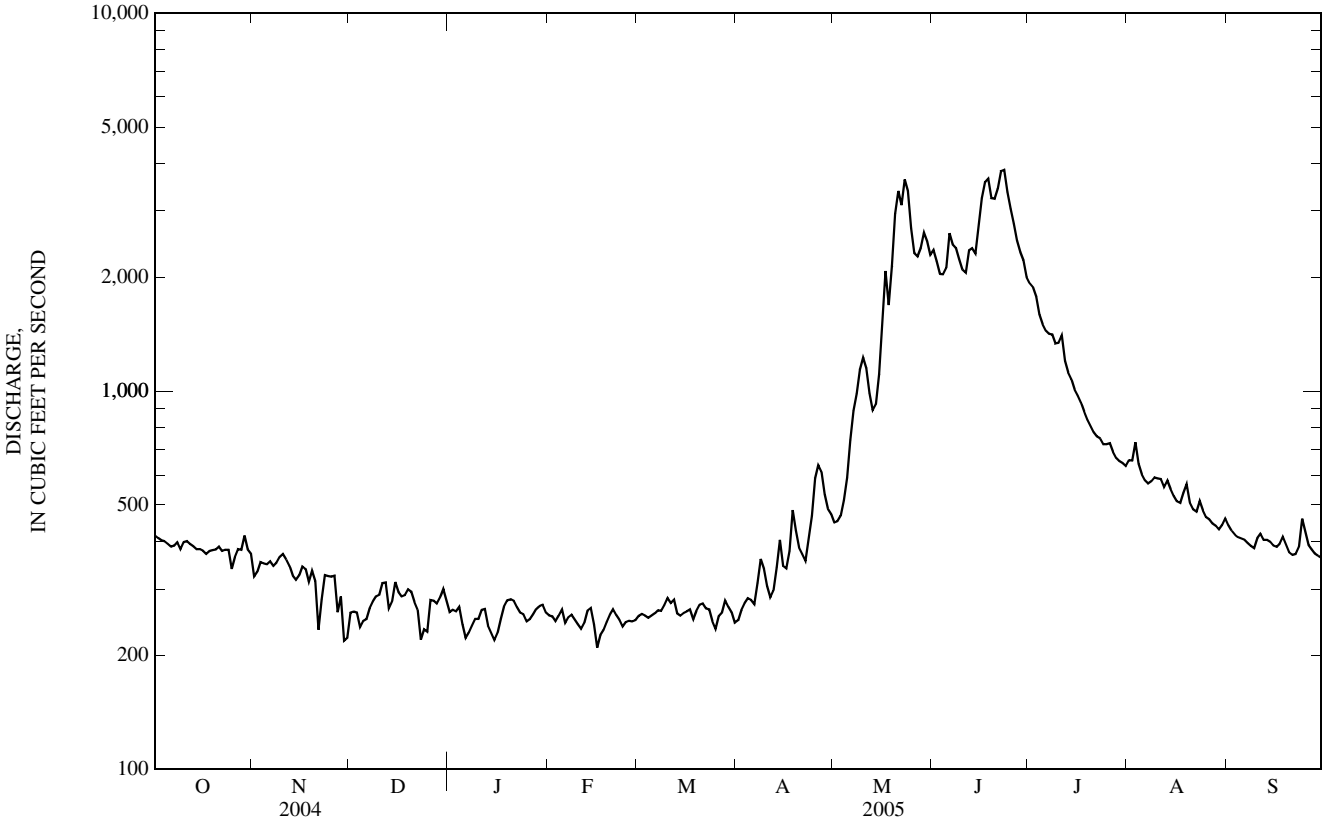
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2005, BY WATER YEAR (WY)*

MEAN	452	380	319	306	302	310	500	1,793	2,923	1,280	606	488
MAX	743	589	549	468	430	465	899	3,135	5,110	3,669	1,162	788
(WY)	(1893)	(1960)	(1893)	(1893)	(1893)	(1960)	(1990)	(1976)	(1997)	(1975)	(1993)	(1968)
MIN	238	247	214	200	220	206	263	873	643	345	269	233
(WY)	(1932)	(1937)	(1935)	(1931)	(1935)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1931)

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1889 - 2005*	
ANNUAL TOTAL	228,285		261,148			
ANNUAL MEAN	624		715		807	
HIGHEST ANNUAL MEAN					1,184	1976
LOWEST ANNUAL MEAN					408	1934
HIGHEST DAILY MEAN	3,330	Jun 10	3,850	Jun 23	8,970	Jun 17, 1974
LOWEST DAILY MEAN	180	Jan 5	210	Feb 16	153	Dec 25, 2002
ANNUAL SEVEN-DAY MINIMUM	223	Jan 2	240	Feb 15	182	Jan 18, 1931
MAXIMUM PEAK FLOW			4,220	Jun 23	b9,160	Jun 2, 1997
MAXIMUM PEAK STAGE			4.52	Jun 23	7.38	Jun 17, 1974
INSTANTANEOUS LOW FLOW			a171	Feb 17	c117	Jan 19, 1935
ANNUAL RUNOFF (AC-FT)	452,800		518,000		584,800	
10 PERCENT EXCEEDS	1,540		2,170		2,030	
50 PERCENT EXCEEDS	400		380		428	
90 PERCENT EXCEEDS	243		248		266	

*--During periods of operation (August 1889 to September 1894, June 1930 to September 1969, October 1971 to September 1981, October 1984 to current year).
a--Gage height, 1.00 ft, result of freezeup.
b--Gage height, 6.71 ft.
c--Gage height, 0.68 ft, result of freezeup.
e--Estimated.



06048700 EAST GALLATIN RIVER BELOW BRIDGER CREEK, NEAR BOZEMAN, MT

LOCATION.--Lat 45°43'30", long 111°04'08" (NAD 27), in $NE^1/_4$ $SW^1/_4$ $NE^1/_4$ sec.26, T.1 S., R.5 E., Gallatin County, Hydrologic Unit 10020008, on left bank 600 ft downstream from Bozeman Wastewater Treatment Plant, 0.2 mi downstream from bridge on Montana Secondary Highway 411, 3.2 mi downstream from Bridger Creek, 2.0 mi northwest of Bozeman, and at river mile 33.0.

DRAINAGE AREA.--226 mi^2.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,610 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation or diurnal effect from wastewater treatment plant upstream. Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperature and conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Measurement made May 12, 1976 was at a stage of 5.15 ft, 1,240 ft^3/s, site and datum then in use.

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	37	50	36	26	38	38	55	137	184	121	33	29
2	37	48	41	e26	38	37	61	127	250	113	33	23
3	36	50	41	e28	38	38	73	123	421	108	46	18
4	34	49	39	e25	38	38	84	128	431	103	43	16
5	34	47	39	e23	40	38	99	147	345	96	33	18
6	36	47	38	e24	34	39	96	174	338	87	29	17
7	36	46	37	e25	31	41	101	203	386	78	29	17
8	37	45	37	e26	38	44	116	219	361	72	32	16
9	37	45	38	e25	37	54	111	226	342	64	36	17
10	41	44	38	e26	36	62	94	264	305	67	37	18
11	41	44	43	e26	34	55	84	389	280	92	35	23
12	40	41	49	e27	36	55	86	339	327	78	33	24
13	40	40	39	e25	37	46	93	278	413	66	40	24
14	40	39	42	e23	37	43	119	284	325	65	e37	23
15	42	40	45	e22	34	42	100	306	283	58	e33	24
16	45	42	41	e25	30	44	89	321	253	51	e30	22
17	44	42	39	e30	34	44	94	338	242	54	28	26
18	50	40	40	40	35	41	146	315	226	55	40	37
19	53	42	41	95	35	42	130	293	211	48	39	33
20	49	43	39	102	34	45	114	316	190	43	31	30
21	49	32	34	80	37	47	106	381	169	41	29	25
22	45	36	e30	64	34	50	105	342	168	39	26	26
23	44	39	e25	55	33	49	135	328	156	43	26	32
24	48	41	e30	51	33	43	158	283	159	38	24	55
25	45	44	e35	46	34	39	190	253	158	45	24	48
26	42	49	41	44	36	43	194	214	157	58	23	40
27	43	39	38	43	36	47	195	195	170	46	20	35
28	44	38	35	43	36	63	173	178	164	39	19	31
29	69	29	38	42	---	70	156	167	146	35	17	30
30	59	32	39	41	---	65	149	157	140	33	21	e29
31	54	---	32	38	---	56	---	150	---	31	32	---
TOTAL	1,351	1,263	1,179	1,216	993	1,458	3,506	7,575	7,700	1,967	958	806
MEAN	43.6	42.1	38.0	39.2	35.5	47.0	117	244	257	63.5	30.9	26.9
MAX	69	50	49	102	40	70	195	389	431	121	46	55
MIN	34	29	25	22	30	37	55	123	140	31	17	16
AC-FT	2,680	2,510	2,340	2,410	1,970	2,890	6,950	15,030	15,270	3,900	1,900	1,600

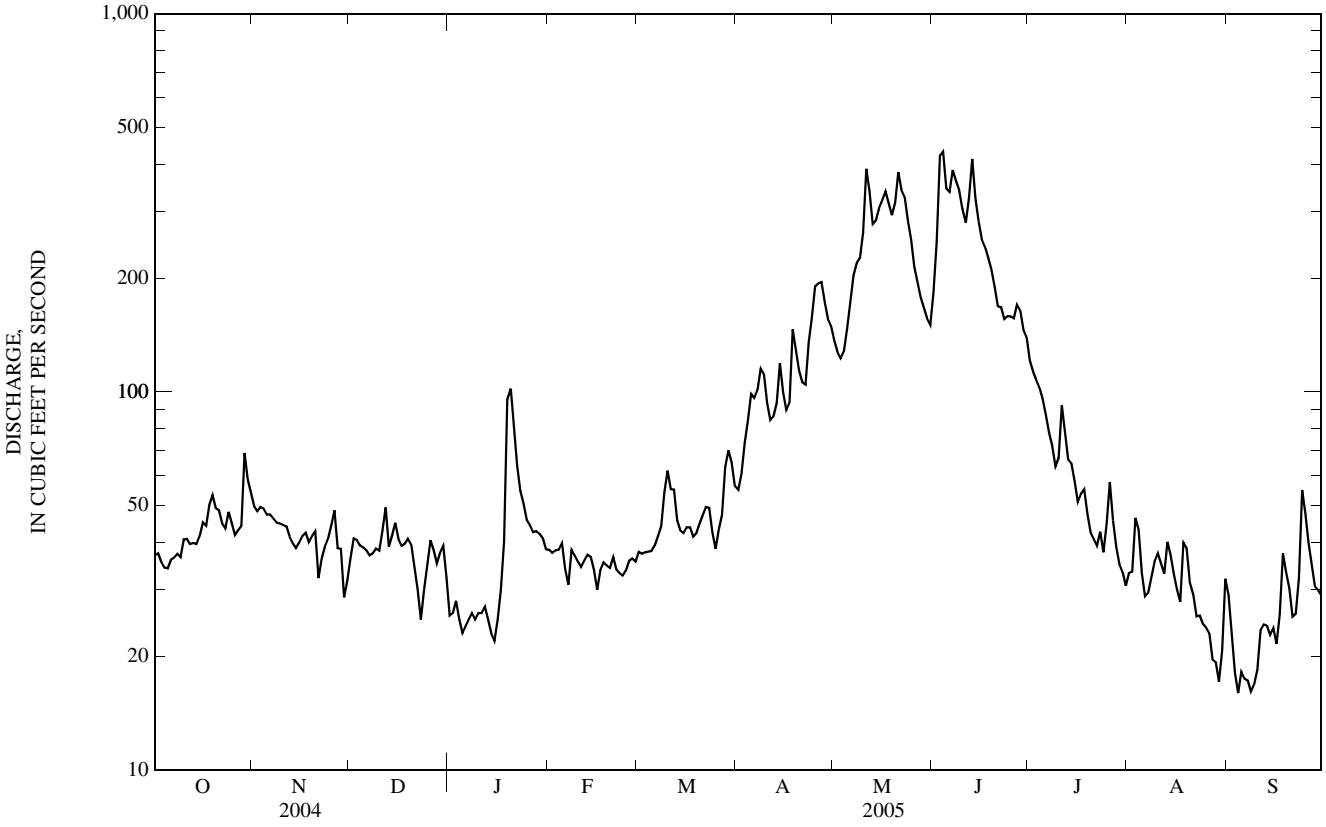
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	38.4	37.8	33.5	34.7	35.0	57.3	135	223	229	62.2	30.2	28.9
MAX	43.6	42.1	38.0	39.2	37.4	73.4	224	328	265	70.6	37.5	36.5
(WY)	(2005)	(2005)	(2005)	(2005)	(2003)	(2004)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)
MIN	30.2	32.1	30.4	30.2	33.4	37.0	99.8	109	165	46.5	21.7	19.9
(WY)	(2004)	(2004)	(2003)	(2004)	(2004)	(2002)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)

06048700 EAST GALLATIN RIVER BELOW BRIDGER CREEK, NEAR BOZEMAN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	25,274		29,972			
ANNUAL MEAN	69.1		82.1		78.8	
HIGHEST ANNUAL MEAN					87.9	2003
LOWEST ANNUAL MEAN					66.6	2004
HIGHEST DAILY MEAN	834	Jun 11	431	Jun 4	834	Jun 11, 2004
LOWEST DAILY MEAN	17	Jan 5	16	Sep 4	15	Sep 5, 2003
ANNUAL SEVEN-DAY MINIMUM	21	Aug 11	17	Sep 3	17	Sep 3, 2005
MAXIMUM PEAK FLOW			492	Jun 3	1,100	Jun 11, 2004
MAXIMUM PEAK STAGE			3.73	Jun 3	5.60	Jun 11, 2004
INSTANTANEOUS LOW FLOW					a6.5	Feb 12, 2004
ANNUAL RUNOFF (AC-FT)	50,130		59,450		57,090	
10 PERCENT EXCEEDS	128		212		195	
50 PERCENT EXCEEDS	42		42		39	
90 PERCENT EXCEEDS	30		26		26	

a--Gage height, 1.38 ft, result of freezeup.
e--Estimated.



06052500 GALLATIN RIVER AT LOGAN, MT

LOCATION.--Lat 45°53'07", long 111°26'15" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $NE^1/_4$ sec.35, T.2 N., R.2 E., Gallatin County, Hydrologic Unit 10020008, on right bank at former county road bridge site, 0.2 mi upstream from present county bridge, 0.5 mi west of Logan, and at river mile 6.3.

DRAINAGE AREA.--1,795 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1893 to December 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1389: 1898-99, 1903, 1905, 1929(M), 1935-36(M), 1938-39(M), 1941(M). WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,086.42 ft (NGVD 29). Prior to Aug. 10, 1928, nonrecording gages at several sites within 0.5 mi of present site at various elevations. Aug. 10, 1928, to Oct. 7, 1941, nonrecording gage at present site and elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Some regulation by Middle Creek Reservoir (station number 06049500). Diversions for irrigation of about 110,000 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	568	735	e620	e570	572	562	569	653	1,870	1,700	329	402
2	570	710	655	e550	574	566	572	621	2,070	1,590	343	390
3	552	739	676	e550	568	562	583	588	2,000	1,480	404	370
4	542	746	656	e570	572	558	614	587	2,100	1,320	429	347
5	503	735	642	e550	583	559	693	604	1,970	1,160	380	366
6	494	739	648	e530	576	561	641	667	2,220	1,010	343	366
7	495	731	657	e570	551	567	619	777	2,540	907	339	357
8	506	725	674	e550	569	576	633	904	2,410	805	343	366
9	503	733	680	e550	568	581	654	1,070	2,360	724	360	347
10	496	738	684	e550	563	591	618	1,210	2,230	715	363	352
11	532	741	705	e560	549	597	588	1,350	2,080	795	384	408
12	529	733	729	e580	559	595	568	1,370	2,290	682	364	424
13	527	713	689	e550	569	594	560	1,220	2,900	541	391	429
14	525	699	664	e520	578	570	594	1,080	2,580	473	407	428
15	518	695	704	e500	562	576	626	1,110	2,630	413	392	425
16	531	710	708	e520	e520	577	549	1,310	3,180	354	363	421
17	533	711	680	e550	e530	574	510	1,820	3,490	347	355	422
18	565	709	676	e580	e540	569	649	1,910	3,840	352	371	465
19	599	710	684	e600	553	556	789	1,770	3,550	368	394	475
20	590	722	689	e630	568	575	714	2,710	3,270	364	392	443
21	587	668	660	e650	570	593	664	3,320	3,230	337	358	432
22	583	624	e620	e640	563	588	632	3,310	3,410	315	361	433
23	590	711	e570	630	558	588	597	3,510	3,660	328	355	447
24	658	742	e550	621	548	580	616	3,600	3,350	321	366	555
25	655	752	e580	597	552	552	676	2,960	2,920	326	344	575
26	637	759	615	585	554	569	761	2,420	2,610	388	340	532
27	677	710	628	584	555	578	803	2,190	2,440	373	322	496
28	679	679	e600	597	556	594	815	2,090	2,250	340	330	468
29	771	e650	e630	603	---	634	738	2,160	2,040	330	329	455
30	754	e600	660	596	---	619	687	2,140	1,860	312	322	448
31	763	---	e600	586	---	598	---	1,900	---	305	393	---
TOTAL	18,032	21,369	20,233	17,819	15,680	17,959	19,332	52,931	79,350	19,775	11,266	12,844
MEAN	582	712	653	575	560	579	644	1,707	2,645	638	363	428
MAX	771	759	729	650	583	634	815	3,600	3,840	1,700	429	575
MIN	494	600	550	500	520	552	510	587	1,860	305	322	347
AC-FT	35,770	42,390	40,130	35,340	31,100	35,620	38,350	105,000	157,400	39,220	22,350	25,480

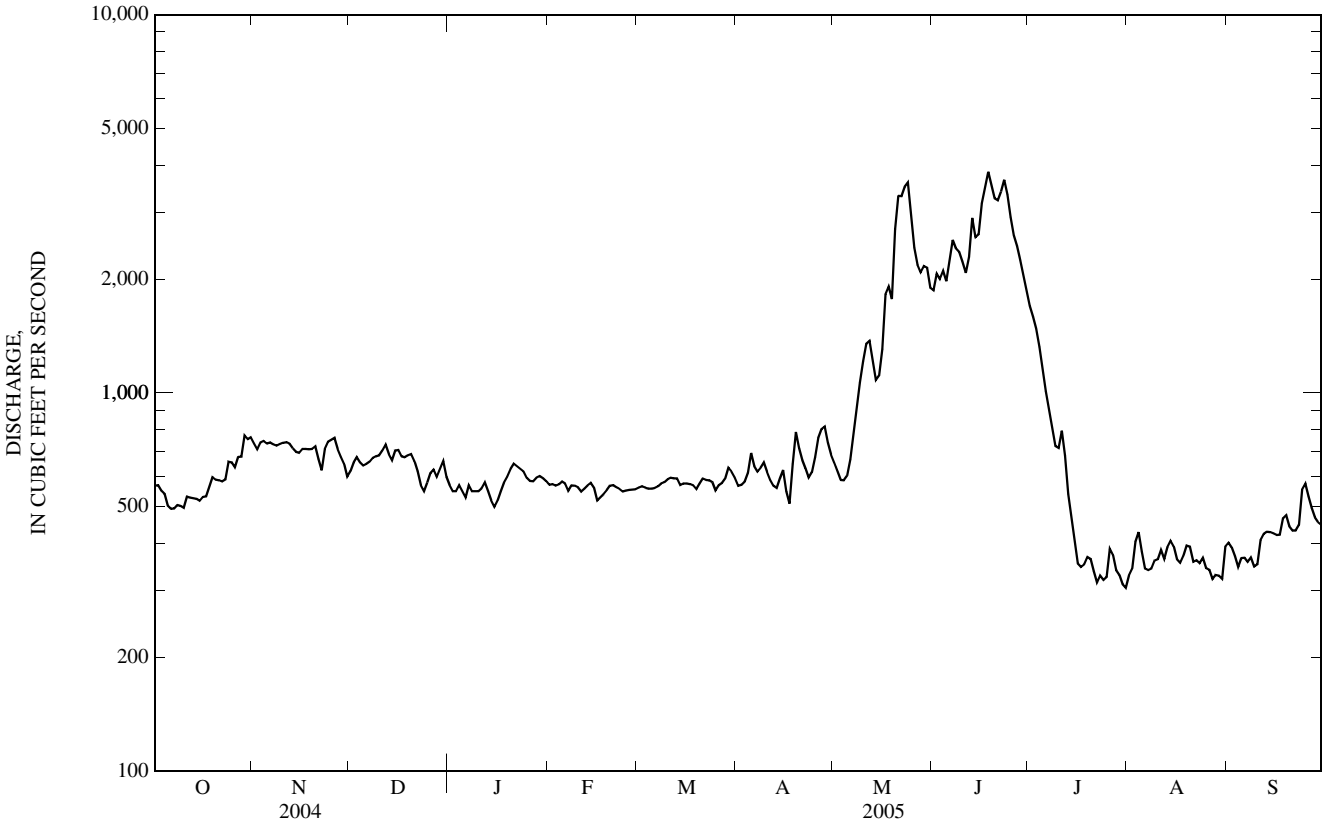
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1894 - 2005, BY WATER YEAR (WY)*

MEAN	761	811	741	684	697	785	1,032	2,104	2,957	998	485	637
MAX	1,265	1,186	1,049	971	1,249	1,290	1,993	4,686	5,957	3,899	1,658	1,269
(WY)	(1983)	(1976)	(1976)	(1976)	(1963)	(1960)	(1952)	(1901)	(1997)	(1975)	(1993)	(1968)
MIN	333	328	450	400	385	478	429	176	280	162	167	238
(WY)	(1935)	(1935)	(1894)	(1894)	(1936)	(1904)	(1934)	(1934)	(1934)	(1934)	(1934)	(1934)

06052500 GALLATIN RIVER AT LOGAN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1894 - 2005*	
ANNUAL TOTAL	239,631		306,590			
ANNUAL MEAN	655		840		1,057	
HIGHEST ANNUAL MEAN					1,673	1997
LOWEST ANNUAL MEAN					454	1934
HIGHEST DAILY MEAN	3,580	Jun 11	3,840	Jun 18	9,840	Jun 21, 1899
LOWEST DAILY MEAN	273	May 18	305	Jul 31	130	Jul 19, 1939
ANNUAL SEVEN-DAY MINIMUM	288	May 15	333	Jul 27	147	Jul 16, 1934
MAXIMUM PEAK FLOW			a4,050	Jun 18	d9,840	Jun 21, 1899
MAXIMUM PEAK STAGE			b8.47	Jan 7	f11.88	Feb 5, 1963
INSTANTANEOUS LOW FLOW			c287	Jul 31	g130	Jul 19, 1939
ANNUAL RUNOFF (AC-FT)	475,300		608,100		766,100	
10 PERCENT EXCEEDS	966		2,050		2,100	
50 PERCENT EXCEEDS	562		588		750	
90 PERCENT EXCEEDS	354		365		415	

*--During periods of operation (October 1893 to December 1905, August 1928 to current year).
a--Gage height, 7.14 ft.
b--Backwater from ice.
c--Gage height, 3.59 ft.
d--Observed, gage height, 6.25 ft, site and datum then in use.
e--Estimated.
f--From floodmark, backwater from ice.
g--Observed, gage height, 2.04 ft.



06052500 GALLATIN RIVER AT LOGAN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1951, 1957, 1965, 1979-86, 1999 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 1979 to September 1985, October 1999 to current year (seasonal records).

INSTRUMENTATION.--Temperature probe installed Sept. 14, 1999.

REMARKS--Daily water temperature records are rated good. Mercury concentrations are in nanograms per unit volume or mass. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 28.5°C, July 19-21, 2003; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE (seasonal records): Maximum, 25.0°C, July 15; minimum, 3.5°C, Apr. 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, water, deg C (00010)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP												
12...	1245	429	8.8	376	11.0	1.4	1.8	.22	.33	21.1	.46	.04

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	8.5	5.0	7.0	12.5	6.0	9.0	12.0	9.5	10.5	18.0	13.5	16.0
2	10.0	6.0	8.0	13.5	7.5	10.5	10.5	8.5	9.5	19.0	14.0	16.5
3	9.5	6.5	8.0	13.0	8.5	11.0	11.5	8.5	10.0	18.5	13.0	16.0
4	8.0	6.5	7.0	14.0	10.0	12.0	16.0	9.5	12.5	19.5	13.0	16.5
5	10.5	5.5	8.0	15.0	11.0	13.0	16.5	11.5	14.0	21.0	14.5	17.5
6	12.0	6.0	9.0	15.5	11.0	13.5	15.0	11.0	12.5	21.0	16.0	18.5
7	11.0	8.0	9.5	14.5	12.0	13.0	13.5	9.0	11.0	22.5	16.5	19.5
8	11.0	8.0	9.5	13.5	10.5	12.5	11.5	9.0	10.5	22.0	17.0	20.0
9	9.5	6.5	8.0	13.0	10.5	11.5	11.5	8.0	10.0	21.0	17.5	19.0
10	10.0	5.5	7.5	11.5	9.5	10.5	12.5	9.0	11.0	19.5	16.5	17.5
11	10.5	5.5	8.0	9.5	8.0	8.5	14.0	10.0	12.5	22.0	15.5	18.5
12	12.5	7.0	10.0	8.0	6.0	7.0	13.0	9.5	11.0	23.5	17.0	20.0
13	13.0	8.0	10.5	11.5	6.0	8.5	14.0	8.0	10.5	23.5	18.5	21.0
14	11.0	6.5	8.5	16.0	9.5	12.5	17.0	10.5	13.5	24.0	17.5	20.5
15	11.0	4.5	7.5	15.5	13.0	14.5	17.5	12.5	15.0	25.0	17.5	21.5
16	13.0	6.5	10.0	14.0	12.5	13.5	16.0	12.5	14.0	23.5	19.0	21.5
17	11.5	8.5	10.0	13.0	10.0	11.0	15.5	12.0	14.0	22.5	16.5	19.5
18	10.0	7.0	8.0	13.0	8.0	10.0	15.0	11.5	13.5	24.0	16.5	20.0
19	7.0	6.0	6.5	13.5	10.5	12.0	16.5	10.5	13.5	23.5	17.5	20.5
20	7.5	5.5	6.5	12.5	10.0	11.5	18.0	11.5	14.5	24.0	17.0	20.5
21	8.0	5.5	6.5	13.5	9.0	11.0	17.0	13.0	15.0	24.5	17.0	21.0
22	13.0	6.5	9.5	15.0	9.5	12.0	18.5	13.0	15.5	22.5	18.5	20.5
23	13.5	8.5	11.0	14.5	10.5	12.5	18.0	13.5	15.5	24.5	17.5	20.5
24	15.0	9.5	12.0	12.0	9.5	11.0	17.5	11.5	14.5	24.0	17.0	20.5
25	15.0	10.0	12.5	12.5	7.5	10.0	16.0	12.5	14.5	20.5	16.5	18.0
26	13.0	9.5	11.0	14.0	8.0	11.0	14.5	12.0	13.5	21.0	14.0	17.5
27	9.5	6.5	8.0	15.5	9.0	12.0	15.5	11.0	13.5	22.5	15.0	19.0
28	8.0	4.5	6.0	16.0	10.0	13.0	15.0	12.0	13.5	20.0	16.0	18.5
29	10.0	3.5	7.0	14.5	10.5	13.0	14.5	12.0	13.0	21.5	14.5	18.0
30	10.5	6.0	8.5	13.5	9.5	11.5	18.5	11.5	15.0	24.0	16.5	20.0
31	---	---	---	13.5	9.5	11.5	---	---	---	21.5	17.5	19.5
MONTH	15.0	3.5	8.6	16.0	6.0	11.5	18.5	8.0	13.0	25.0	13.0	19.0

06052500 GALLATIN RIVER AT LOGAN, 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
		AUGUST			SEPTEMBER							
1	22.5	16.5	19.5	18.5	12.0	15.0						
2	21.5	17.0	19.5	19.0	12.5	16.0						
3	22.5	16.5	19.5	18.5	14.0	16.5						
4	23.5	16.5	20.0	18.5	14.0	16.0						
5	23.5	17.0	20.5	18.0	12.5	15.5						
6	24.0	17.5	21.0	19.0	13.5	16.5						
7	24.0	18.0	20.5	19.5	13.5	16.5						
8	21.0	18.5	19.5	19.5	13.0	16.5						
9	22.0	16.0	18.5	19.0	13.5	16.5						
10	20.5	16.5	18.5	16.0	12.5	13.5						
11	22.5	16.0	19.0	15.0	10.5	12.5						
12	19.5	15.5	17.5	13.5	10.0	11.5						
13	16.5	13.5	15.0	15.0	9.5	12.0						
14	19.0	12.0	15.5	15.0	10.0	12.0						
15	20.5	13.0	17.0	16.0	10.5	13.5						
16	20.5	15.0	17.5	16.5	12.0	14.0						
17	20.0	15.0	18.0	14.0	12.0	12.5						
18	20.5	15.0	17.5	13.5	10.5	12.0						
19	21.0	15.0	18.0	15.5	10.0	12.5						
20	21.5	14.5	18.0	16.0	10.5	13.0						
21	22.0	15.0	18.5	14.5	12.0	13.0						
22	20.0	16.0	18.0	14.5	10.0	12.5						
23	21.0	15.5	18.0	13.0	10.0	11.5						
24	19.5	14.5	17.0	10.0	9.0	9.5						
25	19.0	12.5	16.0	12.5	9.0	10.5						
26	19.5	12.5	16.0	13.5	8.5	11.0						
27	20.0	13.0	16.5	14.5	11.0	12.5						
28	20.5	14.0	17.5	13.0	9.0	11.0						
29	20.0	14.0	17.0	13.0	8.5	11.0						
30	17.0	12.5	14.0	13.5	11.0	12.0						
31	17.5	10.5	13.5	---	---	---						
MONTH	24.0	10.5	18.0	19.5	8.5	13.5						

460719111243201 LOWER TOSTON RESERVOIR NEAR TOSTON, MT

LOCATION.--Lat 46°07'19", long 111°24'32" (NAD 27), in $SE^1/_4SE^1/_4SE^1/_4$ sec.6, T.4 N., R.3 E., Broadwater County, Hydrologic Unit 10030101.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 3,950 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004 30...	1600	50.8	.21	.48	.05

06054500 MISSOURI RIVER AT TOSTON, MT

LOCATION.--Lat 46°08'46", long 111°25'11" (NAD 27), in $NW^1/_4$ $SE^1/_4$ $NW^1/_4$ sec.36, T.5 N., R.2 E., Broadwater County, Hydrologic Unit 10030101, on left bank 2.2 mi southeast of Toston, 4.8 mi upstream from Crow Creek, 7.8 mi downstream from Sixteenmile Creek, and at river mile 2,296.1.

DRAINAGE AREA.--14,669 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1890 to February 1891, April 1910 to December 1916, April 1941 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 3,905.68 ft (NGVD 29). Prior to Dec. 20, 1916, nonrecording gages at site 2.5 mi downstream at different elevations.

REMARKS.--Water-discharge records good. Some regulation by six reservoirs on tributaries and Clark Canyon Reservoir (station 06015300). Diversions for irrigation of about 555,400 acres of which 12,000 acres lies downstream 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	2,640	3,620	2,680	2,000	3,310	2,720	2,860	2,960	6,160	7,630	1,610	1,750
2	2,630	3,490	2,780	1,680	3,230	2,730	2,840	2,860	7,590	6,590	1,660	1,720
3	2,630	3,480	3,090	1,750	3,190	2,730	2,810	2,730	8,520	6,150	1,760	1,700
4	2,730	3,430	3,120	1,970	3,160	2,720	2,860	2,660	8,690	5,770	1,830	1,670
5	2,660	3,390	2,890	2,010	3,180	2,770	2,990	2,620	8,470	5,390	1,710	1,700
6	2,640	3,370	2,910	2,040	2,990	2,830	2,970	2,630	8,380	4,790	1,690	1,690
7	2,660	3,330	2,990	2,140	2,880	2,840	2,910	2,650	8,880	4,160	1,750	1,690
8	2,730	3,330	3,120	2,400	2,840	2,890	2,990	2,790	9,760	3,860	1,750	1,710
9	2,730	3,330	3,090	2,350	2,870	2,820	3,040	3,080	10,100	3,580	1,740	1,690
10	2,750	3,380	3,140	2,420	2,850	2,820	3,070	3,660	9,410	3,440	1,750	1,570
11	2,850	3,460	3,230	2,410	2,800	2,910	3,060	4,600	8,730	3,550	1,780	1,610
12	2,820	3,470	3,240	2,590	2,840	2,970	3,010	5,610	8,670	3,510	1,770	1,680
13	2,810	3,460	3,360	2,750	2,880	2,980	2,850	5,880	9,590	3,480	1,850	1,750
14	2,820	3,400	3,200	2,370	2,970	2,990	2,850	5,340	9,830	3,110	1,870	1,720
15	2,820	3,370	3,310	2,290	2,840	2,980	2,790	5,050	10,300	2,800	1,930	1,720
16	2,850	3,340	3,300	2,240	2,750	2,930	2,700	5,090	10,200	2,580	1,900	1,740
17	2,870	3,340	3,230	2,660	2,730	2,900	2,670	5,550	10,800	2,330	1,870	1,840
18	2,940	3,340	3,200	2,990	2,750	2,830	2,880	6,670	12,000	2,170	1,890	1,930
19	3,010	3,350	3,190	3,360	2,790	2,790	3,130	7,500	12,300	2,110	1,960	1,960
20	3,040	3,370	3,210	3,940	2,870	2,740	3,260	8,480	11,800	1,890	1,950	1,940
21	3,080	3,290	3,100	3,930	2,810	2,830	3,200	9,870	10,700	1,790	1,900	1,990
22	3,150	3,110	3,010	3,870	2,760	2,830	3,130	10,800	10,700	1,830	1,870	2,020
23	3,180	3,250	2,460	3,690	2,870	2,850	2,980	11,100	11,100	1,750	1,710	2,070
24	3,230	3,270	2,220	3,690	2,910	2,830	2,950	11,100	11,300	1,650	1,610	2,340
25	3,290	3,340	2,550	3,650	2,860	2,800	2,970	10,300	10,300	1,590	1,590	2,520
26	3,320	3,400	2,680	3,480	2,830	2,800	3,080	8,870	8,920	1,580	1,590	2,580
27	3,510	3,340	2,630	3,370	2,760	2,750	3,100	7,430	8,790	1,590	1,570	2,660
28	3,550	3,080	2,540	3,390	2,720	2,830	3,190	6,750	8,770	1,530	1,530	2,650
29	3,590	2,790	2,710	3,560	---	2,940	3,160	6,410	8,100	1,660	1,530	2,570
30	3,680	2,530	3,120	3,450	---	2,970	3,070	6,340	8,110	1,630	1,540	2,540
31	3,740	---	2,740	3,420	---	3,010	---	6,110	---	1,540	1,700	---
TOTAL	92,950	99,450	92,040	87,860	81,240	88,330	89,370	183,490	286,970	97,030	54,160	58,720
MEAN	2,998	3,315	2,969	2,834	2,901	2,849	2,979	5,919	9,566	3,130	1,747	1,957
MAX	3,740	3,620	3,360	3,940	3,310	3,010	3,260	11,100	12,300	7,630	1,960	2,660
MIN	2,630	2,530	2,220	1,680	2,720	2,720	2,670	2,620	6,160	1,530	1,530	1,570
AC-FT	184,400	197,300	182,600	174,300	161,100	175,200	177,300	364,000	569,200	192,500	107,400	116,500

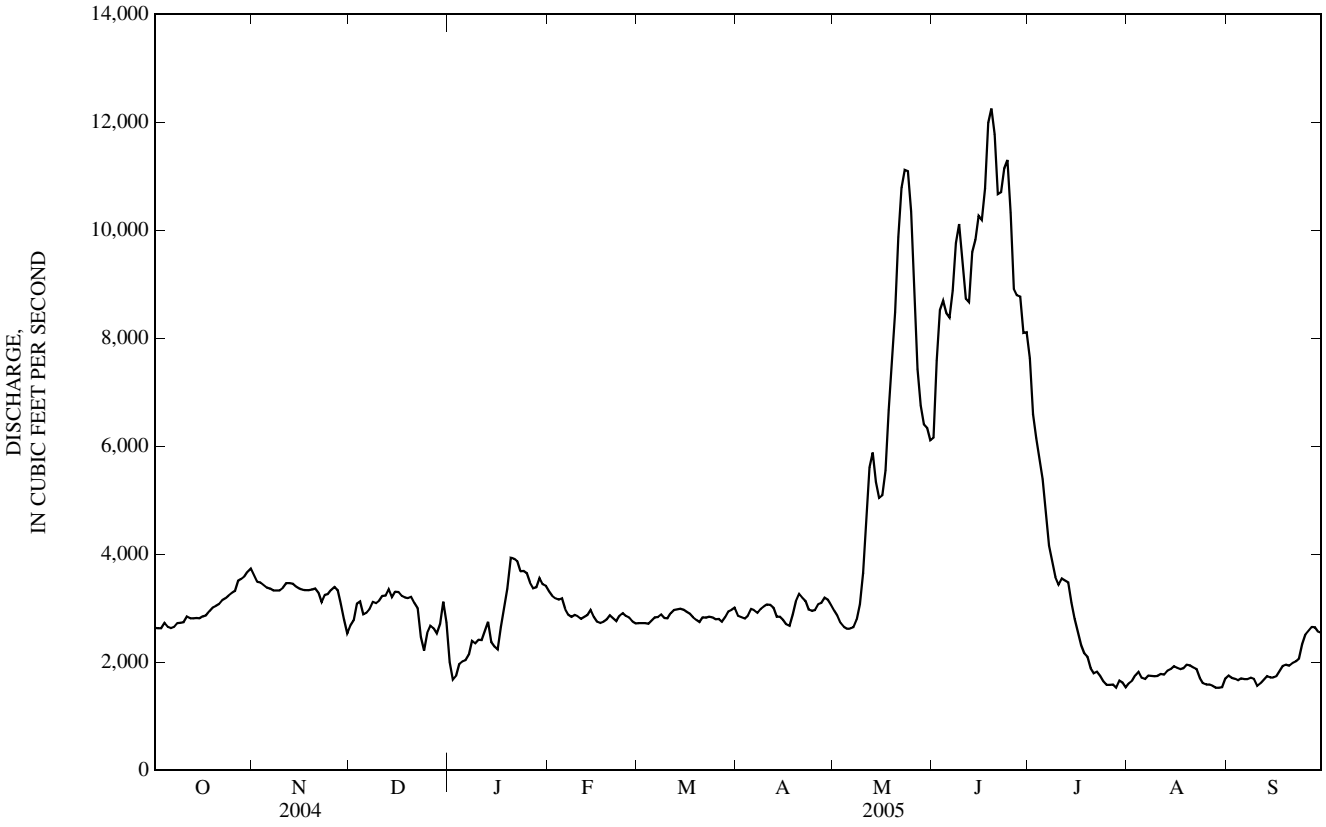
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1890 - 2005, BY WATER YEAR (WY)*

MEAN	4,342	4,650	3,723	3,351	3,673	4,085	5,523	8,662	12,240	5,104	2,697	3,350
MAX	6,778	7,028	5,968	4,893	5,217	6,900	10,090	18,400	24,520	14,240	5,729	5,813
(WY)	(1977)	(1984)	(1960)	(1984)	(1915)	(1916)	(1969)	(1976)	(1997)	(1975)	(1975)	(1984)
MIN	2,242	2,815	2,569	2,165	2,268	2,835	2,388	2,850	3,175	1,243	896	1,448
(WY)	(2004)	(1891)	(1891)	(1891)	(1989)	(1955)	(1961)	(2004)	(1987)	(1988)	(1988)	(1994)

06054500 MISSOURI RIVER AT TOSTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1890 - 2005*	
ANNUAL TOTAL	1,077,090		1,311,610			
ANNUAL MEAN	2,943		3,593		5,135	
HIGHEST ANNUAL MEAN					7,742	1997
LOWEST ANNUAL MEAN					2,830	2004
HIGHEST DAILY MEAN	9,220	Jun 12	12,300	Jun 19	33,400	Jun 12, 1997
LOWEST DAILY MEAN	1,240	Aug 16	1,530	Jul 28	700	Jan 12, 1963
ANNUAL SEVEN-DAY MINIMUM	1,290	Aug 11	1,570	Aug 24	811	Jul 31, 1961
MAXIMUM PEAK FLOW			12,500	Jun 18	34,000	Jun 12, 1997
MAXIMUM PEAK STAGE			7.67	Jun 18	12.22	Jun 12, 1997
INSTANTANEOUS LOW FLOW			a958	Aug 2	b450	Jul 31, 1989
ANNUAL RUNOFF (AC-FT)	2,136,000		2,602,000		3,720,000	
10 PERCENT EXCEEDS	4,000		7,610		9,240	
50 PERCENT EXCEEDS	2,920		2,890		4,050	
90 PERCENT EXCEEDS	1,760		1,740		2,320	

*--During periods of operation (1911-16, 1942 to current year).
a--Gage height, 2.37 ft, result of regulation.
b--Gage height, 1.68 ft, result of regulation.



06054500 MISSOURI RIVER AT TOSTON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-53, 1965, 1972 to current year. Sampling location moved in October 1978, from old bridge on U.S. Highway 287 at Toston, to cableway 2.4 miles upstream.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1973 to September 1981.
WATER TEMPERATURE: May 1949 to June 1953, April 1973 to current year.
SUSPENDED-SEDIMENT DISCHARGE: March 1949 to June 1953.

INSTRUMENTATION.--Temperature recorder since July 6, 1977.

REMARKS.--Daily water temperature records are rated good. Missing daily water temperature data for Nov. 24, 25, and 28-30 due to equipment problems. Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE : Maximum daily, 524 microsiemens per centimeter (µS/cm) at 25°C, Mar. 4, 1978; minimum daily, 159 µS/cm at 25°C, May 28, 1979.
WATER TEMPERATURE: Maximum, 29.0°C, July 31, 1988, July 20, 1989; minimum, 0.0°C on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 670 mg/L, Mar. 22, 25, 1951; minimum daily mean, 5 mg/L, Jul. 12, 1951.
SEDIMENT LOAD: Maximum daily, 16,100 tons, May 5, 1952; minimum daily, 51 tons Feb. 1, 1951.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 24.5°C, July 16 and Aug. 6; minimum, 0.0°C, many days December through February.

WATER-QUALITY DATA, SEPTEMBER 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)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
SEP 2004							
16...	1030	2,240	8.7	368	13.0	--	--
SEP 2005							
13...	1130	1,690	9.0	339	13.5	2.2	3.2

Date	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Mercury solids, total, **ng/g** (62978)	Methylmercury water unfltrd **ng/L** (50284)	Methylmercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ignition, bed sed percent (64178)
SEP 2004							
16...	.48	1.42	6.42	--	.15	.66	.01
SEP 2005							
13...	.35	.86	12.1	.09	--	.56	.02

06054500 MISSOURI RIVER AT TOSTON, 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	13.5	12.0	12.5	4.5	3.5	4.0	0.5	0.5	0.5	0.5	0.0	0.0
2	13.0	12.0	12.5	4.5	3.5	4.0	1.0	0.5	0.5	0.5	0.0	0.0
3	13.0	12.0	12.5	4.5	4.0	4.5	1.0	0.0	0.5	0.5	0.0	0.0
4	13.0	12.5	12.5	4.0	4.0	4.0	1.0	0.5	0.5	0.5	0.0	0.5
5	13.5	12.5	13.0	4.0	3.5	4.0	1.0	0.0	0.5	0.5	0.0	0.0
6	13.0	12.0	12.5	5.0	4.0	4.5	0.5	0.5	0.5	0.5	0.0	0.5
7	13.5	12.5	13.0	6.0	5.0	5.5	0.5	0.5	0.5	0.5	0.0	0.5
8	13.5	12.5	13.0	6.5	5.5	6.0	1.0	0.5	0.5	0.5	0.0	0.0
9	13.5	12.5	13.0	6.0	5.0	5.5	0.5	0.0	0.5	0.5	0.0	0.0
10	12.5	11.0	12.0	6.5	5.5	6.0	1.0	0.5	0.5	0.5	0.0	0.5
11	11.5	10.5	11.0	5.5	4.0	4.5	1.0	0.5	1.0	0.5	0.0	0.5
12	11.0	10.0	10.5	4.0	3.5	3.5	3.0	1.0	2.0	0.5	0.0	0.5
13	11.0	10.0	10.5	3.5	3.0	3.0	2.5	0.5	1.5	0.5	0.0	0.0
14	11.0	10.0	10.5	3.5	2.5	3.0	0.5	0.5	0.5	0.5	0.0	0.0
15	11.5	11.0	11.0	3.5	2.5	3.0	2.0	0.5	1.0	0.5	0.0	0.0
16	11.0	10.5	11.0	4.0	3.0	3.5	2.0	1.0	1.5	0.5	0.0	0.5
17	10.5	8.5	9.5	3.5	3.0	3.5	1.5	1.0	1.0	0.5	0.0	0.5
18	8.5	7.0	7.5	3.5	3.0	3.0	1.5	1.0	1.5	1.0	0.5	0.5
19	8.0	7.0	7.5	3.0	2.5	3.0	2.5	1.5	2.0	1.0	0.5	0.5
20	8.0	7.0	7.5	3.0	2.5	2.5	2.5	1.5	2.0	0.5	0.5	0.5
21	8.5	7.5	8.0	2.5	0.5	1.5	1.5	0.5	0.5	0.5	0.5	0.5
22	8.5	8.0	8.5	1.0	0.5	0.5	0.5	0.0	0.5	0.5	0.0	0.5
23	8.5	8.0	8.0	1.5	0.5	1.0	0.5	0.0	0.0	1.0	0.5	0.5
24	8.0	6.5	7.0	---	---	---	0.5	0.0	0.5	1.0	0.0	0.5
25	6.5	5.0	5.5	---	---	---	1.0	0.5	0.5	1.0	0.0	0.5
26	5.5	5.0	5.5	3.5	2.5	3.0	1.0	0.0	0.5	1.0	0.5	0.5
27	6.5	5.0	6.0	2.5	0.5	1.0	0.5	0.0	0.5	1.0	0.5	0.5
28	6.5	6.0	6.0	---	---	---	1.0	0.0	0.5	1.0	0.5	0.5
29	6.5	6.0	6.0	---	---	---	1.0	0.5	0.5	1.0	0.5	0.5
30	6.0	5.5	6.0	---	---	---	0.5	0.0	0.5	0.5	0.5	0.5
31	5.5	4.5	5.0	---	---	---	0.5	0.0	0.0	1.0	0.0	0.5
MONTH	13.5	4.5	9.5	6.5	0.5	3.5	3.0	0.0	1.0	1.0	0.0	0.5
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	0.0	0.5	5.0	3.5	4.5	6.5	5.5	6.0	10.0	8.5	9.5
2	1.0	0.5	0.5	5.5	4.5	5.0	7.5	6.0	7.0	11.0	9.5	10.5
3	1.0	0.5	0.5	5.5	4.5	5.0	8.5	7.5	8.0	12.0	10.5	11.0
4	1.0	0.5	0.5	6.0	4.5	5.5	8.5	7.5	8.0	12.5	11.0	11.5
5	1.0	0.5	0.5	6.0	5.0	5.5	8.0	7.0	7.5	14.0	12.5	13.0
6	1.0	0.0	0.5	6.5	5.5	6.0	9.5	7.5	8.5	14.5	13.5	14.0
7	1.0	0.0	0.5	6.5	5.5	6.0	11.0	9.5	10.0	15.0	14.5	14.5
8	1.0	0.0	0.5	6.5	5.0	5.5	10.5	10.0	10.0	14.5	13.5	14.0
9	1.0	0.0	0.5	8.0	6.5	7.0	10.0	8.0	9.0	14.0	13.5	14.0
10	1.0	0.5	0.5	9.0	8.0	8.5	8.5	7.5	8.0	13.5	11.0	12.5
11	1.5	0.5	0.5	8.5	7.5	8.0	9.0	8.0	8.5	11.0	9.0	10.0
12	1.5	0.5	1.0	7.5	6.0	7.0	10.0	8.5	9.5	9.0	8.5	8.5
13	1.5	1.0	1.5	6.0	4.0	5.0	11.5	10.0	10.5	10.5	8.5	9.0
14	2.0	1.5	1.5	4.5	3.5	4.0	11.0	9.5	10.5	14.0	10.5	12.0
15	1.5	0.5	1.0	4.0	3.5	3.5	9.5	8.0	8.5	15.0	14.0	14.5
16	1.0	0.5	0.5	4.5	4.0	4.0	10.5	8.0	9.5	15.0	14.5	15.0
17	1.5	0.0	0.5	4.5	3.5	4.0	11.0	10.5	11.0	14.5	12.5	14.0
18	1.5	0.0	0.5	4.0	3.0	3.5	11.0	9.5	10.0	12.5	11.5	12.0
19	1.0	0.5	1.0	4.5	3.0	4.0	9.5	7.5	8.0	14.0	12.5	13.5
20	1.5	1.0	1.0	4.5	4.0	4.0	7.5	6.5	7.0	14.0	13.5	13.5
21	2.5	1.5	2.0	6.0	4.0	5.0	7.0	6.0	6.5	14.5	13.0	13.5
22	3.0	2.0	2.5	6.5	5.5	6.0	9.5	6.5	8.0	15.0	13.5	14.0
23	3.0	2.0	2.5	6.0	2.5	4.5	12.0	9.5	11.0	15.5	14.0	14.5
24	3.5	2.0	3.0	2.5	1.0	1.5	13.0	11.5	12.0	15.5	13.5	14.0
25	3.5	2.5	3.0	3.5	1.0	2.0	13.5	12.0	13.0	14.0	12.0	12.5
26	4.0	3.0	3.5	5.0	3.5	4.0	13.0	12.5	12.5	14.5	12.5	13.5
27	4.5	3.0	3.5	6.0	4.5	5.0	12.5	9.0	10.5	15.5	14.0	14.5
28	4.5	3.5	4.0	7.0	6.0	6.5	9.0	6.5	7.5	16.0	15.5	15.5
29	---	---	---	6.5	5.5	6.0	7.5	6.5	7.0	16.5	15.5	16.0
30	---	---	---	5.5	5.0	5.0	9.0	7.5	8.0	15.5	14.0	15.0
31	---	---	---	5.5	4.0	5.0	---	---	---	15.0	14.0	14.5
MONTH	4.5	0.0	1.5	9.0	1.0	5.0	13.5	5.5	9.0	16.5	8.5	13.0

06054500 MISSOURI RIVER AT TOSTON, 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	14.0	12.0	13.5	19.5	18.5	18.5	23.5	21.0	22.0	18.0	15.0	16.5
2	12.0	11.5	12.0	19.5	18.5	19.0	23.5	20.5	22.0	19.0	16.5	18.0
3	12.5	11.5	11.5	19.0	18.0	18.5	22.5	20.5	21.5	20.0	17.5	18.5
4	15.0	12.0	13.0	19.5	18.0	19.0	23.0	20.5	22.0	20.0	17.5	18.5
5	16.5	15.0	15.5	20.5	19.5	20.0	24.0	21.5	22.5	18.5	17.0	18.0
6	16.5	14.0	15.5	21.5	20.5	21.0	24.5	22.0	23.0	18.0	17.0	17.5
7	14.0	12.5	13.0	22.0	21.0	21.5	24.0	22.5	23.0	19.5	17.0	18.0
8	13.5	12.0	12.5	23.0	22.0	22.5	23.0	22.0	22.5	19.5	17.5	18.5
9	13.0	11.5	12.0	23.0	21.0	22.0	22.0	20.0	21.0	19.5	17.5	18.5
10	13.5	12.5	13.0	21.0	19.5	20.0	21.5	20.0	20.5	17.5	15.5	17.0
11	15.5	13.5	14.0	21.0	19.0	20.0	22.0	20.0	21.0	15.5	13.5	15.0
12	15.5	12.5	14.0	22.5	21.0	22.0	21.0	18.5	20.0	15.0	13.0	14.0
13	14.5	11.5	12.5	24.0	22.5	23.0	18.5	16.5	18.0	14.5	13.0	14.0
14	17.0	14.5	15.0	23.0	21.5	22.5	18.0	16.0	17.0	14.5	13.0	14.0
15	18.0	16.0	17.0	23.5	22.0	23.0	19.5	16.5	18.0	15.0	13.5	14.0
16	18.5	16.5	17.5	24.5	22.5	23.5	20.5	18.5	19.5	16.5	14.0	15.0
17	17.5	16.5	17.0	22.5	20.5	21.5	21.0	19.5	20.0	15.5	14.5	15.0
18	17.0	15.0	16.0	22.0	20.5	21.0	20.0	18.5	19.5	14.5	13.5	14.0
19	17.5	14.5	16.0	23.5	21.5	22.5	20.0	18.0	19.0	15.0	13.5	14.0
20	19.0	16.0	17.0	23.5	21.5	22.5	20.5	19.0	19.5	15.5	13.5	14.5
21	19.0	17.5	18.5	24.0	21.5	22.5	21.0	19.0	20.0	15.0	14.0	14.5
22	20.0	17.5	18.5	24.0	22.0	23.0	21.5	20.0	20.5	14.5	13.0	14.0
23	20.0	17.5	18.5	23.5	21.5	22.5	21.0	19.0	20.0	13.0	12.0	13.0
24	19.5	17.0	18.5	24.0	21.5	23.0	20.5	18.0	19.5	12.0	10.0	10.5
25	19.5	17.5	18.5	22.5	20.0	21.5	19.5	17.5	18.5	10.5	9.5	10.0
26	18.5	16.0	17.0	21.0	18.5	20.0	19.5	17.0	18.0	12.5	10.5	11.5
27	17.5	16.0	16.5	22.0	18.5	20.0	20.0	17.0	18.5	13.0	12.0	12.5
28	17.5	16.5	17.0	22.5	20.0	21.0	20.5	18.0	19.0	12.5	11.5	12.0
29	17.0	15.5	16.0	22.0	20.0	21.0	21.5	18.5	19.5	12.5	11.5	12.0
30	18.5	16.0	17.0	22.5	20.0	21.0	19.0	16.5	18.0	13.5	12.0	13.0
31	---	---	---	24.0	21.0	22.0	17.0	15.0	16.0	---	---	---
MONTH	20.0	11.5	15.5	24.5	18.0	21.5	24.5	15.0	20.0	20.0	9.5	15.0

462334111311701 UPPER CANYON FERRY LAKE NEAR TOWNSEND, MT

LOCATION.--Lat 46°23'34", long 111°31'17" (NAD 27), in $SW^1/_4SW^1/_4NE^1/_4$ sec.6, T.7 N., R.2 E., Broadwater County, Hydrologic Unit 10030101.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 3,797 ft (NGVD 27).

REMARKS.-Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004					
27...	1100	20.3	.15	.69	.02

463811111420001 LOWER CANYON FERRY LAKE NEAR TOWNSEND, MT

LOCATION.--Lat 46°38'11", long 111°14'20" (NAD 27), in $SE^1/_4NW^1/_4SW^1/_4$ sec.11, T.10 N., R.1 W., Lewis and Clark County, Hydrologic Unit 10030101.

PERIOD OF RECORD.--September 2004, discontinued.

GAGE.--None, elevation at site, 3,797 ft (NGVD 27).

REMARKS.--Mercury data for 2004 that was unavailable to publish last year are provided in this 2005 volume; concentrations are in nanograms per unit volume or mass.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Mercury solids, total, **ng/g** (62978)	Methyl-mercury solids, total, **ng/g** (62979)	Bed sed dry wt, percent of wet wt (64177)	Loss on ig-nition, bed sed percent (64178)
SEP 2004					
27...	1300	95.6	<.14	.59	.04

06058500 CANYON FERRY LAKE NEAR HELENA, MT

LOCATION.--Lat 46°38'57", long 111°43'39" (NAD 27), in $SE^1/_4$ $SE^1/_4$ sec.4, T.10 N., R.1 W., Lewis and Clark County, Hydrologic Unit 10030101, in block 17 of Canyon Ferry Dam, 15 mi east of Helena, and at river mile 2,252.8.

DRAINAGE AREA.--15,904 mi^2.

PERIOD OF RECORD.--April 1953 to current year (monthend contents only). Prior to October 1981, published as Canyon Ferry Reservoir near Helena. Records of monthend contents in Lake Sewell, submerged by present reservoir Apr. 8, 1953, available January 1936 to March 1953. Scattered daily elevations and contents for April to July 1953, published in WSP 1320-B. Daily elevations and contents for May to June 1964, published in WSP 1840-B. Records of daily elevations and contents are in files of the USGS Water Science Center located in Helena, Montana.

REVISED RECORDS.--WSP 1559: Drainage area.

GAGE.--Water-stage recorder in powerhouse control room. Elevation of gage is 3,650.0 ft (NGVD 29).

REMARKS.--Reservoir is formed by concrete dam; construction began in 1949, completed in 1953. Storage began in March 1953. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Usable capacity, 1,993,000 acre-ft between elevation 3,650.00 ft, contents at dead storage (1,060 acre-ft) and 3,800.00 ft, controlled spillway elevation. Minimum operating level, 396,000 acre-ft, at elevation 3,728.00 ft, for on-site power generation. 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 daily contents, 2,043,000 acre-ft, July 15-29, 31, 1955, July 2, 5, 6, 8, 1956, July 16, 17, 1962, June 23, 1964, elevation, 3,800.0 ft; minimum since first filling, 1,017,000 acre-ft, Apr. 11, 1967, elevation, 3,764.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,941,000 acre-ft, July 2, 3, elevation, 3,798.51 ft; minimum, 1,354,000 acre-ft, Jan. 18, 19, elevation, 3,779.85 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	3,781.39	1,398,000	--
October 31	3,781.21	1,393,000	-5,000
November 30	3,781.78	1,409,000	+16,000
December 31	3,781.61	1,404,000	-5,000
Calendar year 2004	--	--	-67,000
January 31	3,780.40	1,369,000	-35,000
February 28	3,780.67	1,377,000	+8,000
March 31	3,780.79	1,381,000	+4,000
April 30	3,781.06	1,388,000	+7,000
May 31	3,787.50	1,583,000	+195,000
June 30	3,798.37	1,937,000	+354,000
July 31	3,794.71	1,815,000	-122,000
August 31	3,790.18	1,668,000	-147,000
September 30	3,786.42	1,550,000	-118,000
Water year 2005	--	--	+152,000

462522112172401 08N06W24DDCD01 (LUTTRELL WELL EPA-3)

LOCATION.--Lat 46°25'22", long 112°17'24" (NAD 83), in $SW^1/_4SE^1/_4SE^1/_4$ sec.24, T.8 N., R.6 W., Lewis and Clark County, Hydrologic Unit 10030101.

HYDROGEOLOGIC UNIT.--Boulder batholith quartz monzonite.

WELL CHARACTERISTICS.--Drilled in June 1999, casing diameter 4 in., depth 227 ft.

DATUM.--Measuring point, top of PVC casing, 1.70 ft above land surface datum. Elevation of land-surface datum is 7,579.8 ft (NGVD 29).

PERIOD OF RECORD.-- October 2001 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	127.19	Aug. 15	115.40
Nov. 9	128.26	Aug. 17	R160.48
June 17	122.78	Sept. 30	125.35
July 18	116.51		

R--Recently pumped.

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
JUN										
17...	1300	220	1.0	6.8	307	9.0	15	4.72	.784	4.14
AUG										
17...	1000	--	.2	7.2	391	9.0	4	1.43	.192	5.20

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
JUN											
17...	6	51.7	85	79	78	1.53	.3	22.0	54.1	186	.25
AUG											
17...	17	83.7	94	144	113	1.75	.3	18.7	51.2	231	.31

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
JUN								
17...	2	.6	.11	1.4	81	.13	149	11.3
AUG								
17...	2	2.2	<.04	.6	12	E.07	37.2	1.3

E--Estimated.

462522112172402 08N06W24DDCD02 (LUTTRELL WELL EPA-3S)

LOCATION.--Lat 46°25'22", long 112°17'24", (NAD 83), in $SW^1/_4SE^1/_4SE^1/_4$ sec.24, T.8 N., R.6 W., Lewis and Clark County, Hydrologic Unit 10030101.

HYDROGEOLOGIC UNIT.--Tertiary volcanics.

WELL CHARACTERISTICS.--Drilled in June 2000, casing diameter 2 in., depth 84 ft.

DATUM.--Measuring point, top of PVC casing, 3.10 ft above land surface datum. Elevation of land-surface datum is 7,579.6 ft (NGVD 29).

PERIOD OF RECORD.--October 2001 to current year.

REMARKS.--All water levels are reported as distance, in feet below land-surface datum.

MEASURED WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	53.51	July 18	32.23
Nov. 9	61.31	Aug. 15	46.18
May 25	33.44	Aug. 17	46.52
June 16	24.27	Sept. 30	60.24

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

Date	Time	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
MAY 25...	1400	6.7	--	5.7	58	5.0	20	6.00	1.12	2.07
JUN 16...	1000	27	8.7	5.8	86	8.0	28	8.79	1.54	2.32
AUG 17...	1100	--	4.3	4.1	79	9.0	10	3.08	.609	2.31

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alka-linity, wat flt inc tit field, mg/L as CaCO3 (39086)	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)
MAY 25...	.1	.80	7	10	8	.63	<.1	4.12	11.9	32	.04
JUN 16...	.1	1.57	10	14	11	.74	<.1	5.28	17.6	45	.06
AUG 17...	.1	.85	12	--	<2	.99	<.1	10.6	21.5	E41	E.06

Date	Alum-inum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Zinc, water, fltrd, ug/L (01090)
MAY 25...	62	.4	.05	1.5	20	.46	6.3	5.1
JUN 16...	48	.3	.11	1.7	31	.40	25.2	8.2
AUG 17...	638	<.2	.14	4.6	296	7.20	7.5	41.5

E--Estimated.

462720112165101 TENMILE CREEK ABOVE MONITOR CREEK, NEAR RIMINI, MT

LOCATION.--Lat 46°27'19", long 112°16'52" (NAD 27), $SW^1/_4NE^1/_4SW^1/_4$ sec.7, T.8 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10030101, 30 ft above confluence with Monitor Creek and 2.9 mi south of Rimini.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--None. Elevation at sampling site is 6,230 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
JUN													
14...	1130	13	6.8	23	15.0	5.5	7	2.15	.434	.69	.3	1.70	31
AUG													
25...	0930	.10	7.3	42	13.0	7.0	12	3.50	.741	.80	.4	3.03	34

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)	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)
JUN										
14...	8	E.14	E.1	13.1	2.5	149	2.0	2	.04	.04
AUG										
25...	17	<.20	E.1	14.5	4.4	23	1.3	1.1	E.02	E.02

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)
JUN										
14...	2.4	2.7	114	140	.27	.44	1.5	3	6.4	6
AUG										
25...	1.0	.9	62	70	E.08	.10	10.6	10	4.0	4

E--Estimated.

462542112173101 MONITOR CREEK SS 12 NEAR RIMINI, MT

LOCATION.--Lat 46°25'42", long 112°17'31" (NAD 27), in $NW^1/_4NE^1/_4SE^1/_4$ sec.24, T.8 N., R.6 W., Lewis and Clark County, Hydrologic Unit 10030101, 1.95 mi upstream of confluence with Tenmile Creek, 5.4 mi south of Rimini.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--None. Elevation at sampling site is 7,230 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
JUN											
15...	0930	.93	4.1	225	6.0	5.0	54	16.4	3.31	5.11	.1
JUL											
29...	1000	.07	3.7	299	17.0	9.0	65	19.0	4.27	7.63	.1
AUG											
22...	1400	.06	3.7	280	25.0	11.5	55	16.1	3.71	7.54	.1

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	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)
JUN											
15...	1.05	4	.36	.2	15.6	102	5,070	.8	<2	6.58	6.36
JUL											
29...	2.00	5	.30	.2	30.0	129	6,510	.4	<2	9.35	9.32
AUG											
22...	2.03	6	.48	.2	33.4	111	6,600	.5	.85	7.91	7.93

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)
JUN										
15...	23.0	24.6	160	190	18.9	18.9	485	479	442	397
JUL										
29...	34.1	33.2	460	450	39.6	37.0	722	733	697	683
AUG										
22...	29.8	30.5	583	580	41.8	38.5	699	691	610	652

462721112164801 MONITOR CREEK AT MOUTH (MCM), NEAR RIMINI, MT

LOCATION.--Lat 46°27'21", long 112°16'48" (NAD 27), in $SW^1/_4NE^1/_4SW^1/_4$ sec.7, T.8 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10020006, 20 ft upstream from mouth and 4.0 mi southwest of Rimini.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July and October 1997, July 2003 to current year.

GAGE.--None. Elevation at sampling site is 6,220 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
JUN 14...	1100	8.2	6.5	49	15.0	4.5	15	4.21	1.04	1.32	.2	1.58	17
JUL 29...	0800	.37	6.6	93	17.0	9.5	28	8.02	2.05	2.27	.2	2.38	14
AUG 25...	1000	.19	6.7	117	13.0	6.0	40	11.5	2.69	2.68	.2	2.74	12

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)	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)
JUN 14...	5	E.18	.1	14.7	14.2	365	1.2	E1	.81	.82	4.4	5.6
JUL 29...	8	<.20	.2	19.2	30.9	84	.5	<2	1.47	1.48	2.5	2.9
AUG 25...	7	<.20	.2	21.2	41.8	45	.4	.41	1.43	1.37	1.6	1.6

Date	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)
JUN 14...	74	110	1.39	2.34	55.4	53	64.2	60
JUL 29...	25	50	.43	.85	52.6	52	130	134
AUG 25...	16	30	.13	.22	34.8	33	150	153

E--Estimated.

462544112162001 RUBY CREEK RC2A ABOVE SCOTT RESERVOIR, NEAR RIMINI, MT

LOCATION.--Lat 46°25'44", long 112°16'20" (NAD 27), in NE$^1/_4$ NW$^1/_4$ SE$^1/_4$ sec.19, T.8 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10020006, 200 ft above confluence with unnamed tributary, 0.3 mi upstream from Scott Reservoir, and 0.45 mi south of Rimini.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--None. Elevation at sampling site is 7,380 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)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
JUN 14...	1330	2.0	6.3	16	11.0	5.0	6	1.77	.275	.48	.2	.82	23

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)	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)	Iron, water, fltrd, ug/L (01046)
JUN 14...	6	E.12	<.1	6.14	1.9	145	1.6	E1	<.04	E.03	2.2	2.2	55

Date	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)
JUN 14...	60	.21	.25	1.2	2	4.2	2

E--Estimated.

462657112143501 BANNER CREEK AT BRIDGE, 0.5 MILE ABOVE CITY DIVERSION, NEAR RIMINI, MT

LOCATION.--Lat 46°23'57", long 112°15'25" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $SW^1/_4$ sec.16, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at bridge near the downstream edge of meadow, about 0.5 mi upstream from city diversion, and 2.5 mi south of Rimini.

DRAINAGE AREA.--2.6 mi^2.

PERIOD OF RECORD.--April 2000 to current year.

GAGE--None. Elevation at site is 6,700 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)
MAR													
09...	0900	.17	7.3	88	--	0.0	35	10.7	1.94	.6	<2	.07	.07
MAY													
26...	1240	14	6.9	37	9.5	4.0	14	4.43	.818	1.1	E2	.09	.16
AUG													
01...	0900	.36	7.2	68	9.5	20.5	27	8.36	1.59	.8	<2	.08	.08
SEP													
19...	0915	.24	7.3	80	6.0	3.5	34	10.5	1.86	.6	.83	.08	.08

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR									
09...	.9	2.2	E.07	.14	14.9	16	70	1	<.01
MAY									
26...	3.3	5.4	.18	2.29	15.5	23	54	19	.74
AUG									
01...	1.5	2.0	.10	.23	12.1	14	83	1	<.01
SEP									
19...	--	1.2	--	.12	--	14	69	2	<.01

E--Estimated.

462838112143901 POISON CREEK AT MOUTH, NEAR RIMINI, MT

LOCATION.--Lat 46°28'38", long 112°14'39" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.4, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at culvert crossing on Rimini Road about 1 mi south of Rimini.

DRAINAGE AREA.--0.32 mi^2.

PERIOD OF RECORD.--May 1999 to current year.

GAGE--None. Elevation at site is 5,500 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)
MAR											
09...	1030	E.01	4.8	232	1.5	0.0	82	24.8	4.88	7.3	17
MAY											
17...	1100	1.6	6.7	75	5.5	4.5	22	6.84	1.29	24.4	296
AUG											
01...	1000	.06	5.9	114	21.0	12.0	38	11.8	2.15	17.0	24
SEP											
19...	1015	.01	6.1	141	6.5	6.0	50	15.2	2.79	12.8	15.4

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR											
09...	12.9	12.9	42.0	40.6	7.14	13.0	2,500	2,440	42	3	<.01
MAY											
17...	5.81	6.65	25.4	68.5	1.08	153	901	878	52	87	.38
AUG											
01...	9.96	10.3	35.7	38.0	2.37	5.00	1,550	1,610	57	1	<.01
SEP											
19...	11.3	11.8	34.1	32.2	1.48	2.75	1,830	1,880	67	1	<.01

E--Estimated.

462853112144101 TENMILE CREEK ABOVE CITY DIVERSION, NEAR RIMINI, MT

LOCATION.--Lat 46°28'53", long 112°14'10" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.4 , T.8 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10030101, about 0.25 mile upstream from city diversion, about 100 feet west of Rimini road, and 0.125 mi south of Rimini.

DRAINAGE AREA.--15.2 mi^2.

PERIOD OF RECORD.--May 1999 to current year.

GAGE--None. Elevation at site is 5,350 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)
MAR													
08...	0900	2.2	7.6	71	4.5	0.0	25	7.49	1.56	4.4	6	1.10	1.19
MAY													
17...	1000	123	7.3	37	7.0	3.0	13	3.92	.835	3.0	9	.49	.75
AUG													
01...	1030	2.4	7.2	74	20.0	13.5	26	7.56	1.68	5.9	7	1.77	1.65
SEP													
19...	1100	3.5	7.4	57	11.5	5.5	21	6.23	1.28	3.9	5.2	.97	1.02

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR									
08...	2.6	3.2	.67	1.43	270	272	77	1	.01
MAY									
17...	4.9	8.7	.99	10.6	74.4	105	50	60	20
AUG									
01...	3.6	4.4	.67	1.36	346	394	85	1	.01
SEP									
19...	2.5	2.7	.42	1.17	208	224	73	2	.02

462758112123001 BEAVER CREEK TRIBUTARY NO. 2 NEAR RIMINI, MT

LOCATION.--Lat 46°27'58", long 112°12'30" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.3, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, about 40 ft upstream from inlet structure to Banner Creek flume, about 100 ft. upstream from Banner Creek flume, and about 2.5 mi southwest of Rimini.

DRAINAGE AREA.--0.67 mi^2.

PERIOD OF RECORD.--April 2000 to current year.

GAGE--None. Elevation at site is 6,330 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)
MAR											
09...	1130	.14	7.1	67	--	1.5	21	6.77	1.09	6.8	7
MAY											
26...	1120	1.5	7.0	46	11.0	3.5	14	4.42	.758	4.5	10
AUG											
04...	1400	.22	7.1	38	25.0	10.0	17	5.43	.950	6.6	7
SEP											
22...	1430	.01	6.4	63	18.0	6.0	20	6.41	1.04	6.7	7.1

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR											
09...	1.81	1.85	4.2	4.3	.10	.14	291	297	57	2	<.01
MAY											
26...	3.14	3.24	16.2	19.8	.55	4.54	464	491	50	1	<.01
AUG											
04...	2.51	2.27	7.7	9.0	.34	1.05	357	398	83	1	<.01
SEP											
22...	2.17	2.21	6.3	6.4	.29	.61	347	348	71	1	<.01

462922112145401 TENMILE CREEK BELOW SPRING CREEK, AT RIMINI, MT

LOCATION.--Lat 46°29'22", long 112°14'54" (NAD 27), in $NW^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.33, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at bridge crossing on road to private residence in Rimini.

DRAINAGE AREA.--22.8 mi^2.

PERIOD OF RECORD.--May 1997 to current year.

GAGE--None. Elevation at site is 5,220 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)
MAR											
08...	1000	.52	6.9	139	9.0	0.0	50	13.9	3.59	91.2	135
MAY											
17...	1200	120	6.9	25	8.0	4.5	14	4.08	.903	4.2	17
AUG											
01...	1200	.34	7.0	122	24.5	17.0	44	12.3	3.15	45.6	85
SEP											
19...	1130	.70	7.0	120	11.0	9.5	44	12.8	2.94	7.0	50.5

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR											
08...	4.64	4.63	4.1	5.3	1.46	3.29	803	856	82	3	<.01
MAY											
17...	.49	.78	6.6	10.7	.93	12.3	79.6	114	37	69	22
AUG											
01...	4.30	4.01	5.3	7.6	.89	1.92	627	707	71	3	<.01
SEP											
19...	5.74	5.76	5.8	9.3	.90	7.01	833	878	85	2	<.01

462932112145801 MOORES SPRING CREEK AT MOUTH, NEAR RIMINI, MT

LOCATION.--Lat 46°29'32", long 112°14'58" (NAD 27), in NW$^1/_4$ NW$^1/_4$ SW$^1/_4$ sec.33 , T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at culvert crossing on Rimini Road in Rimini.

DRAINAGE AREA.--0.6 mi^2.

PERIOD OF RECORD.--May 2000 to current year.

GAGE--None. Elevation at site is 5,180 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)
MAR											
08...	1100	.04	7.6	221	9.5	0.0	95	25.5	7.58	70.4	72
MAY											
17...	1230	1.1	7.4	142	9.0	6.0	58	15.7	4.54	49.4	121
AUG											
01...	1230	.04	7.8	248	24.5	13.5	110	29.1	7.95	80.2	81
SEP											
19...	1215	.02	7.6	300	8.0	11.0	130	36.5	10.6	65.9	67.6

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR											
08...	3.15	3.13	4.0	4.6	.08	1.87	488	513	55	2	<.01
MAY											
17...	4.71	5.51	9.9	14.7	.43	19.0	585	708	49	7	.02
AUG											
01...	3.78	4.11	5.8	6.3	.10	.59	586	618	86	1	<.01
SEP											
19...	5.45	5.61	4.7	4.3	E.05	.33	899	918	77	2	<.01

E--Estimated.

462818112171001 MINNEHAHA CREEK ABOVE JUSTICE MINE, NEAR RIMINI, MT

LOCATION.--Lat 46°28'18", long 112°17'10" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.6, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at culvert 0.10 mi upstream from Justice mine and 2.3 mi southwest of Rimini.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--April 1998 to October 1998, May 2005 to August 2005.

GAGE--None. Elevation at site is 6,320 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)
MAY													
18...	0820	1.6	7.5	28	8.5	1.0	8	2.49	.477	1.1	<2	E.03	.05
AUG													
02...	0830	.04	7.4	46	18.0	9.5	13	4.02	.809	.8	<2	.04	E.03

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)	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)
MAY									
18...	14.4	17.3	.13	.47	4.5	6	41	4	.02
AUG									
02...	6.9	7.6	E.06	.16	5.2	5	11	9	<.01

E--Estimated.

462844112165401 MINNEHAHA CREEK ABOVE ARMSTRONG MINE, NEAR RIMINI, MT

LOCATION.--Lat 46°28'44", long 112°16'54" (NAD 27), in $NW^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.6, T. 8 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, at Armstrong mine road, 0.40 mi downstream from Justice mine, and 1.8 mi southwest of Rimini.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--April 1998 to October 1998, May 2005 to August 2005.

GAGE--None. Elevation at site is 5,910 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)
MAY													
18...	0930	7.7	7.1	32	13.0	3.0	9	2.58	.562	4.7	6	.34	.46
AUG													
02...	0930	.30	7.2	48	17.0	9.5	13	3.93	.808	13.8	14	.86	.81

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)	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)
MAY									
18...	6.7	8.9	2.34	6.68	21.5	27	45	4	.08
AUG									
02...	7.5	8.5	2.21	3.66	52.7	59	67	1	<.01

462917112165601 MINNEHAHA CREEK BELOW ARMSTRONG MINE, NEAR RIMINI, MT

LOCATION.--Lat 46°29'17", long 112°16'56" (NAD 27), in $SW^1/_4SW^1/_4NW^1/_4$ sec.31, T. 9 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, 0.6 mi downstream from the Armstrong mine road and 1.4 mi southwest of Rimini.

DRAINAGE AREA.--1.75 mi^2.

PERIOD OF RECORD.--April 1998 to current year.

GAGE--None. Elevation at site is 5,650 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)
MAY													
18...	1100	9.7	7.1	43	13.5	--	13	3.62	.893	4.8	7	2.34	2.53
AUG													
02...	1100	.34	7.2	72	16.0	11.0	22	6.03	1.68	9.3	9	5.21	4.93

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAY									
18...	11.8	15.4	1.46	7.02	310	356	34	5	.13
AUG									
02...	16.2	17.9	.53	1.10	742	796	54	2	<.01

462918112170801 BEATTRICE MINE TRIBUTARY AT MOUTH, NEAR RIMINI, MT

LOCATION.--Lat 46°29'18", long 112°17'08" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.31, T. 9 N., R. 5 W., Lewis and Clark County, Hydrologic Unit 10030101, 400 ft upstream from old logging road crossing, about 1,000 ft upstream from confluence with Minnehaha Creek, and 1.5 mi southwest of Rimini.

DRAINAGE AREA.--0.24 mi^2.

PERIOD OF RECORD.--May 2000 to current year.

GAGE--None. Elevation at site is 5,660 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)
MAY													
18...	1030	1.4	7.4	45	13.5	2.0	15	4.78	.808	1.4	E2	.05	.11
AUG													
02...	1015	.07	7.4	98	16.0	10.5	30	9.15	1.72	.7	<2	.06	.05

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)	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)
MAY									
18...	17.4	25.7	.23	2.44	5.7	10	51	10	.04
AUG									
02...	7.4	8.6	<.08	.07	5.7	6	43	1	<.01

E--Estimated.

463023112153701 MINNEHAHA CREEK ABOVE CITY DIVERSION, NEAR RIMINI, MT

LOCATION.--Lat 46°30'23", long 112°15'37" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.29, T.9 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10030101, about 75 feet upstream from city diversion structure, about 200 feet upstream from mouth and about 3 mi north of Rimini.

DRAINAGE AREA.--5.35 mi^2.

PERIOD OF RECORD.--April 1998 to current year.

GAGE--None. Elevation at site is 5,040 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)
MAR													
08...	1200	.74	7.0	82	10.0	0.0	26	7.61	1.78	1.9	E2	1.30	1.38
MAY													
18...	1245	23	7.0	42	17.0	4.5	14	3.96	.937	2.7	3	.93	1.04
AUG													
02...	1200	1.1	7.5	63	18.0	12.0	20	5.79	1.37	3.1	3	1.26	1.25
SEP													
19...	1300	.49	7.7	74	17.0	7.0	24	6.82	1.60	2.6	2.6	1.32	1.33

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR									
08...	6.7	6.3	.17	.29	234	248	63	2	<.01
MAY									
18...	8.5	11.0	.41	2.19	133	154	59	5	.31
AUG									
02...	5.2	6.4	.13	.59	195	212	72	3	.01
SEP									
19...	4.3	4.3	E.05	.17	247	232	77	2	<.01

E--Estimated.

06062500 TENMILE CREEK NEAR RIMINI, MT

LOCATION.--Lat 46°31'27", long 112°15'22" (NAD 27), in NE$^1/_4$SW$^1/_4$NE$^1/_4$ sec.20, T.9 N., R.5 W., Lewis and Clark County, Hydrologic Unit 10030101, Helena National Forest, on left bank at U.S. Forest Service Moose Creek campground, 500 ft upstream from Moose Creek, 2.5 mi north of Rimini, and at river mile 20.4.

DRAINAGE AREA.--30.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1914 to September 1994, May 1997 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 19417, 1921, 1924-25. WSP 1509: 1915, 1916-17(M), 1920(M), 1927(m), 1928-1930, 1947(m), 1948, 1950(M). WSP 1559: Drainage area. WSP 1709: 1959. WDR--97-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,850 ft (NGVD 29). Prior to Dec. 17, 1934, water-stage recorder at site 40 ft downstream at different elevation and different control.

REMARKS.--Water-discharge records good except those below 1.0 ft^3/s and those for estimated daily discharges, which are poor. Flow regulated by Chessman and Scott Reservoirs on tributaries upstream from station, combined capacity, 2,340 acre-feet. Some small 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	0.52	0.60	e0.56	e0.30	e0.50	0.46	1.4	18	90	29	1.1	0.30
2	0.50	0.67	0.55	e0.26	0.47	0.48	2.3	17	111	26	1.1	0.29
3	0.49	0.83	0.54	e0.26	0.49	0.47	2.4	18	178	23	1.0	0.28
4	0.47	0.69	0.53	e0.27	0.48	0.49	2.5	21	179	21	0.94	0.27
5	0.45	0.74	0.48	e0.27	e0.44	0.52	2.2	30	161	19	0.84	0.31
6	0.43	0.74	0.50	e0.26	e0.38	0.71	2.9	44	154	18	0.75	0.27
7	0.47	0.74	0.52	e0.30	e0.39	0.86	6.8	51	137	16	0.69	0.24
8	0.45	0.80	0.50	e0.28	e0.42	1.3	11	58	115	14	0.73	0.22
9	0.44	0.78	0.50	e0.28	0.46	2.0	7.6	59	102	13	0.67	0.21
10	0.43	0.83	0.48	e0.30	0.49	2.7	6.0	146	90	13	0.62	0.34
11	0.42	0.78	e0.70	e0.32	0.51	2.1	5.1	155	89	12	0.56	0.35
12	0.40	0.61	e0.66	e0.27	0.49	1.5	5.3	127	120	10	0.56	0.32
13	0.40	0.62	0.50	e0.22	0.50	1.4	6.6	122	106	9.1	0.62	0.33
14	0.39	0.61	0.62	e0.20	e0.60	0.98	7.1	123	89	7.9	0.56	0.30
15	0.44	0.60	e0.64	e0.22	e0.44	0.79	5.6	131	96	6.8	0.47	0.28
16	0.44	0.59	0.58	e0.30	e0.40	0.75	5.7	148	89	6.1	0.43	0.27
17	0.45	0.55	0.54	e0.40	e0.44	e0.65	8.3	168	93	5.6	0.43	0.88
18	0.48	0.57	0.51	0.48	e0.40	e0.56	8.5	145	79	5.1	0.44	1.4
19	0.46	0.61	0.57	0.57	e0.40	e0.56	6.9	183	70	4.3	0.41	0.92
20	0.45	0.52	0.53	0.67	e0.44	e0.56	7.1	177	62	3.4	0.37	0.67
21	1.3	0.53	e0.47	e1.2	e0.40	e0.57	6.9	173	56	2.8	0.33	0.51
22	1.3	0.59	e0.36	e1.5	e0.45	e0.54	8.3	147	50	2.7	0.33	0.46
23	0.99	0.88	e0.33	0.88	0.49	e0.54	13	138	45	2.7	0.38	0.47
24	0.88	e0.88	e0.50	e1.6	0.48	e0.50	19	116	41	1.9	0.32	0.95
25	0.67	e1.0	e0.52	0.92	e0.50	e0.54	27	99	40	1.9	0.31	0.96
26	0.63	0.82	e0.46	e1.4	e0.56	e0.56	29	88	45	1.6	0.27	1.2
27	0.63	0.69	e0.40	0.77	e0.60	0.93	27	82	47	1.3	0.24	0.64
28	0.63	e0.70	e0.54	0.64	e0.56	1.8	23	77	45	1.2	0.22	0.50
29	0.66	0.65	e0.50	0.58	---	1.4	21	71	38	1.2	0.21	1.5
30	0.63	0.44	e0.40	0.50	---	1.1	19	63	33	1.1	0.45	1.4
31	0.65	---	e0.30	0.49	---	1.1	---	57	---	1.2	0.34	---
TOTAL	17.95	20.66	15.79	16.91	13.18	29.42	304.5	3,052	2,650	281.9	16.69	17.04
MEAN	0.58	0.69	0.51	0.55	0.47	0.95	10.2	98.5	88.3	9.09	0.54	0.57
MAX	1.3	1.0	0.70	1.6	0.60	2.7	29	183	179	29	1.1	1.5
MIN	0.39	0.44	0.30	0.20	0.38	0.46	1.4	17	33	1.1	0.21	0.21
AC-FT	36	41	31	34	26	58	604	6,050	5,260	559	33	34

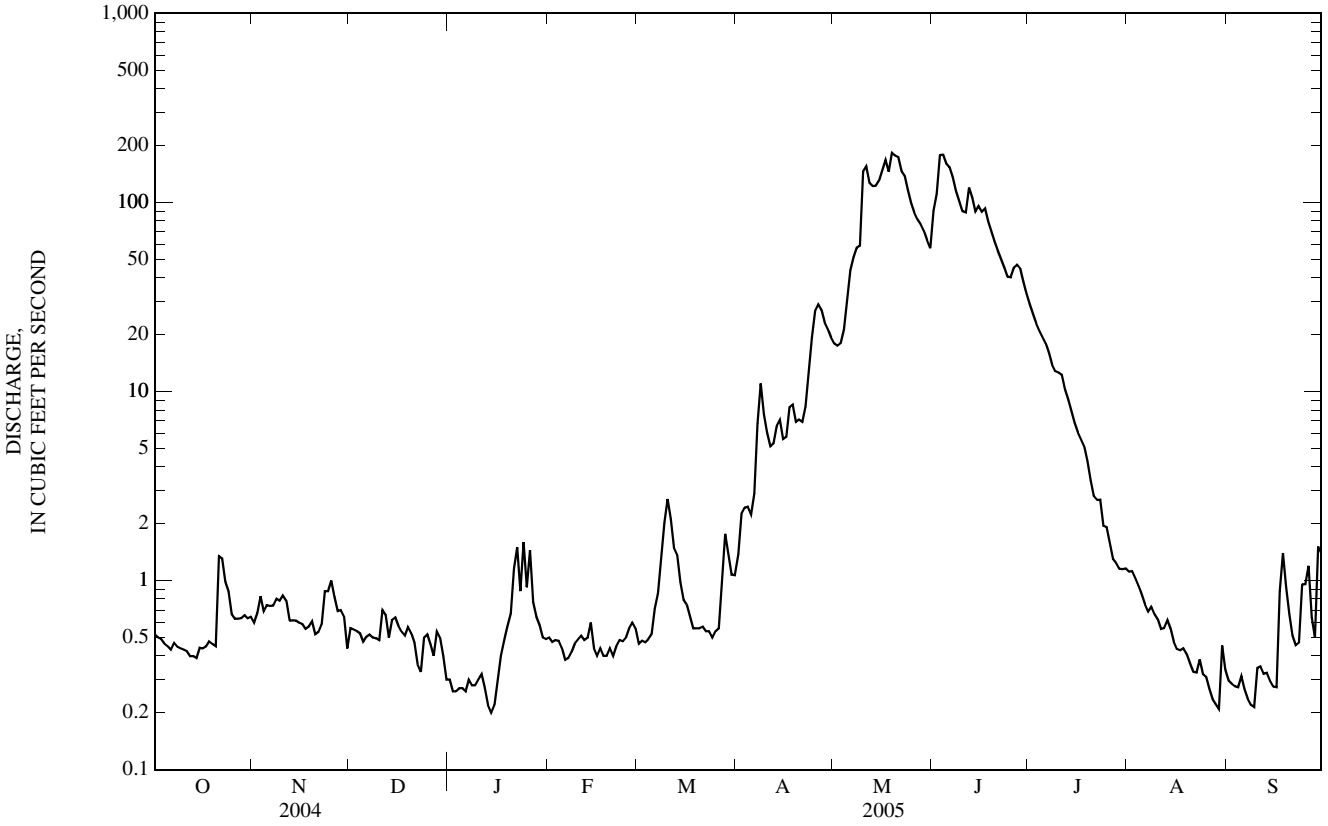
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)*

MEAN	3.01	2.28	1.73	1.43	1.29	2.49	17.9	82.7	71.6	12.1	2.49	2.30
MAX	23.1	13.6	9.64	6.97	5.05	17.5	66.7	300	346	66.4	22.5	22.4
(WY)	(1966)	(1986)	(1918)	(1918)	(1921)	(1986)	(1926)	(1917)	(1975)	(1969)	(1993)	(1993)
MIN	0.19	0.22	0.17	0.14	0.06	0.07	1.50	6.14	3.01	0.34	0.13	0.23
(WY)	(1974)	(1941)	(1941)	(1941)	(2002)	(2002)	(1975)	(2000)	(2000)	(1985)	(2000)	(1935)

06062500 TENMILE CREEK NEAR RIMINI, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1915 - 2005*	
ANNUAL TOTAL	2,887.15		6,436.04			
ANNUAL MEAN	7.89		17.6		16.8	
HIGHEST ANNUAL MEAN					53.1	1917
LOWEST ANNUAL MEAN					1.74	2000
HIGHEST DAILY MEAN	67	May 27	183	May 19	1,880	May 22, 1981
LOWEST DAILY MEAN	0.13	Jan 5	0.20	Jan 14	0.00	Aug 31, 1931
ANNUAL SEVEN-DAY MINIMUM	0.22	Jan 1	0.26	Sep 3	0.00	Aug 31, 1931
MAXIMUM PEAK FLOW			227	Jun 3	3,290	May 22, 1981
MAXIMUM PEAK STAGE			3.33	Jun 3	6.20	May 22, 1981
ANNUAL RUNOFF (AC-FT)	5,730		12,770		12,150	
10 PERCENT EXCEEDS	26		78		50	
50 PERCENT EXCEEDS	0.70		0.67		1.9	
90 PERCENT EXCEEDS	0.36		0.33		0.40	

*--During period of operation (1915-1994, May 1997 to current year).
e--Estimated.



06062500 TENMILE CREEK NEAR RIMINI, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1981, 1997-98, March 2004 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)
MAR											
08...	1300	1.1	7.1	193	12.0	2.5	77	21.8	5.40	20.5	24
MAY											
17...	1330	160	7.6	46	12.0	5.0	16	4.70	1.10	6.6	23
AUG											
01...	1300	1.2	7.7	139	27.0	18.5	52	15.3	3.35	26.9	26
SEP											
19...	1330	.89	7.5	174	18.0	13.5	69	20.1	4.58	26.7	27.4

Date	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)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	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)
MAR											
08...	1.32	1.26	1.8	2.6	E.06	.18	282	297	82	1	<.01
MAY											
17...	.63	1.01	7.4	11.6	.74	11.8	106	151	49	40	17
AUG											
01...	1.08	.95	2.7	3.4	.10	.37	175	193	64	2	.01
SEP											
19...	1.00	1.03	1.9	2.2	E.06	.21	210	189	89	1	<.01

E--Estimated.

06065500 MISSOURI RIVER BELOW HAUSER DAM, NEAR HELENA, MT

LOCATION.--Lat 46°45'58", long 111°53'20" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $SW^1/_4$ sec.29, T.12 N., R.2 W., Lewis and Clark County, Hydrologic Unit 10030101, 0.2 mi downstream from Hauser Dam, 1.3 mi upstream from Beaver Creek, 15 miles northeast of Helena, and at river mile 2,237.2.

DRAINAGE AREA.--16,876 mi^2.

PERIOD OF RECORD.--January 1923 to September 1942, October 1994 to current year. Monthly means for October, November, and December 1922 were from Congressional documents: 73rd Congress, 2nd session, H. Doc. 238, Missouri River. Published figures are in acre feet.

GAGE.--Water-stage recorder. Elevation of gage is 3,580 ft (NGVD 29). Prior to Feb. 1, 1940, water-stage recorder 0.2 mi upstream at different datum.

REMARKS.--Records excellent. Flow regulated by eight small irrigation reservoirs and two power plants, Clark Canyon Reservoir (station number 06015300) and Canyon Ferry Lake (station number 06058500). Diversions for irrigation of about 594,400 acres. 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, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,910	3,560	3,150	3,640	3,110	3,120	2,720	3,250	2,890	6,570	4,250	4,380
2	2,880	3,430	3,070	3,630	3,110	3,110	2,680	3,240	3,020	6,530	4,250	4,250
3	2,890	3,360	3,070	3,690	3,110	3,120	2,810	3,230	3,050	6,510	4,250	4,260
4	2,930	3,350	3,100	3,810	3,110	3,120	2,920	3,230	3,110	6,470	4,180	4,260
5	2,950	3,350	3,170	3,790	3,120	3,070	2,910	3,170	3,130	6,460	4,140	4,350
6	2,950	3,350	3,170	3,720	3,130	3,050	2,900	3,130	3,290	6,440	4,130	4,300
7	2,950	3,350	3,170	3,670	3,110	3,000	2,890	3,140	3,370	6,170	4,140	4,310
8	2,940	3,350	3,170	3,770	3,120	2,920	2,870	3,140	3,380	6,200	4,130	4,470
9	2,940	3,360	3,170	3,770	3,080	2,970	2,910	3,140	3,240	6,350	4,070	4,430
10	2,940	3,370	3,170	3,710	3,030	2,980	2,940	3,200	3,090	6,440	4,010	4,340
11	2,920	3,360	3,180	3,660	3,030	2,970	2,940	3,340	3,240	6,440	4,020	4,320
12	2,870	3,350	3,180	3,700	3,030	3,040	2,960	3,360	3,240	5,910	4,110	4,280
13	2,880	3,460	3,170	3,680	3,050	3,070	3,030	3,350	3,130	5,400	4,280	4,250
14	3,060	3,510	3,190	3,670	3,110	3,040	3,020	3,360	2,990	5,230	4,420	4,260
15	3,320	3,500	3,220	3,660	3,110	2,980	3,010	3,360	2,950	4,730	4,420	4,260
16	3,410	3,390	3,220	3,660	3,110	2,980	3,010	3,350	3,250	4,100	4,420	3,980
17	3,440	3,310	3,220	3,660	3,110	3,030	3,020	3,490	4,690	4,000	4,360	3,570
18	3,420	3,290	3,220	3,650	3,110	3,070	3,030	3,360	5,740	4,060	4,070	3,360
19	3,470	3,290	3,220	3,640	3,070	3,090	3,050	3,360	5,920	4,130	3,710	3,740
20	3,540	3,300	3,220	3,660	3,050	3,060	3,080	3,310	5,980	4,170	3,640	4,110
21	3,620	3,290	3,250	3,670	3,040	3,070	3,150	3,140	6,000	4,270	3,630	4,170
22	3,770	3,290	3,250	3,660	3,080	3,090	3,260	3,090	5,950	4,270	3,640	4,350
23	3,810	3,290	3,230	3,660	3,110	3,100	3,210	3,090	6,470	4,270	3,680	4,460
24	3,800	3,290	3,220	3,660	3,110	3,090	3,170	3,100	6,610	4,280	3,880	4,380
25	3,820	3,290	3,220	3,610	3,110	3,060	3,170	3,040	6,420	4,300	4,160	4,260
26	3,780	3,270	3,240	3,260	3,120	3,060	3,170	3,010	6,470	4,280	4,170	4,240
27	3,690	3,250	3,220	3,130	3,120	2,970	3,180	3,010	6,520	4,220	4,320	4,290
28	3,640	3,210	3,220	3,110	3,120	2,900	3,170	3,020	6,530	4,180	4,510	4,260
29	3,640	3,170	3,220	3,110	---	2,900	3,210	2,980	6,560	4,190	4,540	4,300
30	3,620	3,170	3,390	3,110	---	2,900	3,260	2,880	6,600	4,230	4,560	4,460
31	3,630	---	3,610	3,110	---	2,830	---	2,820	---	4,250	4,500	---
TOTAL	102,430	100,110	99,520	110,930	86,620	93,760	90,650	98,690	136,830	159,050	128,590	126,650
MEAN	3,304	3,337	3,210	3,578	3,094	3,025	3,022	3,184	4,561	5,131	4,148	4,222
MAX	3,820	3,560	3,610	3,810	3,130	3,120	3,260	3,490	6,610	6,570	4,560	4,470
MIN	2,870	3,170	3,070	3,110	3,030	2,830	2,680	2,820	2,890	4,000	3,630	3,360
AC-FT	203,200	198,600	197,400	220,000	171,800	186,000	179,800	195,800	271,400	315,500	255,100	251,200

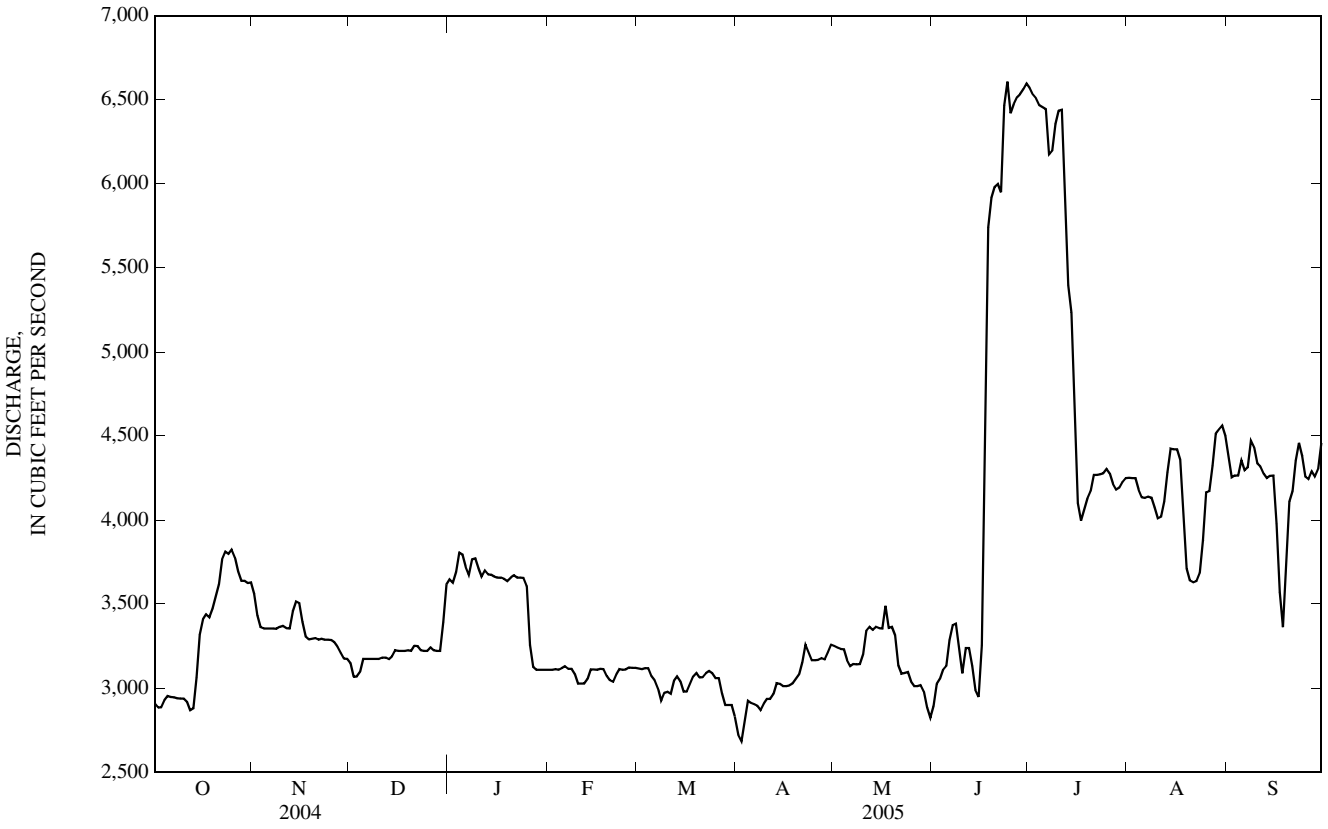
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2005, BY WATER YEAR (WY)*

MEAN	3,532	3,620	3,582	3,565	3,746	4,345	5,128	6,723	8,030	4,307	3,095	3,281
MAX	6,489	6,021	5,622	6,665	8,101	8,271	9,227	16,340	23,540	12,020	5,797	5,684
(WY)	(1998)	(1998)	(1996)	(1997)	(1997)	(1997)	(1942)	(1928)	(1927)	(1998)	(1998)	(1995)
MIN	1,944	1,998	1,935	1,896	1,666	2,398	2,585	2,381	2,546	1,208	971	1,495
(WY)	(1935)	(1935)	(1935)	(1937)	(1938)	(1938)	(1938)	(1934)	(1934)	(1934)	(1934)	(1934)

06065500 MISSOURI RIVER BELOW HAUSER DAM, NEAR HELENA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1923 - 2005*	
ANNUAL TOTAL	1,182,420		1,333,830			
ANNUAL MEAN	3,231		3,654		4,411	
HIGHEST ANNUAL MEAN					7,862	1997
LOWEST ANNUAL MEAN					2,381	1934
HIGHEST DAILY MEAN	3,890	Mar 18	6,610	Jun 24	33,300	Jun 15, 1927
LOWEST DAILY MEAN	2,680	Jul 19	2,680	Apr 2	280	Mar 3, 1938
ANNUAL SEVEN-DAY MINIMUM	2,700	Jul 15	2,820	Mar 28	716	Aug 3, 1934
MAXIMUM PEAK FLOW			6,910	Jun 23	33,300	Jun 15, 1927
MAXIMUM PEAK STAGE			5.34	Jun 23	a78.80	Jun 15, 1927
INSTANTANEOUS LOW FLOW					280	Mar 3, 1938
ANNUAL RUNOFF (AC-FT)	2,345,000		2,646,000		3,196,000	
10 PERCENT EXCEEDS	3,750		4,440		7,380	
50 PERCENT EXCEEDS	3,170		3,290		3,640	
90 PERCENT EXCEEDS	2,790		2,970		2,100	

*--During periods of operation (January 1923 to September 1942, October 1994 to present).
a--Site and datum then in use.



06066500 MISSOURI RIVER BELOW HOLTER DAM, NEAR WOLF CREEK, MT

LOCATION.--Lat 46°59'41", long 112°00'37" (NAD 27), in NE$^1/_4$SW$^1/_4$SE$^1/_4$ sec.5, T.14 N., R.3 W., Lewis and Clark County, Hydrologic Unit 10030102, on left bank 0.4 mi downstream from Holter Dam, 2.8 mi southeast of Wolf Creek, and at river mile 2,210.7.

DRAINAGE AREA.--17,149 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,464.11 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for July to September, which are fair. Flow regulated by nine smaller irrigation reservoirs and powerplants, Clark Canyon Reservoir (station number 06015300), and Canyon Ferry Lake (station number 06058500). Diversions for irrigation of about 594,400 acres. 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	2,910	3,680	3,220	3,770	3,200	3,200	2,930	3,320	3,070	6,560	4,190	4,360
2	2,910	3,590	3,170	3,860	3,230	3,200	2,930	3,270	3,310	6,470	4,200	4,220
3	2,920	3,440	3,160	3,860	3,280	3,190	2,930	3,280	3,290	6,380	4,160	4,160
4	2,930	3,400	3,150	3,840	3,280	3,170	2,940	3,280	3,220	6,370	4,090	4,170
5	2,930	3,440	3,170	3,910	3,260	3,130	2,940	3,260	3,230	6,360	4,090	4,210
6	2,950	3,450	3,220	3,960	3,230	3,100	2,930	3,220	3,340	6,340	4,090	4,240
7	2,950	3,460	3,260	3,830	3,220	3,070	2,940	3,180	3,400	6,070	4,060	4,240
8	2,960	3,460	3,280	3,870	3,200	3,010	2,910	3,180	3,430	5,810	4,120	4,250
9	2,960	3,450	3,270	3,840	3,200	3,010	2,900	3,230	3,380	6,000	4,090	4,250
10	3,000	3,460	3,260	3,860	3,160	3,030	2,900	3,330	3,250	6,260	4,010	4,210
11	3,040	3,430	3,250	3,860	3,150	3,020	2,900	3,480	3,310	6,410	4,080	4,240
12	3,060	3,430	3,250	3,810	3,130	3,120	2,930	3,600	3,430	6,070	4,110	4,240
13	3,080	3,420	3,270	3,760	3,100	3,220	3,020	3,570	3,390	5,480	4,150	4,240
14	3,100	3,420	3,280	3,760	3,120	3,190	3,060	3,510	3,150	5,140	4,370	4,240
15	3,150	3,500	3,280	3,770	3,150	3,130	3,100	3,460	3,040	4,730	4,390	4,240
16	3,170	3,560	3,300	3,790	3,190	3,090	3,090	3,440	3,270	4,210	4,290	4,250
17	3,280	3,490	3,300	3,800	3,210	3,080	3,080	3,470	4,560	4,080	4,140	4,510
18	3,400	3,440	3,290	3,800	3,210	3,080	3,060	3,410	5,830	4,080	4,020	4,660
19	3,410	3,420	3,310	3,780	3,170	3,080	3,160	3,380	6,240	4,070	3,960	4,360
20	3,510	3,370	3,330	3,760	3,130	3,080	3,370	3,320	6,180	4,080	3,940	4,210
21	3,650	3,370	3,330	3,760	3,130	3,070	3,400	3,180	6,110	4,090	3,940	4,210
22	3,870	3,380	3,330	3,740	3,130	3,070	3,360	3,150	6,060	4,090	3,930	4,200
23	4,060	3,330	3,350	3,770	3,180	3,140	3,310	3,180	6,510	4,090	3,900	4,180
24	3,980	3,320	3,330	3,770	3,250	3,270	3,150	3,160	6,630	4,100	3,910	4,180
25	3,790	3,350	3,300	3,730	3,250	3,290	3,060	3,070	6,170	4,100	3,910	4,170
26	3,820	3,370	3,300	3,450	3,250	3,240	3,180	3,070	6,110	4,090	3,910	4,160
27	3,860	3,330	3,320	3,250	3,220	3,130	3,270	3,080	6,390	4,060	3,910	4,160
28	3,780	3,320	3,320	3,240	3,210	3,000	3,320	3,060	6,580	4,020	3,920	4,180
29	3,590	3,300	3,320	3,240	---	2,930	3,320	2,990	6,600	4,070	4,020	4,160
30	3,630	3,280	3,490	3,200	---	2,930	3,350	2,930	6,590	4,090	4,330	4,190
31	3,710	---	3,710	3,180	---	2,930	---	2,930	---	4,130	4,480	---
TOTAL	103,360	102,660	102,120	114,820	89,440	96,200	92,740	100,990	139,070	155,900	126,710	127,290
MEAN	3,334	3,422	3,294	3,704	3,194	3,103	3,091	3,258	4,636	5,029	4,087	4,243
MAX	4,060	3,680	3,710	3,960	3,280	3,290	3,400	3,600	6,630	6,560	4,480	4,660
MIN	2,910	3,280	3,150	3,180	3,100	2,930	2,900	2,930	3,040	4,020	3,900	4,160
AC-FT	205,000	203,600	202,600	227,700	177,400	190,800	183,900	200,300	275,800	309,200	251,300	252,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

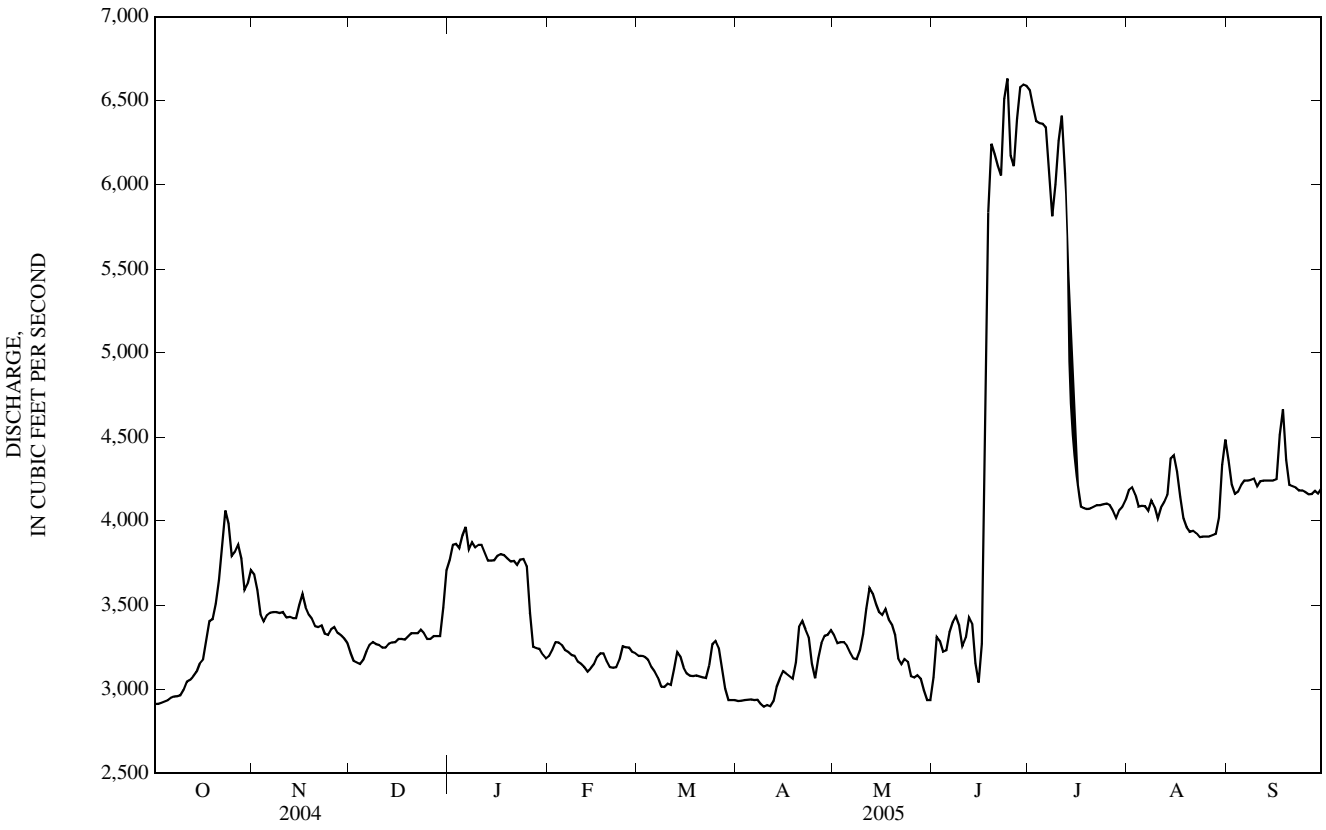
MEAN	4,450	4,749	4,946	4,998	4,946	5,064	5,490	6,686	8,846	5,851	4,246	4,194
MAX	10,140	8,500	9,645	6,637	7,954	9,186	11,130	15,710	23,370	16,580	7,590	10,010
(WY)	(1966)	(1966)	(1960)	(1997)	(1997)	(1968)	(1976)	(1948)	(1948)	(1975)	(1984)	(1984)
MIN	2,710	2,968	3,024	3,068	3,036	2,757	2,489	2,063	1,533	2,454	1,969	2,077
(WY)	(1954)	(1989)	(2002)	(2002)	(2002)	(1959)	(1959)	(1955)	(1955)	(1954)	(1954)	(1959)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	1,191,220		1,351,300			
ANNUAL MEAN	3,255		3,702		5,371	
HIGHEST ANNUAL MEAN					8,497	1984
LOWEST ANNUAL MEAN					3,008	2002
HIGHEST DAILY MEAN	4,060	Oct 23	6,630	Jun 24	34,000	Jun 8, 1948
LOWEST DAILY MEAN	2,660	Jul 23	2,900	Apr 9	747	May 27, 1962
ANNUAL SEVEN-DAY MINIMUM	2,690	Jul 22	2,920	Apr 6	1,040	May 16, 1957
MAXIMUM PEAK FLOW			7,070	Jun 23	34,800	Jun 8, 1948
MAXIMUM PEAK STAGE			4.08	Jun 23	11.70	Jun 8, 1948
INSTANTANEOUS LOW FLOW					a250	Jul 26, 1968
ANNUAL RUNOFF (AC-FT)	2,363,000		2,680,000		3,891,000	
10 PERCENT EXCEEDS	3,770		4,340		7,990	
50 PERCENT EXCEEDS	3,200		3,380		4,650	
90 PERCENT EXCEEDS	2,800		3,050		3,030	

06066500 MISSOURI RIVER BELOW HOLTER DAM, NEAR WOLF CREEK, MT—Continued

SUMMARY STATISTICS	WATER YEARS 1946 - 1952*		WATER YEARS 1953 - 2005**	
ANNUAL MEAN	5,882		5,303	
HIGHEST ANNUAL MEAN	7,787	1948	8,497	1984
LOWEST ANNUAL MEAN	4,651	1946	3,008	2002
HIGHEST DAILY MEAN	34,000	Jun 8, 1948	25,600	Jun 20, 1964
LOWEST DAILY MEAN	1,560	Aug 31, 1946	747	May 27, 1962
ANNUAL SEVEN-DAY MINIMUM	2,310	Aug 2, 1949	1,040	May 16, 1957
MAXIMUM PEAK FLOW	34,800	Jun 8, 1948	27,100	Jun 19, 1964
MAXIMUM PEAK STAGE	11.70	Jun 8, 1948	10.04	Jun 19, 1964
INSTANTANEOUS LOW FLOW	b742	Nov 25, 1949	a250	Jul 26, 1968
ANNUAL RUNOFF (AC-FT)	4,261,000		3,842,000	
10 PERCENT EXCEEDS	10,800		7,760	
50 PERCENT EXCEEDS	4,520		4,690	
90 PERCENT EXCEEDS	3,350		3,020	

*--Before Canyon Ferry Dam completion.
**--After Canyon Ferry Dam completion.
a--Gage height, 0.18 ft.
b--Probably less than; during power plant operation.



06066500 MISSOURI RIVER BELOW HOLTER DAM, NEAR WOLF CREEK, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--October 1999 to current year.
WATER TEMPERATURE: October 1999 to current year.

INSTRUMENTATION.--Temperature probe installed Sept. 30, 1999.

REMARKS--Daily water temperature record excellent. Missing daily temperature values on Apr. 12-13, Aug. 13-15, and Aug. 19-24 due to equipment problems. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE : Maximum, 21.0°C, July 25, 2002; minimum, 0.5°C, many days on January 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 19.5°C, Aug. 1, 5, 8, and 9; minimum, 0.5°C, many days in January.

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	14.0	13.5	13.5	9.5	9.5	9.5	5.0	5.0	5.0	1.5	1.0	1.5
2	14.0	13.5	14.0	9.5	9.5	9.5	5.0	5.0	5.0	1.5	1.0	1.0
3	14.0	13.5	13.5	9.5	9.0	9.5	5.0	4.5	5.0	1.0	1.0	1.0
4	14.0	13.5	13.5	9.0	9.0	9.0	5.0	4.5	4.5	1.0	1.0	1.0
5	14.0	13.5	13.5	9.0	8.5	9.0	4.5	4.5	4.5	1.0	0.5	1.0
6	14.0	13.5	13.5	9.0	9.0	9.0	4.5	4.5	4.5	1.0	0.5	1.0
7	14.0	13.5	13.5	9.0	8.5	9.0	4.5	4.0	4.5	1.0	1.0	1.0
8	14.0	13.5	13.5	9.0	8.5	9.0	4.5	4.0	4.0	1.0	1.0	1.0
9	13.5	13.5	13.5	9.0	8.5	8.5	4.0	4.0	4.0	1.0	0.5	1.0
10	13.5	13.0	13.5	8.5	8.5	8.5	4.0	4.0	4.0	1.0	0.5	1.0
11	13.5	13.0	13.0	8.5	8.0	8.5	4.5	4.0	4.0	1.0	0.5	1.0
12	13.0	13.0	13.0	8.5	8.0	8.0	4.0	4.0	4.0	1.0	0.5	1.0
13	13.0	12.5	13.0	8.0	8.0	8.0	4.0	3.5	4.0	1.0	0.5	0.5
14	13.0	12.5	13.0	8.0	7.5	8.0	4.0	3.5	3.5	1.0	0.5	0.5
15	13.0	12.5	12.5	8.0	7.5	7.5	4.0	3.5	3.5	1.0	0.5	0.5
16	12.5	12.5	12.5	8.0	7.5	7.5	3.5	3.5	3.5	1.0	0.5	1.0
17	12.5	12.0	12.0	7.5	7.5	7.5	3.5	3.0	3.0	1.0	1.0	1.0
18	12.0	12.0	12.0	7.5	7.5	7.5	3.5	3.0	3.0	1.0	1.0	1.0
19	12.0	11.5	12.0	7.5	7.0	7.5	3.5	3.0	3.5	1.0	1.0	1.0
20	12.0	11.5	11.5	7.5	7.0	7.0	3.5	3.0	3.0	1.0	1.0	1.0
21	11.5	11.5	11.5	7.0	6.5	7.0	3.0	3.0	3.0	1.0	1.0	1.0
22	11.5	11.0	11.5	7.0	6.5	6.5	3.0	2.5	3.0	1.0	1.0	1.0
23	11.0	11.0	11.0	6.5	6.5	6.5	3.0	2.5	2.5	1.0	1.0	1.0
24	11.0	10.5	11.0	6.5	6.5	6.5	2.5	2.0	2.5	1.0	1.0	1.0
25	11.0	10.5	10.5	6.5	6.0	6.5	2.5	2.0	2.5	1.0	1.0	1.0
26	10.5	10.5	10.5	6.5	6.0	6.0	2.5	2.0	2.0	1.5	1.0	1.0
27	10.5	10.5	10.5	6.0	6.0	6.0	2.0	1.5	2.0	1.5	1.0	1.0
28	10.5	10.5	10.5	6.0	5.5	6.0	2.0	1.5	1.5	1.5	1.0	1.0
29	10.5	10.0	10.0	6.0	5.5	5.5	2.0	1.5	2.0	1.5	1.0	1.5
30	10.0	10.0	10.0	5.5	5.0	5.0	2.0	1.5	1.5	1.5	1.0	1.5
31	10.0	9.5	10.0	---	---	---	1.5	1.5	1.5	1.5	1.5	1.5
MONTH	14.0	9.5	12.0	9.5	5.0	7.5	5.0	1.5	3.5	1.5	0.5	1.0

06066500 MISSOURI RIVER BELOW HOLTER DAM, NEAR WOLF CREEK, 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	1.5	1.5	1.5	3.0	2.5	3.0	4.0	3.5	3.5	6.5	6.5	6.5
2	1.5	1.5	1.5	3.0	3.0	3.0	4.0	3.5	4.0	7.0	6.5	6.5
3	1.5	1.5	1.5	3.0	3.0	3.0	4.0	3.5	4.0	8.0	6.5	7.0
4	1.5	1.5	1.5	3.0	3.0	3.0	4.0	4.0	4.0	8.5	8.0	8.0
5	1.5	1.5	1.5	3.5	3.0	3.0	4.5	4.0	4.0	9.5	8.0	9.0
6	1.5	1.5	1.5	3.5	3.0	3.0	4.5	4.0	4.5	9.5	8.5	9.0
7	2.0	1.5	1.5	3.5	3.0	3.0	5.0	4.5	4.5	8.5	7.5	8.0
8	2.0	1.5	1.5	3.5	3.0	3.0	5.0	4.5	4.5	8.5	7.5	8.0
9	2.0	1.5	2.0	3.5	3.0	3.5	4.5	4.5	4.5	8.5	7.5	8.0
10	2.0	1.5	2.0	3.5	3.0	3.5	5.0	4.5	5.0	7.5	7.0	7.5
11	2.0	2.0	2.0	3.5	3.0	3.5	5.5	4.5	5.0	7.5	7.5	7.5
12	2.0	2.0	2.0	3.5	3.0	3.0	---	---	---	8.5	7.5	8.5
13	2.0	2.0	2.0	3.5	3.0	3.0	---	---	---	9.5	8.5	9.0
14	2.0	2.0	2.0	3.5	3.0	3.0	5.0	5.0	5.0	10.0	9.0	9.5
15	2.0	2.0	2.0	3.5	3.0	3.0	5.5	5.0	5.0	10.5	9.0	10.0
16	2.5	2.0	2.0	3.5	3.0	3.0	6.5	5.5	6.0	10.5	9.5	10.0
17	2.5	2.0	2.0	3.5	3.0	3.0	6.0	6.0	6.0	10.0	9.0	9.5
18	2.5	2.0	2.5	3.5	3.0	3.0	6.0	5.5	6.0	11.5	9.0	10.5
19	2.5	2.0	2.5	3.5	3.0	3.0	5.5	5.5	5.5	11.0	10.0	10.5
20	2.5	2.5	2.5	3.0	3.0	3.0	5.5	5.5	5.5	12.0	10.0	11.0
21	2.5	2.5	2.5	3.5	3.0	3.0	5.5	5.5	5.5	11.0	10.0	10.5
22	2.5	2.5	2.5	3.0	3.0	3.0	6.5	5.5	6.0	12.0	9.5	11.0
23	2.5	2.5	2.5	3.0	3.0	3.0	7.0	6.5	6.5	12.0	9.5	11.0
24	2.5	2.5	2.5	3.0	3.0	3.0	6.5	6.0	6.5	11.5	10.0	11.0
25	3.0	2.5	2.5	3.0	2.5	3.0	6.5	6.0	6.0	12.0	10.5	11.0
26	3.0	2.5	2.5	3.0	2.5	3.0	6.5	6.0	6.0	12.0	10.5	11.0
27	3.0	2.5	2.5	3.5	3.0	3.0	6.5	6.0	6.0	12.5	10.5	11.5
28	3.0	2.5	2.5	3.5	3.0	3.5	6.5	6.0	6.0	12.0	11.0	11.5
29	---	---	---	3.5	3.0	3.5	7.0	6.0	6.5	12.0	10.5	11.5
30	---	---	---	3.5	3.5	3.5	7.0	6.5	6.5	12.5	11.5	12.0
31	---	---	---	3.5	3.0	3.5	---	---	---	14.0	11.5	13.0
MONTH	3.0	1.5	2.0	3.5	2.5	3.0	7.0	3.5	5.5	14.0	6.5	9.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.5	12.5	13.0	16.0	14.0	15.0	19.5	17.0	18.0	17.5	17.0	17.5
2	13.5	12.5	13.0	15.5	13.0	14.5	18.5	17.0	18.0	17.5	16.5	17.0
3	13.0	12.5	12.5	15.5	13.0	14.5	18.0	17.5	17.5	17.5	16.5	17.0
4	13.5	12.5	13.0	15.5	14.0	15.0	19.0	17.5	18.5	17.5	16.5	17.0
5	13.5	12.5	13.0	16.5	14.5	15.5	19.5	17.5	18.5	17.5	16.5	17.0
6	14.0	12.5	13.5	17.0	14.5	15.5	19.0	17.0	18.0	17.0	16.0	16.5
7	14.5	12.0	13.5	16.5	15.0	15.5	19.0	17.5	18.5	17.5	16.5	17.0
8	14.0	12.5	13.0	17.0	15.0	16.0	19.5	17.5	18.5	18.0	16.5	17.0
9	13.5	12.0	13.0	16.0	15.0	15.5	19.5	16.5	18.5	17.5	16.0	17.0
10	13.5	12.5	13.0	16.5	15.5	16.0	19.0	17.5	18.0	16.5	16.0	16.5
11	14.0	13.0	13.5	17.0	15.5	16.5	18.5	17.0	17.5	16.5	16.5	16.5
12	13.5	13.0	13.0	17.5	16.0	16.5	18.0	17.0	17.0	16.5	16.0	16.0
13	13.5	12.5	13.0	16.5	14.5	16.0	---	---	---	16.5	16.0	16.0
14	14.5	13.0	13.5	17.0	15.0	16.0	---	---	---	16.5	16.0	16.0
15	14.0	13.5	13.5	18.5	16.0	17.0	---	---	---	16.5	16.0	16.0
16	13.5	13.0	13.0	17.5	14.5	16.0	17.5	17.0	17.5	16.0	15.5	16.0
17	13.5	12.5	13.0	16.5	15.0	16.0	18.0	16.0	17.0	15.5	15.5	15.5
18	14.0	13.0	13.5	18.5	16.5	17.0	17.0	16.0	16.5	16.0	15.5	15.5
19	14.5	13.5	14.0	18.0	15.5	17.0	---	---	---	16.0	15.5	15.5
20	14.5	13.5	13.5	17.5	16.0	17.0	---	---	---	16.0	15.5	15.5
21	17.0	13.5	14.5	17.0	16.0	16.5	---	---	---	15.5	15.0	15.0
22	16.5	14.5	15.5	18.5	17.0	17.5	---	---	---	15.5	15.0	15.0
23	15.0	14.0	14.5	18.5	16.0	17.0	---	---	---	15.0	14.5	15.0
24	15.0	14.0	14.5	18.5	15.0	17.5	---	---	---	14.5	14.5	14.5
25	15.5	14.5	15.0	17.0	15.0	16.0	17.5	16.5	17.0	14.5	14.0	14.5
26	16.0	13.5	14.5	18.5	17.0	17.5	18.0	17.0	17.5	14.5	14.0	14.5
27	15.0	14.5	15.0	18.0	17.0	17.5	18.0	17.0	17.5	14.5	14.0	14.0
28	16.0	15.0	15.5	18.5	17.0	17.5	18.0	17.0	17.5	14.0	13.5	14.0
29	15.5	14.0	14.5	18.5	17.0	18.0	18.5	17.0	17.5	14.0	13.5	13.5
30	16.0	14.5	15.0	18.5	17.0	17.5	17.5	16.5	17.0	14.0	13.5	13.5
31	---	---	---	18.5	17.0	18.0	17.5	16.5	17.0	---	---	---
MONTH	17.0	12.0	14.0	18.5	13.0	16.5	19.5	16.0	17.5	18.0	13.5	15.5

06071300 LITTLE PRICKLY PEAR CREEK AT WOLF CREEK, MT

LOCATION.--Lat 47°00'19", long 112°04'10" (NAD 27), in $NE^1/_4NW^1/_4NE^1/_4$ sec.2, T.14 N., R.4 W., Lewis and Clark County, Hydrologic Unit 10030102, on right bank 30 ft downstream from Interstate 15 access road bridge, 500 ft southwest of Wolf Creek Post Office, 0.5 mi downstream from Wolf Creek, and at river mile 3.2.

DRAINAGE AREA.--381 mi^2.

PERIOD OF RECORD.--May 1962 to September 1967, October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,547.38 ft (NGVD 29). May 10, 1962 to July 6, 1965, water-stage recorder on left bank at present elevation. July 7, 1965 to Apr. 11, 1966, non-recording gage on bridge 0.25 mi upstream at elevation 3.27 ft higher. Apr. 12, 1966 to Sept. 30, 1967, water-stage recorder on right bank 23 ft upstream at present elevation.

REMARKS.--Records good except those for estimated daily discharges, 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.--Flood of May 7, 1975, reached a stage of 7.45 ft, present elevation, from floodmarks, discharge, 4,500 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	29	37	37	e22	52	40	49	74	162	127	36	36
2	28	37	36	e25	52	40	49	72	227	122	37	35
3	28	38	36	e28	51	39	51	70	274	108	38	34
4	28	39	37	e30	49	40	52	69	310	103	39	33
5	28	40	37	e27	48	40	53	68	328	98	37	27
6	28	41	38	e42	40	42	52	74	310	96	33	28
7	28	40	37	e40	33	42	53	79	290	92	28	34
8	28	40	38	e35	42	43	56	100	257	87	28	32
9	29	41	38	e32	42	45	58	112	234	84	34	29
10	29	40	39	e34	46	46	57	621	208	86	36	32
11	29	39	44	e37	44	45	56	1,020	193	85	35	35
12	30	39	47	e40	45	46	56	828	224	81	36	34
13	30	38	41	e35	45	45	56	596	268	77	39	34
14	32	37	44	e25	42	42	66	460	218	72	38	30
15	35	38	47	e20	40	42	66	404	212	69	36	27
16	36	39	48	e25	e35	42	60	375	196	66	35	26
17	36	40	46	e35	e36	43	56	403	218	64	34	37
18	37	39	46	54	e37	39	56	371	187	56	36	41
19	36	39	48	69	37	37	68	341	170	50	37	37
20	37	39	47	91	34	39	78	312	155	47	34	34
21	40	37	43	90	48	43	84	301	141	45	32	32
22	39	37	40	72	48	44	69	273	131	42	32	33
23	38	38	e30	68	45	34	66	253	120	39	33	33
24	37	39	e28	65	37	35	79	230	113	38	35	40
25	38	41	46	61	38	e40	96	217	113	40	34	44
26	38	41	47	59	38	46	102	201	116	40	34	38
27	38	38	26	58	38	51	100	187	115	37	30	36
28	38	36	29	57	38	58	93	169	120	35	27	34
29	38	30	33	55	---	57	85	150	127	37	28	33
30	38	30	38	53	---	54	78	136	116	38	32	33
31	38	---	e24	52	---	50	---	123	---	36	40	---
TOTAL	1,041	1,147	1,215	1,436	1,180	1,349	2,000	8,689	5,853	2,097	1,063	1,011
MEAN	33.6	38.2	39.2	46.3	42.1	43.5	66.7	280	195	67.6	34.3	33.7
MAX	40	41	48	91	52	58	102	1,020	328	127	40	44
MIN	28	30	24	20	33	34	49	68	113	35	27	26
AC-FT	2,060	2,280	2,410	2,850	2,340	2,680	3,970	17,230	11,610	4,160	2,110	2,010

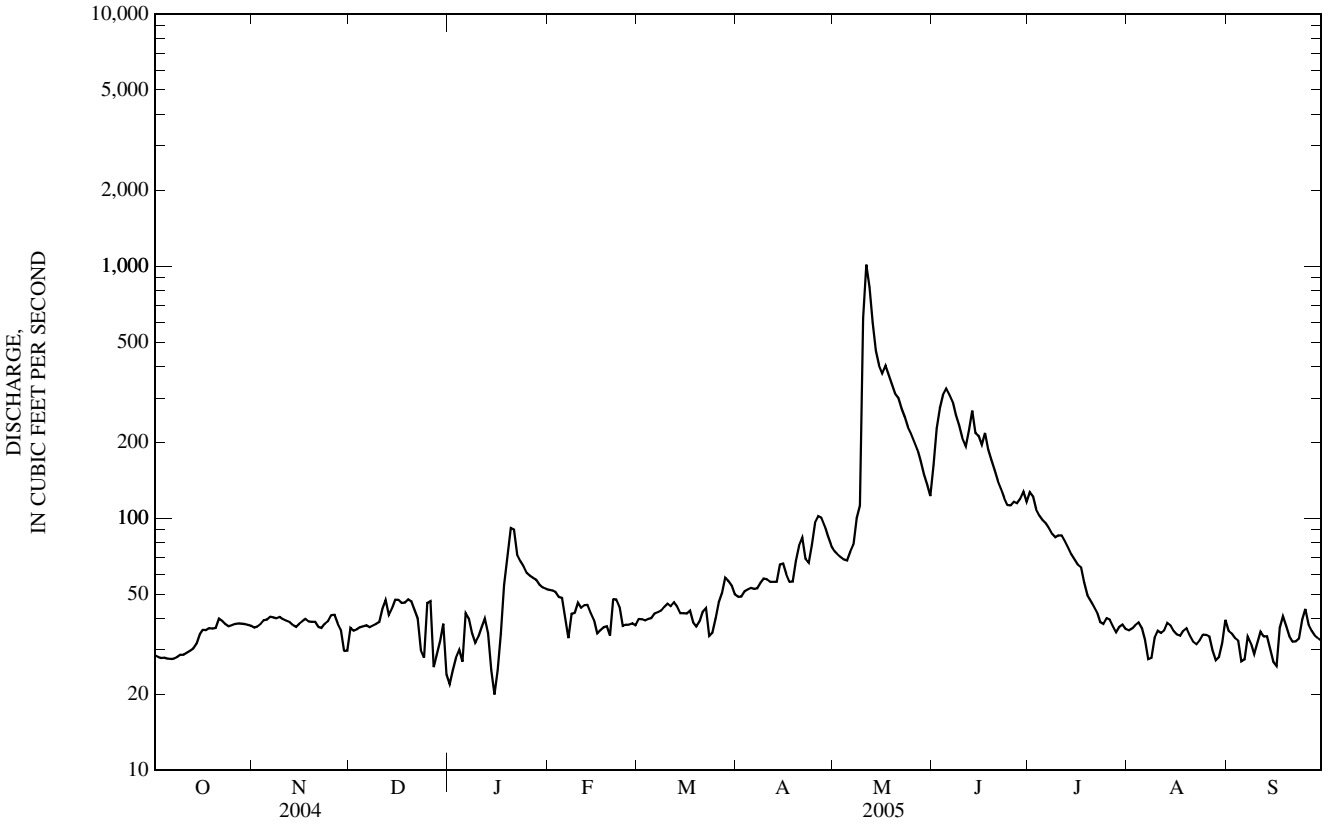
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY*)

MEAN	49.4	52.3	48.5	43.7	58.3	67.1	128	227	197	78.3	43.9	47.0
MAX	131	98.5	74.9	69.1	190	109	372	580	684	175	95.4	127
(WY)	(1966)	(1966)	(1966)	(1965)	(1996)	(2003)	(1965)	(1965)	(1967)	(1965)	(1993)	(1965)
MIN	29.0	31.5	26.0	30.8	29.3	42.0	64.8	35.5	25.5	17.7	14.2	18.5
(WY)	(2004)	(1993)	(2002)	(1993)	(2001)	(2002)	(2000)	(1992)	(1992)	(2000)	(2000)	(2000)

06071300 LITTLE PRICKLY PEAR CREEK AT WOLF CREEK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005*	
ANNUAL TOTAL	18,817		28,081			
ANNUAL MEAN	51.4		76.9		85.9	
HIGHEST ANNUAL MEAN					179	1965
LOWEST ANNUAL MEAN					35.2	2000
HIGHEST DAILY MEAN	218	May 27	1,020	May 11	2,440	Jun 9, 1964
LOWEST DAILY MEAN	18	Jan 27	20	Jan 15	10	Aug 13, 1992
ANNUAL SEVEN-DAY MINIMUM	22	Aug 12	28	Dec 30	11	Jul 29, 2000
MAXIMUM PEAK FLOW			1,150	May 11	3,110	Jun 9, 1964
MAXIMUM PEAK STAGE			5.85	May 11	7.65	Jun 9, 1964
INSTANTANEOUS LOW FLOW					a9.6	Aug 2, 2000
ANNUAL RUNOFF (AC-FT)	37,320		55,700		62,260	
10 PERCENT EXCEEDS	90		169		166	
50 PERCENT EXCEEDS	40		40		52	
90 PERCENT EXCEEDS	26		30		28	

*--During periods of operation (May 1962 to September 1967, October 1991 to current year).
a--Gage height, 2.54 ft.
e--Estimated.



06073500 DEARBORN RIVER NEAR CRAIG, MT

LOCATION.--Lat 47°11'57", long 112°05'44" (NAD 27), in $NW^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.27, T. 17 N., R. 4 W., Lewis and Clark County, Hydrologic Unit 10030102, on left bank at upstream side of bridge on U.S. Highway 287, 7.0 mi downstream from South Fork Dearborn River, 10.5 mi northwest of Craig, 13.5 mi north of Wolf Creek, and at river mile 19.0.

DRAINAGE AREA.--325 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1969, October 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,800 ft (NGVD 29). Oct. 1, 1945 to Sept. 30, 1946, nonrecording gage; Oct. 1, 1946 to June 9, 1964, water-stage recorder on upstream side of bridge; June 10, 1964 to May 31, 1965, nonrecording gage; June 1, 1965 to Sept. 30 1969, water-stage recorder on downstream side of abandoned bridge 0.2 mi downstream, all at same previous elevation.

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	48	43	39	e25	59	41	60	302	460	195	44	21
2	48	44	43	e28	58	38	62	279	548	183	43	20
3	48	46	51	e30	57	36	65	284	574	175	42	20
4	48	47	47	e32	55	35	66	308	553	166	40	19
5	48	46	41	e30	54	35	65	333	537	157	38	18
6	46	44	44	e32	e40	35	63	425	553	146	35	18
7	45	44	49	e30	e35	33	64	607	520	138	28	18
8	45	45	48	e28	e40	34	72	849	461	132	27	18
9	45	45	46	e26	e45	33	83	812	420	126	26	17
10	45	45	46	e28	e60	33	86	2,460	388	126	24	20
11	45	46	49	e30	e55	33	87	3,050	368	118	26	21
12	45	46	46	e28	53	40	88	2,190	395	106	30	20
13	44	45	33	e25	51	38	90	1,630	397	98	36	21
14	44	46	61	e20	41	37	108	1,400	357	94	31	20
15	51	44	49	e18	37	37	102	1,390	348	91	28	19
16	49	43	45	e20	e35	37	98	1,430	338	86	27	19
17	49	43	45	e25	e35	39	99	1,450	366	87	26	26
18	49	43	44	e35	e35	36	106	1,220	359	87	27	33
19	48	44	44	e50	e35	38	128	1,080	326	80	29	29
20	50	45	41	e75	e30	37	135	1,020	302	75	26	29
21	49	38	37	e70	e35	39	140	925	289	74	24	30
22	47	43	e35	e60	e40	41	137	824	283	72	24	31
23	47	43	17	e70	e45	40	163	798	269	63	25	36
24	46	44	e30	77	e45	31	200	718	255	54	30	47
25	47	46	74	71	e40	33	309	639	242	55	27	49
26	47	44	59	67	e38	43	406	542	233	58	26	42
27	46	37	35	66	e37	50	456	506	232	53	24	39
28	45	40	42	67	e37	69	401	497	226	51	22	40
29	44	22	58	65	---	74	359	498	237	47	21	36
30	44	34	e50	63	---	67	343	463	212	44	22	35
31	44	---	e35	61	---	62	---	430	---	43	22	---
TOTAL	1,446	1,285	1,383	1,352	1,227	1,274	4,641	29,359	11,048	3,080	900	811
MEAN	46.6	42.8	44.6	43.6	43.8	41.1	155	947	368	99.4	29.0	27.0
MAX	51	47	74	77	60	74	456	3,050	574	195	44	49
MIN	44	22	17	18	30	31	60	279	212	43	21	17
AC-FT	2,870	2,550	2,740	2,680	2,430	2,530	9,210	58,230	21,910	6,110	1,790	1,610

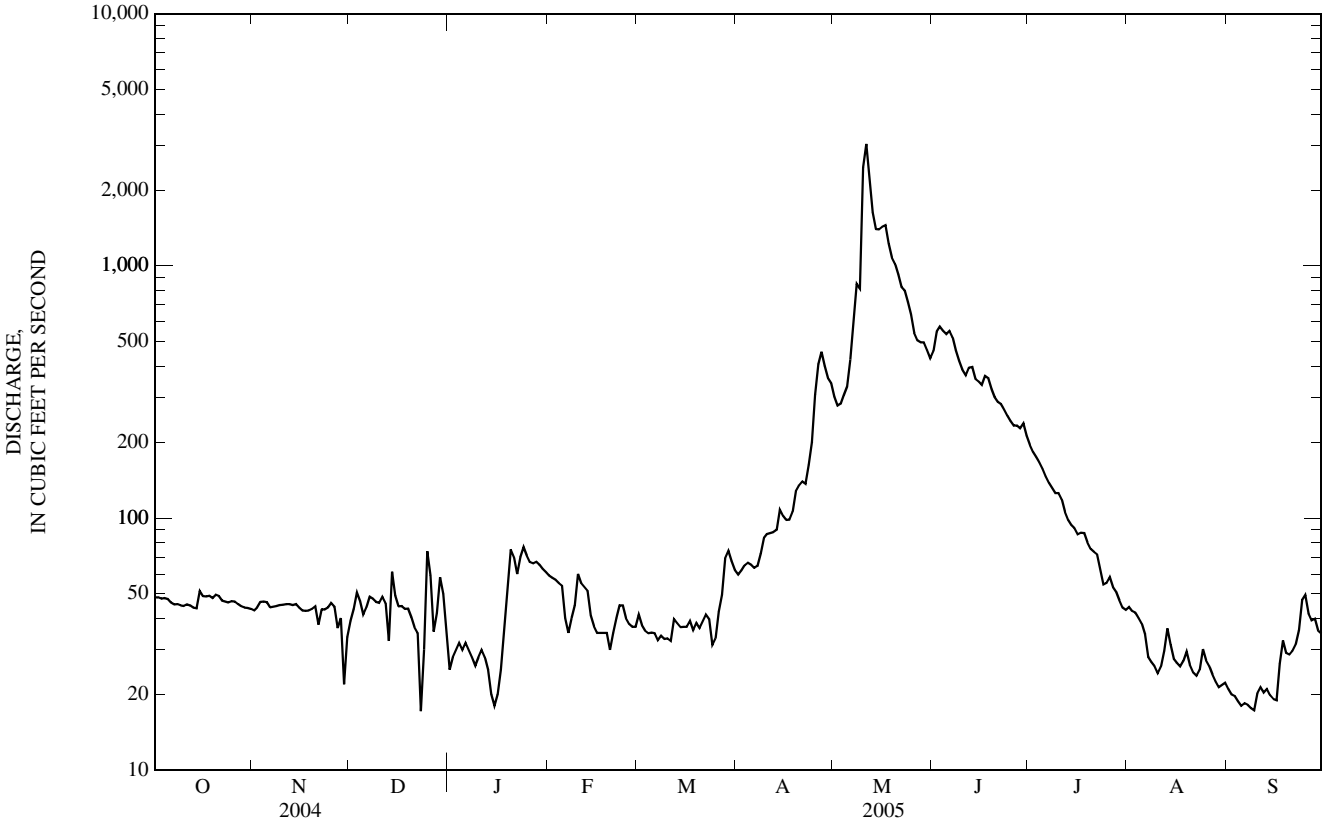
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)*

MEAN	71.7	72.5	64.5	54.9	59.3	83.8	233	683	744	203	65.6	55.4
MAX	187	165	155	104	184	187	519	1,337	2,104	583	163	230
(WY)	(1966)	(1947)	(1947)	(1947)	(1996)	(1947)	(1969)	(1995)	(1964)	(1951)	(1951)	(1993)
MIN	17.0	33.8	23.9	22.2	22.5	33.8	51.0	135	113	27.2	13.1	18.8
(WY)	(1957)	(2002)	(2002)	(2002)	(2002)	(2002)	(1961)	(2000)	(2000)	(2000)	(2000)	(1956)

06073500 DEARBORN RIVER NEAR CRAIG, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005*	
ANNUAL TOTAL	40,177		57,806			
ANNUAL MEAN	110		158		199	
HIGHEST ANNUAL MEAN					363	1948
LOWEST ANNUAL MEAN					58.3	2000
HIGHEST DAILY MEAN	820	May 28	3,050	May 11	12,500	Jun 9, 1964
LOWEST DAILY MEAN	15	Jan 4	17	Dec 23	8.5	Aug 17, 1961
ANNUAL SEVEN-DAY MINIMUM	20	Jan 1	18	Sep 3	11	Aug 14, 1961
MAXIMUM PEAK FLOW			3,850	May 10	a15,400	Jun 9, 1964
MAXIMUM PEAK STAGE			7.60	May 10	b13.50	Jun 9, 1964
INSTANTANEOUS LOW FLOW			8.1	Nov 29	c8.0	Aug 17, 1961
ANNUAL RUNOFF (AC-FT)	79,690		114,700		144,200	
10 PERCENT EXCEEDS	264		412		535	
50 PERCENT EXCEEDS	47		46		72	
90 PERCENT EXCEEDS	30		26		34	

*--During periods of operation (October 1945 to September 1969, October 1993 to current year).
a--From rating curve extended above 7,000 ft^3/s on basis of slope-area measurement of peak flow.
b--From floodmark.
c--Site and datum then in use.
e--Estimated.



06073500 DEARBORN RIVER NEAR CRAIG, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September 1991, June 1999 to July 2003.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1993 to current year.

INSTRUMENTATION.--Temperature recorder installed Nov. 3, 1993.

REMARKS.--Daily water temperature records are rated excellent except for the period Sept. 11-30, which are good. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 28.5°C, Aug. 1, 2, 2000; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.5°C, July 30 and Aug. 5, 6; minimum, 0.5°C, Apr. 29.

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	12.0	3.5	7.0	9.0	3.5	6.0	11.5	8.0	9.5	21.0	13.0	17.0
2	10.0	4.0	7.0	11.5	3.0	7.0	9.0	7.0	8.0	19.5	13.0	16.0
3	10.5	5.0	7.5	11.5	4.5	8.0	11.0	7.5	9.0	19.5	12.0	15.5
4	9.0	4.5	7.0	12.0	7.0	9.5	13.5	8.0	11.0	21.0	12.0	16.5
5	11.0	3.5	7.0	14.0	7.0	11.0	15.0	9.0	12.0	21.5	13.5	17.5
6	13.5	4.5	9.0	12.5	9.0	11.0	12.0	8.5	10.5	22.5	14.5	18.5
7	13.5	7.0	10.0	10.5	7.0	8.5	14.5	7.5	10.5	22.5	15.5	19.0
8	11.5	7.5	9.5	8.0	6.5	7.0	11.5	8.0	9.5	24.5	15.5	19.5
9	8.0	5.0	6.5	7.0	6.0	6.5	10.5	8.0	9.5	21.0	14.5	17.5
10	11.5	4.5	7.5	6.5	6.0	6.5	14.0	8.5	11.0	20.5	12.5	15.5
11	9.5	4.0	7.0	6.0	4.5	5.0	13.0	9.0	11.5	22.5	14.0	18.0
12	12.0	4.0	8.0	8.0	4.5	6.0	12.0	9.0	10.0	24.5	14.5	19.5
13	13.0	5.5	9.0	10.0	5.0	7.0	15.5	7.5	11.0	25.0	17.0	20.5
14	9.0	4.5	6.5	11.0	6.0	8.5	16.0	9.0	12.5	23.5	14.5	19.0
15	10.5	2.5	6.5	11.5	6.5	9.5	17.0	11.5	14.0	24.0	14.5	19.0
16	14.5	5.0	9.0	10.0	7.0	8.5	14.5	11.5	13.5	23.0	16.5	19.5
17	11.0	7.0	9.0	11.5	6.5	8.5	13.5	11.0	12.0	22.5	14.0	18.0
18	7.5	5.0	6.5	10.5	5.5	8.0	16.0	9.5	12.5	23.0	14.0	18.5
19	5.5	3.5	4.5	13.0	7.0	10.0	18.0	10.5	14.0	23.0	15.0	19.0
20	5.0	4.0	4.5	11.5	6.5	9.0	20.0	11.5	15.5	24.0	15.0	19.0
21	7.0	3.5	5.0	12.5	6.5	9.5	19.5	14.0	17.0	24.5	14.0	19.5
22	13.5	3.5	8.0	14.5	6.5	10.0	21.5	14.0	17.5	22.5	16.5	19.0
23	13.0	6.5	9.5	12.0	6.5	9.5	20.0	14.0	17.0	24.5	16.0	20.0
24	13.5	8.0	10.5	10.5	6.0	8.5	18.0	12.0	15.0	24.5	14.5	19.0
25	13.0	6.5	10.0	10.5	6.0	8.5	16.0	12.5	14.0	19.5	15.0	17.0
26	10.5	6.5	7.5	13.0	6.5	9.5	13.5	11.5	12.5	23.0	12.0	17.5
27	6.5	3.5	5.0	14.5	6.5	10.5	17.0	11.0	13.5	25.0	14.0	19.0
28	5.0	2.0	3.5	15.0	8.0	11.5	16.0	12.0	14.0	24.0	14.5	19.0
29	9.0	0.5	4.5	13.0	8.0	10.5	18.5	12.0	15.0	24.0	15.5	19.5
30	6.5	4.0	5.0	14.5	7.0	10.5	20.0	12.5	16.0	25.5	15.5	20.5
31	---	---	---	14.0	8.0	11.0	---	---	---	24.0	15.5	20.0
MONTH	14.5	0.5	7.0	15.0	3.0	85	21.5	7.0	12.5	25.5	12.0	18.5

06073500 DEARBORN RIVER NEAR CRAIG, 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
		AUGUST			SEPTEMBER							
1	25.0	17.0	20.5	21.5	11.5	16.0						
2	23.0	17.0	20.0	20.5	12.0	16.0						
3	25.0	16.5	20.0	21.5	13.0	17.0						
4	24.5	15.0	19.5	21.0	13.5	17.5						
5	25.5	16.0	20.5	21.0	13.5	17.0						
6	25.5	15.5	20.5	21.0	12.0	16.0						
7	24.5	17.0	20.5	21.0	12.0	16.5						
8	23.0	17.0	20.0	20.5	12.0	16.0						
9	25.0	16.5	20.5	18.0	13.5	15.5						
10	25.0	16.0	19.5	15.0	11.5	13.0						
11	21.0	16.5	18.0	17.0	9.0	12.5						
12	17.0	13.5	14.5	14.0	9.0	12.0						
13	19.5	12.0	15.5	18.0	10.5	13.5						
14	22.5	12.0	17.0	18.0	11.5	14.0						
15	24.0	13.0	18.0	18.0	10.5	14.0						
16	24.5	14.0	19.0	17.0	11.5	14.0						
17	20.0	14.5	17.0	13.5	12.0	13.0						
18	19.5	13.5	15.5	17.5	10.0	13.0						
19	22.5	12.0	17.0	17.0	11.0	13.5						
20	23.5	12.5	18.0	17.5	11.0	14.0						
21	24.5	13.5	18.5	17.0	10.5	13.5						
22	22.0	14.5	18.0	14.5	9.5	12.0						
23	22.5	16.0	19.0	12.5	9.5	10.5						
24	18.5	14.0	16.0	9.5	8.0	8.5						
25	21.0	12.0	16.0	14.0	6.5	9.5						
26	22.5	12.0	17.0	15.5	8.5	11.5						
27	23.5	12.5	18.0	12.5	9.0	10.5						
28	23.0	13.5	18.0	13.5	7.0	10.0						
29	22.0	13.5	17.5	14.0	8.5	11.0						
30	17.5	13.5	15.5	17.5	12.0	14.0						
31	21.0	11.0	15.5	---	---	---						
MONTH	25.5	11.0	18.0	21.5	6.5	13.5						

06076560 SMITH RIVER BELOW NEWLAN CREEK, NEAR WHITE SULPHUR SPRINGS, MT

LOCATION.--Lat 46°35'27", long 111°03'26" (NAD 27), in $NW^1/_4NE^1/_4NE^1/_4$ sec.35, T.10 N., R.5 E., Meagher County, Hydrologic Unit 10030103, on left bank 40 ft upstream from county road bridge, 0.3 mi downstream from Newlan Creek, 7.3 mi northwest of White Sulphur Springs, and at river mile 112.1.

DRAINAGE AREA.--517 mi^2.

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 4,785 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by Smith River Reservoir (station number 06075000) and Newlan Creek Reservoir. 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.

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	42	59	e45	e40	57	48	71	49	157	198	68	39
2	46	58	e45	e40	57	49	74	46	296	192	70	38
3	44	61	e45	e40	59	49	72	46	302	175	63	43
4	44	57	e45	e40	57	49	72	47	298	159	50	40
5	43	57	e50	e35	56	51	68	54	269	146	46	43
6	42	59	e50	e40	51	52	66	55	293	141	43	43
7	42	60	e50	e50	e45	48	63	58	342	153	41	45
8	42	60	e50	e45	e45	53	65	60	327	151	40	45
9	41	60	e55	e40	e50	54	63	63	304	144	39	47
10	41	59	62	e45	e55	57	61	85	285	149	37	49
11	41	57	64	e45	e60	51	59	92	267	147	37	54
12	44	e50	59	e45	e55	51	56	92	278	135	33	55
13	45	e45	e50	e40	53	51	51	95	326	129	37	57
14	45	e45	e50	e30	e50	50	52	90	282	130	40	57
15	57	e45	e55	e25	e45	50	50	94	277	123	36	55
16	57	e50	e55	e30	e45	51	49	108	285	125	33	56
17	56	e50	e55	e40	e45	52	49	131	305	125	31	62
18	55	e50	e55	e60	e45	51	56	133	323	123	33	66
19	59	e45	60	e80	e40	53	71	153	292	114	32	63
20	59	e40	e50	e70	e35	54	69	169	264	99	30	55
21	62	e35	e40	e60	e30	57	62	204	239	94	29	56
22	64	e40	e35	e50	e30	61	61	202	233	94	29	56
23	62	e40	e30	e60	e35	41	61	208	233	118	29	57
24	61	e45	e35	e60	e40	54	59	181	199	112	32	80
25	59	e45	e45	e60	e45	79	55	160	166	99	39	81
26	58	e40	e45	e60	e45	82	54	148	167	103	39	69
27	61	e40	e45	e60	e45	66	55	133	208	97	34	62
28	61	e35	e45	e60	49	129	53	121	219	89	32	58
29	61	e35	e45	64	---	124	50	103	218	84	32	59
30	59	e40	e40	59	---	90	50	105	233	80	33	56
31	58	---	e40	62	---	75	---	106	---	71	41	---
TOTAL	1,611	1,462	1,495	1,535	1,324	1,882	1,797	3,391	7,887	3,899	1,208	1,646
MEAN	52.0	48.7	48.2	49.5	47.3	60.7	59.9	109	263	126	39.0	54.9
MAX	64	61	64	80	60	129	74	208	342	198	70	81
MIN	41	35	30	25	30	41	49	46	157	71	29	38
AC-FT	3,200	2,900	2,970	3,040	2,630	3,730	3,560	6,730	15,640	7,730	2,400	3,260

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

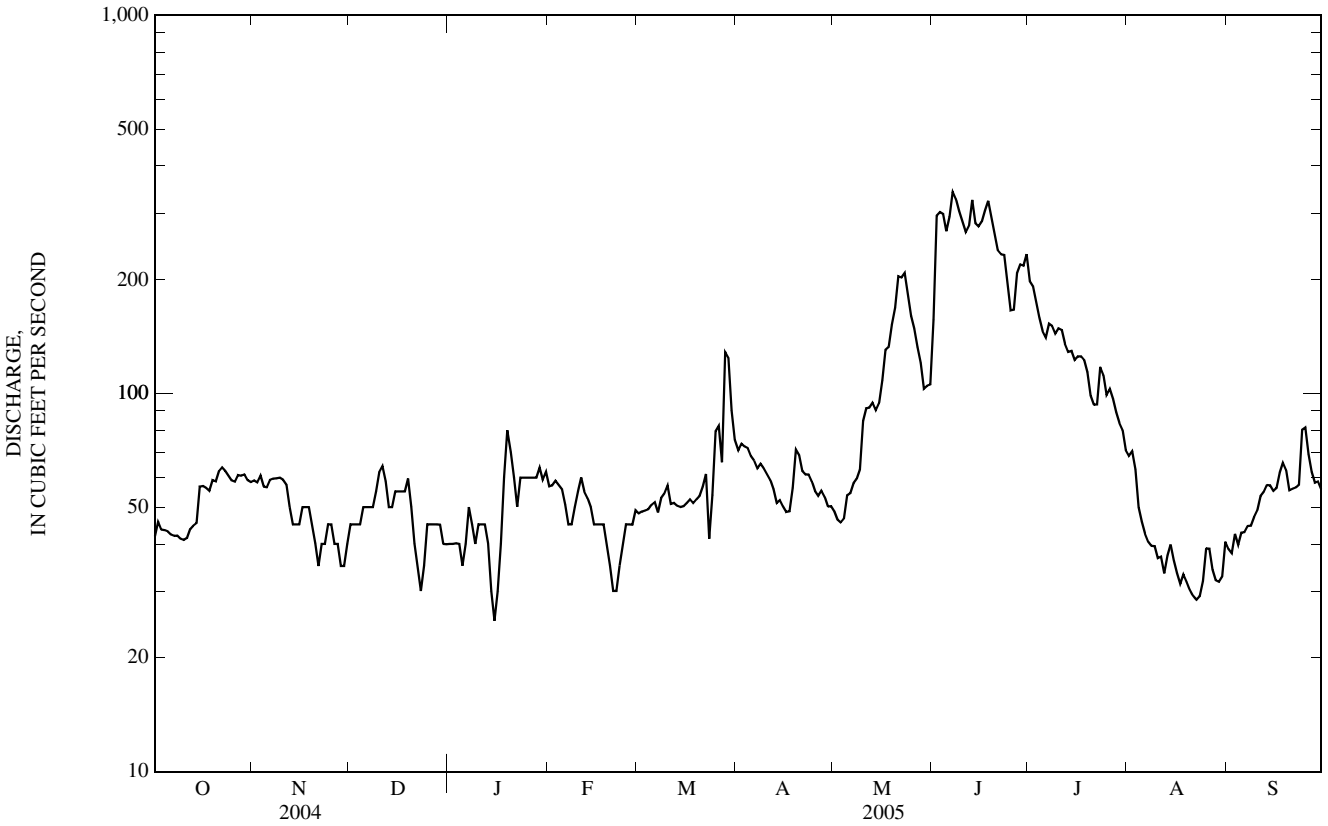
MEAN	52.0	48.7	48.2	49.5	47.3	60.7	59.9	109	263	126	39.0	54.9
MAX	52.0	48.7	48.2	49.5	47.3	60.7	59.9	109	263	126	39.0	54.9
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	52.0	48.7	48.2	49.5	47.3	60.7	59.9	109	263	126	39.0	54.9
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)

SUMMARY STATISTICS FOR 2005 WATER YEAR

ANNUAL TOTAL	29,137	
ANNUAL MEAN	79.8	
HIGHEST DAILY MEAN	342	Jun 7
LOWEST DAILY MEAN	25	Jan 15
ANNUAL SEVEN-DAY MINIMUM	30	Aug 17
MAXIMUM PEAK FLOW	a364	Jun 7
MAXIMUM PEAK STAGE	b4.90	Jan 5
ANNUAL RUNOFF (AC-FT)	57,790	
10 PERCENT EXCEEDS	166	
50 PERCENT EXCEEDS	56	
90 PERCENT EXCEEDS	39	

a--Gage height, 3.71 ft.
b--About, backwater from ice.
e--Estimated.

06076560 SMITH RIVER BELOW NEWLAN CREEK, NEAR WHITE SULPHUR SPRINGS, MT—Continued



06077200 SMITH RIVER BELOW EAGLE CREEK, NEAR FORT LOGAN, MT

LOCATION.--Lat 46°49'41", long 111°11'29" (NAD 27), in $SW^1/_4NW^1/_4SE^1/_4$ sec.2, T.12 S., R.4 E., Meagher County, Hydrologic Unit 10030103, on right bank at downstream side of private bridge, 0.6 mi downstream from Eagle Creek, 11.3 mi north of Fort Logan, and at river mile 80.8.

DRAINAGE AREA.--1,088 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow slightly regulated by Smith River Reservoir (station number 06075000). Diversion for irrigation of about 19,300 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	119	106	e90	e60	e100	e110	160	253	461	595	163	115
2	120	132	e95	e60	e95	e110	209	241	757	553	167	110
3	122	133	e100	e60	e95	e110	263	232	1,420	523	170	104
4	119	107	e100	e65	e95	e110	239	234	1,650	476	155	104
5	120	112	e95	e70	e95	e110	211	261	1,470	438	138	102
6	116	137	e100	e80	e90	e120	212	352	1,430	402	129	104
7	114	137	e100	e90	e90	e120	261	479	1,580	379	121	103
8	113	131	e100	e85	e90	145	268	556	1,430	376	121	108
9	113	130	e110	e80	e100	159	250	562	1,310	366	128	109
10	112	129	e120	e80	e110	e170	207	579	1,240	400	122	105
11	108	110	e120	e85	e120	184	191	592	1,150	382	123	106
12	107	103	e110	e85	e110	151	200	524	1,130	351	120	110
13	110	101	e90	e75	e100	130	231	482	1,340	308	123	115
14	110	e95	e100	e60	e90	120	253	456	1,140	304	123	118
15	121	e95	e100	e50	e90	121	204	476	1,080	276	122	118
16	137	e100	e100	e60	e90	122	207	542	1,020	261	117	117
17	142	e100	e100	e70	e95	119	230	659	994	274	114	124
18	140	e95	e100	e90	e95	e100	250	646	985	274	126	137
19	135	e100	e110	e110	e90	e110	243	673	915	255	124	134
20	137	e95	e90	e130	e80	122	241	713	819	231	119	127
21	138	e85	e80	e120	e80	121	223	857	741	207	116	120
22	147	e95	e60	e120	e90	125	214	825	688	200	113	124
23	142	e100	e55	e110	e100	125	244	818	659	205	111	126
24	135	e100	e60	e120	e100	e100	278	751	605	209	119	153
25	126	e100	e80	e120	e100	e90	343	675	552	198	120	169
26	123	e90	e75	e110	e100	e110	369	617	532	198	120	152
27	133	e80	e75	e110	e100	142	362	542	620	197	112	139
28	134	e75	e75	e100	e110	190	326	474	660	190	106	131
29	131	e80	e75	e100	---	271	291	440	616	179	101	127
30	130	e85	e70	e100	---	225	278	420	624	176	98	126
31	126	---	e65	e100	---	170	---	405	---	168	111	---
TOTAL	3,880	3,138	2,800	2,755	2,700	4,212	7,458	16,336	29,618	9,551	3,852	3,637
MEAN	125	105	90.3	88.9	96.4	136	249	527	987	308	124	121
MAX	147	137	120	130	120	271	369	857	1,650	595	170	169
MIN	107	75	55	50	80	90	160	232	461	168	98	102
AC-FT	7,700	6,220	5,550	5,460	5,360	8,350	14,790	32,400	58,750	18,940	7,640	7,210

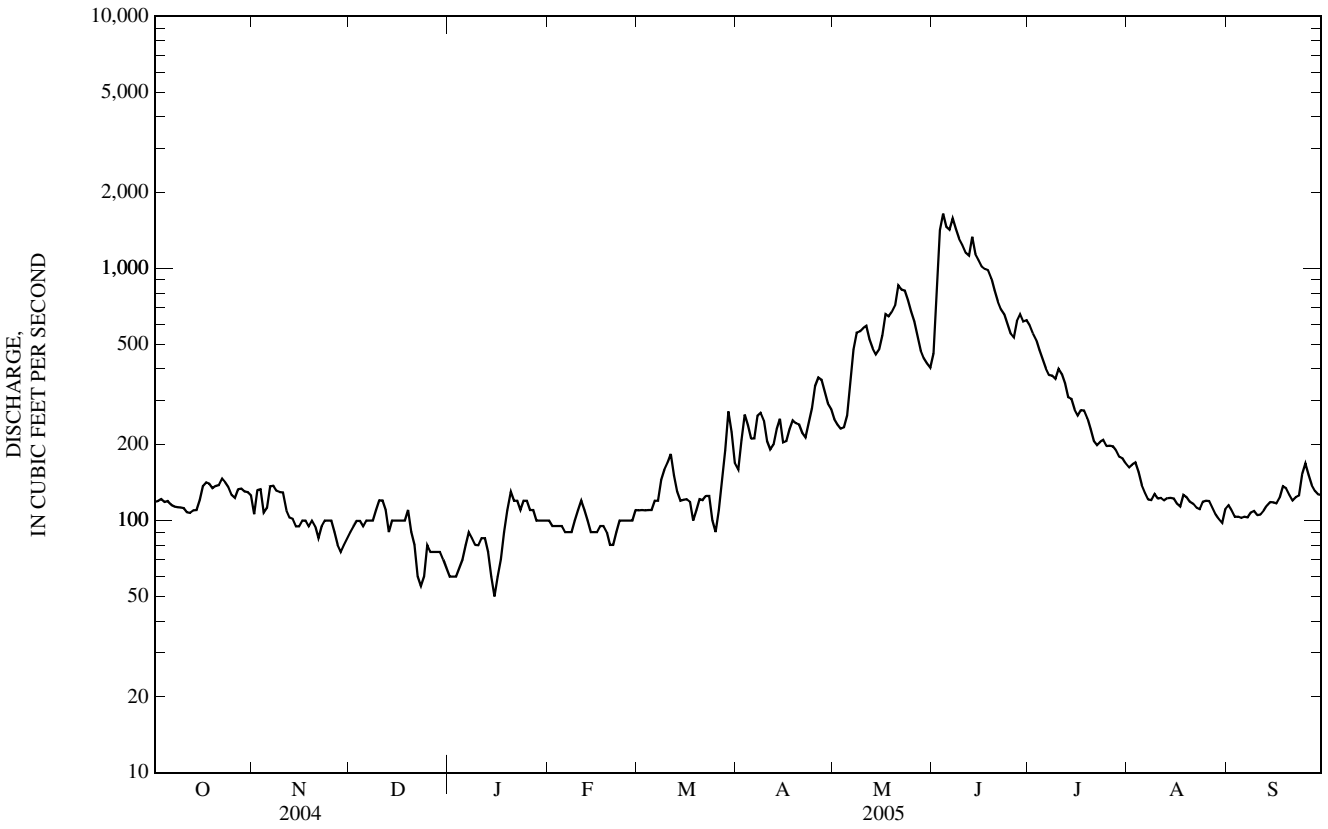
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2005, BY WATER YEAR (WY)

MEAN	122	120	104	115	105	163	247	466	632	255	114	108
MAX	213	185	167	249	145	281	432	1,119	1,893	607	276	219
(WY)	(1998)	(1999)	(1998)	(1997)	(1997)	(2003)	(2003)	(1997)	(1997)	(1998)	(1997)	(1997)
MIN	67.0	73.6	65.8	66.9	65.8	71.5	134	249	152	83.6	43.7	53.6
(WY)	(2002)	(2002)	(2004)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2003)	(2000)	(2001)

06077200 SMITH RIVER BELOW EAGLE CREEK, NEAR FORT LOGAN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1997 - 2005	
ANNUAL TOTAL	69,414		89,937			
ANNUAL MEAN	190		246		213	
HIGHEST ANNUAL MEAN					458	1997
LOWEST ANNUAL MEAN					109	2001
HIGHEST DAILY MEAN	1,650	Jun 12	1,650	Jun 4	3,510	Jun 12, 1997
LOWEST DAILY MEAN	30	Jan 5	50	Jan 15	30	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	41	Jan 1	64	Dec 30	32	Aug 25, 2000
MAXIMUM PEAK FLOW			1,780	Jun 4	a3,900	Jun 12, 1997
MAXIMUM PEAK STAGE			5.88	Jun 4	b9.30	Jan 1, 1997
INSTANTANEOUS LOW FLOW					c28	Aug 26, 2000
ANNUAL RUNOFF (AC-FT)	137,700		178,400		154,200	
10 PERCENT EXCEEDS	382		609		438	
50 PERCENT EXCEEDS	121		123		126	
90 PERCENT EXCEEDS	72		90		68	

a--Gage height, 7.00 ft.
b--Backwater from ice.
c--Gage height, 2.65 ft.
e--Estimated.



06077200 SMITH RIVER BELOW EAGLE CREEK, NEAR FORT LOGAN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--Water years 1997 to present. Data for water years 1997 to 2001 not published.

INSTRUMENTATION.--Water temperature recorder installed Nov. 4, 1997.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 27.5°C, July 14, 2002; minimum 0.0°C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 23.5°C, Aug.7; minimum 0.0°C, many days November through March.

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	7.0	9.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2	12.0	6.0	8.5	3.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
3	11.5	6.0	8.5	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
4	11.5	5.5	8.5	3.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
5	11.0	5.5	8.0	3.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
6	10.0	5.0	7.5	3.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
7	11.5	8.0	9.5	5.0	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
8	11.0	5.5	8.0	5.5	2.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
9	11.0	7.0	9.0	4.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
10	11.0	7.5	9.0	4.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
11	9.5	4.5	7.0	2.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
12	8.0	5.5	7.0	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
13	10.0	5.5	8.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	9.0	6.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	10.0	7.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	8.5	7.5	8.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
17	7.5	4.5	5.0	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
18	5.0	3.0	4.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	6.0	1.5	3.5	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
20	6.0	2.5	4.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	7.0	4.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.5	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
23	5.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	4.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	4.5	0.5	2.5	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
26	3.5	0.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	4.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	4.0	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	4.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	4.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	3.5	1.5	2.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	12.0	0.5	6.0	5.5	0.0	1.0	0.5	0.0	0.0	0.5	0.0	0.0

06077200 SMITH RIVER BELOW EAGLE CREEK, NEAR FORT LOGAN, 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	7.0	2.0	4.5	8.0	1.5	4.5
2	0.0	0.0	0.0	0.5	0.0	0.0	7.5	3.5	5.0	9.5	2.5	6.0
3	0.0	0.0	0.0	1.5	0.0	0.5	5.5	2.5	3.5	10.0	4.0	7.0
4	0.0	0.0	0.0	2.0	0.0	0.5	5.5	2.5	4.0	10.5	6.0	8.5
5	0.0	0.0	0.0	3.0	0.0	0.5	8.0	2.5	5.0	12.5	7.5	10.0
6	0.0	0.0	0.0	2.5	0.0	1.0	10.0	2.5	5.5	11.5	8.0	10.0
7	0.0	0.0	0.0	2.0	0.0	0.5	8.0	3.0	5.0	10.0	7.0	8.5
8	0.0	0.0	0.0	4.0	0.5	1.5	7.0	3.5	4.5	9.5	6.5	8.0
9	0.0	0.0	0.0	4.5	0.5	2.5	4.0	3.0	3.5	8.5	6.5	7.5
10	0.0	0.0	0.0	4.0	1.0	2.5	7.5	2.5	4.5	7.5	6.0	7.0
11	0.0	0.0	0.0	2.5	1.0	2.0	7.5	1.5	4.5	6.5	5.5	5.5
12	0.0	0.0	0.0	2.5	1.0	2.0	10.0	2.5	6.0	6.0	3.5	5.0
13	0.0	0.0	0.0	2.5	0.5	1.0	9.0	3.5	6.5	9.5	4.0	6.5
14	0.0	0.0	0.0	3.5	0.0	1.5	6.0	2.5	4.0	11.5	7.0	9.0
15	0.0	0.0	0.0	4.5	0.5	2.5	7.5	0.5	3.5	12.0	8.5	10.5
16	0.0	0.0	0.0	4.0	2.0	3.0	10.0	2.0	5.5	11.5	9.0	10.5
17	0.0	0.0	0.0	3.0	0.5	1.5	8.5	4.5	6.5	11.0	8.0	9.0
18	0.0	0.0	0.0	2.5	0.0	1.0	6.0	3.5	5.0	11.0	5.5	8.0
19	0.0	0.0	0.0	3.0	0.0	1.0	5.0	3.0	4.0	12.0	8.0	10.0
20	0.0	0.0	0.0	3.0	0.5	1.5	4.0	3.0	3.5	12.0	8.0	10.0
21	0.0	0.0	0.0	6.0	2.0	4.0	5.0	2.5	3.5	11.0	7.5	9.5
22	0.0	0.0	0.0	4.5	0.5	3.0	10.5	3.0	6.0	12.5	7.5	10.0
23	0.0	0.0	0.0	0.5	0.0	0.0	10.0	5.0	7.5	12.0	8.5	10.5
24	0.0	0.0	0.0	0.0	0.0	0.0	11.5	6.0	8.5	11.0	8.0	10.0
25	0.0	0.0	0.0	1.0	0.0	0.5	10.5	5.0	7.5	10.0	7.0	8.5
26	0.0	0.0	0.0	2.0	0.0	1.0	8.0	5.0	6.5	11.0	6.0	8.5
27	0.0	0.0	0.0	6.0	2.0	4.0	6.0	3.5	4.5	13.5	6.5	10.0
28	0.0	0.0	0.0	6.0	3.5	4.5	6.0	1.5	3.5	14.5	8.5	11.5
29	---	---	---	3.5	2.0	2.5	6.5	0.5	3.5	12.5	8.5	10.5
30	---	---	---	4.0	1.5	2.5	5.5	1.5	3.5	11.5	7.5	9.5
31	---	---	---	6.0	1.0	3.5	---	---	---	13.5	7.0	10.5
MONTH	0.0	0.0	0.0	6.0	0.0	1.5	11.5	0.5	5.0	14.5	1.5	8.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.5	8.0	10.0	18.5	13.5	15.5	22.5	16.5	19.5	17.5	9.5	13.0
2	8.0	7.0	7.0	17.5	13.5	15.5	20.5	17.5	19.0	16.5	10.5	13.5
3	8.5	6.5	7.5	17.5	12.5	15.0	22.0	16.0	19.0	19.0	11.0	14.5
4	11.0	7.5	9.0	19.0	12.5	16.0	22.5	15.5	19.0	18.5	12.5	15.5
5	13.5	8.0	10.5	20.5	14.0	17.5	22.5	15.5	19.0	17.5	12.5	15.0
6	12.0	9.5	10.5	21.0	16.0	18.5	23.0	15.5	19.0	18.5	11.5	15.0
7	12.0	7.0	9.5	21.0	16.0	19.0	23.5	16.5	20.0	18.5	11.5	15.0
8	11.0	8.0	9.0	22.0	16.5	19.5	20.0	17.5	18.5	18.0	11.0	14.5
9	10.0	7.5	9.0	20.5	17.0	18.5	22.0	14.5	18.0	16.0	11.5	14.0
10	11.0	8.0	9.5	18.5	15.0	16.5	20.5	15.5	18.0	13.0	10.5	12.0
11	12.0	8.0	10.0	20.5	15.0	17.5	21.5	15.0	18.0	15.0	7.5	10.5
12	11.5	8.0	9.0	22.0	15.0	19.0	17.5	12.0	14.0	11.0	7.0	9.5
13	12.5	7.0	9.5	22.0	17.0	19.5	15.5	11.0	12.5	14.0	9.0	11.0
14	14.5	9.0	12.0	22.0	16.0	19.5	18.5	9.0	13.5	14.5	9.0	11.0
15	14.5	11.0	13.0	22.5	15.5	19.0	20.0	11.5	15.5	15.5	8.5	12.0
16	15.5	12.0	13.5	22.0	18.0	19.5	20.5	13.0	16.5	13.5	9.5	11.5
17	16.0	12.5	14.0	19.5	15.5	17.5	18.0	13.5	16.0	11.5	10.5	11.0
18	15.5	12.0	14.0	20.5	14.0	17.5	18.0	12.5	15.0	12.5	10.0	11.0
19	16.0	10.5	13.0	21.5	15.0	18.5	19.0	11.5	15.0	13.0	8.0	10.0
20	18.5	12.0	15.0	22.5	15.0	18.5	19.5	11.0	15.0	15.0	8.0	11.0
21	18.0	14.0	16.0	23.0	15.0	19.0	21.0	12.0	16.0	13.0	9.5	11.5
22	18.5	14.0	16.5	21.5	17.0	19.0	18.5	13.5	16.0	13.5	7.0	10.5
23	18.5	14.5	16.5	22.5	16.5	19.5	20.5	14.5	17.0	11.0	8.0	9.0
24	18.0	13.0	15.5	22.5	15.5	19.0	16.5	13.5	15.0	8.0	7.0	7.5
25	17.5	13.5	15.5	18.5	14.0	15.5	17.5	11.0	14.0	11.5	6.5	8.5
26	15.5	12.5	14.0	19.0	11.5	15.0	18.0	10.5	14.5	12.5	6.5	9.5
27	16.0	11.5	14.0	20.5	13.0	17.0	19.0	11.0	15.0	11.5	8.0	9.5
28	14.5	12.5	14.0	20.5	14.5	18.0	20.0	11.5	15.5	12.0	6.5	9.0
29	15.5	12.0	13.5	21.5	15.0	18.0	19.5	12.0	16.0	11.5	7.0	9.5
30	17.5	12.0	14.5	23.0	16.0	19.5	16.0	11.5	13.5	13.0	10.0	11.5
31	---	---	---	22.0	16.0	19.5	17.0	9.0	12.5	---	---	---
MONTH	18.5	6.5	12.0	23.0	11.5	18.0	23.5	9.0	16.3	19.0	6.5	11.5

06078200 MISSOURI RIVER NEAR ULM, MT

LOCATION.--Lat 47°26'09", long 111°23'12" (NAD 27), in NE$^1/_4$ NW$^1/_4$ NW$^1/_4$ sec.5, T.19 N., R.3 E., Cascade County, Hydrologic Unit 10030102, on left bank 5.6 mi east of Ulm, 9.1 mi downstream from Smith River, and at river mile 2,140.4.

DRAINAGE AREA.--20,941 mi^2.

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,313.27 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by 10 smaller irrigation reservoirs and power plants, Clark Canyon Reservoir (station number 06015300), and Canyon Ferry Lake (station number 06058500). Diversions for irrigation of about 630,400 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 in June 1953 reached a stage of about 17 ft; discharge, 35,000 ft^3/s. Flood in June 1948 reached a stage of about 16 ft; discharge, 32,000 ft^3/s, 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	2,940	3,790	3,310	e3,800	3,490	3,350	3,280	4,280	4,150	7,980	4,380	4,520
2	2,990	3,830	e3,250	e3,900	3,500	3,330	3,200	4,180	4,530	7,850	4,400	4,480
3	2,990	3,660	e3,250	e4,000	3,480	3,320	3,160	4,060	5,770	7,620	4,430	4,350
4	2,980	3,610	3,230	e4,000	3,500	3,320	3,250	4,030	7,900	7,460	4,390	4,250
5	2,990	3,580	3,240	e4,000	3,500	3,310	3,300	4,030	8,660	7,380	4,310	4,240
6	2,990	3,520	3,280	e4,050	3,430	3,270	3,290	4,060	7,630	7,300	4,250	4,260
7	3,000	3,510	3,310	e4,050	3,400	3,220	3,280	4,160	7,170	7,190	4,230	4,270
8	3,000	3,550	e3,350	e3,950	e3,400	3,220	3,300	4,500	7,080	6,920	4,180	4,270
9	3,020	3,540	e3,350	e3,950	e3,350	3,190	3,360	4,850	6,780	6,600	4,220	4,250
10	2,990	3,530	e3,350	e3,950	e3,300	3,140	3,390	5,060	6,440	6,650	4,200	4,270
11	3,020	3,520	e3,350	e3,900	e3,300	3,190	3,360	6,680	6,080	6,900	4,110	4,270
12	3,040	3,530	3,380	e3,850	e3,300	3,250	3,290	8,420	5,920	7,030	4,150	4,290
13	3,080	3,520	3,340	e3,850	3,350	3,310	3,260	7,730	6,070	6,750	4,260	4,310
14	3,070	3,520	3,370	e3,850	3,270	3,420	3,420	6,780	6,300	6,160	4,290	4,300
15	3,130	3,530	3,370	e3,850	3,240	3,390	3,520	6,260	5,950	5,770	4,430	4,280
16	3,170	3,560	3,430	e3,850	3,280	3,310	3,530	6,070	5,650	5,410	4,480	4,280
17	3,170	3,640	3,430	e4,000	3,290	3,240	3,470	6,170	5,730	4,910	4,420	4,410
18	3,280	3,630	3,420	e4,100	3,320	3,230	3,450	6,320	6,680	4,720	4,320	4,590
19	3,380	3,550	3,470	e4,250	3,320	3,220	3,530	6,150	7,840	4,660	4,200	4,780
20	3,430	3,540	3,410	e4,200	3,310	3,210	3,680	5,890	8,240	4,580	4,130	4,580
21	3,510	3,530	3,410	e4,100	3,260	3,230	3,950	5,800	8,090	4,550	4,090	4,360
22	3,640	3,480	3,400	e4,000	3,260	3,210	4,020	5,660	7,880	4,520	4,070	4,330
23	3,780	3,460	e3,400	e4,000	3,250	3,250	3,950	5,510	7,690	4,510	4,050	4,310
24	3,960	3,500	e3,400	e4,100	3,280	3,300	3,990	5,410	7,810	4,450	4,100	4,390
25	3,960	3,490	e3,400	e4,100	3,360	3,370	4,030	5,250	8,010	4,450	4,090	4,470
26	3,830	3,480	e3,400	e4,000	3,380	3,420	4,110	5,010	7,540	4,470	4,060	4,440
27	3,820	3,490	e3,400	e3,900	3,360	3,440	4,330	4,810	7,400	4,480	4,050	4,390
28	3,870	3,450	e3,400	3,720	3,340	3,390	4,490	4,650	7,720	4,440	4,030	4,410
29	3,840	3,420	e3,400	3,610	---	3,330	4,470	4,500	7,970	4,360	4,020	4,460
30	3,710	3,360	e3,500	3,570	---	3,320	4,340	4,330	8,040	4,350	4,060	4,380
31	3,670	---	e3,700	3,560	---	3,320	---	4,190	---	4,360	4,320	---
TOTAL	103,250	106,320	104,700	122,010	93,820	102,020	109,000	164,800	208,720	178,780	130,720	131,190
MEAN	3,331	3,544	3,377	3,936	3,351	3,291	3,633	5,316	6,957	5,767	4,217	4,373
MAX	3,960	3,830	3,700	4,250	3,500	3,440	4,490	8,420	8,660	7,980	4,480	4,780
MIN	2,940	3,360	3,230	3,560	3,240	3,140	3,160	4,030	4,150	4,350	4,020	4,240
AC-FT	204,800	210,900	207,700	242,000	186,100	202,400	216,200	326,900	414,000	354,600	259,300	260,200

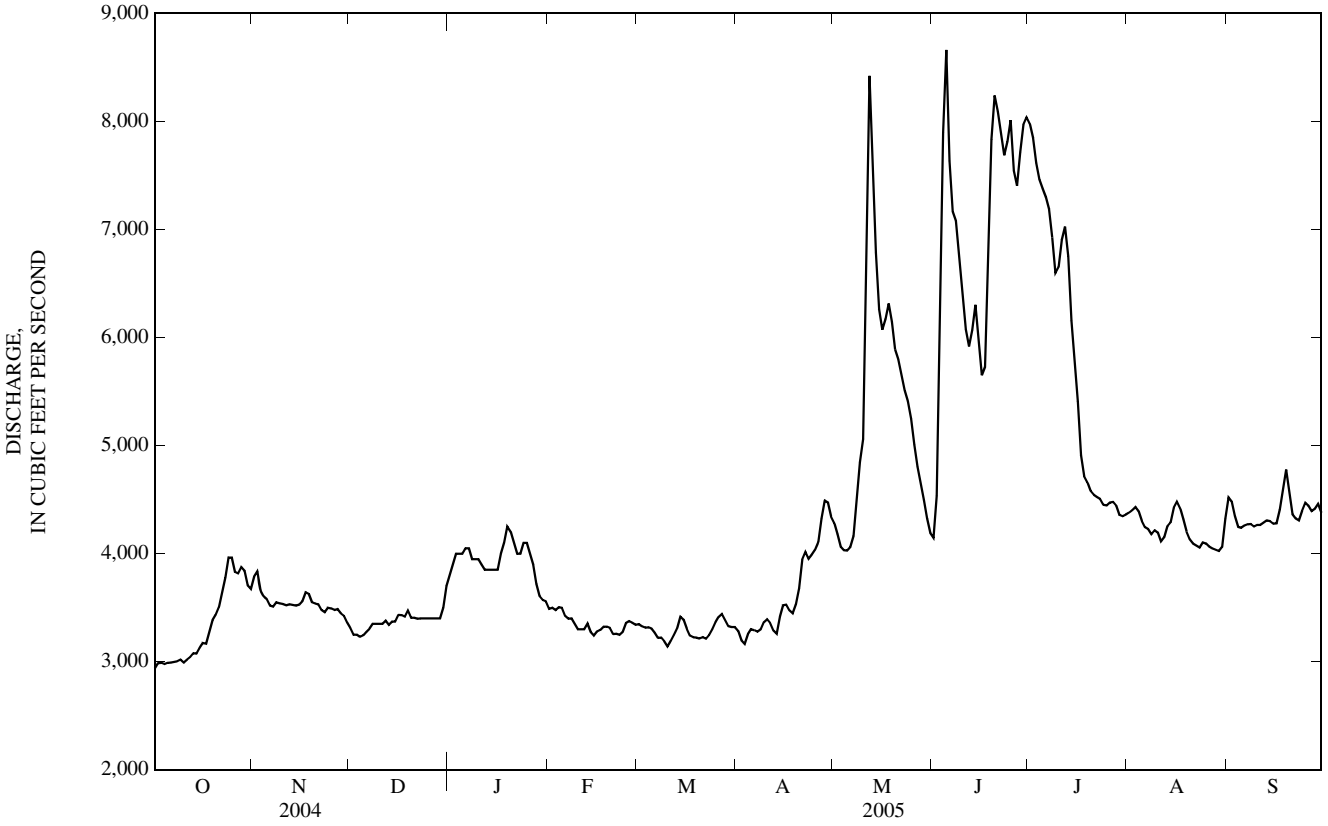
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	4,860	5,226	5,446	5,566	5,667	5,794	6,416	8,784	10,660	7,253	4,802	4,570
MAX	11,230	9,497	10,690	7,213	9,501	9,652	12,070	19,800	24,260	19,480	8,741	9,990
(WY)	(1966)	(1966)	(1960)	(1984)	(1996)	(1968)	(1976)	(1976)	(1981)	(1975)	(1993)	(1984)
MIN	2,977	3,090	3,095	3,129	3,096	3,152	3,070	3,501	2,965	2,868	2,968	2,283
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1961)	(1961)	(1961)	(1985)	(2004)	(1959)

06078200 MISSOURI RIVER NEAR ULM, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	1,329,400		1,555,330			
ANNUAL MEAN	3,632		4,261		6,253	
HIGHEST ANNUAL MEAN					9,653	1976
LOWEST ANNUAL MEAN					3,479	2002
HIGHEST DAILY MEAN	5,820	May 28	8,660	Jun 5	28,200	May 24, 1981
LOWEST DAILY MEAN	2,720	Aug 2	2,940	Oct 1	1,700	Jun 17, 1961
ANNUAL SEVEN-DAY MINIMUM	2,740	Jul 28	2,980	Oct 1	2,150	Sep 4, 1959
MAXIMUM PEAK FLOW			8,970	Jun 5	a28,500	May 24, 1981
MAXIMUM PEAK STAGE			6.80	Jun 5	15.20	Jun 17, 1997
ANNUAL RUNOFF (AC-FT)	2,637,000		3,085,000		4,530,000	
10 PERCENT EXCEEDS	4,170		6,500		9,780	
50 PERCENT EXCEEDS	3,620		3,950		5,430	
90 PERCENT EXCEEDS	2,910		3,250		3,360	

a--Gage height, 14.99 ft.
e--Estimated.



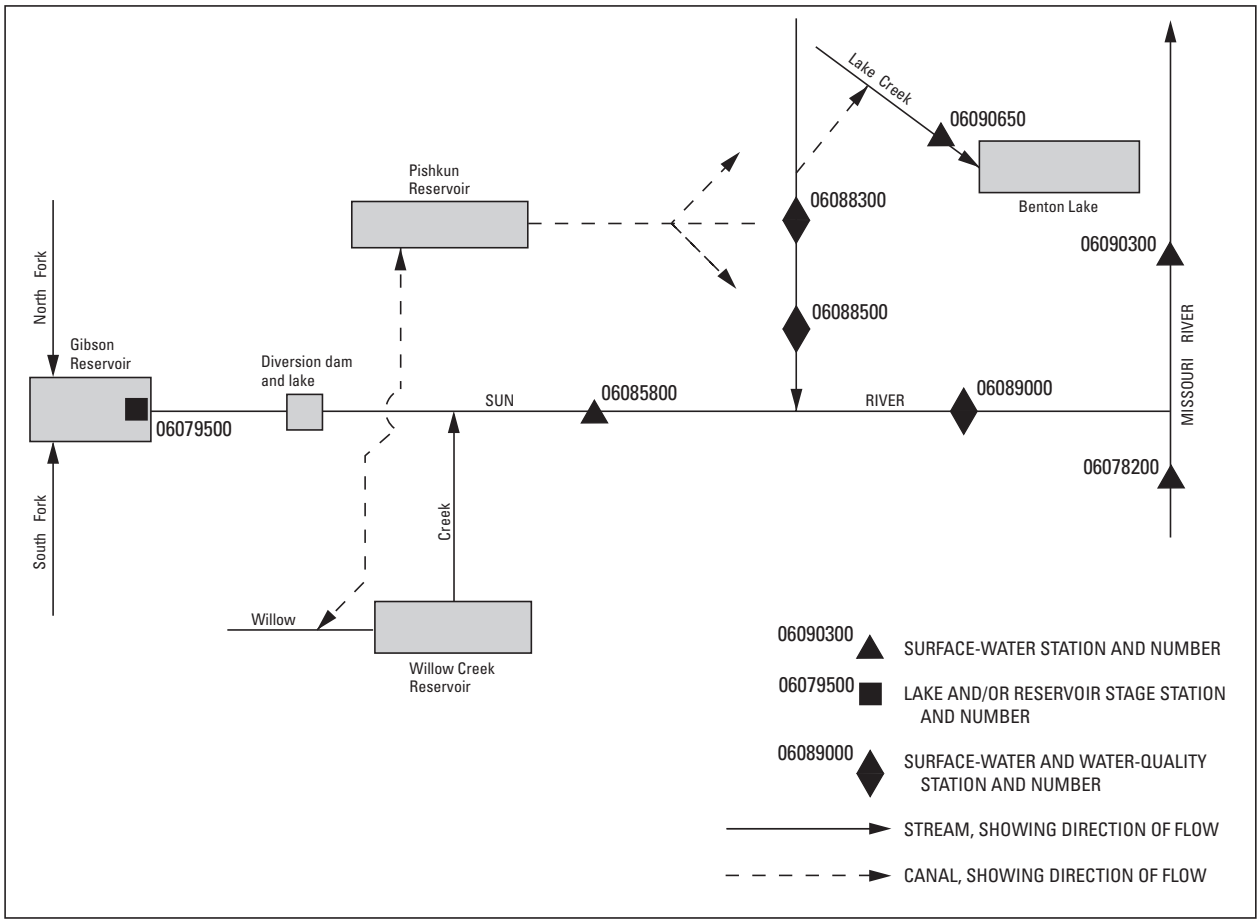


Figure 10. Schematic diagram showing diversions and storage in Sun River basin.

06085800 SUN RIVER AT SIMMS, MT

LOCATION.--Lat 47°30'09", long 111°55'54" (NAD 27), in NW$^1/_4$NW$^1/_4$SE$^1/_4$ sec.12, T. 20 N., R.3 W., Cascade County, Hydrologic Unit 10030104, on left bank on downstream side of Montana Secondary Highway 565 bridge, 0.7 mi downstream from Simms Creek, 0.7 mi north of Simms, and at river mile 45.0.

DRAINAGE AREA.--1,320 mi^2.

PERIOD OF RECORD.--May to June 1953 (in WSP 1320-B), May to June 1964 (in WSP 1840-B), April 1966 to September 1979, April 1997 to October 2004, April 2005 to October 2005, seasonal record only.

REVISED RECORDS.--WDR -75-1: 1964 (M).

GAGE.--Water-stage recorder. Elevation of gage is 3,570 ft (NGVD 29). May 1941 to October 1965, nonrecording gage at different elevation. April 1966 to September 1979, water-stage recorder at site about 500 ft downstream at different elevation.

REMARKS.--Seasonal records good. Flow regulated by Gibson, Pishkun, Willow Creek, and Nilan Reservoirs. Diversions for irrigation of about 105,000 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, OCTOBER 2004 AND CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	OCT 2004	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	107				103	106	385	119	61	98	144		
2	109				101	74	869	123	69	87	140		
3	110				102	68	746	120	78	61	133		
4	110				103	54	2,840	102	74	50	163		
5	95				100	52	2,600	66	69	46	165		
6	63				93	54	2,480	41	62	47	153		
7	44				84	49	2,330	47	60	51	145		
8	46				90	82	2,040	41	68	44	147		
9	48				93	129	993	43	73	43	152		
10	68				96	255	1,450	70	75	47	151		
11	79				97	921	2,050	86	79	56	148		
12	92				99	857	1,650	78	88	56	147		
13	108				101	675	1,510	82	95	84	145		
14	132				117	545	1,020	76	115	75	163		
15	190				116	557	781	66	122	52	180		
16	192				110	1,080	1,010	63	103	54	179		
17	156				109	2,870	1,550	64	84	74	178		
18	152				110	3,520	1,670	73	72	86	176		
19	150				117	2,760	1,480	60	58	76	177		
20	151				106	1,840	1,210	47	55	69	176		
21	159				143	1,550	932	45	51	66	170		
22	157				130	1,470	1,060	51	50	76	171		
23	155				119	1,300	882	52	45	87	172		
24	156				119	1,220	722	50	55	112	172		
25	155				81	755	302	62	55	132	170		
26	156				63	586	167	73	49	135	176		
27	162				58	528	164	67	46	150	186		
28	160				39	458	137	61	46	159	193		
29	162				53	438	122	53	55	149	183		
30	162				113	432	117	64	63	154	181		
31	157				---	482	---	67	83	---	180		
TOTAL	3,943				2,965	25,767	35,269	2,112	2,158	2,476	5,116		
MEAN	127				98.8	831	1,176	68.1	69.6	82.5	165		
MAX	192				143	3,520	2,840	123	122	159	193		
MIN	44				39	49	117	41	45	43	133		
AC-FT	7,820				5,880	51,110	69,960	4,190	4,280	4,910	10,150		

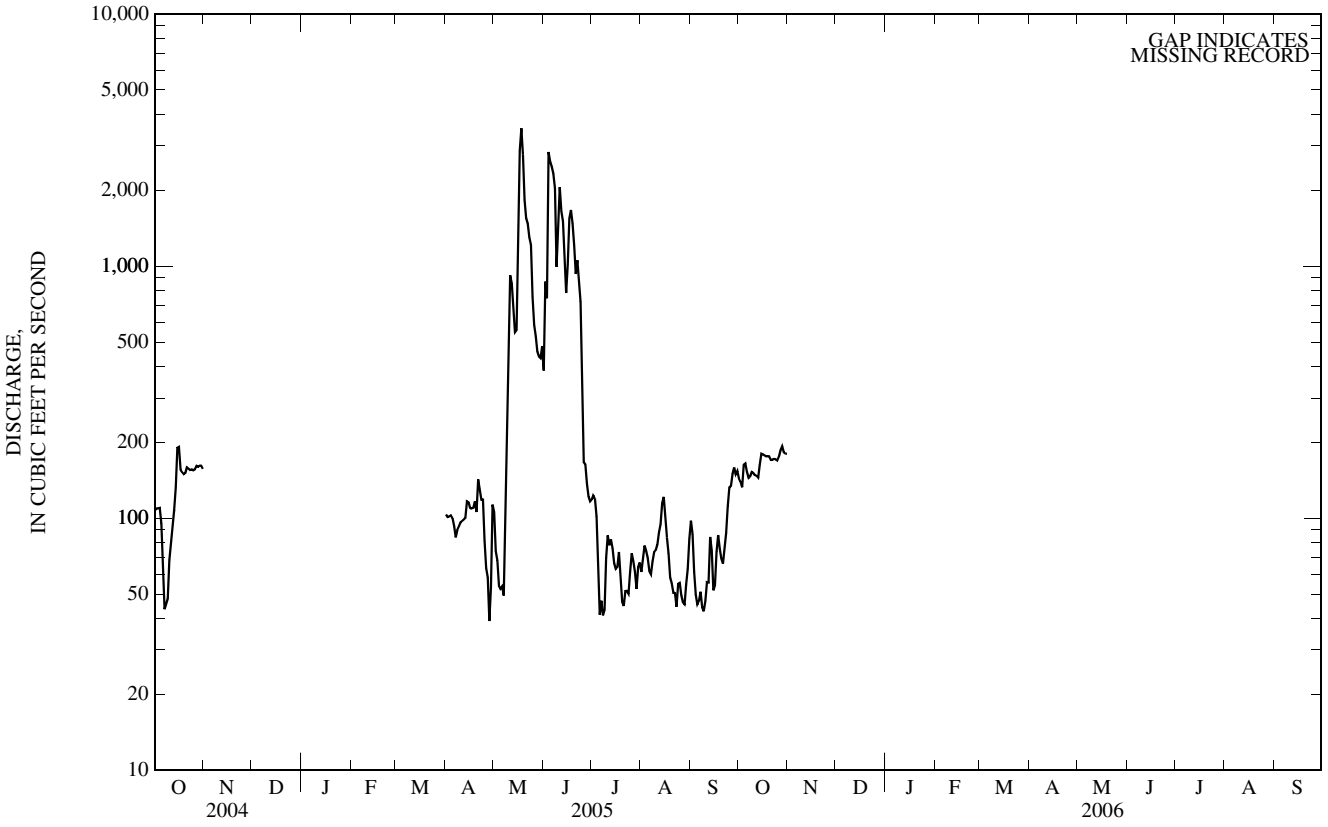
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004 AND SEASON 2005*

MEAN	204	191	188	216	303	1,116	2,100	371	157	144	198	217	192
MAX	519	314	291	473	1,125	4,123	8,558	2,165	383	422	519	596	456
(WY)	(1972)	(1976)	(1976)	(1969)	(1969)	(1976)	(1975)	(1975)	(1972)	(1972)	(1972)	(1976)	(1976)
MIN	89.0	119	96.3	104	77.6	72.1	109	44.3	48.8	49.3	89.0	120	99.8
(WY)	(1978)	(2004)	(1977)	(1977)	(2004)	(2001)	1977)	(2003)	(2000)	(1977)	(1978)	(1978)	(2004)

06085800 SUN RIVER AT SIMMS, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1964 - 2004*	
ANNUAL MEAN			449	
HIGHEST ANNUAL MEAN			1,177	1975
LOWEST ANNUAL MEAN			123	2001
HIGHEST DAILY MEAN	3,520	May 18	35,000	Jun 20, 1975
LOWEST DAILY MEAN	39	Apr 28	19	Sep 29, 1977
ANNUAL SEVEN-DAY MINIMUM			26	Sep 19, 1977
MAXIMUM PEAK FLOW	3,700	May 18	50,000	Jun 9, 1964
MAXIMUM PEAK STAGE	5.72	May 18	b13.70	Jun 9, 1964
INSTANTANEOUS LOW FLOW	a34	Apr 28		
ANNUAL RUNOFF (AC-FT)			325,400	
10 PERCENT EXCEEDS			811	
50 PERCENT EXCEEDS			179	
90 PERCENT EXCEEDS			80	

*--During periods of operation (May to June 1964 April 1966 to September 1979, April 1997 to October 2004, seasonal records April 2005 to October 2005).
a--Gage height, 0.75 ft.
b--About, from floodmark.
e--Estimated.



06088300 MUDDY CREEK NEAR VAUGHN, MT

LOCATION.--Lat 47°37'30", long 111°38'05" (NAD 27), in $NE^1/_4NE^1/_4NW^1/_4$ sec.32, T. 22 N., R.1 E., Cascade County, Hydrologic Unit 10030104, on left bank 200 ft downstream from bridge on county road 6.2 mi northwest of Vaughn and at river mile 14.6

DRAINAGE AREA.--282 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to September 1987, March 1996 to October 2004, April 2005 to October 2005, seasonal records.

GAGE.--Water-stage recorder. Elevation of gage is 3,441.79 ft (NGVD 29) (levels by U.S. Army Corps of Engineers).

REMARKS.--Water-discharge seasonal records good. Natural flow increased by wastage from Greenfield Irrigation Project. Diversions for irrigation of about 400 acres upstream from station and pumped diversions from Muddy Creek upstream from station in $SW^1/_4$ sec.2, T. 22 N., R.1 W, to supplement water supply for Benton Lake Wildlife Refuge. U.S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, OCTOBER 2004 AND CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	OCT 2004	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	57				34	35	171	269	298	62	59		
2	67				34	34	362	251	262	60	58		
3	62				33	34	636	230	293	63	59		
4	60				33	34	460	268	250	60	60		
5	59				32	33	309	292	214	56	60		
6	57				31	33	465	226	234	53	55		
7	56				31	37	313	216	238	51	49		
8	55				32	34	245	238	230	52	48		
9	55				31	33	218	253	240	54	48		
10	53				31	36	215	234	207	61	47		
11	52				31	34	227	233	178	62	45		
12	55				30	32	220	215	230	57	45		
13	74				30	31	216	205	297	57	44		
14	51				38	30	179	241	273	57	43		
15	65				42	28	165	258	253	51	43		
16	56				34	34	168	261	213	48	43		
17	53				33	169	173	267	187	52	40		
18	52				35	104	161	269	161	55	39		
19	51				39	128	154	199	163	49	39		
20	61				38	144	142	198	156	46	39		
21	78				43	131	143	205	151	42	39		
22	73				39	126	123	220	129	43	39		
23	70				36	182	116	267	104	44	39		
24	68				35	116	169	257	111	54	39		
25	67				34	113	172	272	92	64	39		
26	68				34	107	136	222	86	55	39		
27	68				36	99	286	273	82	41	41		
28	67				36	126	252	232	80	40	45		
29	66				35	114	227	225	79	48	41		
30	64				36	175	218	239	72	52	38		
31	63				---	151	---	250	65	---	36		
TOTAL	1,903				1,036	2,517	7,041	7,485	5,628	1,589	1,398		
MEAN	61.4				34.5	81.2	235	241	182	53.0	45.1		
MAX	78				43	182	636	292	298	64	60		
MIN	51				30	28	116	198	65	40	36		
AC-FT	3,770				2,050	4,990	13,970	14,850	11,160	3,150	2,770		

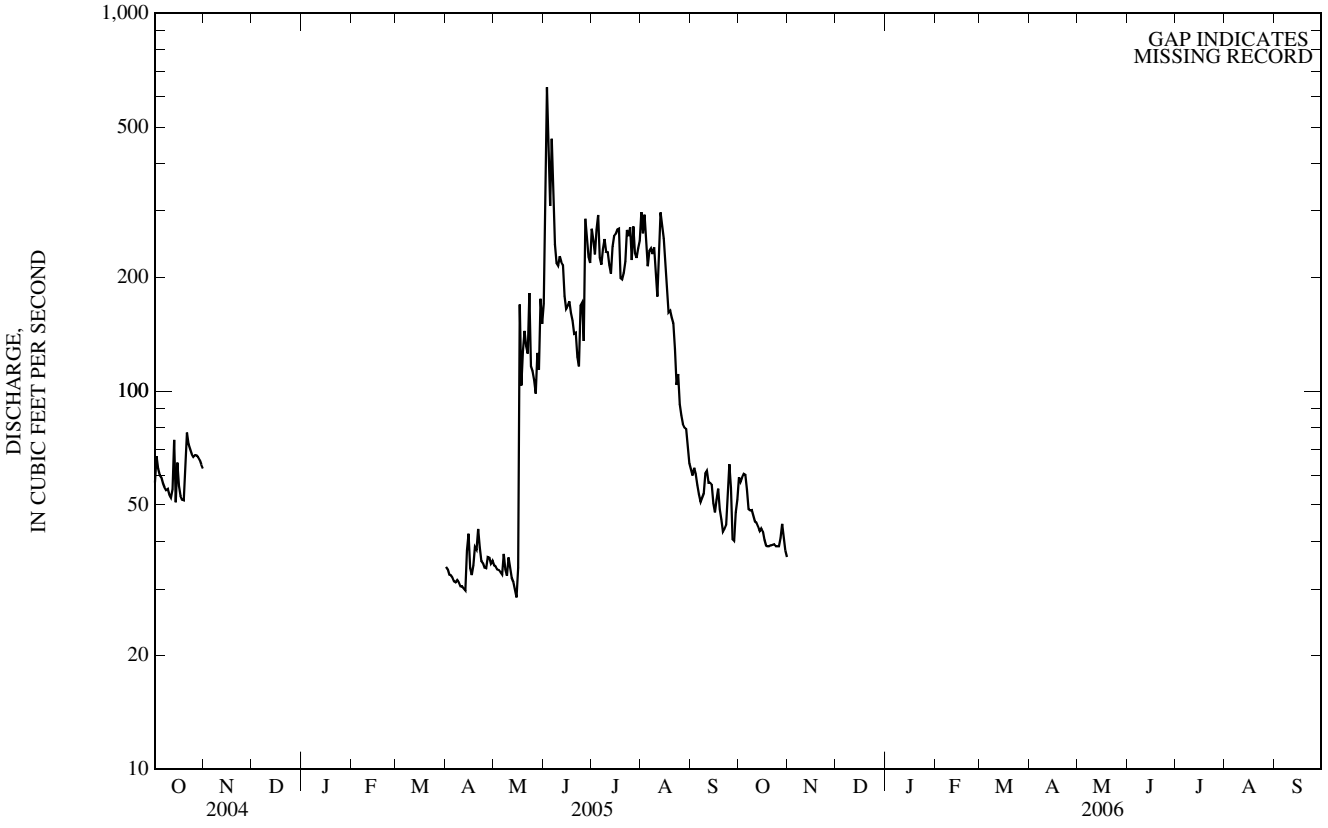
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	74.5	33.0	35.3	57.7	39.6	111	203	256	238	130	73.4	53.8	41.1
MAX	145	59.8	65.1	238	162	264	455	367	402	218	145	71.4	58.5
(WY)	(1976)	(1997)	(1986)	(1978)	(1975)	(1975)	(1969)	(1970)	(1975)	(1972)	(1976)	(1986)	(1986)
MIN	40.8	19.3	17.5	23.4	21.3	56.3	101	137	123	42.1	40.8	34.9	21.7
(WY)	(2002)	(1973)	(1985)	(2002)	(2000)	(2001)	(1985)	(1980)	(2003)	(2003)	(2002	(2002)	(1973)

06088300 MUDDY CREEK NEAR VAUGHN, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1968 - 2004*	
ANNUAL MEAN			107	
HIGHEST ANNUAL MEAN			160	1969
LOWEST ANNUAL MEAN			77.2	1985
HIGHEST DAILY MEAN	636	Jun 3	2,250	May 7, 1975
LOWEST DAILY MEAN	28	May 15	8.0	Dec 8, 1972
ANNUAL SEVEN-DAY MINIMUM			13	Dec 8, 1972
MAXIMUM PEAK FLOW	699	Jun 3	3,560	May 22, 1981
MAXIMUM PEAK STAGE	6.21	Jun 3	b14.72	May 22, 1981
INSTANTANEOUS LOW FLOW	a24	Mar 7	4.8	Mar 7, 2004
ANNUAL RUNOFF (AC-FT)			77,860	
10 PERCENT EXCEEDS			254	
50 PERCENT EXCEEDS			59	
90 PERCENT EXCEEDS			27	

*--During periods of operation [July 1968 to September 1987, March 1996 to October 2004, April 2005 to October 2005 (seasonal records)].
a--Gage height, 1.98 ft.
b--From floodmark.
e--Estimated.



06088300 MUDDY CREEK NEAR VAUGHN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to September 1982, March 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1982.
SUSPENDED-SEDIMENT DISCHARGE: July 1968 to September 1982.

REMARKS.--Chemical analyses of samples discontinued at end of water year 2004. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,400 microsiemens per centimeter (µS/cm) at 25°C, Apr. 29, 1976; minimum daily, 365 µS/cm at 25°C, Feb. 20, 1969.
SEDIMENT CONCENTRATION: Maximum daily mean, 13,000 mg/L, Mar. 18, 1978; minimum daily mean observed, 11 mg/L, Oct. 19, 1968, Oct. 19, 1972, Oct. 30, 1973.
SEDIMENT LOAD: Maximum daily, 63,900 tons, May 22, 1981; minimum daily, 0.84 ton, Jan. 8, 1973.

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, air, deg C (00020)	Temperature, water, deg C (00010)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV								
17...	1445	50	875	16.0	5.0	82	54	7.3
APR								
19...	1400	40	1,300	7.0	8.0	92	31	3.3
MAY								
24...	1450	115	412	15.0	14.0	91	222	69
JUN								
22...	0915	135	696	24.0	18.0	83	155	56
JUL								
27...	1530	279	600	34.0	19.0	74	90	68
AUG								
24...	1020	119	825	15.0	14.0	63	22	7.1

06088500 MUDDY CREEK AT VAUGHN, MT

LOCATION.--Lat 47°33'39", long 111°32'26" (NAD 27), in $SW^1/_4$ $SE^1/_4$ $NE^1/_4$ sec.24, T.21 N., R.1 E., Cascade County, Hydrologic Unit 10030104, on left bank at Vaughn, and at river mile 1.1.

DRAINAGE AREA.--314 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1925 to January 1926, April 1934 to September 1968, July 1971 to current year.

REVISED RECORDS.--WSP 856: 1937. WSP 1509: 1934-35, 1941(M). WSP 1559: 1956. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,330 ft (NGVD 29). May 21, 1925 to Feb. 8, 1926, nonrecording gage at site 500 ft downstream at different elevation. Apr. 19, 1934 to Sept. 30, 1955, at previous site at elevation. May 18, 1955 to Apr. 25, 1960 and Sept. 24, 1962 to Sept. 30, 1968, auxiliary crest-stage gage. Oct. 1, 1955 to Sept. 30, 1968, nonrecording gage at bridge 670 ft upstream at previous elevation. July 1, 1971 to May 9, 1996, 700 ft upstream at previous elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Natural flow increased by wastage from Sun River Canal and by return flow from irrigation. Diversions for irrigation of about 700 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1908 reached a stage of about 24 ft, previous elevation (discharge not determined); flood in June 1932 reached a stage of about 19 ft, previous elevation (discharge not determined); 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	109	67	e55	e30	e40	e26	36	38	208	333	376	99
2	122	68	e60	e28	e45	e28	35	38	390	319	349	97
3	119	69	56	e28	e42	e30	35	37	695	285	381	100
4	108	67	57	e29	e40	e32	35	37	587	308	344	96
5	106	67	e50	e30	e37	35	34	37	410	340	302	93
6	102	64	e50	e35	e35	34	33	36	502	276	311	88
7	98	61	e50	e35	e35	31	33	40	418	264	312	84
8	95	63	e54	e32	e38	33	33	39	337	288	298	83
9	97	62	53	e28	e40	32	33	37	298	315	307	83
10	95	61	51	e30	e45	32	33	40	289	308	271	94
11	95	61	61	e35	41	30	32	41	298	313	230	94
12	111	60	e55	e30	42	33	32	38	296	277	271	88
13	81	61	e50	e25	44	34	32	37	295	262	358	90
14	67	69	60	e20	38	33	38	64	251	325	336	88
15	71	60	56	e22	e35	34	45	77	227	341	321	83
16	68	59	59	e30	e35	33	36	110	228	323	296	70
17	61	59	49	e40	e35	33	34	265	245	332	267	76
18	58	58	52	e50	e35	23	36	246	231	332	237	94
19	59	58	49	e70	e30	31	40	229	224	249	242	84
20	59	57	46	e80	e25	34	41	235	208	263	230	81
21	87	54	41	e70	e27	35	45	194	204	265	211	78
22	80	e60	e40	e60	e28	39	43	137	181	278	179	77
23	77	e60	e30	e50	e30	29	39	201	153	344	150	81
24	75	e65	e40	e45	e28	e32	37	144	200	310	161	91
25	74	e60	e50	e40	e26	35	37	175	213	345	136	100
26	73	52	e45	e40	e25	41	36	170	177	298	125	89
27	74	46	e40	e40	e25	44	39	150	330	346	119	73
28	73	e50	e45	e40	e25	59	39	172	330	322	117	72
29	73	e55	e50	e40	---	47	38	149	292	312	116	78
30	71	e55	e45	e40	---	40	39	221	282	337	112	79
31	69	---	e35	e40	---	37	---	196	---	343	103	---
TOTAL	2,607	1,808	1,534	1,212	971	1,069	1,098	3,630	8,999	9,553	7,568	2,583
MEAN	84.1	60.3	49.5	39.1	34.7	34.5	36.6	117	300	308	244	86.1
MAX	122	69	61	80	45	59	45	265	695	346	381	100
MIN	58	46	30	20	25	23	32	36	153	249	103	70
AC-FT	5,170	3,590	3,040	2,400	1,930	2,120	2,180	7,200	17,850	18,950	15,010	5,120

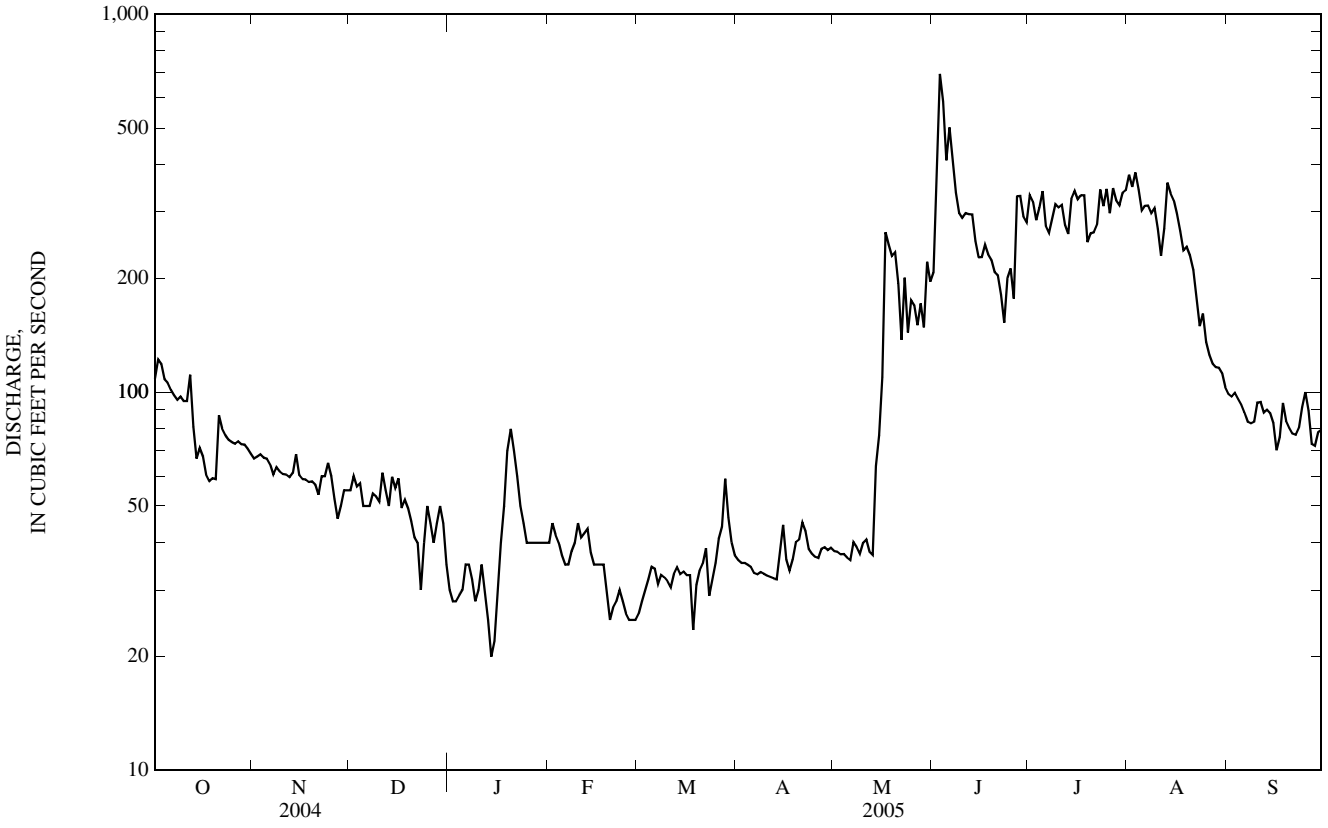
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2005, BY WATER YEAR (WY)*

MEAN	99.0	59.8	44.1	34.4	37.1	54.0	41.3	137	239	276	282	173
MAX	200	113	131	68.5	96.9	283	182	305	480	416	488	270
(WY)	(1963)	(1964)	(1957)	(1997)	(1952)	(1978)	(1975)	(1953)	(1953)	(1966)	(1975)	(1972)
MIN	26.3	30.7	16.8	17.3	10.0	22.4	18.3	52.6	86.0	52.1	44.0	40.2
(WY)	(1926)	(1926)	(1926)	(1936)	(1936)	(1988)	(1968)	(1935)	(1936)	(1925)	(1925)	(1925)

06088500 MUDDY CREEK AT VAUGHN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1925 - 2005*	
ANNUAL TOTAL	44,675		42,632			
ANNUAL MEAN	122		117		124	
HIGHEST ANNUAL MEAN					185	1975
LOWEST ANNUAL MEAN					61.2	1936
HIGHEST DAILY MEAN	383	Aug 24	695	Jun 3	3,500	Jun 4, 1953
LOWEST DAILY MEAN	16	May 5	20	Jan 14	4.8	Mar 29, 1977
ANNUAL SEVEN-DAY MINIMUM	20	Apr 22	26	Feb 24	7.0	Jan 24, 1936
MAXIMUM PEAK FLOW			759	Jun 3	b7,600	Jun 4, 1953
MAXIMUM PEAK STAGE			6.42	Jun 3	c17.70	Jun 4, 1953
INSTANTANEOUS LOW FLOW			a14	Mar 18	d2.0	Mar 16, 1972
ANNUAL RUNOFF (AC-FT)	88,610		84,560		90,100	
10 PERCENT EXCEEDS	290		309		293	
50 PERCENT EXCEEDS	61		61		70	
90 PERCENT EXCEEDS	23		32		26	

*--During periods of operation (June 1925 to January 1926, April 1934 to September 1968, July 1971 to current year).
a--Gage height, 2.05 ft, result of freezeup, may have been less during period of no gage-height record, Dec. 22 to Feb. 3, Feb. 6-10 and15-26.
b--From rating curve extended above 3,000 ft^3/s on basis of a slope-area measurement of peak flow.
c--From floodmark, site and datum then in use.
d--Gage height, 1.20 ft, result of freezeup.
e--Estimated.



06088500 MUDDY CREEK AT VAUGHN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968, 1971-82, October 1991 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1968, July 1972 to September 1982.
WATER TEMPERATURE: October 1967 to September 1968, July 1971 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: July 1971 to September 1982.

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, 5,400 microsiemens per centimeter (µS/cm) at 25.0°C, Apr. 30, 1976; minimum daily, 470 µS/cm at 25.0°C, June 8, 1974. WATER TEMPERATURE : Maximum daily, 25.5°C, June 18, 1974, June 28, 1979; minimum daily, 0.0°C, on many days during winters.
SEDIMENT CONCENTRATION: Maximum daily, 21,100 mg/L, May 22, 1981; minimum daily, 10 mg/L, Feb. 10, 1973.
SEDIMENT LOAD: Maximum daily, 127,000 tons, May 22, 1981; minimum daily, 0.68 ton, Feb. 10, 1973.

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)
NOV									
17...	1645	59	8.6	907	6.0	4.0	<.010	2.49	.012
JAN									
10...	1415	30	7.7	1,030	-5.0	0.0	.087	3.17	.015
FEB									
23...	1415	29	8.4	1,050	15.0	0.0	.017	3.12	.011
MAR									
22...	1500	38	8.4	1,160	0.0	4.0	.014	3.15	.019
APR									
19...	1540	40	8.7	1,170	9.0	8.5	.015	1.79	.016
MAY									
26...	1600	164	8.4	536	19.0	15.0	.018	.551	.006
JUN									
22...	1100	180	8.5	647	24.0	21.0	E.006	.738	.007
JUL									
28...	1200	328	8.5	637	34.0	19.0	<.010	.865	.006
AUG									
24...	1320	170	8.5	746	11.0	16.0	E.005	.679	.007

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Selenium, water, unfltrd ug/L (01147)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV							
17...	<.006	.010	2.75	2.1	82	46	7.3
JAN							
10...	<.006	.013	3.43	2.8	53	53	4.3
FEB							
23...	<.006	.022	3.65	3.2	91	42	3.3
MAR							
22...	<.006	.064	3.57	4.7	98	73	7.5
APR							
19...	<.006	.057	2.24	3.6	98	86	9.3
MAY							
26...	.008	.22	1.22	1.4	91	244	108
JUN							
22...	E.004	.127	1.14	1.8	87	156	76
JUL							
28...	.036	.188	1.36	1.5	69	230	204
AUG							
24...	E.003	.059	1.01	1.5	86	58	27

E--Estimated.

06089000 SUN RIVER NEAR VAUGHN, MT

LOCATION.--Lat 47°31'33", long 111°30'40" (NAD 27), in $SE^1/_4SW^1/_4SW^1/_4$ sec.32, T.21 N., R.2 E., Cascade County, Hydrologic Unit 10030104, on right bank 2.3 mi downstream from Muddy Creek, 2.8 mi southeast of Vaughn, and at river mile 15.0.

DRAINAGE AREA.--1,849 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to October 1897 (gage heights and discharge measurements only, published as "near Great Falls"), April 1934 to current year. Monthly discharge only for April 1934, published in WSP 1309.

REVISED RECORDS.--WSP 786: 1934. WSP 1729: Drainage area. WDR -03-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,340 ft (NGVD 29). July 11 to Oct. 30, 1897, nonrecording gage at site 0.6 mi downstream at different elevation. Apr. 19 to Aug. 3, 1934, non-recording gage 1.4 mi downstream at different elevation. Aug. 4, 1934 to Oct. 15, 2002, water-stage recorder 1.4 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated by Gibson, Pishkun, Willow Creek, and Nilan Reservoirs. Diversion for irrigation of about 110,000 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1964 exceeded the stage of the June 1908 flood by about 3 ft and is the highest since 1908, 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	317	332	e260	e180	259	188	173	198	683	522	540	344
2	333	334	e280	e150	249	183	171	191	1,260	498	474	350
3	335	344	e300	e160	246	174	172	174	2,310	447	522	341
4	324	348	e280	e170	243	171	174	170	3,060	470	458	304
5	312	344	e270	e170	239	170	172	152	3,600	495	416	293
6	280	338	e270	e180	e230	168	166	160	3,380	381	430	282
7	245	332	e270	e160	e200	165	161	156	3,090	344	425	269
8	232	337	e250	e150	e180	168	160	160	3,060	353	418	269
9	235	336	e270	e160	e200	172	163	191	1,980	377	460	268
10	231	336	303	e180	e230	169	164	238	1,760	367	428	280
11	259	339	325	e200	e250	167	161	660	2,390	394	382	285
12	284	336	319	e170	e240	175	161	1,060	2,460	363	478	281
13	318	327	e220	e130	e230	187	164	833	2,180	352	650	276
14	325	331	e230	e110	e230	187	178	651	1,700	405	639	294
15	372	328	304	e100	e220	185	199	570	1,240	410	634	261
16	420	322	280	e150	e220	181	181	811	1,160	376	597	251
17	368	319	273	e200	e220	179	171	2,310	1,910	394	524	267
18	340	314	270	e300	e220	161	174	3,630	2,070	429	492	314
19	341	313	269	e350	e200	169	183	3,580	1,970	368	498	298
20	336	309	263	e380	e190	169	191	2,770	1,720	389	459	253
21	367	305	e210	e400	e180	178	220	2,080	1,380	364	435	249
22	359	e290	e180	e350	e200	186	222	1,990	1,300	351	380	249
23	347	e270	e170	e330	e220	174	199	1,930	1,250	420	348	254
24	339	e300	e200	e350	e230	151	187	1,750	1,100	388	387	297
25	336	320	e250	e320	e210	157	180	1,310	797	432	361	341
26	339	299	e230	301	e190	187	167	913	522	423	343	323
27	347	e250	e210	280	e180	199	173	711	671	503	349	300
28	348	e230	e200	280	e190	226	171	659	699	461	337	302
29	353	e250	e250	268	---	205	177	594	545	452	332	300
30	347	e250	e300	259	---	187	159	657	502	478	345	302
31	341	---	e220	254	---	179	---	653	---	499	346	---
TOTAL	10,030	9,383	7,926	7,142	6,096	5,517	5,294	31,912	51,749	12,905	13,887	8,697
MEAN	324	313	256	230	218	178	176	1,029	1,725	416	448	290
MAX	420	348	325	400	259	226	222	3,630	3,600	522	650	350
MIN	231	230	170	100	180	151	159	152	502	344	332	249
AC-FT	19,890	18,610	15,720	14,170	12,090	10,940	10,500	63,300	102,600	25,600	27,540	17,250

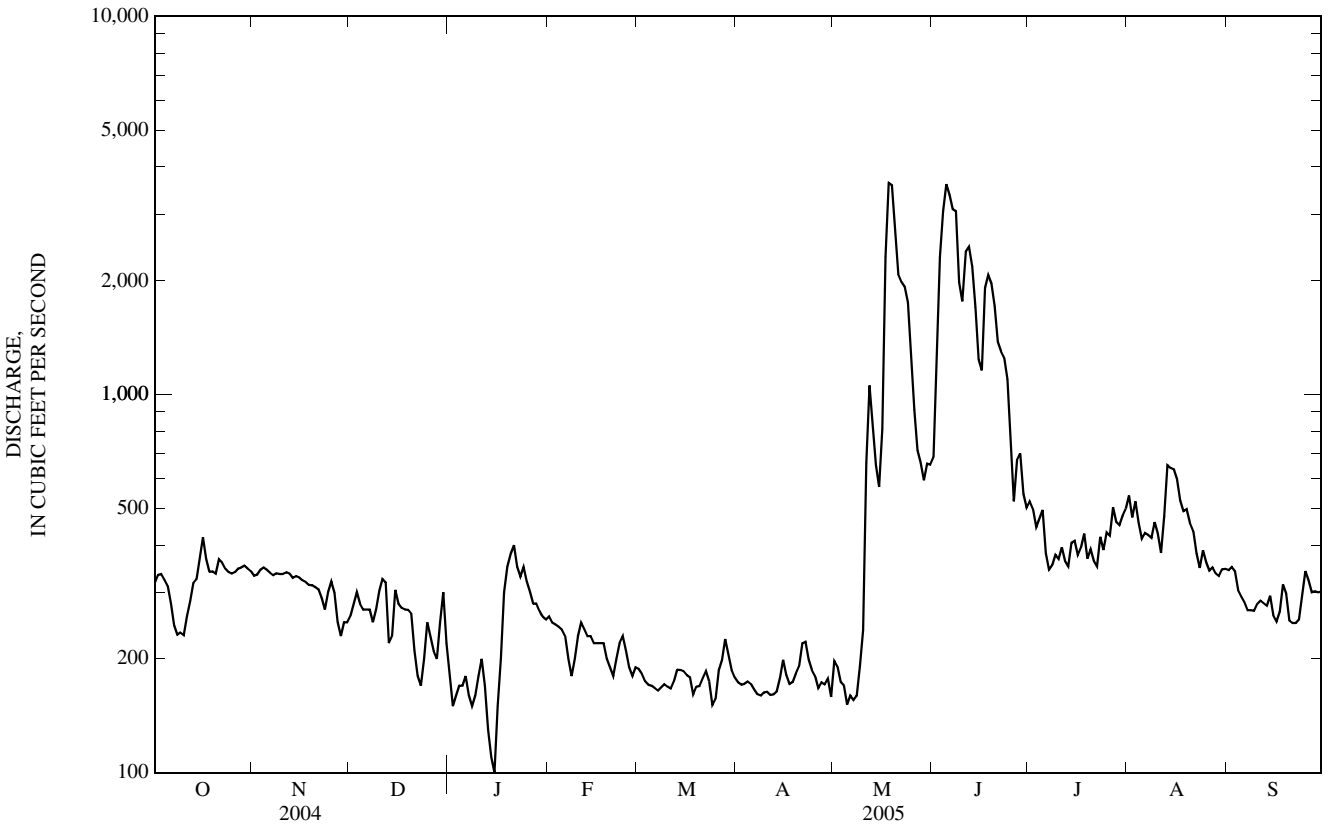
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2005, BY WATER YEAR (WY)

MEAN	378	337	299	255	264	321	489	1,549	2,501	772	561	439
MAX	779	908	896	656	601	868	3,000	4,333	8,014	2,508	1,025	1,040
(WY)	(1952)	(1990)	(1996)	(1986)	(1986)	(1969)	(1934)	(1976)	(1964)	(1975)	(1975)	(1993)
MIN	143	149	114	66.5	82.4	133	93.3	87.1	280	265	250	164
(WY)	(1937)	(1937)	(1936)	(1937)	(1936)	(1941)	(1941)	(1941)	(1941)	(1939)	(1940)	(1936)

06089000 SUN RIVER NEAR VAUGHN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1934 - 2005	
ANNUAL TOTAL	134,068		170,538			
ANNUAL MEAN	366		467		675	
HIGHEST ANNUAL MEAN					1,307	1943
LOWEST ANNUAL MEAN					210	1941
HIGHEST DAILY MEAN	1,690	Jun 8	3,630	May 18	37,000	Jun 10, 1964
LOWEST DAILY MEAN	97	May 6	100	Jan 15	23	May 26, 1941
ANNUAL SEVEN-DAY MINIMUM	108	May 3	149	Jan 10	38	May 21, 1941
MAXIMUM PEAK FLOW			3,850	May 18	a53,500	Jun 9, 1964
MAXIMUM PEAK STAGE			4.33	May 18	b23.40	Jun 9, 1964
INSTANTANEOUS LOW FLOW					c20	Apr 24, 1944
ANNUAL RUNOFF (AC-FT)	265,900		338,300		489,000	
10 PERCENT EXCEEDS	592		803		1,360	
50 PERCENT EXCEEDS	319		300		360	
90 PERCENT EXCEEDS	151		170		177	

a--42,220 ft^3/s in main channel plus 11,300 ft^3/s in bypass channel.
b--From floodmark.
c--Gage height, 0.52 ft, site and datum then in use; result of irrigation.
e--Estimated.



06089000 SUN RIVER NEAR VAUGHN, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

INSTRUMENTATION.--Water temperature probe installed in August 1999.

REMARKS.--Daily water temperature records are rated excellent except for May 27 to June 18, which are rated fair. Missing daily water temperature data from June 19 to July 28 due toprobe being buried by silt. Several unpublished observations of specific conductance and water temperature were made during the year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 2003.
WATER TEMPERATURE: October 1968 to September 1979, August 1999 to September 2003, October 2004 to September 2005.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,610 microsiemens per centimeter (µS/cm) at 25°C, Apr. 8, 1977; minimum daily, 214 µS/cm at 25°C, June 8, 1970.
WATER TEMPERATURE: Maximum, 29.5°C, July 14 and18, 2002; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 22.5°C, Jul 31 and Aug. 2; minimum, 0.0°C, many days November 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)
NOV									
18...	1600	320	8.5	706	10.0	4.0	E.007	.842	.005
JAN									
11...	1330	200	7.4	737	6.0	0.0	.036	.920	.007
FEB									
23...	1600	220	7.8	780	15.0	0.0	.023	.922	.004
MAR									
23...	1545	171	8.2	900	-2.0	2.5	.022	.734	.006
APR									
20...	0900	192	8.4	830	4.0	7.5	.027	.468	.005
MAY									
27...	1000	735	8.2	479	18.0	13.0	.011	.139	.002
JUN									
22...	1245	1,270	8.4	457	31.0	20.0	E.006	.167	.002
JUL									
28...	1615	463	8.6	654	32.0	21.5	E.007	.575	.005
AUG									
24...	1730	378	8.5	740	17.0	17.5	.012	.301	.004

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Selenium, water, unfltrd ug/L (01147)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV							
18...	<.006	.007	.97	1.2	80	44	38
JAN							
11...	<.006	.008	1.11	1.2	69	40	22
FEB							
23...	<.006	.012	1.16	2.0	88	16	9.5
MAR							
23...	.030	.018	.94	2.2	97	24	11
APR							
20...	<.006	.019	.71	1.6	94	22	11
MAY							
27...	<.006	.064	.44	1.0	95	62	123
JUN							
22...	<.006	.052	.42	.8	94	53	182
JUL							
28...	.024	.085	.95	1.3	96	46	58
AUG							
24...	<.006	.040	.64	1.5	95	44	45

E--Estimated.

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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	11.0	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2	12.0	9.5	11.0	4.5	2.0	3.5	0.5	0.0	0.0	0.0	0.0	0.0
3	12.5	10.0	11.5	5.0	3.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
4	12.5	10.5	11.5	3.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
5	12.5	10.0	11.5	4.5	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
6	12.5	10.0	11.5	5.5	4.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0
7	13.0	11.0	12.0	5.5	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
8	12.5	10.0	11.5	5.5	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
9	12.5	11.0	11.5	5.5	4.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0
10	11.5	9.5	11.0	6.0	4.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0
11	11.0	8.5	10.0	4.5	2.5	3.5	1.5	0.0	0.5	0.0	0.0	0.0
12	11.0	9.0	10.0	2.5	1.5	2.0	2.0	0.5	1.5	0.0	0.0	0.0
13	11.0	9.0	10.0	2.0	0.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0
14	11.0	10.0	10.5	2.0	0.5	1.5	1.0	0.0	0.5	0.0	0.0	0.0
15	11.0	10.0	10.5	3.5	1.5	2.5	1.5	0.0	1.0	0.0	0.0	0.0
16	10.0	9.0	9.5	5.0	3.5	4.0	1.0	0.5	1.0	0.0	0.0	0.0
17	9.0	6.0	7.5	4.5	3.5	4.0	2.0	1.0	1.5	0.0	0.0	0.0
18	6.0	5.0	5.5	4.0	2.5	3.0	2.0	1.0	1.5	0.0	0.0	0.0
19	5.0	4.5	4.5	2.5	1.5	2.0	3.5	1.5	2.5	0.0	0.0	0.0
20	5.5	4.0	5.0	1.5	0.0	1.0	2.5	0.5	1.5	0.0	0.0	0.0
21	6.5	5.0	6.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
22	7.0	6.0	6.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
23	6.0	5.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	5.0	4.0	4.5	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
25	4.0	3.0	3.5	3.0	1.5	2.5	0.0	0.0	0.0	1.0	0.0	0.5
26	4.0	3.0	3.5	2.5	0.5	2.0	0.0	0.0	0.0	1.5	0.5	1.0
27	4.5	3.5	4.0	0.5	0.0	0.0	0.0	0.0	0.0	1.5	0.5	1.0
28	5.0	4.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.5	1.0
29	4.5	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.5
30	4.5	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	1.0
31	4.0	2.5	3.0	---	---	---	0.0	0.0	0.0	2.0	0.0	1.0
MONTH	13.0	2.5	8.0	6.0	0.0	2.5	3.5	0.0	0.5	2.0	0.0	0.0
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	0.5	1.5	4.0	0.5	2.0	8.5	5.5	7.0	9.0	5.0	7.0
2	2.5	1.0	2.0	5.0	1.0	3.0	9.0	6.0	7.5	11.5	5.5	8.5
3	2.0	1.5	2.0	5.0	1.5	3.0	10.0	6.5	8.0	14.0	7.5	11.0
4	2.5	1.5	2.0	5.5	1.5	3.5	11.0	7.0	9.0	16.5	10.5	13.5
5	2.0	0.0	1.0	6.0	2.5	4.5	11.5	7.5	9.5	18.0	12.0	15.0
6	0.0	0.0	0.0	7.0	4.0	5.5	12.5	7.5	10.0	18.5	14.0	16.5
7	0.0	0.0	0.0	6.5	3.5	5.0	13.0	9.5	11.0	16.5	14.5	15.5
8	0.0	0.0	0.0	8.0	4.5	6.0	13.0	10.0	11.5	14.5	12.5	13.5
9	0.5	0.0	0.0	9.0	6.5	7.5	10.5	8.0	9.0	13.0	12.0	12.5
10	0.5	0.0	0.0	9.0	5.5	7.5	10.0	7.0	8.0	12.0	10.5	11.5
11	0.5	0.0	0.0	7.0	5.5	6.5	10.0	6.5	8.5	10.5	8.5	9.0
12	0.5	0.0	0.0	6.0	4.0	5.0	12.0	7.0	9.5	9.0	7.0	8.0
13	0.5	0.0	0.0	4.5	3.0	3.5	13.0	8.5	10.5	12.0	8.0	10.0
14	1.0	0.0	0.0	5.0	2.0	3.5	10.0	7.5	9.0	15.0	11.5	13.5
15	0.5	0.0	0.0	6.0	2.5	4.0	9.5	5.5	7.5	16.0	13.5	15.0
16	0.5	0.0	0.0	6.0	4.0	5.0	12.0	6.5	9.5	16.5	15.0	16.0
17	0.5	0.0	0.0	4.5	1.5	3.0	13.5	9.5	11.5	15.5	11.0	13.0
18	0.5	0.0	0.0	4.0	0.5	2.0	11.0	9.0	10.0	11.5	10.0	11.0
19	0.5	0.0	0.0	3.0	0.0	1.0	9.5	8.0	8.5	12.5	11.0	11.5
20	0.0	0.0	0.0	3.0	0.5	1.5	8.5	7.0	7.5	12.5	11.5	12.0
21	0.5	0.0	0.0	5.0	1.0	3.0	9.0	6.5	7.5	12.5	11.5	12.0
22	0.5	0.0	0.0	4.5	2.0	3.5	12.0	7.0	9.5	13.0	11.5	12.0
23	0.5	0.0	0.0	2.5	0.5	1.5	14.5	9.5	12.0	13.0	11.5	12.5
24	0.5	0.0	0.0	3.5	0.0	1.5	16.5	11.5	14.0	13.0	11.5	12.0
25	0.5	0.0	0.0	4.0	0.0	2.0	17.0	12.0	14.5	13.0	12.0	12.5
26	1.0	0.0	0.0	4.5	1.0	2.5	14.5	12.0	13.5	13.5	12.5	13.0
27	1.5	0.0	0.5	7.5	3.0	5.5	12.0	7.5	9.5	16.5	12.5	14.5
28	2.5	0.0	1.0	9.5	6.5	8.0	8.0	6.0	7.0	17.5	15.0	16.5
29	---	---	---	9.0	5.5	7.0	9.0	4.5	6.5	17.0	15.5	16.0
30	---	---	---	7.5	5.0	6.0	8.0	5.5	6.5	16.5	14.0	15.5
31	---	---	---	9.0	5.0	6.5	---	---	---	17.5	14.5	16.0
MONTH	2.5	0.0	05	9.5	0.0	4.0	17.0	4.5	9.5	18.5	5.0	13.0

06089000 SUN RIVER NEAR VAUGHN, 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	17.0	13.5	15.5	---	---	---	22.0	20.5	21.0	17.5	15.0	16.5
2	13.5	10.5	12.0	---	---	---	22.5	20.5	21.0	18.5	15.5	17.0
3	12.0	9.5	10.5	---	---	---	21.5	20.0	20.5	18.5	16.5	17.5
4	12.5	12.0	12.5	---	---	---	21.5	19.0	20.0	19.0	17.0	18.0
5	13.0	12.5	12.5	---	---	---	22.0	19.0	20.5	18.5	16.5	17.5
6	13.0	12.0	12.5	---	---	---	22.0	19.5	21.0	18.5	16.0	17.5
7	14.0	11.5	12.0	---	---	---	22.0	19.5	21.0	18.5	15.5	17.0
8	13.5	11.5	12.0	---	---	---	21.5	19.5	20.5	18.5	15.5	17.0
9	13.0	11.0	12.0	---	---	---	21.5	19.0	20.0	18.0	16.0	16.5
10	14.5	12.5	13.5	---	---	---	21.5	19.0	20.0	16.0	12.5	14.0
11	15.0	14.5	14.5	---	---	---	20.5	18.5	19.5	13.5	11.0	12.5
12	14.5	12.0	13.5	---	---	---	19.0	15.0	17.0	13.0	11.0	12.0
13	14.0	11.0	12.0	---	---	---	16.0	14.0	15.0	14.0	11.0	12.5
14	16.0	13.5	14.5	---	---	---	17.0	15.0	16.0	15.0	12.5	13.5
15	18.5	16.0	17.0	---	---	---	18.5	16.0	17.5	15.5	13.0	14.5
16	18.5	17.0	18.0	---	---	---	19.5	17.5	18.5	16.0	13.5	15.0
17	17.5	15.5	16.0	---	---	---	18.5	17.0	18.0	14.5	12.5	13.5
18	15.5	13.5	14.5	---	---	---	17.0	15.5	16.0	14.0	12.0	13.0
19	---	---	---	---	---	---	17.0	14.5	16.0	13.5	12.0	12.5
20	---	---	---	---	---	---	18.5	15.5	17.0	14.5	11.5	13.0
21	---	---	---	---	---	---	19.5	16.5	18.0	15.0	12.5	13.5
22	---	---	---	---	---	---	19.5	18.0	19.0	14.0	12.5	13.5
23	---	---	---	---	---	---	20.5	18.0	19.0	12.5	10.5	11.5
24	---	---	---	---	---	---	18.5	16.0	17.5	10.5	9.0	9.5
25	---	---	---	---	---	---	17.5	15.0	16.5	10.5	8.0	9.5
26	---	---	---	---	---	---	18.5	16.0	17.0	12.0	9.5	11.0
27	---	---	---	---	---	---	19.0	16.5	18.0	11.5	10.0	11.0
28	---	---	---	---	---	---	20.0	17.0	18.5	11.0	8.5	10.0
29	---	---	---	21.5	19.0	20.0	19.5	17.5	18.5	11.0	9.5	10.5
30	---	---	---	22.0	19.5	20.5	18.5	16.5	17.5	13.5	11.0	12.5
31	---	---	---	22.5	19.5	21.0	17.0	15.0	16.5	---	---	---
MONTH	18.5	9.5	13.5	22.5	19.0	20.5	22.5	14.0	18.5	19.0	8.0	14.0

06090300 MISSOURI RIVER NEAR GREAT FALLS, MT

LOCATION.--Lat 47°35'04", long 111°03'35" (NAD 27), in $SW^1/_4SE^1/_4SW^1/_4$ sec.11, T.21 N., R.5 E., Cascade County, Hydrologic Unit 10030102, on left bank 700 ft downstream from Morony Dam, 12.6 mi northeast of Great Falls, and at river mile 2,105.4.

DRAINAGE AREA.--23,292 mi^2.

PERIOD OF RECORD.--May to July 1953 (in WSP 1320-B), October 1956 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,807.21 ft (NGVD 29). Prior to July 27, 1977, nonrecording gage at same site at elevation 2.00 ft higher. July 27, 1977 to May 26, 1987, at site 600 ft upstream at elevation 2.00 ft higher. October 1971 to July 27, 1977, discharges were obtained from the Montana Power Company at Rainbow Dam 7.05 mi upstream. Prior to October 1971, Foxboro meters were used for determining discharge through powerplant. Water-stage recorder on Morony Reservoir was used for determining head on taintor gates with elevation of gage at sea level (level by Montana Power Company).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by 18 smaller irrigation reservoirs and powerplants upstream, Clark Canyon Reservoir (station number 06015300), and Canyon Ferry Lake (station number 06058500). Diversion for irrigation of about 750,400 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	3,790	4,780	4,150	3,060	4,350	4,190	4,090	5,320	5,880	9,280	5,950	5,630
2	4,040	4,930	4,270	2,800	4,280	4,180	4,240	5,370	6,280	9,010	5,870	5,650
3	4,020	4,870	4,260	3,650	4,350	4,040	3,890	5,280	8,650	8,970	5,510	5,370
4	4,050	4,930	4,270	3,750	4,130	4,270	4,230	5,190	10,400	8,730	5,830	5,290
5	4,160	4,630	4,280	4,190	4,220	4,040	4,130	5,180	12,400	8,720	5,530	5,190
6	3,960	4,500	4,280	4,160	4,200	3,900	4,270	5,290	11,300	8,650	5,200	5,160
7	4,000	4,600	4,170	4,290	3,300	4,160	4,160	5,060	11,000	8,520	5,420	5,160
8	3,980	4,610	4,460	4,700	3,370	4,130	4,150	5,560	10,400	8,420	5,560	5,180
9	3,970	4,660	4,430	4,680	3,730	3,990	4,210	6,040	9,990	8,040	5,140	5,060
10	3,940	4,700	4,390	4,670	4,540	3,900	4,410	6,060	8,900	8,180	5,410	5,070
11	4,000	4,660	4,600	4,670	4,600	4,040	4,300	6,990	9,080	8,370	5,190	4,970
12	3,970	4,530	4,420	4,710	4,950	4,090	4,380	10,200	9,400	8,520	e5,100	4,970
13	4,130	4,590	4,400	4,830	4,580	4,200	4,050	9,900	9,050	8,570	e5,300	5,010
14	4,200	4,660	4,190	4,540	3,970	4,170	4,600	8,670	9,080	7,930	e5,500	5,000
15	4,270	4,530	4,370	4,140	3,930	4,400	4,330	7,670	8,420	7,570	e5,800	5,060
16	4,310	4,610	4,410	4,160	3,970	4,130	4,560	8,270	7,920	7,300	5,580	4,980
17	4,390	4,620	4,480	4,360	3,850	4,350	4,620	8,810	8,340	6,530	e5,600	5,450
18	4,250	4,680	4,420	5,190	4,290	3,850	4,600	10,100	9,330	6,670	e5,300	5,130
19	4,380	4,710	4,410	5,390	4,010	4,120	4,570	10,400	10,300	6,250	e5,200	5,580
20	4,540	4,590	4,510	6,220	4,240	4,100	4,690	9,330	10,400	5,950	e5,200	5,460
21	4,640	4,480	4,250	6,090	3,910	4,090	4,780	8,560	10,000	6,030	e5,500	5,130
22	4,650	4,570	4,130	5,590	4,040	4,130	5,130	8,230	9,680	5,950	5,180	5,000
23	4,790	4,450	3,350	5,570	4,080	4,120	5,160	8,160	9,670	5,790	e5,000	5,090
24	5,010	4,540	2,570	5,770	3,920	4,200	4,980	7,930	9,210	6,240	e5,200	5,130
25	5,120	4,830	3,390	6,090	4,190	4,080	5,230	7,650	9,660	5,810	e5,300	5,230
26	5,040	4,160	4,920	5,880	4,240	4,280	5,180	7,010	8,890	5,960	e5,200	5,350
27	4,990	4,470	4,570	5,450	4,230	4,420	5,470	6,480	8,640	5,940	5,460	5,250
28	4,990	4,390	4,210	4,820	4,150	4,360	5,490	6,250	9,010	5,940	5,510	5,110
29	5,100	4,400	3,670	4,270	---	4,400	5,650	6,120	9,120	5,770	5,480	5,160
30	4,930	4,360	4,310	4,440	---	4,190	5,480	6,000	9,210	5,530	5,210	5,060
31	4,720	---	4,040	4,350	---	4,350	---	6,110	---	5,890	5,620	---
TOTAL	136,330	138,040	130,580	146,480	115,620	128,870	139,030	223,190	279,610	225,030	167,850	155,880
MEAN	4,398	4,601	4,212	4,725	4,129	4,157	4,634	7,200	9,320	7,259	5,415	5,196
MAX	5,120	4,930	4,920	6,220	4,950	4,420	5,650	10,400	12,400	9,280	5,950	5,650
MIN	3,790	4,160	2,570	2,800	3,300	3,850	3,890	5,060	5,880	5,530	5,000	4,970
AC-FT	270,400	273,800	259,000	290,500	229,300	255,600	275,800	442,700	554,600	446,300	332,900	309,200

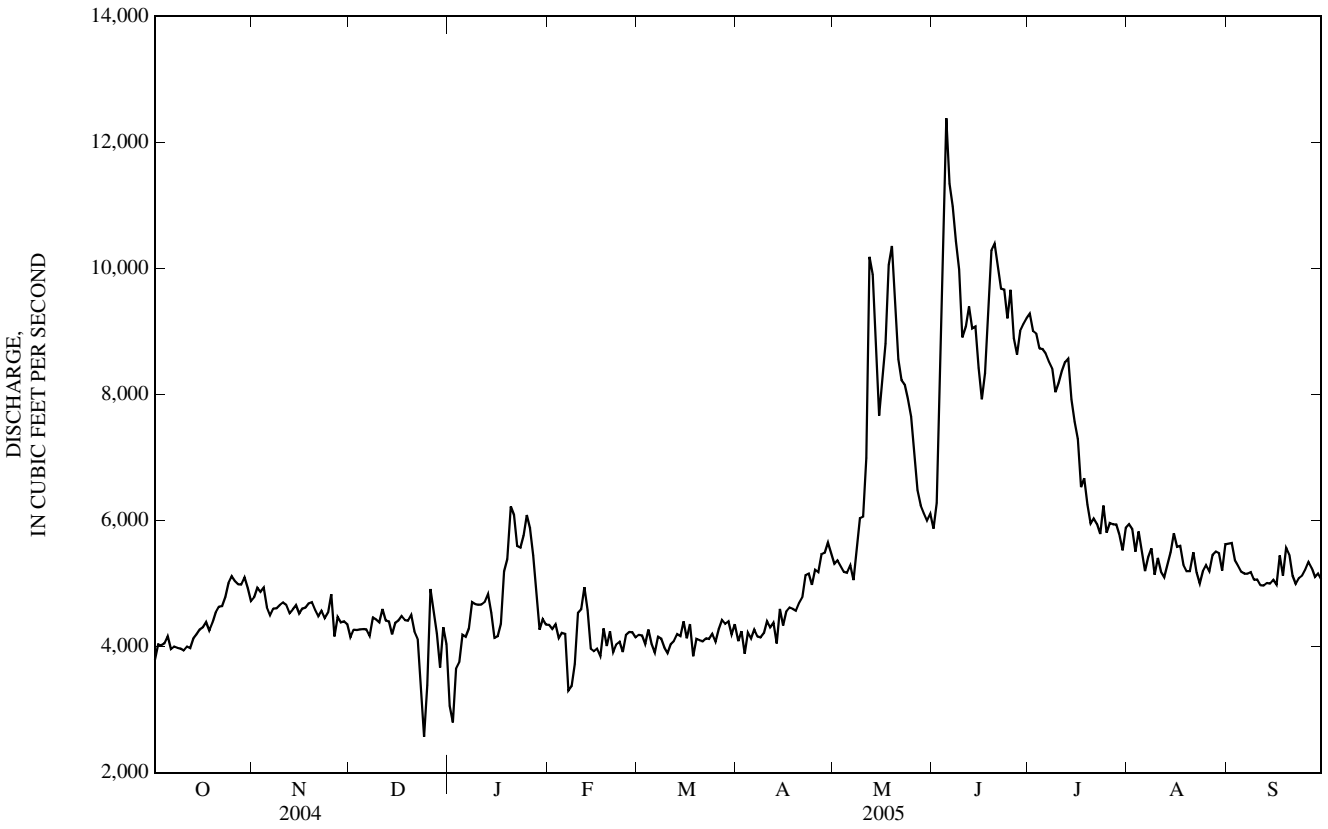
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	5,742	6,088	6,066	6,226	6,414	6,709	7,348	10,760	13,480	8,511	5,884	5,517
MAX	11,940	10,430	11,520	8,232	9,252	10,820	13,200	24,780	30,160	23,560	9,946	9,992
(WY)	(1966)	(1966)	(1960)	(1971)	(1997)	(1968)	(1976)	(1976)	(1964)	(1975)	(1993)	(1984)
MIN	3,829	3,950	3,773	3,869	4,030	4,021	3,526	4,454	3,758	3,817	3,719	3,109
(WY)	(1989)	(1993)	(2002)	(2002)	(2002)	(1961)	(1961)	(1961)	(1977)	(1977)	(1988)	(1959)

06090300 MISSOURI RIVER NEAR GREAT FALLS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	1,707,200		1,986,510			
ANNUAL MEAN	4,664		5,442		7,395	
HIGHEST ANNUAL MEAN					11,490	1975
LOWEST ANNUAL MEAN					4,349	2001
HIGHEST DAILY MEAN	7,770	May 29	12,400	Jun 5	63,400	Jun 10, 1964
LOWEST DAILY MEAN	2,570	Dec 24	2,570	Dec 24	1,760	Apr 16, 1961
ANNUAL SEVEN-DAY MINIMUM	3,720	Jan 1	3,610	Dec 29	2,740	Sep 5, 1959
MAXIMUM PEAK FLOW			13,100	Jun 4	a72,000	Jun 10, 1964
MAXIMUM PEAK STAGE			4.95	Jun 4	b9.02	May 24, 1981
INSTANTANEOUS LOW FLOW					c1.0	Apr 16, 1962
ANNUAL RUNOFF (AC-FT)	3,386,000		3,940,000		5,357,000	
10 PERCENT EXCEEDS	5,320		8,650		11,700	
50 PERCENT EXCEEDS	4,610		4,920		6,280	
90 PERCENT EXCEEDS	3,990		4,040		4,200	

a--From hydrographic comparison with nearby stations.
b--Site and datum then in use.
c--About, powerplant shutdown.
e--Estimated.



06090650 LAKE CREEK NEAR POWER, MT

LOCATION.--Lat 47°41'55", long 111°23'23" (NAD 27), in $SE^1/_4SE^1/_4SE^1/_4$ sec.31, T.23 N., R.3 E., Chouteau County, Hydrologic Unit 10030102, on left bank 1.9 mi downstream from county bridge, 1.5 mi upstream from Benton Lake, and 14 mi east of Power.

DRAINAGE AREA.--83.8 mi^2, of which 11.4 mi^2 is noncontributing.

PERIOD OF RECORD.--July 1990 to current year (seasonal records only).

GAGE.--Water-stage recorder. Parshall flume since Apr. 1, 1997. Prior to Apr. 1, 1997 water-stage recorder located at site 1.9 mi upstream. Elevation of gage is 3,620 ft (NGVD 29).

REMARKS.--Seasonal records fair. Seasonal flows from Muddy Creek diverted into Lake Creek, most years. 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				0.00	0.06	0.00	0.38	0.00	13	16		
2				0.00	0.06	0.53	0.28	0.00	13	16		
3				0.00	0.06	76	0.21	0.00	13	17		
4				0.00	0.06	68	0.16	0.00	13	17		
5				0.00	0.06	12	0.09	0.00	12	17		
6				0.03	0.06	5.7	0.00	0.00	13	17		
7				0.18	0.13	3.1	0.00	0.00	13	16		
8				0.22	0.17	1.7	0.00	0.00	13	16		
9				0.16	0.17	1.2	0.00	0.00	13	17		
10				0.23	0.15	1.1	0.00	0.00	14	17		
11				0.23	0.08	0.95	0.00	9.5	14	17		
12				0.24	0.06	0.82	0.00	26	13	17		
13				0.22	0.06	1.0	0.00	28	14	17		
14				0.41	0.04	1.0	0.00	28	16	16		
15				0.63	0.01	0.76	0.00	28	14	17		
16				0.53	0.04	0.63	0.00	28	12	17		
17				0.38	0.16	0.97	0.00	28	9.0	16		
18				0.33	0.16	0.82	0.00	28	14	16		
19				0.38	0.09	0.67	0.00	27	13	16		
20				0.41	0.06	0.54	0.00	27	12	16		
21				0.47	0.04	0.45	0.00	26	14	16		
22				0.44	0.00	0.38	0.00	26	14	16		
23				0.38	0.00	0.34	0.00	26	14	15		
24				0.32	0.00	0.29	0.00	27	15	15		
25				0.25	0.00	0.29	0.00	23	15	15		
26				0.19	0.00	0.38	0.00	19	15	15		
27				0.17	0.00	0.40	0.00	15	26	15		
28				0.15	0.00	0.49	0.00	14	25	15		
29				0.14	0.00	0.42	0.00	12	16	14		
30				0.10	0.00	0.39	0.00	11	15	15		
31				---	0.00	---	0.00	14	---	15		
TOTAL				7.19	1.78	181.32	1.12	470.50	430.0	497		
MEAN				0.24	0.06	6.04	0.04	15.2	14.3	16.0		
MAX				0.63	0.17	76	0.38	28	26	17		
MIN				0.00	0.00	0.00	0.00	0.00	9.0	14		
AC-FT				14	3.5	360	2.2	933	853	986		

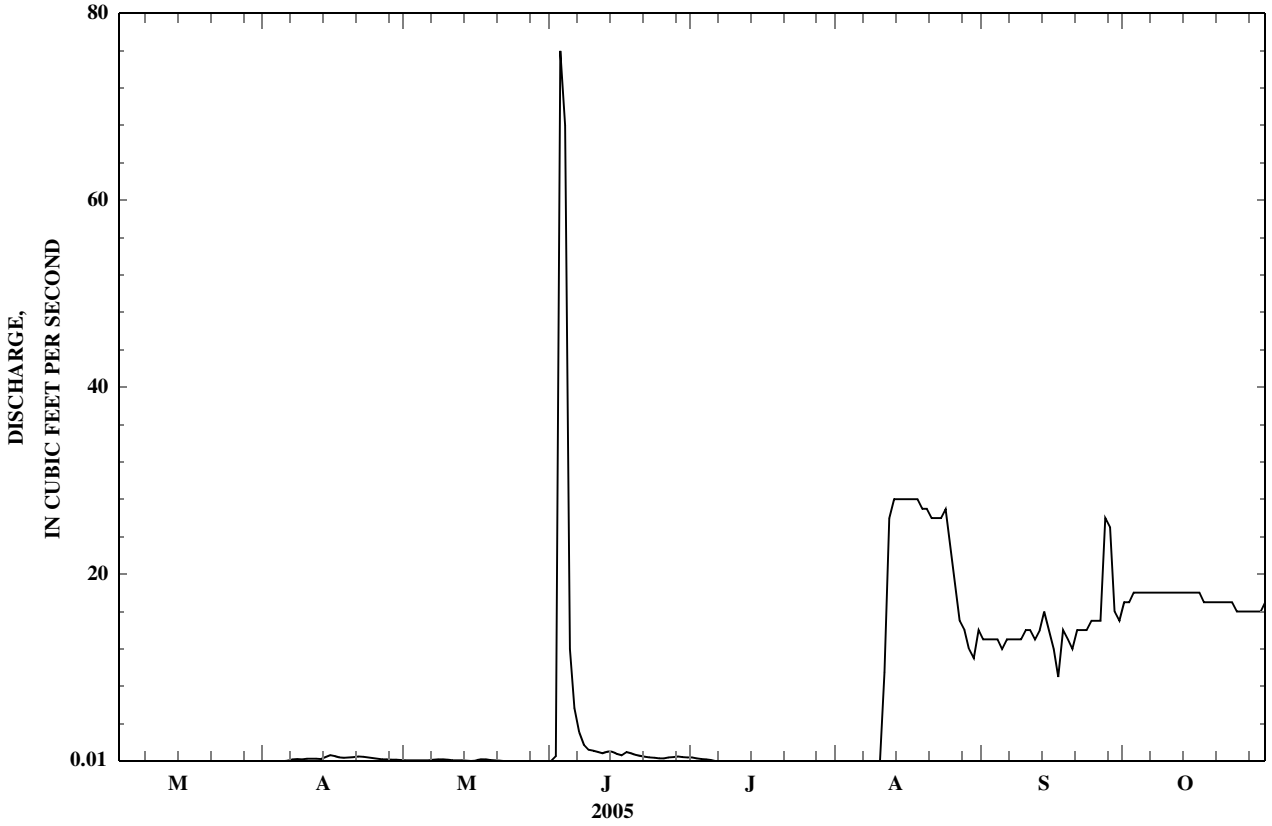
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1990 - 2005

MEAN	3.64	2.85	11.8	12.0	1.21	12.4	25.4	16.4	3.85
MAX	24.8	8.56	30.9	29.8	9.51	35.5	38.1	30.1	10.2
(WY)	(1993)	(1993)	(1992)	(1991)	(1993)	(1990)	(1990)	(2000)	(1999)
MIN	0.05	0.01	0.06	0.05	0.00	0.35	11.3	0.19	0.22
(WY)	(2000)	(2003)	(2005)	(2004)	(1992)	(2002)	(2003)	(1994)	(2003)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1990 - 2005	
HIGHEST DAILY MEAN	76	Jun 3	300	Mar 6, 1993
LOWEST DAILY MEAN	.00	many days	a0.00	Jul 1, 1990
MAXIMUM PEAK FLOW	112	Jun 3	b300	Mar 6, 1993
MAXIMUM PEAK STAGE	2.63	Jun 3	c7.30	Mar 6, 1993

a--Many days most years.
b--Estimated daily discharge during period of ice effect.
c--From floodmarks, site and datum then in use.

06090650 LAKE CREEK NEAR POWER, MT—Continued



06090800 MISSOURI RIVER AT FORT BENTON, MT

LOCATION.--Lat 47°49'03", long 110°39'59" (NAD 27), in $NW^1/_4$ $SE^1/_4$ $SE^1/_4$ sec.23, T.24 N., R.8 E., Chouteau County, Hydrologic Unit 10030102, on left bank at downstream side of Old Fort Benton Bridge at Fort Benton, 3.8 mi upstream from Shonkin Creek, and at river mile 2,073.2.

DRAINAGE AREA.--24,749 mi^2.

PERIOD OF RECORD.--October 1890 to current year. Records for June 1881 to September 1890, published in WSP 546 and 761, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 746: 1932. WSP 1146: 1891-1907, 1908(M), 1909-18, 1937-38. WSP 1209: 1948(P). WSP 1309: 1929(M). WSP 1629: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 2,614.05 ft (NGVD 1929). Prior to Oct. 11, 1920, nonrecording gages, and Oct. 11, 1920, to Apr. 25, 1924, water-stage recorder, all at present site at elevation 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by 18 smaller irrigation reservoirs and powerplants, Clark Canyon Reservoir (station number 06015300), and Canyon Ferry Lake (station number 06058500). Diversions for irrigation of about 751,000 acres upstream from station. Extreme diurnal fluctuation caused by powerplant at Morony Dam. 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	3,600	4,410	3,870	3,320	4,350	4,070	3,880	5,220	5,850	9,620	5,750	5,160
2	3,710	4,570	3,880	e2,950	4,030	4,010	4,140	5,190	6,270	9,480	5,910	5,590
3	3,780	4,590	3,860	e3,300	4,340	4,010	3,780	5,220	9,880	9,290	5,350	5,270
4	3,770	4,580	3,940	e3,600	3,880	4,060	3,890	4,950	14,400	9,080	5,660	5,260
5	3,780	4,470	3,950	e4,000	4,120	4,030	4,000	5,020	16,200	8,940	5,450	5,070
6	3,850	4,060	3,890	e4,100	4,040	3,780	4,040	4,990	14,300	9,010	5,280	5,150
7	3,550	4,230	3,850	e4,200	3,840	4,020	4,000	5,030	13,600	8,870	5,130	5,100
8	3,820	4,230	3,930	e4,500	3,410	3,870	3,930	5,280	12,300	8,650	5,420	5,110
9	3,580	4,260	4,170	e4,650	3,160	3,950	3,940	6,000	11,900	8,370	5,210	5,090
10	3,700	4,350	4,070	e4,600	4,120	3,840	4,130	6,200	10,100	8,330	5,050	5,140
11	3,700	4,290	4,110	e4,600	4,430	3,770	4,150	6,620	10,100	8,460	5,120	5,080
12	3,660	4,220	4,130	e4,650	4,680	3,920	4,130	10,000	10,200	8,640	5,060	5,060
13	3,770	4,180	4,110	e4,750	4,660	3,950	3,930	10,600	10,300	8,720	5,100	5,110
14	3,920	4,320	3,870	e4,600	3,980	4,040	4,090	9,120	10,200	8,200	5,470	5,200
15	4,000	4,190	3,960	e4,450	3,780	4,160	4,200	8,190	9,590	7,650	5,500	5,110
16	4,020	4,200	4,050	e4,500	3,800	4,000	4,270	8,190	8,930	7,230	5,660	5,040
17	4,210	4,220	4,090	e4,700	3,750	4,170	4,300	8,800	9,050	6,800	5,600	5,260
18	3,890	4,340	4,160	e5,150	4,050	3,880	4,360	10,300	10,000	6,520	5,340	5,410
19	4,120	4,340	4,020	e5,300	3,870	3,870	4,230	11,300	10,800	6,250	5,250	5,400
20	4,210	4,350	4,200	e5,950	3,980	3,870	4,450	10,400	11,200	6,020	4,880	5,510
21	4,360	4,170	4,040	e6,200	4,070	3,950	4,560	9,150	11,200	5,880	5,140	5,290
22	4,310	4,220	3,860	e5,800	3,770	3,930	4,870	8,750	10,500	5,980	5,110	4,970
23	4,530	4,160	3,780	e5,600	4,000	3,980	5,060	8,660	10,400	5,410	5,010	5,010
24	4,590	4,180	2,790	e5,700	3,800	4,030	4,820	8,370	9,760	5,910	5,110	5,020
25	4,850	4,480	2,490	e6,000	3,940	3,890	4,970	8,160	10,100	5,810	4,940	5,150
26	4,810	4,020	e4,300	e5,900	4,070	4,020	5,040	7,390	9,570	5,780	5,030	5,230
27	4,710	3,980	e4,800	5,580	4,100	4,150	5,260	6,900	8,960	5,790	4,890	5,170
28	4,640	4,130	e4,300	4,930	4,020	4,220	5,310	6,400	9,240	5,870	4,940	5,080
29	4,850	4,020	3,490	4,150	---	4,140	5,520	6,240	9,520	5,750	5,000	5,020
30	4,700	4,030	3,810	4,260	---	4,080	5,530	6,120	9,560	5,460	4,830	4,990
31	4,500	---	4,230	4,150	---	4,120	---	6,190	---	5,660	5,050	---
TOTAL	127,490	127,790	122,000	146,140	112,040	123,780	132,780	228,950	313,980	227,430	162,240	155,050
MEAN	4,113	4,260	3,935	4,714	4,001	3,993	4,426	7,385	10,470	7,336	5,234	5,168
MAX	4,850	4,590	4,800	6,200	4,680	4,220	5,530	11,300	16,200	9,620	5,910	5,590
MIN	3,550	3,980	2,490	2,950	3,160	3,770	3,780	4,950	5,850	5,410	4,830	4,970
AC-FT	252,900	253,500	242,000	289,900	222,200	245,500	263,400	454,100	622,800	451,100	321,800	307,500

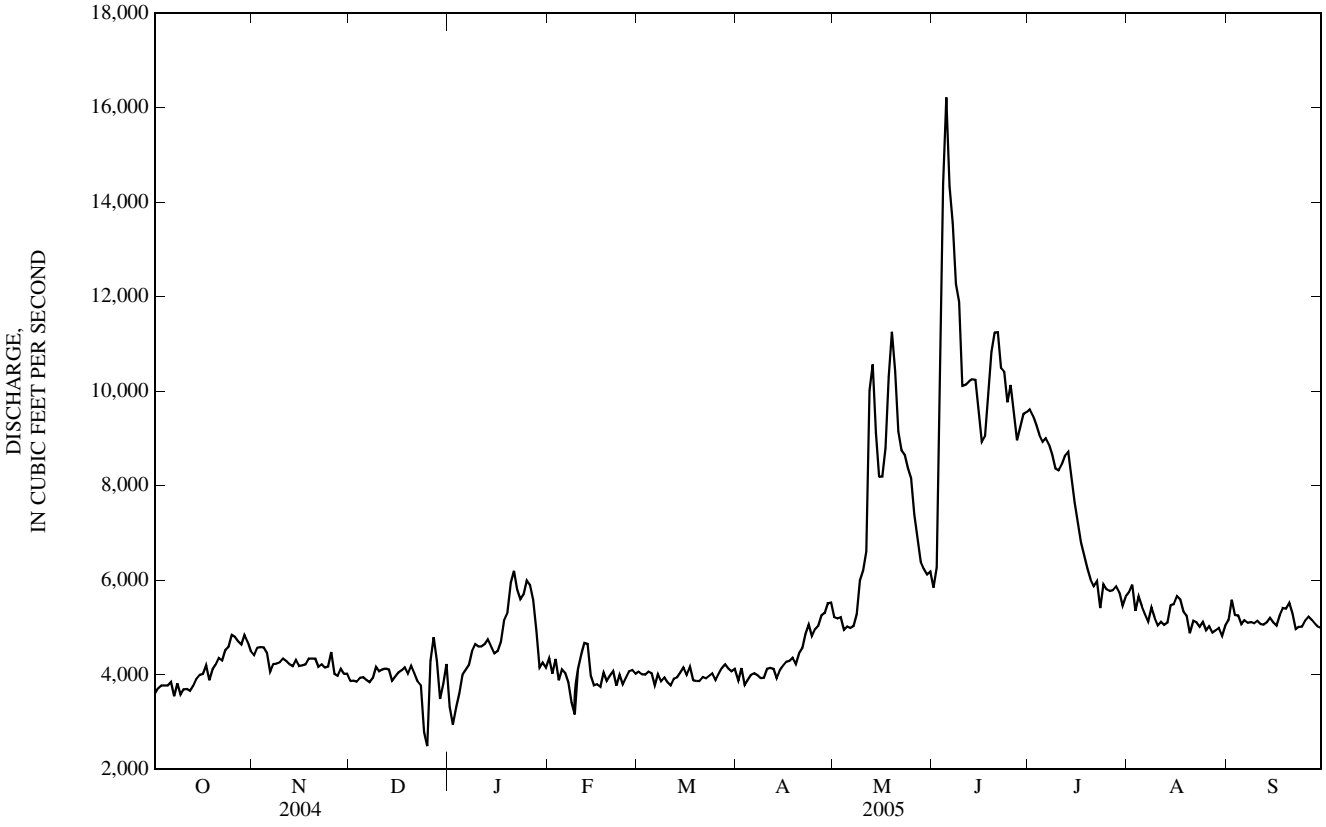
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1891 - 2005, BY WATER YEAR (WY)

MEAN	5,283	5,463	5,175	5,052	5,339	6,225	8,045	13,470	18,220	9,074	5,062	4,845
MAX	12,610	10,850	11,640	8,380	9,327	11,800	15,540	28,600	53,620	26,580	10,550	10,240
(WY)	(1966)	(1966)	(1960)	(1997)	(1997)	(1910)	(1910)	(1894)	(1908)	(1907)	(1993)	(1984)
MIN	2,441	2,789	2,446	2,377	2,492	2,986	3,574	4,144	4,055	2,433	1,576	1,890
(WY)	(1920)	(1920)	(1932)	(1932)	(1937)	(1938)	(1961)	(1941)	(1977)	(1919)	(1934)	(1934)

06090800 MISSOURI RIVER AT FORT BENTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1891 - 2005	
ANNUAL TOTAL	1,696,360		1,979,670			
ANNUAL MEAN	4,635		5,424		7,604	
HIGHEST ANNUAL MEAN					11,850	1894
LOWEST ANNUAL MEAN					3,619	1937
HIGHEST DAILY MEAN	8,800	May 29	16,200	Jun 5	107,000	Jun 7, 1908
LOWEST DAILY MEAN	2,490	Dec 25	2,490	Dec 25	627	Jul 5, 1936
ANNUAL SEVEN-DAY MINIMUM	3,560	Jul 29	3,530	Dec 29	1,190	Jan 10, 1932
MAXIMUM PEAK FLOW			a17,100	Jun 5	c140,000	Jun 6, 1908
MAXIMUM PEAK STAGE			b8.77	Jan 21	d18.50	Jun 6, 1908
INSTANTANEOUS LOW FLOW					f320	Jul 5, 1936
ANNUAL RUNOFF (AC-FT)	3,365,000		3,927,000		5,509,000	
10 PERCENT EXCEEDS	5,520		9,060		14,200	
50 PERCENT EXCEEDS	4,460		4,660		5,610	
90 PERCENT EXCEEDS	3,750		3,860		3,520	

a--Gage height, 5.30 ft.
b--Backwater from ice.
c--About, observed, from rating table extended over 63,000 ft^3/s.
d--Present datum.
e--Estimated.
f--Gage height, -0.05 ft.



06091700 TWO MEDICINE RIVER BELOW SOUTH FORK, NEAR BROWNING, MT

LOCATION.--Lat 48°25'36", long 112°59'20" (NAD 27), in $SE^1/_4SE^1/_4SE^1/_4$ sec.23, T.31 N., R.11 W., Glacier County, Hydrologic Unit 10030201, Blackfeet Indian Reservation, on left bank 15 ft downstream from bridge on Blackfeet Secondary Highway No. 1, 9.7 mi south of Browning, and 12.3 mi northwest of Heart Butte.

DRAINAGE AREA.--250 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,180 ft (NGVD 29). May 1977 to September 1997 at elevation 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Lower Two Medicine Lake (station number 06090900). Diversions for irrigation of about 64 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water discharge and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 100,000 ft^3/s, June 8, 1964, as determined at Two Medicine River near Browning (station number 06092000) located about 10 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	44	53	e52	e62	193	83	152	328	606	334	168	118
2	42	72	e55	e60	181	83	172	306	819	318	166	117
3	42	94	e60	e60	166	82	160	297	1,080	308	166	115
4	41	70	e56	e56	162	80	163	308	1,040	281	163	113
5	40	71	e50	e54	e150	84	167	325	1,030	264	159	111
6	39	70	e44	e54	e130	88	161	366	995	249	157	110
7	40	68	e43	e54	e135	87	202	495	930	235	156	108
8	41	68	e44	e52	147	100	323	640	1,070	222	156	104
9	39	72	e50	e49	145	106	283	608	1,080	213	155	104
10	40	75	e60	e49	141	115	239	762	985	202	168	89
11	39	69	e58	e49	137	111	224	846	791	197	210	94
12	38	54	e56	e47	126	128	215	687	687	184	221	82
13	38	59	e60	e43	122	121	224	519	605	176	219	77
14	39	63	e70	e40	e110	118	259	505	481	176	205	75
15	60	73	e80	e43	e90	115	246	675	461	187	199	74
16	60	64	e90	e50	e90	114	249	905	453	177	190	75
17	121	59	e100	e70	e95	114	309	1,220	494	172	169	80
18	89	55	e100	e100	e90	109	298	1,170	517	163	175	75
19	81	56	e95	e200	e85	107	283	1,050	408	176	170	71
20	73	51	e90	e350	e90	115	278	944	275	218	163	68
21	75	49	e70	e300	e90	118	256	791	310	215	159	67
22	80	e53	e58	e380	e95	102	259	690	451	216	157	67
23	77	e53	e58	401	e100	113	297	637	479	207	155	68
24	72	e50	e66	399	99	103	345	582	467	207	155	68
25	63	e47	e70	369	92	105	407	540	431	206	154	65
26	62	e47	e64	345	86	102	460	516	389	184	149	61
27	65	e46	e64	320	e80	118	479	505	374	180	144	58
28	67	e46	e74	284	81	189	401	512	426	176	141	55
29	62	e48	e74	253	---	198	366	535	399	174	135	48
30	64	e50	e70	236	---	167	348	543	362	171	120	90
31	61	---	e64	212	---	148	---	544	---	169	119	---
TOTAL	1,794	1,805	2,045	5,041	3,308	3,523	8,225	19,351	18,895	6,557	5,123	2,507
MEAN	57.9	60.2	66.0	163	118	114	274	624	630	212	165	83.6
MAX	121	94	100	401	193	198	479	1,220	1,080	334	221	118
MIN	38	46	43	40	80	80	152	297	275	163	119	48
AC-FT	3,560	3,580	4,060	10,000	6,560	6,990	16,310	38,380	37,480	13,010	10,160	4,970
*	0	0	0	0	0	0	789	4,680	2,550	6,080	6,930	3,850

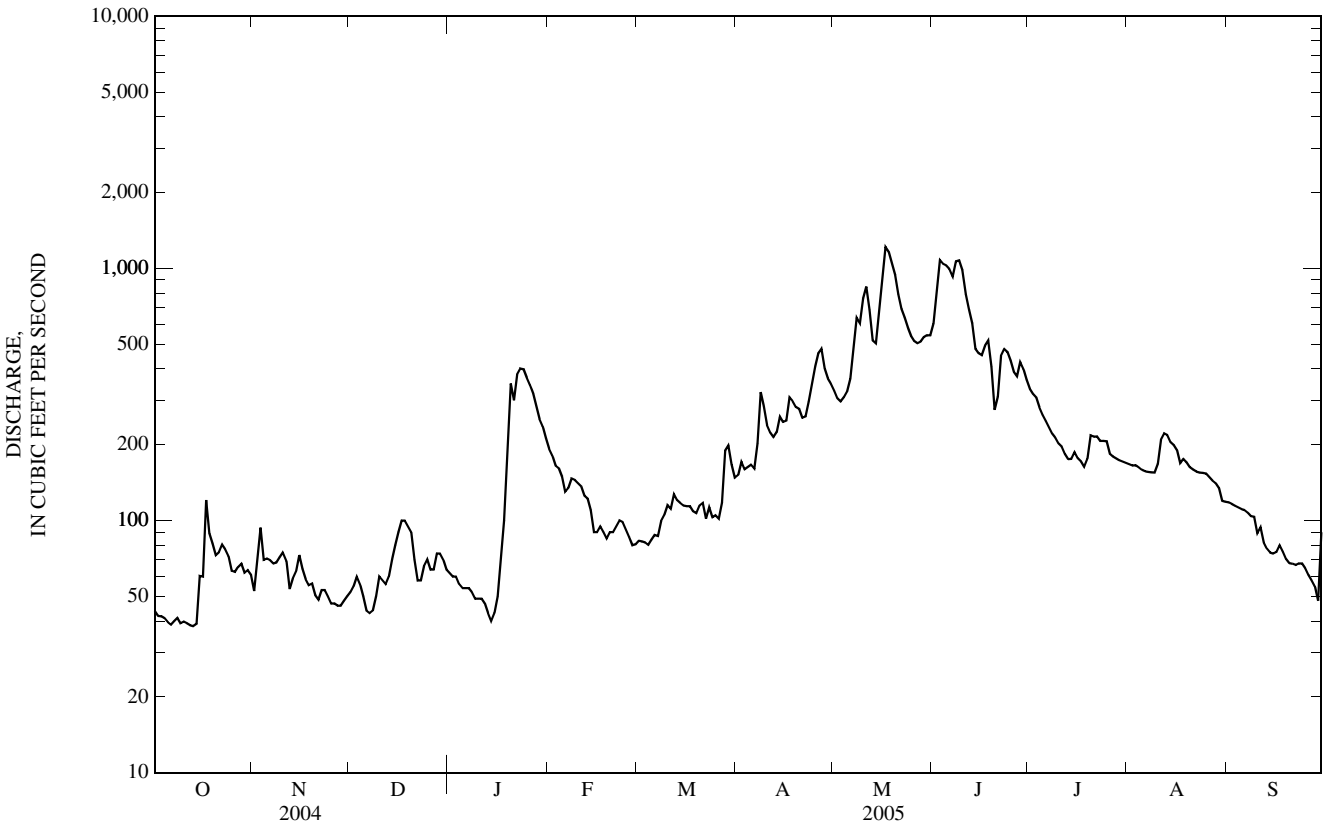
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)

MEAN	91.5	122	76.2	63.3	89.6	143	489	1,142	1,026	356	162	102
MAX	533	558	394	180	394	474	923	2,040	2,922	656	265	240
(WY)	(1986)	(1996)	(1996)	(1981)	(1996)	(1986)	(1990)	(1991)	(2002)	(2002)	(2002)	(1985)
MIN	23.2	18.8	19.7	17.9	26.4	40.5	140	439	282	173	41.2	24.4
(WY)	(2004)	(1980)	(1999)	(1982)	(1980)	(1980)	(2001)	(1977)	(1977)	(1994)	(1994)	(1988)

06091700 TWO MEDICINE RIVER BELOW SOUTH FORK, NEAR BROWNING, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1977 - 2005	
ANNUAL TOTAL	87,633		78,174			
ANNUAL MEAN	239		214		327	
HIGHEST ANNUAL MEAN					542	1991
LOWEST ANNUAL MEAN					199	2001
HIGHEST DAILY MEAN	1,070	Jun 8	1,220	May 17	8,600	Jun 7, 1995
LOWEST DAILY MEAN	18	Jan 4	38	Oct 12	10	Jan 29, 1980
ANNUAL SEVEN-DAY MINIMUM	23	Jan 25	39	Oct 8	13	Feb 3, 1982
MAXIMUM PEAK FLOW			1,460	Jun 8	b11,700	May 19, 1991
MAXIMUM PEAK STAGE			a4.38	Jun 8	c8.25	Jun 7, 1995
ANNUAL RUNOFF (AC-FT)	173,800		155,100		236,900	
10 PERCENT EXCEEDS	674		508		938	
50 PERCENT EXCEEDS	107		121		120	
90 PERCENT EXCEEDS	35		51		32	

*--Flows, in acre-ft, in Two Medicine Canal.
a--May have been higher during ice-affected periods.
b--Gage height, 7.78 ft, previous datum; from rating curve extended above 5,500 ft^3/s.
c--Previous datum.
e--Estimated.



06093200 BADGER CREEK BELOW FOUR HORNS CANAL, NEAR BROWNING, MT

LOCATION.--Lat 48°22'12", long 112°48'07" (NAD 27), in $NW^1/_4SW^1/_4SE^1/_4$ sec.8, T.30 N., R.9 W., Glacier County, Hydrologic Unit 10030201, Blackfeet Indian Reservation, on left bank, 3.4 mi downstream from point of diversion to Four Horns Canal, 15.5 mi southeast of Browning, and at river mile 11.6.

DRAINAGE AREA.--152 mi^2.

PERIOD OF RECORD.--October 1973 to current year. Records equivalent to those published as Badger Creek near Browning (station number 06092500) if diversion to Four Horns Canal is added to flow past station.

GAGE.--Water-stage recorder. Elevation of gage is 4,140 ft (NGVD 29). May 1951 to September 1973, water-stage recorder at site 3.4 mi upstream (station number 06092500) at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Four Horns Canal diverts water from right bank in $NE^1/_4$ sec.24, T.30 N., R.10 W., at diversion dam 3.4 mi upstream for irrigation of about 6,000 acres downstream from station. Recorded diversions by Four Horns Canal are listed in daily table below. Several unpublished observations of water temperature and specific conductance were made during the year. Bureau of Reclamation satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 49,700 ft^3/s, June 8, 1964, gage height, 10.37 ft, from rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow, as determined at Badger Creek near Browning site (station number 06092500) 3.4 mi upstream.

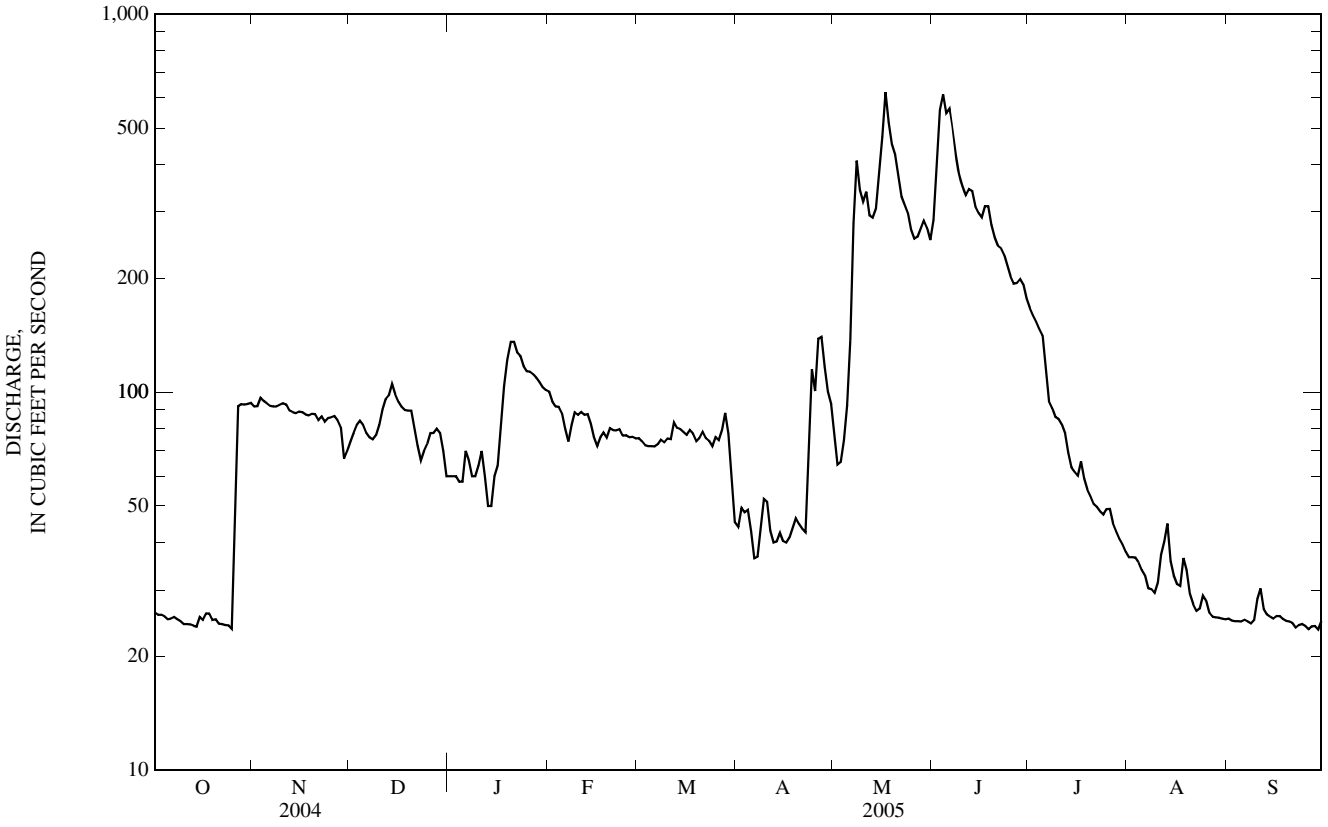
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	92	e74	e60	100	76	44	78	286	167	37	25
2	26	92	e78	e60	94	74	49	64	391	160	37	25
3	26	97	e82	e60	92	73	48	65	559	154	37	25
4	26	95	e84	e58	92	72	49	75	613	147	36	25
5	25	94	e82	e58	e88	72	43	92	547	141	34	25
6	25	92	e78	e70	e80	72	36	137	562	117	33	25
7	25	92	e76	e66	e74	73	37	280	484	95	30	25
8	25	92	e75	e60	e82	75	44	410	423	91	30	24
9	25	93	e77	e60	89	74	52	342	376	86	29	25
10	24	93	e82	e64	87	75	51	319	351	85	31	28
11	24	93	e90	e70	89	75	43	339	332	82	37	30
12	24	90	e96	e60	87	83	40	293	344	78	40	27
13	24	89	98	e50	87	81	40	290	340	69	45	26
14	24	88	105	e50	83	80	42	306	310	63	36	25
15	25	89	99	e60	e76	79	40	382	298	62	33	25
16	e25	89	94	e64	e72	77	40	474	290	60	31	26
17	e26	87	92	e80	e76	79	41	622	311	66	31	26
18	e26	87	90	e104	78	78	44	516	311	59	36	25
19	e25	88	89	e122	e76	74	46	452	277	55	34	25
20	25	88	90	e136	80	76	45	425	257	53	29	25
21	24	85	e80	e136	79	79	44	375	244	51	27	25
22	24	86	e72	127	79	76	43	329	241	50	26	24
23	24	84	e66	125	80	74	68	313	231	48	27	24
24	24	86	e70	117	77	72	115	298	216	47	29	24
25	24	86	e73	114	77	76	101	269	202	49	28	24
26	55	87	e78	114	76	75	138	255	194	49	26	24
27	92	84	e78	112	76	79	140	257	194	45	26	24
28	93	81	e80	109	76	88	117	271	199	43	25	24
29	93	67	e78	106	---	78	100	284	193	41	25	24
30	93	e70	e70	103	---	60	93	272	177	40	25	25
31	94	---	e60	101	---	45	---	252	---	38	25	---
TOTAL	1,141	2,636	2,536	2,676	2,302	2,320	1,833	9,136	9,753	2,391	975	754
MEAN	36.8	87.9	81.8	86.3	82.2	74.8	61.1	295	325	77.1	31.5	25.1
MAX	94	97	105	136	100	88	140	622	613	167	45	30
MIN	24	67	60	50	72	45	36	64	177	38	25	24
AC-FT	2,260	5,230	5,030	5,310	4,570	4,600	3,640	18,120	19,350	4,740	1,930	1,500
DIVERSION BY FOUR HORNS CANAL												
AC-FT	4,960	0	0	0	0	147	4,240	5,030	3,070	4,610	4,840	4,240
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)												
MEAN	82.5	110	96.1	88.6	89.3	93.5	168	486	557	161	72.7	65.7
MAX	316	295	184	160	198	205	321	899	2,240	568	184	199
(WY)	(1986)	(1990)	(1976)	(1976)	(1996)	(1986)	(1990)	(1976)	(1975)	(1975)	(1975)	(1993)
MIN	9.13	40.9	42.9	57.0	52.5	44.6	61.1	140	58.9	17.5	16.4	15.6
(WY)	(1978)	(2002)	(1984)	(2001)	(2001)	(1977)	(2005)	(1977)	(1977)	(1977)	(1984)	(1988)

06093200 BADGER CREEK BELOW FOUR HORNS CANAL, NEAR BROWNING, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005	
ANNUAL TOTAL	36,028		38,453			
ANNUAL MEAN	98.4		105*		173**	
HIGHEST ANNUAL MEAN					350	1975
LOWEST ANNUAL MEAN					68.1	1977
HIGHEST DAILY MEAN	451	Jun 6	622	May 17	14,000	Jun 19, 1975
LOWEST DAILY MEAN	24	Oct 10	24	Oct 10	6.5	Sep 17, 1984
ANNUAL SEVEN-DAY MINIMUM	24	Oct 8	24	Sep 22	7.7	Oct 25, 1977
MAXIMUM PEAK FLOW			684	May 17	a20,700	Jun 19, 1975
MAXIMUM PEAK STAGE			6.03	May 17	13.58	Jun 19, 1975
ANNUAL RUNOFF (AC-FT)	71,460		76,270		125,100	
10 PERCENT EXCEEDS	229		282		380	
50 PERCENT EXCEEDS	78		76		95	
90 PERCENT EXCEEDS	27		25		40	

*--148 ft^3/s, adjusted for flow in Four Horns Canal.
**--214 ft^3/s, adjusted for flow in Four Horns Canal.
a--From rating curve extended above 7,700 ft^3/s, based on comparison with previous site, 3.4 miles upstream.
e--Estimated.



06098500 CUT BANK CREEK NEAR BROWNING, MT

LOCATION--Lat 48°37'00", long 113°02'06" (NAD 27), in $NE^1/_4NW^1/_4SW^1/_4$ sec.15, T.33 N., R.11 W., Glacier County, Hydrologic Unit 10030202, Blackfeet Indian Reservation, on right bank 20 ft downstream from bridge on Montana Secondary Highway 464, 4.0 mile north of Browning, and at river mile 73.3.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--April 1918 to October 1925 (seasonal records only), April 1991 to current year.

REVISED RECORDS.--WDR -93-1: 1992(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,380 ft (NGVD 29). April 1918 to October 1925, water-stage recorder at site about 120 ft upstream at different elevation. April 1991 to September 1995 at elevation 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 1,200 acres upstream from station. Several unpublished observations of water temperature and specific conductance were made during the year. 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	55	55	e32	e36	87	41	51	142	297	247	e41	15
2	52	60	e35	e36	90	41	57	123	384	234	e35	13
3	49	68	38	e37	83	42	59	114	582	219	e27	12
4	48	69	39	e34	76	41	58	112	705	194	26	11
5	45	62	40	e28	e68	43	57	119	659	176	23	9.8
6	43	60	42	e27	e60	43	56	138	620	163	20	10
7	43	59	e40	e28	e62	40	57	190	537	157	19	9.9
8	42	56	e35	e28	e65	42	61	264	465	152	19	8.8
9	41	56	36	e27	e70	43	69	291	381	142	20	10
10	42	59	38	e26	e80	44	69	283	339	138	22	23
11	41	59	e50	e25	e80	43	68	265	307	130	27	44
12	41	52	e75	e25	e69	49	69	237	336	e122	34	35
13	40	50	e100	e24	e60	50	72	230	350	e120	38	29
14	40	53	111	e23	e55	48	85	266	297	e125	30	26
15	53	51	99	e24	e55	48	86	342	275	e120	26	25
16	55	51	82	e26	e55	49	78	454	264	e110	24	26
17	79	49	78	e28	e52	49	81	544	282	e120	24	29
18	91	48	70	e31	e50	e48	88	523	332	e110	32	29
19	92	47	75	e44	e47	e42	87	418	317	e100	32	26
20	88	42	70	e100	e47	e43	85	365	287	e80	27	24
21	88	40	e65	e200	e50	e45	84	320	276	e65	22	23
22	90	e39	e60	e220	e52	e43	79	280	282	65	21	23
23	86	e33	e50	210	e50	e40	78	263	302	59	23	23
24	81	e33	e48	181	e47	e39	85	252	290	54	28	24
25	73	e36	e50	173	e45	e39	101	241	255	58	29	24
26	67	e35	e48	157	44	e40	139	228	228	57	23	23
27	65	e33	e46	148	45	46	167	228	219	51	19	23
28	64	e31	e44	129	44	54	156	244	273	46	17	23
29	62	e29	e41	114	---	60	147	265	268	e43	15	21
30	62	e30	e39	101	---	56	187	269	258	e41	14	24
31	63	---	e37	94	---	49	---	272	---	e43	16	---
TOTAL	1,881	1,445	1,713	2,384	1,688	1,400	2,616	8,282	10,667	3,541	773	646.5
MEAN	60.7	48.2	55.3	76.9	60.3	45.2	87.2	267	356	114	24.9	21.6
MAX	92	69	111	220	90	60	187	544	705	247	41	44
MIN	40	29	32	23	44	39	51	112	219	41	14	8.8
AC-FT	3,730	2,870	3,400	4,730	3,350	2,780	5,190	16,430	21,160	7,020	1,530	1,280

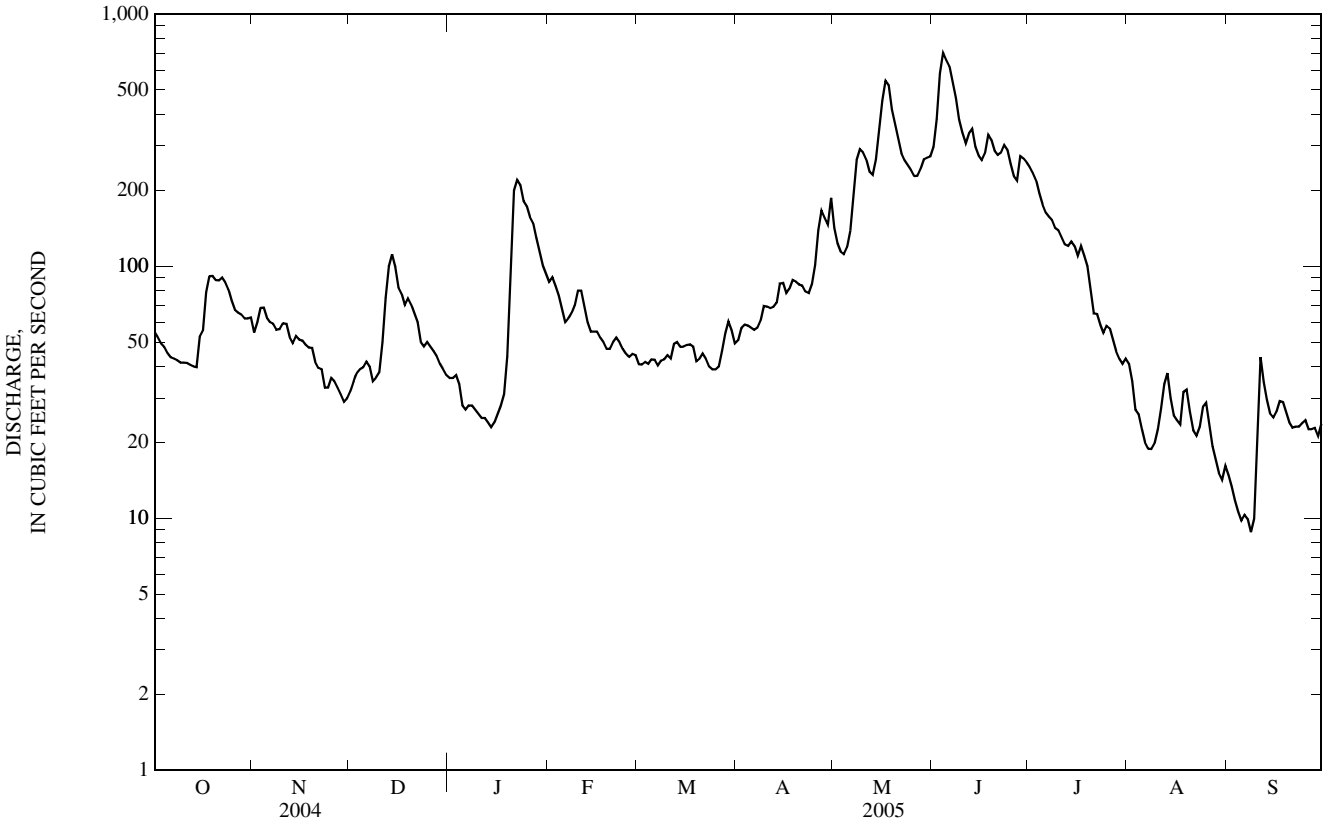
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2005, BY WATER YEAR (WY)*

MEAN	54.2	59.0	42.1	34.5	39.8	52.4	135	405	487	181	63.7	41.8
MAX	136	216	157	76.9	139	110	217	740	955	344	140	81.8
(WY)	(1996)	(1996)	(1996)	(2005)	(1996)	(1997)	(1996)	(1991)	(2002)	(2002)	(1923)	(1993)
MIN	15.2	25.4	17.3	18.5	15.4	17.8	57.1	248	184	57.9	15.6	11.7
(WY)	(2002)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(1992)	(1992)	(2001)	(2001)	(2001)

06098500 CUT BANK CREEK NEAR BROWNING, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1918 - 2005*	
ANNUAL TOTAL	41,008		37,036.5			
ANNUAL MEAN	112		101		126	
HIGHEST ANNUAL MEAN					201	1996
LOWEST ANNUAL MEAN					69.0	2001
HIGHEST DAILY MEAN	551	Jun 6	705	Jun 4	3,400	Jun 7, 1995
LOWEST DAILY MEAN	16	Jan 6	8.8	Sep 8	8.8	Sep 8, 2005
ANNUAL SEVEN-DAY MINIMUM	18	Jan 3	10	Sep 3	9.8	Aug 30, 2001
MAXIMUM PEAK FLOW			797	Jun 5	a5,480	Jun 7, 1995
MAXIMUM PEAK STAGE			3.75	Jun 5	b5.59	Jun 7, 1995
INSTANTANEOUS LOW FLOW					c4.9	Nov 22, 1994
ANNUAL RUNOFF (AC-FT)	81,340		73,460		91,550	
10 PERCENT EXCEEDS	311		268		327	
50 PERCENT EXCEEDS	59		55		51	
90 PERCENT EXCEEDS	27		24		21	

*--During periods of operation (April 1918 to October 1925, seasonal records only; April 1991 to current year).
a--From rating curve extended above 2,500 ft^3/s.
b--Previous datum.
c--Gage height, 0.60 ft, result of freezeup.
e--Estimated.



06099000 CUT BANK CREEK AT CUT BANK, MT

LOCATION.--Lat 48°38'00", long 112°20'46" (NAD 27), in $SW^1/_4SE^1/_4NE^1/_4$ sec.11, T.33 N., R.6 W., Glacier County, Hydrologic Unit 10030202, Blackfeet Indian Reservation, on right bank, 0.1 mi downstream from bridge on U.S. Highway 2, 0.7 mi west of Cut Bank, 0.8 mi downstream from Old Maids Coulee, and at river mile 17.7.

DRAINAGE AREA.--1,041 mi^2.

PERIOD OF RECORD.--August 1905 to October 1919, May to July 1920, May 1922 to October 1924, May 1951 to September 1973, October 1981 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309; 1907-8, 1910-11, 1924-25. WSP 1509: 1911, 1916(M). WSP 1559: 1905(M), 1908(M). WSP 1709: 1959. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,561.42 ft (NGVD 29). Prior to May 12, 1922, nonrecording gage at several sites 0.5 mi upstream at various elevations. May 12, 1922 to Nov. 1, 1924, nonrecording gage at present site and different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Few minor diversions for irrigation upstream from station. Natural flow of stream may be affected by return flow from Two Medicine Canal which irrigates lands 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 20, 1975 reached a discharge of 5,200 ft^3/s, gage height, 8.2 ft, from floodmarks.

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	e69	e40	e46	e170	82	66	167	231	352	37	48
2	64	e69	e44	e46	e180	84	64	142	368	296	38	45
3	62	69	e47	e45	e130	76	65	125	580	269	34	43
4	60	71	e50	e42	e110	74	67	112	941	245	34	42
5	57	74	e50	e40	e80	80	64	110	897	219	30	42
6	54	72	e46	e42	e84	89	63	111	2,330	190	22	40
7	52	69	e40	e40	e90	175	63	123	1,640	176	21	42
8	51	68	e38	e38	e80	128	61	167	2,340	174	16	42
9	49	67	e40	e37	e90	71	62	234	1,010	167	20	40
10	47	66	e50	e37	e120	108	65	264	827	153	22	40
11	46	e68	e62	e36	e120	66	66	282	611	149	29	93
12	46	e66	e56	e36	e130	67	66	278	497	137	36	124
13	46	e64	e60	e34	e120	65	67	240	632	123	49	118
14	46	e60	e75	e33	e100	65	83	228	609	119	58	102
15	55	e66	e100	e34	e80	68	100	250	469	106	51	84
16	59	62	e110	e37	e84	66	96	332	388	98	46	75
17	63	60	e120	e40	e84	66	85	447	419	121	42	71
18	70	60	e110	e45	e82	67	83	514	528	125	40	69
19	88	56	e100	e60	e80	e55	91	502	475	106	43	68
20	92	e52	e79	e95	e78	e58	89	418	405	94	46	66
21	91	e47	e64	e180	e76	e62	83	365	344	87	43	62
22	91	e48	e64	e250	80	e60	78	324	308	87	37	59
23	95	e36	e60	e360	85	e58	75	279	294	86	38	58
24	92	e40	e62	e330	89	e56	72	256	309	75	43	58
25	89	e45	e60	e270	92	e60	71	244	303	69	51	61
26	84	e40	e58	e200	91	67	74	224	270	74	54	62
27	81	e35	e56	e200	84	79	95	203	252	79	52	59
28	77	e32	e54	e180	83	66	125	207	895	72	51	58
29	75	e34	e56	e170	---	67	125	215	687	62	51	56
30	72	e36	e50	e160	---	70	120	237	447	55	48	56
31	69	---	e47	e170	---	69	---	232	---	46	49	---
TOTAL	2,089	1,701	1,948	3,333	2,772	2,324	2,384	7,832	20,306	4,211	1,231	1,883
MEAN	67.4	56.7	62.8	108	99.0	75.0	79.5	253	677	136	39.7	62.8
MAX	95	74	120	360	180	175	125	514	2,340	352	58	124
MIN	46	32	38	33	76	55	61	110	231	46	16	40
AC-FT	4,140	3,370	3,860	6,610	5,500	4,610	4,730	15,530	40,280	8,350	2,440	3,730

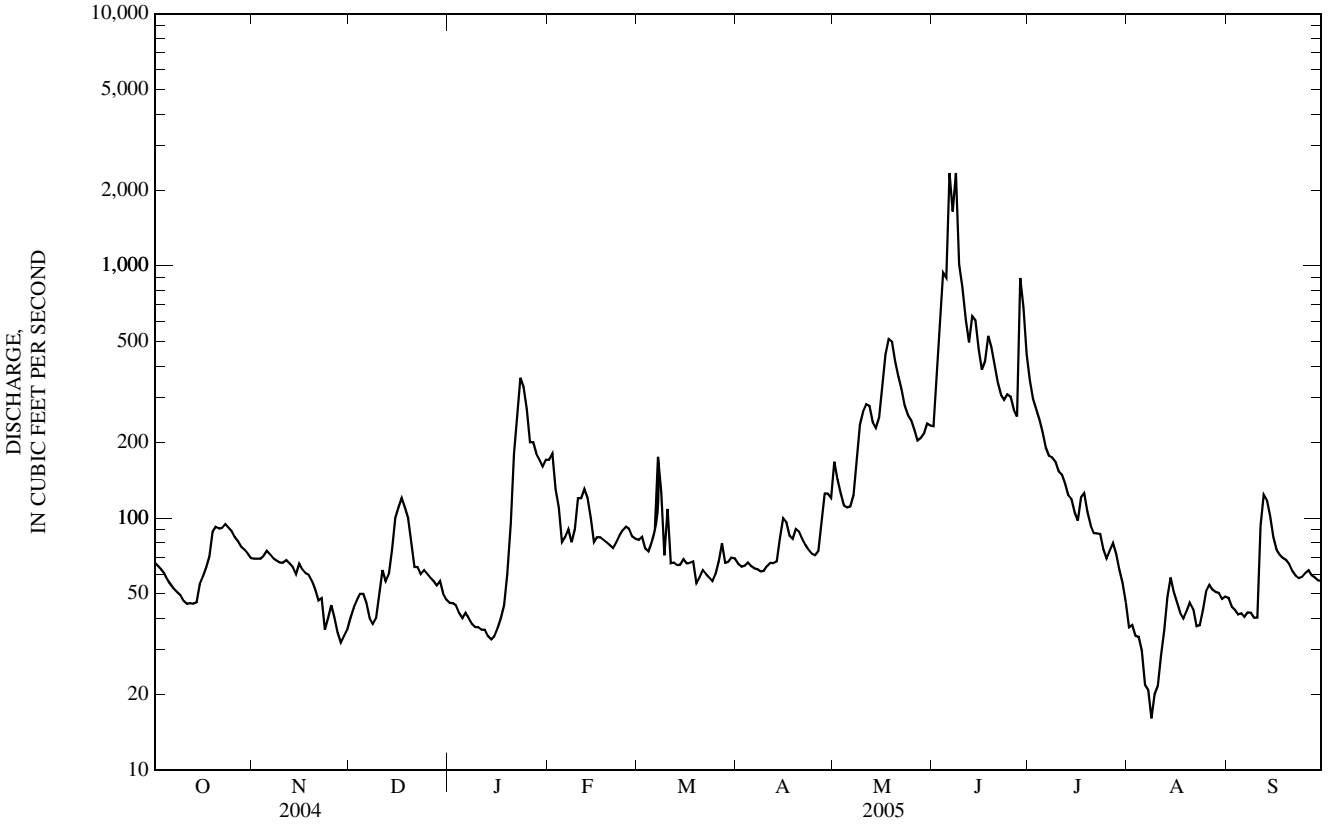
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2005, BY WATER YEAR (WY)*

MEAN	83.0	75.7	47.3	35.6	57.5	147	238	477	627	239	88.2	74.9
MAX	268	271	185	115	414	1,053	664	894	1,781	605	233	298
(WY)	(1952)	(1990)	(1996)	(1990)	(1986)	(1972)	(1952)	(1954)	(2002)	(1951)	(1972)	(1911)
MIN	11.2	19.1	15.0	1.61	11.1	6.90	79.4	198	174	17.0	5.56	5.92
(WY)	(2002)	(2002)	(1984)	(1982)	(1985)	(1907)	(1984)	(1984)	(1992)	(1988)	(1988)	(1988)

06099000 CUT BANK CREEK AT CUT BANK, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1905 - 2005*	
ANNUAL TOTAL	44,380		52,014			
ANNUAL MEAN	121		143		181	
HIGHEST ANNUAL MEAN					317	1972
LOWEST ANNUAL MEAN					73.9	1988
HIGHEST DAILY MEAN	525	Jun 7	2,340	Jun 8	11,200	Jun 9, 1964
LOWEST DAILY MEAN	13	Jan 6	16	Aug 8	1.0	Jan 22, 1982
ANNUAL SEVEN-DAY MINIMUM	15	Jan 3	23	Aug 5	1.1	Jan 20, 1982
MAXIMUM PEAK FLOW			4,060	Jun 6	a16,600	Jun 9, 1964
MAXIMUM PEAK STAGE			7.32	Jun 6	13.93	Jun 9, 1964
INSTANTANEOUS LOW FLOW					b0.92	Sep 10, 1988
ANNUAL RUNOFF (AC-FT)	88,030		103,200		131,100	
10 PERCENT EXCEEDS	315		299		477	
50 PERCENT EXCEEDS	71		71		80	
90 PERCENT EXCEEDS	27		40		24	

*--During periods of operation (August 1905 to october 1919, May to July 1920, May 1922 to October 1924, May 1951 to September 1973, October 1981 to current year).
a--From rating curve extended above 12,000 ft^3/s on basis of slope-area measurement of peak flow.
b--Gage height, 0.59 ft.
e--Estimated.



06099500 MARIAS RIVER NEAR SHELBY, MT

LOCATION.--Lat 48°25'38", long 111°53'20" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.20, T.31 N., R.2 W., Toole County, Hydrologic Unit 10030203, on left bank 20 ft downstream from bridge on old U.S. Highway 91, 5.1 mi south of Shelby, 24 mi downstream from Cut Bank Creek, and at river mile 140.6.

DRAINAGE AREA.--3,242 mi^2, of which 518 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1902 to December 1904, May 1905 to December 1906, May 1907 to January 1908, April 1911 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1903-4, 1918, 1921, 1933, 1935, 1947. WSP 1509: 1902, 1912(M), 1916, 1943(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,087.72 ft (NGVD 29). Prior to Dec. 23, 1947, nonrecording gage or water-stage recorder at several sites within 1,000 ft of present site at approximately the same elevation. Dec. 23, 1947, to Apr. 6, 1976, water-stage recorder at site 150 ft downstream at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Lower Two Medicine Lake (station number 06090900), Four Horns Reservoir (station number 06093000) Swift Reservoir (station number 06094000), and Lake Frances (station number 06095500), having a combined capacity of 172,630 acre-ft. Diversions for irrigation of about 50,000 acres upstream from station and about 15,000 acres 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	185	e250	e105	e110	e600	392	348	644	994	1,060	111	135
2	198	e265	e110	e100	e560	336	323	622	1,270	893	100	132
3	212	e240	e120	e110	560	330	328	554	2,140	799	93	129
4	207	e230	e130	e120	507	313	338	511	2,750	753	93	124
5	199	e270	e120	e120	e450	327	331	500	2,790	690	101	118
6	186	280	e105	e110	e310	322	328	516	3,720	624	101	117
7	180	279	e100	e130	e310	298	322	610	3,560	559	89	112
8	182	276	e95	e130	e320	304	323	910	4,190	488	83	108
9	182	272	e100	e130	e380	301	377	1,340	3,250	449	87	105
10	186	e240	e120	e120	460	301	433	1,300	2,750	429	92	108
11	190	e240	e150	e120	492	299	410	1,400	2,450	411	117	151
12	193	e220	e140	e120	518	309	388	1,500	1,960	398	124	298
13	199	e220	e130	e110	527	340	377	1,340	1,950	356	182	278
14	200	e230	e150	e110	e470	354	417	1,170	1,960	300	249	227
15	213	e255	e190	e100	e390	354	484	1,150	1,650	274	278	185
16	240	e255	e240	e120	e330	352	485	1,460	1,440	258	261	160
17	241	270	e280	e160	e340	e320	452	1,900	1,350	250	245	153
18	248	e200	e310	e300	e330	e280	442	2,310	1,540	257	218	151
19	285	e180	e320	e320	e310	e260	439	2,210	1,540	249	200	145
20	286	e150	e300	e360	e320	e260	451	1,990	1,330	213	205	138
21	283	e160	e260	e400	367	e280	441	1,780	1,070	192	200	130
22	270	e170	e200	e340	362	e300	422	1,570	991	208	181	129
23	265	e140	e150	e400	383	e260	406	1,380	1,060	205	168	129
24	e250	e200	e130	e600	412	e240	415	1,260	1,080	197	174	138
25	e240	e200	e160	e600	433	e240	483	1,160	1,070	186	190	149
26	e230	e150	e150	e540	427	e300	533	1,050	1,010	189	207	154
27	e215	e110	e140	e540	400	353	640	952	954	191	198	151
28	e240	e100	e180	e660	380	352	732	909	1,440	170	172	150
29	e260	e105	e170	e680	---	366	724	938	1,860	153	156	148
30	e270	e105	e150	e640	---	405	667	982	1,300	137	150	149
31	e250	---	e120	e640	---	387	---	1,000	---	124	142	---
TOTAL	6,985	6,262	5,125	9,040	11,648	9,835	13,259	36,918	56,419	11,662	4,967	4,501
MEAN	225	209	165	292	416	317	442	1,191	1,881	376	160	150
MAX	286	280	320	680	600	405	732	2,310	4,190	1,060	278	298
MIN	180	100	95	100	310	240	322	500	954	124	83	105
AC-FT	13,850	12,420	10,170	17,930	23,100	19,510	26,300	73,230	111,900	23,130	9,850	8,930

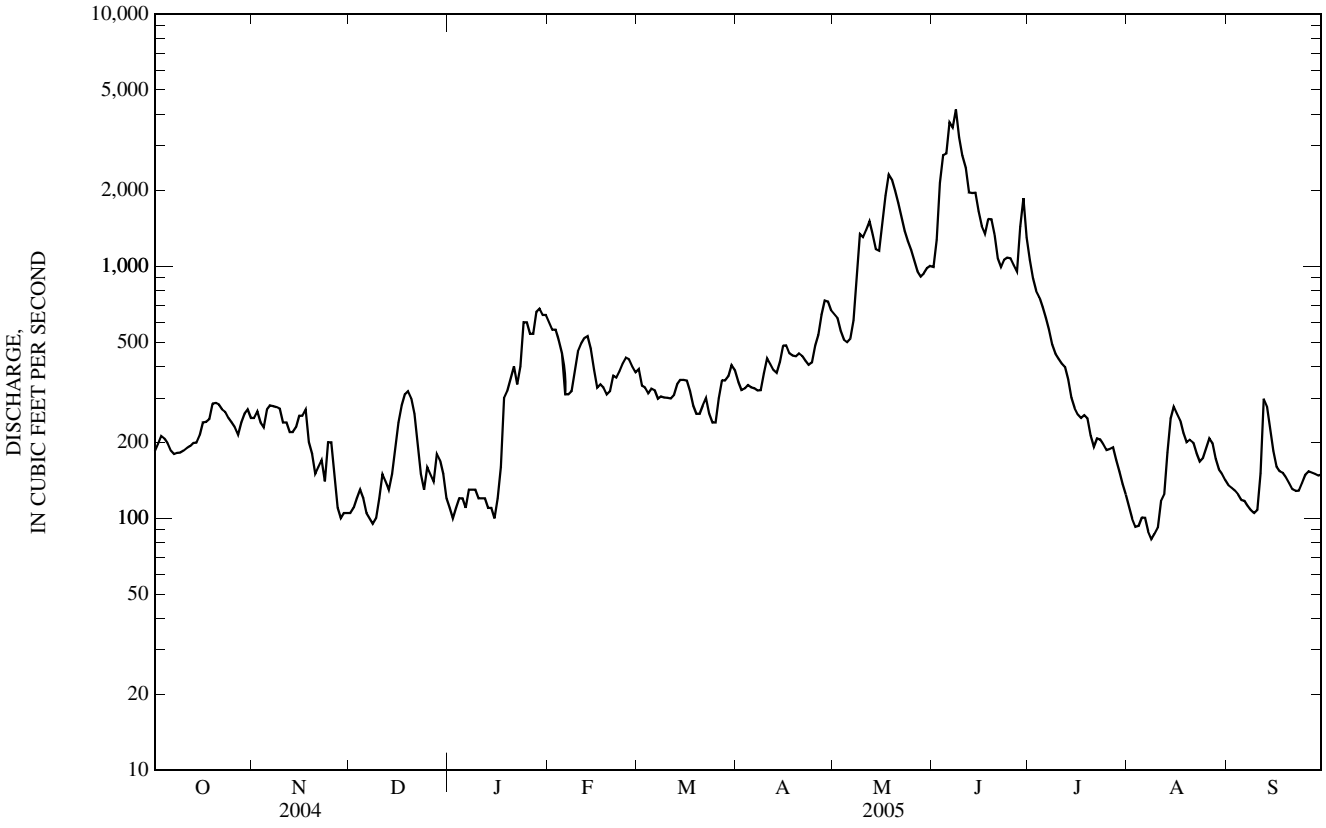
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2005, BY WATER YEAR (WY)*

MEAN	400	390	302	253	318	575	1,125	2,678	3,042	1,038	382	352
MAX	1,448	1,485	1,135	700	1,173	2,300	3,149	5,300	10,190	3,982	1,100	1,853
(WY)	(1952)	(1990)	(1996)	(1918)	(1986)	(1947)	(1934)	(1927)	(1948)	(1902)	(1927)	(1911)
MIN	73.8	116	103	41.9	58.7	139	280	711	409	147	67.1	66.4
(WY)	(2002)	(2002)	(1937)	(1937)	(1936)	(2002)	(1931)	(1977)	(1977)	(1940)	(1988)	(1988)

06099500 MARIAS RIVER NEAR SHELBY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1902 - 2005*	
ANNUAL TOTAL	167,392		176,621			
ANNUAL MEAN	457		484		894	
HIGHEST ANNUAL MEAN					1,929	1927
LOWEST ANNUAL MEAN					302	1977
HIGHEST DAILY MEAN	1,790	May 6	4,190	Jun 8	109,000	Jun 9, 1964
LOWEST DAILY MEAN	86	Jan 27	83	Aug 8	10	Aug 20, 1919
ANNUAL SEVEN-DAY MINIMUM	89	Jan 27	92	Aug 4	21	Jan 25, 1937
MAXIMUM PEAK FLOW			5,160	Jun 6	a241,000	Jun 9, 1964
MAXIMUM PEAK STAGE			7.14	Jun 6	b23.64	Jun 9, 1964
INSTANTANEOUS LOW FLOW					c10	Aug 20, 1919
ANNUAL RUNOFF (AC-FT)	332,000		350,300		647,500	
10 PERCENT EXCEEDS	1,290		1,210		2,300	
50 PERCENT EXCEEDS	265		279		397	
90 PERCENT EXCEEDS	128		120		155	

*--During periods of operation (1903-04, 1906, 1912 to current year).
a--Largely due to the failure of Swift Dam, from slope-area measurement of peak flow. Maximum unaffected by dam failure, 75,000 ft3/s, June 20, 1975, gage height, 18.21 ft.
b--From floodmark.
c--Observed, site and datum in use.
e--Estimated.



06101500 MARIAS RIVER NEAR CHESTER, MT

LOCATION.--Lat 48°18'23", long 111°04'47" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.34, T.30 N., R.5 E., Liberty County, Hydrologic Unit 10030203, on left bank 2.0 mi downstream from Tiber Dam, 4.4 mi upstream from Pondera Coulee, 15 mi southwest of Chester, and at river mile 78.3.

DRAINAGE AREA.--4,927 mi^2, of which 518 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April to September 1921, October 1945 to September 1947, October 1955 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,814.03 ft (NGVD) (Bureau of Reclamation bench mark). Prior to Oct. 1, 1921, nonrecording gage at bridge 2.5 mi downstream at different elevation. Oct. 4, 1945, to Sept. 30, 1946, nonrecording gage at site 3 mi downstream at different elevation.

REMARKS.--Records good. Flow completely regulated by Lake Elwell since Oct. 28, 1955 (see preceding page). 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 1948 reached a stage of 16 ft, present elevation.

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	508	508	505	504	507	501	493	497	510	414	417	413
2	508	509	501	507	505	500	492	497	514	412	413	413
3	508	508	503	506	503	498	494	497	444	413	413	413
4	508	508	508	507	503	498	492	497	404	413	415	414
5	508	508	509	505	503	499	492	498	408	413	413	414
6	508	508	512	503	503	495	493	498	406	413	414	418
7	508	508	509	503	503	494	494	498	407	413	414	418
8	511	508	508	503	503	494	492	497	408	413	413	418
9	514	508	508	503	503	494	492	497	408	413	418	418
10	514	508	508	503	503	494	492	497	408	413	415	417
11	514	508	508	503	503	492	494	501	408	413	416	413
12	513	508	508	503	503	494	496	503	409	414	417	414
13	514	508	508	503	503	495	493	502	409	413	418	415
14	514	508	508	506	503	496	494	504	412	413	418	413
15	515	507	508	508	503	497	496	503	414	413	418	414
16	514	507	508	508	503	496	497	503	413	413	418	414
17	514	508	508	508	503	494	494	503	415	413	418	416
18	514	507	508	504	504	495	496	500	413	413	418	414
19	510	505	508	503	503	497	495	497	413	413	418	413
20	507	507	507	503	503	497	497	498	413	415	418	413
21	508	506	508	505	503	496	497	501	414	415	418	403
22	512	504	508	505	503	494	498	506	413	418	418	418
23	508	506	508	503	503	494	496	505	413	414	421	417
24	508	504	508	503	504	496	494	508	414	414	412	418
25	508	502	508	505	503	496	494	508	416	417	410	413
26	508	503	508	507	503	494	493	507	415	417	412	413
27	508	505	508	507	503	493	492	505	418	417	413	413
28	508	507	508	508	503	492	496	500	418	417	413	412
29	508	508	508	508	---	492	494	507	416	418	414	404
30	508	506	506	507	---	492	494	512	418	418	414	404
31	508	---	506	506	---	492	---	512	---	418	414	---
TOTAL	15,816	15,205	15,734	15,657	14,092	15,351	14,826	15,558	12,591	12,846	12,881	12,410
MEAN	510	507	508	505	503	495	494	502	420	414	416	414
MAX	515	509	512	508	507	501	498	512	514	418	421	418
MIN	507	502	501	503	503	492	492	497	404	412	410	403
AC-FT	31,370	30,160	31,210	31,060	27,950	30,450	29,410	30,860	24,970	25,480	25,550	24,620

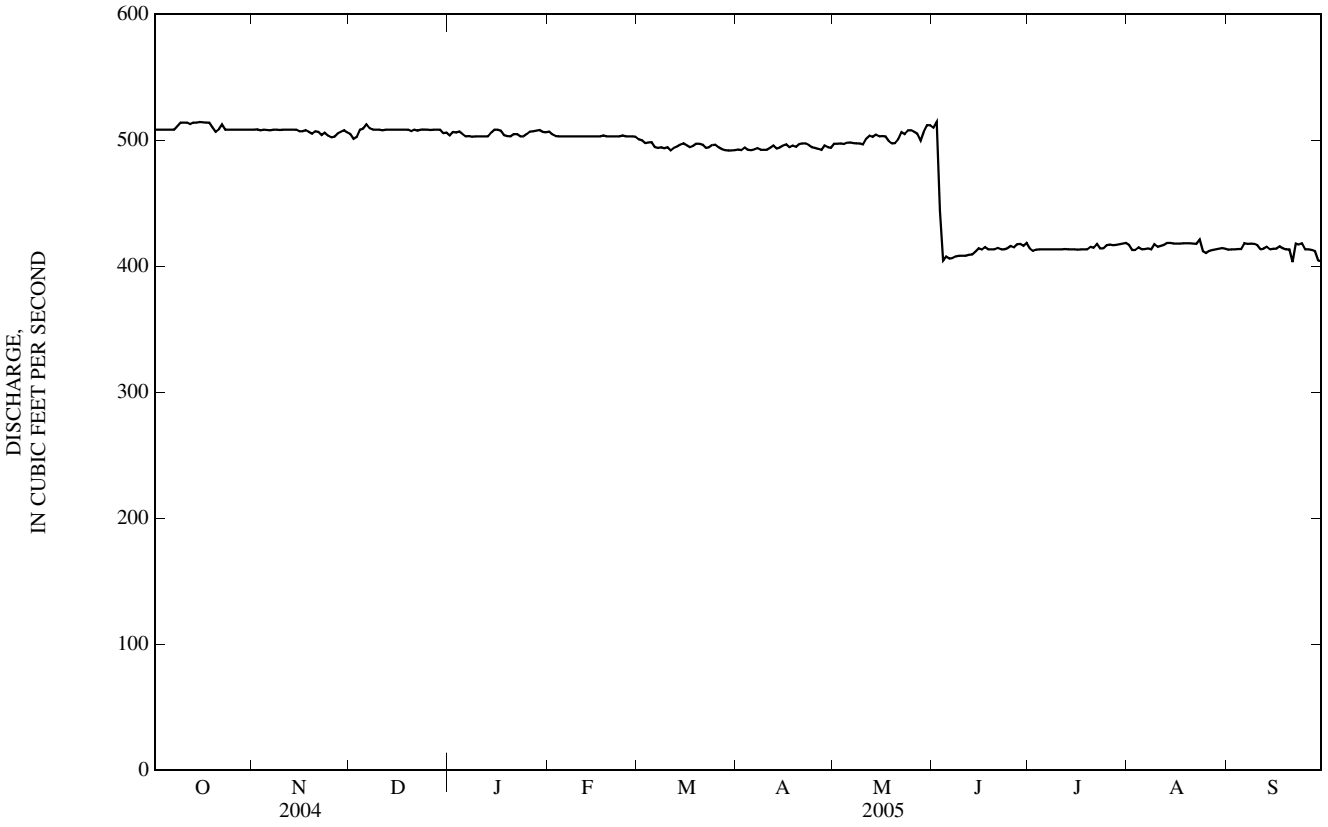
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)*

MEAN	725	586	446	408	443	598	798	1,194	1,654	1,204	906	835
MAX	2,758	1,733	1,050	1,079	1,068	2,400	2,343	3,541	6,254	5,325	2,909	3,063
(WY)	(1966)	(1986)	(1990)	(1990)	(1990)	(1947)	(1996)	(1947)	(1964)	(1975)	(1964)	(1965)
MIN	208	0.40	15.7	35.0	35.0	47.7	46.1	51.0	58.9	57.5	82.5	173
(WY)	(1983)	(1956)	(1956)	(1956)	(1956)	(1956)	(1956)	(1956)	(1956)	(1956)	(1956)	(1921)

06101500 MARIAS RIVER NEAR CHESTER, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005*	
ANNUAL TOTAL	184,647		172,967			
ANNUAL MEAN	504		474		816	
HIGHEST ANNUAL MEAN					1,488	1959
LOWEST ANNUAL MEAN					97.5	1956
HIGHEST DAILY MEAN	659	Jun 2	515	Oct 15	10,100	Jun 12, 1964
LOWEST DAILY MEAN	320	Feb 4	403	Sep 21	0.20	Oct 29, 1955
ANNUAL SEVEN-DAY MINIMUM	462	Feb 2	407	Jun 4	0.20	Oct 29, 1955
MAXIMUM PEAK FLOW			643	Oct 22	a10,400	Jun 16, 1964
MAXIMUM PEAK STAGE			3.61	Oct 22	10.63	Jun 16, 1964
INSTANTANEOUS LOW FLOW					b0.20	Nov 10, 1955
ANNUAL RUNOFF (AC-FT)	366,200		343,100		590,900	
10 PERCENT EXCEEDS	514		508		1,590	
50 PERCENT EXCEEDS	505		497		531	
90 PERCENT EXCEEDS	492		413		223	

*--During periods of operation (April to September 1921, October 1945 to September 1947, October 1955 to current year).
a--Since dam completion. Maximum discharge not determined; occurred about March 20, 1947.
b--Probably less than; during Tiber Dam shutdown.



06102050 MARIAS RIVER NEAR LOMA, MT

LOCATION.--Lat 47°55'59", long 111°31'02" (NAD 27) , in SW$^1/_4$ NE$^1/_4$ SE$^1/_4$ sec.12, T.25 N., R.9 E., Choteau County, Hydrologic Unit 10030203, on left bank 600 ft upstream from Teton River, 800 ft upstream from highway bridge, 0.2 mi southwest of Loma, and at river mile 2.5.

DRAINAGE AREA.--7,137 mi^2, of which 518 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1959 to September 1972, June 2001 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 2,570 ft (NGVD 29). Prior to June 2001, water-stage recorder at site 4.5 mi upstream at different elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow completely regulated by Lake Elwell. Numerous 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				e485	472	446	380	341	365	380		
2				e485	465	467	366	348	365	395		
3				e485	466	508	361	350	369	403		
4				e485	471	548	360	353	373	413		
5				e485	464	424	371	351	370	420		
6				e484	465	431	370	356	372	414		
7				e482	466	436	367	360	372	415		
8				e481	467	414	356	356	372	413		
9				488	467	430	350	356	372	415		
10				492	456	433	360	352	373	411		
11				493	440	416	364	355	384	412		
12				487	432	401	344	356	372	409		
13				481	451	421	337	360	377	410		
14				484	452	414	337	363	385	408		
15				498	448	407	330	368	389	408		
16				488	456	400	324	360	388	410		
17				473	468	406	336	357	384	410		
18				474	473	406	336	354	387	409		
19				475	458	386	338	363	385	405		
20				477	450	363	341	363	383	401		
21				482	441	366	325	364	386	403		
22				480	444	366	329	366	385	401		
23				477	450	375	338	370	380	400		
24				478	446	372	338	376	390	401		
25				477	462	359	331	379	400	401		
26				474	460	368	342	360	395	401		
27				475	456	366	333	360	383	399		
28				468	447	489	338	361	386	400		
29				468	443	422	336	360	386	393		
30				474	434	397	343	361	384	392		
31				---	436	---	335	367	---	393		
TOTAL				14,435	14,106	12,437	10,716	11,146	11,412	12,545		
MEAN				481	455	415	346	360	380	405		
MAX				498	473	548	380	379	400	420		
MIN				468	432	359	324	341	365	380		
AC-FT				28,630	27,980	24,670	21,260	22,110	22,640	24,880		

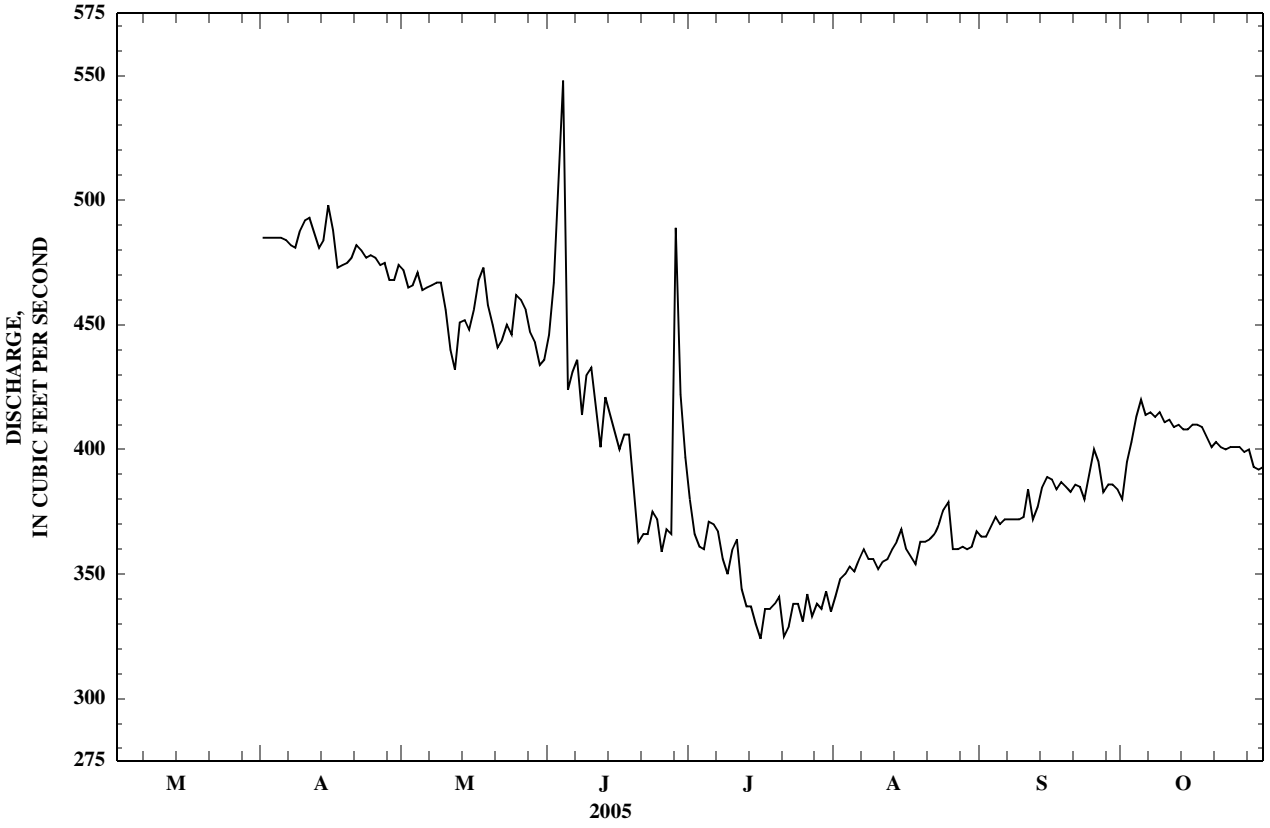
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1972, AND 2001 - 2005 SEASONS

MEAN	298	434	568	810	1,180	1,951	1,240	1,072	1,001	850	723	402
MAX	517	910	1,290	2,184	2,175	6,018	2,990	3,040	3,258	2,750	1,580	908
(WY)	(1968)	(1968)	(1967)	(1972)	(1972)	(1964)	(2002)	(1965)	(1965)	(1966)	(1966)	(1968)
MIN	105	110	117	180	441	415	250	137	296	292	78.5	107
(WY)	(1964)	(1964)	(1964)	(1961)	(2002)	(2005)	(1962)	(1961)	(2001)	(1964)	(1963)	(1963)

SUMMARY STATISTICS	FOR THE 2005 SEASON		WATER YEARS 1960 - 1972		SEASONS 2001 - 2005	
ANNUAL MEAN			977			
HIGHEST ANNUAL MEAN			1,330	1967		
LOWEST ANNUAL MEAN			522	1963		
HIGHEST DAILY MEAN	548	Jun 4	10,300	Jun 16, 1964	5,250	Jun 23, 2002
LOWEST DAILY MEAN	324	Jul 16	45	Dec 11, 1962	220	Apr 1, 2002
ANNUAL SEVEN-DAY MAXIMUM			49	Dec 5, 1962		
MAXIMUM PEAK FLOW	713	Jun 28	10,800	Jun 16, 1964	5,250	Jun 23, 2002
MAXIMUM PEAK STAGE	1.58	Jun 28	a8.72	Jun 16, 1964	b5.29	Jun 24, 2002
ANNUAL RUNOFF (AC-FT)			707,900			
10 PERCENT EXCEEDS			1,940			
50 PERCENT EXCEEDS			800			
90 PERCENT EXCEEDS			180			

a--Site and datum then in use.
b--From highwater mark.
e--Estimated.

06102050 MARIAS RIVER NEAR LOMA, MT—Continued



06102500 TETON RIVER BELOW SOUTH FORK, NEAR CHOTEAU, MT

LOCATION.--Lat 47°52'59", long 112°36'40" (NAD 27), in $NE^1/_4NE^1/_4NE^1/_4$ sec.34, T.25 N., R.8 W., Teton County, Hydrologic Unit 10030205, on right bank at county road bridge, 1.1 mi downstream from South Fork, 7.6 mi southwest of Bynum Reservoir, 20 mi northwest of Choteau, and at river mile 194.7.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--June 1947 to October 1954 (published as "near Farmington"), June 1998 to current year, seasonal records only.

GAGE.--Water-stage recorder. Elevation of gage is 4,770 ft (NGVD 29). June 1947 to October 1954, water-stage recorder 300 ft downstream at different elevation.

REMARKS.--Seasonal water-discharge records good. Negligible diversion for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1964 reached a discharge of 54,600 ft^3/s, from 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				42	68	225	169	94	76	69		
2				42	68	255	163	94	75	68		
3				43	69	416	157	93	74	69		
4				43	71	504	151	92	73	69		
5				43	73	474	147	90	72	68		
6				43	86	476	144	89	72	68		
7				45	113	415	140	88	72	67		
8				48	126	358	137	88	71	67		
9				50	126	319	136	87	71	66		
10				49	199	306	133	87	75	65		
11				50	233	293	127	90	73	64		
12				48	212	301	124	99	73	64		
13				48	215	304	122	93	71	63		
14				50	246	293	120	90	70	64		
15				47	316	285	118	87	70	63		
16				47	381	283	118	86	71	63		
17				49	426	292	120	86	73	62		
18				50	372	285	114	88	70	62		
19				51	324	261	111	86	69	63		
20				51	293	247	110	84	68	62		
21				51	263	240	107	82	67	62		
22				52	241	242	106	82	67	63		
23				54	227	236	104	83	68	62		
24				57	217	223	104	84	69	62		
25				63	203	209	106	83	67	62		
26				71	190	199	103	80	66	61		
27				74	188	194	101	79	67	63		
28				71	194	197	99	78	66	62		
29				69	202	187	97	77	64	61		
30				68	197	176	96	78	65	61		
31				---	200	---	94	76	---	61		
TOTAL				1,569	6,339	8,695	3,778	2,673	2,105	1,986		
MEAN				52.3	204	290	122	86.2	70.2	64.1		
MAX				74	426	504	169	99	76	69		
MIN				42	68	176	94	76	64	61		
AC-FT				3,110	12,570	17,250	7,490	5,300	4,180	3,940		

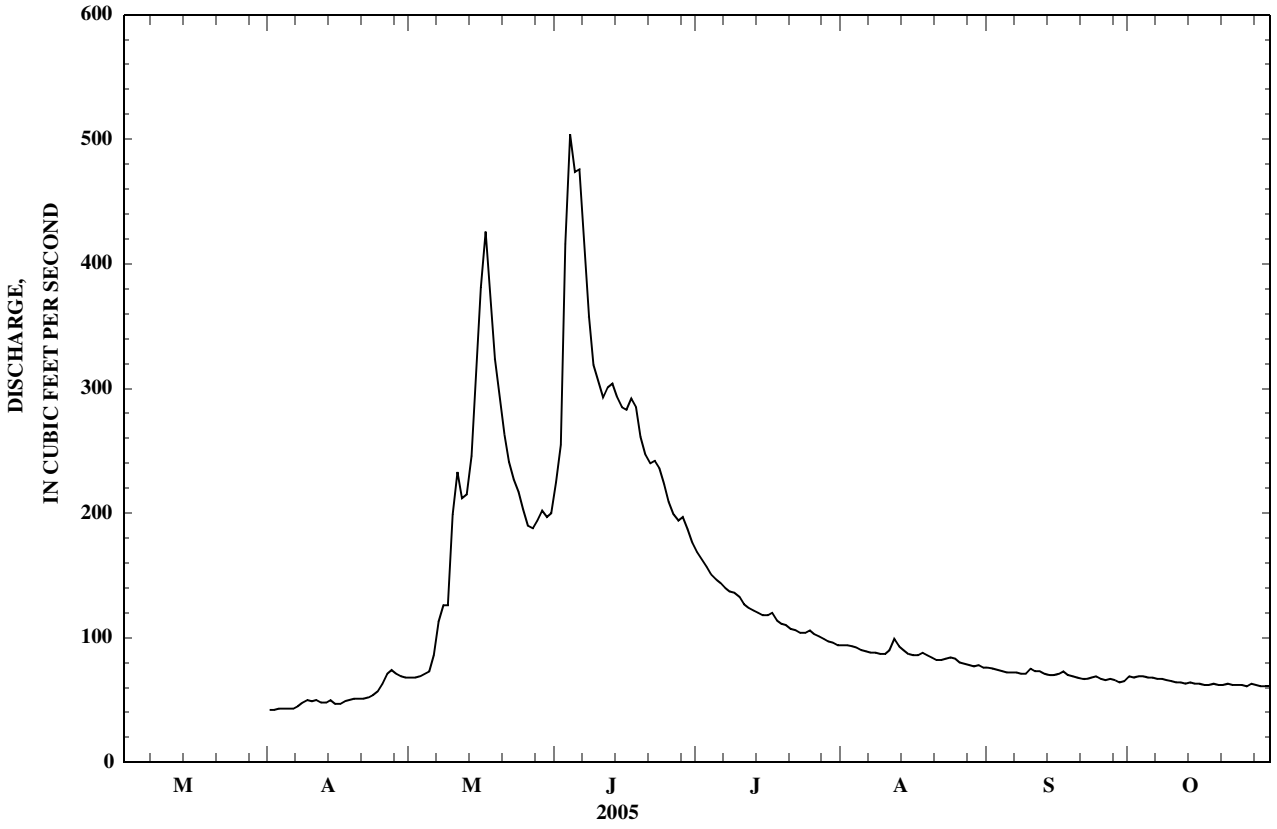
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1954 AND SEASONS 1998 - 2005*

MEAN	47.9	46.3	45.1	79.5	299	463	215	107	82.8	77.0	68.6	56.9
MAX	59.0	59.0	48.9	142	516	1,178	468	182	134	133	89.8	68.2
(WY)	(1952)	(1952)	(1952)	(1952)	(1951)	(1953)	(1951)	(1951)	(1951)	(1952)	(1952)	(1951)
MIN	24.9	25.1	36.5	45.0	195	218	92.9	61.8	57.3	54.6	44.0	40.7
(WY)	(1950)	(1949)	(1950)	(2001)	(2001)	(2004)	(2003)	(1949)	(1949)	(1950)	(1950)	(1950)

06102500 TETON RIVER BELOW SOUTH FORK, NEAR CHOTEAU, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1947 - 1954*		SEASONS 1998 - 2005*	
ANNUAL MEAN			166			
HIGHEST ANNUAL MEAN			225	1953		
LOWEST ANNUAL MEAN			92.9	1949		
HIGHEST DAILY MEAN	504	Jun 4	2,380	Jun 5, 1948	1,160	Jun 17, 2002
LOWEST DAILY MEAN	42	Apr 1	20	Jan 24, 1949	36	Apr 13, 2001
ANNUAL SEVEN-DAY MINIMUM			22	Jan 24, 1949		
MAXIMUM PEAK FLOW	547	Jun 4	b2,780	Jun 3, 1948	1,280	Jun 17, 2002
MAXIMUM PEAK STAGE	5.13	Jun 4	c7.34	Jan 6, 1950	5.78	Jun 17, 2002
INSTANTANEOUS LOW FLOW	a39	Apr 1	d12	Mar 28, 1951	f35	Apr 15, 2001
ANNUAL RUNOFF (AC-FT)			119,900			
10 PERCENT EXCEEDS			418			
50 PERCENT EXCEEDS			80			
90 PERCENT EXCEEDS			43			

*--During periods of operation [June 1947 to October 1954, June 1998 to current year (seasonal records only)].
a--Gage height, 3.56 ft.
b--From rating curve extended above 1,100 ft3/s, gage height, 5.32 ft, previous site and datum.
c--Backwater from ice, previous site and datum.
d--Gage height, 2.82 ft, previous site and datum.
f--Gage height, 3.71 ft.



06102500 TETON RIVER BELOW SOUTH FORK, NEAR CHOTEAU, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 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)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
NOV									
16...	1210	55	8.0	381	8.5	4.5	<.010	.035	E.001
JAN									
10...	1415	25	7.9	388	1.5	0.0	<.010	.045	<.002
FEB									
22...	1330	45	7.6	389	13.0	3.0	E.006	.051	E.001
MAR									
23...	1000	30	7.9	394	-4.0	0.0	E.009	.047	.002
APR									
18...	1540	52	8.3	375	5.5	6.5	E.008	.033	<.002
MAY									
25...	1030	209	8.4	318	10.5	5.5	<.010	.036	<.002
JUN									
21...	1800	239	8.4	321	25.0	16.0	E.005	.019	<.002
JUL									
26...	1000	110	8.4	368	18.0	8.0	<.010	.028	E.001
AUG									
23...	1215	83	8.4	385	23.0	12.0	E.006	.016	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)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV						
16...	<.006	<.004	E.04	41	14	2.1
JAN						
10...	<.006	E.003	.07	88	9	.61
FEB						
22...	<.006	E.003	.07	88	5	.61
MAR						
23...	<.006	E.002	.07	56	3	.24
APR						
18...	<.006	<.004	E.05	85	3	.42
MAY						
25...	<.006	.008	E.05	76	8	4.5
JUN						
21...	<.006	<.004	E.04	64	15	9.7
JUL						
26...	<.006	<.004	E.05	61	9	2.7
AUG						
23...	<.006	E.003	.08	63	12	2.7

E--Estimated.

06102500 TETON RIVER BELOW SOUTH FORK, NEAR CHOTEAU, MT—Continued

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

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)
APR								
18...	1540	210	58.5	14.9	.51	.0	1.25	148
JUN								
21...	1800	180	48.6	13.7	.44	.0	1.14	150
AUG								
23...	1215	210	57.1	15.3	.50	.0	1.21	148

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)
APR							
18...	.21	.4	4.86	46.6	216	.29	30.4
JUN							
21...	E.20	.3	4.69	23.5	E183	.25	E118
AUG							
23...	.23	.3	4.95	45.0	213	.29	47.8

E--Estimated.

06108000 TETON RIVER NEAR DUTTON, MT

LOCATION.--Lat 47°55'49", long 111°33'07" (NAD 27), in $SE^1/_4SW^1/_4SW^1/_4$ sec.12, T.25 N., R.1 E., Teton County, Hydrologic Unit 10030205, on right bank 150 ft upstream from Kerr Bridge, 0.9 mi downstream from Hunt Coulee, 9.5 mi northeast of Dutton, and at river mile 100.9.

DRAINAGE AREA.--1,307 mi^2. Area at site used prior to July 17, 1965, 1,308 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 3,235 ft (NGVD 29). Prior to July 17, 1965, water-stage recorder at site 1,800 ft downstream at elevation 1.97 ft lower.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Water is diverted on left bank in sec.34, T.25 N., R.7 W., for storage in Bynum Reservoir (usable capacity, 75,000 acre-ft). Diversions for irrigation of about 44,000 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	16	22	e18	e13	e30	48	61	40	30	68	3.5	8.9
2	16	21	e20	e12	e33	51	56	39	44	79	3.3	9.0
3	18	23	e23	e12	e30	58	52	37	67	73	1.6	8.4
4	18	21	e20	e13	e27	69	52	35	118	61	1.4	8.8
5	18	20	e18	e15	e23	65	49	33	223	53	1.8	8.4
6	18	21	e15	e17	e20	43	47	31	229	43	2.3	8.0
7	18	21	e16	e15	e22	39	44	33	233	36	2.6	7.9
8	18	21	e17	e13	e25	41	44	33	205	26	2.1	7.3
9	19	21	e20	e15	e28	42	43	32	170	20	1.5	7.3
10	22	22	e23	e17	e32	43	40	32	150	16	1.8	8.4
11	21	22	e25	e18	e35	43	39	30	133	15	2.4	9.6
12	21	22	e20	e16	e34	45	37	31	126	17	6.8	11
13	22	e20	e15	e13	e32	46	37	38	125	15	11	13
14	22	e25	e18	e11	e30	46	43	43	135	14	13	13
15	25	29	e22	e10	e28	46	46	37	148	11	12	12
16	26	23	e20	e13	e28	45	45	33	144	11	13	11
17	27	22	e22	e20	e30	47	43	42	131	11	12	11
18	28	22	e24	e30	e30	42	41	47	128	14	13	12
19	30	22	e25	e35	e28	e45	41	57	121	14	13	12
20	32	e20	e22	e40	e25	50	42	66	114	10	12	11
21	35	e20	e18	e30	e27	53	47	61	107	8.7	11	10
22	33	e20	e14	e25	e32	58	49	58	95	8.1	9.5	9.3
23	31	e17	e12	e27	e35	e55	50	55	84	7.0	9.1	10
24	29	e18	e15	e30	e40	e50	53	52	71	4.1	12	12
25	26	e20	e20	e28	e38	61	46	49	59	3.8	13	14
26	25	e22	e18	e25	e35	62	42	46	53	4.2	13	13
27	25	e20	e18	e25	e38	61	42	46	49	4.2	12	13
28	25	e19	e20	e25	e42	61	43	43	51	3.0	11	13
29	23	e18	e23	e25	---	70	43	37	57	2.2	11	13
30	23	e18	e20	e25	---	79	42	32	61	2.7	10	13
31	23	---	e15	e27	---	71	---	29	---	3.9	8.9	---
TOTAL	733	632	596	640	857	1,635	1,359	1,277	3,461	658.9	250.6	318.3
MEAN	23.6	21.1	19.2	20.6	30.6	52.7	45.3	41.2	115	21.3	8.08	10.6
MAX	35	29	25	40	42	79	61	66	233	79	13	14
MIN	16	17	12	10	20	39	37	29	30	2.2	1.4	7.3
AC-FT	1,450	1,250	1,180	1,270	1,700	3,240	2,700	2,530	6,860	1,310	497	631

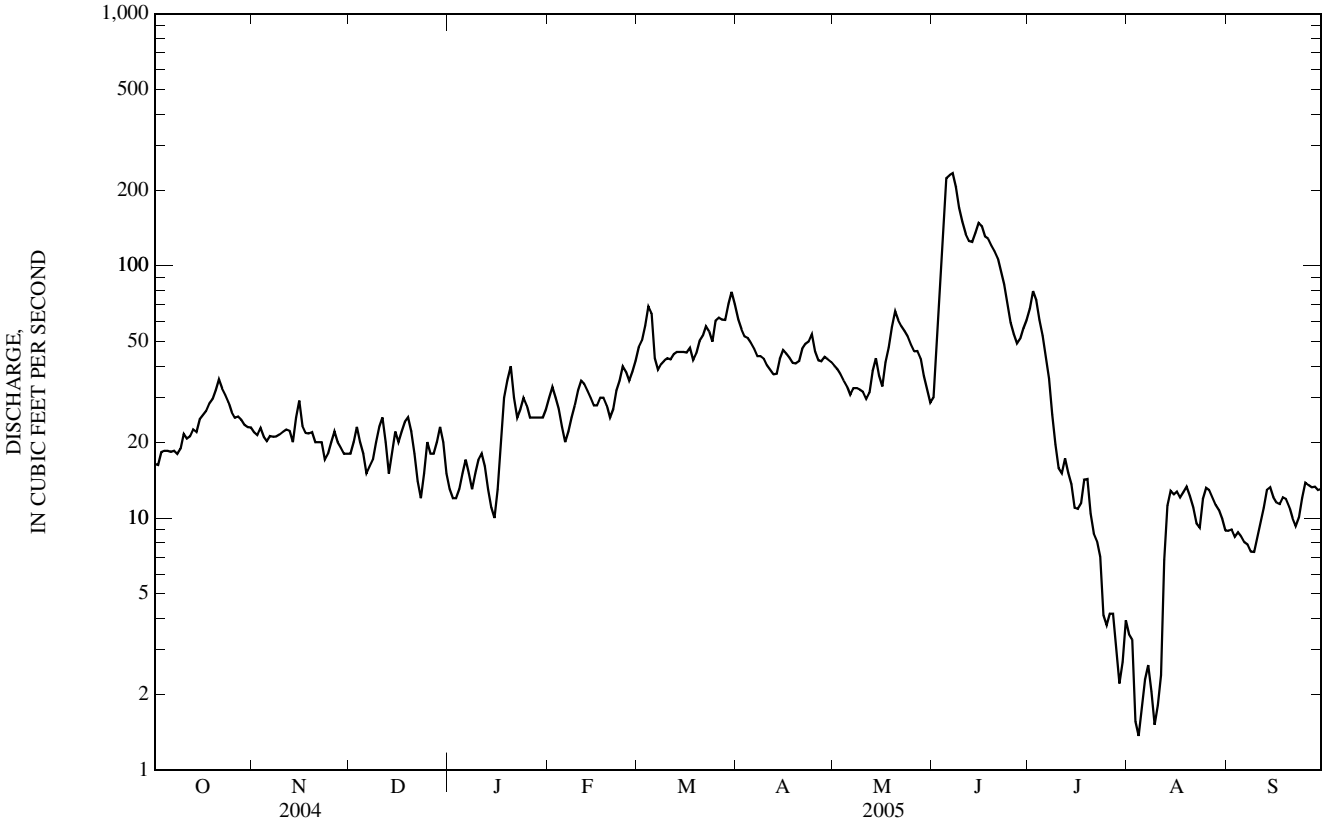
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	67.9	68.7	62.3	53.7	83.5	178	154	237	373	152	70.3	63.0
MAX	223	176	209	167	388	819	495	957	2,727	551	263	211
(WY)	(1966)	(1976)	(1960)	(1976)	(1986)	(1969)	(1965)	(1976)	(1964)	(1958)	(1972)	(1993)
MIN	15.4	18.5	14.8	13.2	15.2	28.8	32.8	20.1	16.9	1.30	0.00	7.39
(WY)	(2002)	(2002)	(2001)	(1985)	(1985)	(2002)	(2004)	(2000)	(1988)	(1985)	(1988)	(2001)

06108000 TETON RIVER NEAR DUTTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1954 - 2005	
ANNUAL TOTAL	10,121.7		12,417.8			
ANNUAL MEAN	27.7		34.0		130	
HIGHEST ANNUAL MEAN					350	1964
LOWEST ANNUAL MEAN					26.9	2001
HIGHEST DAILY MEAN	155	May 26	233	Jun 7	20,000	Jun 9, 1964
LOWEST DAILY MEAN	1.4	Jul 28	1.4	Aug 4	0.00	Jul 21, 1984
ANNUAL SEVEN-DAY MINIMUM	2.9	Jul 24	1.9	Aug 3	0.00	Jul 21, 1984
MAXIMUM PEAK FLOW			247	Jun 6	b71,300	Jun 9, 1964
MAXIMUM PEAK STAGE			2.66	Jun 6	c20.48	Jun 9, 1964
INSTANTANEOUS LOW FLOW			a0.88	Aug 5	d0.00	Jul 21, 1984
ANNUAL RUNOFF (AC-FT)	20,080		24,630		94,260	
10 PERCENT EXCEEDS	45		61		260	
50 PERCENT EXCEEDS	22		25		67	
90 PERCENT EXCEEDS	10		9.4		20	

a--Gage height, 0.60 ft.
b--From slope-area measurement of peak flow.
c--From floodmark.
d--No flow at times on many years.
e--Estimated.



06108000 TETON RIVER NEAR DUTTON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 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)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
NOV									
16...	1500	22	8.5	807	13.0	5.0	<.010	.317	.004
JAN									
10...	1130	17	7.3	924	-5.0	0.0	.144	.698	.005
FEB									
22...	1620	32	8.0	930	13.0	0.0	E.005	.539	.003
MAR									
23...	1300	53	8.5	1,300	-6.0	0.5	.015	.278	.005
APR									
19...	1215	41	8.6	1,270	9.0	8.5	E.008	E.009	E.001
MAY									
25...	1500	47	8.6	1,170	16.0	16.0	E.005	<.016	<.002
JUN									
21...	1430	105	8.6	1,260	32.0	26.0	<.010	<.016	<.002
JUL									
26...	1410	4.3	8.4	1,200	25.0	22.0	E.008	<.016	E.001
AUG									
23...	1700	9.6	8.5	863	20.0	23.5	E.005	<.016	<.002

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Selenium, water, unfltrd ug/L (01147)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV							
16...	<.006	.010	.49	--	88	73	4.4
JAN							
10...	<.006	.007	.99	--	68	53	2.4
FEB							
22...	<.006	.019	.78	--	85	40	3.5
MAR							
23...	E.003	.040	.61	2.0	99	58	8.3
APR							
19...	<.006	.017	.36	--	92	22	2.4
MAY							
25...	<.006	.034	.35	--	93	65	8.2
JUN							
21...	<.006	.073	.56	--	92	120	34
JUL							
26...	<.006	.025	.37	1.1	97	29	.34
AUG							
23...	<.006	.036	.33	--	98	39	1.0

E--Estimated.

06108000 TETON RIVER NEAR DUTTON, MT—Continued

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

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)
APR										
19...	1215	510	74.7	78.5	2.98	2	107	276	17.1	.5
JUN										
21...	1430	520	66.5	85.1	3.07	2	104	294	14.1	.5
AUG										
23...	1700	350	49.7	55.6	3.08	1	59.8	205	8.65	.4

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
APR					
19...	1.79	412	860	1.17	95.2
JUN					
21...	2.46	369	821	1.12	233
AUG					
23...	1.50	249	550	.75	14.3

06108800 TETON RIVER AT LOMA, MT

LOCATION.--Lat 47°55'57", long 110°30'49" (NAD 27), in NW$^1/_4$ SW$^1/_4$ SE$^1/_4$ sec.12, T.25 N., R.9 E., Choteau County, Hydrologic Unit 10030205, on left bank 25 ft downstream from county bridge, 0.5 mi southwest of Loma, and at river mile 0.3.

DRAINAGE AREA.--2,010 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1998 to current year. Prior to October 1, 1999, seasonal records only.

GAGE.--Water-stage recorder. Elevation of gage is 2,560 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. U.S. Geological Survey satellite telemeter at station. Numerous diversions upstream from station for irrigation.

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	5.4	18	17	e11	e17	e33	64	25	21	44	0.00	0.00
2	5.0	18	16	e10	e20	e38	61	24	27	42	0.00	0.00
3	4.6	17	20	e10	e21	41	57	22	43	43	0.00	0.00
4	4.6	17	17	e10	e16	43	54	17	58	37	0.00	0.00
5	4.8	17	e11	e10	e14	45	49	15	53	37	0.00	0.00
6	4.8	16	e9.0	e11	e13	48	47	17	80	31	0.00	0.00
7	4.8	15	e9.5	e11	e14	53	46	17	185	27	0.00	0.00
8	6.2	16	e10	e10	e15	51	45	20	205	21	0.00	0.00
9	6.2	16	e10	e10	e17	46	44	21	221	13	0.00	0.00
10	6.3	16	e12	e9.0	e20	41	41	21	210	14	0.00	0.00
11	6.8	16	e13	e9.0	e22	40	38	27	178	10	0.00	0.00
12	7.1	14	e11	e8.0	e23	42	37	29	156	5.0	0.00	0.00
13	7.2	12	e10	e8.0	e21	42	36	27	148	2.8	0.00	0.00
14	9.3	12	e11	e7.0	e18	41	37	26	129	1.6	0.00	0.00
15	13	15	e13	e7.0	e16	42	36	26	122	0.86	0.00	0.00
16	18	15	e12	e8.0	e15	42	36	27	127	0.50	0.00	0.00
17	24	16	e16	e9.0	e16	45	38	22	155	0.35	0.00	0.00
18	24	19	e19	e12	e17	41	39	23	148	0.28	0.00	0.00
19	21	20	e22	e18	e15	41	39	15	125	0.18	0.00	0.00
20	22	16	e20	e24	e16	43	38	16	121	0.00	0.00	0.00
21	24	11	e13	e20	e16	40	37	19	112	0.00	0.00	0.00
22	25	14	e11	e17	e17	45	36	25	106	0.00	0.00	0.00
23	25	11	e10	e18	e17	53	32	41	112	0.00	0.00	0.00
24	27	9.7	e11	e22	e18	57	30	39	85	0.00	0.00	0.00
25	26	17	e13	e20	e19	50	28	39	74	0.00	0.00	0.00
26	25	24	e12	e17	e20	44	27	42	67	0.00	0.00	0.00
27	24	12	e12	e18	e23	47	29	41	59	0.00	0.00	0.00
28	23	15	e15	e19	e27	53	28	34	56	0.00	0.00	0.00
29	21	14	e14	e17	---	53	27	28	51	0.00	0.00	0.00
30	20	13	e12	e16	---	51	24	28	46	0.00	0.00	0.00
31	20	---	e11	e16	---	56	---	27	---	0.00	0.00	---
TOTAL	465.1	461.7	412.5	412.0	503	1,407	1,180	800	3,280	330.57	0.00	0.00
MEAN	15.0	15.4	13.3	13.3	18.0	45.4	39.3	25.8	109	10.7	0.00	0.00
MAX	27	24	22	24	27	57	64	42	221	44	0.00	0.00
MIN	4.6	9.7	9.0	7.0	13	33	24	15	21	0.00	0.00	0.00
AC-FT	923	916	818	817	998	2,790	2,340	1,590	6,510	656	0.00	0.00

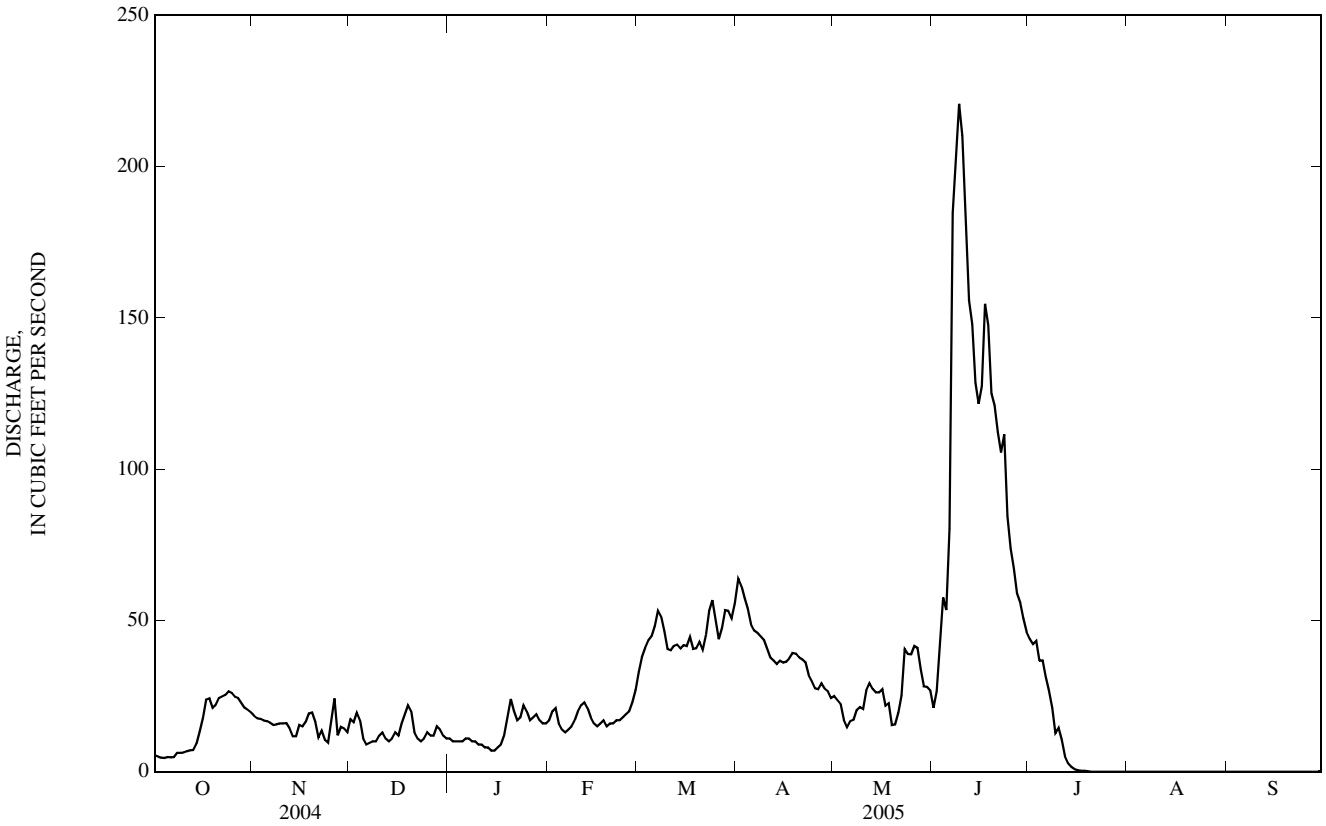
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	14.8	19.0	17.3	14.4	21.2	61.9	60.9	37.8	112	30.3	10.3	7.45
MAX	30.6	44.0	39.5	35.0	31.6	109	109	74.8	304	151	62.6	24.8
(WY)	(2003)	(2003)	(2000)	(2000)	(2000)	(2003)	(2003)	(1999)	(2002)	(1998)	(1998)	(1999)
MIN	0.00	0.00	0.82	3.24	14.8	20.2	23.5	10.2	4.98	2.48	0.00	0.00
(WY)	(2002)	(2002)	(2002)	(2004)	(2001)	(2002)	(2004)	(2000)	(2001)	(2000)	(2000)	(2000)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	6,076.20		9,251.87			
ANNUAL MEAN	16.6		25.3		28.1	
HIGHEST ANNUAL MEAN					42.6	2003
LOWEST ANNUAL MEAN					14.3	2004
HIGHEST DAILY MEAN	93	May 28	221	Jun 9	1,740	Jun 13, 2002
LOWEST DAILY MEAN	0.00	Jul 20	0.00	Jul 20	0.00	Jul 30, 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 20	0.00	Jul 20	0.00	Jul 30, 1999
MAXIMUM PEAK FLOW			236	Jun 9	a2,000	Jun 13, 2002
MAXIMUM PEAK STAGE			2.77	Jun 9	b6.98	Mar 16, 2003
ANNUAL RUNOFF (AC-FT)	12,050		18,350		20,390	
10 PERCENT EXCEEDS	39		51		64	
50 PERCENT EXCEEDS	12		17		15	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a--Gage height, 5.87 ft.
b--Backwater from ice, from floodmarks.
e--Estimated.

06108800 TETON RIVER AT LOMA, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965, May 1998 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1999 to September 2003, October 2004 to September 2005.

REMARKS.--Daily water temperature records rated excellent except for June 12 to July 20, which are good. Unable to collect water-quality samples and daily temperature data July 20 to end of water year due to no flow. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 35.5°C, July 13, 2002; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 33.5°C, July 13; minimum, 0.0°C many days from November 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)
NOV									
17...	1100	16	8.6	1,020	11.5	2.0	<.010	E.008	E.001
JAN									
11...	0900	E9.0	7.6	1,450	-10.0	0.0	.039	.544	.004
FEB									
23...	0900	E17	8.2	1,140	8.0	0.0	E.006	.435	.003
MAR									
22...	1045	44	8.1	1,240	3.0	4.5	.014	.021	.003
APR									
19...	0900	40	8.5	1,400	8.5	8.0	E.007	<.016	<.002
MAY									
25...	1815	37	8.6	1,340	19.5	18.0	<.010	<.016	<.002
JUN									
22...	1530	103	8.6	1,400	33.0	29.0	<.010	<.016	<.002

E--Estunated,

06108800 TETON RIVER AT LOMA, MT—Continued

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

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Selenium, water, unfltrd ug/L (01147)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV							
17...	<.006	.009	--	.18	75	53	2.3
JAN							
11...	<.006	.007	--	.76	74	33	E.80
FEB							
23...	<.006	.019	--	.70	88	57	E2.6
MAR							
22...	<.006	.047	1.6	.31	98	68	8.1
APR							
19...	<.006	.023	--	.30	96	37	4.0
MAY							
25...	<.006	.043	--	.35	98	72	7.2
JUN							
22...	<.006	.112	--	.58	98	153	43

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)
APR										
19...	0900	540	77.4	84.5	3.52	2	126	256	18.1	.5
JUN										
22...	1530	510	64.3	85.9	3.72	2	114	271	15.5	.5

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
APR					
19...	.87	480	944	1.28	102
JUN					
22...	4.28	408	859	1.17	239

E--Estimated.

06108800 TETON RIVER AT LOMA, 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	15.0	6.0	10.0	5.0	0.5	2.5	0.5	0.0	0.0	0.0	0.0	0.0
2	17.0	6.5	11.0	8.5	2.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0
3	17.0	8.0	12.0	7.0	3.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0
4	17.5	7.0	12.0	5.0	0.0	3.0	1.0	0.0	0.5	0.0	0.0	0.0
5	18.0	8.0	12.5	7.5	2.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
6	17.0	7.5	12.0	8.5	5.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0
7	16.5	11.0	13.0	7.0	5.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
8	16.5	7.0	11.5	7.0	2.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
9	15.0	9.5	12.0	5.0	2.0	4.0	0.5	0.0	0.0	0.0	0.0	0.0
10	15.0	8.0	11.0	6.0	2.5	4.5	0.5	0.0	0.0	0.0	0.0	0.0
11	14.0	6.0	9.5	3.5	0.0	1.5	2.0	0.0	0.5	0.0	0.0	0.0
12	13.0	9.0	10.5	2.5	0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0
13	13.5	6.0	9.5	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
14	11.0	9.5	10.5	1.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
15	11.0	8.5	9.5	4.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
16	9.5	8.0	9.0	5.5	3.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0
17	8.5	4.5	6.0	5.0	1.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0
18	5.5	4.0	4.5	3.0	0.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0
19	6.0	2.5	4.0	2.5	1.0	2.0	3.5	0.0	1.5	0.0	0.0	0.0
20	5.0	1.5	3.5	1.5	0.0	0.5	2.5	0.0	0.5	0.0	0.0	0.0
21	7.0	3.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	9.0	5.0	7.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
23	7.5	5.0	6.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
24	7.0	3.0	5.0	2.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
25	7.0	1.0	4.0	5.0	2.0	3.5	0.0	0.0	0.0	1.5	0.0	0.5
26	7.0	1.0	4.0	3.5	0.0	2.0	0.0	0.0	0.0	0.5	0.0	0.0
27	7.5	2.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
28	6.0	2.5	4.5	0.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.5
29	5.0	1.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.5
30	5.5	2.0	3.5	0.5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
31	5.0	2.5	3.5	---	---	---	0.0	0.0	0.0	1.5	0.0	0.5
MONTH	18.0	1.0	8.0	8.5	0.0	2.5	3.5	0.0	0.0	1.5	0.0	0.0
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	0.0	0.5	6.5	0.0	2.0	10.5	4.5	7.0	15.0	3.0	8.0
2	2.5	0.0	1.0	6.5	0.0	2.5	12.5	5.5	8.5	17.5	4.0	10.5
3	2.5	0.0	1.0	8.0	0.5	3.5	12.0	7.0	9.5	19.5	6.0	12.5
4	2.5	0.5	1.5	8.0	0.0	4.0	14.0	7.5	10.5	20.5	10.5	15.5
5	1.5	0.0	0.5	9.0	1.0	5.0	15.0	7.5	11.0	24.0	13.5	18.0
6	0.0	0.0	0.0	9.0	3.5	6.0	16.5	6.5	11.0	25.0	13.5	18.5
7	0.0	0.0	0.0	6.0	1.5	4.0	17.5	9.0	13.0	18.5	13.5	16.0
8	0.0	0.0	0.0	10.0	2.5	6.0	14.5	10.0	12.0	16.5	11.5	13.5
9	0.0	0.0	0.0	9.0	5.0	7.0	11.0	6.5	8.0	18.0	11.0	14.5
10	0.0	0.0	0.0	11.0	3.5	7.0	14.0	4.5	9.0	14.0	10.5	12.5
11	0.5	0.0	0.0	8.0	3.5	6.0	14.5	5.5	10.0	12.5	7.5	9.5
12	0.0	0.0	0.0	8.0	4.5	6.0	15.0	6.5	10.5	11.0	7.0	8.5
13	0.5	0.0	0.0	5.5	2.5	4.0	17.0	7.0	11.5	16.5	5.5	11.0
14	0.0	0.0	0.0	5.5	2.0	3.5	12.0	6.5	9.0	22.0	9.0	15.0
15	0.5	0.0	0.0	9.5	2.0	5.0	13.5	4.0	8.5	23.5	13.0	18.5
16	0.0	0.0	0.0	8.5	3.5	6.0	17.0	5.5	11.0	24.5	15.5	19.5
17	0.0	0.0	0.0	6.0	0.0	2.5	16.5	9.0	12.5	19.0	15.0	17.0
18	0.5	0.0	0.0	5.0	0.0	1.5	12.5	9.0	10.5	21.5	11.0	16.0
19	0.5	0.0	0.0	4.0	0.0	1.5	12.5	8.0	10.0	22.0	13.5	17.0
20	0.0	0.0	0.0	5.5	0.0	2.5	11.0	8.5	9.5	23.5	12.0	17.5
21	0.0	0.0	0.0	10.0	2.5	5.5	14.5	7.5	10.5	21.5	13.0	17.0
22	0.0	0.0	0.0	7.0	1.5	4.5	19.0	7.5	12.5	22.0	11.5	16.5
23	0.5	0.0	0.0	4.0	0.0	1.5	19.0	9.0	14.0	22.5	12.5	17.0
24	0.5	0.0	0.0	5.0	0.0	1.5	21.0	10.5	15.0	18.5	12.0	15.5
25	0.5	0.0	0.0	7.0	0.0	2.5	21.0	10.0	15.0	18.5	13.0	15.5
26	0.5	0.0	0.0	7.5	0.0	4.0	15.0	11.0	13.0	21.0	12.5	16.0
27	1.0	0.0	0.5	12.0	4.0	7.5	11.0	7.0	9.0	24.0	11.5	17.5
28	4.5	0.0	1.0	10.0	6.5	8.0	11.0	4.5	7.5	24.0	13.5	18.5
29	---	---	---	11.5	3.5	7.5	11.0	3.0	7.0	22.5	13.0	17.5
30	---	---	---	8.0	4.5	6.0	8.0	4.5	6.0	22.0	12.0	17.0
31	---	---	---	12.0	3.5	7.0	---	---	---	24.0	12.5	18.0
MONTH	4.5	0.0	0.0	12.0	0.0	4.5	21.0	3.0	10.5	25.0	3.0	15.5

06108800 TETON RIVER AT LOMA, 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	18.5	14.5	16.0	27.5	19.0	23.5	---	---	---	---	---	---
2	16.5	12.0	14.0	27.0	19.0	22.5	---	---	---	---	---	---
3	16.0	12.0	14.0	27.0	16.5	21.5	---	---	---	---	---	---
4	21.5	13.5	16.5	29.0	17.5	23.0	---	---	---	---	---	---
5	25.5	15.0	19.5	30.5	19.0	24.5	---	---	---	---	---	---
6	20.0	16.5	18.0	29.0	20.0	24.5	---	---	---	---	---	---
7	21.0	15.0	17.5	30.5	21.0	25.5	---	---	---	---	---	---
8	17.5	15.0	16.0	32.0	20.0	26.0	---	---	---	---	---	---
9	17.0	14.0	15.5	30.0	21.5	25.0	---	---	---	---	---	---
10	21.0	14.5	17.5	28.0	19.0	23.0	---	---	---	---	---	---
11	23.5	15.5	19.5	30.0	19.5	24.5	---	---	---	---	---	---
12	20.5	16.5	18.5	32.5	18.5	25.5	---	---	---	---	---	---
13	22.0	14.5	18.0	33.5	21.0	26.0	---	---	---	---	---	---
14	24.0	15.5	19.5	31.5	19.0	25.0	---	---	---	---	---	---
15	25.5	18.0	21.0	31.5	19.0	25.0	---	---	---	---	---	---
16	25.5	18.5	22.0	26.0	21.0	23.5	---	---	---	---	---	---
17	25.0	19.5	22.0	23.5	17.5	21.0	---	---	---	---	---	---
18	24.5	18.0	21.0	26.5	17.5	22.0	---	---	---	---	---	---
19	25.5	17.0	21.5	29.5	20.0	24.5	---	---	---	---	---	---
20	28.0	19.5	23.5	---	---	---	---	---	---	---	---	---
21	30.5	22.5	26.0	---	---	---	---	---	---	---	---	---
22	30.5	21.5	25.5	---	---	---	---	---	---	---	---	---
23	27.5	21.0	24.0	---	---	---	---	---	---	---	---	---
24	27.5	19.5	23.0	---	---	---	---	---	---	---	---	---
25	27.0	20.0	22.5	---	---	---	---	---	---	---	---	---
26	23.5	18.5	21.0	---	---	---	---	---	---	---	---	---
27	26.0	18.5	21.5	---	---	---	---	---	---	---	---	---
28	27.5	19.0	22.5	---	---	---	---	---	---	---	---	---
29	22.5	18.0	19.5	---	---	---	---	---	---	---	---	---
30	28.0	16.0	22.0	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	30.5	12.0	2.0	33.5	16.5	24.0	---	---	---	---	---	---

06109500 MISSOURI RIVER AT VIRGELLE, MT

LOCATION.--Lat 48°00'18", long 110°15'25" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SE^1/_4$ sec.13, T.26 N., R.11 E., Chouteau County, Hydrologic Unit 10040101, on left bank 0.2 mi upstream from Virgelle ferry, 0.6 mi southwest of Virgelle, 1.8 mi downstream from Spring Coulee, and at river mile 2,034.2.

DRAINAGE AREA.--34,379 mi^2.

PERIOD OF RECORD.--February 1935 to current year. Prior to October 1953, published as "at Loma."

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,507.50 ft (NGVD 29). Prior to Sept. 30, 1953, water-stage recorder at Loma, 18 mi upstream, 2,543.40 ft.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by 23 smaller irrigation reservoirs and powerplants, Clark Canyon Reservoir (station number 06015300), Canyon Ferry Lake (station number 06058500), and Lake Elwell (station number 06101300). Diversions for irrigation of about 850,400 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 in June 1908 reached a stage about 2 ft higher than that of June 5, 1953, 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	4,370	5,100	4,810	4,600	e4,800	4,610	4,730	5,750	6,380	10,200	5,740	5,320
2	4,230	5,190	4,570	e4,100	4,860	4,660	4,600	5,650	6,530	10,200	5,900	5,590
3	4,440	5,320	4,770	e3,850	4,830	4,640	4,700	5,680	7,950	9,740	5,680	5,600
4	4,420	5,240	4,730	e4,000	4,810	4,550	4,430	5,480	14,400	9,540	5,510	5,420
5	4,440	5,280	4,700	e4,150	4,630	4,660	4,640	5,450	17,000	9,350	5,700	5,290
6	4,550	4,950	4,800	e4,600	4,760	4,530	4,630	5,380	16,300	9,270	5,480	5,300
7	4,320	4,900	5,410	e4,600	5,060	4,390	4,730	5,530	14,500	9,100	5,200	5,230
8	4,400	5,000	5,500	e4,800	4,310	4,590	4,690	5,370	13,400	8,790	5,520	5,260
9	4,370	5,020	4,930	e5,150	4,240	4,580	4,660	6,170	13,100	8,590	5,590	5,340
10	4,380	5,040	4,840	e5,150	4,290	4,490	4,690	6,590	11,600	8,330	5,170	5,260
11	4,350	5,060	4,910	e5,150	5,050	4,390	4,770	6,780	10,700	8,290	5,480	5,290
12	4,390	5,030	5,020	e5,150	5,120	4,450	4,790	9,130	10,700	8,530	5,220	5,250
13	4,390	4,940	4,790	e5,200	5,370	4,490	4,790	10,900	11,200	8,580	5,330	5,310
14	4,560	5,000	4,760	e5,300	4,930	4,550	4,630	10,600	10,900	8,410	5,610	5,390
15	4,700	5,050	4,710	e5,050	4,450	4,620	4,980	9,140	10,700	7,740	5,720	5,340
16	4,780	4,920	4,820	e5,000	4,620	4,760	4,710	8,260	9,820	7,320	6,040	5,380
17	4,870	5,000	4,860	e5,100	4,510	4,610	4,860	8,990	9,680	7,020	5,810	5,280
18	4,780	5,050	4,940	e5,450	4,370	4,730	4,890	10,300	10,400	6,300	5,780	5,870
19	4,750	5,100	4,880	e5,800	4,780	4,380	4,850	11,800	11,200	6,370	5,530	5,370
20	4,820	5,120	4,890	e6,100	4,520	4,560	4,910	11,500	12,100	5,890	5,340	5,940
21	5,040	5,000	4,930	e6,850	5,010	4,530	5,060	10,000	12,000	5,680	5,200	5,770
22	5,050	4,930	4,630	e6,700	4,730	4,550	5,180	9,330	11,300	5,750	5,450	5,350
23	5,110	4,970	4,520	e6,300	4,530	4,580	5,470	9,340	11,200	5,520	5,270	5,300
24	5,200	4,880	3,680	e6,300	4,530	4,620	5,420	9,090	10,900	5,520	5,310	5,400
25	5,440	5,050	3,460	e6,450	4,450	4,650	5,310	8,820	10,400	5,860	5,270	5,520
26	5,490	5,150	4,130	e6,700	4,640	4,570	5,540	8,190	10,800	5,530	5,260	5,530
27	5,410	4,620	5,650	e6,450	4,700	4,660	5,550	7,550	9,770	5,700	5,110	5,670
28	5,360	4,890	5,420	e5,950	4,660	4,790	5,820	7,050	9,820	5,710	5,120	5,560
29	5,430	4,740	5,080	e5,200	---	4,840	5,890	6,730	10,100	5,710	5,170	5,430
30	5,450	4,810	4,510	e4,750	---	4,810	6,040	6,550	10,200	5,600	5,090	5,490
31	5,290	---	5,010	e4,800	---	4,680	---	6,490	---	5,420	4,990	---
TOTAL	148,580	150,350	148,660	164,750	131,560	142,520	149,960	243,590	335,050	229,560	168,590	163,050
MEAN	4,793	5,012	4,795	5,315	4,699	4,597	4,999	7,858	11,170	7,405	5,438	5,435
MAX	5,490	5,320	5,650	6,850	5,370	4,840	6,040	11,800	17,000	10,200	6,040	5,940
MIN	4,230	4,620	3,460	3,850	4,240	4,380	4,430	5,370	6,380	5,420	4,990	5,230
AC-FT	294,700	298,200	294,900	326,800	260,900	282,700	297,400	483,200	664,600	455,300	334,400	323,400

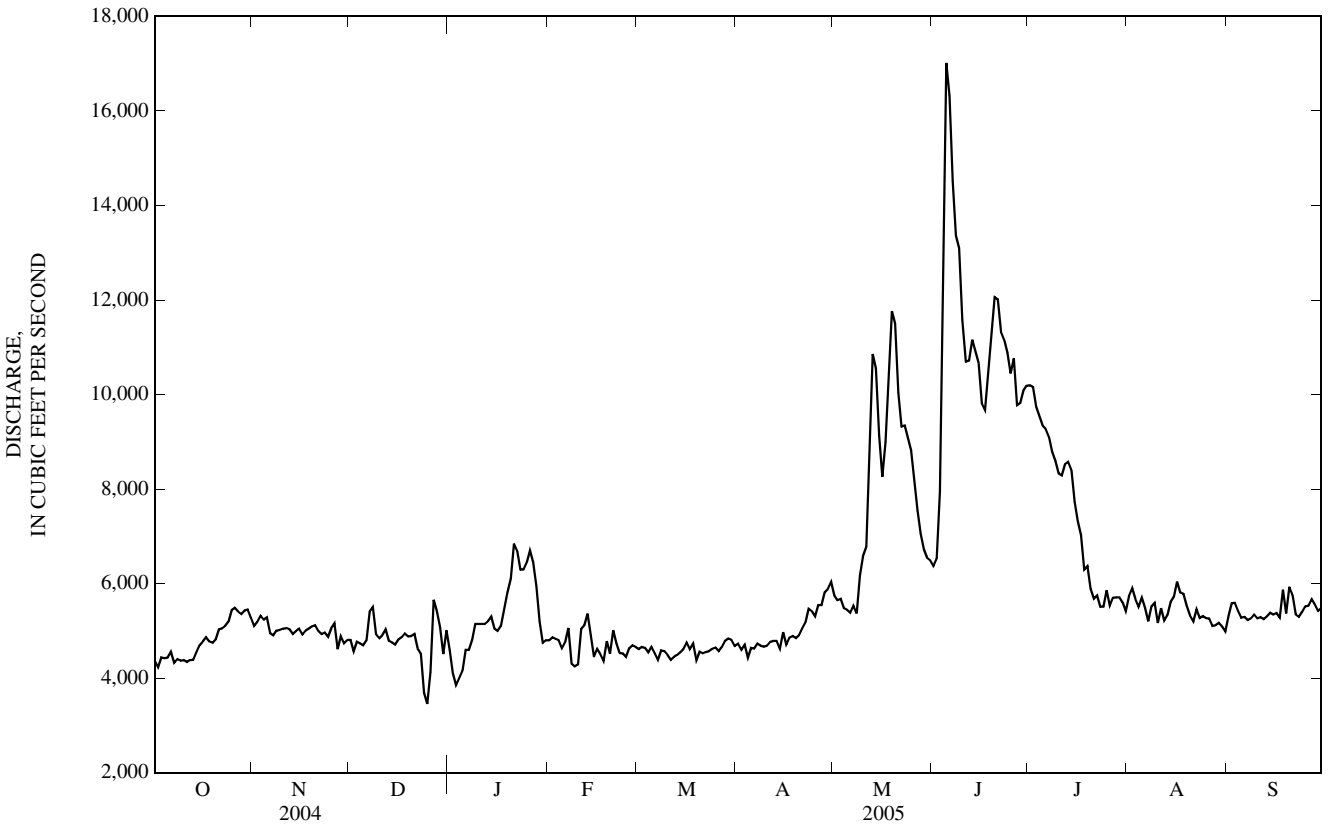
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)

MEAN	6,112	6,288	6,214	6,219	6,535	7,277	8,572	13,160	17,610	9,647	6,110	5,802
MAX	15,340	12,470	12,220	8,997	10,240	14,490	17,720	28,260	51,960	29,670	11,950	11,590
(WY)	(1966)	(1966)	(1960)	(1976)	(1971)	(1978)	(1943)	(1976)	(1948)	(1975)	(1993)	(1965)
MIN	3,533	3,207	3,221	2,716	2,600	3,784	4,062	4,819	4,646	3,704	2,821	2,818
(WY)	(1938)	(1938)	(1937)	(1936)	(1937)	(1938)	(1961)	(1992)	(1977)	(1940)	(1937)	(1937)

06109500 MISSOURI RIVER AT VIRGELLE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005	
ANNUAL TOTAL	1,929,730		2,176,220			
ANNUAL MEAN	5,272		5,962		8,322	
HIGHEST ANNUAL MEAN					13,660	1975
LOWEST ANNUAL MEAN					4,152	1937
HIGHEST DAILY MEAN	9,730	May 29	17,000	Jun 5	119,000	Jun 5, 1953
LOWEST DAILY MEAN	2,890	Jan 1	3,460	Dec 25	638	Jul 5, 1936
ANNUAL SEVEN-DAY MINIMUM	3,870	Jan 1	4,270	Jan 1	2,020	Feb 2, 1937
MAXIMUM PEAK FLOW			a18,000	Jun 5	c122,000	Jun 5, 1953
MAXIMUM PEAK STAGE			b12.12	Jan 26	d23.40	Jun 5, 1953
ANNUAL RUNOFF (AC-FT)	3,828,000		4,317,000		6,029,000	
10 PERCENT EXCEEDS	6,070		9,600		14,400	
50 PERCENT EXCEEDS	5,120		5,200		6,650	
90 PERCENT EXCEEDS	4,330		4,530		4,240	

a--Gage height, 7.06 ft.
b--Backwater from ice.
c--From rating curve for former site at Loma, extended above 66,000 ft^3/s.
d--From floodmark.
e--Estimated.



06114700 JUDITH RIVER NEAR MOUTH, NEAR WINIFRED, MT

LOCATION.--Lat 47°40'06", long 109°39'09" (NAD 27), in $SW^1/_4NW^1/_4NE^1/_4$ sec.22, T.22 N., R.16 E., Fergus County, Hydrologic Unit 10040103, on right bank 0.2 mi downstream from private road bridge, 5.3 mi south of Judith Landing, 15 mi northwest of Winifred, and at river mile 7.7.

DRAINAGE AREA.--2,731 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,490 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. 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	226	269	e230	e220	e210	238	305	326	283	578	126	220
2	231	266	e230	e220	e210	237	291	307	323	542	129	214
3	228	268	e250	e210	e210	239	285	296	435	510	121	199
4	213	271	e250	e210	e210	237	286	292	534	477	124	192
5	214	272	e250	e210	e200	238	282	286	750	433	102	188
6	216	273	e230	e210	e200	241	274	282	855	400	99	191
7	231	268	e210	e210	e200	238	270	281	868	380	106	191
8	242	271	e230	e210	e200	243	271	276	900	328	111	178
9	237	272	e240	e210	e200	246	294	276	915	292	143	174
10	233	269	e240	e210	e210	247	354	269	893	287	323	182
11	234	268	e250	e210	e220	247	345	271	872	289	148	190
12	234	268	e250	e210	e220	258	317	299	842	273	158	199
13	237	267	e240	e210	e220	262	306	346	1,010	250	171	195
14	243	270	e240	e200	e210	263	316	352	1,400	228	199	212
15	266	271	e240	e200	e210	260	307	331	1,370	215	184	224
16	285	273	e250	e200	e210	254	290	305	1,210	177	166	217
17	275	270	e250	e200	e210	259	281	309	1,140	149	170	237
18	274	271	e250	e210	e210	264	280	347	1,060	144	192	239
19	285	271	e250	e210	e210	257	347	485	1,020	146	204	243
20	278	270	e250	e200	e210	259	394	483	954	132	203	242
21	280	274	e240	e200	e220	264	393	494	877	135	197	235
22	282	266	e210	e200	e250	273	378	473	825	130	189	227
23	277	280	e180	e210	236	291	361	494	770	109	175	231
24	272	270	e230	e210	235	286	372	463	716	109	172	255
25	269	273	e230	e210	235	266	400	459	681	110	177	267
26	268	279	e230	e210	237	263	389	442	652	120	181	259
27	268	276	e230	e210	235	276	371	406	643	128	186	255
28	269	285	e230	e210	236	331	355	371	631	127	194	244
29	269	e210	e220	e210	---	362	341	339	641	126	208	246
30	267	e210	e230	e210	---	352	333	303	618	122	210	245
31	266	---	e230	e210	---	330	---	301	---	145	218	---
TOTAL	7,869	8,021	7,290	6,460	6,064	8,281	9,788	10,964	24,688	7,591	5,286	6,591
MEAN	254	267	235	208	217	267	326	354	823	245	171	220
MAX	285	285	250	220	250	362	400	494	1,400	578	323	267
MIN	213	210	180	200	200	237	270	269	283	109	99	174
AC-FT	15,610	15,910	14,460	12,810	12,030	16,430	19,410	21,750	48,970	15,060	10,480	13,070

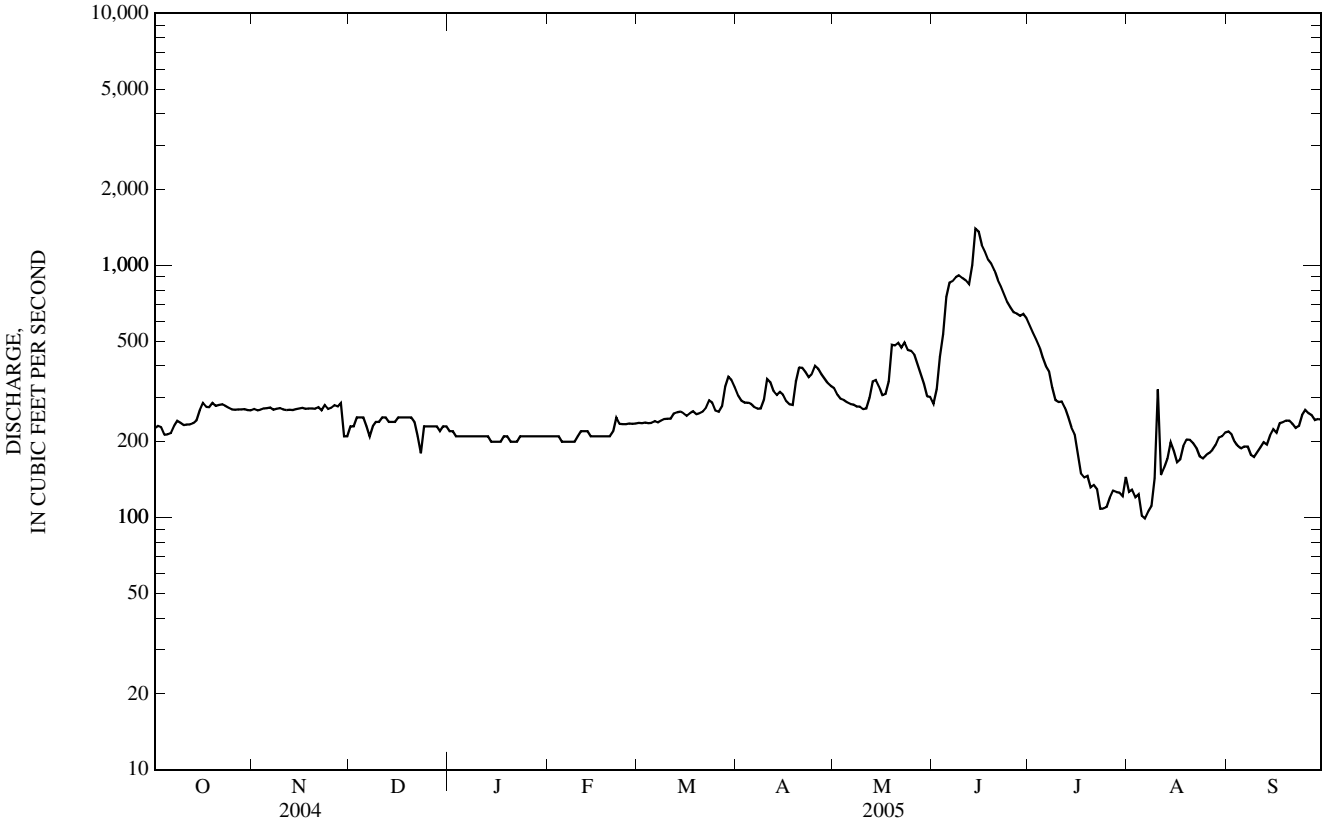
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	245	256	232	236	250	443	313	320	488	196	173	204
MAX	272	268	242	278	287	867	380	599	823	245	236	220
(WY)	(2001)	(2001)	(2003)	(2002)	(2002)	(2003)	(2003)	(2003)	(2005)	(2005)	(2002)	(2005)
MIN	229	239	223	192	217	267	269	157	318	112	143	192
(WY)	(2004)	(2004)	(2001)	(2004)	(2005)	(2005)	(2004)	(2001)	(2001)	(2003)	(2003)	(2003)

06114700 JUDITH RIVER NEAR MOUTH, NEAR WINIFRED, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005	
ANNUAL TOTAL	98,068		108,893			
ANNUAL MEAN	268		298		280	
HIGHEST ANNUAL MEAN					336	2003
LOWEST ANNUAL MEAN					243	2001
HIGHEST DAILY MEAN	1,190	Mar 9	1,400	Jun 14	6,860	Mar 14, 2003
LOWEST DAILY MEAN	84	Jul 24	99	Aug 6	58	Jul 24, 2003
ANNUAL SEVEN-DAY MINIMUM	102	Jul 22	113	Aug 2	64	Jul 19, 2003
MAXIMUM PEAK FLOW			a1,530	Jun 14	d7,600	Mar 14, 2003
MAXIMUM PEAK STAGE			b5.37	Jan 22	f11.00	Mar 13, 2003
INSTANTANEOUS LOW FLOW			c99	Aug 6	g54	Jul 24, 2003
ANNUAL RUNOFF (AC-FT)	194,500		216,000		202,600	
10 PERCENT EXCEEDS	372		467		379	
50 PERCENT EXCEEDS	241		250		250	
90 PERCENT EXCEEDS	160		181		156	

a--Gage height, 4.53 ft.
b--Backwater from ice.
c--Gage height, 2.47 ft.
d--Gage height, 9.06 ft.
e--Estimated.
f--From floodmarks, backwater from ice.
g--Gage height, 2.26 ft.



06114700 JUDITH RIVER NEAR MOUTH, NEAR WINIFRED, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2001 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (seasonal records some years): April 2002 to current year.

INSTRUMENTATION: Temperature recorder installed Sept. 9, 2000.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (seasonal records some years): Maximum, 32.0°C,July 13, 2002; minimum, 0.0°C, on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 29.5°C, on July 8; minimum, 0.0°C, on many days.

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	13.0	9.5	11.5	5.0	3.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0
2	13.0	9.0	11.0	6.5	3.5	5.0	1.0	0.0	0.5	0.0	0.0	0.0
3	14.0	10.0	12.0	6.5	5.0	6.0	2.5	0.5	1.0	0.0	0.0	0.0
4	14.0	10.0	12.0	5.0	3.0	4.0	3.5	2.5	3.0	0.0	0.0	0.0
5	14.0	10.5	12.5	6.0	3.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0
6	14.0	10.0	12.5	7.5	6.0	6.5	2.0	0.0	0.5	0.0	0.0	0.0
7	14.5	12.0	13.0	7.5	6.5	7.0	0.5	0.0	0.0	0.0	0.0	0.0
8	13.5	9.5	11.5	7.5	5.0	6.5	1.0	0.0	0.5	0.0	0.0	0.0
9	13.0	11.0	12.0	7.0	5.0	6.0	2.0	0.5	1.5	0.0	0.0	0.0
10	13.0	10.5	12.0	6.5	5.0	6.0	2.5	0.5	1.5	0.0	0.0	0.0
11	12.5	9.0	11.0	5.0	2.5	3.5	4.5	2.5	3.5	0.0	0.0	0.0
12	12.0	10.0	11.0	3.5	1.5	2.5	3.5	1.0	2.0	0.0	0.0	0.0
13	12.0	8.5	10.5	3.0	1.0	2.0	1.0	0.0	0.5	0.0	0.0	0.0
14	12.0	10.5	11.0	3.5	1.0	2.5	0.5	0.0	0.5	0.0	0.0	0.0
15	11.0	10.0	10.5	4.5	2.5	3.5	2.5	0.5	1.5	0.0	0.0	0.0
16	10.5	9.5	10.0	5.0	4.0	4.5	2.0	0.5	1.0	0.0	0.0	0.0
17	10.0	7.5	8.5	5.0	3.0	4.0	2.5	1.0	2.0	0.0	0.0	0.0
18	7.5	6.5	7.0	4.0	2.5	3.5	2.5	1.5	2.0	0.0	0.0	0.0
19	7.0	5.0	6.0	5.0	3.5	4.5	3.5	1.0	2.0	0.0	0.0	0.0
20	7.0	6.0	6.0	4.5	2.5	3.0	3.5	1.0	2.5	0.0	0.0	0.0
21	9.0	6.0	7.0	2.5	0.5	1.5	1.0	0.0	0.5	0.0	0.0	0.0
22	10.0	8.0	9.0	2.5	2.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0
23	9.5	7.5	8.5	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
24	7.5	6.0	7.0	2.5	1.0	2.0	0.0	0.0	0.0	0.5	0.0	0.0
25	6.5	4.5	5.5	5.0	2.5	4.0	0.0	0.0	0.0	0.5	0.0	0.0
26	6.5	4.0	5.5	4.5	3.0	4.0	0.0	0.0	0.0	0.5	0.5	0.5
27	7.0	4.5	6.0	3.0	0.5	1.0	0.0	0.0	0.0	0.5	0.5	0.5
28	7.0	5.0	6.0	1.0	0.0	0.5	0.0	0.0	0.0	0.5	0.5	0.5
29	6.5	5.0	6.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
30	6.5	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
31	6.0	4.5	5.5	---	---	---	0.0	0.0	0.0	0.5	0.0	0.5
MONTH	14.5	4.0	9.0	7.5	0.0	3.5	4.5	0.0	1.0	0.5	0.0	0.0

06114700 JUDITH RIVER NEAR MOUTH, NEAR WINIFRED, 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	0.5	0.0	0.5	6.0	2.5	4.5	10.0	7.0	9.0	9.5	3.5	6.0
2	0.5	0.5	0.5	7.5	3.5	5.5	11.0	8.0	9.5	12.5	4.5	8.5
3	0.5	0.5	0.5	7.5	4.0	6.0	14.5	9.5	10.5	15.5	7.0	11.0
4	0.5	0.5	0.5	8.0	4.5	6.5	13.5	10.0	11.5	17.5	10.5	14.0
5	0.5	0.5	0.5	8.5	5.0	7.0	13.0	9.0	11.0	19.5	13.5	16.5
6	0.5	0.5	0.5	8.5	6.5	7.5	14.5	8.5	11.5	20.0	14.0	17.0
7	0.5	0.5	0.5	8.0	5.5	7.0	15.0	11.0	13.0	18.0	14.5	16.5
8	0.5	0.5	0.5	9.5	6.0	8.0	14.5	12.0	13.0	16.0	13.5	14.5
9	0.5	0.5	0.5	10.0	6.5	8.5	12.5	7.5	9.5	16.5	12.5	14.5
10	0.5	0.5	0.5	10.0	7.0	8.5	11.0	6.5	8.5	14.5	12.0	13.5
11	0.5	0.5	0.5	9.0	6.5	8.0	12.0	7.0	9.5	12.0	9.5	10.5
12	0.5	0.5	0.5	9.5	7.5	8.0	14.0	8.5	11.5	10.0	7.5	9.0
13	2.5	0.5	1.0	8.5	5.0	6.0	14.5	10.5	12.5	15.5	6.5	10.5
14	2.5	1.5	2.0	6.5	4.0	5.0	14.5	9.5	11.0	18.0	10.5	14.0
15	2.0	0.5	1.0	6.5	3.5	5.5	13.0	7.0	10.0	20.5	14.0	17.5
16	1.0	0.5	0.5	8.0	5.0	7.0	16.0	8.0	12.0	21.0	17.0	19.0
17	1.5	0.5	1.0	7.5	5.5	6.5	14.0	10.5	12.5	19.5	15.5	17.0
18	1.5	0.5	1.0	5.5	2.0	3.5	13.5	11.0	12.0	20.0	13.0	16.5
19	1.0	0.5	1.0	4.5	3.0	3.5	11.5	9.5	10.5	18.5	15.0	17.0
20	0.5	0.5	0.5	4.0	2.5	3.0	10.0	8.0	9.0	20.0	15.0	17.5
21	1.0	0.5	0.5	8.5	3.5	5.5	11.5	7.0	9.0	18.5	15.0	16.5
22	1.5	0.5	1.0	7.5	6.0	7.0	14.5	7.5	11.0	20.0	13.5	16.5
23	2.5	0.5	1.5	6.0	4.0	5.0	15.5	9.5	12.5	20.0	14.5	17.0
24	4.5	1.0	2.5	6.0	3.0	4.0	17.5	11.0	14.0	18.5	14.0	16.5
25	5.0	1.5	3.5	7.0	2.0	4.5	17.0	11.5	14.0	16.5	14.5	15.5
26	5.5	2.0	4.0	7.5	3.5	5.5	14.5	11.0	12.5	17.5	13.0	15.0
27	5.5	3.0	4.5	11.0	6.5	8.5	11.0	7.0	9.0	18.5	11.5	15.0
28	5.5	2.5	4.0	10.5	8.5	9.5	7.5	5.0	6.5	19.5	13.0	16.5
29	---	---	---	11.0	8.0	9.5	8.5	4.0	6.0	18.5	14.0	16.5
30	---	---	---	10.0	7.5	9.0	6.5	4.0	5.0	18.0	12.5	15.5
31	---	---	---	11.0	6.5	8.5	---	---	---	18.5	13.0	15.5
MONTH	5.5	0.0	1.5	11.0	2.0	6.5	17.5	4.0	10.5	21.0	3.5	15.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	14.0	15.5	23.5	18.0	21.0	28.0	21.0	25.0	19.5	14.5	17.0
2	14.5	12.5	13.5	23.5	18.5	21.0	26.5	21.5	24.0	20.0	15.0	18.0
3	14.5	12.0	13.5	22.5	16.5	19.5	26.0	20.5	23.0	21.5	16.5	19.0
4	18.5	13.0	15.5	24.0	17.0	20.5	26.0	19.0	22.5	21.5	17.5	19.5
5	20.5	15.0	17.5	26.0	18.5	22.0	26.0	19.5	23.0	20.0	17.5	19.0
6	19.0	16.0	17.0	26.0	20.5	23.5	26.5	19.0	23.0	20.5	15.5	18.0
7	17.5	14.5	16.0	27.0	21.5	24.0	26.0	19.5	23.0	20.0	15.0	17.5
8	16.5	14.5	15.0	29.5	22.0	25.5	25.0	20.5	23.0	21.5	15.5	18.5
9	15.5	14.5	15.0	26.5	23.0	24.5	23.5	19.0	21.5	20.0	16.0	18.5
10	17.0	13.5	15.0	23.5	20.5	22.0	21.5	11.5	17.0	18.0	14.5	16.0
11	18.0	14.0	16.0	25.5	18.5	22.0	20.5	19.5	20.0	17.0	12.0	14.5
12	18.0	15.0	16.0	28.0	19.5	23.5	20.5	17.5	19.0	15.0	11.5	13.5
13	17.0	13.0	15.0	27.0	22.0	24.5	18.5	16.5	17.5	17.5	12.5	14.5
14	19.5	14.0	16.5	27.5	20.5	24.0	19.0	17.0	18.0	17.5	13.0	15.0
15	19.5	16.5	18.0	28.0	20.5	24.5	20.0	18.0	19.0	18.5	13.5	16.0
16	21.5	17.0	19.0	26.5	21.0	23.5	20.5	18.5	19.5	17.0	13.5	16.0
17	22.5	18.5	20.0	21.0	17.5	19.0	20.5	19.0	20.0	16.5	14.5	15.0
18	22.5	18.0	20.0	25.5	16.0	20.5	20.5	18.0	19.0	17.5	13.5	15.0
19	22.5	17.5	20.0	26.5	18.5	22.5	19.0	16.0	17.5	16.0	12.0	14.5
20	24.5	18.5	21.5	27.5	19.5	23.5	20.5	16.5	18.5	17.5	11.5	14.5
21	26.5	21.0	24.0	27.5	20.5	24.0	22.0	18.0	19.5	16.5	13.0	15.0
22	26.5	21.5	24.0	24.5	20.5	22.5	21.5	19.5	20.5	16.0	11.5	14.0
23	24.5	21.0	22.5	26.5	19.5	23.0	21.5	19.5	20.5	14.5	11.5	12.5
24	24.0	19.0	21.5	27.0	18.5	22.5	21.0	18.0	19.0	11.5	10.0	11.0
25	22.5	19.0	21.0	22.5	18.0	19.5	18.0	15.0	16.5	14.5	9.0	11.5
26	20.5	18.0	19.0	24.0	15.0	19.5	19.0	15.5	17.5	16.0	10.0	13.0
27	22.5	17.5	20.0	25.0	17.5	21.5	20.0	16.5	18.0	14.5	11.0	12.5
28	23.0	18.5	20.5	26.5	18.5	22.5	21.0	17.0	19.0	14.0	8.5	11.5
29	20.5	17.5	18.5	27.0	19.5	23.5	22.0	17.5	19.5	15.5	10.5	13.0
30	23.0	15.5	19.0	27.5	20.0	24.0	20.5	16.0	17.0	17.5	13.0	15.5
31	---	---	---	28.0	19.5	23.5	18.5	14.0	16.5	---	---	---
MONTH	26.5	12.0	180	29.5	15.0	22.5	28.0	11.5	20.0	21.5	8.5	15.5

06115200 MISSOURI RIVER NEAR LANDUSKY, MT

LOCATION.--Lat 47°37'51", long 108°41'13" (NAD 27), in $NW^1/_4$ $NE^1/_4$ sec.31, T.22 N., R.24 E., Fergus County, Hydrologic Unit 10040104, C. M. Russel National Wildlife Refuge, on right bank 380 ft upstream from bridge on U.S. Highway 191, 0.9 mi upstream from Armells Creek, 20 mi south of Landusky, and at river mile 1,921.61.

DRAINAGE AREA.--40,987 mi^2. Area at site used prior to Dec. 13, 1968, 40,763 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1934 to current year. Prior to October 1968, published as "at powerplant ferry, near Zortman."

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,239.96 ft (NGVD 29) (State Highway bench mark). Prior to Feb. 7, 1935, nonrecording gage, and Feb. 7, 1935, to Dec. 12, 1968, water-stage recorder, at site 16.5 mi upstream at elevation 33.06 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Flow regulated by 24 smaller irrigation reservoirs and powerplants, Clark Canyon Reservoir (station number 06015300), Canyon Ferry Lake (station number 06058500), and Lake Elwell (station number 06101300). Diversions for irrigation of about 870,400 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	4,080	5,100	4,870	e5,200	e5,000	e4,900	4,780	5,890	6,460	10,000	5,370	5,000
2	4,120	4,940	4,950	e4,800	e5,000	e4,800	4,780	5,880	6,640	10,000	5,540	5,210
3	4,080	4,880	4,640	e4,300	e5,100	e4,900	4,600	5,650	6,880	9,900	5,690	5,370
4	4,100	5,020	4,470	e4,000	e5,000	e4,900	4,740	5,640	7,320	9,530	5,790	5,740
5	4,170	5,020	4,470	e4,200	e5,000	e4,800	4,480	5,630	12,900	9,400	5,310	5,430
6	4,170	5,010	4,520	e4,300	e4,800	e4,900	4,470	5,400	17,000	9,130	5,590	5,380
7	4,170	4,910	4,340	e4,800	e4,900	e4,800	4,580	5,480	16,600	9,030	5,420	5,180
8	4,250	4,580	4,180	e4,800	e5,200	e4,600	4,660	5,390	14,700	8,860	5,280	5,300
9	4,040	4,720	4,570	e5,000	e4,500	4,810	4,660	5,360	13,800	8,610	5,240	5,260
10	4,190	4,760	4,900	e5,400	e4,400	4,710	4,560	5,710	13,400	8,370	6,170	5,240
11	4,050	4,750	5,000	e5,400	e4,500	4,670	4,580	6,290	12,300	8,020	5,700	5,200
12	4,130	4,820	4,720	e5,400	e5,200	4,560	4,750	6,450	11,200	8,000	5,110	5,280
13	4,130	4,790	4,880	e5,400	e5,300	4,510	4,770	7,710	13,700	8,130	5,270	5,270
14	4,110	4,740	5,320	e5,400	e5,600	4,660	4,720	10,200	11,700	8,220	5,270	5,260
15	4,210	4,710	5,060	e5,500	e5,100	4,680	4,550	10,300	11,700	8,160	5,390	5,350
16	4,470	4,820	4,600	e5,200	e4,600	4,750	4,670	9,140	11,500	7,600	5,690	5,460
17	4,640	4,730	4,560	e5,200	e4,800	4,840	4,760	8,370	10,700	7,110	5,800	5,550
18	4,620	4,730	4,600	e5,300	e4,700	4,760	4,810	8,800	10,900	6,770	5,850	5,460
19	4,740	4,730	4,610	e5,700	e4,600	4,890	4,840	9,660	10,500	6,320	5,820	5,600
20	4,470	4,830	4,630	e6,000	e5,000	4,640	4,960	11,200	11,200	6,180	5,570	5,690
21	4,600	4,830	4,580	e6,300	e4,700	4,620	4,900	11,300	12,100	5,900	5,510	5,730
22	4,710	4,840	e4,800	e7,100	e5,200	4,630	5,110	10,100	12,000	5,650	5,180	5,840
23	4,820	4,700	e4,800	e6,900	e5,000	4,730	5,200	9,460	11,500	5,520	5,410	5,610
24	4,760	4,750	e4,700	e6,500	e4,800	4,730	5,460	9,230	11,100	5,600	5,410	5,360
25	4,940	4,690	e3,900	e6,500	e4,800	4,750	5,580	9,030	10,900	5,150	5,270	5,470
26	5,020	4,720	e3,700	e6,600	e4,700	4,750	5,360	8,750	10,400	5,550	5,280	5,540
27	5,230	4,960	e4,400	e6,900	e4,900	4,640	5,480	8,400	10,700	5,520	5,160	5,630
28	5,210	4,630	e5,900	e6,600	e4,900	4,790	5,500	7,730	9,940	5,510	5,230	5,700
29	5,120	4,560	e5,600	e6,100	---	4,920	5,700	7,200	9,840	5,530	5,120	5,630
30	5,080	4,940	e5,300	e5,400	---	4,960	5,720	6,780	9,960	5,620	5,130	5,540
31	5,230	---	e4,700	e5,000	---	4,860	---	6,590	---	5,540	5,230	---
TOTAL	139,660	144,210	146,270	171,200	137,300	147,460	147,730	238,720	339,540	228,430	168,800	163,280
MEAN	4,505	4,807	4,718	5,523	4,904	4,757	4,924	7,701	11,320	7,369	5,445	5,443
MAX	5,230	5,100	5,900	7,100	5,600	4,960	5,720	11,300	17,000	10,000	6,170	5,840
MIN	4,040	4,560	3,700	4,000	4,400	4,510	4,470	5,360	6,460	5,150	5,110	5,000
AC-FT	277,000	286,000	290,100	339,600	272,300	292,500	293,000	473,500	673,500	453,100	334,800	323,900

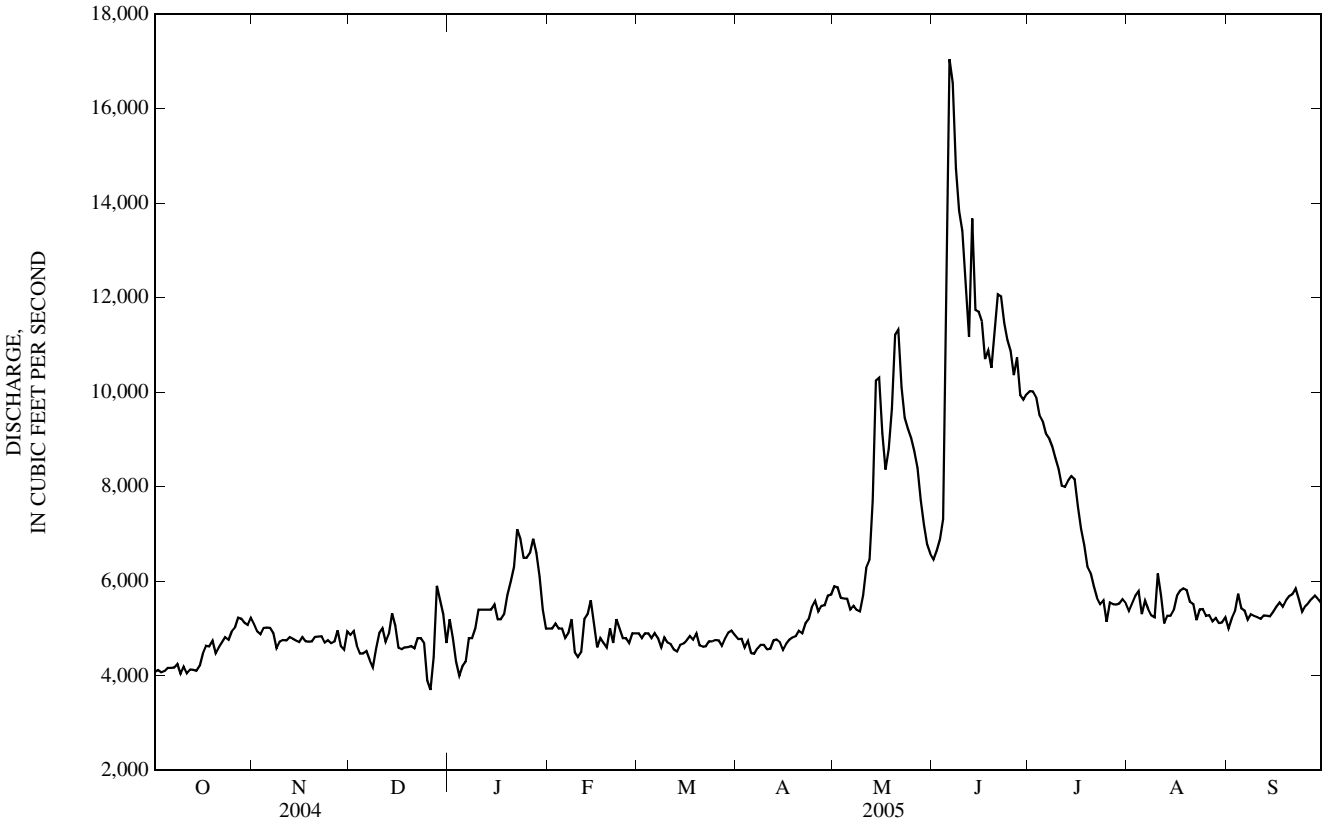
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2005, BY WATER YEAR (WY)

MEAN	6,470	6,678	6,564	6,568	7,067	8,437	9,411	14,020	19,120	10,570	6,523	6,155
MAX	16,480	13,920	13,180	10,840	11,380	19,700	19,240	30,510	55,270	33,590	12,620	12,310
(WY)	(1966)	(1966)	(1960)	(1979)	(1965)	(1978)	(1952)	(1975)	(1948)	(1975)	(1975)	(1965)
MIN	3,270	3,581	3,121	2,805	2,511	4,313	4,338	4,860	4,939	3,956	2,075	2,501
(WY)	(1935)	(1938)	(1937)	(1937)	(1936)	(2002)	(1961)	(1992)	(1977)	(1940)	(1934)	(1934)

06115200 MISSOURI RIVER NEAR LANDUSKY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1934 - 2005	
ANNUAL TOTAL	1,958,200		2,172,600			
ANNUAL MEAN	5,350		5,952		8,988	
HIGHEST ANNUAL MEAN					15,280	1975
LOWEST ANNUAL MEAN					4,438	1937
HIGHEST DAILY MEAN	10,100	May 30	17,000	Jun 6	136,000	Jun 6, 1953
LOWEST DAILY MEAN	3,400	Jan 2	3,700	Dec 26	1,220	Dec 13, 1936
ANNUAL SEVEN-DAY MINIMUM	4,120	Sep 30	4,120	Oct 9	1,620	Dec 9, 1936
MAXIMUM PEAK FLOW			a17,700	Jun 6	c137,000	Jun 3, 1953
MAXIMUM PEAK STAGE			b19.67	Jan 22	b34.17	Mar 22, 1978
ANNUAL RUNOFF (AC-FT)	3,884,000		4,309,000		6,512,000	
10 PERCENT EXCEEDS	6,530		9,490		15,800	
50 PERCENT EXCEEDS	5,160		5,200		7,200	
90 PERCENT EXCEEDS	4,300		4,560		4,410	

a--Gage height, 19.55 ft.
b--Backwater from ice.
c--Gage height, 22.20 ft, from graph based on gage readings, site and datum then in use.
e--Estimated.



06115200 MISSOURI RIVER NEAR LANDUSKY, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1979 to September 1981, October 2003 to current year (seasonal records).
WATER TEMPERATURE: March to September 1979, October 2004 to September 2005.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1991, October 1991 to current year (seasonal records only, March through November).

REMARKS.--Daily water temperature records rated good. Daily sediment records rated good for most of the seasonal period; rated fair to poor for several short-duration runoff events. Daily sediment data not available from Dec. 1 to Mar. 9 due to ice cover. U.S. Army. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water years 1979-81): Maximum daily, 1,240 microsiemens per centimeter (µS/cm), June 20, 1979; minimum daily, 410 µS/cm, July 3, 1980.
WATER TEMPERATURE: Maximum, 27.0°C, on Aug. 1, 2005; minimum, 0.0°C, on many days during winter period.
SEDIMENT CONCENTRATION: Maximum daily mean, 27,400 mg/L, June 22, 1976; minimum daily mean, 2 mg/L, Dec. 21, 1983.
SEDIMENT LOAD: Maximum daily, 1,680,000 tons, June 22, 1976; minimum daily, 33 tons, Dec. 21, 1983.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 27.0°C, on August 1; minimum, 0.0°C, on many days during winter period.
SEDIMENT CONCENTRATION: During period of collection, maximum daily mean, 12,400 mg/L, June 13 and Aug. 11; minimum daily mean, 63 mg/L, Oct. 3 and 4.
SEDIMENT LOAD: During period of seasonal collection, maximum daily, 459,000 tons, June 13; minimum daily, 694 tons, Oct. 3.

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, air, deg C (00020)	Temperature, water, deg C (00010)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
MAR								
28...	1500	4,810	555	--	7.5	79	253	3,290
APR								
18...	1415	4,840	520	--	10.5	60	149	1,950
JUN								
07...	1250	16,500	--	--	15.5	78	1,530	68,300
JUL								
27...	1345	5,410	442	--	21.5	27	126	1,840
AUG								
17...	1030	5,550	466	26.0	21.0	64	294	4,410
SEP								
07...	1030	5,160	--	28.0	17.5	42	118	1,640

Date	Bed sediment, dry svd sve dia percent <.062mm (80164	Bed sediment, dry svd sve dia percent <.125mm (80165)	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)
MAR	--							
28...		2	12	63	88	96	98	100
APR								
18...	--	--	--	--	--	--	--	--
JUN								
07...	1	2	63	99	100	--	--	--
JUL								
27...	--	6	49	88	97	99	100	--
AUG								
17...	--	--	--	--	--	--	--	--
SEP								
07...	--	2	33	77	96	99	100	--

06115200 MISSOURI RIVER NEAR LANDUSKY, 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	14.0	12.0	13.0	4.5	4.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
2	13.0	11.0	12.0	4.5	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
3	13.0	11.5	12.5	5.0	4.5	4.5	1.0	0.0	0.5	0.0	0.0	0.0
4	13.0	11.5	12.5	5.0	4.0	4.5	1.5	0.5	1.0	0.0	0.0	0.0
5	13.5	11.5	12.5	5.5	4.0	4.5	2.0	1.5	1.5	0.0	0.0	0.0
6	13.5	12.0	13.0	6.5	5.0	6.0	2.0	0.5	1.5	0.0	0.0	0.0
7	13.5	13.0	13.0	6.5	6.0	6.0	0.5	0.0	0.0	0.0	0.0	0.0
8	13.5	12.0	12.5	6.0	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
9	13.0	12.0	12.5	6.0	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
10	13.0	11.5	12.5	6.0	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0
11	12.5	11.0	11.5	4.5	3.5	4.0	1.0	0.0	0.5	0.0	0.0	0.0
12	12.0	11.0	11.5	3.5	2.5	3.0	0.5	0.0	0.5	0.0	0.0	0.0
13	12.0	10.5	11.5	3.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
14	12.0	11.0	11.5	2.5	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
15	11.0	10.5	11.0	2.5	1.5	2.5	0.5	0.0	0.0	0.0	0.0	0.0
16	10.5	9.5	10.0	3.5	2.5	3.0	0.5	0.0	0.0	0.0	0.0	0.0
17	9.5	8.5	9.0	3.5	3.0	3.0	1.5	0.0	0.5	0.0	0.0	0.0
18	8.5	7.0	7.5	3.5	2.5	3.0	1.5	0.5	1.0	0.0	0.0	0.0
19	7.0	6.0	6.5	4.0	3.0	3.5	2.0	1.0	1.5	0.0	0.0	0.0
20	7.0	6.0	6.5	3.5	2.0	2.5	2.0	1.0	2.0	0.0	0.0	0.0
21	6.0	5.5	6.0	2.0	1.0	1.5	1.0	0.0	0.5	0.0	0.0	0.0
22	7.5	6.0	7.0	2.0	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
23	7.5	7.0	7.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
24	7.0	6.5	7.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
25	6.5	5.5	6.0	2.0	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
26	6.0	5.0	5.5	2.5	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
27	6.0	5.5	5.5	2.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
28	6.0	5.5	6.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
29	6.5	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	6.0	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	5.5	4.5	5.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	14.0	4.5	9.5	6.5	0.0	3.0	2.0	0.0	0.5	0.0	0.0	0.0
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	0.0	0.0	0.0	9.0	7.0	8.0	8.0	6.0	7.0
2	0.0	0.0	0.0	0.0	0.0	0.0	9.5	8.0	8.5	10.0	7.0	8.5
3	0.0	0.0	0.0	0.0	0.0	0.0	10.0	8.0	9.0	11.5	8.5	10.0
4	0.0	0.0	0.0	0.0	0.0	0.0	10.5	9.0	9.5	13.5	11.0	12.0
5	0.0	0.0	0.0	0.0	0.0	0.0	11.5	9.5	10.5	15.0	12.5	13.5
6	0.0	0.0	0.0	0.5	0.0	0.0	12.0	9.5	11.0	16.5	14.0	15.5
7	0.0	0.0	0.0	4.5	0.5	2.5	13.0	11.0	12.0	17.0	15.5	16.0
8	0.0	0.0	0.0	6.0	4.5	5.0	13.0	12.0	12.5	16.5	15.0	15.5
9	0.0	0.0	0.0	6.5	5.0	6.0	12.0	9.0	10.5	15.5	14.5	15.0
10	0.0	0.0	0.0	7.5	5.5	6.5	10.0	8.0	9.0	15.0	14.0	14.5
11	0.0	0.0	0.0	7.5	6.0	7.0	11.0	8.5	10.0	14.0	11.0	12.5
12	0.0	0.0	0.0	7.5	6.5	7.0	12.0	9.5	11.0	11.0	10.0	10.5
13	0.0	0.0	0.0	6.5	5.0	5.5	13.5	11.0	12.0	12.0	9.5	10.5
14	0.0	0.0	0.0	5.5	4.5	5.0	13.0	11.0	12.0	13.0	11.0	11.5
15	0.0	0.0	0.0	5.0	3.5	4.5	11.0	9.5	10.5	15.0	12.5	13.5
16	0.0	0.0	0.0	5.5	4.5	5.0	12.0	9.0	10.5	16.0	14.5	15.5
17	0.0	0.0	0.0	5.5	3.5	4.5	12.5	10.5	12.0	16.0	15.5	15.5
18	0.0	0.0	0.0	4.0	2.5	3.5	12.0	11.0	11.5	16.5	14.5	15.5
19	0.0	0.0	0.0	3.5	3.0	3.5	11.5	10.5	11.0	17.0	16.0	16.5
20	0.0	0.0	0.0	3.5	2.5	3.0	11.0	10.5	11.0	17.5	16.0	17.0
21	0.0	0.0	0.0	4.5	2.5	3.5	11.5	9.5	10.5	17.5	16.0	16.5
22	0.0	0.0	0.0	5.5	4.0	4.5	13.0	10.0	11.5	17.0	15.5	16.0
23	0.0	0.0	0.0	5.0	3.0	3.5	14.0	11.5	12.5	17.5	16.5	17.0
24	0.0	0.0	0.0	4.0	3.0	3.5	15.5	12.5	14.0	17.0	15.5	16.5
25	0.0	0.0	0.0	4.0	2.0	3.0	15.0	13.0	14.0	16.5	15.5	16.0
26	0.0	0.0	0.0	5.0	2.5	4.0	15.0	13.5	14.0	16.5	15.0	15.5
27	0.0	0.0	0.0	6.5	4.0	5.0	13.5	10.5	11.5	17.0	15.0	16.0
28	0.0	0.0	0.0	8.0	6.0	7.0	10.5	9.0	10.0	18.0	15.5	17.0
29	---	---	---	8.5	7.0	8.0	9.0	7.5	8.0	17.5	16.5	17.0
30	---	---	---	8.5	7.0	8.0	8.0	7.0	7.5	17.0	15.5	16.0
31	---	---	---	9.0	7.0	8.0	---	---	---	17.0	16.0	16.0
MONTH	0.0	0.0	0.0	9.0	0.0	4.0	15.5	7.0	11.0	18.0	6.0	14.5

06115200 MISSOURI RIVER NEAR LANDUSKY, 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	16.0	15.0	15.5	22.0	19.5	21.0	27.0	24.5	25.5	19.5	17.0	18.0
2	16.0	15.0	15.5	22.5	20.5	21.5	26.5	25.0	25.5	20.0	17.5	18.5
3	15.5	14.5	15.0	21.5	20.0	21.0	25.0	24.0	24.5	20.5	18.5	19.5
4	17.0	15.0	16.0	22.0	20.0	21.0	25.0	22.5	24.0	21.0	19.5	20.5
5	17.5	16.0	16.5	23.5	21.0	22.0	25.0	23.0	24.0	20.5	19.5	20.0
6	17.0	16.0	16.5	24.0	22.0	23.5	25.0	22.5	24.0	19.5	18.0	18.5
7	17.0	15.0	16.0	25.0	23.0	24.0	25.0	23.5	24.0	19.5	17.0	18.5
8	16.5	16.0	16.5	26.0	23.5	24.5	24.5	23.0	24.0	20.0	17.5	18.5
9	16.0	15.0	15.5	26.0	24.5	25.5	24.0	22.5	23.0	19.5	18.5	19.0
10	16.0	15.5	16.0	25.0	22.5	23.5	23.0	21.5	22.5	19.0	17.0	18.0
11	17.5	15.5	16.0	24.0	21.5	23.0	23.0	21.0	21.5	17.0	15.5	16.0
12	17.5	16.5	17.0	25.0	22.5	23.5	21.0	19.0	20.0	15.5	14.5	15.0
13	17.0	15.0	16.0	25.0	24.0	24.5	19.5	18.0	19.0	16.5	15.0	15.5
14	18.5	16.0	17.0	25.5	23.5	24.5	21.0	18.0	19.5	17.0	15.0	16.0
15	19.0	17.5	18.0	26.0	24.0	25.0	21.5	19.5	20.5	17.5	16.0	17.0
16	20.0	18.0	19.0	25.5	24.0	25.0	22.5	20.0	21.5	18.0	16.5	17.0
17	21.5	19.5	20.0	24.0	22.0	22.5	22.5	21.0	22.0	17.5	16.0	17.0
18	21.0	19.5	20.5	23.0	20.5	21.5	22.0	19.5	21.0	16.0	15.5	16.0
19	21.5	19.5	20.5	24.0	21.5	23.0	19.5	18.0	19.0	16.5	15.0	16.0
20	22.5	20.0	21.0	24.5	22.5	23.5	20.5	18.0	19.0	16.5	15.0	16.0
21	24.0	22.0	23.0	25.5	22.5	24.0	22.0	19.0	20.5	16.5	15.0	15.5
22	24.5	22.5	23.5	24.5	23.0	23.5	22.0	20.5	21.5	15.0	14.0	15.0
23	24.0	23.0	23.5	24.0	22.5	23.0	23.0	21.5	22.0	15.0	13.5	14.5
24	23.0	21.5	22.5	24.5	22.5	23.5	22.0	18.5	20.5	13.5	12.0	13.0
25	22.0	21.0	21.5	24.0	21.0	22.0	18.5	16.5	17.5	13.0	11.5	12.0
26	21.5	21.0	21.0	22.5	19.5	21.0	18.5	16.0	17.0	13.5	11.5	12.5
27	21.5	20.5	21.0	22.5	21.0	22.0	19.5	17.0	18.5	13.5	12.5	12.5
28	22.0	20.0	21.0	23.5	20.5	22.0	21.0	18.5	19.5	13.0	11.5	12.0
29	21.5	19.5	20.5	25.0	22.0	23.5	21.5	19.5	20.5	14.0	12.0	13.0
30	20.5	18.5	19.5	25.0	23.0	24.0	21.0	18.0	19.5	15.0	13.5	14.0
31	---	---	---	26.0	23.0	24.5	18.5	17.0	18.0	---	---	---
MONTH	24.5	14.5	18.5	26.0	19.5	23.0	27.0	16.0	21.5	21.0	11.5	16.0

06115200 MISSOURI RIVER NEAR LANDUSKY, 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	64	705	96	1,320	---	---	---	---	---	---	---	---
2	64	712	85	1,130	---	---	---	---	---	---	---	---
3	63	694	79	1,040	---	---	---	---	---	---	---	---
4	63	697	76	1,030	---	---	---	---	---	---	---	---
5	64	721	72	976	---	---	---	---	---	---	---	---
6	65	732	71	960	---	---	---	---	---	---	---	---
7	68	766	70	928	---	---	---	---	---	---	---	---
8	72	826	68	841	---	---	---	---	---	---	---	---
9	75	818	70	892	---	---	---	---	---	---	---	---
10	77	871	94	1,210	---	---	---	---	---	---	235	2,990
11	79	864	118	1,510	---	---	---	---	---	---	237	2,990
12	78	870	107	1,390	---	---	---	---	---	---	196	2,410
13	74	825	92	1,190	---	---	---	---	---	---	156	1,900
14	70	777	82	1,050	---	---	---	---	---	---	140	1,760
15	74	841	77	979	---	---	---	---	---	---	125	1,580
16	203	2,450	78	1,020	---	---	---	---	---	---	123	1,580
17	457	5,730	77	983	---	---	---	---	---	---	123	1,610
18	565	7,050	76	971	---	---	---	---	---	---	108	1,390
19	300	3,840	76	971	---	---	---	---	---	---	122	1,610
20	155	1,870	76	991	---	---	---	---	---	---	86	1,080
21	130	1,610	76	991	---	---	---	---	---	---	83	1,040
22	120	1,530	76	993	---	---	---	---	---	---	82	1,030
23	110	1,430	77	977	---	---	---	---	---	---	93	1,190
24	109	1,400	79	1,010	---	---	---	---	---	---	104	1,330
25	112	1,490	81	1,030	---	---	---	---	---	---	87	1,120
26	114	1,550	82	1,050	---	---	---	---	---	---	103	1,320
27	117	1,650	82	1,100	---	---	---	---	---	---	169	2,120
28	119	1,670	82	1,030	---	---	---	---	---	---	244	3,160
29	120	1,660	82	1,010	---	---	---	---	---	---	357	4,740
30	118	1,620	82	1,090	---	---	---	---	---	---	338	4,530
31	110	1,550	---	---	---	---	---	---	---	---	192	2,520
TOTAL	---	49,819	---	31,663	---	--	---	--	---	--	---	45,000

06115200 MISSOURI RIVER NEAR LANDUSKY, 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	142	1,830	185	2,940	195	3,400	889	24,000	161	2,330	153	2,070
2	136	1,760	156	2,480	264	4,730	682	18,400	160	2,390	172	2,420
3	118	1,470	148	2,260	1,720	32,000	618	16,500	156	2,400	194	2,810
4	113	1,450	151	2,300	1,540	30,400	552	14,200	151	2,360	189	2,930
5	106	1,280	142	2,160	1,570	54,700	497	12,600	150	2,150	148	2,170
6	96	1,160	128	1,870	2,840	130,000	451	11,100	166	2,510	122	1,770
7	98	1,210	160	2,370	1,630	73,100	424	10,300	187	2,740	121	1,690
8	112	1,410	660	9,600	1,220	48,400	422	10,100	220	3,140	132	1,890
9	385	4,840	275	3,980	1,070	39,900	430	10,000	250	3,540	121	1,720
10	509	6,270	231	3,560	1,530	55,400	440	9,940	5,250	87,500	116	1,640
11	233	2,880	298	5,060	1,340	44,500	420	9,090	12,400	191,000	115	1,610
12	132	1,690	288	5,020	1,680	50,800	350	7,560	8,100	112,000	115	1,640
13	145	1,870	465	9,680	12,400	459,000	319	7,000	2,200	31,300	115	1,640
14	164	2,090	1,140	31,400	3,850	122,000	348	7,720	513	7,300	115	1,630
15	127	1,560	879	24,400	1,530	48,300	315	6,940	517	7,520	116	1,680
16	147	1,850	655	16,200	975	30,300	190	3,900	507	7,790	123	1,810
17	160	2,060	575	13,000	1,140	32,900	123	2,360	298	4,670	141	2,110
18	149	1,940	565	13,400	6,750	199,000	147	2,690	250	3,950	162	2,390
19	150	1,960	571	14,900	3,830	109,000	129	2,200	220	3,460	180	2,720
20	152	2,040	798	24,100	1,380	41,700	120	2,000	189	2,840	186	2,860
21	154	2,040	794	24,200	1,010	33,000	118	1,880	165	2,450	175	2,710
22	156	2,150	630	17,200	895	29,000	118	1,800	158	2,210	164	2,590
23	162	2,270	555	14,200	735	22,800	117	1,740	193	2,820	156	2,360
24	177	2,610	480	12,000	650	19,500	117	1,770	236	3,450	152	2,200
25	180	2,710	443	10,800	710	20,900	116	1,610	264	3,760	146	2,160
26	174	2,520	437	10,300	655	18,400	111	1,660	253	3,610	144	2,150
27	178	2,630	359	8,140	711	20,500	114	1,700	206	2,870	143	2,170
28	154	2,290	276	5,760	469	12,600	126	1,870	171	2,410	143	2,200
29	178	2,740	267	5,190	499	13,300	140	2,090	148	2,050	142	2,160
30	163	2,520	265	4,850	1,240	33,300	150	2,280	143	1,980	142	2,120
31	---	---	225	4,000	---	---	156	2,330	145	2,050	---	---
TOTAL	---	67,100	---	307,320	---	1,832,830	---	209,330	---	512,550	---	64,020

TOTAL LOAD FOR SEASON: 3,119,632 tons

06119600 MUSSELSHELL RIVER NEAR MARTINSDALE, MT

LOCATION.--Lat 46°28'37", long 110°14'54" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SE^1/_4$ sec.5, T.8 N., R.12 E., Wheatland County, Hydrologic Unit 10040201, on right bank at private road bridge, 1.7 mi downstream from confluence of North and South Forks, 3.2 mi northeast of Martinsdale, and at river mile 362.5.

DRAINAGE AREA.--538 mi^2.

PERIOD OF RECORD.--April 2003 to current season (seasonal records only).

REVISED RECORDS.--WDR -05-1: 2003, 2004 (M).

GAGE.--Water-stage recorder. Elevation of gage is 4,660 ft (NGVD 29) .

REMARKS.-Seasonal records. Some regulation by Bair and Martinsdale Reservoirs. Diversions for irrigation of about 21,900 acres upstream from station of which about 21,400 acres are flood irrigated. 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				19	81	167	97	26	37	41		
2				16	76	298	87	30	36	43		
3				16	93	263	106	35	35	49		
4				20	93	382	94	40	36	55		
5				21	108	357	113	35	34	56		
6				20	126	359	145	30	33	56		
7				20	150	428	127	25	36	53		
8				21	189	419	113	28	34	50		
9				22	215	359	109	28	29	61		
10				21	285	319	121	30	28	48		
11				28	452	271	135	39	29	40		
12				31	397	278	114	42	30	38		
13				32	253	421	97	47	30	36		
14				32	250	333	91	47	29	36		
15				34	311	285	79	43	29	36		
16				30	406	284	69	38	28	37		
17				33	518	309	63	35	28	38		
18				26	536	302	63	42	36	36		
19				44	471	271	57	44	37	35		
20				37	576	225	51	37	35	36		
21				32	597	198	44	32	30	37		
22				55	619	203	44	29	27	38		
23				109	572	206	52	28	36	38		
24				100	509	230	47	27	50	37		
25				78	406	231	46	32	57	37		
26				77	317	246	57	27	50	36		
27				67	231	328	50	30	47	36		
28				72	189	261	42	31	45	35		
29				95	170	134	38	33	45	35		
30				91	155	119	34	32	42	35		
31				---	146	---	26	40	---	33		
TOTAL				1,299	9,497	8,486	2,411	1,062	1,078	1,277		
MEAN				43.3	306	283	77.8	34.3	35.9	41.2		
MAX				109	619	428	145	47	57	61		
MIN				16	76	119	26	25	27	33		
AC-FT				2,580	18,840	16,830	4,780	2,110	2,140	2,530		

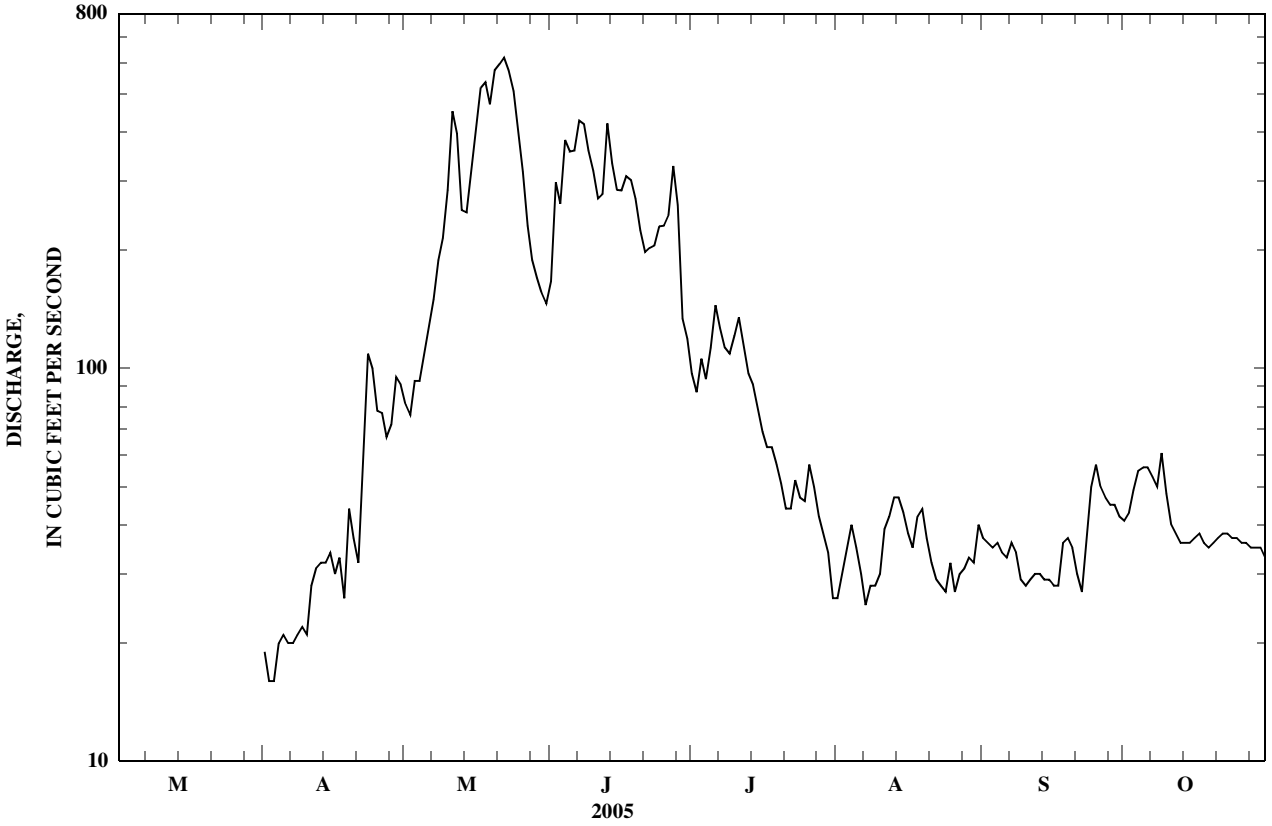
STATISTICS OF MONTHLY MEAN DATA FOR 2003 - 2005 SEASONS

MEAN	60.0	200	187	57.0	26.3	22.0	27.8
MAX	103	306	283	77.8	34.3	35.9	41.2
(WY)	(2003)	(2005)	(2005)	(2005)	(2005)	(2005)	(2006)
MIN	33.4	101	103	45.3	16.6	14.3	19.2
(WY)	(2004)	(2004)	(2003)	(2004)	(2003)	(2003)	(2004)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 2003 - 2005	
HIGHEST DAILY MEAN	619	May 22	619	May 22, 2005
LOWEST DAILY MEAN	16	Apr 2	7.1	Sep 7, 2003
MAXIMUM PEAK FLOW	660	May 20	664	Jun 12, 2004
MAXIMUM PEAK STAGE	4.34	May 20	4.35	Jun 12, 2004
INSTANTANEOUS LOW FLOW	a9.4	Apr 2	b6.4	Sep 3, 2003

a--Gage height, 1.50 ft.
b--Gage height, 1.49 ft.

06119600 MUSSELSHELL RIVER NEAR MARTINSDALE, MT—Continued



06120500 MUSSELSHELL RIVER AT HARLOWTON, MT

LOCATION.--Lat 46°25'48", long 109°50'24" (NAD 27), in $SW^1/_4NW^1/_4$ $NW^1/_4$ sec.27, T.8 N., R.15 E., Wheatland County, Hydrologic Unit 10040201, on right bank at downstream of bridge on U.S. Highway 191, 1.0 mi southwest of Harlowton, 9.6 mi upstream from American Fork, and at river mile 327.8.

DRAINAGE AREA.--1,125 mi^2.

PERIOD OF RECORD.--July 1907 to November 1929, March 1930 to December 1932, April to August 1933, February 1934 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912, 1915(M), 1918, 1925. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,171.46 ft (NGVD 29) (levels by Morrison and Maierle, Inc.). Prior to Dec. 8, 1937, nonrecording gages at site 1.2 mi downstream at different elevations. Dec. 8, 1937 to Aug. 26, 1955, nonrecording gage at previous bridge 50 ft downstream at elevation 2.0 ft higher. Aug. 27, 1955 to Apr. 9, 2003, water-stage recorder 350 ft downstream at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bair and Martinsdale Reservoirs. Diversions for irrigation of about 21,900 acres upstream from station of which about 21,400 acres are flood irrigated. 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	34	e17	e21	e32	35	32	102	220	197	98	85
2	21	36	e18	e20	32	36	30	95	347	177	106	81
3	21	38	e20	e22	33	30	29	92	349	164	107	79
4	21	40	e20	e24	33	27	26	100	376	160	107	80
5	21	40	e19	e26	33	27	28	106	430	142	126	94
6	20	39	e17	e28	e28	26	29	119	433	148	96	79
7	20	38	e16	e26	e28	26	29	131	575	150	89	77
8	20	41	e16	e25	e30	26	28	157	564	149	92	76
9	21	44	e18	e25	e35	26	27	191	488	147	98	66
10	22	42	e22	e28	39	26	24	238	420	166	85	52
11	23	41	e22	e30	34	26	23	e450	355	207	91	50
12	24	41	e20	e25	37	26	23	e650	332	197	103	51
13	24	40	e18	e20	38	25	27	477	474	170	96	53
14	25	41	e20	e15	e35	24	27	320	483	151	98	54
15	32	42	e22	e13	e32	23	27	331	369	143	96	52
16	40	24	e24	e20	e30	24	27	405	345	128	92	50
17	43	23	e26	e30	e32	e22	24	626	384	123	82	49
18	46	e22	e28	e40	e35	e20	32	762	393	120	85	54
19	47	e23	e30	e50	e37	24	46	720	370	110	99	56
20	49	e22	e28	e80	e35	28	73	839	309	89	88	49
21	46	e20	e25	e75	e38	30	72	1,030	274	77	74	46
22	42	e21	e22	e70	40	29	73	962	251	68	67	43
23	41	e22	e20	e65	42	e27	111	815	260	78	65	36
24	40	e22	e22	e60	43	e25	138	740	268	87	64	51
25	40	e20	e25	e55	39	e25	115	561	325	86	63	68
26	35	e18	e26	e50	35	28	95	437	350	103	64	67
27	34	e16	e27	44	36	30	89	323	441	97	60	59
28	35	e15	e28	42	34	33	79	250	485	103	59	56
29	36	e15	e27	38	---	36	86	272	292	99	54	54
30	35	e16	e24	35	---	38	102	256	227	99	56	52
31	35	---	e22	32	---	37	---	221	---	99	69	---
TOTAL	979	896	689	1,134	975	865	1,571	12,778	11,189	4,034	2,629	1,819
MEAN	31.6	29.9	22.2	36.6	34.8	27.9	52.4	412	373	130	84.8	60.6
MAX	49	44	30	80	43	38	138	1,030	575	207	126	94
MIN	20	15	16	13	28	20	23	92	220	68	54	36
AC-FT	1,940	1,780	1,370	2,250	1,930	1,720	3,120	25,350	22,190	8,000	5,210	3,610

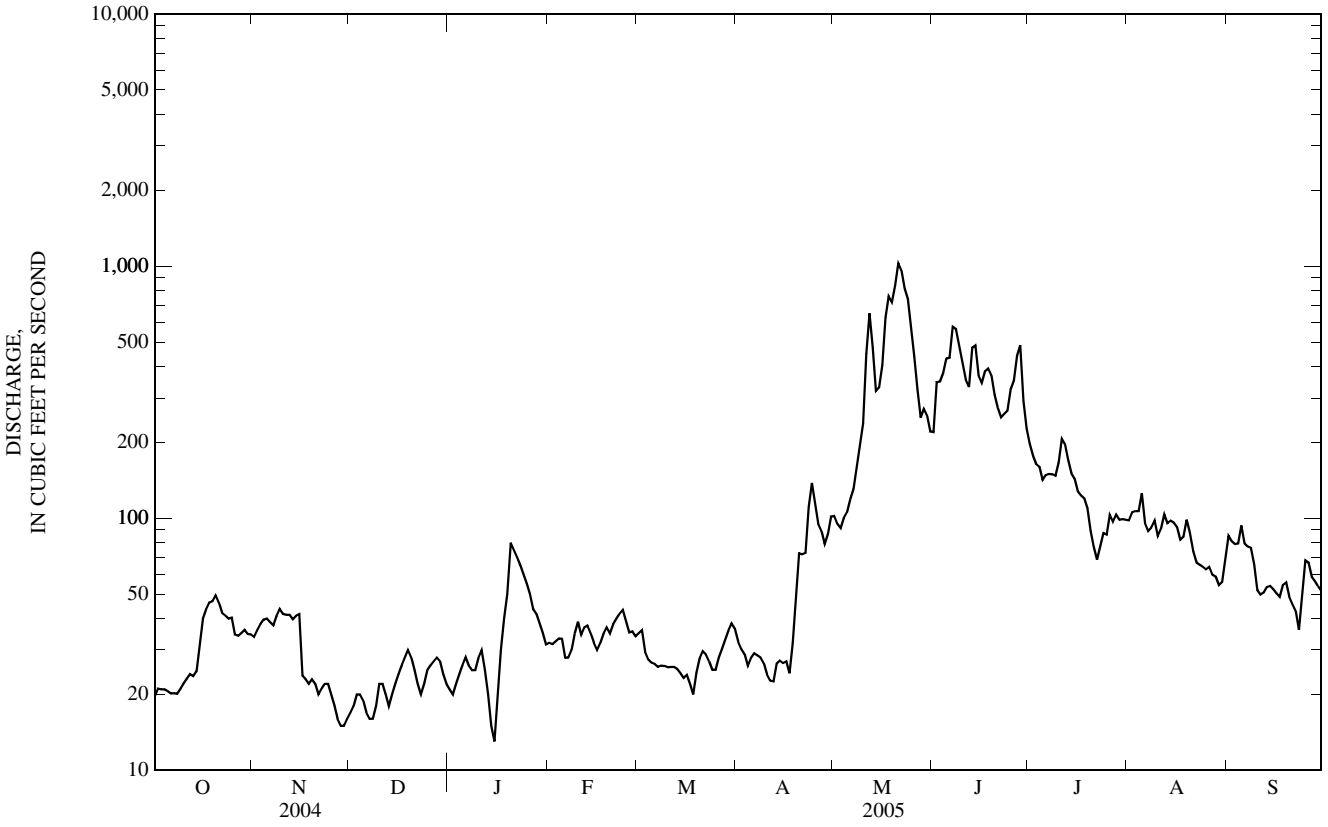
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2005, BY WATER YEAR (WY)*

MEAN	72.8	76.9	66.5	58.4	64.9	111	173	401	499	159	75.0	62.4
MAX	226	176	206	250	190	500	632	1,957	2,467	751	292	290
(WY)	(1919)	(1942)	(1976)	(1918)	(1996)	(1918)	(1943)	(1917)	(1917)	(1975)	(1993)	(1993)
MIN	0.00	0.00	0.00	0.00	10.0	20.4	22.1	11.8	27.9	0.84	0.00	0.00
(WY)	(1932)	(1932)	(1932)	(1932)	(1936)	(1935)	(1931)	(1931)	(1930)	(1936)	(1931)	(1931)

06120500 MUSSELSHELL RIVER AT HARLOWTON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1907 - 2005*	
ANNUAL TOTAL	19,489.7		39,558			
ANNUAL MEAN	53.3		108		154	
HIGHEST ANNUAL MEAN					483	1917
LOWEST ANNUAL MEAN					21.1	1935
HIGHEST DAILY MEAN	604	Jun 13	1,030	May 21	6,200	Jun 20, 1975
LOWEST DAILY MEAN	6.7	Sep 2	13	Jan 15	0.00	Aug 4, 1910
ANNUAL SEVEN-DAY MINIMUM	9.7	Sep 1	16	Nov 26	0.00	Aug 4, 1910
MAXIMUM PEAK FLOW			1,070	May 21	7,270	Jun 20, 1975
MAXIMUM PEAK STAGE			5.21	May 21	a10.01	Jun 20, 1975
INSTANTANEOUS LOW FLOW					0.01	Aug 29, 2001
ANNUAL RUNOFF (AC-FT)	38,660		78,460		111,300	
10 PERCENT EXCEEDS	117		327		354	
50 PERCENT EXCEEDS	38		42		74	
90 PERCENT EXCEEDS	18		21		25	

*--During periods of operation (July 1907 to November 1929, March 1930 to December 1932, April to August 1933, February 1934 to current year).
a--Previous site and same datum.
e--Estimated.



06123030 MUSSELSHELL RIVER ABOVE MUD CREEK, NEAR SHAWMUT, MT

LOCATION.--Lat 46°19'07", long 109°27'35" (NAD 27), in $NE^1/_4$ $SW^1/_4$ $SW^1/_4$ sec.34, T.7 N., R.18 E., Wheatland County, Hydrologic Unit 10040201, on left bank at private road bridge, 14.1 mi downstream from diversion to Deadmans Basin Reservoir, 3.5 mi southeast of Shawmut, 3.7 mi west of Barber, and at river mile 294.8.

DRAINAGE AREA.--1,513 mi^2.

PERIOD OF RECORD.--June 1998 to current season (seasonal records only).

REVISED RECORDS.--WDR -03-1: 2002 (M).

GAGE.--Water-stage recorder. Elevation of gage is 3,780 ft (NGVD 29).

REMARKS.--Seasonal records good. Diversions for irrigation of about 27,000 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

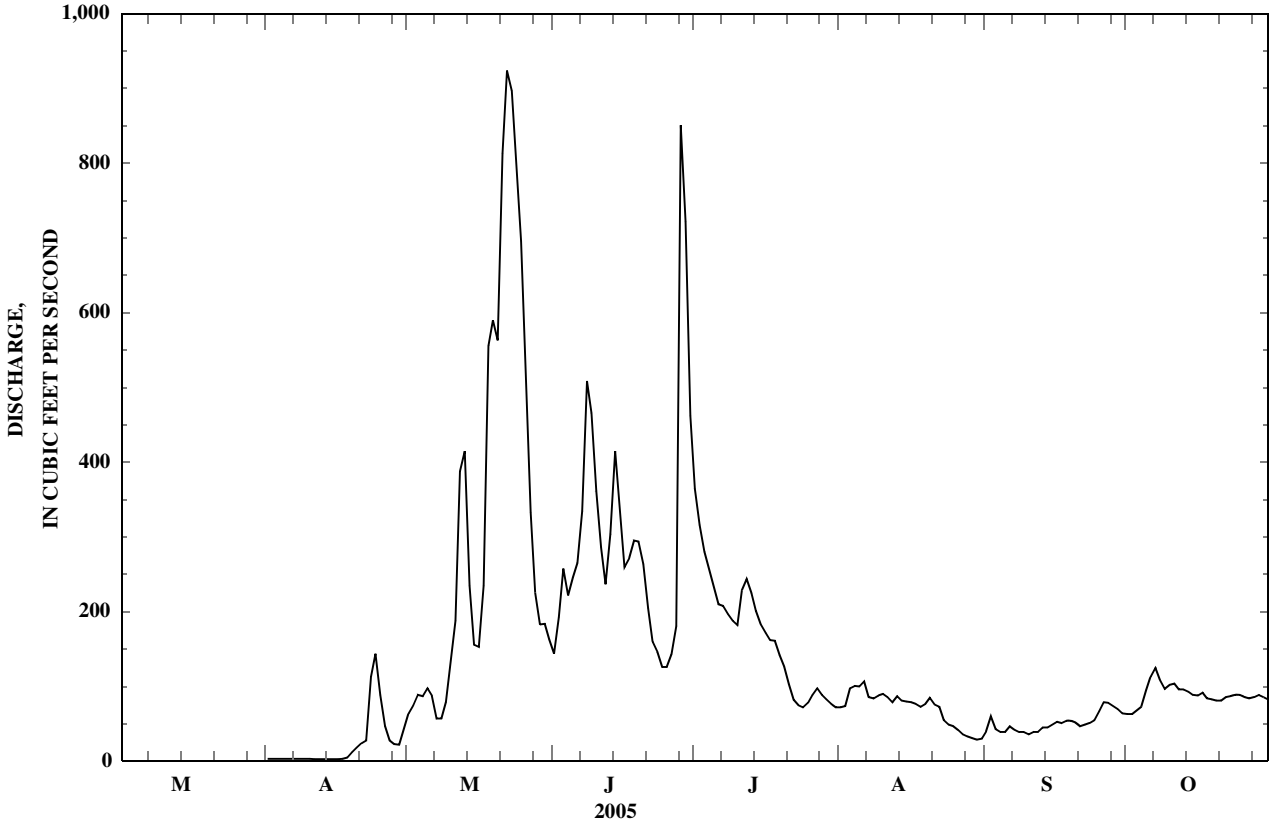
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				3.1	64	144	365	72	40	63		
2				3.2	75	193	316	74	60	63		
3				3.2	89	258	280	98	43	68		
4				3.4	87	222	257	101	39	73		
5				3.3	98	246	233	100	39	95		
6				3.2	88	265	210	107	47	113		
7				3.1	57	335	208	86	42	125		
8				3.1	57	509	197	84	39	108		
9				3.1	79	466	188	88	39	97		
10				3.1	131	362	182	90	36	102		
11				2.9	188	286	229	86	39	104		
12				2.9	388	237	244	79	39	96		
13				2.9	415	304	225	87	45	96		
14				2.7	235	415	201	81	45	93		
15				2.7	156	336	183	80	49	89		
16				2.9	153	260	172	79	53	88		
17				3.1	235	272	162	77	51	92		
18				4.8	556	295	161	73	54	84		
19				12	590	294	142	77	54	83		
20				18	563	264	127	85	52	81		
21				24	813	205	103	76	47	81		
22				28	924	160	82	73	49	86		
23				113	897	146	75	55	51	87		
24				144	802	126	72	49	55	89		
25				89	696	126	78	47	67	89		
26				47	527	143	89	42	79	86		
27				28	333	181	98	36	78	84		
28				23	226	851	89	33	74	86		
29				22	183	722	83	31	70	89		
30				42	184	462	77	29	64	86		
31				---	163	---	72	30	---	83		
TOTAL				646.7	10,052	9,085	5,200	2,205	1,539	2,759		
MEAN				21.6	324	303	168	71.1	51.3	89.0		
MAX				144	924	851	365	107	79	125		
MIN				2.7	57	126	72	29	36	63		
AC-FT				1,280	19,940	18,020	10,310	4,370	3,050	5,470		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1998 - 2004

MEAN	23.3	94.0	150	74.5	32.0	27.3	35.3
MAX	57.6	324	303	201	97.8	70.8	89.0
(WY)	(2003)	(2005)	(2005)	(1998)	(1998)	(1998)	(2005)
MIN	3.91	8.96	14.4	9.88	1.68	1.38	3.48
(WY)	(2002)	(2001)	(2000)	(2000)	(2000)	(2000)	(2002)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1998 - 2005	
HIGHEST DAILY MEAN	924	May 22	924	May 22, 2005
LOWEST DAILY MEAN	2.7	Apr 14	0.18	Sep 28, 2001
MAXIMUM PEAK FLOW	980	Jun 28	980	Jun 28, 2005
MAXIMUM PEAK STAGE	5.20	Jun 28	5.20	Jun 28, 2005

06123030 MUSSELSHELL RIVER ABOVE MUD CREEK, NEAR SHAWMUT, MT—Continued



06126050 MUSSELSHELL RIVER NEAR LAVINA, MT

LOCATION.--Lat 46°17'34", long 108°53'31" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $SE^1/_4$ sec.6, T.6 N., R.23 E., Golden Valley County, Hydrologic Unit 10040201, on left bank, at private bridge 2.2 mi east of Lavina, 4.4 mi downstream from Big Coulee Creek, and at river mile 245.7.

DRAINAGE AREA.--2,970 mi^2.

PERIOD OF RECORD.--April 1992 to current year (seasonal record only).

GAGE.--Water-stage recorder. Elevation of gage is 3,400 ft (NGVD 29).

REMARKS.--Seasonal records fair. Some regulation by Bair (station number 06116500), Martinsdale (station number 06119000), and Deadmans Basin (station number 06122500) Reservoirs. Diversions for irrigation of about 31,900 acres upstream from station, of which about 29,700 acres is flood irrigated. 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

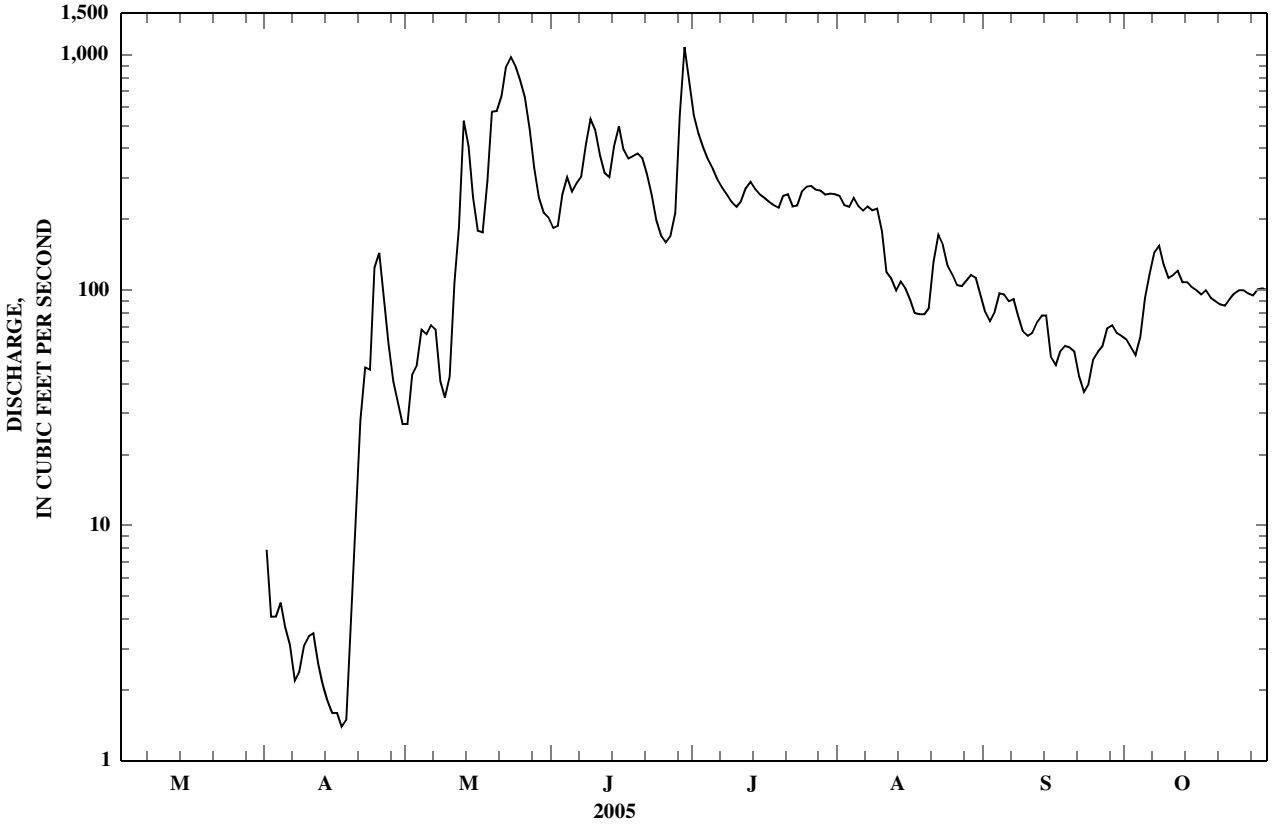
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				7.9	27	184	554	252	81	62		
2				4.1	44	188	460	230	74	57		
3				4.1	48	255	401	226	81	53		
4				4.7	68	302	360	247	97	63		
5				3.7	65	263	328	228	96	93		
6				3.1	71	285	294	218	90	117		
7				2.2	68	305	273	227	92	145		
8				2.4	41	419	255	219	78	155		
9				3.1	35	534	237	222	67	129		
10				3.4	43	478	226	178	64	113		
11				3.5	108	374	239	119	66	116		
12				2.6	185	315	271	112	73	121		
13				2.1	526	303	289	100	78	108		
14				1.8	410	411	270	109	78	108		
15				1.6	249	498	256	102	52	103		
16				1.6	179	397	247	91	48	100		
17				1.4	176	363	238	80	55	96		
18				1.5	293	372	230	79	58	100		
19				4.6	573	382	224	79	57	93		
20				12	577	364	252	84	55	90		
21				28	668	310	256	132	43	87		
22				47	892	256	227	172	37	86		
23				46	980	198	229	156	40	92		
24				125	893	170	263	127	51	97		
25				144	783	160	276	116	55	100		
26				92	660	171	277	105	58	100		
27				59	484	213	267	104	69	97		
28				41	333	552	265	110	71	95		
29				33	247	1,080	255	116	66	101		
30				27	213	760	257	113	64	102		
31				---	204	---	256	95	---	100		
TOTAL				713.4	10,143	10,862	8,732	4,548	1,994	3,079		
MEAN				23.8	327	362	282	147	66.5	99.3		
MAX				144	980	1,080	554	252	97	155		
MIN				1.4	27	160	224	79	37	53		
AC-FT				1,420	20,120	21,540	17,320	9,020	3,960	6,110		

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1992 - 2005

MEAN	95.5	296	485	294	171	119	82.8
MAX	466	919	2,733	1,061	507	525	335
(WY)	(1996)	(1997)	(1997)	(1997)	(1993)	(1993)	(1994)
MIN	4.39	36.7	67.8	35.8	3.00	2.22	0.87
(WY)	(2004)	(2002)	(2001)	(2002)	(2002)	(2000)	(2002)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1992 - 2005	
HIGHEST DAILY MEAN	1,080	Jun 29	5,850	Jun 14, 1997
LOWEST DAILY MEAN	1.4	Apr 17	0.00	Sep 26, 2001
MAXIMUM PEAK FLOW	1,270	Jun 29	6,220	Jun 14, 1997
MAXIMUM PEAK STAGE	5.35	Jun 29	11.13	Jun 14, 1997

06126050 MUSSELSHELL RIVER NEAR LAVINA, MT—Continued



06126500 MUSSELSHELL RIVER NEAR ROUNDUP, MT

LOCATION.--Lat 46°25'41", long 108°34'19" (NAD 27), in NW$^1/_4$ SE$^1/_4$ SE$^1/_4$ sec.22, T.8 N., R.25 E., Musselshell County, Hydrologic Unit 10040202, on left bank 20 ft downstream from Halfbreed Creek, 0.1 mi upstream from bridge on U.S. Highway 87, 2.0 mi southwest of Roundup, and at river mile 211.6.

DRAINAGE AREA.--4,023 mi^2.

PERIOD OF RECORD.--May 1946 to current year. Monthly discharge only from October 1947 to September 1949, published in WSP 1309.

REVISED RECORDS.--WSP 1086: 1946. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,188.15 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Sept. 26, 1949, nonrecording gage at present site and elevation.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Some regulation by Bair (station number 06116500), Martinsdale (station number 06119000) and Deadmans Basin (station number 06122500) Reservoirs. Diversions for irrigation of about 39,100 acres upstream from station, of which about 35,900 acres are flood irrigated. Several unpublished observations of water temperature and specific conductance were made 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	10	48	e7.5	e6.5	e13	11	5.5	28	185	704	214	76
2	8.7	43	e8.0	e6.0	e13	11	6.1	26	169	598	218	72
3	8.7	39	e8.5	e6.0	e13	11	5.1	40	198	516	199	58
4	11	40	e8.5	e6.0	e12	9.9	3.6	47	328	439	204	72
5	11	37	e7.5	e6.0	e10	10	4.4	61	324	377	215	76
6	10	37	e7.0	e7.0	e8.0	9.8	4.4	61	301	317	189	75
7	9.7	40	e7.5	e7.0	e7.0	6.5	4.2	61	336	274	207	78
8	10	37	e8.0	e7.0	e7.0	5.2	3.5	40	392	230	206	85
9	11	27	e8.0	e6.0	e8.0	3.5	7.1	27	600	184	210	72
10	12	20	e8.0	e7.0	e9.0	3.1	6.2	27	621	164	203	69
11	14	16	e10	e7.0	e10	2.8	4.3	44	531	158	130	65
12	16	14	e9.0	e7.0	e10	3.0	3.3	125	435	172	108	65
13	14	12	e8.0	e7.0	e10	3.1	2.7	354	393	203	91	66
14	14	12	e8.5	e5.5	e9.0	3.3	2.3	541	413	210	78	68
15	24	11	e8.5	e5.5	e8.0	3.6	2.2	336	596	182	84	63
16	28	10	e8.5	e7.0	e8.0	3.2	2.0	179	567	171	79	45
17	28	10	e8.5	e8.0	e8.0	5.7	1.9	142	481	166	69	46
18	28	10	e8.5	e10	e8.0	9.3	2.1	147	460	154	71	51
19	35	9.7	e8.5	e13	e8.0	9.7	4.3	448	472	165	75	49
20	36	9.8	e8.5	e12	e9.0	9.8	7.5	590	464	167	78	49
21	38	9.1	e7.5	e10	e9.0	9.5	9.1	605	411	199	79	45
22	40	9.5	e6.5	e9.0	e9.0	8.7	22	775	327	170	137	37
23	40	9.6	e6.0	e12	e9.0	9.2	50	866	246	150	159	35
24	43	8.8	e6.5	e16	e10	12	65	874	188	174	129	47
25	42	9.3	e7.0	e14	e10	12	131	826	168	218	114	56
26	41	9.4	e7.5	e13	e10	12	122	760	162	251	103	55
27	42	9.1	e7.5	e13	11	12	78	649	182	241	104	57
28	44	e7.5	e8.0	e13	11	12	58	461	408	213	106	65
29	49	e7.0	e9.0	e12	---	8.1	45	308	856	206	112	67
30	54	e7.0	e8.0	e12	---	5.7	38	208	855	202	104	63
31	53	---	e7.0	e12	---	4.6	---	199	---	204	98	---
TOTAL	825.1	568.8	245.5	282.5	267.0	240.3	700.8	9,855	12,069	7,779	4,173	1,827
MEAN	26.6	19.0	7.92	9.11	9.54	7.75	23.4	318	402	251	135	60.9
MAX	54	48	10	16	13	12	131	874	856	704	218	85
MIN	8.7	7.0	6.0	5.5	7.0	2.8	1.9	26	162	150	69	35
MED	28	11	8.0	7.0	9.0	9.2	5.3	199	400	203	112	64
AC-FT	1,640	1,130	487	560	530	477	1,390	19,550	23,940	15,430	8,280	3,620

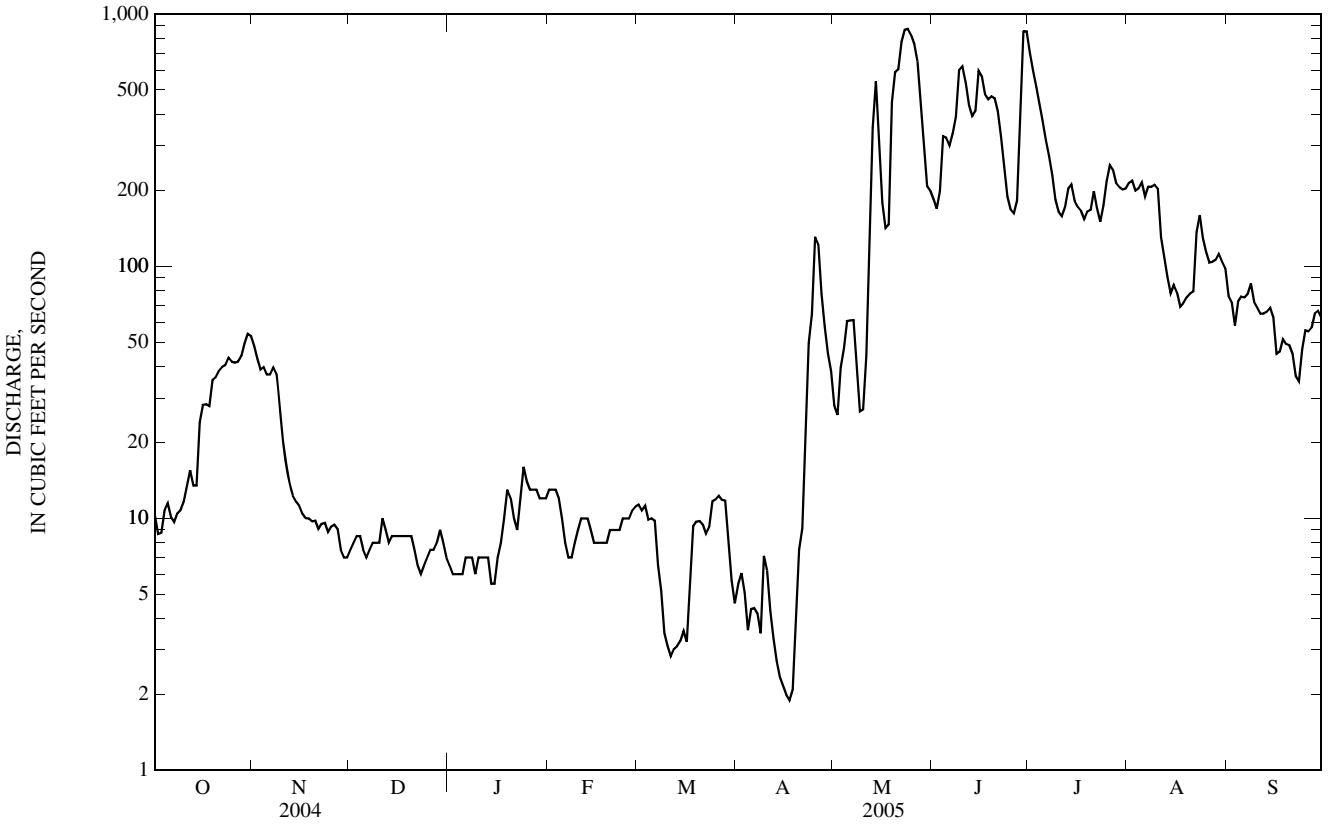
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

MEAN	76.2	72.0	65.0	62.5	92.1	188	175	408	649	291	185	123
MAX	335	242	283	222	414	1,281	788	1,811	4,315	1,308	563	504
(WY)	(1994)	(1994)	(1976)	(1976)	(1971)	(1978)	(1975)	(1976)	(1967)	(1975)	(1993)	(1993)
MIN	1.43	3.99	3.65	5.29	5.82	6.81	1.77	30.0	36.6	14.5	2.11	0.01
(WY)	(2002)	(2002)	(2002)	(2002)	(1985)	(2002)	(2002)	(2002)	(2001)	(2002)	(2001)	(2002)

06126500 MUSSELSHELL RIVER NEAR ROUNDUP, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947 - 2005	
ANNUAL TOTAL	9,869.97		38,833.0			
ANNUAL MEAN	27.0		106		a199	
HIGHEST ANNUAL MEAN					608	1975
LOWEST ANNUAL MEAN					17.6	2002
HIGHEST DAILY MEAN	271	Jun 15	874	May 24	8,180	Jun 8, 1967
LOWEST DAILY MEAN	0.38	Sep 25	1.9	Apr 17	0.00	Sep 4, 2002
ANNUAL SEVEN-DAY MINIMUM	0.57	Sep 19	2.4	Apr 12	0.00	Sep 11, 2002
MAXIMUM PEAK FLOW			971	Jun 29	b9,610	Jun 18, 1967
MAXIMUM PEAK STAGE			4.71	Jun 29	c13.73	Mar 9, 1979
ANNUAL RUNOFF (AC-FT)	19,580		77,030		144,300	
10 PERCENT EXCEEDS	65		331		428	
50 PERCENT EXCEEDS	10		27		95	
90 PERCENT EXCEEDS	1.6		6.1		16	

a--Median of yearly mean discharges, 181 ft^3/s, 130,800 ac-ft/yr.
b--Gage height, 12.45 ft.
c--Ice jam.
e--Estimated.



06127500 MUSSELSHELL RIVER AT MUSSELSHELL, MT

LOCATION.--Lat 46°31'23", long 108°06'30" (NAD 27), in NW$^1/_4$ SE$^1/_4$ SE$^1/_4$ sec.20, T.9 N., R.29 E., Musselshell County, Hydrologic Unit 10040202, on left bank 0.9 mi upstream from Hawk Creek, 1 mi west of Musselshell, and at river mile 164.5.

DRAINAGE AREA.--4,568 mi^2.

PERIOD OF RECORD.--August 1928 to September 1932 (no records December to February for the water years 1930-31), August 1945 to September 1979, October 1982 to September 1983, October 1983 to current season (seasonal record only). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,984.72 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to Oct. 8, 1949, nonrecording gage at site 1 mi downstream at different elevations.

REMARKS.--Records good. Some regulation by Bair (station number 06116500), Martinsdale (station number 06119000), and Deadmans Basin (station number 06122500) Reservoirs. Diversions for irrigation of about 44,600 acres upstream from station, of which about 39,400 acres is flood irrigated. 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				3.9	5.6	175	706	121	80	51		
2				3.1	9.9	176	515	120	61	56		
3				3.7	25	160	428	147	55	63		
4				1.7	8.8	193	375	137	50	67		
5				1.1	18	276	335	146	56	73		
6				0.53	13	264	296	145	61	77		
7				1.0	19	268	243	131	56	88		
8				2.7	21	282	206	136	61	105		
9				3.6	16	335	171	126	64	126		
10				2.7	8.7	452	144	122	52	123		
11				4.3	4.9	435	129	132	47	112		
12				5.7	5.6	383	119	89	46	110		
13				3.3	82	394	131	78	50	118		
14				2.5	284	321	151	75	50	115		
15				1.6	312	360	148	62	52	111		
16				1.5	184	449	124	60	44	110		
17				1.5	96	405	116	53	30	107		
18				1.6	73	363	118	48	29	105		
19				4.8	74	358	108	46	31	106		
20				5.5	293	363	118	40	29	106		
21				5.7	382	356	131	37	29	104		
22				7.0	417	321	131	33	29	101		
23				7.4	646	277	102	76	25	99		
24				19	785	229	80	97	30	100		
25				40	718	197	103	69	34	104		
26				83	618	189	135	61	38	107		
27				65	520	181	149	51	39	109		
28				33	400	312	140	49	38	110		
29				15	302	450	129	63	47	108		
30				6.5	232	1,040	119	68	48	110		
31				---	182	---	118	75	---	111		
TOTAL				337.93	6,755.5	9,964	6,018	2,693	1,361	3,092		
MEAN				11.3	218	332	194	86.9	45.4	99.7		
MAX				83	785	1,040	706	147	80	126		
MIN				0.53	4.9	160	80	33	25	51		
AC-FT				670	13,400	19,760	11,940	5,340	2,700	6,130		

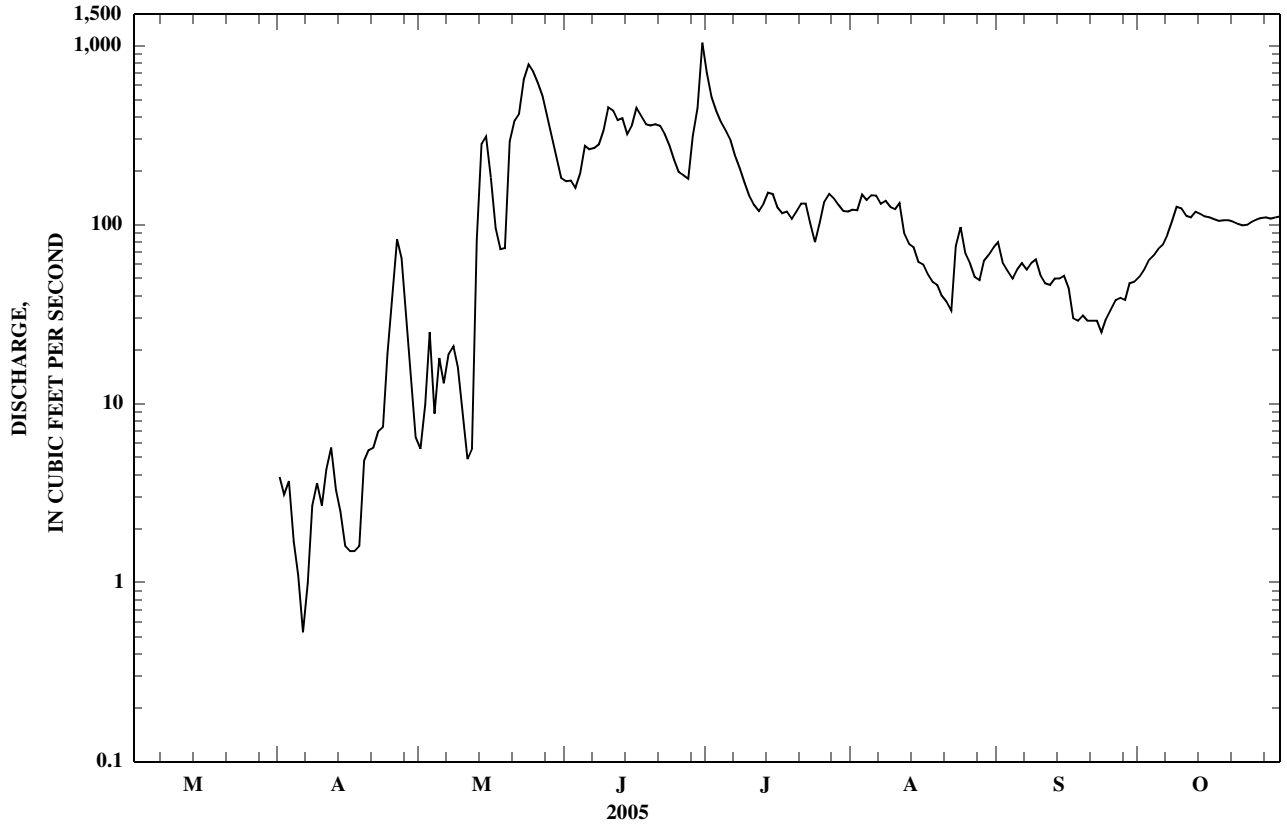
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)*

MEAN	71.0	108	273	183	344	558	231	135	104	74.1	76.5	77.5
MAX	222	460	1,356	859	1,670	4,223	1,376	534	477	328	236	269
(WY)	(1976)	(1971)	(1979)	(1975)	(1976)	(1967)	(1975)	(1993)	(1993)	(1994)	(1976)	(1976)
MIN	0.00	0.04	12.7	1.05	0.36	0.49	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1932)	(1932)	(1932)	(2004)	(1931)	(1931)	(1930)	(1931)	(1931)	(1932)	(1932)	(1932)

06127500 MUSSELSHELL RIVER AT MUSSELSHELL, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1929 - 1983**		SEASONS 1984 - 2005***	
ANNUAL MEAN			215			
HIGHEST ANNUAL MEAN			609	1975		
LOWEST ANNUAL MEAN			34.1	1961		
HIGHEST DAILY MEAN	1,040	Jun 30	8,600	Jun 19, 1967	6,270	Jun 16, 1997
LOWEST DAILY MEAN	0.53	Apr 6	0.00	Sep 1, 1929	0.00	Aug 14, 2001
ANNUAL SEVEN-DAY MINIMUM			0.00	Sep 8, 1929		
MAXIMUM PEAK FLOW	1,180	Jun 30	a9,850	Jun 19, 1967	6,420	Jun 16, 1997
MAXIMUM PEAK STAGE	5.89	Jun 30	b12.96	Mar 19, 1979	11.25	Jun 16, 1997
ANNUAL RUNOFF (AC-FT)			155,800			
10 PERCENT EXCEEDS			464			
50 PERCENT EXCEEDS			105			
90 PERCENT EXCEEDS			17			

*--During period of operation.
**--During period of continuous operation 1928-29, 1931-32, 1945-79, 1982-83.
***--Seasonal records October 1983 to current season.
a--Gage height, 11.57 ft.
b--Ice jam.



06130500 MUSSELSHELL RIVER AT MOSBY, MT

LOCATION.--Lat 46°59'41", long 107°53'18" (NAD 27), in $SW^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.11, T.14 N., R.30 E., Petroleum County, Hydrologic Unit 10040205, on right bank, downstream side of bridge on State Highway 20, 0.3 mi west of Mosby, 10.9 mi downstream from Flatwillow Creek, and at river mile 60.0.

DRAINAGE AREA.--7,846 mi^2.

PERIOD OF RECORD.--May to November 1929, March 1930 to September 1932, February 1934 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1559: 1935-36. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,493.23 ft (NGVD 29). Dec. 6, 1962 to Mar. 14, 1966, water-stage recorder at site 900 ft downstream at different elevation. Mar. 15, 1966 to Dec. 11, 1973, water-stage recorder and nonrecording gages at site 400 ft downstream at same elevation. Dec. 12, 1973 to Oct. 1, 1981, nonrecording gage at site 400 ft downstream at same elevation. Oct. 1, 1981 to July 25, 1995, water-stage recorder at site 400 ft upstream from bridge at elevation 2.67 ft higher. See WSP 2116 for history of changes prior to 1962.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Bair (station number 06116500), Martinsdale (station number 06119000) and Deadmans Basin (station number 06122500) Reservoirs. Diversions for irrigation of about 47,000 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	0.00	24	e3.5	e2.5	e5.0	e9.5	6.3	15	117	1,110	25	6.7
2	0.00	28	e3.5	e2.5	e5.5	e9.5	6.1	8.0	91	979	17	8.5
3	0.00	31	e3.5	e2.5	e6.0	9.5	10	4.4	87	651	17	23
4	0.00	34	e4.0	e2.5	e5.0	8.8	6.9	1.3	88	523	10	28
5	0.00	34	e3.5	e2.5	e5.0	10	8.6	0.45	72	406	11	25
6	0.00	33	e3.5	e2.5	e4.5	8.1	7.9	0.04	89	336	37	18
7	0.00	27	e3.5	e2.5	e3.0	4.7	4.8	0.03	158	274	39	16
8	0.00	24	e3.5	e2.5	e4.5	4.4	2.5	0.08	156	212	43	14
9	0.00	25	e3.5	e2.5	e5.5	3.1	7.1	0.08	190	162	37	15
10	0.00	23	e3.5	e2.5	e6.0	2.8	13	0.03	220	133	31	21
11	0.00	23	e4.0	e2.5	e7.0	4.1	21	1.6	314	108	32	23
12	0.00	25	e3.5	e2.5	e8.0	4.3	16	4.6	393	82	39	27
13	0.00	22	e3.5	e2.5	e8.0	4.9	9.8	8.4	1,080	68	37	26
14	0.00	22	e3.5	e2.0	e7.0	4.6	6.8	24	802	64	46	25
15	0.00	19	e3.5	e2.0	e6.0	4.1	4.8	15	463	55	33	25
16	0.00	15	e3.5	e2.0	e6.0	4.0	3.5	206	320	61	18	23
17	0.00	14	e3.5	e2.5	e6.0	4.4	2.2	177	500	60	16	22
18	0.00	12	e3.5	e2.5	e6.0	4.3	2.0	99	470	43	17	26
19	0.00	11	e3.5	e3.0	e6.0	3.9	5.3	47	336	34	13	46
20	0.00	9.0	e3.5	e3.0	e6.0	4.3	80	20	314	29	9.4	43
21	0.00	e8.0	e3.5	e3.0	e7.0	4.4	109	686	306	23	9.1	44
22	0.00	e6.0	e3.5	e3.0	e7.0	4.5	117	455	300	18	12	45
23	0.00	e5.0	e3.0	e4.0	e7.0	3.8	63	302	274	18	10	46
24	0.00	e5.0	e3.0	e6.0	e7.0	8.7	28	376	232	27	6.6	50
25	0.00	e7.0	e3.5	e4.5	e8.0	6.8	15	535	197	24	5.0	49
26	0.00	e6.0	e3.5	e4.5	e8.0	9.8	9.1	574	214	18	4.5	47
27	0.00	e4.0	e3.5	e4.5	e8.0	11	6.8	511	206	12	2.9	49
28	0.00	e3.5	e3.5	e4.5	e9.0	11	12	422	1,430	7.9	15	53
29	0.00	e3.5	e3.5	e4.0	---	11	23	344	1,470	13	14	56
30	18	e3.5	e3.5	e4.5	---	8.3	17	233	990	31	12	54
31	22	---	e3.0	e4.5	---	6.6	---	168	---	32	11	---
TOTAL	40.00	506.5	108.0	96.5	177.0	199.2	624.5	5,238.01	11,879	5,613.9	629.5	954.2
MEAN	1.29	16.9	3.48	3.11	6.32	6.43	20.8	169	396	181	20.3	31.8
MAX	22	34	4.0	6.0	9.0	11	117	686	1,470	1,110	46	56
MIN	0.00	3.5	3.0	2.0	3.0	2.8	2.0	0.03	72	7.9	2.9	6.7
AC-FT	79	1,000	214	191	351	395	1,240	10,390	23,560	11,140	1,250	1,890

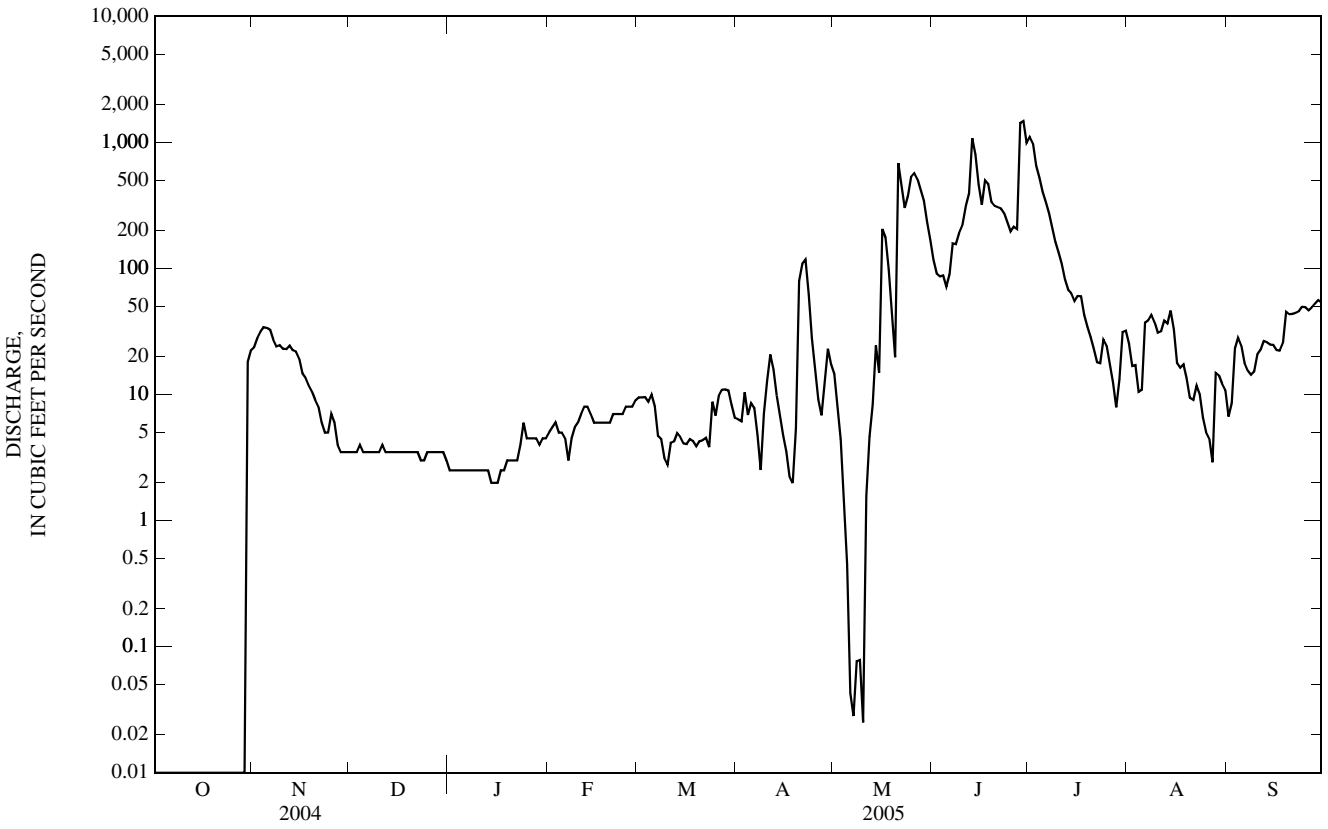
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2005, BY WATER YEAR (WY)*

MEAN	77.5	77.2	69.1	74.4	168	444	276	509	852	312	110	110
MAX	478	337	278	376	1,858	4,658	1,917	3,772	4,967	2,153	870	787
(WY)	(1994)	(1994)	(1979)	(1997)	(1971)	(1978)	(1979)	(1975)	(1967)	(1975)	(1993)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91	0.00	0.00	0.00
(WY)	(1932)	(1932)	(1931)	(1932)	(1932)	(1932)	(2003)	(1931)	(1935)	(1961)	(1934)	(1934)

06130500 MUSSELSHELL RIVER AT MOSBY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1931 - 2005*	
ANNUAL TOTAL	7,001.26		26,066.31			
ANNUAL MEAN	19.1		71.4		a258	
HIGHEST ANNUAL MEAN					1,089	1978
LOWEST ANNUAL MEAN					8.12	2002
HIGHEST DAILY MEAN	1,640	Mar 10	1,470	Jun 29	15,700	Jun 18, 1944
LOWEST DAILY MEAN	0.00	May 7	0.00	Oct 1	0.00	Oct 1, 1930
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 22	0.00	Oct 1	0.00	Oct 1, 1930
MAXIMUM PEAK FLOW			2,030	Jun 29	b18,000	Jun 18, 1944
MAXIMUM PEAK STAGE			6.22	Jun 29	c15.10	Mar 12, 1979
ANNUAL RUNOFF (AC-FT)	13,890		51,700		187,300	
10 PERCENT EXCEEDS	26		213		560	
50 PERCENT EXCEEDS	2.0		8.6		80	
90 PERCENT EXCEEDS	0.00		1.5		0.05	

*--During period of operation (1931-32, 1935 to current year).
a--Median of yearly discharge, 179 ft^3/s.
b--Gage height, 14.43 ft, from rating extension above 10,000 ft^3/s.
c--From floodmark, backwater from ice.
e--Estimated.



06131000 BIG DRY CREEK NEAR VAN NORMAN, MT

LOCATION.--Lat 47°20'58", long 106°21'26" (NAD 27), in $NE^1/_4SW^1/_4NW^1/_4$ sec.3, T.18 N., R.42 E., Garfield County, Hydrologic Unit 10040105, on left bank 900 ft downstream from Little Dry Creek, 3.2 mi northeast of Van Norman Post Office, 26 mi east of Jordan, and at river mile 55.1.

DRAINAGE AREA.--2,554 mi^2.

PERIOD OF RECORD.--October 1939 to July 1969, July 1970 to current year (discharge measurements only, October 1947 to March 1949). Prior to July 1970, published as "Dry Creek near Van Norman."

REVISED RECORDS.--WSP 1309: 1947(M). WSP 1559: 1944(M), 1947. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,330 ft (NGVD 29). Prior to July 24, 1978, at site 400 ft upstream at same elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Few small diversions for irrigation of hay meadows 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	1.1	1.7	e1.5	e1.5	e5.5	e8.0	3.3	3.1	4.5	312	0.97	0.77
2	1.1	1.7	e2.0	e1.5	e5.5	e8.5	3.1	2.9	4.2	157	0.77	0.68
3	1.2	1.7	1.9	e1.0	e5.5	e8.5	3.1	2.7	3.7	116	1.7	0.63
4	1.3	1.7	1.9	e1.0	e5.5	e8.0	3.0	2.5	3.5	85	1.9	0.58
5	1.2	1.7	2.0	e1.0	e5.0	e18	3.1	2.3	3.3	60	1.5	0.54
6	1.2	1.6	3.3	e1.0	e5.0	5.0	3.0	1.9	8.4	39	1.2	0.52
7	1.2	1.7	2.0	e1.0	e5.0	4.5	2.8	1.6	26	33	1.0	0.51
8	1.3	1.7	1.9	e1.0	e5.5	4.2	2.6	3.9	274	27	0.97	0.51
9	1.3	1.7	1.9	e1.0	e6.0	3.9	4.5	3.4	369	23	0.98	0.49
10	1.2	1.7	2.7	e1.0	e6.5	3.7	13	2.9	146	18	54	0.47
11	1.3	1.7	1.8	e1.0	e7.0	3.4	11	3.0	128	16	6.1	0.49
12	1.2	1.7	e2.0	e1.0	e7.0	3.4	8.6	5.9	124	13	3.6	0.52
13	1.3	1.7	e1.5	e1.0	e6.5	3.5	8.1	35	122	11	2.8	0.52
14	1.2	1.7	e3.0	e1.0	e6.5	3.8	6.0	29	87	8.5	4.1	0.53
15	1.3	1.7	e1.5	e1.0	e5.5	4.0	5.4	14	67	7.7	3.5	0.54
16	1.4	1.7	e2.0	e1.0	e6.0	4.1	4.8	9.9	45	6.6	4.9	0.56
17	1.4	1.7	e1.5	e1.5	e6.0	4.4	4.5	7.9	44	5.4	4.9	0.57
18	1.5	1.7	e2.0	e2.0	e6.0	4.5	4.5	6.4	98	4.9	5.6	0.63
19	1.5	1.6	e3.0	e3.0	e6.0	4.2	5.8	5.5	54	4.6	4.6	0.65
20	1.5	1.7	e3.0	e3.0	e5.5	4.0	4.9	5.5	35	4.2	3.8	0.63
21	1.5	1.7	e2.5	e3.0	e6.0	4.1	6.1	11	48	3.7	3.2	0.62
22	1.5	1.7	e2.5	e2.5	e6.5	4.2	5.0	6.2	116	3.3	2.5	0.62
23	1.5	1.6	e2.0	e3.0	e6.5	4.2	5.7	5.8	65	2.8	2.2	0.60
24	1.5	e1.5	e2.0	e4.0	e7.0	4.6	5.2	8.0	40	2.5	1.9	0.67
25	1.6	e1.5	e2.5	e6.0	e7.5	4.7	4.5	6.3	25	2.6	1.5	0.73
26	1.5	e1.5	e2.5	e10	e7.5	4.7	4.5	6.3	19	2.8	1.2	0.73
27	1.6	e2.0	e2.0	e100	e7.0	4.4	4.4	6.1	22	2.3	1.0	0.71
28	1.7	e2.0	e2.5	e50	e7.5	4.1	4.1	5.3	224	2.2	0.98	0.74
29	1.6	e1.5	e2.5	e9.0	---	3.9	3.7	4.6	1,930	1.8	0.89	0.70
30	1.7	e2.0	e2.0	e8.0	---	3.7	3.4	4.1	902	1.5	0.68	0.69
31	1.7	---	e2.0	e6.5	---	3.5	---	4.9	---	1.3	0.79	---
TOTAL	43.1	50.8	67.4	228.5	172.5	157.7	151.7	217.9	5,037.6	978.7	125.73	18.15
MEAN	1.39	1.69	2.17	7.37	6.16	5.09	5.06	7.03	168	31.6	4.06	0.60
MAX	1.7	2.0	3.3	100	7.5	18	13	35	1,930	312	54	0.77
MIN	1.1	1.5	1.5	1.0	5.0	3.4	2.6	1.6	3.3	1.3	0.68	0.47
AC-FT	85	101	134	453	342	313	301	432	9,990	1,940	249	36

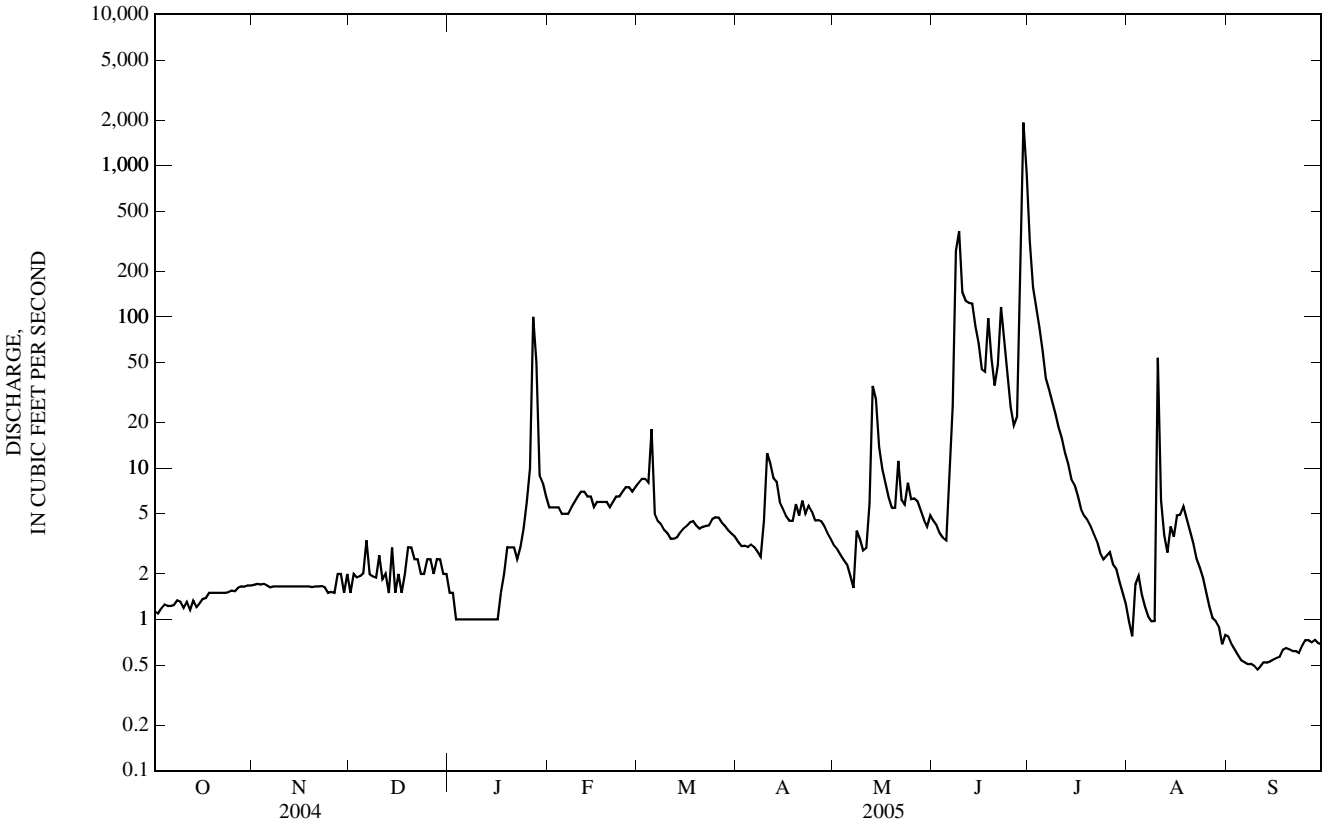
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)*

MEAN	6.15	2.95	2.63	6.39	70.6	250	81.5	28.2	59.1	43.0	15.7	15.9
MAX	97.5	14.2	33.7	192	1,004	1,760	2,043	300	552	458	367	391
(WY)	(1987)	(1987)	(1976)	(1997)	(1997)	(1959)	(1952)	(1975)	(1944)	(1993)	(1954)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	2.75	1.05	0.21	0.07	0.00	0.00	0.00
(WY)	(1940)	(1961)	(1961)	(1940)	(1940)	(1961)	(1961)	(1958)	(1988)	(1961)	(1959)	(1940)

06131000 BIG DRY CREEK NEAR VAN NORMAN, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005*	
ANNUAL TOTAL	4,949.96		7,249.78			
ANNUAL MEAN	13.5		19.9		48.6**	
HIGHEST ANNUAL MEAN					243	1978
LOWEST ANNUAL MEAN					1.18	1985
HIGHEST DAILY MEAN	1,270	Mar 10	1,930	Jun 29	21,300	Mar 22, 1947
LOWEST DAILY MEAN	0.17	Aug 2	0.47	Sep 10	0.00	Oct 1, 1939
ANNUAL SEVEN-DAY MINIMUM	0.30	Jul 27	0.50	Sep 6	0.00	Oct 1, 1939
MAXIMUM PEAK FLOW			3,510	Jun 29	a24,600	Mar 21, 1947
MAXIMUM PEAK STAGE			6.78	Jun 29	b15.26	Mar 21, 1947
INSTANTANEOUS LOW FLOW					c0.00	Oct 1, 1940
ANNUAL RUNOFF (AC-FT)	9,820		14,380		35,220	
10 PERCENT EXCEEDS	7.1		22		40	
50 PERCENT EXCEEDS	1.7		3.0		2.5	
90 PERCENT EXCEEDS	0.54		0.98		0.00	

*--During period of operation (1940-47, 1949-68, 1970 to current year).
**--Median of yearly mean discharges, 27.1 ft^3/s.
a--Gage height, 13.39 ft, at different site and datum.
b--Backwater from ice.
c--No flow at times most years.
e--Estimated.



06131500 FORT PECK LAKE AT FORT PECK, MT

LOCATION.--Lat 48°00'26", long 106°23'49" (NAD 27), in sec.14, T.26 N., R.41 E., McCone County, Hydrologic Unit 10040104, in No. 4 emergency gate shaft of Fort Peck Dam on Missouri River at Fort Peck, 2 mi downstream from Bear Creek, 9.5 mi southwest of Nashua, 9.5 mi upstream from Milk River, and at river mile 1,771.6.

DRAINAGE AREA.--57,500 mi^2.

PERIOD OF RECORD.--October 1937 to current year. (Monthend contents only, except October 1938 to September 1940, when elevations were included.) Monthend contents for October 1937 to August 1938, published only in WSP 1309. Daily elevations and contents for May to June 1964, published in WSP 1840-B. Prior to October 1970, published as "Fort Peck Reservoir." Daily elevations are on file at the USGS Water Science Center located in Helena, Montana.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Prior to May 1, 1941, nonrecording gage at same site and elevation. Elevation of gage is 2095.00 (NGVD 29).

REMARKS.--Reservoir is formed by earthfill dam completed in 1939; storage began in 1937. The following capacity figures are from capacity table effective July 1, 1973; see previous reports for superseded figures. All elevations are referenced to the National Geodetic Vertical Datum of 1929. Total capacity, 18,910,000 acre-ft between elevation 2,095.00 ft, invert of lower ring gates, and 2,250.00 ft, top of 25 ft gates. Elevation of spillway crest, 2,225.00 ft. Normal operating level, 17,930,000 acre-ft, elevation, 2,246.00 ft. Dead storage, 542,800 acre-ft below elevation 2,095.00 ft. Minimum operating level, 4,283,000 acre-ft, elevation, 2,160.00 ft, for on-site power generation. Figures given herein represent total contents; usable contents published in previous water-supply papers for October 1950 to September 1955. Water is used for navigation, recreation, flood control, and power generation. Elevations materially affected by wind.

COOPERATION.--Elevations and capacity table furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 19,310,000 acre-ft, July 15-17, 1975, elevation, 2,251.6 ft; minimum since first filling, 5,061,000 acre-ft, Jan. 25, 26, 1956, elevation, 2,167.67 ft, by capacity table used Mar. 1, 1940, to Dec. 31, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,558,000 acre-ft, July 13, elevation, 2,203.70 ft; minimum, 8,734,000 acre-ft, Jan. 22, elevation, 2,198.25 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	2,199.79	8,963,000	--
October 31	2,199.81	8,965,000	+2,000
November 30	2,199.77	8,959,000	-6,000
December 31	2,198.90	8,831,000	-128,000
Calendar Year 2004	--	--	-976,000
January 31	2,198.45	8,764,000	-67,000
February 28	2,198.29	8,740,000	-24,000
March 31	2,198.55	8,779,000	+39,000
April 30	2,198.55	8,779,000	0
May 31	2,199.61	8,936,000	+157,000
June 30	2,203.01	9,451,000	+515,000
July 31	2,203.20	9,481,000	+30,000
August 31	2,202.20	9,327,000	-154,000
September 30	2,101.96	9,290,000	-37,000
Water Year 2005	--	--	+327,000

06132000 MISSOURI RIVER BELOW FORT PECK DAM, MT

LOCATION.--Lat 48°02'39" (NAD 27), long 106°21'21", in NW$^1/_4$ sec.6, T.26 N., R.42 E., McCone County, Hydrologic Unit 10060001, on right bank 2 mi upstream from Milk River, 6 mi south of Nashua, 8 mi downstream from Fort Peck Dam, and at river mile 1,763.5.

DRAINAGE AREA.--57,556 mi^2.

PERIOD OF RECORD.--March 1934 to current year.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,018 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark). Prior to Apr. 14, 1938, at site 0.7 mi upstream at different elevation; Apr. 14, 1938, to Sept. 30, 1963, at present site at elevation 2.00 ft higher, all water-stage recorders. Since Oct. 1, 1969, published discharge is determined by flowmeters and spillway discharge at Fort Peck Dam.

REMARKS.--Flow completely regulated by Fort Peck Lake. Diversions for irrigation of about 880,400 acres upstream from station. Operational level in Fort Peck Lake was reached beginning 1944 water year. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--Records since Oct. 1, 1969, furnished by U.S. Army Corps of Engineers; 2 to 4 discharge measurements are made each year and the records are reviewed by Geological Survey. Records for March 1934 to September 1969 collected and computed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft^3/s including 32,000 ft^3/s inflow from spillway 1 mi downstream from station, Aug. 8, 1946; maximum gage height observed, 12.30 ft, Mar. 10, 1936 (ice jam), site and elevation then in use; maximum daily reverse flow, 400 ft^3/s, Mar. 29, 1943, backwater from Milk River.

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	5,000	4,000	5,400	5,500	6,100	5,200	4,500	5,400	5,600	5,200	6,600	7,000
2	4,600	3,900	5,600	5,400	6,500	5,100	4,700	5,300	5,500	5,500	7,300	7,000
3	4,900	3,600	5,400	5,600	6,300	5,100	5,300	5,200	5,500	5,700	7,400	6,600
4	4,800	3,900	5,500	5,600	5,700	5,000	4,900	5,300	5,500	5,700	7,400	6,800
5	4,300	3,900	5,400	6,200	5,400	4,900	5,100	5,400	5,400	5,400	6,900	7,000
6	4,100	3,800	5,500	6,100	5,500	5,000	5,100	5,500	5,500	5,300	7,100	6,300
7	4,600	3,900	5,400	5,500	5,100	4,200	5,400	5,500	5,400	5,500	7,300	6,600
8	4,600	4,100	5,400	6,000	5,800	3,800	5,500	5,500	5,300	5,700	7,200	7,100
9	4,500	3,900	5,700	6,100	5,300	3,900	5,200	5,600	5,300	7,300	6,800	7,200
10	4,600	4,000	5,700	5,700	5,300	4,000	5,300	5,700	5,200	7,200	6,800	7,100
11	4,700	4,000	5,400	5,700	5,400	3,900	5,200	4,000	5,100	7,500	6,900	7,200
12	4,600	3,900	5,500	6,000	5,400	4,000	5,200	5,100	5,200	7,500	7,000	6,500
13	4,600	3,800	5,500	5,900	5,400	4,000	5,200	5,200	5,200	7,300	6,900	6,200
14	4,600	3,800	5,400	6,000	5,500	4,300	5,200	5,600	5,300	7,100	7,200	6,200
15	3,700	4,200	5,500	6,000	5,500	4,400	5,200	5,500	5,200	7,300	7,100	6,600
16	3,700	4,500	5,500	6,200	5,400	4,100	5,300	5,500	5,100	7,400	6,700	6,500
17	3,700	4,500	5,400	5,800	5,500	4,000	5,300	5,400	5,200	7,500	6,800	4,600
18	3,700	4,200	5,700	5,900	5,400	4,100	5,200	5,300	5,300	7,400	6,900	4,600
19	3,900	4,300	5,500	5,500	5,200	4,000	5,200	5,500	5,500	6,300	6,800	4,600
20	3,800	4,500	5,500	5,800	4,800	4,200	5,200	5,500	5,400	6,400	7,000	5,000
21	3,800	4,300	5,600	5,700	5,100	4,700	5,200	5,500	5,500	6,100	6,900	4,800
22	3,800	4,900	5,600	5,800	5,100	4,900	5,400	5,400	5,400	6,000	6,500	4,600
23	3,900	4,900	5,600	5,700	5,100	5,300	5,500	5,200	5,200	5,800	7,200	4,900
24	3,700	4,800	5,600	5,900	5,100	5,300	5,400	5,300	5,400	5,800	7,200	4,000
25	3,800	4,900	5,500	6,000	5,100	4,600	5,500	5,500	5,600	5,800	7,300	4,500
26	3,800	5,100	5,600	6,000	5,200	4,500	5,300	5,500	5,400	7,800	7,300	4,300
27	3,700	5,000	5,200	6,500	5,000	4,500	5,400	5,500	5,500	7,700	7,400	4,500
28	3,600	4,800	5,400	7,700	5,800	4,500	5,500	5,300	5,300	8,000	7,200	3,200
29	3,700	5,400	5,500	6,700	---	4,600	5,400	5,400	5,500	8,100	7,200	3,000
30	3,700	5,500	5,700	7,400	---	4,600	5,400	5,300	5,300	7,100	7,000	3,100
31	3,780	---	5,600	6,700	---	4,700	---	5,400	---	7,000	7,100	---
TOTAL	128,280	130,300	170,800	186,600	152,000	139,400	157,200	166,300	160,800	205,400	218,400	167,600
MEAN	4,138	4,343	5,510	6,019	5,429	4,497	5,240	5,365	5,360	6,626	7,045	5,587
MAX	5,000	5,500	5,700	7,700	6,500	5,300	5,500	5,700	5,600	8,100	7,400	7,200
MIN	3,600	3,600	5,200	5,400	4,800	3,800	4,500	4,000	5,100	5,200	6,500	3,000
AC-FT	254,400	258,400	338,800	370,100	301,500	276,500	311,800	329,900	318,900	407,400	433,200	332,400

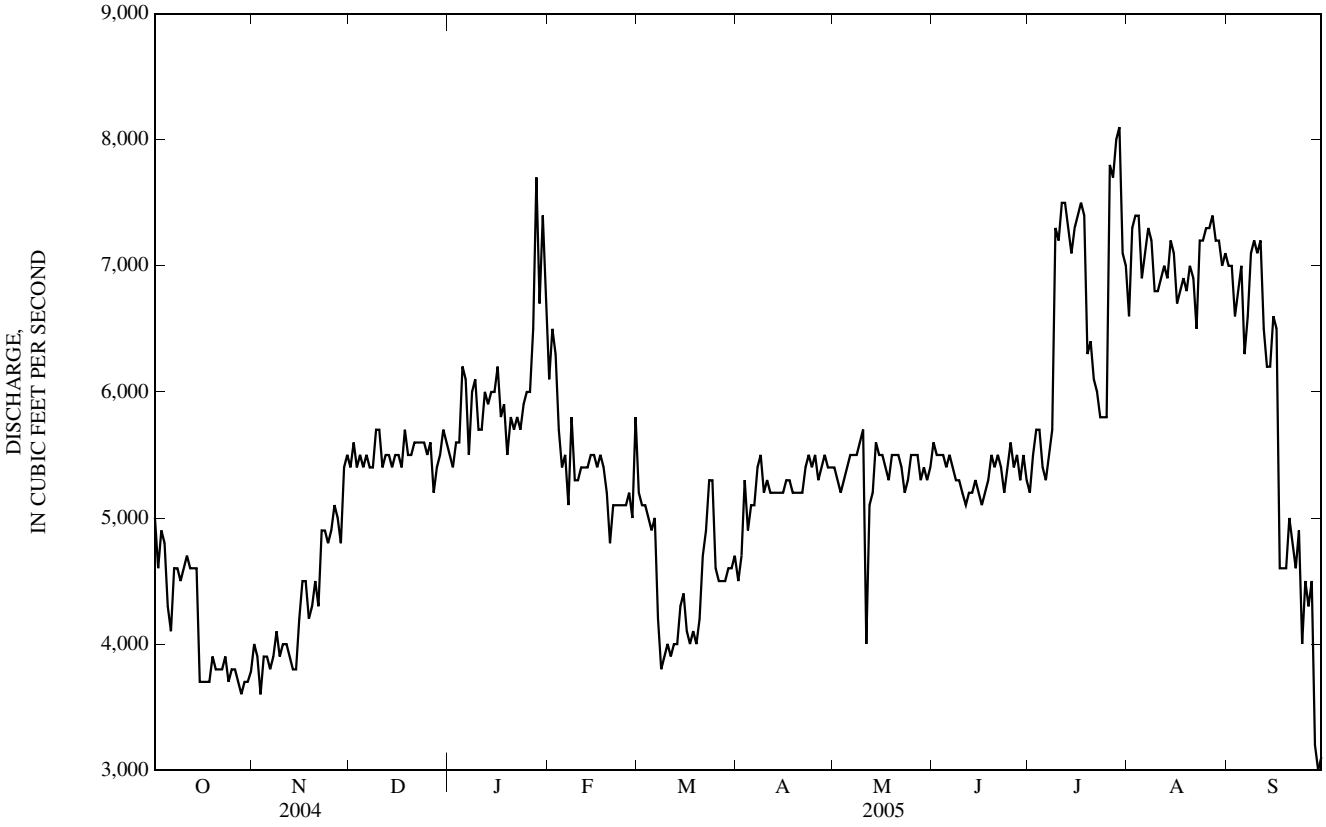
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2005, BY WATER YEAR (WY)*

MEAN	11,010	8,917	9,111	9,748	9,684	7,341	7,200	8,468	8,621	9,858	11,710	11,320
MAX	28,800	21,150	13,330	14,010	15,240	13,390	17,230	18,830	26,190	35,030	26,180	27,120
(WY)	(1956)	(1998)	(1944)	(1971)	(1979)	(1982)	(1979)	(1979)	(1975)	(1975)	(1955)	(1948)
MIN	3,016	2,085	1,490	1,390	1,180	1,050	856	950	832	1,163	3,449	2,997
(WY)	(1994)	(1947)	(1946)	(1946)	(1945)	(1944)	(1945)	(1944)	(1944)	(1945)	(1963)	(1992)

06132000 MISSOURI RIVER BELOW FORT PECK DAM, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1944 - 2005*	
ANNUAL TOTAL	2,474,110		1,983,080			
ANNUAL MEAN	6,760		5,433		9,418	
HIGHEST ANNUAL MEAN					14,950	1975
LOWEST ANNUAL MEAN					5,313	1963
HIGHEST DAILY MEAN	11,200	Apr 27	8,100	Jul 29	35,400	Jul 7, 1975
LOWEST DAILY MEAN	3,600	Oct 28	3,000	Sep 29	16	Apr 6, 1978
ANNUAL SEVEN-DAY MINIMUM	3,710	Oct 24	3,710	Oct 24	161	Mar 26, 1944
INSTANTANEOUS LOW FLOW					161	Mar 26, 1944
ANNUAL RUNOFF (AC-FT)	4,907,000		3,933,000		6,823,000	
10 PERCENT EXCEEDS	9,300		7,100		14,700	
50 PERCENT EXCEEDS	6,600		5,400		8,290	
90 PERCENT EXCEEDS	4,300		4,000		4,100	

*--Period of record after operational level in Fort Peck Lake was reached.



06132200 SOUTH FORK MILK RIVER NEAR BABB, MT

LOCATION.--Lat 48°45'14", long 113°10'00" (NAD 27), in $NE^1/_4NW^1/_4NW^1/_4$ sec.34, T.35 N., R.12 W., Glacier County, Hydrologic Unit 10050001, Blackfeet Indian Reservation, on right bank 0.4 mi upstream from bridge on FAS 464 ("Duck Lake Road"), 14.4 mi southeast of Babb, 15.2 mi northwest of Browning, and at river mile 17.3.

DRAINAGE AREA.--70.4 mi^2.

PERIOD OF RECORD.--May 1961 to current season (seasonal records only).

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,731.6 ft (NGVD 29).

REMARKS.--Records good except those for Sept. 5 to Oct. 31, which are poor. Many small 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.

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			e9.0	17	17	13	39	7.9	7.0	17		
2			e9.2	27	16	33	33	6.6	6.2	20		
3			9.7	29	16	178	29	7.2	6.8	16		
4			10	25	15	186	27	7.1	5.7	19		
5			12	23	16	86	24	6.8	8.9	20		
6			13	20	16	92	21	5.9	9.6	21		
7			12	19	16	100	19	5.7	6.3	17		
8			15	23	18	129	17	6.3	7.0	16		
9			17	26	19	76	16	6.8	7.4	13		
10			15	22	20	62	16	8.8	15	10		
11			16	19	23	52	18	13	39	8.6		
12			14	16	20	53	17	18	21	8.2		
13			14	16	17	68	15	22	9.5	8.2		
14			12	21	16	52	12	16	6.2	7.6		
15			12	24	15	46	12	11	7.0	8.4		
16			12	24	15	42	11	10	8.1	8.0		
17			11	35	25	50	12	9.8	13	8.6		
18			9.9	33	30	60	14	15	15	8.8		
19			9.3	28	21	48	12	19	12	9.2		
20			10	24	18	41	11	15	9.6	11		
21			11	21	16	37	8.8	10	7.5	12		
22			11	19	14	34	8.3	8.2	8.9	16		
23			9.8	18	13	29	9.9	11	8.9	14		
24			10	19	12	29	8.7	17	10	13		
25			10	19	13	29	9.5	30	11	13		
26			10	18	13	28	12	18	10	12		
27			13	19	12	34	12	11	9.1	12		
28			23	20	11	72	10	10	11	13		
29			31	17	11	62	9.5	8.0	11	14		
30			26	17	11	48	6.8	7.3	11	13		
31			17	---	12	---	6.2	6.8	---	12		
TOTAL			413.9	658	507	1,869	476.7	355.2	318.7	399.6		
MEAN			13.4	21.9	16.4	62.3	15.4	11.5	10.6	12.9		
MAX			31	35	30	186	39	30	39	21		
MIN			9.0	16	11	13	6.2	5.7	5.7	7.6		
AC-FT			821	1,310	1,010	3,710	946	705	632	793		

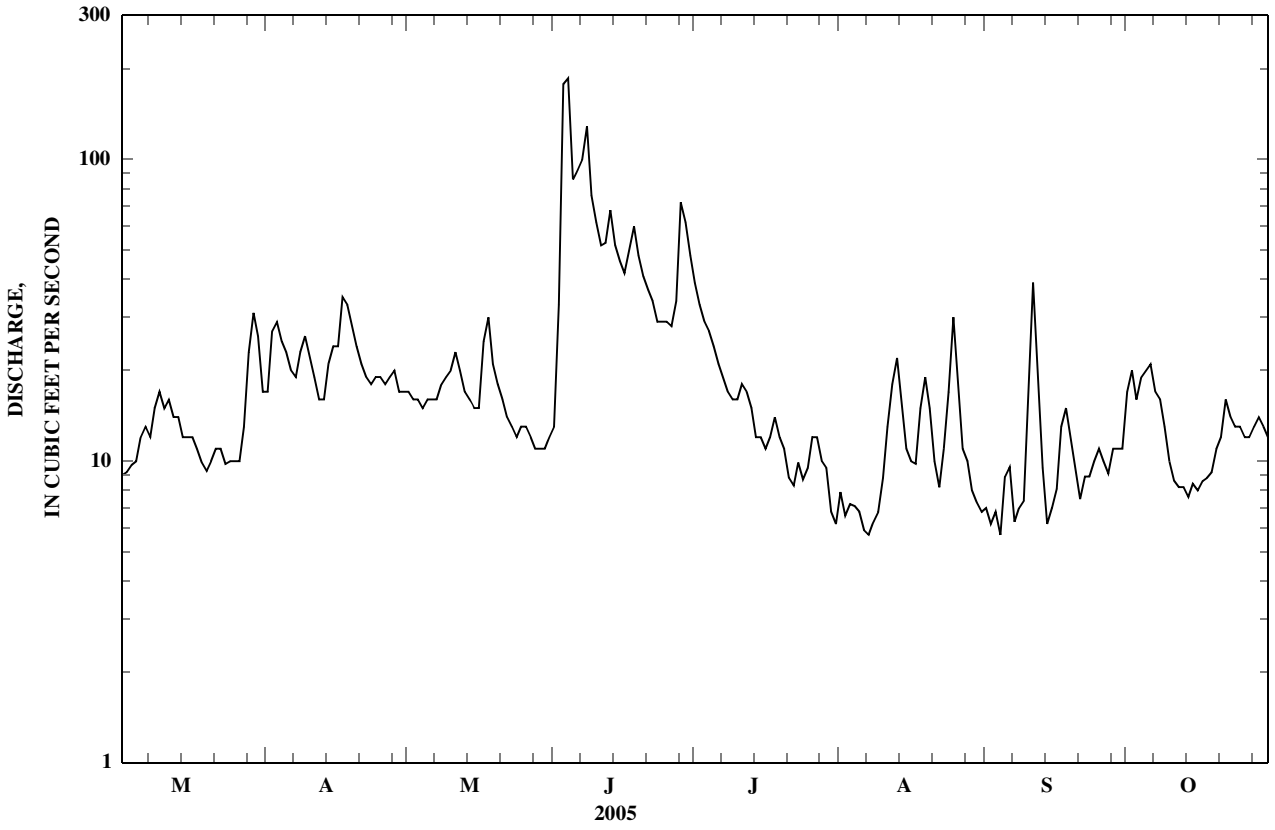
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1961 - 2005

MEAN	46.0	31.2	64.3	84.1	88.7	36.2	17.0	14.7	16.3
MAX	46.0	136	153	239	465	96.6	42.6	43.8	37.0
(WY)	(1963)	(1972)	(1969)	(1967)	(1975)	(1975)	(1993)	(1993)	(1986)
MIN	46.0	5.76	20.7	10.2	0.89	0.00	0.38	0.22	5.07
(WY)	(1963)	(2001)	(1984)	(1977)	(1977)	(1977)	(2001)	(2001)	(1964)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1961 - 2005	
HIGHEST DAILY MEAN	186	Jun 4	5,590	Jun 20, 1975
LOWEST DAILY MEAN	5.7	Aug 7	0.00	Aug 23, 1973
MAXIMUM PEAK FLOW	306	Jun 3	a12,000	Jun 8, 1964
MAXIMUM PEAK STAGE	4.42	Jun 3	7.17	Feb 24, 1986
INSTANTANEOUS LOW FLOW			0.00	Aug 23, 1973

a-Gage height, 6.61 ft, from rating curve extended above 400 ft^3/s, on basis of slope-area measurement of peak flow.
e--Estimated.

06132200 SOUTH FORK MILK RIVER NEAR BABB, MT—Continued



06133000 MILK RIVER AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'27", long 112°32'42" (NAD 27), in NE$^1/_4$ sec.1, T.1, R.20 W., fourth meridian, in Alberta, Hydrologic Unit 10050001, on left bank 0.8 mi north of international boundary, 22 mi upstream from North Milk River, 23 mi southwest of Milk River, Alberta, and at river mile 656.4.

DRAINAGE AREA.--401 mi^2.

PERIOD OF RECORD.--March 1931 to current season (seasonal records only). Prior to October 1961, published as South Fork Milk River near international boundary.

REVISED RECORDS.--WSP 1389: 1934(M), 1935, 1936(M), 1937, 1942(M), 1947-48(M). W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,820 ft (NGVD 29). Prior to Aug. 9, 1948, and Aug. 9, 1948, to Oct. 31, 1958, water-stage recorders at sites 0.4 mi and 0.5 mi downstream, respectively, at different elevations.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several diversions for irrigation upstream from station. Environment Canada satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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			e19	e48	43	14	102	2.2	9.0	18		
2			e21	e43	42	31	76	3.0	7.7	19		
3			e23	49	40	139	58	2.8	6.3	21		
4			e23	57	38	477	47	2.3	5.3	33		
5			e24	54	36	441	40	1.9	4.7	41		
6			e24	51	35	657	36	1.6	4.1	42		
7			e23	50	34	544	31	1.4	3.7	46		
8			e23	47	34	946	27	1.2	3.5	55		
9			e21	49	35	526	24	1.5	3.1	58		
10			20	55	37	274	22	4.3	4.5	53		
11			20	53	38	207	20	4.4	33	47		
12			20	46	39	161	18	4.7	114	40		
13			23	43	41	224	17	7.8	135	36		
14			22	49	37	237	14	8.8	88	32		
15			20	51	33	156	13	20	63	30		
16			19	54	33	118	14	18	46	29		
17			e19	58	37	104	13	15	35	28		
18			e18	73	32	126	11	13	29	28		
19			e18	83	37	156	9.7	13	25	28		
20			e19	74	43	114	9.3	12	24	29		
21			e25	64	34	87	10	12	22	29		
22			e29	55	28	69	8.9	15	19	30		
23			e27	49	25	57	7.8	12	18	31		
24			e25	45	21	49	6.9	19	17	33		
25			e23	42	20	42	6.5	28	17	33		
26			e22	42	20	41	5.7	40	17	32		
27			e32	43	19	47	5.0	37	17	32		
28			e32	46	16	280	4.3	27	17	31		
29			e32	48	16	203	3.8	19	17	30		
30			e41	47	17	147	3.4	14	17	29		
31			e49	---	15	---	2.8	11	---	29		
TOTAL			756	1,568	975	6,674	667.1	372.9	821.9	1,052		
MEAN			24.4	52.3	31.5	222	21.5	12.0	27.4	33.9		
MAX			49	83	43	946	102	40	135	58		
MIN			18	42	15	14	2.8	1.2	3.1	18		
AC-FT			1,500	3,110	1,930	13,240	1,320	740	1,630	2,090		

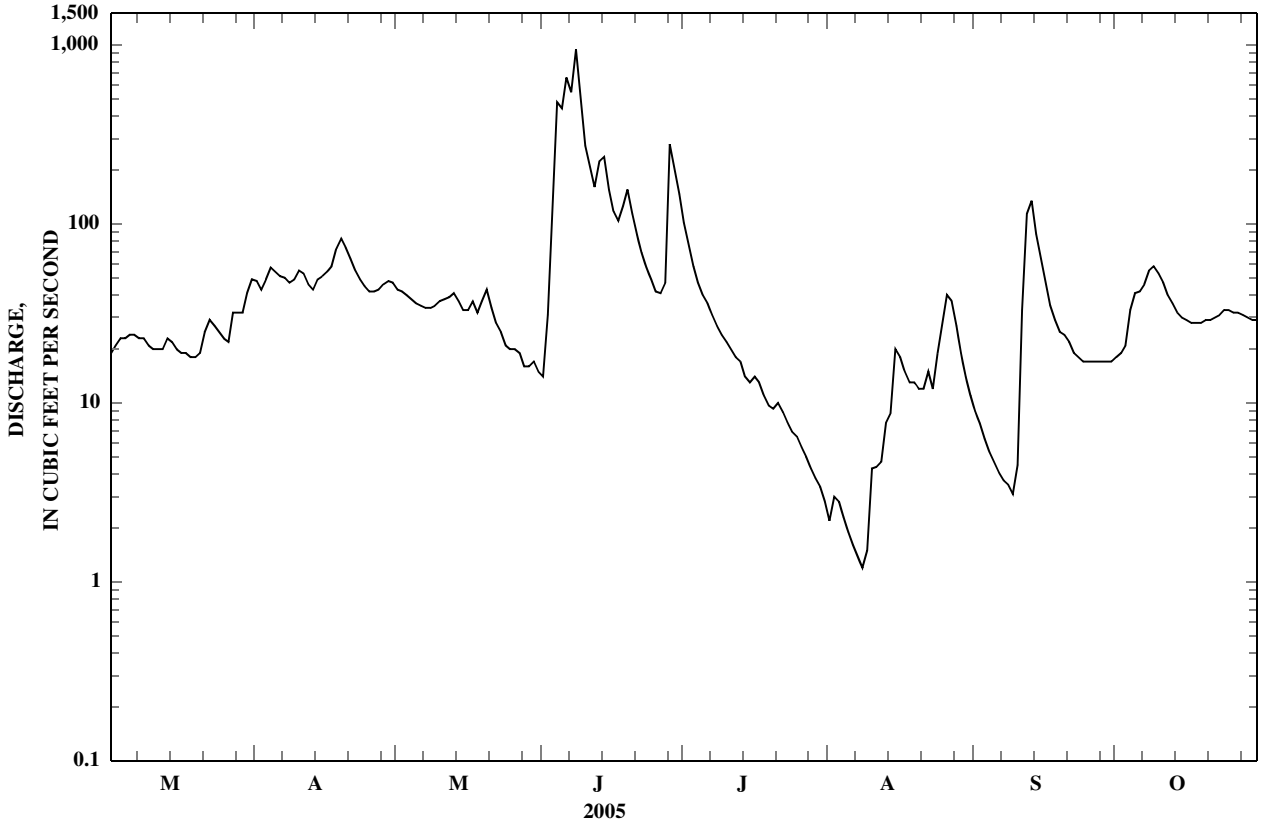
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1931 - 2005

MEAN	103	204	204	179	57.1	20.2	20.5	25.0
MAX	717	615	679	907	348	142	168	133
(WY)	(1972)	(1969)	(1967)	(2002)	(1951)	(1951)	(1951)	(1952)
MIN	1.95	41.5	13.3	3.07	0.01	0.00	0.00	0.00
(WY)	(2002)	(1941)	(1941)	(1977)	(1977)	(1939)	(1939)	(1964)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1931 - 2005	
HIGHEST DAILY MEAN	946	Jun 8	5,410	Jun 9, 1964
LOWEST DAILY MEAN	1.2	Aug 8	0.00	Jul 31, 1931
MAXIMUM PEAK FLOW	1,240	Jun 8	a7,930	Jun 9, 1964
MAXIMUM PEAK STAGE	5.69	Jun 8	b12.55	Mar 18, 1976

a--Gage height, 9.77 ft.
b--Backwater from ice.
e--Estimated.

06133000 MILK RIVER AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY—Continued



06133500 NORTH FORK MILK RIVER ABOVE ST. MARY CANAL, NEAR BROWNING, MT
(International gaging station)

LOCATION.--Lat 48°58'15", long 113°03'22" (NAD 27), in $NE^1/_4NE^1/_4SW^1/_4$ sec.16, T.37 N., R.11 W., Glacier County, Hydrologic Unit 10050001, Blackfeet Indian Reservation, on left bank 2.3 mi upstream from outlet of canal, 2.3 mi south of international boundary, 29 mi north of Browning, and at river mile 58.3.

DRAINAGE AREA.--59.0 mi^2.

PERIOD OF RECORD.--May 1911 to July 1912 and June to July 1918 (published as "near Browning"), May 1919 to current season (seasonal records only). Monthly discharge only for some periods published in WSP 1309.

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,240 ft (NGVD 29). Prior to June 20, 1921, nonrecording gages at several sites within 1 mi of present site at different elevations. June 20, 1921 to Mar. 19, 1997 water-stage recorder at site 0.5 mile downstream from current site at elevation 15 ft lower.

REMARKS.--Records fair. Many small diversions for irrigation upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

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			e9.8	13	12	10	16	12	13	16		
2			10	15	11	32	15	12	13	15		
3			10	13	11	89	15	13	12	16		
4			10	13	10	46	15	14	12	20		
5			9.6	13	11	30	15	13	13	19		
6			9.8	11	10	95	14	13	13	21		
7			9.3	12	10	109	14	13	13	26		
8			9.6	13	11	74	13	14	12	21		
9			9.7	11	10	33	13	17	13	18		
10			9.6	10	10	26	13	30	25	17		
11			9.6	9.8	10	21	13	26	90	16		
12			e9.5	9.6	9.6	24	13	32	40	16		
13			e9.0	9.8	9.3	38	12	26	25	15		
14			e9.0	15	9.1	21	12	17	20	14		
15			e8.5	13	9.0	19	12	18	18	15		
16			e9.0	14	8.9	17	12	18	19	14		
17			e8.5	19	10	23	14	19	20	14		
18			e8.0	14	9.4	28	12	28	19	15		
19			e8.0	13	8.6	19	11	22	17	15		
20			e8.5	13	8.3	17	11	18	16	14		
21			e9.0	12	8.3	16	11	16	15	14		
22			e9.0	11	8.1	15	11	16	16	16		
23			11	11	7.9	15	11	16	16	15		
24			12	11	8.0	15	10	34	17	14		
25			12	10	9.3	16	13	42	16	14		
26			13	10	9.8	16	14	22	16	14		
27			12	12	8.9	18	13	16	16	14		
28			15	12	8.7	30	13	14	18	14		
29			15	11	8.6	21	13	13	16	14		
30			13	12	8.7	18	13	13	15	13		
31			13	---	8.8	---	12	13	---	13		
TOTAL			319.0	366.2	293.3	951	399	590	584	492		
MEAN			10.3	12.2	9.46	31.7	12.9	19.0	19.5	15.9		
MAX			15	19	12	109	16	42	90	26		
MIN			8.0	9.6	7.9	10	10	12	12	13		
AC-FT			633	726	582	1,890	791	1,170	1,160	976		

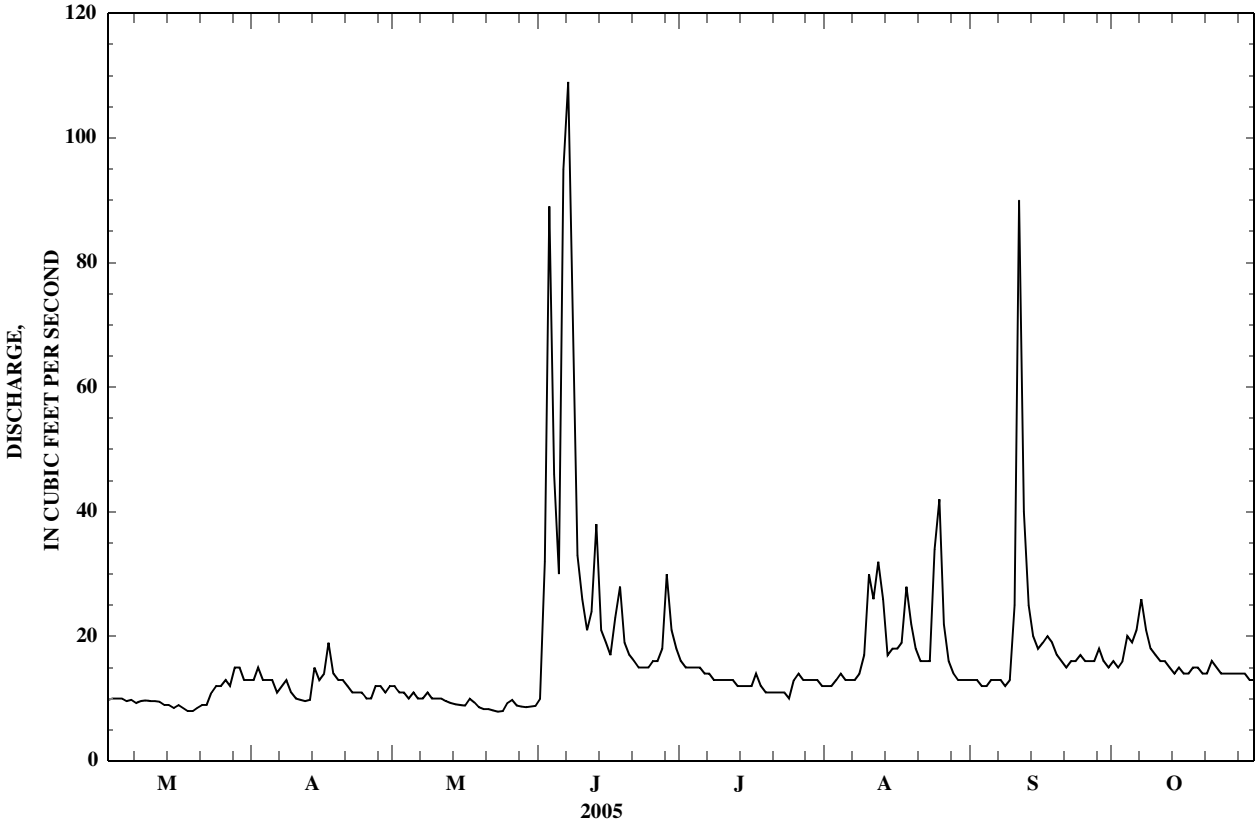
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1911 - 2005*

MEAN	23.4	37.1	33.7	30.1	19.5	16.5	18.2	17.6
MAX	72.1	167	164	147	101	65.5	86.8	55.0
(WY)	(1997)	(1948)	(1967)	(1995)	(1995)	(1951)	(1911)	(1996)
MIN	8.14	9.47	7.14	6.95	4.12	3.30	3.90	4.95
(WY)	(2001)	(2002)	(1941)	(1988)	(1985)	(1940)	(1940)	(1941)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1911 - 2005*	
HIGHEST DAILY MEAN	109	Jun 7	1,320	Apr 22, 1953
LOWEST DAILY MEAN	7.9	May 23	1.7	Sep 17, 1940
MAXIMUM PEAK FLOW	177	Jun 7	a3,090	May 8, 1967
MAXIMUM PEAK STAGE	4.68	Jun 7	b10.50	Mar 19, 1997

*--During periods of operation (May 1911 to July 1912, June to July 1918, May 1919 to current season).
a--Gage height, 7.95 ft, from rating curve extended above 130 ft^3/s, on basis of slope-area measurements at gage heights 7.55 ft and 7.95 ft, at previous site and datum.
b--Backwater from ice, gage height, 9.07 ft, from floodmarks at previous site, which was destroyed.
e--Estimated.

06133500 NORTH FORK MILK RIVER ABOVE ST. MARY CANAL, NEAR BROWNING, MT—Continued



06134000 NORTH MILK RIVER NEAR INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°01'19", long 112°58'16" (NAD 27), in $SW^1/_4NE^1/_4$ sec.11, T.1, R.23 W., fourth meridian, in Alberta, Hydrologic Unit 10050001, on right bank 0.4 mi upstream from highway bridge, 1.6 mi north of international boundary, 2.8 mi east of Whiskey Gap, Alberta, 11 mi southeast of Kimball, Alberta, and at river mile 49.9.

DRAINAGE AREA.--91.8 mi^2. Area at site used Apr. 12, 1930, to Aug. 15, 1962, 97.4 mi^2.

PERIOD OF RECORD.--July 1909 to October 1912 (seasonal records only), January 1913 to October 1922, March 1923 to current season (seasonal records only). Records for November and December 1912, published in WSP 1309, have been found to be unreliable and should not be used. Published as "near Kimball, Alberta" 1913-16. Prior to February 1962, published as North Fork Milk River near international boundary.

REVISED RECORDS.--WSP 1309: 1909-13, 1915(M), 1920(M), 1937(M). WSP 1559: 1948(M). WSP 1729: 1944(M). W 1983: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 4,112.16 ft, Canadian Geodetic Vertical Datum 1928. Prior to May 1913, nonrecording gage at site 2 mi downstream at different elevation. May 1, 1913, to Apr. 11, 1930, water-stage recorder 700 ft downstream at different elevation. Apr. 12, 1930, to Aug. 15, 1962, water-stage recorder 1,500 ft downstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1917, flow increased during irrigation season by water from St. Mary Canal (station number 05018500). Several small diversions for irrigation upstream from station. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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			e11	55	607	671	604	607	632	22		
2			e11	208	607	717	607	611	629	22		
3			e12	331	607	837	604	607	607	23		
4			e12	378	604	636	604	611	547	28		
5			e12	406	607	576	600	611	498	27		
6			e13	434	622	788	600	611	420	29		
7			e13	463	643	840	593	611	329	49		
8			e12	473	653	696	561	611	259	41		
9			e10	484	660	572	501	622	249	29		
10			e12	526	664	540	470	639	285	26		
11			e9.7	533	660	516	466	636	341	24		
12			e10	530	664	533	463	650	208	24		
13			e10	540	660	593	463	643	105	23		
14			e10	572	664	509	477	625	58	22		
15			e9.4	551	667	544	519	614	38	23		
16			e9.0	554	671	579	533	618	35	22		
17			e8.8	569	682	622	533	622	34	22		
18			e8.5	565	671	653	533	629	29	23		
19			e8.8	561	685	618	547	622	25	24		
20			e9.5	558	675	614	586	625	26	23		
21			e9.4	558	675	611	604	625	22	24		
22			e9.2	558	660	597	604	625	21	25		
23			e11	558	650	590	607	622	22	24		
24			e13	554	650	593	597	671	22	23		
25			e14	558	653	604	600	685	22	23		
26			e14	561	646	604	604	636	21	23		
27			e15	569	643	614	597	625	21	23		
28			e16	572	646	759	597	625	22	23		
29			e17	572	650	622	597	629	21	23		
30			e18	590	653	611	600	629	20	23		
31			e23	---	660	---	604	629	---	23		
TOTAL			371.3	14,941	20,159	18,859	17,475	19,426	5,568	783		
MEAN			12.0	498	650	629	564	627	186	25.3		
MAX			23	590	685	840	607	685	632	49		
MIN			8.5	55	604	509	463	607	20	22		
AC-FT			736	29,640	39,990	37,410	34,660	38,530	11,040	1,550		

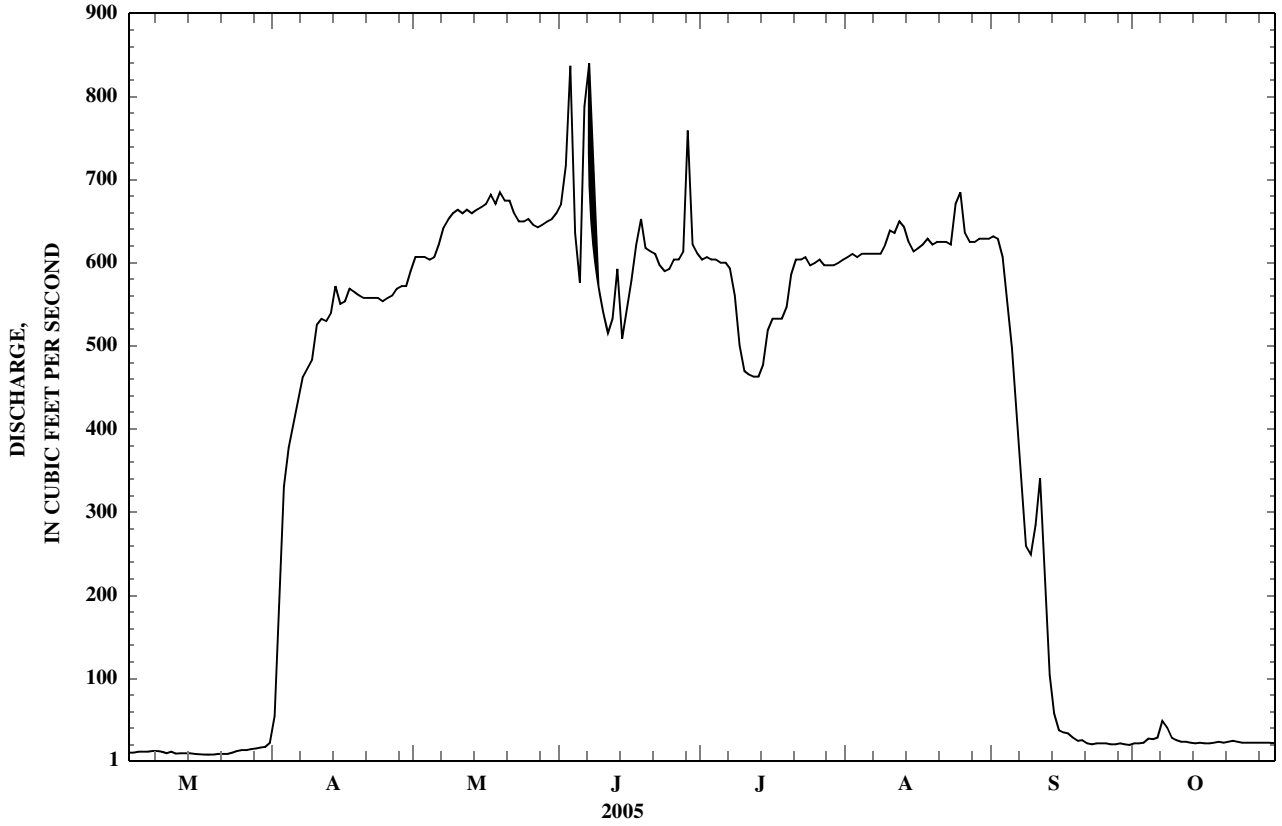
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1917 - 2005

MEAN	65.2	201	426	523	558	530	307	58.1
MAX	402	633	732	745	727	721	702	524
(WY)	(1981)	(1991)	(2001)	(1976)	(1936)	(1969)	(2002)	(1951)
MIN	9.67	23.6	38.6	43.5	84.3	16.0	5.57	6.06
(WY)	(2002)	(1940)	(1918)	(1952)	(2002)	(1982)	(1988)	(1942)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1917 - 2005	
HIGHEST DAILY MEAN	840	Jun 7	2,170	Jun 7, 1995
LOWEST DAILY MEAN	8.5	Mar 18	0.00	Mar 1, 1940
MAXIMUM PEAK FLOW	1,160	Jun 7	a3,670	Jun 6, 1995
MAXIMUM PEAK STAGE	4.08	Jun 7	6.89	Jun 6, 1995

a--From rating curve extended above 1,500 ft^3/s.
e--Estimated.

06134000 NORTH MILK RIVER NEAR INTERNATIONAL BOUNDARY—Continued



06134500 MILK RIVER AT MILK RIVER, ALBERTA
(International gaging station)

LOCATION.--Lat 49°08'37", long 112°04'44" (NAD 27), in NE$^1/_4$ sec.21, T.2, R.16 W., fourth meridian, in Alberta, Hydrologic Unit 10050002, on right bank 5 ft downstream from highway bridge at Milk River, Alberta, 22 mi downstream from North Milk River, and at river mile 613.4.

DRAINAGE AREA.--1,050 mi^2.

PERIOD OF RECORD.--June 1909 to October 1910 (no winter records), April 1911 to current year. Monthly discharge only for June 1909, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1599: 1916, 1927(M), 1947(M). W 1983: Drainage area. W 1984: 1983 (M).

GAGE.--Water-stage recorder. Elevation of gage is 3,402.78 ft, Canadian Geodetic Vertical Datum 1928. Prior to June 17, 1919, nonrecording gages, and June 17, 1919, to Nov. 2, 1921, water-stage recorder at several sites 300 ft upstream at elevation 0.61 ft higher. Nov. 3, 1921, to Aug. 28, 1947, water-stage recorder at site 60 ft upstream at present elevation. Aug. 29, 1947, to Nov. 10, 1976, water-stage recorder located 700 ft downstream on left bank at present elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1917, flow increased during irrigation season by water from St. Mary Canal (station number 05018500). Several diversions for irrigation upstream from station. Environment Canada satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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	31	e27	e23	e11	e56	e53	75	643	653	848	629	625
2	29	e30	e24	e11	e59	e53	84	650	756	780	625	625
3	27	e31	e22	e11	e59	e55	173	650	950	738	625	618
4	25	e31	e20	e11	e44	e54	385	646	1,210	710	618	593
5	23	e32	e18	e11	e30	e61	438	639	1,240	699	614	537
6	23	e32	e16	e12	e22	e51	463	639	1,290	692	614	491
7	23	e32	e16	e12	e33	e50	487	650	1,660	682	622	420
8	21	e31	e17	e11	e33	e68	512	667	2,230	667	625	338
9	21	e30	e17	e11	e34	e77	512	678	1,660	632	625	271
10	21	e28	e18	e9.5	e37	e62	526	682	1,290	576	653	278
11	21	e28	e17	e10	e32	e67	579	685	1,040	537	660	388
12	21	e29	e16	e9.3	e37	e69	614	689	904	530	664	420
13	20	e30	e16	e7.2	e38	63	625	689	883	516	667	399
14	23	e30	e17	e4.6	e41	59	667	685	985	505	650	289
15	31	e29	e17	e3.4	e38	59	667	689	844	523	625	203
16	35	e28	e17	e3.2	e37	55	657	689	812	565	625	148
17	39	e27	e17	e5.4	e38	e49	671	710	862	590	636	116
18	39	e27	e18	e10	e35	e42	682	696	872	586	639	98
19	41	e26	e17	e8.0	e35	e49	682	682	904	576	646	84
20	47	e26	e15	e12	e36	e49	682	696	855	586	632	73
21	49	e27	e14	e35	e37	e53	671	696	802	622	622	66
22	47	e28	e15	e53	e39	e48	664	682	759	636	618	64
23	44	e27	e16	e49	e39	e42	660	664	727	636	622	59
24	41	e25	e14	e44	e42	e53	643	653	710	639	660	55
25	e33	e24	e14	e37	e44	e71	639	653	717	636	738	53
26	e27	e23	e14	e29	e46	e64	643	646	731	643	696	51
27	e26	e23	e15	e34	e47	e56	625	639	759	636	657	50
28	e26	e23	e14	e58	e48	e62	622	639	946	629	657	50
29	e26	e23	e13	e47	---	63	625	632	1,140	622	643	50
30	e26	e24	e13	e48	---	57	629	632	922	618	632	49
31	e26	---	e12	e47	---	61	---	629	---	625	622	---
TOTAL	932	831	512	664.6	1,116	1,775	16,602	20,619	30,113	19,480	19,861	7,561
MEAN	30.1	27.7	16.5	21.4	39.9	57.3	553	665	1,004	628	641	252
MAX	49	32	24	58	59	77	682	710	2,230	848	738	625
MIN	20	23	12	3.2	22	42	75	629	653	505	614	49
AC-FT	1,850	1,650	1,020	1,320	2,210	3,520	32,930	40,900	59,730	38,640	39,390	15,000

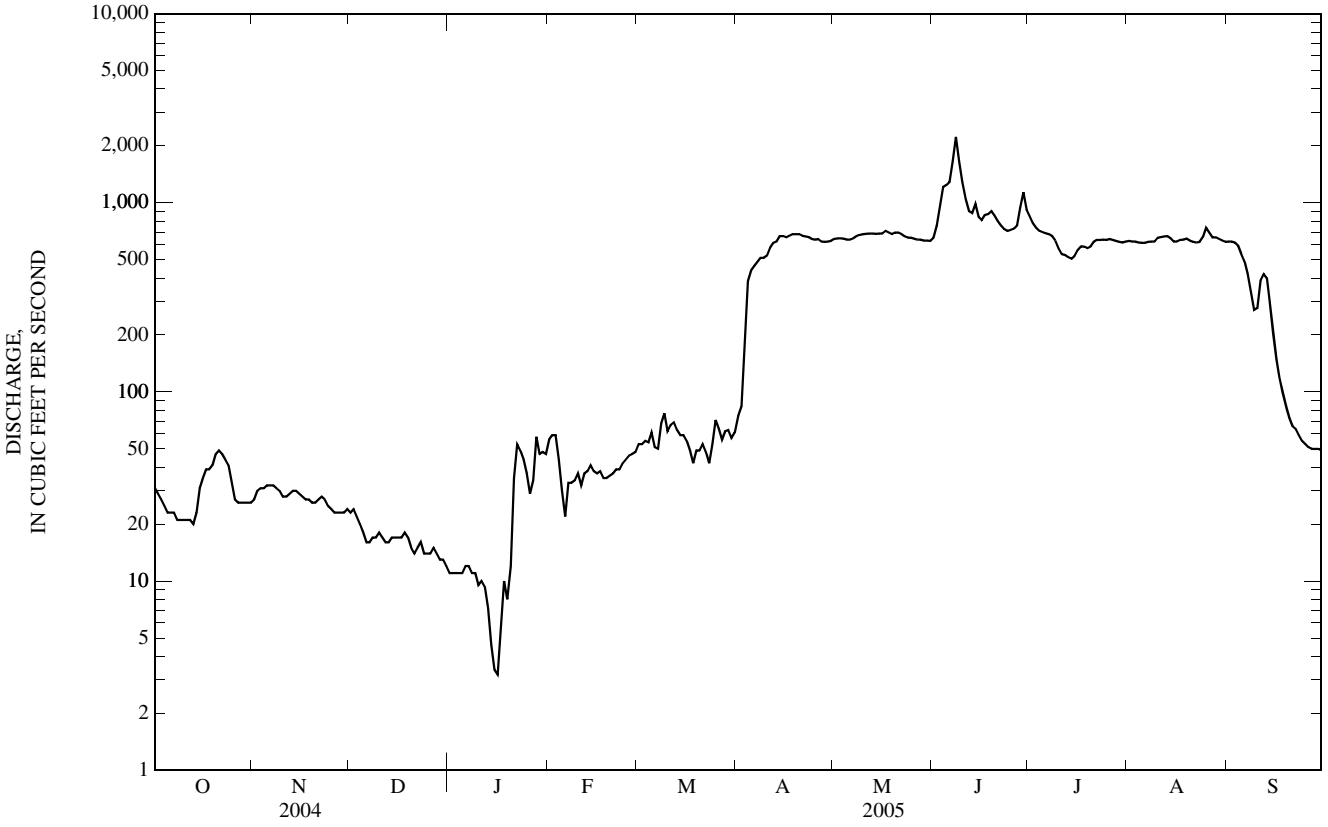
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2005, BY WATER YEAR (WY)*

MEAN	101	56.3	33.7	30.2	60.9	226	497	659	722	615	553	350
MAX	555	216	133	268	616	1,025	1,384	1,179	1,633	965	795	713
(WY)	(1951)	(1952)	(1952)	(1928)	(1986)	(1972)	(1917)	(1967)	(1953)	(1951)	(1976)	(1959)
MIN	7.83	8.74	2.06	0.00	0.00	3.44	94.5	236	162	192	29.2	3.65
(WY)	(1989)	(2002)	(1923)	(1923)	(1922)	(1922)	(1945)	(1918)	(1952)	(2002)	(1982)	(2001)

06134500 MILK RIVER AT MILK RIVER, ALBERTA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1917 - 2005*	
ANNUAL TOTAL	105,752.6		120,066.6			
ANNUAL MEAN	289		329		327	
HIGHEST ANNUAL MEAN					489	1953
LOWEST ANNUAL MEAN					157	1921
HIGHEST DAILY MEAN	833	May 24	2,230	Jun 8	7,840	Jun 11, 2002
LOWEST DAILY MEAN	4.1	Jan 7	3.2	Jan 16	0.00	Jan 19, 1922
ANNUAL SEVEN-DAY MINIMUM	5.2	Jan 4	6.0	Jan 13	0.00	Jan 19, 1922
MAXIMUM PEAK FLOW			2,780	Jun 8	9,850	Feb 25, 1986
MAXIMUM PEAK STAGE			6.14	Jun 8	a12.46	Feb 25, 1986
ANNUAL RUNOFF (AC-FT)	209,800		238,200		236,500	
10 PERCENT EXCEEDS	667		697		739	
50 PERCENT EXCEEDS	104		63		157	
90 PERCENT EXCEEDS	13		17		13	

*--Flow increased during irrigation season by water from St. Mary Canal.
a--From floodmarks, backwater from ice.
e--Estimated.



06134700 VERDIGRIS COULEE NEAR THE MOUTH, NEAR MILK RIVER, ALBERTA
(International gaging station)

LOCATION.--Lat 49°06'39", long 111°45'31" (NAD 27), in NW$^1/_4$ sec.12, T.2, R.14 W., fourth meridian, in Alberta, Hydrologic Unit 10050002, on left bank, 0.6 mi upstream from mouth, 5 mi downstream from culvert on provincial highway 501, and 15 mi east of Milk River, Alberta.

DRAINAGE AREA.--137 mi^2, of which 130 mi^2 is probably noncontributing.

PERIOD OF RECORD.--May 1985 to current season (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 3,040 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Nearly all flow is the result of interbasin diversion from St. Mary River into Weston Lake 25 miles upstream. Environment Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

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			e0.04	1.3	0.00	0.00	0.07	0.00	0.00	0.00		
2			e0.04	0.28	0.00	0.00	0.04	0.00	0.00	0.00		
3			e0.04	0.18	0.00	0.88	0.00	0.00	0.00	0.00		
4			e0.07	0.11	0.00	0.28	0.00	0.00	0.00	0.00		
5			e0.11	0.11	0.00	0.07	0.00	0.00	0.00	0.00		
6			e0.11	0.07	0.00	4.2	0.00	0.00	0.00	0.00		
7			e0.11	0.07	0.00	5.5	0.00	0.00	0.00	0.00		
8			e0.11	0.07	0.00	3.5	0.00	0.00	0.00	0.00		
9			e0.11	0.07	0.00	2.8	0.00	0.00	0.00	0.00		
10			e0.11	0.04	0.00	1.3	0.00	0.00	0.00	0.00		
11			e0.11	0.04	0.00	0.46	0.00	0.00	7.2	0.00		
12			e0.11	0.04	0.00	1.4	0.00	0.00	1.2	0.00		
13			e0.14	0.04	0.00	3.0	0.00	0.00	0.46	0.00		
14			e0.11	0.04	0.00	0.49	0.00	0.00	0.18	0.00		
15			e0.07	0.07	0.00	0.21	0.00	0.00	0.11	0.00		
16			e0.00	0.07	0.00	0.11	0.00	0.00	0.07	0.00		
17			e0.00	0.07	0.00	0.18	0.00	0.00	0.04	0.00		
18			e0.00	0.04	0.00	0.88	0.00	0.00	0.04	0.00		
19			e0.00	0.04	0.00	0.11	0.00	0.00	0.04	0.00		
20			e0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00		
21			e0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00		
22			e0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00		
23			e0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00		
24			e0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25			e0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26			e0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27			e0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28			e0.21	0.00	0.00	1.6	0.00	0.00	0.00	0.00		
29			0.25	0.00	0.00	0.39	0.00	0.00	0.00	0.00		
30			0.14	0.00	0.00	0.11	0.00	0.00	0.00	0.00		
31			1.0	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			3.39	2.91	0.00	27.59	0.11	0.00	9.34	0.00		
MEAN			0.11	0.10	0.00	0.92	0.00	0.00	0.31	0.00		
MAX			1.0	1.3	0.00	5.5	0.07	0.00	7.2	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			6.7	5.8	0.00	55	0.2	0.00	19	0.00		

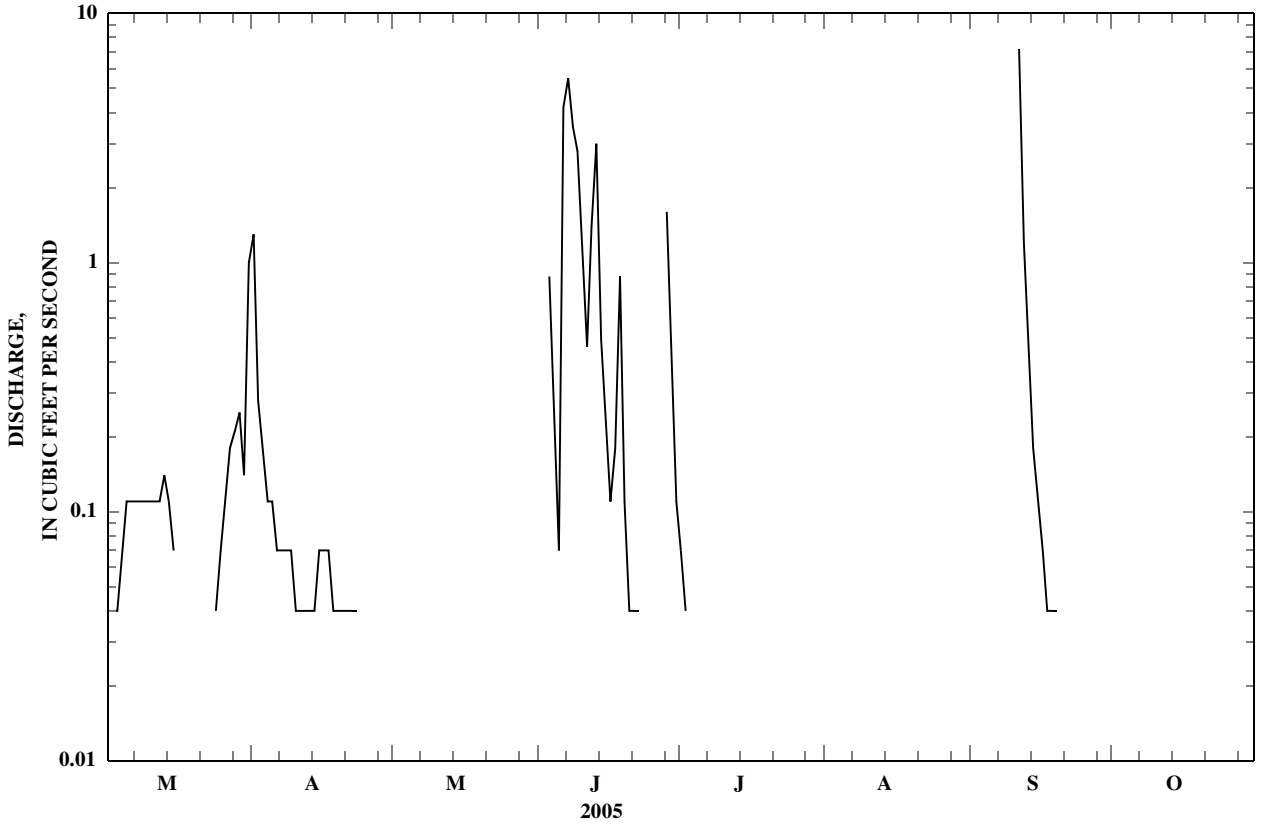
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1985 - 2005

MEAN	5.26	5.45	5.96	6.80	4.68	5.39	6.24	5.66
MAX	43.9	29.6	20.8	18.1	16.4	24.1	25.5	26.2
(WY)	(1996)	(1996)	(1994)	(1989)	(1991)	(1993)	(1985)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2001)	(2004)	(1998)	(2000)	(1999)	(1998)	(1999)	(2000)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1985 - 2005	
HIGHEST DAILY MEAN	7.2	Sep 11	264	Mar 11, 1996
LOWEST DAILY MEAN	0.00	many days	0.00	Nov 19, 1985
MAXIMUM PEAK FLOW	16.9	Sep 11	a280	Mar 11, 1996
MAXIMUM PEAK STAGE	4.04	Sep 11	6.51	Mar 2, 1994

a--About, gage height not determined (backwater from ice).
e--Estimated.

06134700 VERDIGRIS COULEE NEAR THE MOUTH, NEAR MILK RIVER, ALBERTA—Continued



06135000 MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 48°58'29", long 110°25'18" (NAD 27), in NW$^1/_4$SW$^1/_4$SE$^1/_4$ sec.9, T.37 N., R.9 E., Hill County, Hydrologic Unit 10050002, on left bank 1.6 mi south of international boundary, 1.7 mi upstream from Lost River, 10 mi northwest of Simpson, 35.5 mi north of Rudyard, and at river mile 479.6.

DRAINAGE AREA.--2,506 mi^2.

PERIOD OF RECORD.--August 1909 to current season (seasonal records only). A few winter records were collected and are on file in the USGS Water Science Center located in Helena, Montana. Monthly discharge only for April 1912, published in WSP 1309.

REVISED RECORDS.--WSP 1086: 1927, 1935. WSP 1559: 1920(M), 1922(M), 1926, 1928(M), 1929, 1930(M), 1932(M). WSP 1729: 1912-13, 1921-22, 1929(M). WRD -94-1(M). W 1983: Drainage area. WRD -98-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,660 ft (NGVD 29). Prior to Mar. 1, 1998, water-stage recorder or nonrecording gages at several sites within 15 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1917, flow increased during irrigation season by water from St. Mary Canal (station number 05018500). Many diversions for irrigation upstream from station. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

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			e46	62	639	553	982	515	647	71		
2			e55	59	632	545	695	516	662	70		
3			e60	66	625	630	671	525	649	71		
4			e70	63	628	817	624	500	647	74		
5			e100	57	647	890	661	493	652	77		
6			e110	64	641	1,400	676	485	675	77		
7			e95	183	610	1,530	659	480	612	73		
8			86	419	604	1,760	631	488	549	73		
9			81	448	599	1,980	643	510	508	72		
10			85	470	572	2,420	657	535	450	74		
11			74	495	594	1,730	666	578	428	82		
12			87	495	618	1,450	600	577	426	82		
13			95	500	623	1,360	518	615	394	87		
14			96	542	619	1,340	463	587	424	105		
15			84	594	612	1,020	447	570	464	102		
16			90	586	632	1,090	449	578	458	e93		
17			81	615	650	995	436	564	368	e88		
18			e75	613	652	1,000	426	565	279	e84		
19			e65	598	646	962	474	593	220	e78		
20			e65	623	647	919	494	608	181	e76		
21			e70	651	611	966	489	604	155	75		
22			e75	645	602	993	465	611	136	73		
23			e70	623	614	924	473	602	124	73		
24			e65	606	613	814	521	624	113	74		
25			e60	605	602	743	544	655	103	68		
26			e60	591	586	704	544	643	94	70		
27			77	584	580	685	547	681	87	80		
28			91	623	567	798	539	751	82	110		
29			76	643	562	729	545	684	72	101		
30			59	652	564	804	540	648	69	91		
31			63	---	558	---	534	648	---	82		
TOTAL			2,366	13,775	18,949	32,551	17,613	18,033	10,728	2,506		
MEAN			76.3	459	611	1,085	568	582	358	80.8		
MAX			110	652	652	2,420	982	751	675	110		
MIN			46	57	558	545	426	480	69	68		
AC-FT			4,690	27,320	37,590	64,560	34,940	35,770	21,280	4,970		

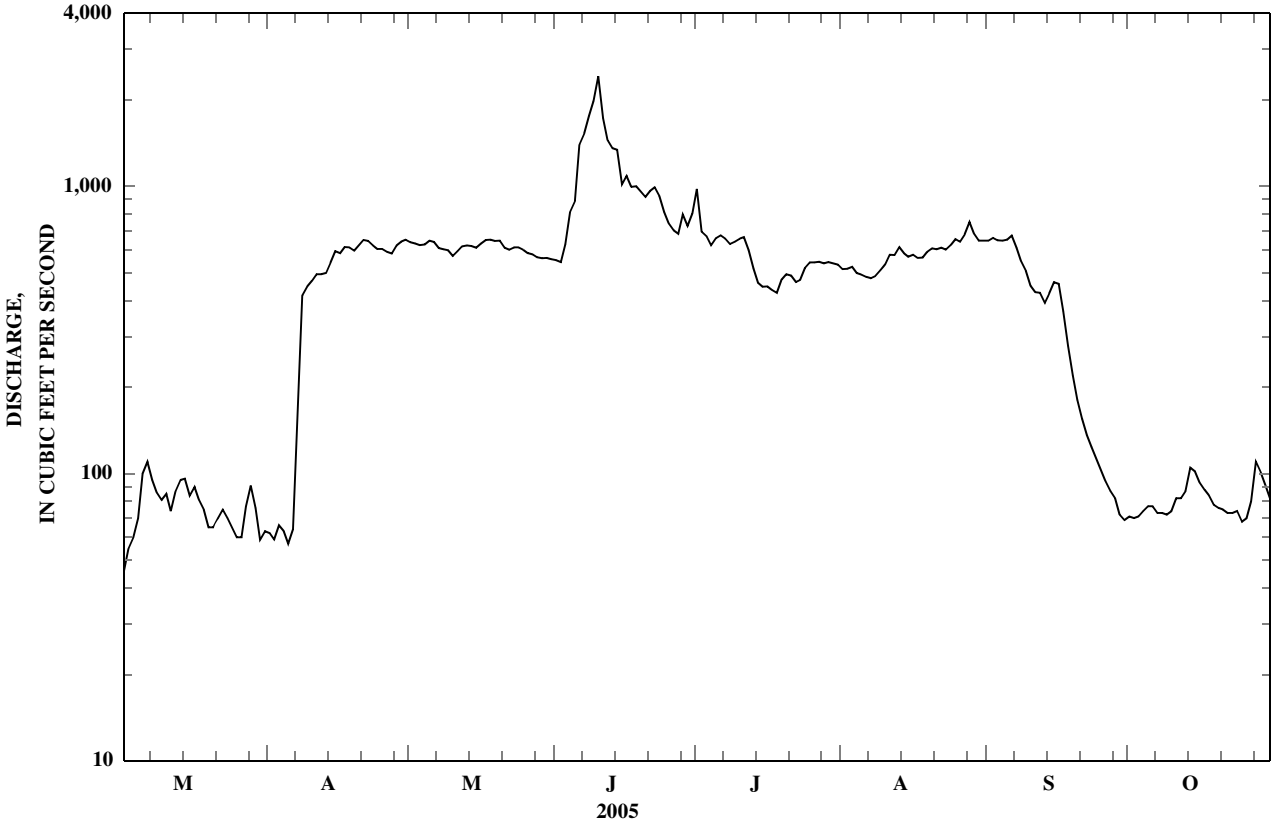
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1917 - 2005*

MEAN	368	563	710	783	616	543	382	126
MAX	1,522	1,691	1,943	2,561	1,046	886	740	566
(WY)	(1978)	(1965)	(1927)	(2002)	(1951)	(1927)	(1972)	(1990)
MIN	9.88	80.1	257	200	262	77.4	2.21	0.16
(WY)	(2002)	(1945)	(1918)	(1952)	(1977)	(1982)	(2001)	(2002)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1917 - 2005*	
HIGHEST DAILY MEAN	2,420	Jun 10	12,400	Jun 12, 2002
LOWEST DAILY MEAN	46	Mar 1	0.00	Feb 1, 1922
MAXIMUM PEAK FLOW	2,930	Jun 10	a14,400	Jun 12, 2002
MAXIMUM PEAK STAGE	5.19	Jun 10	b15.03	Mar 13, 1996

*--Flow increased during irrigation season by water from St. Mary Canal.
a--Gage height, 10.78 ft, from floodmarks.
b--Backwater from ice.
e--Estimated.

06135000 MILK RIVER AT EASTERN CROSSING OF INTERNATIONAL BOUNDARY—Continued



06137400 BIG SANDY CREEK AT RESERVATION BOUNDARY, NEAR ROCKY BOY, MT

LOCATION.--Lat 48°10'27", long 109°49'23" (NAD 27), in $SW^1/_4NW^1/_4NE^1/_4$ sec.20, T.28 N., R.15 E., Chouteau County, Hydrologic Unit 10050005, on left bank 0.9 mi downstream from Muddy Creek, 6.0 mi south of Rocky Boy Agency, and at river mile 90.6.

DRAINAGE AREA.--24.7 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,830 ft (NGVD 29). Prior to Sept. 6, 2001, water-stage recorder at site 0.1 mi downstream at different elevation.

REMARKS.--Records good except those for flows over 15 ft^3/s, which are fair, and those for estimated daily discharges, which are poor. No known regulation or diversions upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of water temperatures 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	4.4	4.2	e4.0	e2.5	e3.0	e3.0	6.6	6.6	6.0	29	9.3	6.9
2	4.4	4.2	e3.0	e2.0	e3.0	3.3	11	6.6	19	28	9.0	6.4
3	4.5	4.5	4.2	e2.0	e3.0	e3.5	10	7.2	59	26	9.1	6.0
4	4.6	4.2	4.2	e2.0	e2.5	e3.5	12	7.4	47	25	8.8	5.9
5	4.5	4.2	4.2	e2.0	e2.5	e3.5	10	7.5	41	24	8.3	5.6
6	4.5	4.2	e3.0	e2.0	e2.5	2.8	8.4	7.5	43	23	7.9	5.7
7	4.3	4.2	e3.0	e2.5	e2.5	3.1	11	7.7	40	22	7.7	5.5
8	4.4	4.2	e3.5	e2.5	e3.0	3.0	12	7.2	38	21	7.5	5.6
9	4.4	4.2	e3.5	e2.5	2.8	e3.5	12	6.9	38	21	7.8	5.5
10	4.2	4.0	e3.5	e2.5	2.8	e3.5	8.8	6.6	41	21	7.9	5.8
11	4.3	3.9	e4.0	e2.5	3.1	e3.5	8.7	6.5	40	19	8.7	6.1
12	4.3	3.7	e3.5	e2.5	3.0	e3.5	9.1	6.5	40	18	9.5	6.0
13	4.3	3.7	e3.0	e2.0	3.0	3.3	11	6.9	48	17	9.9	5.9
14	4.5	3.5	e3.0	e2.0	3.3	3.4	13	6.5	44	16	8.4	5.7
15	5.4	3.9	e3.5	e2.0	e3.0	e3.5	9.3	6.4	44	16	7.8	5.6
16	5.9	4.0	e3.5	e2.0	e2.5	3.3	11	6.5	43	16	7.5	5.6
17	5.9	4.0	3.6	e2.5	e2.5	3.2	13	11	44	16	7.3	6.2
18	5.7	3.8	3.6	e3.0	e2.5	e3.5	12	9.2	43	15	7.6	6.3
19	5.7	3.8	3.6	e6.0	e2.5	3.3	10	7.6	41	14	7.7	5.9
20	5.8	3.5	e3.0	e5.0	e2.5	3.6	9.7	7.2	40	14	7.1	5.6
21	5.8	e3.0	e2.5	e4.0	e2.5	3.3	9.2	9.3	39	13	6.5	5.4
22	5.5	e3.5	e2.0	e3.0	e2.5	3.3	8.9	7.6	38	13	6.3	5.3
23	5.3	e3.0	e2.0	e3.5	e3.0	3.8	8.7	7.4	37	12	6.3	5.5
24	5.1	e3.5	e2.5	e3.5	3.1	4.2	8.6	7.1	34	12	13	6.0
25	4.9	e3.5	e2.5	e3.5	e3.0	5.9	8.1	7.5	33	13	11	6.0
26	4.8	e3.0	e2.5	e3.0	e3.0	5.6	7.7	6.9	33	12	7.8	5.7
27	4.7	e3.0	e2.5	e3.0	e3.0	4.3	7.8	6.5	32	11	7.1	5.4
28	4.6	e3.0	e3.0	e3.0	e3.0	7.9	7.3	6.0	31	11	6.6	5.5
29	4.5	e3.5	e3.0	e2.5	---	9.3	6.8	6.0	39	10	6.2	5.3
30	4.4	e4.0	e3.0	e3.0	---	6.2	6.4	5.9	33	9.7	8.4	5.5
31	4.4	---	e2.5	e3.0	---	5.7	---	6.0	---	9.6	8.4	---
TOTAL	150.0	112.9	98.4	87.0	78.6	126.3	288.1	221.7	1,148.0	527.3	252.4	173.4
MEAN	4.84	3.76	3.17	2.81	2.81	4.07	9.60	7.15	38.3	17.0	8.14	5.78
MAX	5.9	4.5	4.2	6.0	3.3	9.3	13	11	59	29	13	6.9
MIN	4.2	3.0	2.0	2.0	2.5	2.8	6.4	5.9	6.0	9.6	6.2	5.3
AC-FT	298	224	195	173	156	251	571	440	2,280	1,050	501	344

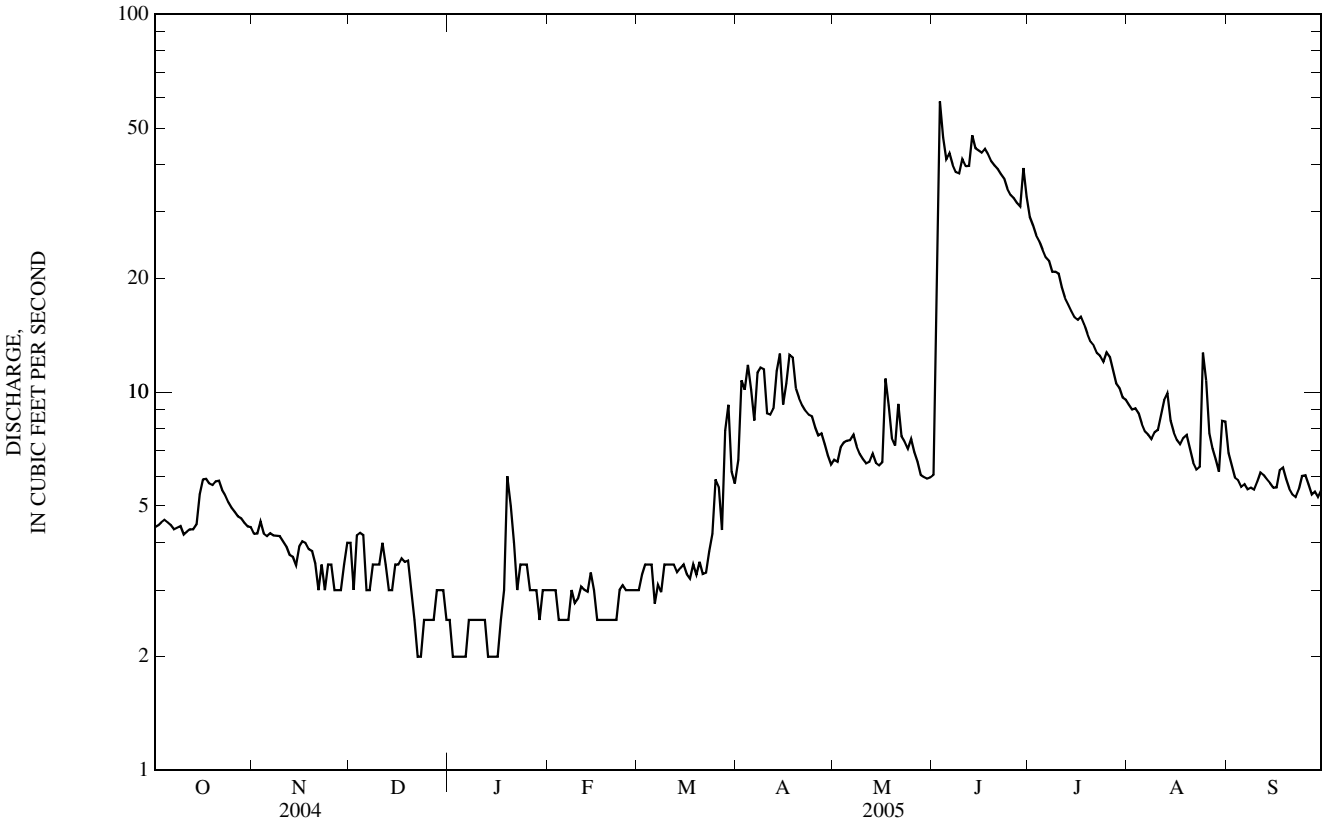
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	5.17	4.54	4.03	3.43	4.15	6.33	10.4	13.2	17.7	12.9	6.45	5.28
MAX	14.0	11.1	11.8	9.44	21.7	28.0	32.6	68.3	50.0	53.7	29.3	18.8
(WY)	(1986)	(1994)	(1996)	(1996)	(1996)	(1996)	(1994)	(1986)	(1982)	(1993)	(1993)	(1993)
MIN	0.66	0.92	0.81	0.71	0.76	0.90	3.67	1.84	1.42	1.01	0.50	0.65
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1988)	(1988)	(2001)	(1988)	(2001)

06137400 BIG SANDY CREEK AT RESERVATION BOUNDARY, NEAR ROCKY BOY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	2,459.3		3,264.1			
ANNUAL MEAN	6.72		8.94		7.66	
HIGHEST ANNUAL MEAN					18.1	1986
LOWEST ANNUAL MEAN					1.79	2001
HIGHEST DAILY MEAN	40	Jun 12	59	Jun 3	298	Jun 27, 1998
LOWEST DAILY MEAN	1.4	Jan 5	2.0	Dec 22	0.42	Aug 10, 1988
ANNUAL SEVEN-DAY MINIMUM	1.5	Jan 1	2.1	Dec 31	0.45	Aug 9, 1988
MAXIMUM PEAK FLOW			105	Jun 3	a510	Jun 27, 1998
MAXIMUM PEAK STAGE			2.47	Jun 3	6.07	Jun 27, 1998
INSTANTANEOUS LOW FLOW					b0.03	Jun 26, 1992
ANNUAL RUNOFF (AC-FT)	4,880		6,470		5,550	
10 PERCENT EXCEEDS	17		21		16	
50 PERCENT EXCEEDS	4.5		5.6		4.5	
90 PERCENT EXCEEDS	2.0		2.5		1.5	

a--On basis of slope-area measurement of peak flow.
b--Gage height, 2.32 ft, site and datum then in use.
e--Estimated.



06139500 BIG SANDY CREEK NEAR HAVRE, MT

LOCATION.--Lat 48°31'36", long 109°50'27" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.18, T.32 N., R.15 E., Hill County, Hydrologic Unit 10050005, on right bank, 6 mi upstream from mouth, 7.7 mi west southwest of Havre post office, and 22 mi downstream from Sage Creek.

DRAINAGE AREA.--1,805 mi^2.

PERIOD OF RECORD.--February 1946 to November 1953 (monthly discharge only for February 1946, published in WSP 1309 as "Big Sandy Creek near Assinniboine"), annual maximum, water years 1955-67 (published as "Big Sandy Creek near Assinniboine"), and May 1984 to current year (seasonal records only).

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,510 ft (NGVD 29).

REMARKS.--Records fair. Diversions for irrigation of about 1,000 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1978, reached a stage of 15.15 ft, from floodmarks, discharge, about 6,000 ft^3/s.

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				24	9.7	5.0	60	3.5	0.95			
2				18	10	6.0	70	2.9	0.80			
3				16	10	8.9	68	2.1	0.80			
4				15	10	10	59	1.9	0.75			
5				13	9.9	7.0	54	1.6	0.67			
6				13	9.8	34	51	1.2	0.57			
7				13	9.9	37	49	0.99	0.49			
8				12	9.7	28	48	0.87	0.47			
9				12	9.5	32	46	0.71	0.50			
10				13	9.7	31	41	0.66	0.54			
11				11	9.6	27	36	0.63	0.60			
12				14	9.7	27	34	0.66	0.54			
13				19	9.5	52	31	0.63	0.64			
14				16	9.4	59	29	0.62	0.59			
15				14	9.4	81	26	0.59	0.59			
16				13	9.0	109	22	0.51	0.60			
17				12	10	81	17	0.51	0.59			
18				13	9.8	78	16	0.54	0.57			
19				14	9.4	90	14	0.40	0.55			
20				12	9.3	142	9.1	0.39	0.59			
21				12	9.7	113	7.6	0.42	0.56			
22				11	9.5	78	5.9	0.52	0.55			
23				11	9.0	74	4.4	0.60	0.57			
24				11	9.0	70	3.9	1.4	0.61			
25				11	9.2	67	3.4	2.1	0.50			
26				10	8.0	63	2.6	2.1	0.65			
27				10	6.5	61	2.8	2.1	0.61			
28				9.9	5.8	58	2.1	1.7	0.65			
29				9.8	6.4	59	1.7	1.4	0.60			
30				9.7	5.6	58	2.8	1.3	0.55			
31				---	5.0	---	3.6	1.2	---			
TOTAL				392.4	277.0	1,645.9	820.9	36.75	18.25			
MEAN				13.1	8.94	54.9	26.5	1.19	0.61			
MAX				24	10	142	70	3.5	0.95			
MIN				9.7	5.0	5.0	1.7	0.39	0.47			
AC-FT				778	549	3,260	1,630	73	36			

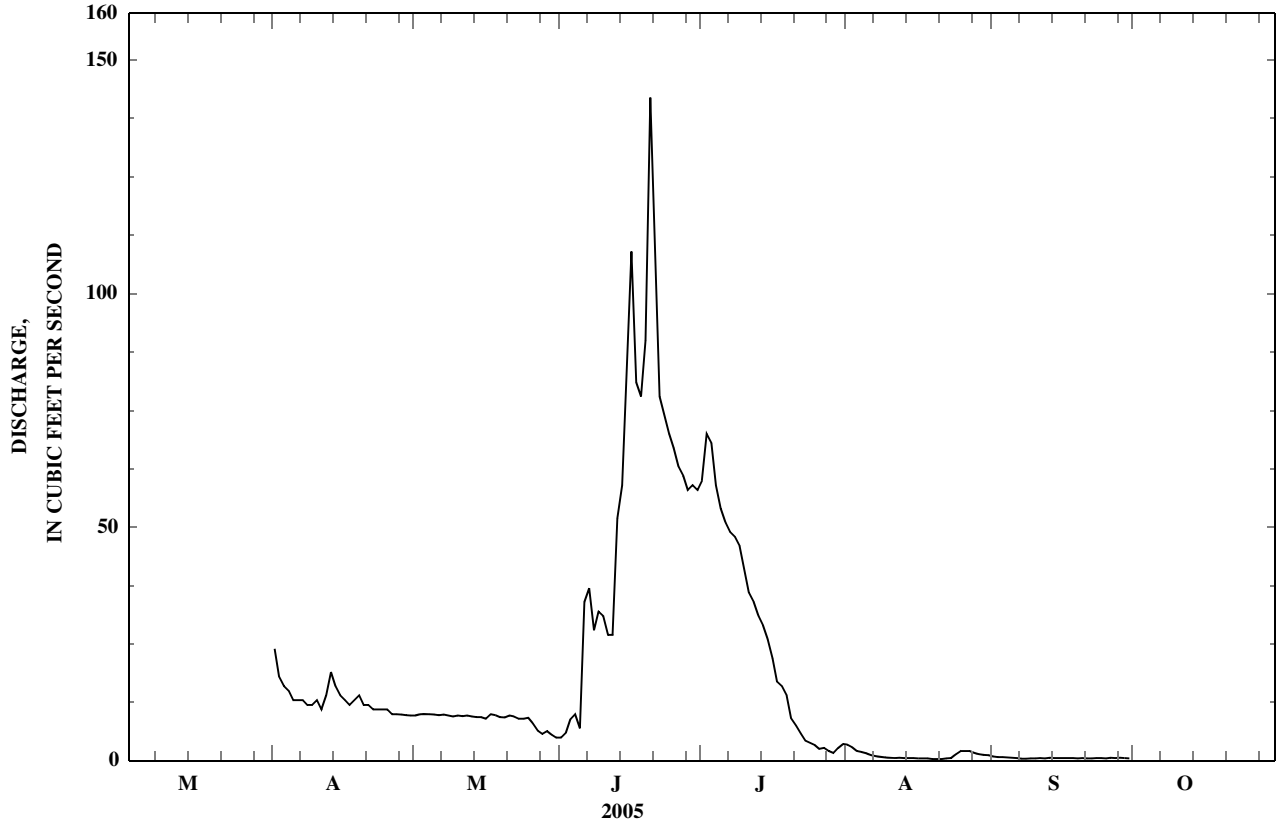
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1967 AND SEASONS 1984-2005*

MEAN	0.48	6.68	61.3	58.8	14.0	27.1	18.0	5.29	4.05	7.96	0.04	0.02
MAX	3.39	19.5	343	1,218	108	222	137	85.9	54.4	54.5	0.31	0.14
(WY)	(1947)	(1947)	(1947)	(1952)	(1986)	(1953)	(1993)	(1993)	(1993)	(1987)	(1953)	(1953)
MIN	0.00	0.00	0.63	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1948)	(1948)	(1949)	(2002)	(1949)	(1949)	(1946)	(1946)	(1946)	(1947)	(1947)	(1947)

SUMMARY STATISTICS	FOR THE 2005 SEASON		SEASONS 1946 - 2005*	
HIGHEST DAILY MEAN	142	Jun 20	5,100	Apr 3, 1952
LOWEST DAILY MEAN	0.39	Aug 20	0.00	many days
MAXIMUM PEAK FLOW	160	Jun 20	5,570	Apr 3, 1952
MAXIMUM PEAK STAGE	5.06	Jun 20	a14.70	Apr 3, 1952

*--During periods of operation.
a--From floodmarks.
e--Estimated.

06139500 BIG SANDY CREEK NEAR HAVRE, MT—Continued



06140500 MILK RIVER AT HAVRE, MT

LOCATION.--Lat 48°33'50", long 109°41'42" (NAD 27), in $SE^1/_4$ $NE^1/_4$ $NE^1/_4$ sec.6, T.32 N., R.16 E., Hill County, Hydrologic Unit 10050004, on left bank, 1.25 mi upstream from Bullhook Creek and 7th Avenue East highway bridge in Havre, 8.2 mi downstream from Big Sandy Creek, 15.8 mi downstream from Fresno Dam, and at river mile 419.2.

DRAINAGE AREA.--5,785 mi^2, of which 670 mi^2 is probably noncontributing.

PERIOD OF RECORD.--May to November 1898, April 1899 to November 1922, March, April 1923, March, April 1952 (gage heights only, in WSP 1260-B), June 1953 (in WSP 1320-B), September 1954 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1899-1900, 1902-4, 1907-8, 1909(M), 1912, 1917(M), 1920(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,465.24 ft (NGVD 29). Prior to Nov. 4, 1902, nonrecording gage at site 0.75 mi downstream at different elevation. Nov. 4, 1902, to Aug. 6, 1980, nonrecording gages 1.25 mi downstream on 7th Avenue East highway bridges, all at elevations then in use.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 6,000 acres upstream from station. Since 1917, flow increased during irrigation season by water from St. Mary Canal (station number 05018500). Since 1939, flow regulated by Fresno Reservoir (station number 06136500). 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	87	62	e50	e50	e70	e60	78	202	862	350	1,080	688
2	88	63	e50	e50	e70	e60	76	205	794	419	1,080	661
3	86	63	e60	e50	e70	e60	74	206	793	454	1,120	648
4	87	64	e60	e50	e60	e60	76	236	769	453	1,210	645
5	87	65	e50	e50	e60	62	71	283	733	486	1,200	631
6	85	63	e50	e50	e50	63	66	350	774	522	1,190	623
7	83	64	e50	e50	e50	61	63	361	740	550	1,190	560
8	82	65	e50	e50	e50	64	64	357	594	553	1,190	548
9	83	64	e60	e50	e50	62	76	359	527	688	1,180	551
10	81	64	e60	e50	e60	60	80	367	409	683	1,180	547
11	81	64	e60	e50	e60	60	73	413	242	672	1,110	545
12	82	64	e50	e50	e60	59	67	419	203	657	1,070	545
13	70	e60	e50	e50	e60	58	72	431	235	709	1,020	486
14	64	e50	e50	e50	e50	59	78	561	210	781	1,000	386
15	64	e60	e60	e50	e50	59	75	731	210	994	1,000	273
16	65	e60	e60	e50	e50	60	127	777	234	1,080	1,010	129
17	67	e60	e60	e50	e60	61	157	776	253	1,090	1,010	105
18	67	e60	e60	e60	e60	54	157	701	240	1,070	997	104
19	66	e60	e60	e80	e50	64	156	698	232	1,060	961	97
20	65	e60	e60	e90	e50	58	192	775	249	1,050	919	93
21	66	e60	e60	e80	e50	62	212	908	257	1,040	880	94
22	66	e60	e50	e70	e60	61	203	924	302	1,040	861	93
23	64	e60	e50	e70	e60	61	191	921	312	1,090	867	93
24	63	e60	e60	e90	e60	59	192	920	328	1,080	805	57
25	63	e60	e60	e80	e60	58	191	923	332	1,080	785	47
26	63	e50	e50	e70	e60	62	190	919	329	1,090	747	43
27	64	e50	e50	e70	e60	59	192	877	329	1,180	706	43
28	64	e50	e60	e70	e60	60	199	876	339	1,170	698	43
29	63	e50	e60	e70	---	59	200	875	342	1,120	732	42
30	64	e50	e50	e70	---	61	199	874	348	1,070	779	41
31	63	---	e50	e70	---	63	---	874	---	1,080	771	---
TOTAL	2,243	1,785	1,710	1,890	1,610	1,869	3,847	19,099	12,521	26,361	30,348	9,461
MEAN	72.4	59.5	55.2	61.0	57.5	60.3	128	616	417	850	979	315
MAX	88	65	60	90	70	64	212	924	862	1,180	1,210	688
MIN	63	50	50	50	50	54	63	202	203	350	698	41
AC-FT	4,450	3,540	3,390	3,750	3,190	3,710	7,630	37,880	24,840	52,290	60,200	18,770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2005, BY WATER YEAR (WY)*

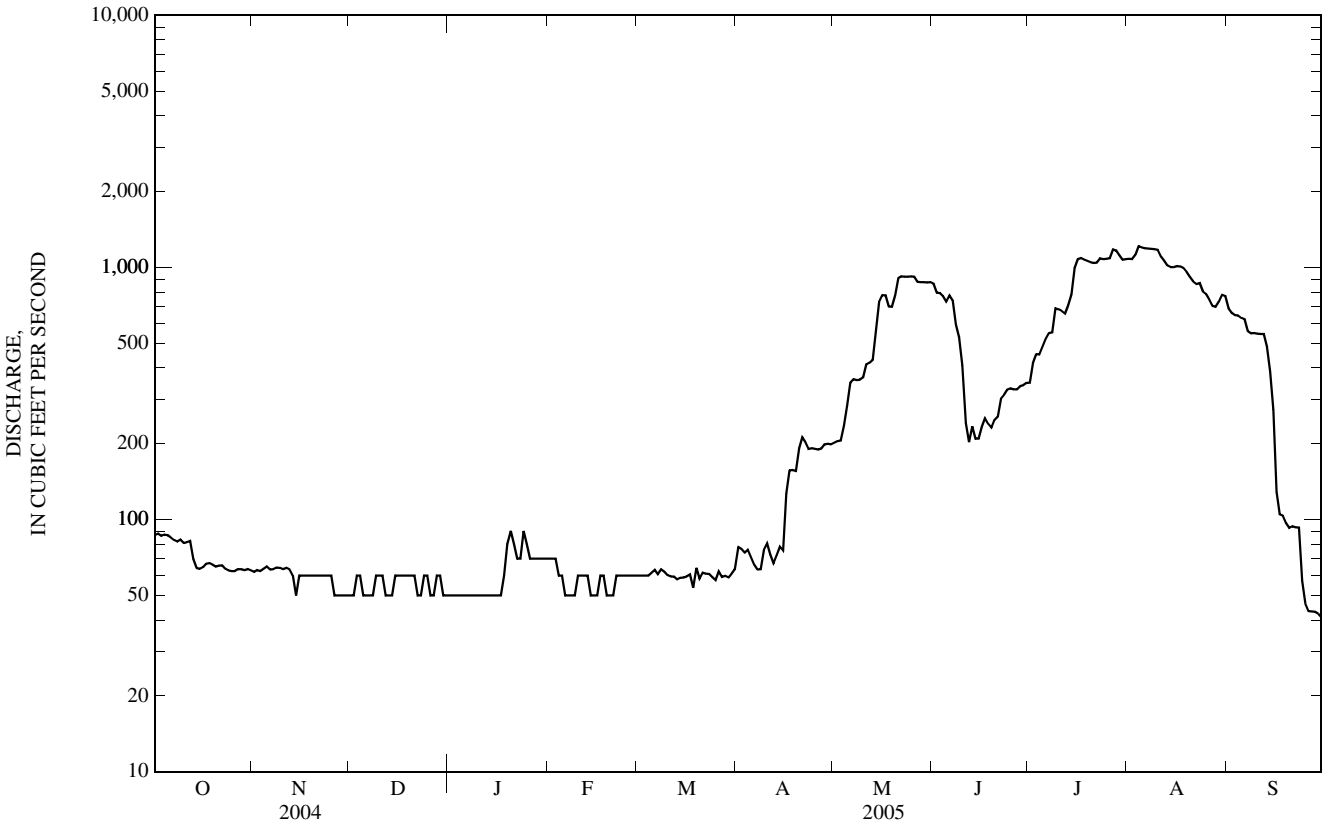
MEAN	144	75.5	53.1	56.9	89.6	312	509	804	814	773	571	323
MAX	628	325	160	780	1,400	2,106	2,700	2,191	2,188	2,045	1,303	956
(WY)	(1994)	(1976)	(1900)	(1918)	(1916)	(1918)	(1899)	(1967)	(1908)	(1902)	(1978)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	5.00	25.0	61.4	35.2	15.3	0.00	0.00
(WY)	(1906)	(1906)	(1906)	(1906)	(1922)	(1919)	(1983)	(1905)	(1905)	(1910)	(1910)	(1905)

06140500 MILK RIVER AT HAVRE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1898 - 2005*	
ANNUAL TOTAL	98,872		112,744			
ANNUAL MEAN	270		309		378	
HIGHEST ANNUAL MEAN					727	1965
LOWEST ANNUAL MEAN					39.2	1905
HIGHEST DAILY MEAN	1,240	May 7	1,210	Aug 4	a16,000	Apr 12, 1899
LOWEST DAILY MEAN	40	Nov 3	41	Sep 30	b0.00	Jul 11, 1898
ANNUAL SEVEN-DAY MINIMUM	40	Feb 24	45	Sep 24	0.00	Aug 15, 1905
MAXIMUM PEAK FLOW			1,260	Aug 4	c20,000	Apr 12, 1899
MAXIMUM PEAK STAGE			4.78	Aug 4	d19.30	Apr 12, 1899
ANNUAL RUNOFF (AC-FT)	196,100		223,600		274,000	
10 PERCENT EXCEEDS	783		939		1,040	
50 PERCENT EXCEEDS	77		76		130	
90 PERCENT EXCEEDS	50		50		28	

SUMMARY STATISTICS	WATER YEARS 1900 - 1916**		WATER YEARS 1917 - 2005***	
ANNUAL MEAN	273.7		409	
HIGHEST ANNUAL MEAN	517	1916	727	1965
LOWEST ANNUAL MEAN	39.2	1905	160	1919
HIGHEST DAILY MEAN	9,600	Jun 9, 1908	9,150	Mar 20, 1918
LOWEST DAILY MEAN	a0.00	Aug 16, 1904	0.00	Jan 1, 1922
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 15, 1905	0.00	Jan 1, 1922
MAXIMUM PEAK FLOW	11,000	Jun 9, 1908	f11,400	Apr 3, 1952
MAXIMUM PEAK STAGE	16.5	Jun 9, 1908	18.60	Apr 3, 1952
ANNUAL RUNOFF (AC-FT)	198,300		296,500	
10 PERCENT EXCEEDS	640		1,080	
50 PERCENT EXCEEDS	110		160	
90 PERCENT EXCEEDS	5.0		30	

*--During periods of operation (May 1898 to November 1898, April 1898 to November 1922, March 1923 to April 1923, September 1954 to current year).
**--Prior to operation of St. Mary Canal.
***--Post operation of St. Mary Canal.
a--Observed.
b--Observed, no flow at times in several years.
c--Observed from rating curve extended above 5,200 ft^3/s.
d--Site and datum then in use, from floomarks.
e--Estimated.
f--Observed, about.



06142400 CLEAR CREEK NEAR CHINOOK, MT

LOCATION.--Lat 48°34'44", long 109°23'26" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.33, T.33 N., R.18 E., Blaine County, Hydrologic Unit 10050004, on right bank, 7 mi west of Chinook, and at river mile 2.5.

DRAINAGE AREA.--135 mi^2.

PERIOD OF RECORD.--June 1984 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 2,470 ft (NGVD 29).

REMARKS.--Records good. Diversions for irrigation of about 2,000 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Several unpublished observations of water temperatures 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				2.7	9.7	1.0	20	0.00	0.00			
2				2.3	10	1.8	17	0.00	0.00			
3				1.8	9.9	5.8	14	0.00	0.00			
4				1.6	7.1	11	12	0.00	0.00			
5				1.4	5.8	15	11	0.00	0.00			
6				1.2	5.2	23	10	0.00	0.00			
7				1.3	4.9	30	9.1	0.00	0.00			
8				1.2	3.9	26	8.1	0.00	0.00			
9				2.7	3.6	24	5.8	0.00	0.00			
10				10	2.8	30	5.1	0.02	0.00			
11				13	2.6	26	4.4	0.04	0.00			
12				9.9	2.8	27	4.0	0.05	0.00			
13				7.9	2.3	38	3.2	0.08	0.00			
14				7.0	1.9	49	2.2	0.05	0.00			
15				7.7	2.1	50	1.7	0.02	0.00			
16				8.8	2.5	48	1.1	0.00	0.00			
17				7.6	3.9	50	0.93	0.01	0.00			
18				6.8	4.1	48	0.71	0.00	0.00			
19				6.6	3.8	39	0.47	0.00	0.00			
20				6.5	2.6	32	0.41	0.00	0.00			
21				6.4	3.1	29	0.28	0.00	0.00			
22				6.7	2.4	24	0.15	0.00	0.00			
23				5.8	4.4	21	0.05	0.00	0.00			
24				6.2	3.5	20	0.01	0.00	0.00			
25				5.9	3.8	21	0.12	0.00	0.00			
26				5.5	2.4	19	0.26	0.00	0.00			
27				5.8	1.4	19	0.09	0.00	0.00			
28				7.5	1.0	20	0.15	0.00	0.00			
29				9.3	0.77	20	0.14	0.00	0.00			
30				9.6	0.67	21	0.05	0.00	0.00			
31				---	0.76	---	0.00	0.02	---			
TOTAL				176.7	115.70	788.6	132.52	0.29	0.00			
MEAN				5.89	3.73	26.3	4.27	0.01	0.00			
MAX				13	10	50	20	0.08	0.00			
MIN				1.2	0.67	1.0	0.00	0.00	0.00			
AC-FT				350	229	1,560	263	0.6	0.00			

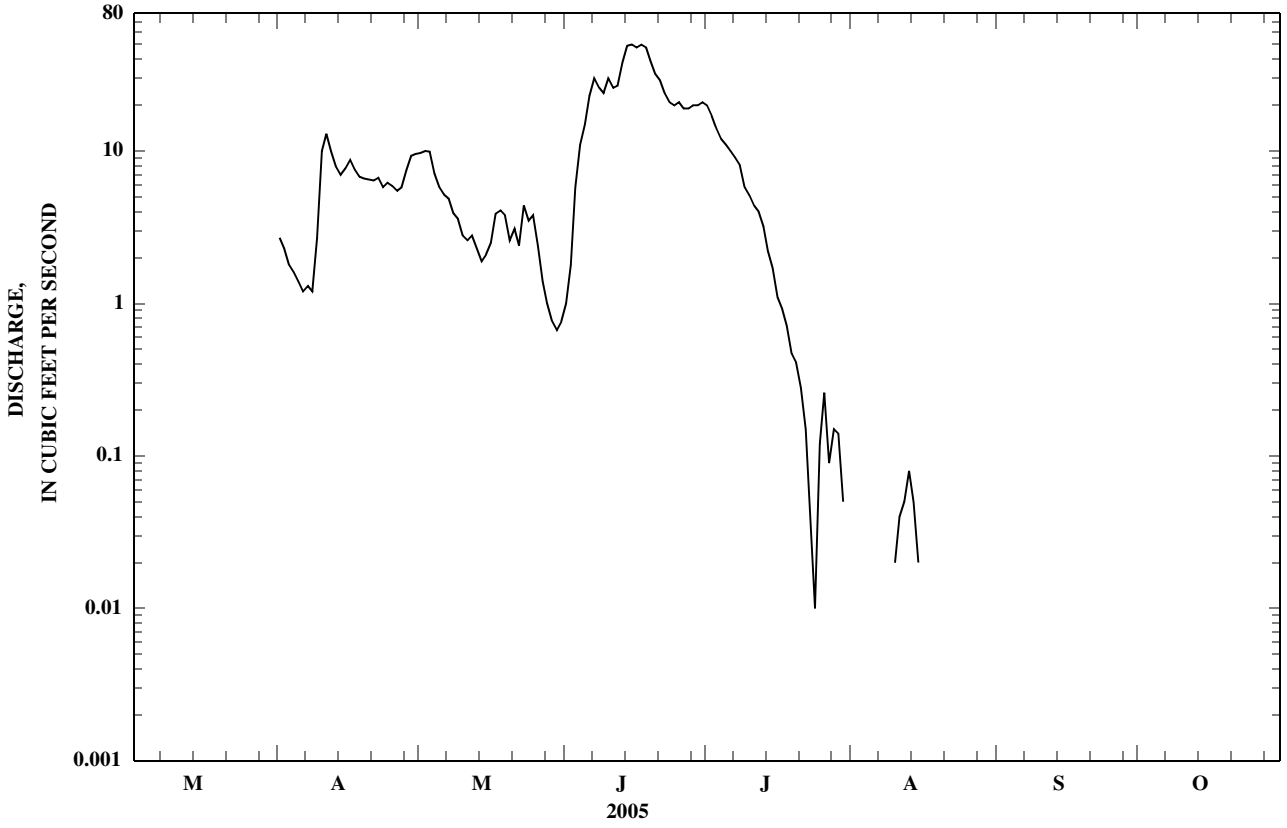
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1984 - 2005

MEAN	10.6	18.9	17.4	8.67	2.56	3.75
MAX	46.0	137	74.1	51.4	34.9	47.4
(WY)	(1994)	(1986)	(1986)	(1993)	(1993)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(2002)	(2001)	(2001)	(1985)	(1984)	(1984)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1984 - 2005	
HIGHEST DAILY MEAN	50	Jun 15	360	Sep 25, 1986
LOWEST DAILY MEAN	0.00	Jul 31	a0.00	Jul 5, 1984
MAXIMUM PEAK FLOW	70	Jun 18	571	Sep 25, 1986
MAXIMUM PEAK STAGE	2.90	Jun 18	8.23	Sep 25, 1986

a--No flow at times most seasons.

06142400 CLEAR CREEK NEAR CHINOOK, MT—Continued



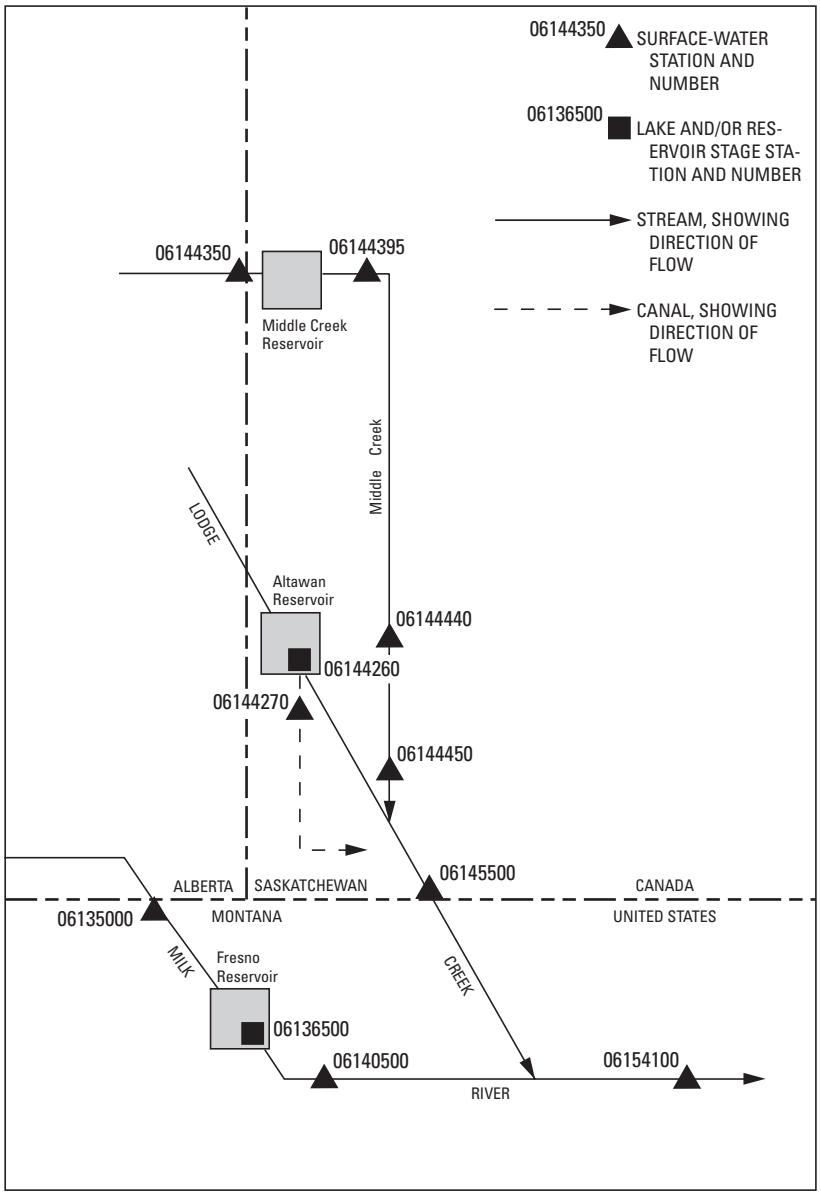


Figure 11. Schematic diagram showing diversions and storage in Lodge Creek basin.

06144260 ALTAWAN RESERVOIR NEAR GOVENLOCK, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°10'00", long 109°55'00" (NAD 27), in $SW^1/_4$ sec.35, T.2, R.30 W., third meridian, Hydrologic Unit 10050007, at dam on Lodge Creek, 6.3 mi southwest of Govenlock, and at river mile 113.5.

DRAINAGE AREA.-- 373 mi^2.

PERIOD OF RECORD.--February 1966 to current season (seasonal records only). February 1960 to current season in reports of Department of the Environment, Canada. Water-stage recorder. Elevation of gage is 2,918.0 (Geodetic Survey of Canada datum). Prior to July 7, 1967, nonrecording gage in gate read every ten days during irrigation season.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway and control works as well as an emergency earthen spillway, completed in 1959. The following capacity figures are from revised capacity table effective Jan. 1, 1983. All elevations are referenced to the Geodetic Survey of Canada datum. Usable capacity is 5,440 acre-ft between elevation 2,918.0 ft, bottom of outlet works, and 2,952.0 ft, maximum design level. No dead storage. Water is used for irrigation. Water Survey of Canada satellite telemeter at station. This is one of a number of stations which are maintained jointly by Canada and the United States.

REVISED RECORDS.--W 1983, drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,300 acre-ft, Sept. 26, 1986, elevation, 2,958.10 ft; no contents Mar. 1, 1960, Oct. 6-31, 1984, Mar. 1-18, and Oct. 3-31, 1985.

EXTREMES FOR CURRENT SEASON.--Maximum contents, 5,280 acre-ft, Apr. 26, elevation, 2,951.64 ft; minimum, 3,250 acre-ft, Oct. 31, elevation, 2,946.52 ft.

SEASONAL MONTHEND CONTENTS, IN ACRE-FT, FEBRUARY 2005 TO OCTOBER 2005

Date	Contents (acre-feet)
February 28	3,640
March 31	4,180
April 30	5,250
May 31	3,830
June 30	4,430
July 31	4,180
August 31	3,430
September 30	3,310
October 31	3,250

06144270 SPANGLER DITCH NEAR GOVENLOCK, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°09'16", long 109°54'58" (NAD 27), in NW$^1/_4$ sec.26, T.2, R.30 W., third meridian, Hydrologic Unit 10050007, on right bank 0.9 mi south of Altawan Dam, and 6.8 mi southwest of Govenlock.

PERIOD OF RECORD.--March 1966 to current season (seasonal records only). March 1950 to current season, in reports of Department of the Environment, Canada. Some estimates of monthly diversion in several years prior to 1932.

GAGE.--Water-stage recorder. Elevation of gage is 2,920 ft (NGVD 29). Prior to March 1950, nonrecording gages at several sites within 2 mi of present site at different elevations. March 1950 to July 8, 1960, water-stage recorder at site 350 ft downstream at different elevation.

REMARKS.--Records good. Canal diverts water from right bank of Lodge Creek in SW$^1/_4$ sec.35, T.2, R.30 W., third meridian, for irrigation of 1,320 acres in Spangler irrigation project. Water Survey of Canada satellite telemeter at station.

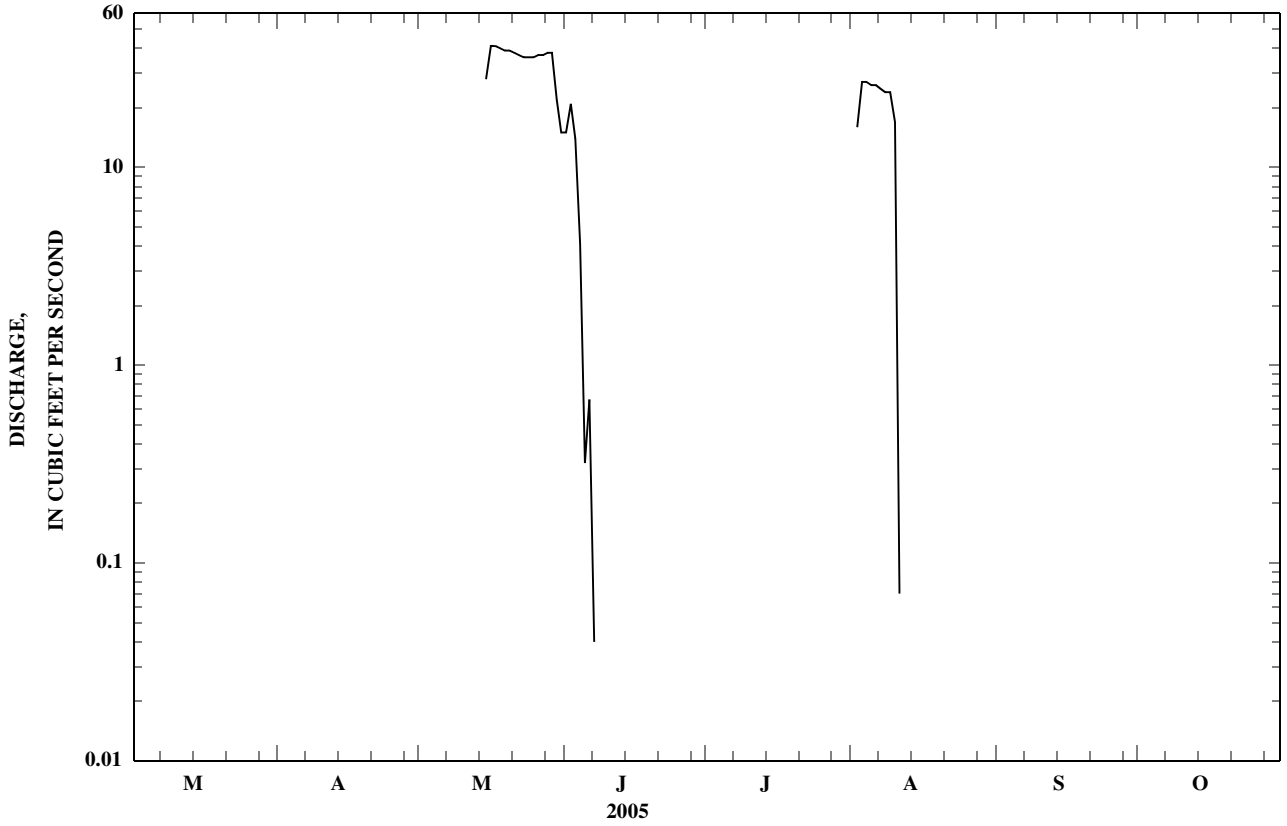
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 65 ft^3/s, Apr. 22, 1950, July 9, 1985; no flow most of each season.

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			0.00	0.00	0.00	15	0.00	0.00	0.00	0.00		
2			0.00	0.00	0.00	21	0.00	16	0.00	0.00		
3			0.00	0.00	0.00	14	0.00	27	0.00	0.00		
4			0.00	0.00	0.00	4.1	0.00	27	0.00	0.00		
5			0.00	0.00	0.00	0.32	0.00	26	0.00	0.00		
6			0.00	0.00	0.00	0.67	0.00	26	0.00	0.00		
7			0.00	0.00	0.00	0.04	0.00	25	0.00	0.00		
8			0.00	0.00	0.00	0.00	0.00	24	0.00	0.00		
9			0.00	0.00	0.00	0.00	0.00	24	0.00	0.00		
10			0.00	0.00	0.00	0.00	0.00	17	0.00	0.00		
11			0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00		
12			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
13			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
14			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15			0.00	0.00	28	0.00	0.00	0.00	0.00	0.00		
16			0.00	0.00	41	0.00	0.00	0.00	0.00	0.00		
17			0.00	0.00	41	0.00	0.00	0.00	0.00	0.00		
18			0.00	0.00	40	0.00	0.00	0.00	0.00	0.00		
19			0.00	0.00	39	0.00	0.00	0.00	0.00	0.00		
20			0.00	0.00	39	0.00	0.00	0.00	0.00	0.00		
21			0.00	0.00	38	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	37	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	36	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	36	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	36	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	37	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	37	0.00	0.00	0.00	0.00	0.00		
28			0.00	0.00	38	0.00	0.00	0.00	0.00	0.00		
29			0.00	0.00	38	0.00	0.00	0.00	0.00	0.00		
30			0.00	0.00	22	0.00	0.00	0.00	0.00	0.00		
31			0.00	---	15	---	0.00	0.00	---	0.00		
TOTAL			0.00	0.00	598.00	55.13	0.00	212.07	0.00	0.00		
MEAN			0.00	0.00	19.3	1.84	0.00	6.84	0.00	0.00		
MAX			0.00	0.00	41	21	0.00	27	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	1,190	109	0.00	421	0.00	0.00		

06144270 SPANGLER DITCH NEAR GOVENLOCK, SASKATCHEWAN—Continued



06144350 MIDDLE CREEK NEAR SASKATCHEWAN BOUNDARY
(International gaging station)

LOCATION.--Lat 49°25'30", long 110°03'08" (NAD 27), in $SW^1/_4$ sec.34, T.5, R.1 W., fourth meridian, in Alberta, Hydrologic Unit 10050007, on left bank 2 mi upstream from Middle Creek Reservoir, 2 mi west of Saskatchewan boundary, 18 mi northwest of Govenlock, Saskatchewan, and at river mile 65.7.

DRAINAGE AREA.--118 mi^2.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). Prior to March 1982, published as "Middle Creek near Alberta boundary". June 1910 to April 1915, published as "at McKinnon's Ranch" and September 1949 to current season in reports of Department of the Environment, Canada.

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,381.13 ft (Geodetic Survey of Canada datum). Prior to Mar. 1, 1951, nonrecording gages, and Mar. 1, 1951, to July 5, 1961, water-stage recorder, at site 0.3 mi downstream at different elevations. Water Survey of Canada satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minor diversions for irrigation upstream from station. Water Survey of Canada telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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			e0.39	e17	0.35	0.25	0.32	0.04	0.07	0.07		
2			e0.60	14	0.35	0.32	0.32	0.04	0.07	0.07		
3			e0.78	22	0.35	0.35	0.28	0.04	0.07	0.07		
4			e0.74	17	0.35	0.35	0.25	0.04	0.07	0.07		
5			e0.81	13	0.32	0.35	0.25	0.04	0.07	0.07		
6			e1.1	17	0.35	0.49	0.25	0.04	0.07	0.04		
7			e0.71	13	0.35	1.3	0.25	0.04	0.11	0.04		
8			e0.53	6.2	0.35	0.57	0.25	0.04	0.11	0.04		
9			e2.9	4.3	0.32	0.53	0.21	0.04	0.07	0.04		
10			e2.5	3.7	0.28	0.95	0.18	0.07	0.11	0.04		
11			e2.0	5.3	0.28	3.4	0.18	0.07	0.11	0.04		
12			e2.1	2.3	0.28	2.5	0.14	0.04	0.11	0.04		
13			e2.4	1.3	0.28	2.3	0.14	0.04	0.11	0.07		
14			e2.0	1.1	0.28	1.5	0.14	0.04	0.07	0.07		
15			e1.6	0.85	0.28	5.3	0.11	0.07	0.07	0.07		
16			e1.2	1.4	0.32	4.0	0.11	0.07	0.07	0.07		
17			e0.95	1.9	0.35	2.3	0.11	0.07	0.07	0.07		
18			e0.78	2.9	0.28	1.4	0.11	0.07	0.07	0.07		
19			e0.71	5.3	0.28	0.99	0.11	0.07	0.07	0.07		
20			e0.64	2.3	0.25	0.74	0.07	0.07	0.07	0.21		
21			e0.64	1.4	0.25	0.60	0.11	0.07	0.07	0.14		
22			e0.60	0.92	0.21	0.49	0.11	0.07	0.07	0.11		
23			e0.53	0.64	0.21	0.46	0.07	0.07	0.07	0.11		
24			e0.49	0.49	0.21	0.42	0.07	0.11	0.07	0.11		
25			e0.49	0.46	0.21	0.39	0.07	0.18	0.07	0.11		
26			e0.53	0.39	0.25	0.39	0.07	0.21	0.07	0.11		
27			e0.81	0.35	0.25	0.35	0.04	0.21	0.04	0.11		
28			e1.4	0.35	0.28	0.42	0.04	0.11	0.04	0.11		
29			e2.8	0.35	0.25	0.39	0.04	0.07	0.07	0.07		
30			e24	0.32	0.21	0.35	0.04	0.07	0.07	0.07		
31			e23	---	0.21	---	0.04	0.07	---	0.07		
TOTAL			80.73	157.52	8.79	34.15	4.48	2.28	2.28	2.45		
MEAN			2.60	5.25	0.28	1.14	0.14	0.07	0.08	0.08		
MAX			24	22	0.35	5.3	0.32	0.21	0.11	0.21		
MIN			0.39	0.32	0.21	0.25	0.04	0.04	0.04	0.04		
AC-FT			160	312	17	68	8.9	4.5	4.5	4.9		

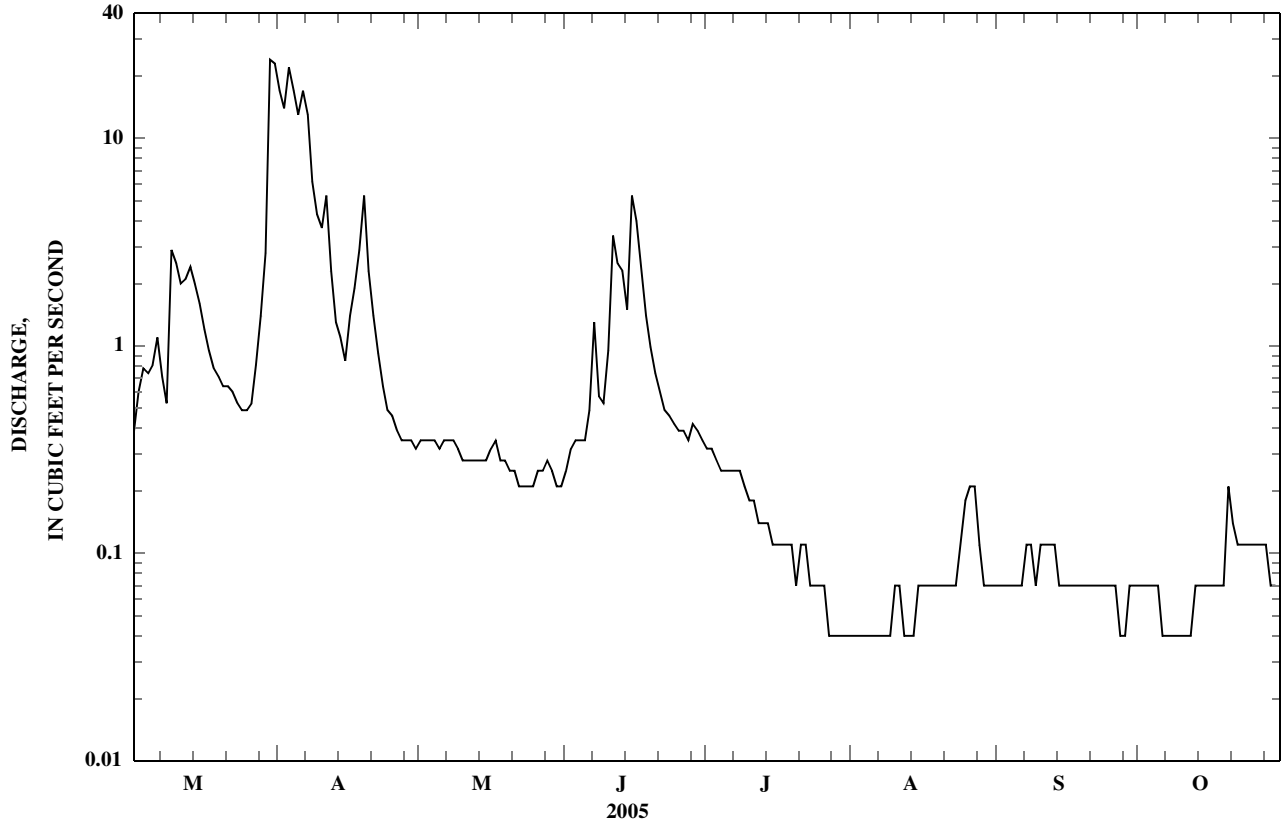
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1910 - 2005*

MEAN	6.58	13.7	36.2	11.0	3.79	1.78	0.71	0.96	0.44
MAX	25.1	74.2	330	136	45.1	20.0	6.99	24.8	2.38
(WY)	(1986)	(1960)	(1952)	(1967)	(1953)	(1963)	(1993)	(1986)	(1966)
MIN	0.07	0.00	0.04	0.08	0.08	0.02	0.00	0.00	0.05
(WY)	(1993)	(1950)	(2001)	(2001)	(2000)	(2001)	(2001)	(1962)	(1999)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1910 - 2005*	
HIGHEST DAILY MEAN	24	Mar 30	2,560	Apr 15, 1952
LOWEST DAILY MEAN	0.04	Jul 27	0.00	Mar 1, 1950
MAXIMUM PEAK FLOW	40	Mar 30	b4,980	Apr 15, 1952
MAXIMUM PEAK STAGE	a4.84	Mar 30	c10.27	Apr 15, 1952

*--For periods of operation.
a--Backwater from ice.
b--From rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow.
c--Previous site and datum.
e--Estimated.

06144350 MIDDLE CREEK NEAR SASKATCHEWAN BOUNDARY—Continued



06144395 MIDDLE CREEK BELOW MIDDLE CREEK RESERVOIR, NEAR GOVENLOCK, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°24'44", long 109°55'06" (NAD 27), in $SW^1/_4$ sec.25, T.5, R.30 W., third meridian, Hydrologic Unit 10050007, on right bank 9.1 mi downstream from Middle Creek Reservoir, 14 mi northwest of Govenlock, and at river mile 57.6.

DRAINAGE AREA.--149 mi^2.

PERIOD OF RECORD.--April 1972 to current season (seasonal records only). July 1909 to May 1931, September 1935 to October 1936, and April 1972 to current season in reports of Department of the Environment, Canada. Published as "at Ross Ranch" 1909-20, "at Downes and Robert's Ranch" 1920-23, and "at Wright's Ranch" 1920-31, 1935-36. Discharge measurements only during 1928 season.

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,300 ft (NGVD 29). Prior to April 1972, non recording gages at two sites within 2 mi of present site, at different elevations.

REMARKS.--Records good. Flow completely regulated by Middle Creek Reservoir (station number 06144360). Many diversions for irrigation upstream from station. At high reservoir levels flow may be diverted to Lodge Creek through Middle Creek Reservoir. Diversions for irrigation of 920 acres between Middle Creek Reservoir and station. Water Survey of Canada satellite telemeter at station.

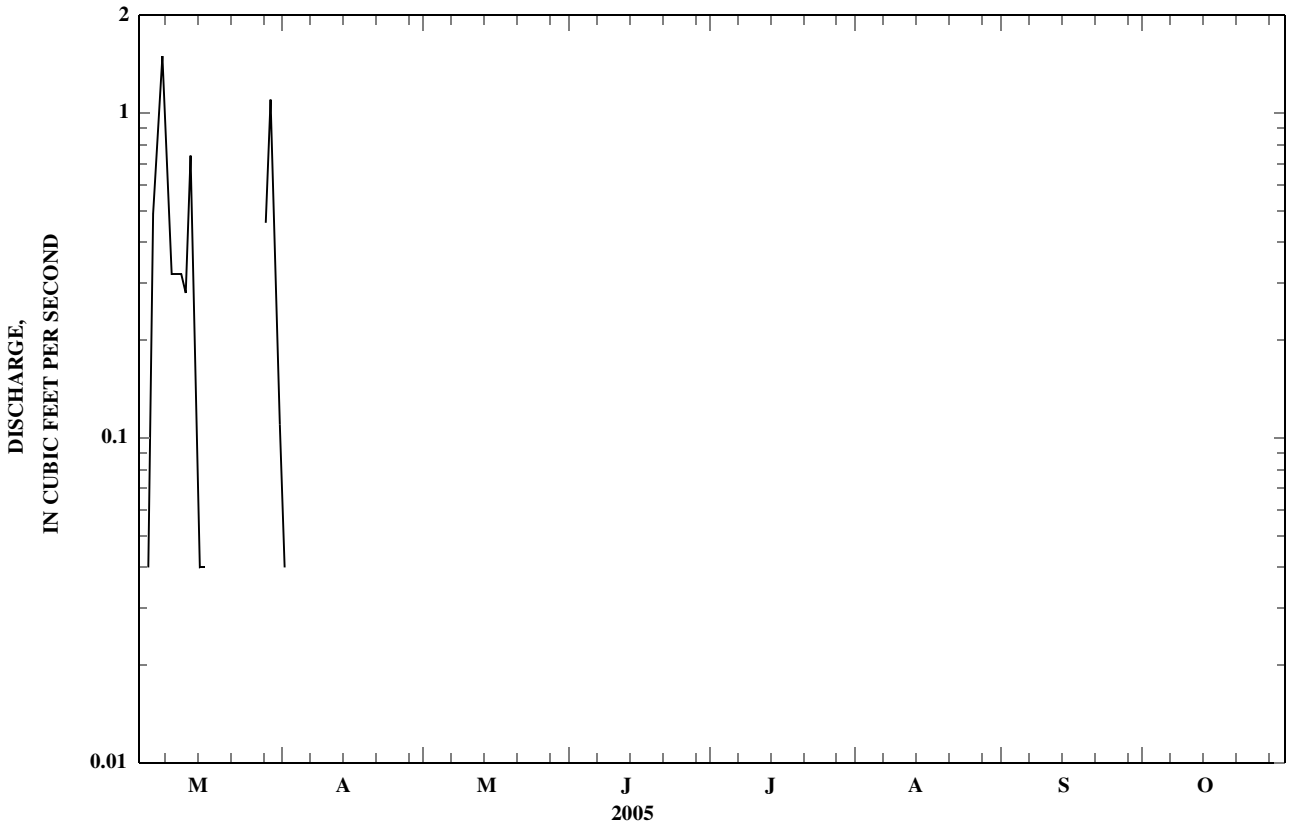
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 77 ft^3/s, May 3, 1985; no flow at times most seasons.

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			0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00		
2			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3			0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4			0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
5			0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6			1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7			0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8			0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
9			0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10			0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
11			0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12			0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
13			0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
14			0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15			0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
16			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
17			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
18			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
19			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
20			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
21			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28			0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29			1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30			0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31			0.11	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			7.84	0.04	0.00	0.00	0.00	0.00	0.00	0.00		
MEAN			0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MAX			1.5	0.04	0.00	0.00	0.00	0.00	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			16	0.08	0.00	0.00	0.00	0.00	0.00	0.00		

06144395 MIDDLE CREEK BELOW MIDDLE CREEK RESERVOIR, NEAR GOVENLOCK, SASKATCHEWAN—Continued



06144440 MIDDLE CREEK NEAR GOVENLOCK, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°13'42", long 109°48'57" (NAD 27), in NW$^1/_4$ sec.23, T.3, R.29 W., third meridian, Hydrologic Unit 10050007, on left bank 43.9 mi downstream from Middle Creek Reservoir, 0.3 mi northwest of Govenlock, and at river mile 22.8.

DRAINAGE AREA.--253 mi^2.

PERIOD OF RECORD.--February 1986 to current season (seasonal records only). March 1968 to current season in reports of Department of the Environment, Canada.

GAGE.--Water-stage recorder. Elevation of gage is 3,010 ft (NGVD 29).

REMARKS.--Records fair except those for estimaed daily discharges, which are poor. Natural flow of stream is affected by Middle Creek Reservoir (station 06144360), several smaller reservoirs, diversions for irrigation, and return flow from irrigated areas. At high reservoir levels flow may be diverted to Lodge Creek through Middle Creek Reservoir. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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		e7.1	e0.35	0.99	1.2	0.04	0.14	0.00	0.00	0.00		
2		e7.3	e0.39	1.1	1.2	0.04	0.14	0.00	0.00	0.00		
3		e6.2	e0.78	0.99	1.2	0.07	0.14	0.00	0.00	0.00		
4		e5.8	e1.4	2.3	1.2	0.21	0.11	0.00	0.00	0.00		
5		e3.9	e1.6	1.8	1.2	0.32	0.11	0.00	0.00	0.00		
6		e1.6	e1.9	4.0	1.2	0.49	0.11	0.00	0.00	0.00		
7		e0.49	e1.2	1.9	1.1	1.2	0.07	0.00	0.00	0.00		
8		e0.21	e1.8	3.7	1.1	1.4	0.04	0.00	0.00	0.00		
9		e0.04	e2.5	5.4	1.0	0.92	0.04	0.00	0.00	0.00		
10		e0.04	e3.6	4.3	0.95	0.78	0.00	0.00	0.00	0.00		
11		e0.07	e3.5	2.8	0.85	0.74	0.00	0.00	0.00	0.00		
12		e0.11	e2.3	2.4	0.85	0.60	0.00	0.00	0.00	0.00		
13		e0.11	e1.3	2.3	0.85	0.71	0.00	0.00	0.00	0.00		
14		e0.11	e1.1	2.3	0.71	2.4	0.00	0.00	0.00	0.00		
15		e0.07	e0.81	2.2	0.74	2.4	0.00	0.00	0.00	0.00		
16		e0.04	e0.81	2.2	0.71	1.5	0.00	0.00	0.00	0.00		
17		e0.04	e0.67	2.2	0.74	1.1	0.00	0.00	0.00	0.00		
18		e0.04	e0.49	2.0	0.57	0.81	0.00	0.00	0.00	0.00		
19		e0.04	e0.39	1.8	0.42	0.60	0.00	0.00	0.00	0.00		
20		e0.07	e0.42	1.7	0.32	0.42	0.00	0.00	0.00	0.00		
21		e0.07	e0.49	1.7	0.35	0.39	0.00	0.00	0.00	0.00		
22		e0.07	e0.64	2.9	0.21	0.39	0.00	0.00	0.00	0.00		
23		e0.04	e0.46	2.7	0.21	0.32	0.00	0.00	0.00	0.00		
24		e0.11	e0.57	2.2	0.14	0.21	0.00	0.00	0.00	0.00		
25		e0.14	e0.60	1.8	0.14	0.14	0.00	0.00	0.00	0.00		
26		e0.21	e0.99	1.6	0.07	0.14	0.00	0.00	0.00	0.00		
27		e0.21	1.3	1.4	0.04	0.11	0.00	0.00	0.00	0.00		
28		e0.25	1.1	1.3	0.04	0.11	0.00	0.00	0.00	0.00		
29		---	1.1	1.3	0.04	0.11	0.00	0.00	0.00	0.00		
30		---	1.1	1.3	0.04	0.11	0.00	0.00	0.00	0.00		
31		---	0.95	---	0.04	---	0.00	0.00	---	0.00		
TOTAL		34.48	36.61	66.58	19.43	18.78	0.90	0.00	0.00	0.00		
MEAN		1.23	1.18	2.22	0.63	0.63	0.03	0.00	0.00	0.00		
MAX		7.3	3.6	5.4	1.2	2.4	0.14	0.00	0.00	0.00		
MIN		0.04	0.35	0.99	0.04	0.04	0.00	0.00	0.00	0.00		
AC-FT		68	73	132	39	37	1.8	0.00	0.00	0.00		

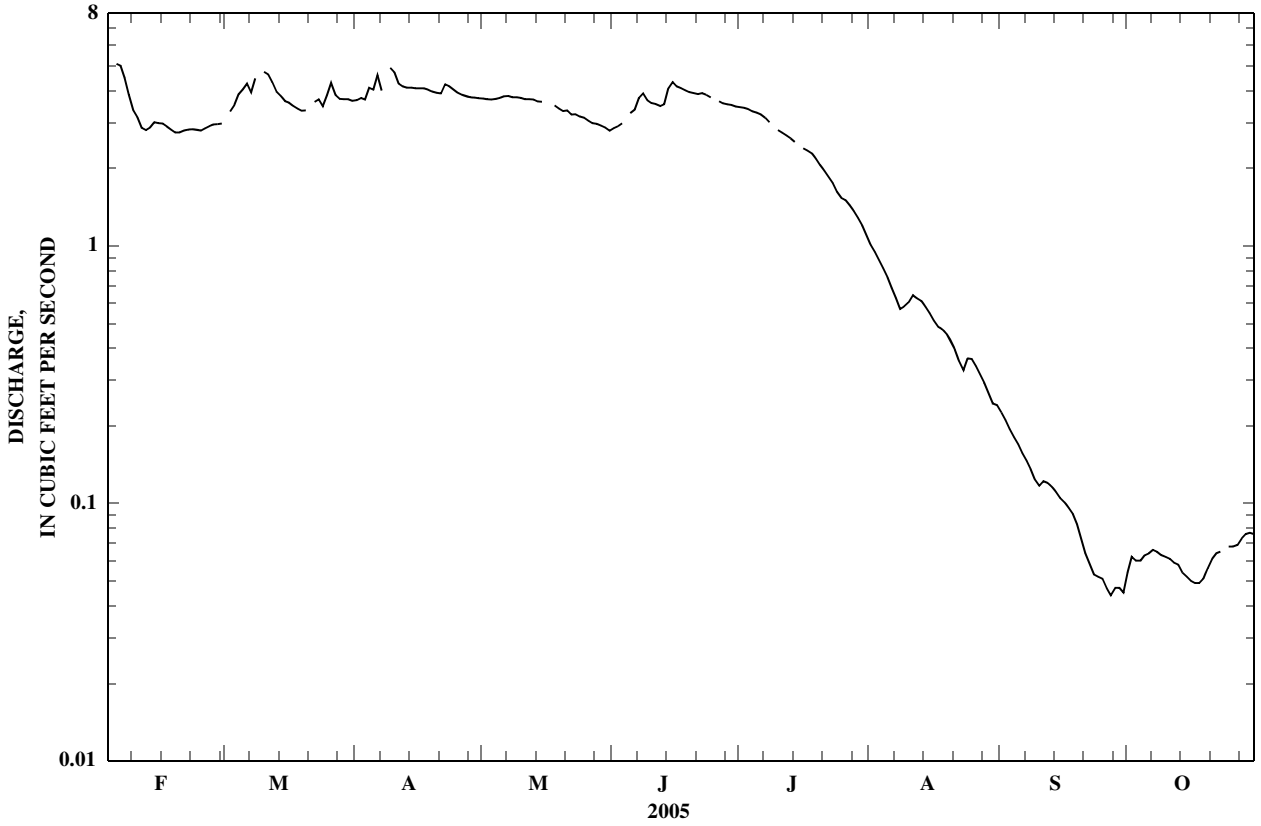
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	3.50	10.8	5.20	2.47	3.38	0.59	0.13	2.92	0.54
MAX	15.5	53.2	36.4	6.79	14.3	5.45	2.20	56.9	4.04
(WY)	(1986)	(1997)	(1996)	(1997)	(1988)	(1993)	(1993)	(1986)	(1987)
MIN	0.00	0.00	0.83	0.27	0.00	0.00	0.00	0.00	0.00
(WY)	(1997)	(2002)	(1992)	(1992)	(1992)	(1990)	(1986)	(1987)	(1991)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1986 - 2005*	
HIGHEST DAILY MEAN	7.3	Feb 2	724	Sep 26, 1986
LOWEST DAILY MEAN	0.00	many days	0.00	Feb 19, 1986
MAXIMUM PEAK FLOW	a8.5	Jan 30	1,190	Sep 25, 1986
MAXIMUM PEAK STAGE	b4.50	Jan 30	9.81	Sep 25, 1986

*--During periods of operation.
a--About, occurred during period of backwater from ice.
b--Backwater from ice.
e--Estimated.

06144440 MIDDLE CREEK NEAR GOVENLOCK, SASKATCHEWAN—Continued



06144450 MIDDLE CREEK ABOVE LODGE CREEK, NEAR GOVENLOCK, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°06'01", long 109°49'02" (NAD 27), in $NE^1/_4$ sec.4, T.2, R.29 W., third meridian, Hydrologic Unit 10050007, on left bank, 0.7 mi upstream from Lodge Creek, and 9 mi south of Govenlock.

DRAINAGE AREA.--276 mi^2.

PERIOD OF RECORD.--March 1962 to October 1966 and February 1986 to current season. Seasonal records only. March 1911 to May 1931 and March 1962 to current season in reports of Department of the Environment, Canada. Published as "at Hammond's Ranch" 1911-31.

GAGE.--Water-stage recorder. Elevation of gage is 2,830 ft (NGVD 29). Prior to Mar. 1, 1962, nonrecording gage at site 1,000 ft downstream at different elevation.

REMARKS.--Records fair. Natural flow of stream affected by Middle Creek Reservoir (station 06144360), several smaller reservoirs, diversions for irrigation, and return flow from irrigated areas. At high reservoir levels flow may be diverted to Lodge Creek through Middle Creek Reservoir. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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			e0.49	e0.42	0.00	0.00	0.00	0.00	0.00	0.00		
2			e0.57	1.2	0.00	0.00	0.00	0.00	0.00	0.00		
3			e0.57	1.3	0.00	0.00	0.00	0.00	0.00	0.00		
4			e0.64	5.2	0.00	0.00	0.00	0.00	0.00	0.00		
5			e0.64	1.5	0.00	0.00	0.00	0.00	0.00	0.00		
6			e0.81	0.95	0.00	0.18	0.21	0.00	0.00	0.00		
7			e0.78	0.64	0.00	3.0	0.42	0.00	0.00	0.00		
8			e0.71	0.71	0.00	1.6	0.42	0.00	0.00	0.00		
9			e0.85	0.74	0.00	1.5	0.64	0.00	0.00	0.00		
10			e0.85	0.53	0.00	1.2	0.88	0.00	0.00	0.00		
11			e0.99	0.28	0.00	0.49	0.35	0.00	0.00	0.00		
12			e1.2	0.18	0.00	0.21	0.49	0.00	0.00	0.00		
13			e0.78	0.14	0.00	0.85	0.21	0.00	0.00	0.00		
14			e0.57	0.14	0.00	1.1	0.07	0.00	0.00	0.00		
15			e0.60	0.14	0.00	0.53	0.04	0.00	0.00	0.00		
16			e0.49	0.11	0.00	0.28	0.04	0.00	0.00	0.00		
17			e0.42	0.07	0.00	0.25	0.04	0.00	0.00	0.00		
18			e0.35	0.07	0.00	0.18	0.00	0.00	0.00	0.00		
19			e0.21	0.04	0.00	0.11	0.00	0.00	0.00	0.00		
20			e0.18	0.04	0.00	0.07	0.00	0.00	0.00	0.00		
21			e0.21	0.04	0.00	0.04	0.00	0.00	0.00	0.00		
22			e0.18	0.04	0.00	0.04	0.00	0.00	0.00	0.00		
23			e0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
24			e0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25			e0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26			e0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27			e0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28			e0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29			e0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30			e0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31			e0.25	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			14.09	14.48	0.00	11.63	3.81	0.00	0.00	0.00		
MEAN			0.45	0.48	0.00	0.39	0.12	0.00	0.00	0.00		
MAX			1.2	5.2	0.00	3.0	0.88	0.00	0.00	0.00		
MIN			0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			28	29	0.00	23	7.6	0.00	0.00	0.00		

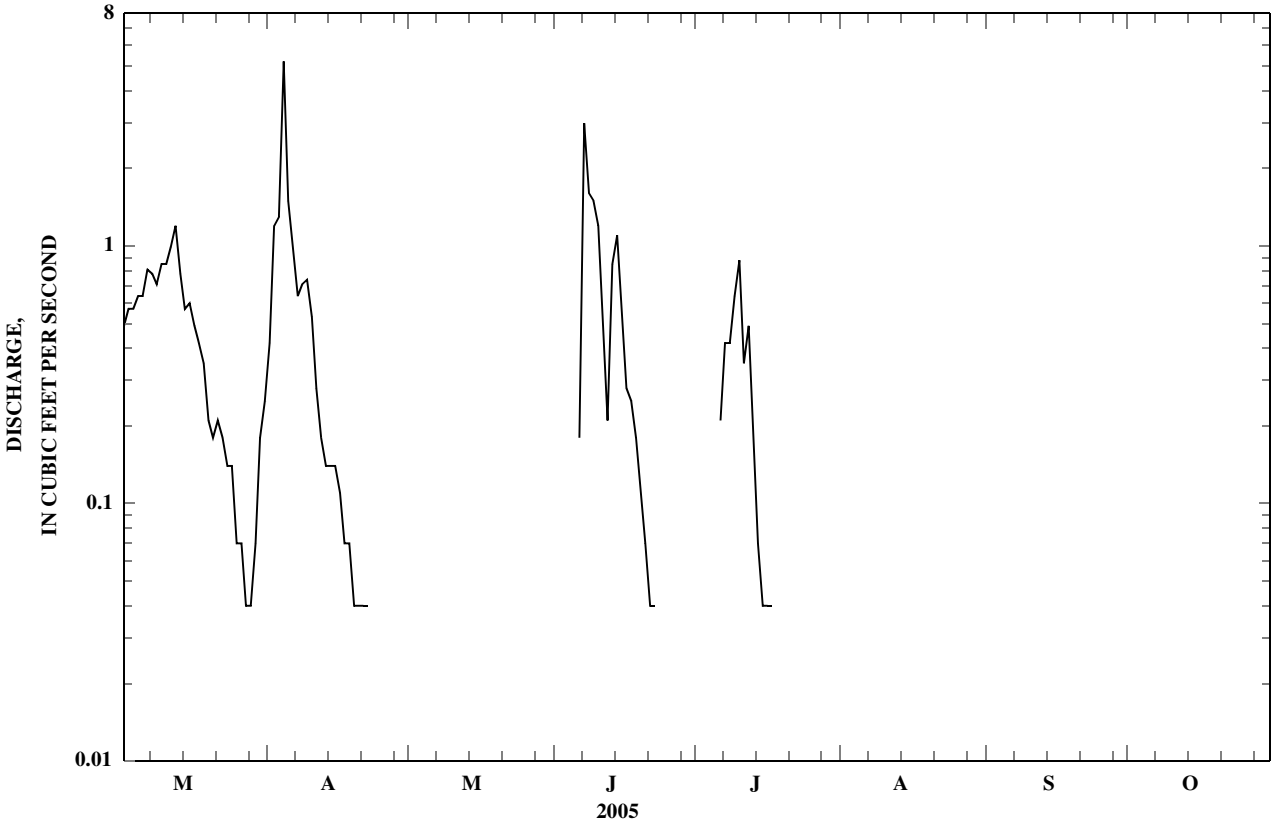
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1911 - 2005*

MEAN	12.4	50.7	12.6	6.44	3.75	0.51	2.48	0.55
MAX	71.8	457	222	61.1	35.1	9.76	63.3	8.35
(WY)	(1997)	(1917)	(1927)	(1965)	(1923)	(1915)	(1986)	(1987)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1919)	(1991)	(1989)	(1926)	(1914)	(1911)	(1912)	(1913)

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1911 - 2005*	
HIGHEST DAILY MEAN	5.2	Apr 4	b1,170	Apr 24, 1922
LOWEST DAILY MEAN	0.00	many days	0.00	Mar 13, 1911
MAXIMUM PEAK FLOW	a8.5	Feb 3	738	Sep 26, 1986
MAXIMUM PEAK STAGE	a4.75	Feb 3	13.84	Sep 26, 1986

*--During periods of operation.
a--Observed.
b--Maximum peak flow not determined.
e--Estimated.

06144450 MIDDLE CREEK ABOVE LODGE CREEK, NEAR GOVENLOCK, SASKATCHEWAN—Continued



06145500 LODGE CREEK BELOW MCRAE CREEK, AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'19", long 109°43'02" (NAD 27), in SW$^1/_4$ sec.5, T.1, R.28 W., third meridian, in Saskatchewan, Hydrologic Unit 10050007, on right bank 0.3 mi downstream from McRae Creek, 0.4 mi north of international boundary, 0.8 mi northeast of Willow Creek Port of Entry, 31 mi north of Havre, and at river mile 84.3.

DRAINAGE AREA.--825 mi^2, of which 88 mi^2 are noncontributing.

PERIOD OF RECORD.--October 1951 to current season (seasonal records only). Prior to October 1951, records were collected on both McRae Coulee (1927-51) and Lodge Creek above McRae Coulee (1910-51). Summations are equivalent to records at this site. Prior to March 1965, published as "below McRae Coulee."

REVISED RECORDS.--W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,731.0 ft (International Boundary Survey datum).

REMARKS.--Records good. Natural flow affected by numerous storage reservoirs, diversions for irrigation of about 3,000 acres, and return flow from irrigated areas. Water Survey of Canada satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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			0.21	0.32	0.00	0.00	2.8	0.00	0.00	0.00		
2			0.25	0.25	0.00	0.00	2.1	0.00	0.00	0.00		
3			0.25	0.21	0.00	0.00	1.6	0.00	0.00	0.00		
4			0.25	0.21	0.00	0.11	1.1	0.00	0.00	0.00		
5			0.28	0.21	0.00	1.6	0.85	0.00	0.00	0.00		
6			0.35	0.21	0.00	1.5	0.64	0.00	0.00	0.00		
7			0.57	1.5	0.00	60	0.42	0.00	0.00	0.00		
8			0.64	1.9	0.00	119	0.28	0.00	0.00	0.00		
9			0.67	1.4	0.00	98	0.21	0.00	0.00	0.00		
10			0.78	1.2	0.00	71	0.14	0.00	0.00	0.00		
11			0.81	0.88	0.00	67	0.11	0.00	0.00	0.00		
12			0.88	0.67	0.00	70	0.07	0.00	0.00	0.00		
13			0.71	0.53	0.00	61	0.07	0.00	0.00	0.00		
14			0.74	0.53	0.00	60	0.04	0.00	0.00	0.00		
15			0.78	0.49	0.00	68	0.04	0.00	0.00	0.00		
16			0.95	0.39	0.00	72	0.04	0.00	0.00	0.00		
17			0.99	0.35	0.00	67	0.00	0.00	0.00	0.00		
18			0.99	0.35	0.00	62	0.00	0.00	0.00	0.00		
19			0.95	0.28	0.00	56	0.00	0.00	0.00	0.00		
20			0.92	0.21	0.00	54	0.00	0.00	0.00	0.00		
21			0.85	0.18	0.00	55	0.00	0.00	0.00	0.00		
22			0.78	0.14	0.00	54	0.00	0.00	0.00	0.00		
23			0.85	0.11	0.00	53	0.00	0.00	0.00	0.00		
24			0.74	0.07	0.00	52	0.00	0.00	0.00	0.00		
25			0.60	0.07	0.00	51	0.00	0.00	0.00	0.00		
26			0.53	0.04	0.00	28	0.00	0.00	0.00	0.00		
27			0.53	0.04	0.00	12	0.00	0.00	0.00	0.00		
28			0.53	0.04	0.00	7.2	0.00	0.00	0.00	0.00		
29			0.49	0.04	0.00	4.9	0.00	0.00	0.00	0.00		
30			0.46	0.00	0.00	3.6	0.00	0.00	0.00	0.00		
31			0.35	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			19.68	12.82	0.00	1,308.91	10.51	0.00	0.00	0.00		
MEAN			0.63	0.43	0.00	43.6	0.34	0.00	0.00	0.00		
MAX			0.99	1.9	0.00	119	2.8	0.00	0.00	0.00		
MIN			0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			39	25	0.00	2,600	21	0.00	0.00	0.00		

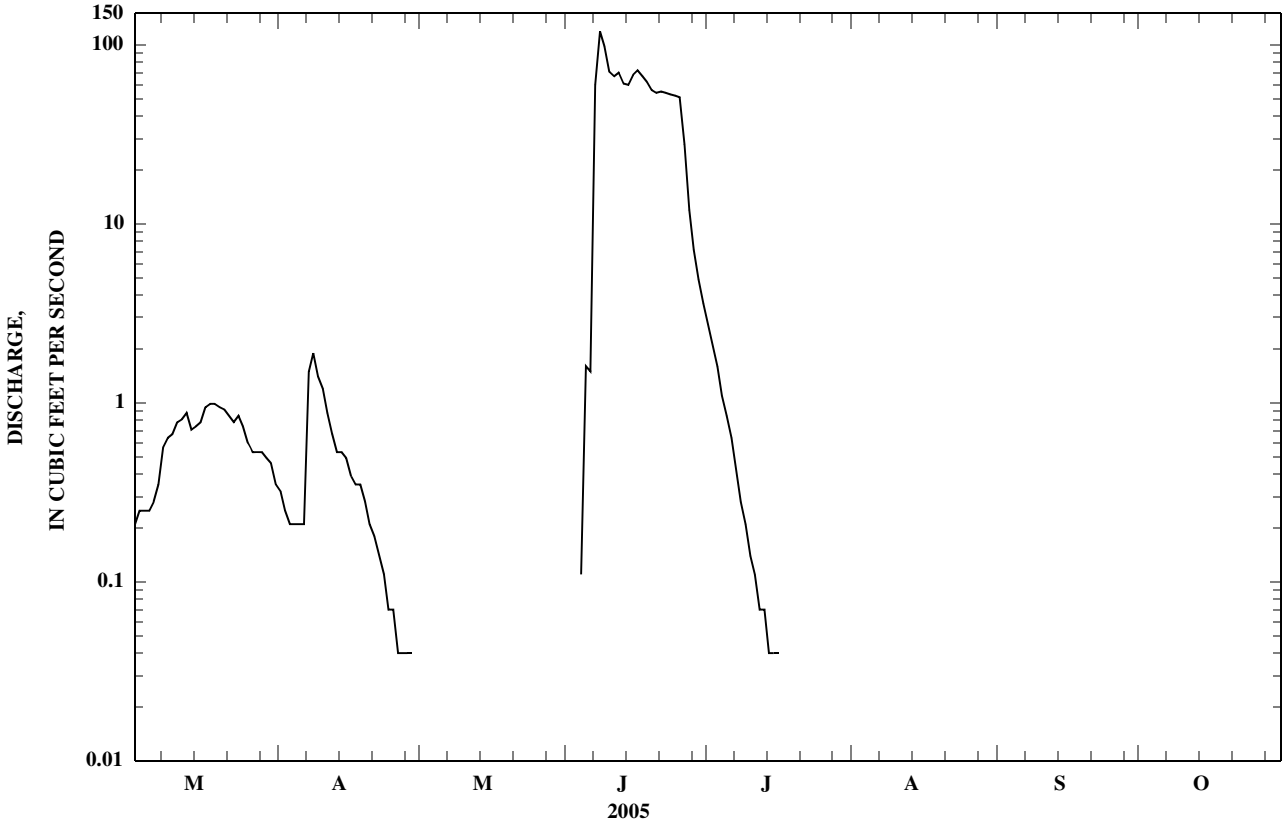
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1952 - 2005

MEAN	53.9	132	38.5	24.5	9.51	2.18	13.2	1.39
MAX	374	1,899	500	294	174	33.1	678	52.3
(WY)	(1997)	(1952)	(1967)	(1965)	(1955)	(1993)	(1986)	(1987)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1953)	(1992)	(1992)	(1963)	(1958)	(1954)	(1952)	(1953)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1952 - 2005	
HIGHEST DAILY MEAN	119	Jun 8	7,770	Sep 26, 1986
LOWEST DAILY MEAN	0.00	many days	0.00	Mar 1, 1952
MAXIMUM PEAK FLOW	130	Jun 7	a9,890	Sep 25, 1986
MAXIMUM PEAK STAGE	3.88	Jun 7	16.36	Sep 25, 1986

a--From rating curve extended above 4,000 ft^3/s on basis of slope-area measurement of peak flow.

06145500 LODGE CREEK BELOW MCRAE CREEK, AT INTERNATIONAL BOUNDARY—Continued



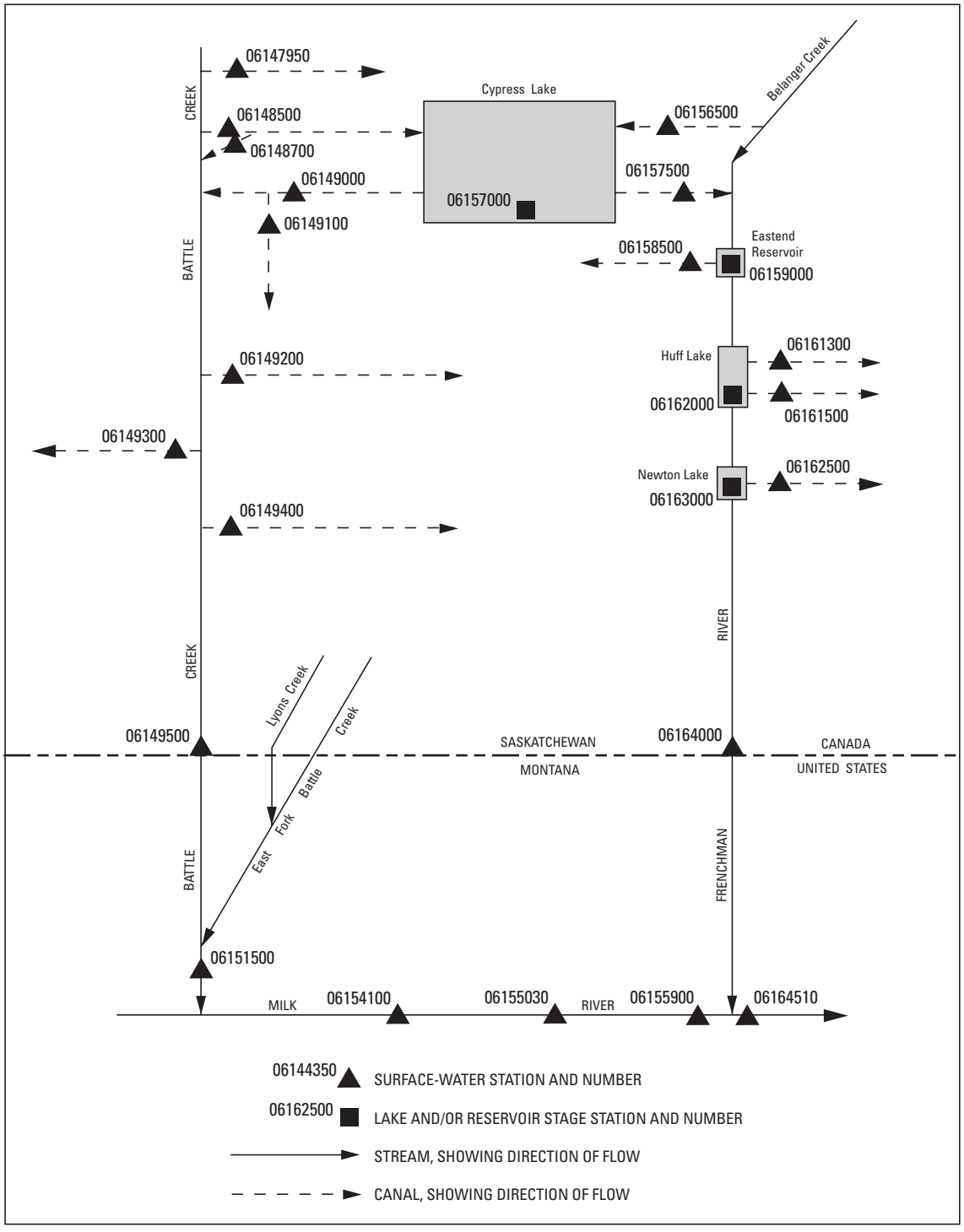


Figure 12. Schematic diagram showing diversions and storage in Battle Creek and Frenchman River basins.

06147950 GAFF DITCH NEAR MERRYFLAT, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°26'05", long 109°50'07" (NAD 27), in NW$^1/_4$ sec.34, T.5, R.29 W., third meridian, Hydrologic Unit 10050008, on left bank about 200 ft downstream from headgates, and 4 mi southwest of Merryflat.

PERIOD OF RECORD.--March 1972 to current season (seasonal record only). March 1964 to current season in reports of Department of the Environment, Canada.

GAGE.--Water-stage recorder. Elevation of gage is 3,350 ft (NGVD 29).

REMARKS.--Records fair. Water is diverted from left bank of Battle Creek in NW$^1/_4$ sec.34, T.5. R.29 W., third meridian, for irrigation of about 890 acres along Battle Creek. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

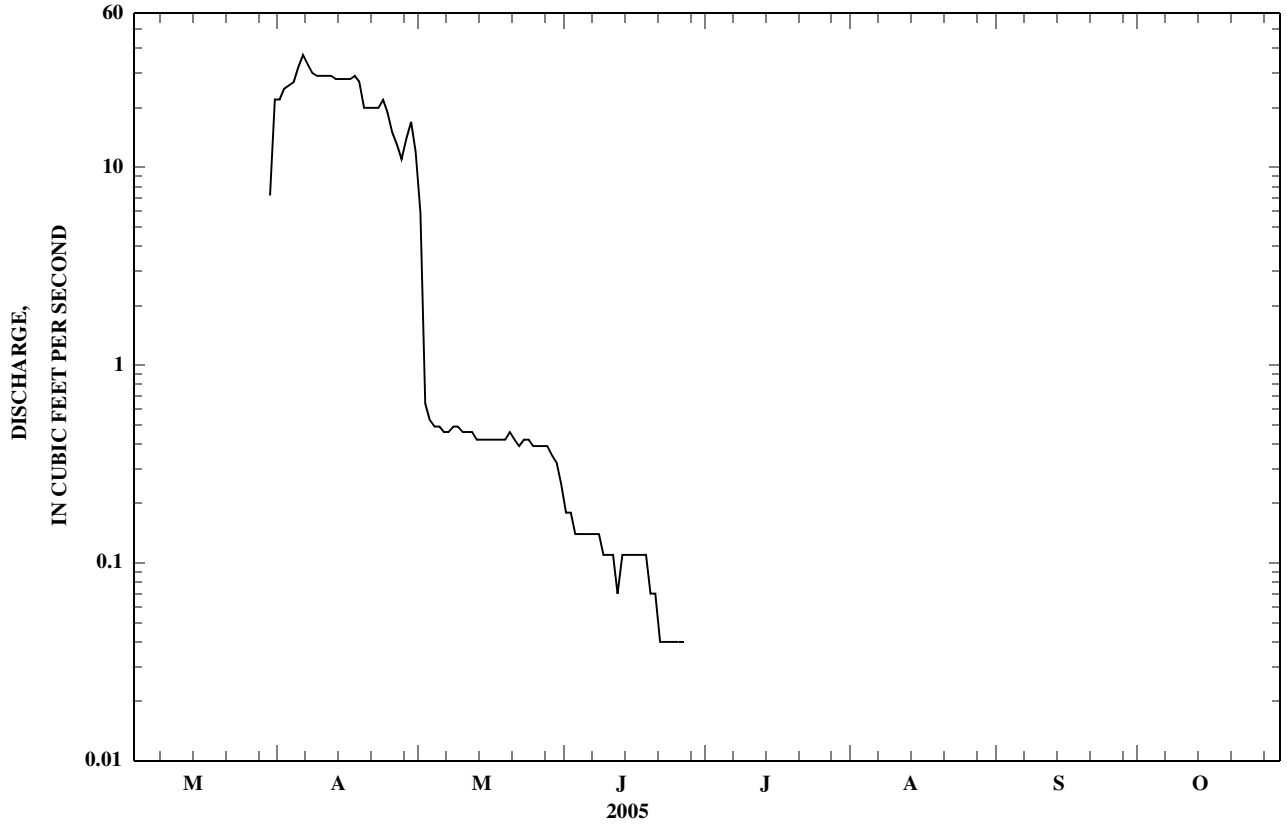
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 42 ft^3/s, Apr. 22, 1971; no flows at times each season.

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			e0.00	e22	5.9	0.18	0.00	0.00	0.00	0.00		
2			e0.00	e25	0.64	0.18	0.00	0.00	0.00	0.00		
3			e0.00	26	0.53	0.14	0.00	0.00	0.00	0.00		
4			e0.00	27	0.49	0.14	0.00	0.00	0.00	0.00		
5			e0.00	32	0.49	0.14	0.00	0.00	0.00	0.00		
6			e0.00	37	0.46	0.14	0.00	0.00	0.00	0.00		
7			e0.00	33	0.46	0.14	0.00	0.00	0.00	0.00		
8			e0.00	30	0.49	0.14	0.00	0.00	0.00	0.00		
9			e0.00	29	0.49	0.11	0.00	0.00	0.00	0.00		
10			e0.00	29	0.46	0.11	0.00	0.00	0.00	0.00		
11			e0.00	29	0.46	0.11	0.00	0.00	0.00	0.00		
12			e0.00	29	0.46	0.07	0.00	0.00	0.00	0.00		
13			e0.00	28	0.42	0.11	0.00	0.00	0.00	0.00		
14			e0.00	28	0.42	0.11	0.00	0.00	0.00	0.00		
15			e0.00	28	0.42	0.11	0.00	0.00	0.00	0.00		
16			e0.00	28	0.42	0.11	0.00	0.00	0.00	0.00		
17			e0.00	29	0.42	0.11	0.00	0.00	0.00	0.00		
18			e0.00	27	0.42	0.11	0.00	0.00	0.00	0.00		
19			e0.00	20	0.42	0.07	0.00	0.00	0.00	0.00		
20			e0.00	20	0.46	0.07	0.00	0.00	0.00	0.00		
21			e0.00	20	0.42	0.04	0.00	0.00	0.00	0.00		
22			e0.00	20	0.39	0.04	0.00	0.00	0.00	0.00		
23			e0.00	22	0.42	0.04	0.00	0.00	0.00	0.00		
24			e0.00	19	0.42	0.04	0.00	0.00	0.00	0.00		
25			e0.00	15	0.39	0.04	0.00	0.00	0.00	0.00		
26			e0.00	13	0.39	0.04	0.00	0.00	0.00	0.00		
27			e0.00	11	0.39	0.00	0.00	0.00	0.00	0.00		
28			e0.00	14	0.39	0.00	0.00	0.00	0.00	0.00		
29			e0.00	17	0.35	0.00	0.00	0.00	0.00	0.00		
30			e7.2	12	0.32	0.00	0.00	0.00	0.00	0.00		
31			e22	---	0.25	---	0.00	0.00	---	0.00		
TOTAL			29.20	719	18.86	2.64	0.00	0.00	0.00	0.00		
MEAN			0.94	24.0	0.61	0.09	0.00	0.00	0.00	0.00		
MAX			22	37	5.9	0.18	0.00	0.00	0.00	0.00		
MIN			0.00	11	0.25	0.00	0.00	0.00	0.00	0.00		
AC-FT			58	1,430	37	5.2	0.00	0.00	0.00	0.00		

e--Estimated.

06147950 GAFF DITCH NEAR MERRYFLAT, SASKATCHEWAN—Continued



06148500 CYPRESS LAKE WEST INFLOW CANAL NEAR WEST PLAINS, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°28'18", long 109°37'08" (NAD 27), in SE$^1/_4$ sec.18, T.6, R.27 W., third meridian, Hydrologic Unit 10050008, on left bank 2.5 mi downstream from canal headgates, 5.5 mi northeast of West Plains, and 13 mi northwest of Consul.

PERIOD OF RECORD.--March 1939 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 3,210 ft (NGVD 29). Prior to Oct. 16, 1956, at site 2.3 mi upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Canal diverts water from Battle Creek in NW$^1/_4$ sec.1, T.6, R.28 W., third meridian, for storage in Cypress Lake. Part or all of flow may be returned to Battle Creek via Cypress Lake west inflow canal drain (station 06148700) 0.4 mi downstream. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

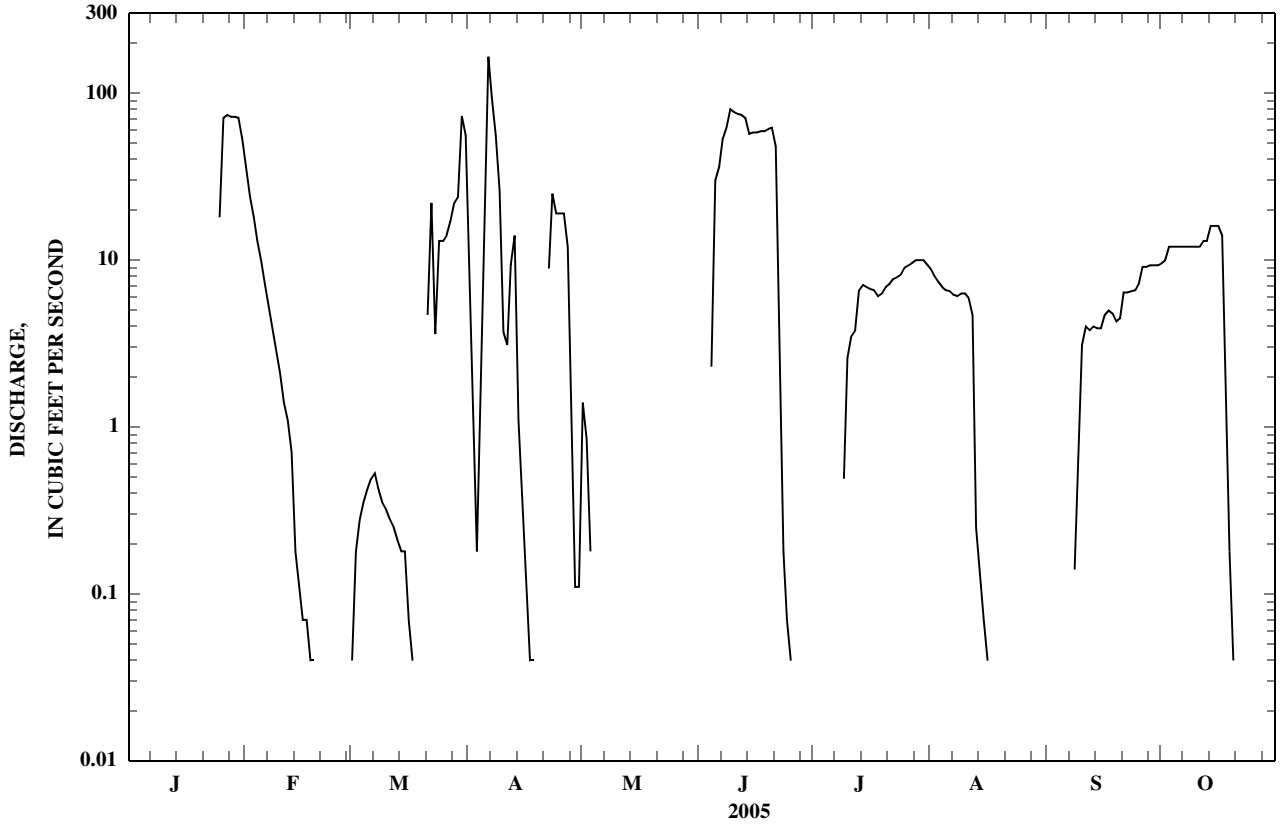
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 884 ft^3/s, Apr. 27, 1965; no flow at times each season.

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	e0.00	e35	e0.04	e15	1.4	0.00	0.00	8.8	0.00	9.6		
2	e0.00	e24	e0.18	e1.2	0.85	0.00	0.00	8.0	0.00	10		
3	e0.00	e18	e0.28	e0.18	0.18	0.00	0.00	7.4	0.00	12		
4	e0.00	e13	e0.35	e5.6	0.00	2.3	0.00	6.9	0.00	12		
5	e0.00	e9.9	e0.42	e32	0.00	30	0.00	6.6	0.00	12		
6	e0.00	e7.1	e0.49	e165	0.00	36	0.00	6.5	0.00	12		
7	e0.00	e5.3	e0.53	e93	0.00	53	0.00	6.2	0.00	12		
8	e0.00	e3.9	e0.42	56	0.00	62	0.00	6.1	0.14	12		
9	e0.00	e2.8	e0.35	26	0.00	80	0.49	6.3	0.49	12		
10	e0.00	e2.1	e0.32	3.7	0.00	77	2.6	6.3	3.1	12		
11	e0.00	e1.4	e0.28	3.1	0.00	75	3.5	5.9	4.0	12		
12	e0.00	e1.1	e0.25	9.4	0.00	74	3.8	4.7	3.8	13		
13	e0.00	e0.71	e0.21	14	0.00	71	6.6	0.25	4.0	13		
14	e0.00	e0.18	e0.18	1.1	0.00	57	7.1	0.14	3.9	16		
15	e0.00	e0.11	e0.18	0.35	0.00	58	6.9	0.07	3.9	16		
16	e0.00	e0.07	e0.07	0.11	0.00	58	6.7	0.04	4.7	16		
17	e0.00	e0.07	e0.04	0.04	0.00	59	6.6	0.00	5.0	14		
18	e0.00	e0.04	e0.00	0.04	0.00	59	6.1	0.00	4.8	1.7		
19	e0.00	e0.04	e0.00	0.00	0.00	61	6.3	0.00	4.3	0.18		
20	e0.00	e0.00	e0.00	0.00	0.00	62	6.9	0.00	4.5	0.04		
21	e0.00	e0.00	e4.7	0.00	0.00	48	7.2	0.00	6.4	0.00		
22	e0.00	e0.00	e22	8.9	0.00	1.9	7.7	0.00	6.4	0.00		
23	e0.00	e0.00	e3.6	25	0.00	0.18	7.9	0.00	6.5	0.00		
24	e0.00	e0.00	e13	19	0.00	0.07	8.2	0.00	6.6	0.00		
25	e18	e0.00	e13	19	0.00	0.04	9.0	0.00	7.3	0.00		
26	e71	e0.00	e14	19	0.00	0.00	9.3	0.00	9.1	0.00		
27	e74	e0.00	e17	12	0.00	0.00	9.6	0.00	9.1	0.00		
28	e72	e0.00	e22	0.53	0.00	0.00	10	0.00	9.3	0.00		
29	e72	---	e24	0.11	0.00	0.00	10	0.00	9.3	0.00		
30	e71	---	e73	0.11	0.00	0.00	10	0.00	9.3	0.00		
31	e53	---	e56	---	0.00	---	9.4	0.00	---	0.00		
TOTAL	431.00	124.82	266.89	529.47	2.43	1,024.49	161.89	80.20	125.93	217.52		
MEAN	13.9	4.46	8.61	17.6	0.08	34.1	5.22	2.59	4.20	7.02		
MAX	74	35	73	165	1.4	80	10	8.8	9.3	16		
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT	855	248	529	1,050	4.8	2,030	321	159	250	431		

e--Estimated.

06148500 CYPRESS LAKE WEST INFLOW CANAL NEAR WEST PLAINS, SASKATCHEWAN—Continued



06148700 CYPRESS LAKE WEST INFLOW CANAL DRAIN NEAR OXARAT, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°28'25", long 109°36'38" (NAD 27), in NW$^1/_4$ sec.17, T.6, R.27 W., third meridian, Hydrologic Unit 10050008, on left bank about 500 ft downstream from drain gate on Cypress Lake west inflow canal, 0.5 mi upstream from Battle Creek, and 4 mi northwest of Oxarat.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). March 1955 to current season in reports of Department of the Environment, Canada.

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft (NGVD 29).

REMARKS.--Records poor. Drain used as an emergency bypass to return diverted water to Battle Creek. It may also be used to return stored water from Cypress Lake when lake stage is high.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

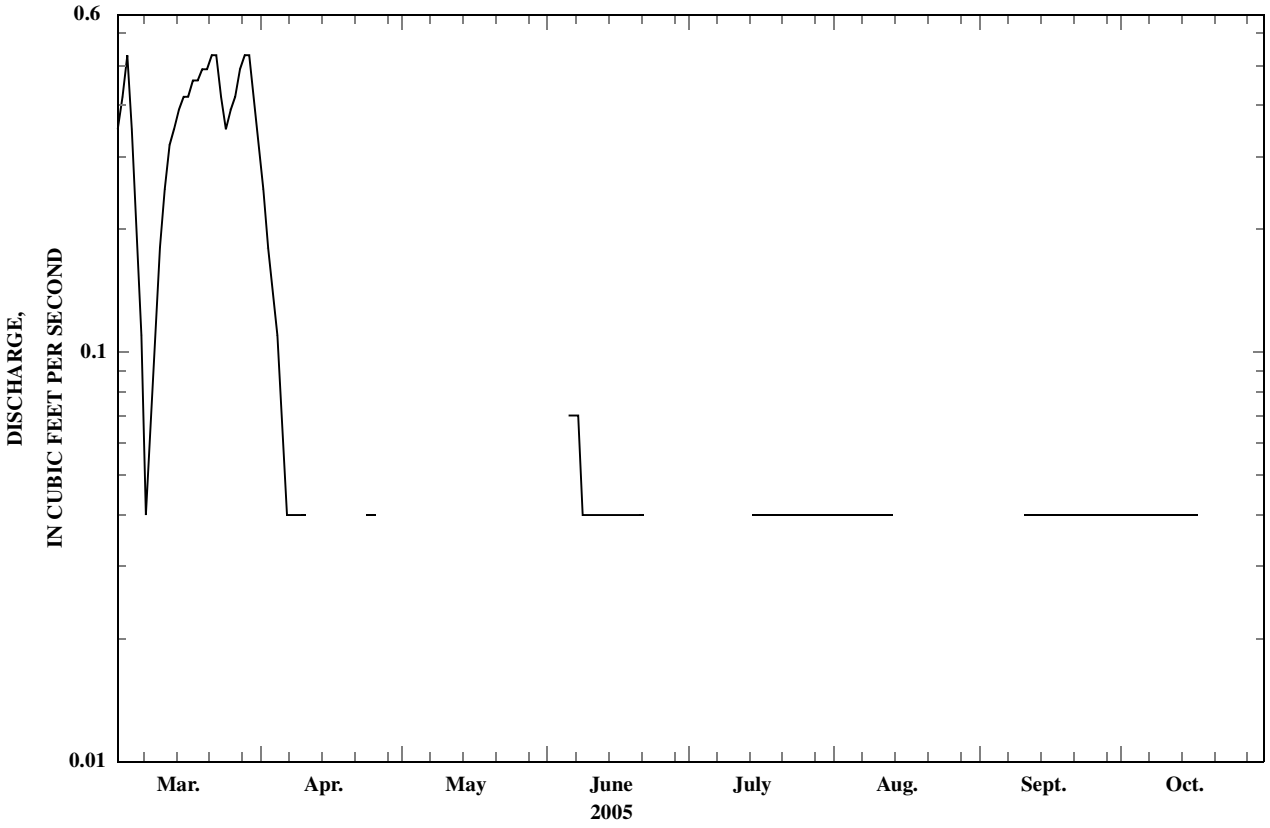
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 450 ft^3/s, Apr. 20, 1955; no flow at times each season.

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			e0.35	e0.25	0.00	0.00	0.00	0.04	0.00	0.04		
2			e0.42	e0.18	0.00	0.00	0.00	0.04	0.00	0.04		
3			e0.53	e0.14	0.00	0.00	0.00	0.04	0.00	0.04		
4			e0.35	e0.11	0.00	0.00	0.00	0.04	0.00	0.04		
5			e0.18	0.07	0.00	0.07	0.00	0.04	0.00	0.04		
6			e0.11	0.04	0.00	0.07	0.00	0.04	0.00	0.04		
7			e0.04	0.04	0.00	0.07	0.00	0.04	0.00	0.04		
8			e0.07	0.04	0.00	0.04	0.00	0.04	0.00	0.04		
9			e0.11	0.04	0.00	0.04	0.00	0.04	0.00	0.04		
10			e0.18	0.04	0.00	0.04	0.00	0.04	0.04	0.04		
11			e0.25	0.00	0.00	0.04	0.00	0.04	0.04	0.04		
12			e0.32	0.00	0.00	0.04	0.00	0.04	0.04	0.04		
13			e0.35	0.00	0.00	0.04	0.00	0.04	0.04	0.04		
14			e0.39	0.00	0.00	0.04	0.04	0.00	0.04	0.04		
15			e0.42	0.00	0.00	0.04	0.04	0.00	0.04	0.04		
16			e0.42	0.00	0.00	0.04	0.04	0.00	0.04	0.04		
17			e0.46	0.00	0.00	0.04	0.04	0.00	0.04	0.04		
18			e0.46	0.00	0.00	0.04	0.04	0.00	0.04	0.00		
19			e0.49	0.00	0.00	0.04	0.04	0.00	0.04	0.00		
20			e0.49	0.00	0.00	0.04	0.04	0.00	0.04	0.00		
21			e0.53	0.00	0.00	0.04	0.04	0.00	0.04	0.00		
22			e0.53	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
23			e0.42	0.04	0.00	0.00	0.04	0.00	0.04	0.00		
24			e0.35	0.04	0.00	0.00	0.04	0.00	0.04	0.00		
25			e0.39	0.04	0.00	0.00	0.04	0.00	0.04	0.00		
26			e0.42	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
27			e0.49	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
28			e0.53	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
29			e0.53	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
30			e0.42	0.00	0.00	0.00	0.04	0.00	0.04	0.00		
31			e0.32	---	0.00	---	0.04	0.00	---	0.00		
TOTAL			11.32	1.07	0.00	0.77	0.72	0.52	0.84	0.68		
MEAN			0.37	0.04	0.00	0.03	0.02	0.02	0.03	0.02		
MAX			0.53	0.25	0.00	0.07	0.04	0.04	0.04	0.04		
MIN			0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			22	2.1	0.00	1.5	1.4	1.0	1.7	1.3		

e--Estimated.

06148700 CYPRESS LAKE WEST INFLOW CANAL DRAIN NEAR OXARAT, SASKATCHEWAN—Continued



06149000 CYPRESS LAKE WEST OUTFLOW CANAL NEAR WEST PLAINS, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°28'14", long 109°35'18" (NAD 27), in SW$^1/_4$ sec.16, T.6, R.27 W., third meridian, Hydrologic Unit 10050008, on left bank 1.1 mi downstream from Cypress Lake West Dam, 6 mi northeast of West Plains, and 13 mi north of Consul.

PERIOD OF RECORD.--March 1940 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 3,180 ft (NGVD 29). Prior to Sept. 18, 1952, at site 1 mi upstream and 300 ft downstream from Cypress Lake West Dam at different elevation.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Canal diverts water from Cypress Lake in NW$^1/_4$ sec.15, T.6, R.27 W., third meridian, for irrigation of 5,500 acres in Battle Creek basin in Saskatchewan. Water may be delivered to Battle Creek or diverted into Vidora Ditch at gate structure near lower end of canal. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

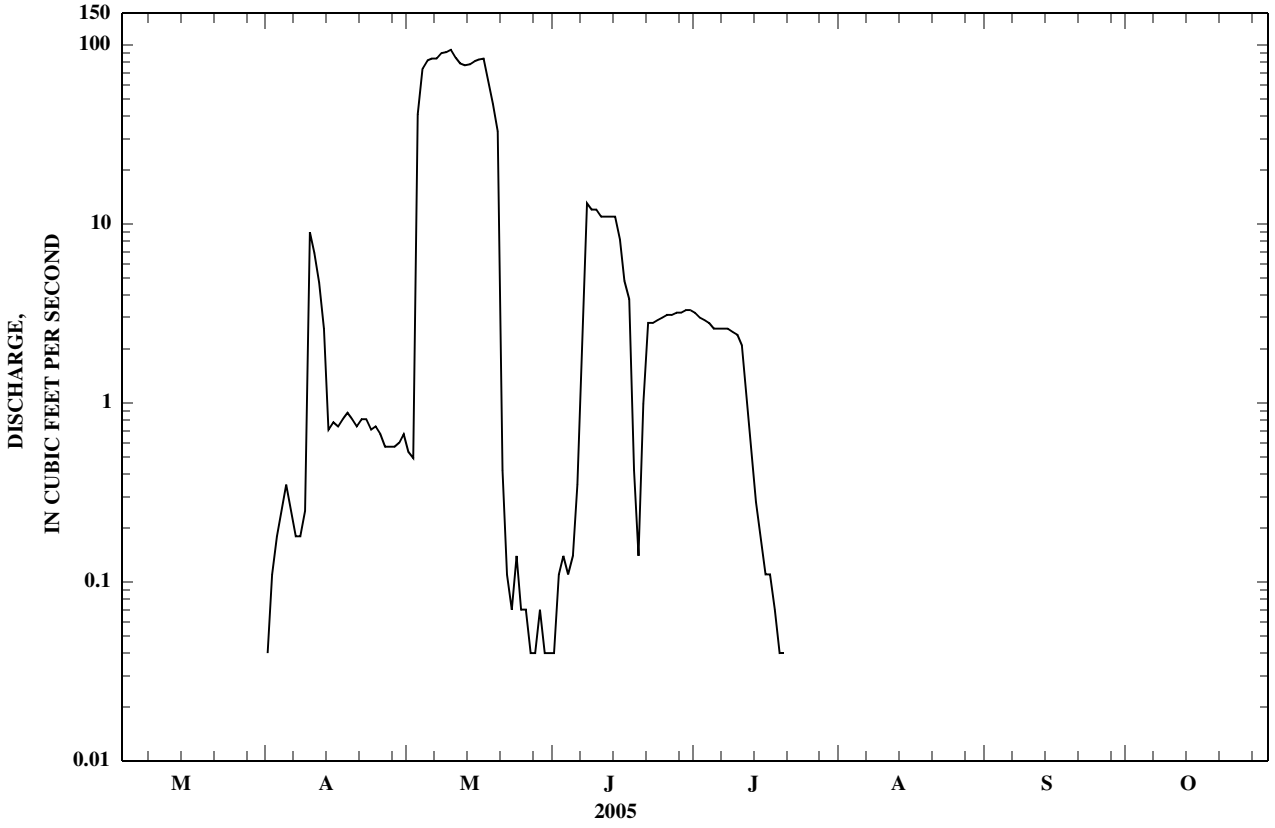
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 304 ft^3/s, May 4, 1951; no flow at times each season.

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			e0.00	e0.04	0.53	0.04	3.2	0.00	0.00	0.00		
2			e0.00	e0.11	0.49	0.11	3.0	0.00	0.00	0.00		
3			e0.00	e0.18	41	0.14	2.9	0.00	0.00	0.00		
4			e0.00	e0.25	74	0.11	2.8	0.00	0.00	0.00		
5			e0.00	e0.35	82	0.14	2.6	0.00	0.00	0.00		
6			e0.00	e0.25	84	0.35	2.6	0.00	0.00	0.00		
7			e0.00	e0.18	84	3.0	2.6	0.00	0.00	0.00		
8			e0.00	e0.18	90	13	2.6	0.00	0.00	0.00		
9			e0.00	e0.25	91	12	2.5	0.00	0.00	0.00		
10			e0.00	e9.0	94	12	2.4	0.00	0.00	0.00		
11			e0.00	e6.9	85	11	2.1	0.00	0.00	0.00		
12			e0.00	e4.7	79	11	0.95	0.00	0.00	0.00		
13			e0.00	e2.6	77	11	0.49	0.00	0.00	0.00		
14			e0.00	0.71	78	11	0.28	0.00	0.00	0.00		
15			e0.00	0.78	81	8.2	0.18	0.00	0.00	0.00		
16			e0.00	0.74	83	4.8	0.11	0.00	0.00	0.00		
17			e0.00	0.81	84	3.8	0.11	0.00	0.00	0.00		
18			e0.00	0.88	63	0.42	0.07	0.00	0.00	0.00		
19			e0.00	0.81	47	0.14	0.04	0.00	0.00	0.00		
20			e0.00	0.74	33	0.99	0.04	0.00	0.00	0.00		
21			e0.00	0.81	0.42	2.8	0.00	0.00	0.00	0.00		
22			e0.00	0.81	0.11	2.8	0.00	0.00	0.00	0.00		
23			e0.00	0.71	0.07	2.9	0.00	0.00	0.00	0.00		
24			e0.00	0.74	0.14	3.0	0.00	0.00	0.00	0.00		
25			e0.00	0.67	0.07	3.1	0.00	0.00	0.00	0.00		
26			e0.00	0.57	0.07	3.1	0.00	0.00	0.00	0.00		
27			e0.00	0.57	0.04	3.2	0.00	0.00	0.00	0.00		
28			e0.00	0.57	0.04	3.2	0.00	0.00	0.00	0.00		
29			e0.00	0.60	0.07	3.3	0.00	0.00	0.00	0.00		
30			e0.00	0.67	0.04	3.3	0.00	0.00	0.00	0.00		
31			e0.00	---	0.04	---	0.00	0.00	---	0.00		
TOTAL			0.00	37.18	1,352.13	133.94	31.57	0.00	0.00	0.00		
MEAN			0.00	1.24	43.6	4.46	1.02	0.00	0.00	0.00		
MAX			0.00	9.0	94	13	3.2	0.00	0.00	0.00		
MIN			0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00		
AC-FT			0.00	74	2,680	266	63	0.00	0.00	0.00		

e--Estimated.

06149000 CYPRESS LAKE WEST OUTFLOW CANAL NEAR WEST PLAINS, SASKATCHEWAN—Continued



06149100 VIDORA DITCH NEAR CONSUL, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°27'27", long 109°35'30" (NAD 27), in $SW^1/_4$ sec.9, T.6, R.27 W., third meridian, Hydrologic Unit 10050008, on left bank 0.5 mi downstream from headgate near lower end of Cypress Lake west outflow canal, 12 mi north of Consul.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). March 1952 to current season in reports of Department of the Environment, Canada.

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft (NGVD 29). Prior to Aug. 1, 1963, at elevation 1.0 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Canal diverts water from Cypress Lake west outflow canal in $NE^1/_4$ sec.8, T.6, R.27 W., third meridian, for irrigation of about 2,140 acres in the Battle Creek basin. Water may be delivered either to this canal or returned to Battle Creek from Cypress Lake. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

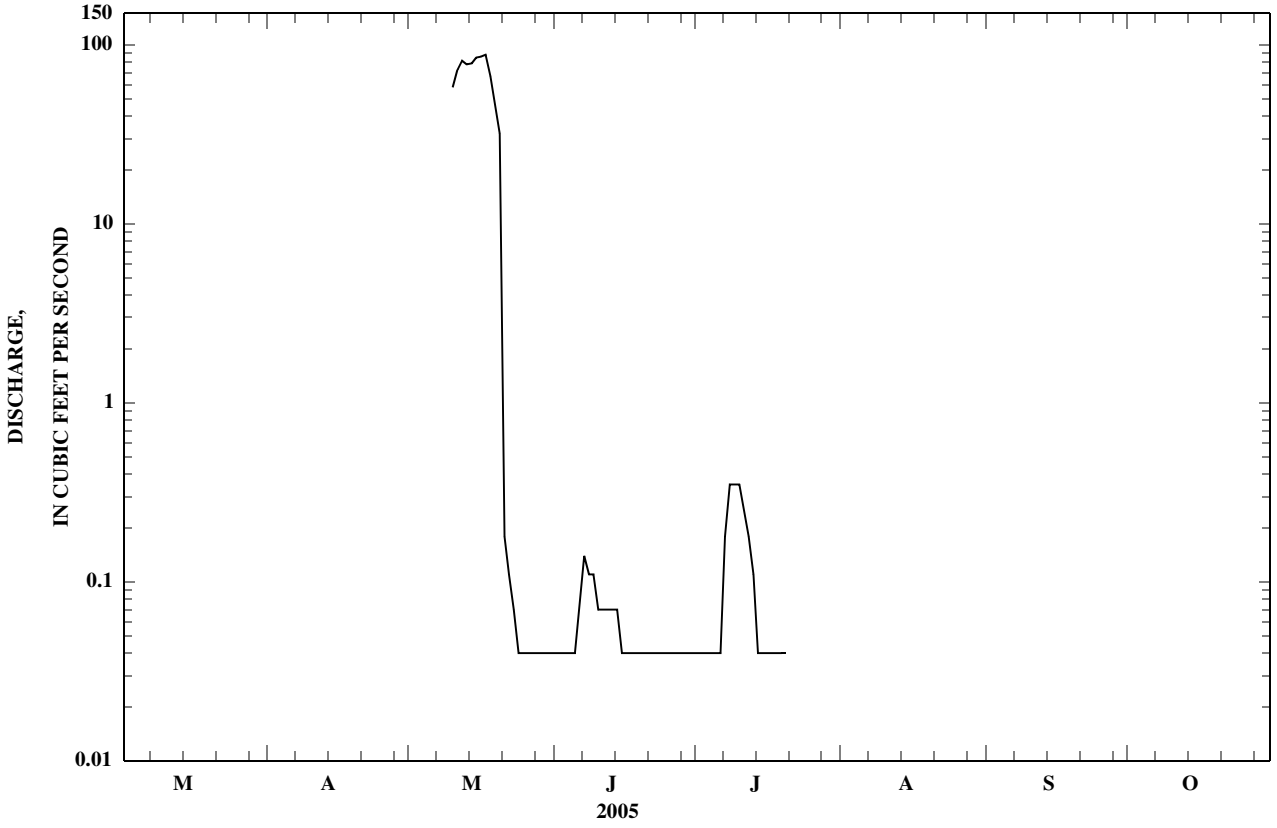
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 101 ft^3/s, May 26, 1988; no flow at times each season.

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			0.00	0.00	0.00	e0.04	e0.04	0.00	0.00	0.00		
2			0.00	0.00	0.00	e0.04	e0.04	0.00	0.00	0.00		
3			0.00	0.00	0.00	e0.04	e0.04	0.00	0.00	0.00		
4			0.00	0.00	0.00	e0.04	e0.04	0.00	0.00	0.00		
5			0.00	0.00	0.00	e0.04	e0.04	0.00	0.00	0.00		
6			0.00	0.00	0.00	e0.07	0.04	0.00	0.00	0.00		
7			0.00	0.00	0.00	e0.14	0.18	0.00	0.00	0.00		
8			0.00	0.00	0.00	e0.11	0.35	0.00	0.00	0.00		
9			0.00	0.00	0.00	e0.11	0.35	0.00	0.00	0.00		
10			0.00	0.00	58	e0.07	0.35	0.00	0.00	0.00		
11			0.00	0.00	73	e0.07	0.25	0.00	0.00	0.00		
12			0.00	0.00	82	e0.07	0.18	0.00	0.00	0.00		
13			0.00	0.00	78	e0.07	0.11	0.00	0.00	0.00		
14			0.00	0.00	79	e0.07	0.04	0.00	0.00	0.00		
15			0.00	0.00	85	e0.04	e0.04	0.00	0.00	0.00		
16			0.00	0.00	86	e0.04	e0.04	0.00	0.00	0.00		
17			0.00	0.00	88	e0.04	e0.04	0.00	0.00	0.00		
18			0.00	0.00	67	e0.04	e0.04	0.00	0.00	0.00		
19			0.00	0.00	46	e0.04	e0.04	0.00	0.00	0.00		
20			0.00	0.00	32	e0.04	e0.04	0.00	0.00	0.00		
21			0.00	0.00	e0.18	e0.04	0.00	0.00	0.00	0.00		
22			0.00	0.00	e0.11	e0.04	0.00	0.00	0.00	0.00		
23			0.00	0.00	e0.07	e0.04	0.00	0.00	0.00	0.00		
24			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
25			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
26			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
27			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
28			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
29			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
30			0.00	0.00	e0.04	e0.04	0.00	0.00	0.00	0.00		
31			0.00	---	e0.04	---	0.00	0.00	---	0.00		
TOTAL			0.00	0.00	774.68	1.62	2.29	0.00	0.00	0.00		
MEAN			0.00	0.00	25.0	0.05	0.07	0.00	0.00	0.00		
MAX			0.00	0.00	88	0.14	0.35	0.00	0.00	0.00		
MIN			0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	1,540	3.2	4.5	0.00	0.00	0.00		

e--Estimated.

06149100 VIDORA DITCH NEAR CONSUL, SASKATCHEWAN—Continued



06149200 RICHARDSON DITCH NEAR CONSUL, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°21'50", long 109°32'12" (NAD 27), near center of south line of sec.11, T.5, R.27 W., third meridian, Hydrologic Unit 10050008, on left bank 420 ft downstream from headgate, 4.8 mi north of Consul.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). 1910-12, 1914, 1916-20, 1922-33, 1935, July 1946 to current season in reports of Department of the Environment, Canada. Estimates of seasonal diversion only in most seasons prior to 1946.

GAGE.--Water-stage recorder. Prior to June 26, 1949, nonrecording gages at different sites and elevations. June 26, 1949, to Aug. 28, 1963, water-stage recorder at present site at elevation 1.00 ft higher.

REMARKS.--Records good. Ditch diverts from left bank of Battle Creek in $SW^1/_4$ sec.11, T.5, R.27 W., third meridian, for irrigation of about 1,330 acres along Battle Creek. Water Survey of Canada satellite telemeter at station.

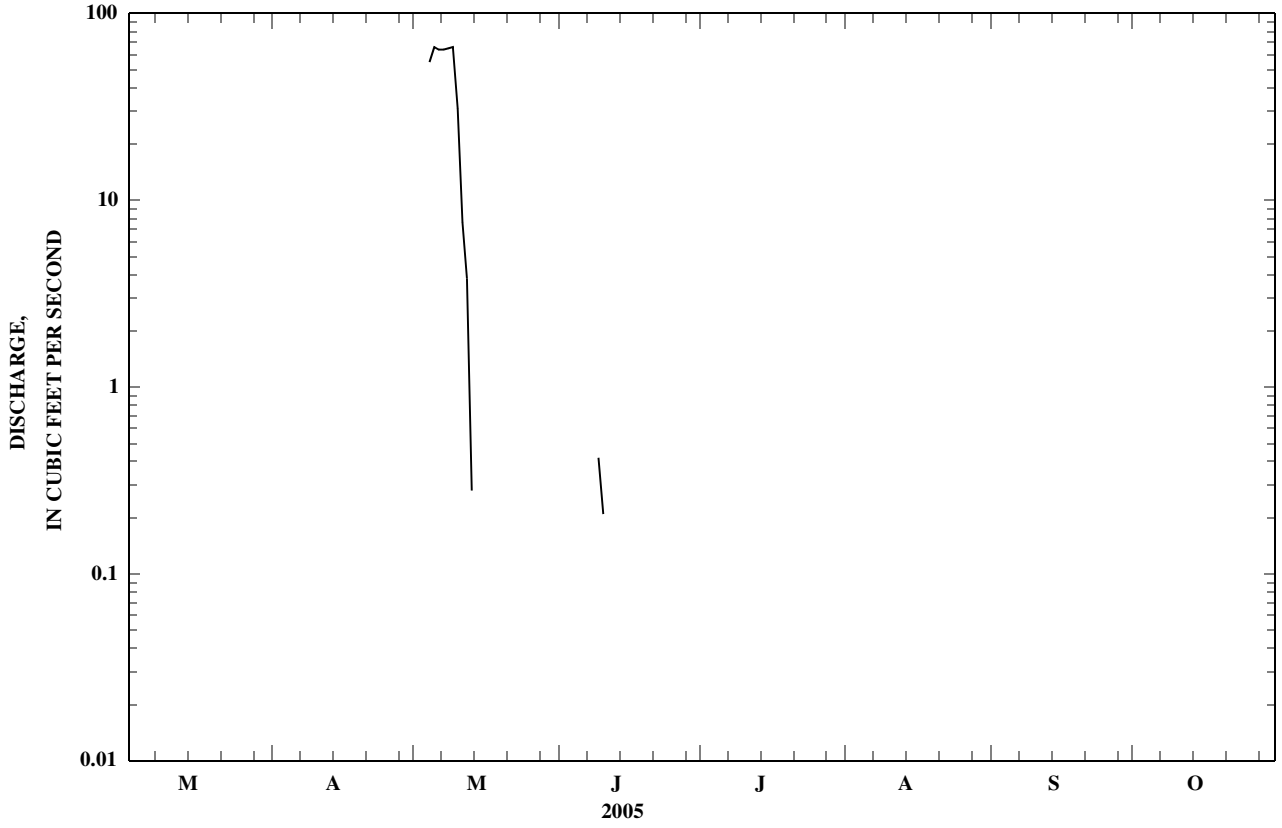
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 72 ft^3/s, June 15, 1974; no flow at times each season.

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			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4			0.00	0.00	55	0.00	0.00	0.00	0.00	0.00		
5			0.00	0.00	66	0.00	0.00	0.00	0.00	0.00		
6			0.00	0.00	64	0.04	0.00	0.00	0.00	0.00		
7			0.00	0.00	64	0.00	0.00	0.00	0.00	0.00		
8			0.00	0.00	65	0.00	0.00	0.00	0.00	0.00		
9			0.00	0.00	66	0.42	0.00	0.00	0.00	0.00		
10			0.00	0.00	31	0.21	0.00	0.00	0.00	0.00		
11			0.00	0.00	7.6	0.00	0.00	0.00	0.00	0.00		
12			0.00	0.00	3.8	0.00	0.00	0.00	0.00	0.00		
13			0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00		
14			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
16			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
17			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
18			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
19			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
20			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
21			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31			0.00	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			0.00	0.00	422.68	0.67	0.00	0.00	0.00	0.00		
MEAN			0.00	0.00	13.6	0.02	0.00	0.00	0.00	0.00		
MAX			0.00	0.00	66	0.42	0.00	0.00	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	838	1.3	0.00	0.00	0.00	0.00		

06149200 RICHARDSON DITCH NEAR CONSUL, SASKATCHEWAN—Continued



06149300 MCKINNON DITCH NEAR CONSUL, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°20'00", long 109°29'40" (NAD 27), in NW$^1/_4$ sec.30, T.4, R.26 W., third meridian, Hydrologic Unit 10050008, on right bank 1.0 mi downstream from headgate on Battle Creek, and 2.7 mi northeast of Consul.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). 1911-26, 1929-31, and March 1938 to current season in reports of Department of the Environment, Canada. Estimates of seasonal diversions only in many years prior to 1947.

GAGE.--Water-stage recorder. Prior to September 1949, nonrecording gages at various sites and elevations. Sept. 4, 1949, to Aug. 29, 1963, water-stage recorder at present site at elevation 1.00 ft higher.

REMARKS.--Records good. Ditch diverts from right bank of Battle Creek in NE$^1/_4$ sec.30, T.4, R.26 W., third meridian, for irrigation of about 1,320 acres along Battle Creek. Water Survey of Canada satellite telemeter at station.

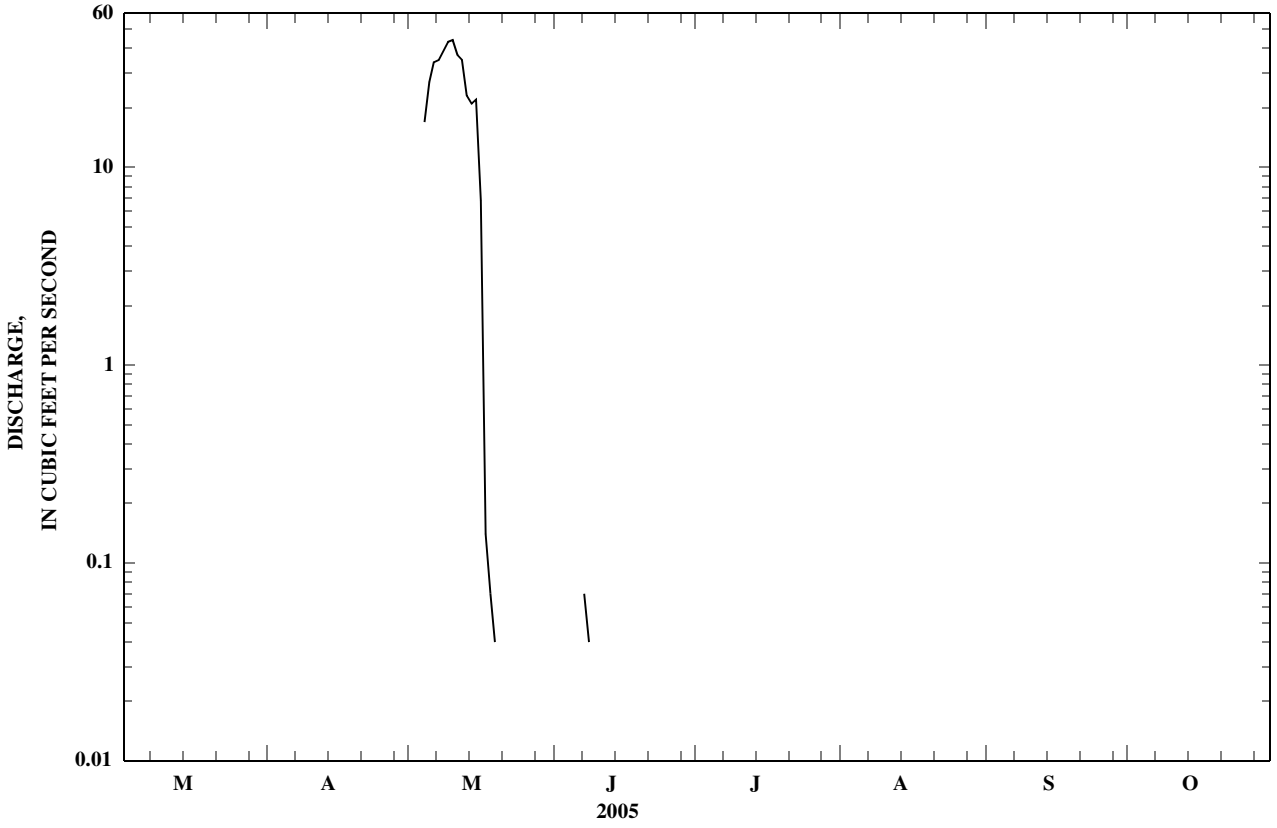
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 68 ft^3/s, June 18, 1975; no flow at times each season.

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			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4			0.00	0.00	17	0.00	0.00	0.00	0.00	0.00		
5			0.00	0.00	27	0.00	0.00	0.00	0.00	0.00		
6			0.00	0.00	34	0.00	0.00	0.00	0.00	0.00		
7			0.00	0.00	35	0.07	0.00	0.00	0.00	0.00		
8			0.00	0.00	39	0.04	0.00	0.00	0.00	0.00		
9			0.00	0.00	43	0.00	0.00	0.00	0.00	0.00		
10			0.00	0.00	44	0.00	0.00	0.00	0.00	0.00		
11			0.00	0.00	37	0.00	0.00	0.00	0.00	0.00		
12			0.00	0.00	35	0.00	0.00	0.00	0.00	0.00		
13			0.00	0.00	23	0.00	0.00	0.00	0.00	0.00		
14			0.00	0.00	21	0.00	0.00	0.00	0.00	0.00		
15			0.00	0.00	22	0.00	0.00	0.00	0.00	0.00		
16			0.00	0.00	6.8	0.00	0.00	0.00	0.00	0.00		
17			0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00		
18			0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00		
19			0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00		
20			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
21			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31			0.00	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			0.00	0.00	384.05	0.11	0.00	0.00	0.00	0.00		
MEAN			0.00	0.00	12.4	0.00	0.00	0.00	0.00	0.00		
MAX			0.00	0.00	44	0.07	0.00	0.00	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	762	0.2	0.00	0.00	0.00	0.00		

06149300 MCKINNON DITCH NEAR CONSUL, SASKATCHEWAN—Continued



06149400 NASHLYN CANAL NEAR CONSUL, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°13'57", long 109°33'27" (NAD 27), in NE$^1/_4$ sec.22, T.3, T.27 W., third meridian, Hydrologic Unit 10050008, on left bank 0.8 mi downstream from headgate on Battle Creek, and 5.9 mi south of Consul.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only); 1912, 1914-35, 1938 to current season in reports of Department of the Environment, Canada. Prior to March 1950, estimates of seasonal diversions only in many seasons. Prior to Mar. 1, 1971, published as "Stirling and Nash Ditch".

GAGE.--Water-stage recorder. Prior to Sept. 21, 1949, water-stage recorder at present site or nonrecording gages at site 0.5 mi downstream at different elevations.

REMARKS.--Records good. Ditch diverts water from left bank of Battle Creek in SW$^1/_4$ sec.27, T.3, R.27 W., third meridian, for irrigation of about 1,880 acres along Battle Creek. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

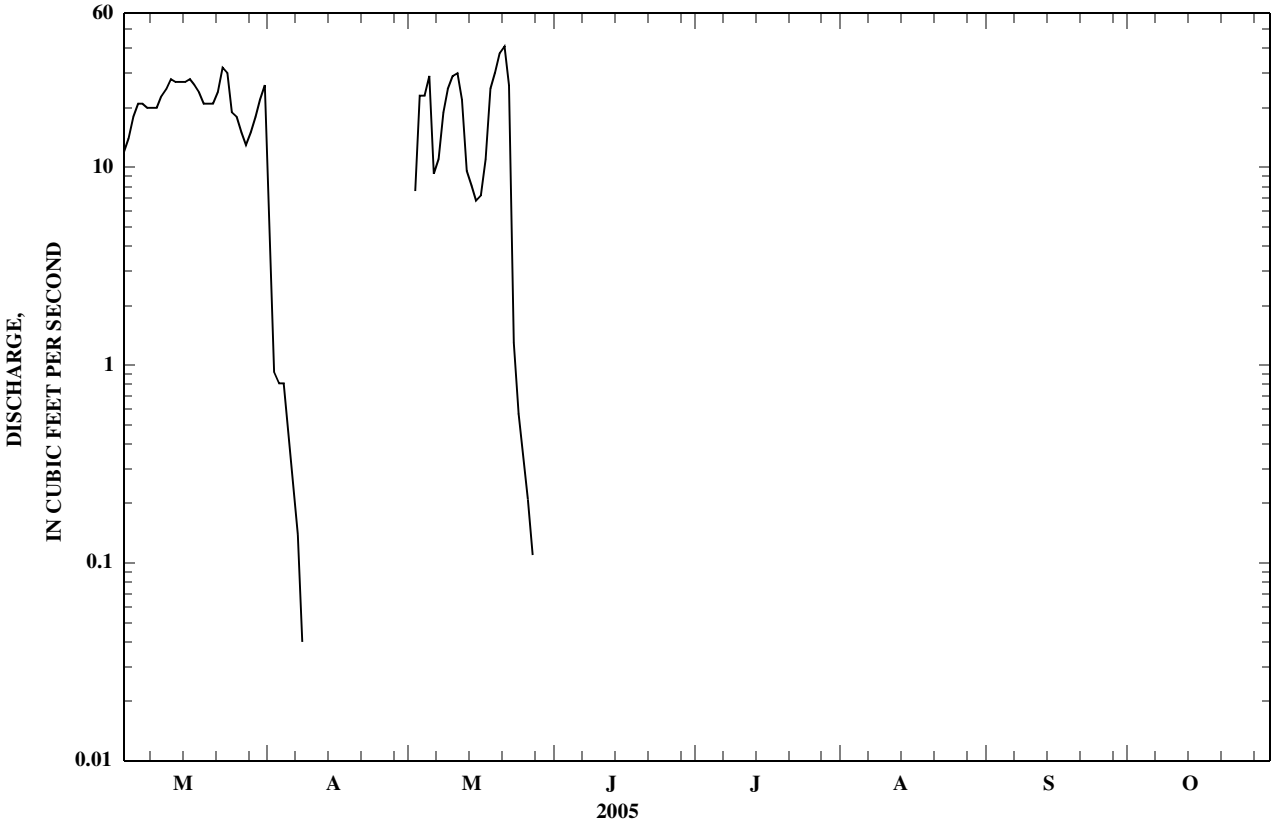
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 85 ft^3/s, Apr. 14, 1952; no flow at times each season.

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			e12	3.3	0.00	0.00	0.00	0.00	0.00	0.00		
2			e14	0.92	7.6	0.00	0.00	0.00	0.00	0.00		
3			e18	0.81	23	0.00	0.00	0.00	0.00	0.00		
4			e21	0.81	23	0.00	0.00	0.00	0.00	0.00		
5			e21	0.46	29	0.00	0.00	0.00	0.00	0.00		
6			e20	0.25	9.3	0.00	0.00	0.00	0.00	0.00		
7			e20	0.14	11	0.00	0.00	0.00	0.00	0.00		
8			e20	0.04	19	0.00	0.00	0.00	0.00	0.00		
9			e23	0.00	25	0.00	0.00	0.00	0.00	0.00		
10			e25	0.00	29	0.00	0.00	0.00	0.00	0.00		
11			e28	0.00	30	0.00	0.00	0.00	0.00	0.00		
12			e27	0.00	22	0.00	0.00	0.00	0.00	0.00		
13			e27	0.00	9.6	0.00	0.00	0.00	0.00	0.00		
14			e27	0.00	8.1	0.00	0.00	0.00	0.00	0.00		
15			e28	0.00	6.8	0.00	0.00	0.00	0.00	0.00		
16			e26	0.00	7.2	0.00	0.00	0.00	0.00	0.00		
17			e24	0.00	11	0.00	0.00	0.00	0.00	0.00		
18			e21	0.00	25	0.00	0.00	0.00	0.00	0.00		
19			e21	0.00	30	0.00	0.00	0.00	0.00	0.00		
20			e21	0.00	38	0.00	0.00	0.00	0.00	0.00		
21			e24	0.00	41	0.00	0.00	0.00	0.00	0.00		
22			e32	0.00	26	0.00	0.00	0.00	0.00	0.00		
23			e30	0.00	1.3	0.00	0.00	0.00	0.00	0.00		
24			e19	0.00	0.57	0.00	0.00	0.00	0.00	0.00		
25			e18	0.00	0.35	0.00	0.00	0.00	0.00	0.00		
26			e15	0.00	0.21	0.00	0.00	0.00	0.00	0.00		
27			e13	0.00	0.11	0.00	0.00	0.00	0.00	0.00		
28			e15	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29			18	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30			22	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31			26	---	0.00	---	0.00	0.00	---	0.00		
TOTAL			676	6.73	433.14	0.00	0.00	0.00	0.00	0.00		
MEAN			21.8	0.22	14.0	0.00	0.00	0.00	0.00	0.00		
MAX			32	3.3	41	0.00	0.00	0.00	0.00	0.00		
MIN			12	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			1,340	13	859	0.00	0.00	0.00	0.00	0.00		

e--Estimated.

06149400 NASHLYN CANAL NEAR CONSUL, SASKATCHEWAN—Continued



06149500 BATTLE CREEK AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'07", long 109°25'18" (NAD 27), in SE$^1/_4$ sec.4, T.1, R.26 W., third meridian, Hydrologic Unit 10050008, on left bank 600 ft north of international boundary, in Saskatchewan, 8 mi upstream from Woodpile Coulee, 30 mi north of Chinook, , and at mile 69.8.

DRAINAGE AREA.--997 mi^2, of which 378 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1917 to current season (seasonal records only most seasons). Monthly discharge only for March 1918 and March 1928, published in WSP 1309.

REVISED RECORDS.--WSP 1389: 1935(M), 1936, 1937-38(M). WSP 1729: 1924, 1926, 1932 (monthly discharge only). W 1983: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,729.8 ft (International Boundary Commission Survey Datum).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 9,500 acres, and return flow from irrigated areas. Water may be diverted into or from Frenchman River basin through Cypress Lake. Water Survey of Canada satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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		e12	e19	32	14	17	30	2.1	12	5.5		
2		e16	e20	32	16	17	30	1.9	17	5.4		
3		e18	16	31	25	17	30	1.5	14	4.6		
4		e14	11	32	20	16	33	1.1	11	4.7		
5		e8.8	9.3	37	9.7	16	35	1.1	9.7	4.4		
6		e9.9	9.3	42	5.2	21	34	0.99	8.4	5.3		
7		e12	8.3	38	3.2	25	31	0.88	7.8	5.2		
8		e14	11	40	2.2	51	28	0.74	7.1	5.5		
9		e15	14	32	1.8	37	25	0.64	6.9	5.8		
10		e14	12	26	1.4	32	25	0.64	6.7	5.4		
11		e12	16	19	1.1	41	22	0.71	6.9	5.5		
12		e11	17	24	1.0	87	18	0.57	6.5	5.8		
13		e11	12	39	1.0	83	17	0.67	6.1	5.3		
14		e11	19	52	0.88	74	14	0.85	5.9	5.0		
15		e10	12	52	0.78	61	13	0.74	6.4	5.1		
16		e9.6	20	35	7.0	45	13	0.71	6.1	4.9		
17		e9.5	15	32	8.9	36	12	0.64	5.3	4.7		
18		e9.7	12	34	7.6	35	11	0.49	5.4	5.0		
19		e10	8.6	31	5.7	35	8.4	4.9	10	5.2		
20		e10	9.7	33	3.7	28	7.0	11	9.9	5.3		
21		e11	9.0	33	2.5	23	5.9	9.5	9.0	5.2		
22		e12	6.5	37	1.8	19	5.4	9.1	7.6	4.7		
23		e12	6.6	42	1.2	24	4.9	8.4	7.0	3.7		
24		e13	20	40	2.3	22	4.4	9.2	7.5	12		
25		e15	14	37	31	15	3.5	9.1	7.4	18		
26		e16	12	29	48	20	3.1	8.6	7.0	18		
27		e17	11	21	40	37	3.0	9.5	6.1	17		
28		e18	8.4	17	35	35	3.0	9.1	5.1	17		
29		---	8.6	14	32	32	2.9	10	4.8	17		
30		---	9.4	15	32	31	2.6	10	4.9	16		
31		---	10	---	22	---	2.3	9.3	---	16		
TOTAL		351.5	386.7	978	383.96	1,032	477.4	134.67	235.5	248.2		
MEAN		12.6	12.5	32.6	12.4	34.4	15.4	4.34	7.85	8.01		
MAX		18	20	52	48	87	35	11	17	18		
MIN		8.8	6.5	14	0.78	15	2.3	0.49	4.8	3.7		
AC-FT		697	767	1,940	762	2,050	947	267	467	492		

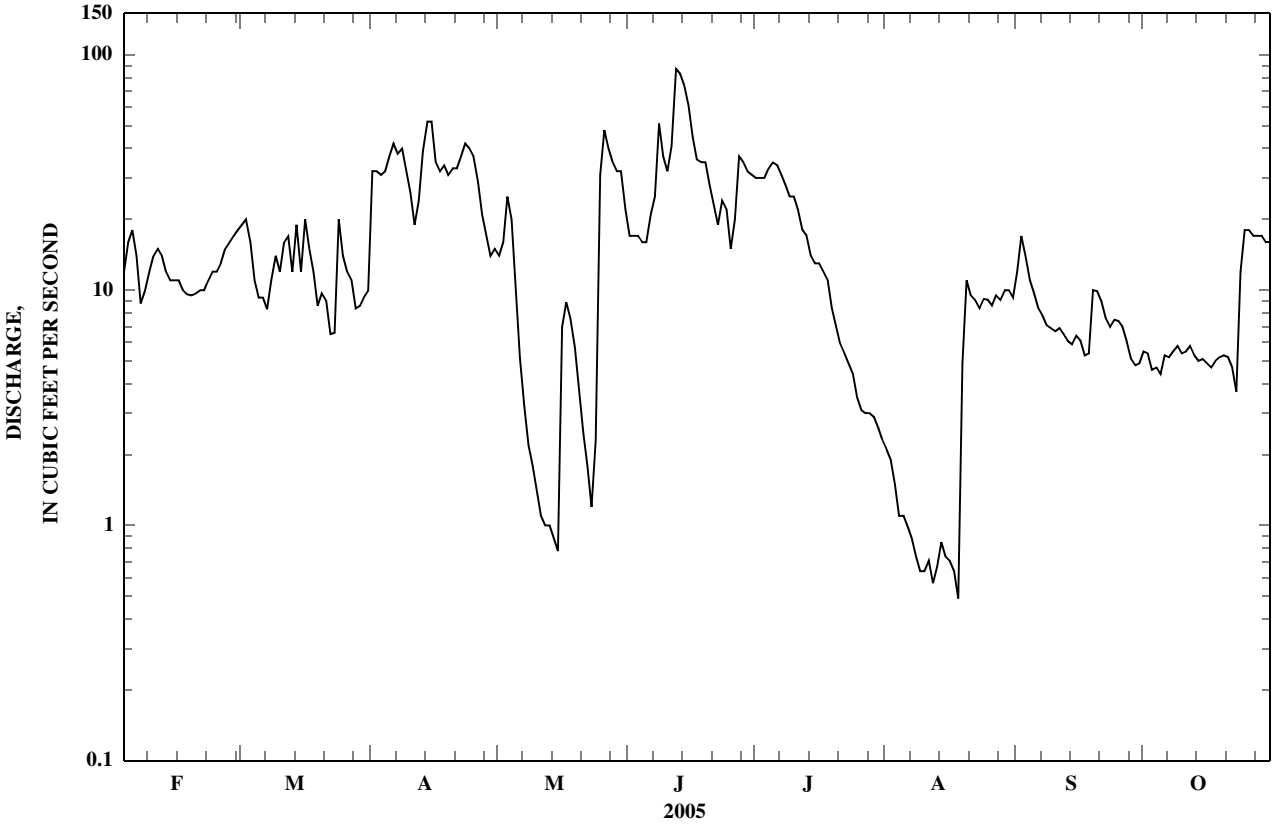
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1917 - 2005

MEAN	3.03	49.9	124	56.8	32.7	16.6	7.03	8.06	8.05
MAX	12.6	353	1,526	538	261	250	50.7	332	57.7
(WY)	(2005)	(1997)	(1952)	(1927)	(1927)	(1955)	(1975)	(1986)	(1987)
MIN	0.00	0.00	4.34	0.77	0.00	0.00	0.00	0.00	0.00
(WY)	(1920)	(1936)	(1981)	(1937)	(1937)	(1919)	(1919)	(1919)	(1920)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1917 - 2005	
HIGHEST DAILY MEAN	87	Jun 12	5,590	Apr 15, 1952
LOWEST DAILY MEAN	0.49	Aug 18	0.00	Mar 1, 1918
MAXIMUM PEAK FLOW	96	Jun 12	a9,780	Sep 25, 1986
MAXIMUM PEAK STAGE	4.56	Jun 12	11.57	Sep 25, 1986

a--From rating table extended above 4,400 ft^3/s on basis of slope-area measurement of peak flow.
e--Estimated.

06149500 BATTLE CREEK AT INTERNATIONAL BOUNDARY—Continued



06151500 BATTLE CREEK NEAR CHINOOK, MT

LOCATION.--Lat 48°38'58", long 109°13'54" (NAD 27), in NW$^1/_4$SW$^1/_4$NE$^1/_4$ sec.3, T.33 N., R.19 E., Blaine County, Hydrologic Unit 10050008, on left bank, 4 mi north of Chinook, and at river mile 14.

DRAINAGE AREA.--1,539 mi^2.

PERIOD OF RECORD.--April 1905 to September 1921 (monthly discharge only, published in WSP 1309), June 1984 to current year (seasonal records only). Published as North Fork Milk River near Chinook prior to 1913.

GAGE.--Water-stage recorder. Elevation of gage is 2,410 ft (NGVD 29). Apr. 22, 1905 to Apr. 8, 1918, chain gage 100 ft downstream, and Apr. 9, 1918 to Sept. 30, 1921, chain gage on bridge 600 ft downstream at same elevation but different from present elevation.

REMARKS.--Records fair. Diversions for irrigation of about 11,000 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

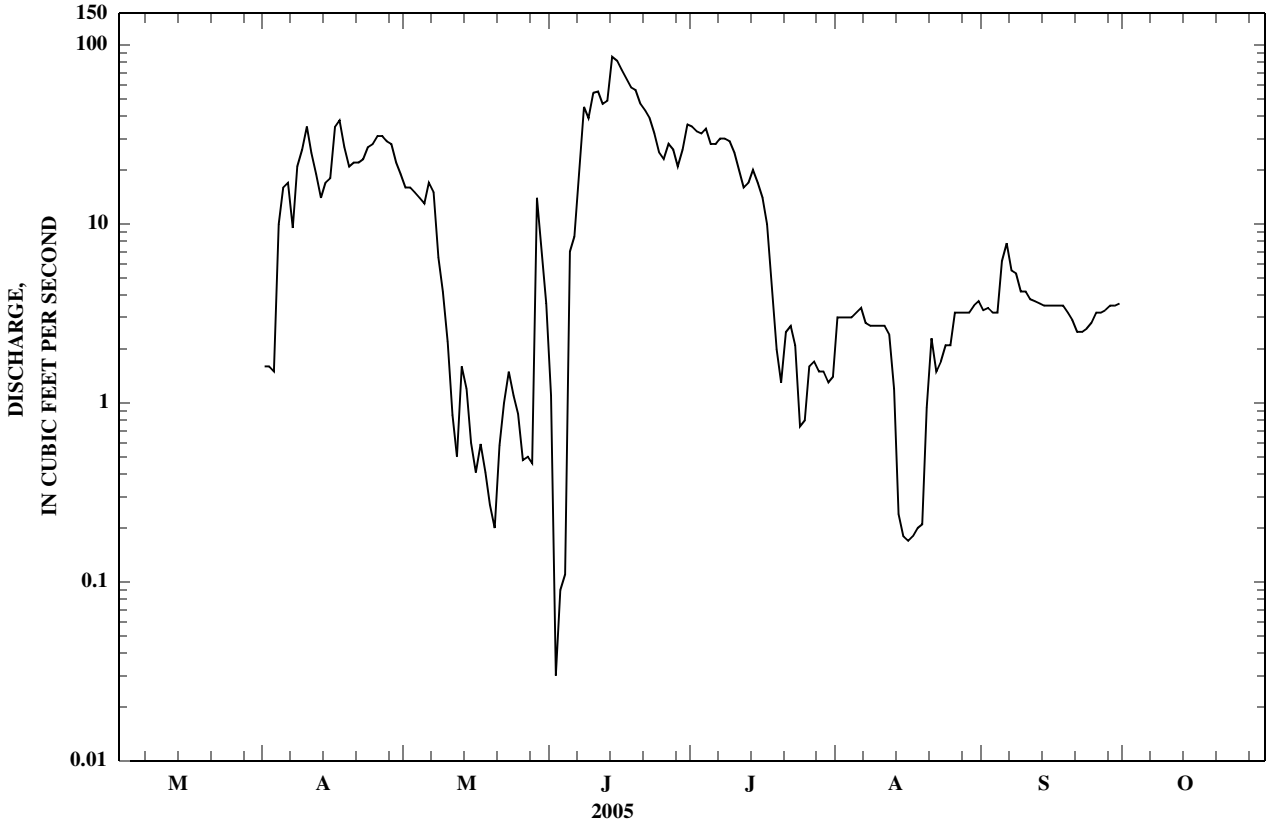
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				1.6	16	1.1	35	3.0	3.3			
2				1.6	16	0.03	33	3.0	3.4			
3				1.5	15	0.09	32	3.0	3.2			
4				10	14	0.11	34	3.0	3.2			
5				16	13	7.0	28	3.2	6.2			
6				17	17	8.5	28	3.4	7.8			
7				9.5	15	21	30	2.8	5.5			
8				21	6.5	45	30	2.7	5.3			
9				26	4.2	39	29	2.7	4.2			
10				35	2.2	54	25	2.7	4.2			
11				25	0.86	55	20	2.7	3.8			
12				19	0.50	47	16	2.4	3.7			
13				14	1.6	49	17	1.2	3.6			
14				17	1.2	86	20	0.24	3.5			
15				18	0.60	82	17	0.18	3.5			
16				35	0.41	73	14	0.17	3.5			
17				38	0.59	65	10	0.18	3.5			
18				27	0.41	58	4.6	0.20	3.5			
19				21	0.27	56	2.0	0.21	3.2			
20				22	0.20	47	1.3	0.94	2.9			
21				22	0.58	43	2.5	2.3	2.5			
22				23	1.0	39	2.7	1.5	2.5			
23				27	1.5	32	2.1	1.7	2.6			
24				28	1.1	25	0.74	2.1	2.8			
25				31	0.87	23	0.80	2.1	3.2			
26				31	0.48	28	1.6	3.2	3.2			
27				29	0.50	26	1.7	3.2	3.3			
28				28	0.46	21	1.5	3.2	3.5			
29				22	14	26	1.5	3.2	3.5			
30				19	7.1	36	1.3	3.5	3.6			
31				---	3.6	---	1.4	3.7	---			
TOTAL				635.2	156.73	1,092.83	443.74	67.62	111.7			
MEAN				21.2	5.06	36.4	14.3	2.18	3.72			
MAX				38	17	86	35	3.7	7.8			
MIN				1.5	0.20	0.03	0.74	0.17	2.5			
AC-FT				1,260	311	2,170	880	134	222			

STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1984 - 2005

MEAN	57.0	25.2	22.7	12.8	3.02	45.5
MAX	539	101	48.3	57.6	15.3	910
(WY)	(1996)	(1986)	(2002)	(2000)	(2002)	(1986)
MIN	0.03	0.00	0.09	0.02	0.00	0.00
(WY)	(2002)	(2002)	(1984)	(1984)	(1984)	(1984)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1984 - 2005	
HIGHEST DAILY MEAN	86	Jun 14	12,000	Sep 26 1986
LOWEST DAILY MEAN	0.03	Jun 2	0.00	Jul 12 1984
MAXIMUM PEAK FLOW	93	Jun 14	19,400	Sep 26 1986
MAXIMUM PEAK STAGE	2.38	Jun 14	22.91	Sep 26 1986

06151500 BATTLE CREEK NEAR CHINOOK, MT—Continued



06154100 MILK RIVER NEAR HARLEM, MT

LOCATION.--Lat 48°29'22", long 108°45'28" (NAD 27), in NE$^1/_4$ SE$^1/_4$ NE$^1/_4$ sec.32, T.32 N., R.23 E., Blaine County, Hydrologic Unit 10050004, Fort Belknap Indian Reservation, on right bank 30 ft downstream from U.S. Highway 2 bridge, 0.6 mi northeast of unincorporated community of Fort Belknap Agency, 3.5 mi southeast of Harlem, and at river mile 332.2.

DRAINAGE AREA.--9,822 mi^2.

PERIOD OF RECORD.--October 1959 to September 1969, October 1982 to current year (seasonal record beginning 1994 water year). Gage heights only for period Apr. 3-25, 1952, published as "at Fort Belknap" in 1260-B.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,319.48 ft (NGVD 29). Apr. 3-25, 1952, nonrecording gage on old bridge 200 ft downstream at different elevation. Nov. 1, 1959, to Mar. 12, 1968, nonrecording gage or water-stage recorder at several sites within 0.5 mi of present site at different elevation.

REMARKS.--Records good. Flow increased during irrigation season by water from St. Mary Canal (station number 05018500). Flow mainly regulated by Fresno Reservoir (station number 06136500) since 1939. Diversions for irrigation of about 60,000 acres of which about 13,000 acres lie downstream 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 April 1952 reached a stage of about 23.5 ft, present site and elevation.

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			e80	81	210	401	367	517	456	74		
2			e80	77	211	400	361	505	443	72		
3			e90	74	213	425	319	500	427	69		
4			e100	82	215	388	350	488	420	71		
5			e110	86	211	412	400	507	423	74		
6			157	75	211	452	357	573	414	72		
7			131	66	255	555	352	596	399	74		
8			106	62	321	631	282	596	398	73		
9			97	55	333	591	267	613	361	69		
10			90	147	328	596	266	623	342	66		
11			88	174	321	613	347	623	329	67		
12			87	102	320	499	314	625	349	67		
13			80	82	360	381	270	598	358	72		
14			79	69	369	342	215	567	354	70		
15			76	55	399	394	200	556	324	68		
16			75	52	511	412	253	527	258	68		
17			77	43	542	417	395	519	268	67		
18			70	52	532	445	455	524	253	66		
19			80	133	412	427	486	539	135	68		
20			85	154	284	396	474	551	95	69		
21			81	143	277	354	446	510	83	68		
22			87	153	330	354	440	452	74	65		
23			90	184	412	330	461	441	83	67		
24			86	199	399	350	496	474	127	67		
25			85	188	362	373	503	494	131	64		
26			85	191	363	383	508	486	126	64		
27			83	193	359	385	532	470	99	65		
28			82	192	365	372	519	450	88	64		
29			80	196	354	349	557	442	83	64		
30			72	203	364	355	598	436	76	65		
31			72	---	396	---	515	448	---	70		
TOTAL			2,741	3,563	10,539	12,782	12,305	16,250	7,776	2,119		
MEAN			88.4	119	340	426	397	524	259	68.4		
MAX			157	203	542	631	598	625	456	74		
MIN			70	43	210	330	200	436	74	64		
AC-FT			5,440	7,070	20,900	25,350	24,410	32,230	15,420	4,200		

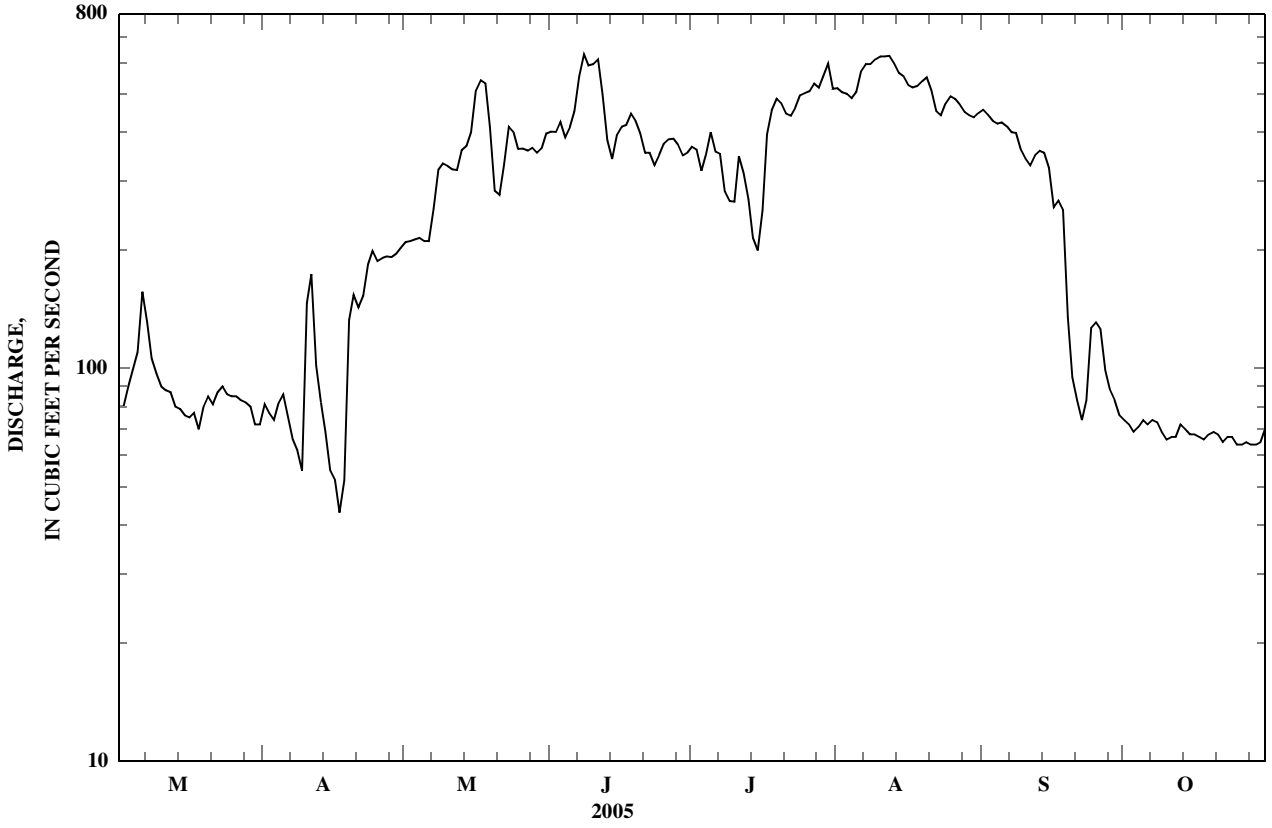
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1993 AND SEASONS 1994 - 2005*

MEAN	69.4	84.5	443	540	645	578	559	398	341	205	94.4	71.8
MAX	139	200	2,287	2,935	3,506	1,506	2,484	726	1,913	949	289	198
(WY)	(1990)	(1987)	(1996)	(1965)	(1967)	(1965)	(1965)	(1965)	(1986)	(1987)	(1987)	(1987)
MIN	19.0	26.5	37.1	54.4	129	232	138	10.3	20.9	37.4	31.2	25.9
(WY)	(1985)	(1985)	(2002)	(1961)	(2001)	(1985)	(2001)	(1988)	(1988)	(1989)	(1964)	(1985)

06154100 MILK RIVER NEAR HARLEM, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1960 - 1993		SEASONS 1994 - 2005*	
ANNUAL MEAN			349			
HIGHEST ANNUAL MEAN			857	1965		
LOWEST ANNUAL MEAN			139	1984		
HIGHEST DAILY MEAN	631	Jun 8	12,900	Sep 29, 1986	6,190	Mar 18, 1996
LOWEST DAILY MEAN	43	Apr 17	a0.00	Aug 10, 1988	2.5	Apr 6, 2001
ANNUAL SEVEN-DAY MINIMUM			0.00	Aug 24, 1988		
MAXIMUM PEAK FLOW	653	Jun 10	13,900	Sep 29, 1986	6,450	Mar 18, 1996
MAXIMUM PEAK STAGE	7.07	Jun 10	25.73	Sep 29, 1986	23.88	Mar 18, 1996
INSTANTANEOUS LOW FLOW			0.00	Aug 1, 1988		
ANNUAL RUNOFF (AC-FT)			253,200			
10 PERCENT EXCEEDS			682			
50 PERCENT EXCEEDS			180			
90 PERCENT EXCEEDS			39			

*--During period of operation (1960-69, 1983 to current year. Seasonal records beginning water year 1994).
a--No flow on many days in August and September 1988.
e--Estimated.



06154400 PEOPLES CREEK NEAR HAYS, MT

LOCATION.--Lat 48°13'25", long 108°42'48" (NAD 27), in SW$^1/_4$ sec.35, T.29 N., R.23 E., Blaine County, Hydrologic Unit 10050009, on right bank 45 ft downstream from bridge on State Highway 66, 2.5 mi downstream from Myrtle Creek, 16.4 mi north of Hays, and at river mile 47.2.

DRAINAGE AREA.--220 mi^2.

PERIOD OF RECORD.--December 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,714.10 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some storage in numerous stock and beaver ponds and diversions for irrigation of about 1,300 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	0.01	0.00	0.04	e0.00	e0.00	e0.05	14	4.8	0.26	17	0.10	0.10
2	0.02	0.00	0.03	e0.00	e0.00	e0.20	13	5.0	0.74	14	0.10	0.09
3	0.03	0.00	0.03	e0.00	e0.00	e0.50	11	4.3	1.3	11	0.10	0.10
4	0.03	0.00	0.03	e0.00	e0.00	e1.0	10	3.7	2.0	9.5	0.10	0.10
5	0.04	0.00	0.02	e0.00	e0.00	e2.0	8.9	3.3	1.5	8.3	0.08	0.10
6	0.04	0.01	0.02	e0.00	e0.00	e3.0	8.7	3.1	3.0	6.7	0.09	0.10
7	0.05	0.00	0.02	e0.00	e0.00	4.6	7.8	2.5	4.4	5.0	0.08	0.10
8	0.06	0.00	0.02	e0.00	e0.00	4.2	7.1	1.5	8.1	3.4	0.10	0.10
9	0.07	0.00	0.00	e0.00	e0.00	4.2	14	2.1	16	2.3	0.10	0.10
10	0.10	0.00	0.00	e0.00	e0.00	4.2	26	1.6	18	1.3	0.10	0.10
11	0.06	0.00	e0.00	e0.00	e0.00	4.0	25	1.8	16	0.81	0.10	0.10
12	0.06	0.00	e0.00	e0.00	e0.00	4.3	25	1.5	12	0.50	0.10	0.10
13	0.06	0.00	e0.00	e0.00	e0.00	3.9	26	1.5	14	0.29	0.10	0.11
14	0.07	0.00	e0.00	e0.00	e0.00	4.0	22	2.0	22	0.23	0.09	0.10
15	0.07	0.00	e0.00	e0.00	e0.00	3.7	23	2.0	29	0.14	0.10	0.10
16	0.07	0.00	e0.00	e0.00	e0.00	5.6	27	2.2	28	0.10	0.10	0.10
17	0.06	0.03	e0.00	e0.00	e0.00	7.3	27	3.0	23	0.10	0.09	0.10
18	0.04	0.04	e0.00	e0.00	e0.00	6.2	22	2.4	21	0.09	0.10	0.09
19	0.02	0.05	e0.00	e0.00	e0.00	3.9	18	1.6	16	0.09	0.08	0.09
20	0.02	0.05	e0.00	e0.00	e0.00	4.1	14	0.99	15	0.08	0.08	0.10
21	0.02	0.06	e0.00	e0.00	e0.00	6.2	12	1.5	13	0.08	0.08	0.10
22	0.04	0.05	e0.00	e0.00	e0.00	5.7	9.0	1.3	12	0.09	0.08	0.10
23	0.06	0.05	e0.00	e0.00	e0.00	5.9	7.1	1.9	12	0.09	0.09	0.09
24	0.04	0.04	e0.00	e0.00	e0.00	4.6	6.7	1.7	12	0.09	0.10	0.07
25	0.03	0.04	e0.00	e0.00	e0.00	5.4	5.1	1.3	15	0.11	0.10	0.03
26	0.01	0.04	e0.00	e0.00	e0.00	7.6	4.7	1.0	14	0.09	0.09	0.00
27	0.00	0.04	e0.00	e0.00	e0.00	8.4	4.5	0.63	15	0.10	0.10	0.00
28	0.00	0.04	e0.00	e0.00	e0.00	9.8	4.8	0.64	24	0.09	0.10	0.00
29	0.00	0.04	e0.00	e0.00	---	10	4.6	0.35	15	0.09	0.09	0.00
30	0.00	0.03	e0.00	e0.00	---	11	4.5	0.29	16	0.09	0.10	0.00
31	0.00	---	e0.00	e0.00	---	14	---	0.24	---	0.09	0.10	---
TOTAL	1.18	0.61	0.21	0.00	0.00	159.55	412.5	61.74	399.30	81.94	2.92	2.37
MEAN	0.04	0.02	0.01	0.00	0.00	5.15	13.8	1.99	13.3	2.64	0.09	0.08
MAX	0.10	0.06	0.04	0.00	0.00	14	27	5.0	29	17	0.10	0.11
MIN	0.00	0.00	0.00	0.00	0.00	0.05	4.5	0.24	0.26	0.08	0.08	0.00
AC-FT	2.3	1.2	0.4	0.00	0.00	316	818	122	792	163	5.8	4.7

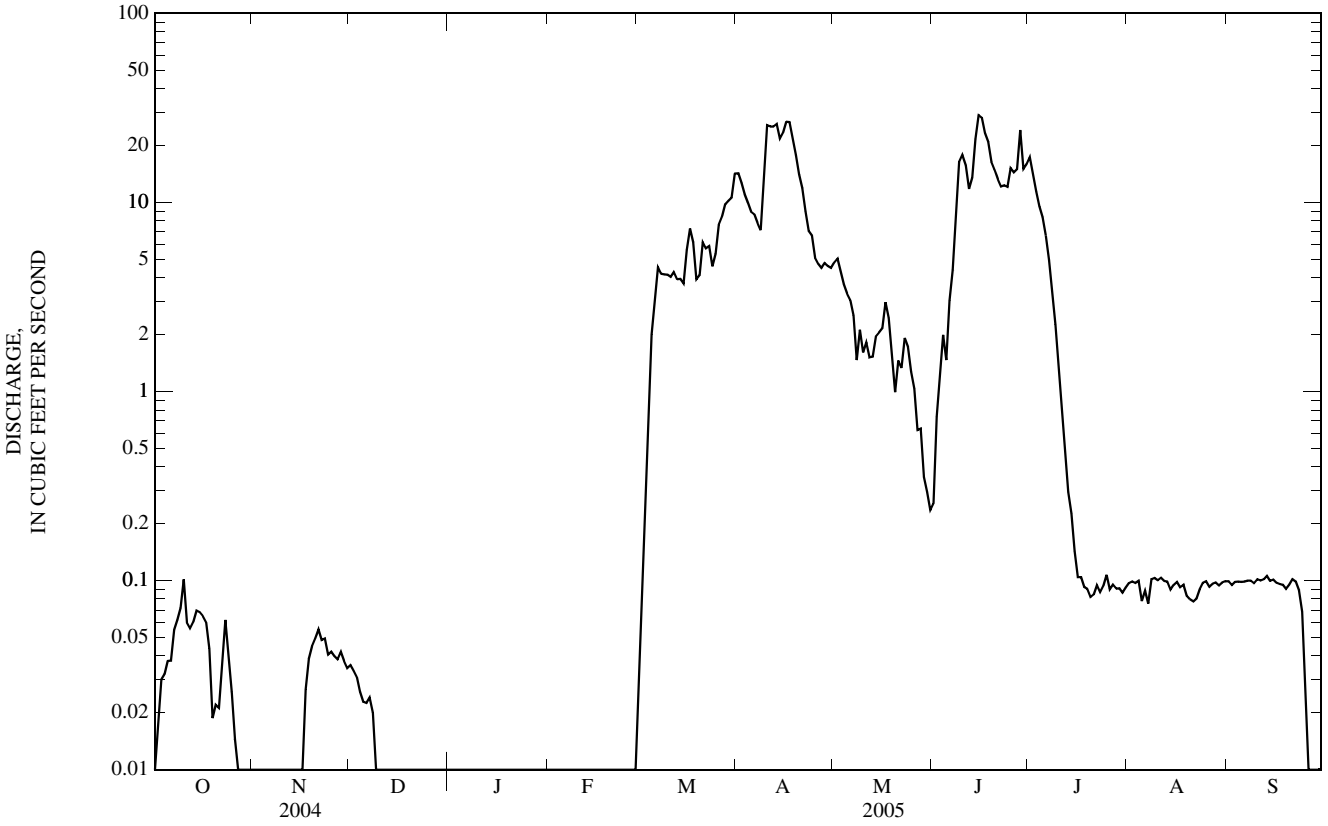
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	3.25	3.15	2.58	3.29	8.56	28.1	17.1	28.6	20.2	7.93	2.24	3.42
MAX	37.1	20.5	12.9	30.0	74.9	285	122	190	123	51.5	21.3	57.6
(WY)	(1987)	(1987)	(1987)	(1971)	(1971)	(1979)	(1979)	(1975)	(1982)	(1975)	(1975)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.03	0.00	0.00	0.00
(WY)	(1972)	(1972)	(1972)	(1972)	(1998)	(2002)	(2002)	(2001)	(2001)	(1972)	(1967)	(1969)

06154400 PEOPLES CREEK NEAR HAYS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005	
ANNUAL TOTAL	1,695.43		1,122.32			
ANNUAL MEAN	4.63		3.07		10.5*	
HIGHEST ANNUAL MEAN					47.8	1979
LOWEST ANNUAL MEAN					0.10	2001
HIGHEST DAILY MEAN	209	Mar 9	29	Jun 15	1,000	Mar 7, 1979
LOWEST DAILY MEAN	0.00	Jan 31	0.00	Oct 27	a0.00	Dec 1, 1966
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 31	0.00	Oct 27	0.00	Dec 1, 1966
MAXIMUM PEAK FLOW			49	Jun 28	b8,460	Jun 8, 1972
MAXIMUM PEAK STAGE			4.62	Jun 28	15.03	Jun 8, 1972
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Jan 2, 1995
ANNUAL RUNOFF (AC-FT)	3,360		2,230		7,640	
10 PERCENT EXCEEDS	10		12		20	
50 PERCENT EXCEEDS	0.05		0.09		0.99	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

*--Median of yearly mean discharge, 4.66 ft^3/s, 3,380 ac-ft/yr.
a--No flow at times most years.
b--From floodmark, from rating curve extended above 490 ft^3/s on basis of slope-area measurement of peak flow.
e--Estimated.



06154410 LITTLE PEOPLES CREEK NEAR HAYS, MT

LOCATION.--Lat 47°57'58", long 108°39'36" (NAD 27), in $SE^1/_4SE^1/_4NW^1/_4$ sec.32, T.26 N., R.24 E., Blaine County, Hydrologic Unit 10050009, on right bank 0.5 mi upstream from west entrance to Mission Canyon, 2 mi southeast of Hays, and at river mile 23.1.

DRAINAGE AREA.--13.0 mi^2.

PERIOD OF RECORD.--August 1972 to current year.

REVISED RECORDS.--WDR -81-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,769.72 ft (NGVD 29). August 1972 to June 24, 1976, gage at former site at elevation 10.00 ft higher. Prior to Apr. 22, 1987, gage located 330 ft downstream.

REMARKS.--Records 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	1.5	1.4	1.3	1.3	1.1	1.1	1.1	3.3	1.9	6.1	2.3	1.5
2	1.6	1.4	1.3	1.3	1.1	1.1	1.1	3.1	2.0	5.8	2.3	1.5
3	1.6	1.4	1.3	1.3	1.1	1.1	1.1	2.6	2.0	5.5	2.3	1.4
4	1.6	1.3	1.3	1.2	1.1	1.1	1.2	2.1	2.0	5.3	2.2	1.4
5	1.5	1.3	1.3	1.3	1.1	1.2	1.2	1.9	2.1	5.1	2.1	1.4
6	1.4	1.3	1.3	1.3	1.1	1.2	1.2	1.9	5.3	5.1	2.0	1.4
7	1.5	1.3	1.3	1.2	1.1	1.2	1.2	1.9	11	4.9	2.0	1.4
8	1.6	1.3	1.3	1.2	1.0	1.2	1.2	1.8	9.0	4.7	2.0	1.4
9	1.6	1.3	1.3	1.2	1.0	1.2	1.3	1.7	9.1	4.6	2.0	1.4
10	1.5	1.3	1.3	1.2	1.0	1.2	1.3	1.8	14	4.6	2.0	1.4
11	1.4	1.3	1.3	1.2	1.0	1.2	1.3	1.7	22	4.4	2.0	1.4
12	1.4	1.3	1.3	1.2	1.0	1.2	1.3	1.8	20	4.2	2.0	1.4
13	1.4	1.3	1.3	1.2	1.0	1.2	1.3	1.8	67	4.1	1.9	1.4
14	1.5	1.2	1.3	1.3	1.0	1.2	1.8	1.7	66	4.0	1.9	1.4
15	1.5	1.2	1.3	1.2	1.0	1.2	3.6	1.6	43	3.7	1.9	1.4
16	1.6	1.2	1.2	1.2	1.0	1.2	5.3	1.6	31	3.5	1.9	1.4
17	1.5	1.2	1.2	1.2	1.0	1.2	7.7	1.7	25	3.6	1.9	1.5
18	1.5	1.2	1.2	1.2	1.0	1.2	11	1.6	19	3.4	2.0	1.5
19	1.4	1.2	1.2	1.2	1.0	1.2	8.3	1.6	16	3.3	1.9	1.5
20	1.4	1.2	1.2	1.2	1.1	1.2	6.7	1.5	13	3.1	1.8	1.6
21	1.4	1.2	1.2	1.1	1.1	1.2	5.9	1.6	12	3.1	1.8	1.6
22	1.4	1.3	1.2	1.1	1.1	1.2	5.3	1.6	11	3.0	1.7	1.7
23	1.4	1.3	1.3	1.1	1.1	1.2	5.4	1.8	9.8	2.9	1.6	1.8
24	1.4	1.3	1.3	1.1	1.1	1.1	5.7	1.7	9.0	2.8	1.7	1.8
25	1.4	1.3	1.3	1.1	1.1	1.1	5.3	1.8	8.2	2.8	1.6	1.8
26	1.4	1.3	1.4	1.1	1.1	1.1	4.8	1.7	7.7	2.8	1.6	1.8
27	1.4	1.3	1.3	1.1	1.1	1.2	4.6	1.9	7.5	2.7	1.6	1.9
28	1.4	1.3	1.3	1.1	1.1	1.2	4.2	1.9	7.6	2.6	1.5	1.9
29	1.4	1.3	1.3	1.1	---	1.2	3.9	1.8	7.2	2.6	1.5	1.9
30	1.4	1.3	1.3	1.1	---	1.1	3.5	1.9	6.6	2.5	1.5	1.9
31	1.4	---	1.3	1.1	---	1.1	---	1.9	---	2.4	1.5	---
TOTAL	45.4	38.5	39.7	36.7	29.60	36.3	108.8	58.3	467.0	119.2	58.0	46.8
MEAN	1.46	1.28	1.28	1.18	1.06	1.17	3.63	1.88	15.6	3.85	1.87	1.56
MAX	1.6	1.4	1.4	1.3	1.1	1.2	11	3.3	67	6.1	2.3	1.9
MIN	1.4	1.2	1.2	1.1	1.0	1.1	1.1	1.5	1.9	2.4	1.5	1.4
AC-FT	90	76	79	73	59	72	216	116	926	236	115	93

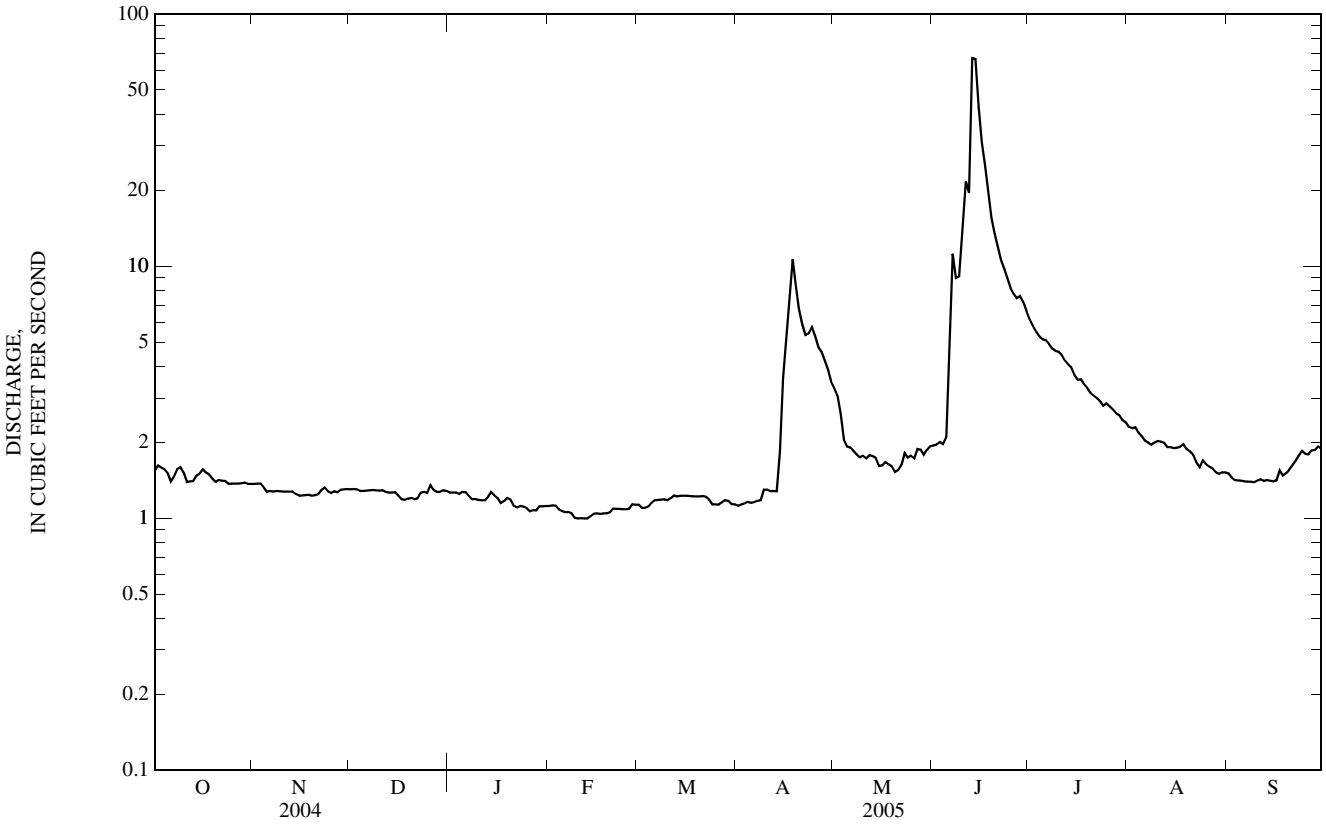
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

MEAN	2.28	2.10	1.95	1.84	1.74	2.23	4.39	11.4	8.49	5.19	2.83	2.49
MAX	6.92	4.60	3.75	3.84	3.51	5.52	21.5	75.6	26.6	32.9	8.11	8.42
(WY)	(1987)	(1987)	(1986)	(1976)	(1986)	(1996)	(1979)	(1974)	(1975)	(1993)	(1993)	(1978)
MIN	1.11	1.07	0.93	0.90	0.95	1.07	1.20	1.45	1.98	1.38	1.19	1.13
(WY)	(2002)	(2002)	(2002)	(2002)	(1997)	(2003)	(2002)	(2002)	(2000)	(2003)	(2003)	(2003)

06154410 LITTLE PEOPLES CREEK NEAR HAYS, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005	
ANNUAL TOTAL	969.50		1,084.30			
ANNUAL MEAN	2.65		2.97		3.92*	
HIGHEST ANNUAL MEAN					11.6	1974
LOWEST ANNUAL MEAN					1.46	2001
HIGHEST DAILY MEAN	31	Jun 12	67	Jun 13	500	May 25, 1974
LOWEST DAILY MEAN	1.0	Jan 1	1.0	Feb 8	0.67	May 21, 1997
ANNUAL SEVEN-DAY MINIMUM	1.0	Jan 1	1.0	Feb 8	0.76	May 18, 1997
MAXIMUM PEAK FLOW			112	Jun 13	a576	May 25, 1974
MAXIMUM PEAK STAGE			1.93	Jun 13	b4.57	May 25, 1974
INSTANTANEOUS LOW FLOW					0.67	May 21, 1997
ANNUAL RUNOFF (AC-FT)	1,920		2,150		2,840	
10 PERCENT EXCEEDS	4.8		5.3		6.5	
50 PERCENT EXCEEDS	1.4		1.4		2.1	
90 PERCENT EXCEEDS	1.0		1.1		1.3	

*--Median of yearly mean discharge, 3.02 ft^3/s.
a--From rating curve extended above 44 ft^3/s, on basis of slope-area measurement of flow.
b--From floodmark, at site and datum then in use.



06154550 PEOPLES CREEK BELOW KUHR COULEE, NEAR DODSON, MT

LOCATION.--Lat 48°21'49", long 108°21'16" (NAD 27), in $NW^1/_4NW^1/_4NE^1/_4$ sec.16, T.30 N., R.26 E., Phillips County, Hydrologic Unit 10050009, on right bank 10 ft downstream from bridge on county highway, 2.4 mi downstream from Kuhr Coulee, 5.5 mi southwest of Dodson, and at river mile 7.8.

DRAINAGE AREA.--675 mi^2.

PERIOD OF RECORD.--April 1918 to November 1921 (fragmentary), June 1951 to September 1973, October 1981 to September 1988 (published as "near Dodson"), October 1988 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 2,309.18 ft (NGVD 29) (levels by Bureau of Indian Affairs). Prior to June 1951, nonrecording gage at site 0.5 mi upstream at different elevation. June 1, 1951 to Sept. 30, 1988, water-stage recorder at sites 2.5 mi upstream at different elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 3,300 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	0.47	4.8	2.9	e0.80	e0.20	e0.70	20	6.9	2.1	50	0.00	0.00
2	0.68	5.0	2.9	e0.80	e0.20	e0.80	21	6.5	2.6	41	0.00	0.00
3	0.89	5.1	3.4	e0.85	e0.20	e1.0	20	6.8	3.4	37	0.00	0.00
4	1.2	4.9	3.9	e0.75	e0.20	e3.0	18	7.0	3.3	34	0.00	0.00
5	1.3	5.0	4.0	e0.65	e0.20	e4.0	18	6.3	3.4	32	0.00	0.00
6	1.5	4.9	3.4	e0.55	e0.10	e10	14	5.9	5.5	31	0.00	0.00
7	1.5	4.8	3.0	e0.50	e0.10	17	12	6.7	11	28	0.00	0.00
8	1.6	4.8	3.1	e0.30	e0.10	23	11	6.2	18	26	0.00	0.00
9	1.9	4.7	3.0	e0.30	e0.20	18	24	5.3	16	24	0.00	0.00
10	2.1	4.5	2.8	e0.30	e0.20	16	99	3.8	27	21	0.00	0.00
11	2.1	4.5	e3.0	e0.25	e0.30	13	49	2.7	28	21	0.00	0.00
12	2.3	4.3	2.6	e0.20	e0.30	12	37	2.9	26	17	0.00	0.00
13	2.1	4.1	2.5	e0.05	e0.20	11	36	3.4	28	15	0.00	0.00
14	2.7	3.8	2.7	e0.00	e0.10	10	33	3.9	47	14	0.00	0.00
15	2.7	4.2	3.1	e0.00	e0.10	8.3	28	3.2	41	12	0.00	0.00
16	3.0	4.7	2.8	e0.00	e0.10	9.3	25	3.0	60	9.4	0.00	0.00
17	3.1	5.0	3.1	e0.00	e0.10	9.9	26	5.5	72	7.0	0.00	0.00
18	3.4	4.8	2.8	e0.00	e0.10	7.9	25	7.6	64	6.5	0.00	0.00
19	3.6	4.7	2.8	e0.00	e0.10	11	24	7.5	56	5.1	0.00	0.00
20	3.9	4.0	e1.5	e0.00	e0.10	9.6	21	6.4	49	3.9	0.00	0.00
21	4.4	3.5	e1.5	e0.00	e0.10	12	19	5.8	45	1.9	0.00	0.00
22	4.6	4.1	e1.0	e0.00	e0.10	10	17	3.9	41	1.3	0.00	0.00
23	4.9	3.1	e1.0	e0.20	e0.20	12	15	3.9	39	0.76	0.00	0.00
24	4.8	3.4	e1.0	e0.20	e0.60	9.5	13	3.9	33	0.33	0.00	0.00
25	4.6	4.4	e1.0	e0.20	e0.60	9.4	10	3.7	34	0.31	0.00	0.00
26	4.6	4.7	e1.0	e0.10	e0.60	11	7.4	3.6	34	0.23	0.00	0.00
27	4.6	3.2	e1.0	e0.10	e0.50	12	6.9	3.1	34	0.10	0.00	0.00
28	4.7	3.4	e0.95	e0.10	e0.60	20	7.5	2.5	66	0.02	0.00	0.00
29	4.7	3.1	e1.0	e0.10	---	18	7.3	2.1	199	0.00	0.00	0.00
30	4.7	3.1	e0.55	e0.10	---	18	7.1	1.8	77	0.00	0.00	0.00
31	4.8	---	e0.85	e0.20	---	19	---	2.1	---	0.00	0.00	---
TOTAL	93.44	128.6	70.15	7.60	6.50	346.40	671.2	143.9	1,165.3	439.85	0.00	0.00
MEAN	3.01	4.29	2.26	0.25	0.23	11.2	22.4	4.64	38.8	14.2	0.00	0.00
MAX	4.9	5.1	4.0	0.85	0.60	23	99	7.6	199	50	0.00	0.00
MIN	0.47	3.1	0.55	0.00	0.10	0.70	6.9	1.8	2.1	0.00	0.00	0.00
AC-FT	185	255	139	15	13	687	1,330	285	2,310	872	0.00	0.00

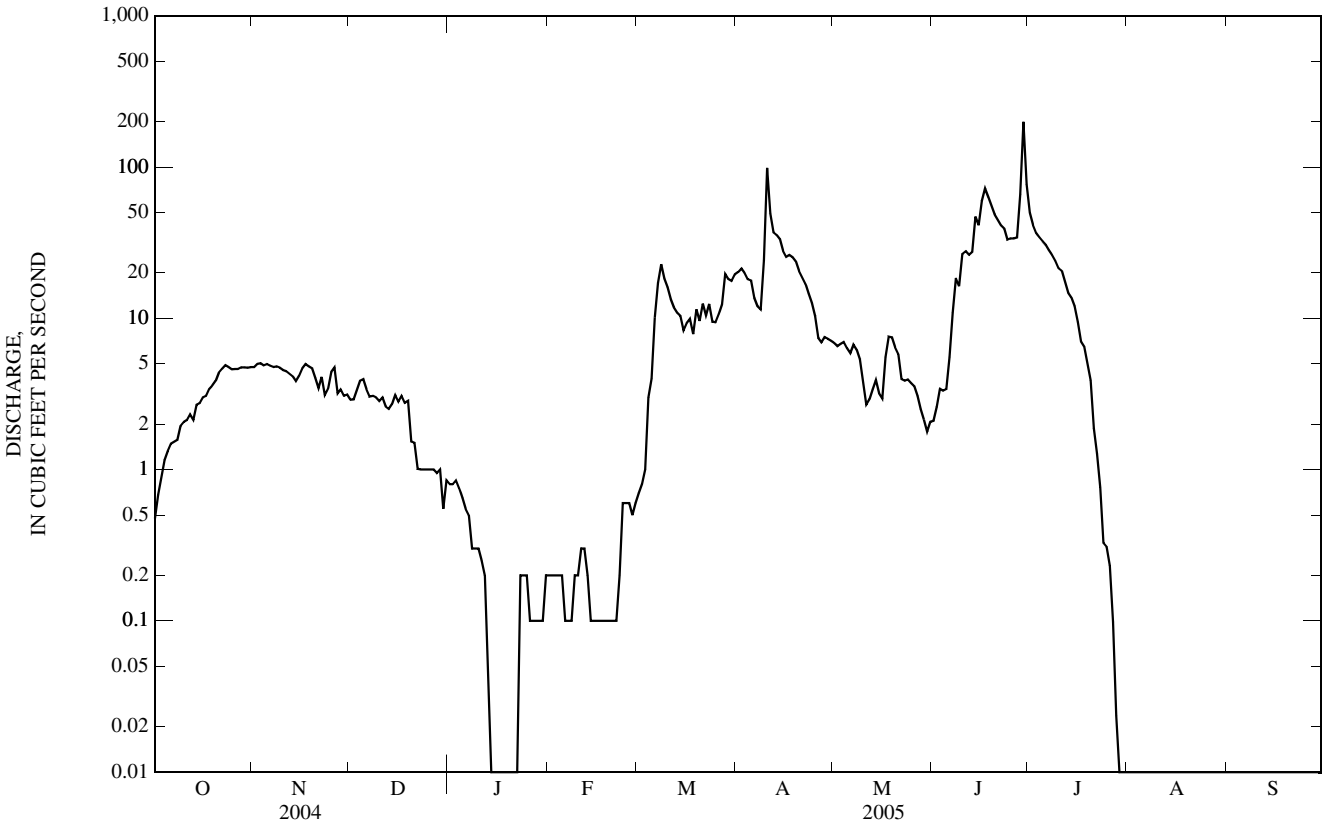
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2005, BY WATER YEAR (WY)*

MEAN	8.07	5.53	4.33	4.97	28.7	77.8	52.3	52.2	41.2	21.8	3.19	12.2
MAX	195	63.6	61.5	64.1	369	385	520	575	332	128	31.2	480
(WY)	(1987)	(1987)	(1987)	(1971)	(1971)	(1996)	(1965)	(1986)	(1953)	(1983)	(1993)	(1986)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.09	0.00	0.00	0.00	0.00
(WY)	(1959)	(1957)	(1953)	(1956)	(1956)	(2002)	(1962)	(1998)	(2001)	(1918)	(1919)	(1918)

06154550 PEOPLES CREEK BELOW KUHR COULEE, NEAR DODSON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1918 - 2005*	
ANNUAL TOTAL	7,212.63		3,072.94			
ANNUAL MEAN	19.7		8.42		26.3	
HIGHEST ANNUAL MEAN					131	1986
LOWEST ANNUAL MEAN					1.01	2001
HIGHEST DAILY MEAN	930	Mar 10	199	Jun 29	5,070	Sep 25, 1986
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Jan 14	0.00	Jun 11, 1918
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jan 14	0.00	Jun 11, 1918
MAXIMUM PEAK FLOW			451	Jun 29	a7,590	Sep 25, 1986
MAXIMUM PEAK STAGE			8.45	Jun 29	b17.05	Mar 29, 1952
INSTANTANEOUS LOW FLOW					0.00	many days
ANNUAL RUNOFF (AC-FT)	14,310		6,100		19,090	
10 PERCENT EXCEEDS	46		25		44	
50 PERCENT EXCEEDS	2.6		3.0		2.7	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

*--During period of operation [1918-21 (fragmentary), 1951-63, 1982 to current year].
a--Gage height, 15.91 ft, from floodmark, at different site and datum.
b--Backwater from ice, from floodmark in gage house, at different site and datum.
e--Estimated.



06155030 MILK RIVER NEAR DODSON, MT

LOCATION.--Lat 48°24'11", long 108°17'35" (NAD27), in NE$^1/_4$ SE$^1/_4$ NW$^1/_4$ sec.36, T.31 N., R.26 E., Phillips County, Hydrologic Unit 10050004, on left bank 30 ft downstream from U.S. Highway 2 bridge, 0.95 mi downstream from Dodson Dam, 1.9 mi west of Dodson, and at river mile 273.2.

DRAINAGE AREA.--11,192 mi^2.

PERIOD OF RECORD.--October 1982 to current year (seasonal record beginning water year 1994).

GAGE.--Water-stage recorder. Elevation of gage is 2,250 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Numerous diversions for irrigation 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, CALENDAR YEAR JANUARY TO DECEMBER 2005
DAILY MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1			e0.10	0.24	0.11	0.75	1.5	2.1	0.80	0.83		
2			e0.10	0.31	0.04	0.90	1.4	0.78	1.7	0.84		
3			e0.10	0.22	0.10	0.32	1.2	0.25	1.6	0.90		
4			e0.10	0.29	0.62	0.12	1.3	0.62	1.2	1.0		
5			e0.10	0.25	0.85	0.14	1.4	1.3	1.3	1.4		
6			e0.10	0.44	26	0.35	1.5	0.55	0.89	1.3		
7			e0.10	0.24	0.53	0.45	1.4	1.0	0.88	0.99		
8			e0.10	0.19	0.22	2.5	1.3	0.43	0.53	0.87		
9			e0.10	0.49	0.29	56	1.2	0.65	0.43	0.88		
10			0.24	0.20	0.19	26	1.0	0.96	0.80	0.88		
11			0.16	0.19	0.55	7.2	1.4	1.5	0.77	0.88		
12			0.16	0.36	0.57	26	0.98	1.7	0.62	0.89		
13			0.17	0.54	0.28	31	1.1	2.0	0.62	0.91		
14			0.32	0.34	0.21	2.9	0.85	1.0	0.65	0.99		
15			0.15	0.19	0.91	1.0	0.89	2.8	0.71	1.2		
16			0.20	0.12	1.2	1.6	1.4	2.2	0.67	1.3		
17			0.20	0.29	36	1.8	1.6	2.4	0.76	1.3		
18			0.13	0.12	19	1.5	1.3	1.7	0.69	1.4		
19			0.20	0.30	5.5	1.1	1.1	1.1	0.56	1.5		
20			0.17	0.15	1.1	1.7	1.3	0.78	0.49	1.7		
21			0.10	0.13	0.74	1.5	1.7	0.99	0.52	1.7		
22			0.07	0.14	0.16	2.0	1.6	0.87	0.52	1.7		
23			0.08	0.15	0.15	2.7	0.99	0.94	0.57	1.7		
24			0.07	0.08	0.09	1.9	1.0	0.92	0.56	1.7		
25			0.04	0.06	0.20	1.3	0.73	0.78	0.56	1.7		
26			0.04	0.04	0.08	1.3	0.10	0.47	0.50	1.7		
27			0.05	0.04	0.08	1.4	0.10	0.61	0.48	1.6		
28			0.08	0.05	0.07	1.6	0.11	1.0	0.57	79		
29			0.21	0.09	0.08	1.2	0.26	1.9	0.59	135		
30			0.22	0.06	0.09	1.4	0.45	1.4	0.59	131		
31			0.26	---	0.19	---	0.60	0.68	---	142		
TOTAL			4.22	6.31	96.20	179.63	32.76	36.38	22.13	520.76		
MEAN			0.14	0.21	3.10	5.99	1.06	1.17	0.74	16.8		
MAX			0.32	0.54	36	56	1.7	2.8	1.7	142		
MIN			0.04	0.04	0.04	0.12	0.10	0.25	0.43	0.83		
AC-FT			8.4	13	191	356	65	72	44	1,030		

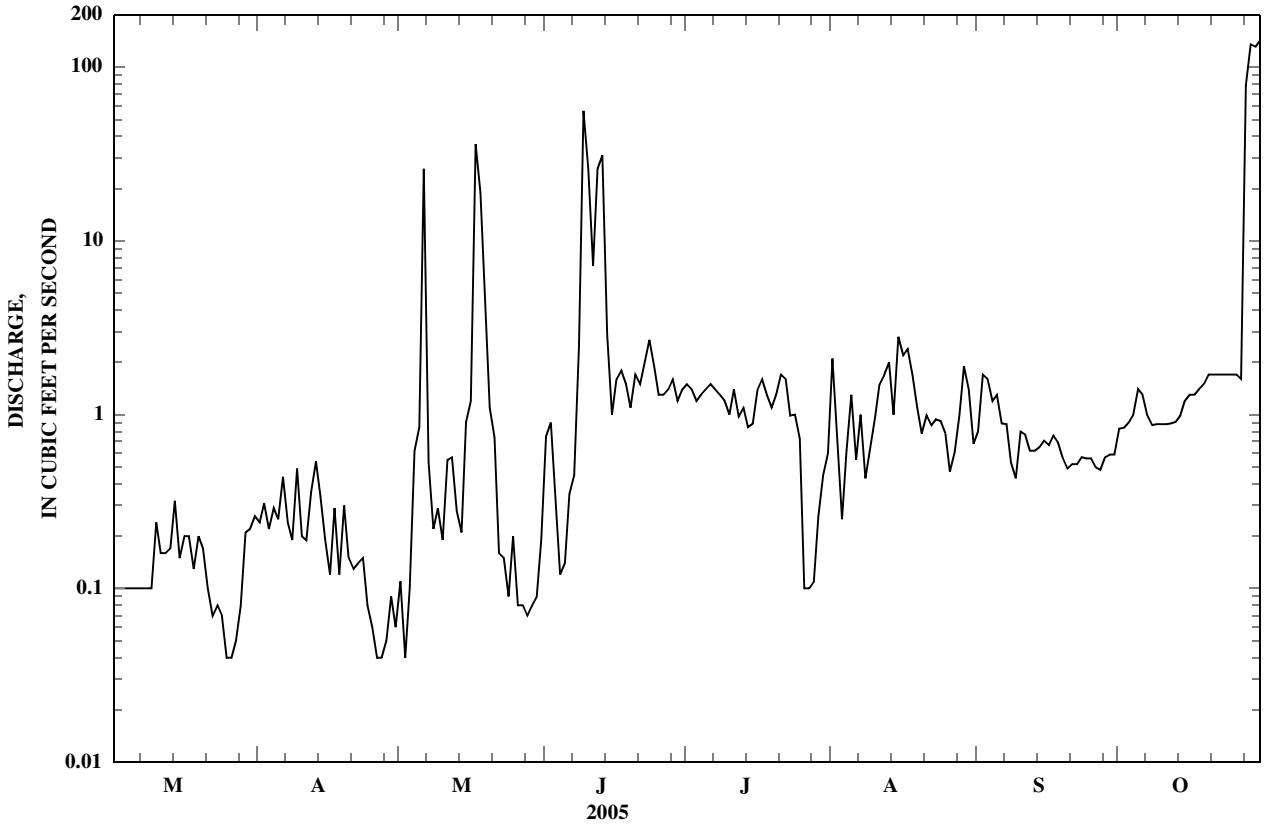
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1993 AND SEASONS 1994 - 2005*

MEAN	83.2	129	595	285	98.1	248	119	39.4	12.2	93.7	106	77.8
MAX	230	526	2,252	1,691	375	655	350	85.0	29.4	692	421	275
(WY)	(1990)	(1986)	(1996)	(1996)	(1994)	(1995)	(1998)	(2002)	(1999)	(1994)	(1987)	(1987)
MIN	18.2	20.3	19.2	2.35	3.41	0.42	8.72	0.63	0.06	5.39	25.3	17.3
(WY)	(1985)	(1985)	(2001)	(1999)	(2001)	(2004)	(2001)	(2004)	(2003)	(1998)	(1985)	(1985)

06155030 MILK RIVER NEAR DODSON, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1994 - 2005*		WATER YEARS 1982 - 1993	
ANNUAL MEAN					181	
HIGHEST ANNUAL MEAN					590	1996
LOWEST ANNUAL MEAN					36.6	1985
HIGHEST DAILY MEAN	142	Oct 31	5,000	Mar 20 1996	11,500	Sep 26, 1986
LOWEST DAILY MEAN	0.04	Mar 25	0.00	Aug 15 2003	d0.00	Sep 16, 1983
ANNUAL SEVEN-DAY MINIMUM					0.00	Sep 16, 1983
MAXIMUM PEAK FLOW	a152	Oct 31	c5,200	Mar 17 1994	13,200	Sep 26, 1986
MAXIMUM PEAK STAGE	b5.60	Mar 2	b24.51	Mar 14 1996	29.79	Sep 26, 1986
INSTANTANEOUS LOW FLOW					0.00	Oct 6, 1990
ANNUAL RUNOFF (AC-FT)					131,300	
10 PERCENT EXCEEDS					386	
50 PERCENT EXCEEDS					47	
90 PERCENT EXCEEDS					5.2	

*--Seasonal records beginning water year 1994.
a--Gage height, 4.76 ft.
b--Backwater from ice.
c--Gage height, 22.71 ft.
d--No flow at times most years.
e--Estimated.



06155900 MILK RIVER AT CREE CROSSING, NEAR SACO, MT

LOCATION.--Lat 48°32'25", long 107°31'10" (NAD 27), in $NW^1/_4SE^1/_4SE^1/_4$ sec.11, T.32 N., R.32 E., Phillips County, Hydrologic Unit 10050004, on right bank 25 ft upstream from bridge on Phillips County road, 500 ft upstream from Nelson Canal, 9.9 mi northwest of Saco, and at river mile 176.4.

DRAINAGE AREA.--13,118 mi^2.

PERIOD OF RECORD.--May 2000 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 2,188 ft (NGVD 29).

REMARKS.--Seasonal records good except those for estimated daily discharges, which are poor. 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			e110	35	20	98	74	106	106	38		
2			e110	37	20	104	67	105	98	35		
3			e120	32	21	114	59	136	101	34		
4			e110	30	21	124	47	158	95	34		
5			e130	29	20	111	41	142	79	33		
6			e140	27	21	109	37	141	70	33		
7			e110	26	22	175	35	131	71	34		
8			e130	26	22	242	31	146	79	32		
9			e140	27	19	470	29	149	82	31		
10			161	32	22	492	27	176	97	31		
11			90	40	36	456	27	226	265	31		
12			64	137	37	415	26	206	246	30		
13			50	116	33	305	29	154	164	30		
14			43	82	62	208	29	158	142	29		
15			38	91	65	205	52	151	151	28		
16			35	75	55	211	56	120	154	28		
17			36	65	71	187	49	110	145	28		
18			39	58	77	336	48	118	129	27		
19			37	57	60	234	48	134	99	27		
20			35	54	56	173	41	135	71	28		
21			35	51	86	147	44	115	58	28		
22			34	42	67	152	62	100	54	29		
23			35	38	60	146	75	94	48	29		
24			33	33	78	127	80	95	41	30		
25			34	29	90	86	90	97	40	30		
26			33	26	89	80	107	98	40	31		
27			32	25	104	80	96	119	49	32		
28			33	22	103	86	90	126	48	34		
29			32	20	94	169	90	122	45	36		
30			32	20	88	90	85	117	40	35		
31			33	---	87	---	87	113	---	62		
TOTAL			2,094	1,382	1,706	5,932	1,758	4,098	2,907	997		
MEAN			67.5	46.1	55.0	198	56.7	132	96.9	32.2		
MAX			161	137	104	492	107	226	265	62		
MIN			32	20	19	80	26	94	40	27		
AC-FT			4,150	2,740	3,380	11,770	3,490	8,130	5,770	1,980		

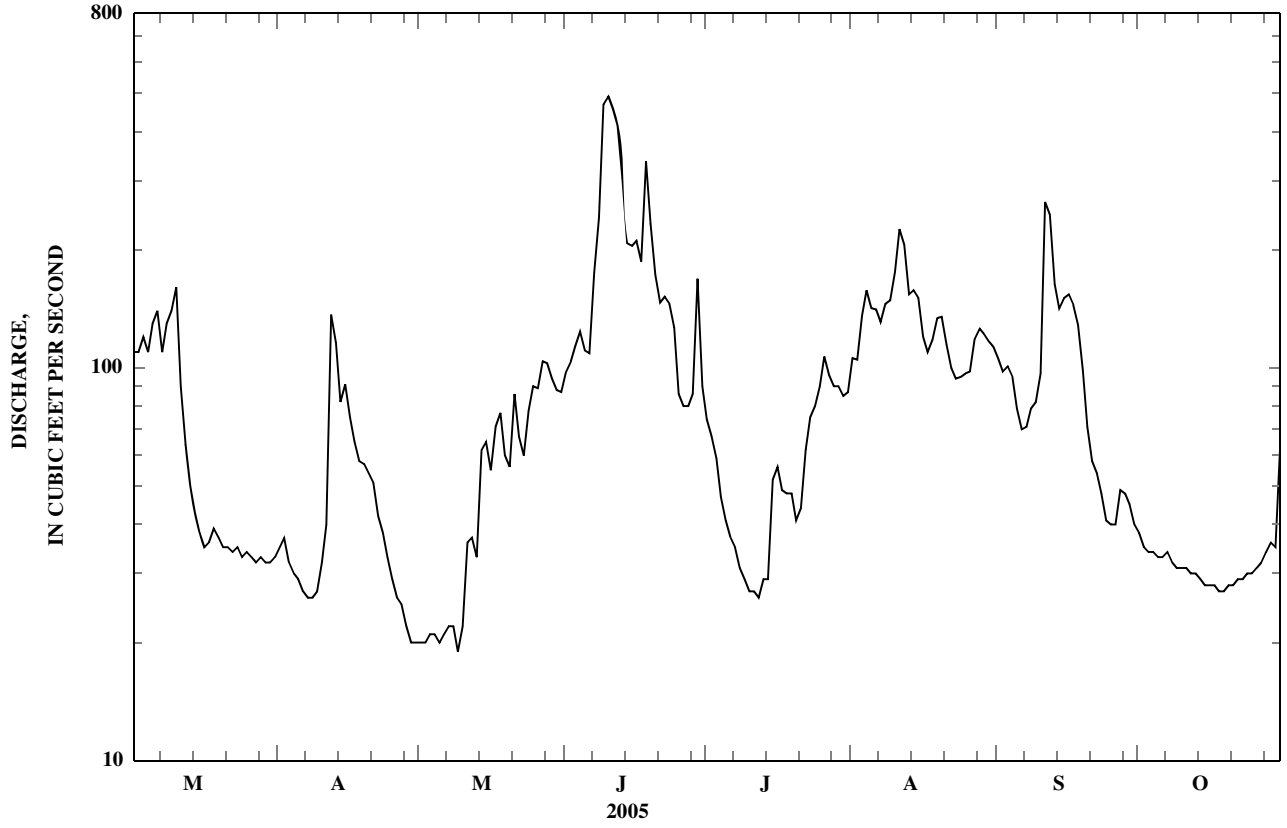
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 2000 - 2005

MEAN	404	57.9	104	201	124	116	63.9	32.1
MAX	1,196	125	271	517	244	225	108	50.4
(WY)	(2004)	(2003)	(2004)	(2002)	(2002)	(2002)	(2002)	(2005)
MIN	38.3	20.5	9.44	68.1	28.3	16.7	18.6	12.6
(WY)	(2002)	(2002)	(2001)	(2001)	(2001)	(2001)	(2000)	(2002)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 2000 - 2005	
HIGHEST DAILY MEAN	492	Jun 10	3,800	Mar 15 2004
LOWEST DAILY MEAN	19	May 9	2.6	May 28 2001
MAXIMUM PEAK FLOW	564	Jun 10	a2,600	Mar 21 2003
MAXIMUM PEAK STAGE	4.23	Jun 10	b15.19	Mar 14 2004
INSTANTANEOUS LOW FLOW	19	Apr 30	2.6	May 28 2001

a--Maximum peak discharge is known to be higher, occurred Mar. 15, 2004, but was affected by backwater from ice.
b--Backwater from ice.
e--Estimated.

06155900 MILK RIVER AT CREE CROSSING, NEAR SACO, MT—Continued



06156500 BELANGER CREEK DIVERSION CANAL NEAR VIDORA, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°29'39", long 109°21'54" (NAD 27), in NW$^1/_4$ sec.19, T.6, R.25 W., third meridian, Hydrologic Unit 10050013, on left bank 0.3 mi downstream from diversion weir and 12 mi north of Vidora.

PERIOD OF RECORD.--March 1946 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 3,200 ft (NGVD 29), from Cypress Lake elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Canal diverts water from right bank of Belanger Creek in SW$^1/_4$ sec.30, T.6, R.25 W., third meridian, for storage in Cypress Lake. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

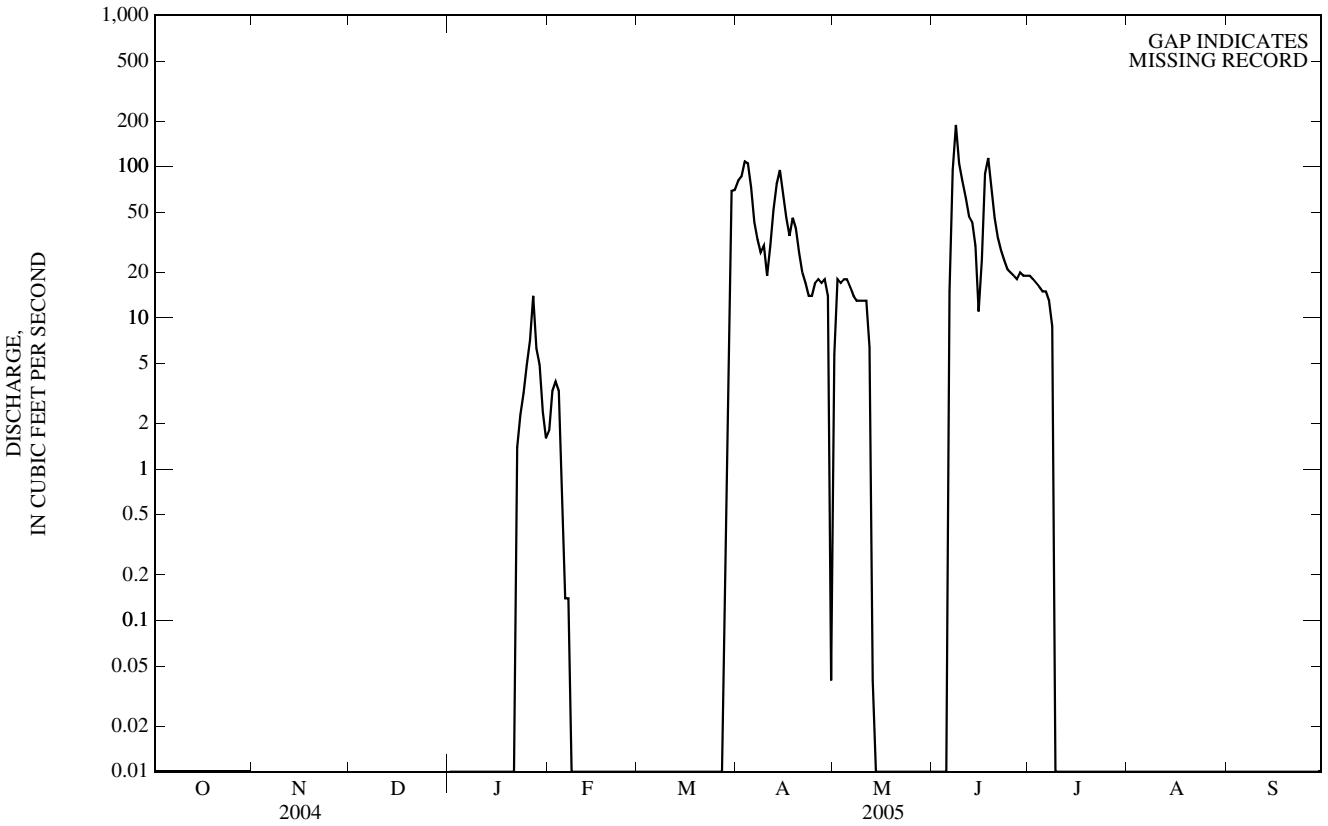
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 696 ft^3/s, June 28, 1998; no flow at times each season.

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	e0.00	e1.8	e0.00	e81	5.7	0.00	19	0.00	0.00	0.00		
2	e0.00	e3.3	e0.00	e86	18	0.00	18	0.00	0.00	0.00		
3	e0.00	e3.8	e0.00	e108	17	0.00	17	0.00	0.00	0.00		
4	e0.00	e3.3	e0.00	105	18	0.00	16	0.00	0.00	0.00		
5	e0.00	e0.95	e0.00	73	18	0.00	15	0.00	0.00	0.00		
6	e0.00	e0.14	e0.00	43	16	15	15	0.00	0.00	0.00		
7	e0.00	e0.14	e0.00	33	14	95	13	0.00	0.00	0.00		
8	e0.00	e0.00	e0.00	27	13	189	8.8	0.00	0.00	0.00		
9	e0.00	e0.00	e0.00	30	13	105	0.00	0.00	0.00	0.00		
10	e0.00	e0.00	e0.00	19	13	81	0.00	0.00	0.00	0.00		
11	e0.00	e0.00	e0.00	30	13	62	0.00	0.00	0.00	0.00		
12	e0.00	e0.00	e0.00	52	6.4	47	0.00	0.00	0.00	0.00		
13	e0.00	e0.00	e0.00	77	0.04	43	0.00	0.00	0.00	0.00		
14	e0.00	e0.00	e0.00	95	0.00	30	0.00	0.00	0.00	0.00		
15	e0.00	e0.00	e0.00	66	0.00	11	0.00	0.00	0.00	0.00		
16	e0.00	e0.00	e0.00	46	0.00	24	0.00	0.00	0.00	0.00		
17	e0.00	e0.00	e0.00	35	0.00	90	0.00	0.00	0.00	0.00		
18	e0.00	e0.00	e0.00	46	0.00	114	0.00	0.00	0.00	0.00		
19	e0.00	e0.00	e0.00	39	0.00	73	0.00	0.00	0.00	0.00		
20	e0.00	e0.00	e0.00	27	0.00	46	0.00	0.00	0.00	0.00		
21	e0.00	e0.00	e0.00	20	0.00	34	0.00	0.00	0.00	0.00		
22	e1.4	e0.00	e0.00	17	0.00	28	0.00	0.00	0.00	0.00		
23	e2.3	e0.00	e0.00	14	0.00	24	0.00	0.00	0.00	0.00		
24	e3.2	e0.00	e0.00	14	0.00	21	0.00	0.00	0.00	0.00		
25	e4.9	e0.00	e0.00	17	0.00	20	0.00	0.00	0.00	0.00		
26	e7.1	e0.00	e0.00	18	0.00	19	0.00	0.00	0.00	0.00		
27	e14	e0.00	e0.00	17	0.00	18	0.00	0.00	0.00	0.00		
28	e6.3	e0.00	e0.07	18	0.00	20	0.00	0.00	0.00	0.00		
29	e4.9	---	e9.4	14	0.00	19	0.00	0.00	0.00	0.00		
30	e2.4	---	e69	0.04	0.00	19	0.00	0.00	0.00	0.00		
31	e1.6	---	e70	---	0.00	---	0.00	0.00	---	0.00		
TOTAL	48.10	13.43	148.47	1,267.04	165.14	1,247.00	121.80	0.00	0.00	0.00		
MEAN	1.55	0.48	4.79	42.2	5.33	41.6	3.93	0.00	0.00	0.00		
MAX	14	3.8	70	108	18	189	19	0.00	0.00	0.00		
MIN	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT	95	27	294	2,510	328	2,470	242	0.00	0.00	0.00		

e--Estimated.

06156500 BELANGER CREEK DIVERSION CANAL NEAR VIDORA, SASKATCHEWAN—Continued



06157500 CYPRESS LAKE EAST OUTFLOW CANAL NEAR VIDORA, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°29'12", long 109°21'08" (NAD 27), in SE$^1/_4$ sec.19, T.6, R.25 W., third meridian, Hydrologic Unit 10050013, on right bank 500 ft upstream from Belanger Creek, and 12.3 mi north of Vidora.

PERIOD OF RECORD.--April to October 1940, April 1943 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 3,180 ft (NGVD 29). Prior to Sept. 26, 1946, at elevation 2.24 ft higher and Sept. 26, 1946, to May 18, 1950, at elevation 1.54 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Canal diverts water from Cypress Lake for irrigation in Frenchman River basin in Saskatchewan. Water Survey of Canada satellite telemeter at station.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

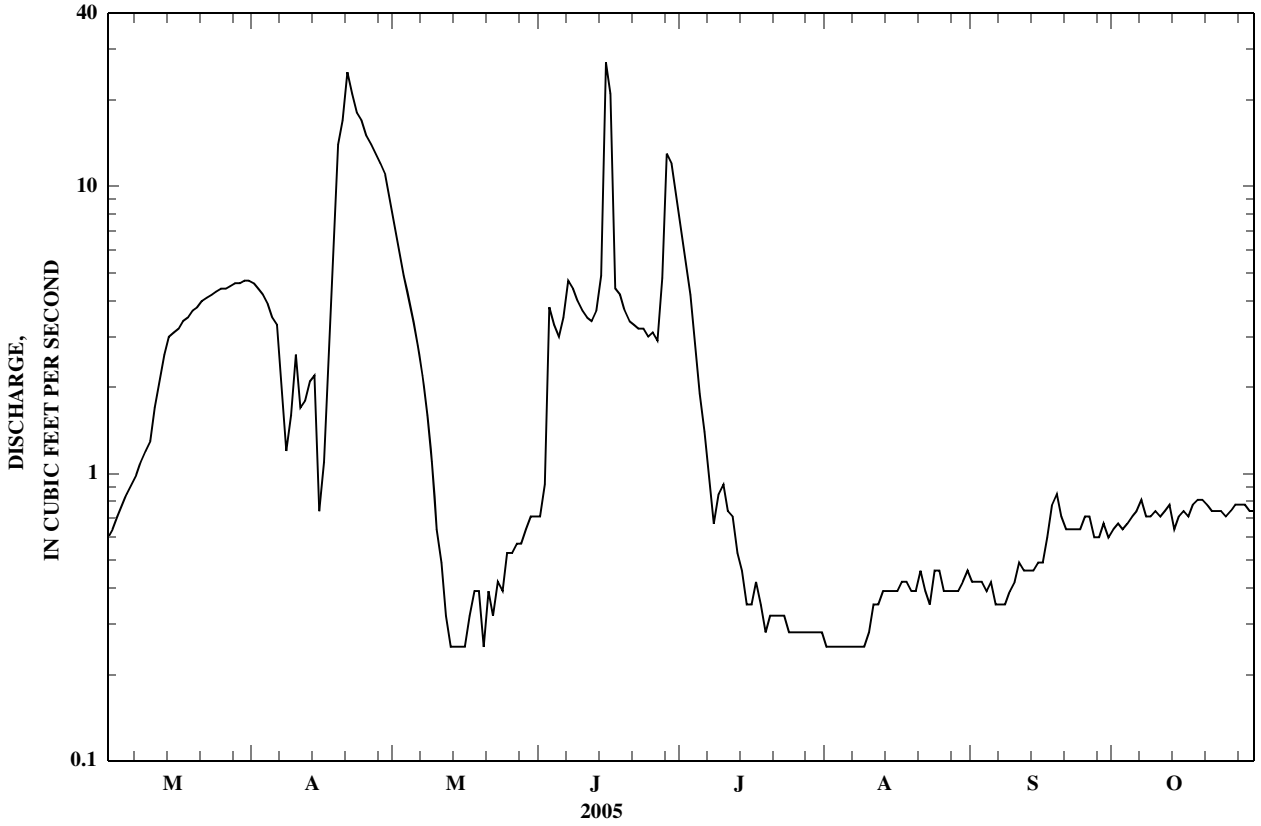
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 202 ft^3/s, Apr. 19, 1952; no flow at times most seasons.

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			e0.60	e4.6	7.2	0.71	7.3	0.25	0.42	0.64		
2			e0.64	e4.4	5.9	0.92	5.6	0.25	0.42	0.67		
3			e0.71	e4.2	4.9	3.8	4.2	0.25	0.42	0.64		
4			e0.78	e3.9	4.1	3.3	2.9	0.25	0.39	0.67		
5			e0.85	e3.5	3.4	3.0	1.9	0.25	0.42	0.71		
6			e0.92	e3.3	2.8	3.5	1.4	0.25	0.35	0.74		
7			e0.99	2.0	2.2	4.7	0.99	0.25	0.35	0.81		
8			e1.1	1.2	1.6	4.4	0.67	0.25	0.35	0.71		
9			e1.2	1.6	1.1	4.0	0.85	0.25	0.39	0.71		
10			e1.3	2.6	0.64	3.7	0.92	0.28	0.42	0.74		
11			e1.7	1.7	0.49	3.5	0.74	0.35	0.49	0.71		
12			e2.1	1.8	0.32	3.4	0.71	0.35	0.46	0.74		
13			e2.6	2.1	0.25	3.7	0.53	0.39	0.46	0.78		
14			e3.0	2.2	0.25	4.9	0.46	0.39	0.46	0.64		
15			e3.1	0.74	0.25	27	0.35	0.39	0.49	0.71		
16			e3.2	1.1	0.25	21	0.35	0.39	0.49	0.74		
17			e3.4	2.4	0.32	4.4	0.42	0.42	0.60	0.71		
18			e3.5	5.2	0.39	4.2	0.35	0.42	0.78	0.78		
19			e3.7	14	0.39	3.7	0.28	0.39	0.85	0.81		
20			e3.8	17	0.25	3.4	0.32	0.39	0.71	0.81		
21			e4.0	25	0.39	3.3	0.32	0.46	0.64	0.78		
22			e4.1	21	0.32	3.2	0.32	0.39	0.64	0.74		
23			e4.2	18	0.42	3.2	0.32	0.35	0.64	0.74		
24			e4.3	17	0.39	3.0	0.28	0.46	0.64	0.74		
25			e4.4	15	0.53	3.1	0.28	0.46	0.71	0.71		
26			e4.4	14	0.53	2.9	0.28	0.39	0.71	0.74		
27			e4.5	13	0.57	4.8	0.28	0.39	0.60	0.78		
28			e4.6	12	0.57	13	0.28	0.39	0.60	0.78		
29			e4.6	11	0.64	12	0.28	0.39	0.67	0.78		
30			e4.7	8.9	0.71	9.4	0.28	0.42	0.60	0.74		
31			e4.7	---	0.71	---	0.28	0.46	---	0.74		
TOTAL			87.69	234.44	42.78	169.13	34.44	10.97	16.17	22.74		
MEAN			2.83	7.81	1.38	5.64	1.11	0.35	0.54	0.73		
MAX			4.7	25	7.2	27	7.3	0.46	0.85	0.81		
MIN			0.60	0.74	0.25	0.71	0.28	0.25	0.35	0.64		
AC-FT			174	465	85	335	68	22	32	45		

e--Estimated.

06157500 CYPRESS LAKE EAST OUTFLOW CANAL NEAR VIDORA, SASKATCHEWAN—Continued



06158500 EASTEND CANAL AT EASTEND, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°30'21", long 108°50'54" (NAD 27), in NW$^1/_4$ sec.25, T.6, R.22 W., third meridian, Hydrologic Unit 10050013, on left bank 600 ft downstream from Eastend Reservoir headgate, 1.5 mi west of Eastend.

PERIOD OF RECORD.--March 1937 to current season (seasonal records only). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 2,998.58 ft (Canadian Geodetic Vertical Datum 1928). Prior to June 1973, at sites within 1 mi, at different elevations.

REMARKS.--Records good. Canal diverts water from Eastend Reservoir in NW$^1/_4$ sec.25, T.6, R.22 W., third meridian, on right bank for irrigation of about 3,100 acres in the Frenchman River basin in Saskatchewan. Water Survey of Canada satellite telemeter at station.

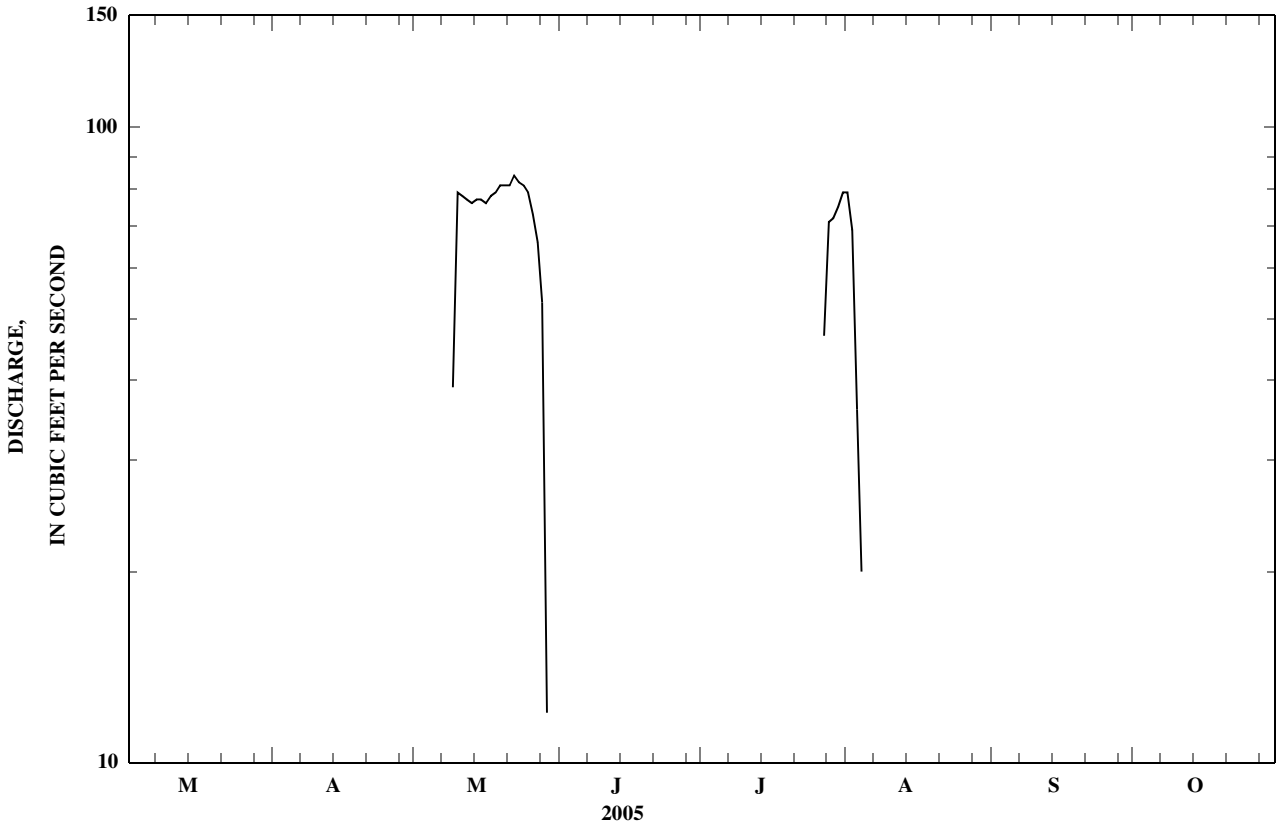
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 91 ft^3/s, May 18, 1993; no flow at times each season.

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		0.00	0.00	0.00	0.00	0.00	0.00	79	0.00	0.00		
2		0.00	0.00	0.00	0.00	0.00	0.00	69	0.00	0.00		
3		0.00	0.00	0.00	0.00	0.00	0.00	36	0.00	0.00		
4		0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	0.00		
5		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
9		0.00	0.00	0.00	39	0.00	0.00	0.00	0.00	0.00		
10		0.00	0.00	0.00	79	0.00	0.00	0.00	0.00	0.00		
11		0.00	0.00	0.00	78	0.00	0.00	0.00	0.00	0.00		
12		0.00	0.00	0.00	77	0.00	0.00	0.00	0.00	0.00		
13		0.00	0.00	0.00	76	0.00	0.00	0.00	0.00	0.00		
14		0.00	0.00	0.00	77	0.00	0.00	0.00	0.00	0.00		
15		0.00	0.00	0.00	77	0.00	0.00	0.00	0.00	0.00		
16		0.00	0.00	0.00	76	0.00	0.00	0.00	0.00	0.00		
17		0.00	0.00	0.00	78	0.00	0.00	0.00	0.00	0.00		
18		0.00	0.00	0.00	79	0.00	0.00	0.00	0.00	0.00		
19		0.00	0.00	0.00	81	0.00	0.00	0.00	0.00	0.00		
20		0.00	0.00	0.00	81	0.00	0.00	0.00	0.00	0.00		
21		0.00	0.00	0.00	81	0.00	0.00	0.00	0.00	0.00		
22		0.00	0.00	0.00	84	0.00	0.00	0.00	0.00	0.00		
23		0.00	0.00	0.00	82	0.00	0.00	0.00	0.00	0.00		
24		0.00	0.00	0.00	81	0.00	0.00	0.00	0.00	0.00		
25		0.00	0.00	0.00	79	0.00	0.00	0.00	0.00	0.00		
26		0.00	0.00	0.00	73	0.00	0.00	0.00	0.00	0.00		
27		0.00	0.00	0.00	66	0.00	47	0.00	0.00	0.00		
28		0.00	0.00	0.00	53	0.00	71	0.00	0.00	0.00		
29		---	0.00	0.00	12	0.00	72	0.00	0.00	0.00		
30		---	0.00	0.00	0.00	0.00	75	0.00	0.00	0.00		
31		---	0.00	---	0.00	---	79	0.00	---	0.00		
TOTAL		0.00	0.00	0.00	1,509.00	0.00	344.00	204.00	0.00	0.00		
MEAN		0.00	0.00	0.00	48.7	0.00	11.1	6.58	0.00	0.00		
MAX		0.00	0.00	0.00	84	0.00	79	79	0.00	0.00		
MIN		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT		0.00	0.00	0.00	2,990	0.00	682	405	0.00	0.00		

06158500 EASTEND CANAL AT EASTEND, SASKATCHEWAN—Continued



06161300 HUFF LAKE PUMPING CANAL NEAR VAL MARIE, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°22'20", long 107°53'05" (NAD 27), in NW$^1/_4$ sec.7, T.5, R.14 W., third meridian, Hydrologic Unit 10050013, on right bank 50 ft downstream from pump discharge outlet, and 11 mi northwest of Val Marie.

PERIOD OF RECORD.--March 1963 to current season (seasonal records only). Published as Val Marie West Pumping Canal near Val Marie, Saskatchewan, March 1963 to October 1980. July 1950 to current season in reports of Department of the Environment, Canada.

GAGE.--Water-stage recorder. Prior to 1956 and subsequent to 1960, records obtained from occasional discharge measurements and records of pump operation.

REMARKS.--Records fair. Canal diverts water from Huff Lake in NW$^1/_4$ sec.7, T.5, R.14 W., third meridian, on left bank for irrigation of about 2,100 acres in the Frenchman River basin in Saskatchewan.

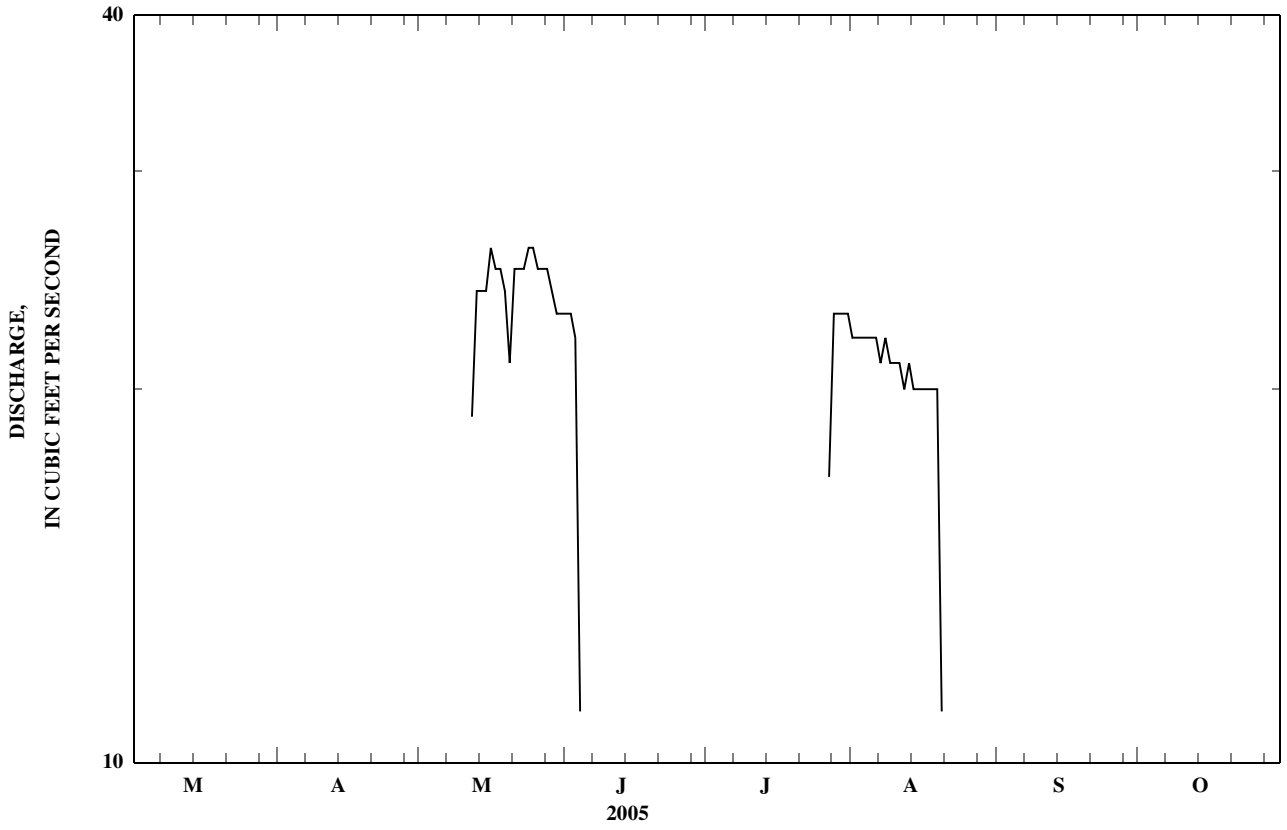
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 31 ft^3/s, May 30 to June 2, 7-10, 1975, May 5, 6, 7, 9, 1977; no flow at times each season.

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			0.00	0.00	0.00	23	0.00	22	0.00	0.00		
2			0.00	0.00	0.00	23	0.00	22	0.00	0.00		
3			0.00	0.00	0.00	22	0.00	22	0.00	0.00		
4			0.00	0.00	0.00	11	0.00	22	0.00	0.00		
5			0.00	0.00	0.00	0.00	0.00	22	0.00	0.00		
6			0.00	0.00	0.00	0.00	0.00	22	0.00	0.00		
7			0.00	0.00	0.00	0.00	0.00	21	0.00	0.00		
8			0.00	0.00	0.00	0.00	0.00	22	0.00	0.00		
9			0.00	0.00	0.00	0.00	0.00	21	0.00	0.00		
10			0.00	0.00	0.00	0.00	0.00	21	0.00	0.00		
11			0.00	0.00	0.00	0.00	0.00	21	0.00	0.00		
12			0.00	0.00	19	0.00	0.00	20	0.00	0.00		
13			0.00	0.00	24	0.00	0.00	21	0.00	0.00		
14			0.00	0.00	24	0.00	0.00	20	0.00	0.00		
15			0.00	0.00	24	0.00	0.00	20	0.00	0.00		
16			0.00	0.00	26	0.00	0.00	20	0.00	0.00		
17			0.00	0.00	25	0.00	0.00	20	0.00	0.00		
18			0.00	0.00	25	0.00	0.00	20	0.00	0.00		
19			0.00	0.00	24	0.00	0.00	20	0.00	0.00		
20			0.00	0.00	21	0.00	0.00	11	0.00	0.00		
21			0.00	0.00	25	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	25	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	25	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	26	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	26	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	25	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	25	0.00	17	0.00	0.00	0.00		
28			0.00	0.00	25	0.00	23	0.00	0.00	0.00		
29			0.00	0.00	24	0.00	23	0.00	0.00	0.00		
30			0.00	0.00	23	0.00	23	0.00	0.00	0.00		
31			0.00	---	23	---	23	0.00	---	0.00		
TOTAL			0.00	0.00	484.00	79.00	109.00	410.00	0.00	0.00		
MEAN			0.00	0.00	15.6	2.63	3.52	13.2	0.00	0.00		
MAX			0.00	0.00	26	23	23	22	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	960	157	216	813	0.00	0.00		

06161300 HUFF LAKE PUMPING CANAL NEAR VAL MARIE, SASKATCHEWAN—Continued



06161500 HUFF LAKE GRAVITY CANAL NEAR VAL MARIE, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°22'10", long 107°53'06" (NAD 27), in $SW^1/_4$, sec.7, T. 5, R.14 W., third meridian, Hydrologic Unit 10050013, on right bank 100 ft downstream from Huff Lake headgate and 11 mi northwest of Val Marie.

PERIOD OF RECORD.--March 1946 to current season (seasonal records only). Published as Val Marie West Gravity Canal near Val Marie, Saskatchewan, March 1946 to October 1980. Monthly figures only prior to March 1947, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 2,662.88 ft (Canadian Geodetic Vertical Datum 1928). Prior to Sept. 27, 1949, at site 0.5 mi downstream at different datum.

REMARKS.--Records fair. Canal diverts water from Huff Lake in $SW^1/_4$, sec.7, T. 5, R.14 W., third meridian, on left bank for irrigation of about 1,900 acres in the Frenchman River basin in Saskatchewan. Since 1962, records have been based on gate openings in Huff Lake Dam.

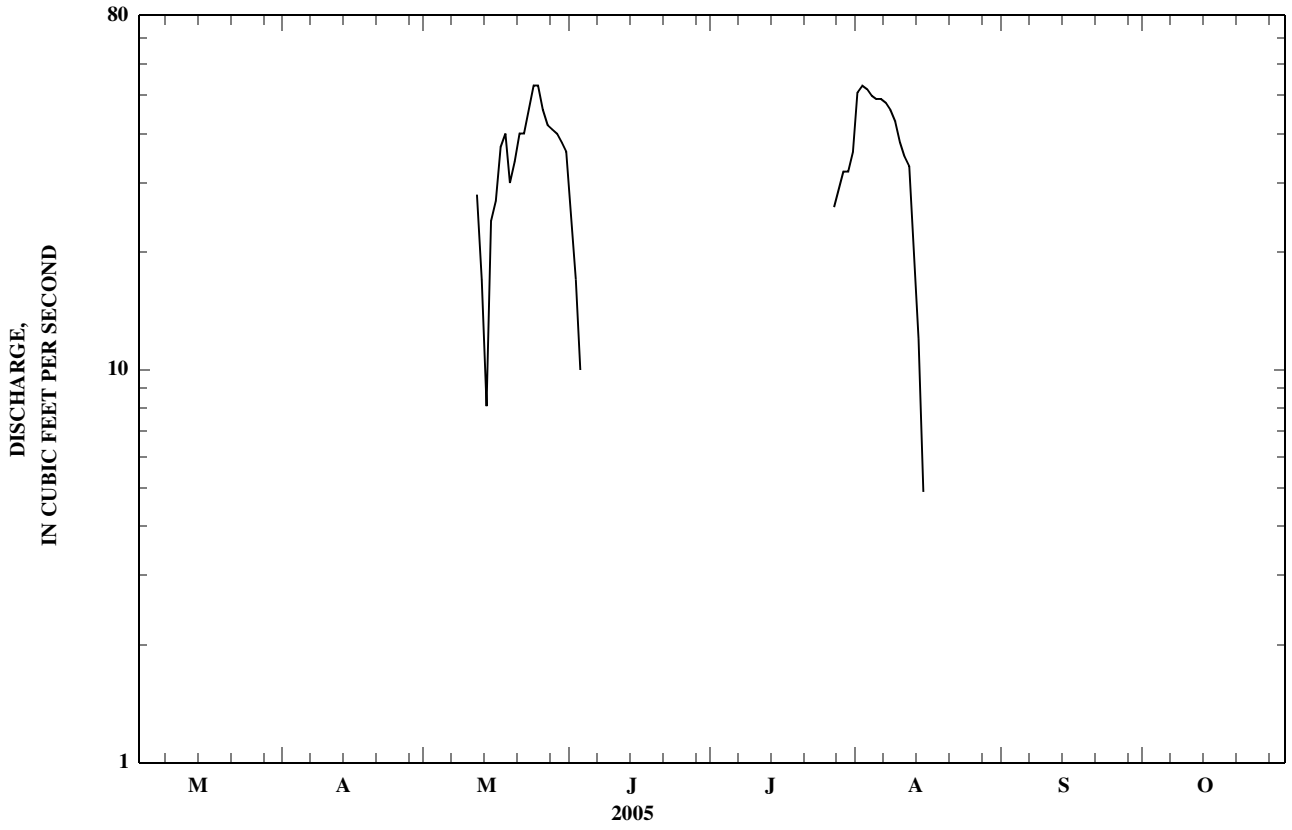
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 68 ft^3/s, July 24, 1996; no flow at times each season.

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		0.00	0.00	0.00	0.00	25	0.00	51	0.00	0.00		
2		0.00	0.00	0.00	0.00	17	0.00	53	0.00	0.00		
3		0.00	0.00	0.00	0.00	10	0.00	52	0.00	0.00		
4		0.00	0.00	0.00	0.00	0.00	0.00	50	0.00	0.00		
5		0.00	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00		
6		0.00	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00		
7		0.00	0.00	0.00	0.00	0.00	0.00	48	0.00	0.00		
8		0.00	0.00	0.00	0.00	0.00	0.00	46	0.00	0.00		
9		0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00		
10		0.00	0.00	0.00	0.00	0.00	0.00	38	0.00	0.00		
11		0.00	0.00	0.00	0.00	0.00	0.00	35	0.00	0.00		
12		0.00	0.00	0.00	28	0.00	0.00	33	0.00	0.00		
13		0.00	0.00	0.00	17	0.00	0.00	21	0.00	0.00		
14		0.00	0.00	0.00	8.1	0.00	0.00	12	0.00	0.00		
15		0.00	0.00	0.00	24	0.00	0.00	4.9	0.00	0.00		
16		0.00	0.00	0.00	27	0.00	0.00	0.00	0.00	0.00		
17		0.00	0.00	0.00	37	0.00	0.00	0.00	0.00	0.00		
18		0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00		
19		0.00	0.00	0.00	30	0.00	0.00	0.00	0.00	0.00		
20		0.00	0.00	0.00	34	0.00	0.00	0.00	0.00	0.00		
21		0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00		
22		0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00		
23		0.00	0.00	0.00	46	0.00	0.00	0.00	0.00	0.00		
24		0.00	0.00	0.00	53	0.00	0.00	0.00	0.00	0.00		
25		0.00	0.00	0.00	53	0.00	0.00	0.00	0.00	0.00		
26		0.00	0.00	0.00	46	0.00	0.00	0.00	0.00	0.00		
27		0.00	0.00	0.00	42	0.00	26	0.00	0.00	0.00		
28		0.00	0.00	0.00	41	0.00	29	0.00	0.00	0.00		
29		---	0.00	0.00	40	0.00	32	0.00	0.00	0.00		
30		---	0.00	0.00	38	0.00	32	0.00	0.00	0.00		
31		---	0.00	---	36	---	36	0.00	---	0.00		
TOTAL		0.00	0.00	0.00	720.10	52.00	155.00	584.90	0.00	0.00		
MEAN		0.00	0.00	0.00	23.2	1.73	5.00	18.9	0.00	0.00		
MAX		0.00	0.00	0.00	53	25	36	53	0.00	0.00		
MIN		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT		0.00	0.00	0.00	1,430	103	307	1,160	0.00	0.00		

06161500 HUFF LAKE GRAVITY CANAL NEAR VAL MARIE, SASKATCHEWAN—Continued



06162500 NEWTON LAKE MAIN CANAL NEAR VAL MARIE, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°18'18", long 107°48'05" (NAD 27), in $NE^1/_4$ sec.15, T.4, R.14 W., third meridian, Hydrologic Unit 10050013, on right bank about 500 ft downstream from Newton Lake headgate, and 5.4 mi northwest of Val Marie.

PERIOD OF RECORD.--April 1937 to current season (seasonal records only). Published as Val Marie Main Canal near Val Marie, Saskatchewan, March 1962 to October 1980. Prior to April 1947 monthly discharge only, published in WSP 1309. Prior to March 1962, published as Val Marie Canal near Val Marie.

GAGE.--Water-stage recorder. Elevation of gage is 2,622.03 ft (Canadian Geodetic Vertical Datum 1928). Prior to May 21, 1963, at several sites within 2 mi of present site at different elevations.

REMARKS.--Records good. Canal diverts water from Newton Lake in $SE^1/_4$ sec.22, T.4, R.14 W., third meridian, on left bank for irrigation of about 4,700 acres in the Frenchman River basin in Saskatchewan.

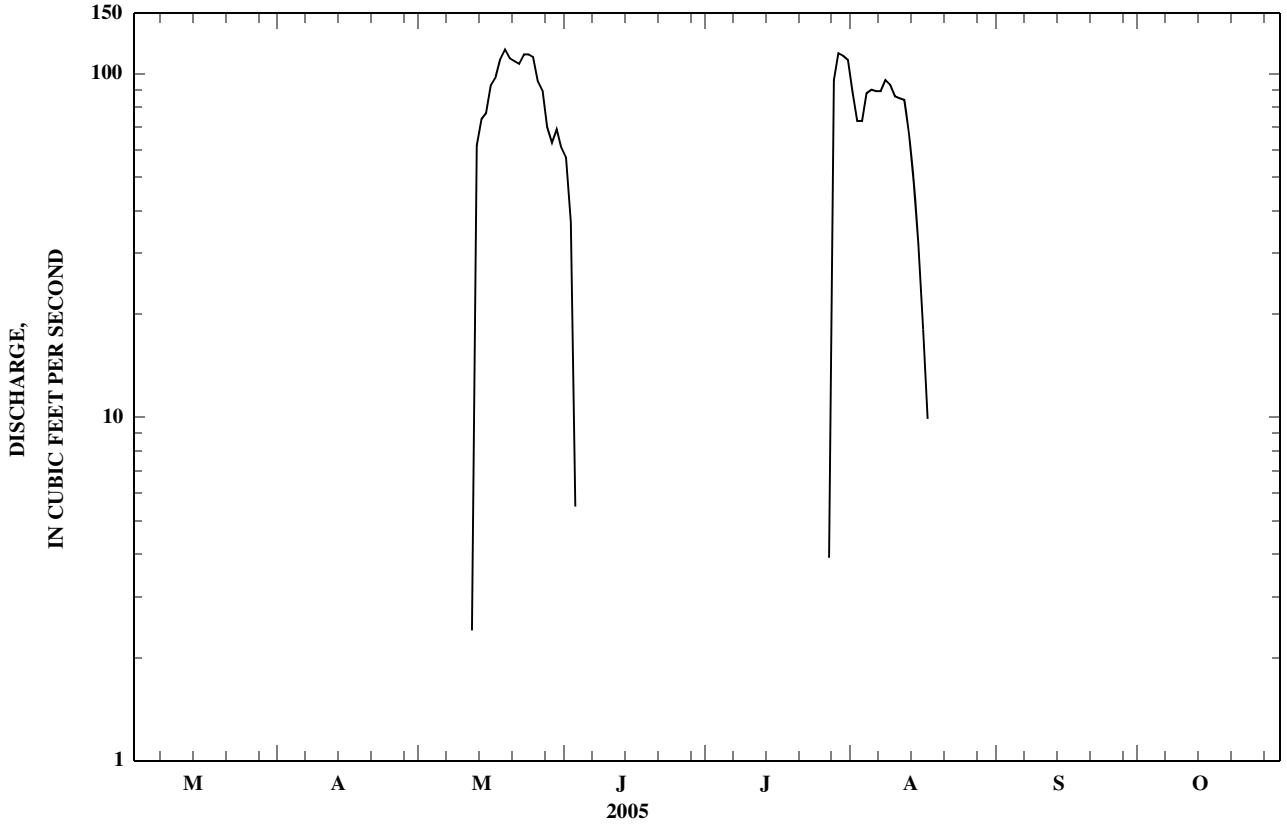
COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 131 ft^3/s, May 23, 1997; no flow at times each season.

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			0.00	0.00	0.00	57	0.00	89	0.00	0.00		
2			0.00	0.00	0.00	37	0.00	73	0.00	0.00		
3			0.00	0.00	0.00	5.5	0.00	73	0.00	0.00		
4			0.00	0.00	0.00	0.00	0.00	88	0.00	0.00		
5			0.00	0.00	0.00	0.00	0.00	90	0.00	0.00		
6			0.00	0.00	0.00	0.00	0.00	89	0.00	0.00		
7			0.00	0.00	0.00	0.00	0.00	89	0.00	0.00		
8			0.00	0.00	0.00	0.00	0.00	96	0.00	0.00		
9			0.00	0.00	0.00	0.00	0.00	93	0.00	0.00		
10			0.00	0.00	0.00	0.00	0.00	86	0.00	0.00		
11			0.00	0.00	0.00	0.00	0.00	85	0.00	0.00		
12			0.00	0.00	2.4	0.00	0.00	84	0.00	0.00		
13			0.00	0.00	62	0.00	0.00	67	0.00	0.00		
14			0.00	0.00	74	0.00	0.00	49	0.00	0.00		
15			0.00	0.00	77	0.00	0.00	32	0.00	0.00		
16			0.00	0.00	93	0.00	0.00	18	0.00	0.00		
17			0.00	0.00	98	0.00	0.00	9.9	0.00	0.00		
18			0.00	0.00	111	0.00	0.00	0.00	0.00	0.00		
19			0.00	0.00	118	0.00	0.00	0.00	0.00	0.00		
20			0.00	0.00	111	0.00	0.00	0.00	0.00	0.00		
21			0.00	0.00	109	0.00	0.00	0.00	0.00	0.00		
22			0.00	0.00	107	0.00	0.00	0.00	0.00	0.00		
23			0.00	0.00	114	0.00	0.00	0.00	0.00	0.00		
24			0.00	0.00	114	0.00	0.00	0.00	0.00	0.00		
25			0.00	0.00	112	0.00	0.00	0.00	0.00	0.00		
26			0.00	0.00	95	0.00	0.00	0.00	0.00	0.00		
27			0.00	0.00	89	0.00	3.9	0.00	0.00	0.00		
28			0.00	0.00	70	0.00	96	0.00	0.00	0.00		
29			0.00	0.00	63	0.00	115	0.00	0.00	0.00		
30			0.00	0.00	69	0.00	113	0.00	0.00	0.00		
31			0.00	---	61	---	110	0.00	---	0.00		
TOTAL			0.00	0.00	1,749.40	99.50	437.90	1,210.90	0.00	0.00		
MEAN			0.00	0.00	56.4	3.32	14.1	39.1	0.00	0.00		
MAX			0.00	0.00	118	57	115	96	0.00	0.00		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			0.00	0.00	3,470	197	869	2,400	0.00	0.00		

06162500 NEWTON LAKE MAIN CANAL NEAR VAL MARIE, SASKATCHEWAN—Continued



06164000 FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'00", long 107°18'06" (NAD 27), in SE$^1/_4$ sec.5, T.1, R.10 W., third meridian, in Saskatchewan, Hydrologic Unit 10050013, on left bank 50 ft north of international boundary, 22 mi northeast of Whitewater, , and at river mile 76.4.

DRAINAGE AREA.--2,120 mi^2, of which 343 mi^2 probably is noncontributing.

PERIOD OF RECORD.--April 1917 to current season (seasonal records only for most years).

REVISED RECORDS.--WSP 1389: 1938(M), 1939-41, 1942(M), 1943, 1950(M). W 1983: Drainage area.

GAGE.--Water-stage recorder and concrete control since August 1949. Elevation of gage is 2,420 ft (NGVD 29). Prior to June 23, 1937, water-stage recorder at site 0.5 mi upstream at different elevation. June 23, 1937, to October 1952, water-stage recorder at site 100 ft downstream at present elevation.

REMARKS.--Seasonal records fair. Natural flow of stream affected by several storage reservoirs, diversions for irrigation of about 14,500 acres, and return flow from irrigated areas. Water may be diverted into or from Battle Creek basin through Cypress Lake. Water Survey of Canada satellite telemeter at station. Several unpublished observations of water temperature and specific conductance were made during the year.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

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			e11	131	60	33	13	31	64	0.11		
2			e11	133	60	31	8.3	31	63	0.07		
3			e11	134	51	30	32	31	63	0.07		
4			e12	140	46	29	50	31	61	0.07		
5			e16	130	46	28	50	31	54	0.04		
6			e24	215	46	26	49	31	47	0.04		
7			e24	310	44	23	48	31	30	0.00		
8			e24	329	36	17	47	31	19	0.00		
9			e21	332	27	9.5	45	31	13	0.00		
10			e32	303	18	8.8	42	31	8.0	0.00		
11			e49	252	12	8.3	38	31	7.3	0.00		
12			e25	245	7.9	8.9	36	32	7.2	0.00		
13			e24	240	6.8	9.9	33	32	6.8	0.00		
14			e24	238	5.8	9.3	31	32	6.0	0.00		
15			e24	238	5.6	5.9	27	32	3.2	0.00		
16			e28	221	4.7	4.1	17	32	1.9	0.00		
17			392	199	4.2	4.5	11	32	1.3	0.00		
18			618	101	14	4.3	7.1	32	1.0	0.00		
19			120	57	47	3.0	3.8	32	0.81	0.00		
20			54	65	47	1.9	1.8	28	0.60	0.00		
21			50	64	43	1.3	12	19	0.49	0.00		
22			48	95	42	1.1	53	18	0.39	0.00		
23			39	124	43	1.0	43	17	0.32	0.00		
24			27	134	41	1.2	35	14	0.25	31		
25			57	130	41	1.4	32	9.6	0.21	48		
26			73	121	40	1.5	30	6.5	0.21	48		
27			79	120	39	1.6	30	3.9	0.18	29		
28			112	107	38	36	30	3.1	0.14	11		
29			129	82	38	104	30	37	0.14	4.7		
30			117	67	37	31	31	63	0.11	2.2		
31			77	---	36	---	30	63	---	1.3		
TOTAL			2,352	5,057	1,027.0	475.5	946.0	879.1	460.55	175.60		
MEAN			75.9	169	33.1	15.8	30.5	28.4	15.4	5.66		
MAX			618	332	60	104	53	63	64	48		
MIN			11	57	4.2	1.0	1.8	3.1	0.11	0.00		
AC-FT			4,670	10,030	2,040	943	1,880	1,740	914	348		

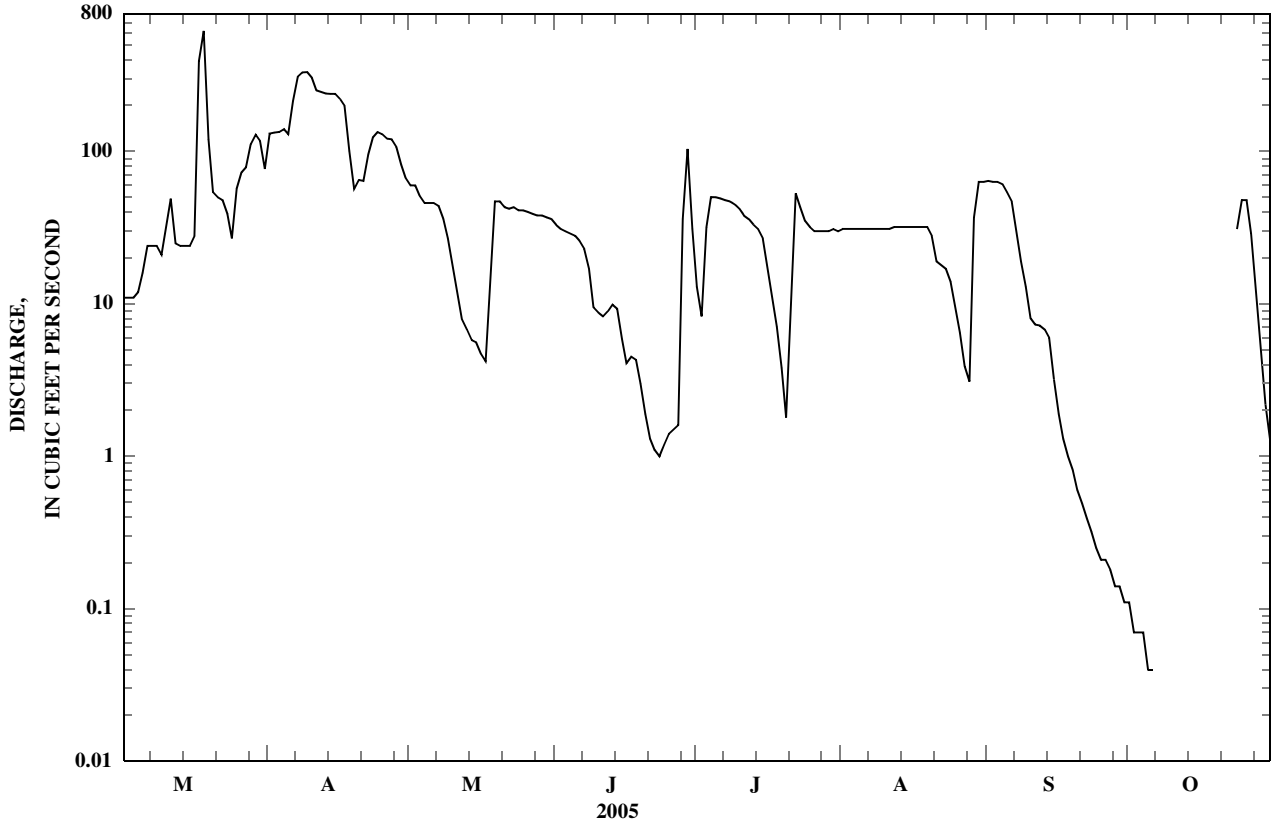
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1917 - 2005*

MEAN			179	397	138	83.8	52.7	17.1	7.23	10.5		
MAX			1,490	5,313	1,051	886	602	199	65.9	77.7		
(WY)			(1997)	(1952)	(1927)	(1923)	(1955)	(2002)	(1951)	(1966)		
MIN			0.00	0.35	2.54	0.39	0.02	0.00	0.00	0.00		
(WY)			(2002)	(2000)	(1937)	(1937)	(1984)	(1934)	(1919)	(1932)		

06164000 FRENCHMAN RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1917 - 2005*	
HIGHEST DAILY MEAN	618	Mar 18	19,200	Apr 15, 1952
LOWEST DAILY MEAN	0.07	Oct 2	0.00	Jul 28, 1919
MAXIMUM PEAK FLOW	784	Mar 18	a22,700	Apr 15, 1952
MAXIMUM PEAK STAGE	7.47	Mar 18	b19.90	Apr 15, 1952

*--Seasonal records most years.
a--From rating curve extended above 2,300 ft^3/s on basis of slope-area measurement of peak flow.
b--From floodmarks.



RESERVOIRS IN FRENCHMAN RIVER BASIN IN SASKATCHEWAN
(International gaging stations)

All elevations listed for the following reservoirs are referenced to the National Geodetic Vertical Datum of 1929.

06157000 CYPRESS LAKE

LOCATION.--Lat 49°27'30", long 109°30'25" (NAD 27), in $SE^1/_4$ sec.12, T.6, R.27 W., third meridian, Hydrologic Unit 10050013, on south shore, and 12 mi north of Consul.

DRAINAGE AREA.--107 mi^2.

PERIOD OF RECORD, February 1939 to current season (seasonal records only). Records prior to October 1946, published only in WSP 1309. March to May 1952 daily elevations and contents, published in WSP 1260-B. Water-stage recorder. Elevation of gage is at mean sea level (Geodetic Survey of Canada datum; subtract 33.67 ft to obtain Reclamation Service datum). Prior to 1969 season, at Reclamation Service datum. Prior to 1940, nonrecording gage on natural lake at "South" station. February 1940 to Apr. 28, 1955, elevation obtained from average of nonrecording gage readings at west and east dams. Apr. 29, 1955, to Aug. 21, 1984, gage located at east dam.

REMARKS.--This is an offstream reservoir formed by two earthfill dams on a natural lake of the same name which is the head of the Frenchman River. There are concrete control works at both dams. The following capacity figures are from capacity table effective January 1971; see previous reports for superseded figures. Usable capacity, 79,500 acre-ft between elevation 3,187.0 ft, bottom of west outlet works, and 3,201.9 ft, maximum design level. Dead storage, 24,300 acre-ft. Water is diverted from Battle Creek on west, 12 mi northwest of Consul, and from Belanger Creek, in the Frenchman River basin, on the east, 12 mi north of Vidora. Water is released to the same streams for irrigation. Figures given herein represent total contents. Water Survey of Canada satellite telemeter at station. This is one of a number of stations which are maintained jointly by Canada and the United States.

REVISED RECORDS.--W 1983: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 117,300 acre-ft, Apr. 21, 1955, elevation, 3,203.36 ft; minimum observed since first filling, 8,190 acre-ft, Nov. 17, 1992, elevation, 3,183.17 ft.

EXTREMES FOR CURRENT SEASON.--Maximum contents, 20,490 acre-ft, June 29, elevation, 3,186.15 ft; minimum, 14,550 acre-ft, Mar.3, elevation, 3,184.77 ft.

06159000 EASTEND RESERVOIR

LOCATION.--Lat 49°30'26", long 108°51'08" (NAD 27), in $NW^1/_4$ sec.25, T.6, R.22 W., third meridian Hydrologic Unit 10050013, at dam on Frenchman River, 1.6 mi west of Eastend, and at mile 300.5.

DRAINAGE AREA.--619 mi^2.

PERIOD OF RECORD.--February 1937 to current season (seasonal records only). Prior to 1958, published as East End Reservoir at East End. Nonrecording gages read about once a day during irrigation season and twice a day during high stages February 1937 to July 1979. Water-stage recorder. Elevation of gage is at mean sea level (Geodetic Survey of Canada datum).

REMARKS.--Reservoir is formed by earthfill dam completed in 1939, breached during flood in 1952 and rebuilt the same year with a concrete spillway and control works. The following capacity figures are from capacity table effective September 1982. Usable capacity, 1,690 acre-ft between elevation 2,993.5 ft, bottom of outlet works, and 3,012.0 ft, maximum design level. No dead storage. Water is used for irrigation. Water Survey of Canada satellite telemeter at station. This is one of a number of stations which are maintained jointly by Canada and the United States.

REVISED RECORDS (SEASONS).--WSP 1309: 1948(M). WSP 1729: Drainage area. WSP 2116: 1937-65. W 1983: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, about 3,700 acre-ft, Apr. 15, 1952, elevation, about 3,015 ft, dam overtopped; no contents at times.

EXTREMES FOR CURRENT SEASON.--Maximum contents, 2,400 acre-ft, May 9, elevation, 3,013.73 ft; minimum, 474 acre-ft, Oct. 31, elevation, 3,007.57 ft.

06162000 HUFF LAKE

LOCATION.--Lat 49°22'16", long 107°53'07" (NAD 27), in $SW^1/_4$ sec.7, T.5, R.14 W., third meridian, Hydrologic Unit 10050013, near dam on Frenchman River, 11 mi northwest of Val Marie, and at mile 169.7.

DRAINAGE AREA.--1,274 mi^2.

PERIOD OF RECORD, February 1940 to current season (seasonal records only). February 1940 to October 1979, published as Val Marie West Reservoir. Records prior to October 1946, published only in WSP 1309. April to May 1952 daily elevations and contents, published in WSP 1260-B. Water-stage recorder. Elevation of gage is at mean sea level (Geodetic Survey of Canada datum). May 1952 to May 1954, reference point on control structure. May 1954 to May 10, 1966, nonrecording gages. May 11, 1966, to Oct. 31, 1979, recording gage on riparian gatewell.

REMARKS (REVISED).--Reservoir is formed by earthfill dam with concrete control works completed in 1939. The following capacity figures are from capacity table effective Jan. 1, 2004. Usable capacity, 3,000 acre-ft between elevation 2,663.2 ft, bottom of outlet works, and 2,676.5 ft, maximum design level. Dead storage, 25 acre-ft. Water is used for irrigation. Figures given herein represent total contents. Water Survey of Canada satellite telemeter at station. This is one of a number of stations which are maintained jointly by Canada and the United States.

REVISED RECORDS (SEASONS).--WSP 1309: 1947-50.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,160 acre-ft, Mar. 26, 1997, elevation, 2,678.91 ft; no contents Feb. 28, Mar. 31, 1950, Oct. 22-31, 1984, Mar. 1-7, Aug. 6 to Sept. 14, 1985 and Feb. 28 to Apr. 11, 2002.

EXTREMES FOR CURRENT SEASON.--Maximum contents, 3,470 acre-ft, Apr. 4, elevation, 2,677.31 ft; minimum, 434 acre-ft, Aug. 20, elevation, 2.668.54 ft.

RESERVOIRS IN FRENCHMAN RIVER BASIN IN SASKATCHEWAN—Continued

06163000 NEWTON LAKE

LOCATION.--Lat 49°18'12", long 107°48'20" (NAD 27), in NE$^1/_4$ sec.15, T.4, R.14 W., third meridian, Hydrologic Unit 10050013, at dam on Frenchman River, 5.4 mi northwest of Val Marie, and at mile 156.2.

DRAINAGE AREA.--1,349 mi^2.

PERIOD OF RECORD.--February 1937 to current season (seasonal records only). February 1937 to October 1979, published as Val Marie Reservoir. Water-stage recorder. Elevation of gage is at mean sea level (Geodetic Survey of Canada datum). Prior to May 11, 1966, nonrecording gages.

REMARKS.--Reservoir is formed by earthfill dam with concrete control works; construction began in 1936; storage began in 1937; construction completed in 1938. The following capacity figures are from capacity table effective February 1983. Usable capacity, 9,950 acre-ft between elevation 2,616.1 ft, bottom of outlet works, and 2,635.4 ft maximum design level. No dead storage. Water is used for irrigation. Water Survey of Canada satellite telemeter at station. This is one of a number of stations which are maintained jointly by Canada and the United States.

REVISED RECORDS (SEASONS).--WSP 2116: 1937-65. WSP 1729: 1949.

EXTREMES FOR PERIOD OF RECORD,--Maximum contents observed, 18,920 acre-ft, Apr. 19, 1952, elevation, 2,638.80 ft; no contents at times.

EXTREMES FOR CURRENT SEASON.--Maximum contents, 13,510 acre-ft, Mar. 14, elevation, 2,637.63 ft; minimum, 3,500 acre-ft, Oct. 31, elevation, 2,629.54 ft.

SEASONAL MONTHEND CONTENTS, IN ACRE-FEET, FEBRUARY 2005 TO OCTOBER 2005

Date	Cypress Lake	Eastend Reservoir	Huff Lake	Newton Lake
Feb. 28	14,630	487	3,160	12,020
Mar. 31	15,870	1,790	3,170	10,370
Apr. 30	19,100	2,210	3,090	10,050
May 31	15,360	798	1,350	7,800
June 30	20,180	1,880	3,200	9,890
July 31	18,170	1,470	2,450	7,320
Aug. 31	16,690	1,140	565	4,610
Sept. 30	16,150	486	1,630	4,180
Oct. 31	16,030	474	2,290	3,530

06164510 MILK RIVER AT JUNEBERG BRIDGE, NEAR SACO, MT

LOCATION.--Lat 48°30'32", long 107°13'02" (NAD 27), in $NE^1/_4$ $NE^1/_4$ sec.30, T.32 N., R.35 E., Phillips County, Hydrologic Unit 10050014, on left bank 25 ft upstream from Juneberg bridge on Phillips County road, 1.5 mi downstream from Frenchman River, 6.9 mi northeast of Saco, and at river mile 152.3.

DRAINAGE AREA. --17,670 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,130 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow increased during irrigation season by water from St. Mary Canal which diverts from the St. Mary River near Babb (station number 05017500). Flow regulated by Fresno Reservoir (station number 06136500), two reservoirs in Lodge Creek basin in Saskatchewan (station numbers 06144260 and 06144360 and four reservoirs in Frenchman River basin in Saskatchewan. There are many small dams for the diversion of irrigation canals upstream. 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	91	62	136	e100	e150	e120	114	137	172	125	189	108
2	88	61	124	e100	e150	e130	107	125	185	118	201	108
3	89	62	110	e100	e140	e120	107	115	188	104	202	109
4	89	63	117	e100	e120	e120	119	106	130	92	233	112
5	91	63	133	e100	e100	e140	133	94	117	77	224	100
6	89	65	141	e100	e100	176	143	52	124	67	191	87
7	86	63	141	e100	e100	177	135	141	158	62	184	78
8	78	63	139	e100	e120	180	169	250	218	56	186	81
9	74	65	142	e100	e130	192	238	272	375	57	193	86
10	70	64	147	e100	e140	173	326	211	476	160	205	99
11	64	63	150	e100	e130	129	347	226	494	167	183	128
12	63	67	150	e100	e140	129	337	201	452	156	193	247
13	62	68	138	e100	e120	148	371	184	341	158	155	175
14	63	69	136	e100	e100	119	320	182	263	230	142	151
15	121	125	137	e100	e110	90	267	218	204	236	145	145
16	129	142	136	e100	e110	72	279	201	227	256	132	155
17	103	141	141	e110	e100	86	295	181	207	260	116	156
18	88	139	146	e120	e100	83	288	199	299	245	114	147
19	78	165	140	e130	e100	96	272	189	300	234	122	131
20	72	206	132	e140	e110	339	197	171	194	214	133	105
21	70	194	124	e130	e120	280	152	200	170	168	128	92
22	67	246	115	e110	e130	145	142	199	159	169	116	85
23	66	173	e100	e120	e140	103	122	189	163	168	107	82
24	65	155	e110	e130	e130	82	118	187	146	174	104	77
25	65	126	e110	e140	e130	70	109	208	116	190	106	73
26	64	118	e110	e130	e120	65	152	208	95	206	101	72
27	63	120	e100	e130	e110	63	170	209	96	198	103	74
28	63	147	e110	e130	e120	61	164	220	108	186	119	80
29	64	162	e110	e130	---	79	160	207	299	186	121	80
30	63	136	e110	e130	---	80	150	193	144	185	117	76
31	63	---	e100	e150	---	106	---	187	---	186	111	---
TOTAL	2,401	3,393	3,935	3,530	3,370	3,953	6,003	5,662	6,620	5,090	4,676	3,299
MEAN	77.5	113	127	114	120	128	200	183	221	164	151	110
MAX	129	246	150	150	150	339	371	272	494	260	233	247
MIN	62	61	100	100	100	61	107	52	95	56	101	72
AC-FT	4,760	6,730	7,810	7,000	6,680	7,840	11,910	11,230	13,130	10,100	9,270	6,540

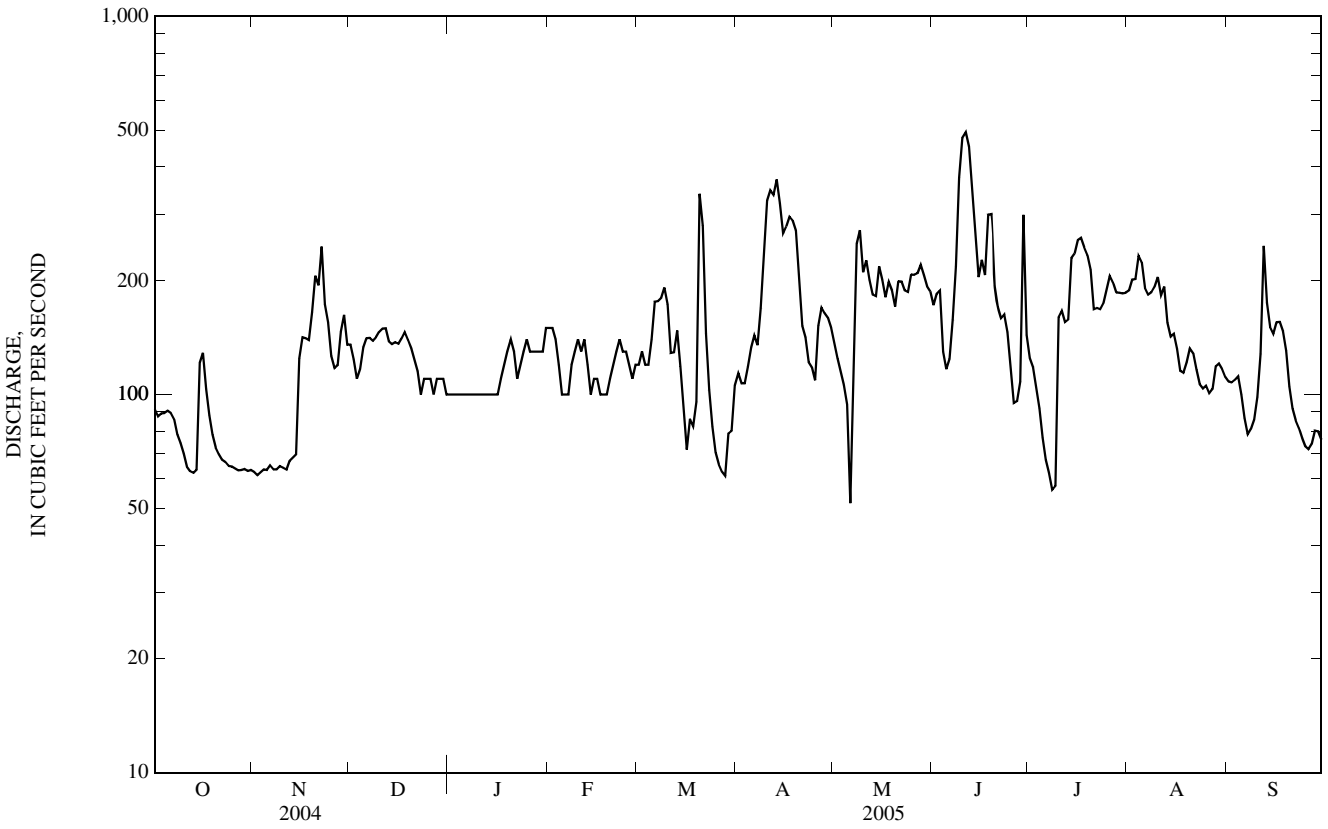
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2005, BY WATER YEAR (WY)

MEAN	275	149	120	117	211	979	723	456	458	404	234	226
MAX	4,043	597	406	271	1,758	4,075	6,221	2,545	2,258	1,844	693	1,517
(WY)	(1987)	(1987)	(1987)	(1987)	(1996)	(1979)	(1978)	(1986)	(1982)	(1991)	(1993)	(1986)
MIN	24.9	60.1	44.8	33.1	49.1	47.4	38.4	56.4	103	29.6	9.35	22.7
(WY)	(2002)	(1978)	(1986)	(1985)	(2002)	(2002)	(2002)	(1989)	(2001)	(1984)	(1984)	(1984)

06164510 MILK RIVER AT JUNEBERG BRIDGE, NEAR SACO, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1978 - 2005	
ANNUAL TOTAL	102,201		51,932			
ANNUAL MEAN	279		142		364*	
HIGHEST ANNUAL MEAN					1,042	1978
LOWEST ANNUAL MEAN					70.1	2001
HIGHEST DAILY MEAN	a3,200	Mar 16	494	Jun 11	12,300	Apr 3, 1978
LOWEST DAILY MEAN	46	May 6	52	May 6	2.1	Aug 20, 1984
ANNUAL SEVEN-DAY MINIMUM	56	May 1	62	Oct 30	4.0	Jul 27, 1984
MAXIMUM PEAK FLOW			582	Jun 11	b12,400	Apr 3, 1978
MAXIMUM PEAK STAGE			4.14	Jun 11	c26.70	Mar 4, 1986
ANNUAL RUNOFF (AC-FT)	202,700		103,000		263,400	
10 PERCENT EXCEEDS	658		222		648	
50 PERCENT EXCEEDS	122		129		147	
90 PERCENT EXCEEDS	69		70		50	

*--Median of yearly mean discharge 221 ft^3/s.
a--About.
b--Gage height, 24.20 ft.
c--Backwater from ice.
e--Estimated.



06166000 BEAVER CREEK BELOW GUSTON COULEE, NEAR SACO, MT

LOCATION.--Lat 48°21'24", long 107°34'56" (NAD 27), in $SE^1/_4SW^1/_4NW^1/_4$ sec.16, T.30 N., R.32 E., Phillips County, Hydrologic Unit 10050014, on right bank, 25 ft upstream from bridge on county road, 13 mi southwest of Saco, 22.5 river miles downstream from Guston Coulee, and at mile 61.1.

DRAINAGE AREA.--1,208 mi^2.

PERIOD OF RECORD.--April 1920 to September 1921, April 1981 to current year (seasonal records only).

GAGE.--Water-stage recorder. Elevation of gage is 2,215 ft (NGVD 29).

REMARKS.--Seasonal records fair. Some regulation by numerous small reservoirs on tributary streams. Diversions for irrigation upstream from gage. U.S. Geological Survey satellite telemetry 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			e0.00	0.79	5.8	12	52	2.9	0.89	0.01		
2			e0.00	0.77	5.8	7.7	20	1.8	0.74	0.01		
3			e0.00	12	10	0.35	9.1	0.99	0.66	0.00		
4			e0.00	14	8.0	e0.00	5.4	0.73	0.58	0.00		
5			e0.00	6.1	8.5	e0.00	2.8	0.63	0.50	0.00		
6			e0.00	4.7	11	e0.00	2.1	0.64	0.57	0.00		
7			e0.10	3.7	10	0.37	1.0	0.91	0.65	0.00		
8			e0.20	0.06	7.1	4.2	0.46	2.5	0.67	0.00		
9			e0.20	0.04	3.7	20	0.40	3.4	0.57	0.00		
10			e0.50	e0.00	2.6	18	0.16	3.2	0.65	0.00		
11			e0.50	e0.00	2.4	14	e0.00	2.2	0.76	0.00		
12			e0.30	0.06	4.1	13	e0.00	1.6	0.70	0.00		
13			e0.10	0.81	7.8	14	e0.00	1.3	0.68	0.00		
14			e0.10	86	5.6	12	e0.00	1.2	0.54	0.00		
15			e0.10	96	5.4	12	e0.00	1.2	0.04	0.00		
16			e0.10	100	4.9	20	e0.00	1.1	0.01	0.00		
17			e0.10	94	9.8	50	e0.00	1.2	0.01	0.01		
18			e0.10	44	31	24	e0.00	1.3	0.00	0.00		
19			e0.20	20	28	13	e0.00	1.1	0.01	0.00		
20			e0.30	19	14	6.4	0.04	0.90	0.01	0.00		
21			e0.30	14	6.4	18	0.83	0.88	0.01	0.00		
22			e0.40	10	6.5	23	3.7	1.0	0.01	0.00		
23			e0.20	9.5	11	12	3.1	1.2	0.01	0.00		
24			e0.30	12	12	6.7	1.8	1.1	0.01	0.00		
25			e0.50	11	12	3.5	0.54	1.2	0.00	0.00		
26			e1.0	9.3	16	2.4	e0.00	1.6	0.00	0.00		
27			1.2	8.8	19	1.3	e0.00	1.4	0.00	0.00		
28			1.1	7.7	17	1.1	e0.00	1.4	0.00	0.00		
29			1.1	6.6	10	6.9	e0.00	1.8	0.01	0.00		
30			1.1	6.3	8.1	90	0.09	2.0	0.01	0.00		
31			0.98	---	9.9	---	0.77	1.2	---	0.00		
TOTAL			11.08	597.23	313.4	405.92	104.29	45.58	9.30	0.03		
MEAN			0.36	19.9	10.1	13.5	3.36	1.47	0.31	0.00		
MAX			1.2	100	31	90	52	3.4	0.89	0.01		
MIN			0.00	0.00	2.4	0.00	0.00	0.63	0.00	0.00		
AC-FT			22	1,180	622	805	207	90	18	0.06		

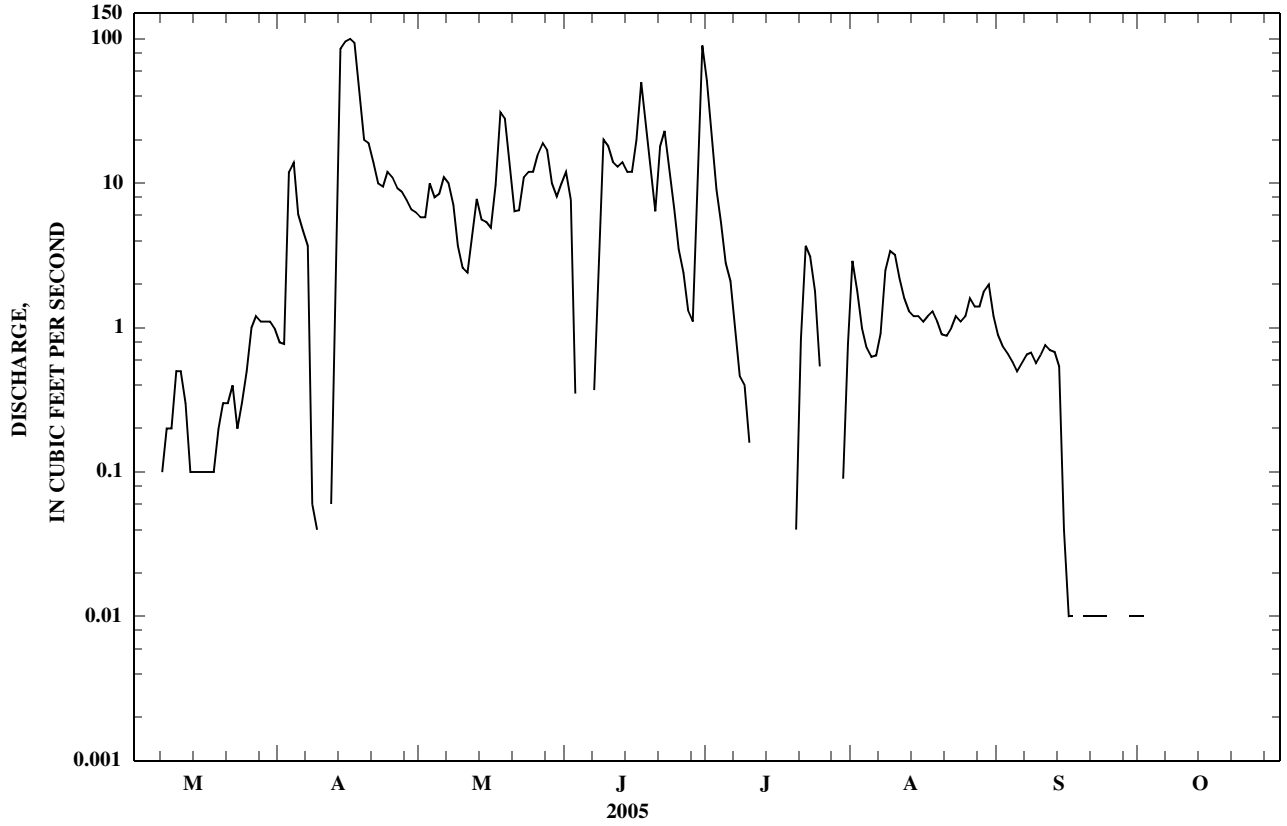
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1981 - 2005*

MEAN	64.5	19.4	56.6	33.9	41.2	6.71	53.7	19.6
MAX	304	140	718	315	223	40.7	1,187	342
(WY)	(2004)	(1987)	(1986)	(1982)	(1998)	(1993)	(1986)	(1987)
MIN	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
(WY)	(1995)	(1995)	(1984)	(2001)	(1985)	(2001)	(1984)	(1985)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1981 - 2005*	
HIGHEST DAILY MEAN	100	Apr 16	11,900	Sep 27, 1986
LOWEST DAILY MEAN	a0.00	Mar 1	d0.00	Apr 5, 1981
MAXIMUM PEAK FLOW	b124	Apr 14	f23,500	Sep 26, 1986
MAXIMUM PEAK STAGE	c4.09	Jun 30	14.68	Sep 26, 1986

*--During period of operation (1981 to current year).
a--Many days.
b--Gage height, 3.66 ft.
c--Backwater from algae.
d--No flow at times each year.
e--Estimated.
f--From slope-area measurement of peak flow.

06166000 BEAVER CREEK BELOW GUSTON COULEE, NEAR SACO, MT—Continued



06169500 ROCK CREEK BELOW HORSE CREEK, NEAR INTERNATIONAL BOUNDARY

LOCATION.--Lat 48°58'10", long 106°50'20" (NAD 27), in $NE^1/_4$ $NW^1/_4$ sec.15, T.37 N., R.37 E., Valley County, Hydrologic Unit 10050015, on right bank 2 mi south of international boundary, 3 mi downstream from Horse Creek, 21 mi northwest of Opheim, , and at river mile 82.0.

DRAINAGE AREA.--328 mi^2.

PERIOD OF RECORD.--March 1916 to October 1926, September 1956 to current year (seasonal records only prior to October 1978). Monthly discharge only for some periods, published in WSP 1309. Published as Rock Creek near Barnard, . 1916-17. Prior to September 1956, records were collected at both Horse Creek (1914-56) and Rock Creek above Horse Creek (1914-56). Summations are equivalent to records at this site.

REVISED RECORDS.--WSP 1509: 1925(M), WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,530 ft (NGVD 29). March 1916 to October 1926, nonrecording gages at several sites within 500 ft upstream at different elevation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several small 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 Apr. 15, 1952, reached a stage of 12.6 ft, from floodmarks, discharge, 5,110 ft^3/s, by slope-area measurement of peak flow.

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	0.93	2.6	1.3	e0.55	e0.00	e0.30	24	4.1	5.1	35	0.06	0.00
2	0.98	2.5	1.4	e0.40	e0.00	e0.40	24	4.1	4.4	16	0.04	0.00
3	1.0	2.0	e1.3	e0.20	e0.00	e0.50	21	4.1	4.1	11	0.04	0.00
4	1.1	2.4	e1.3	e0.10	e0.00	e0.60	17	4.1	3.8	7.8	0.03	0.00
5	1.1	2.6	e1.4	e0.00	e0.33	e0.90	17	4.0	4.1	6.0	0.02	0.00
6	1.2	2.4	e1.3	e0.00	e0.00	e1.0	15	3.9	4.9	4.5	0.01	0.00
7	1.3	2.5	e1.4	e0.00	e0.00	e6.0	14	3.6	14	3.4	0.01	0.00
8	1.3	2.9	e1.4	e0.00	e0.00	e20	11	3.3	27	2.6	0.01	0.00
9	1.4	2.8	e1.4	e0.00	e0.00	e50	9.5	3.3	37	2.0	0.01	0.00
10	1.5	2.0	1.4	e0.00	e0.10	e50	9.0	3.3	24	1.6	0.01	0.01
11	1.5	2.3	1.5	e0.00	e0.10	e60	24	3.3	19	1.4	0.01	0.02
12	1.5	2.3	1.7	e0.00	e0.20	e50	41	3.4	20	1.3	0.01	0.01
13	1.5	1.8	1.4	e0.00	e0.20	e30	34	3.5	15	1.4	0.01	1.2
14	1.6	2.3	1.1	e0.00	e0.20	e20	21	3.5	11	1.1	0.01	2.8
15	1.6	2.2	1.1	e0.00	e0.20	e10	15	3.8	9.2	0.84	0.01	1.5
16	1.6	2.4	e0.90	e0.00	e0.20	e10	11	3.9	9.8	0.79	0.01	0.82
17	2.0	2.6	e1.0	e0.00	e0.20	e10	9.2	4.0	8.1	0.76	0.01	0.58
18	2.2	2.6	e1.0	e0.00	e0.30	e8.0	8.0	4.4	8.6	0.68	0.01	0.47
19	2.3	2.3	e0.95	e0.00	e0.30	e6.0	7.1	4.2	7.2	0.66	0.01	0.47
20	2.3	2.3	e0.95	e0.00	e0.30	e5.0	6.7	11	8.1	0.60	0.01	0.42
21	2.4	2.1	e0.95	e0.00	e0.30	e4.0	6.3	11	9.6	0.55	0.01	0.41
22	2.5	1.7	e0.75	e0.00	e0.30	5.4	6.0	8.2	7.3	0.47	0.00	0.39
23	2.6	1.9	e0.65	e0.00	e0.30	5.5	5.6	8.3	15	0.42	0.00	0.40
24	2.8	1.5	e0.30	e0.00	e0.30	e6.0	5.2	7.2	8.1	0.33	0.00	0.41
25	2.8	1.6	e0.40	e0.00	e0.30	e4.0	4.7	11	4.8	0.28	0.00	0.41
26	2.8	1.9	e0.50	e0.00	e0.30	e4.0	4.7	12	4.9	0.25	0.00	0.42
27	2.9	1.8	e0.60	e0.00	e0.30	e5.0	4.5	10	23	0.23	0.00	0.40
28	3.0	1.7	e0.60	e0.00	e0.25	6.8	4.1	8.3	12	0.20	0.00	0.41
29	2.9	1.7	e0.60	e0.00	---	9.5	4.1	7.0	25	0.14	0.00	0.46
30	2.9	1.4	e0.60	e0.00	---	15	4.1	6.4	66	0.14	0.00	0.49
31	2.8	---	e0.55	e0.00	---	32	---	5.7	---	0.11	0.00	---
TOTAL	60.31	65.1	31.70	1.25	4.98	435.90	387.8	177.9	420.1	102.55	0.35	12.50
MEAN	1.95	2.17	1.02	0.04	0.18	14.1	12.9	5.74	14.0	3.31	0.01	0.42
MAX	3.0	2.9	1.7	0.55	0.33	60	41	12	66	35	0.06	2.8
MIN	0.93	1.4	0.30	0.00	0.00	0.30	4.1	3.3	3.8	0.11	0.00	0.00
AC-FT	120	129	63	2.5	9.9	865	769	353	833	203	0.7	25

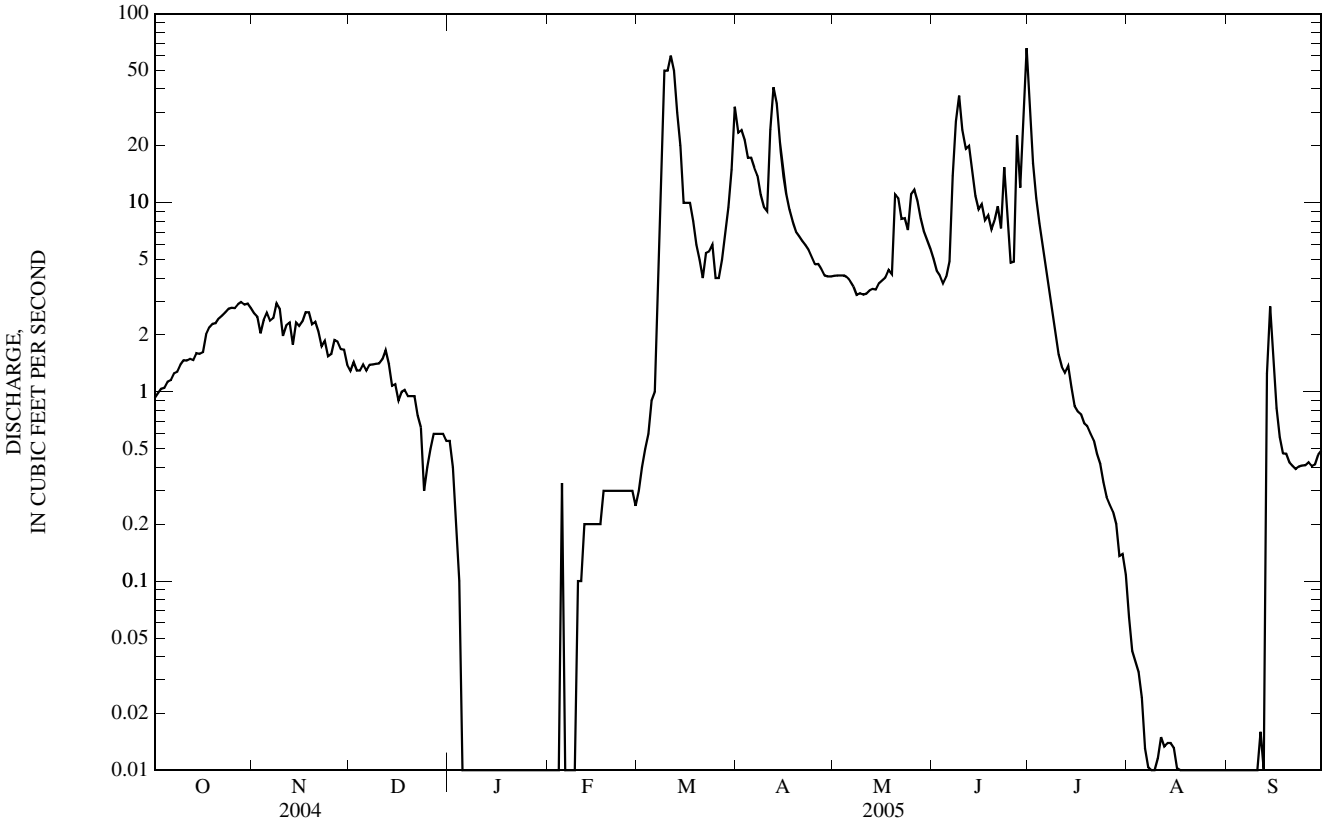
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)*

MEAN	1.83	1.49	0.74	0.27	5.49	78.0	80.9	16.2	13.3	9.34	1.23	1.06
MAX	9.33	2.79	2.19	1.78	96.1	369	437	89.0	102	63.6	13.4	12.5
(WY)	(1987)	(1981)	(1980)	(1981)	(1981)	(1976)	(1969)	(1982)	(1991)	(1969)	(1975)	(1986)
MIN	0.00	0.10	0.03	0.00	0.00	0.00	3.97	1.46	0.17	0.00	0.00	0.00
(WY)	(1989)	(1989)	(1996)	(1984)	(1980)	(1965)	(1992)	(1992)	(1988)	(1988)	(1959)	(1958)

06169500 ROCK CREEK BELOW HORSE CREEK, NEAR INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005**	
ANNUAL TOTAL	5,624.67		1,700.44			
ANNUAL MEAN	15.4		4.66		13.8***	
HIGHEST ANNUAL MEAN					37.4	1999
LOWEST ANNUAL MEAN					1.88	1998
HIGHEST DAILY MEAN	903	May 24	66	Jun 30	3,460	Apr 7, 1969
LOWEST DAILY MEAN	0.00	Jan 16	0.00	Jan 5	0.00	Mar 1, 1957
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 16	0.00	Jan 5	0.00	Mar 1, 1957
MAXIMUM PEAK FLOW			a85	Jun 29	c4,420	Apr 7, 1969
MAXIMUM PEAK STAGE			b4.86	Mar 12	b13.40	Mar 29, 1978
INSTANTANEOUS LOW FLOW					d0.00	Mar 1, 1957
ANNUAL RUNOFF (AC-FT)	11,160		3,370		10,020	
10 PERCENT EXCEEDS	26		11		14	
50 PERCENT EXCEEDS	1.5		1.4		1.0	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

*--During period of operation (September 1956 to current year).
**--Seasonal records only prior to October 1978.
***--Median of yearly discharge, 9.92 ft^3/s, 6,970 acre-ft/yr (October 1978 to current year).
a--Gage height, 3.83 ft.
b--Backwater from ice.
c--Gage height, 12.03 ft.
d--No flow at times most years.
e--Estimated.



06172310 MILK RIVER AT TAMPICO, MT

LOCATION.--Lat 48°18'29", long 106°49'19" (NAD 27), in $SW^1/_4SW^1/_4SW^1/_4$ sec.32, T.30 N., R.38 E., Valley County, Hydrologic Unit 10050012, on right bank, at county bridge 0.8 miles downstream from Buggy Creek and 0.3 miles northeast of Tampico, and at river mile 98.7.

DRAINAGE AREA.--21,078 mi^2.

PERIOD OF RECORD.--October 1973 to September 1977, May 1987 to current year (seasonal record beginning 1995 water year).

GAGE.--Water-stage recorder. Elevation of gage is 2,110 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow increased during irrigation season by water from St. Mary Canal which diverts from the St. Mary River near Babb. Flow regulated by Fresno and Nelson Reservoirs, five reservoirs in Lodge Creek basin in Saskatchewan, and four reservoirs in Frenchman River basin in Saskatchewan. Many small dams for the diversion of irrigation canals upstream, the closest being Vandalia Dam 19 mi upstream. Diversions upstream from station for irrigation of about 126,000 acres of which about 17,000 acres lies downstream 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 Apr. 17, 1952 reached an observed stage of 38.67 ft at gage 200 ft downstream from Vandalia Dam, furnished by the U.S. Army Corps of Engineers; discharge about 45,000 ft^3/s.

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			e140	22	81	92	1,250	24	33	153		
2			e130	10	84	93	696	23	31	136		
3			e130	9.1	81	118	446	22	28	133		
4			e130	8.9	76	157	317	23	27	158		
5			e150	11	70	134	262	27	26	121		
6			e170	10	56	111	210	39	26	94		
7			e170	12	45	319	166	48	26	85		
8			e170	17	42	707	114	56	31	83		
9			e180	19	66	897	77	61	25	80		
10			e170	77	117	1,100	55	75	30	77		
11			e130	261	126	1,130	47	98	34	75		
12			e130	458	122	980	53	96	51	94		
13			161	632	108	821	54	99	173	83		
14			164	436	83	633	48	86	182	81		
15			176	273	72	534	41	63	135	81		
16			177	163	74	417	37	48	108	81		
17			127	145	72	352	42	42	109	79		
18			110	156	81	363	49	41	102	79		
19			117	149	76	855	56	38	88	79		
20			106	129	69	705	61	38	74	79		
21			238	97	64	447	57	39	183	78		
22			378	73	63	356	49	43	124	79		
23			241	58	66	383	46	42	115	78		
24			130	50	61	328	39	40	209	78		
25			165	42	56	265	34	37	192	76		
26			99	35	57	229	30	33	187	76		
27			75	35	60	176	35	31	265	76		
28			70	48	64	156	38	30	217	75		
29			73	64	70	253	35	29	108	75		
30			73	73	79	1,580	31	32	165	75		
31			80	---	85	---	27	35	---	75		
TOTAL			4,560	3,573.0	2,326	14,691	4,502	1,438	3,104	2,772		
MEAN			147	119	75.0	490	145	46.4	103	89.4		
MAX			378	632	126	1,580	1,250	99	265	158		
MIN			70	8.9	42	92	27	22	25	75		
AC-FT			9,040	7,090	4,610	29,140	8,930	2,850	6,160	5,500		

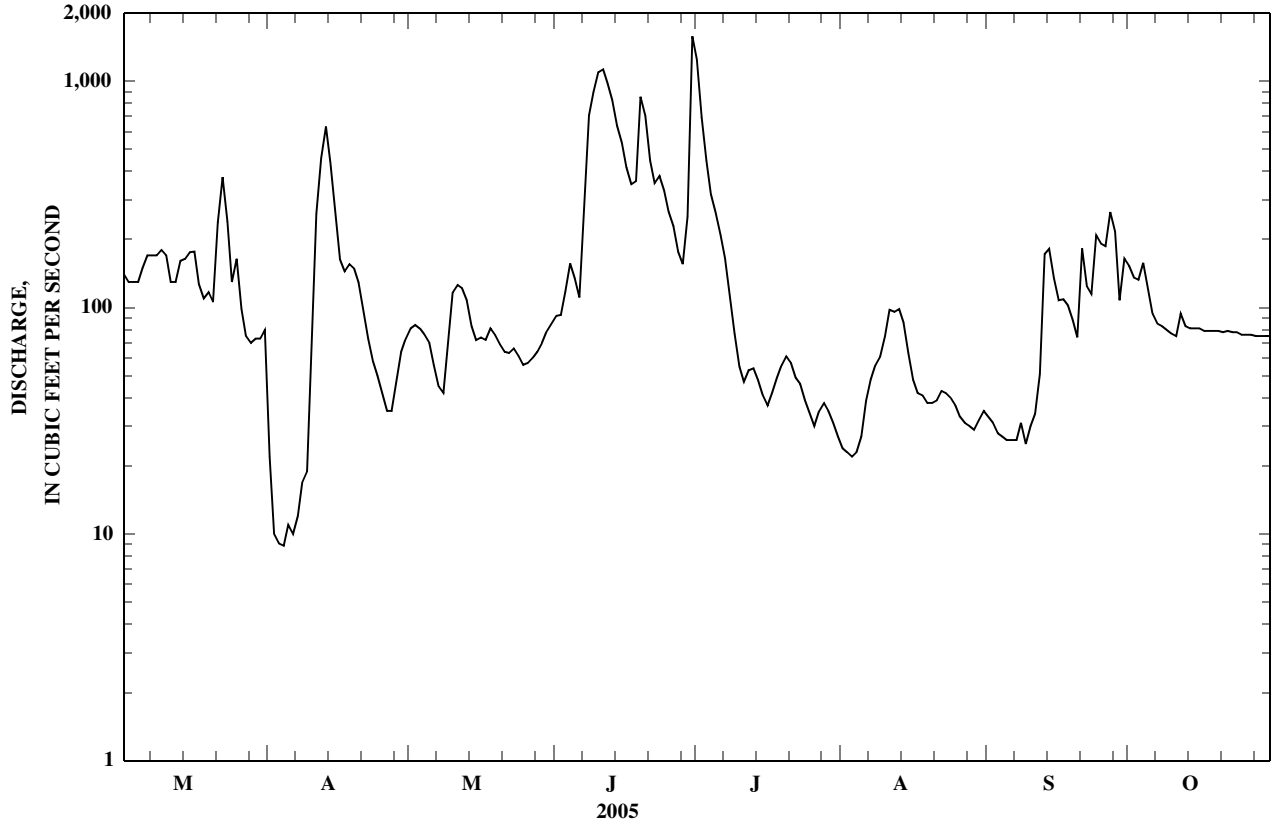
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1994, AND SEASONS 1995 - 2005*

MEAN	211	178	1,155	802	349	554	303	107	117	154	217	152
MAX	791	433	3,041	3,911	4,555	1,852	2,515	769	903	906	710	363
(WY)	(1974)	(1974)	(1994)	(1996)	(1975)	(1974)	(1991)	(1993)	(1993)	(1994)	(1976)	(1976)
MIN	55.2	49.3	46.6	3.35	6.59	11.7	8.35	4.63	6.52	29.1	90.0	66.9
(WY)	(1989)	(1989)	(2002)	(1992)	(2001)	(1977)	(1977)	(1988)	(1988)	(2002)	(1989)	(1989)

06172310 MILK RIVER AT TAMPICO, MT—Continued

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1995 - 2005*		WATER YEARS 1974 - 1994*	
ANNUAL MEAN					400	
HIGHEST ANNUAL MEAN					998	1975
LOWEST ANNUAL MEAN					84.6	1988
HIGHEST DAILY MEAN	1,580	Jun 30	a11,000	Mar 27, 1997	8,180	May 26, 1974
LOWEST DAILY MEAN	8.9	Apr 4	1.8	Jun 7, 2002	0.00	Aug 28, 1988
ANNUAL SEVEN-DAY MINIMUM					0.00	Sep 7, 1988
MAXIMUM PEAK FLOW	1,980	Jun 30	a11,000	Mar 27, 1997	c8,210	May 26, 1974
MAXIMUM PEAK STAGE	9.32	Jun 30	b27.64	Mar 27, 1997	25.40	Jul 4, 1991
INSTANTANEOUS LOW FLOW					0.00	Aug 28, 1988
ANNUAL RUNOFF (AC-FT)					308,500	
10 PERCENT EXCEEDS					920	
50 PERCENT EXCEEDS					128	
90 PERCENT EXCEEDS					13	

*--During period of operation (1974-77, 1987 to current year. Seasonal records beginning with 1995 water year).
a--Estimated daily discharge, ungaged bypass flow.
b--Backwater from ice.
c--Gage height, 23.65 ft.
e--Estimated.



06174500 MILK RIVER AT NASHUA, MT

LOCATION.--Lat 48°07'47", long 106°21'50" (NAD 27), in $NE^1/_4$ $NE^1/_4$ sec.1, T.27 N., R.41 E., Valley County, Hydrologic Unit 10050012, on right bank at downstream side of former highway bridge site, 0.6 mi southwest of Nashua, 2.0 mi upstream from Porcupine Creek, and at river mile 22.7.

DRAINAGE AREA.--22,332 mi^2.

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

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,027.75 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow increased during irrigation season by water from St. Mary Canal which diverts from the St. Mary River near Babb. Flow regulated by Fresno Reservoir (station number 06136500), two reservoirs in Lodge Creek basin in Saskatchewan, and four reservoirs in Frenchman River basin in Saskatchewan. Diversions for irrigation of about 140,000 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	93	90	208	e110	e220	e210	97	85	114	486	57	61
2	201	88	213	e110	e220	e200	100	97	128	1,220	57	74
3	509	86	206	e110	e220	e200	81	101	135	991	49	90
4	444	84	196	e110	e220	e195	52	100	138	537	33	107
5	336	83	184	e110	e210	e200	40	92	153	359	111	108
6	248	84	181	e110	e200	e210	32	84	189	273	205	103
7	205	82	178	e110	e200	e200	28	77	208	231	103	89
8	247	83	e125	e110	e200	e220	26	77	1,050	194	77	78
9	242	82	e95	e110	e200	e220	28	79	2,390	159	85	72
10	185	80	e50	e110	e200	e220	30	71	3,870	125	92	76
11	136	81	e85	e110	e200	e230	40	61	4,430	99	89	91
12	119	82	e150	e110	e200	e230	229	89	3,950	107	106	184
13	111	80	e190	e110	e200	e220	344	124	3,110	86	130	326
14	102	77	209	e110	e200	e210	448	137	2,370	77	138	168
15	95	73	183	e110	e180	e200	474	140	1,800	78	130	174
16	92	84	185	e110	e190	196	443	109	1,200	82	138	191
17	93	88	182	e120	e190	178	310	111	721	82	137	166
18	93	89	194	e130	e180	152	253	111	554	78	117	150
19	125	131	e190	e140	e180	138	237	96	856	80	110	147
20	150	139	e180	e150	e180	136	243	90	1,490	82	97	141
21	135	117	e130	e140	e190	125	240	81	1,770	88	89	122
22	121	153	e120	e120	e190	123	214	83	2,740	94	89	110
23	108	187	e110	e130	e200	169	187	79	2,440	92	84	163
24	101	212	e120	e140	e210	318	157	84	1,390	89	81	161
25	97	222	e120	e150	e210	352	115	83	664	86	71	121
26	91	243	e120	e140	e210	227	100	81	396	92	57	175
27	89	252	e110	e140	e210	174	108	59	316	84	53	176
28	91	211	e120	e140	e200	159	107	59	274	65	58	178
29	96	211	e120	e140	---	133	84	69	226	57	58	222
30	97	191	e120	e200	---	116	72	82	240	62	56	193
31	93	---	e110	e220	---	101	---	102	---	63	57	---
TOTAL	4,945	3,765	4,684	3,960	5,610	5,962	4,919	2,793	39,312	6,298	2,814	4,217
MEAN	160	126	151	128	200	192	164	90.1	1,310	203	90.8	141
MAX	509	252	213	220	220	352	474	140	4,430	1,220	205	326
MIN	89	73	50	110	180	101	26	59	114	57	33	61
AC-FT	9,810	7,470	9,290	7,850	11,130	11,830	9,760	5,540	77,980	12,490	5,580	8,360

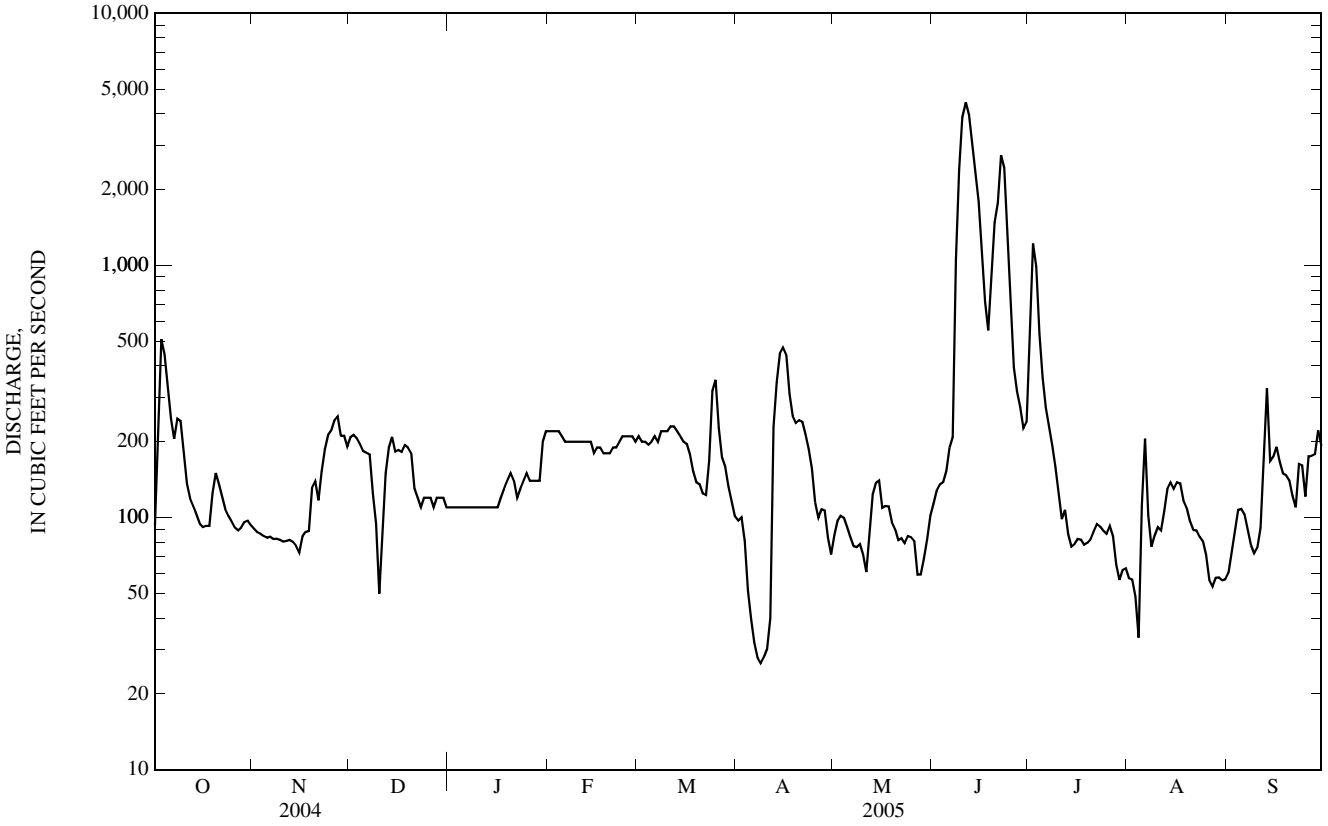
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	300	209	156	144	237	1,280	2,137	981	953	648	301	269
MAX	6,837	768	487	843	2,337	6,678	20,930	5,207	6,611	3,578	1,754	2,138
(WY)	(1987)	(1987)	(1987)	(1974)	(1996)	(1986)	(1952)	(1975)	(1953)	(1962)	(1993)	(1978)
MIN	34.4	61.2	39.7	36.0	38.9	56.5	15.1	10.5	28.0	3.56	3.42	12.6
(WY)	(2002)	(2002)	(1984)	(1950)	(1949)	(2002)	(1981)	(1992)	(1984)	(1984)	(1984)	(1988)

06174500 MILK RIVER AT NASHUA, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	212,269		89,279			
ANNUAL MEAN	580		245		635*	
HIGHEST ANNUAL MEAN					2,359	1952
LOWEST ANNUAL MEAN					57.7	1984
HIGHEST DAILY MEAN	8,000	Mar 21	4,430	Jun 11	44,200	Apr 18, 1952
LOWEST DAILY MEAN	40	Jan 5	26	Apr 8	0.00	Jul 14, 1984
ANNUAL SEVEN-DAY MINIMUM	47	Jan 1	32	Apr 5	0.00	Jul 17, 1984
MAXIMUM PEAK FLOW			4,540	Jun 11	45,300	Apr 18, 1952
MAXIMUM PEAK STAGE			11.35	Jun 11	31.38	Apr 18, 1952
ANNUAL RUNOFF (AC-FT)	421,000		177,100		459,900	
10 PERCENT EXCEEDS	1,900		288		1,250	
50 PERCENT EXCEEDS	142		128		175	
90 PERCENT EXCEEDS	80		77		58	

*--Median of yearly discharge, 540 ft^3/s, 391,200 ac-ft/yr.
e--Estimated.



06177000 MISSOURI RIVER NEAR WOLF POINT, MT

LOCATION.--Lat 48°04'00", long 105°31'55" (NAD 27), in $SW^1/_4NW^1/_4$ sec.28, T.27 N., R.48 E., McCone County, Hydrologic Unit 10060001, on right bank 500 ft downstream from bridge on State Highway 13, 5 mi southeast of Wolf Point, 7.8 mi downstream from Wolf Creek, and at river mile 1,701.4.

DRAINAGE AREA.--82,290 mi^2.

PERIOD OF RECORD.--September 1928 to current year.

REVISED RECORDS.--WSP 1146: 1931. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,958.57 ft (NGVD 29). Prior to Apr. 13, 1930, nonrecording gages at Wolf Point ferry landing 5.5 mi upstream at different elevation.

REMARKS.-- Records good except those for estimated daily discharges, which are fair. Flow partly regulated by Fort Peck Lake and many other reservoirs upstream from station. Diversion for irrigation of about 1,010,400 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1908, reached a stage of about 20 ft (site and elevation then in use).

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	4,470	3,900	5,480	e5,900	e7,700	e5,400	5,150	5,530	5,160	5,770	6,340	6,240
2	4,390	3,980	5,730	e5,800	e7,000	e6,100	5,120	5,450	5,130	5,680	6,090	6,020
3	4,370	4,080	5,650	e5,700	e6,500	e5,500	4,970	5,500	5,270	6,180	6,360	6,040
4	4,340	4,020	5,760	e5,600	e6,800	e5,400	5,170	5,360	5,060	6,360	6,810	6,050
5	4,630	3,910	5,620	e5,800	e6,600	e5,400	5,480	5,280	5,170	6,040	6,430	5,740
6	4,460	3,910	5,620	e5,800	e6,100	5,230	5,250	5,390	5,200	5,850	5,960	5,990
7	4,300	3,790	5,700	e6,400	e5,700	5,210	5,370	5,550	5,570	5,550	6,630	5,990
8	4,180	3,920	5,650	e6,300	e5,800	5,240	5,160	5,720	6,470	5,360	6,530	5,640
9	4,100	3,900	5,650	e5,800	e5,500	4,980	5,500	5,690	7,310	5,390	6,220	6,000
10	4,110	4,130	5,700	e6,200	e6,100	4,830	5,550	5,600	7,460	5,880	5,870	6,070
11	4,060	4,040	5,720	e6,300	e5,600	4,870	5,450	5,580	8,340	7,010	6,110	6,090
12	4,080	4,100	5,590	e5,900	e5,600	4,900	5,340	5,600	9,310	7,180	6,020	6,010
13	4,040	4,220	5,560	e5,900	e5,700	4,900	5,310	4,690	9,340	6,750	6,160	5,980
14	4,020	4,060	5,660	e6,200	e5,700	4,860	5,540	4,850	8,500	6,950	6,050	6,060
15	4,010	4,020	5,750	e6,100	e5,700	4,900	5,660	5,290	7,690	6,460	6,140	6,120
16	3,820	4,270	5,700	e6,200	e5,800	4,910	5,770	5,580	7,290	6,510	6,320	6,370
17	3,970	4,440	5,680	e6,200	e5,800	4,990	5,760	5,420	6,660	6,530	7,060	6,810
18	3,950	4,600	5,670	e6,400	e5,700	4,960	5,790	5,410	6,470	6,590	6,670	5,610
19	3,970	4,710	5,660	e6,000	e5,800	4,880	5,640	5,150	5,960	6,500	6,710	4,460
20	3,920	4,270	5,880	e6,100	e5,600	4,780	5,560	5,140	6,040	6,340	6,620	4,320
21	4,060	4,470	e5,800	e5,800	e5,500	4,830	5,520	5,240	6,700	6,130	6,510	4,360
22	4,010	4,640	e5,800	e6,000	e5,200	5,070	5,530	5,310	7,170	5,940	6,370	4,450
23	3,970	4,920	e5,800	e5,900	e5,400	5,250	5,570	5,120	7,360	5,840	6,100	4,320
24	3,950	4,970	e5,800	e6,000	e5,400	5,440	5,660	5,010	7,680	5,850	6,330	4,240
25	3,940	5,090	e5,800	e5,900	e5,400	5,290	5,730	4,830	6,830	5,830	6,060	4,090
26	3,940	5,150	e5,800	e6,100	e5,400	5,620	5,560	5,000	6,290	5,700	6,030	3,920
27	3,880	5,300	e5,700	e6,200	e5,400	5,360	5,620	5,100	6,120	6,270	6,110	3,970
28	3,950	5,220	e5,800	e6,200	e5,600	5,290	5,450	5,120	6,000	6,820	6,220	3,990
29	3,960	5,190	e5,400	e6,800	---	5,180	5,450	5,010	6,050	6,840	6,240	3,830
30	3,860	5,260	e5,600	e8,000	---	5,200	5,520	4,960	6,010	7,120	6,270	3,570
31	3,920	---	e5,700	e7,100	---	5,250	---	5,100	---	6,500	5,930	---
TOTAL	126,630	132,480	176,430	190,600	164,100	160,020	164,150	163,580	199,610	193,720	195,270	158,350
MEAN	4,085	4,416	5,691	6,148	5,861	5,162	5,472	5,277	6,654	6,249	6,299	5,278
MAX	4,630	5,300	5,880	8,000	7,700	6,100	5,790	5,720	9,340	7,180	7,060	6,810
MIN	3,820	3,790	5,400	5,600	5,200	4,780	4,970	4,690	5,060	5,360	5,870	3,570
AC-FT	251,200	262,800	349,900	378,100	325,500	317,400	325,600	324,500	395,900	384,200	387,300	314,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)*

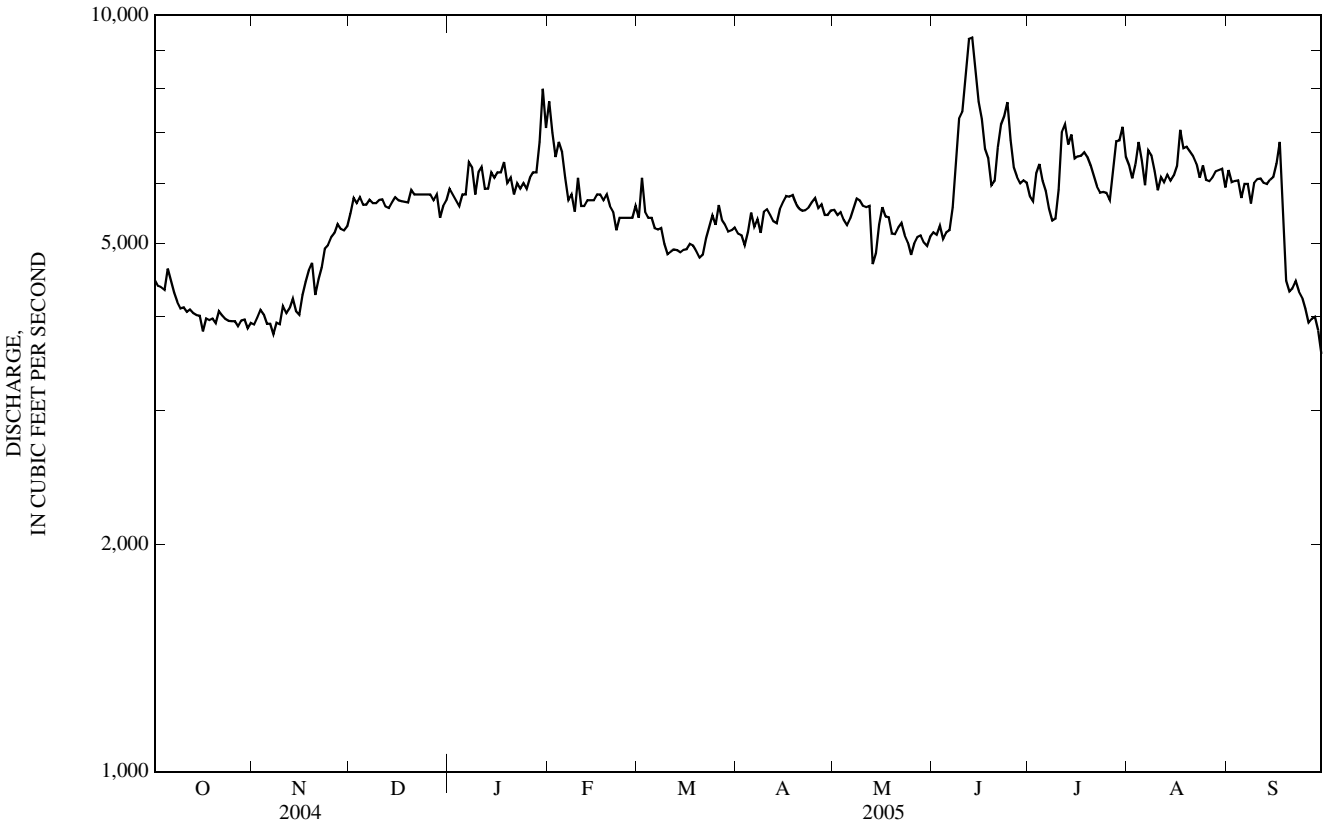
MEAN	11,200	9,019	8,968	9,646	9,845	8,839	9,440	9,233	9,349	10,160	11,840	11,560
MAX	29,130	22,210	13,420	14,270	15,820	16,750	27,180	21,800	26,040	36,270	27,110	27,150
(WY)	(1956)	(1998)	(1944)	(1971)	(1976)	(1976)	(1952)	(1979)	(1975)	(1975)	(1955)	(1955)
MIN	3,151	2,328	1,338	995	1,195	2,301	1,470	1,182	1,268	1,171	3,515	3,274
(WY)	(1993)	(1947)	(1943)	(1943)	(1943)	(1945)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1943 - 2005*	
ANNUAL TOTAL	2,719,540		2,024,940			
ANNUAL MEAN	7,430		5,548		9,927	
HIGHEST ANNUAL MEAN					15,850	1955
LOWEST ANNUAL MEAN					5,548	2005
HIGHEST DAILY MEAN	15,300	May 28	9,340	Jun 13	45,100	Apr 19, 1952
LOWEST DAILY MEAN	3,790	Nov 7	3,570	Sep 30	680	Dec 5, 1942
ANNUAL SEVEN-DAY MINIMUM	3,920	Oct 26	3,920	Oct 26	906	Jan 12, 1943
MAXIMUM PEAK FLOW			a9,630	Jun 12	c46,800	Apr 19, 1952
MAXIMUM PEAK STAGE			b6.83	Jan 8	b15.64	Mar 27, 1960
INSTANTANEOUS LOW FLOW					d320	Dec 10, 1941
ANNUAL RUNOFF (AC-FT)	5,394,000		4,016,000		7,192,000	
10 PERCENT EXCEEDS	11,100		6,550		15,500	
50 PERCENT EXCEEDS	7,160		5,620		8,880	
90 PERCENT EXCEEDS	4,120		4,070		4,530	

06177000 MISSOURI RIVER NEAR WOLF POINT, MT—Continued

SUMMARY STATISTICS	WATER YEARS 1929 - 1939**	
ANNUAL TOTAL		
ANNUAL MEAN	7,183	
HIGHEST ANNUAL MEAN	10,300	1939
LOWEST ANNUAL MEAN	4,891	1937
HIGHEST DAILY MEAN	56,700	Mar 25 1939
LOWEST DAILY MEAN	840	Nov 29 1937
ANNUAL SEVEN-DAY MINIMUM	910	Feb 10 1938
INSTANTANEOUS PEAK FLOW	f66,800	Mar 25 1939
INSTANTANEOUS PEAK STAGE	b14.40	Mar 25 1939
ANNUAL RUNOFF (AC-FT)	520,400	
10 PERCENT EXCEEDS	14,800	
50 PERCENT EXCEEDS	5,060	
90 PERCENT EXCEEDS	2,600	

*--After Fort Peck Lake reached operational level (1943 to current water year).
**--Prior to Fort Peck Lake reaching operational level (1929-1939).
a--Gage height, 3.72 ft.
b--Backwater from ice.
c--Gage height, 9.98 ft.
d--Occurred outside of period of record, during filling of Fort Peck Lake.
e--Estimated.
f--From rating curve extended above 39,000 ft^3/s.



06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 48°59'25", long 105°41'46" (NAD 27), in $NE^1/_4NE^1/_4SE^1/_4$ sec.6, T.37 N., R.46 E., Daniels County, Hydrologic Unit 10060003, on left bank 0.7 mi south of international boundary, 1.5 mi upstream from Coal Creek, 18.5 mi northwest of Scobey, and at river mile 135.7.

DRAINAGE AREA.--358 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1931 to current season (seasonal records only for most years). Published as Middle Fork Poplar River at international boundary, March 1931 to November 1975.

REVISED RECORDS.--WSP 1389: 1931, 1935-37(M), 1939-40, 1942(M), 1943, 1948(M), 1950(M). WSP 1729: Drainage area. W 1984: Drainage area.

GAGE.--Water-stage recorder and concrete control since September 1977. Elevation of gage is 2,460 ft (NGVD 29).

REMARKS.--Water-discharge 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.

COOPERATION.--This is one of a number of stations which are maintained jointly by the United States and Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft^3/s, Apr. 6, 1954, gage height, 10.25 ft, from floodmark, from rating curve extended above 2,500 ft^3/s, on basis of slope-area measurement of peak flow; no flow at times.

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			e4.5	48	8.7	7.5	20	0.50	0.08	2.0		
2			e4.5	21	8.5	7.5	14	0.64	0.08	2.1		
3			e4.5	21	8.5	7.0	10	0.63	0.08	2.2		
4			e4.5	21	8.3	6.8	7.7	0.65	0.10	2.4		
5			e10	21	8.0	8.6	6.3	0.60	0.15	2.5		
6			e30	20	7.8	9.6	5.4	0.56	0.18	2.5		
7			e25	18	7.5	13	4.5	0.60	0.24	2.5		
8			e20	17	7.5	22	3.7	0.43	0.26	2.9		
9			e25	17	7.6	24	3.2	0.36	0.30	3.0		
10			e25	19	7.7	29	3.6	0.31	0.37	3.1		
11			e30	17	7.5	28	3.4	0.34	0.44	3.2		
12			e25	16	7.5	21	3.1	0.29	0.34	3.2		
13			e20	16	7.7	16	2.8	0.25	0.55	3.2		
14			e15	15	7.7	14	3.0	0.22	0.80	3.2		
15			e15	13	7.5	12	2.8	0.26	1.5	3.2		
16			e15	12	7.5	11	2.7	0.35	1.4	3.3		
17			e10	11	8.5	10	5.1	0.34	1.6	3.5		
18			e10	11	29	13	3.3	0.54	1.8	4.1		
19			e10	11	20	14	2.8	0.65	2.0	4.4		
20			e10	10	14	14	2.5	0.57	1.8	4.7		
21			e9.5	10	14	14	2.1	0.49	1.8	5.0		
22			e10	9.7	9.9	11	1.9	0.34	1.7	4.7		
23			e10	9.5	9.6	12	1.6	0.29	1.7	4.7		
24			e10	9.3	9.7	8.0	1.3	0.30	1.8	4.7		
25			e9.5	8.9	8.0	7.3	0.93	0.28	1.9	4.7		
26			e10	8.7	7.5	7.2	0.83	0.22	2.0	4.7		
27			17	8.5	7.1	6.7	0.77	0.18	1.8	4.7		
28			22	8.9	6.4	7.2	0.72	0.20	1.8	4.7		
29			27	9.0	6.1	111	0.69	0.19	1.8	4.7		
30			27	8.9	6.1	41	0.65	0.13	1.8	4.7		
31			30	---	7.1	---	0.55	0.12	---	4.7		
TOTAL			495.0	446.4	288.5	513.4	121.94	11.83	32.17	113.2		
MEAN			16.0	14.9	9.31	17.1	3.93	0.38	1.07	3.65		
MAX			30	48	29	111	20	0.65	2.0	5.0		
MIN			4.5	8.5	6.1	6.7	0.55	0.12	0.08	2.0		
MED			15	12	7.7	12	2.8	0.34	1.5	3.3		
AC-FT			982	885	572	1,020	242	23	64	225		

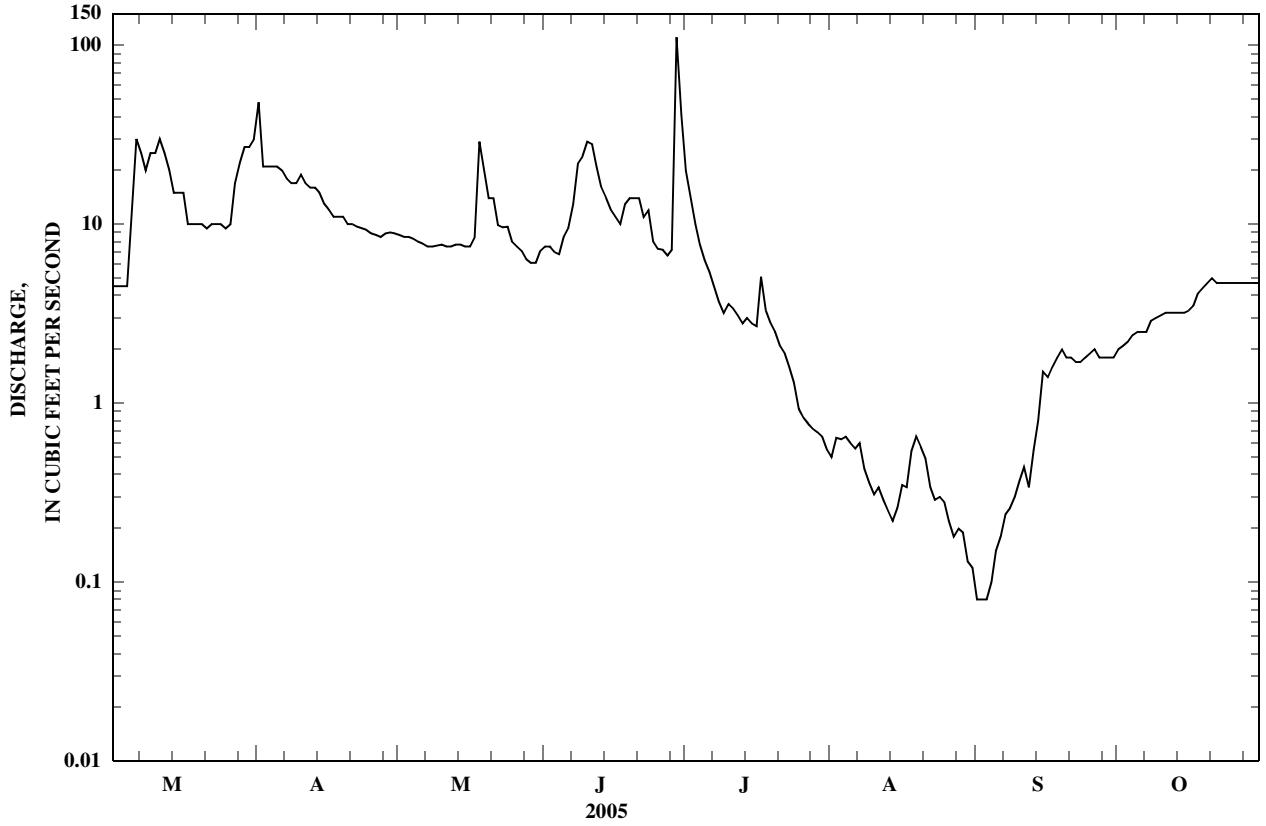
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1931 - 2005*

MEAN	0.00	20.2	68.1	79.9	17.7	14.9	8.56	1.53	1.45	2.73	4.90	0.00
MAX	0.00	61.3	418	699	86.2	191	120	19.4	15.3	11.8	9.35	0.00
(WY)	(1936)	(1981)	(1999)	(1952)	(1982)	(1963)	(1993)	(1940)	(1954)	(1955)	(1955)	(1936)
MIN	0.00	0.00	0.00	5.52	3.05	0.16	0.04	0.00	0.01	0.04	0.12	0.00
(WY)	(1936)	(1936)	(1950)	(1988)	(1992)	(1988)	(1988)	(1967)	(1988)	(1989)	(1937)	(1936)

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 SEASON		SEASONS 1931 - 2005*	
HIGHEST DAILY MEAN	335	May 25	111	Jun 29	5,000	Apr 6, 1954
LOWEST DAILY MEAN	0.00	Mar 1	0.08	Sep 1	0.00	Jun 30, 1932
MAXIMUM PEAK FLOW			208	Jun 29	a12,700	Apr 6, 1954
MAXIMUM PEAK STAGE			3.86	Jun 29	10.25	Apr 6, 1954

*--Seasonal record most years.
a--From rating curve extended above 2,500 ft3/s on basis of slope-area measurement of peak flow.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1976 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)	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)
APR													
06...	1045	20	712	10.2	95	8.4	1,060	11.0	9.5	340	55.4	48.6	7.12
MAY													
18...	1215	30	697	4.4	48	9.1	1,410	18.0	15.0	280	31.8	47.7	8.29
JUN													
21...	1215	14	711	10.5	135	8.6	1,270	29.0	24.0	370	38.9	65.3	8.93
AUG													
02...	1200	.60	704	8.4	109	8.9	1,400	24.0	24.0	290	25.5	54.9	9.43

06178000 POPLAR RIVER AT INTERNATIONAL BOUNDARY—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)
APR													
06...	3	144	47	404	5.64	.4	10.6	195	710	.97	38.3	E.008	<.016
MAY													
18...	7	257	66	443	6.75	.4	9.5	324	953	1.30	77.2	.013	.028
JUN													
21...	4	172	50	495	5.26	.4	2.3	224	815	1.11	30.8	E.006	<.016
AUG													
02...	6	216	61	474	8.59	.5	3.8	275	879	1.20	1.42	E.008	<.016

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)	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)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)
APR													
06...	E.001	E.005	.050	.60	1.9	E2	46	46	727	<.04	<.04	<.8	<1.6
MAY													
18...	.007	.091	.27	1.88	--	7	--	--	1,260	--	.10	--	--
JUN													
21...	E.001	.021	.060	.96	--	5	--	--	1,110	--	<.04	--	--
AUG													
02...	E.001	.017	.102	1.15	--	6	--	--	1,400	--	<.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)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)
APR												
06...	1.2	2.2	46	390	<.08	.36	17.3	23	<.01	E.01	2.40	2.32
MAY												
18...	--	--	--	--	--	2.22	--	--	--	--	--	--
JUN												
21...	--	--	--	--	--	.09	--	--	--	--	--	--
AUG												
02...	--	--	--	--	--	.28	--	--	--	--	--	--

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, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR							
06...	E.3	.5	1.2	4	56	58	3.1
MAY							
18...	--	--	--	11	99	91	7.4
JUN							
21...	--	--	--	E2	52	18	.68
AUG							
02...	--	--	--	2	94	13	.02

E--Estimated.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY
(International gaging station)

LOCATION.--Lat 49°00'00", long 105°24'32" (NAD 27), in $SW^1/_4SW^1/_4$ sec.3, T.1 N., R.26 W., second meridian, in Saskatchewan, Hydrologic Unit 10060003, on left bank 10 ft north of international boundary, 400 ft southwest of Canadian East Poplar Port of Entry, 14 mi north of Scobey, and at river mile 21.9.

DRAINAGE AREA.--541 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1931 to current year (seasonal records only in most seasons prior to October 1974). Prior to March 1962, published as East Fork Poplar River at international boundary.

REVISED RECORDS.--WSP 1389: 1932, 1939, 1942-43, 1947. W 1983: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,410.92 ft (International Boundary Commission Survey Datum). Prior to Oct. 5, 1953, water-stage recorder at site 80 ft upstream at same elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. U.S. Geological Survey satellite telemeter at station. Since September 1975 flow regulated by Morrison Dam at Cookson Reservoir 3.1 mi upstream.

COOPERATION.--This is one of a number of stations which are maintained jointly by Canada and the United States.

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	2.5	2.4	2.3	2.1	2.4	2.2	e2.0	7.5	2.8	2.4	e1.0	e1.5
2	2.4	2.4	2.4	2.1	2.5	2.3	e2.5	8.7	2.4	2.3	e6.0	e8.0
3	2.5	2.6	2.4	2.1	2.5	2.6	e2.5	9.0	2.5	2.4	3.8	e4.0
4	2.4	2.4	2.5	2.1	2.5	2.9	e2.5	10	2.5	2.2	2.9	e0.50
5	2.4	2.5	2.4	2.1	2.5	3.3	e2.5	11	2.2	2.1	2.6	e1.0
6	2.4	2.6	2.4	2.1	2.3	4.2	e5.0	10	2.1	2.1	2.3	e2.1
7	2.5	2.4	2.4	2.1	2.2	3.8	3.4	12	2.6	2.1	2.4	e3.3
8	2.5	2.4	2.4	2.1	2.1	3.3	2.4	11	3.7	2.0	2.4	e0.50
9	2.0	2.5	2.4	2.1	2.1	3.3	3.3	11	3.5	2.2	e1.0	e5.0
10	2.1	2.5	2.4	2.0	2.2	3.6	3.1	11	3.0	2.1	e0.50	3.4
11	2.3	2.4	2.5	2.0	2.2	3.6	2.4	10	2.8	2.1	e1.5	2.6
12	2.7	2.4	2.5	2.0	2.2	3.9	2.4	11	2.6	2.1	e1.5	2.4
13	2.7	2.4	2.5	1.6	2.3	2.9	2.2	11	2.7	2.1	e1.5	e0.50
14	3.2	2.4	2.5	1.6	2.3	2.6	2.4	10	3.5	2.3	e1.5	e0.50
15	2.4	2.5	2.5	1.6	2.2	2.5	2.9	10	2.7	2.2	e1.5	e1.7
16	2.3	2.5	2.5	1.6	2.1	2.4	2.4	10	2.8	2.2	e2.3	3.4
17	2.6	2.5	2.4	1.9	2.1	2.4	2.4	11	3.1	2.6	3.1	e0.50
18	2.6	2.4	2.4	2.1	2.1	2.4	2.4	15	3.9	2.4	3.1	e1.0
19	2.8	2.5	2.3	2.2	2.1	2.4	2.2	10	2.9	2.3	2.7	e1.0
20	2.6	2.5	2.4	2.2	2.1	2.4	2.2	9.6	2.5	2.2	2.7	e2.0
21	2.7	2.4	2.3	2.2	2.0	2.4	2.4	11	2.3	2.2	2.5	3.0
22	2.6	2.5	2.2	2.1	2.1	2.5	2.2	7.6	2.2	2.2	2.4	2.7
23	2.6	2.4	2.1	2.2	2.1	2.6	2.4	10	2.3	2.4	e0.50	e2.3
24	2.6	2.4	2.0	2.3	2.1	2.5	2.4	9.6	2.1	2.2	e1.5	2.8
25	2.5	2.4	2.1	2.5	2.2	2.5	2.4	9.6	2.0	2.1	e1.5	e2.0
26	2.5	2.5	2.1	2.5	2.2	2.5	2.1	9.5	2.3	2.1	e1.5	e2.5
27	2.5	2.5	2.1	2.4	2.2	e2.2	2.2	10	2.3	e1.0	e1.5	e2.3
28	2.6	2.4	2.1	2.4	2.2	e2.0	2.1	9.7	2.2	e1.0	e1.5	e2.5
29	2.8	2.4	2.0	2.4	---	e2.5	2.1	10	2.5	e0.50	e1.5	2.7
30	2.6	2.3	2.1	2.4	---	e2.5	2.5	8.5	2.6	e1.0	e0.50	e2.4
31	2.6	---	1.9	2.4	---	e2.5	---	3.6	---	e1.0	e0.50	---
TOTAL	78.5	73.4	71.5	65.5	62.1	85.7	75.9	307.9	79.6	62.10	61.70	70.10
MEAN	2.53	2.45	2.31	2.11	2.22	2.76	2.53	9.93	2.65	2.00	1.99	2.34
MAX	3.2	2.6	2.5	2.5	2.5	4.2	5.0	15	3.9	2.6	6.0	8.0
MIN	2.0	2.3	1.9	1.6	2.0	2.0	2.0	3.6	2.0	0.50	0.50	0.50
AC-FT	156	146	142	130	123	170	151	611	158	123	122	139

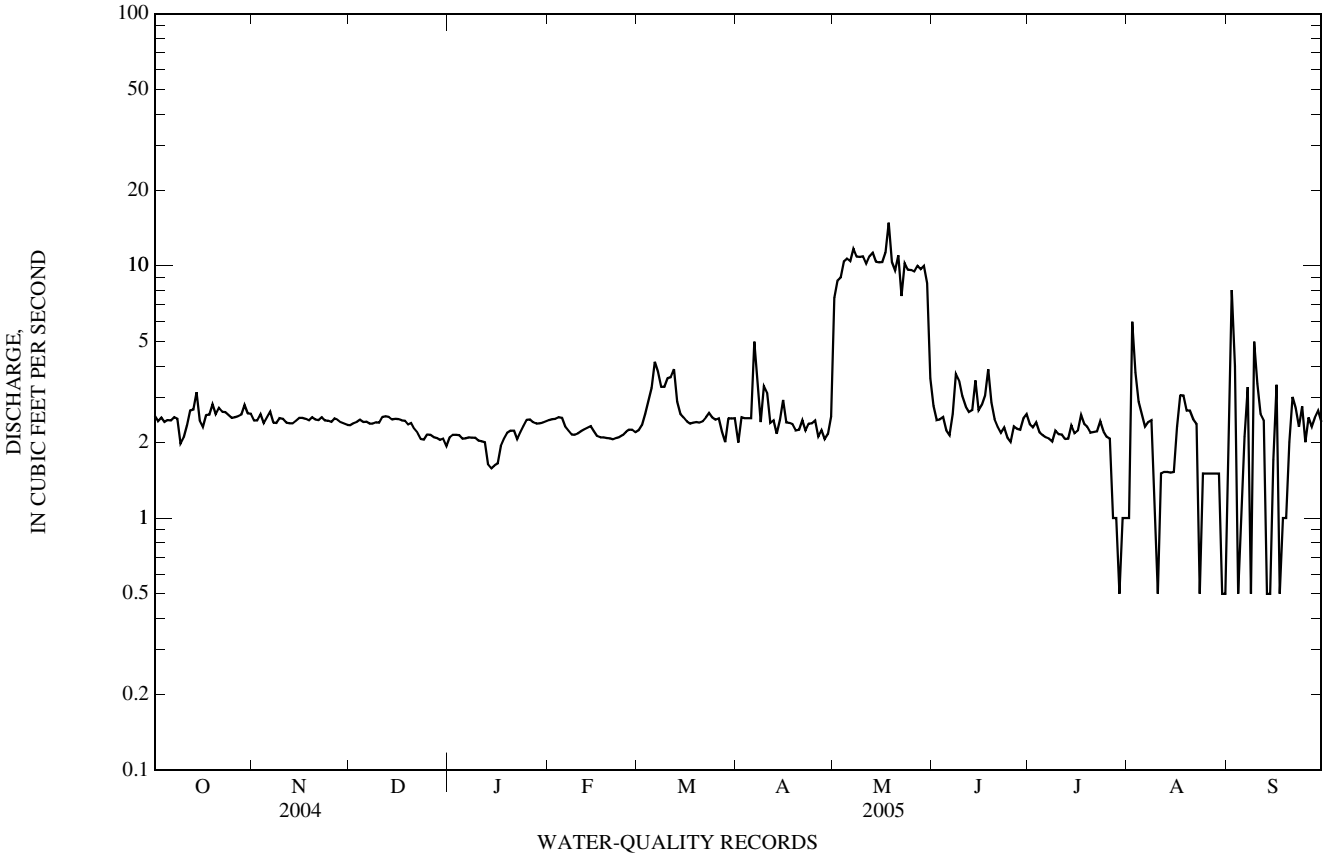
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)*

MEAN	2.58	2.45	2.26	2.19	2.55	20.3	21.4	11.3	5.17	2.79	2.37	2.50
MAX	4.65	4.42	4.37	4.40	7.95	280	306	40.7	23.2	6.84	3.31	4.10
(WY)	(1980)	(1980)	(1980)	(1980)	(1997)	(1999)	(1982)	(1979)	(1979)	(1999)	(1997)	(1979)
MIN	1.59	1.64	1.27	1.26	0.14	1.91	1.80	2.98	1.72	1.79	1.58	1.53
(WY)	(1993)	(1993)	(1993)	(1982)	(2004)	(1992)	(1992)	(1978)	(1992)	(1977)	(1992)	(1992)

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1977 - 2005*	
ANNUAL TOTAL	1,241.00		1,094.00			
ANNUAL MEAN	3.39		3.00		6.50	
HIGHEST ANNUAL MEAN					32.3	1982
LOWEST ANNUAL MEAN					2.13	1992
HIGHEST DAILY MEAN	50	Mar 28	15	May 18	2,930	Apr 15, 1982
LOWEST DAILY MEAN	0.00	Feb 5	0.50	Jul 29	0.00	Feb 5, 2004
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 5	1.1	Jul 26	0.00	Feb 5, 2004
MAXIMUM PEAK FLOW			22	May 18	a4,020	Apr 23, 1975
MAXIMUM PEAK STAGE			6.15	May 18	b12.80	Mar 25, 1943
INSTANTANEOUS LOW FLOW					c0.70	Feb 28, 1998
ANNUAL RUNOFF (AC-FT)	2,460		2,170		4,710	
10 PERCENT EXCEEDS	7.9		3.9		6.7	
50 PERCENT EXCEEDS	2.5		2.4		2.5	
90 PERCENT EXCEEDS	0.00		1.8		1.7	

*--Since initial filling of Cookson Reservoir.
a--Gage height, 12.01 ft.
b--Backwater from ice.
c--Backwater from beavers.
e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1982 to current year.
WATER TEMPERATURE: June 1975 to September 1983.

INSTRUMENTATION.--Specific conductance monitor installed April 1995.

REMARKS.--Daily specific conductance records are rated good to excellent except during periods of ice cover (December to March), which are rated fair to poor. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 2,040 microsiemens per centimeter (µS/cm) at 25.0°C, Feb. 10-12, 1997; minimum daily, 363 µS/cm at 25.0°C, July 2, 1991.
WATER TEMPERATURE: Maximum, 29.5°C, July 6, 1975, July 25, 26, 1978; minimum, 0.0°C on many days during winters most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 1,670 microsiemens per centimeter (µS/cm) at 25.0°C, Dec. 6 and 7; minimum daily mean, 1,040 µS/cm at 25.0°C, Apr. 2.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—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)
APR													
06...	1400	E5.0	712	5.5	53	8.2	1,150	21.0	10.5	310	56.7	40.2	6.40
MAY													
18...	0915	15	698	8.1	87	8.5	1,480	16.0	14.5	400	45.9	68.9	18.5
JUN													
21...	0945	2.4	712	7.0	87	8.3	1,500	29.0	22.5	350	55.6	51.4	8.59
AUG													
02...	0945	E6.0	704	6.4	83	8.4	1,480	28.0	24.0	340	45.8	55.7	8.93

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)
APR													
06...	4	175	55	412	5.38	.3	8.4	228	770	1.05	E10.4	.105	.051
MAY													
18...	4	206	51	474	7.81	.4	3.9	338	975	1.33	39.5	.167	.127
JUN													
21...	5	236	59	501	6.51	.4	9.1	301	971	1.32	6.40	<.010	<.016
AUG													
02...	5	212	57	474	6.51	.3	13.5	297	926	1.26	E15.0	<.010	<.016

Date	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)	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)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)
APR													
06...	.004	.65	<.006	.043	2.2	2	32	35	1,370	<.04	<.04	<.8	E.5
MAY													
18...	.011	1.50	.006	.104	--	5	--	--	1,550	--	E.04	--	--
JUN													
21...	<.002	.81	<.006	.078	--	7	--	--	1,890	--	<.04	--	--
AUG													
02...	<.002	.98	<.006	.103	--	18	--	--	1,970	--	<.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)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)
APR												
06...	1.0	2.8	15	680	<.08	.29	63.9	97	<.01	<.01	2.72	2.10
MAY												
18...	--	--	--	--	--	.79	--	--	--	--	--	--
JUN												
21...	--	--	--	--	--	.50	--	--	--	--	--	--
AUG												
02...	--	--	--	--	--	.40	--	--	--	--	--	--

E--Estimated.

06178500 EAST POPLAR RIVER AT INTERNATIONAL BOUNDARY—Continued

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

Date	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	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)
APR							
06...	.4	.9	.7	2	82	95	E1.3
MAY							
18...	--	--	--	5	91	88	3.6
JUN							
21...	--	--	--	4	88	82	.54
AUG							
02...	--	--	--	5	59	58	E.94

E--Estimated.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
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	1,530	1,590	1,500	1,430	1,400	1,110	1,510	1,510	1,460	1,540	1,470
2	1,430	1,570	1,590	1,490	1,430	1,410	1,040	1,480	1,520	1,450	1,510	1,460
3	1,450	1,550	1,610	1,490	1,430	1,400	1,050	1,480	1,530	1,420	1,440	1,430
4	1,440	1,570	1,640	1,500	1,430	1,380	1,060	1,480	1,540	1,430	1,440	1,460
5	1,460	1,570	1,660	1,500	1,430	1,330	1,110	1,490	1,550	1,440	1,460	1,460
6	1,470	1,550	1,670	1,500	1,430	1,300	1,150	1,480	1,530	1,460	1,450	1,440
7	1,480	1,530	1,670	1,500	1,490	1,220	1,150	1,500	1,510	1,470	1,460	1,440
8	1,500	1,520	1,650	1,500	1,530	1,230	1,260	1,490	1,480	1,480	1,470	1,450
9	1,520	1,540	1,620	1,500	1,540	1,430	1,360	1,490	1,530	1,470	1,490	1,450
10	1,520	1,530	1,580	1,490	1,520	1,290	1,380	1,490	1,540	1,460	1,510	1,470
11	1,520	1,580	1,570	1,500	1,480	1,320	1,390	1,490	1,530	1,460	1,510	1,480
12	1,520	1,620	1,550	1,500	1,450	1,210	1,470	1,490	1,530	1,460	1,490	1,480
13	1,520	1,620	1,540	1,530	1,430	1,220	1,420	1,490	1,540	1,470	1,490	1,470
14	1,540	1,620	1,550	1,550	1,420	1,320	1,450	1,490	1,530	1,470	1,490	1,470
15	1,540	1,620	1,550	1,570	1,420	1,370	1,460	1,500	1,530	1,500	1,490	1,470
16	1,540	1,600	1,540	1,600	1,430	1,380	1,500	1,510	1,550	1,490	1,490	1,460
17	1,530	1,590	1,530	1,600	1,450	1,430	1,550	1,510	1,530	1,440	1,460	1,470
18	1,520	1,570	1,520	1,570	1,470	1,510	1,490	1,540	1,480	1,440	1,450	1,480
19	1,520	1,550	1,530	1,520	1,470	1,570	1,510	1,620	1,480	1,430	1,440	1,490
20	1,520	1,550	1,550	1,460	1,470	1,600	1,550	1,590	1,510	1,430	1,450	1,480
21	1,520	1,610	1,560	1,430	1,490	1,570	1,570	1,530	1,520	1,430	1,460	1,450
22	1,520	1,630	1,580	1,460	1,480	1,600	1,580	1,580	1,530	1,440	1,470	1,450
23	1,520	1,560	1,600	1,490	1,470	1,460	1,550	1,530	1,530	1,450	1,480	1,470
24	1,520	1,590	1,590	1,490	1,460	1,370	1,530	1,520	1,520	1,470	1,480	1,470
25	1,530	1,620	1,580	1,470	1,450	1,380	1,520	1,520	1,510	1,460	1,470	1,480
26	1,530	1,640	1,570	1,440	1,430	1,490	1,500	1,510	1,500	1,450	1,480	1,490
27	1,530	1,640	1,530	1,420	1,420	1,380	1,520	1,510	1,480	1,460	1,490	1,490
28	1,530	1,620	1,510	1,420	1,410	1,350	1,540	1,510	1,480	1,470	1,490	1,480
29	1,530	1,620	1,500	1,430	---	1,240	1,560	1,510	1,460	1,490	1,500	1,460
30	1,540	1,600	1,500	1,430	---	1,150	1,550	1,510	1,450	1,500	1,470	1,470
31	1,530	---	1,500	1,430	---	1,060	---	1,490	---	1,530	1,460	---
MEAN	1,510	1,580	1,570	1,490	1,460	1,370	1,400	1,510	1,510	1,460	1,480	1,470
MAX	1,540	1,640	1,670	1,600	1,540	1,600	1,580	1,620	1,550	1,530	1,540	1,490
MIN	1,390	1,520	1,500	1,420	1,410	1,060	1,040	1,480	1,450	1,420	1,440	1,430

06181000 POPLAR RIVER NEAR POPLAR, MT

LOCATION.--Lat 48°10'15", long 105°10'42" (NAD 27), in NE$^1/_4$ NE$^1/_4$ sec.19, T.28 N., R.51 E., Roosevelt County, Hydrologic Unit 10060003, on right bank 4 mi north of Poplar, and at river mile 11.

DRAINAGE AREA.---3,174 mi^2.

PERIOD OF RECORD.--August 1908 to October 1924, August 1947 to September 1969, June 1975 to September 1979, October 1981 to current year. Monthly discharge only for some periods, published in WSP 1309.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1176. 1948. WSP 1389: 1911. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,953.16 ft (NGVD 29). Prior to May 1, 1911, nonrecording gage at site 4.2 mi upstream at different elevation. May 1, 1911, to Oct. 4, 1913, nonrecording gage at site 14 mi upstream at different elevation. Oct. 5, 1913, to Oct. 31, 1924, nonrecording gage at site 2.2 mi upstream at different elevation. Aug. 10, 1947, to Sept. 30, 1969, water-stage recorder at present site and elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 5,500 acres upstream from station. Flow partially regulated by Coronach Dam, on the East Fork Poplar River, 2 mi north of international boundary. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1946, reached a stage of 18.1 ft, from floodmark, discharge, 40,000 ft^3/s, from slope-area measurement of peak flow made at site 20 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	21	38	e25	e15	e4.0	e20	125	45	51	104	20	11
2	22	38	e25	e15	e4.0	e30	123	44	48	101	18	11
3	22	38	e30	e10	e4.0	e100	134	43	45	175	18	9.8
4	22	38	e30	e10	e4.0	e150	122	42	44	185	18	9.7
5	23	38	e25	e10	e4.0	e100	120	42	42	178	16	9.2
6	23	38	e25	e10	e4.0	e100	114	41	43	166	15	8.9
7	24	37	e25	e10	e4.0	e100	109	48	46	139	13	9.3
8	24	37	e25	e10	e4.0	e95	101	115	69	116	12	9.1
9	25	37	e25	e10	e4.0	e95	98	64	110	96	12	9.4
10	24	37	e25	e8.0	e4.0	e95	94	53	194	84	13	9.4
11	25	35	e30	e7.0	e4.0	105	91	48	195	75	16	9.1
12	25	34	e30	e6.0	e4.0	142	86	49	192	68	14	9.3
13	26	32	e30	e5.0	e4.0	e90	83	51	184	63	16	9.4
14	27	37	e35	e5.0	e4.0	e95	75	49	164	77	17	9.5
15	27	38	e35	e4.0	e4.0	e95	75	47	202	54	18	9.8
16	27	43	e35	e3.5	e4.0	e95	69	47	171	47	18	10
17	27	42	e35	e3.5	e4.0	e90	66	47	155	45	18	10
18	29	41	e35	e3.5	e4.0	e90	65	50	129	45	19	11
19	30	41	e35	e4.0	e4.0	e95	66	46	120	42	34	10
20	31	e30	e35	e4.0	e4.0	e100	64	43	118	39	24	10
21	32	e25	e30	e4.0	e4.0	e100	61	48	119	36	18	9.7
22	32	e30	e30	e4.0	e8.0	112	57	70	119	34	15	9.3
23	33	e30	e30	e4.0	e10	110	55	78	114	32	15	9.8
24	34	e25	e30	e4.0	e10	94	53	79	104	31	13	10
25	35	e30	e30	e4.0	e10	88	52	70	92	30	12	10
26	36	e30	e30	e4.0	e10	90	49	62	94	32	12	10
27	37	e25	e25	e4.0	e10	110	48	55	99	30	12	11
28	38	e25	e25	e4.0	e10	112	46	52	111	27	12	11
29	39	e25	e20	e4.0	---	119	45	50	123	25	12	11
30	39	e25	e20	e4.0	---	120	45	50	114	24	11	11
31	38	---	e20	e4.0	---	118	---	50	---	22	10	---
TOTAL	897	1,019	885	197.5	152.0	3,055	2,391	1,678	3,411	2,222	491	297.7
MEAN	28.9	34.0	28.5	6.37	5.43	98.5	79.7	54.1	114	71.7	15.8	9.92
MAX	39	43	35	15	10	150	134	115	202	185	34	11
MIN	21	25	20	3.5	4.0	20	45	41	42	22	10	8.9
AC-FT	1,780	2,020	1,760	392	301	6,060	4,740	3,330	6,770	4,410	974	590

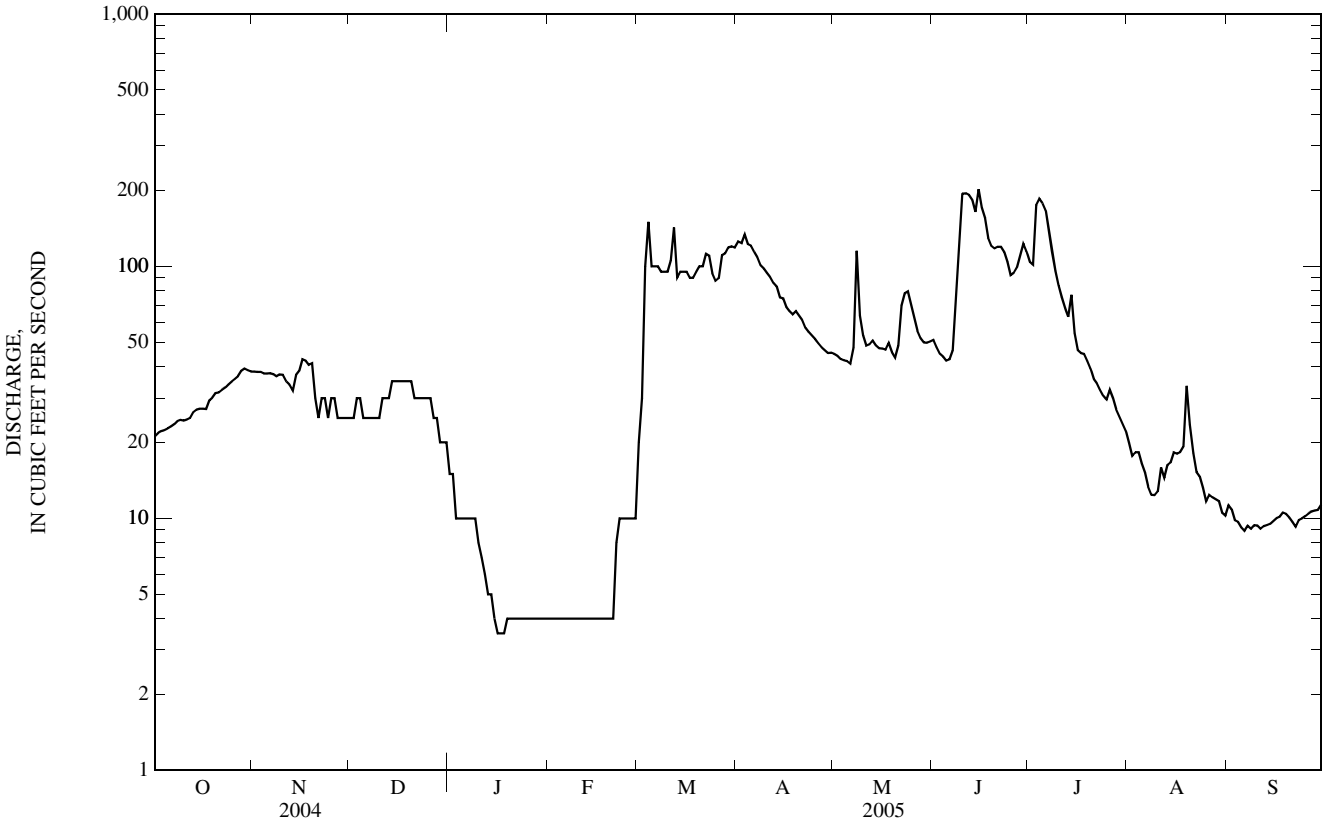
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2005, BY WATER YEAR (WY)*

MEAN	27.8	26.6	16.7	8.45	26.3	326	649	123	89.4	76.8	27.1	23.6
MAX	81.5	93.5	50.0	30.0	743	2,445	4,918	421	336	800	220	206
(WY)	(1925)	(1919)	(1915)	(1915)	(1996)	(1960)	(1952)	(1955)	(1953)	(1993)	(1993)	(1911)
MIN	2.19	4.25	1.28	0.01	0.10	0.18	37.3	17.4	2.77	0.68	0.04	0.15
(WY)	(1959)	(1959)	(1986)	(1950)	(1959)	(1965)	(1992)	(1992)	(1988)	(1984)	(1988)	(1988)

06181000 POPLAR RIVER NEAR POPLAR, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1908 - 2005*	
ANNUAL TOTAL	32,527.0		16,696.2			
ANNUAL MEAN	88.9		45.7		118**	
HIGHEST ANNUAL MEAN					435	1952
LOWEST ANNUAL MEAN					13.7	1988
HIGHEST DAILY MEAN	1,250	May 31	202	Jun 15	34,200	Apr 7, 1954
LOWEST DAILY MEAN	4.0	Jan 28	3.5	Jan 16	c0.00	Dec 16, 1917
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 25	3.8	Jan 15	0.00	Jan 4, 1950
MAXIMUM PEAK FLOW			a230	Jun 15	37,400	Apr 6, 1954
MAXIMUM PEAK STAGE			b3.47	Jan 20	d17.86	Apr 6, 1954
ANNUAL RUNOFF (AC-FT)	64,520		33,120		85,490	
10 PERCENT EXCEEDS	212		111		174	
50 PERCENT EXCEEDS	30		31		23	
90 PERCENT EXCEEDS	8.0		4.0		3.0	

*--During period of operation (1908-24, 1947-69, 1975-79, 1982 to current year).
**--Median of yearly mean discharge, 82.1 ft^3/s.
a--Gage height, 2.99 ft.
b--Result of backwater from ice, but may have been higher during period of no gage-height record, Dec. 21 to Jan. 19, Feb. 1 to Mar. 9.
c--No flow at times.
d--From floodmark, from slope-area measurement of peak flow.
e--Estimated.



06181000 POPLAR RIVER NEAR POPLAR, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-81, 1987-94, May 1999 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2000 to September 2003 (seasonal records).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE (seasonal records): Maximum, 33.0°C, Aug. 12, 18, 19, 2003; minimum, 0.0°C on many days during winter periods.

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)
APR													
07...	1000	110	716	10.1	98	8.6	1,150	11.0	11.0	230	35.4	34.1	5.46
MAY													
19...	0915	47	714	6.7	72	8.7	1,570	16.0	16.0	260	29.1	44.6	6.47
JUN													
22...	0915	120	715	6.8	91	8.7	1,440	29.0	26.5	250	30.4	43.2	7.52
AUG													
03...	0900	20	723	7.2	86	8.6	1,790	19.5	21.0	250	27.3	45.0	7.94

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)
APR													
07...	6	200	65	381	26.0	.4	3.9	213	748	1.02	222	E.005	<.016
MAY													
19...	8	292	71	473	52.4	.5	4.6	291	1,010	1.37	128	E.005	.038
JUN													
22...	7	248	67	492	23.7	.5	8.4	267	924	1.26	299	E.005	<.016
AUG													
03...	8	302	71	490	115	.5	7.9	270	1,070	1.46	57.8	<.010	<.016

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 analysis, mg/L (62855)	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)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
APR													
07...	<.002	<.006	.036	.50	1.4	E1	46	50	637	<.04	.05	<.8	E.6
MAY													
19...	<.002	<.006	.047	.61	--	2	--	--	897	--	E.03	--	--
JUN													
22...	E.001	<.006	.150	1.32	--	5	--	--	955	--	.08	--	--
AUG													
03...	<.002	<.006	.070	.85	--	5	--	--	1,030	--	E.03	--	--

E--Estimated.

06181000 POPLAR RIVER NEAR POPLAR, 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)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
APR													
07...	1.3	3.5	7	650	<.08	.48	5.3	58	<.01	<.01	2.54	2.73	.7
MAY													
19...	--	--	--	--	--	.73	--	--	--	--	--	--	--
JUN													
22...	--	--	--	--	--	3.00	--	--	--	--	--	--	--
AUG													
03...	--	--	--	--	--	.95	--	--	--	--	--	--	--

Date	Selenium, water, unfltrd ug/L (01147)	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)
APR						
07...	.7	E.6	3	94	58	17
MAY						
19...	--	--	4	98	91	12
JUN						
22...	--	--	13	98	183	59
AUG						
03...	--	--	5	98	77	4.2

E--Estimated.

06183450 BIG MUDDY CREEK NEAR ANTELOPE, MT

LOCATION.--Lat 48°40'22", long 104°30'42" (NAD 27), in $SW^1/_4$ $SW^1/_4$ $NW^1/_4$ sec.27, T.34 N., R.55 E., Sheridan County, Hydrologic Unit 10060006, on right bank, 3 mi southwest of Antelope, and 7 mi south of Plentywood, .

DRAINAGE AREA.--967 mi^2. Prior to 1981, drainage area published as 1,171 mi^2.

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

REVISED RECORDS.--WDR -81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,000 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several known diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station. Several unpublished observations of instantaneous 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	3.6	7.1	e6.0	e3.0	e1.5	e6.5	85	8.9	11	89	3.8	4.1
2	3.4	6.8	e6.0	e3.0	e1.5	e10	126	8.6	9.6	65	3.4	3.1
3	3.6	6.7	e6.0	e3.0	e1.5	e20	136	8.6	9.5	67	3.4	2.4
4	3.7	6.4	e6.0	e3.0	e1.5	e30	104	8.6	8.7	51	3.2	2.0
5	3.6	e6.0	e5.5	e3.0	e1.0	e60	79	8.6	8.1	46	3.0	1.8
6	3.7	e5.5	e5.0	e3.0	e1.0	e50	66	8.3	7.8	40	2.8	1.4
7	4.4	e6.0	e5.5	e3.0	e1.5	e40	58	8.4	8.5	38	2.8	1.3
8	4.5	e6.0	e5.5	e3.0	e1.5	e30	51	15	15	33	2.6	1.2
9	3.8	e6.0	e5.5	e2.5	e1.5	e30	45	12	23	26	2.5	0.90
10	3.8	e6.0	e6.0	e2.0	e1.5	e30	41	16	32	20	2.6	0.68
11	4.6	e6.0	e6.5	e2.0	e1.5	e35	36	19	34	16	3.6	0.49
12	4.7	e6.0	e7.0	e2.0	e1.5	e35	33	28	51	13	2.6	0.52
13	4.9	e6.0	7.3	e2.0	e1.5	e30	31	27	46	9.5	2.0	0.46
14	4.8	6.2	7.1	e1.5	e1.5	e35	28	24	42	8.5	1.8	0.43
15	5.1	6.1	7.3	e1.5	e1.5	e35	27	22	40	7.7	1.7	0.44
16	4.6	6.1	7.5	e1.5	e1.5	e35	23	19	34	6.9	1.5	0.87
17	5.1	e5.5	7.3	e2.0	e1.5	e35	21	16	27	6.7	1.3	0.46
18	6.4	e6.0	7.7	e2.0	e1.5	e30	19	18	23	6.4	1.9	0.24
19	7.1	e6.0	e6.5	e2.0	e1.5	e30	17	20	21	6.0	1.8	0.25
20	6.5	e5.5	e6.0	e2.0	e1.5	e35	16	19	19	5.7	6.2	0.16
21	6.2	e6.0	e5.5	e1.5	e1.5	32	15	18	16	5.6	12	0.12
22	6.4	e6.0	e6.0	e1.0	e2.0	28	14	17	13	5.4	7.7	0.10
23	6.6	e6.0	e6.0	e1.5	e3.0	23	13	16	15	5.3	9.5	0.11
24	7.4	e6.0	e6.0	e1.5	e5.0	21	13	21	14	5.1	7.8	0.13
25	7.9	e6.0	e6.0	e1.5	e7.0	19	11	19	12	5.4	6.9	0.13
26	8.3	e6.0	e6.0	e1.5	e7.0	19	9.7	16	17	5.2	6.1	0.12
27	8.5	e6.0	e5.5	e1.5	e6.5	22	9.2	16	23	5.3	6.7	0.17
28	8.3	e6.0	e5.0	e1.5	e6.5	31	8.8	15	25	5.5	6.0	0.10
29	8.2	e6.0	e4.5	e1.5	---	42	9.1	13	163	5.3	5.6	0.13
30	7.5	e6.0	e4.0	e1.5	---	52	9.1	12	162	5.0	4.8	0.13
31	7.1	---	e3.5	e1.5	---	62	---	11	---	4.6	4.1	---
TOTAL	174.3	181.9	185.2	63.0	67.5	992.5	1,153.9	489.0	930.2	619.1	131.7	24.44
MEAN	5.62	6.06	5.97	2.03	2.41	32.0	38.5	15.8	31.0	20.0	4.25	0.81
MAX	8.5	7.1	7.7	3.0	7.0	62	136	28	163	89	12	4.1
MIN	3.4	5.5	3.5	1.0	1.0	6.5	8.8	8.3	7.8	4.6	1.3	0.10
AC-FT	346	361	367	125	134	1,970	2,290	970	1,850	1,230	261	48

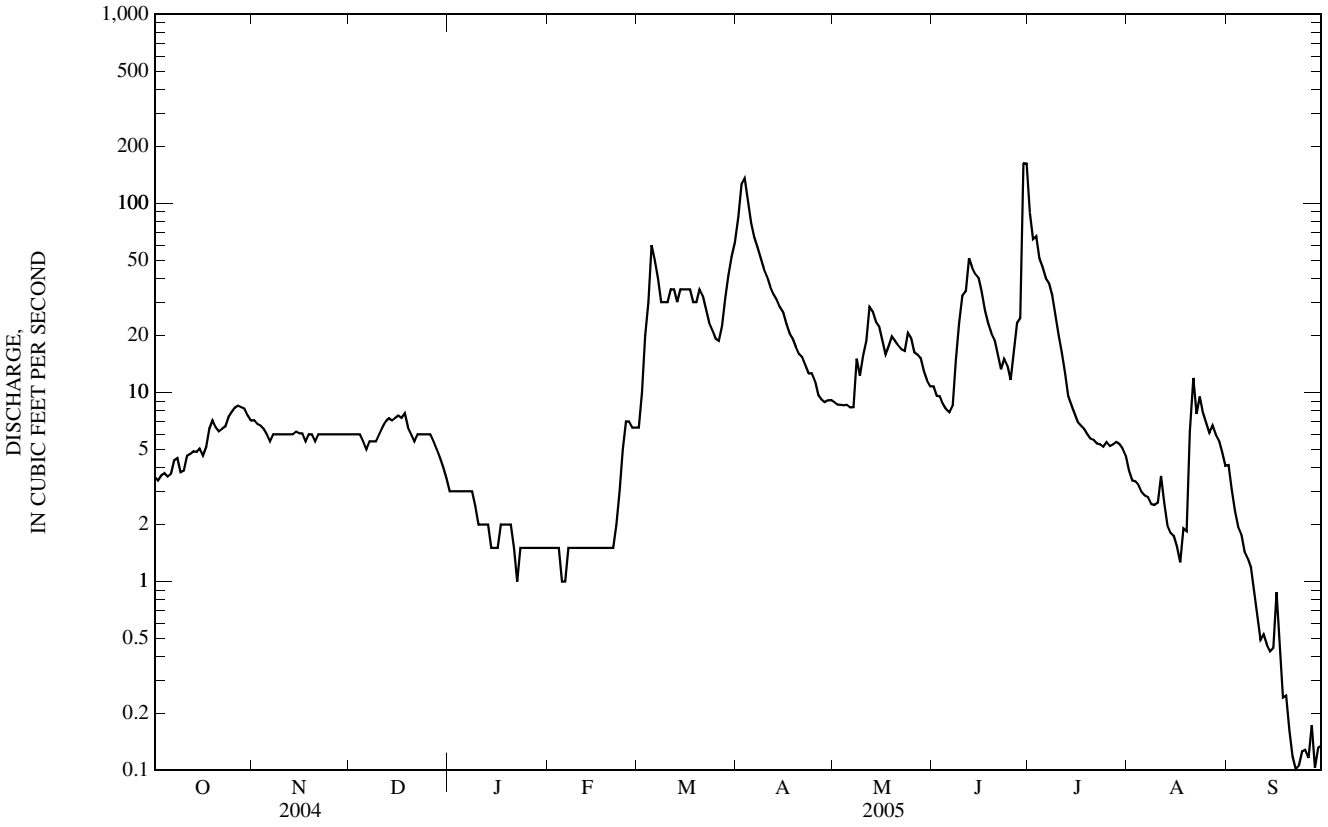
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2005, BY WATER YEAR (WY)

MEAN	5.26	5.82	3.64	1.88	22.4	133	109	26.3	18.6	24.3	8.47	4.16
MAX	25.0	11.8	6.86	6.38	290	851	826	120	76.2	226	92.5	35.7
(WY)	(1987)	(1999)	(1982)	(1983)	(1996)	(1999)	(1982)	(1979)	(2004)	(1993)	(1987)	(1997)
MIN	0.14	0.88	0.45	0.00	0.00	2.65	5.04	5.29	0.23	0.03	0.00	0.00
(WY)	(1989)	(1989)	(1986)	(1989)	(1989)	(2002)	(1988)	(1992)	(1988)	(1985)	(1984)	(1984)

06183450 BIG MUDDY CREEK NEAR ANTELOPE, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1979 - 2005	
ANNUAL TOTAL	7,595.0		5,012.74			
ANNUAL MEAN	20.8		13.7		30.2*	
HIGHEST ANNUAL MEAN					93.2	1979
LOWEST ANNUAL MEAN					4.73	1992
HIGHEST DAILY MEAN	274	Jun 2	163	Jun 29	3,160	Mar 23, 1999
LOWEST DAILY MEAN	1.5	Jan 26	0.10	Sep 22	a0.00	Aug 2, 1981
ANNUAL SEVEN-DAY MINIMUM	1.5	Jan 26	0.12	Sep 22	0.00	Jul 23, 1984
MAXIMUM PEAK FLOW			211	Jun 29	3,190	Mar 22, 1999
MAXIMUM PEAK STAGE			4.88	Jun 29	17.37	Apr 14, 1982
INSTANTANEOUS LOW FLOW			0.10	Sep 22	0.00	Aug 2, 1981
ANNUAL RUNOFF (AC-FT)	15,060		9,940		21,860	
10 PERCENT EXCEEDS	59		35		38	
50 PERCENT EXCEEDS	6.0		6.0		4.6	
90 PERCENT EXCEEDS	2.0		1.5		0.25	

*--Median of yearly mean discharge, 20.2 ft^3/s, 14,630 ac-ft/yr.
a--No flow many days most years.
e--Estimated.



06183700 BIG MUDDY CREEK DIVERSION CANAL NEAR MEDICINE LAKE, MT

LOCATION.--Lat 48°30'34", long 104°32'55" (NAD 27), in $SE^1/_4NW^1/_4SE^1/_4$ sec.22, T.32 N., R.55 E., Sheridan County, Hydrologic Unit 10060006, on right bank, on dike road about 2 ft upstream from canal headgate and 2.2 miles northwest of Medicine Lake.

PERIOD OF RECORD.--August 1985 to September 1991, October 1991 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 1,940 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Canal diverts water into Medicine Lake at the Medicine Lake National Wildlife Refuge. 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			e4.5	86	2.0	e3.0	90	0.83	0.32	0.00		
2			e10	92	1.9	e3.0	62	0.70	0.01	0.00		
3			e10	134	1.5	e3.0	45	0.51	0.00	0.00		
4			e10	126	1.4	e3.0	41	0.14	0.00	0.00		
5			e10	88	1.5	e3.5	35	0.00	0.00	0.00		
6			e10	55	1.4	e4.0	30	0.00	0.00	0.00		
7			e10	47	1.3	e4.5	26	0.00	0.00	0.00		
8			e10	34	3.8	e5.0	23	0.00	0.00	0.00		
9			e10	24	3.9	e10	21	0.00	0.00	0.00		
10			e9.0	17	3.7	e15	17	0.00	0.00	0.00		
11			e9.0	13	3.2	e15	13	0.00	0.00	0.00		
12			e8.0	8.9	3.4	e20	9.7	0.00	0.00	0.00		
13			e8.0	6.9	4.6	23	7.2	0.00	0.00	0.00		
14			e9.5	5.6	5.3	22	5.9	0.00	0.00	0.00		
15			e10	6.1	4.7	18	5.2	0.00	0.00	0.00		
16			e15	5.9	4.4	17	4.7	0.00	0.00	0.00		
17			e20	5.1	4.2	15	4.1	0.00	0.00	0.00		
18			e25	4.8	4.1	11	3.9	0.00	0.00	0.00		
19			e25	e4.5	4.0	8.2	3.4	0.00	0.00	0.00		
20			e30	e4.0	3.9	6.1	3.0	0.00	0.00	0.00		
21			e30	3.7	4.2	5.6	3.2	0.00	0.00	0.00		
22			e25	3.5	e3.5	5.1	2.7	0.00	0.00	0.00		
23			e25	3.1	e4.5	5.0	2.7	0.00	0.00	0.00		
24			e20	3.0	e6.0	4.8	2.1	0.77	0.00	0.00		
25			e20	3.1	e6.0	4.6	1.9	1.4	0.00	0.00		
26			e20	2.9	e4.5	40	1.8	1.5	0.00	0.00		
27			e20	2.5	e4.0	25	1.6	1.5	0.00	0.00		
28			e30	2.1	e3.5	15	1.3	1.1	0.00	0.00		
29			e35	1.7	e3.0	15	1.2	0.80	0.00	0.00		
30			e45	1.8	e3.0	65	0.92	0.72	0.00	0.00		
31			e50	---	e3.0	---	0.83	0.46	---	0.00		
TOTAL			573.0	795.2	109.4	394.4	470.35	10.43	0.33	0.00		
MEAN			18.5	26.5	3.53	13.1	15.2	0.34	0.01	0.00		
MAX			50	134	6.0	65	90	1.5	0.32	0.00		
MIN			4.5	1.7	1.3	3.0	0.83	0.00	0.00	0.00		
AC-FT			1,140	1,580	217	782	933	21	0.7	0.00		

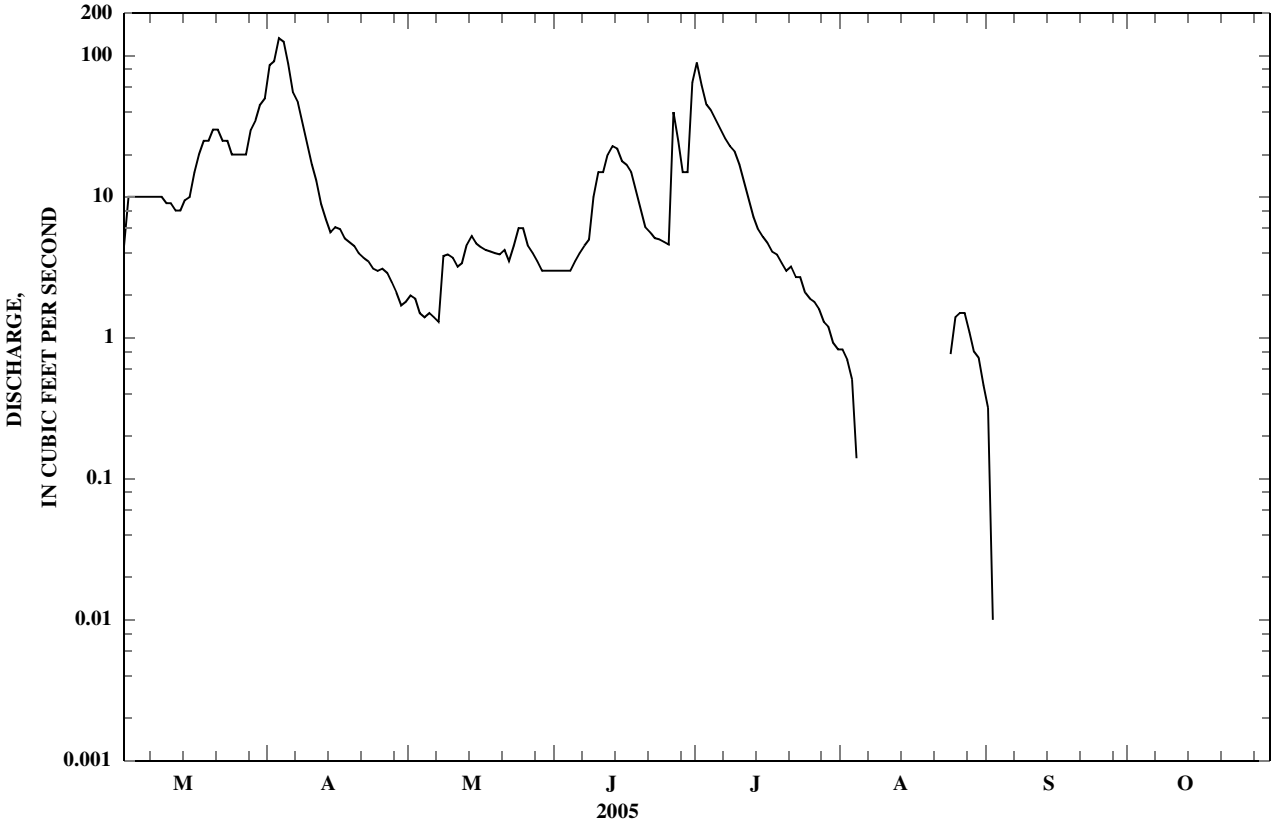
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1991 AND SEASONS 1992 - 2005*

MEAN	0.28	5.11	93.3	50.4	15.6	12.7	22.4	5.61	3.51	3.34	1.66	0.58
MAX	1.10	23.4	434	260	46.5	77.6	144	31.3	37.3	10.5	4.97	2.80
(WY)	(1990)	(1986)	(1999)	(1997)	(1999)	(2004)	(1993)	(1987)	(1997)	(2004)	(1990)	(1990)
MIN	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
(WY)	(1988)	(1988)	(2002)	(1988)	(1987)	(1987)	(1987)	(1988)	(1987)	(1988)	(1988)	(1988)

SUMMARY STATISTICS	FOR 2005 SEASON		WATER YEARS 1985 - 1991*		SEASONS 1992 - 2005*	
ANNUAL MEAN			14.5			
HIGHEST ANNUAL MEAN			31.6	1989		
LOWEST ANNUAL MEAN			0.17	1988		
HIGHEST DAILY MEAN	134	Apr 3	1,300	Mar 2, 1986	1,340	Mar 23, 1999
LOWEST DAILY MEAN	0.00	Aug 5	b0.00	Feb 11, 1986	0.00	Sep 22, 1992
ANNUAL SEVEN-DAY MINIMUM			0.00	Feb 11, 1986		
MAXIMUM PEAK FLOW	178	Apr 4	1,300	Mar 2, 1986	c1,360	Mar 23, 1999
MAXIMUM PEAK STAGE	a7.59	Apr 4			d12.18	Jul 24, 1993
ANNUAL RUNOFF (AC-FT)			10,540			
10 PERCENT EXCEEDS			29			
50 PERCENT EXCEEDS			2.6			
90 PERCENT EXCEEDS			0.00			

*--During periods of operation 1985-91, 1992 to current year. Seasonal records beginning water year 1992.
a--May have been higher during period of no gage-height record.
b--No flow at times most years.
c--Gage height, 10.99 ft.
d--Site and datum then in use.
e--Estimated.

06183700 BIG MUDDY CREEK DIVERSION CANAL NEAR MEDICINE LAKE, MT—Continued



06183750 LAKE CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°33'51", long 104°10'38" (NAD 27), in $SE^1/_4$ $SE^1/_4$ $SW^1/_4$ sec.31, T.33 N., R.58 E., Sheridan County, Hydrologic Unit 10060006, on left bank, at downstream end of dike, just north of Medicine Lake National Wildlife Refuge and 1.7 mi southeast of Dagmar.

DRAINAGE AREA.--101 mi^2.

PERIOD OF RECORD.--September 1985 to October 1989, March 1995 to current year (seasonal records only since 1986).

GAGE.--Water-stage recorder. Elevation of gage is 1,979 ft (NGVD 29).

REMARKS.--Records fair. Numerous diversions upstream for irrigation. Several 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			e0.00	0.00	0.00	0.27	0.38	0.00	0.00	0.10		
2			e0.00	0.00	0.00	0.28	e0.30	0.00	0.00	0.01		
3			e0.00	0.00	0.00	0.28	e0.25	0.00	0.00	0.04		
4			e0.00	0.00	0.00	0.27	e0.20	0.00	0.00	0.06		
5			e0.00	0.00	0.03	0.22	e0.15	0.00	0.00	0.05		
6			e0.00	0.00	0.00	0.25	e0.10	0.00	0.00	0.03		
7			e0.00	0.00	0.05	0.27	e0.05	0.00	0.00	0.02		
8			e0.00	0.00	0.40	0.36	e0.00	0.00	0.00	0.01		
9			e0.00	0.00	0.49	0.48	0.00	0.00	0.01	0.06		
10			e0.00	0.00	0.46	0.53	0.00	0.00	0.01	0.09		
11			e0.00	0.00	0.41	2.1	0.00	0.00	0.03	0.08		
12			e0.00	0.00	0.38	0.67	0.00	0.00	0.02	0.07		
13			e0.00	0.03	0.40	0.44	0.00	0.00	0.02	0.07		
14			e0.00	0.06	0.34	0.31	0.00	0.00	0.03	0.09		
15			e0.00	0.00	0.26	0.24	0.00	0.00	0.04	0.09		
16			e0.00	0.00	0.22	0.22	0.00	0.00	0.04	0.09		
17			e0.00	0.00	0.23	0.19	0.00	0.00	0.03	0.08		
18			e0.00	0.01	0.28	0.17	0.00	0.00	0.02	0.10		
19			e0.00	0.00	0.32	0.15	0.00	0.00	0.02	0.10		
20			e0.50	0.00	0.30	0.12	0.00	0.00	0.00	0.09		
21			0.25	0.00	0.25	0.05	0.00	0.00	0.00	0.06		
22			0.24	0.00	0.24	0.03	0.00	0.00	0.01	0.01		
23			0.28	0.00	0.22	0.01	0.00	0.00	0.06	0.00		
24			e0.27	0.00	0.25	0.00	0.00	0.00	0.06	0.00		
25			e0.23	0.00	0.21	0.02	0.00	0.00	0.08	0.00		
26			0.22	0.00	0.18	0.64	0.00	0.00	0.12	0.00		
27			0.31	0.00	0.19	4.2	0.00	0.00	0.13	0.00		
28			0.39	0.00	0.19	12	0.00	0.00	0.10	0.00		
29			0.41	0.00	0.21	4.6	0.00	0.00	0.08	0.00		
30			0.39	0.00	0.24	1.2	0.00	0.00	0.09	0.00		
31			0.17	---	0.26	---	0.00	0.00	---	0.00		
TOTAL			3.66	0.10	7.01	30.57	1.43	0.00	1.00	1.40		
MEAN			0.12	0.00	0.23	1.02	0.05	0.00	0.03	0.05		
MAX			0.50	0.06	0.49	12	0.38	0.00	0.13	0.10		
MIN			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AC-FT			7.3	0.2	14	61	2.8	0.00	2.0	2.8		

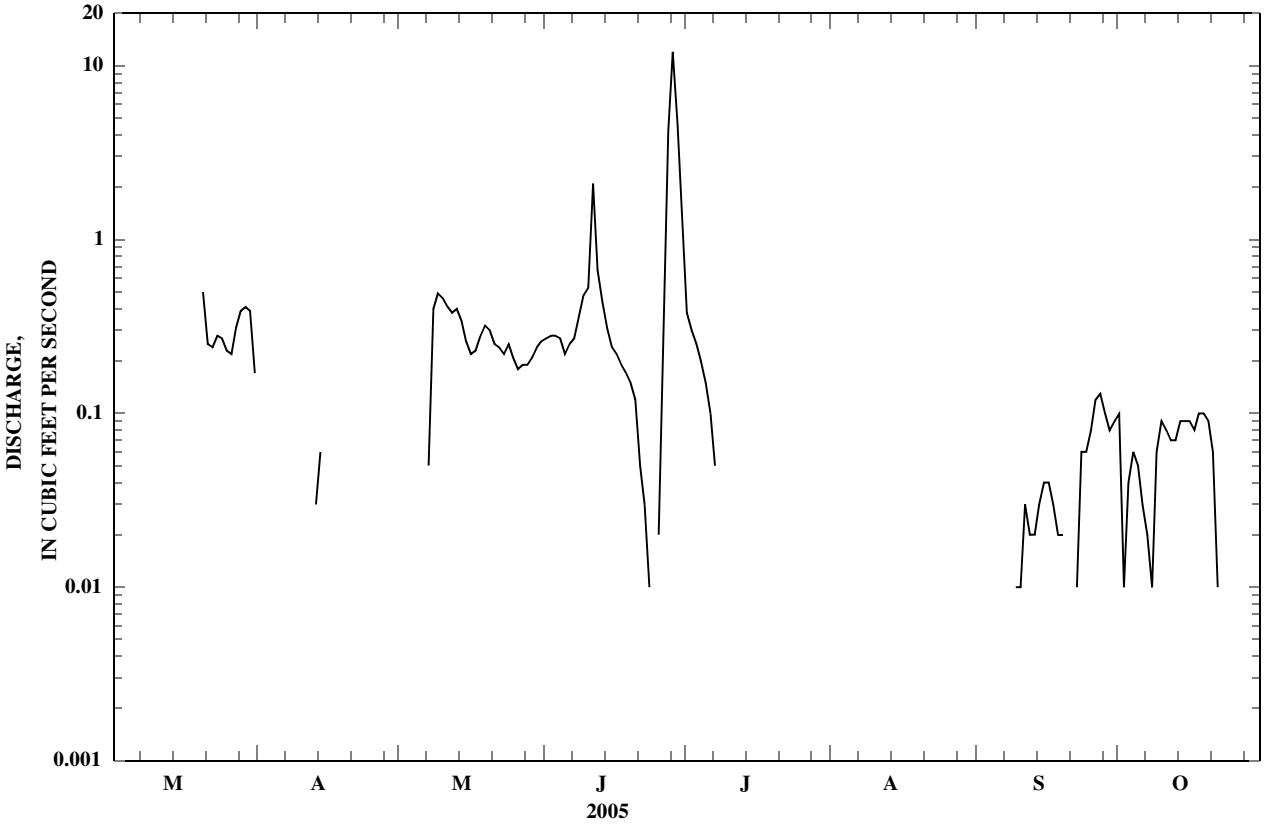
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	10.9	9.35	0.88	0.46	0.35	0.03	0.00	0.00
MAX	83.4	45.1	3.35	2.81	1.40	0.26	0.03	0.05
(WY)	(2003)	(1997)	(1986)	(2000)	(1999)	(1999)	(2005)	(2006)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1998)	(1997)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1986 - 2005*	
HIGHEST DAILY MEAN	12	Jun 28	950	Mar 20, 2003
LOWEST DAILY MEAN	0.00	Mar 1	a0.00	Oct 1, 1985
MAXIMUM PEAK FLOW	14	Jun 28	950	Mar 20, 2003
MAXIMUM PEAK STAGE	6.31	Jun 28	10.05	Mar 20, 2003

*--During periods of operation (September 1985 to October 1989, March 1995 to current year).
a--No flow many days most years.
e--Estimated.

06183750 LAKE CREEK NEAR DAGMAR, MT—Continued



06183800 COTTONWOOD CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°30'35", long 104°10'23" (NAD 27), in $SE^1/_4NE^1/_4SE^1/_4$ sec.21, T.32 N., R.58 E., Sheridan County, Hydrologic Unit 10060006, on right bank, at bridge on county road 1.2 mi southeast of Medicine Lake National Wildlife Refuge, and 5.3 mi south of Dagmar.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--August 1985 to September 1989, March 1995 to current year, seasonal records only.

GAGE.--Water-stage recorder. Elevation of gage is 1,975 ft (NGVD 29).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. 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			e0.00	e15	e0.30	e1.0	1.2	0.39	0.61	0.00		
2			e0.00	e15	e0.25	e1.0	0.97	0.36	0.59	0.00		
3			e0.00	e14	e0.35	e1.0	0.63	0.35	0.59	0.00		
4			e0.00	e8.0	e0.40	e1.0	0.44	0.34	0.49	0.00		
5			e0.00	e5.5	e0.30	e1.0	0.39	0.33	0.46	0.00		
6			e0.00	e4.5	e0.30	e0.90	0.38	0.32	0.41	0.00		
7			e0.00	e3.5	e0.50	e1.0	0.39	0.31	0.37	0.00		
8			e0.00	e2.5	e1.0	e1.5	0.43	0.30	0.34	0.00		
9			e0.00	e2.0	e5.0	e2.5	0.43	0.28	0.29	0.00		
10			e0.00	e1.5	e8.0	e4.0	0.38	0.27	0.21	0.00		
11			e0.00	e1.5	e4.0	e6.0	0.38	0.31	0.18	0.00		
12			e0.00	e1.0	e2.5	e4.5	0.35	0.30	0.14	0.00		
13			e0.00	e1.0	e2.0	e2.5	0.34	0.31	0.10	0.00		
14			e0.00	e1.0	e1.5	e2.0	0.36	0.29	0.07	0.00		
15			e0.00	e0.70	e1.5	e1.5	0.33	0.29	0.04	0.00		
16			e0.00	e0.40	e1.0	e1.0	0.34	0.28	0.02	0.00		
17			e0.00	e0.40	e1.0	e1.0	0.36	0.28	0.01	0.00		
18			e0.00	e0.40	e1.0	e0.95	0.35	0.46	0.01	0.00		
19			e0.00	e0.50	e1.5	e0.90	0.33	0.45	0.00	0.00		
20			e0.00	e0.65	e1.5	e0.70	0.32	0.45	0.00	0.00		
21			e0.50	e0.60	e2.0	e0.70	0.65	0.49	0.00	0.01		
22			e0.65	e0.60	e3.5	e0.50	0.93	0.54	0.00	0.03		
23			e1.0	e0.50	e4.5	0.34	1.1	0.56	0.00	0.05		
24			e2.5	e0.50	e4.0	0.32	0.64	0.52	0.00	0.06		
25			e5.0	e0.40	e2.5	0.33	0.57	0.48	0.00	0.06		
26			e12	e0.35	e1.5	0.41	0.48	0.48	0.00	0.05		
27			e10	e0.30	e1.0	0.41	0.44	0.44	0.00	0.07		
28			e12	e0.25	e1.0	0.82	0.44	0.46	0.00	0.07		
29			e16	e0.30	e0.90	1.6	0.45	0.53	0.00	0.11		
30			e18	e0.35	e1.0	1.3	0.44	0.67	0.00	0.10		
31			e15	---	e1.0	---	0.42	0.70	---	0.10		
TOTAL			92.65	83.20	56.80	42.68	15.66	12.54	4.93	0.71		
MEAN			2.99	2.77	1.83	1.42	0.51	0.40	0.16	0.02		
MAX			18	15	8.0	6.0	1.2	0.70	0.61	0.11		
MIN			0.00	0.25	0.25	0.32	0.32	0.27	0.00	0.00		
AC-FT			184	165	113	85	31	25	9.8	1.4		

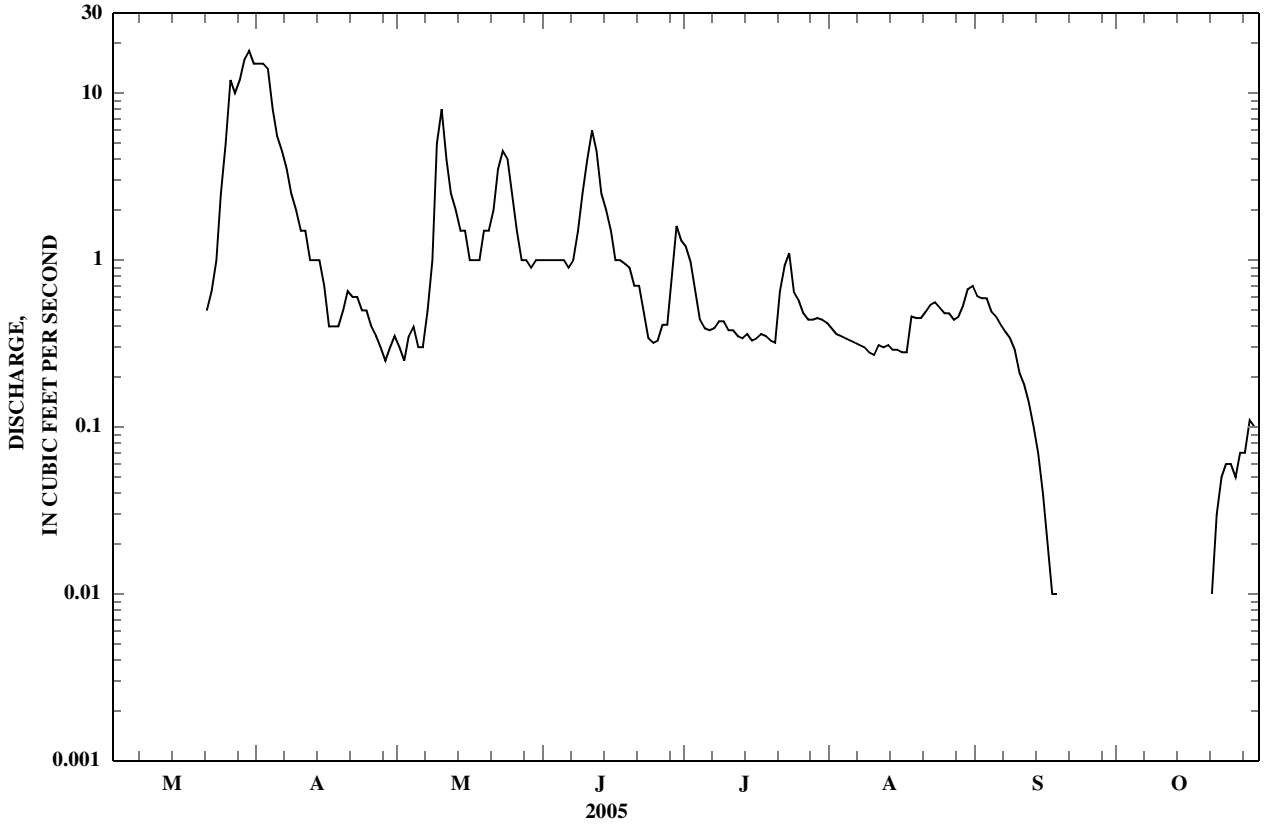
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	31.3	8.24	1.56	1.58	5.08	0.16	0.05	0.01
MAX	140	32.6	6.95	13.7	27.4	0.71	0.33	0.10
(WY)	(2003)	(1987)	(1999)	(2000)	(1997)	(1999)	(1997)	(2001)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1988)	(1987)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1986 - 2005*	
HIGHEST DAILY MEAN	18	Mar 30	1,810	Mar 18, 2003
LOWEST DAILY MEAN	0.00	Mar 1	c0.00	Oct 1, 1985
MAXIMUM PEAK FLOW	a18	Mar 30	d3,380	Mar 18, 2003
MAXIMUM PEAK STAGE	b1.61	Mar 30	8.76	Mar 22, 1997

*--During periods of operation (1985-89, 1995 to current year; seasonal records only).
a--Backwater from ice.
b--From floodmark, may have been higher during period of no gage-height record, Mar. 21 to June 22.
c--No flow most years.
d--Gage height, 8.43 ft, from floodmark.
e--Estimated.

06183800 COTTONWOOD CREEK NEAR DAGMAR, MT—Continued



06183850 SAND CREEK NEAR DAGMAR, MT

LOCATION.--Lat 48°29'38", long 104°16'23" (NAD 27), in $SE^1/_4$ $NW^1/_4$ $NW^1/_4$ sec.26, T.32 N., R.57 E., Sheridan County, Hydrologic Unit 10060006, at Medicine Lake National Wildlife Refuge boundary, on right bank at downstream end of culvert on county road, 1.0 mi upstream from mouth, and 7 mi southwest of Dagmar.

DRAINAGE AREA.--122 mi^2.

PERIOD OF RECORD.--August 1985 to September 1989, March 1995 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 1,945 ft (NGVD 29).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known diversions for irrigation upstream from station. Several 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			e0.00	6.9	0.30	1.2	3.0	0.00	0.00	0.00		
2			e0.00	7.2	0.24	1.2	2.7	0.00	0.00	0.00		
3			e0.00	4.5	0.35	1.2	2.8	0.00	0.00	0.00		
4			e0.00	2.8	0.39	1.1	2.5	0.00	0.00	0.00		
5			e0.00	2.3	0.29	0.98	1.8	0.00	0.00	0.00		
6			e0.00	1.6	0.32	0.90	1.3	0.00	0.00	0.00		
7			e0.00	1.9	0.48	1.1	0.98	0.00	0.00	0.00		
8			e0.00	2.0	1.1	1.7	0.86	0.00	0.00	0.00		
9			e0.00	1.6	5.4	2.5	0.64	0.00	0.00	0.00		
10			e0.00	1.2	8.1	5.4	0.41	0.00	0.00	0.00		
11			e0.00	1.1	4.1	7.4	0.14	0.00	0.00	0.00		
12			e0.00	1.1	2.6	5.1	0.00	0.00	0.00	0.00		
13			e0.00	1.2	2.1	4.0	0.00	0.00	0.00	0.00		
14			e0.00	1.0	1.8	3.1	0.00	0.00	0.00	0.00		
15			e0.00	1.0	1.5	2.3	0.00	0.00	0.00	0.00		
16			e0.00	0.90	1.2	1.6	0.00	0.00	0.00	0.00		
17			e0.00	0.78	1.2	1.3	0.00	0.00	0.00	0.00		
18			e0.00	0.75	1.3	1.0	0.00	0.00	0.00	0.00		
19			e0.00	0.72	1.4	0.87	0.00	0.00	0.00	0.00		
20			e5.0	0.66	1.6	0.70	0.00	0.00	0.00	0.00		
21			e2.0	0.63	1.8	0.70	0.04	0.00	0.00	0.00		
22			e1.5	0.58	3.3	0.50	0.07	0.00	0.00	0.00		
23			e0.50	0.53	4.4	0.26	0.00	0.00	0.00	0.00		
24			e0.50	0.50	3.8	0.00	0.00	0.00	0.00	0.00		
25			e0.50	0.42	2.3	0.27	0.00	0.00	0.00	0.00		
26			e0.25	0.34	1.7	1.0	0.00	0.00	0.00	0.00		
27			e0.00	0.29	1.1	1.1	0.00	0.00	0.00	0.00		
28			e2.0	0.27	0.96	1.5	0.00	0.00	0.00	0.00		
29			e9.5	0.29	0.89	2.0	0.00	0.00	0.00	0.00		
30			e23	0.34	1.0	3.0	0.00	0.00	0.00	0.00		
31			11	---	1.1	---	0.00	0.00	---	0.00		
TOTAL			55.75	45.40	58.12	54.98	17.24	0.00	0.00	0.00		
MEAN			1.80	1.51	1.87	1.83	0.56	0.00	0.00	0.00		
MAX			23	7.2	8.1	7.4	3.0	0.00	0.00	0.00		
MIN			0.00	0.27	0.24	0.00	0.00	0.00	0.00	0.00		
AC-FT			111	90	115	109	34	0.00	0.00	0.00		

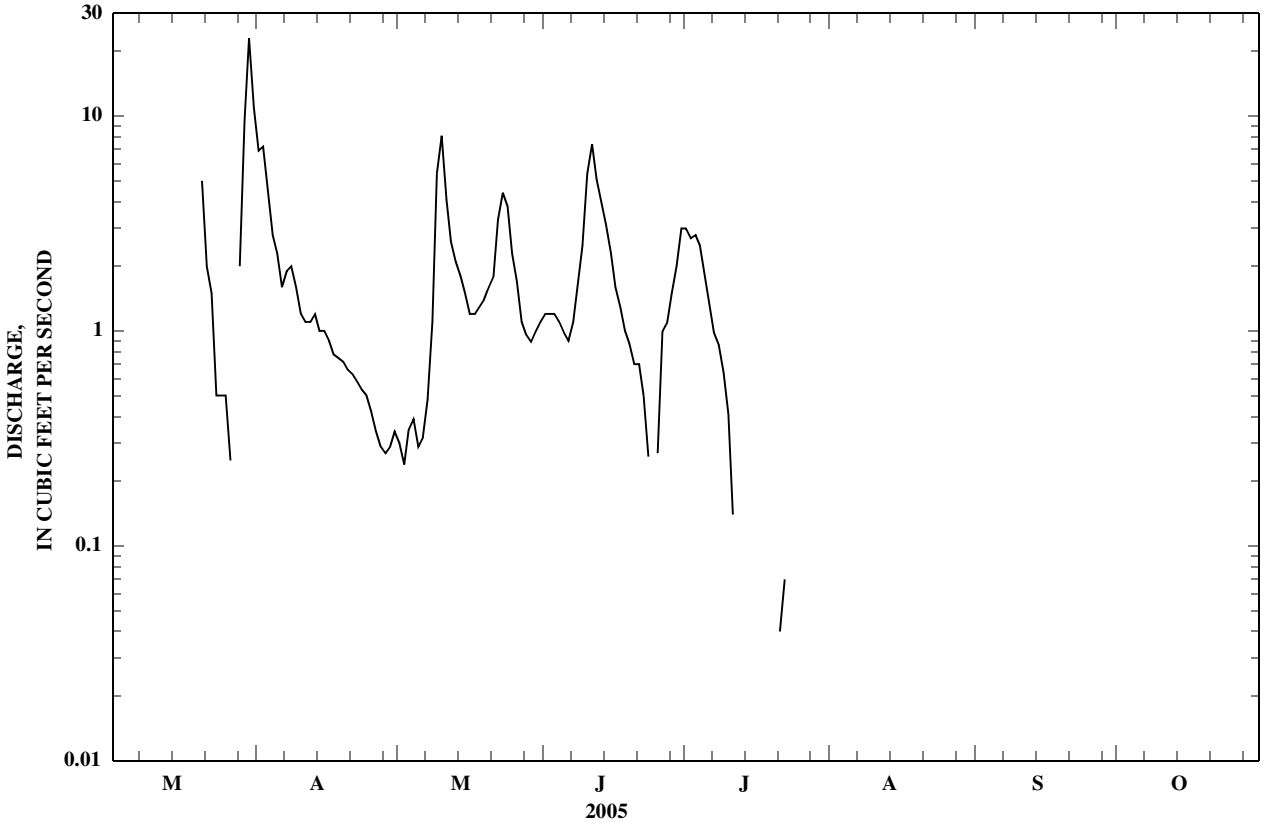
STATISTICS OF MONTHLY MEAN DATA FOR SEASONS 1986 - 2005*

MEAN	9.84	5.97	1.87	2.10	3.29	0.31	0.05	0.01
MAX	33.1	16.7	6.80	9.06	21.6	3.34	0.80	0.14
(WY)	(1999)	(1987)	(1999)	(2000)	(1997)	(1997)	(1997)	(2005)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1988)	(1988)	(1988)	(1988)	(1986)	(1986)	(1986)	(1986)

SUMMARY STATISTICS	FOR 2005 SEASON		SEASONS 1986 - 2005*	
HIGHEST DAILY MEAN	23	Mar 30	200	Mar 18, 2003
LOWEST DAILY MEAN	0.00	Oct 1	c0.00	Oct 1, 1985
MAXIMUM PEAK FLOW	a40	Mar 30	d284	Mar 18, 2003
MAXIMUM PEAK STAGE	b2.71	Mar 30	b5.80	Mar 26, 1997

*--During periods of operation (1985-89, 1995 to current year; seasonal records only).
a--About, backwter from ice.
b--From floodmark, probable date, backwater from ice.
c--No flow most years.
c--Result of culvert computation of peak flow.
e--Estimated.

06183850 SAND CREEK NEAR DAGMAR, MT—Continued



06185500 MISSOURI RIVER NEAR CULBERTSON, MT
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 48°07'30", long 104°28'20" (NAD 27), in $SE^1/_4NW^1/_4$ sec.3, T.27 N., R.56 E., Richland County, Hydrologic Unit 10060005, on right bank at upstream side of bridge on State Highway 16, 2.5 mi southeast of Culbertson, 10 mi downstream from Big Muddy Creek, and at river mile 1,620.76.

DRAINAGE AREA.--91,557 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1941 to December 1951, April 1958 to current year.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,883.4 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark). July 1 to Nov. 6, 1941, water-stage recorder at site 400 ft upstream at elevation 0.11 ft higher. Nov. 7, 1941, to Aug. 17, 1950, water-stage recorder at site 580 ft downstream at present elevation. Aug. 18, 1950, to Dec. 31, 1951, nonrecording gage on bridge at present elevation. Apr. 1, 1958, to Nov. 1, 1967, water-stage recorder at site 580 ft downstream at present elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow partly regulated by Fort Peck Lake (station number 06131500) and many other reservoirs upstream from station. Diversions for irrigation of about 1,030,400 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	4,870	4,270	5,850	e5,900	e8,100	e5,600	5,420	5,640	5,360	6,970	6,790	5,940
2	4,790	4,310	6,080	e6,000	e7,400	e5,800	5,370	5,670	5,580	6,720	6,200	5,870
3	4,710	4,330	5,970	e6,100	e7,900	e5,600	5,340	5,650	5,500	6,270	6,100	5,930
4	4,690	4,430	e6,000	e6,000	e7,300	e6,300	5,240	5,600	5,480	6,260	6,040	5,840
5	4,560	4,480	6,060	e5,800	e6,800	e5,800	5,210	5,510	5,520	6,690	6,330	5,840
6	4,760	4,370	5,940	e5,800	e6,900	e5,700	5,410	5,320	5,370	6,560	6,450	5,770
7	4,830	4,290	5,950	e5,900	e6,700	e5,600	5,570	5,300	5,500	6,280	6,060	5,710
8	4,640	4,240	6,200	e6,000	e6,300	e5,400	5,410	5,690	5,730	6,020	5,990	5,850
9	4,530	4,210	e5,800	e6,600	e5,900	e5,300	5,410	6,030	6,520	5,810	6,360	5,750
10	4,380	4,290	e5,800	e6,400	e5,900	e5,400	5,320	5,990	7,490	5,710	6,140	5,690
11	4,350	4,400	e5,900	e6,000	e5,700	e5,000	5,600	5,950	8,430	5,770	6,010	5,840
12	4,340	4,520	6,140	e6,300	e6,300	e4,800	5,590	5,890	8,440	6,480	5,900	5,890
13	4,340	4,470	6,030	e6,400	e5,800	5,310	5,480	6,040	9,180	7,140	5,960	5,920
14	4,310	4,530	6,170	e6,100	e5,800	5,220	5,430	5,550	9,930	7,210	5,980	5,900
15	4,290	4,540	6,350	e6,100	e5,800	5,150	5,390	5,190	9,480	7,060	5,980	5,870
16	4,310	4,380	6,300	e6,300	e5,800	5,160	5,590	5,210	8,530	6,860	5,970	5,920
17	4,280	4,410	6,240	e6,200	e5,800	5,130	5,680	5,680	7,870	6,560	6,060	5,930
18	4,270	4,690	e5,900	e6,300	e5,900	4,960	5,730	5,810	7,440	6,640	6,370	6,290
19	4,350	4,870	6,160	e6,300	e5,900	6,170	5,730	5,750	6,880	6,560	6,780	6,420
20	4,350	5,020	5,890	e6,600	e5,900	5,770	5,780	5,600	6,550	6,530	6,500	5,070
21	4,330	4,940	e5,900	e6,200	e5,900	5,130	5,640	5,500	6,430	6,400	6,510	4,520
22	4,340	4,720	e6,100	e6,300	e5,800	4,940	5,590	5,470	6,610	6,160	6,320	4,420
23	4,410	4,910	e6,000	e6,000	e5,700	5,030	5,530	5,520	7,090	6,070	6,210	4,540
24	4,350	5,060	e6,000	e6,100	e5,400	5,270	5,550	5,540	7,240	5,940	6,050	4,470
25	4,310	5,260	e6,000	e6,000	e5,600	5,400	5,610	5,380	7,530	5,920	5,930	4,360
26	4,300	5,420	e6,000	e6,100	e5,500	5,470	5,690	5,190	7,510	5,910	6,010	4,260
27	4,310	5,510	e6,000	e6,100	e5,500	5,590	5,710	5,100	6,780	5,870	5,910	4,040
28	4,280	5,580	e6,000	e6,200	e5,500	5,710	5,700	5,330	6,620	5,890	5,910	3,980
29	4,260	5,670	e5,900	e6,300	---	5,540	5,680	5,390	6,780	6,390	5,940	4,010
30	4,350	5,760	e6,000	e6,400	---	5,420	5,590	5,380	6,820	6,640	5,960	3,990
31	4,280	---	e5,700	e7,200	---	5,360	---	5,280	---	6,770	5,960	---
TOTAL	137,470	141,880	186,330	192,000	172,800	168,030	165,990	172,150	210,190	198,060	190,680	159,830
MEAN	4,435	4,729	6,011	6,194	6,171	5,420	5,533	5,553	7,006	6,389	6,151	5,328
MAX	4,870	5,760	6,350	7,200	8,100	6,300	5,780	6,040	9,930	7,210	6,790	6,420
MIN	4,260	4,210	5,700	5,800	5,400	4,800	5,210	5,100	5,360	5,710	5,900	3,980
AC-FT	272,700	281,400	369,600	380,800	342,700	333,300	329,200	341,500	416,900	392,900	378,200	317,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)*

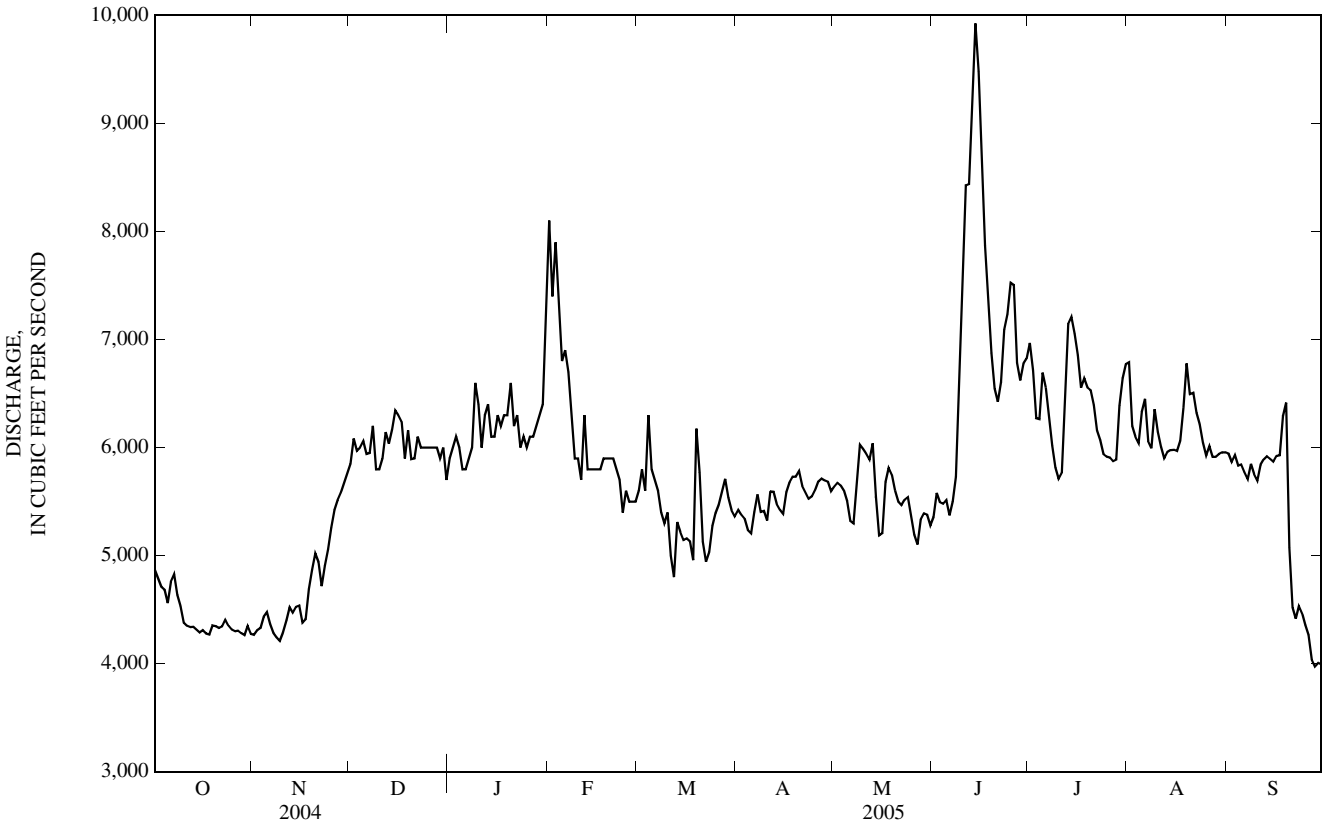
MEAN	10,390	9,051	9,095	9,837	10,420	10,200	10,370	9,530	9,651	10,090	11,140	10,850
MAX	28,570	22,440	13,280	14,400	17,450	20,690	32,840	26,220	26,650	37,050	25,300	26,590
(WY)	(1949)	(1952)	(1944)	(1986)	(1976)	(1976)	(1979)	(1979)	(1975)	(1975)	(1948)	(1948)
MIN	1,237	1,126	1,061	1,010	1,167	2,674	1,965	1,353	1,366	1,273	3,823	3,771
(WY)	(1942)	(1942)	(1942)	(1943)	(1942)	(1950)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005*	
ANNUAL TOTAL	2,784,890		2,095,410			
ANNUAL MEAN	7,609		5,741		10,050	
HIGHEST ANNUAL MEAN					19,910	1952
LOWEST ANNUAL MEAN					4,083	1942
HIGHEST DAILY MEAN	15,700	May 29	9,930	Jun 14	69,200	Mar 27, 1943
LOWEST DAILY MEAN	3,500	Nov 6	3,980	Sep 28	575	Nov 22, 1941
ANNUAL SEVEN-DAY MINIMUM	4,290	Oct 26	4,160	Sep 24	709	Nov 19, 1941
MAXIMUM PEAK FLOW			a10,000	Jun 14	c78,200	Mar 26, 1943
MAXIMUM PEAK STAGE			b7.19	Dec 28	b19.66	Apr 14, 1979
INSTANTANEOUS LOW FLOW					575	Nov 22, 1941
ANNUAL RUNOFF (AC-FT)	5,524,000		4,156,000		7,282,000	
10 PERCENT EXCEEDS	11,100		6,640		15,700	
50 PERCENT EXCEEDS	7,140		5,800		9,220	
90 PERCENT EXCEEDS	4,510		4,390		4,500	

SUMMARY STATISTICS	WATER YEARS 1941 - 1951**		WATER YEARS 1958 - 2005***	
ANNUAL MEAN	9,245		10,180	
HIGHEST ANNUAL MEAN	14,520	1948	16,580	1975
LOWEST ANNUAL MEAN	4,083	1942	5,741	2005
HIGHEST DAILY MEAN	69,200	Mar 27, 1943	52,000	Apr 18, 1979
LOWEST DAILY MEAN	575	Nov 22, 1941	2,000	Nov 20, 1964
ANNUAL SEVEN-DAY MINIMUM	709	Nov 19, 1941	2,130	Nov 19, 1964
MAXIMUM PEAK FLOW	c78,200	Mar 26, 1943	d55,000	Mar 23, 1960
MAXIMUM PEAK STAGE	b15.12	Mar 26, 1943	b19.66	Apr 14, 1979
ANNUAL RUNOFF (AC-FT)	6,698,000		7,375,000	
10 PERCENT EXCEEDS	21,000		15,000	
50 PERCENT EXCEEDS	6,190		9,420	
90 PERCENT EXCEEDS	1,400		5,600	

*--During period of operation (1941-52, 1958 to current year).
**--Before operational level at Fort Peck Lake was reached.
***--After operational level at Fort Peck Lake was reached.
a--Gage height, 5.79 ft.
b--Backwater from ice.
c--Gage height, 14.80 ft, from rating curve extended above 30,000 ft^3/s.
d--Gage height, 19.14 ft.
e--Estimated.



06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1965 to 1986, 1991 to 1994, October 1996 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1965 to September 1981.
WATER TEMPERATURE: July 1965 to September 1979, seasonal records starting July 18, 2002 to September 2004.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1976.

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, 941 microsiemens per centimeter (µS/cm) at 25°C, Jan. 19, 1980; minimum daily, 338 µS/cm at 25°C, Mar. 30, 1967.
WATER TEMPERATURE: Maximum, 26.0°C, Aug. 14, 2003; minimum, 0.0°C, on many days during winter period.
SEDIMENT CONCENTRATION: Maximum daily mean, 2,940 mg/L, Aug. 15, 1974; minimum daily mean, 30 mg/L, Jan. 13, 1975.
SEDIMENT LOAD: Maximum daily, 147,000 tons, June 5, 1975; minimum daily, 421 tons, Jan. 13, 1975.

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)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	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)
OCT													
26...	1130	4,300	11	.050	.035	721	11.5	99	8.4	630	6.0	6.5	240
MAR													
21...	1145	5,110	28	.053	.036	720	12.9	96	8.0	631	1.0	1.0	230
APR													
11...	1215	5,610	34	.049	.032	723	12.0	108	8.2	610	16.0	8.5	220
MAY													
10...	1130	5,980	130	.058	.040	723	10.2	102	8.4	636	19.0	13.0	220
JUN													
06...	1100	5,350	28	.051	.035	714	8.8	103	8.4	619	21.0	19.5	230
27...	1115	6,780	E710	.093	.069	722	7.0	84	8.2	552	24.5	21.5	170
AUG													
08...	1115	5,970	39	.049	.034	720	7.8	95	8.3	591	24.0	22.0	210

Date	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)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
OCT													
26...	57.4	22.4	4.20	1	51.1	174	165	201	.0	10.6	.9	6.85	140
MAR													
21...	56.1	22.7	3.97	2	54.3	176	171	209	.0	10.2	.9	6.69	144
APR													
11...	53.4	21.6	3.72	1	47.0	163	165	194	3	9.67	1.0	6.54	133
MAY													
10...	53.4	21.8	4.27	2	53.0	164	174	183	14	10.3	.9	6.38	139
JUN													
06...	53.1	23.0	4.35	1	47.8	168	171	204	2	9.89	.9	6.59	137
27...	41.0	17.3	4.60	2	52.6	130	124	152	.0	7.48	.8	7.38	136
AUG													
08...	52.4	19.5	3.63	1	41.3	162	165	182	9	9.82	.9	6.13	127

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

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

Date	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 + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT												
26...	393	.55	4,730	407	.18	.22	<.010	<.016	E.001	.006	.009	.089
MAR												
21...	403	.55	5,550	402	.18	.32	<.010	E.009	E.001	<.006	.006	.142
APR												
11...	375	.53	5,930	391	.14	E.30	E.005	<.016	<.002	<.006	E.009	.127
MAY												
10...	394	.55	6,480	401	.20	.44	<.010	.035	E.001	E.005	.012	.163
JUN												
06...	385	.54	5,790	401	.17	.27	<.010	<.016	<.002	E.004	.009	.196
27...	343	.49	6,540	357	.24	2.5	E.005	.155	E.001	.025	.034	.34
AUG												
08...	360	.49	5,860	364	.15	.29	<.010	<.016	<.002	.008	.014	.27

Date	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Lithium water, fltrd, ug/L (01130)	Selenium, water, fltrd, ug/L (01145)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)
OCT													
26...	1.2	<.1	1.1	2.5	1.7	3.3	2.4	123	<6	64.2	.6	487	.7
MAR													
21...	1.3	.2	1.1	2.4	.7	2.9	2.7	126	<6	68.6	.7	482	1.0
APR													
11...	1.0	.2	.8	2.4	.2	3.5	2.4	120	<6	58.9	.8	528	1.2
MAY													
10...	2.6	.2	2.4	2.5	1.9	2.9	2.4	117	<6	52.1	.8	501	1.4
JUN													
06...	3.4	.2	3.2	2.4	.4	2.0	2.4	121	<6	70.4	.7	502	.9
27...	17.3	1.6	15.8	3.0	4.1	1.4	2.1	124	<6	64.4	.9	388	1.2
AUG													
08...	4.5	<.1	4.4	2.3	.7	4.5	2.5	118	<6	69.0	.7	491	1.2

Date	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)
OCT												
26...	<.006	<.006	<.006	<.005	<.005	99.1	<.007	<.050	<.010	<.004	<.041	<.020
MAR												
21...	<.006	<.006	<.006	<.005	<.005	90.4	<.007	<.050	<.010	<.004	<.041	<.020
APR												
11...	<.006	<.006	<.006	<.005	<.005	92.0	<.007	<.050	<.010	<.004	<.041	<.020
MAY												
10...	<.006	<.006	<.006	<.005	<.005	91.1	E.003	<.050	<.010	<.004	<.041	<.020
JUN												
06...	<.006	<.006	<.006	<.005	<.005	98.9	<.007	<.050	<.010	<.004	<.041	<.020
27...	<.006	<.006	<.006	<.005	<.005	104	E.005	<.050	<.010	<.004	<.041	<.020
AUG												
08...	<.006	<.006	<.006	<.005	<.005	89.2	<.007	<.050	<.010	<.004	<.041	<.020

E--Estimated.

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

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

Date	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinyl fipronil amide, wat flt ug/L (62169)
OCT												
26...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.010	<.009	<.005	<.029
MAR												
21...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
APR												
11...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
MAY												
10...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
JUN												
06...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.009	<.009	<.005	<.029
27...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029
AUG												
08...	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.006	<.009	<.005	<.029

Date	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)
OCT												
26...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
MAR												
21...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
APR												
11...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
MAY												
10...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
JUN												
06...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
27...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007
AUG												
08...	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.006	<.006	<.003	<.007

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)
OCT											
26...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
MAR											
21...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
APR											
11...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
MAY											
10...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
JUN											
06...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
27...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
AUG											
08...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005

E--Estimated.

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

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

Date	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Suspnd. sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT									
26...	<.02	<.034	<.02	<.010	<.006	<.009	25	110	1,280
MAR									
21...	<.02	<.034	<.02	<.010	<.006	<.009	36	186	2,570
APR									
11...	<.02	<.034	<.02	<.010	<.006	<.009	44	183	2,770
MAY									
10...	<.02	<.034	<.02	<.010	<.006	<.009	72	304	4,910
JUN									
06...	<.02	<.034	<.02	<.010	<.006	<.009	40	184	2,660
27...	<.02	<.034	<.02	<.010	<.006	<.009	94	1,890	34,700
AUG									
08...	<.02	<.034	<.02	<.010	<.006	<.009	44	196	3,160

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA

All elevations listed for the following reservoirs are referenced to the National Geodetic Vertical Datum of 1929.

06012000 LIMA RESERVOIR

LOCATION--Lat 44°39'16", long 112°21'54" (NAD 27), in $SW^1/_4$ sec.32, T.13 S., R.6 W., Beaverhead County, Hydrologic Unit 10020001, at Lima Dam on Red Rock River, 7 mi northwest of Monida, and at river mile 2,542.2.

DRAINAGE AREA--570 mi^2.

PERIOD OF RECORD.--April 1940 to current year. Records prior to October 1950, published only in WSP 1309, and those for April 1955, published only in WSP 1729. Records of daily elevations are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS.--Elevation of gage is at sea level (levels by Montana Department of Natural Resources and Conservation)Reservoir is formed by earthfill dam with concrete spillway completed in 1902. Usable capacity, 84,050 acre-ft between elevation 6,537.30 ft, bottom of tunnel, and 6,582.7 ft, spillway crest. No dead storage. Figures given herein represent usable contents. Water is used for irrigation, flood control, and recreation. Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 85,870 acre-ft, May 27, 28, June 14, 15, 1984, elevation, 6,582.98 ft; no usable storage Sept. 20-26, 1979, Sept. 13-30, 1987, Oct. 1987, July 18 to Sept. 30, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,540 acre-ft, May 20-27, elevation 6,581.17 ft; minimum contents, 27,410 acre-ft, Oct. 1, elevation, 6,569.00 ft.

06038000 HEBGEN LAKE

LOCATION.--Lat 44°51'51", long 111°20'09" (NAD 27), in $SW^1/_4$ $NW^1/_4$ sec.23, T.11 S., R.3 E., Gallatin County, Hydrologic Unit 10020007, at Hebgen Dam on Madison River, 18 mi northwest of West Yellowstone, and at river mile 103.

DRAINAGE AREA.--904 mi^2.

PERIOD OF RECORD.--January 1936 to current year. Records prior to October 1939, published only in WSP 1309. Figures of contents published in WSP 1629, 1709, and 1729 have been found to be in error and should not be used. Prior to Oct. 1, 1949, published as Hebgen Reservoir near West Yellowstone. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Prior to earthquake of Aug. 17, 1959, elevation of gage was 9.74 ft higher, also at sea level. Reservoir is formed by earthfill dam with concrete core and spillway completed in 1915, repaired in 1960 following severe earthquake of Aug. 17, 1959, which lowered dam 9.74 ft and deformed reservoir area. Subsequent usable capacity, 378,800 acre-ft, between elevation 6,473.00 ft, bottom of outlet tower, and 6,534.87 ft, spillway crest. Dead storage, 7,340 acre-ft below elevation 6,473.00 ft. Prior to Aug. 17, 1959, usable capacity, 344,700 acre-ft between 6,483.11 ft, bottom of outlet tower, and 6,544.61 ft, spillway crest. Observations of reservoir level prior and subsequent to earthquake indicate smaller increases in capacity than indicated by new capacity table. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by The Montana Power Co. REVISED RECORDS, WSP 1916: 1959-60.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 380,500 acre-ft, July 21, 1987, elevation, 6,535.0 ft; minimum monthend, 670 acre-ft, Dec. 31, 1936, by capacity table used prior to August 1959.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 376,500 acre-ft, June 14, elevation, 6,534.69 ft; minimum observed, 289,100 acre-ft, Apr. 4-15, elevation, 6,527.37 ft.

06040500 ENNIS LAKE

LOCATION.--Lat 45°28'12", long 111°38'15" (NAD 27), in $NW^1/_4$ $SW^1/_4$ sec.20, T.4 S., R.1 E., Madison County, Hydrologic Unit 10020007, at Madison Dam on Madison River, 5 mi northeast of McAllister, and at river mile 40.3.

DRAINAGE AREA.--2,181 mi^2.

PERIOD OF RECORD.--January 1936 to September 1975 (total contents), October 1975 to current year (usable contents). Records prior to October l939, published only in WSP 1309. Prior to 1949, published as Madison Reservoir near McAllister. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by timber crib dam completed in 1900. Usable capacity, 41,020 acre-ft between elevation 4,826.5 ft, bottom of penstock, and 4,841.5 ft, top of flashboard. Dead storage, 1,040 acre-ft below elevation 4,826.5 ft. Not normally drawn below 4,831.0 ft, 6,810 acre-ft. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 40,830 acre-ft, June 20, 1968, elevation, 4,841.45 ft; minimum observed, 2,600 acre-ft, Mar. 31, 1937, elevation, 4,828.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 37,320 acre-ft, July 11, 12, elevation, 4,840.80 ft; minimum observed, 28,520 acre-ft, Dec. 25, 26, elevation, 4,838.40 ft.

06064500 LAKE HELENA

LOCATION.--Lat 46°45'58", long 111°53'10" (NAD 27), in $SE^1/_4$ $SW^1/_4$ sec.29, T.12 N., R.2 W., Lewis and Clark County, Hydrologic Unit 10030101, at Hauser Dam on Missouri River, 13 mi northeast of Helena, and at river mile 2,239.1.

DRAINAGE AREA.--610 mi^2 above dam and control works on Prickly Pear Creek. PERIOD OF RECORD, May 1945 to current year. April to July 1953 scattered daily elevation and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage at Hauser Dam read hourly.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Gage heights collected at Hauser Dam are effective on Lake Helena at control dam. Prior to April 1945, contents of Lake Helena included with records of Hauser Lake. Since that date, a dam and control works has separated the two lakes to allow independent regulation of Lake Helena, if needed. Usable capacity, 12,710 acre-ft, between elevation 3,624.00 ft, bottom of control works, and 3,635.00 ft, top of flashboards. No dead storage. Figures given herein represent usable contents. Water is used for recreation, wildlife, and power production through Hauser Dam. Records furnished by PPL EnergyPlus, LLC.

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA—Continued

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 12,040 acre-ft, Mar. 14, 2003, elevation, 3,635.70 ft; no storage Mar. 29 to Apr. 7, 1958, Feb. 12, 20, 1962, May 4-10, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 11,360 acre-ft, Oct. 21 and Jan. 3, elevation, 3,635.40 ft; minimum observed, 6,700 acre-ft, Sept. 17-19 and 25-27, elevation, 3,633.00 ft.

06065000 HAUSER LAKE

LOCATION.--Lat 46°45'58", long 111°53'10" (NAD 27), in $SE^1/_4$ $SW^1/_4$ sec.29, T.12 N., R.2 W., Lewis and Clark County, Hydrologic Unit 10030101, at Hauser Dam on Missouri River, 1.6 mi downstream from Prickly Pear Creek, 13 mi northeast of Helena, and at river mile 2,226.4.

DRAINAGE AREA.--16,876 mi^2.

PERIOD OF RECORD.--January 1936 to current year. Records prior to October 1939, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Monthend contents prior to May 1945 include contents of Lake Helena, excluded thereafter. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage read hourly.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by concrete dam completed in 1907; separated from Lake Helena in April 1945. Usable contents, 61,870 acre-ft, between elevation 3,617.00 ft, bottom of tunnel, and 3,635.00 ft top of flashboards. Dead storage, 46,810 acre-ft below elevation 3,617.00 ft. Prior to Nov. 28, 1949, usable capacity, 52,090 acre-ft at elevation 3,635.00 ft, decrease caused by construction of Canyon Ferry Dam in backwater of Hauser Dam. Not normally drawn below 3,621.00 ft, 8,870 acre-ft. Capacity above elevation 3625.0 updated in 1990. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC. REVISED RECORDS, WSP 1729: 1949-57.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 66,040 acre-ft, Mar. 14, 2003, elevation, 3,635.70 ft; no storage Jan. 31, Feb. 29, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 64,250 acre-ft, Oct. 21 and Jan. 3, elevation, 3,635.40 ft; minimum observed, 59,930 acre-ft, Sept. 17-19 and 25-27, elevation, 3,633.00 ft.

06066000 HOLTER LAKE

LOCATION.--Lat 46°59'28", long 112°00'17" (NAD 27), on line between $SE^1/_4$ sec.5 and $NE^1/_4$ sec.8, T.14 N., R.3 W., Lewis and Clark County, Hydrologic Unit 10030101, at Holter Dam on Missouri River, 3.3 mi east of Wolf Creek, and at river mile 2,211.1.

DRAINAGE AREA.--17,149 mi^2.

PERIOD OF RECORD, January 1936 to current year. Records prior to October 1939, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Records of daily elevations since October 1955 are in files of the USGS Water Science Center located in Helena, Montana. Prior to 1950, published as Holter Reservoir near Wolf Creek. Nonrecording gage read three times daily.

REMARKS.--Elevation of gage is at sea level (levels by The Montana Power Co.). Reservoir is formed by concrete dam completed in 1918. Usable capacity, 81,920 acre-ft between elevation 3,543.00 ft, bottom of tunnel, and 3,564.00 ft, top of flashboards. Dead storage, 158,500 acre-ft below elevation 3,543.00 ft. Not normally drawn below 3,548.00 ft, 16,660 acre-ft. Figures given herein represent usable contents. Water is used for power and recreation. Records furnished by PPL EnergyPlus, LLC.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 85,250 acre-ft, June 19, 1970, elevation, 3,564.70 ft; no storage Feb. 29, Dec. 31, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 81,860 acre-ft, June 27, elevation, 3,563.99 ft; minimum observed, 74,810 acre-ft, Sept. 21, elevation, 3,562.48 ft.

06079500 GIBSON RESERVOIR

LOCATION.--Lat 47°36'09", long 112°45'39" (NAD 27), in $NE^1/_4$ $NW^1/_4$ $SE^1/_4$ sec.4, T.21 N., R.9 W., Teton County, Hydrologic Unit 10030104, at Gibson Dam on Sun River, 19 mi northwest of Augusta, and at river mile 100.8.

DRAINAGE AREA.--575 mi^2.

PERIOD OF RECORD.--January 1930 to current year. Records prior to October 1940, published only in WSP 1309. April to July 1953 scattered daily elevations and contents, published in WSP 1320-B. May to June 1964 daily elevations and contents, published in WSP 1840-B. Nonrecording gage read daily. Records of daily elevations are in files of the USGS Water Science Center located in Helena, Montana.

REMARKS.--Elevation of gage is at sea level (levels by Bureau of Reclamation). Reservoir is formed by concrete dam with glory-hole spillway completed in 1929. usable capacity, 96,480 acre-ft, between elevation 4,557.5 ft, bottom of outlet, and 4,724.0 ft, top of glory-hole, by capacity table effective Oct. 1, 1997; see previous reports for superseded figures. Water is used for irrigation and recreation. Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 116,300 acre-ft, June 8, 1964, elevation 4,732.23 ft, from floodmark, of which 11,600 acre-ft was uncontrolled storage, by capacity table used Oct. 1, 1965 to July 30, 1975; minimum observed, 11 acre-ft, Oct. 13, 1936, elevation, 4,560.9 ft by capacity table used prior to 1939.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 96,530 acre-ft, June 15, elevation, 4,724.04 ft; minimum, 5,080 acre-ft, Sept. 30, elevation, 4,609.22 ft.

SMALLER RESERVOIRS IN MISSOURI RIVER BASIN IN MONTANA—Continued

06136500 FRESNO RESERVOIR

LOCATION.--Lat 48°36'30", long 109°56'45" (NAD 27), in SE$^1/_4$ sec, 19, T. 33 N., R.14E, Hill County, Hydrologic Unit 10050002, at dam on Milk River, 13. mi west of Havre and at river mile 437.3.

DRAINAGE AREA.--3,766 mi ^{2} of which 670 mi^2 is probably noncontributing.

PERIOD OF RECORD.--January 1, 1940 to current year. Records prior to September 1940, published only in WSP 1309. March to May 1952 daily elevations and contents published in WSP 1260-B. April to July 1953 scattered daily elevations and contents published in WSP 1320-B. Records of daily contents are in files of the USGS Water Science Center located in Helena, Montana. Nonrecording gage read daily.

REMARKS.--Elevation of gage is at sea level (levels by Bureau of Reclamation). Reservoir is formed by earthfill dam with concrete spillway completed in 1939. Usable capacity, 103,000 acre-ft, between elevation 2,530.00 ft, invert of tunnel inlet, and 2,575.00 ft, spillway crest, from capacity table effective Feb. 1, 1983. Elevation of maximum water surface is 2,592.93 ft, 224,700 acre-ft. Crest of dam is 2,596.10 ft. There are no gates in the spillway. Dead storage, 448 acre-ft, below elevation 2,530.00 ft. Figures given herein represent usable contents. Water is used for irrigation and recreation. Records furnished by Bureau of Reclamation. REVISED RECORDS, WSP 1729: Drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,000 acre-ft, Apr. 3, 1952, elevation, 2,579.3 ft, of which 26,800 acre-ft was uncontrolled storage, capacity table then in use; no storage Feb. 18 to Mar. 6, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 95,250 acre-ft, July 7, elevation, 2,575.57 ft; minimum observed, 36,150 acre-ft, Jan. 28, 29, elevation, 2,557.95 ft.

MONTHEND CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Lima Reservoir	Hebgen Lake	Ennis Lake	Lake Helena	Hauser Lake
Oct. 31	30,060	333,300	35,070	10,680	62,460
Nov. 30	34,040	325,100	29,230	10,680	62,460
Dec. 30	36,740	315,500	30,660	10,900	63,060
Jan. 31	37,960	307,900	29,230	10,680	62,460
Feb. 28	39,680	298,600	29,590	10,900	63,060
Mar. 31	42,390	289,800	31,020	10,680	62,460
Apr. 30	65,150	292,900	32,850	11,130	63,660
May 31	74,310	359,800	35,440	10,450	61,870
June 30	70,640	369,200	36,200	10,680	62,460
July 31	55,720	367,200	35,070	10,900	63,060
Aug. 31	38,400	349,900	36,200	10,680	62,460
Sept. 30	27,910	336,700	35,820	7,400	54,240

Date	Holter Lake	Gibson Reservoir	Fresno Reservoir
Oct. 31	81,290	26,540	41,400
Nov. 30	80,540	27,140	40,180
Dec. 30	81,340	32,640	38,320
Jan. 31	81,250	40,910	36,600
Feb. 28	81,010	46,940	37,200
Mar. 31	80,630	55,970	39,400
Apr. 30	81,060	73,560	54,450
May 31	81,340	96,010	49,070
June 30	81,290	90,210	89,350
July 31	81,340	33,220	70,810
Aug. 31	81,430	5,600	45,040
Sept. 30	75,950	5,080	45,800

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