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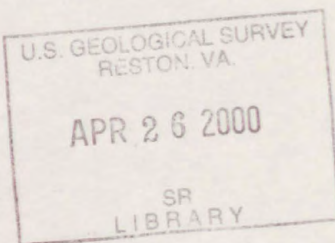
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Water Resources Data Wyoming Water Year 1999

Volume 1. Surface Water

Water-Data Report WY-99-1



U.S. Department of the Interior
U.S. Geological Survey



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

CALENDAR FOR WATER YEAR 1999

1998

OCTOBER							NOVEMBER							DECEMBER						
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1999

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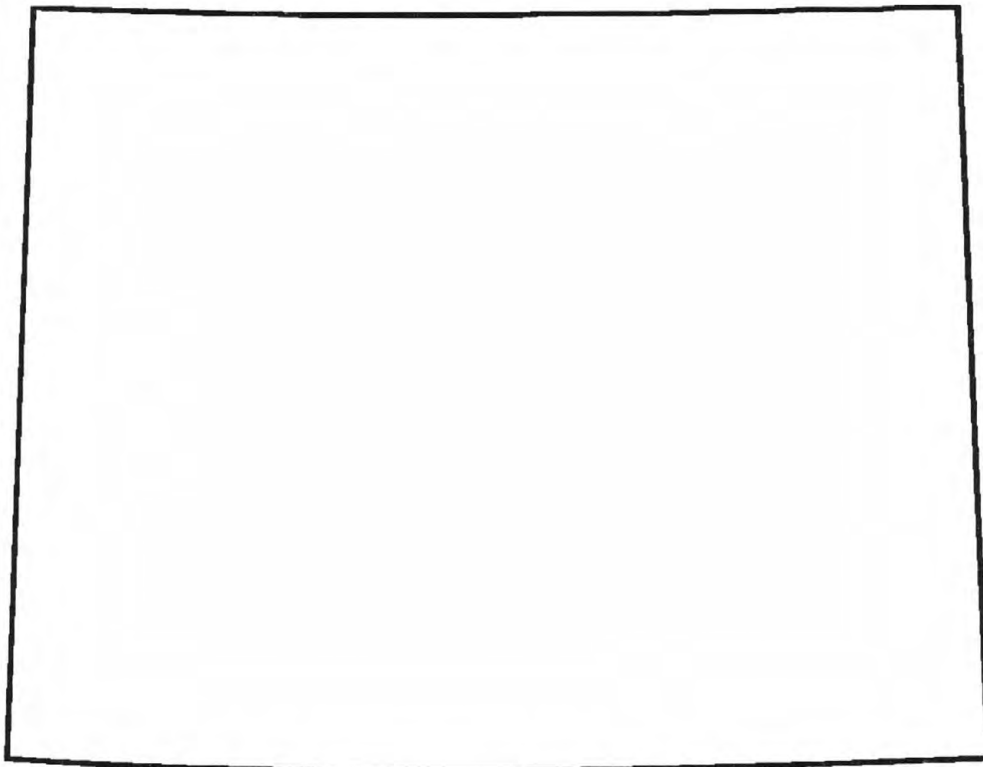
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Water Resources Data Wyoming Water Year 1999

Volume 1. Surface Water

By R.B. Swanson, M.L. Smalley, R.E. Woodruff, M.L. Clark

Water-Data Report WY-99-1



UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

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Cheyenne, Wyoming 82001-5662

2000

PREFACE

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

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

These reports are the culmination of a concerted effort by personnel of the U.S. Geological Survey of the Wyoming District who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policies and guidelines.

Most of the data were collected, computed, and processed from the Casper Field Headquarters, R. E. Woodruff, Chief and from the Riverton Field Headquarters, M. L. Smalley, Chief. The following personnel are recognized for their significant contributions to this report:

E. J. Blajszczak	S. L. Green	T. J. Leman	W. J. Sadler
J. R. Elliott	K. J. Hedmark	L. Littau	D. Trefren-Miller
N. Friday	G. A. Laidlaw	T. A. Pointon	K. R. Watson

S. L. Green, D. Trefren-Miller and L. Littau typed and assembled the report; D. Trefren-Miller and S. C. Roberts provided the illustrations.

This report was prepared under the general supervision of Myron H. Brooks, District Chief, Wyoming, and in cooperation with the State of Wyoming and with other agencies.

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13. ABSTRACT (Maximum 200 words) Water resources data for the 1999 water year for Wyoming consists of records of stage, discharge and water quality of streams; stage and contents of lakes and reservoirs, and water levels and water quality of ground water. Volume 1 of this report contains discharge records for 147 gaging stations; stage and contents for 15 lakes and reservoirs; and water quality for 26 gaging stations and 23 ungaged stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data together with the data in Volume 2 represent part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Wyoming.			
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RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station names designate type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (r) radiochemical, (s) sediment, (t) daily water temperature, (e) elevation, (v) contents]

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BLACKS FORK NEAR LITTLE AMERICA, WY (d,c,t)	09224700	332
FLAMING GORGE RESERVOIR AT FLAMING GORGE DAM, UT (v)	09234400	337
GREEN RIVER NEAR GREENDALE, UT (d,c,t)	09234500	339
YAMPA RIVER:		
LITTLE SNAKE RIVER NEAR SLATER, CO (d)	09253000	345
BATTLE CREEK:		
WEST FORK BATTLE CREEK:		
HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY (c)	09253455	347
WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY (c)	09253465	348
SLATER FORK NEAR SLATER, CO (d)	09255000	349
LITTLE SNAKE RIVER BELOW BAGGS, WY (c,s)	09259050	351
<u>GREAT SALT LAKE BASIN</u>		
BEAR RIVER BASIN		
BEAR RIVER NEAR UTAH-WYOMING STATE LINE (d)	10011500	352
BEAR RIVER AT EVANSTON, WY (d)	10016900	354
BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT (d,c,s)	10020100	356
BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT (d)	10020300	359
TWIN CREEK AT SAGE, WY (c,s)	10027000	361
BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY (d)	10028500	362
SMITHS FORK NEAR BORDER, WY (d)	10032000	364
SMITHS FORK AT COKEVILLE, WY (c,s)	10035000	366
BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY (d,c,m,s,t)	10038000	367
BEAR RIVER AT BORDER, WY (d)	10039500	373
<u>SNAKE RIVER BASIN</u>		
SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY (d,c,s)	13010065	375
JACKSON LAKE NEAR MORAN, WY (v)	13010500	379
SNAKE RIVER NEAR MORAN, WY (d)	13011000	381
PACIFIC CREEK AT MORAN, WY (d)	13011500	383
BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY (d)	13011900	385
SNAKE RIVER AT MOOSE, WY (d,c,s)	13013650	387

	Station Number	Page
<u>SNAKE RIVER</u> --Continued		
GROS VENTRE BASIN		
GROS VENTRE RIVER AT ZENITH, WY (d)	13015000	391
FISH CREEK BASIN		
LAKE CREEK BELOW GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY (d)	13016240	393
GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY (d)	13016305	395
GRANITE CREEK SUPPLEMENTAL ABOVE LAKE CREEK, NEAR MOOSE, WY (d)	13016310	397
GRANITE CREEK SUPPLEMENTAL BELOW LAKE CREEK, NEAR MOOSE, WY (d)	13016315	399
FISH CREEK AT WILSON, WY (d)	13016450	401
FLAT CREEK BASIN		
CACHE CREEK NEAR JACKSON, WY (d)	13018300	403
SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY (d)	13018750	405
SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (d)	13022500	407
GREYS RIVER BASIN		
GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (d)	13023000	409
SALT RIVER BASIN		
SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY (d,c,m,s)	13027500	411
HENRYS FORK BASIN		
FALLS RIVER:		
BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY (d)	13046680	414

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS

The following surface-water, water-quality, sediment, and biological stations have been operated in and adjacent to Wyoming. The listing includes both discontinued and currently (1999) active stations. Reservoir stations also are included. Records have been collected and published for the period of record, expressed in calendar years, shown for each station. The listing is limited to those stations that have been part of systematic data-collection monitoring networks. Miscellaneous sites are not included. [--, drainage area not determined or no record available]

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN								
MADISON RIVER BASIN								
Firehole River (head of Madison River) near West Yellowstone, Mont.....	06036905	282	1983-95.	--	1983-93.	1988-93.	--	
Gibbon River near West Yellowstone, Mont	06037000	118	1913-16;1983-95.	--	1983-93.	1988-93.	--	
Madison River near West Yellowstone, Mont	06037500	420	1913-73;1983-86;1988-	--	1983-86; 1989-96.	1989-96.	--	
GALLATIN RIVER BASIN								
Gallatin (West Gallatin) River near Gallatin Gateway (Bozeman), Mont.....	06043500	825	1889-94;1930-81;1984-	--	--	--	--	
YELLOWSTONE RIVER BASIN								
Yellowstone Lake at Bridge Bay (Lake Hotel), Yellowstone National Park	06186000	1,006	1921a-82a.	--	--	--	--	
Yellowstone River at Yellowstone Lake outlet, Yellowstone National Park	06186500	1,006	1922-86;1988-	--	--	--	--	
Tower Creek at Tower Falls, Yellowstone National Park	06187500	50.4	1922-43.	--	--	--	--	
Yellowstone River at Tower Junction, Yellowstone National Park, near	06187550	1,342	1983-86.	--	--	--	--	
Soda Butte Creek at Yellowstone National Park boundary, near Silver Gate, Mont.....	06187915	28.2	--	--	1999-	1999-	1999-	
Soda Butte Creek near Lamar Ranger Station, Yellowstone National Park.....	06187950	99.0	1988-	--	1988-89.	1988-89.	--	
Lamar River near Tower Falls Ranger Station, Yellowstone National Park.....	06188000	660	1922-69;1985-86;1988-	--	1985-86; 1988-92.	1988-92.	--	
Blacktail Deer Creek:								
East Fork Blacktail Deer Creek near Mammoth, Yellowstone National Park.....	06188500	10.3	1937-41.	--	--	--	--	
Blacktail Deer Creek near Mammoth, Yellowstone National Park	06189000	14.3	1937-45;1988-93.	--	1988-89.	1988-89.	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
YELLOWSTONE RIVER BASIN--continued							
Gardner River:							
Lava Creek:							
Lupine Creek near Mammoth, Yellowstone National Park.....	06190000	4.67	1937-41.	--	--	--	--
Gardner River above Mammoth Springs outflow near Mammoth, Yellowstone National Park.....	06190370	--	--	--	1988-93.	--	--
Mammoth Springs outflow at Mammoth, Yellowstone National Park.....	06190415	--	--	--	1988-94.	--	--
Gardner River at Mammoth (Hotel) (near Mammoth Hot Springs), Yellowstone National Park.....	06190500	200	1922-38.	--	--	--	--
Gardner River Sinkhole Diversion near Mammoth, Yellowstone National Park.....	06190525	--	--	--	1988-92.	--	--
Hot River:							
Clematic Creek at Mammoth, Yellowstone National Park.....	06190530	--	--	--	1990-92.	--	--
Hot River at Mammoth, Yellowstone National Park.	06190540	--	1988-95.	--	1988-94.	--	--
Gardner River near Mammoth, Yellowstone National Park.....	06191000	202	1938-72;1984-	--	1984-85; 1987-93.	1988-93.	--
LaDuke (Corwin) Hot Springs near Corwin Springs, Mont.....	06191400	--	--	--	1987-94.	--	--
Yellowstone River at Corwin Springs (Horr), Mont.....	06191500	2,623	1889-1893;1910-	--	1988-92, 1999-	1985-92, 1999-	1999-
Clarks Fork Yellowstone River at Montana-Wyoming State line, near Cooke City, Mont.....	06205450	--	--	--	1975-77; 1990-	1975-77.	--
Clarks Fork Yellowstone River (Clarks Fork) above Squaw Creek, near Painter.....	06205500	194	1945-51.	--	--	--	--
Crandall Creek:							
Lodgepole Creek at mouth, near Painter.....	06205950	8.51	1989.	--	--	--	--
Clarks Fork Yellowstone River (Clarks Fork) below Crandall Creek, near Painter.....	06206000	446	1929-32;1949-57.	--	--	--	--
Sunlight Creek near Painter.....	06206500	135	1929-32;1945-71.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Clarks Fork Yellowstone River above Paint Creek, near Clark.....	06206600	--	--	--	1975-77.	1975-77.	--	
Clarks Fork Yellowstone River (Clarks Fork) near Clark.....	06207000	912	1918-24.	--	--	--	--	
Clarks Fork Yellowstone River (Clarks Fork) near Belfry (at Chance), Mont.....	06207500	1,154	1921-	--	1965-88.	1965;1971; 1984.	--	
Big Sand Coulee above State ditch, near Badger Basin	06207507	98.3	1973-77.	--	1977.	1973-77.	--	
Big Sand Coulee at Wyoming-Montana State line.....	06207510	134	1973-81.	--	1976-81.	1973-81.	--	
Silver Tip Creek near Belfry, Mont.....	06207540	88.0	1967-75.	--	--	--	--	
Wind River (head of Bighorn River) near Dubois	06218500	232	1945-92.	--	1947-50; 1953; 1965-86.	1970;1980.	1973-82.	
Wagon Gulch near Dubois	06218700	4.89	--	1961-84.	--	--	--	
Warm Spring Creek near Dubois.....	06219000	85.8	1911-12a.	--	1965.	--	--	
Horse Creek at Dubois	06219500	120	1910-12.	--	--	--	--	
Wind River at Dubois.....	06220000	486	1910-12.	--	1948-49.	--	--	
East (North) Fork Wind River near Dubois	06220500	427	1950-57;1975-97.	--	1975-86; 1990.	1975-86.	--	
Wind River above Red Creek, near Dubois	06220800	1,073	1990-	--	1986-92.	--	--	
Red Creek near Dubois	06221000	--	1909a.	--	--	--	--	
Wind River tributary near Burris.....	06221200	4.71	--	1961-72.	--	--	--	
Dinwoody Creek above lakes, near Burris.....	06221400	88.2	1957-78;1988-	--	1988-92.	1970.	--	
Dinwoody Creek near Burris (Crowheart, Lenore)... ..	06221500	100	1909;1918-30;1950-58.	--	--	--	--	
Wind River near Burris	06222000	1,236	1946-53.	--	--	--	--	
Upper Wind River A Canal at Headworks, near Burris	06222100	--	1997-	--	--	--	--	
Dry Creek near Burris, (at Crowheart) (near Lenore)	06222500	53.7	1909a;1921-40;1988-	--	1990.	--	--	
Dry Creek Canal at headgate, near Burris.....	06222510	--	1989-	--	--	1990.	--	
Crow Creek near Tipperary	06222700	30.2	1962-93.	--	1974-93.	--	--	
Meadow Creek near Lenore (near J. K. Ranch Post Office)	06223000	41.7	1909a;1921-23.	--	--	--	--	
Willow Creek near Crowheart (at J. K. Ranch Post Office) (near Lenore)	06223500	55.4	1909;1921-23; 1925-40;1988-	--	1990.	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Wind River--continued								
Sand Draw near Crowheart	06223700	12.8	--	1961-77.	--	--	--	
Wind River above Bull Lake Creek, near Crowheart ...	06223750	--	--	--	1990-91.	1990-91.	--	
Wind River tributary No. 2 near Crowheart.....	06223800	3.16	--	1961-81.	--	--	--	
Bull Lake Creek above Bull Lake (Bull Lake Reservoir).....	06224000	187	1941-53;1966-	--	1974-	--	--	
Bull Lake (Bull Lake Reservoir) near Lenore.....	06224500	b210	1938-a	--	--	--	--	
Bull Lake Creek near Lenore	06225000	b213	1918-	--	1990.	--	--	
Wind River near Crowheart	06225500	1,891	1945-	--	1976;1978; 1987-92.	1970-82; 1990-92.	--	
Wyoming Canal near Lenore.....	06226000	--	1941-45;1949-82;1988-	--	1988.	1974-82; 1988.	--	
Dry Creek:								
Little Dry Creek near Crowheart.....	06226200	10.5	--	1961-81.	--	--	--	
Dry Creek near Crowheart	06226300	97.9	--	1959; 1961-81.	--	--	--	
Pilot Canal:								
Pilot wasteway near Morton	06226500	--	1949-53.	--	--	--	--	
Pilot Canal near Morton	06227000	--	1949-53.	--	1977.	--	--	
Wyoming Canal below Pilot diversion, near Morton.	06227500	--	1949-53.	--	--	1975-82.	--	
Johnstown Ditch at Headworks, near Kinnear	06227596	--	1991-	--	--	--	--	
Wind River near Kinnear	06227600	2,194	1974-79;1991-	--	1985-92.	1990-92.	--	
LeClair Canal near Riverton	06227700	--	--	--	--	1976-77.	--	
Lefthand Ditch at Headworks, near Riverton.....	06227810	--	1991-	--	--	--	--	
Wind (Big Wind) River at (near) Riverton (near Arapahoe Agency)	06228000	2,309	1906-8;1911-	--	1947-50; 1965-95.	1949-51; 1959-65; 1971;1977; 1985-95.	1973-78; 1986-95.	
South Fork Little Wind River above Washakie Reservoir, near Fort Washakie								
South Fork Little Wind River below Washakie Reservoir, near Fort Washakie	06228350	90.3	1976-	--	1976-92.	--	--	
South Fork Little Wind River below Washakie Reservoir, near Fort Washakie	06228450	93.5	1988-	--	1990.	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
YELLOWSTONE RIVER BASIN--continued							
Wind River--continued							
(South Fork) Little Wind River near Fort Washakie ..	06228500	117	1921-40.	--	--	--	--
Ray Canal at headworks, near Fort Washakie	06228510	--	1989-	--	--	--	--
North Fork Little Wind River near Fort Washakie ..	06228800	112	1988-	--	1990.	--	--
North Fork Little Wind River at Fort Washakie	06229000	128	1921-40.	--	--	--	--
Little Wind River at Fort Washakie	06229500	249	1908-9.	--	--	--	--
Sage Creek above Norkok Meadows Creek, near Fort Washakie	06229680	118	1990-95.	--	1990.	--	--
Norkok Meadows Creek near Fort Washakie	06229700	15.4	--	1965-81.	--	--	--
Sand Draw near Fort Washakie	06229800	99	--	1961-81.	--	--	--
Trout Creek near Fort Washakie	06229900	16.1	1990-	1961-68; 1970-84.	1990.	--	--
Trout Creek at Wind River	06230000	33.6	1909.	--	--	--	--
Mill Creek above Ray Lake outlet canal, near Fort Washakie	06230190	15.8	1990-96.	--	1990.	--	--
Ray Lake near outlet, near Fort Washakie	06230300	--	--	--	1960-70.	--	--
Little Wind River near Arapahoe	06230500	618	1950-53.	--	1992.	--	1992.
Little Wind River tributary near Hudson	06230800	2.98	--	1961-71.	--	--	--
Little Wind River above Arapahoe (Agency)	06231000	660	1906-9;1911-18; 1979-95.	--	1966-92.	--	1973-77; 1989-92.
Middle (Middle Fork) Popo Agie River (Popo Agie River) near Lander	06231500	86.5	1911-12;1918-24.	--	--	--	--
Middle Popo Agie River below The Sinks, near Lander	06231600	87.5	1959-68.	1969-74.	--	1965.	--
Baldwin Creek below Dickinson Creek, at Lander	06231930	--	--	--	1989-	1989-	--
Little Dickinson Creek at Lander (formerly Baldwin Creek at Lander)	06231950	--	--	--	1981.	--	1981.
North Popo Agie River near Milford	06232000	98.4	1945-63.	--	1990.	--	--
North (North Fork) Popo Agie River near Lander	06232500	134	1938-53.	--	--	--	--
Popo Agie River at Hudson Siding, near Lander ...	06232600	--	--	--	1983-	--	1983-89.
Little Popo Agie River near Atlantic City	06232800	5.99	1957-73.	--	--	--	--
Little Popo Agie River near Lander	06233000	125	1946-	--	--	--	--

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
YELLOWSTONE RIVER BASIN--continued							
Wind River--continued							
Little Wind River--continued							
Popo Agie River--continued							
Little Popo Agie River--continued							
Government Draw:							
Monument Draw at upper station, near Hudson.....	06233340	5.50	--	1965-72.	--	--	--
Monument Draw at lower station, near Hudson.....	06233360	8.38	--	1965-84.	--	--	--
Coal Mine Draw:							
Coal Mine Draw tributary near Hudson	06233440	63	--	1965-72.	--	--	--
Little Popo Agie River at Hudson	06233500	384	1907-9;1911-17; 1938-53.	--	--	--	--
Popo Agie River at Hudson.....	06233600	--	--	--	1966-69; 1984.	--	--
Popo Agie River near Arapahoe.....	06233900	796	1979-95.	--	1980-92.	--	1983; 1989.
Little Wind (Popo Agie) River below Arapahoe (Agency)							
Beaver Creek near Lander.....	06234000	1,464	1906-9;1911-18.	--	--	--	--
South Fork Hall Creek near Lander.....	06234500	113	1938-41.	--	--	--	--
South Fork Hall Creek near Lander.....	06234700	3.88	--	1960-72.	--	--	--
Big Sand Draw:							
Bobcat Draw near Sand Draw	06234800	62.89	--	1969; 1971-81.	--	--	--
Beaver Creek near Arapahoe.....	06235000	354	1950-53.	--	1951; 1967-81; 1985-92.	1989-92.	--
Little Wind River (Popo Agie River) near Riverton ..	06235500	1,904	1941-	--	1953-54; 1965-	1959-65; 1971; 1989-93.	1987-
Haymaker Creek near Riverton.....	06235700	9.52	--	1961-64; 1966-73.	--	--	--
Kirby Draw near Riverton.....	06236000	129	1951-53.	1961-84.	--	--	--
Wind River above Boysen Reservoir, near Shoshoni...	06236100	4,390	1990-	--	1973-93.	1991-	1974-89.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Wind River--continued								
Muskrat Creek:								
Lower Fraser diversion reservoir (on Fraser Draw)	06236500	27.4	1953-67c.	--	--	--	--	
Mahoney Reservoir (on Mahoney Draw).....	06237000	9.82	1952-57d.	--	--	--	--	
Conant Creek:								
Horseshoe Creek:								
Signor Reservoir (on Signor Draw).....	06237500	7.15	1952-60d.	--	--	--	--	
Rongis Reservoir (on Logan Draw)	06238000	37.0	1954-60d; 1961-70c.	--	--	--	--	
Rongis Reservoir Canal	06238500	--	1953-67c.	--	--	--	--	
Dry Cheyenne Creek:								
West Fork Dry Cheyenne Creek at upper station, near Riverton	06238760	.69	--	1965-84.	--	--	--	
West Fork Dry Cheyenne Creek tributary near Riverton	06238780	1.85	--	1965-72.	--	--	--	
West Fork Dry Cheyenne Creek near Riverton...	06238790	3.52	--	1965-70.	--	--	--	
Muskrat Creek near Shoshoni	06239000	733	1950-73.	--	--	1950; 1961; 1964; 1967-68; 1971-73.	--	
Maverick Springs Draw (head of Fivemile Creek):								
Coal Draw:								
Reservoir No. 9 (on Paintrock Draw)	06239500	.64	1953-60d.	--	--	--	--	
Reservoir No. 8	06240000	1.00	1953-60d.	--	--	--	--	
Reservoir No. 7	06240500	4.57	1952-56d.	--	--	--	--	
Reservoir No. 10	06241000	.13	1954-60d.	--	--	--	--	
Reservoir No. 6	06241500	5.07	1954-57d.	--	--	--	--	
Reservoir No. 5	06242000	5.14	1954-60d.	--	--	--	--	
Reservoir No. 4	06242500	5.77	1954-57d.	--	--	--	--	
Reservoir No. 3	06243000	5.84	1952-57d.	--	--	--	--	
Reservoir No. 1	06243500	5.91	1954-57d.	--	--	--	--	
Fivemile Creek Reservoir.....	06244000	72.8	1956-70c.	--	--	--	--	
Lower Teapot Reservoir (on Teapot Draw)	06244200	13.5	1954-65c.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Wind River--continued								
Fivemile Creek above Wyoming Canal, near Pavillion	06244500	118	1949-75;1988-	--	1949-51; 1969; 1974-75; 1987-92.	1949-51; 1960-61; 1964-68; 1970-75; 1989-92.	--	
Fivemile Creek near Pavillion.....	06245000	118	1948-49.	--	--	--	--	
Powerline wasteway near Pavillion.....	06245500	--	1949-50.	--	--	1950.	--	
Pavillion drain near Pavillion	06246000	--	1948-50.	--	1988.	1949-50; 1988.	--	
Ocean drain at Ocean Lake outlet, near Pavillion ..	06246500	--	1948-53;1978-83.	--	1950-51; 1978-83; 1986;1988.	1950-51.	--	
Ocean drain near Midvale	06246800	--	1979-82.	--	--	1979-82.	--	
Ocean drain near Pavillion	06247000	--	1948-53.	--	--	1949-50.	--	
Dudley wasteway near Pavillion	06247500	--	1949-50.	--	--	--	--	
Kellett drain near Pavillion.....	06248000	--	1948-50.	--	--	1950.	--	
Dewey drain near Pavillion	06248500	--	1948-50.	--	--	--	--	
Fivemile 76 drain near Riverton.....	06249000	--	1949-50.	--	--	--	--	
Sand Gulch drain and wasteway near Riverton.....	06249500	--	1949-50.	--	--	--	--	
Fivemile Creek near Riverton	06250000	b356	1949-65.	--	1950-51.	1949-51; 1959-61; 1963-65.	--	
Lost Wells Butte drain near Riverton	06250500	--	1949-50.	--	--	--	--	
Coleman drain near Shoshoni.....	06251000	--	1948-50.	--	--	1950.	--	
Sand Gulch near Shoshoni.....	06251500	18.6	1948-53.	--	1988.	1949-50; 1988.	--	
Eagle drain near Shoshoni	06252000	--	1948-50.	--	--	--	--	
Lateral P-34.9 wasteway near Shoshoni.....	06252500	--	1949-50.	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Wind River--continued								
Fivemile Creek near Shoshoni	06253000	b418	1941-42;1948-83;1988-	--	1948-51; 1953; 1965-86; 1988.	1949-51; 1959-61; 1963-68; 1972; 1974-75; 1978-85; 1988.	--	
Lateral P-36.8 wasteway near Shoshoni.....	06253500	--	1949-50.	--	--	--	--	
Poison Creek:								
Graham Draw:								
East Fork Reservoir	06254000	.81	1949-60d.	--	--	--	--	
West Fork Reservoir	06254500	.38	1947-60d.	--	--	--	--	
Graham Reservoir.....	06255000	3.12	1947-60d.	--	--	--	--	
Dead Man Gulch:								
Dead Man Gulch tributary near Lysite	06255160	.54	--	1965-68; 1970-72.	--	--	--	
Dead Man Gulch near Lysite.....	06255190	4.11	--	1965-73.	--	--	--	
Dead Man Gulch near Moneta	06255200	4.46	--	1958-69.	--	1966.	--	
Poison Creek tributary near Shoshoni	06255300	.39	--	1959-81.	--	--	--	
Poison Creek near Shoshoni.....	06255500	500	1949-53;1955-56.	1961-68.	1951.	1949-51; 1964.	--	
Badwater Creek at Lybyer Ranch, near Lost Cabin ...	06256000	131	1948-68.	--	--	--	--	
Badwater Creek at Lost Cabin	06256500	166	1945-48.	--	--	--	--	
Alkali Creek:								
E-K Creek:								
E-K Creek tributary near Arminto	06256550	.14	--	1960-68.	--	--	--	
Red Creek near Arminto.....	06256600	7.15	--	1963-81.	--	1965.	--	
Badwater Creek at Lysite	06256650	415	1965-73.	--	--	1966-68; 1970-73.	--	
Badwater Creek tributary near Lysite.....	06256670	5.86	--	1966-73.	--	--	--	
Bridger Creek:								
South Bridger Creek near Lysite	06256700	10.0	--	1960-81.	--	--	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Wind River--continued								
Badwater Creek--continued								
Bridger Creek near Lysite.....	06256800	182	1965-73.	--	--	1966-68; 1970-73.	--	
Dry Creek near Bonneville.....	06256900	52.6	1965-81.	--	1976-81.	1966-68; 1970-81.	--	
Badwater Creek at Bonneville.....	06257000	808	1947-73.	--	--	1949-51; 1960-61; 1963-68; 1970-73.	--	
Muddy Creek:								
Holland Creek:								
Warm Springs Creek near Pavillion	06257200	5.44	--	1961-69.	--	--	--	
Shotgun Creek:								
Shotgun Creek tributary near Pavillion.....	06257300	2.57	--	1961-81.	--	--	--	
Muddy Creek near Pavillion	06257500	267	1949-73.	--	1949-51; 1988-92.	1949-51; 1961; 1964-68; 1970-72.	--	
Muddy Creek near Shoshoni	06258000	332	1949-68;1972-83.	--	1953; 1982-84; 1986;1988.	1949-51; 1960-61; 1964-68; 1982-85; 1988.	--	
Cottonwood Creek drain near Shoshoni.....	06258010	--	--	--	--	1979-82.	--	
Birdseye Creek near Shoshoni	06258400	13.2	--	1959-72.	--	--	--	
Cottonwood (Dry Cottonwood) Creek near Bonneville	06258500	165	1949-53.	--	1949-50; 1976.	--	--	
Boysen Reservoir	06258900	7,700	1951-a	--	--	--	--	
Wind River below Boysen Reservoir.....	06259000	7,701	1951-	--	1953-54; 1956; 1960-92.	1979-86.	1973-87.	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River at (near) Thermopolis.....	06259500	8,020	1900-5;1910-53.	--	1949-51; 1953-54; 1969-70.	1949-53.	--	
South Fork Owl Creek near Anchor.....	06260000	85.5	1932;1939-43;1959-85; 1991-95.	--	1974-85.	1965; 1977-78.	1977-78.	
Middle Fork Owl Creek above Anchor Reservoir .	06260200	33.6	1959-65.	--	--	--	--	
Anchor Reservoir	06260300	131	1960-a	--	--	--	--	
South Fork Owl Creek below Anchor Reservoir	06260400	131	1959-	--	1974-86.	--	--	
South Fork Owl Creek above Curtis Ranch, near Thermopolis	06260500	144	1943-59.	--	--	--	--	
South Fork Owl Creek at Curtis Ranch, near Thermopolis	06261000	149	1931-32;1938-43.	--	--	--	--	
South Fork Owl Creek near Thermopolis (Owl Creek near Embar).....	06261500	180	1921-22;1929-32.	--	--	--	--	
North Fork Owl Creek near Anchor	06262000	54.8	1941-62.	--	--	--	--	
North Fork Owl Creek above Basin Ranch (below Cup Creek), near Anchor.....	06262300	e61	1962-75;1991-95.	--	--	--	--	
North Fork Owl Creek at Crann Ranch, near Thermopolis.....	06262500	94.2	1938-39.	--	--	--	--	
North Fork Owl Creek near Thermopolis	06263000	102	1930-32.	--	--	--	--	
Mud Creek near Thermopolis.....	06263500	101	1938-39.	--	--	--	--	
Owl Creek near Thermopolis	06264000	478	1910-17;1931-32; 1938-69.	--	1976.	1965.	1975.	
Owl Creek near Lucerne	06264500	509	1932-33;1938-53.	--	--	--	--	
Bighorn River at Lucerne.....	06264700	--	--	--	1966-	1990-92.	1978-	
Kirby Creek near Lucerne	06265000	199	1941-45.	--	--	--	--	
Sand Draw near Thermopolis.....	06265200	6.33	--	1960-81.	--	--	--	
Cottonwood Creek at High Island Ranch (at county bridge), near Hamilton Dome	06265337	81.4	1993-	--	1977-78.	1977-78.	1977-78.	
Cottonwood Creek at State Highway 120, near Hamilton Dome.....	06265410	--	--	--	1977-78.	1977-78.	1977-78.	
Grass Creek above Little Grass Creek, near Grass Creek	06265435	--	--	--	1977-78.	1977-78.	1977-78.	
Grass Creek near mouth, near Hamilton Dome	06265492	--	--	--	1977-78.	1977-78.	1977-78.	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River--continued								
Cottonwood Creek at Winchester.....	06265500	416	1941-49;1977-78.	--	1977-78.	1965-66; 1977-78.	1977-78.	
Tie Down Gulch near Worland.....	06265600	1.78	--	1961-84.	--	--	--	
Gooseberry Creek at Dickie	06265800	95	1957-78.	--	1977-78.	1977-78.	1977-78.	
Gooseberry Creek near Grass Creek	06266000	142	1945-57.	--	--	--	--	
Gillies Draw:								
Gillies Draw tributary near Grass Creek	06266320	1.30	--	1965-73.	--	--	--	
Gooseberry Creek at State Highway 431, near Grass Creek	06266450	--	1977-78.	--	1977-78.	1977-78.	1977-78.	
Murphy Draw near Grass Creek.....	06266460	2.32	--	1965-81.	--	--	--	
Gooseberry Creek near Dickie	06266500	289	1938-41.	--	1983.	--	--	
Gooseberry Creek at Neiber (Pulliam).....	06267000	361	1941-53.	--	--	1965-66.	--	
Bighorn River at Neiber.....	06267050	--	--	--	1965-69; 1976.	--	--	
Nowater Creek:								
East Fork Nowater Creek:								
North Prong East Fork Nowater Creek near Worland.....	06267260	3.77	--	1964-84.	--	--	--	
North Prong East Fork Nowater Creek tributary near Worland	06267270	2.11	--	1965-73.	--	--	--	
Denver Jake Reservoir (on unnamed tributary of East Fork)	06267300	--	1958-67f.	--	--	--	--	
East Fork Nowater Creek near Colter	06267400	149	1971-91.	--	1977-81.	1977-81.	--	
Fifteenmile Creek:								
Red Spires Reservoir (on Rock Waterhole Creek)	06267500	5.24	1954-59d;1960-67c.	--	--	--	--	
Middle Fork Fifteenmile Creek near Worland	06267900	--	--	--	1978-82.	1978-82.	1978-82.	
Big Gin Reservoir (on unnamed tributary).....	06268000	.94	1954-59d;1960-67c.	--	--	--	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River--continued								
Fifteenmile Creek near Worland	06268500	518	1951-72;1978-86.	1973-78.	1965; 1978-81; 1983-86; 1989-92.	1949-51; 1959-61; 1963-68; 1970-72; 1978-86; 1989-92.	1978-81.	
Bighorn River at Worland	06268600	10,810	1965-69.	--	1964-86.	1965-68.		
Slick Creek near Worland.....	06268640	--	--	--	1981-86.	--	--	
Bighorn River near Manderson	06269000	11,020	1949-53;1955-56.	--	1950-51; 1966-71.	1949-51.	--	
Bighorn River at Manderson	06269500	11,048	1941-49.	--	1976.	--	--	
Nowood River:								
Spring Creek near Ten Sleep	06269700	57.9	--	1961-74.	--	1967.	--	
Nowood River (Creek) tributary near Ten Sleep....	06269750	.42	--	1960-81.	--	--	--	
Nowood River (Creek) near Ten Sleep	06270000	803	1938-43;1950-55; 1972-92.	--	1967-86.	1971-82.	--	
Tensleep Creek:								
Leigh Creek near Ten Sleep.....	06270200	2.54	--	1961-74.	--	--	--	
Canyon Creek:								
Canyon Creek tributary near Ten Sleep	06270300	.52	--	1961-74.	--	--	--	
Canyon Creek below Cooks Canyon, near Ten Sleep	06270450	72	1969-71.	--	1969-71.	1969-71.	--	
Canyon Creek near Ten Sleep	06270500	86.1	1939-44.	--	--	--	--	
Tensleep Creek near Ten Sleep.....	06271000	247	1910-12;1914-24; 1943-72.	--	1967.	--	--	
Brokenback Creek near Ten Sleep	06271200	55.0	--	1961-70.	--	--	--	
Paintrock Creek below Lake Solitude	06271500	16.0	1946-53.	--	--	--	--	
Paintrock Creek at Longview ranger station, near Hyattville	06272000	79.9	1911-12a.	--	--	--	--	
Paintrock Creek near Hyattville	06272500	164	1920-27;1941-53.	--	1951.	--	--	
Medicine Lodge Creek near Hyattville	06273000	86.8	1942-73.	--	1951;1968.	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River--continued								
Nowood River--continued								
Paint Rock Creek near mouth (near Bonanza), below Hyattville	06273500	376	1910-13;1915-22.	--	1951-53; 1967-84.	--	--	
Nowood River (Creek) at Bonanza	06274000	1,730	1910-28.	--	--	--	--	
Sand Creek:								
East Fork Sand Creek near Worland.....	06274100	19.1	--	1960-71.	--	--	--	
Nowood River tributary No. 2 near Basin.....	06274190	1.51	--	1965-84.	--	--	--	
Nowood River tributary No. 2 near Manderson.....	06274200	1.59	--	1961-71.	1978.	1967.	--	
Nowood River at Manderson	06274220	e2,000	--	--	1965-86.	1950; 1965-67.	--	
Elk Creek near Basin.....	06274250	96.9	--	1959-81.	--	1967.	--	
Bighorn River at Basin.....	06274300	13,223	1983-	--	1983-	1989-92.	1983-	
Greybull River near Pitchfork	06274500	282	1946-49;1951-71.	--	--	--	--	
Wood River near Kirwin	06274800	7.66	1970-75.	--	--	1975.	--	
Wood River at Kirwin	06274810	11.4	1970-78.	--	--	1975.	--	
Wood River at Sunshine	06275000	e194	1945-92.	--	--	1975.	--	
Wood River near Meeteetse.....	06275500	211	1910-12;1914-17; 1929-49.	--	--	--	--	
Greybull River near Meeteetse.....	06276000	659	1910-12;1915-16;1920.	--	--	--	--	
Greybull River at Meeteetse.....	06276500	681	1897;1903;1920-	--	1996-	1975.	--	
Bench Canal near Burlington	06277000	--	1930-38.	--	--	--	--	
Greybull River near Basin.....	06277500	1,115	1930-73.	--	1951-53; 1965-92.	1950; 1965-66; 1972; 1989-92.	--	
Dry Creek:								
Twentyfour Mile Creek near Emblem.....	06277700	12.8	--	1960-81.	--	--	--	
Dry Creek tributary near Emblem	06277750	.65	--	1960-68; 1970-81.	--	--	--	
Dry Creek near Greybull	06277950	432	1979-81.	--	1979-81.	1979-80.	1979-81.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
MISSOURI RIVER BASIN--continued							
YELLOWSTONE RIVER BASIN--continued							
Bighorn River--continued							
Dry Creek at Greybull	06278000	433	1951-53;1955-60.	--	1950-51; 1957-60; 1965; 1979-80.	1949-51; 1959-60; 1979-80.	1979-80.
Shell Creek above Shell (Creek) Reservoir.....	06278300	23.1	1956-	--	--	--	--
Granite Creek near Shell Creek ranger station, near Shell (formerly Granite Creek near Shell ranger station, near Shell).....	06278400	11.1	--	1961-74.	--	--	--
Shell Creek near Shell	06278500	145	1940-	--	1951;1976; 1982.	1967.	--
Shell Creek at Shell	06279000	256	1911-23.	--	--	--	1973-74.
Red Gulch near Shell.....	06279020	47.8	--	1967; 1970-81.	--	--	--
Shell Creek at Porter Gulch, near Greybull.....	06279050	--	--	--	1983-89.	--	1989-90.
Shell Creek near Greybull	06279090	e560	--	--	1951; 1965-86.	1965-67.	1973-78.
Bighorn River at Kane	06279500	15,765	1928-	--	1947-53; 1955-57; 1960-97, 1999-	1949-51; 1959-61; 1964; 1969-92, 1999-	1972-81; 1984-89, 1999-
Willow Creek near Kane	06279700	14.0	--	1961-75.	--	--	--
North Fork Shoshone River:							
Jones Creek at mouth, near Pahaska.....	06279790	24.8	1989-93.	--	1989-93.	1989-93.	--
Crow Creek at mouth, near Pahaska.....	06279795	19.1	1989-93.	--	1989-93.	1989-93.	--
North Fork Shoshone River at Pahaska.....	06279800	108	1989-90.	--	--	--	--
Middle Creek at East Entrance, Yellowstone National Park	06279850	32.6	1981-84.	--	1968-70.	--	--
North Fork Shoshone River at Wapiti	06279940	669	1990-	--	1989-90.	--	1989-90.
Trout Creek near Wapiti	06279950	49.4	--	1961-74.	--	--	--
North Fork Shoshone River near Wapiti	06280000	775	1921-26;1979-89.	--	1981-86.	--	--
South Fork Shoshone River near Valley.....	06280300	297	1956-	--	1984.	1958-64.	--
South Fork Shoshone River (Shoshone River) near Ishawooa.....	06280500	541	1915-24.	--	--	--	--

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River--continued								
Shoshone River--continued								
South Fork Shoshone River (Shoshone River) above Buffalo Bill Reservoir (at Marquette).	06281000	585	1903;1905-8;1921-26; 1973-	--	1982-92.	--	--	
Diamond Creek near mouth, near Cody	06281400	7.34	1980-92.	--	--	--	--	
Buffalo Bill (Shoshone) Reservoir near Cody	06281500	1,498	1909-	--	--	--	--	
Shoshone River above Demaris Springs, near Cody..	06281700	--	--	--	1987-	1989.	1989.	
Shoshone River below Buffalo Bill (Shoshone) Reservoir	06282000	1,538	1921-	--	1947-49; 1964-86.	--	1973-78.	
Shoshone River at (near) Cody	06282500	1,603	1902-9.	--	--	--	--	
Cottonwood Creek:								
Cottonwood Creek tributary near Cody.....	06282700	.76	--	1961-73.	--	--	--	
Shoshone River above Dry Creek, near Cody.....	06282900	--	--	--	1974-89.	--	1974-89.	
Shoshone River at Corbett Dam.....	06283000	1,793	1908-25.	--	--	--	--	
Garland Canal (Corbett Tunnel) at Corbett Dam ...	06283500	--	1909-20;1922-26.	--	--	--	--	
Shoshone River above Willwood Dam, near Willwood.....	06283800	1,830	1979-82.	--	--	1979-82.	--	
Shoshone River at Willwood Dam.....	06284000	1,833	1925-26.	--	--	--	--	
Willwood Canal near Ralston.....	06284005	--	--	--	--	1981-83.	--	
Shoshone River below Willwood Dam, near Ralston	06284010	--	--	--	--	1972; 1981-83.	--	
Shoshone River at Willwood.....	06284200	1,980	1974-79.	--	1976.	--	--	
Roan Wash near Garland.....	06284380	--	--	--	1985-92.	--	--	
Shoshone River near Garland.....	06284400	2,036	1958-79.	--	1958-59; 1967-71; 1974-92.	--	--	
Bitter Creek below sewage lagoon, near Powell	06284450	--	--	--	1981-92.	--	1981-89.	
Bitter Creek near Garland.....	06284500	80.5	1951-53;1958-61; 1969-87.	--	1949-53; 1958-60; 1969-	1950-51.	1973-78; 1984-89; 1993-	
Whistle Creek near Garland	06284800	101	1958-60;1968-87.	--	1959-60; 1969-87.	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Bighorn River--continued								
Shoshone River at Byron.....	06285000	2,345	1929-66.	--	1964-66; 1976.	1950.	--	
Shoshone River near Lovell	06285100	e2,350	1966-	--	1966-97.	1971-82; 1990-92.	1978-81; 1987-89.	
Sage Creek at Sidon Canal, near Deaver.....	06285400	341	1958-60;1968-87.	--	1958-60; 1969-87.	--	--	
Sage Creek near Lovell	06285500	381	1951-60.	--	1965;1967; 1969-71.	--	--	
Shoshone River at Lovell	06286000	2,832	1897-98;1899a.	--	--	--	--	
Shoshone River at Kane	06286200	2,989	1957-58.	--	1958-68; 1976-89, 1999-	1959-61; 1964, 1999-	1982-89, 1999-	
Bighorn River near Lovell	06286250	e18,900	1964-66.	--	--	--	--	
Crooked Creek:								
Big Coulee near Lovell.....	06286258	30.1	1970-78.	--	--	1970-74; 1976-77.	--	
Crooked Creek near Lovell	06286260	e119	1964-67.	--	--	--	--	
Porcupine Creek near Lovell.....	06286270	e135	1964-67.	--	--	--	--	
Bighorn Lake (Yellowtail Reservoir) near St. Xavier, Mont.....	06286400	19,626	1965-	--	--	--	--	
Bighorn River near St. Xavier, Mont	06287000	19,667	1934-	--	1966-81.	--	--	
Little Bighorn River below Dayton Gulch, near Burgess Junction	06288600	15.9	1982-87.	--	--	--	--	
Dry Fork below Lick Creek, near Burgess Junction.....	06288700	54.1	1982-87;1992-95.	--	--	--	--	
Little Bighorn River near Parkman	06288960	137	1969-72.	--	--	--	--	
Elkhorn Creek above Fuller Ranch Ditch, near Parkman.....	06288975	4.58	1982-87.	--	--	--	--	
West Fork Little Bighorn River near Parkman.....	06288990	38.6	1969-72;1982-87.	--	--	--	--	
Little Bighorn (Little Horn) River at State line, near Wyola, Mont	06289000	193	1939-	--	1992-	1992-	1992-	
Powers Upper Ditch (Spring Creek):								
Red Canyon Creek near Parkman.....	06289100	3.20	1983-90.	--	--	--	--	
Little Bighorn (Little Horn) River near Wyola, Mont	06289500	251	1911-24.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
MISSOURI RIVER BASIN--continued							
YELLOWSTONE RIVER BASIN--continued							
Bighorn River--continued							
Little Bighorn River--continued							
Pass Creek:							
West Pass Creek near Parkman.....	06289600	15.4	1982-	--	--	--	--
East Pass Creek near Parkman.....	06289800	11.6	1974-76.	--	--	--	--
East Pass Creek near Dayton.....	06289820	21.7	1982-	--	--	--	--
Twin Creek near Parkman.....	06289870	27.0	1982-90.	--	--	--	--
Pass Creek near Wyola, Mont.....	06290000	111	1935-56.	--	--	--	--
Little Bighorn (Little Horn) River below Pass Creek, near Wyola, Mont.....	06290500	428	1939-75.	--	--	--	--
Lodge Grass Creek at State line, near Wyola, Mont.....	06291200	16.7	1982-89.	--	--	--	--
North Tongue River:							
Hideout Creek near Dayton.....	06296400	2.89	--	1961-67.	--	--	--
North (Fork) Tongue River near Dayton.....	06296500	32.4	1945-57.	--	--	--	--
Big Willow Creek near Dayton.....	06296700	7.08	--	1961-73.	--	--	--
South (Fork) Tongue River near Dayton.....	06297000	85	1945-72.	--	--	--	--
Tongue River at Tongue Canyon Campground, near Dayton.....	06297480	202	1974-79.	--	--	--	--
Highland ditch near Dayton.....	06297500	--	1919-23;1940-	--	--	--	--
Tongue River near Dayton.....	06298000	204	1918-29;1940-	--	1966-81; 1987-88, 1999-	1999-	1973-77; 1980, 1999-
Little Tongue River at Steamboat Point, near Dayton	06298480	11.4	1974-76.	--	--	--	--
Little Tongue River above South Fork Little Tongue River, near Dayton.....	06298490	14.1	1975-76.	--	--	--	--
Little Tongue River near Dayton.....	06298500	25.1	1951-53;1955-74.	--	1971.	--	--
Tongue River at Dayton.....	06299000	259	1903.	--	--	--	--
Wolf Creek below Alden Creek, near Wolf.....	06299480	32.8	1974-76.	--	--	--	--
Wolf Creek above Red Canyon Creek, at Wolf.....	06299490	33.8	1974-76.	--	--	--	--
Wolf Creek at Wolf.....	06299500	37.8	1945-	--	1985.	--	--
Slater Creek near Monarch.....	06299900	18.0	--	1967-81.	--	1967.	--
Tongue River at Monarch.....	06299980	--	--	--	1974-80; 1982-83.	1976-77.	1976-80; 1982-83.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Tongue River at Carneyville	06300000	495	1911-13;1915-17.	--	--	--	--	
East Fork Big Goose (East Goose) Creek near Big Horn	06300500	20.1	1953-	--	--	--	--	
Cross Creek above Big Horn Reservoir, near Big Horn.....	06300900	9.29	1960-71.	--	--	--	--	
Cross Creek near Big Horn.....	06301000	9.63	1953-60.	--	--	--	--	
West Fork Big Goose Creek:								
Coney Creek above Twin Lakes, near Big Horn.	06301480	3.41	1990-	--	--	--	--	
Lost Lake Creek near Big Horn.....	06301485	2.14	1990-93.	--	--	--	--	
Snail Creek near Big Horn.....	06301490	1.36	1990-93.	--	--	--	--	
Coney Creek below Twin Lakes, near Big Horn..	06301495	8.07	1990-94;1995-	--	--	--	--	
West Fork Big Goose (West Goose) Creek near Big Horn	06301500	24.4	1953-	--	--	--	--	
Big Goose (Goose) Creek near Sheridan	06302000	120	1929-	--	1987-89.	1989-92.	1989-99.	
Big Goose Creek above Park Creek, near Sheridan	06302200	--	1999-	--	--	--	--	
Goose Creek at Sheridan	06302500	182	1909-13;1915-16.	--	--	--	--	
Little Goose Creek:								
Willow Creek near Big Horn.....	06303000	2.99	1953-55.	--	--	--	--	
Little Goose Creek in canyon, near Big Horn	06303500	51.6	1941-	--	--	--	--	
Little Goose Creek above Davis Creek, near Big Horn	06303700	--	1999-	--	--	--	--	
Little Goose Creek near Big Horn.....	06304000	71	1919-21.	--	--	--	--	
Little Goose Creek at Sheridan.....	06304500	159	1896-97;1911-12.	--	1979-	1990-92.	1979-	
Goose (Big Goose) Creek below Little Goose Creek, at Sheridan	06305000	341	1895;1896-97.	--	--	--	--	
Goose Creek below Sheridan	06305500	392	1941-84.	--	1959-64; 1967-	1971-82; 1989-92.	1973-	
Goose Creek near Acme.....	06305700	411	1984-	--	1983-89.	--	1983-87.	
Tongue River near Acme.....	06306000	894	1938-57.	--	--	--	--	
Squirrel Creek near Decker, Mont.....	06306100	33.6	1975-85.	--	1975-85.	--	--	
Prairie Dog Creek near Acme	06306250	358	1970-79.	--	1976-92.	1976-77.	1976-77.	
Tongue River at State line, near Decker, Mont	06306300	1,477	1960-	--	1965-	1976-77; 1979-83.	1973-89.	
Deer Creek near Decker, Mont.....	06306800	38.3	--	--	1975-77.	1975-76.	--	
Middle Fork Powder River near Barnum.....	06309200	45.2	1961-	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
MISSOURI RIVER BASIN--continued							
YELLOWSTONE RIVER BASIN--continued							
Middle Fork Powder River--continued							
Buffalo Creek above North Fork Buffalo Creek, near Arminto	06309260	8.80	1974-79.	--	--	--	--
North Fork Buffalo Creek near Arminto	06309270	8.10	1974-79.	--	--	--	--
Buffalo Creek below North Fork Buffalo Creek, near Arminto	06309280	18.6	1974-79.	--	--	--	--
Beaver Creek below Bayer Creek, near Barnum	06309450	10.9	1974-89.	--	--	--	--
Beaver Creek above White Panther Ditch, near Barnum.....	06309460	24.2	1974-89.	--	--	--	--
Middle Fork Powder River above Kaycee	06309500	e450	1949-70;1984-92.	--	1949; 1952-54; 1984-92.	1966-68; 1970.	1984-92.
Red Fork near Barnum	06310000	e142	1929-32;1950-53.	--	1988-89.	--	--
Middle Fork Powder River at Kaycee.....	06310500	647	1911-12;1929-32.	--	1977.	--	--
North Fork Powder River near Hazelton.....	06311000	24.5	1946-	--	--	--	--
North Fork Powder River below Bull Creek, near Hazelton	06311060	32.3	1974-92.	--	1970-71.	--	--
North Fork Powder River below Pass Creek, near Mayoworth	06311400	100	1973-	--	--	--	--
North Fork Powder River near Mayoworth	06311500	106	1940-73.	--	1971.	--	--
North Fork Powder River near Kaycee	06312000	244	1911;1929-32.	--	1988-89.	--	--
Powder River near Kaycee.....	06312500	e980	1933-35;1938-71.	--	1946; 1949-50; 1952-54; 1968-91.	--	1973-89.
South Fork Powder River near Powder River	06312700	262	--	1961-84.	--	--	--
Cottonwood Creek:							
North Fork Cottonwood Creek:							
Sanchez Creek above reservoir, near Arminto.	06312795	5.53	--	1970-81.	--	--	--
Sanchez Creek near Arminto	06312800	5.95	--	1961-76.	--	--	--
Dead Horse Creek:							
Dead Horse Creek tributary near Midwest.....	06312910	1.53	--	1965-72.	--	--	--
Dead Horse Creek tributary No. 2 near Midwest	06312920	1.34	--	1965-72.	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Powder River--continued								
South Fork Powder River near Kaycee	06313000	e1,150	1911;1938-40; 1950-69; 1978-80; 1983-84.	--	1949; 1951-53; 1968-81; 1983-89; 1992.	1950-51; 1983-84; 1986-87.	1975-80.	
Salt Creek:								
Bobcat Creek near Edgerton.....	06313020	8.29	--	1965-81.	--	--	--	
Coopers Draw near Edgerton	06313030	1.11	--	1965-73.	--	--	--	
Seven L Creek near Edgerton.....	06313040	7.10	--	1965-73.	--	--	--	
Teapot Creek:								
East Teapot Creek near Edgerton	06313050	5.44	--	1965-72; 1974-79.	--	--	--	
Coal Draw near Midwest.....	06313100	11.4	--	1961-84.	--	--	--	
Dugout Creek:								
Dugout Creek tributary near Midwest.....	06313180	b.8	1975-83.	1965-74.	--	1982-83.	--	
Hay Draw near Midwest.....	06313200	1.60	--	1958-70.	--	--	--	
Salt Creek near Sussex	06313400	769	1976-81;1982-93.	--	1967-	1975-81; 1983-87.	1976-77; 1980.	
North Spring Draw near Sussex	06313450	5.21	--	1980-81.	--	--	--	
Powder River at Sussex.....	06313500	e3,090	1938-40;1950-57; 1977-84; 1985-98.	--	1966-68; 1976-	1967; 1976-87.	1976-81.	
Bugher Draw near Buffalo	06313600	4.57	--	1961-71.	--	--	--	
Van Houten Draw near Buffalo	06313630	10.8	--	1971-81.	--	--	--	
Powder River above Dead Horse Creek, near Buffalo (formerly 441252106090801).....	06313665	--	--	--	1978; 1988-89.	--	--	
Dead Horse Creek near Buffalo	06313700	151	1971-90.	1958-71.	1976; 1980-81; 1989.	1976.	1976; 1978.	
North Fork Crazy Woman Creek:								
Caribou Creek near Buffalo.....	06313900	5.08	--	1961-74.	--	--	--	
North Fork Crazy Woman Creek below Pole Creek, near Buffalo.....	06313950	43.4	1973-84.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
YELLOWSTONE RIVER BASIN--continued								
Powder River--continued								
North Fork Crazy Woman Creek near Buffalo.....	06314000	44.9	1942-49;1973-84.	--	--	--	--	
North Fork Crazy Woman Creek below Spring Draw, near Buffalo.....	06314500	51.7	1949-79.	--	--	--	--	
North Fork Crazy Woman Creek near Greub.....	06315000	174	1950-68.	--	--	1966-68.	1978.	
Middle Fork Crazy Woman Creek:								
Poison Creek below Tetley Spring, near Mayoworth.....	06315480	19.0	1974-76.	--	--	--	--	
Poison Creek near Mayoworth	06315490	24.7	1974-76.	--	--	--	--	
Middle Fork Crazy Woman Creek near Greub.....	06315500	82.7	1942-72.	--	--	--	1983.	
Crazy Woman Creek near Buffalo	06316000	464	1929-32.	--	--	--	1976-81	
Crazy Woman Creek at upper station, near Arvada ...	06316400	e945	1963-70;1977-81.	--	1949-50; 1966-	1950; 1966-67; 1976-81; 1990-	1976-81.	
Headgate Draw at upper station, near Buffalo	06316480	3.1	--	1965-73.	--	--	--	
Headgate Draw at lower station, near Buffalo	06316490	e2.6	--	1965-73.	--	--	--	
Crazy Woman Creek near Arvada.....	06316500	956	1939-43;1950-64.	--	--	--	--	
Coal Draw near Buffalo (formerly Powder River tributary near Buffalo)	06316700	1.64	--	1965-84.	--	--	--	
Powder River at Arvada.....	06317000	e6,050	1919-	--	1946; 1948-53; 1955;1967-	1968; 1970-79; 1983-84; 1986-87.	1972-82.	
Spotted Horse Creek:								
Spotted Horse Creek tributary near Spotted Horse	06317050	3.98	--	1961-81.	--	--	--	
Powder River near Arvada.....	06317100	e6,580	1915-19.	--	--	--	--	
Clear Creek:								
Sourdough Creek near Buffalo.....	06317300	5.80	1985-90.	--	--	--	--	
Little Sourdough Creek near Buffalo	06317340	4.53	1985-88.	--	--	--	--	
North Fork Clear Creek near Buffalo.....	06317500	29.0	1949-68.	--	--	--	--	
Clear Creek at Camp Comfort, near Buffalo.....	06318000	e110	1911-12a.	--	--	--	--	
Clear Creek near (at) Buffalo	06318500	120	1894;1896-99;1917-27; 1938-92.	--	1977-78.	1977-78.	1976-78.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
YELLOWSTONE RIVER BASIN--continued							
Powder River--continued							
Clear Creek at Buffalo.....	06319000	e130	1902a;1903-4;1911-12.	--	--	--	--
Bull Creek:							
Sand Creek near Buffalo.....	06319100	10.8	--	1969-84.	--	--	--
South Rock Creek (head of Rock Creek) at forest boundary, near Buffalo	06319470	40.3	1974-76.	--	--	--	--
South Rock Creek above Red Canyon, near Buffalo	06319480	40.5	1974-76.	--	--	--	--
South Fork Rock Creek near Buffalo	06319500	43.8	1941-43;1950-53.	--	--	--	--
Rock Creek near Buffalo	06320000	60.0	1941-	--	1978.	--	--
Clear Creek below Rock Creek, near Buffalo	06320200	322	1971-81.	--	1975-91.	1975-81.	1976-89.
Clear Creek near Kumer Draw, near Buffalo	06320210	--	--	--	1993-	--	1993-
Clear Creek at Ucross.....	06320400	409	1976-81.	--	1975-81; 1983-92.	1975-81.	1976; 1978.
South Piney Creek (head of Piney Creek) at Willow Park	06320500	33.6	1945-57;1959-	--	--	--	--
South Piney Creek near Story.....	06321000	69.4	1951-80.	--	--	--	--
Mead-Coffeen ditch above fish hatchery, near Story.....	06321020	--	1974-79.	--	--	--	--
Mead-Coffeen ditch below fish hatchery, near Story.....	06321040	--	1974-79.	--	--	--	--
South Piney Creek below Mead-Coffeen ditch, near Story.....	06321100	69.5	1974-79.	--	--	--	--
North Piney Creek near Story.....	06321500	36.8	1951-82.	--	1976-77.	1976-78.	1976.
Spring Creek near Story	06321800	--	1974-79.	--	--	--	--
Cruetz ditch near Story.....	06322000	--	1903a.	--	--	--	--
Prairie Dog ditch near Story.....	06322500	--	1903a.	--	--	--	--
Piney Creek at Kearney	06323000	118	1902-6;1910-17; 1919-23;1940-	--	1975-78.	1976-78.	1975-76; 1978.
Piney Creek at Ucross	06323500	267	1917-23;1950-82.	--	1975-92.	1976-78.	1975-80.
Clear Creek near Arvada	06324000	e1,110	1915-19;1928-29; 1939-82.	--	1949-54; 1966-92.	1966-67; 1975-83.	1975-80.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
YELLOWSTONE RIVER BASIN--continued								
Powder River at Moorhead, Mont.....	06324500	8,088	1929-72;1974-	--	1950-53; 1955-57; 1968-72; 1974-92.	1974-97.	--	
Little Powder River:								
Little Powder River tributary near Gillette.....	06324800	.81	--	1960-81.	--	--	--	
Rawhide Creek:								
Box Draw:								
Box Draw tributary near Gillette.....	06324810	.5	--	1965-72.	--	--	--	
Rawhide Creek tributary near Gillette	06324820	2.6	--	1965-72.	--	--	--	
Little Powder River below Corral Creek, near Weston.....	06324890	204	1975;1977-83.	--	1975-83.	1975-83.	1976-82.	
Cedar Draw near Gillette (formerly Little Powder River tributary No. 2 near Gillette)	06324900	3.45	--	1959-81.	--	--	--	
Cow Creek:								
Cow Creek tributary near Weston.....	06324910	.72	--	1971-84.	--	--	--	
Little Powder River near Weston	06324925	540	1977-81.	--	1969; 1975-81.	1975-81.	1975-81.	
Little Powder River above Dry Creek, near Weston..	06324970	1,235	1972-	--	1975-82; 1985-	1975-82, 1999-	1975-82, 1999-	
Little Powder River near Wyoming-Montana State line.....	06324985	--	--	--	1969-70.	--	--	
LITTLE MISSOURI RIVER BASIN								
Little Missouri River near New Haven.....	06332800	--	--	--	1976-77.	--	1976-77.	
CHEYENNE RIVER BASIN								
Antelope Creek (head of Cheyenne River):								
Wind Creek:								
Reservoir No. 13.....	06361500	.60	1951-54g.	--	--	--	--	
Sand Creek:								
Reservoir No. 35A.....	06362000	.61	1952-54g.	--	--	--	--	
Reservoir No. 13A.....	06363000	.28	1952-54g.	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
CHEYENNE RIVER BASIN--continued							
Antelope Creek--continued							
Porcupine Creek:							
Reservoir No. 10B.....	06363500	0.20	1952-54.	--	--	--	--
Porcupine Creek near Turnercrest.....	06363700	31.5	--	1959-76.	--	--	--
Reservoir No. 10A.....	06364000	.43	1952-54g.	--	--	--	--
Reservoir No. 11.....	06364500	2.46	1951-54g.	--	--	--	--
Antelope Creek near Teckla.....	06364700	959	1977-81.	--	1977-81.	1977-81.	1977-81.
Dry Fork:							
Reservoir No. 40.....	06365000	.71	1951-54g.	--	--	--	--
Bear Creek:							
Reservoir No. 36.....	06365200	.48	1951-54g.	--	--	--	--
Dry Fork Cheyenne River near Bill	06365300	128	1976-81;1985-87.	--	1977-81; 1987.	1977-81; 1987.	1979.
Reservoir No. 33A.....	06365500	.44	1952-54g.	--	--	--	--
Cheyenne River near Dull Center.....	06365900	1,527	1976-81;1985-87.	--	1975-81; 1987.	1975-81; 1987.	1978-81.
Reservoir No. 14	06366000	10.9	1950-51g;1953-54g.	--	--	--	--
Reservoir No. 31	06366500	.35	1951-52g.	--	--	--	--
Reservoir No. 30	06367000	1.31	1951-52g.	--	--	--	--
Reservoir No. 32	06367500	.59	1951-52g.	--	--	--	--
Reservoir No. 26	06368000	1.51	1951-52g.	--	--	--	--
Reservoir No. 22	06368500	.02	1951g.	--	--	--	--
Reservoir No. 28	06369000	.68	1951-52g.	--	--	--	--
Reservoir No. 27	06369500	1.09	1951-52g.	--	--	--	--
Reservoir No. 24	06370000	.52	1951-52g.	--	--	--	--
Reservoir No. 23	06370500	2.67	1951-52g.	--	--	--	--
Reservoir No. 21	06371000	.31	1951-52g.	--	--	--	--
Reservoir No. 18	06371500	.30	1951-52g.	--	--	--	--
Reservoir No. 17	06372000	.06	1951-54g.	--	--	--	--
Reservoir No. 25	06372500	.56	1951-54g.	--	--	--	--
Reservoir No. 20	06373000	.11	1951-52g.	--	--	--	--
Reservoir No. 19	06373500	.92	1951-54g.	--	--	--	--
Reservoir No. 16	06374000	.18	1951-52g.	--	--	--	--
Reservoir No. 15	06374500	9.58	1951-54g.	--	--	--	--

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
CHEYENNE RIVER BASIN--continued							
Cheyenne River--continued							
Black Thunder Creek:							
Little Thunder Creek:							
Reservoir No. 10.....	06375000	0.66	1951-54g.	--	--	--	--
Reservoir No. 12.....	06375500	.28	1951-52g.	--	--	--	--
Little Thunder Creek near Hampshire.....	06375600	234	1977-81;1987-97.	--	1977-81; 1988; 1990-97.	1977-81; 1988; 1990-97.	1977-81.
Reservoir No. 7A.....	06376000	.23	1952-54g.	--	--	--	--
Black Thunder Creek near Hampshire.....	06376300	e535	1972-90.	--	1980-81.	1980-81; 1986-87; 1989.	1980-81.
Lodgepole Creek:							
Reservoir No. 9.....	06376500	.94	1951-54g.	--	--	--	--
Reservoir No. 7.....	06377000	2.68	1951-54g.	--	--	--	--
Reservoir No. 8.....	06377500	.10	1951-54g.	--	--	--	--
Reservoir No. 7B.....	06378000	1.40	1952-54g.	--	--	--	--
Lodgepole Creek near Hampshire.....	06378300	354	1977-81.	--	1978-81.	1978-81.	1978-81.
Boggy Creek:							
Reservoir No. 35.....	06378500	7.52	1950-54g.	--	--	--	--
Lance Creek:							
Lance Creek tributary near Lance Creek.....	06378640	1.20	--	1965-73.	--	--	--
Lightning Creek:							
Reservoir No. 55.....	06379000	.05	1953-54g.	--	--	--	--
Box Creek:							
Reservoir No. 41.....	06379500	1.27	1951-54g.	--	--	--	--
Box Creek near Bill.....	06379600	112	1956-58.	1959; 1961-81.	--	--	--
Walker Creek:							
Reservoir No. 56.....	06380000	.70	1953-54g.	--	--	--	--
Reservoir No. 57.....	06380500	.21	1953-54g.	--	--	--	--
Dry Creek:							
Reservoir No. 36A.....	06381000	.41	1953-54g.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
CHEYENNE RIVER BASIN--continued								
Lance Creek--continued								
Lightning Creek--continued								
Twentymile Creek--continued								
Reservoir No. 58	06381500	0.07	1953-54g.	--	--	--	--	
Reservoir No. 42 (on Twentymile Draw).....	06382000	.33	1951-54g.	--	--	--	--	
Pritchard Draw near Lance Creek	06382200	5.10	--	1964-81.	--	--	--	
Cow Creek:								
Reservoir No. 34.....	06382500	.34	1951-54g.	--	--	--	--	
Reservoir No. 37.....	06383000	2.47	1951-54g.	--	--	--	--	
Reservoir No. 38.....	06383500	1.70	1951-54g.	--	--	--	--	
Dogie Creek:								
Reservoir No. 33.....	06384000	.73	1951-54g.	--	--	--	--	
Crazy Woman Creek:								
Reservoir No. 43.....	06384500	1.26	1951-54g.	--	--	--	--	
Reservoir No. 43A	06385000	.18	1953-54g.	--	--	--	--	
Old Woman Creek:								
Sage Creek:								
Cottonwood Creek at Hat Creek	06385400	14.5	--	1972-79.	--	--	--	
Reservoir No. 44	06385500	.92	1951-54g.	--	--	--	--	
Lance Creek (at Spencer) near Riverview	06386000	e2,070	1948-54;1956-83.	--	1975-83.	1971; 1975-83.	1978.	
Reservoir No. 39.....	06386200	.52	1951-54g.	--	--	--	--	
Cheyenne River at Riverview	06386400	e5,160	--	--	1980-92.	1981-82.	1980-82.	
(South Fork) Cheyenne River near Spencer	06386500	e5,270	1948-74.	--	1969-70; 1975-80.	1971-74.	1975-80.	
Beaver Creek:								
Turner Creek near Osage.....	06387500	47.8	--	1959-84.	--	--	--	
Reservoir No. 3.....	06388000	.25	1951-54g.	--	--	--	--	
Stockade Beaver Creek:								
Reservoir No. 1	06388200	.08	1951-54g.	--	--	--	--	
Skull Creek:								
Oil Creek:								
Reservoir No. 4	06388500	.11	1951-54g.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
CHEYENNE RIVER BASIN--continued								
Cheyenne River--continued								
Beaver Creek--continued								
Blacktail Creek:								
Blacktail Creek tributary near Newcastle.....	06388800	0.25	--	1960-81.	--	--	--	
Reservoir No. 6	06389000	3.80	1951-54g.	--	--	--	--	
Reservoir No. 6A	06389500	.44	1952-54g.	--	--	--	--	
Reservoir No. 6C.....	06390000	.16	1954g.	--	--	--	--	
Reservoir No. 6B.....	06390500	1.52	1953-54g.	--	--	--	--	
Reservoir No. 5A	06391500	1.39	1953-54g.	--	--	--	--	
Reservoir No. 2	06392000	6.06	1951-53g.	--	--	--	--	
Reservoir No. 5	06392500	.54	1951-54g.	--	--	--	--	
Beaver Creek at Mallo Camp, near Four Corners.....	06392900	10.3	1974-82;1991-	--	--	--	--	
Stockade Beaver Creek near Newcastle.....	06392950	107	1974-82;1991-	--	--	--	--	
Redbird Canyon:								
Gillette Canyon:								
Reservoir No. 45, S. Dak.....	06393000	1.02	1951-54.	--	--	--	--	
Beaver Creek near Newcastle	06394000	e1,320	1943;1945-97.	--	1946-47; 1949-53; 1967-86.	1977-78.	1978.	
Beaver Creek near Burdock (Edgemont), S. Dak	06394500	e1,540	1904-6;1928-32.	--	--	--	--	
Reservoir No. 39A.....	06394700	.12	1953-54g.	--	--	--	--	
Reservoir No. 46, S. Dak.....	06394800	.30	1951-54g.	--	--	--	--	
Cheyenne River at Edgemont, S. Dak	06395000	7,143	1903-6;1928-33;1946-	--	--	--	--	
Cottonwood Creek:								
Reservoir No. 47B	06395500	.05	1952-54g.	--	--	--	--	
Reservoir No. 47A, S. Dak.....	06396000	.05	1952-54g.	--	--	--	--	
Belle Fourche River:								
Belle Fourche River tributary near Turnercrest.....	06425700	.35	--	1961-71.	--	--	--	
Belle Fourche River below Rattlesnake Creek, near Piney	06425720	495	1975-83.	--	1975-83.	1976-79; 1981-83.	1976-77; 1980-82.	
Coal Creek near Piney.....	06425750	71.8	1980-83.	--	1981-83.	1981-83.	1981.	
Belle Fourche River above Dry Creek, near Piney	06425780	594	1975-83.	--	1975-83.	1976-83.	1976-77; 1980-82.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
CHEYENNE RIVER BASIN--continued								
Belle Fourche River--continued								
Caballo Creek near Gillette	06425800	122	--	1959-69.	--	--	--	
Caballo Creek at mouth, near Piney	06425900	260	1977-83.	--	1977-80; 1982-83.	1977-80; 1982-83.	1978-80.	
Raven Creek near Moorcroft.....	06425950	76	1977-83.	--	1978-80.	1977-79.	1978-79.	
Belle Fourche River near Moorcroft.....	06426000	e1,380	1923-33.	--	--	--	--	
Donkey Creek:								
Stonepile Creek:								
Burlington Lake Ditch at Gillette	06426095	--	1988-90.	--	--	--	--	
Stonepile Creek at Gillette.....	06426100	11.2	1988-92.	--	1988-92.	1988-92.	1988-92.	
Donkey Creek tributary above reservoir, near Gillette	06426195	.2	--	1970-84.	--	--	--	
Donkey Creek tributary near Gillette	06426200	.28	--	1960-76.	--	--	--	
Donkey Creek near Moorcroft	06426400	246	1977-81.	--	1977-89.	1977-81.	1977-81; 1983-89.	
Belle Fourche River below Moorcroft.....	06426500	1,690	1943-70;1975-83; 1985-87;1990-	--	1975-93; 1995-	1976-83; 1986-87; 1990-93.	1975-93; 1995-	
Keyhole Reservoir near Moorcroft	06427000	1,953	1952-	--	--	--	--	
Belle Fourche River below Keyhole Reservoir	06427500	1,954	1951-95.	--	1969; 1984-90.	--	--	
Inyan Kara Creek near Upton.....	06427700	96.5	--	1959-84.	1968;1974.	--	--	
Belle Fourche River at Devils Tower.....	06427850	--	--	--	1967-92.	--	1973-77.	
Barlow Creek near Devils Tower	06427880	21.9	--	1971-76.	--	--	--	
Blacktail Creek near Hulett	06427900	42.3	--	1962-69.	--	--	--	
Belle Fourche River at Hulett	06428000	e2,800	1929-32;1938-51.	--	--	--	--	
Belle Fourche River below Hulett.....	06428050	--	--	--	1981-	--	1981-89; 1993-	
Belle Fourche River tributary No. 2 near Hulett.....	06428100	10.2	--	1962-84.	--	--	--	
Belle Fourche River near Alva.....	06428200	2,948	1988-98.	--	--	--	--	
Belle Fourche River at Wyoming-South Dakota State line	06428500	e3,280	1946-	--	1960; 1965-88.	1960.	1970-81.	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
CHEYENNE RIVER BASIN--continued								
Belle Fourche River--continued								
Redwater Creek:								
Rocky Ford Creek:								
Ogden Creek near Sundance.....	06429300	8.42	--	1962-81.	--	--	--	
Sundance Creek:								
Sundance Creek tributary above forest boundary, at Sundance.....	06429375	.76	--	1969-72.	--	--	--	
Sundance Creek tributary at Sundance.....	06429380	1.40	--	1965-68.	--	--	--	
Sundance Creek tributary near Sundance.....	06429400	1.80	--	1962-71.	--	--	--	
Cold Springs Creek (head of Sand Creek) at								
Buckhorn	06429500	19.0	1974-82;1991-	--	--	--	--	
Sand Creek above Ranch A, near Beulah.....	06429898	--	--	--	1987-91.	--	--	
Sand Creek at Ranch A, near Beulah	06429900	260	1974-76.	--	1987-91.	--	--	
Sand Creek near Ranch A, near Beulah	06429905	267	1976-83;1991-	--	1981-83.	--	1981-83.	
Murray ditch above headgate, at Wyoming-South								
Dakota State line.....	06429997	--	1987-	--	--	--	--	
Murray ditch at Wyoming-South Dakota State line	06430000	--	1954-87.	--	--	--	--	
Redwater Creek at Wyoming-South Dakota State								
line.....	06430500	471	1929-31;1936-37;1954-	--	1969-70.	1971-83.	--	
NIOBRARA RIVER BASIN								
Niobrara River at Wyoming-Nebraska State line	06454000	e450	1955-94.	--	--	--	--	
PLATTE RIVER BASIN								
North Platte River near Northgate (Pinkhampton), Colo .								
Douglas Creek above Keystone	06620000	1,431	1904;1915-	--	1965-86.	1971-74.	1973-82.	
Douglas Creek near Keystone	06620400	22.1	1955-65.	--	--	--	--	
Douglas Creek near Keystone	06620500	25.6	1912;1914-16.	--	--	--	--	
Douglas Creek near Foxpark.....	06621000	120	1946-72.	--	--	--	--	
Mullen Creek:								
North Fork Mullen (Mullen) Creek near French.....	06621500	--	1911a.	--	--	--	--	
Big Creek at Big Creek ranger station (near								
Downington, Big Creek).....	06622000	106	1911a;1912-24.	--	--	--	--	
French Creek near French	06622500	59.6	1909-24.	--	--	--	--	
North Brush Creek near Saratoga	06622700	37.4	1960-	--	--	--	--	
South Brush Creek near Saratoga.....	06622900	22.8	1960-74;1976-77;1979-	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Brush Creek at upper station, near Saratoga (near Saratoga)	06623000	77.0	1941-47.	--	--	--	--	
Brush Creek at lower station, near Saratoga (near Saratoga)	06623500	107	1909-15.	--	--	--	--	
Encampment River above East Fork, near Encampment	06623750	--	--	--	1991-92.	1991-92	1991-92.	
East Fork Encampment River at mouth, near Encampment	06623790	--	--	--	1991-92.	1991-92.	1991-92.	
Encampment River above Hog Park Creek, near Encampment	06623800	72.7	1964-	--	1964-96.	1970-96.	1973-96.	
Encampment River near Encampment	06623900	105	1956-64.	--	--	--	--	
Encampment River above Encampment	06624000	207	1940-44.	--	--	--	--	
Encampment River (Grand Encampment Creek) at Encampment (Perym's ranch)	06624500	211	1900;1909-24;1928-32.	--	--	--	--	
Encampment River at mouth, near Encampment.....	06625000	265	1940-	--	1965-89.	--	1973-78; 1982-83; 1987-89.	
Cow Creek near Saratoga.....	06625500	58.9	1911-12.	--	--	--	--	
North Platte River at Highway 130, near Saratoga (formerly 412117106433201).....	06625650	--	--	--	1977; 1984-91.	--	--	
Spring Creek:								
North Spring Creek near Saratoga	06626000	24.5	1913-15.	--	--	--	--	
Spring Creek near Saratoga.....	06626500	114	1911-12.	--	--	--	--	
North Platte River at Saratoga	06627000	2,840	1903-6;1909-70.	--	1967.	--	--	
Jack Creek at Jack Creek Park, near Saratoga	06627300	12.2	1966-68.	--	--	--	--	
Jack Creek at Matheson Ranch, near Saratoga	06627500	41.2	1913-24.	--	--	--	--	
Jack Creek below Little Jack (Willow) Creek, near Saratoga.....	06627600	98.2	1956-58;1966-68.	--	--	--	--	
Jack Creek above Coyote Draw, near Saratoga.....	06627800	109	1989-	--	--	--	--	
Jack Creek at Blydenburgh's ranch, near Saratoga	06628000	113	1912-14.	--	--	--	--	
Jack Creek near Saratoga	06628500	138	1911-12.	--	--	--	--	
North Platte River near Saratoga	06628550	--	--	--	1971-74.	--	--	

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DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
PLATTE RIVER BASIN--continued							
North Platte River--continued							
Sage Creek below Adams Reservoir, near Rawlins.....	06628700	24.3	1966-68.	--	--	--	--
Sage Creek near Rawlins	06628750	52.0	1966-68.	--	--	--	--
Sage Creek near Saratoga.....	06628800	263	1973-81.	--	1972-81.	1972-81.	--
Pass Creek near Elk Mountain	06628900	91.5	1957-	--	1983.	--	--
Pass Creek near Saratoga	06629000	106	1929-32.	--	--	--	--
Rattlesnake Creek near Walcott	06629100	13.9	--	1962-74.	1983.	--	--
Coal Bank Draw:							
Coal Bank Draw tributary near Walcott	06629150	3.65	--	1962-81.	--	--	--
Coal Bank Draw tributary No. 2 near Walcott	06629200	2.41	--	1962-81.	--	--	--
Pass Creek tributary near Walcott	06629300	.66	--	1963-67.	--	--	--
Pass Creek near Walcott	06629500	230	1911.	--	--	--	--
St. Mary Creek:							
St. Mary Creek tributary No. 2 near Hanna	06629600	3.90	--	1963-67.	--	--	--
Kenny Creek near Hanna	06629650	.46	--	1963-67.	--	--	--
St. Mary Creek tributary near Sinclair	06629700	.46	--	1959-71.	--	--	--
Sugar Creek:							
Coal Creek near Rawlins.....	06629800	7.32	--	1959-81.	--	--	--
Great Divide basin:							
Delaney Draw near Red Desert.....	06629850	32.8	--	1961-75.	--	--	--
North Platte River above Seminole Reservoir, near Sinclair (Parco)	06630000	64,175	1939-	--	1960-	1974; 1986-94.	1973-
Big Ditch:							
Big Ditch tributary near Hanna	06630200	7.42	--	1959-81.	--	--	--
Big Ditch near Coyote Springs	06630300	110	1975-81.	--	1976; 1978-81.	1976; 1978-81.	--
North Ditch near Coyote Springs	06630330	22.6	1976-81.	--	1976; 1978-81.	1976;1980.	--
Medicine Bow River at Bow Ranger Station, near Elk Mountain.....							
East Fork Medicine Bow River near Elk Mountain	06630440	28.7	1972-75.	--	--	--	--
Medicine Bow River near Elk Mountain	06630480	17.8	1972-75.	--	--	--	--
Medicine Bow River near Elk Mountain	06630500	65.6	1946-47.	--	--	--	--
Mill Creek near Elk Mountain	06630600	25.8	--	1963-65.	--	--	--
Bear Creek near Elk Mountain	06630800	8.93	--	1962-74.	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Medicine Bow River near Medicine Bow.....	06631000	190	1911-17;1919-24.	--	--	--	--	
Wagonhound Creek near Elk Mountain	06631100	25.6	--	1962-74.	--	--	--	
Third Sand Creek:								
Third Sand Creek tributary near Medicine Bow	06631140	.78	--	1965-73.	--	--	--	
Third Sand Creek near Medicine Bow	06631150	10.8	--	1965-81.	--	--	--	
Foote Creek near Arlington.....	06631200	5.49	--	1962-69.	--	--	--	
Foote Creek tributary No. 2 near Arlington	06631230	1.43	--	1962-65.	--	--	--	
Foote Creek tributary near Arlington	06631260	2.10	--	1962-70.	--	--	--	
Medicine Bow River above Rock Creek, near								
Medicine Bow.....	06631500	b436	1951-63.	--	--	--	--	
Rock Creek:								
Deep Creek near Arlington.....	06632000	3.13	1914-18.	--	--	--	--	
Carlson Creek ditch near Arlington.....	06632050	--	1992-95.	--	--	--	--	
Carlson Creek ditch above Wagonhound Creek, near Arlington.....	06632055	--	1994-95.	--	--	--	--	
Rock Creek above King Canyon Canal, near								
Arlington.....	06632400	62.9	1965-	--	1967.	--	--	
Rock Creek at (near) Arlington.....	06632500	64.5	1910-18;1939-65.	--	--	--	--	
Threemile Creek near Arlington.....	06632600	6.31	--	1962-74.	--	--	--	
Onemile Creek near Arlington	06632700	3.59	--	1962-74.	--	--	--	
Rock Creek near Rock River.....	06633000	187	1911-12;1928-33.	--	--	--	--	
Rock Creek below Rock River.....	06633500	218	1940-42;1951-68.	--	1965-68.	--	--	
Medicine Bow River at Medicine Bow.....	06634000	1,030	1901.	--	--	--	--	
Little Medicine Bow River at Heward Ranch.....	06634030	--	--	--	1972-73.	--	--	
Little Medicine Bow River near Shirley Basin	06634100	--	--	--	1972-73.	--	--	
Sheep Creek near Marshall.....	06634200	61.0	--	1961-81.	--	--	--	
Sheep Creek near Medicine Bow	06634300	174	--	1961-81.	--	--	--	
Muddy Creek near Shirley.....	06634500	76.6	1915-16.	--	--	--	--	
Little Medicine Bow River near Medicine Bow	06634600	963	1973-84.	--	1965-84.	1971-82.	--	
Little Medicine Bow River at Boles Spring, near								
Medicine Bow	06634620	969	1973-	--	1985-89.	--	--	
Medicine Bow River tributary near Hanna	06634910	3.01	--	1965-84.	--	--	--	

Footnote at end of the table.

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Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Medicine Bow River--continued								
Willow Springs Draw:								
Willow Springs Draw tributary near Hanna	06634950	1.98	--	1965-73.	--	--	--	
Hanna Draw near Hanna	06634990	21.6	1975-81.	--	1975-81.	1975-81.	--	
Medicine Bow River above Seminoe Reservoir, near Hanna	06635000	b2,338	1939-	--	1965-93.	1971-82; 1987-89.	--	
Seminoe Reservoir near Leo.....	06635500	b7,230	1939-	--	1972-78h.	--	1975-78h.	
North Platte River above Pathfinder Reservoir	06636000	b7,241	1913-39;1950-59.	--	1969-82; 1987-89.	1987-89.		
Sage Creek above Pathfinder Reservoir	06636500	190	1915-25.	--	--	--	--	
Deweese Creek near Alcova	06637000	16.4	1918;1923-24.	--	--	--	--	
Sand Creek near Alcova.....	06637500	51.0	1915-24.	--	--	--	--	
Sweetwater River near South Pass City	06637550	177	1958-73.	1974-81.	1975-78.	1975-78.	--	
Willow Creek near Atlantic City	06637600	3.08	1957-58.	--	--	--	--	
Willow Creek near South Pass City	06637700	9.21	1957-58.	--	--	--	--	
Sweetwater River above Rock Creek, near Atlantic City.....	06637740	--	--	--	--	1981.	--	
Rock Creek above Rock Creek Reservoir.....	06637750	e9.2	1962-95.	--	1978.	1975.	--	
Rock Creek near South Pass City.....	06637800	9.87	1957-60.	--	--	--	--	
Rock Creek near Atlantic City	06637850	14.6	1957.	--	--	--	--	
Slate Creek near Atlantic City	06637900	5.92	1957-73.	--	--	--	--	
Rock Creek at Atlantic City	06637910	21.3	1957-76.	--	1957-59; 1966-67; 1969-71; 1976.	1964-66; 1968; 1971-72; 1976.	--	
Rock Creek at Oregon Trail Crossing, near Atlantic City.....	06637950	--	--	--	--	1981.	--	
Sweetwater River near Atlantic City.....	06638000	438	1946-51.	--	--	--	--	
Sweetwater River near Sweetwater Station	06638090	849	1973-92.	--	--	--	--	
Sweetwater River at Sweetwater Station, near Lander .	06638100	889	--	1965-73.	--	--	--	
Crooks Creek:								
West Fork Crooks Creek near Jeffrey City.....	06638300	11.6	--	1961-81.	1976-78.	1976-78.	--	

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Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Sweetwater River--continued								
Muddy Creek:								
Coal Creek near Muddy Gap.....	06638350	6.08	--	1961-81.	--	--	--	
Cherry Creek near Lamont.....	06638400	29.4	--	1960-70.	--	--	--	
Sweetwater River at Devils Gate, near Splitrock (near Splitrock)	06638500	2,290	1902-3.	--	--	--	--	
Sweetwater River near Alcova.....	06639000	2,327	1913-24;1938-	--	1964-90.	1975-82. 1973-82.		
Horse Creek at Highway 220, near Alcova.....	06639480	--	--	--	1982-90.	--	--	
Horse Creek near Alcova	06639500	117	1915-20;1923-24.	--	--	--	--	
Canyon Creek near Alcova	06640000	97.1	1915-24.	--	--	--	--	
Pathfinder Reservoir near Alcova.....	06640500	b10,711	1909-	--	1975-77h.	--.	1975-77h.	
North Platte River below Pathfinder Reservoir (at Pathfinder).....	06641000	b14,671	1905-60.	--	--	--	--	
Bear Springs Creek near Alcova.....	06641400	9.33	--	1960-84.	--	--	--	
Alcova Reservoir at Alcova.....	06641500	b10,766	1938-	--	1975-76h.	--	1975-76h.	
North Platte River at Alcova.....	06642000	b10,812	1904-5;1934-98.	--	1965-88; 1992-95.	1976; 1980-86; 1988.	1973-87.	
Bates Creek near Freeland	06642500	118	1940-41;1945-51.	--	1981-86.	--	--	
Stinking Creek near Alcova	06642650	91.8	1983-84.	--	1983-84.	1983-84.	--	
Lawn Creek near Alcova.....	06642700	11.5	--	1961-84.	--	--	--	
Stinking Creek tributary near Alcova.....	06642730	1.34	--	1961-71.	--	--	--	
Stinking Creek near Alcova	06642760	117	--	1961-81.	--	--	--	
Bates Creek near Alcova (Casper)	06643000	393	1916-24;1935-61.	--	1965; 1968-86; 1988; 1993.	1988.	--	
Coal Creek near Goose Egg	06643300	5.39	--	1960-84.	--	--	--	
North Platte River near Goose Egg (Casper).....	06643500	b11,423	1917-19;1924;1947; 1950-60;1983-86; 1988-95.	--	1957-60. 1985-87; 1989.	1985-87.	1987.	
North Platte River near Goose Egg	06643510	--	--	--	1977-79; 1982-89; 1992-95.	1983;1988.	1977-79; 1982-87.	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Poison Spider Creek near Goose Egg	06644000	301	1950-56.	--	1965; 1967-70; 1979;1986; 1988; 1992-95.	1988.	--	
North Platte River at Mills.....	06644085	--	--	--	1970-89.	1988.	1974-77; 1982-87.	
Casper Creek:								
Middle Fork Casper Creek near Bucknam.....	06644120	--	--	--	1967-75; 1988; 1992-94.	--	--	
South Fork Casper Creek:								
Clarks Gulch near Natrona	06644200	2.64	--	1961-72.	--	--	--	
Casper Creek at Casper	06644500	668	1946-56.	--	1965; 1967-88; 1992-95.	1988.	1974; 1982-87.	
North Platte River at Casper	06644550	--	--	--	1971-94.	1971-82.	1982-87.	
Reefs Draw:								
Reefs Draw tributary near Casper	06644700	.47	--	1959-71.	--	--	--	
Sand Spring Creek:								
McKenzie Draw:								
McKenzie Draw tributary near Casper	06644840	2.02	--	1965-81.	--	--	--	
North Platte River below (at) Casper.....	06645000	b12,574	1929-59.	--	1949-53; 1957-59; 1967-	1971;1988.	1970-89.	
Smith Creek above Otter Creek, near Casper	06645150	9.91	1974-79;1987-96.	--	--	--	--	
Smith Creek at Otter Creek, near Casper	06645160	10.9	1974-79.	--	--	--	--	
Otter Creek at mouth, near Casper	06645164	6.50	1987-96.	--	--	--	--	
Smith Creek below Otter Creek, near Casper	06645166	18.5	1987-96.	--	--	--	--	
Beaver Creek above Pole Creek, near Casper.....	06645174	4.67	1987-96.	--	--	--	--	
Pole Creek near Casper	06645178	2.70	1987-96.	--	--	--	--	
North Platte River at Parkerton.....	06645500	b17,135	1919-24.	--	--	--	--	
Deer Creek in Canyon, near Glenrock	06646000	139	1946-51;1985-	--	1985-91.	1985-91.	1985-91.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>MISSOURI RIVER BASIN--continued</u>							
PLATTE RIVER BASIN--continued							
North Platte River--continued							
Deer Creek--continued							
Little Deer Creek above East Cart Creek, near Glenrock.....	06646280	3.89	1974-76.	--	--	--	--
Little Deer Creek below East Cart Creek, near Glenrock.....	06646300	7.48	1974-76.	--	--	--	--
Deer Creek at Glenrock.....	06646500	212	1916-24;1928-33; 1935-61.	--	--	--	--
Deer Creek below Millar wasteway, at Glenrock	06646600	213	1961-92.	--	1965; 1967-86.	--	--
North Platte River below Deer Creek, near Glenrock	06646610	--	--	--	1979.	--	--
Dry Creek:							
East Fork Dry Creek:							
East Fork Dry Creek tributary near Glenrock	06646700	2.60	--	1961-81.	--	--	--
Sand Creek near Glenrock	06646780	79.9	1977-81.	--	1978-80.	1978-80.	1978-80.
North Platte River near Glenrock	06646800	b13,538	1959-92.	--	1960-86.	1976.	--
Running Dutchman Canal near Careyhurst.....	06647000	--	1935-50.	--	--	--	--
North Platte River near Careyhurst.....	06647020	--	--	--	1969-76.	--	--
Box Elder Creek at Boxelder	06647500	63.0	1946-51;1961-67;1971-	--	--	--	--
Box Elder Creek near Boxelder	06647800	136	1981-84.	--	--	--	--
Box Elder Creek at Converse County Park, near Careyhurst.....	06647810	138	1981-84.	--	--	--	--
Little Box Elder Creek near Careyhurst.....	06647890	7.18	1974-88.	--	--	--	--
Little Box Elder Creek at Little Box Elder Cave, near Careyhurst.....	06647900	8.47	1974-88.	--	--	--	--
Little Box Elder Spring near Careyhurst.....	06647910	--	1980-86.	--	1983.	--	--
Cottonwood Creek near Careyhurst.....	06647920	2.33	1981-84.	--	--	--	--
Box Elder Creek below Interstate 25, near Careyhurst.	06647990	--	--	--	1981-86.	--	--
Box Elder Creek near Careyhurst	06648000	202	1911;1915-24;1928-33; 1935-69.	--	1965.	--	--
Douglas (Morton) Canal near Orpha.....	06648500	--	1935-51.	--	--	--	--
Sage Creek:							
Frank Draw:							
Frank Draw tributary near Orpha	06648720	.79	--	1965-73.	--	--	--
Sage Creek tributary near Orpha.....	06648780	1.38	--	1965-84.	--	--	--

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
La Prele Creek near Douglas.....	06649000	135	1919-92.	--	--	--	--	
La Prele Creek below La Prele Reservoir.....	06649200	152	1961-68.	--	1965.	--	--	
La Prele Creek near Orpha (Fetterman)	06649500	177	1916;1918;1923-24; 1928-33;1935-70.	--	1981-86.	--	--	
North Platte River at Orpha	06649520	--	--	--	1974-75.	--	--	
North Platte River tributary near Douglas	06649900	8.53	--	1961-81.	--	--	--	
North Platte River near (at) Douglas	06650000	b18,338	1891-94;1919-23; 1929-39;1946-59.	--	--	--	--	
Wagonhound Creek near La Bonte	06650500	112	1916-24;1929-32; 1937-69.	--	1965;1979; 1981-86.	--	--	
La Bonte Creek:								
West Fork La Bonte Creek near La Bonte	06651000	20.6	1946-51.	--	1979.	--	--	
La Bonte Creek near La Bonte.....	06651500	287	1916-24;1928-33; 1935-69.	--	1965; 1981-86.	--	--	
Sand Creek near Orin	06651800	27.8	--	1955; 1961-84.	--	--	--	
North Platte River at Orin (Orin Junction) (McKinley) ...	06652000	b15,025	1895-99;1917-18;1924; 1958-	--	1966-89.	1971-82.	1973-89.	
Shawnee Creek:								
Shawnee Creek tributary near Orin	06652200	.33	--	1961-76.	--	--	--	
Lost Creek:								
Watkins (Watson) Draw near Lost Springs	06652400	6.95	--	1960-84.	--	--	--	
Glendo Reservoir near Glendo	06652700	b15,545	1958-	--	1975-76h.	--	1975-76h.	
North Platte River below Glendo Reservoir.....	06652800	b15,548	1957-	--	1966-88.	--	1973-82.	
Horseshoe Creek near Esterbrook	06653000	45.5	1946-51.	--	--	--	--	
Horseshoe Creek near Binford	06653100	e110	1961-64.	--	--	--	--	
Horseshoe Creek near Cassa	06653300	195	1961-68;1988-96.	--	1965.	--	--	
Horseshoe Creek near Glendo.....	06653500	211	1916-18;1921-24; 1928-33;1935-70; 1988-96.	--	--	--	--	
North Platte River near Cassa.....	06654000	b19,796	1946-57.	--	1953.	--	--	
Cottonwood Creek near Fletcher Park	06654500	51.1	1946-51.	--	--	--	--	
Cottonwood Creek below Dagley Creek, near Binford	06654510	54.0	1974-76.	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Cottonwood Creek below Tunnel Outlet, near Binford	06654520	57.2	1974-76.	--	--	--	--	
Cottonwood Creek near Binford	06654550	61	1973-74.	--	--	--	--	
Cottonwood Creek at (near) Wendover.....	06655000	196	1916-24;1929-33; 1935-42;1946-55; 1973-74.	--	--	--	--	
Deadmans Gulch near Guernsey	06655360	.34	--	1965-72.	--	--	--	
Fish Canyon near Guernsey	06655380	1.06	--	1965-76.	--	--	--	
Black Canyon near Guernsey	06655400	.22	--	1965-70.	--	--	--	
Guernsey Reservoir near Guernsey	06655500	b16,224	1928-	--	1972-73.	--	--	
Hartville Canyon:								
Sparks Canyon near Hartville	06655750	.74	--	1965-72.	--	--	--	
North Platte River (North Platte River and Interstate Canal) below Guernsey Reservoir (near, at Guernsey) (at, above Whalen)	06656000	b16,237	1900-98.	--	1950-52; 1955-58; 1965-86.	1979.	1980-81.	
North Platte River near Guernsey.....	06656500	--	--	--	1981-83.	--	1981-83.	
North Platte River (at recorder station) below Whalen (below Whalen) diversion dam.....	06657000	b16,237	1909-	--	1970-76.	--	1974.	
Laramie River near (at) Glendevoy, Colo	06657500	101	1904-5;1910-82.	--	--	--	--	
Laramie River near Jelm	06658500	294	1904-5;1911-71.	--	1965;1968.	--	--	
Laramie River at Woods Landing (Woods).....	06659000	392	1890-92;1895a; 1896-1911.	--	--	--	--	
Laramie River and Pioneer Canal near Woods	06659500	434	1912-24;1926-27;1931-	--	--	--	--	
Sand Creek at Colorado-Wyoming State line	06659580	29.2	1968-	--	--	--	--	
Sand Creek near Tie Siding.....	06659600	39.9	1957-68.	--	--	--	--	
Laramie River at Laramie	06660000	b1,071	1933-72.	--	1968-70.	--	--	
Laramie River above Howell	06660070	--	--	--	1980-89.	--	1980-89.	
Laramie River at Howell	06660100	--	--	--	1974-80.	1974.	1974-80.	
Laramie River at Two Rivers	06660500	b1,224	1908-27;1932-72.	--	1966-92.	--	--	
Little Laramie River near Filmore (Hatton).....	06661000	157	1902-3;1911-26;1933-	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>MISSOURI RIVER BASIN--continued</u>								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Laramie River--continued								
Little Laramie River at Two Rivers (at Haley's ranch, near Laramie)	06661500	b376	1903;1910-27;1933-72.	--	1965-87; 1990-92.	--	--	
Fourmile Creek near Centennial	06661530	7.34	--	1963-68.	--	--	--	
Onemile Creek near Centennial.....	06661550	6.12	--	1963-65.	--	--	--	
Fourmile Creek tributary near Centennial	06661570	.28	--	1963-71.	--	--	--	
Sevenmile Creek near Centennial	06661580	11.2	--	1962-84.	--	--	--	
Laramie River near Bosler	06661585	b1,790	1972-	--	1990-92.	1990-92.	--	
Dutton Creek:								
Sheep Creek near Arlington	06661590	5.46	--	1962-63.	--	--	--	
Dutton Creek near McFadden	06661600	19.9	1958-63.	--	--	--	--	
Cooper Creek near Arlington	06661700	8.51	--	1962-65.	--	--	--	
Cooper Creek tributary near Arlington.....	06661740	1.83	--	1962-65.	--	--	--	
South Fork Cooper Creek near Arlington.....	06661750	6.41	--	1962-65.	--	--	--	
Laramie River near Lookout	06662000	b2,174	1912-17;1921-27; 1932-96.	--	1965; 1976-80.	--	--	
Wheatland Reservoir No. 2 near Lookout.....	06662500	b2,221	1951-66.	--	--	--	--	
Laramie River at McGill	06663000	b2,230	1912-15.	--	--	--	--	
Laramie River below Wheatland Reservoir No. 2 (below McGill).....	06663500	b2,248	1916-17;1951-63.	--	--	--	--	
Laramie River below Luman Creek, near Wheatland...	06663900	--	--	--	1989-92.	--	--	
Laramie River near Wheatland	06664000	b2,527	1912-16;1929-33.	--	--	--	--	
Sybilie Creek above Mule Creek, near Wheatland	06664400	194	1974-	--	1984-87.	--	--	
Sybilie Creek below Mule Creek, near Wheatland	06664490	219	1968-73.	--	--	--	--	
Sybilie Creek above Bluegrass Creek, near Wheatland	06664500	225	1941-68.	--	--	--	--	
Bluegrass Creek near Wheatland.....	06664900	139	1958-63;1968-79.	--	--	--	--	
Sybilie Creek below Bluegrass Creek, near Wheatland	06665000	366	1950-68.	--	1965.	--	--	
Wheatland Canal No. 1 near Wheatland	06665500	--	1952-63.	--	1958-59.	--	--	
Sybilie Creek above Canal No. 3, near Wheatland	06665790	--	1980-	--	--	--	--	
Wheatland Canal No. 3 near Wheatland	06665800	--	1958-63.	--	1958-59.	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Laramie River--continued								
Sybille Creek--continued								
Wheatland Canal No. 2 near Wheatland	06666000	--	1952-63.	--	1958-59.	--	--	
Sybille Creek near Muleshoe Ranch, near Wheatland	06666500	507	1950-58.	--	--	--	--	
Sybille Creek at Muleshoe Ranch, near Wheatland...	06666600	508	1958-63;1966-67.	--	1959.	--	--	
Sybille Creek near Wheatland.....	06667000	515	1912-16.	--	--	--	--	
Laramie River above North Laramie River, near Uva ..	06667060	3,131	1973-79.	--	--	--	--	
North Laramie River near Garrett	06667200	e46	1963-65.	--	--	--	--	
North Laramie River (at upper station) near Wheatland	06667500	370	1915-23;1939-71; 1973-74.	--	--	--	--	
Piney Creek:								
Piney Creek tributary at upper station, near Wheatland.....	06667560	.18	--	1965-72.	--	--	--	
Piney Creek tributary at lower station, near Wheatland.....	06667580	.58	--	1965-70.	--	--	--	
North Laramie River at Wilson's ranch, near Wheatland								
Wheatland	06668000	377	1912-14.	--	--	--	--	
Rabbit Creek near Wheatland.....	06668040	1.30	--	1965-84.	--	--	--	
Fish Creek near Fletcher Park	06668200	6.33	1973-74.	--	--	--	--	
North Laramie River at Uva.....	06668500	530	1911-12.	--	--	--	--	
Laramie River at Uva	06669000	b3,662	1895-99;1903.	--	--	--	--	
Wheatland Creek below Wheatland.....	06669050	--	--	--	1982-	--	1982-	
Wheatland Creek near Uva	06669100	56.7	1973-74.	--	--	--	--	
Chugwater Creek at Platte-Laramie County line, near Chugwater (formerly 413918105021401)								
Chugwater	06669350	--	--	--	1984-89.	--	--	
Chugwater Creek at Chugwater	06669500	349	1911-21;1938-40.	--	1984-89.	--	--	
Chugwater Creek tributary near Chugwater.....	06669600	.23	--	1960-68.	--	--	--	
Chugwater Creek near Uva	06669850	654	1966-68;1973-74.	--	1958-59; 1965; 1984-85.	--	--	
Laramie River near Uva								
Laramie River	06670000	b4,440	1952-68.	--	1956-59.	--	--	
Laramie River tributary near Guernsey.....	06670100	1.97	--	1971-79.	--	--	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
MISSOURI RIVER BASIN--continued								
PLATTE RIVER BASIN--continued								
North Platte River--continued								
Laramie River--continued								
Laramie River tributary No. 2 near Fort Laramie	06670480	8.91	--	1971-76.	--	--	--	
Laramie River near (at) Fort Laramie	06670500	b4,564	1915-	--	1965-88.	1971-82.	1973-82.	
North Platte River near Lingle.....	06670900	b25,095	1968-75.	--	1969-75.	1969-75.	--	
Rawhide Creek:								
Dry Rawhide Creek near Lingle.....	06670985	20	--	1969-81.	--	--	--	
Rawhide Creek above Interstate Canal, near Lingle.....	06670990	--	--	--	1970-73.	--	--	
Rawhide Creek near Lingle.....	06671000	522	1928-92.	--	1965; 1970-73.	--	--	
North Platte River at Vaughn.....	06671500	b25,648	1924.	--	--	--	--	
North Platte River at Torrington	06672000	b25,742	1917-24;1926-39.	--	1975-79.	--	--	
Cherry Creek drain near Torrington	06672500	356	1931-32;1935-92.	--	1969-72.	--	--	
Arnold drain near Torrington	06673000	--	1931;1940-42.	--	1971-72.	--	--	
Katzer drain near Henry, Nebr	06673500	b45.9	1928-92.	--	1971.	--	--	
Mitchell Canal at Wyoming-Nebraska State line.....	06674000	--	1938-41.	--	--	--	--	
North Platte River at Wyoming-Nebraska State line.....	06674500	b22,218	1929-	--	1964-	1971-82.	1970-89.	
Horse Creek:								
Horse Creek tributary near Little Bear	06675300	8.16	--	1961-81.	--	--	--	
Horse Creek near Meriden	06675500	425	1945-47.	--	--	--	--	
Horse Creek near Johnson Ranch, near La Grange.....	06675850	595	1978-79.	--	--	--	--	
Horse Creek near Little Horse Creek	06676000	--	1911-12.	--	--	--	--	
Horse Creek (at Wye Cross Bridge) near La Grange....	06676500	645	1912-20.	--	--	--	--	
Horse Creek at WyCross Ranch, near La Grange	06676550	651	1965-73;1978-79.	--	1965; 1969-72; 1981-83.	1969-72.	1981-83.	
Bear Creek:								
South Fork Bear Creek near Little Bear	06676700	34.2	--	1960-76.	--	--	--	
Bear Creek near La Grange.....	06676900	516	1978-79.	--	--	--	--	
Bear Creek below Lovercheck Canyon, near LaGrange.....	06676905	--	--	--.	1992.	--	--	
Horse Creek near Yoder	06677000	1,347	1928-33;1935-45.	--	--	--	--	
Horse Creek at lower station, near Yoder.....	06677010	e1,320	1965-72.	--	1969-72.	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
MISSOURI RIVER BASIN--continued							
PLATTE RIVER BASIN--continued							
North Platte River--continued							
Horse Creek at Wyoming-Nebraska State line.....	06677100	1,530	1969-71.	--	--	--	--
North Platte River at Mitchell, Nebr.....	06679500	124,300	1901-13;1916-18; 1920-94.	--	--	--	--
South Platte River:							
Lonetree Creek at Carr, Colo.....	06753400	--	1993-95.		1993-95.	1993-95.	--
South Platte River near (at) Kersey, Colo	06754000	9,598	1901-3;1905-	--	1993-	1993-	--
Middle (Fork) Crow Creek near Hecla	06754500	25.8	1902-3;1933-69.	--	--	--	--
South (Fork) Crow Creek near Hecla.....	06755000	13.9	1933-69.	--	--	--	--
North Fork Crow Creek near Hecla.....	06755500	27.9	1933-44.	--	--	--	--
Crow Creek at Roundtop Road, near Cheyenne	06755800	239	1994-96.	--	1986-92.	--	--
Diamond Creek below Roundtop Road, at F. E. Warren Air Force Base	06755840	10.75	1994-96.	--	--	--	--
Diamond Creek at F.E. Warren Air Force Base	06755860	10.8	1992-96.	--	--	--	--
Diamond Creek at mouth, at F.E. Warren Air Force Base	06755880	10.9	1992-96.	--	--	--	--
Crow Creek at F.E. Warren Air Force Base	06755950	253	1994-96.	--	1983-94.	--	1987-94.
Crow Creek at 19th Street, at Cheyenne	06755960	257	1994-	--	--	--	--
Crow Creek near Cheyenne.....	06756000	297	1922-24;1951-57.	--	1972-75; 1983-92.	--	1972-75; 1987-92.
Crow Creek near Archer	06756060	--	--	--	1990-	--	1990-
Crow Creek near Carpenter.....	06756100	415	1990-96.	--	1990-92.	--	1990-92.
Lodgepole Creek near Federal	06761000	25	1933-38.	--	--	--	--
South Fork Lodgepole Creek near Federal.....	06761500	16	1933-38.	--	--	--	--
Ninemile Draw:							
Ninemile Draw tributary near Federal.....	06761600	1.49	--	1960-76.	--	--	--
Muddy Creek:							
Muddy Creek tributary near Burns.....	06761700	24.8	--	1960-76.	--	--	--
Lodgepole Creek tributary near Pine Bluffs.....	06761900	.44	--	1960-81.	--	--	--
Lodgepole Creek tributary No. 2 near Albin.....	06762600	5.69	--	1960-84.	--	--	--
Lodgepole Creek tributary No. 3 near Albin.....	06762700	.75	--	1960-71.	--	--	--

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN								
GREEN RIVER BASIN								
Green River near Kendall	09188000	271	1910-12;1918.	--	--	--	--	
Green River at Warren Bridge, near Daniel	09188500	468	1932-92;1994-	--	1962-64; 1967-72; 1974-82.	1975-78.	1974-82.	
Beaver Creek near Daniel	09189000	141	1938-54.	--	--	--	--	
North Horse (head of Horse Creek) Creek above Sherman Ranger Station	09189495	42.8	1982-84.	--	--	--	--	
Horse Creek at Sherman Ranger Station.....	09189500	43.0	1954-74.	--	1976-78.	1976;1978.	1976; 1978.	
South Horse Creek near Merna	09189550	33.3	1982-85.	--	--	--	--	
Horse Creek near Daniel	09190000	106	1931-54;1982-85.	--	1969;1977.	1977.	1977.	
Horse Creek at Daniel	09190500	173	1913-18.	--	--	--	--	
Green River near Daniel	09191000	932	1912-32.	--	--	--	--	
Cottonwood Creek:								
South Cottonwood Creek near Big Piney	09191300	21.4	1982-84.	--	--	--	--	
Cottonwood Creek near Daniel	09191500	202	1938-54.	--	--	--	--	
Cottonwood Creek near Big Piney (North channel and South channel)	09192000	227	1915-19;1931-32.	--	--	--	--	
Cottonwood Creek near mouth, near Big Piney.....	09192500	238	1938-40.	--	--	--	--	
Green River near Big Piney	09192600	e1,260	--	--	1967-86.	1975-78.	--	
New Fork River above New Fork Lakes.....	09192750	21.8	1985.	--	--	--	--	
New Fork River (New Fork) below New Fork Lake, near Cora.....	09193000	36.2	1938-72.	--	--	--	--	
New Fork River at Alexander's Ranch, near Cora (near Cora)	09193500	47.3	1910-11.	--	--	--	--	
New Fork River at Pinedale crossing, near Cora (near Cora)	09194000	e72	1905.	--	--	--	--	
Willow Creek near Cora	09194500	41.8	1938-41.	--	--	--	--	
Lake Creek near Cora	09195000	31.6	1938-41.	--	--	--	--	
Duck Creek at Cora	09195500	e27	1938-41.	--	--	--	--	
New Fork River (New Fork) near Pinedale	09196000	241	1938-44.	--	1975.	--	--	
Pine Creek above Fremont Lake	09196500	75.8	1954-97.	--	1975-78; 1980; 1985-88.	1975-78.	1976.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
New Fork River--continued								
Pine Creek--continued								
Fremont Ditch near Pinedale.....	09196940	--	1985-86;1988-95.	--	--	--	--	
Highland Ditch near Pinedale.....	09196960	--	1985-86;1988-95.	--	--	--	--	
Pine Creek below Fremont Lake (at Fremont Lake outlet) (near Pinedale).....	09197000	114	1910-12;1915-18; 1985-86;1988-	--	--	--	--	
Pine Creek near Pinedale.....	09197500	118	1904-6.	--	--	--	--	
Pine Creek at Pinedale.....	09198000	118	1903-4;1914-54.	--	--	--	--	
Pole Creek below Little Half Moon Lake, near Pinedale.....	09198500	87.5	1938-1971.	--	--	--	--	
Pole Creek at Fayette.....	09199000	126	1904-6.	--	--	--	--	
Fall Creek near Pinedale.....	09199500	37.2	1938-1971.	--	--	--	--	
Fall Creek near (at) Fayette.....	09200000	e38	1904-5.	--	--	--	--	
Pole Creek near Pinedale.....	09200500	167	1910a.	--	--	--	--	
New Fork River (New Fork) near Boulder.....	09201000	552	1914-69.	--	1965; 1967-71.	--	--	
Boulder Creek above Boulder Lake, near Boulder	09201500	115	1938-39.	--	--	--	--	
Boulder Creek below Boulder Lake, near Boulder	09202000	130	1938-73.	--	--	--	--	
Boulder Creek near Boulder (New Fork).....	09202500	135	1903-6;1914-24; 1930-32.	--	--	--	--	
East Fork River (East Fork) near Big Sandy.....	09203000	79.2	1938-92.	--	1965;1968; 1971; 1975-78.	1975-78.	1976-77.	
East Fork at East Fork Canal.....	09203500	106	1915-17;1920-23.	--	--	--	--	
Silver Creek near Big Sandy	09204000	45.4	1938-1971.	--	1965;1977.	1977.	--	
East Fork at Newfork	09204500	348	1904-6;1914-24; 1930-32.	--	--	--	--	
Sand Springs Draw:								
Sand Springs Draw tributary near Boulder	09204700	2.77	--	1961-81.	--	--	--	
New Fork River near Big Piney	09205000	e1,230	1954-	--	1965-86.	1975-78.	1975-78.	
North Piney Creek above Apperson Creek, near Mason.....	09205490	29.6	1982-84.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
North Piney Creek near Mason (Marbleton).....	09205500	e58	1915-16;1931-1972.	--	1977.	1977.	1977.	
Middle Piney Creek below South Fork, near Big Piney	09206000	34.3	1939-54.	--	--	1981.	--	
Middle Piney Creek above Springman Creek, near Big Piney	09206500	42.1	1938-39.	--	--	--	--	
Middle Piney Creek near Big Piney.....	09207000	e46	1914-18;1931-32.	--	--	--	--	
South Piney Creek near Big Piney	09207500	117	1938-42.	--	--	--	--	
Dry Basin Creek near Big Piney	09207650	47.2	--	1971-81.	1975-76; 1978.	1965; 1975-76; 1978.	--	
Dry Piney Creek near Big Piney	09207700	e67	1965-73.	--	1990-93.	1965-68; 1971-73; 1990-93.	--	
La Barge Creek near La Barge Meadows ranger station.....	09208000	e6.3	1940-42;1950-81.	--	1975-78.	1975-78.	1976-78.	
La Barge Creek above Viola	09208400	122	1982-84.	--	--	--	--	
La Barge Creek near Viola (La Barge).....	09208500	172	1913-16;1940-49.	--	1977-78.	1978.	1977-78.	
La Barge Creek near La Barge (Tulsa).....	09209000	193	1931-39.	--	1963.	--	--	
Green River near La Barge	09209400	e3,910	1963-	--	1963-94.	1975-82; 1986-94.	1973-80; 1986-94.	
Green River near Fontenelle.....	09209500	3,970	1946-65.	--	1962-63.	--	--	
Fontenelle Creek at upper station, near Fontenelle.....	09210000	e58	1941-42.	--	--	--	--	
Fontenelle Creek near Herschler Ranch, near Fontenelle.....	09210500	152	1951-	--	1975-78.	1975-78.	1977.	
Fontenelle Creek near Fontenelle.....	09211000	224	1914-19;1931-53.	--	--	--	--	
Green River tributary near Fontenelle.....	09211100	3.75	--	1961-74.	--	--	--	
Fontenelle Reservoir near Fontenelle	09211150	e4,280	1964-	--	1975.	--	--	
Green River below Fontenelle Reservoir	09211200	e4,280	1963-	--	1967-	1975-78; 1980.	1973-80.	
Fourmile Gulch:								
Fourmile Gulch tributary near Fontenelle.....	09211300	14.2	--	1971-81.	--	--	--	
Big Sandy River (Creek):								
Squaw Creek near Big Sandy.....	09211500	e28	1911-12.	--	--	--	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Big Sandy River--continued								
Squaw Creek--continued								
Dutch Joe Creek near Big Sandy	09212000	17.0	1911-12.	--	--	--	--	
Big Sandy River (Creek) at Leckie Ranch, near Big Sandy (near Big Sandy)	09212500	e94	1910-11;1939-87.	--	1961-62; 1975-78.	1974-78.	1977.	
Big Sandy Creek near Eden	09213000	265	1911;1912a.	--	--	--	--	
Big Sandy River (Creek) near Farson	09213500	322	1914-17;1920-24; 1926-34;1953-	--	1962;1972; 1975-82.	1971-82.	1977.	
Big Sandy Reservoir near Farson.....	09213700	386	1987-	--	--	--	--	
Big Sandy River below Big Sandy Reservoir	09213705	--	--	--	1981-86.	--	--	
Big Sandy River at Farson	09213800	--	--	--	1981-86.	--	--	
Little Sandy Creek near Elkhorn.....	09214000	20.9	1939-71.	--	1961-62; 1977.	1977.	1977.	
Little Sandy Creek above Eden.....	09214500	134	1954-81.	--	1962; 1975-81.	1972; 1975-81.	1977.	
Jack Morrow Creek near Farson.....	09214955	--	--	--	1981.	--	--	
Pacific Creek near Farson.....	09215000	e500	1954-73.	--	1976-78.	1969; 1976-78.	1976-77.	
Little Sandy Creek near Eden.....	09215500	823	1911-12.	--	1981-86.	--	--	
Big Sandy River below Farson	09215550	b1,097	1981-99.	--	1982-99.	--	--	
Simpson Gulch near Farson	09215990	78.5	--	1961-69.	--	--	--	
Big Sandy River (Creek) below Eden.....	09216000	e1,610	1954-81.	--	1961-64; 1967-81.	1971-81.	1975-80.	
Big Sandy River at Gasson Bridge, near Eden	09216050	e1,720	1972-	--	1975-	1975-79; 1981-82; 1990-93.	1976-78.	
East Otterman Wash near Green River	09216290	16.6	--	1969-84.	--	1976.	--	
Green River at Big Island, near Green River.....	09216300	e7,300	--	--	1966-81.	1975-79.	1973-78.	
Skunk Canyon Creek near Green River	09216350	15.7	--	1965; 1971-81.	--	--	--	
Greasewood Canyon near Green River.....	09216400	45.1	--	1959-74.	--	--	--	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>COLORADO RIVER BASIN--continued</u>								
GREEN RIVER BASIN--continued								
Green River at Green River	09216500	e7,670	1891;1894-1906; 1914-45.	--	--	--	--	
Telephone Canyon near Green River	09216510	6.98	--	1965-72.	--	--	--	
Telephone Canyon tributary near Green River.....	09216520	3.44	--	1965-72.	--	--	--	
Bitter Creek:								
Great Divide basin:								
Separation Creek at upper station, near Riner	09216525	41.8	--	--	1975-76.	1975-76.	1976.	
Separation Creek near Riner.....	09216527	55.3	1976-81.	--	1976-81.	1976; 1980-81.	1976.	
Delaney Draw near Red Desert	09216537	34.5	--	1961-84.	1976-78.	1976-78.	--	
Bitter Creek near Bitter Creek.....	09216545	308	1975-81.	--	1975-81.	1975-81.	1976-78.	
Deadman Wash near Point of Rocks	09216550	152	--	1961-81.	1976-78.	1976-78.	--	
Bitter Creek near Point of Rocks	09216560	765	--	1961-75.	1975-76.	1975-76.	--	
Bitter Creek above Salt Wells Creek, near Salt Wells...	09216562	836	1976-81.	--	1975-81.	1975-81.	--	
Salt Wells Creek near South Baxter	09216565	34.7	1976-81.	--	1975-81.	1975-81.	1976.	
Gap Creek above Beans Spring Creek, near South Baxter	09216570	22.0	--	--	1976;1978.	1975-76; 1978.	1976.	
Beans Spring Creek near South Baxter	09216572	4.92	--	--	1975-76; 1978.	1975-76; 1978.	1975-76.	
Beans Spring Creek at mouth, near South Baxter	09216574	13.1	--	--	1975-1976; 1978.	1976;1978.	1975-76.	
Gap Creek below Beans Spring Creek, near South Baxter	09216576	35.9	1975-76.	1976-81.	1975-76; 1978.	1975-76; 1978.	1975-76.	
Dry Canyon Creek near South Baxter	09216578	3.69	1976-80.	--	1980.	1979-80.	--	
Big Flat Draw near Rock Springs.....	09216580	19.5	--	1973-81.	1976.	1976-77.	--	
Cutthroat Draw near Rock Springs (formerly Salt Wells Creek tributary near Rock Springs).....	09216600	7.88	--	1959-81.	--	--	--	
No Name Creek near Rock Springs.....	09216695	18.2	--	1973-81.	1975.	1975; 1977-78.	--	
Salt Wells Creek near Rock Springs.....	09216700	515	--	1959-76.	1975-76.	1968; 1975-76.	--	
Salt Wells Creek near Salt Wells	09216750	526	1976-81.	--	1975-81.	1975-81.	1976.	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Bitter Creek above Killpecker Creek, at Rock Springs.	09216790	--	--	--	1983-93.	1989-93.	1989-93.	
Killpecker Creek at Rock Springs.....	09216810	--	--	--	1975-80; 1983-87.	--	1975-80; 1982-83.	
Bitter Creek below Little Bitter Creek, near Kanda.....	09216880	--	--	--	1975-83.	1978; 1980-82.	1975-82.	
Bitter Creek tributary near Green River.....	09216900	1.65	--	1959-82.	--	--	--	
Bitter Creek near Green River.....	09216950	--	--	--	1966-72.	1966-72.	--	
Green River near Green River.....	09217000	114,000	1951-	--	1951-	1960-66; 1970-71; 1973-84; 1990-92.	1973-87.	
Green River below Green River.....	09217010	--	--	--	1905;1974-	1975;1977.	1974-89.	
Blacks Fork above Blacks Fork ranger station, Utah....	09217500	48.8	1937-39.	--	--	--	--	
Blacks Fork near Robertson.....	09217900	130	1966-86;1992-	--	--	--	--	
Blacks Fork at Blacks Fork ranger station, Utah.....	09218000	129	1937-39.	--	--	--	--	
Blacks Fork near Millburne.....	09218500	152	1939-	--	1969-70; 1975-78.	1975-78.	1976-77.	
Blacks Fork near Urie.....	09219000	261	1913-24;1937-55.	--	--	--	--	
East Fork of Smiths Fork at China Meadows, near Robertson.....	09219500	36.9	1938-39.	--	--	--	--	
East Fork of Smiths Fork near Robertson.....	09220000	53.0	1939-	--	1975-78.	1975-78.	1977.	
West Fork of Smiths Fork near Robertson.....	09220500	37.2	1939-81.	--	1975-78.	1975-78.	1977.	
Smiths Fork near Robertson.....	09221000	144	1938-39.	--	1969-70; 1976.	1976.	1976.	
Smiths Fork at Mountainview.....	09221500	192	1941-57.	--	--	--	--	
Smiths Fork near Lyman.....	09221650	--	--	--	1974-89.	1975-78.	1974-82.	
Mud Spring Hollow:								
Mud Spring Hollow tributary near Lyman.....	09221670	.97	--	1965-72.	--	--	--	
Mud Spring Hollow near Church Butte, near Lyman.....	09221680	8.83	--	1965-84.	1977-78.	1977-78.	--	
Mud Spring (Hank) Hollow near Lyman.....	09221700	10.2	--	1959-71.	--	--	--	
Blacks Fork near Lyman.....	09222000	821	1937-57;1962-83.	--	1962-89; 1995-	1971-81; 1995-	1973-80; 1995-	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Blacks Fork--continued								
Muddy Creek:								
Little Muddy Creek:								
Ryckman Creek near Glencoe	09222200	53.4	1980-81.	--	1980-81.	1980-81.	--	
Little Muddy Creek above North Fork, near Glencoe	09222250	366	1980-81.	--	1980-81.	1980-81.	--	
Little Muddy Creek near Glencoe	09222300	416	1976-80.	--	1975-80.	1975-80.	1976.	
Muddy Creek near Hampton	09222400	963	1975-81.	--	1975-81.	1975-81.	1976.	
Blacks Fork above Hams Fork, near (at) Granger (near Granger)	09222500	e2,170	1896-97.	--	--	--	--	
Hams Fork below Pole Creek, near Frontier	09223000	128	1952-	--	1975-78.	1975-78.	--	
Hams Fork near Frontier	09223500	298	1945-1972.	--	--	--	--	
Hams Fork at Diamondville (Kemmerer)	09224000	386	1917-33;1945-49.	--	--	--	--	
Hams Fork near Diamondville	09224050	--	--	--	1975-89; 1992-	1980-82.	1975-89; 1992-	
Hams Fork near Granger	09224450	e670	--	--	1967-86.	1971-82.	1975-76.	
Blacks Fork below Hams Fork, at Granger (at Granger)	09224500	e2,840	1896-1900.	--	--	--	--	
Blacks Fork tributary near Granger	09224600	5.03	--	1959-81.	--	--	--	
Blacks Fork near Little America	09224700	e3,100	1962-		1964-	1968; 1970-82; 1989.	1973-82.	
Meadow Springs Wash:								
Meadow Springs Wash (Spider Creek) tributary near Green River	09224800	5.22	--		1962-65; 1968-81.	1978.	--	
Blacks Fork tributary No. 2 near Green River	09224810	12.0	--		1965-81.	1978.	--	
Blacks Fork tributary No. 3 near Green River	09224820	3.59	--		1965-84.	--	--	
Blacks Fork tributary No. 4 near Green River	09224840	1.26	--		1965-81.	--	--	
Blacks Fork near Marston	09224900	--	--		--	1959-64.	--	
Summers Dry Creek near Green River	09224980	423	--		1965-81.	1976-78.	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Blacks Fork near Green River	09225000	e3,670	1947-62.	--	1954-55; 1958-59; 1967.	--	--	
Squaw Hollow near Burntfork	09225200	6.57	--	1965-84.	1977-78.	1975; 1977-78.	--	
Green River tributary No. 2 near Burntfork.....	09225300	13.0	--	1959; 1961-81.	1976.	1976-77.	--	
Green River near Linwood, Utah.....	09225500	e14,300	1928-63.	--	--	--	--	
Henrys Fork near Lonetree.....	09226000	e56	1942-72.	--	1969-72; 1976-77.	1977.	1976-77.	
Middle Fork Beaver Creek near Lonetree.....	09226500	e28	1948-70.	--	--	--	--	
East Fork Beaver Creek near Lonetree.....	09227000	e8.2	1948-62.	--	--	--	--	
West Fork Beaver Creek near Lonetree.....	09227500	e23	1948-62.	--	--	--	--	
Henrys Fork near Burntfork	09228000	242	1942-54.	--	--	--	--	
Burnt Fork near Burntfork.....	09228500	52.8	1943-83.	--	1969-70; 1975-78.	1975-78.	1977.	
Burnt Fork at Burntfork.....	09229000	e73	1929-43.	--	--	--	--	
Henrys Fork tributary near Manila, Utah	09229450	3.15	--	1965-74.	--	--	--	
Henrys Fork near Manila, Utah.....	09229500	e520	1928-93.	--	1954-55; 1958-89.	1972; 1975-78; 1989.	1976.	
Sheep Creek:								
Sheep Creek upper canal near Manila, Utah	09231000	--	1949-61.	--	--	--	--	
Carter Creek canal near Manila, Utah	09231200	--	1956-61.	--	--	--	--	
Sheep Creek lower canal near Manila, Utah	09231500	--	1949-61.	--	--	--	--	
Sheep Creek near Manila, Utah	09232000	42	1942-61.	--	--	--	--	
Sheep Creek at mouth, near Manila, Utah	09232500	111	1946-61.	--	--	--	--	
Flaming Gorge Reservoir at Flaming Gorge Dam, Utah..	09234400	e19,350	1962-	--	--	--	--	
Green River near Greendale, Utah.....	09234500	i19,350	1950-	--	1956-59; 1963-	1956-59.	--	
Vermillion Creek near Hiawatha, Colo	09235300	196	1975-81.	--	1975-81.	1975-81.	1976-77.	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>COLORADO RIVER BASIN--continued</u>							
GREEN RIVER BASIN--continued							
Green River--continued							
Yampa River:							
Middle Fork Little Snake River:							
North Fork Little Snake River near Encampment..	09251800	9.64	1956-65.	--	--	--	--
North Fork Little Snake River near Slater, Colo	09251900	29.3	1956-63.	--	1957-58; 1977-78.	1977-78.	1977.
Little Snake River near Slater, Colo.....	09253000	285	1943-47;1950-99.	--	1977-86.	1977.	1977.
Battle Creek near Encampment	09253400	13.0	1956-63;1985-88.	--	1978; 1986-88.	1978; 1986-88.	1978.
West Fork Battle Creek:							
Haggarty Creek above Belvidere ditch, near Encampment	09253455	--	--	--	1993-	--	--
West Fork Battle Creek at Battle Creek Campground, near Savery	09253465	--	--	--	1993-	--	--
Slater Fork (Creek) near Slater, Colo	09255000	161	1910-12;1931-	--	--	--	--
East Fork Savery Creek near Encampment	09255400	5.57	1956-58;1985-88.	--	1986-87.	1986-88.	--
Savery Creek at upper station, near Savery	09255500	200	1940-44;1952-71.	--	1957-58; 1975-78; 1986.	1976-78.	1975-78.
Big Sandstone Creek near Savery	09255900	9.85	1956-58;1985-88.	--	1986-87.	1986-88.	--
Savery Creek near Savery	09256000	330	1941-46;1947-72; 1985-92.	--	1975-78; 1985-91.	1976-78; 1985-91.	1975-78; 1985-91.
Savery Creek at Savery	09256500	354	1915-16;1918-22.	--	1957;1975; 1977.	1977.	1975; 1977.
Little Snake River near Dixon.....	09257000	988	1910-23;1938-98.	--	1957-58; 1975-78; 1981-88.	1971-82; 1988.	1975-77.
Willow Creek near Baggs.....	09257500	e5	1911-23.	--	--	--	--
Willow Creek near Dixon.....	09258000	e24	1953-93.	--	--	--	--
Muddy Creek:							
Cow Creek:							
Dry Cow Creek near Baggs	09258200	49.7	--	1970-81.	1976-78.	1975-79.	--
Little Robber Reservoir	09258500	b8.5	1954-62d.	--	--	--	--
Muddy Creek above Baggs	09258900	1,178	--	1958-71.	1976;1978.	1976;1978.	1976.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Yampa River--continued								
Little Snake River--continued								
Muddy Creek near Baggs	09259000	e1,257	1915-16;1918;1987-91.	--	1957-58; 1985.	1988-91.	1985.	
Little Snake River below Baggs.....	09259050	--	--	--	1980-	1989-	1981-89.	
Fourmile Creek (at Ryan's Ranch) near Baggs.....	09259500	e4	1911-23.	--	--	--	--	
Little Snake River near Baggs.....	09259700	e3,020	1961-68.	--	1965-80.	1977.	1977.	
Little Snake River near Lily, Colo	09260000	e3,730	1904;1921-	--	--	--	--	
GREAT SALT LAKE BASIN								
BEAR RIVER BASIN								
Bear River:								
East Fork Bear River near Evanston	10010400	34.6	1973-86.	--	--	--	--	
Hilliard-East Fork Canal near State line, near Evanston.....	10010500	--	1941-79.	--	--	--	--	
Diversions from Bear River above gaging station, near Utah-Wyoming State line.....	10011000	--	1944-47j;1953-56j; 1958-k.	--	--	--	--	
West Fork Bear River at Whitney Dam, near Oakley, Utah.....	10011200	6.79	1963-86.	--	--	--	--	
West Fork Bear River below Deer Creek, near Evanston.....	10011400	52.2	1973-86.	--	--	--	--	
Bear River near Utah-Wyoming State line	10011500	172	1942-	--	--	--	--	
Mill Creek at Utah-Wyoming State line.....	10012000	59	1949-62.	--	--	--	--	
Mill Creek near Evanston.....	10012500	60.6	1942-48.	--	--	--	--	
Diversions from Mill Creek	10013000	--	1944-45j.	--	--	--	--	
Mill Creek below diversions, near Evanston	10013500	--	1946-47j.	--	--	--	--	
Bear River above Sulphur Creek, near Evanston	10014000	282	1946-56.	--	--	--	--	
Sulphur Creek above diversions, near Evanston.....	10014500	--	1945k.	--	--	--	--	
Willow Creek above diversion, near Evanston	10015000	--	1945k.	--	--	--	--	
Diversions from Sulphur Creek and Willow Creek ...	10015500	--	1944-45j.	--	--	--	--	
Sulphur Creek above reservoir, near Evanston	10015700	64.2	1957-97.	--	--	--	--	
Sulphur Creek below reservoir, near Evanston.....	10015900	69.2	1958-92; 1996-97.	--	--	--	--	

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
GREAT SALT LAKE BASIN--continued							
BEAR RIVER BASIN--continued							
Bear River--continued							
Sulphur Creek near Evanston.....	10016000	80.5	1942-59.	--	--	--	--
Bear River at Millis, near Evanston.....	10016500	420	1942-46.	--	--	--	--
Bear River at Evanston	10016900	433	1984-	--	1986;1989.	1988-89.	--
Yellow Creek near Evanston	10017000	79.2	1944-45;1949-78.	--	--	--	--
Coyote Creek near Evanston	10017500	e28	1942-45.	--	--	--	--
Diversions from Yellow Creek.....	10018000	--	1944-45j.	--	--	--	--
Yellow Creek below diversions, near Evanston.....	10018500	--	1946-47j.	--	--	--	--
Yellow Creek at mouth, near Evanston	10018900	--	--	--	1983-89.	--	1983-89.
Bear River near Evanston	10019000	715	1913-56.	--	--	--	--
Chapman Canal at State line, near Evanston	10019500	--	1942-86.	--	--	--	--
Whitney Canyon Creek near Evanston	10019700	8.93	--	1965-81.	--	--	--
Diversions from Bear River between State line and Woodruff gaging stations.....	10020000	--	1944-47j;1953-56j; 1958-k.	--	--	--	--
Bear River above reservoir, near Woodruff, Utah	10020100	752	1961-	--	1968-	1989-	1978-89.
Woodruff Narrows Reservoir near Woodruff, Utah.....	10020200	784	1965-96.	--	--	--	--
Bear River below reservoir, near Woodruff, Utah	10020300	784	1961-	--	--	--	--
Bear River near Woodruff, Utah.....	10020500	e870	1941-61.	--	--	--	--
Bear River near Randolph, Utah.....	10026500	1,616	1943-92.	--	--	--	--
Twin Creek:							
Rock Creek near Fossil	10026800	49.0	1961-66.	--	--	--	--
Twin Creek tributary near Sage.....	10026850	2.91	--	1965-70.	--	--	--
Twin Creek at Sage	10027000	246	1943-62;1976-81.	--	1958;1961; 1967-69; 1975-81; 1989-	1976-81; 1989-	1975-80.
Twin Creek Canal near Sage	10027500	--	1944-45j.	--	--	--	--
Diversions from Bear River between Randolph and below Pixley Dam gaging stations.....	10028000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Bear River below Pixley Dam, near Cokeville (near Cokeville)	10028500	2,032	1941-43;1952-56;1958-	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
GREAT SALT LAKE BASIN--continued								
BEAR RIVER BASIN--continued								
Bear River--continued								
Leeds Creek near Cokeville	10029000	--	1944j.	--	--	--	--	
Bear River above Sublette Creek, near Cokeville	10029500	e2,110	1948-55.	--	--	--	--	
Sublette Creek near Cokeville.....	10030000	--	1944-45j;1955-56j; 1958-k.	--	--	--	--	
Smiths Fork near Afton	10030300	1.62	--	1964-70.	--	--	--	
Smiths Fork near Smoot.....	10030500	17.3	1943.	--	--	--	--	
Smiths Fork above Hobbie Creek, near Geneva, Idaho	10031000	--	1944-46j.	--	--	--	--	
Smiths Fork near Border	10032000	165	1942-	--	--	--	--	
Coal (Howland) Creek near Cokeville	10032500	--	1944-48j;1953-56j.	--	--	--	--	
Muddy Creek above Mill Creek, near Cokeville	10032700	20.7	1965-69.	--	--	--	--	
Mill Creek near Cokeville	10032800	8.07	1966-69.	--	--	--	--	
Grade Creek near Cokeville	10033000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--	
Pine Creek above diversions, near Cokeville.....	10033500	--	1944-48j;1953-56j; 1958-65k.	--	--	--	--	
Diversions from Pine Creek	10034000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--	
Bruner Creek above Covey Canal, near Cokeville	10034500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--	
Smiths Fork at Cokeville.....	10035000	275	1942-52.	--	1985-88; 1990-92; 1993-	1989-92; 1993-	--	
Spring Creek above Covey Canal, near Cokeville.....	10035500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--	
Spring Creek to Collette Creek, near Cokeville	10036000	--	1944-48j;1953-56j.	--	--	--	--	
Birch Creek near Cokeville.....	10036500	--	1944-45k.	--	--	--	--	
Garrett Springs:								
Hickman Canal near Cokeville	10037000	--	1944-48j.	--	--	--	--	
George Bourne Canal near Cokeville.....	10037500	--	1944-48j.	--	--	--	--	
Bear River below Smiths Fork, near Cokeville	10038000	2,447	1954-	--	1993-	--	1993-	

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>GREAT SALT LAKE BASIN--continued</u>								
BEAR RIVER BASIN--continued								
Bear River--continued								
Chalk Creek:								
Chalk Creek Canal near Cokeville	10038500	--	1944-45j.	--	--	--	--	
Diversions from Bear River between Pixley Dam and Border gaging stations, and from Smiths Fork and its tributaries.....	10039000		1944-48j;1953-56j; 1958-k.	--	--	--	--	
Bear River at Border	10039500	2,486	1937-	--	1961; 1965-95.	1978-84; 1986-93.	1973-89.	
Thomas Fork near Geneva, Idaho	10040000	45.3	1939-51.	--	--	--	--	
Thomas Fork near Wyoming-Idaho State line	10041000	113	1949-92.	--	--	--	--	
Sheep Creek:								
Sheep Creek tributary near Border	10043300	.12	--	1961-64.	--	--	--	
Sheep Creek tributary No. 2 near Border	10043350	.34	--	1965-71.	--	--	--	
<u>SNAKE RIVER BASIN</u>								
Snake River at south boundary of Yellowstone National Park								
Park	13010000	485	1913-25.	--	--	--	--	
Snake River above Jackson Lake, at Flagg Ranch	13010065	486	1987-	--	1987-	1987-92.	1987-93.	
Snake River above Jackson Lake, at Flagg Ranch	13010200	486	1983-87.	--	1972; 1975-76; 1983-88.	--	1976.	
Pilgrim Creek near Moran	13010450	--	1997.	--	--	--	--	
Jackson Lake near (at) Moran	13010500	807	1908-79;1984-	--	--	--	--	
(South Fork) Snake River near (at) Moran.....	13011000	807	1903-	--	--	--	--	
Pacific Creek at (near) Moran.....	13011500	169	1906;1917-18;1944-75; 1978-	--	1987-93.	1987-93.	--	
Buffalo Fork:								
Blackrock Creek:								
Blackrock Creek tributary near Moran.....	13011800	.80	--	1964-74.	--	--	--	
Buffalo Fork above Lava Creek, near Moran	13011900	323	1965-	--	1971; 1973-78.	--	--	
Buffalo Fork (River) near Moran (Elk)	13012000	378	1906a;1917-18; 1944-60.	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>SNAKE RIVER BASIN--continued</u>							
Snake River--continued							
Spread Creek at diversion dam, near Moran	13012490	97.4	1994-96.	--	--	--	--
Spread Creek near Moran (Elk)	13012500	101	1917-18;1993-95.	--	1971-72; 1976;1990.	1990.	1976.
Cottonwood Creek near Teton	13013000	72.3	1917-18.	--	--	--	--
Spring Creek near Teton	13013500	--	1917-18.	--	--	--	--
Snake River at Moose	13013650	1,677	1995-	--	1995-	1995-	--
Cottonwood Creek:							
Spring Creek near Zenith	13014000	--	1917-18.	--	--	--	--
Gros Ventre River at Kelly	13014500	622	1918;1944-58.	--	--	--	--
Gros Ventre River at Zenith	13015000	683	1917-18;1987-	--	--	--	--
Spring Creek at Zenith	13015500	--	1917-18.	--	--	--	--
Spring Creek at West Gros Ventre Butte	13016000	--	1918.	--	--	--	--
Snake River near Wilson	13016100	2,342	1972-75.	--	--	--	--
FISH CREEK BASIN							
Fish Creek:							
Lake Creek below Granite Creek Supplement, near Moose	13016240	22.2	1995-99.	--	--	--	--
Granite Creek above Granite Creek Supplement, near Moose	13016305	14.9	1995-	--	--	--	--
Granite Creek Supplement above Lake Creek, near Moose	13016310	--	1995-99.	--	--	--	--
Granite Creek Supplement below Lake Creek, near Moose	13016315	--	1995-99.	--	--	--	--
Fish Creek at Wilson	13016450	71.2	1994-	--	--	--	--
Fish Creek near Wilson	13016500	87.4	1917-18.	--	--	--	--
Mosquito Creek near Wilson	13017000	24.2	1917-18.	--	--	--	--
Big Spring Creek near Cheney	13017500	--	1918.	--	--	--	--
FLAT CREEK BASIN							
Flat Creek near Jackson	13018000	40.1	1933-41;1989-93.	1994-96.	1966;1973.	--	--
Cache Creek near Jackson	13018300	10.6	1962-	--	1965-96.	1968-96.	1969; 1973-96.
Flat Creek below Cache Creek, near Jackson	13018350	129	1989-96.	--	1973.	--	--
Flat Creek near Cheney	13018500	142	1917-18;1989-93.	1994-96.	1981-82.	--	1981-82.
Snake River below Flat Creek, near Jackson	13018750	2,627	1975-	--	--	--	--
Horse Creek near Cheney	13019000	37.9	1917-18.	--	--	--	--

Footnote at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<u>SNAKE RIVER BASIN--continued</u>							
Snake River--continued							
HOBACK RIVER BASIN							
Hoback River:							
Rim Draw (Fish Creek) near Bondurant	13019210	3.41	--	1964-74.	--	--	--
Sour Moose Creek near Bondurant	13019220	2.77	--	1964-81.	--	--	--
North Fork Fish Creek near Bondurant.....	13019280	14.4	--	1964-69.	--	--	--
Cliff Creek near Bondurant.....	13019400	58.6	--	1964-74.	--	--	--
Granite Creek near Bondurant	13019430	--	--	--	1983-90.	1983-90.	--
Little Granite Creek at mouth, near Bondurant.....	13019438	21.1	1981-92.	--	1981-90.	1981-90.	1981-90.
Hoback River near Jackson (Cheney).....	13019500	564	1917-18;1944-58.	--	--	--	--
Fall (Coburn) Creek near Jackson (Cheney)	13020000	46.8	1917-18.	1964-74.	--	--	--
Snake River at Astoria Mineral Hot Springs.....	13020300	--	--	--	1992.	--	--
Dog Creek near Cheney	13020500	14.1	1917-18.	--	--	--	--
Cabin Creek near Jackson (Cheney).....	13021000	8.71	1917-18.	1964-74.	--	--	--
Bailey Creek near Alpine, Idaho (Wyo.)	13021500	15.9	1917-18.	--	--	--	--
West Table Creek near Alpine	13021700	1.06	--	1964-69.	--	--	--
Wolf Creek near Alpine, Wyo. (Idaho).....	13022000	13.1	1917-18.	1964-67.	--	--	--
Snake River above reservoir, near Alpine	13022500	3,465	1937-39;1953-	--	1965-86; 1988.	1974-77.	1973-80.
RED CREEK BASIN							
Red Creek near Alpine.....	13022550	3.88	--	1964-73.	--	--	--
COTTONWOOD CREEK BASIN							
Cottonwood Creek near Alpine	13022570	2.40	--	1964-72.	--	--	--
GREYS RIVER BASIN							
Greys River above reservoir, near Alpine (near Alpine, Idaho).....	13023000	448	1917-18;1937-39;1953-	--	--	--	--
Snake River below Greys River, at Alpine, Idaho	13023500	3,940	1944-54.	--	--	--	--
SALT RIVER BASIN							
Salt River:							
Fish Creek near Smoot	13023800	e3.60	--	1964-74.	--	--	--
Salt River near Smoot	13023900	47.8	1932-57.	--	1981-85.	--	--
Cottonwood Creek near Smoot	13024500	26.3	1932-57.	--	--	--	--
Swift Creek near Afton	13025000	27.4	1942-80.	--	1965; 1981-85.	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<u>SNAKE RIVER BASIN--continued</u>								
Snake River--continued								
SALT RIVER BASIN--continued								
Salt River--continued								
Crow Creek near Fairview	13025500	e115	1946-49;1961-67.	--	1965; 1983-84.	--	--	
Stump Creek near Auburn.....	13026000	103	1946-49.	--	1989-92.	--	--	
Salt River near Thayne	13026500	570	1932-33;1961-67.	--	--	--	--	
Strawberry Creek near Bedford	13027000	21.3	1932-43.	--	--	--	--	
Bear Canyon near Freedom.....	13027200	e3.3	--	1961-71.	--	--	--	
Salt River above reservoir, near Etna	13027500	829	1953-	--	1965-95.	1989-95.	1970; 1973-81; 1989-92.	
Salt River near Alpine, Idaho	13028000	878	1917-18.	--	--	--	--	
Salt River at Wyoming-Idaho State line	13028500	890	1933-55.	--	--	--	--	
Snake River near Alpine.....	13029000	4,841	1916-18;1934.	--	--	--	--	
Snake River near Irwin, Idaho.....	13032500	5,225	1934-36;1939-41;1949-	--	--	--	--	
HENRYS FORK BASIN								
Falls River:								
Grassy Lake near Moran	13046500	10.4	1939-79.	--	--	--	--	
Boundary Creek near Bechler Ranger Station	13046680	86.9	1984-	--	--	--	--	
Conant Creek:								
Squirrel Creek:								
North Fork Squirrel Creek near Squirrel, Idaho..	13047800	2.40	1961-67.	--	--	--	--	

a Stage record or stage record and instantaneous discharge measurements only.

b Part of drainage area is noncontributing or does not contribute directly to surface runoff.

c Storm runoff for summer season only.

d Published in U.S. Geological Survey Water-Supply Paper 1475-I, Hydrology of Small Watersheds in Western States.

e Approximate.

f Published in reports of Department of Northern Affairs and National Resources, Canada.

g Published in U.S. Geological Survey Water-Supply Paper 1531, Hydrology of the Upper Cheyenne River Basin.

h Includes several sites on the reservoir.

i Approximately, includes area which is probably noncontributing.

j Published in U. S. Geological Survey Open-File Report of Bear River hydrometric data.

k Published in reports of Bear River Commission.

INTRODUCTION

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

Water resources data for water year 1999 for Wyoming in this volume consist of records of stage, discharge, and water quality of streams; and stage, contents, and water quality of lakes and reservoirs. This report contains discharge records for 147 gaging stations; stage and contents for 15 lakes and reservoirs; and water quality at 26 gaging stations and 23 ungaged stations. Locations of streamflow-gaging stations and water-quality stations are shown in figure 1. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements.

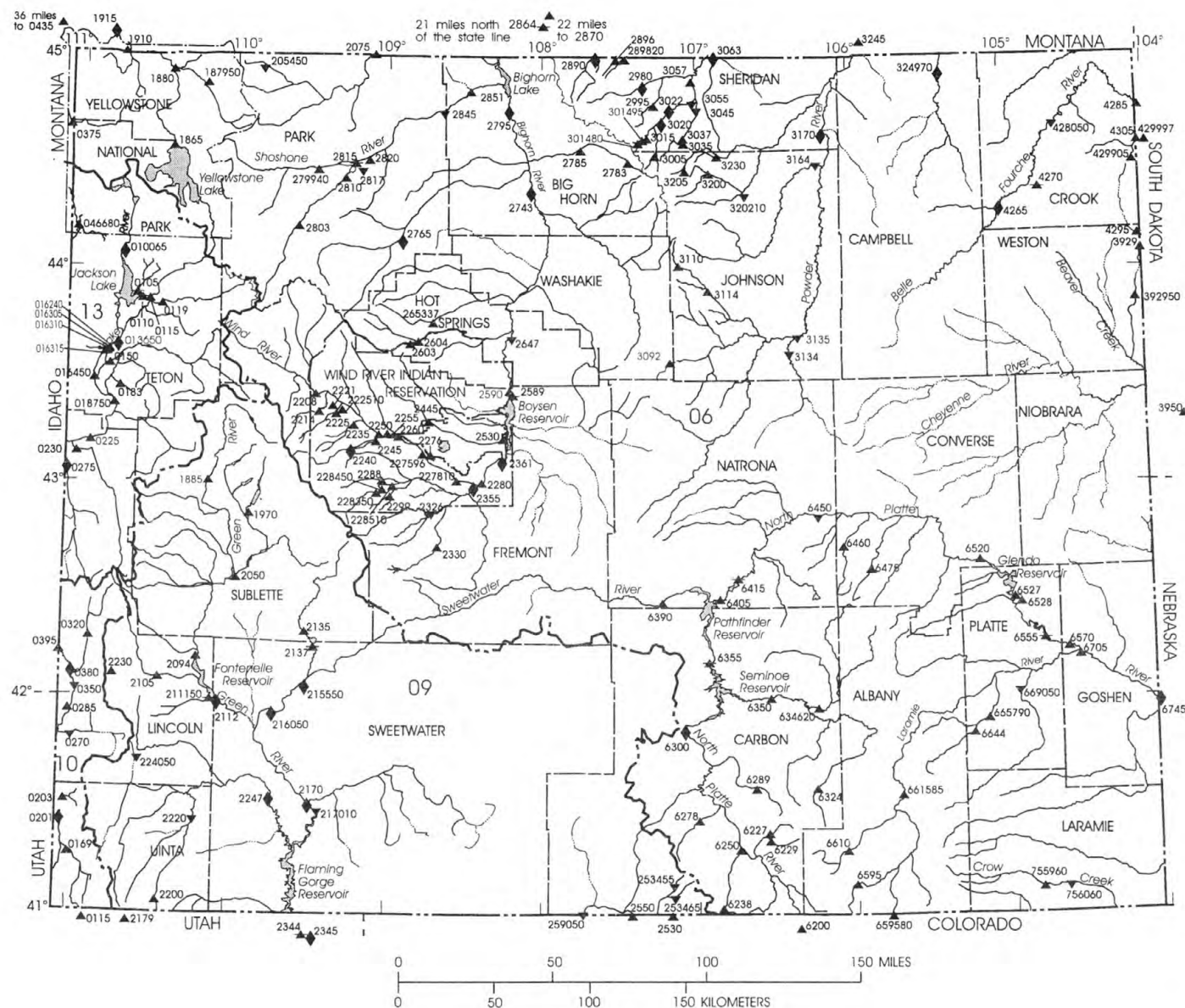
Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual 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 consulted in the libraries of the principal cities of the United States or may be purchased from U.S. Geological Survey, Earth Science Information Center, Federal Center, Building 810, Box 25425, Denver, Colorado 80225.

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

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water have been published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report WY-99-1." These water-data reports are for sale, in paper copy or on microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page, by telephone at (307) 778-2931, or by email at state_rep_wy@usgs.gov. Hydrologic data for Wyoming is available on the World Wide Web at:

<http://wy.water.usgs.gov>



TWO-DIGIT BASIN NUMBER FOR MAJOR DRAINAGE BASIN		EXPLANATION	
06	Missouri River Basin (Yellowstone, Cheyenne, Niobrara, and Platte River basins)	10	The Great Basin (Bear River basin)
09	Upper Colorado River Basin (Green River basin)	13	Snake River Basin
		---	MAJOR DRAINAGE DIVIDE
		▲	2530 STREAMFLOW-GAGING STATION AND NUMBER
		▼	259050 SURFACE-WATER-QUALITY AND (OR) SEDIMENT STATION AND NUMBER
		◆	2345 STREAMFLOW-GAGING AND SURFACE-WATER-QUALITY AND (OR) SEDIMENT STATION AND NUMBER
		◆	6355 RESERVOIR STATION AND NUMBER

Station numbers are abbreviated by not showing two-digit basin number and last two digits if zero.

Figure 1. Location of surface-water stations, water-quality stations, and stage and/or content stations, 1999 water year.

COOPERATION

The U.S. Geological Survey and organizations of the State of Wyoming have had cooperative agreements for the systematic collection of streamflow records since 1895, for ground-water levels since 1940, and for water-quality records since 1946. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Wyoming State Engineer's Office, Gordon W. Fassett, State Engineer

Wyoming Water Development Commission, Lawrence Besson, Administrator

Wyoming Department of Environmental Quality, Dennis Hemmer, Director

Fremont County Weed and Pest Control District, Lars Baker, Supervisor

Teton Conservation District, Rick Gay, Coordinator

City of Evanston, William Davis, Mayor

City of Sheridan, Jim Wilson, Mayor

Saratoga, Encampment, Rawlins Conservation District, Scott Kerbs, Chairman

Sheridan Area Water Supply Joint Powers Board, Shad Springer, Administrator

Shoshone and Arapaho Tribes, Joint Business Council, John Washakie, Chairman

The following Federal agencies assisted in the data collection program by providing funds or services:

Corps of Engineers, U.S. Army

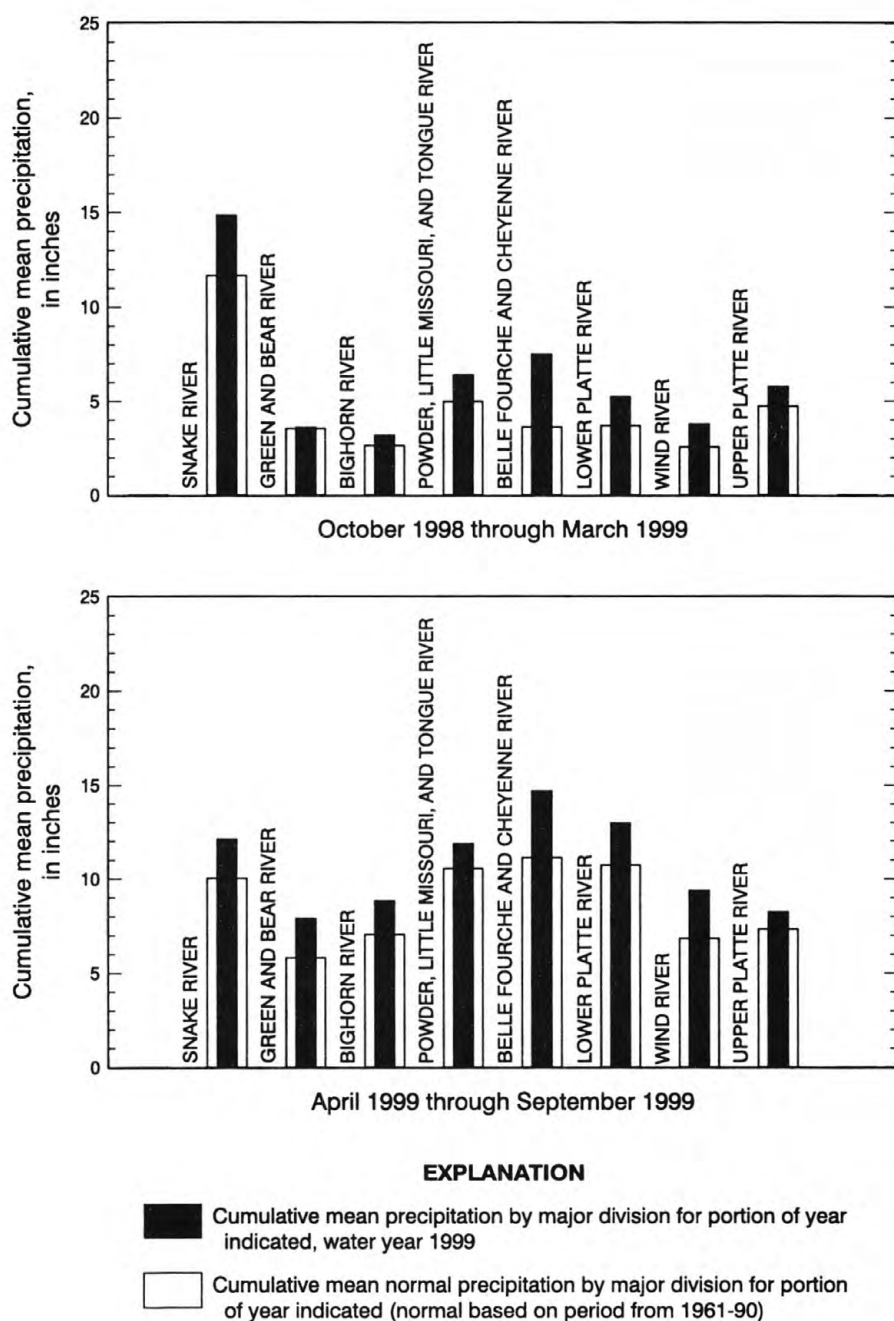
Bureau of Reclamation, U.S. Department of the Interior

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation was greater than normal during water year 1999 throughout most of Wyoming. Snowpack varied from much less than normal to greater than normal across the State. Streamflow at most streamflow-gaging stations in water year 1999 was near normal to much greater than normal. Specific conductance measurements in 1999 at seven gaging stations for six selected Wyoming streams (Shoshone River, Powder River, North Platte River, Green River, Blacks Fork, and Bear River) generally were within the range of measurements for the 10-year period preceding water year 1999.

Precipitation

Precipitation was greater than normal (average for 1961-90) during water year 1999 throughout most of the State. Precipitation and departures from normal for the major divisions, as defined by the National Oceanic and Atmospheric Administration, are published monthly in "Climatological Data, Wyoming". The divisional data from water year 1999 were separated into two time periods (October 1998 through March 1999, and April through September 1999) representing periods of snow accumulation and snowmelt/rainfall for water year 1999 and compared to normal precipitation for the same periods (fig. 2). Precipitation from October 1998 through March 1999 was slightly greater than normal in the Green and Bear River division and was greater than normal in all other divisions of the State. Precipitation from April through September 1999 was greater than normal in all the divisions of the State.



NOTE: Precipitation data summarized by major divisions as defined by the National Oceanic and Atmospheric Administration.

Figure 2. Mean cumulative precipitation for water year 1999 and mean cumulative normal precipitation for 1961-90 by major divisions, Wyoming.

Most of the precipitation data compiled for figure 2 are from stations in basin and plains areas of the State. Data from these stations might not be indicative of precipitation in the mountains. Most of the precipitation in the mountains is in the form of snow. Melting of the snowpack throughout the late spring and early summer provides most of Wyoming's annual water supply. Precipitation and snowpack is reported by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) in "Wyoming Basin Outlook Reports."

Mountain snowpack as of May 1, 1999, prior to the normal intense snowmelt period, varied from much less than normal to greater than normal across the State. Part of the Wind River division was the exception, where snowpack was much greater than normal. The range of snowpack, in percent of normal, for stations in the major river divisions, as defined by the NRCS, in Wyoming as of May 1, 1999 are listed in the table 1.

Table 1.--Summary of snowpack conditions in eight major river divisions in Wyoming for water year 1999.

Major River Division	Range of snowpack, in percent of normal
	As of May 1, 1999
Snake River	110 to 142
Green and Bear River	109 to 141
Bighorn River	54 to 154
Powder and Tongue Rivers	93 to 127
Belle Fourche and Cheyenne Rivers	28
Lower Platte River	100 to 137
Wind River	135 to 187
Upper Platte River	96 to 111

Streamflow

The U.S. Geological Survey operates a network of streamflow stations throughout Wyoming in cooperation with numerous Federal, State, and local agencies. The network changes from year to year as objectives are achieved or changed, or funding is changed. Long-term index stations have been established for the eight major river basin divisions of the State. Over time, the discharge record for these stations provide valuable data to describe hydrologic conditions and climate changes in the State.

Streamflow at most gaging stations across the State in water year 1999 was above normal to much greater than normal. Streamflow statistics at seven gaging stations for representative major rivers in Wyoming are shown in figure 3. Average annual discharge at gaging stations on most major rivers in 1999 was slightly greater to much greater than the median average annual discharge for the period of record. Average annual discharge in 1999 for gaging station 06279500 Bighorn River at Kane was the second highest for the period of record, surpassed only in water year 1947. Average monthly discharges for October through May were nearly equal to or much greater than the median average monthly discharge on most major rivers. A new maximum average monthly discharge for November was established for gaging station 06317000 Powder River at Arvada. Average monthly discharges were greater than normal to much greater than normal during June and normal to greater than normal for July through September for all stations shown in figure 3.

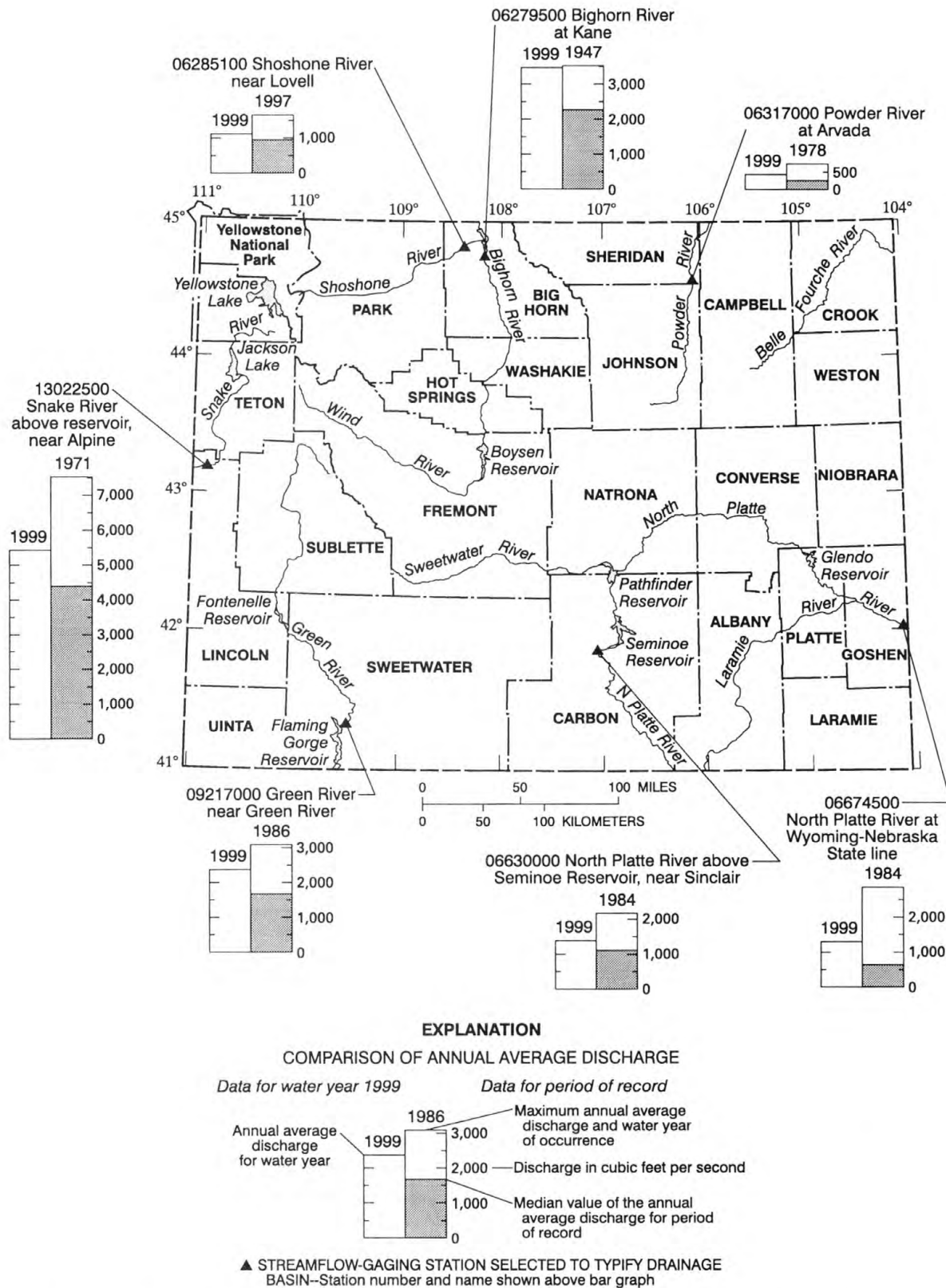


Figure 3a. Annual average discharge for water year 1999, and median and maximum annual average discharge for period of record for seven representative gaging stations in Wyoming.

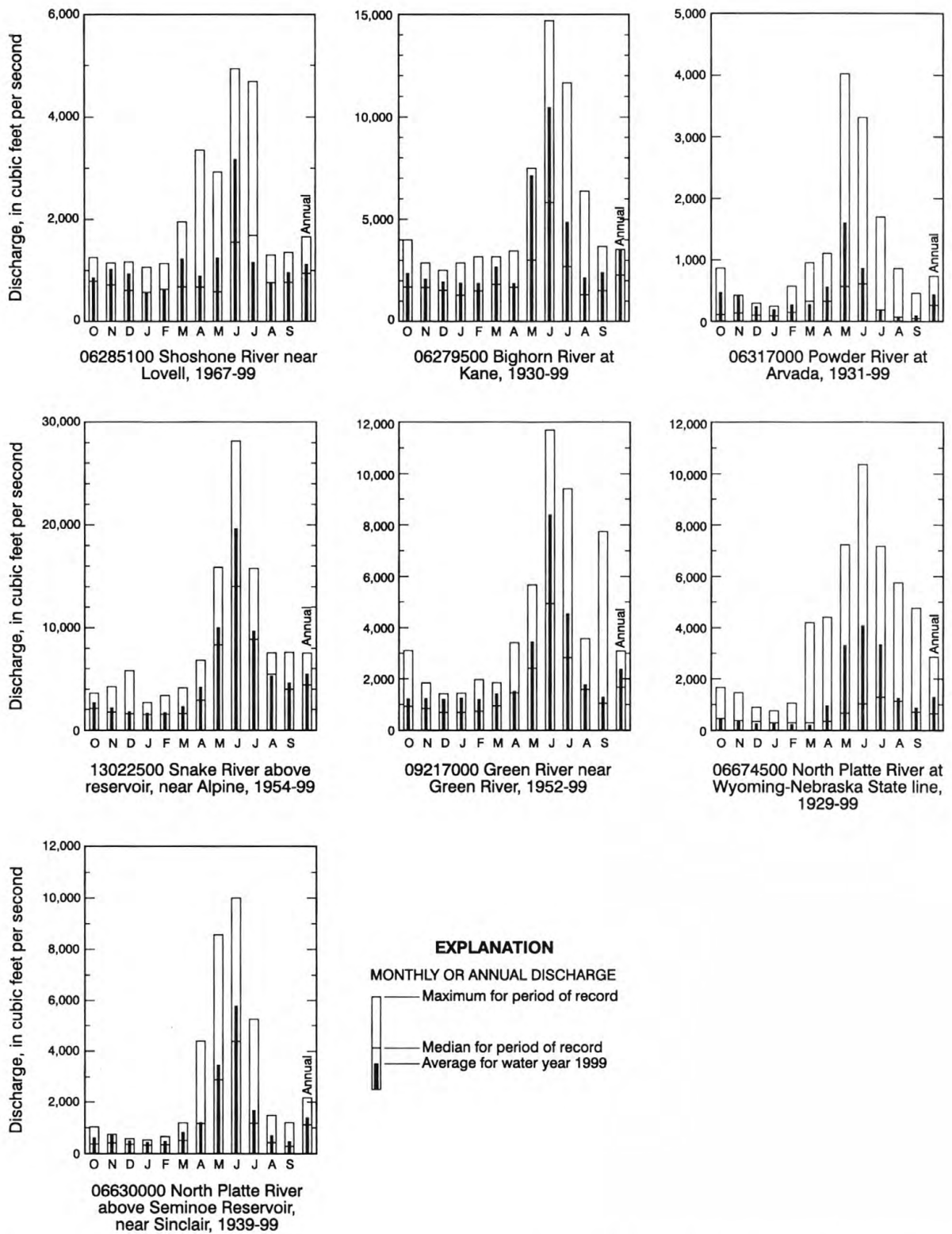


Figure 3b. Average monthly and annual discharge for water year 1999, and median and maximum monthly and annual discharge for period of record for seven representative gaging stations in Wyoming.

Chemical Quality of Stream Water

The U.S. Geological Survey operates a network of water-quality stations throughout Wyoming in cooperation with numerous Federal, State, and local agencies. The network changes from year to year as objectives are achieved or changed, or funding is changed. The sampling frequency varies from station to station, however most stations are sampled at least four times per year. Some stations have only a few years of water-quality information, while other stations have been in operation for many years and provide a basis for description of long-term conditions that represent a wide range of natural variability. Various water-quality measurements are made, either onsite or by laboratory analyses of samples, depending on the objectives for the sampling site. Onsite stream measurements generally include specific conductance, pH, water temperature, and dissolved oxygen for all stations. In addition, bacteria are sometimes analyzed in the field. Laboratory analyses in 1999 included major ions, dissolved solids, nutrients, trace elements, or organic compounds.

The concentration of dissolved solids represents the total of all constituents dissolved in the water. Specific conductance typically varies directly with the dissolved-solids concentration; thus, specific conductance was chosen as an indicator of the concentration of dissolved solids in water. Concentrations of dissolved solids generally are inversely related to discharge. A statistical summary of specific conductance measurements from stream-water samples at seven stations for six selected streams in Wyoming describes the general chemical variability of the stream water during 1999 (table 2). The specific conductance of Wyoming surface waters varies considerably owing to the diverse geology of the State. The maximum value measured on these streams (2170 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at the Powder River station (06317000); the minimum value measured (102 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at the Shoshone River station (06281700).

To compare the current and long-term water-quality conditions, specific conductance measurements are summarized for water year 1999 and the 10-year period of water years 1989-98. The range of specific conductance measurements is described by the minimum and maximum values. In addition, the central tendency of data collected over the 10-year period is described by the median (50th percentile). All specific conductance measurements in 1999 were within the range of measurements for the 10-year period of water years 1989-98, except for one sample for the North Platte River at the Wyoming-Nebraska State line. The minimum specific conductance measurement at this site in water year 1999 (545 microsiemens per centimeter at 25 degrees Celsius) was less than the minimum for the 10-year period of water years 1989-98.

Table 2.--Statistical summary of specific conductance measurements for discrete water samples at selected locations and for the 1999 and 1989-1998 water years.

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius]

Specific Conductance							
Stream name and station number	Number of values	Water Year 1999		Water years 1989-1998			
		Maximum	Minimum	Number of values	Maximum	Minimum	Median
Shoshone River above Demaris Springs, near Cody, WY 06281700	8	259	102	95	450	89	180
Powder River at Arvada, WY 06317000	4	2,170	1,320	60	6,030	744	2,210
North Platte River above Seminoe Reservoir, near Sinclair, WY 06630000	13	487	160	77	600	155	378
North Platte River at Wyoming-Nebraska State line 06674500	4	934	545	90	1,240	627	890
Green River near Green River, WY 09217000	6	574	330	72	1,000	270	508
Blacks Fork near Little America, WY 09224700	10	1,620	635	106	3,950	475	1,380
Bear River above reservoir, near Woodruff, UT 10020100	4	531	180	36	730	145	422

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country. The objectives of the network are to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare with conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 40 stations. 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 Program (NAWQA); (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 to determine global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program is available through the World Wide Web at:

<http://water.usgs.gov/nasqan>

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) To provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) to provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; and (3) to provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

<http://nadp.sws.uiuc.edu>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey 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 53 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 are being 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 decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

The water quality in the Yellowstone river basin presently is being studied as part of the USGS NAWQA program. During the 1999 water year, the study conducted the first of three years of intensive data collection. Ground water and stream water are being sampled for an extensive list of natural and anthropogenic chemicals. Aquatic ecology, including stream morphology and aquatic plant and animal communities, are also being measured. All media are being sampled using a nationally consistent set of protocols, methods, and measurements. Most of the routine data (major ions, nutrients, trace elements, and some pesticides) collected in Montana and Wyoming are included in this report. Other data not included in this report (additional pesticides, volatile organic compounds, stream morphology, populations of aquatic flora and fauna, and data for adjacent states) are available in the District offices.

The Yellowstone River basin study unit extends from central Wyoming north to include most of southeastern Montana and a small part of western North Dakota. The entire Yellowstone River watershed defines the study unit boundaries and includes all of the Wind/Bighorn, Powder, Tongue, and Clarks Fork Yellowstone tributary watersheds. Total area for the study unit is about 70,100 square miles (sq mi) of which 51 percent is in Montana, 48 percent is in Wyoming, and 1 percent is in North Dakota. Total population of the study unit was about 323,000 (1990 census), of which 206,000 were in Montana, 116,000 were in Wyoming, and 1,000 were in North Dakota.

The study unit lies within the Rocky Mountain System and Interior Plains physiographic divisions. Topography of the study unit in the Rocky Mountain System division varies from mountain ranges and high plateaus, including the Wind River Range, Bighorn Mountains, and Absaroka Plateau, to intermontane basins, such as the Wind River and Bighorn Basins. The highest elevations in the study unit are in the Wind River Range, where several peaks exceed 13,000 feet above sea level. The Interior Plains division part of the study unit varies from gently rolling plains to sharply dissected badlands. The lowest point in the study unit, 1,850 feet above sea level, is located at the mouth of the Yellowstone River in North Dakota.

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 within the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://water.usgs.gov/nawqa/nawqa_home.html

or for the Yellowstone Study at:

<http://wy.water.usgs.gov/YELL/yell.html>

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

Tritium Network is a network of stations that has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data also are obtained at a number of precipitation stations. The purpose of collecting tritium data at precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for water year 1999, which began October 1, 1998, and ended September 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figure 1. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each surface-water data station in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The system is used by the U.S. Geological Survey to assign identification numbers for surface-water stations is based on geographic location. Generally, the "downstream-order" system is used for surface-water stations, and the "latitude-longitude" system is used in Wyoming for surface-water stations where only miscellaneous measurements are made.

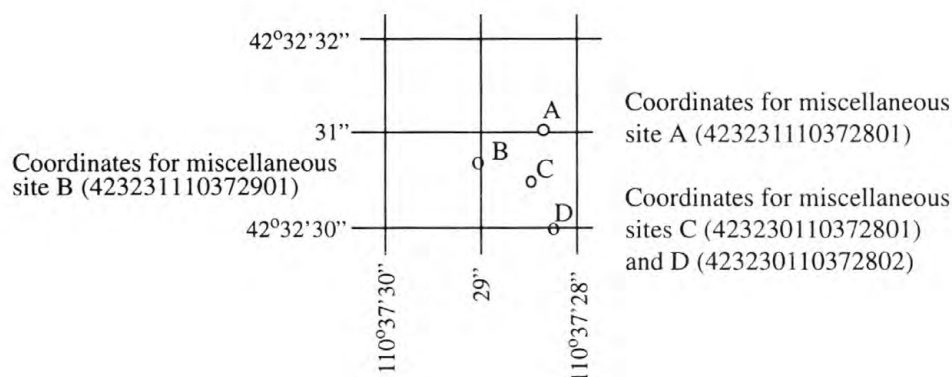
Downstream-Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the section "Surface-water stations, in downstream order, for which records are published in this volume" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06646000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "646000." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of north latitude, the next seven digits denote degrees, minutes, and seconds of west longitude, and the last two digits (assigned sequentially) identify the order of sites if more than one within a 1-second grid. This site-identification number, once assigned, is arbitrary and has no locational significance. If the initial determination of latitude and longitude is found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See following figure.)



System for numbering miscellaneous sites
(latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily reservoir storage and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

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

Data Collection and Computation

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

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

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

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

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

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

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

Data Presentation

Streamflow data in this report are presented in a format considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of reformatting the annual water-data report to meet current user needs and data preferences.

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

Station manuscript

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

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

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 and methods of determining drainage area become available.

PERIOD OF RECORD.--This indicates the 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 flow at it reasonably can be considered equivalent to flow at the present station.

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

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information 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 to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

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

Data table of daily mean values

The daily table of discharge records for streamgaging 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 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 usually is expressed in acre-feet (line headed "AC-FT"). At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

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

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All statistics, except HIGHEST and LOWEST DAILY MEANS and INSTANTANEOUS PEAK FLOW and STAGE, are computed based on the period(s) 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 this occurs, it will be noted in the footnotes. Selected streamflow duration curve statistics and runoff data also are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table. Other statistics, such as instantaneous low flow, annual runoff in cubic feet per square mile or in inches, may be available on request.

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

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

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

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

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

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

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

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

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. No rounding rules apply to discharges listed for miscellaneous sites. Discharges listed are those actually computed.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation from artificial causes, or to other factors. For such stations, figures for cubic feet per second per square mile and for 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 Records Available

Records of daily diversions of water from streams by canals are collected by and published in Hydrographers Annual Reports of the Wyoming Board of Control. Included are discharge records for streams and storage records for reservoirs not published in reports of the Geological Survey.

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

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Wyoming District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained at the address given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality in this report represent a variety of data types and measurement or sampling and analysis frequencies. Whenever possible, records of surface-water quality are obtained at or near streamgaging stations because interpretation of surface-water quality and seasonal variation is enhanced by knowledge of corresponding discharge data. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Classification of Records

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

A distinction needs to be made between "continuing records", as used in reference to data for continuing-record stations, and "continuous record," which refers to a continuous graph over time or a series of recorded discrete short-time-interval values. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, most water-quality data are obtained on a monthly or less frequent basis.

Onsite Measurements and Sample Collection

When obtaining water-quality data, a major concern is assuring that onsite water-quality measurements and the samples collected for laboratory analysis are representative of the actual quality of the water. Measurements such as water temperature, pH, and dissolved oxygen are made onsite when the samples are collected because of the potential for significant change with time. To assure that measurements made in the laboratory also represent the actual environmental concentrations of constituents, prescribed procedures need to be followed in collection and processing of samples. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," (TWRI) Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from other references and from the Wyoming District office.

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

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. If an apparent inconsistency exists between a reported pH value and a 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 water-quality stations equipped with electronic monitors and digital recorders, the record consists of a daily maximum, minimum, and mean values for each constituent measured and are based upon hourly recordings beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records of the individual hourly values (unit values) may be obtained from the Wyoming District office.

Water Temperature

Water temperatures are measured at water-quality stations at the time of sampling. In addition, water temperatures are taken at the time of discharge measurements at streamgaging stations. For stations where water temperatures are measured manually once daily, the water temperatures are taken at about the same time each day for consistency in the record. Deep streams commonly have a small diurnal temperature change, whereas shallow streams may have a daily range of several degrees, which closely follows the changes in air temperature. The water temperature in some streams may be affected by industrial discharges of warm water.

For stations where recording instruments are used, the record consisting of either daily mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements and those taken manually once-daily are on file in the Wyoming District office.

Sediment

Suspended-sediment concentrations are determined from samples collected using depth-integrating samplers. Samples usually are obtained from several verticals in the cross section. At daily sediment stations, daily samples may be obtained from a single vertical and a coefficient applied to determine the mean concentration in the cross section. Daily mean suspended-sediment concentrations are computed using sample concentrations and the continuous streamflow record according to the methods described in TWRI Book 3, Chap. C3. Daily suspended-sediment discharge then is computed as the product of stream discharge times the daily mean concentration times a unit conversion factor of 0.0027.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration 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 were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between suspended-sediment concentration and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

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

Laboratory Analyses

Samples for indicator bacteria are analyzed locally. Samples for suspended-sediment are analysed at the U.S. Geological Survey laboratory in Helena, Montana. Samples for all other constituents are analyzed at the Geological Survey National Water-Quality Laboratory in Lakewood, Colorado except for the pesticide 1-3 dichloropropene, analyzed as part of the Pesticide and Nutrient Sampling program, which is analyzed by Quanterra Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1 and C3. Methods used by the National Water-Quality Laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Presentation of Water-Quality Records

Water-quality records collected at a streamgaging station are published immediately following the daily discharge record. Station number and name are the same for both records. Where a daily discharge record is not available or where the location of the water quality station differs significantly from that of the nearby streamgaging station, the water-quality record is published with its own station number and name in the standard downstream-order sequence.

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, cooperating agencies, and extremes for parameters measured on a daily basis. Tables of chemical, physical, biological, and radiochemical data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, water temperature, and suspended sediment then follow in sequence.

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

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

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptable range (non- ideal colony count)

Quality-Control Samples

Data generated from quality-control (QC) samples are used to evaluate the quality of the sampling and processing techniques, as well as data from the actual samples themselves. Interpretations of environmental sample data is aided when errors associated with sample measurements are known. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of QC data within the USGS. These procedures allow for identification of various types of QC data so that they can be related to corresponding environmental samples. Information on QC samples is on file in the Wyoming district office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is free of the constituents of interest. Any detectable concentration of a constituent in the blank solution is believed to be due to contamination introduced at some point during sample collecting, processing, or analysis. There are many types of blank samples, each designed to test a different part of the overall data-collection process. The types of blank samples collected in this district 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.

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 using recently cleaned equipment).

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 through a field splitter in the same manner and through the same apparatus used for splitting an environmental sample.

Preservation blank - a blank solution that is treated with the same preservatives used for an environmental sample.

Replicate Samples

Replicate samples are two or more sets of environmental samples collected in the same manner such that the samples are considered to be essentially identical in composition. Replicate samples are collected and analyzed to establish the amount of variability in the data, which can be contributed by either the collection or the analytical process or both. There are many types of replicate samples 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 in this district are:

Sequential sample - a type of replicate sample in which the samples are collected one after the other, typically over a short time (pumped samples).

Split sample - a type of replicate sample in which a single composite sample is split into subsamples.

Concurrent sample - two sets of samples, collected independently, but at the same time and place.

ACCESS TO WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://water.usgs.gov>

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

DEFINITION OF TERMS

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

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 the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

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 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, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters

Cubic foot per second per square mile [CFSM, (ft³/s)/mi²] 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.

Inch (IN., in.) 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 uniformly distributed on it.

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

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C 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.

Base flow is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

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

Bottom material: See "Bed material."

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

Colloid is any substance with particles in such a fine state of subdivision dispersed in a medium (for example, water) that they do not settle out; but not in so fine a state of subdivision that they can be said to be truly dissolved.

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 that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.
2. Water-quality, sediment, or other hydrologic measurements are recorded at least daily.

Control designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. 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, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Cubic foot per second-day (CFS-DAY, Cfs-day, $[(\text{ft}^3/\text{s})/\text{d}]$) 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, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

Daily record is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

Daily record station is a site for which daily records of streamflow, sediment, or water-quality values are computed.

Datum, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

Discharge, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

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

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

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

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 agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved oxygen (DO) content of water in equilibrium with air 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, with small temperature changes having the more significant offset. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration of water is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During that analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to reflect the change. Alternatively, alkalinity concentration (as mg/L CaCO_3) can be converted to carbonate concentration by multiplying by 0.60.

Drainage area of a site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. Figures of drainage area 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 is occupied by a drainage system with a common outlet for its surface runoff (see “Drainage area”).

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.

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

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see “Datum”). This elevation is established by a system of levels from known benchmarks, by approximation from topographic maps, or by geographical positioning system.

Gage height (G.H.) is the water-surface elevation referenced to the gage datum. Gage height is often used interchangeably with the more general term “stage,” although gage height is more appropriate when used with a reading on a gage.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

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

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

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 U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

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

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

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

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

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Microsiemens per centimeter (US/CM, $\mu\text{S}/\text{cm}$) 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 mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

Miscellaneous site, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

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

Organism is any living entity.

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 U.S. Geological Survey 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 utilizes 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 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

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

Percent composition 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, or volume.

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

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 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

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

Radioisotopes are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights 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.

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

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 non-exceedance 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 non-exceedances of the $7Q_{10}$ occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. 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.

River mile is the distance of a point on a river measured in miles from the river's mouth along the low-water channel.

River mileage is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

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

Sea level refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929. See: http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD

Sediment is solid material that is transported by, suspended in, or deposited from water. It originates mostly from disintegrated rocks; it also includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along or very close to the bed. In this report, bed load is considered to consist of particles in transit from the bed to an elevation equal to the top of the bed-load sampler nozzle (usually within 0.25 ft of the streambed).

Bed-load discharge (tons per day) is the quantity of sediment moving as bed load, reported as dry weight, that passes a cross section in a given time.

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

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

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

Suspended-sediment discharge (tons/day) is the quantity of sediment moving in suspension, reported as dry weight, 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 (ft³/s) x 0.0027.

Suspended-sediment load is a term that refers to material in suspension. 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.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, reported as dry weight, that passes a cross section in a given time.

Total sediment load or total load is a term that refers to the total sediment (bed load plus suspended-sediment load) that is in transport. 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 total sediment discharge.

Seven-day 10-year low flow (7Q₁₀, 7Q₁₀) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The 7Q₁₀ has a 10-percent chance of occurring in any given year.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is 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 MILL/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 waters, to evaluate mixing of different waters, 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 “stream-flow” is more general than “runoff” as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on USGS topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

Suspended, total is the total amount of a given constituent in the part of a representative suspended-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 analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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.

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot is the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

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

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

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

Turbidity is a measurement of the collective optical properties of a water sample that cause light to be scattered and absorbed rather than transmitted in straight lines; the higher the intensity of scattered light, the higher the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU) or Formazin turbidity units (FTU) depending on the method and equipment used.

Volatile organic compounds (VOC's) 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 VOC's are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often 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 (U.S. Environmental Protection Agency, 1996).

Water level is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see "Gage height"), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1999, is called the "1999 water year."

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

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

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

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

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

Book 1. Collection of Water Data by Direct Measurement**Section D. Water Quality**

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS-TWRI book 1, chap. D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI book 1, chap. D2. 1976. 24 pages.

Book 3. Applications of Hydraulics**Section A. Surface-Water Techniques**

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI book 3, chap. A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI book 3, chap. A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI book 3, chap. A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI book 3, chap. A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 pages.

- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 pages.

Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H.P. Guy and V.W. Norman: USGS-TWRI book 3, chap. C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 pages.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 pages.

Section B. Surface Water

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 pages.

Section D. Interrelated Phases of the Hydrologic Cycle

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

Book 5. Laboratory Analysis

Section A. Water Analysis

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI book 5, chap. A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 pages.

- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI book 5, chap. A6. 1982. 181 pages.

Section C. Sediment Analysis

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

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 pages.

Section B. Instruments for Measurement of Discharge

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

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A5. 1999. 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS-TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS-TWRI book 9, chap. A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS-TWRI book 9, chap. A9. 1998. 60 pages.

MADISON RIVER BASIN

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°39'25", long 111°04'03", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.13 S., R.5 E., Gallatin County, Hydrologic Unit 10020007, Yellowstone National Park, on left bank 0.7 mi downstream of 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 mi².

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 above sea level, from topographic map. 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 datums. U. S. Geological Survey satellite telemeter at station. Supplementary nonrecording gage at site 0.3 mi downstream at different datum used at time during 1927-30.

REMARKS.--Records good. No regulation or diversions upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	502	498	520	480	484	493	488	1020	1720	874	560	567
2	506	502	520	468	480	485	480	1010	1730	827	557	576
3	519	505	520	463	469	487	481	1050	1700	805	559	604
4	508	499	527	466	491	488	482	950	1690	789	568	578
5	502	499	512	471	490	487	482	826	1550	754	574	557
6	502	502	499	478	487	473	491	723	1480	725	630	547
7	501	498	496	485	493	485	488	766	1570	711	584	533
8	493	507	495	485	492	485	493	932	1510	702	573	529
9	493	502	495	485	504	485	493	987	1460	684	557	529
10	493	502	482	485	514	485	486	929	1250	664	557	532
11	493	496	493	485	489	481	470	833	1200	653	573	530
12	493	501	493	485	487	477	476	768	1200	643	635	520
13	493	500	493	484	493	473	485	882	1180	631	657	520
14	493	500	493	476	493	476	487	886	1200	632	617	520
15	493	502	487	485	493	485	479	824	1230	652	576	520
16	499	502	485	493	493	484	480	782	1200	620	558	520
17	498	502	487	489	493	468	486	758	1330	625	557	520
18	500	509	493	491	488	471	515	765	1300	649	548	520
19	494	498	454	491	493	480	571	810	1230	610	547	520
20	493	493	e390	493	487	487	633	923	1170	604	557	520
21	493	500	e370	493	489	493	647	1110	1140	603	568	517
22	493	524	e360	489	490	493	576	1280	1150	587	557	516
23	504	505	e370	491	484	490	532	1490	1100	582	548	512
24	523	544	e420	494	493	492	520	1620	1040	572	539	513
25	516	521	e500	479	493	494	556	1780	1060	564	538	512
26	502	507	468	493	493	513	649	1810	1020	565	529	511
27	498	507	469	489	486	506	731	1850	933	562	531	512
28	500	526	472	480	485	496	829	1920	906	561	584	510
29	501	547	475	476	---	492	835	2090	857	563	603	520
30	502	524	484	473	---	493	842	2110	870	584	559	520
31	502	---	478	476	---	493	---	2070	---	575	620	---
TOTAL	15502	15222	14700	14971	13726	15090	16663	36554	37976	20172	17720	15905
MEAN	500	507	474	483	490	487	555	1179	1266	651	572	530
MAX	523	547	527	494	514	513	842	2110	1730	874	657	604
MIN	493	493	360	463	469	468	470	723	857	561	529	510
AC-FT	30750	30190	29160	29690	27230	29930	33050	72500	75330	40010	35150	31550

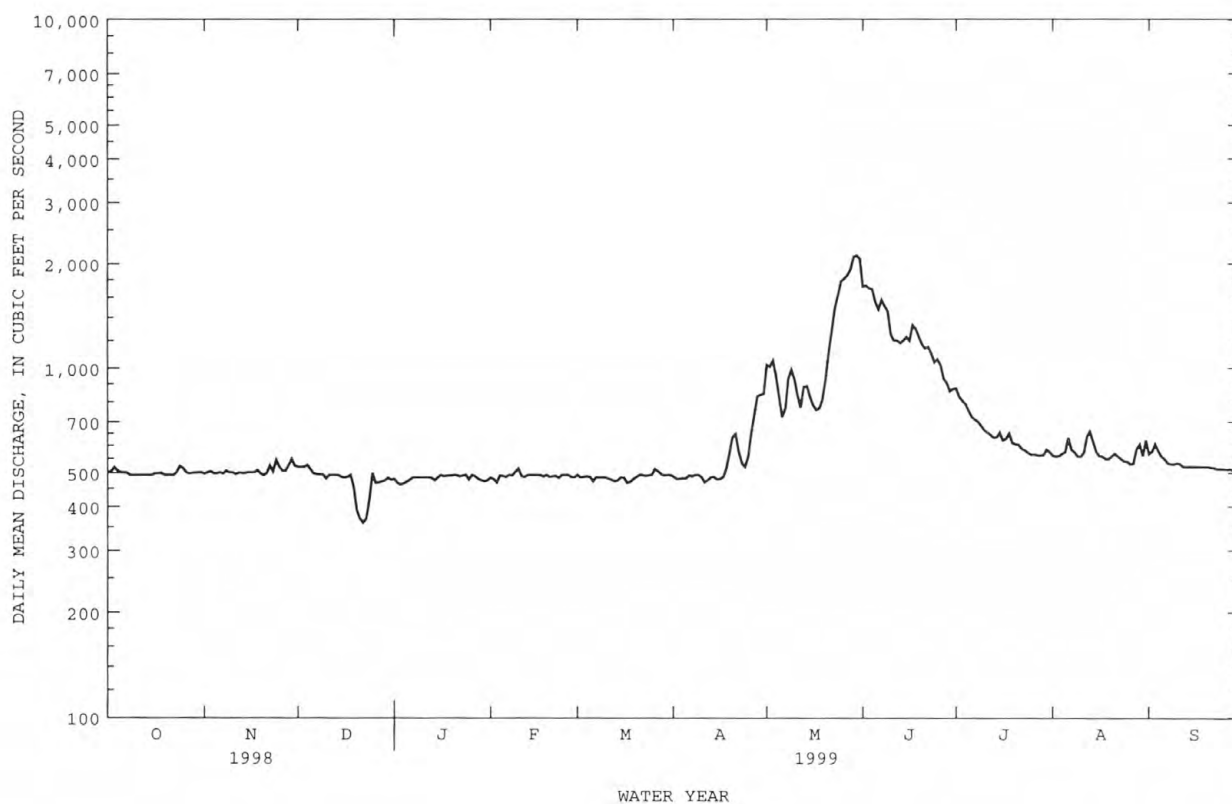
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1999, BY WATER YEAR (WY)*

	433	424	415	404	398	405	495	854	825	503	435	429
MEAN	433	424	415	404	398	405	495	854	825	503	435	429
MAX	710	697	641	586	572	539	671	1725	1479	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 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1913 - 1999*	
ANNUAL TOTAL	225950		234201		--	
ANNUAL MEAN	619		642		500	
HIGHEST ANNUAL MEAN	--		--		789	1997
LOWEST ANNUAL MEAN	--		--		337	1934
HIGHEST DAILY MEAN	1390	May 10	2110	May 30	2750	May 18 1996
LOWEST DAILY MEAN	360	Dec 22	360	Dec 22	245	Jan 1 1942
ANNUAL SEVEN-DAY MINIMUM	408	Dec 18	408	Dec 18	267 ^a	Aug 6 1931
INSTANTANEOUS PEAK FLOW	--		2210	May 29	2820 ^a	May 18 1996
INSTANTANEOUS PEAK STAGE	--		3.35	May 29	10.00 ^b	Jan 8 1937
ANNUAL RUNOFF (AC-FT)	448200		464500		362600	
10 PERCENT EXCEEDS	957		1040		750	
50 PERCENT EXCEEDS	527		509		434	
90 PERCENT EXCEEDS	493		480		338	

* During periods of operation.

^a Gage height, 3.78 ft.^b About, backwater from ice.^e Estimated.

GALLATIN RIVER BASIN

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION.--Lat 45°29'51", long 111°16'11" in SE¹/₄SE¹/₄SE¹/₄ 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 mi².

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 MT-85-1 (M).

GAGE.--Water-stage recorder. Datum of gage is 5,167.67 ft above sea level. Prior to Oct. 20, 1932, nonrecording gages at several different sites and datums within 0.8 mi of present site.

REMARKS.--Records good. Diversions for irrigation of about 1,400 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519	462	441	341	339	362	379	971	3290	2080	738	632
2	517	490	431	335	347	340	356	995	3230	1950	725	609
3	540	481	432	321	338	340	359	1010	3360	1840	717	629
4	533	458	436	319	322	338	366	951	3230	1760	800	614
5	523	470	384	332	335	334	361	834	3270	1700	785	583
6	518	466	334	342	338	312	358	750	3470	1630	784	560
7	513	455	357	360	347	341	355	811	3500	1640	744	552
8	505	460	374	370	336	343	369	1020	3210	1680	699	564
9	496	447	358	370	327	349	377	1080	2830	1530	672	535
10	500	411	294	369	346	348	364	1000	2520	1460	663	523
11	507	411	346	374	311	336	342	919	2410	1410	684	521
12	504	432	368	377	295	336	357	880	2400	1370	787	515
13	498	461	397	379	309	341	377	904	2600	1340	814	511
14	505	481	394	358	327	352	376	851	3290	1300	752	509
15	495	469	380	379	332	361	355	815	3650	1270	686	515
16	507	460	388	374	329	374	362	781	3820	1190	660	491
17	501	458	388	354	333	330	382	752	4180	1160	634	487
18	507	466	380	358	331	343	430	805	4180	1120	620	481
19	489	450	281	361	333	364	509	1030	4300	1070	612	488
20	476	412	e240	370	338	379	607	1310	4190	1050	641	478
21	481	455	e220	375	338	401	595	1630	4190	1010	645	471
22	487	455	e230	372	346	406	524	1920	4210	970	625	471
23	501	432	238	361	342	404	481	2230	3520	930	597	466
24	501	477	272	333	346	408	462	2660	3170	894	595	464
25	491	435	334	314	355	431	520	3180	3310	875	644	466
26	482	432	352	357	362	482	645	3640	2890	847	590	462
27	478	433	355	367	343	445	733	3850	2550	824	571	475
28	488	462	374	341	342	396	777	4010	2270	807	674	464
29	496	455	365	329	---	393	813	4630	2150	796	734	465
30	475	434	364	328	---	396	744	4500	2190	787	627	471
31	462	---	347	319	---	379	---	3610	---	757	672	---
TOTAL	15495	13570	10854	10939	9387	11464	14035	54329	97380	39047	21191	15472
MEAN	500	452	350	353	335	370	468	1753	3246	1260	684	516
MAX	540	490	441	379	362	482	813	4630	4300	2080	814	632
MIN	462	411	220	314	295	312	342	750	2150	757	571	462
AC-FT	30730	26920	21530	21700	18620	22740	27840	107800	193200	77450	42030	30690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 1999, BY WATER YEAR (WY) *

	MEAN	458	385	323	309	306	313	504	1813	2980	1315	618	497
MAX	743	589	549	468	430	465	899	3135	5110	3669	1162	788	
(WY)	1893	1960	1893	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	1934	1931

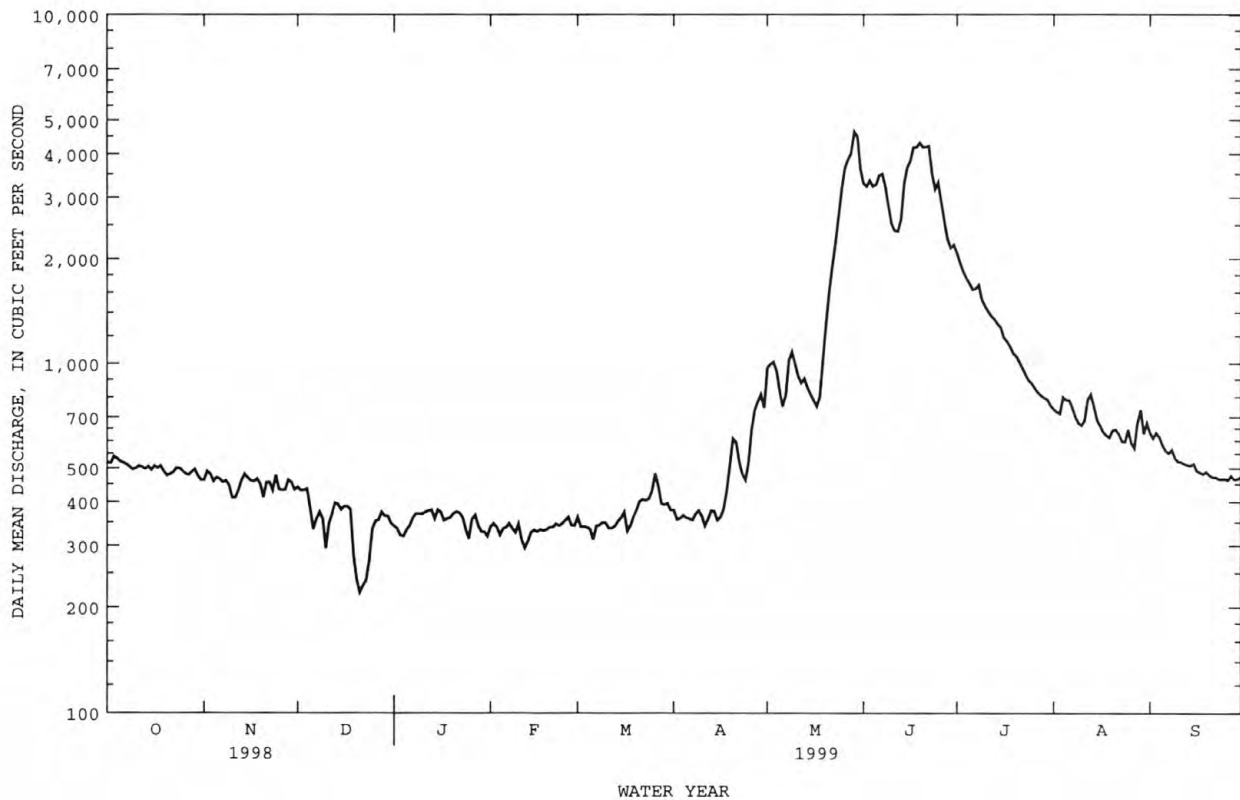
06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1889 - 1999*	
ANNUAL TOTAL	358082		313163		--	
ANNUAL MEAN	981		858		821	
HIGHEST ANNUAL MEAN	--		--		1184	1976
LOWEST ANNUAL MEAN	--		--		408	1934
HIGHEST DAILY MEAN	5160	Jun 26	4630	May 29	8970	Jun 17 1974
LOWEST DAILY MEAN	220	Dec 21	220	Dec 21	174	Nov 21 1931
ANNUAL SEVEN-DAY MINIMUM	259	Dec 19	259	Dec 19	182	Jan 18 1931
INSTANTANEOUS PEAK FLOW	--		4990	May 29	9270 ^a	Jun 27 1971
INSTANTANEOUS PEAK STAGE	--		4.98	May 29	7.38	Jun 17 1974
ANNUAL RUNOFF (AC-FT)	710300		621200		594800	
10 PERCENT EXCEEDS	2520		2250		2060	
50 PERCENT EXCEEDS	495		481		430	
90 PERCENT EXCEEDS	370		337		270	

* During periods of operation.

^a From rating curve extended above 5,500 ft³/s. Gage height, 6.49 ft.

e Estimated.



YELLOWSTONE RIVER BASIN

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

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

DRAINAGE AREA.--1,006 mi².

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

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,729.58 ft above sea level. Prior to Oct. 2, 1928, nonrecording gage at site 450 ft upstream at datum 1.07 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No regulation. U. S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	730	659	e560	e560	e600	581	627	3170	6570	3980	1970
2	1030	729	666	e550	e560	e600	581	641	3320	6490	3870	1990
3	1010	733	654	e550	e560	e600	577	662	3520	6420	3770	2000
4	981	731	652	e540	e560	e600	576	690	3670	6390	3680	1960
5	965	726	648	e530	e560	e600	576	705	3800	6380	3620	1920
6	945	724	636	e540	e570	e590	580	716	3930	6370	3540	1900
7	949	715	628	e540	e570	e590	578	726	4070	6330	3450	1830
8	940	712	618	e540	e570	e590	576	737	4280	6300	3370	1770
9	927	704	608	e540	e570	e590	577	759	4380	6230	3270	1740
10	908	699	604	e540	e560	e590	583	774	4410	6160	3190	e1700
11	891	689	599	e540	e560	e590	578	793	4440	6040	3120	e1650
12	879	676	596	e550	e560	e590	575	802	4480	5960	3070	e1600
13	870	668	589	e550	e560	e590	569	825	4540	5870	3010	e1600
14	862	656	583	e550	e570	e580	565	840	4620	5760	2950	e1550
15	843	653	580	e550	e570	e580	563	858	4750	5680	2880	e1500
16	821	643	578	e550	e570	e580	558	901	4910	5580	2790	e1450
17	824	633	561	e550	e570	e580	555	916	5110	5460	2720	e1420
18	811	628	541	e550	e570	e580	549	913	5300	5350	2640	1390
19	805	621	e520	e550	e570	e580	552	919	5510	5250	2560	1370
20	793	618	e510	e550	e570	e580	560	931	5690	5140	2490	1350
21	791	630	e500	e550	e580	e580	582	963	5910	5040	2460	1330
22	780	660	e500	e550	e580	e580	577	1020	6140	4940	2420	1310
23	783	659	e500	e550	e580	e580	574	1100	6330	4830	2380	1300
24	776	676	e510	e540	e580	585	574	1210	6440	4720	2310	1270
25	771	663	e510	e540	e590	583	574	1390	6630	4620	2260	1240
26	769	647	e520	e540	e590	585	577	1620	6690	4510	2200	1190
27	764	645	e520	e550	e590	596	578	1820	6720	4420	2150	1160
28	758	654	e530	e550	e590	600	582	2070	6700	4330	2140	1140
29	748	663	e540	e550	---	596	588	2360	6630	4240	2120	1130
30	744	656	e550	e550	---	590	600	2610	6600	4180	2060	1100
31	735	---	e560	e550	---	584	---	2950	---	4100	2040	---
TOTAL	26503	20241	17770	16940	15990	18239	17215	34848	152690	169660	88510	45830
MEAN	855	675	573	546	571	588	574	1124	5090	5473	2855	1528
MAX	1030	733	666	560	590	600	600	2950	6720	6570	3980	2000
MIN	735	618	500	530	560	580	549	627	3170	4100	2040	1100
AC-FT	52570	40150	35250	33600	31720	36180	34150	69120	302900	336500	175600	90900

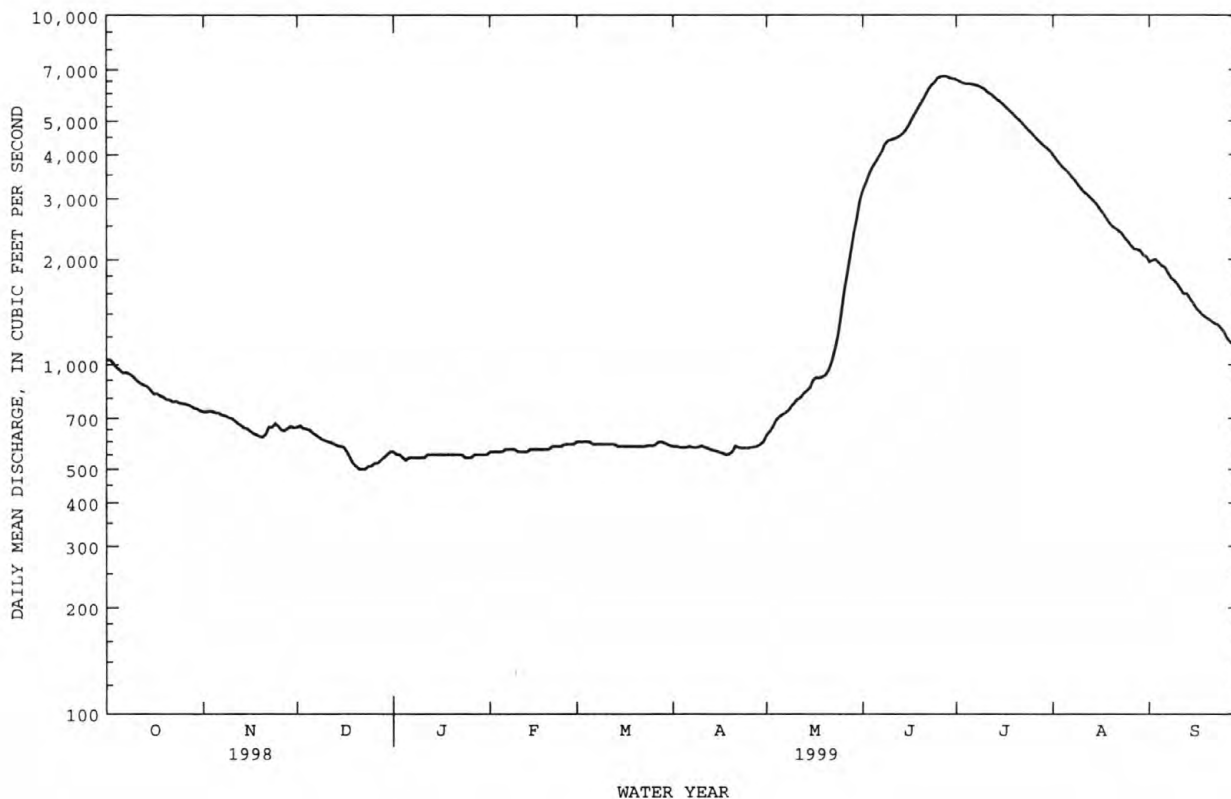
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)*

	MEAN	809	612	480	401	389	448	546	1155	3709	4104	2251	1230
MAX	1259	984	775	699	637	717	801	2214	8574	7160	4031	1954	
(WY)	1973	1951	1951	1998	1998	1962	1952	1997	1997	1982	1982	1982	
MIN	327	276	246	168	122	130	175	605	1707	1272	812	538	
(WY)	1989	1989	1932	1989	1989	1935	1937	1953	1934	1934	1934	1934	

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1927 - 1999*	
ANNUAL TOTAL	539115		624436		--	
ANNUAL MEAN	1477		1711		1350	
HIGHEST ANNUAL MEAN	--		--		2253	1997
LOWEST ANNUAL MEAN	--		--		682	1934
HIGHEST DAILY MEAN	4750	Jul 8	6720	Jun 27	9930	Jun 19 1997
LOWEST DAILY MEAN	500	Dec 21	500	Dec 21	100	Feb 18 1993
ANNUAL SEVEN-DAY MINIMUM	507	Dec 19	507	Dec 19	113	Feb 11 1989
INSTANTANEOUS PEAK FLOW	--		6790	Jun 27	9950	Jun 18 1997
INSTANTANEOUS PEAK STAGE	--		7.63	Jun 27	8.90	Jun 18 1997
ANNUAL RUNOFF (AC-FT)	1069000		1239000		977800	
ANNUAL RUNOFF (CFSM)	1.47		1.70		1.34	
ANNUAL RUNOFF (INCHES)	19.94		23.09		18.23	
10 PERCENT EXCEEDS	3730		4920		3520	
50 PERCENT EXCEEDS	730		726		682	
90 PERCENT EXCEEDS	573		550		340	

* During periods of operation.
e Estimated.



YELLOWSTONE RIVER BASIN

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

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

DRAINAGE AREA.--99.0 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and those for May 21 to July 7, which are poor. No regulation or diversion upstream of station. U. S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	36	33	26	26	26	27	196	654	607	145	66
2	54	37	33	e25	e26	e25	26	177	626	551	139	140
3	55	38	33	e25	26	24	e26	158	766	530	139	124
4	54	38	32	25	26	25	27	137	649	612	147	100
5	51	38	e23	26	26	e25	28	120	664	596	134	84
6	49	37	e19	27	26	e25	28	108	740	542	132	77
7	47	36	e20	27	26	26	27	119	774	559	155	71
8	47	36	e21	27	e26	26	28	144	723	538	125	66
9	48	36	e20	26	26	25	28	133	589	474	115	65
10	48	26	e22	26	26	26	27	123	503	448	109	63
11	48	29	e23	27	e26	e25	e27	115	487	429	126	63
12	47	31	24	26	e26	e25	27	110	494	415	149	62
13	46	32	25	e25	e26	25	28	116	546	418	150	60
14	46	34	23	e23	26	25	28	109	745	409	121	60
15	45	33	25	25	26	24	e28	104	920	376	113	59
16	43	33	26	26	26	25	28	99	1030	330	103	57
17	44	34	26	e25	27	25	29	98	1120	301	95	57
18	43	34	e23	25	27	24	33	99	1180	286	91	57
19	41	32	e21	26	26	24	36	107	1280	267	91	56
20	37	33	e19	26	26	24	41	156	1270	253	93	55
21	36	34	e18	26	26	25	42	229	1270	241	90	54
22	36	34	e19	25	27	25	38	323	1260	227	83	53
23	38	31	e20	25	26	25	37	447	940	212	79	52
24	38	35	e21	23	26	26	40	609	987	206	76	52
25	38	33	e22	e24	26	27	55	852	1100	198	74	53
26	37	30	e23	25	26	30	72	1090	928	180	73	53
27	36	30	24	26	25	29	97	1230	808	173	70	51
28	37	34	25	e26	26	31	107	1310	652	165	98	48
29	40	33	26	e26	---	28	130	1350	603	173	94	47
30	38	32	26	e26	---	28	154	1070	636	176	76	46
31	38	---	26	e26	---	28	---	757	---	154	71	---
TOTAL	1352	1009	741	792	730	801	1349	11795	24944	11046	3356	1951
MEAN	43.6	33.6	23.9	25.5	26.1	25.8	45.0	380	831	356	108	65.0
MAX	55	38	33	27	27	31	154	1350	1280	612	155	140
MIN	36	26	18	23	25	24	26	98	487	154	70	46
AC-FT	2680	2000	1470	1570	1450	1590	2680	23400	49480	21910	6660	3870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

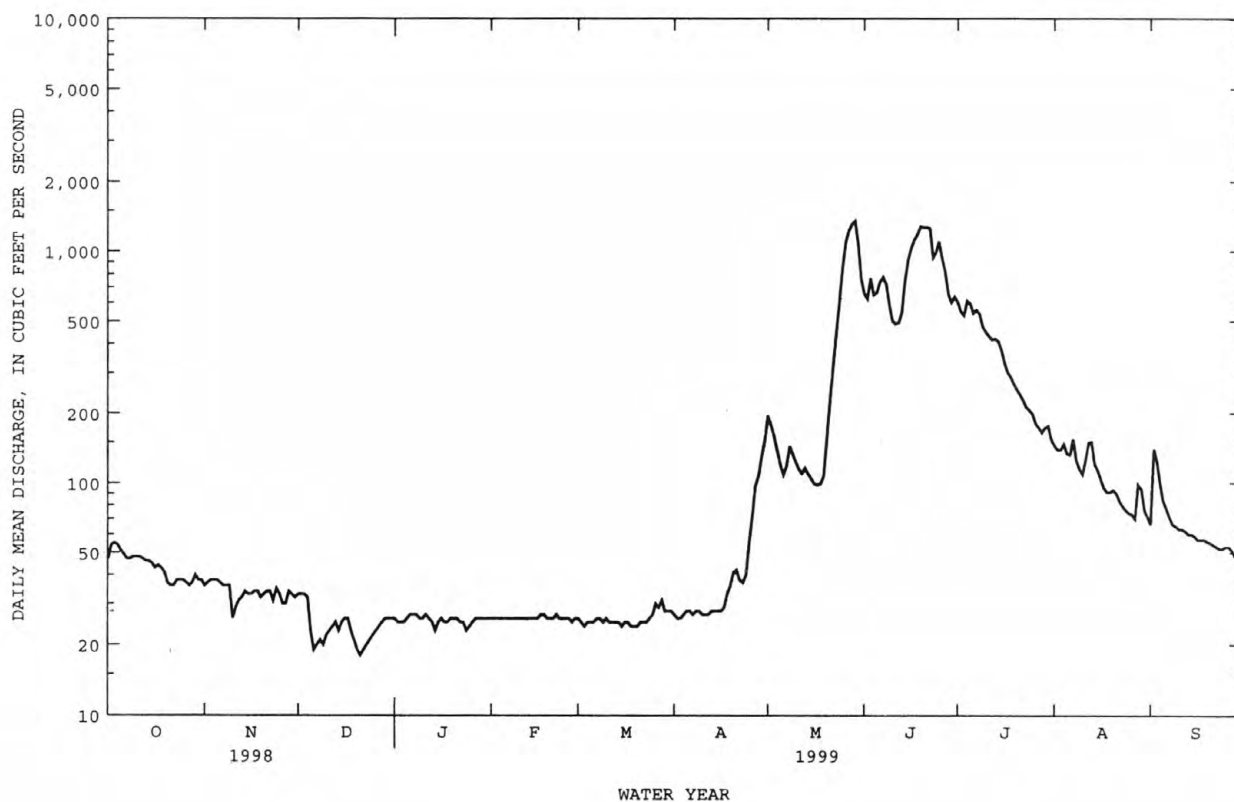
MEAN	45.0	33.0	25.6	25.5	23.6	24.5	63.9	412	733	320	104	61.4
MAX	68.8	40.3	31.2	33.3	30.9	32.0	127	580	1251	447	162	92.0
(WY)	1998	1997	1996	1997	1997	1997	1990	1993	1996	1998	1997	1997
MIN	27.8	21.4	16.0	16.7	16.9	20.1	32.3	217	368	106	58.1	40.4
(WY)	1989	1995	1989	1989	1995	1989	1993	1995	1994	1994	1994	1994

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	54697		59866		--	
ANNUAL MEAN	150		164		156	
HIGHEST ANNUAL MEAN	--		--		204	1996
LOWEST ANNUAL MEAN	--		--		108	1994
HIGHEST DAILY MEAN	842	Jun 26	1350	May 29	2070	Jun 9 1996
LOWEST DAILY MEAN	18	Dec 21	18	Dec 21	12	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	20	Dec 19	20	Dec 19	13	Feb 2 1989
INSTANTANEOUS PEAK FLOW	--		1710	Jun 19	2450 ^a	Jun 8 1996
INSTANTANEOUS PEAK STAGE	--		6.64	Jun 19	6.64	Jun 19 1999
ANNUAL RUNOFF (AC-FT)	108500		118700		113200	
10 PERCENT EXCEEDS	471		592		512	
50 PERCENT EXCEEDS	39		38		44	
90 PERCENT EXCEEDS	26		25		22	

a Gage height, 5.61 ft.

e Estimated.



YELLOWSTONE RIVER BASIN

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

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

DRAINAGE AREA.--660 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft above sea level, from topographic map. Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925 to July 29, 1927, water-stage recorder at same site at datum 1.00 ft higher. July 29, 1927 to Sept. 30, 1969, water-stage recorder at same site and datum. May 1985 to September 1986, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	156	155	e150	e150	e200	e180	2980	5170	e4800	582	285
2	195	167	156	e140	e150	e200	e170	2990	5360	e4500	553	420
3	218	169	160	e140	e150	e195	e160	2510	6140	e4200	531	660
4	239	161	161	e150	e160	e190	e170	2130	5360	e4500	576	490
5	219	163	e140	e150	e160	e180	e170	1660	5530	e4200	539	392
6	199	160	e120	e160	e160	e180	173	1370	5920	e4000	517	333
7	197	157	e120	e150	e170	e180	166	1600	5960	e4000	570	302
8	193	159	e130	e150	e170	e190	174	2430	5480	e3800	494	286
9	187	149	e120	e150	e170	e190	183	2140	4500	e3500	445	275
10	181	141	e130	e150	e160	e190	178	1800	3740	e3200	417	264
11	179	e130	e140	e160	e150	e180	158	1560	3840	e2800	428	260
12	171	e140	e150	e150	e150	e180	171	1420	4120	e2500	647	251
13	167	e145	e150	e140	e160	e190	201	1410	4350	e2100	682	242
14	168	152	e150	e140	e170	e210	221	1300	5090	e1800	529	237
15	168	147	e150	e150	e180	e220	198	1300	6140	1600	447	232
16	172	147	e160	e140	e180	e210	202	1070	e7000	1410	413	334
17	171	145	e160	e150	e170	e200	224	1140	e8000	1300	379	429
18	168	149	e150	e150	e160	e210	331	1200	e9000	1270	358	422
19	157	137	e130	e150	e170	e210	519	1490	e9500	1150	342	419
20	148	134	e110	e150	e160	e210	588	2420	e9700	1080	346	416
21	152	147	e100	e150	e160	e220	629	3730	e9800	1020	382	411
22	156	163	e100	e150	e170	e220	528	4680	e9000	953	358	402
23	169	139	e110	e140	e180	e220	472	5820	e8500	876	322	400
24	171	166	e110	e140	e190	e230	454	6840	e8800	823	304	394
25	169	149	e120	e130	e210	e250	702	8140	e8000	796	296	396
26	160	e130	e130	e140	e200	e240	1000	8030	e7000	729	281	399
27	158	e135	e130	e140	e200	e220	1400	8550	e6000	687	269	400
28	179	e140	e140	e140	e210	e200	1800	9320	e5500	658	314	389
29	179	e150	e160	e140	---	e210	2060	9800	e5700	657	413	370
30	168	155	e150	e140	---	e200	2370	8760	e5200	750	320	372
31	169	---	e150	e140	---	e190	---	6520	---	631	296	---
TOTAL	5510	4482	4242	4520	4770	6315	15952	116110	193400	66290	13350	10882
MEAN	178	149	137	146	170	204	532	3745	6447	2138	431	363
MAX	239	169	161	160	210	250	2370	9800	9800	4800	682	660
MIN	148	130	100	130	150	180	158	1070	3740	631	269	232
AC-FT	10930	8890	8410	8970	9460	12530	31640	230300	383600	131500	26480	21580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1999, BY WATER YEAR (WY)*

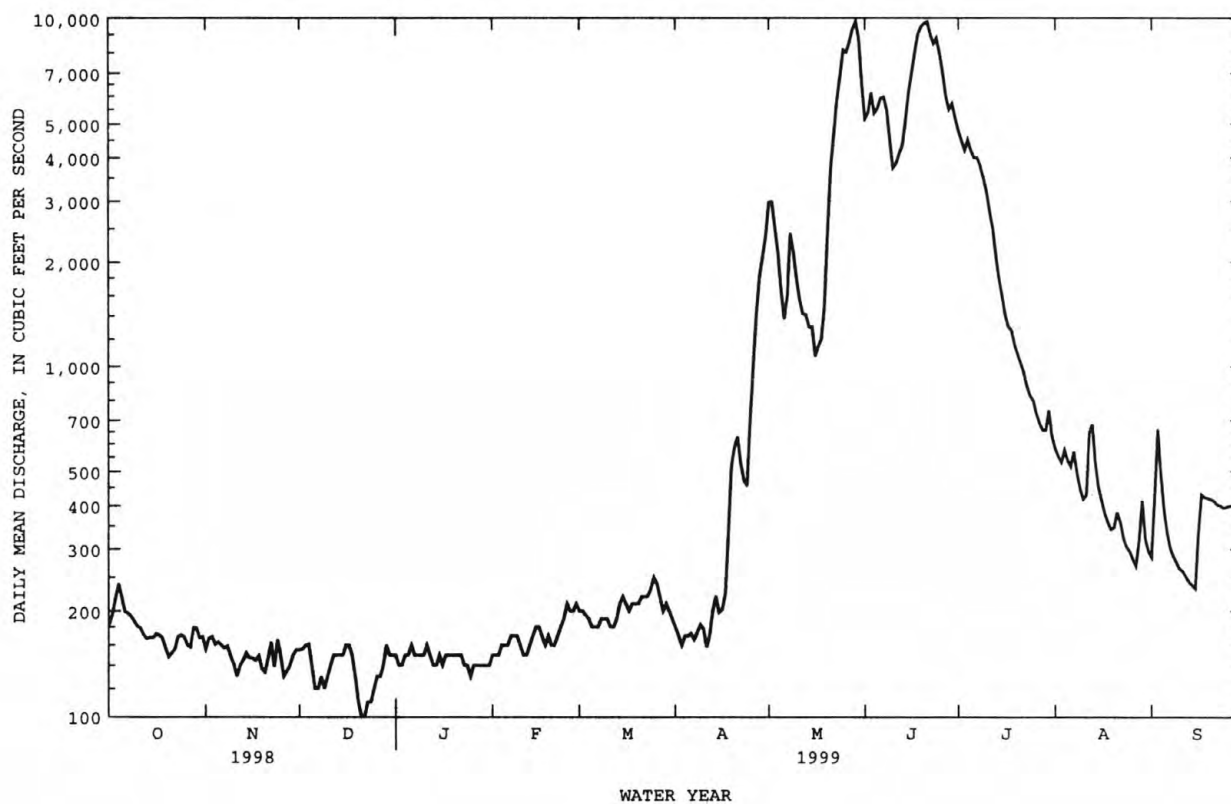
	MEAN	215	158	121	107	103	112	455	2816	4306	1386	358	232
MAX	485	330	202	200	171	204	1684	6885	9044	3256	886	518	
(WY)	1942	1928	1951	1969	1969	1999	1990	1928	1996	1943	1968	1968	
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1408	344	173	115	
(WY)	1989	1937	1953	1989	1942	1964	1945	1933	1934	1931	1940	1988	

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1923 - 1999*
ANNUAL TOTAL	344218	445823	--
ANNUAL MEAN	943	1221	871
HIGHEST ANNUAL MEAN	--	--	1531
LOWEST ANNUAL MEAN	--	--	525
HIGHEST DAILY MEAN	5530 Jun 19	9800 May 29	15600 Jun 10 1996
LOWEST DAILY MEAN	100 Dec 21	100 Dec 21	45 Mar 23 1964
ANNUAL SEVEN-DAY MINIMUM	111 Dec 19	111 Dec 19	57 Mar 5 1964
INSTANTANEOUS PEAK FLOW	--	11500 May 29	19500 Jun 10 1996
INSTANTANEOUS PEAK STAGE	--	9.14 May 29	12.15 Jun 10 1996
ANNUAL RUNOFF (AC-FT)	682800	884300	631100
10 PERCENT EXCEEDS	3820	4570	2990
50 PERCENT EXCEEDS	195	210	190
90 PERCENT EXCEEDS	120	140	92

* During periods of operation.

e Estimated.



YELLOWSTONE RIVER BASIN

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

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

DRAINAGE AREA.--202 mi².

PERIOD OF RECORD.--October 1938 to September 1972, April 1984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,623.97 ft above sea level (levels by National Park Service).

REMARKS.--Records good. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	138	139	129	120	124	121	315	1100	553	237	174
2	154	144	136	125	106	119	119	340	1060	528	233	172
3	159	144	135	124	105	126	118	338	1060	525	228	183
4	157	140	137	124	115	120	118	312	1000	513	236	173
5	153	143	127	124	115	124	121	267	1020	476	233	169
6	153	141	126	124	113	117	120	239	1090	446	237	165
7	150	138	126	124	111	131	120	275	1140	449	236	160
8	150	139	135	121	108	126	124	362	1040	479	222	163
9	150	134	119	118	113	127	121	389	908	474	211	163
10	147	127	121	120	111	127	120	362	798	447	206	164
11	150	134	145	119	101	126	117	317	780	431	221	165
12	149	133	147	119	107	126	121	316	783	414	239	163
13	147	133	148	117	111	126	123	337	807	406	219	166
14	147	136	142	112	110	129	123	304	904	400	200	166
15	147	136	143	110	109	130	120	289	1030	390	190	167
16	150	137	139	115	109	128	121	270	1050	368	183	165
17	149	141	139	112	111	123	126	273	1080	357	176	163
18	150	141	127	115	111	123	138	324	1130	345	173	163
19	148	135	99	115	113	126	152	441	1180	327	170	163
20	144	133	e110	116	110	130	165	564	1140	314	171	163
21	142	126	e110	117	113	133	163	667	1110	303	172	162
22	142	124	e115	116	114	133	151	767	1130	290	168	159
23	144	128	e120	114	104	130	145	910	978	279	163	159
24	147	142	e125	112	112	128	144	1050	907	270	160	159
25	145	134	131	106	118	128	158	1180	917	264	158	159
26	142	135	134	124	124	134	191	1200	813	256	156	157
27	140	140	138	115	121	131	225	1250	708	248	155	159
28	141	147	132	111	122	123	248	1350	627	248	187	158
29	146	149	138	115	---	120	250	1500	567	254	186	159
30	144	140	133	107	---	121	250	1470	580	261	169	156
31	142	---	129	118	---	122	---	1270	---	245	190	---
TOTAL	4584	4112	4045	3638	3137	3911	4433	19248	28437	11560	6085	4917
MEAN	148	137	130	117	112	126	148	621	948	373	196	164
MAX	159	149	148	129	124	134	250	1500	1180	553	239	183
MIN	140	124	99	106	101	117	117	239	567	245	155	156
AC-FT	9090	8160	8020	7220	6220	7760	8790	38180	56400	22930	12070	9750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)*

	128	113	103	97.2	92.9	93.6	141	514	732	311	165	138
MEAN	128	113	103	97.2	92.9	93.6	141	514	732	311	165	138
MAX	175	151	135	134	128	128	304	1067	1354	662	236	190
(WY)	1969	1998	1998	1998	1998	1998	1990	1997	1971	1943	1943	1968
MIN	95.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4
(WY)	1961	1940	1941	1941	1940	1942	1945	1960	1987	1988	1988	1988

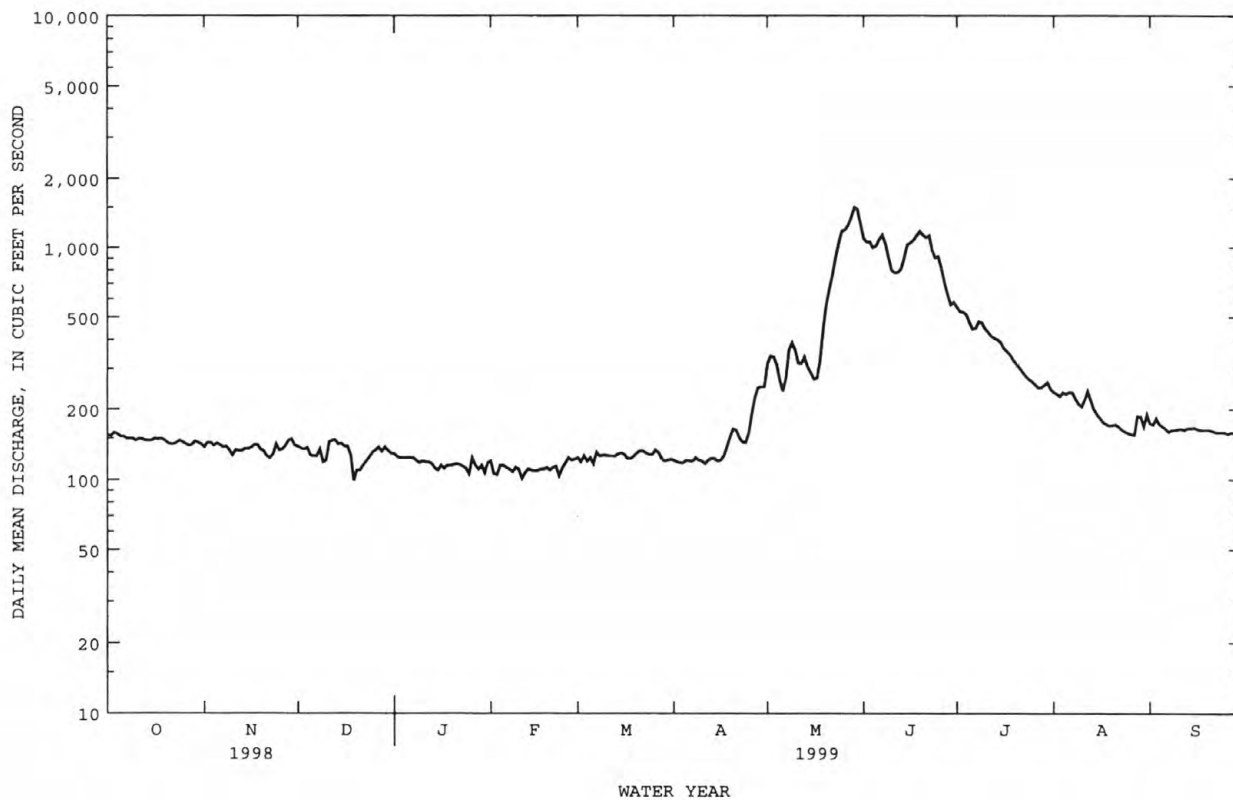
06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999*	
ANNUAL TOTAL	94357		98107		--	
ANNUAL MEAN	259		269		219	
HIGHEST ANNUAL MEAN	--		--		324	1997
LOWEST ANNUAL MEAN	--		--		138	1988
HIGHEST DAILY MEAN	1040	Jun 26	1500	May 29	1830	May 29 1956
LOWEST DAILY MEAN	99	Dec 19	99	Dec 19	53	Dec 15 1988
ANNUAL SEVEN-DAY MINIMUM	115	Dec 18	108	Feb 10	61	Feb 1 1989
INSTANTANEOUS PEAK FLOW	--		1590	May 29	2080 ^a	Jun 4 1956
INSTANTANEOUS PEAK STAGE	--		4.54	May 29	5.03	Jun 2 1997
ANNUAL RUNOFF (AC-FT)	187200		194600		158800	
10 PERCENT EXCEEDS	645		732		529	
50 PERCENT EXCEEDS	148		147		122	
90 PERCENT EXCEEDS	125		115		88	

* During periods of operation.

^a Gage height, 4.46 ft.

e Estimated.



YELLOWSTONE RIVER BASIN

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT
(National Water-Quality Assessment Program)

LOCATION.--Lat 45°06'43", long 110°47'37", in NW¹/₄SE¹/₄NW¹/₄ sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft downstream from county road bridge at Corwin Springs, 1.3 mi upstream from Mol Heron Creek, 7 mi northwest of Gardiner, and at river mile 549.7.

DRAINAGE AREA.--2,623 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 5,079.09 ft above sea level. Aug. 12, 1889, to Nov. 4, 1893, nonrecording gages at site 2 mi upstream at different datums. Sept. 2, 1910, to Apr. 19, 1935, nonrecording gages on bridge at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lies downstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District. Water-quality data are published in the special studies section of this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1760	1370	1340	1090	1090	1170	1210	4920	13100	12400	5360	2820
2	1760	1380	1330	1100	1100	1110	1100	5210	13300	11900	5210	2890
3	1790	1390	1350	1090	1030	1090	1190	4700	14600	11600	5070	3260
4	1780	1370	1350	1070	1040	1090	1170	4190	13600	11600	5030	3030
5	1730	1370	1260	1110	1100	1090	1200	3520	14000	11600	4930	2920
6	1690	1370	1130	1120	1090	1030	1210	3030	14500	11000	4860	2790
7	1680	1350	1160	1130	1110	1090	1210	3320	15200	10900	4820	2710
8	1670	1370	1230	1130	1100	1120	1230	4600	14400	10900	4620	2620
9	1640	1360	1180	1120	1130	1120	1240	4590	13100	10300	4440	2560
10	1620	1270	1140	1130	1160	1130	1230	4140	11600	9940	4290	2520
11	1600	1310	1210	1150	1060	1100	1170	3650	11500	9680	4260	2470
12	1580	1310	1280	1150	1000	1090	1210	3430	11800	9400	4550	2400
13	1550	1330	1310	1140	1080	1080	1230	3600	12200	9230	4560	2370
14	1550	1330	1200	1110	1080	1130	1260	3440	13500	9030	4240	2340
15	1530	1310	1210	1120	1100	1160	1200	3280	15400	8820	4010	2290
16	1520	1310	1220	1140	1100	1160	1190	3110	16400	8450	3870	2250
17	1480	1300	1190	1090	1120	1080	1220	3050	17200	8160	3720	2210
18	1490	1310	1170	1130	1100	1090	1360	3180	18100	7980	3600	2170
19	1460	1260	e900	1140	1100	1140	1590	3800	18900	7650	3500	2130
20	1430	1240	e720	1170	1100	1190	1770	5170	18900	7420	3430	2110
21	1420	1260	e700	1170	1100	1220	1880	7380	18800	7210	3420	2080
22	1410	1340	e750	1150	1110	1250	1750	9040	19500	6970	3360	2040
23	1430	1290	e850	1170	1110	1250	1600	11200	17500	6750	3240	2010
24	1460	1420	e900	1100	1130	1270	1560	12900	16300	6540	3150	1990
25	1440	1370	e950	1080	1160	1320	1800	15100	16900	6390	3080	1980
26	1410	1280	e1000	1090	1160	1430	2220	15200	15700	6190	3000	1940
27	1390	1300	1060	1140	1100	1430	2690	16200	14000	5990	2920	1880
28	1390	1350	1090	1110	1110	1250	3280	17600	13000	5830	3020	1840
29	1440	1380	1080	1110	---	1280	3600	19400	12400	5730	3150	1820
30	1400	1350	1080	1090	---	1310	3960	18300	12400	5800	2940	1820
31	1390	---	1070	1060	---	1250	---	15600	---	5540	2920	---
TOTAL	47890	39950	34410	34700	30770	36520	49530	235850	447800	266900	122570	70260
MEAN	1545	1332	1110	1119	1099	1178	1651	7608	14930	8610	3954	2342
MAX	1790	1420	1350	1170	1160	1430	3960	19400	19500	12400	5360	3260
MIN	1390	1240	700	1060	1000	1030	1100	3030	11500	5540	2920	1820
AC-FT	94990	79240	68250	68830	61030	72440	98240	467800	888200	529400	243100	139400

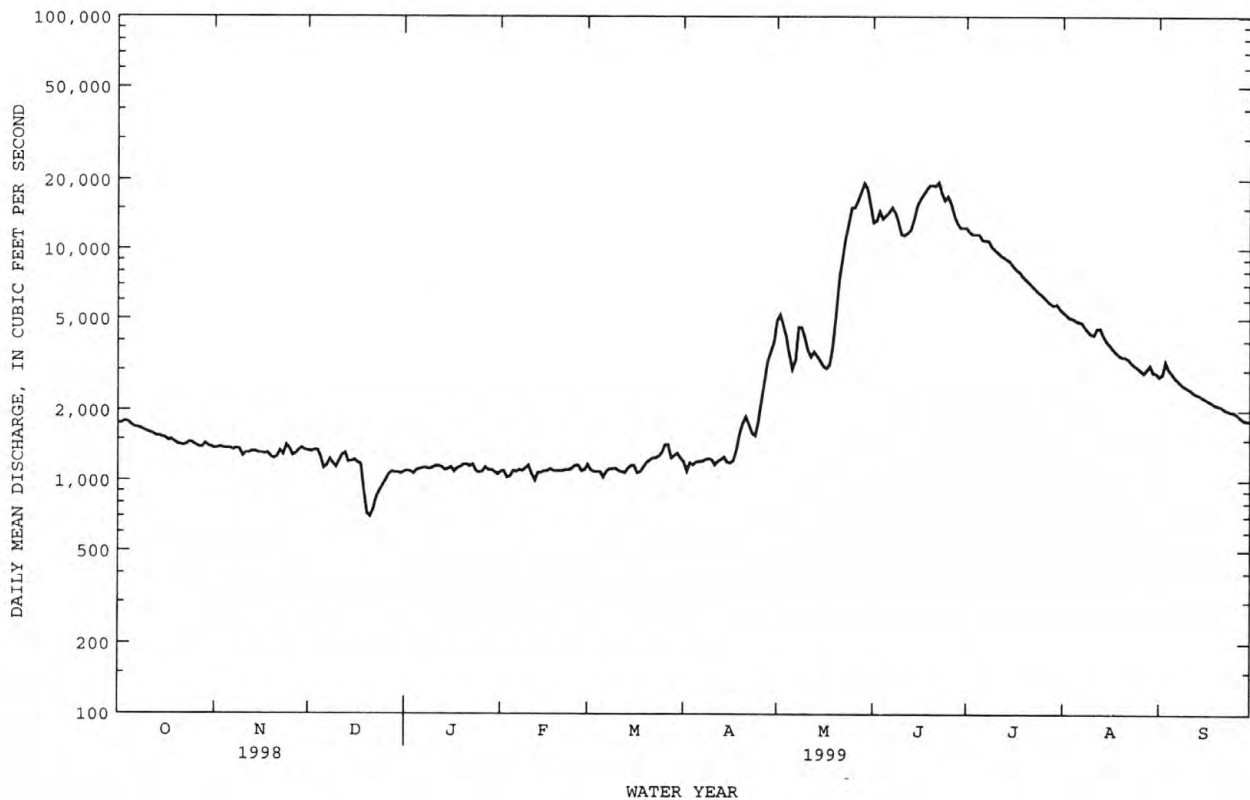
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 1999, BY WATER YEAR (WY) *

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
MEAN	1532	1197	970	854	841	922	1541	6058	11560	6896	3223	1971
MAX	2429	2058	1424	1361	1340	1376	3542	13590	22540	13260	5688	3207
(WY)	1973	1928	1984	1997	1997	1997	1990	1928	1997	1982	1982	1968
MIN	781	702	551	448	411	412	576	2575	4245	2025	1319	938
(WY)	1989	1989	1937	1937	1937	1937	1937	1975	1934	1919	1919	1988

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1889 - 1999*	
ANNUAL TOTAL	1253950		1417150		--	
ANNUAL MEAN	3435		3883		3139	
HIGHEST ANNUAL MEAN	--		--		5158	1997
LOWEST ANNUAL MEAN	--		--		1903	1934
HIGHEST DAILY MEAN	14300	Jun 26	19500	Jun 22	32000	Jun 14 1918
LOWEST DAILY MEAN	700	Dec 21	700	Dec 21	380	Feb 5 1989
ANNUAL SEVEN-DAY MINIMUM	824	Dec 19	824	Dec 19	393	Feb 4 1937
INSTANTANEOUS PEAK FLOW	--		20600	May 29	32200 ^a	Jun 10 1996
INSTANTANEOUS PEAK STAGE	--		8.73	May 29	11.50	Jun 14 1918
ANNUAL RUNOFF (AC-FT)	2487000		2811000		2274000	
10 PERCENT EXCEEDS	9250		12000		8530	
50 PERCENT EXCEEDS	1460		1480		1410	
90 PERCENT EXCEEDS	1160		1090		760	

* During periods of operation.

^a Gage height, 10.92 ft.^e Estimated.

YELLOWSTONE RIVER BASIN

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

LOCATION.--Lat 44°57'28", long 109°48'21", Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 12, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
OCT 27...	0815	11	103	7.5	.5	-2.5	597	10.8	96	55	17	2.9	
FEB 26...	1025	17	87	8.0	.5	-3.0	665	8.9	71	44	14	2.2	
MAY 25...	1100	752	41	7.9	3.5	20.0	676	10.9	93	21	6.7	1.2	
AUG 18...	0900	90	55	7.7	11.0	20.0	600	10.0	116	25	7.7	1.3	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 27...	1.6	.1	.4	54	4.9	.2	<.1	5.1	65	.09	1.93	<.01	
FEB 26...	1.3	.1	.4	45	4.7	.3	<.1	4.7	55	.07	2.53	<.01	
MAY 25...	.9	.1	.3	27	2.1	.3	<.1	4.1	32	.04	65.3	<.01	
AUG 18...	.8	.1	.3	26	2.7	.1	<.1	3.0	32	.04	7.69	<.01	
DATE		NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
OCT 27...	<.05	.04	<.01	12	<1	19	<1	E8.6	<1	<1	<1	<1	<1
FEB 26...	.07	<.02	<.01	6	<1	14	<1	<16.0	<1	2	<1	<1	<1
MAY 25...	.06	.02	.01	26	<1	8	<1	<16.0	<1	<1.0	<1	<1	2
AUG 18...	<.05	<.02	<.01	8	<1	10	<1	<16.0	<1	<1.0	<1	<1	1
DATE		IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT 27...	E6	<1	<6	2	<.1	<1	<1	<1	<1	<1	51	<10	4
FEB 26...	<10	<1	<6	1	<.1	<1	<1	<1	<1	<1	40	<10	2
MAY 25...	27	<1	<6	4	<.1	<1	<1	<1	<1	<1	23	<10	2
AUG 18...	10	<1	<4	1	<.1	<1	<1	<1	<1	<1	26	<10	1

E Estimated.

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53", in NW¹/₄SW¹/₄NW¹/₄ sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi².

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,100 acres upstream from station. U. S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	229	353	e260	276	250	266	1350	3640	3380	1190	410
2	227	225	354	e260	257	250	251	1650	3260	3170	1110	421
3	246	257	349	e260	249	237	244	1430	3570	3040	1010	636
4	261	283	355	e260	255	249	245	1280	3630	3300	1090	687
5	280	270	347	e270	272	242	244	1060	3740	3800	1140	604
6	276	269	e230	e260	253	229	240	865	3740	3480	1210	532
7	277	278	e210	e260	268	231	239	857	4130	3380	1170	479
8	269	281	e180	e250	266	251	241	1150	3860	3750	1060	428
9	262	275	e210	e260	256	240	258	1080	3380	3480	968	391
10	263	258	e230	e270	262	240	266	895	2800	3070	881	360
11	281	247	e250	e290	e220	231	249	744	2640	2890	805	343
12	278	301	e260	304	e170	224	239	651	2770	2780	874	328
13	268	321	e290	293	e260	219	243	645	2860	2800	933	307
14	270	325	e320	285	271	219	247	639	3470	2920	870	291
15	269	331	324	301	266	228	221	607	4420	2980	778	268
16	282	328	323	290	250	232	204	614	5120	2680	688	247
17	289	324	328	277	255	234	204	561	6030	2370	601	231
18	276	321	e280	276	246	219	232	536	6850	2340	540	222
19	266	318	e200	292	252	226	285	615	7380	2220	500	217
20	255	300	e150	290	249	242	302	881	7610	2040	482	212
21	251	307	e130	289	231	270	371	1490	7410	1880	507	202
22	248	333	e140	286	248	312	319	2020	7640	1760	517	197
23	249	340	e150	264	246	300	282	2720	7150	1660	481	191
24	251	334	e150	e240	254	311	245	3450	6340	1560	451	179
25	251	346	e160	e230	250	345	258	4310	6600	1540	431	182
26	241	340	e190	e270	251	405	358	4790	6530	1490	407	184
27	231	343	e250	296	239	411	565	4890	4890	1390	385	184
28	232	350	e250	280	248	339	768	5310	3710	1300	398	175
29	235	364	e260	259	---	295	1540	5940	3100	1260	459	172
30	230	357	e260	270	---	292	1330	5680	3150	1360	423	176
31	231	---	e260	255	---	274	---	4650	---	1300	421	---
TOTAL	7967	9155	7743	8447	7020	8247	10956	63360	141420	76370	22780	9456
MEAN	257	305	250	272	251	266	365	2044	4714	2464	735	315
MAX	289	364	355	304	276	411	1540	5940	7640	3800	1210	687
MIN	222	225	130	230	170	219	204	536	2640	1260	385	172
AC-FT	15800	18160	15360	16750	13920	16360	21730	125700	280500	151500	45180	18760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1999, BY WATER YEAR (WY)

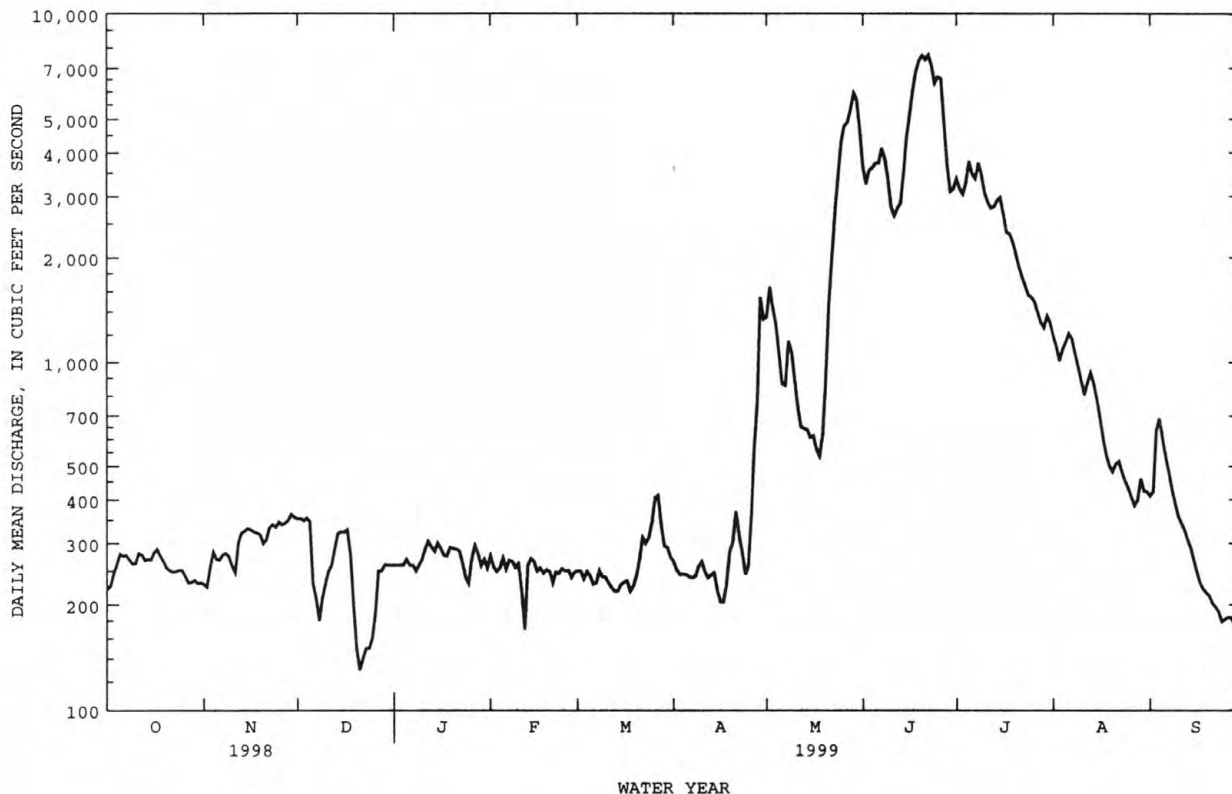
	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
MEAN	285	298	263	232	223	222	427	2034	4125	2229	630	323
MAX	725	648	379	359	329	364	1167	5704	7225	5744	1453	834
(WY)	1931	1928	1951	1997	1963	1972	1943	1928	1997	1975	1951	1941
MIN	45.5	115	110	110	100	96.3	110	839	1607	349	66.5	50.1
(WY)	1989	1989	1922	1922	1922	1922	1961	1968	1987	1988	1988	1988

YELLOWSTONE RIVER BASIN

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1921 - 1999	
ANNUAL TOTAL	319566		372921		942	
ANNUAL MEAN	876		1022		1485	
HIGHEST ANNUAL MEAN					547	
LOWEST ANNUAL MEAN					12300	
HIGHEST DAILY MEAN	5150	Jul 4	7640	Jun 22	33	Jun 9 1981
LOWEST DAILY MEAN	130	Dec 21	130	Dec 21	37	Apr 26 1961
ANNUAL SEVEN-DAY MINIMUM	153	Dec 20	153	Dec 20	14800	Oct 8 1988
INSTANTANEOUS PEAK FLOW			8140	Jun 20	9.97	Jun 9 1981
INSTANTANEOUS PEAK STAGE			7.44	Jun 20		
ANNUAL RUNOFF (AC-FT)	633900		739700		682700	
10 PERCENT EXCEEDS	2640		3380		2890	
50 PERCENT EXCEEDS	320		295		302	
90 PERCENT EXCEEDS	226		227		170	

e Estimated.



YELLOWSTONE RIVER BASIN

49

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

LOCATION.--Lat 43°26'30", long 109°27'29", in NW¹/₄ SW¹/₄ NW¹/₄ sec.3, T.5 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, 400 ft downstream from East Fork Wind River and 12.1 mi southeast of Dubois.

DRAINAGE AREA.--1,073 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above sea level, from topographic map.

REMARKS.--Records good. Diversions for irrigation of about 15,000 acres upstream from station. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0115	5,090	7.42
June 19	0130	*6,910	*8.30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412	342	283	217	219	223	221	756	3150	2620	1050	578
2	403	364	282	210	211	204	208	851	2960	2720	996	590
3	419	374	278	204	213	201	227	660	3070	3040	942	769
4	431	322	269	204	213	199	214	539	2920	3330	980	1030
5	390	323	209	218	223	197	214	455	3260	3090	932	854
6	384	363	149	224	213	187	238	395	2930	2640	1180	700
7	397	318	155	224	224	200	228	491	3230	2650	952	609
8	384	317	153	222	223	200	255	739	3130	2760	910	555
9	373	260	192	222	227	201	261	755	2790	2370	861	520
10	364	251	194	215	231	198	218	521	2660	2240	800	501
11	359	256	204	221	203	200	204	471	2720	2160	767	481
12	352	242	225	223	204	200	223	424	3090	2040	788	456
13	349	279	253	217	224	193	257	437	3220	2080	743	449
14	339	347	228	212	228	216	285	413	3590	2030	701	436
15	349	350	224	211	228	235	247	454	4420	1870	663	428
16	390	331	235	212	217	247	233	456	5020	1760	622	414
17	369	316	239	212	225	205	244	405	5830	1590	589	408
18	360	313	216	215	223	211	344	464	5710	1660	568	399
19	343	249	173	217	224	243	487	514	5910	1540	543	466
20	350	250	156	219	213	283	525	564	5780	1490	536	465
21	346	305	151	217	210	325	418	763	5720	1470	569	425
22	357	316	172	216	219	325	373	1210	5500	1420	576	407
23	368	288	189	220	218	304	317	1710	4740	1330	535	395
24	365	313	181	218	222	319	303	2320	4540	1310	517	389
25	363	266	e190	194	219	361	334	2830	4360	1310	519	389
26	359	274	e190	208	212	428	351	3210	3850	1160	501	379
27	355	278	195	213	200	327	456	3410	3060	1100	491	375
28	372	299	213	205	218	258	407	4110	2610	1080	491	388
29	362	290	209	207	---	252	1050	4260	2610	1070	502	383
30	364	284	220	215	---	261	995	4240	2490	1220	495	385
31	358	---	214	208	---	236	---	4130	---	1120	672	---
TOTAL	11486	9080	6441	6640	6104	7639	10337	42957	114870	59270	21991	15023
MEAN	371	303	208	214	218	246	345	1386	3829	1912	709	501
MAX	431	374	283	224	231	428	1050	4260	5910	3330	1180	1030
MIN	339	242	149	194	200	187	204	395	2490	1070	491	375
AC-FT	22780	18010	12780	13170	12110	15150	20500	85210	227800	117600	43620	29800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY)

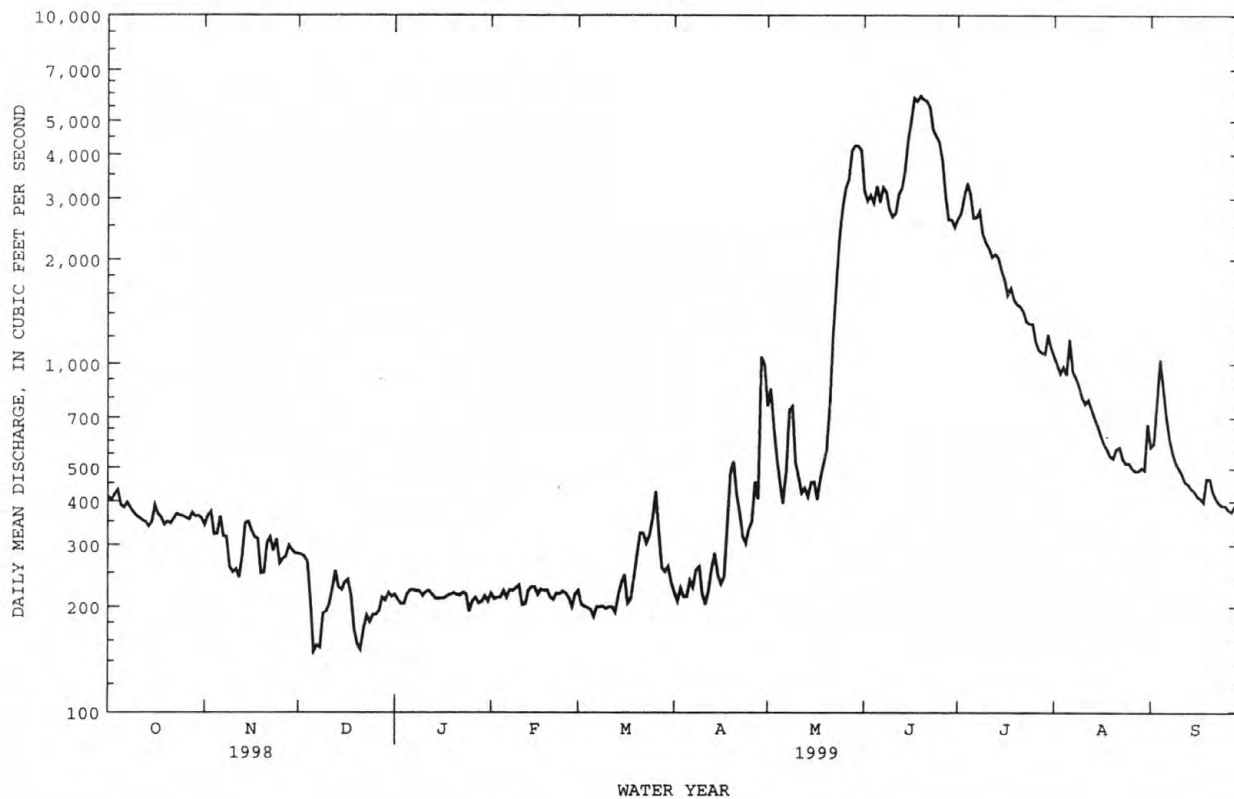
	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	320	248	198	186	182	207	317	1376	2871
MAX	421	303	242	222	218	246	429	2121	4559
(WY)	1998	1999	1998	1998	1999	1999	1994	1997	1995
MIN	244	171	146	122	144	178	213	621	892
(WY)	1993	1993	1993	1993	1993	1995	1995	1995	1994

YELLOWSTONE RIVER BASIN

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1991 - 1999	
ANNUAL TOTAL	269324		311838		--	
ANNUAL MEAN	738		854		714	
HIGHEST ANNUAL MEAN	--		--		982	
LOWEST ANNUAL MEAN	--		--		410	
HIGHEST DAILY MEAN	3870	Jul 3	5910	Jun 19	8770	Jun 9 1997
LOWEST DAILY MEAN	149	Dec 6	149	Dec 6	90	Jan 13 1993
ANNUAL SEVEN-DAY MINIMUM	173	Dec 19	173	Dec 19	96	Jan 9 1993
INSTANTANEOUS PEAK FLOW	--		6910	Jun 19	11300	Jun 9 1997
INSTANTANEOUS PEAK STAGE	--		8.30	Jun 19	9.97	Jun 9 1997
ANNUAL RUNOFF (AC-FT)	534200		618500		517000	
10 PERCENT EXCEEDS	2000		2740		1900	
50 PERCENT EXCEEDS	363		362		291	
90 PERCENT EXCEEDS	204		206		170	

e Estimated.



LOCATION.--Lat 43°20'44", long 109°24'34", in SE¹/₄ SE¹/₄ sec.1, T.4 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.5 mi upstream from Upper Dinwoody Lake, 7.0 mi west of Burris, and 17 mi southeast of Dubois.

PERIOD OF RECORD.--October 1957 to September 1978, October 1988 to current year.

REMARKS.--Records good except those for Apr. 28 to May 25, which are fair and those for estimated daily discharges, which are poor. No diversion upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 28	2330	815	3.81
June 22	1100	*1,300	*4.08
July 4	0930	926	3.87

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	33	27	11	11	12	11	118	483	434	430	426
2	88	43	27	10	11	12	13	117	440	473	410	353
3	90	38	26	10	11	11	13	109	444	605	417	305
4	87	31	26	10	11	11	12	96	420	805	399	262
5	79	39	e25	10	11	13	11	83	436	762	411	206
6	78	36	e24	11	11	14	11	73	455	696	477	168
7	79	35	e23	11	11	11	12	84	486	673	481	142
8	72	35	e24	11	11	10	14	116	462	836	447	125
9	67	36	e25	11	11	11	13	130	436	692	433	115
10	63	34	e23	11	11	10	13	114	394	582	407	111
11	57	39	e21	11	13	10	13	96	386	553	387	115
12	57	34	e22	11	13	10	13	96	434	531	374	104
13	59	31	e21	11	12	11	13	98	484	549	316	97
14	52	34	e20	11	13	12	14	102	556	570	299	93
15	52	32	20	11	13	12	15	103	696	597	294	93
16	56	29	18	12	13	12	14	100	813	550	255	94
17	54	26	18	12	13	11	14	95	1090	479	244	96
18	51	26	16	12	12	11	16	107	931	470	245	98
19	47	22	e14	12	12	12	21	162	1090	467	259	118
20	46	28	e12	12	12	13	28	203	1130	450	273	106
21	45	25	e8.4	12	11	14	32	297	1070	487	295	95
22	49	24	e8.0	12	11	14	30	426	1170	512	274	86
23	47	24	e8.6	12	12	13	25	519	997	501	287	82
24	45	24	e9.2	12	12	13	40	489	842	492	289	79
25	43	25	e9.6	13	12	14	35	502	855	503	282	75
26	42	25	e10	12	11	16	47	609	712	459	302	67
27	39	24	10	12	12	14	61	691	534	431	294	59
28	45	25	10	12	12	12	52	738	441	430	310	62
29	40	26	10	12	---	13	194	773	421	420	326	61
30	39	26	11	12	---	13	187	727	440	530	309	64
31	35	---	11	11	---	12	---	664	---	507	470	---
TOTAL	1792	909	537.8	353	329	377	987	8637	19548	17046	10696	3957
MEAN	57.8	30.3	17.3	11.4	11.8	12.2	32.9	279	652	550	345	132
MAX	90	43	27	13	13	16	194	773	1170	836	481	426
MIN	35	22	8.0	10	11	10	11	73	386	420	244	59
AC-FT	3550	1800	1070	700	653	748	1960	17130	38770	33810	21220	7851

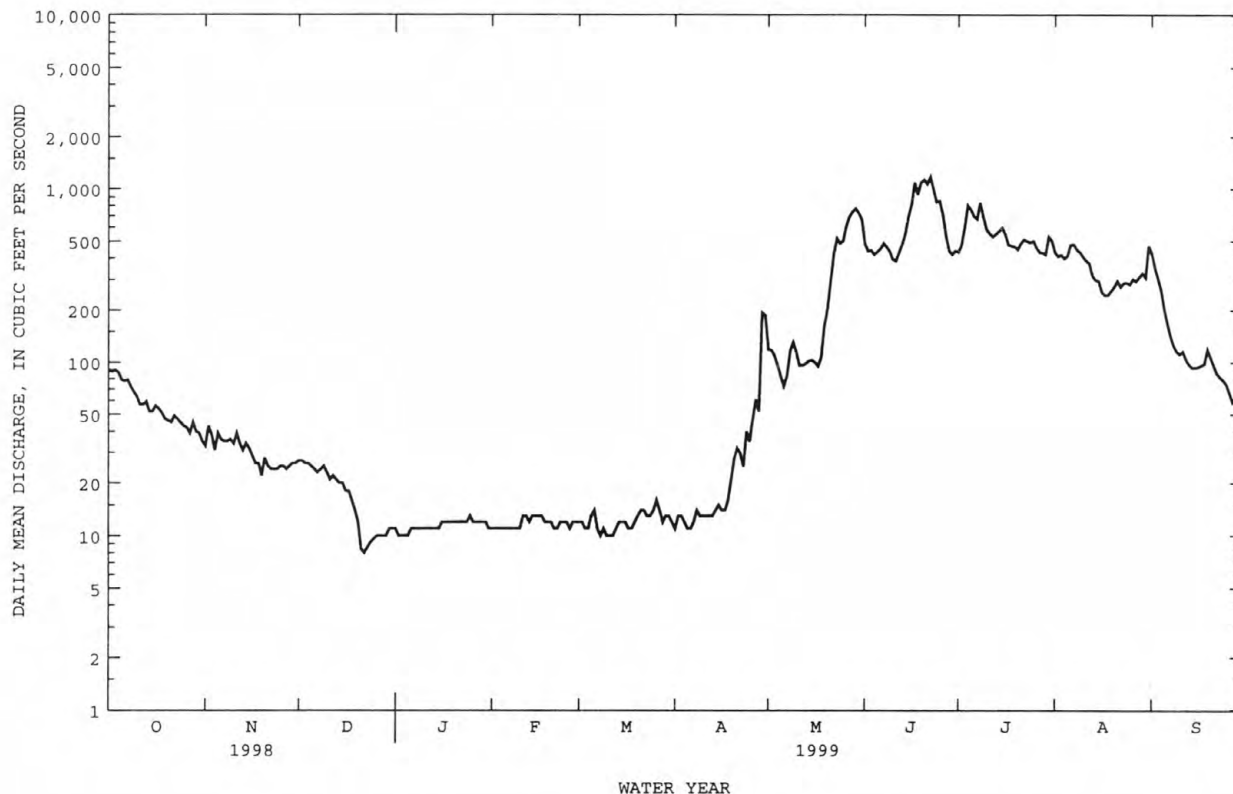
MEAN	43.0	20.6	12.7	8.78	7.68	8.57	19.7	163	463	486	320	138
MAX	72.5	40.6	22.8	19.2	12.5	13.6	60.3	299	739	794	406	250
(WY)	1968	1974	1974	1962	1962	1972	1962	1958	1971	1975	1971	1973
MIN	22.8	9.74	3.79	1.53	2.12	2.31	8.48	71.1	261	280	245	59.2
(WY)	1989	1977	1977	1977	1977	1977	1970	1959	1992	1992	1989	1964

YELLOWSTONE RIVER BASIN

06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1958 - 1999	
ANNUAL TOTAL	61036.5		65168.8		--	
ANNUAL MEAN	167		179		142	
HIGHEST ANNUAL MEAN	--		--		179	
LOWEST ANNUAL MEAN	--		--		95.2	
HIGHEST DAILY MEAN	957	Jul 13	1170	Jun 22	1250	Jun 15 1995
LOWEST DAILY MEAN	7.7	Mar 7	8.0	Dec 22	1.0	Jan 9 1977
ANNUAL SEVEN-DAY MINIMUM	8.2	Mar 6	9.1	Dec 21	1.3	Jan 4 1977
INSTANTANEOUS PEAK FLOW	--		1300		1510	
INSTANTANEOUS PEAK STAGE	--		4.08		4.50	
ANNUAL RUNOFF (AC-FT)	121100		129300		102700	
10 PERCENT EXCEEDS	459		515		441	
50 PERCENT EXCEEDS	44		45		28	
90 PERCENT EXCEEDS	9.7		11		7.1	

e Estimated.



06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY

LOCATION.--Lat 43°24'59", long 109°19'40", in NE¹/₄ NW¹/₄ NW¹/₄ sec.14, T.5 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 30 ft downstream from headworks, 2 mi southeast of Wilderness, and 4 mi northwest of Burris.

PERIOD OF RECORD.--May 1997 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above sea level, from topographic map. Miscellaneous measurements (July 1988 to September 1996) published at equivalent site previously identified as 432609109205001 at different datum.

REMARKS.--Records good. Flow completely regulated by headworks. U.S. Geological Survey data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 5 . . . 0.14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	---	---	---	---	---	---	---	50	51	72	53
2	---	---	---	---	---	---	---	---	55	51	67	53
3	---	---	---	---	---	---	---	---	52	51	61	54
4	---	---	---	---	---	---	---	---	53	44	55	53
5	---	---	---	---	---	---	---	---	51	37	55	52
6	---	---	---	---	---	---	---	19	50	35	55	49
7	---	---	---	---	---	---	---	38	50	32	56	46
8	---	---	---	---	---	---	---	38	49	31	55	45
9	---	---	---	---	---	---	---	34	63	29	55	44
10	---	---	---	---	---	---	---	34	68	29	55	44
11	---	---	---	---	---	---	---	39	67	28	54	44
12	---	---	---	---	---	---	---	39	65	27	54	43
13	---	---	---	---	---	---	---	39	65	28	53	43
14	---	---	---	---	---	---	---	39	66	37	52	43
15	---	---	---	---	---	---	---	39	50	44	51	42
16	---	---	---	---	---	---	---	39	53	44	51	42
17	---	---	---	---	---	---	---	39	58	48	50	42
18	---	---	---	---	---	---	---	39	59	56	50	42
19	---	---	---	---	---	---	---	40	49	56	50	43
20	---	---	---	---	---	---	---	39	48	56	50	43
21	---	---	---	---	---	---	---	40	40	42	50	42
22	---	---	---	---	---	---	---	40	57	32	50	42
23	---	---	---	---	---	---	---	35	58	31	50	42
24	---	---	---	---	---	---	---	27	52	32	50	42
25	---	---	---	---	---	---	---	40	46	64	50	e42
26	---	---	---	---	---	---	---	37	49	95	50	e42
27	---	---	---	---	---	---	---	36	54	90	50	e42
28	---	---	---	---	---	---	---	36	56	81	50	e42
29	---	---	---	---	---	---	---	41	51	83	50	28
30	---	---	---	---	---	---	---	46	51	84	50	---
31	---	---	---	---	---	---	---	39	---	84	52	---
TOTAL	---	---	---	---	---	---	---	---	1635	1532	1653	---
MEAN	---	---	---	---	---	---	---	---	54.5	49.4	53.3	---
MAX	---	---	---	---	---	---	---	---	68	95	72	---
MIN	---	---	---	---	---	---	---	---	40	27	50	---
AC-FT	---	---	---	---	---	---	---	---	3240	3040	3280	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	59.7	59.6	58.4	56.8	52.4
MAX	---	---	---	---	---	---	---	59.7	63.9	65.4	60.1	62.2
(WY)	---	---	---	---	---	---	---	1998	1998	1997	1997	1998
MIN	---	---	---	---	---	---	---	59.7	54.5	49.4	53.3	42.6
(WY)	---	---	---	---	---	---	---	1998	1999	1999	1999	1997

YELLOWSTONE RIVER BASIN

06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

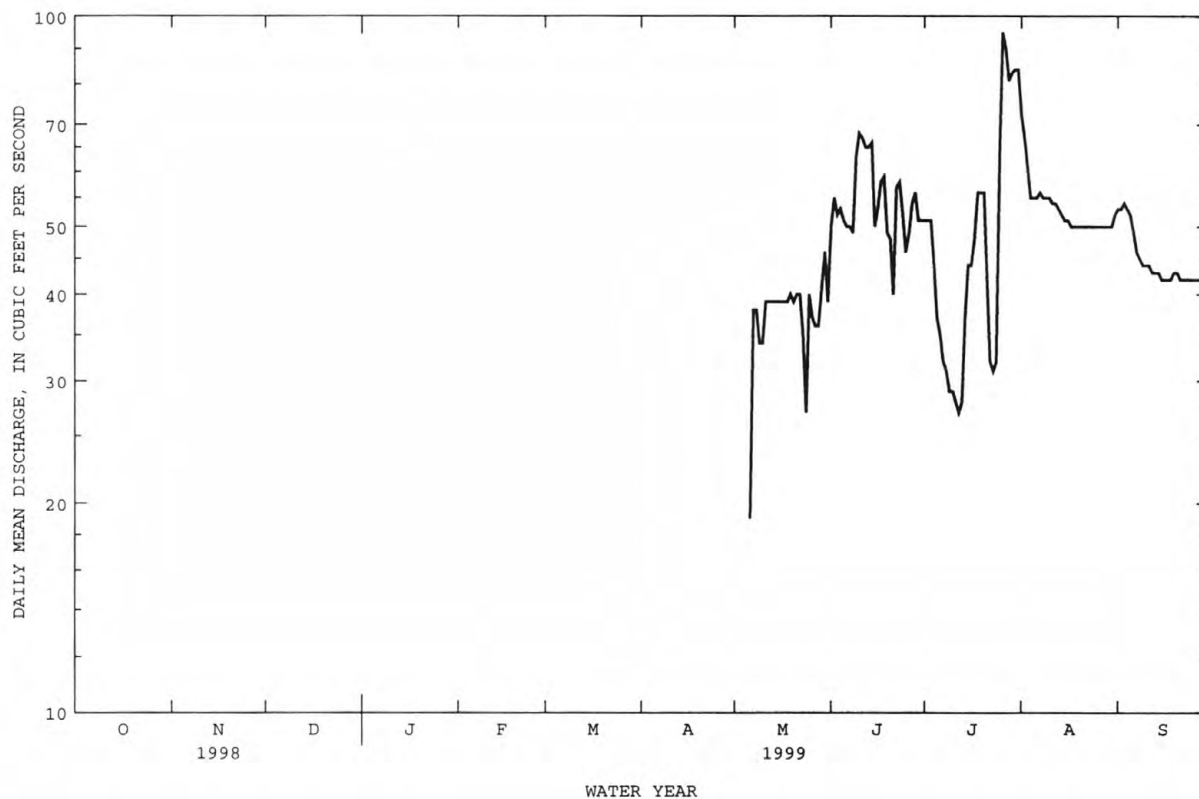
WATER YEARS 1997 - 1999*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 INSTANTANEOUS PEAK FLOW
 INSTANTANEOUS PEAK STAGE

95 Jul 26
 19 May 6
 98 Jul 27
 2.14 Jul 27

105 Jun 3 1998
 5.3 Oct 6 1997
 250 May 1 1998
 2.52 May 1 1998

* During period of operation.
 e Estimated.



LOCATION.--Lat 43°20'11", long 109°17'55", in NW¹/₄ NE¹/₄ SW¹/₄ sec. 12, T.4 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.9 mi upstream from Dry Creek Canal headgate and 2.4 mi southwest of Burris.

PERIOD OF RECORD.--June 1921 to September 1940, October 1988 to current year (no winter records since 1995). Published as "near Lenore" 1921 to 1924.

REMARKS.-- Records fair except those for estimated daily discharges, which are poor. Adjudicated diversion upstream for irrigation of 267 acres. U.S. Geological Survey data collection platform with satellite telemetry at station. Results of discharge measurements, in cubic feet per second, made during the period when the station was not in operation, are given below:

Oct. 6 . . .	31.8
Mar. 25 . . .	4.68

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e4.0	50	286	254	119	60
2	---	---	---	---	---	---	e4.1	48	299	268	110	66
3	---	---	---	---	---	---	e4.2	41	317	308	105	77
4	---	---	---	---	---	---	e4.6	33	259	372	102	83
5	---	---	---	---	---	---	e4.6	30	258	344	102	77
6	---	---	---	---	---	---	4.6	32	249	282	107	68
7	---	---	---	---	---	---	4.6	41	259	251	108	61
8	---	---	---	---	---	---	4.9	60	255	297	106	55
9	---	---	---	---	---	---	4.9	55	242	248	101	50
10	---	---	---	---	---	---	4.5	41	221	218	94	45
11	---	---	---	---	---	---	4.4	32	230	208	89	43
12	---	---	---	---	---	---	4.4	30	253	200	88	41
13	---	---	---	---	---	---	4.5	35	290	198	83	38
14	---	---	---	---	---	---	4.8	38	329	196	77	35
15	---	---	---	---	---	---	4.9	43	404	207	71	33
16	---	---	---	---	---	---	4.9	39	485	200	66	31
17	---	---	---	---	---	---	4.9	38	e730	191	61	29
18	---	---	---	---	---	---	5.5	47	e665	187	58	27
19	---	---	---	---	---	---	7.4	76	e635	184	57	30
20	---	---	---	---	---	---	12	88	e690	181	57	31
21	---	---	---	---	---	---	12	115	e700	183	58	30
22	---	---	---	---	---	---	12	119	756	185	59	29
23	---	---	---	---	---	---	6.5	142	593	184	55	27
24	---	---	---	---	---	---	8.6	184	511	180	52	26
25	---	---	---	---	---	---	14	253	518	e175	51	24
26	---	---	---	---	---	---	21	298	459	e130	51	22
27	---	---	---	---	---	---	26	380	332	115	50	21
28	---	---	---	---	---	---	22	385	270	113	51	25
29	---	---	---	---	---	---	93	398	251	110	51	26
30	---	---	---	---	---	---	67	435	255	129	49	26
31	---	---	---	---	---	---	---	404	---	128	54	---
TOTAL	---	---	---	---	---	---	384.8	4010	12001	6426	2342	1236
MEAN	---	---	---	---	---	---	12.8	129	400	207	75.5	41.2
MAX	---	---	---	---	---	---	93	435	756	372	119	83
MIN	---	---	---	---	---	---	4.0	30	221	110	49	21
AC-FT	---	---	---	---	---	---	763	7950	23800	12750	4650	2450

MEAN	17.3	10.3	5.97	4.10	2.71	2.91	8.86	86.2	208	127	59.6	32.1
MAX	50.0	25.4	15.0	10.0	7.00	10.0	25.7	162	525	328	164	64.6
(WY)	1924	1928	1926	1926	1923	1923	1926	1924	1921	1995	1930	1927
MIN	5.16	1.76	.55	.30	.20	.000	.88	29.5	51.4	33.8	18.8	12.2
(WY)	1934	1934	1934	1934	1934	1934	1940	1935	1934	1940	1940	1934

YELLOWSTONE RIVER BASIN

06222500 DRY CREEK NEAR BURRIS, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1921 - 1999*

ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN

--
--
--
756 Jun 22
4.0 Apr 1

44.6
73.0 1995
20.1 1940
1240 Jun 7 1921
.00 Mar 1 to
Apr 11 1934
1400^a Jun 12 1921
5.95^b Jun 17 1999
32290

INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE
ANNUAL RUNOFF (AC-FT)

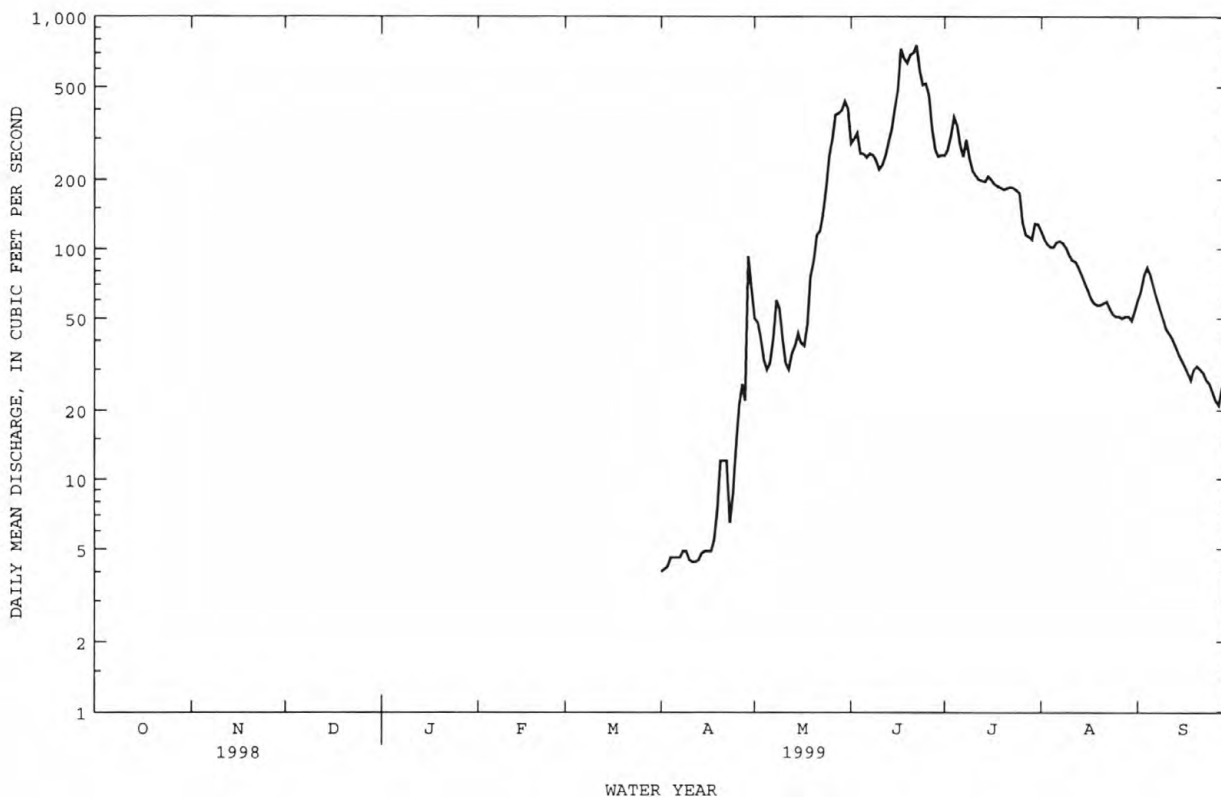
1020 Jun 17
5.95^b Jun 17
--

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a Gage height, 3.9 ft, from floodmarks, site and datum then in use, from rating curve extended above 580 ft³/s.

b From floodmarks.

e Estimated.



YELLOWSTONE RIVER BASIN

57

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY

LOCATION.--Lat 43°20'38", long 109°17'25", in NW¹/₄ NE¹/₄ NE¹/₄ sec.12, T.4 S., R.5 W., Fremont County, Hydrologic Unit
10080001, Wind River Indian Reservation, on left bank 200 ft downstream from headgate and 1.7 miles southwest of Burris.

PERIOD OF RECORD.--April 1989 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of the gage is 6,360 ft above sea level, from topographic map. Prior to April 1, 1990, at datum 1.00 ft higher.

REMARKS.--Records good. Flow is diverted from Dry Creek for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	12	150	228	216	189
2	---	---	---	---	---	---	---	12	156	233	205	191
3	---	---	---	---	---	---	---	14	160	238	202	197
4	---	---	---	---	---	---	---	14	162	231	201	188
5	---	---	---	---	---	---	---	14	161	229	202	172
6	---	---	---	---	---	---	---	14	155	217	211	158
7	---	---	---	---	---	---	---	21	161	210	215	162
8	---	---	---	---	---	---	---	30	160	210	214	160
9	---	---	---	---	---	---	---	30	157	196	206	153
10	---	---	---	---	---	---	---	29	152	189	195	147
11	---	---	---	---	---	---	---	44	152	190	188	141
12	---	---	---	---	---	---	---	48	160	187	186	136
13	---	---	---	---	---	---	---	47	163	187	183	131
14	---	---	---	---	---	---	---	47	169	186	178	124
15	---	---	---	---	---	---	---	47	177	189	172	119
16	---	---	---	---	---	---	---	46	183	194	169	115
17	---	---	---	---	---	---	---	46	112	192	171	110
18	---	---	---	---	---	---	---	45	123	187	173	106
19	---	---	---	---	---	---	2.5	62	148	186	175	106
20	---	---	---	---	---	---	6.2	86	173	185	175	108
21	---	---	---	---	---	---	6.8	89	209	186	177	108
22	---	---	---	---	---	---	6.8	104	154	187	179	105
23	---	---	---	---	---	---	7.6	105	168	186	175	100
24	---	---	---	---	---	---	6.7	101	187	182	171	91
25	---	---	---	---	---	---	6.8	109	202	178	172	73
26	---	---	---	---	---	---	6.8	138	194	176	171	46
27	---	---	---	---	---	---	7.1	147	172	183	172	67
28	---	---	---	---	---	---	10	174	153	197	174	79
29	---	---	---	---	---	---	13	156	148	204	174	77
30	---	---	---	---	---	---	13	149	173	223	174	38
31	---	---	---	---	---	---	---	148	---	231	178	---
TOTAL	---	---	---	---	---	---	---	2128	4894	6197	5754	3697
MEAN	---	---	---	---	---	---	---	68.6	163	200	186	123
MAX	---	---	---	---	---	---	---	174	209	238	216	197
MIN	---	---	---	---	---	---	---	12	112	176	169	38
AC-FT	---	---	---	---	---	---	---	4220	9710	12290	11410	7330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	1.44	---	---	---	---	---	3.01	96.7	186	200	190	131
MAX	2.29	---	---	---	---	---	6.24	154	247	228	217	188
(WY)	1993	---	---	---	---	---	1989	1994	1994	1996	1994	1990
MIN	.60	---	---	---	---	---	.000	53.8	116	155	169	90.2
(WY)	1994	---	---	---	---	---	1991	1991	1995	1989	1998	1992

YELLOWSTONE RIVER BASIN

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY--Continued

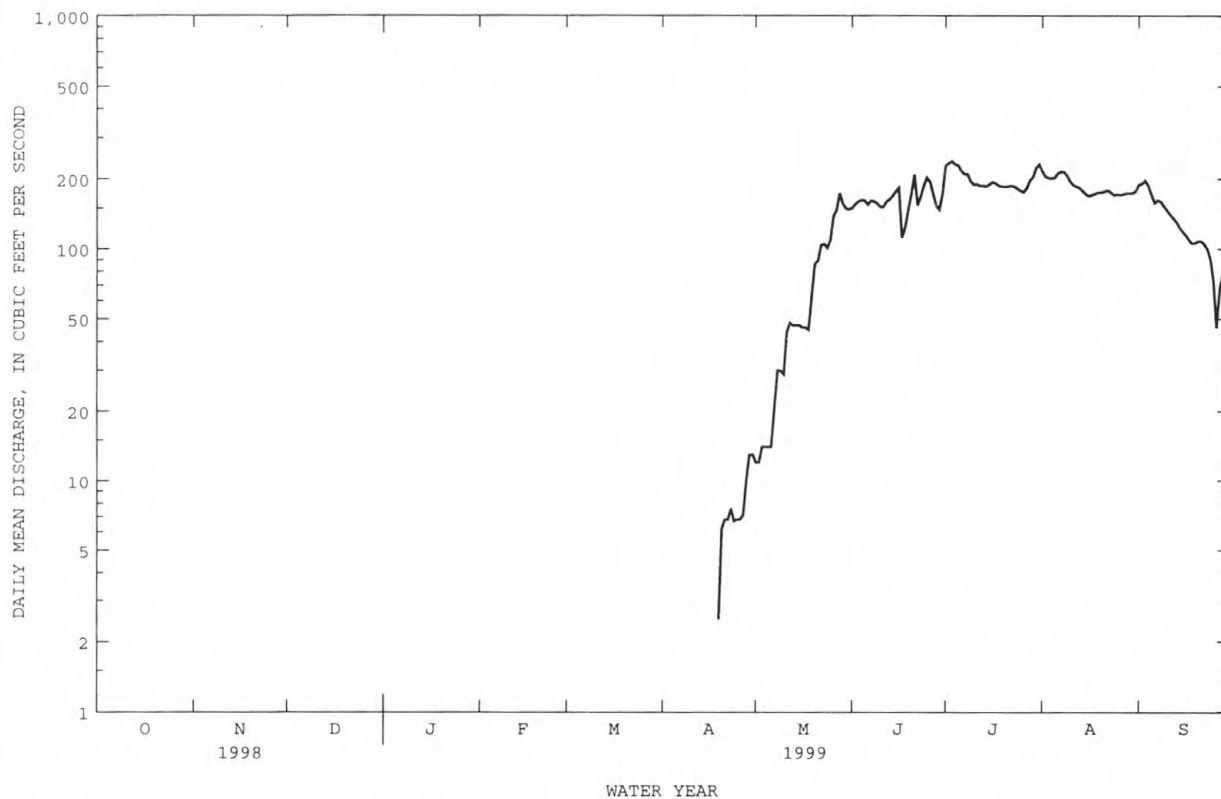
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1988 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN238 Jul 3
2.5 Apr 19285 Jun 23 1994
.00 Many days,
most yearsINSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE247 Jul 3
3.01 Jul 3301 Jun 23 1994
3.88 Jun 23 1994

* During period of operation.



YELLOWSTONE RIVER BASIN

59

06223500 WILLOW CREEK NEAR CROWHEART, WY

LOCATION.--Lat 43°17'00", long 109°11'08", in SE¹/₄ NW¹/₄ NW¹/₄ sec.36, T.4 N., R.4 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 1000 ft upstream from Willow Creek Canal diversion and 2.0 mi south of Crowheart.

DRAINAGE AREA.--55.4 mi².

PERIOD OF RECORD.--June to October 1909 (published as "J. K. Ranch Post Office"), June 1921 to September 1922 (published as "near Lenore"), May and June 1923, May 1925 to September 1940, October 1988 to current year (no winter record since 1995).

REVISED RECORDS.--WSP 1309: 1939 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6,080 ft above sea level, from topographic map. May 17 to October 31, 1909, nonrecording gage 1.9 mi downstream at different datum, May 16, 1921 to Aug. 24, 1923, nonrecording gage 200 ft upstream at different datum, and May 1925 to September 1940, water-stage recorder 600 ft downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of 60.1 acres upstream from station. Results of discharge measurements, in cubic feet per second, made during the period station was not in operation, are given below:

Oct. 15 . . . 9.15
Mar. 31 . . . 6.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.5	e40	220	128	24	11
2	---	---	---	---	---	---	6.9	e35	210	145	23	11
3	---	---	---	---	---	---	6.1	e23	233	160	20	13
4	---	---	---	---	---	---	6.2	e20	206	147	18	14
5	---	---	---	---	---	---	6.0	e25	208	111	18	12
6	---	---	---	---	---	---	5.8	e25	192	91	19	11
7	---	---	---	---	---	---	5.9	e35	222	86	18	10
8	---	---	---	---	---	---	5.9	e30	231	96	16	9.9
9	---	---	---	---	---	---	5.6	e25	212	68	14	9.9
10	---	---	---	---	---	---	5.4	e20	191	59	14	10
11	---	---	---	---	---	---	5.5	e18	203	55	13	10
12	---	---	---	---	---	---	5.2	e20	220	51	16	10
13	---	---	---	---	---	---	5.2	e30	246	53	17	10
14	---	---	---	---	---	---	5.1	e35	256	50	16	10
15	---	---	---	---	---	---	5.1	e35	320	54	15	10
16	---	---	---	---	---	---	5.3	e35	359	47	18	9.9
17	---	---	---	---	---	---	5.1	e25	393	44	14	9.8
18	---	---	---	---	---	---	4.8	e35	357	44	14	9.7
19	---	---	---	---	---	---	5.2	e55	352	40	13	11
20	---	---	---	---	---	---	5.3	e65	369	38	13	10
21	---	---	---	---	---	---	5.1	e75	360	38	13	10
22	---	---	---	---	---	---	5.6	e85	340	36	13	10
23	---	---	---	---	---	---	6.4	e100	255	34	13	9.9
24	---	---	---	---	---	---	7.0	e130	206	31	12	9.7
25	---	---	---	---	---	---	6.8	135	225	31	12	9.6
26	---	---	---	---	---	---	8.4	159	180	27	12	9.2
27	---	---	---	---	---	---	8.6	196	132	26	12	9.7
28	---	---	---	---	---	---	9.0	222	121	25	12	10
29	---	---	---	---	---	---	e65	249	121	24	12	10
30	---	---	---	---	---	---	e48	229	130	30	11	10
31	---	---	---	---	---	---	---	257	---	26	11	---
TOTAL	---	---	---	---	---	---	282.0	2468	7270	1895	466	310.3
MEAN	---	---	---	---	---	---	9.40	79.6	242	61.1	15.0	10.3
MAX	---	---	---	---	---	---	65	257	393	160	24	14
MIN	---	---	---	---	---	---	4.8	18	121	24	11	9.2
AC-FT	---	---	---	---	---	---	559	4900	14420	3760	924	615

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1999, BY WATER YEAR (WY)

MEAN	9.03	7.53	6.15	5.25	4.76	4.96	6.49	30.8	86.3	32.1	13.1	9.38
MAX	17.6	13.3	10.0	8.00	7.00	8.00	9.40	79.6	242	112	45.4	21.9
(WY)	1931	1927	1927	1927	1922	1922	1999	1999	1999	1995	1930	1930
MIN	5.15	2.50	2.00	2.00	2.00	2.50	3.97	6.85	9.71	5.68	3.50	4.67
(WY)	1989	1940	1940	1940	1940	1940	1940	1935	1934	1940	1940	1935

YELLOWSTONE RIVER BASIN

06223500 WILLOW CREEK NEAR CROWHEART, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1922 - 1999*

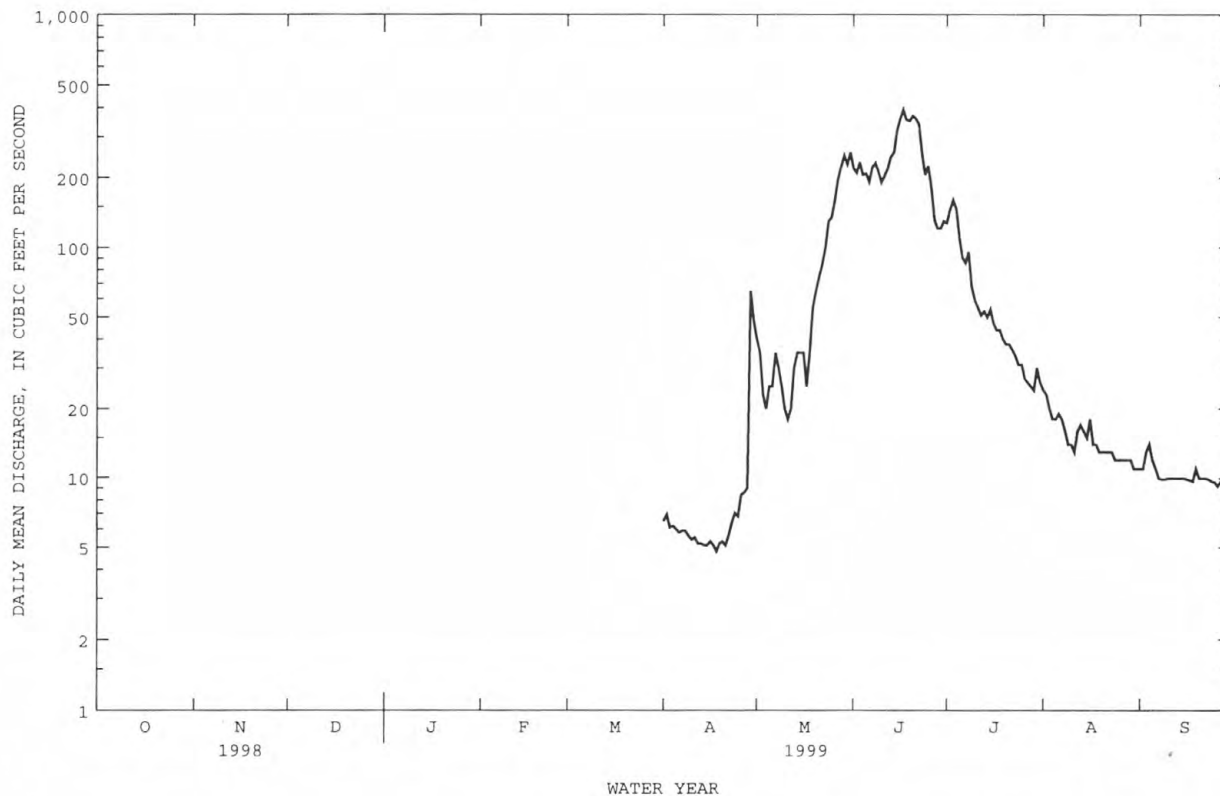
ANNUAL MEAN	--		16.5	
HIGHEST ANNUAL MEAN	--		31.0	1995
LOWEST ANNUAL MEAN	--		4.60	1940
HIGHEST DAILY MEAN	393	Jun 17	468	Jun 12 1991
LOWEST DAILY MEAN	4.8	Apr 18	2.0 ^a	Dec 1 1939
INSTANTANEOUS PEAK FLOW	539	Jun 16	1100 ^a	May 31 1939
INSTANTANEOUS PEAK STAGE	4.49	Jun 16	5.40 ^b	May 31 1939
ANNUAL RUNOFF (AC-FT)	--		11930	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a On basis of flow-over-dam measurement of peak flow.

b Site and datum then in use.

e Estimated.



LOCATION.--Lat 43°10'37", long 109°12'08", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.2 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 1.2 mi upstream from high-water line of Bull Lake and 9.0 mi south of Crowheart.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Elevation of gage is 5,874 ft above sea level, from topographic map.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	2400	2,180	5.67
June 22	0715	*3,080	*6.52
July 4	1045	2,350	5.84

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	78	58	32	28	e30	34	287	1500	1150	746	516
2	126	76	57	30	27	e30	40	267	1290	1300	647	489
3	136	80	51	27	26	e31	40	240	1370	1660	599	489
4	157	81	46	28	26	e30	35	186	1140	2230	593	489
5	161	79	52	27	29	e30	37	155	1110	2160	602	424
6	154	78	25	27	37	e30	39	137	1020	1760	645	355
7	151	77	25	25	32	e29	41	142	1160	1520	683	300
8	150	78	37	24	38	e29	45	201	1180	1700	651	257
9	143	67	40	23	42	e30	47	247	1080	1610	620	232
10	133	61	28	23	48	e30	43	194	939	1320	586	209
11	127	91	41	22	59	e30	40	161	900	1170	538	195
12	117	82	43	23	53	e31	39	148	1000	1090	521	181
13	113	73	41	22	54	e31	40	154	1190	1060	480	170
14	109	70	39	22	54	e31	44	153	1410	1070	419	161
15	101	65	37	22	46	e31	44	149	1850	1160	380	153
16	114	65	36	23	61	e30	41	139	2320	1170	368	147
17	117	61	35	22	41	e30	41	132	2770	1080	351	141
18	112	59	44	24	47	e30	48	141	2550	939	333	134
19	106	52	14	27	41	e30	66	206	2690	900	324	150
20	102	52	11	28	42	e32	88	255	2780	854	328	172
21	99	59	15	29	37	e34	99	370	2860	859	339	184
22	96	60	22	30	55	e33	101	537	2910	905	346	187
23	94	57	22	31	39	e31	99	742	2660	897	342	187
24	92	58	23	33	35	e34	104	979	2310	846	341	176
25	87	51	25	33	34	e38	109	1190	2280	819	340	167
26	84	55	26	34	30	e43	146	1340	2010	775	330	152
27	82	52	28	32	e28	e37	174	1550	1510	706	338	140
28	83	51	30	29	e30	e32	159	1750	1210	678	345	143
29	84	54	32	30	---	e33	653	1920	1110	684	351	147
30	81	58	34	30	---	34	478	2080	1090	795	360	143
31	80	---	31	29	---	33	---	1960	---	841	403	---
TOTAL	3520	1980	1048	841	1119	987	3014	18112	51199	35708	14249	6990
MEAN	114	66.0	33.8	27.1	40.0	31.8	100	584	1707	1152	460	233
MAX	161	91	58	34	61	43	653	2080	2910	2230	746	516
MIN	80	51	11	22	26	29	34	132	900	678	324	134
AC-FT	6980	3930	2080	1670	2220	1960	5980	35930	101600	70830	28260	13860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999, BY WATER YEAR (WY)

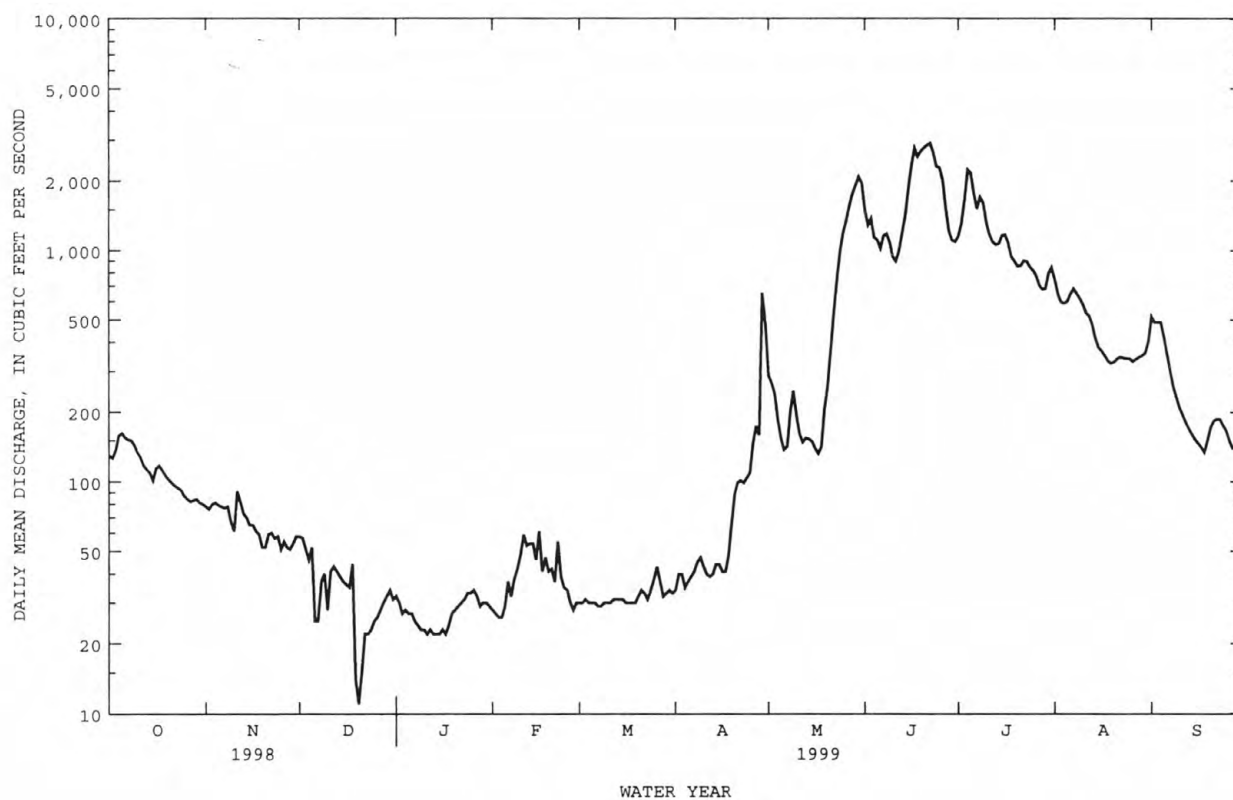
MEAN	100	56.1	37.9	29.1	25.4	27.1	66.9	467	1171	929	435	208
MAX	222	109	62.2	57.1	41.4	57.4	199	777	2104	1581	655	533
(WY)	1983	1951	1951	1997	1943	1986	1943	1969	1986	1975	1982	1973
MIN	32.9	29.5	14.6	7.29	6.88	6.69	24.9	170	560	337	145	109
(WY)	1989	1977	1977	1977	1977	1977	1970	1975	1992	1994	1985	1988

YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1942 - 1999	
ANNUAL TOTAL	121153		138767		--	
ANNUAL MEAN	332		380		297	
HIGHEST ANNUAL MEAN	--		--		415	1986
LOWEST ANNUAL MEAN	--		--		174	1977
HIGHEST DAILY MEAN	2140	Jul 5	2910	Jun 22	3560	Jun 9 1981
LOWEST DAILY MEAN	11	Dec 20	11	Dec 20	6.2	Jan 9 1977
ANNUAL SEVEN-DAY MINIMUM	19	Dec 19	19	Dec 19	6.5	Mar 10 1977
INSTANTANEOUS PEAK FLOW	--		3080	Jun 22	4470	Jun 9 1981
INSTANTANEOUS PEAK STAGE	--		6.52	Jun 22	7.98	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	240300		275200		215400	
10 PERCENT EXCEEDS	1010		1170		920	
50 PERCENT EXCEEDS	94		99		76	
90 PERCENT EXCEEDS	29		29		23	

e Estimated.



YELLOWSTONE RIVER BASIN

63

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
OCT					
29...	1100	85	52	5.5	6.5
DEC					
03...	1040	53	61	5.0	8.0
JAN					
20...	0825	29	92	0.0	2.0
MAR					
29...	1250	33	88	6.5	11.5
MAY					
07...	1100	140	75	5.0	13.5
JUN					
18...	1045	2620	28	8.0	23.0
JUL					
30...	1130	800	22	15.0	25.5
AUG					
30...	1145	358	26	15.0	25.0

YELLOWSTONE RIVER BASIN

06224500 BULL LAKE NEAR LENORE, WY

LOCATION.--Lat 43°12'35", long 109°02'30", in E $\frac{1}{2}$ NW $\frac{1}{4}$ sec.30, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, at dam on Bull Lake Creek, 2.8 mi upstream from mouth of Bull Lake Creek, and 9.8 mi south of Lenore.

DRAINAGE AREA.--210 mi², of which 12 mi² probably is noncontributing.

PERIOD OF RECORD.--April 1938 to current year. Monthend contents only for some periods, published in WSP 1309. Published as Bull Lake Reservoir near Lenore 1938-50.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum).

REMARKS.--Reservoir is formed by rockfill dam completed by Bureau of Reclamation July 22, 1938. Capacity, 152,500 acre-ft below elevation 5,805.00 ft, top of spillway gates. Dead storage, 722 acre-ft. Figures given herein represent total contents. Water is used for irrigation near Riverton. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 154,200 acre-ft, Aug. 10, 1965, elevation, 5,805.70 ft; minimum daily contents (since appreciable storage was attained), 5,540 acre-ft, Mar. 15, 1950, elevation, 5,742.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 148,000 acre-ft, July 22 to Aug. 3, Aug. 8-11, maximum daily elevation, 5,803.64 ft, July 31, Aug. 1; minimum daily contents, 92,400 acre-ft, June 4, minimum elevation, 5,784.30 ft, Mar. 23-25.

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,780	81,400	5,800	137,000
5,790	108,000	5,810	152,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

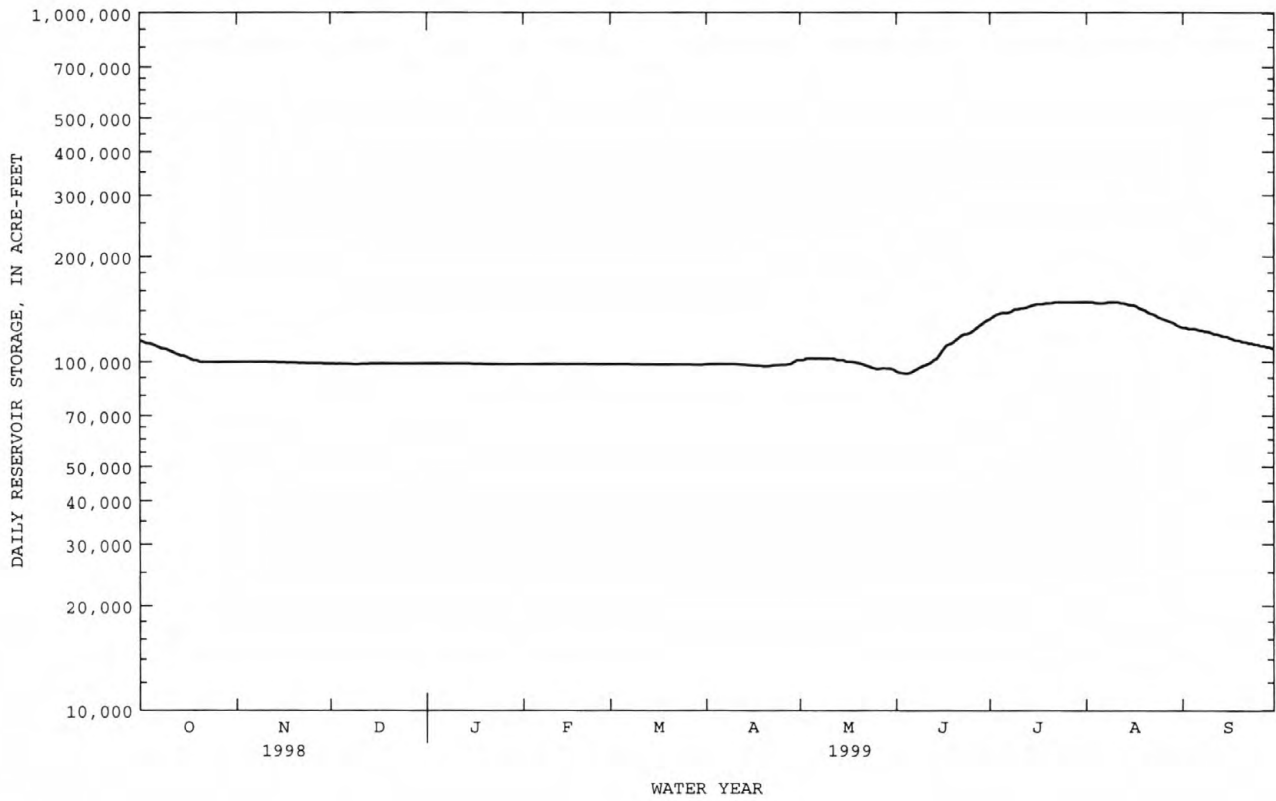
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115000	100000	98800	98800	98600	98500	98300	101000	93800	132000	148000	125000
2	114000	100000	98800	98800	98600	98500	98400	101000	93000	134000	148000	125000
3	113000	100000	98700	98800	98500	98500	98400	102000	92800	136000	148000	124000
4	113000	100000	98800	98900	98500	98400	98400	102000	92400	137000	147000	124000
5	112000	100000	98700	98900	98500	98400	98400	102000	92600	138000	147000	124000
6	111000	100000	98700	98900	98500	98400	98400	102000	93300	138000	147000	123000
7	110000	100000	98700	98900	98500	98400	98400	102000	94500	138000	147000	123000
8	109000	100000	98600	98900	98500	98300	98400	102000	95600	139000	148000	122000
9	109000	100000	98600	98900	98600	98300	98400	102000	96700	141000	148000	122000
10	108000	100000	98600	98800	98600	98300	98400	102000	97500	141000	148000	121000
11	107000	100000	98700	98800	98600	98300	98300	102000	98200	142000	148000	120000
12	106000	100000	98700	98800	98600	98300	98200	102000	99200	142000	147000	120000
13	105000	99900	98700	98800	98600	98300	98000	101000	101000	143000	147000	119000
14	104000	99800	98800	98800	98600	98300	97900	101000	102000	144000	146000	118000
15	104000	99700	98800	98800	98600	98200	97800	101000	105000	145000	145000	118000
16	103000	99700	98800	98700	98600	98200	97600	100000	108000	146000	145000	117000
17	102000	99600	98800	98700	98600	98200	97500	100000	111000	146000	144000	116000
18	101000	99500	98800	98700	98600	98200	97400	99800	112000	146000	142000	115000
19	101000	99500	98800	98600	98600	98200	97300	99600	113000	147000	141000	115000
20	100000	99400	98800	98600	98600	98200	97200	99100	115000	147000	140000	114000
21	100000	99300	98800	98600	98600	98200	97200	98400	117000	147000	138000	114000
22	99900	99300	98800	98600	98600	98200	97600	97800	119000	148000	137000	113000
23	99900	99200	98800	98600	98600	98200	97800	97100	120000	148000	136000	113000
24	99900	99200	98800	98600	98600	98200	97800	96300	120000	148000	134000	112000
25	99900	99100	98800	98600	98600	98200	98000	95600	121000	148000	133000	112000
26	99800	99000	98800	98600	98600	98200	98100	95400	123000	148000	132000	111000
27	99900	99000	98800	98600	98500	98200	98200	95600	125000	148000	131000	111000
28	100000	99000	98800	98600	98600	98100	98400	95800	127000	148000	130000	110000
29	100000	98900	98800	98600	---	98100	99700	95600	129000	148000	129000	110000
30	100000	98800	98800	98600	---	98100	101000	95600	131000	148000	127000	109000
31	100000	---	98800	98600	---	98200	---	95100	---	148000	126000	---
MAX	115000	100000	98800	98900	98600	98500	101000	102000	131000	148000	148000	125000
MIN	99800	98800	98600	98600	98500	98100	97200	95100	92400	132000	126000	109000
(#)	5,787.17	5,786.69	5,786.69	5,786.60	5,786.60	5,786.46	5,787.37	5,785.30	5,797.87	5,803.64	5,796.39	5,790.44
(*)	-16,000	-1,200	0	-200	0	-400	+2,800	-5,900	+35,900	+17,000	-22,000	-17,000

WTR YR 1999 MAX 148,000 MIN 92,400 (*) -7,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06224500 BULL LAKE NEAR LENORE, WY--Continued



YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY

LOCATION.--Lat 43°14'33", long 109°01'20", in NE¹/₄ NW¹/₄ sec.17, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 700 ft upstream from mouth, 2.8 mi downstream from Bull Lake, and 8.5 mi southeast of Lenore.

DRAINAGE AREA.--213 mi², of which 12 mi² probably is noncontributing.

PERIOD OF RECORD.--May 1918 to current year.

REVISED RECORDS.--WSP 1309: 1921 (M, date only), 1925(M), 1926(M), 1930(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,654 ft above sea level, from topographic map. May 18, 1918, to Mar. 25, 1922, at site 10 ft upstream at datum 0.86 ft higher; Mar. 26, 1922, to Oct. 3, 1934, at present site at datum 2.00 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Bull Lake 2.8 mi upstream since April 1938 (see station 06224500). Diversions upstream from station for irrigation of about 730 acres downstream. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	515	56	85	31	38	34	34	113	e1760	131	705	863
2	514	58	86	31	e37	35	35	112	1480	295	715	829
3	515	86	73	e31	e37	35	34	111	1260	690	719	743
4	514	83	46	e31	38	35	33	111	1160	1220	723	555
5	511	86	e44	32	38	e34	34	128	926	1670	675	413
6	513	114	e43	32	38	e35	34	167	616	1420	616	508
7	511	111	e43	31	38	35	34	167	511	1030	549	566
8	511	111	e43	31	38	35	34	166	513	903	508	567
9	508	111	41	31	38	35	34	167	517	848	503	559
10	508	109	32	31	e37	35	35	188	525	853	536	526
11	508	107	32	32	e37	33	66	254	496	736	582	497
12	508	107	32	31	e40	33	111	291	419	692	596	490
13	508	106	33	31	38	33	111	293	420	648	670	491
14	507	107	33	37	37	33	111	293	424	592	720	502
15	507	107	32	39	36	33	111	295	430	596	773	508
16	505	107	32	38	36	33	113	293	558	693	770	504
17	503	100	32	e38	36	33	110	291	1090	795	793	500
18	497	86	e32	38	e36	33	104	291	1760	710	847	534
19	504	84	e31	37	37	33	108	302	1640	683	887	521
20	318	83	e31	36	e37	32	107	469	1570	689	937	459
21	139	83	e32	36	35	32	108	664	1570	639	932	428
22	134	83	e32	37	34	32	117	801	1670	586	930	429
23	99	84	e32	38	e34	32	115	976	1900	623	928	430
24	98	86	e32	38	35	32	111	1220	1850	757	877	423
25	97	86	e32	e37	34	32	113	1370	1230	759	853	422
26	97	86	e31	e37	34	33	113	1220	772	762	849	423
27	86	85	e33	e37	e34	33	111	1220	531	738	847	423
28	53	84	e33	e37	35	33	111	1440	328	662	844	420
29	53	84	33	e37	---	33	116	e1720	113	607	877	423
30	56	84	32	e38	---	33	114	e1750	115	607	905	409
31	56	---	32	38	---	33	---	e1740	---	677	899	---
TOTAL	10953	2764	1210	1079	1022	1035	2522	18623	28154	23311	23565	15365
MEAN	353	92.1	39.0	34.8	36.5	33.4	84.1	601	938	752	760	512
MAX	515	114	86	39	40	35	117	1750	1900	1670	937	863
MIN	53	56	31	31	34	32	33	111	113	131	503	409
AC-FT	21730	5480	2400	2140	2030	2050	5000	36940	55840	46240	46740	30480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 1999, BY WATER YEAR (WY)

	MEAN	138	70.8	71.4	88.5	74.9	61.2	95.6	237	559	817	660	435
MAX	782	467	241	267	219	197	601	831	2265	1645	1027	982	
(WY)	1952	1969	1972	1954	1951	1951	1965	1928	1918	1923	1969	1976	
MIN	4.16	8.34	13.8	11.0	12.0	.000	3.59	6.01	10.6	85.6	193	113	
(WY)	1941	1965	1978	1931	1931	1937	1941	1940	1941	1941	1977	1961	

YELLOWSTONE RIVER BASIN

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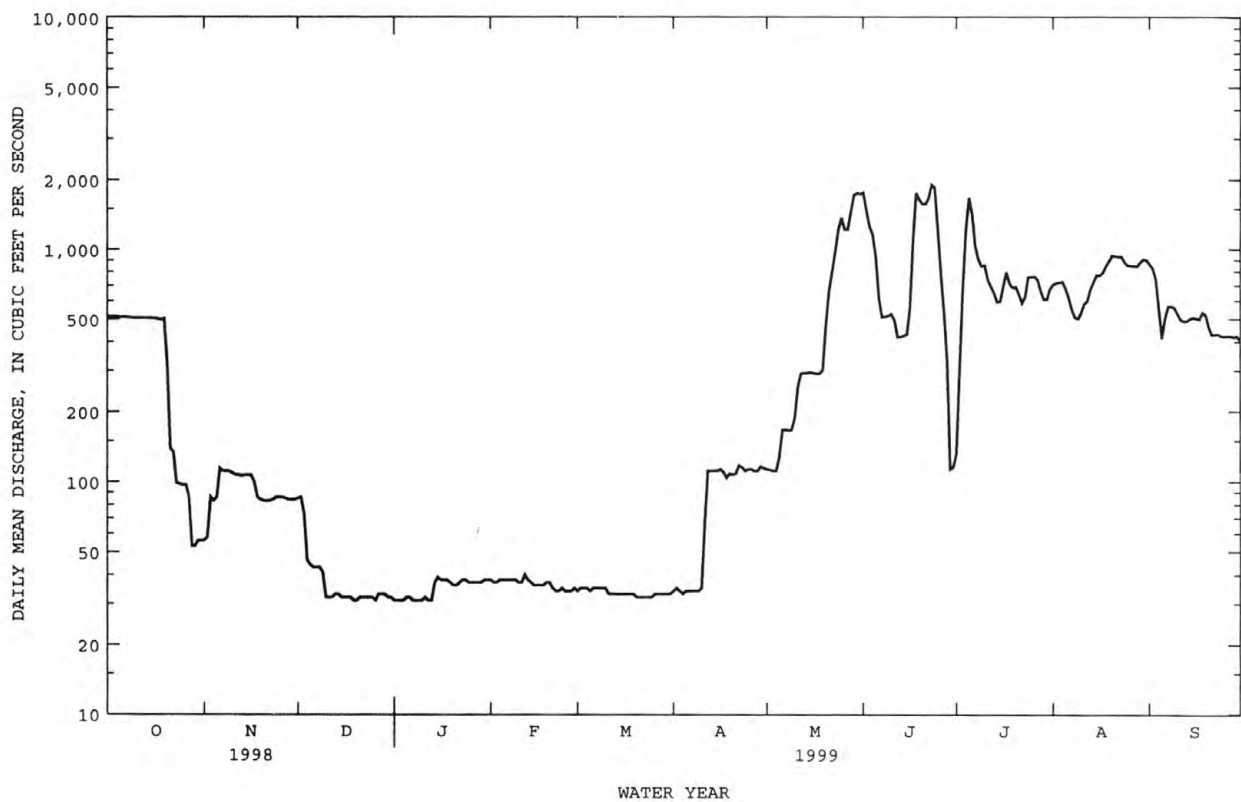
06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1918 - 1999	
ANNUAL TOTAL	114098		129603		--	
ANNUAL MEAN	313		355		276	
HIGHEST ANNUAL MEAN	--		--		427	1969
LOWEST ANNUAL MEAN	--		--		100	1941
HIGHEST DAILY MEAN	1820	Jul 8	1900	Jun 23	3900	Jun 16 1918
LOWEST DAILY MEAN	31	Dec 19,20,26	31	Many days	.00 ^a	Feb 28 to Apr 7 1937
ANNUAL SEVEN-DAY MINIMUM	32	Dec 15	31	Jan 7	.00 ^b	Feb 28 1937
INSTANTANEOUS PEAK FLOW	--		2070	Jun 23	6200 ^b	Aug 8 1951
INSTANTANEOUS PEAK STAGE	--		4.53	Jun 23	7.09	Aug 8 1951
ANNUAL RUNOFF (AC-FT)	226300		257100		199800	
10 PERCENT EXCEEDS	975		877		805	
50 PERCENT EXCEEDS	57		111		108	
90 PERCENT EXCEEDS	43		33		20	

a Result of regulation.

b From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow. Result of automatic spillway gates releasing at Bull Lake Dam.

e Estimated.



YELLOWSTONE RIVER BASIN

06225500 WIND RIVER NEAR CROWHEART, WY

LOCATION.--Lat 43°14'33", long 109°00'35", in NW¹/₄ NW¹/₄ sec.16, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 0.9 mi downstream from Bull Lake Creek and 9.0 mi southeast of Crowheart.

DRAINAGE AREA.--1,891 mi².

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1116: 1946-47. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,635 ft above sea level, from topographic map.

REMARKS.--Records good except those for December to February and estimated daily discharges, which are poor. Some regulation by Bull Lake on Bull Lake Creek (see station 06224500). Diversions for irrigation of about 25,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1927, reached a discharge of 13,000 ft³/s; discharge measurement made by Bureau of Reclamation at site 1.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1240	663	526	399	e395	369	362	1360	e7550	e4970	2340	1810
2	1260	646	520	406	390	340	340	1260	5890	e5000	2230	1800
3	1260	757	503	e385	399	336	342	1120	5580	e5300	2100	1800
4	1310	706	473	e370	383	335	341	979	5360	e5600	2140	1900
5	1270	616	428	e395	375	318	332	870	5320	e6000	2140	1650
6	1210	666	354	e410	359	328	339	815	4830	e5600	e2020	1500
7	1210	661	339	e410	366	329	348	826	4810	e5200	e2300	1420
8	1200	598	350	e410	364	335	351	1050	4700	e5000	e2100	1320
9	1190	577	390	e400	371	321	363	1320	4390	e4600	e2000	1250
10	1170	521	415	e410	378	322	360	1030	4040	e4100	1730	1190
11	1150	518	422	419	337	324	355	897	3910	e3900	1690	1140
12	1140	538	422	398	337	326	382	871	4270	e3700	1690	1130
13	1110	525	427	367	375	316	397	840	4340	e3510	1730	1130
14	1110	604	419	398	361	319	424	835	4980	3170	1710	1110
15	1110	648	420	401	360	336	431	855	6030	3090	1690	1100
16	1210	614	427	e400	347	356	405	891	7450	3120	1640	1090
17	1180	595	445	e410	350	343	396	860	10200	3020	1620	1070
18	1130	567	418	e430	359	319	429	825	11400	2860	1610	1100
19	1110	520	337	e400	363	336	551	867	11400	2700	1640	1140
20	912	481	e300	e410	367	369	652	1080	11200	2610	1700	1130
21	720	518	e300	e400	361	408	613	1390	10400	2530	1710	1050
22	698	570	307	e400	338	445	596	1870	9720	2460	1740	1020
23	659	531	321	e400	344	417	577	2810	9040	2430	1710	1010
24	664	549	335	e400	376	411	495	4820	8600	2510	1640	994
25	660	511	336	e380	372	438	553	5950	8370	2640	1630	981
26	654	511	348	e390	351	501	652	6900	8210	2530	1610	976
27	633	533	378	e400	338	476	731	7360	6540	2380	1600	977
28	612	532	370	e380	352	404	695	9010	5310	2250	1600	983
29	607	538	388	e390	---	361	1250	e9240	4830	2140	1610	986
30	613	529	398	e400	---	372	2190	e9660	4680	2250	1650	977
31	668	---	392	e390	---	369	---	e10400	---	2330	1730	---
TOTAL	30670	17343	12208	12358	10168	11279	16252	88861	203350	109500	56050	36734
MEAN	989	578	394	399	363	364	542	2866	6778	3532	1808	1224
MAX	1310	757	526	430	399	501	2190	10400	11400	6000	2340	1900
MIN	607	481	300	367	337	316	332	815	3910	2140	1600	976
AC-FT	60830	34400	24210	24510	20170	22370	32240	176300	403300	217200	111200	72860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

	MEAN	690	484	388	370	358	366	559	1783	3826	2951	1675	1163
MAX	1415	932	625	560	538	616	1284	2938	7259	5694	2483	1774	
(WY)	1952	1969	1972	1954	1951	1972	1952	1956	1971	1967	1951	1997	
MIN	371	298	215	179	202	226	309	729	1520	1362	853	688	
(WY)	1989	1978	1982	1982	1989	1977	1993	1977	1994	1992	1977	1994	

YELLOWSTONE RIVER BASIN

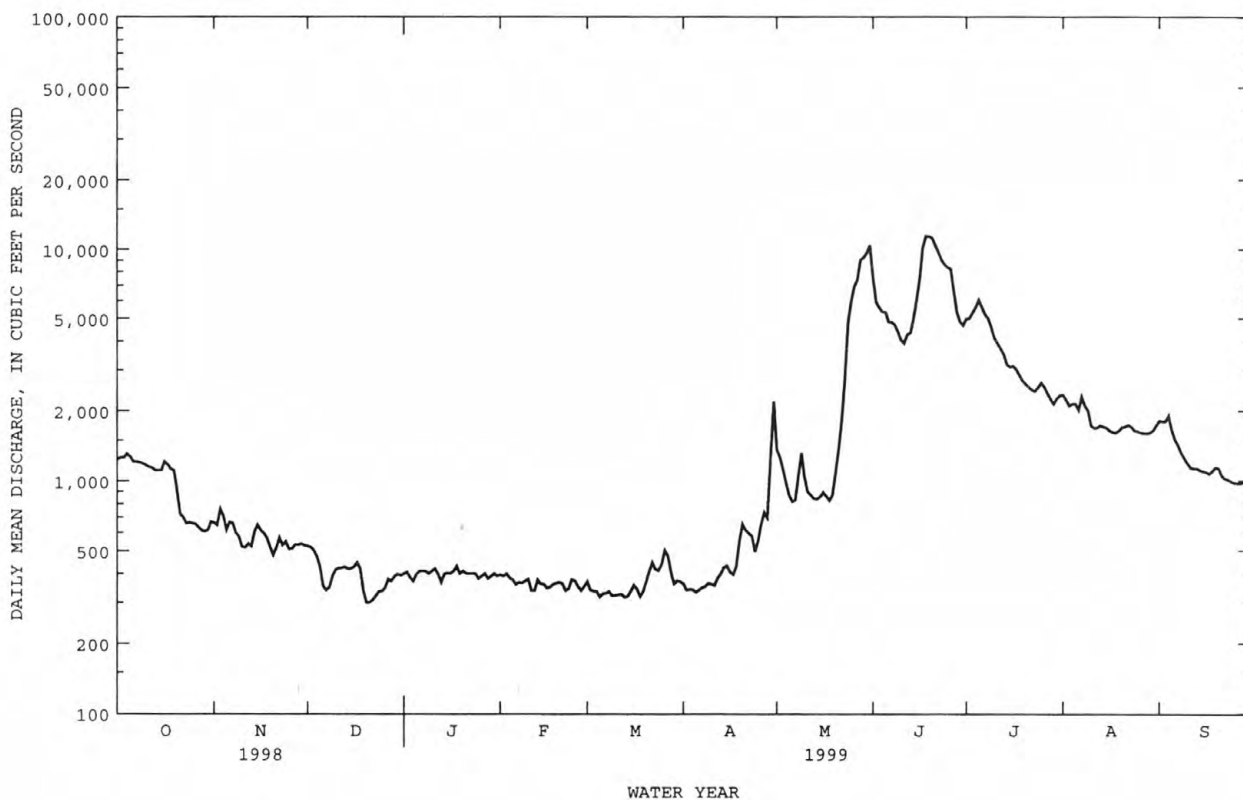
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06225500 WIND RIVER NEAR CROWHEART, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1946 - 1999	
ANNUAL TOTAL	521609		604773		--	
ANNUAL MEAN	1429		1657		1221	
HIGHEST ANNUAL MEAN	--		--		1657	1999
LOWEST ANNUAL MEAN	--		--		670	1977
HIGHEST DAILY MEAN	8840	Jul 4	11400	Jun 18,19	11400	Jun 18,19 1999
LOWEST DAILY MEAN	280	Jan 7	300	Dec 20,21	130	Feb 5 1982
ANNUAL SEVEN-DAY MINIMUM	299	Jan 6	319	Dec 19	143	Dec 30 1981
INSTANTANEOUS PEAK FLOW	--		13200	Jun 19	14300 ^a	Jun 13 1991
INSTANTANEOUS PEAK STAGE	--		11.23	Jun 19	11.23	Jun 19 1999
ANNUAL RUNOFF (AC-FT)	1035000		1200000		884600	
10 PERCENT EXCEEDS	3460		4830		2850	
50 PERCENT EXCEEDS	665		666		584	
90 PERCENT EXCEEDS	337		348		300	

a Gage height, 11.04 ft, from floodmarks.

e Estimated.



06226000 WYOMING CANAL NEAR LENORE, WY

LOCATION.--Lat 43°13'45", long 108°53'40", in SE¹/₄ SE¹/₄ sec.17, T.3 N., R.1 W., Fremont County, Hydrologic Unit 10080001, on right bank 3.3 mi downstream from diversion dam on Wind River and 15 mi southeast of Lenore.

PERIOD OF RECORD.--May 1941 to September 1945 (irrigation season only), May 1949 to September 1982, April 1988 to current year. No winter record 1977-1978, and 1988 to current year. Monthly discharge only from some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 5,560.85 ft above sea level. May 1, 1941 to Sept. 30, 1945, nonrecording gage at site 3.2 mi upstream at different datum. May 3, 1949 to Oct. 2, 1952, and Apr. 12 to May 15, 1971, water-stage recorder at site 3.0 mi upstream at different datum.

REMARKS.--Records good. Flow used for irrigation on Riverton project. Midvale Irrigation District data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	949	---	---	---	---	---	---	268	1610	1440	1740	1320
2	984	---	---	---	---	---	---	268	1690	1450	1640	1320
3	989	---	---	---	---	---	---	269	1730	1490	1530	1370
4	1020	---	---	---	---	---	---	266	1690	1540	1570	1480
5	893	---	---	---	---	---	116	265	e1670	1470	1500	1230
6	831	---	---	---	---	---	258	265	e1660	1470	1520	1030
7	830	---	---	---	---	---	256	266	1670	1650	1500	977
8	829	---	---	---	---	---	244	267	1640	1680	1380	965
9	725	---	---	---	---	---	236	272	1510	1650	1260	910
10	26	---	---	---	---	---	250	300	1460	1620	1200	879
11	---	---	---	---	---	---	255	321	1470	1630	1170	852
12	---	---	---	---	---	---	293	332	1500	1660	1180	841
13	---	---	---	---	---	---	321	391	1500	1670	1220	829
14	---	---	---	---	---	---	351	400	1500	1660	1180	846
15	---	---	---	---	---	---	382	413	1430	1650	1170	855
16	---	---	---	---	---	---	328	413	1440	1760	1110	831
17	---	---	---	---	---	---	306	419	1460	1690	1110	805
18	---	---	---	---	---	---	329	442	1400	1670	1150	824
19	---	---	---	---	---	---	399	481	1360	1700	1150	892
20	---	---	---	---	---	---	456	533	1350	1830	1240	899
21	---	---	---	---	---	---	478	676	1340	1800	1260	800
22	---	---	---	---	---	---	452	810	1290	1730	1300	760
23	---	---	---	---	---	---	441	960	1290	1790	1260	738
24	---	---	---	---	---	---	410	1020	1290	1800	1180	725
25	---	---	---	---	---	---	414	1050	1350	1790	1140	719
26	---	---	---	---	---	---	409	1200	1350	1760	1110	715
27	---	---	---	---	---	---	372	1390	1300	1720	1100	713
28	---	---	---	---	---	---	339	1380	1270	1660	1100	720
29	---	---	---	---	---	---	316	1520	1300	1550	1140	720
30	---	---	---	---	---	---	294	1560	1380	1670	1200	728
31	---	---	---	---	---	---	---	1590	---	1720	1280	---
TOTAL	---	---	---	---	---	---	---	20007	43900	51370	39590	27293
MEAN	---	---	---	---	---	---	---	645	1463	1657	1277	910
MAX	---	---	---	---	---	---	---	1590	1730	1830	1740	1480
MIN	---	---	---	---	---	---	---	265	1270	1440	1100	713
AC-FT	---	---	---	---	---	---	---	39680	87080	101900	78530	54140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

MEAN	195	184	199	199	201	224	297	706	1124	1267	990	696
MAX	430	436	383	345	357	422	440	1159	1668	1736	1402	1168
(WY)	1994	1972	1958	1958	1954	1972	1980	1976	1990	1976	1995	1997
MIN	.000	.000	.000	.000	.000	.000	91.2	339	321	587	423	277
(WY)	1951	1951	1971	1971	1971	1971	1971	1942	1944	1941	1941	1994

06226000 WYOMING CANAL NEAR LENORE, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

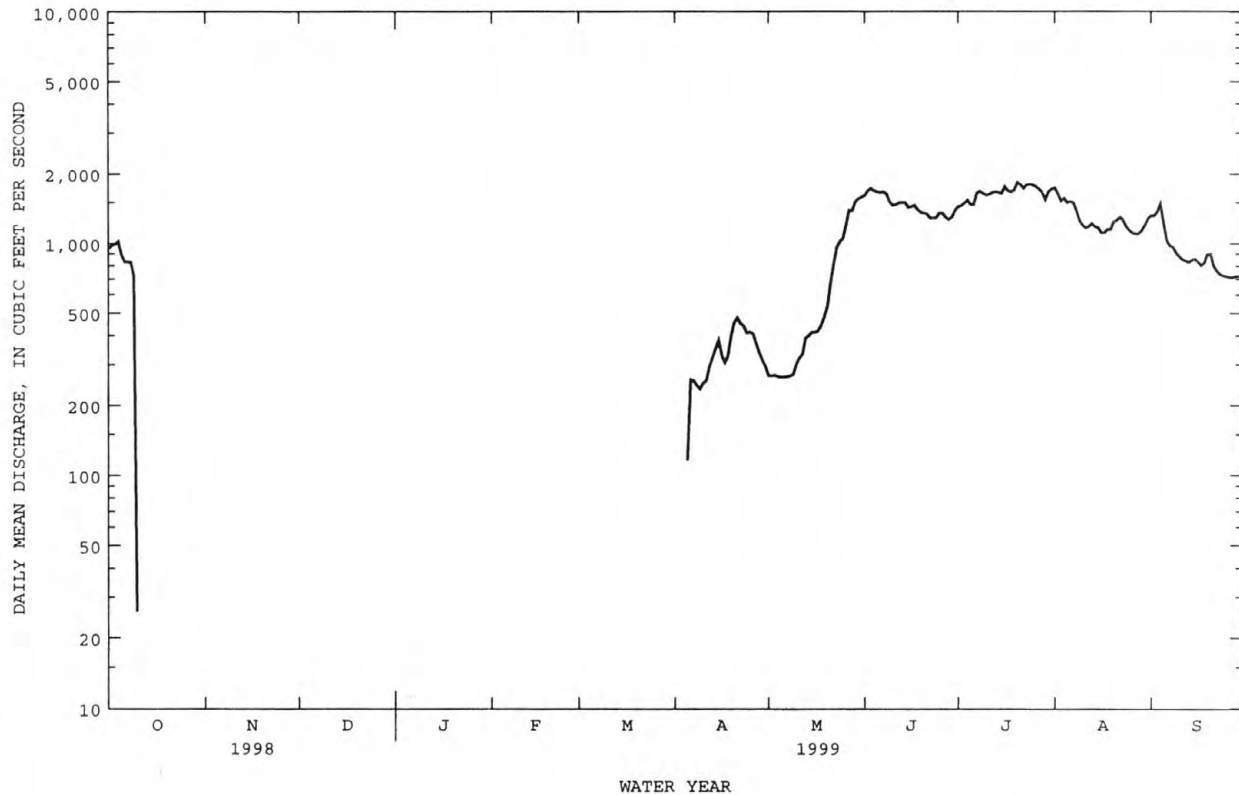
WATER YEARS 1941 - 1999

ANNUAL MEAN	--		540 ^a	
HIGHEST ANNUAL MEAN	--		669 ^a	1972
LOWEST ANNUAL MEAN	--		461 ^a	1975
HIGHEST DAILY MEAN	1830	Jul 20	1860	Jun 11, 12 1990
LOWEST DAILY MEAN	26	Oct 10	.00	Many days, most years
INSTANTANEOUS PEAK FLOW	1860	Jul 19	2060	Jun 5 1990
INSTANTANEOUS PEAK STAGE	13.34	Jul 19	13.79	Jun 5 1990

* During period of operation.

a Water years 1977, 1978, and 1988 to current year not included.

e Estimated.



YELLOWSTONE RIVER BASIN

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY

LOCATION.--Lat 43°09'02", long 108°43'41", in SW¹/₄ SE¹/₄ NW¹/₄ sec.14, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, 450 ft downstream from headgate, 1.6 mi upstream from bridge on State Highway 132 and 2.5 mi west of Kinnear.

PERIOD OF RECORD.--May 1991 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft above sea level, from topographic map.

REMARKS.--Records good. Flow is diverted from the Wind River for irrigation. Data collection platform with satellite telemetry at station. Results of discharge measurements, in cubic feet per second, made during period when station was not in operation, are given below:

Oct. 1 . . .	0.63
Mar. 31 . . .	0.52

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.9	9.4	37	38	33
2	---	---	---	---	---	---	---	1.7	11	37	37	33
3	---	---	---	---	---	---	---	1.6	16	38	36	34
4	---	---	---	---	---	---	---	1.6	19	36	36	34
5	---	---	---	---	---	---	---	1.3	33	29	36	33
6	---	---	---	---	---	---	---	1.2	41	26	37	33
7	---	---	---	---	---	---	---	1.1	41	23	36	33
8	---	---	---	---	---	---	---	1.1	41	22	35	31
9	---	---	---	---	---	---	---	1.2	40	21	34	31
10	---	---	---	---	---	---	---	1.1	40	21	34	30
11	---	---	---	---	---	---	---	1.1	40	20	34	28
12	---	---	---	---	---	---	---	1.1	40	20	34	28
13	---	---	---	---	---	---	---	10	41	20	34	28
14	---	---	---	---	---	---	---	13	43	20	33	28
15	---	---	---	---	---	---	---	7.1	44	35	33	27
16	---	---	---	---	---	---	---	6.9	45	45	33	27
17	---	---	---	---	---	---	---	6.9	45	38	32	26
18	---	---	---	---	---	---	---	6.4	47	38	32	26
19	---	---	---	---	---	---	---	6.3	47	38	32	27
20	---	---	---	---	---	---	---	6.7	39	37	32	27
21	---	---	---	---	---	---	---	7.3	33	37	32	26
22	---	---	---	---	---	---	---	7.9	28	37	32	25
23	---	---	---	---	---	---	---	8.4	35	36	32	25
24	---	---	---	---	---	---	---	8.7	34	37	32	25
25	---	---	---	---	---	---	---	8.7	21	36	32	25
26	---	---	---	---	---	---	---	10	17	38	32	25
27	---	---	---	---	---	---	---	19	15	40	32	25
28	---	---	---	---	---	---	---	25	29	38	32	21
29	---	---	---	---	---	---	---	16	38	36	32	14
30	---	---	---	---	---	---	---	14	37	37	32	9.4
31	---	---	---	---	---	---	---	12	---	38	32	---
TOTAL	---	---	---	---	---	---	---	216.3	1009.4	1011	1040	817.4
MEAN	---	---	---	---	---	---	---	6.98	33.6	32.6	33.5	27.2
MAX	---	---	---	---	---	---	---	25	47	45	38	34
MIN	---	---	---	---	---	---	---	1.1	9.4	20	32	9.4
AC-FT	---	---	---	---	---	---	---	429	2000	2010	2060	1620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY)*

MEAN	1.25	---	---	---	---	---	---	15.2	21.5	25.0	24.7	19.1
MAX	1.73	---	---	---	---	---	---	26.1	33.6	32.6	33.5	27.2
(WY)	1993	---	---	---	---	---	---	1994	1999	1999	1999	1999
MIN	.76	---	---	---	---	---	---	6.98	11.5	12.7	19.5	10.9
(WY)	1994	---	---	---	---	---	---	1999	1995	1992	1997	1993

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEN, WY--Continued

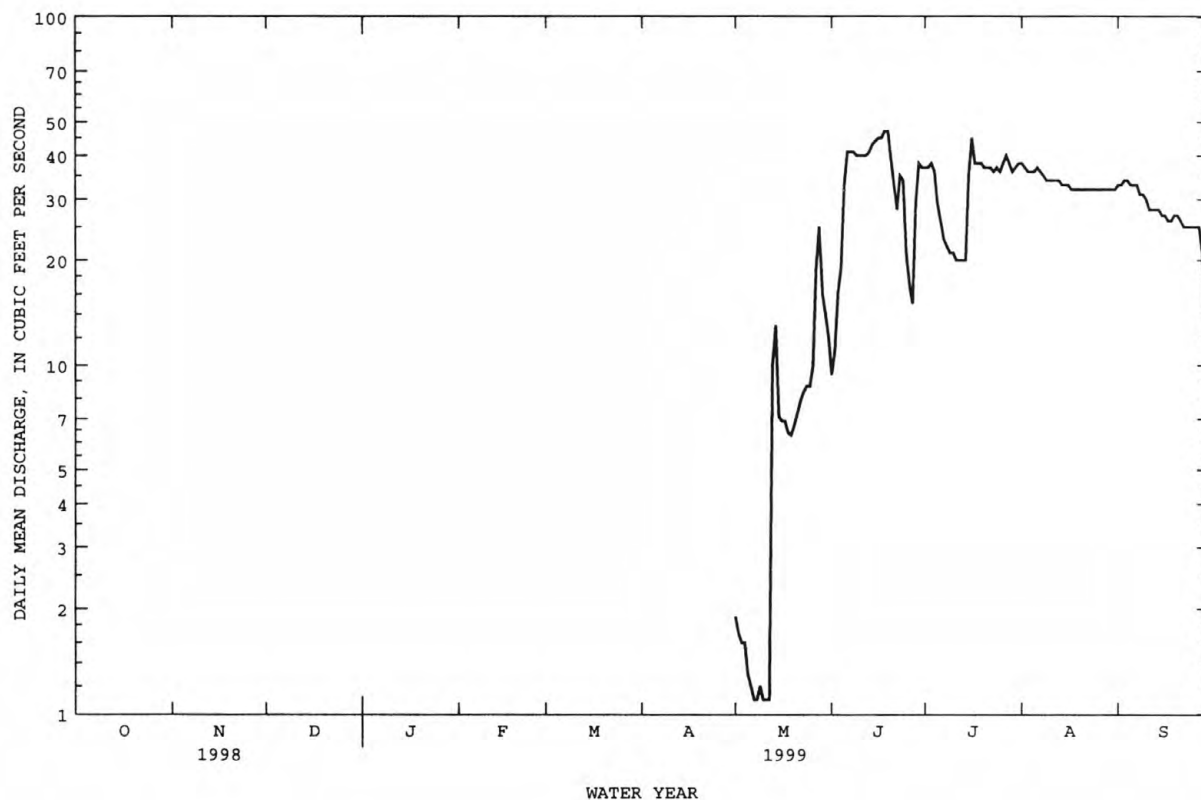
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1991 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN47 Jun 18,19
1.1 May 7,8,10-1248 Jun 25 1991
.00 Several days
in 1991, 1992INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE52 Jun 23
2.15 Jun 2356 Jul 23 1996
2.25 Jul 23 1996

* During period of operation.



LOCATION.--Lat 43°08'38", long 108°42'26", in SE¹/₄ SE¹/₄ SW¹/₄ sec.13, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, downstream side of bridge on Wyoming State Secondary Highway 132, and 1.6 mi southwest of Kinnear.

PERIOD OF RECORD.--April 1974 to September 1979 (no winter records), April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above sea level, from topographic map. April 1974 to September 1979 and Mar. 28, 1991 to June 8, 1997, at site 300 ft upstream on right bank at same datum. June 9, 1997 to Apr. 21, 1998, at present site on right bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 (see station 06224500) and Pilot-Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 102,100 acres lying both upstream and downstream from station. The Wyoming Canal of the Riverton Project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot Wasteway. Additional wastewater returns to river downstream from station through Fiveville and Muddy creeks. Midvale Irrigation District data collection platform with satellite telemetry at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	651	521	e340	e345	e385	404	1600	8250	2930	528	593
2	321	629	518	e325	e360	e376	378	1190	6090	3170	513	563
3	334	719	511	e331	e345	e374	367	1020	5390	3970	472	589
4	360	706	478	e335	e350	364	370	808	5220	5530	477	629
5	412	620	446	e362	e348	340	279	656	5010	6750	476	563
6	419	655	360	e370	e335	337	112	616	4490	5790	571	546
7	409	671	306	e378	e344	353	125	550	4330	4400	510	537
8	408	603	302	e358	e350	360	109	735	4320	4300	482	430
9	427	577	337	e356	e362	351	177	1170	4140	3940	475	419
10	1230	525	343	e360	e370	352	152	889	3740	3440	472	387
11	1240	510	391	e360	e318	353	117	684	3590	2940	472	348
12	1230	532	455	e345	e295	358	116	651	3790	2570	477	343
13	1210	515	459	e325	e300	352	122	499	4080	2450	476	340
14	1210	583	480	e340	e315	346	103	489	4570	2290	475	329
15	1200	634	472	e342	e337	366	100	481	5820	2160	474	289
16	1410	618	468	e355	e325	385	99	561	7010	1910	472	286
17	1390	596	461	e352	e325	391	116	532	8950	1870	454	283
18	1260	564	453	e350	e322	352	113	427	10900	1590	453	284
19	1230	532	e320	e365	e322	359	128	422	11000	1350	458	301
20	1070	469	e225	e368	e335	391	173	554	11100	1000	468	289
21	719	500	e225	e369	e344	434	205	783	11100	909	477	286
22	691	557	e240	e365	e342	499	191	1330	11100	871	476	281
23	661	539	e300	e358	e345	473	229	2080	11000	734	472	281
24	657	530	e290	e362	e366	453	173	3530	10300	830	469	281
25	649	518	e285	e332	e379	471	184	4940	9000	786	480	278
26	639	501	e302	e334	e368	530	348	5760	7730	677	469	270
27	629	521	e320	e348	e360	568	468	6040	5730	561	473	274
28	614	520	e330	e358	e362	460	463	7230	4210	430	477	283
29	607	534	e341	e348	---	400	726	8320	3380	376	476	284
30	611	524	e349	e356	---	395	2840	8910	3000	423	483	284
31	646	---	e350	e352	---	403	---	9570	---	528	489	---
TOTAL	24215	17153	11638	10899	9569	12331	9487	73027	198340	71475	14896	11150
MEAN	781	572	375	352	342	398	316	2356	6611	2306	481	372
MAX	1410	719	521	378	379	568	2840	9570	11100	6750	571	629
MIN	321	469	225	325	295	337	99	422	3000	376	453	270
AC-FT	48030	34020	23080	21620	18980	24460	18820	144800	393400	141800	29550	22120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)

MEAN	393	460	325	300	309	335	279	1081	3055	1941	608	410
MAX	850	625	380	360	378	418	758	2356	6611	4802	1230	564
(WY)	1998	1998	1996	1996	1998	1996	1974	1999	1999	1995	1976	1976
MIN	188	364	240	193	224	194	72.9	346	400	379	340	216
(WY)	1993	1995	1993	1993	1993	1992	1978	1995	1994	1994	1977	1977

YELLOWSTONE RIVER BASIN

75

06227600 WIND RIVER NEAR KINNEAR, WY--Continued

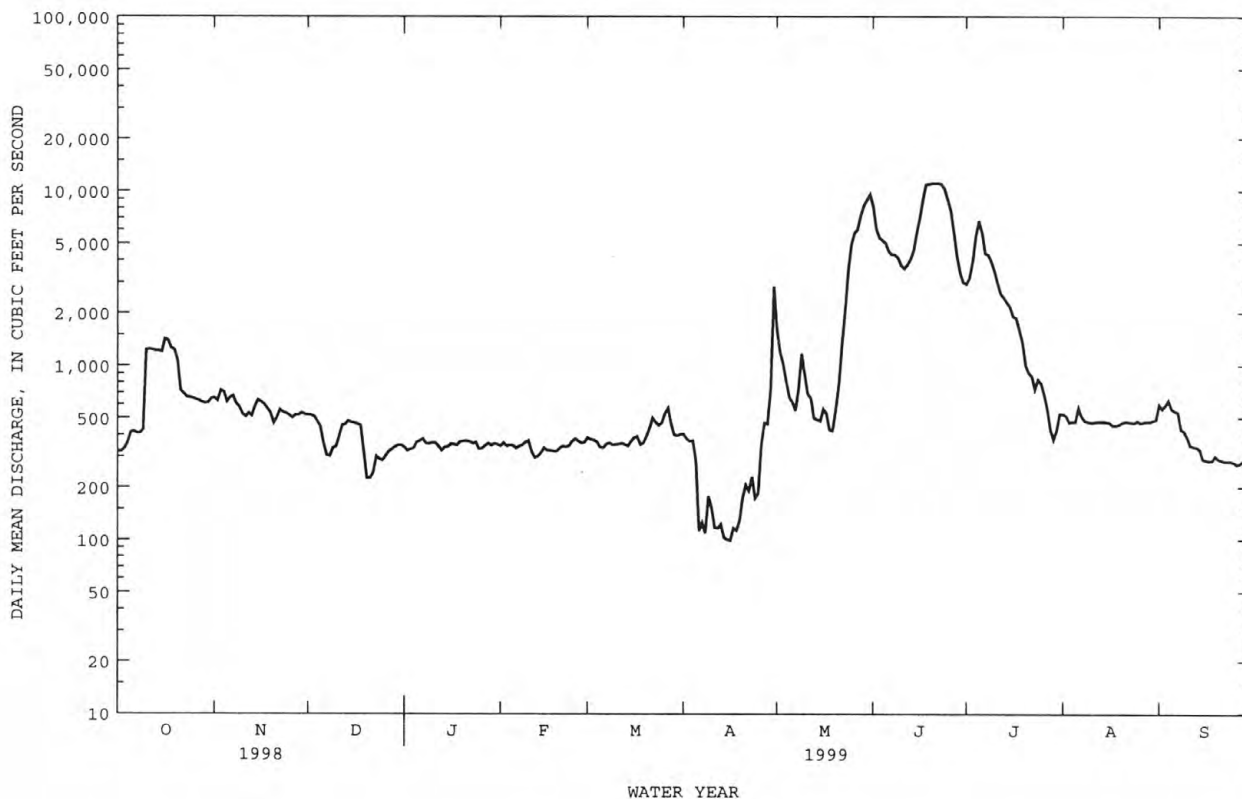
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1974 - 1999*	
ANNUAL TOTAL	342289		464180		--	
ANNUAL MEAN	938		1272		817	
HIGHEST ANNUAL MEAN	--		--		1272	1999
LOWEST ANNUAL MEAN	--		--		361	1994
HIGHEST DAILY MEAN	7380	Jul 4	11100	Jun 20-22	11100	Jun 20 1999
LOWEST DAILY MEAN	116	Apr 28	99	Apr 16	28	Apr 24,25 1978
ANNUAL SEVEN-DAY MINIMUM	141	Apr 23	110	Apr 12	79	Oct 18 1992
INSTANTANEOUS PEAK FLOW	--		12000	Jun 18	13900 ^a	Jun 13 1991
INSTANTANEOUS PEAK STAGE	--		8.72	Jun 18	8.79 ^b	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	678900		920700		592200	
10 PERCENT EXCEEDS	2240		4100		1770	
50 PERCENT EXCEEDS	420		471		377	
90 PERCENT EXCEEDS	300		286		206	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a Gage height, 8.03 ft, from floodmark.

b From floodmark, discharge, 11,600 ft³/s.

e Estimated.



YELLOWSTONE RIVER BASIN

06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY

LOCATION.--Lat 43°01'34", long 108°31'12", in NE¹/₄ NE¹/₄ NE¹/₄ sec.33, T.1 N., R.3 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.6 mi downstream from headgates and 6.9 mi west of Riverton.

PERIOD OF RECORD.--May 1991 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,060 ft above sea level, from topographic map.

REMARKS.--Records fair. Flow is diverted from Wind River for irrigation. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	20	2.4	21	23
2	---	---	---	---	---	---	---	---	18	17	20	24
3	---	---	---	---	---	---	---	---	19	27	19	24
4	---	---	---	---	---	---	---	---	20	27	19	23
5	---	---	---	---	---	---	---	---	e21	26	20	23
6	---	---	---	---	---	---	---	---	e23	26	20	23
7	---	---	---	---	---	---	---	---	e24	24	20	23
8	---	---	---	---	---	---	---	---	25	23	19	22
9	---	---	---	---	---	---	---	---	25	22	18	19
10	---	---	---	---	---	---	---	---	23	22	17	14
11	---	---	---	---	---	---	---	---	23	22	18	9.4
12	---	---	---	---	---	---	---	---	22	25	18	7.6
13	---	---	---	---	---	---	---	---	22	28	18	6.5
14	---	---	---	---	---	---	---	---	21	27	17	6.2
15	---	---	---	---	---	---	---	---	19	27	17	5.7
16	---	---	---	---	---	---	---	---	16	33	18	5.2
17	---	---	---	---	---	---	---	---	17	36	17	5.0
18	---	---	---	---	---	---	---	---	18	34	19	4.6
19	---	---	---	---	---	---	---	---	15	33	20	4.5
20	---	---	---	---	---	---	---	---	15	31	20	4.4
21	---	---	---	---	---	---	---	---	15	30	21	4.2
22	---	---	---	---	---	---	---	---	14	29	20	3.8
23	---	---	---	---	---	---	---	---	14	28	20	3.6
24	---	---	---	---	---	---	---	---	e13	28	20	3.3
25	---	---	---	---	---	---	---	1.1	e11	28	21	3.1
26	---	---	---	---	---	---	---	16	e9.0	27	22	2.8
27	---	---	---	---	---	---	---	22	e6.6	24	22	2.7
28	---	---	---	---	---	---	---	22	e4.1	19	23	2.7
29	---	---	---	---	---	---	---	21	3.6	16	22	3.0
30	---	---	---	---	---	---	---	21	2.8	14	22	3.7
31	---	---	---	---	---	---	---	21	---	18	23	---
TOTAL	---	---	---	---	---	---	---	---	499.1	773.4	611	310.0
MEAN	---	---	---	---	---	---	---	---	16.6	24.9	19.7	10.3
MAX	---	---	---	---	---	---	---	---	25	36	23	24
MIN	---	---	---	---	---	---	---	---	2.8	2.4	17	2.7
AC-FT	---	---	---	---	---	---	---	---	990	1530	1210	615

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY) *

MEAN	.60	---	---	---	---	---	.60	24.4	23.7	27.4	25.0	24.5
MAX	.87	---	---	---	---	---	.60	35.3	39.7	44.6	47.7	42.9
(WY)	1994	---	---	---	---	---	1992	1992	1993	1994	1994	1994
MIN	.33	---	---	---	---	---	.60	20.2	12.8	19.4	8.74	10.3
(WY)	1993	---	---	---	---	---	1992	1993	1995	1993	1998	1999

06227810 LEPHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY--Continued

SUMMARY STATISTICS

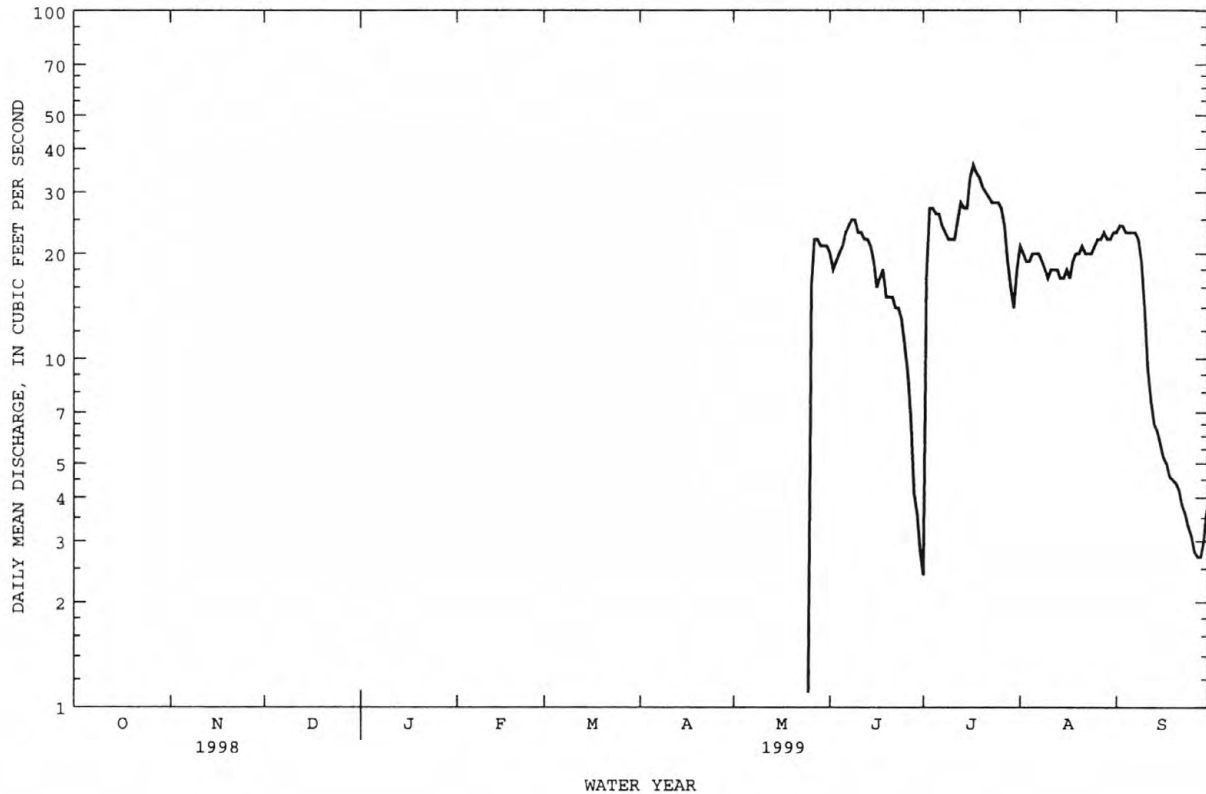
FOR 1999 WATER YEAR*

WATER YEARS 1991 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN36 Jul 17
1.1 May 2566 May 25 1997
.00 Many days,
1991-1994INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE50 Jul 2
2.82 Jul 274 Jun 13 1991
3.19 Sep 8 1997

* During period of operation.

e Estimated.



YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43°00'38", long 108°22'34", in NE¹/₄ NW¹/₄ NW¹/₄ sec.2, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 20 ft downstream from bridge on State Highway 789, 1.1 mi southeast of post office in Riverton, and 1.5 mi upstream from Little Wind River.

DRAINAGE AREA.--2,309 mi².

PERIOD OF RECORD.--May to August 1906, August to December 1907, May to October 1908, May 1911 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Big Wind River near Arapahoe Agency 1906 and as Big Wind River near Riverton 1907-08.

REVISED RECORDS.--WSP 1509: 1935. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.56 ft above sea level. See WSP 1729 for history of changes prior to Oct. 13, 1930. Oct. 13, 1930 to Apr. 15, 1968, water-stage recorder at site 280 ft upstream at datum 2.00 ft higher. Apr. 16 to Nov. 17, 1968, water-stage recorder at site 155 ft upstream at datum 2.00 ft higher. Nov. 18, 1968 to July 28, 1970, water-stage recorder at site 20 ft downstream at datum 2.00 ft higher. July 29, 1970 to Sept. 30, 1977, water-stage recorder at site 245 ft downstream at datum 2.00 ft higher. Oct. 1, 1977 to Oct. 23, 1997 at site 245 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 (station 06224500) and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 128,000 acres upstream and downstream from station. The Wyoming Canal of the Riverton project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	770	615	e330	e340	e405	404	1590	6670	1650	214	92
2	312	748	610	e320	e340	e415	407	1130	4630	1790	203	214
3	342	805	613	e312	e350	416	374	1050	3750	2170	150	312
4	e370	864	587	e300	e350	395	377	840	3650	3170	154	408
5	e389	758	548	e325	e355	376	359	686	3320	4470	181	352
6	433	757	466	e340	e340	358	157	625	3240	4180	190	296
7	417	815	381	e365	e358	376	135	552	2740	2990	266	316
8	415	741	353	e335	e360	388	156	612	2850	2750	189	276
9	405	691	367	e332	e385	383	171	1030	2800	2600	155	244
10	966	650	416	e350	e410	376	190	948	2450	2210	142	239
11	1260	617	441	e360	e315	377	163	707	2330	1890	163	200
12	1260	624	517	e350	e280	386	114	659	2370	1610	224	183
13	1250	634	e540	e320	e300	e390	120	550	2640	1480	193	186
14	1240	657	e516	e330	e310	e393	112	507	2980	1350	193	189
15	1230	733	e520	e325	e344	e390	82	483	3740	1300	192	144
16	1380	742	e540	e340	e330	e385	71	542	4810	1040	187	126
17	1430	707	e513	e333	e330	413	78	531	6040	1100	167	124
18	1300	675	e480	e330	e324	386	86	422	7770	871	138	118
19	1270	647	e292	e340	e325	373	85	381	8520	766	138	180
20	1210	564	e200	e355	e340	397	115	417	8540	504	139	189
21	875	588	e210	e348	e358	439	169	580	8370	431	139	172
22	806	623	e220	e340	e363	499	177	921	8250	382	134	175
23	778	649	e244	e345	e370	514	229	1480	8510	307	128	169
24	762	615	e258	e355	e380	476	199	2410	7940	299	124	164
25	757	631	e270	e325	e418	481	226	3440	6900	331	122	156
26	745	585	e295	e317	e405	522	426	4140	5600	300	103	145
27	735	607	e320	e335	e400	586	491	4440	4130	214	84	160
28	730	613	e320	e367	e395	509	497	5000	2950	105	92	180
29	700	632	e322	e335	---	440	575	6020	2140	70	89	214
30	721	619	e338	e342	---	391	2260	6530	1840	53	87	302
31	736	---	e340	e345	---	382	---	6950	---	102	91	---
TOTAL	25537	20361	12652	10446	9875	13017	9005	56173	142470	42485	4771	6225
MEAN	824	679	408	337	353	420	300	1812	4749	1370	154	208
MAX	1430	864	615	367	418	586	2260	6950	8540	4470	266	408
MIN	312	564	200	300	280	358	71	381	1840	53	84	92
AC-FT	50650	40390	25100	20720	19590	25820	17860	111400	282600	84270	9460	12350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1999, BY WATER YEAR (WY)

	603	452	349	331	334	350	417	1238	2893	1767	690	488
MEAN	603	452	349	331	334	350	417	1238	2893	1767	690	488
MAX	1500	895	559	539	531	650	1234	4618	7194	5802	3052	1794
(WY)	1952	1969	1972	1972	1948	1916	1943	1928	1921	1917	1930	1927
MIN	152	222	200	151	196	74.9	53.8	72.6	68.6	20.3	42.8	35.7
(WY)	1993	1941	1932	1938	1981	1981	1989	1989	1994	1994	1994	1988

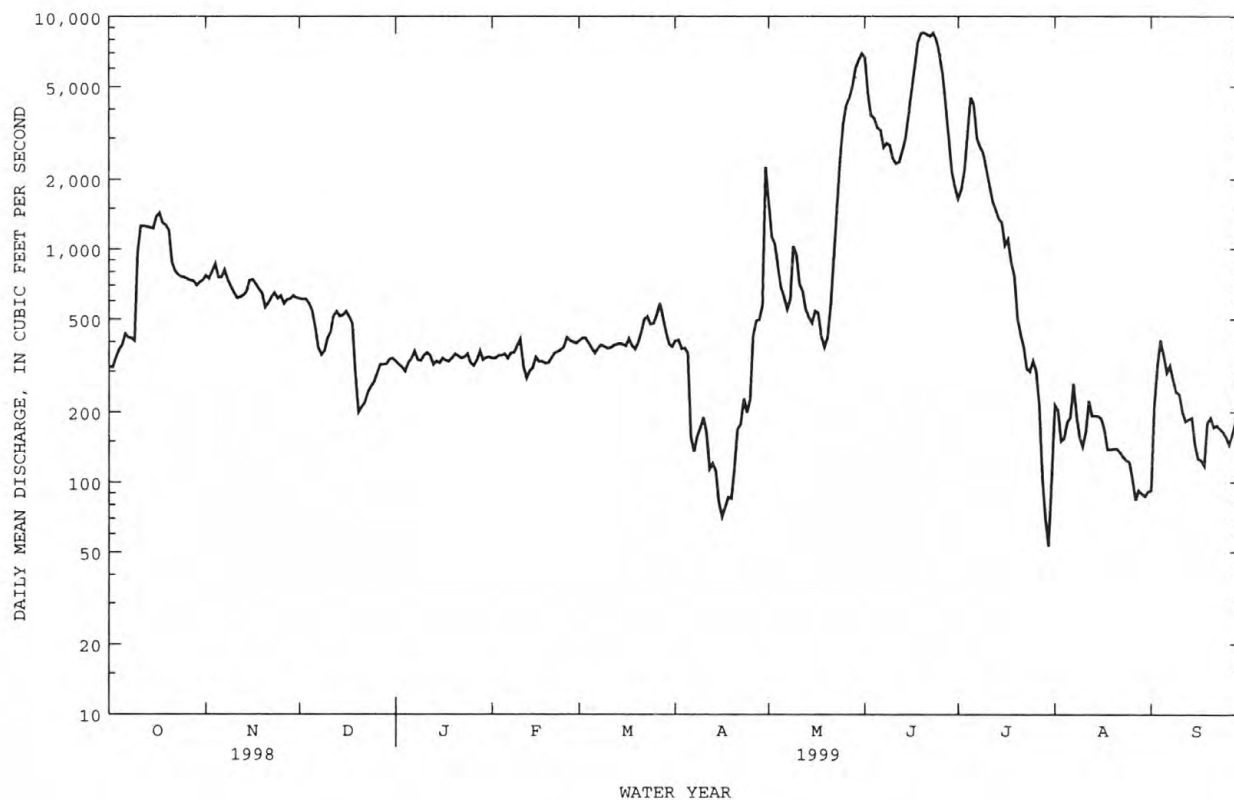
06228000 WIND RIVER AT RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1912 - 1999	
ANNUAL TOTAL	268776		353017		--	
ANNUAL MEAN	736		967		817	
HIGHEST ANNUAL MEAN	--		--		1626	
LOWEST ANNUAL MEAN	--		--		195	
HIGHEST DAILY MEAN	5640	Jul 4	8540	Jun 20	11400	Jun 14 1935
LOWEST DAILY MEAN	76	Apr 29	53	Jul 30	9.8	May 28 1977
ANNUAL SEVEN-DAY MINIMUM	94	Apr 24	90	Apr 14	12	Jul 13 1977
INSTANTANEOUS PEAK FLOW	--		9000	Jun 20	13300 ^a	Jun 15 1935
INSTANTANEOUS PEAK STAGE	--		10.84	Jun 20	10.86 ^b	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	533100		700200		592000	
10 PERCENT EXCEEDS	1440		2680		2090	
50 PERCENT EXCEEDS	430		390		403	
90 PERCENT EXCEEDS	203		152		172	

a Gage height, 10.15 ft, site and datum then in use.

b Discharge, 10,100 ft³/s, site 245 ft downstream, present datum.

e Estimated.



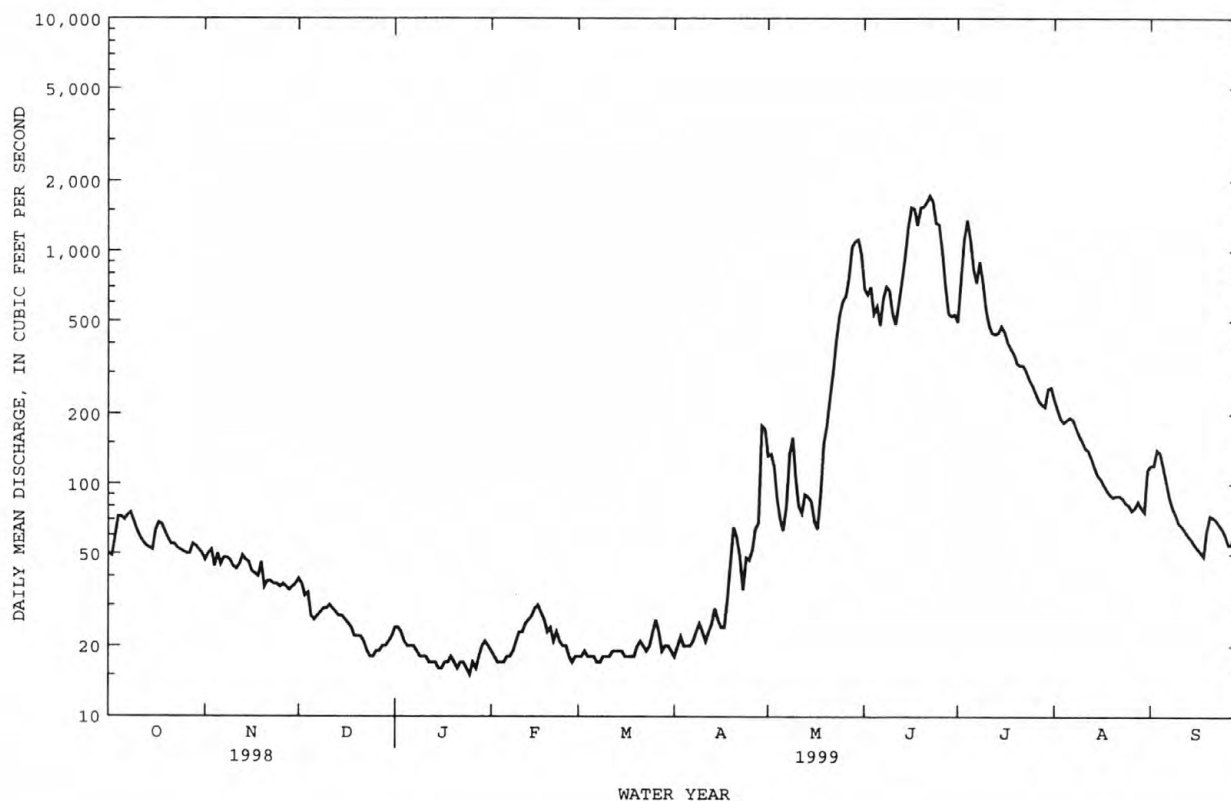
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 740 ft³/s and maximum (*):

MEAN	43.5	29.9	23.6	17.4	14.7	17.7	49.6	255	605	349	115	58.4
MAX	94.3	48.4	34.6	30.9	26.1	34.1	94.6	403	1067	791	197	96.2
(WY)	1983	1991	1996	1997	1986	1986	1987	1987	1986	1995	1982	1997
MIN	14.5	15.7	11.8	6.05	6.72	9.60	29.2	111	242	81.0	30.7	20.0
(WY)	1989	1989	1977	1977	1977	1977	1982	1995	1994	1988	1988	1988

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1977 - 1999	
ANNUAL TOTAL	58701		67235		--	
ANNUAL MEAN	161		184		132	
HIGHEST ANNUAL MEAN	--		--		188	1986
LOWEST ANNUAL MEAN	--		--		71.2	1977
HIGHEST DAILY MEAN	1300	Jul 2	1730	Jun 22	1960	Jun 13 1991
LOWEST DAILY MEAN	14	Feb 20	15	Jan 25	4.5	Feb 1 1977
ANNUAL SEVEN-DAY MINIMUM	15	Feb 19	16	Jan 21	4.5	Feb 1 1977
INSTANTANEOUS PEAK FLOW	--		2000	Jun 22	2230	Jun 13 1991
INSTANTANEOUS PEAK STAGE	--		7.22	Jun 22	8.48	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	116400		133400		95520	
10 PERCENT EXCEEDS	491		605		400	
50 PERCENT EXCEEDS	52		52		39	
90 PERCENT EXCEEDS	18		18		14	

e Estimated.



YELLOWSTONE RIVER BASIN

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°59'04", long 108°59'57", in SW¹/₄ SW¹/₄ SE¹/₄ sec.9, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 0.7 mi downstream from Washakie Reservoir, 2.3 mi upstream from Timmoco Creek, and 6.2 mi west of Fort Washakie.

DRAINAGE AREA.--93.5 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Washakie Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	49	33	16	18	19	18	152	870	977	272	127
2	109	46	33	16	18	18	18	149	829	946	247	127
3	108	39	33	16	18	18	18	149	796	934	226	141
4	108	37	33	16	18	18	18	149	775	962	219	150
5	107	37	33	17	18	18	18	147	749	981	217	134
6	105	37	33	17	18	18	19	144	692	972	224	111
7	103	37	33	17	18	18	19	141	659	946	220	94
8	101	37	33	17	18	18	19	139	690	924	201	85
9	101	37	33	17	18	18	19	141	716	909	167	79
10	99	37	33	17	18	18	19	140	702	879	184	73
11	97	37	33	17	18	18	20	140	665	822	163	69
12	90	34	32	16	18	18	20	137	650	761	155	65
13	81	32	32	16	18	18	20	137	654	699	145	62
14	79	32	32	16	18	18	20	135	693	641	134	61
15	77	32	32	17	18	18	20	134	756	589	124	57
16	77	32	32	16	18	19	20	130	847	528	115	56
17	77	32	32	16	19	19	20	129	925	469	110	53
18	77	32	31	16	19	19	20	126	966	436	103	50
19	76	33	31	17	19	19	20	130	1010	402	99	66
20	75	33	31	17	19	19	20	152	1060	352	95	76
21	75	33	31	17	19	19	28	214	1070	327	95	75
22	73	34	31	17	19	19	76	285	1110	308	94	74
23	71	33	28	17	19	19	96	353	1150	333	90	70
24	70	33	20	17	19	19	94	451	1170	355	87	67
25	69	33	16	17	19	19	94	565	1170	370	83	65
26	67	33	16	17	19	19	105	637	1170	368	80	57
27	66	33	e16	17	19	20	113	671	1140	295	81	58
28	56	33	16	17	19	19	113	742	1100	259	90	68
29	42	33	16	17	---	18	115	788	1060	252	83	73
30	41	33	16	17	---	18	141	844	1020	288	80	80
31	49	---	16	17	---	18	---	881	---	299	115	---
TOTAL	2538	1053	870	517	516	573	1360	9232	26864	18583	4398	2423
MEAN	81.9	35.1	28.1	16.7	18.4	18.5	45.3	298	895	599	142	80.8
MAX	112	49	33	17	19	20	141	881	1170	981	272	150
MIN	41	32	16	16	18	18	18	126	650	252	80	50
AC-FT	5030	2090	1730	1030	1020	1140	2700	18310	53280	36860	8720	4810

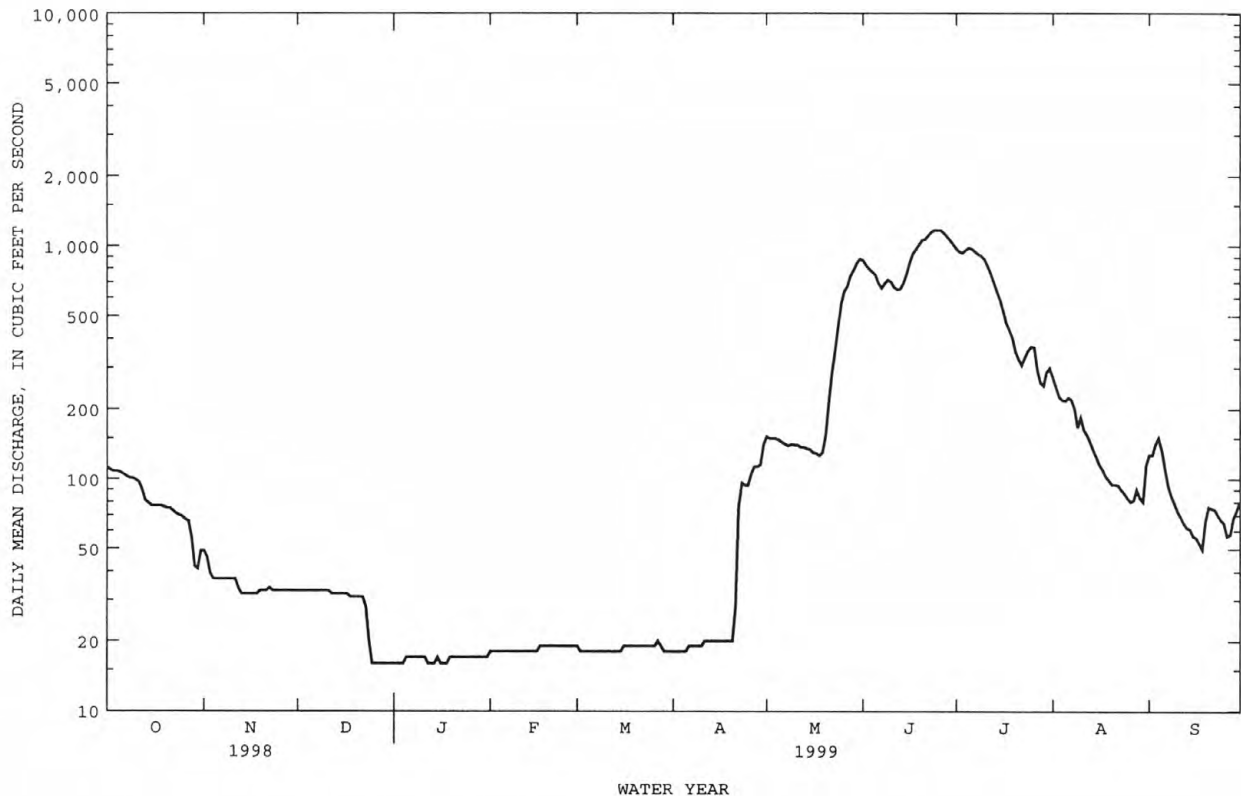
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

	MEAN	41.0	29.7	25.1	20.2	16.2	15.6	34.3	199	569	380	170	97.4
MAX	81.9	46.0	36.7	34.5	29.0	21.8	71.4	298	897	774	264	146	
(WY)	1999	1998	1991	1997	1994	1994	1999	1991	1995	1993	1993	1993	
MIN	18.8	4.68	5.19	6.18	7.19	6.65	5.07	125	244	169	65.3	33.7	
(WY)	1989	1989	1989	1989	1989	1991	1991	1990	1992	1994	1994	1994	

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	54766		68927		--	
ANNUAL MEAN	150		189		134	
HIGHEST ANNUAL MEAN	--		--		189	1999
LOWEST ANNUAL MEAN	--		--		80.1	1994
HIGHEST DAILY MEAN	856	Jul 7	1170	Jun 24-26	1930	Jun 13 1991
LOWEST DAILY MEAN	16	Dec 25-31	16	Dec 25 to Jan 4, Jan 12-14,16-18	3.5	Mar 17 1991
ANNUAL SEVEN-DAY MINIMUM	16	Dec 25	16	Dec 25	3.6	Mar 16 1991
INSTANTANEOUS PEAK FLOW	--		1200	Jun 25	2120	Jun 13 1991
INSTANTANEOUS PEAK STAGE	--		4.80	Jun 25	6.43	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	108600		136700		96750	
10 PERCENT EXCEEDS	430		745		368	
50 PERCENT EXCEEDS	49		61		37	
90 PERCENT EXCEEDS	21		17		11	

e Estimated.



YELLOWSTONE RIVER BASIN

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°00'02", long 108°55'56", in NW¹/₄ SW¹/₄ SW¹/₄ sec.6, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 160 ft downstream from headgate, 300 ft upstream from culvert on County Road 43, 2.0 mi upstream from Crooked Creek, and 2.4 mi west of Fort Washakie.

PERIOD OF RECORD.--April 1989 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,710 ft above sea level, from topographic map.

REMARKS.--Records good. Flow is diverted from the South Fork Little Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	---	---	---	---	---	---	---	31	308	238	131
2	54	---	---	---	---	---	---	---	28	314	210	132
3	55	---	---	---	---	---	---	---	34	312	187	150
4	55	---	---	---	---	---	---	---	49	319	192	160
5	53	---	---	---	---	---	---	---	54	321	213	146
6	52	---	---	---	---	---	---	---	53	315	222	129
7	53	---	---	---	---	---	---	---	73	306	222	114
8	52	---	---	---	---	---	---	---	103	293	207	102
9	34	---	---	---	---	---	---	---	131	289	181	96
10	5.4	---	---	---	---	---	---	---	145	285	193	91
11	4.7	---	---	---	---	---	---	---	160	291	173	86
12	4.5	---	---	---	---	---	---	6.0	171	278	164	82
13	4.5	---	---	---	---	---	---	7.9	199	281	159	80
14	3.8	---	---	---	---	---	---	7.9	217	287	146	76
15	2.6	---	---	---	---	---	---	7.9	226	276	135	73
16	2.6	---	---	---	---	---	---	7.9	225	267	125	71
17	2.5	---	---	---	---	---	---	7.7	224	254	119	67
18	2.4	---	---	---	---	---	---	21	219	240	113	65
19	2.3	---	---	---	---	---	---	40	212	252	108	85
20	2.3	---	---	---	---	---	---	41	208	251	105	97
21	2.3	---	---	---	---	---	13	44	211	265	104	95
22	2.2	---	---	---	---	---	47	44	221	258	104	92
23	2.1	---	---	---	---	---	57	45	232	278	99	90
24	---	---	---	---	---	---	56	40	249	298	96	86
25	---	---	---	---	---	---	56	27	252	310	91	83
26	---	---	---	---	---	---	57	21	239	313	87	78
27	---	---	---	---	---	---	22	31	233	259	86	80
28	---	---	---	---	---	---	---	43	261	221	98	90
29	---	---	---	---	---	---	---	49	303	214	91	82
30	---	---	---	---	---	---	---	41	308	244	88	41
31	---	---	---	---	---	---	---	34	---	260	112	---
TOTAL	---	---	---	---	---	---	---	---	5271	8659	4468	2850
MEAN	---	---	---	---	---	---	---	---	176	279	144	95.0
MAX	---	---	---	---	---	---	---	---	308	321	238	160
MIN	---	---	---	---	---	---	---	---	28	214	86	41
AC-FT	---	---	---	---	---	---	---	---	10460	17180	8860	5650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)*

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	33.4	21.6	---	---	---	---	---	19.2	110	196	233
MAX	73.2	28.9	---	---	---	---	---	47.5	199	320	287
(WY)	1998	1995	---	---	---	---	---	1989	1992	1990	1996
MIN	.81	14.2	---	---	---	---	---	.97	21.3	29.5	100
(WY)	1994	1993	---	---	---	---	---	1992	1991	1995	1992

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY--Continued

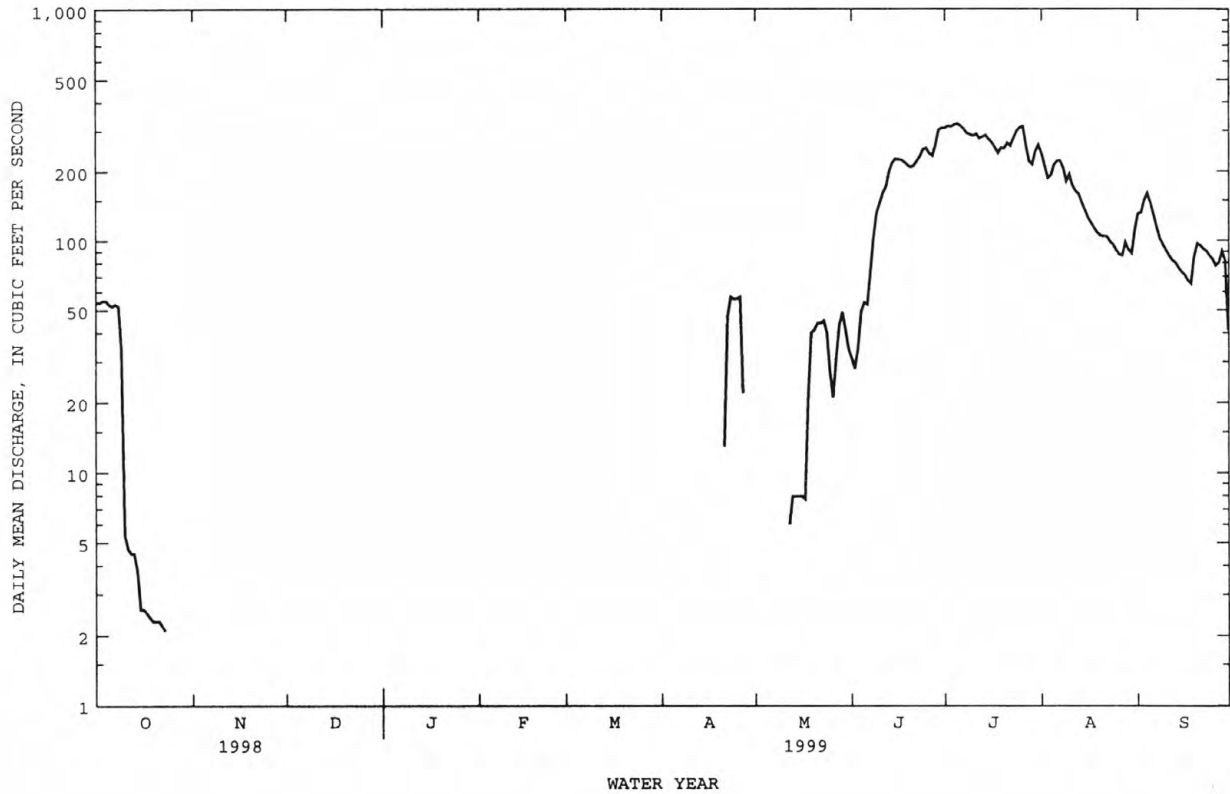
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1989 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN321 Jul 5
2.1 Oct 23390 Jun 29 1996
.00 Many days,
most yearsINSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE369 Jun 24
4.11 Jun 24446 Jun 12 1996
4.11 Jun 24 1999

* During period of operation.



YELLOWSTONE RIVER BASIN

06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°01'43", long 109°00'02", in NW¹/₄ SW¹/₄ SE¹/₄ sec.28, T.1 N., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 0.2 mi upstream from North Fork Diversion Canal and 5.9 mi northeast of Fort Washakie.

DRAINAGE AREA.--112 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above sea level, from topographic map. Prior to Oct. 21, 1993, at site 2,000 ft upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of 80 acres upstream from station. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 680 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	2345	1,410	6.66
June 17	0800	*1,810	*7.19
July 4	0945	1,080	6.16

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	65	51	e28	e25	e30	34	216	955	644	223	84
2	65	64	52	e26	e23	e28	38	207	866	693	216	87
3	72	68	53	e25	e22	e26	39	184	896	843	201	98
4	85	68	49	e24	e20	e24	36	138	791	1020	193	107
5	86	67	35	e27	e23	e25	36	114	811	1000	191	103
6	85	66	e34	e30	e26	e26	36	101	688	903	200	100
7	87	66	e33	e33	e28	e27	37	116	741	821	209	96
8	92	67	e30	e32	e29	e28	40	168	809	764	204	92
9	87	62	e32	e31	e31	e29	42	189	815	705	194	88
10	83	59	e29	e31	e33	e30	40	146	749	625	182	86
11	79	63	e31	32	e29	e28	38	120	707	547	168	82
12	76	66	e32	32	e31	e27	39	114	755	487	159	78
13	72	66	e37	32	e32	e29	43	130	906	451	151	75
14	69	63	e34	e30	e33	e31	49	125	1080	427	139	72
15	68	61	e36	e28	e35	e33	44	122	1420	427	130	70
16	78	58	e37	e24	e33	e29	41	108	1630	419	122	67
17	81	54	e38	e27	e32	e28	40	102	1680	419	111	64
18	80	53	e32	e29	e33	e27	53	127	1560	398	101	61
19	79	49	e26	e30	e32	e30	69	183	1610	372	97	77
20	78	44	e22	e31	e34	e35	104	221	1610	336	95	78
21	75	50	e19	e30	e33	42	91	304	1620	300	95	75
22	76	52	e18	e29	e31	39	82	375	1630	287	93	74
23	76	50	e22	e29	e29	38	71	465	1530	279	87	73
24	74	51	e27	e29	e31	41	77	546	1360	270	85	72
25	72	47	e30	e30	e33	44	78	632	1310	254	84	72
26	69	48	e34	e32	e31	48	92	731	1150	238	81	68
27	69	47	e35	e31	e28	42	111	844	924	221	81	73
28	73	46	e34	e29	e27	37	106	995	773	210	84	82
29	72	49	e36	e31	---	34	332	1120	694	206	83	83
30	70	51	e33	e32	---	33	286	1250	669	216	84	91
31	67	---	e30	e28	---	33	---	1190	---	221	87	---
TOTAL	2360	1720	1041	912	827	1001	2224	11383	32739	15003	4230	2428
MEAN	76.1	57.3	33.6	29.4	29.5	32.3	74.1	367	1091	484	136	80.9
MAX	92	68	53	33	35	48	332	1250	1680	1020	223	107
MIN	65	44	18	24	20	24	34	101	669	206	81	61
AC-FT	4680	3410	2060	1810	1640	1990	4410	22580	64940	29760	8390	4820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1999, BY WATER YEAR (WY)

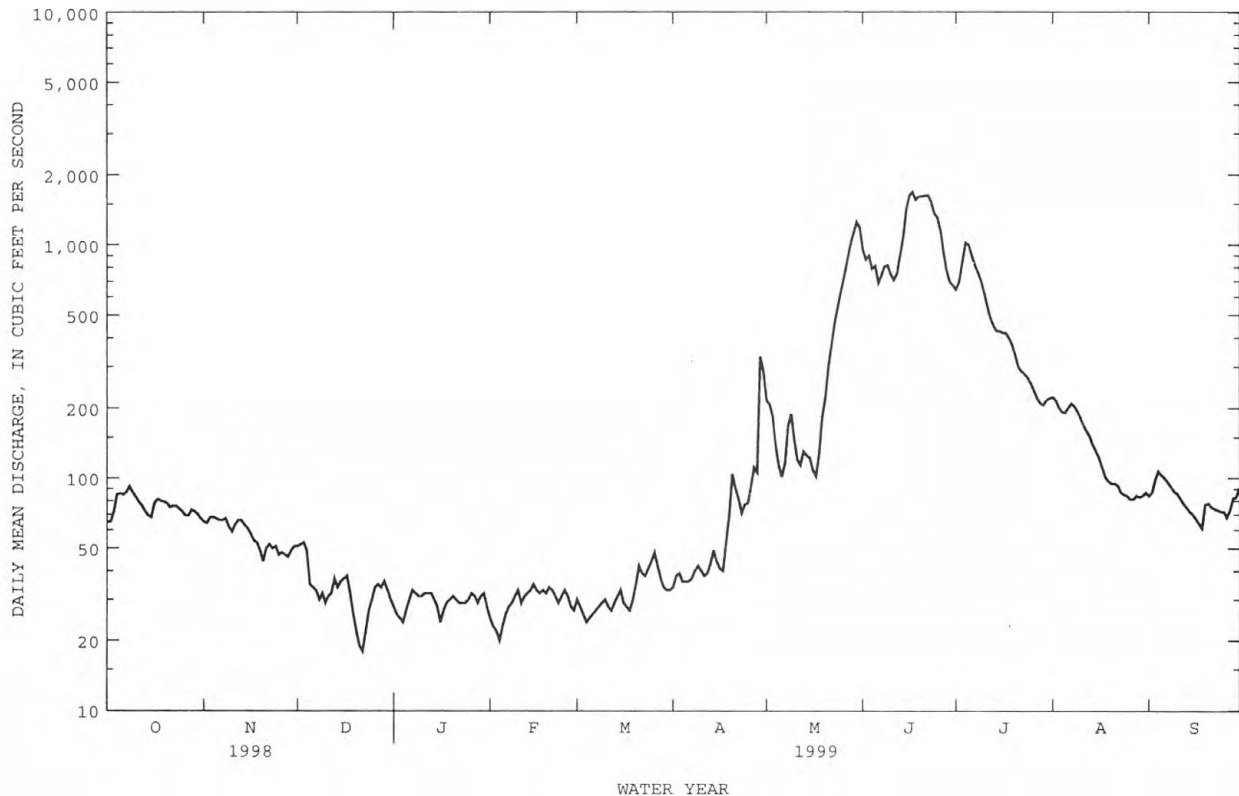
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
MEAN	51.6	36.4	26.6	20.5	18.7	26.9	54.4	270	685	377	139	71.9
MAX	76.1	57.3	50.1	31.9	29.5	38.8	84.5	376	1091	758	227	118
(WY)	1999	1999	1996	1996	1999	1995	1994	1993	1999	1995	1997	1997
MIN	13.5	14.7	13.6	8.95	8.52	16.1	27.5	143	212	74.9	56.0	35.5
(WY)	1989	1989	1989	1989	1989	1990	1993	1990	1992	1994	1994	1992

06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1989 - 1999	
ANNUAL TOTAL	68345		75868		--	
ANNUAL MEAN	187		208		148	
HIGHEST ANNUAL MEAN	--		--		208	1999
LOWEST ANNUAL MEAN	--		--		76.1	1992
HIGHEST DAILY MEAN	1260	Jul 3	1680	Jun 17	2070	Jun 13 1991
LOWEST DAILY MEAN	17	Feb 16-18	18	Dec 22	6.5	Feb 3 1989
ANNUAL SEVEN-DAY MINIMUM	18	Feb 12	23	Dec 19	7.4	Feb 2 1989
INSTANTANEOUS PEAK FLOW	--		1810	Jun 17	2360 ^a	Jun 13 1991
INSTANTANEOUS PEAK STAGE	--		7.19	Jun 17	7.19	Jun 17 1999
ANNUAL RUNOFF (AC-FT)	135600		150500		107600	
10 PERCENT EXCEEDS	603		744		427	
50 PERCENT EXCEEDS	70		70		47	
90 PERCENT EXCEEDS	21		29		17	

a Gage height, 6.20 ft, site and datum then in use.

e Estimated.



YELLOWSTONE RIVER BASIN

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°57'04", long 108°56'54", in SE¹/₄ NW¹/₄ NW¹/₄ sec.25, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, 50 ft upstream of Blue Trail Crossing, and 5.0 miles southwest of Fort Washakie.

DRAINAGE AREA.--16.1 mi².

PERIOD OF RECORD.--Annual maximum, water years 1961-68, 1970-84. May 1990 to current year (no winter records since 1997).

GAGE.--Water-stage recorder. Elevation of gage is 5,935 ft above sea level, from topographic map. Oct. 1, 1961 to Sept. 30, 1968, crest-stage gage at site 100 ft downstream at datum 1.05 ft lower. Oct. 1, 1969 to Sept. 30, 1984, crest-stage gage at present site at datum 1.05 ft lower.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.2	39	127	27	11	8.6
2	---	---	---	---	---	---	5.2	38	122	26	11	8.6
3	---	---	---	---	---	---	5.2	36	122	25	10	8.8
4	---	---	---	---	---	---	5.2	32	107	24	11	9.0
5	---	---	---	---	---	---	5.2	28	106	23	11	8.6
6	---	---	---	---	---	---	5.3	24	96	22	10	8.4
7	---	---	---	---	---	---	5.4	23	102	21	10	8.3
8	---	---	---	---	---	---	5.5	24	110	20	10	8.3
9	---	---	---	---	---	---	5.2	29	100	19	9.8	8.3
10	---	---	---	---	---	---	5.2	30	88	18	9.6	8.4
11	---	---	---	---	---	---	5.3	28	80	16	9.6	8.2
12	---	---	---	---	---	---	5.3	27	77	15	9.6	8.3
13	---	---	---	---	---	---	5.5	28	77	15	9.6	8.2
14	---	---	---	---	---	---	5.7	28	77	15	9.3	8.4
15	---	---	---	---	---	---	6.0	27	82	14	9.0	8.3
16	---	---	---	---	---	---	6.1	27	81	14	8.8	8.1
17	---	---	---	---	---	---	6.1	25	75	14	9.0	8.1
18	---	---	---	---	---	---	6.3	25	72	14	8.8	8.0
19	---	---	---	---	---	---	7.0	28	72	13	9.0	8.8
20	---	---	---	---	---	---	9.5	38	68	13	9.1	8.5
21	---	---	---	---	---	---	9.6	51	66	13	9.4	8.3
22	---	---	---	---	---	---	10	62	61	12	9.4	8.1
23	---	---	---	---	---	---	9.8	78	54	12	9.3	7.8
24	---	---	---	---	---	---	9.7	97	48	11	9.0	7.9
25	---	---	---	---	---	---	11	111	45	11	8.7	7.8
26	---	---	---	---	---	---	14	126	41	11	8.6	7.7
27	---	---	---	---	---	---	14	e147	37	11	8.6	7.5
28	---	---	---	---	---	---	15	e156	33	11	8.8	8.3
29	---	---	---	---	---	---	22	e161	31	11	8.6	8.1
30	---	---	---	---	---	---	40	e158	29	11	8.6	8.1
31	---	---	---	---	---	---	---	148	---	11	8.6	---
TOTAL	---	---	---	---	---	---	270.5	1879	2286	493	292.8	247.8
MEAN	---	---	---	---	---	---	9.02	60.6	76.2	15.9	9.45	8.26
MAX	---	---	---	---	---	---	40	161	127	27	11	9.0
MIN	---	---	---	---	---	---	5.2	23	29	11	8.6	7.5
AC-FT	---	---	---	---	---	---	537	3730	4530	978	581	492

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996
MEAN	5.79	5.28	4.79	4.57	4.38	4.54	5.55
MAX	8.45	7.37	6.26	5.97	5.15	5.52	7.47
(WY)	1996	1996	1996	1996	1996	1996	1996
MIN	3.77	4.12	3.78	3.71	3.44	3.78	4.05
(WY)	1991	1991	1995	1991	1991	1991	1991

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1990 - 1996

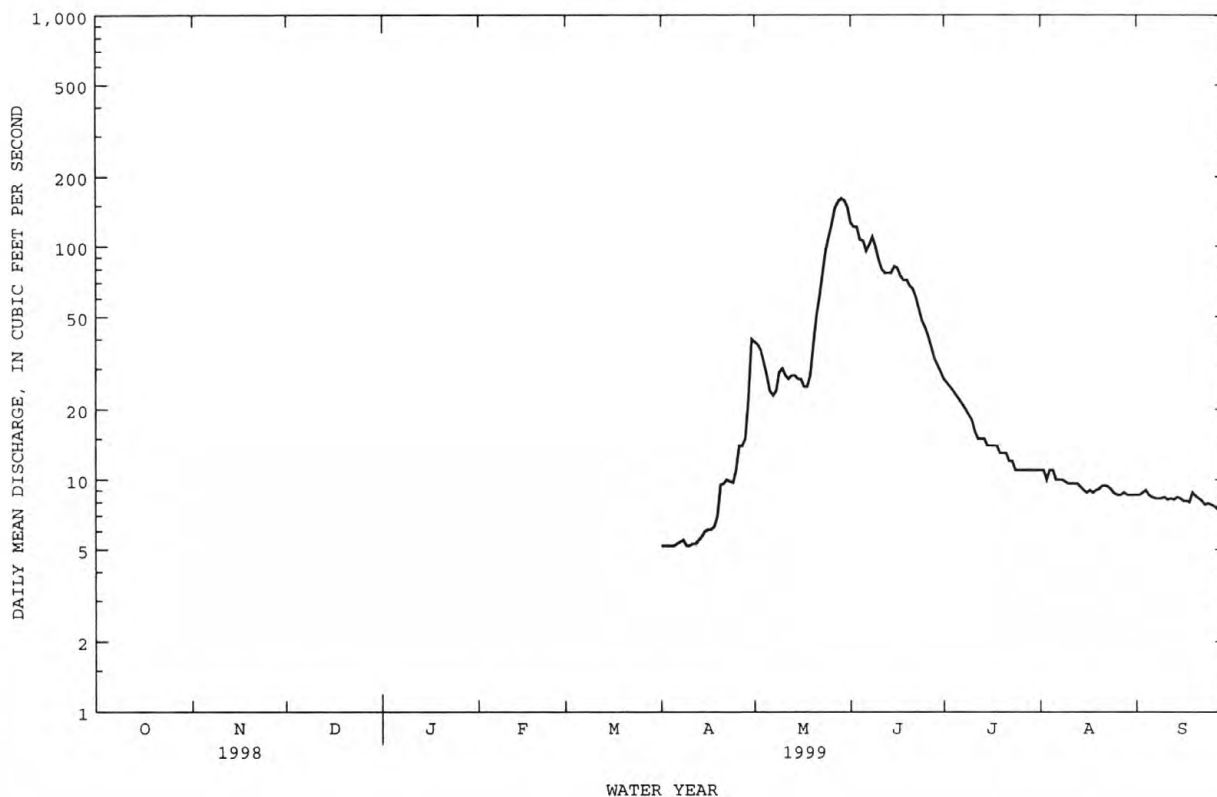
ANNUAL MEAN	--		10.4	
HIGHEST ANNUAL MEAN	--		17.3	1995
LOWEST ANNUAL MEAN	--		5.95	1994
HIGHEST DAILY MEAN	161	May 29	316	Jun 2 1991
LOWEST DAILY MEAN	5.2	Several days	3.0	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	--		3.3	Feb 14 1991
INSTANTANEOUS PEAK FLOW	205	May 28	500 ^a	Jun 2 1991#
INSTANTANEOUS PEAK STAGE	8.72	May 28	7.49	Jun 2 1991#
ANNUAL RUNOFF (AC-FT)	--		7550	

* During period of operation.

For period of record, 1961-68, 1970-84, 1990 to current year.

a From rating curve extended above 160 ft/s on basis of slope-conveyance computation of peak flow.

e Estimated.



YELLOWSTONE RIVER BASIN

06232600 POPO AGIE RIVER AT HUDSON SIDING, NEAR LANDER, WY

LOCATION.--Lat 42°51'59", long 108°41'04", in NW¹/₄ NE¹/₄ sec.30, T.2 S., R.2 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank at bridge on private road, 1.2 mi downstream from North Popo Agie River, and 3.2 mi northeast of Lander.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV							
10...	1145	132	530	8.6	0.0	-1.0	630
MAR							
25...	1335	86	472	8.8	10.0	16.0	630
JUN							
24...	1330	2670	96	7.7	11.0	25.0	632
AUG							
31...	1445	205	536	8.5	20.0	29.0	635
DATE		OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV							
10...	12.4	103	K5	<.01	.18	.05	.03
MAR							
25...	12.1	130	<1	<.01	.09	.06	.03
JUN							
24...	9.8	107	160	<.01	<.05	<.02	<.01
AUG							
31...	9.9	132	130	.01	<.05	<.02	.04

K Results based on colony count outside the acceptable range (non-ideal colony count).

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY

LOCATION.--Lat 42°43'00", long 108°38'34", in NE¹/₄ SE¹/₄ sec.27, T.32 N., R.99 W., Fremont County, Hydrologic Unit 10080003, on left bank 700 ft downstream from bridge on State Highway 28, 2.5 mi downstream from Red Canyon Creek, and 9.5 mi southeast of post office in Lander.

DRAINAGE AREA.--125 mi².

PERIOD OF RECORD.--March 1946 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,436.49 ft above sea level.

REMARKS.--Records good. Diversions for irrigation of about 540 acres upstream from station. Slight regulation by Christina Lake, capacity, about 3,860 acre-ft. Results of discharge measurements, in cubic feet per second, made during period when station was not in operation, are given below:

Oct. 1 . . . 30.7
Mar. 23 . . . 25.0

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 31	0200	1,030	4.94
June 17	0415	*1,060	*4.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	25	228	703	313	86	78
2	---	---	---	---	---	---	26	251	624	327	80	79
3	---	---	---	---	---	---	26	248	595	364	77	88
4	---	---	---	---	---	---	31	218	537	376	71	84
5	---	---	---	---	---	---	32	186	556	321	77	81
6	---	---	---	---	---	---	29	162	474	277	88	80
7	---	---	---	---	---	---	31	164	587	258	84	76
8	---	---	---	---	---	---	35	206	674	269	78	73
9	---	---	---	---	---	---	37	242	641	249	76	73
10	---	---	---	---	---	---	32	218	548	210	69	71
11	---	---	---	---	---	---	30	194	478	194	67	71
12	---	---	---	---	---	---	28	188	505	183	69	69
13	---	---	---	---	---	---	31	217	556	172	65	69
14	---	---	---	---	---	---	34	207	605	162	59	67
15	---	---	---	---	---	---	30	202	680	157	55	65
16	---	---	---	---	---	---	28	188	783	154	54	65
17	---	---	---	---	---	---	28	180	882	147	52	61
18	---	---	---	---	---	---	34	191	787	132	49	59
19	---	---	---	---	---	---	44	225	812	125	48	71
20	---	---	---	---	---	---	64	245	786	118	47	76
21	---	---	---	---	---	---	69	301	798	114	54	73
22	---	---	---	---	---	---	57	367	805	109	48	69
23	---	---	---	---	---	---	34	452	746	103	44	65
24	---	---	---	---	---	---	43	565	625	96	52	61
25	---	---	---	---	---	---	62	662	606	94	68	61
26	---	---	---	---	---	---	96	750	553	90	69	55
27	---	---	---	---	---	---	113	733	451	82	69	51
28	---	---	---	---	---	---	134	764	386	80	78	54
29	---	---	---	---	---	---	166	846	346	80	76	54
30	---	---	---	---	---	---	231	927	327	86	71	59
31	---	---	---	---	---	---	---	911	---	90	79	---
TOTAL	---	---	---	---	---	---	1660	11438	18456	5532	2059	2058
MEAN	---	---	---	---	---	---	55.3	369	615	178	66.4	68.6
MAX	---	---	---	---	---	---	231	927	882	376	88	88
MIN	---	---	---	---	---	---	25	162	327	80	44	51
AC-FT	---	---	---	---	---	---	3290	22690	36610	10970	4080	4080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

	35.6	29.7	25.6	23.4	23.7	24.6	48.9	204	345	139	56.1	47.5
MEAN	35.6	29.7	25.6	23.4	23.7	24.6	48.9	204	345	139	56.1	47.5
MAX	50.7	41.8	35.8	32.9	42.5	33.9	109	398	856	404	98.6	114
(WY)	1972	1951	1951	1948	1962	1948	1987	1980	1986	1995	1950	1973
MIN	22.5	21.4	17.5	13.9	17.4	18.8	26.3	79.3	73.4	34.5	21.9	22.3
(WY)	1961	1963	1960	1963	1960	1957	1982	1977	1977	1961	1960	1994

YELLOWSTONE RIVER BASIN

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY--Continued

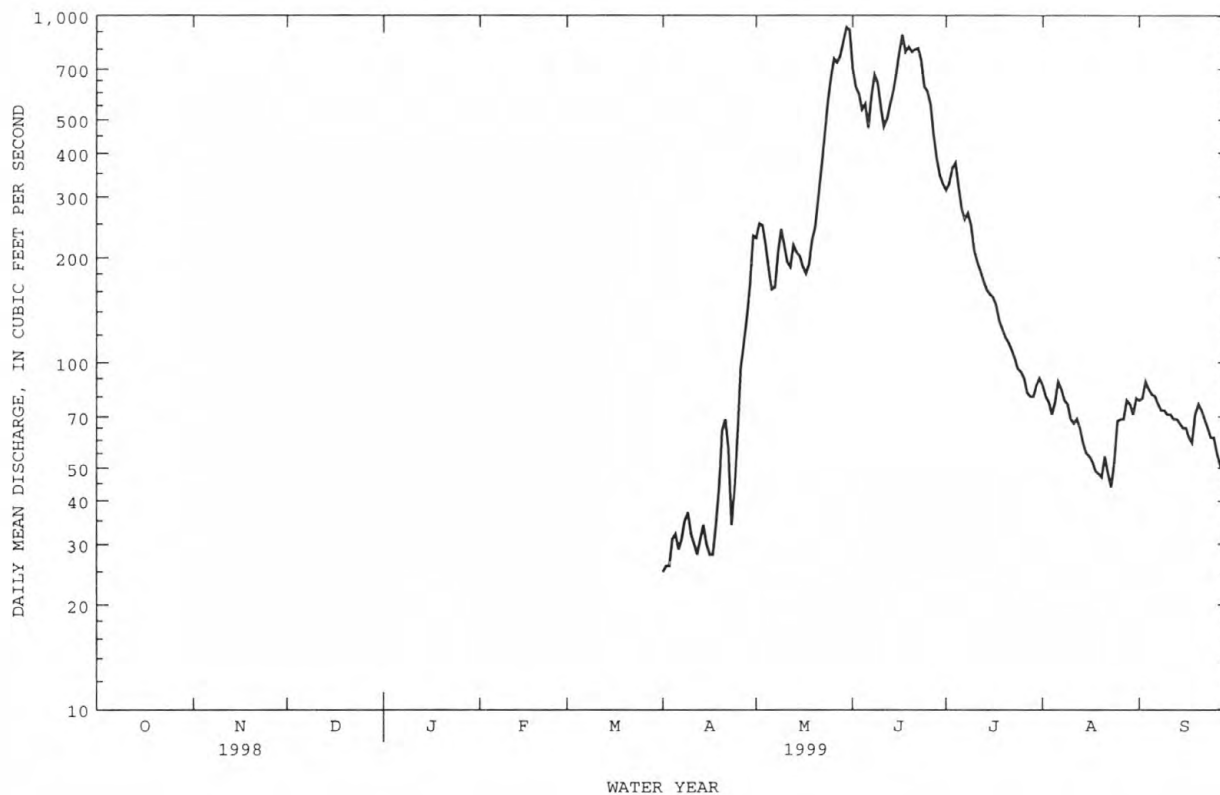
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1946 - 1999*

ANNUAL MEAN	--		80.4	
HIGHEST ANNUAL MEAN	--		131	1965
LOWEST ANNUAL MEAN	--		37.0	1960
HIGHEST DAILY MEAN	927	May 30	1590	Jun 16 1963
LOWEST DAILY MEAN	25	Apr 1	12	Several days, 1960, 1963
INSTANTANEOUS PEAK FLOW	1060	Jun 17	2010	Jun 16 1963
INSTANTANEOUS PEAK STAGE	4.97	Jun 17	6.64	Jun 16 1963
ANNUAL RUNOFF (AC-FT)	--		58230	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42°59'51", long 108°22'29", in NE¹/₄ NW¹/₄ sec.11, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.8 mi upstream from mouth and 1.9 mi southeast of Riverton.

DRAINAGE AREA.--1,904 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to current year. Prior to October 1958, published as Popo Agie River near Riverton.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.84 ft above sea level. Prior to Sept. 19, 1956, at site 600 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 62,900 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 30	1445	3,660	6.35
May 31	1945	5,730	7.61
June 23	0130	*6,240	*7.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	519	395	e242	e250	e270	274	3100	5280	2740	522	256
2	465	499	395	e237	e250	e275	301	2450	4520	2720	518	278
3	497	520	394	e230	e255	277	295	2120	4190	3040	510	336
4	915	595	386	e221	e255	271	291	1890	3960	3490	481	479
5	967	524	374	e240	e260	257	264	1680	3790	3400	481	493
6	680	521	263	e250	e248	225	266	1450	3580	3070	526	447
7	621	536	226	e269	e260	248	299	1300	3370	2770	613	410
8	612	511	339	e246	e263	256	368	1290	3670	2800	579	375
9	600	492	370	e244	e280	252	505	1490	3820	2720	522	356
10	589	439	309	e255	e298	251	447	1530	3460	2350	474	353
11	587	423	338	e265	e210	250	391	1370	3080	2060	437	350
12	568	450	383	e258	e205	252	356	1250	3000	1840	436	339
13	548	494	380	e235	e220	255	335	1280	3220	1660	430	336
14	526	496	361	e243	e225	253	328	1340	3650	1490	361	334
15	511	501	364	e240	e250	256	333	1290	4110	1400	325	333
16	567	541	377	e250	e240	258	331	1230	4890	1300	291	331
17	913	516	366	e244	e238	258	324	1190	5620	1240	273	318
18	750	481	342	e240	e231	252	314	1120	5810	1130	253	295
19	648	459	227	e248	e230	250	314	1200	5670	1030	230	311
20	593	423	e160	e260	e240	253	337	1310	5890	917	218	464
21	563	415	e165	e255	e250	258	410	1570	5960	817	220	447
22	548	427	e172	e250	e252	269	533	1850	6000	731	238	429
23	551	440	e180	e253	e255	271	604	2250	6060	663	232	424
24	540	417	e196	e260	e260	266	548	2890	5570	608	211	404
25	529	412	e205	e240	e282	267	670	3400	4970	576	202	360
26	515	397	e220	e232	e275	267	1460	3860	4790	546	214	344
27	502	398	e237	e245	e265	278	2540	4180	4110	524	223	333
28	520	397	e235	e268	e260	278	2610	4470	3480	481	228	369
29	528	400	e238	e245	---	259	2630	4860	3060	430	233	459
30	532	402	e250	e250	---	250	3280	5300	2880	415	233	467
31	559	---	e250	e252	---	251	---	5610	---	464	229	---
TOTAL	18488	14045	9097	7667	7007	8033	21958	71120	131460	49422	10943	11230
MEAN	596	468	293	247	250	259	732	2294	4382	1594	353	374
MAX	967	595	395	269	298	278	3280	5610	6060	3490	613	493
MIN	444	397	160	221	205	225	264	1120	2880	415	202	256
AC-FT	36670	27860	18040	15210	13900	15930	43550	141100	260800	98030	21710	22270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

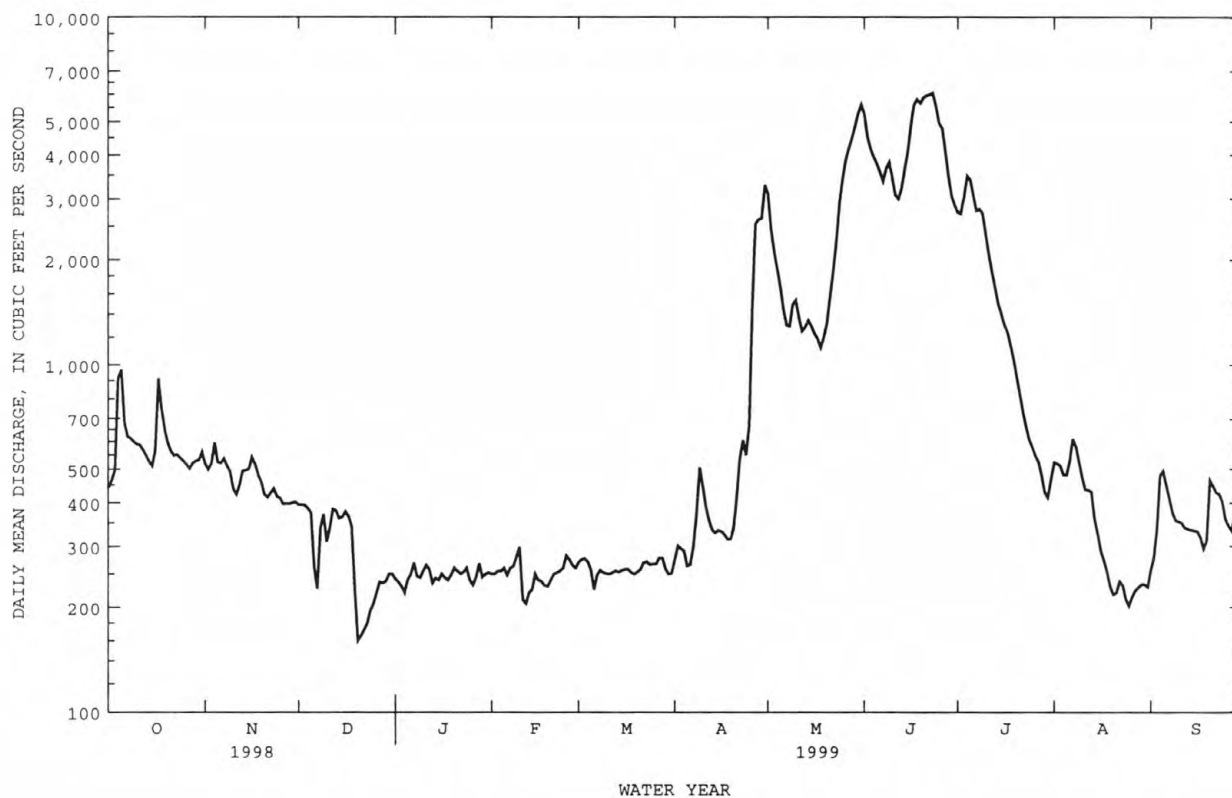
	328	285	214	188	212	270	375	1132	2457	1029	276	265
MEAN	328	285	214	188	212	270	375	1132	2457	1029	276	265
MAX	728	501	351	302	728	579	1044	2351	5109	3345	699	1323
(WY)	1983	1974	1974	1974	1962	1998	1973	1958	1983	1995	1965	1973
MIN	115	174	129	95.0	123	181	148	242	288	111	58.4	82.5
(WY)	1989	1989	1959	1961	1959	1989	1989	1960	1977	1994	1960	1994

YELLOWSTONE RIVER BASIN

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1941 - 1999	
ANNUAL TOTAL	294801		360470		--	
ANNUAL MEAN	808		988		587	
HIGHEST ANNUAL MEAN	--		--		1021	
LOWEST ANNUAL MEAN	--		--		236	
HIGHEST DAILY MEAN	4240	Jun 27	6060	Jun 23	12800	Jun 17 1963
LOWEST DAILY MEAN	160	Dec 20	160	Dec 20	41	Aug 7 1960
ANNUAL SEVEN-DAY MINIMUM	179	Jan 7	185	Dec 20	46	Aug 5 1960
INSTANTANEOUS PEAK FLOW	--		6240	Jun 23	14700	Jun 17 1963
INSTANTANEOUS PEAK STAGE	--		7.88	Jun 23	10.85	Jun 17 1963
ANNUAL RUNOFF (AC-FT)	584700		715000		425400	
10 PERCENT EXCEEDS	1900		3150		1480	
50 PERCENT EXCEEDS	491		410		268	
90 PERCENT EXCEEDS	211		238		150	

e Estimated.



YELLOWSTONE RIVER BASIN

95

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
NOV 10...	1015	408	965	8.4	0.0	-3.5	638	12.1	99	K12
MAR 25...	1515	266	850	8.4	13.0	17.5	635	9.9	113	K10
JUN 24...	1500	5420	179	8.0	15.0	26.5	640	8.5	101	100
AUG 31...	1615	230	874	8.5	24.0	31.0	640	8.0	114	K60

K Results based on colony count outside the acceptable range (non-ideal colony count).

YELLOWSTONE RIVER BASIN

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43°07'45", long 108°13'24", in SE¹/₄ SE¹/₄ SE¹/₄ sec.24, T.2 N., R.5 E., Fremont County, Hydrologic Unit 10080001, on left bank 5.3 mi upstream from Boysen Reservoir and 9.4 mi southwest of Shoshoni.

DRAINAGE AREA.--4,390 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,775 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 191,000 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	850	1360	1050	e610	e630	e750	731	5210	12500	4750	812	529
2	881	1320	1050	e595	e630	e770	774	3880	9680	4780	847	672
3	946	1350	1040	e580	e648	769	708	3390	8180	5450	789	799
4	1430	1500	1020	e555	e650	740	705	2960	7810	6820	766	1230
5	1540	1370	960	e605	e655	696	673	2570	7330	7990	802	1110
6	1270	1330	756	e630	e630	664	535	2270	7230	7880	842	976
7	1170	1410	503	e675	e663	673	491	2040	6270	6360	1020	948
8	1140	1330	560	e620	e667	717	561	2010	6740	5840	952	845
9	1130	1260	672	e615	e712	703	695	2480	6890	5790	840	764
10	1430	1170	774	e640	e760	690	720	2720	6260	5000	769	758
11	1790	1160	e798	e665	e535	694	639	2300	5690	4360	733	728
12	1730	1200	e914	e648	e521	702	545	2070	5460	3780	838	686
13	1730	1260	e907	e590	e560	709	518	2000	5980	3410	780	671
14	1710	1210	e860	e610	e575	689	498	1990	6720	3160	715	659
15	1700	1290	e870	e605	e638	697	475	1930	7760	3070	654	632
16	1830	1340	e900	e630	e615	721	477	1920	9660	2690	611	591
17	2210	1300	e890	e615	e615	738	470	1890	11500	2700	586	564
18	2020	1240	e839	e605	e600	719	465	1750	13500	2390	527	523
19	1860	1170	e540	e625	e602	686	460	1700	14400	2180	490	627
20	1790	1070	e380	e655	e630	707	498	1840	14800	1800	475	822
21	1510	1040	e390	e644	e660	758	623	2170	14700	1580	492	803
22	1410	1080	e410	e630	e672	820	839	2670	14600	1400	524	788
23	1380	1140	e451	e640	e690	857	999	3570	14700	1290	516	764
24	1350	1080	e478	e655	e707	808	905	4930	14000	1140	475	759
25	1340	1090	e500	e605	e775	795	954	6580	12500	1150	459	712
26	1320	1030	e545	e590	e750	832	1830	7780	11100	1090	457	677
27	1300	1050	e590	e620	e740	907	3100	8600	9190	968	456	660
28	1330	1060	e592	e680	e730	853	3140	9190	7030	807	472	728
29	1300	1070	e595	e620	---	760	3080	10600	5650	665	484	840
30	1350	1070	e625	e635	---	693	5110	11900	5120	581	480	909
31	1360	---	e630	e640	---	663	---	12500	---	625	474	---
TOTAL	45107	36350	22089	19332	18260	22980	32218	129410	282950	101496	20137	22774
MEAN	1455	1212	713	624	652	741	1074	4175	9432	3274	650	759
MAX	2210	1500	1050	680	775	907	5110	12500	14800	7990	1020	1230
MIN	850	1030	380	555	521	663	460	1700	5120	581	456	523
AC-FT	89470	72100	43810	38350	36220	45580	63900	256700	561200	201300	39940	45170

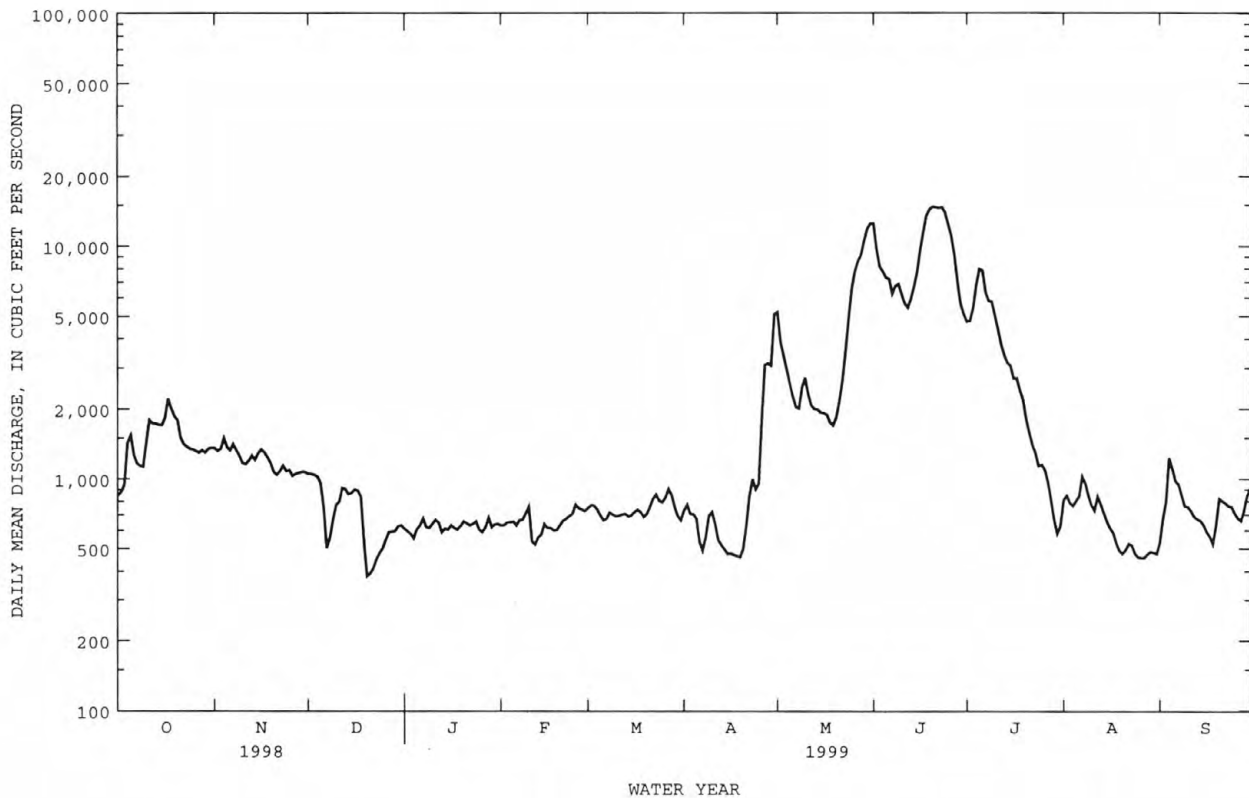
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	802	838	574	564	588	736	689	1954	5539	2429
MAX	1455	1212	719	665	755	1096	1074	4175	9432	6650
(WY)	1999	1999	1996	1996	1996	1998	1999	1999	1999	1997
MIN	393	631	442	356	361	557	398	513	598	195
(WY)	1993	1993	1994	1993	1994	1991	1992	1990	1994	1994

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1990 - 1999	
ANNUAL TOTAL	597928		753103		--	
ANNUAL MEAN	1638		2063		1398	
HIGHEST ANNUAL MEAN	--		--		2063	1999
LOWEST ANNUAL MEAN	--		--		551	1994
HIGHEST DAILY MEAN	9430	Jul 4	14800	Jun 20	17900	Jun 14 1991
LOWEST DAILY MEAN	380	Dec 20	380	Dec 20	152	Jul 21 1994
ANNUAL SEVEN-DAY MINIMUM	450	Dec 19	450	Dec 19	156	Jul 20 1994
INSTANTANEOUS PEAK FLOW	--		15200	Jun 20	18700	Jun 14 1991
INSTANTANEOUS PEAK STAGE	--		8.30	Jun 20	9.31	Jun 14 1991
ANNUAL RUNOFF (AC-FT)	1186000		1494000		1013000	
10 PERCENT EXCEEDS	3120		6090		2920	
50 PERCENT EXCEEDS	1040		840		680	
90 PERCENT EXCEEDS	597		543		400	

e Estimated.



YELLOWSTONE RIVER BASIN

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: April 1991 to current year (irrigation season only).

INSTRUMENTATION: Sediment pumping sampler set for once or twice daily.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean during period of operation, 5,630 mg/L, June 13, 1991; minimum daily mean during period of operation, 17 mg/L, Aug. 31, 1998.

SEDIMENT LOADS: Maximum daily during period of operation, 242,000 tons, June 13, 1991; minimum daily during period of operation, 8.3 tons, July 20, 1994.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean during period of operation, 2,320 mg/L, May 25; minimum daily mean during period of operation, 29 mg/L, July 30.

SEDIMENT LOADS: Maximum daily during period of operation, 55,400 tons, June 18; minimum daily during period of operation, 45 tons, July 30.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	e1110	e15600	1390	46900	310	3980	---	---	---	---
2	---	---	e1030	e10800	1230	32100	348	4490	---	---	---	---
3	---	---	e955	e8740	970	21400	429	6310	---	---	---	---
4	---	---	880	7030	740	15600	558	10300	---	---	---	---
5	---	---	812	5630	605	12000	673	14500	---	---	---	---
6	---	---	706	4330	858	16700	550	11700	---	---	---	---
7	---	---	635	3500	710	12000	367	6300	---	---	---	---
8	---	---	522	2830	600	10900	309	4870	---	---	---	---
9	---	---	580	3880	483	8990	270	4220	---	---	---	---
10	---	---	668	4910	468	7910	227	3060	---	---	---	---
11	---	---	e601	e3730	502	7710	220	2590	---	---	---	---
12	---	---	505	2820	450	6630	283	2890	---	---	---	---
13	---	---	344	1860	482	7780	250	2300	---	---	---	---
14	---	---	310	1670	600	10900	215	1830	---	---	---	---
15	---	---	289	1510	880	18400	167	1380	---	---	---	---
16	---	---	275	1430	1380	36000	144	1050	---	---	---	---
17	---	---	243	1240	1540	47800	130	948	---	---	---	---
18	---	---	273	1290	1520	55400	107	690	---	---	---	---
19	---	---	307	1410	1220	47400	102	600	---	---	---	---
20	---	---	269	1340	1110	44400	103	501	---	---	---	---
21	---	---	348	2040	1030	40900	94	401	---	---	---	---
22	---	---	500	3600	910	35900	84	318	---	---	---	---
23	---	---	758	7310	940	37300	72	251	---	---	---	---
24	---	---	1450	19300	827	31300	58	179	---	---	---	---
25	---	---	2320	41200	918	31000	54	168	---	---	---	---
26	---	---	2160	45400	926	27800	52	153	---	---	---	---
27	---	---	2160	50200	867	21500	54	141	---	---	---	---
28	---	---	1660	41200	649	12300	41	89	---	---	---	---
29	---	---	1780	50900	492	7510	31	56	---	---	---	---
30	---	---	1700	54600	391	5410	29	45	---	---	---	---
31	---	---	1340	45200	---	---	39	66	---	---	---	---
TOTAL	---	---	---	446500	---	717840	---	86376	---	---	---	---

e Estimated.

LOCATION.--Lat 43°18'05", long 108°42'08", in SE¹/₄ SW¹/₄ SE¹/₄ sec.24, T.4 N., R.1 E., Fremont County, Hydrologic Unit 10080005, on left bank 1,700 ft upstream from Wyoming Canal siphon and 4.0 mi north of Pavillion.

PERIOD OF RECORD.--October 1949 to September 1975, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above sea level, from topographic map. Aug. 27, 1948, to Mar. 28, 1950, at site 0.2 mi downstream at different datum. Mar. 29, 1950, to Apr. 23, 1974, at site 325 ft downstream at present datum. Apr. 24, 1974, to September 30, 1975, at site 25 ft downstream at present datum.

REMARKS.--Records fair except those for discharges less than 1 ft³/s and those for estimated daily discharges, which are poor. Flow regulated by reservoir system about 10.5 mi upstream. Diversion for irrigation of about 320 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1948 reached a stage of about 6.1 ft, discharge, 2,600 ft³/s, on basis of slope-area measurement of peak flow.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.1	5.4	e3.3	e3.3	10	5.5	e6.0	8.4	.58	.01	.12
2	5.4	4.2	34	e3.0	e3.5	9.7	5.6	e5.8	8.1	.43	.01	.12
3	5.8	4.7	8.0	e2.9	e3.5	10	5.6	e5.6	6.7	.33	.01	13
4	6.5	4.6	6.1	e2.9	e3.5	9.6	5.8	e5.6	5.7	.21	.01	42
5	4.8	4.3	5.3	e3.1	e3.6	8.5	5.2	e5.4	7.9	.14	.01	11
6	4.3	4.8	5.3	e3.3	e3.4	10	4.9	e5.3	9.5	.11	.01	4.7
7	4.3	5.1	5.3	e3.4	e3.3	12	4.8	e5.0	10	.09	.01	3.6
8	4.4	5.0	5.3	e3.6	e3.1	10	e5.6	e5.4	7.6	.09	.01	2.9
9	6.1	5.0	5.3	e3.7	e3.0	9.7	e6.0	e5.6	6.2	.08	.01	2.5
10	7.7	5.1	5.3	e3.7	e2.8	8.3	e6.2	e6.0	5.4	.07	.02	2.2
11	7.6	4.8	5.3	e3.7	e2.7	8.0	e5.8	e6.6	4.8	.06	.02	2.1
12	7.2	5.0	5.3	e3.7	e2.8	7.9	e6.0	e7.0	5.0	.05	.02	2.0
13	6.9	5.7	5.2	e3.6	e2.9	7.8	e6.2	e6.8	4.5	.06	.02	2.0
14	6.4	6.2	5.0	e3.6	e3.0	7.6	e6.4	e6.8	4.1	.05	.03	2.1
15	6.2	5.5	5.0	e3.6	e3.3	7.7	e6.4	e6.6	5.0	.05	.02	2.3
16	7.5	4.8	5.0	e3.3	e3.5	7.4	e6.4	e6.4	4.8	.05	.02	2.3
17	6.6	4.6	5.0	e3.5	e3.6	7.2	e6.4	e6.2	4.9	.04	.03	2.3
18	6.0	5.1	5.2	e3.6	e4.0	6.6	e6.6	e6.1	4.5	.04	.03	2.8
19	5.8	5.6	5.2	e3.5	e4.5	6.6	e7.0	e6.0	4.4	.04	.03	5.5
20	5.9	5.3	5.0	e3.4	e5.0	6.5	e7.4	e5.9	4.7	.04	.04	6.0
21	4.8	6.6	5.1	e3.4	e5.2	6.6	e8.0	e5.7	4.0	.03	.04	4.7
22	4.0	5.8	e5.0	e3.3	e5.2	6.6	e9.0	e5.4	3.2	.02	.04	4.3
23	4.0	5.7	e4.8	e3.3	e15	6.6	e10	e5.3	2.4	.02	.04	4.5
24	3.9	5.8	e4.8	e3.3	8.3	6.3	e11	e5.1	2.0	.02	.05	4.6
25	3.8	5.1	e4.9	e3.3	8.4	6.1	e12	6.4	1.6	.02	.05	4.4
26	3.8	4.8	e4.5	e3.3	7.7	5.9	e12	6.8	1.2	.01	.05	4.1
27	3.8	4.4	e4.0	e3.3	7.8	5.6	e11	7.5	.98	.01	.06	4.2
28	5.8	4.7	e3.5	e3.2	9.7	5.1	e8.0	6.2	.84	.01	.07	4.6
29	4.4	4.8	e3.5	e3.2	---	5.3	e6.6	4.9	.71	.01	.08	5.0
30	4.5	5.1	e3.4	e3.2	---	5.0	e6.2	6.0	.58	.01	.11	5.1
31	4.2	---	e3.3	e3.2	---	5.0	---	7.1	---	.01	.11	---
TOTAL	167.9	152.3	183.3	104.4	135.6	235.2	213.6	186.5	139.71	2.78	1.07	157.04
MEAN	5.42	5.08	5.91	3.37	4.84	7.59	7.12	6.02	4.66	.090	.035	5.23
MAX	7.7	6.6	34	3.7	15	12	12	7.5	10	.58	.11	42
MIN	3.8	4.1	3.3	2.9	2.7	5.0	4.8	4.9	.58	.01	.01	.12
AC-FT	333	302	364	207	269	467	424	370	277	5.5	2.1	313

MEAN	2.94	3.28	2.30	2.32	3.81	5.62	4.73	5.42	6.07	2.14	1.10	2.86
MAX	6.98	10.2	6.69	7.72	10.6	13.3	8.95	53.4	48.8	17.8	7.53	14.5
(WY)	1994	1992	1993	1994	1991	1993	1994	1991	1991	1997	1997	1973
MIN	.000	.000	.000	.000	.000	.27	.097	.38	.043	.000	.000	.000
(WY)	1955	1955	1953	1951	1956	1954	1954	1955	1952	1956	1954	1950

YELLOWSTONE RIVER BASIN

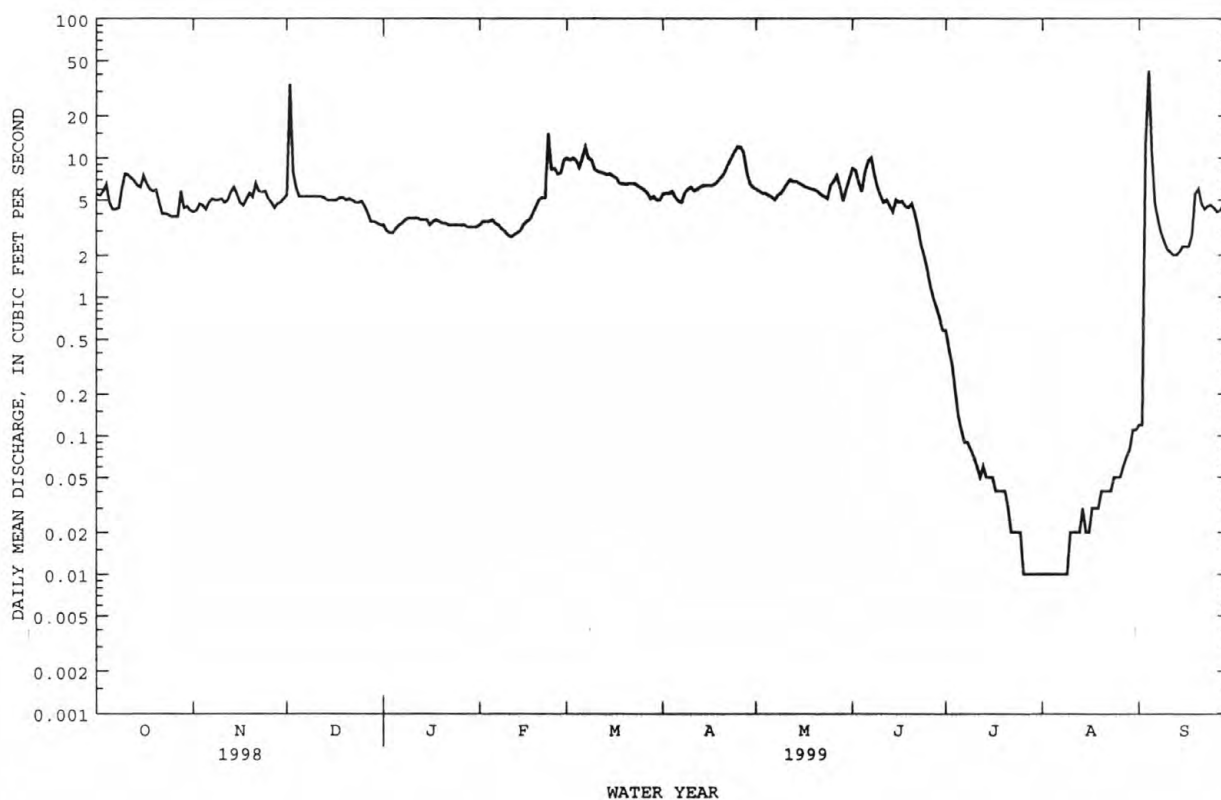
06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1950 - 1999
ANNUAL TOTAL	2045.50	1679.40	--
ANNUAL MEAN	5.60	4.60	3.54
HIGHEST ANNUAL MEAN	--	--	12.4
LOWEST ANNUAL MEAN	--	--	.25
HIGHEST DAILY MEAN	40 Sep 15	42 Sep 4	273 Sep 20 1950
LOWEST DAILY MEAN	.10 Jul 13-21	.01 Many days	.00 Several days, most years
ANNUAL SEVEN-DAY MINIMUM	.10 Jul 13	.01 Jul 26	.00 Several days, most years
INSTANTANEOUS PEAK FLOW	--	83 Dec 2	1750 ^a Sep 6 1951
INSTANTANEOUS PEAK STAGE	--	3.02 Dec 2	5.60 ^b Sep 6 1951
ANNUAL RUNOFF (AC-FT)	4060	3330	2560
10 PERCENT EXCEEDS	8.8	7.7	7.6
50 PERCENT EXCEEDS	5.6	4.8	2.0
90 PERCENT EXCEEDS	.63	.04	.00

a From rating curve extended above 350 ft³/s.

b From floodmarks.

e Estimated.



101

LOCATION.--Lat 43°13'20", long 108°13'06", in NW¼ SW¼ sec.19, T.3 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 1.2 mi upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft and 5.0 mi west of Shoshoni.

PERIOD OF RECORD.--May 1941 to September 1942, August 1948 to September 1983, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above sea level, from topographic map. May 10, 1941 to Sept. 30, 1942, nonrecording gage at site 1.0 mi downstream at different datum. Aug. 28, 1948 to Sept. 30, 1983, at same site and datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, discharge, 3,500 ft³/s, from estimate provided by Bureau of Reclamation, gage height not determined.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	470	146	97	e70	e64	56	48	223	352	390	591	496
2	485	143	101	e70	e66	51	51	222	358	415	606	457
3	473	143	121	e66	e68	52	54	222	370	413	589	569
4	425	145	100	e70	e66	51	58	225	394	387	593	746
5	414	139	92	e80	e70	50	62	228	448	411	556	712
6	413	140	e72	e84	e68	47	66	227	462	409	553	610
7	383	142	e75	e86	e68	50	248	222	461	421	558	604
8	377	140	e78	e82	e70	52	325	213	440	408	587	621
9	365	133	e80	e80	e68	50	273	220	410	445	582	547
10	325	127	e79	e82	e68	51	207	222	364	450	559	508
11	247	123	e74	e84	e62	50	129	225	354	469	518	501
12	213	126	e74	e82	e60	51	141	224	371	522	507	496
13	198	125	e76	e80	e60	51	139	220	399	497	536	511
14	185	127	e78	e80	e62	51	132	220	436	503	534	501
15	179	124	e80	e74	e62	51	185	220	431	503	544	490
16	187	121	e80	e76	e64	51	224	244	434	464	542	447
17	198	118	e85	e74	e64	50	222	260	429	479	536	468
18	179	116	e88	e72	e64	49	216	258	432	472	525	458
19	174	113	e64	e72	e64	48	206	288	441	478	479	514
20	178	110	e58	e72	60	48	211	286	453	475	459	514
21	177	113	e56	e74	61	48	219	290	458	484	467	450
22	169	111	e54	e70	60	48	255	266	425	492	481	497
23	161	108	e52	e70	62	48	331	244	389	495	477	564
24	161	108	e54	e68	65	48	343	236	377	476	484	534
25	158	105	e56	e64	57	47	355	295	369	492	433	524
26	154	103	e58	e64	55	47	398	377	363	509	420	486
27	150	101	e62	e68	53	48	310	360	369	527	439	490
28	156	100	e68	e68	56	46	224	469	384	520	417	491
29	154	99	e74	e64	---	43	202	468	380	532	415	504
30	156	98	e74	e62	---	44	208	505	380	561	401	502
31	153	---	e72	e62	---	45	---	332	---	561	458	---
TOTAL	7817	3647	2332	2270	1767	1522	6042	8511	12133	14660	15846	15812
MEAN	252	122	75.2	73.2	63.1	49.1	201	275	404	473	511	527
MAX	485	146	121	86	70	56	398	505	462	561	606	746
MIN	150	198	52	62	53	43	48	213	352	387	401	447
AC-FT	15510	7230	4630	4500	3500	3020	11980	16880	24070	29080	31430	31360

MEAN	145	79.3	58.7	50.2	48.3	52.3	81.3	179	281	333	341	293
MAX	252	135	114	89.9	79.5	87.2	201	275	442	524	525	527
(WY)	1999	1998	1998	1998	1959	1963	1999	1999	1976	1983	1983	1999
MIN	18.0	14.8	8.25	2.60	6.24	17.8	12.7	28.1	97.4	141	139	88.4
(WY)	1942	1942	1942	1942	1942	1942	1942	1942	1941	1977	1977	1941

YELLOWSTONE RIVER BASIN

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY--Continued

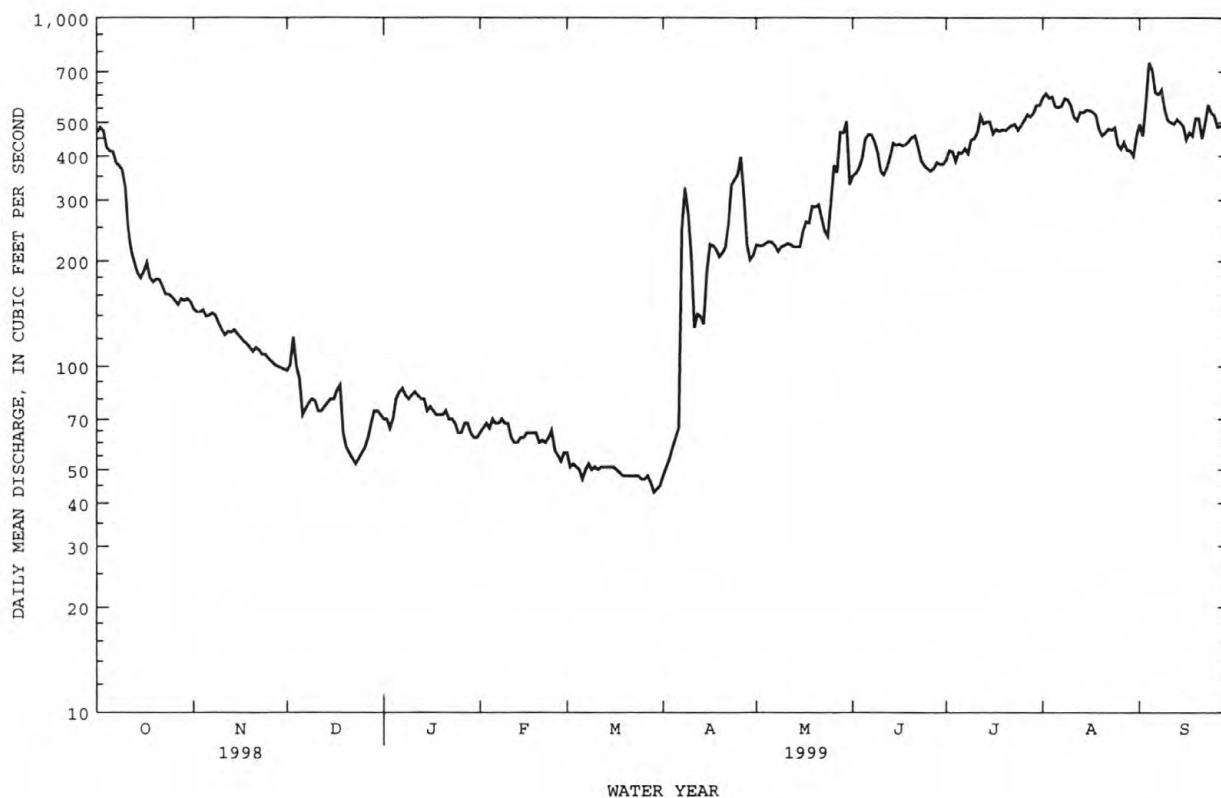
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1941 - 1999
ANNUAL TOTAL	84282	92359	--
ANNUAL MEAN	231	253	164
HIGHEST ANNUAL MEAN	--	--	253
LOWEST ANNUAL MEAN	--	--	54.8
HIGHEST DAILY MEAN	566	746	964
LOWEST DAILY MEAN	47	43	1.0
ANNUAL SEVEN-DAY MINIMUM	49	46	1.4
INSTANTANEOUS PEAK FLOW	--	824 ^a	3390
INSTANTANEOUS PEAK STAGE	--	8.79 ^c	9.61 ^c
ANNUAL RUNOFF (AC-FT)	167200	183200	118700
10 PERCENT EXCEEDS	471	510	365
50 PERCENT EXCEEDS	154	206	103
90 PERCENT EXCEEDS	61	54	40

a Gage height, 4.37 ft.

b Gage height, 7.85 ft.

c Backwater from ice.

e Estimated.



YELLOWSTONE RIVER BASIN

103

06258900 BOYSEN RESERVOIR NEAR SHOSHONI, WY

LOCATION.--Lat 43°25'00", long 108°10'37", in NW¹/₄ NW¹/₄ sec.16, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, at dam on Wind River and 13 mi north of Shoshoni.

DRAINAGE AREA.--7,700 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum of 1933).

REMARKS.--Reservoir is formed by rockfill dam completed by Bureau of Reclamation in October 1951. Capacity, 802,000 acre-ft below elevation 4,725.00 ft, top of spillway gate. Includes 59,880 acre-ft dead storage below elevation 4,657.00 ft, invert of penstock pipe. Figures given herein represent total contents. Water used for irrigation, flood control, and power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 922,000 acre-ft, July 6, 7, 1967, elevation, 4,730.83 ft; minimum daily contents (since normal use of water started), 252,000 acre-ft, Mar. 18, 19, 1956, elevation, 4,684.18 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 774,000 acre-ft, July 7-9, maximum daily elevation, 4,725.73 ft, July 8, 9; minimum daily contents, 500,000 acre-ft, May 24, elevation, 4,710.54 ft.

Capacity table (elevation, in feet,
and contents, in acre-feet)

4,705	427,000	4,720	648,000
4,710	493,000	4,725	742,000
4,715	566,000	4,730	844,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

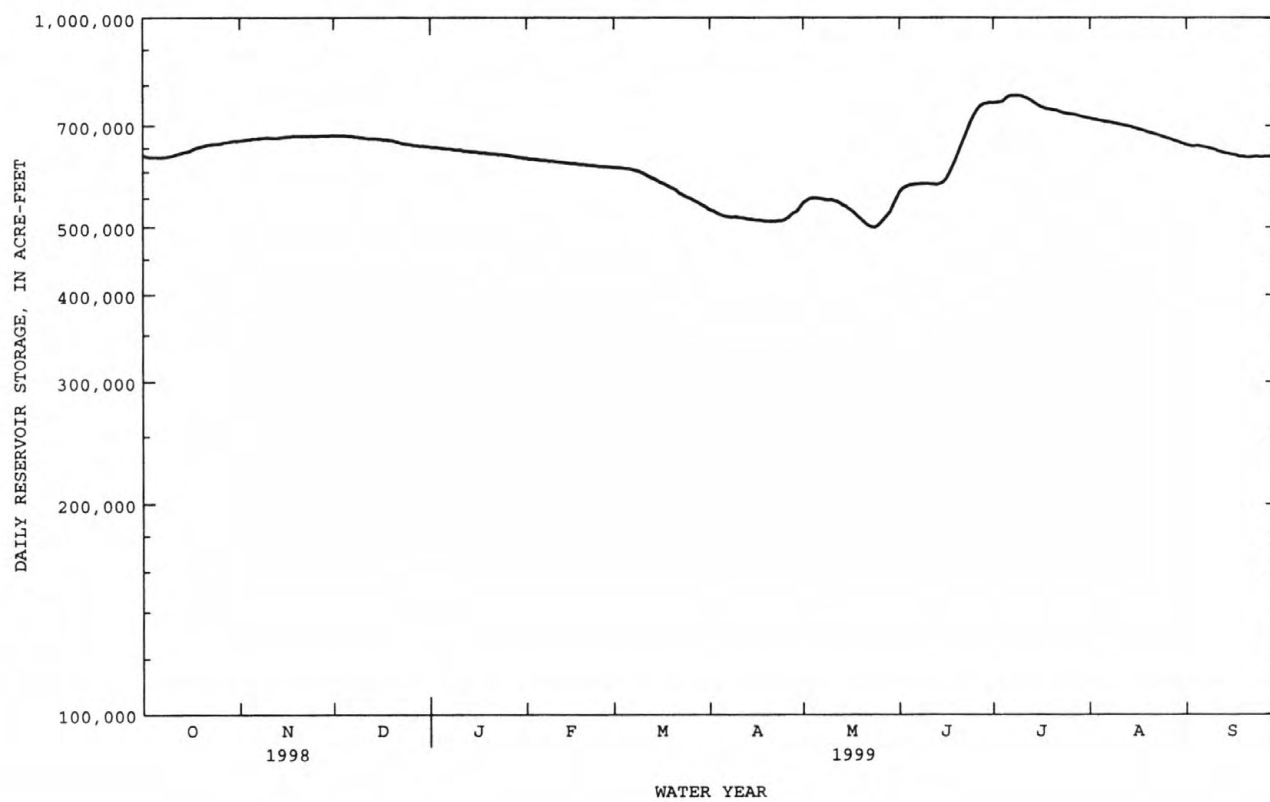
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	634000	666000	678000	652000	629000	610000	530000	542000	562000	755000	718000	657000
2	632000	667000	678000	651000	627000	609000	528000	546000	569000	756000	716000	656000
3	631000	668000	677000	651000	627000	609000	525000	549000	572000	757000	715000	654000
4	631000	669000	678000	650000	626000	608000	522000	551000	575000	759000	713000	655000
5	631000	670000	677000	649000	625000	607000	520000	551000	576000	767000	712000	655000
6	630000	671000	676000	648000	624000	607000	519000	550000	577000	772000	710000	654000
7	631000	671000	676000	648000	624000	605000	518000	549000	577000	774000	709000	652000
8	631000	672000	674000	647000	623000	604000	517000	548000	578000	774000	708000	651000
9	632000	672000	674000	646000	623000	602000	518000	547000	578000	774000	706000	649000
10	633000	673000	673000	646000	622000	599000	517000	548000	578000	773000	705000	647000
11	635000	672000	672000	645000	621000	596000	516000	546000	577000	770000	703000	644000
12	638000	672000	671000	643000	621000	592000	516000	545000	577000	767000	701000	642000
13	639000	672000	671000	643000	620000	590000	514000	541000	576000	763000	700000	640000
14	641000	673000	671000	642000	619000	587000	514000	538000	578000	757000	698000	639000
15	642000	674000	670000	642000	618000	584000	513000	535000	581000	752000	696000	637000
16	644000	675000	670000	641000	618000	580000	512000	531000	587000	747000	694000	636000
17	648000	675000	668000	640000	617000	578000	512000	527000	598000	744000	691000	635000
18	650000	676000	668000	640000	616000	575000	511000	522000	612000	741000	690000	632000
19	652000	676000	667000	639000	616000	571000	510000	517000	627000	740000	687000	632000
20	654000	676000	666000	638000	615000	569000	510000	512000	644000	738000	685000	631000
21	656000	676000	664000	638000	614000	566000	510000	507000	661000	737000	683000	631000
22	657000	676000	662000	637000	614000	560000	510000	503000	677000	735000	681000	631000
23	658000	676000	660000	636000	613000	557000	511000	501000	695000	732000	679000	632000
24	659000	677000	659000	636000	612000	554000	511000	500000	713000	730000	676000	632000
25	659000	676000	658000	635000	612000	551000	513000	503000	727000	729000	674000	631000
26	660000	677000	657000	634000	611000	549000	516000	508000	740000	728000	672000	632000
27	662000	677000	655000	633000	611000	546000	521000	514000	749000	727000	670000	632000
28	663000	677000	655000	632000	610000	543000	525000	520000	753000	725000	667000	632000
29	664000	677000	654000	631000	---	540000	527000	527000	754000	723000	665000	633000
30	665000	678000	654000	630000	---	537000	535000	539000	756000	721000	662000	633000
31	666000	---	653000	629000	---	534000	---	550000	---	719000	660000	---
MAX	666000	678000	678000	652000	629000	610000	535000	551000	756000	774000	718000	657000
MIN	630000	666000	653000	629000	610000	534000	510000	500000	562000	719000	660000	631000
(#)	4,720.98	4,721.63	4,720.26	4,718.90	4,717.76	4,712.87	4,712.94	4,713.99	4,725.73	4,723.84	4,720.66	4,719.10
(*)	+30,000	+12,000	-25,000	-24,000	-19,000	-76,000	+1,000	+15,000	+206,000	-37,000	-59,000	-27,000

WTR YR 1999 MAX 774,000 MIN 500,000 (*) -3,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06258900 BOYSEN RESERVOIR NEAR SHOSHONI, WY--Continued



LOCATION.--Lat 43°25'30", long 108°10'42", in NW¹/₄ SW¹/₄ sec.9, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 0.6 mi downstream from Boysen Dam and 13 mi north of Shoshoni.

GAGE.--Water-stage recorder. Datum of gage is 4,608.58 ft above sea level.

REMARKS.--Records fair. Flow regulated by Boysen Reservoir (see station 06258900) since October 1951. Natural flow also affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 196,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and data provided by Bureau of Reclamation from April 1998; record computed and reviewed by U.S. Geological Survey.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2240	913	951	1140	1130	1170	2050	2310	1620	2780	3400	2260
2	2260	912	955	1140	1130	1170	2060	2300	1530	3400	3540	2260
3	2250	911	1040	1150	1120	1210	2070	2300	1530	4840	3550	2260
4	2250	916	1140	1140	1120	1360	2160	2310	1530	5090	3540	2260
5	2250	913	1140	1140	1140	1570	2140	2280	1490	5120	3530	2260
6	2250	912	1140	1120	1140	1710	2140	2260	1500	5680	3280	2250
7	2250	913	1140	1120	1150	1700	2130	2300	1430	6100	3050	2250
8	2270	924	1140	1140	1140	1700	2130	2290	1490	6130	3040	2260
9	2280	920	1150	1140	1140	1700	2180	2300	1550	6150	3040	2240
10	2290	914	1160	1140	1140	1700	2340	2290	1540	6160	2510	2240
11	2290	921	1150	1150	1140	1690	2340	2280	1540	6150	2250	2230
12	2290	916	1150	1140	1140	1690	2340	2280	1490	6150	2260	2250
13	2300	925	1150	1140	1140	1690	2330	2280	1400	6150	2260	2240
14	2310	922	1140	1150	1140	1690	2330	2280	1410	6200	2260	2240
15	2320	916	1140	1150	1140	1700	2320	2280	1410	6210	2260	2240
16	2320	916	1140	1150	1150	1700	2320	2270	1420	6030	2250	2230
17	2320	916	1140	1140	1140	1700	2330	2270	1420	4940	2260	2230
18	2320	917	1140	1120	1200	1710	2310	2270	1410	3710	2260	2230
19	2320	921	1150	1120	1170	1700	2310	2200	1410	3090	2260	2230
20	2350	921	1140	1130	1160	1690	2320	2160	1410	3090	2260	2230
21	2330	921	1130	1130	1180	1680	2320	2160	1410	3090	2270	2220
22	2320	931	1130	1120	1160	1690	2310	2150	1410	3060	2270	2220
23	2300	938	1130	1120	1160	1690	2310	2110	1400	3060	2260	2220
24	2260	943	1130	1130	1170	1690	2300	2080	1410	3060	2270	2220
25	1900	952	1130	1130	1170	1700	2310	2100	1480	3070	2270	2220
26	1600	953	1130	1130	1160	1720	2320	1910	1810	3070	2260	2220
27	1020	953	1130	1130	1160	1740	2310	1810	1820	3060	2240	2210
28	913	949	1130	1130	1160	1690	2310	1740	1840	3060	2250	2210
29	906	950	1130	1130	---	1670	2310	1700	2060	3050	2250	2210
30	908	949	1140	1130	---	1660	2310	1720	2390	3050	2250	2210
31	915	---	1140	1140	---	1840	---	1720	---	3050	2260	---
TOTAL	63102	27778	34846	35180	32190	50720	67760	66710	46560	136850	79910	67050
MEAN	2036	926	1124	1135	1150	1636	2259	2152	1552	4415	2578	2235
MAX	2350	953	1160	1150	1200	1840	2340	2310	2390	6210	3550	2260
MIN	906	911	95									

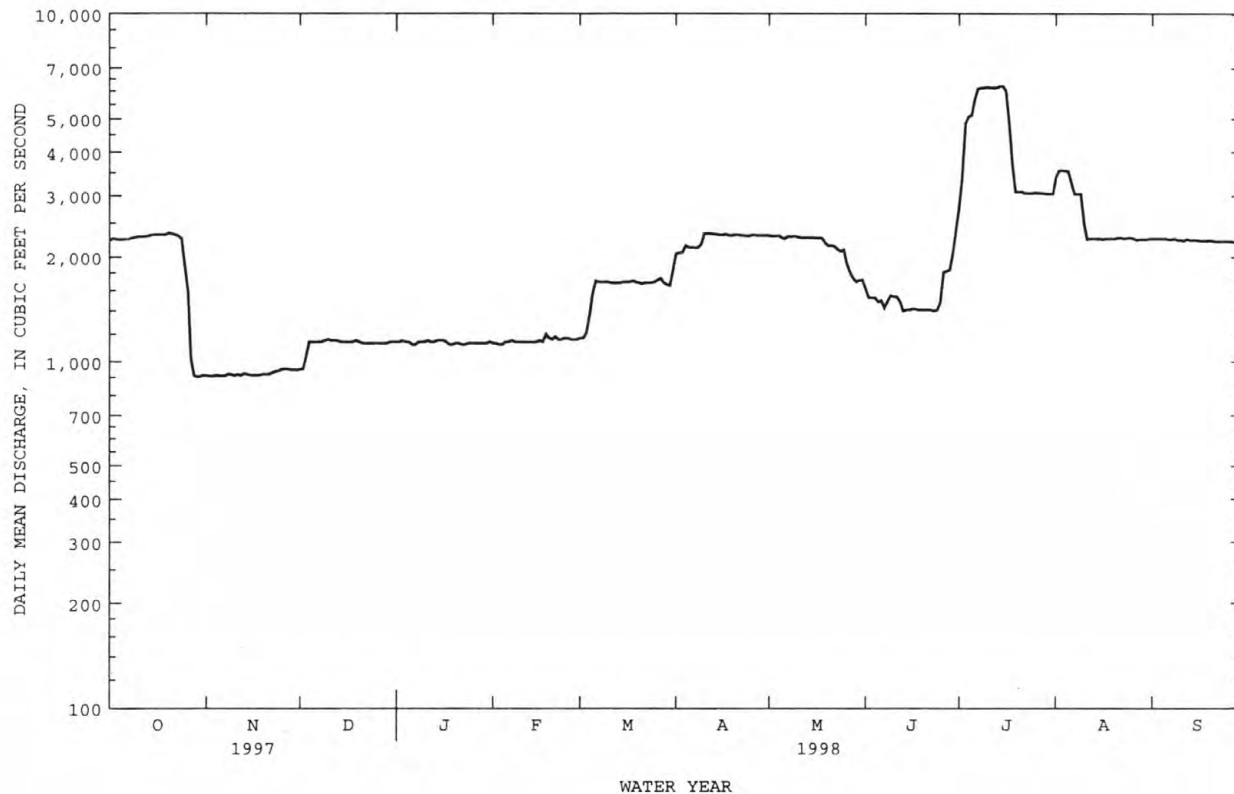
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

MEAN	1212	1183	1177	1110	1071	1143	1277	1466	2287	2544	1529	1318
MAX	2846	2086	2005	2208	2202	2035	2259	2360	7252	8816	2789	2502
(WY)	1983	1959	1959	1958	1958	1997	1998	1984	1991	1967	1997	1973
MIN	332	306	301	299	210	213	389	777	980	935	909	715
(WY)	1961	1978	1989	1989	1952	1952	1952	1952	1992	1992	1992	1994

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	757027		708656		--	
ANNUAL MEAN	2074		1942		1433	
HIGHEST ANNUAL MEAN	--		--		2349	1983
LOWEST ANNUAL MEAN	--		--		612	1961
HIGHEST DAILY MEAN	6550	Jun 22	6210	Jul 15	13200	Jul 7 1967
LOWEST DAILY MEAN	906	Oct 29	906	Oct 29	4.7	Apr 3 1962
ANNUAL SEVEN-DAY MINIMUM	911	Oct 28	911	Oct 28	106	Oct 12 1951
INSTANTANEOUS PEAK FLOW	--		6310	Jul 9	13500	Jul 7 1967
INSTANTANEOUS PEAK STAGE	--		9.40	Jul 9	13.35	Jul 7 1967
ANNUAL RUNOFF (AC-FT)	1502000		1406000		1038000	
10 PERCENT EXCEEDS	3480		3050		2190	
50 PERCENT EXCEEDS	2160		1720		1180	
90 PERCENT EXCEEDS	960		994		661	



DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

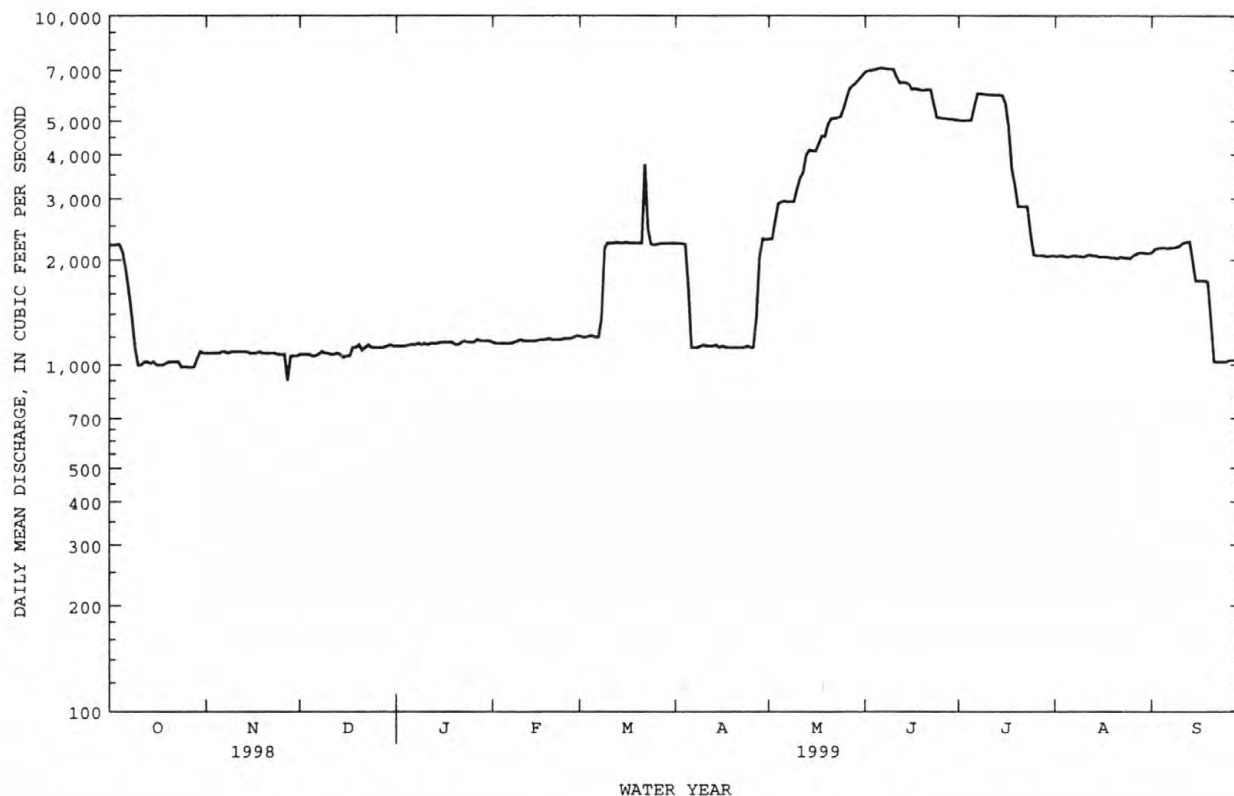
MEAN	1213	1181	1176	1110	1074	1161	1279	1525	2368	2577	1539	1326
MAX	2846	2086	2005	2208	2202	2035	2259	4314	7252	8816	2789	2502
(WY)	1983	1959	1959	1958	1958	1997	1998	1999	1991	1967	1997	1973
MIN	332	306	301	299	210	213	389	777	980	935	909	715
(WY)	1961	1978	1989	1989	1952	1952	1952	1952	1992	1992	1992	1994

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1999	
ANNUAL TOTAL	688303		844393		--	
ANNUAL MEAN	1886		2313		1451	
HIGHEST ANNUAL MEAN	--		--		2349	1983
LOWEST ANNUAL MEAN	--		--		612	1961
HIGHEST DAILY MEAN	6210	Jul 15	7110	Jun 6	13200	Jul 7 1967
LOWEST DAILY MEAN	901	Nov 27	901	Nov 27	4.7	Apr 3 1962
ANNUAL SEVEN-DAY MINIMUM	995	Oct 22	995	Oct 22	106	Oct 12 1951
INSTANTANEOUS PEAK FLOW	--		7180	Jun 6	13500	Jul 7 1967
INSTANTANEOUS PEAK STAGE	--		9.73	Jun 6	13.35	Jul 7 1967
ANNUAL RUNOFF (AC-FT)	1365000		1675000		1051000	
10 PERCENT EXCEEDS	3050		5880		2210	
50 PERCENT EXCEEDS	1690		1360		1180	
90 PERCENT EXCEEDS	1070		1060		669	

e Estimated.



06260300 ANCHOR RESERVOIR NEAR ANCHOR, WY

LOCATION.--Lat 43°39'50", long 108°49'27", in sec.26, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, at dam on South Fork Owl Creek, 2.0 mi downstream from Middle Fork, 3.0 mi southeast of Anchor, and 32 mi west of Thermopolis.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--November 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum).

REVISED RECORDS.--WRD 1996: 1995(M).

REMARKS.--Reservoir is formed by concrete arch dam completed by Bureau of Reclamation in 1960. Capacity, 17,230 acre-ft below elevation 6,441.00 ft, crest of spillway. Includes 68 acre-ft below elevation 6,343.75 ft, invert of river outlet. Figures given herein represent total contents. Water used for irrigation of lands in Owl Creek basin.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 9,250 acre-ft, July 4, 1967, elevation, 6,418.52 ft; maximum elevation, 6,419.10 ft, June 12, 1991; no storage on many days, most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 7,570 acre-ft, June 24-25, elevation, 6,412.80 ft; minimum daily contents, 174 acre-feet, Jan. 22 to Feb. 2; elevation, 6,351.20 ft.

Capacity table (elevation in feet,
and contents, in acre-feet)

6,350	148	6,390	2,880
6,360	414	6,400	4,470
6,370	915	6,410	6,470
6,380	1,720		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	628	767	212	229	174	183	548	915	4540	7390	3420	320
2	628	733	212	225	174	183	558	955	4560	7470	3200	339
3	638	701	212	220	178	187	571	1010	4590	7530	3110	348
4	648	669	212	216	183	187	580	1050	4800	7510	2880	359
5	654	638	212	212	183	187	590	1100	4990	7390	2740	345
6	654	614	212	212	183	187	599	1110	5170	7360	2590	320
7	659	590	212	208	183	187	609	1130	5380	7490	2460	311
8	664	571	212	204	183	191	618	1180	5530	7540	2200	302
9	669	548	212	202	183	191	628	1230	5750	7470	2060	289
10	669	522	212	202	183	191	633	1280	5860	7420	1890	283
11	674	496	212	199	183	193	638	1320	6000	7320	1740	280
12	679	476	212	197	183	193	638	1340	6200	7140	1600	277
13	679	414	212	195	183	195	638	1360	6440	6850	1410	271
14	679	397	212	195	183	197	638	1350	6670	6640	1190	266
15	690	379	212	191	183	199	648	1310	7020	6520	969	260
16	701	372	212	191	183	202	654	1280	7410	6370	790	254
17	711	365	212	191	183	204	654	1230	7520	6220	654	254
18	722	359	212	191	183	204	654	1130	7490	6080	580	252
19	733	352	212	187	183	208	659	1040	7450	5930	505	250
20	739	352	212	183	183	212	664	1040	7480	5780	433	248
21	744	345	216	178	183	220	664	1040	7490	5620	345	246
22	744	345	223	174	183	231	664	1240	7430	5460	289	246
23	756	333	229	174	183	250	669	1490	7450	5290	269	246
24	767	317	229	174	183	274	674	1900	7570	5110	246	246
25	767	299	229	174	183	311	674	2350	7570	4910	246	248
26	773	283	229	174	183	342	679	2850	7340	4710	248	250
27	779	271	229	174	183	372	739	3160	6920	4500	250	252
28	779	233	229	174	183	410	790	3620	6980	4290	269	250
29	779	223	229	174	---	456	833	4030	7070	4070	295	248
30	784	216	229	174	---	509	864	4320	7130	3850	314	248
31	790	---	229	174	---	540	---	4500	---	3630	323	---
MAX	790	767	229	229	183	540	864	4500	7570	7540	3420	359
MIN	628	216	212	174	174	183	548	915	4540	3630	246	246
(#)	6,368.00	6,353.20	6,353.80	6,351.20	6,351.60	6,363.10	6,369.20	6,400.20	6,411.64	6,395.10	6,357.30	6,354.70
(*)	+162	-574	+13	-55	+9	+357	+324	+3,636	+2,630	-3,500	-3,307	-75

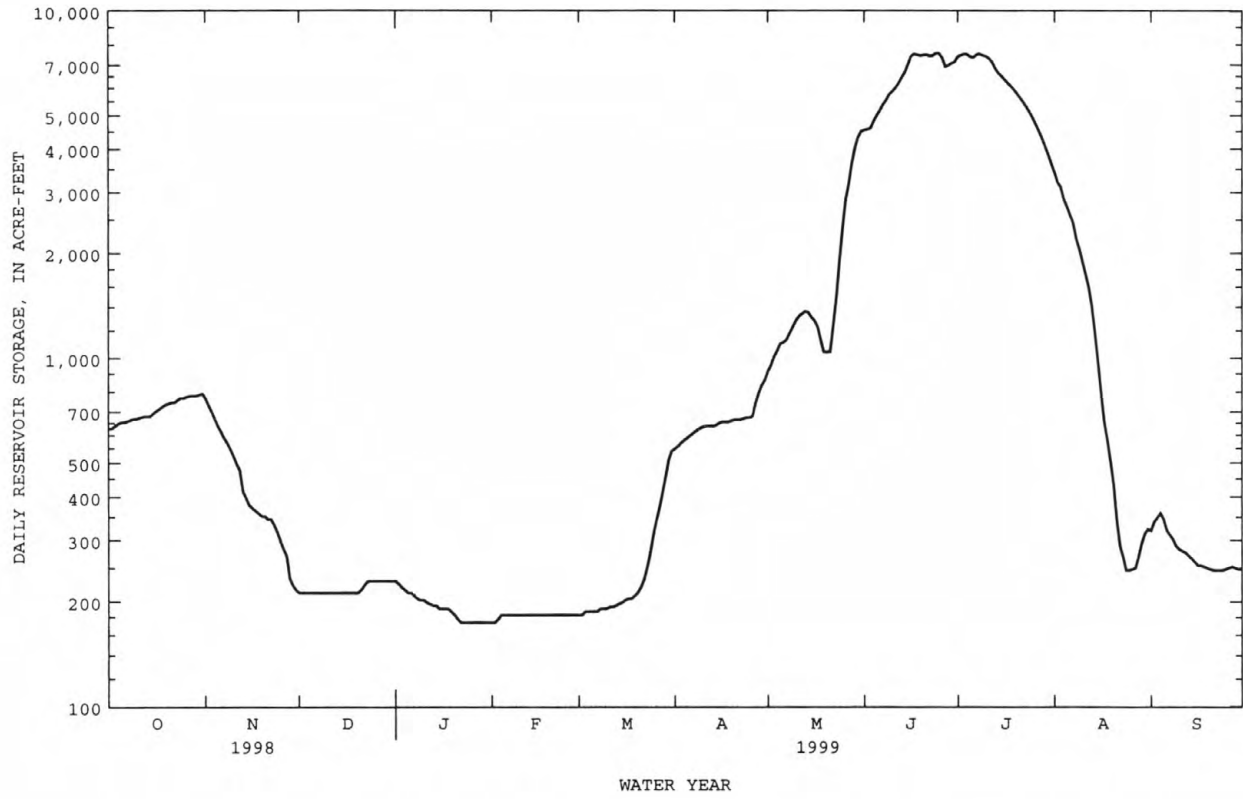
WTR YR 1999 MAX 7570 MIN 174 (*) -380

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

YELLOWSTONE RIVER BASIN

06260300 ANCHOR RESERVOIR NEAR ANCHOR, WY--Continued



06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY

LOCATION.--Lat43°39'57", long 108°47'34", in sec.25, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 1.6 mi downstream from Anchor Dam and 30 mi west of Thermopolis.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--April 1959 to current year (no winter records since 1988).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above sea level, from topographic map.

REMARKS.--Records fair. Flow regulated by Anchor Dam (station 06260300). No diversion upstream from station. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 28 . . . 8.06
Mar. 29 . . . 5.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.4	4.2	146	41	94	22
2	---	---	---	---	---	---	6.1	4.1	145	67	92	18
3	---	---	---	---	---	---	6.7	4.4	115	95	90	20
4	---	---	---	---	---	---	7.8	4.4	97	126	89	23
5	---	---	---	---	---	---	5.6	4.9	98	128	87	23
6	---	---	---	---	---	---	5.4	4.9	99	78	86	23
7	---	---	---	---	---	---	5.4	5.0	100	30	85	22
8	---	---	---	---	---	---	5.1	4.9	100	48	83	20
9	---	---	---	---	---	---	4.9	5.2	101	68	81	17
10	---	---	---	---	---	---	5.0	5.4	102	59	78	16
11	---	---	---	---	---	---	4.9	5.3	103	59	77	15
12	---	---	---	---	---	---	4.6	5.2	104	62	76	15
13	---	---	---	---	---	---	4.3	9.9	105	79	73	14
14	---	---	---	---	---	---	4.1	27	141	79	71	13
15	---	---	---	---	---	---	4.1	38	215	80	69	13
16	---	---	---	---	---	---	3.9	38	248	79	66	12
17	---	---	---	---	---	---	3.9	52	325	79	62	11
18	---	---	---	---	---	---	3.9	73	357	79	59	11
19	---	---	---	---	---	---	3.9	71	350	79	55	13
20	---	---	---	---	---	---	4.0	71	306	78	51	14
21	---	---	---	---	---	---	4.1	72	290	78	38	12
22	---	---	---	---	---	---	4.1	75	286	77	20	11
23	---	---	---	---	---	---	3.9	78	204	77	17	11
24	---	---	---	---	---	---	3.7	85	152	80	16	11
25	---	---	---	---	---	---	3.8	90	224	85	16	10
26	---	---	---	---	---	---	5.0	117	251	84	16	10
27	---	---	---	---	---	---	3.9	134	166	83	15	11
28	---	---	---	---	---	---	4.0	138	68	90	13	9.2
29	---	---	---	---	---	---	4.4	142	68	98	12	11
30	---	---	---	---	---	---	4.3	145	65	97	12	12
31	---	---	---	---	---	---	---	146	---	95	20	---
TOTAL	---	---	---	---	---	---	141.2	1659.8	5131	2437	1719	443.2
MEAN	---	---	---	---	---	---	4.71	53.5	171	78.6	55.5	14.8
MAX	---	---	---	---	---	---	7.8	146	357	128	94	23
MIN	---	---	---	---	---	---	3.7	4.1	65	30	12	9.2
AC-FT	---	---	---	---	---	---	280	3290	10180	4830	3410	879

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1999, BY WATER YEAR (WY)

	MEAN	7.40	2.71	.98	.40	.71	2.06	8.85	48.1	101	59.0	27.1	13.4
MAX	20.5	8.90	3.86	2.39	2.82	8.66	30.2	90.1	226	124	79.4	37.1	
(WY)	1983	1982	1982	1981	1988	1960	1987	1974	1986	1982	1995	1992	
MIN	2.49	.013	.000	.000	.000	.000	.000	14.3	21.0	4.67	4.18	4.01	
(WY)	1965	1962	1961	1960	1960	1961	1991	1981	1994	1994	1966	1964	

YELLOWSTONE RIVER BASIN

06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY--Continued

SUMMARY STATISTICS

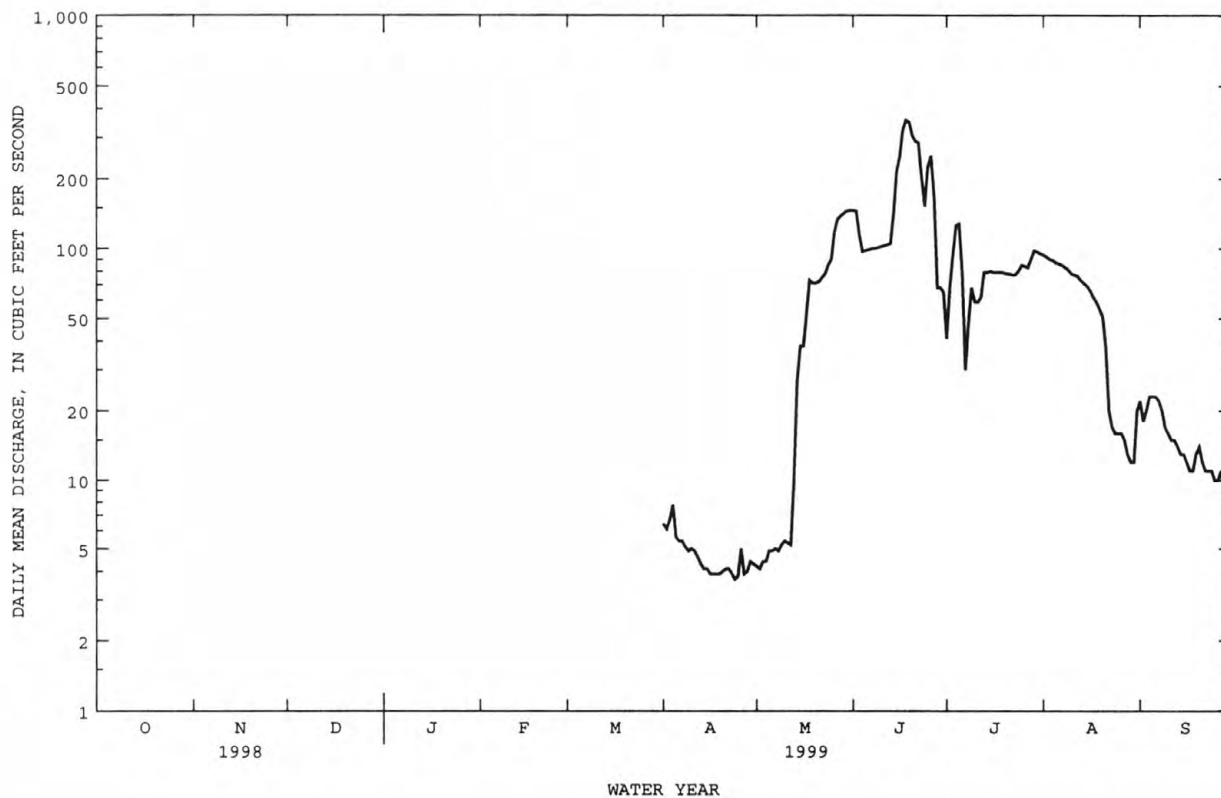
FOR 1999 WATER YEAR*

WATER YEARS 1959 - 1999*

ANNUAL MEAN	--		22.1	
HIGHEST ANNUAL MEAN	--		35.9	1986
LOWEST ANNUAL MEAN	--		11.3	1985
HIGHEST DAILY MEAN	357	Jun 18	357	Jun 18 1999
LOWEST DAILY MEAN	3.7	Apr 24	.00	Several days, most years
INSTANTANEOUS PEAK FLOW	366	Jun 17	373 ^a	May 26 1967
INSTANTANEOUS PEAK STAGE	4.22	Jun 17	4.22	Jun 17 1999
ANNUAL RUNOFF (AC-FT)	--		16050	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

^a Gage height, 3.64 ft.



YELLOWSTONE RIVER BASIN

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06264700 BIGHORN RIVER AT LUCERNE, WY

LOCATION.--Lat 43°44'10", long 108°09'38", in SE¹/₄ sec.32, T.44 N., R.94 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on Black Mountain road, 0.7 mi upstream from Kirby Creek, 0.8 mi east of Lucerne, and 1.0 mi downstream from Owl Creek.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT							
26...	1015	1250	677	8.5	11.0	8.0	659
FEB							
25...	1000	1250	689	8.2	4.5	14.5	652
MAY							
24...	1110	5070	697	8.3	11.5	24.0	660
AUG							
10...	0940	2600	431	7.6	19.5	21.5	652
DATE		OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT							
26...	10.5	111	290	<.01	<.05	.05	.01
FEB							
25...	9.9	90	130	<.01	.05	<.02	.01
MAY							
24...	9.6	102	73	<.01	.06	.02	.01
AUG							
10...	8.0	102	250	<.01	.08	<.02	<.01

YELLOWSTONE RIVER BASIN

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°45'46", long 108°40'34", in SW¹/₄ NE¹/₄ SE¹/₄ sec.24, T.44 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, on right bank 15 ft upstream from county bridge, 5.2 miles west of Hamilton Dome, and 12 miles south of Grass Creek.

DRAINAGE AREA.--81.4 mi².

PERIOD OF RECORD.--May 1977 to September 1978 (discharge measurements and water quality only), April 1993 to current year. Prior to April 1993, published as Cottonwood Creek at county bridge, near Hamilton Dome.

GAGE.--Water-stage recorder. Elevation of gage is 5,677 ft above sea level, from topographic map. Prior to Sept. 9, 1996, at site 9 ft downstream at datum 3.00 ft higher.

REMARKS.--Records poor. State of Wyoming data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	6.9	4.4	e.20	e1.3	3.9	3.0	148	124	46	7.8	3.0
2	5.9	7.2	3.2	.13	e1.5	3.9	3.4	142	123	39	14	3.5
3	7.5	6.9	3.5	.11	e1.6	4.1	4.9	112	120	34	8.9	15
4	22	6.6	2.1	e1.0	e1.8	3.6	4.4	97	106	32	8.1	45
5	20	5.7	1.3	e2.7	e1.7	1.9	4.1	93	115	29	6.9	21
6	20	6.1	1.3	e2.0	e1.4	2.0	4.4	79	111	23	11	11
7	18	5.5	1.9	e2.6	1.3	2.3	6.8	75	106	21	13	6.9
8	18	2.8	2.9	e1.9	1.1	2.0	8.6	84	109	21	10	6.3
9	13	4.5	e2.0	e1.5	1.1	3.1	8.1	120	105	19	6.9	5.8
10	12	2.5	e2.5	e2.0	1.1	18	5.2	85	98	18	6.7	5.3
11	11	3.0	e3.0	e2.8	1.0	2.9	3.9	73	90	14	6.3	5.3
12	10	5.9	e3.5	e2.0	1.4	2.5	6.3	56	91	13	12	5.3
13	9.7	6.4	e3.8	e1.4	1.4	2.6	7.3	48	89	12	13	4.9
14	9.5	6.2	e3.5	e1.8	1.6	4.1	7.4	46	87	10	7.3	4.9
15	9.8	5.8	e3.0	e2.5	1.7	5.9	4.6	44	86	8.7	5.7	4.7
16	15	5.3	e3.2	e1.8	1.3	8.8	5.0	48	84	8.7	5.2	4.1
17	20	4.8	e3.5	e1.5	1.2	7.6	4.6	50	88	9.0	4.7	4.1
18	29	4.2	e2.5	e2.2	1.3	5.8	12	52	84	9.0	4.8	4.1
19	23	2.4	e1.5	e1.9	1.7	7.6	17	69	82	9.7	4.4	4.2
20	22	3.4	e1.0	e1.8	1.6	11	22	78	80	10	4.7	5.0
21	20	5.4	e1.5	e1.8	1.3	11	23	91	77	9.9	4.9	4.1
22	20	5.0	e1.6	e1.7	1.4	9.7	14	102	74	7.8	4.8	3.7
23	20	3.3	e1.7	e1.5	1.4	9.7	12	78	71	7.3	4.3	3.1
24	17	3.3	e1.8	e1.3	1.3	9.3	26	89	65	6.3	3.7	3.1
25	14	1.8	e2.1	e1.4	1.6	8.0	44	65	64	5.9	3.7	3.1
26	12	4.3	e2.5	e1.7	2.1	9.1	105	55	60	5.4	3.6	3.3
27	12	3.9	e3.0	e1.3	2.9	6.1	69	86	56	5.7	3.4	4.8
28	13	4.0	e2.5	e1.0	3.1	3.2	59	80	53	4.9	3.8	4.7
29	10	4.6	e1.0	e1.3	---	4.0	222	101	49	4.9	4.7	6.4
30	8.8	3.7	e.60	e1.5	---	5.8	188	127	50	5.3	3.9	7.5
31	7.5	---	e.30	e1.8	---	4.4	---	134	---	5.1	3.1	---
TOTAL	455.4	141.4	72.20	50.14	43.2	183.9	905.0	2607	2597	454.6	205.3	213.2
MEAN	14.7	4.71	2.33	1.62	1.54	5.93	30.2	84.1	86.6	14.7	6.62	7.11
MAX	29	7.2	4.4	2.8	3.1	18	222	148	124	46	14	45
MIN	5.7	1.8	.30	.11	1.0	1.9	3.0	44	49	4.9	3.1	3.0
AC-FT	903	280	143	99	86	365	1800	5170	5150	902	407	423

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999
MEAN	6.03	3.37	1.65	1.29	1.80	9.48	14.3
MAX	14.7	6.91	2.96	2.83	3.30	26.9	30.2
(WY)	1999	1994	1998	1997	1996	1998	1999
MIN	1.11	.39	.057	.015	.28	4.80	5.43
(WY)	1997	1995	1995	1995	1995	1997	1993

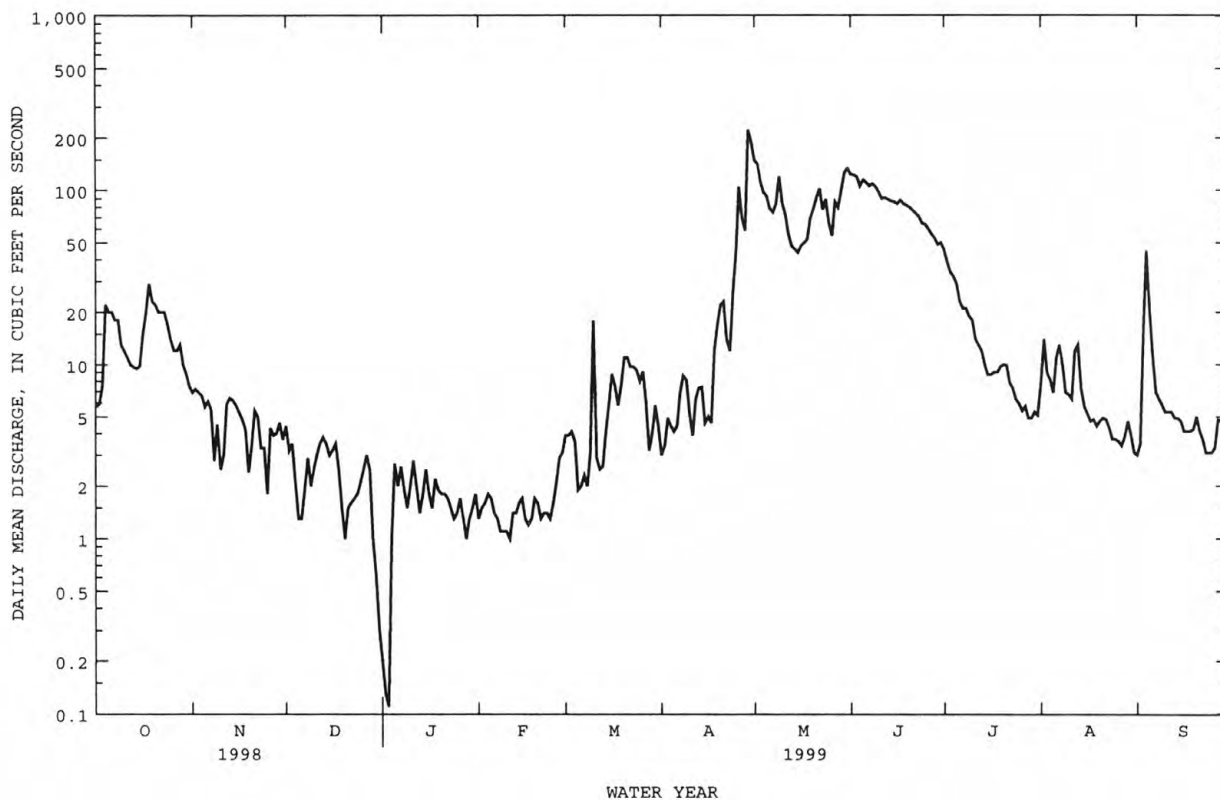
06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1993 - 1999	
ANNUAL TOTAL	6554.20		7928.34		--	
ANNUAL MEAN	18.0		21.7		14.6	
HIGHEST ANNUAL MEAN	--		--		21.7	
LOWEST ANNUAL MEAN	--		--		5.12	
HIGHEST DAILY MEAN	109	Mar 24	222	Apr 29	895	Jun 11 1997
LOWEST DAILY MEAN	.30	Dec 31	.11	Jan 3	.00	Several days, most years
ANNUAL SEVEN-DAY MINIMUM	1.2	Feb 23	.48	Dec 29	.00	Most years
INSTANTANEOUS PEAK FLOW	--	--	327	Apr 29	3390 ^a	Jun 10 1997
INSTANTANEOUS PEAK STAGE	--	--	5.16	Apr 29	10.75 ^b	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	13000	--	15730	--	10570	--
10 PERCENT EXCEEDS	50	--	83	--	49	--
50 PERCENT EXCEEDS	7.4	--	5.7	--	4.8	--
90 PERCENT EXCEEDS	1.6	--	1.5	--	.40	--

a From indirect measurement of peak flow.

b From floodmark.

e Estimated.



YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY

LOCATION.--Lat 44°23'00", long 108°02'08", in SE¹/₄ NW¹/₄ NE¹/₄ sec.21, T.51 N., R.93 W., Big Horn County, Hydrologic Unit 10080007, on left bank 10 ft downstream from county bridge on E Street, 0.2 mi northeast of Big Horn County Courthouse in Basin, and 1.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--13,223 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 3,821.29 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 226,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2380	1710	1540	e1950	e1650	1550	2550	4980	9910	5460	1750	1720
2	2370	1670	1540	e1850	e1600	1550	2590	5020	9380	5280	1780	1730
3	2390	1680	1550	e1800	e1520	1530	2570	4760	9610	5360	1720	1950
4	2540	1710	1550	e1700	e1550	1520	2570	5350	9610	5710	1900	3230
5	3120	1680	1560	e1600	e1570	1530	2550	5030	9360	5910	1990	3460
6	2630	1640	1510	e1650	e1580	1520	2120	4510	9730	5500	1820	2680
7	2330	1690	e1400	e1680	e1580	1510	1490	4210	9740	5610	1940	2480
8	2100	1670	e1350	e1700	1500	1510	1450	4040	9920	6080	1900	2370
9	1900	1650	e1400	e1700	1520	1560	1400	4570	10300	6040	1850	2330
10	1830	1650	e1450	e1700	1560	2340	1400	5210	9830	5850	1730	2310
11	1710	1580	e1470	e1700	1570	2480	1450	5310	9130	5770	1660	2290
12	1600	1540	e1480	e1700	1570	2480	1370	5150	8610	5790	1930	2300
13	1580	1560	e1480	e1700	1500	2480	1290	5030	8390	5730	1920	2330
14	1570	1630	e1480	e1700	1510	2500	1250	5470	8440	5660	1960	2320
15	1550	1660	e1480	e1700	1530	2510	1250	5630	8270	5810	1950	2170
16	1660	1710	e1450	e1700	1530	2510	1250	5620	8250	5770	1870	1880
17	2490	1700	e1450	e1700	1510	2520	1220	5750	8070	5480	1760	1890
18	1890	1650	e1350	e1700	1500	2530	1170	5800	8520	4700	1720	1880
19	1710	1640	e1200	e1710	1500	2520	1100	5850	8820	3930	1670	1880
20	1630	1620	e1250	e1780	1510	2510	1010	5820	9130	3150	1660	1910
21	1600	1590	e1300	e1680	1490	2500	1190	6310	9000	2750	1680	1770
22	1570	1590	e1400	e1500	1490	2510	1270	6720	8690	2670	1730	1330
23	1550	1590	e1500	e1550	1490	3780	1430	7080	8070	2610	1740	1300
24	1530	1580	e1600	e1510	1500	2840	1370	7360	7050	2540	1690	1280
25	1520	1560	e2000	e1450	1530	2600	1290	7520	6390	2260	1650	1250
26	1510	1560	e1900	e1500	1540	2580	1330	7810	6440	1900	1660	1230
27	1500	1550	e2200	e1520	1540	2560	1570	8470	6040	1840	1670	1240
28	1580	1480	e2100	e1600	1540	2580	1750	9240	5580	1790	1720	1290
29	1720	1530	e2000	e1600	---	2530	2790	9580	5280	1710	1820	1310
30	1680	1560	e2200	e1600	---	2410	4160	10000	5200	1700	1880	1310
31	1750	---	e2100	e1630	---	2390	---	10600	---	1720	1770	---
TOTAL	58490	48630	49240	51560	42980	70440	51200	193800	250760	132080	55490	58420
MEAN	1887	1621	1588	1663	1535	2272	1707	6252	8359	4261	1790	1947
MAX	3120	1710	2200	1950	1650	3780	4160	10600	10300	6080	1990	3460
MIN	1500	1480	1200	1450	1490	1510	1010	4040	5200	1700	1650	1230
AC-FT	116000	96460	97670	102300	85250	139700	101600	384400	497400	262000	110100	115900

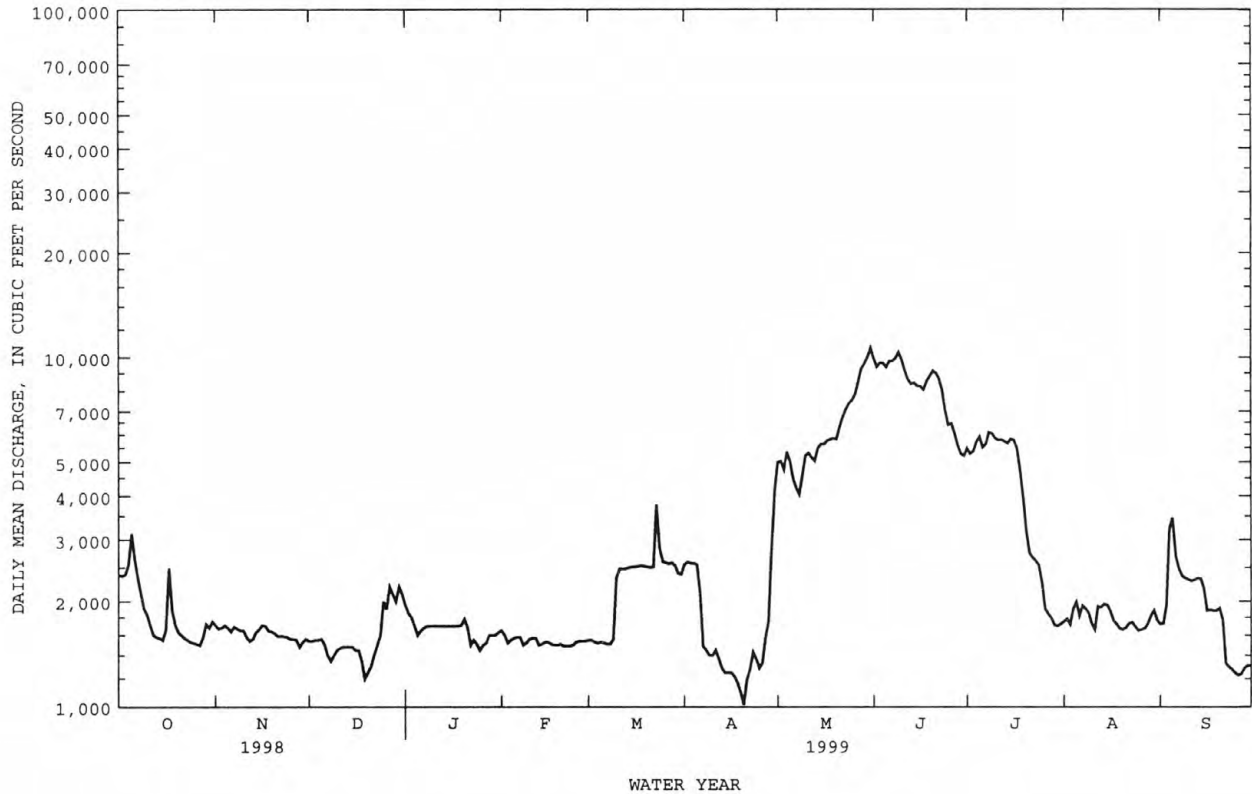
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	1591	1453	1329	1232	1295	1598	1541	2646	4420	2627	1261	1412				
MAX	2346	2439	1933	1975	1772	2753	2929	6252	11210	8574	2627	2326				
(WY)	1984	1984	1985	1992	1997	1998	1998	1999	1991	1995	1997	1998				
MIN	694	659	642	566	504	634	723	1052	1075	357	455	749				
(WY)	1989	1989	1989	1989	1989	1989	1992	1989	1994	1988	1988	1988				

06274300 BIGHORN RIVER AT BASIN, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	872930		1063090		--	
ANNUAL MEAN	2392		2913		1868	
HIGHEST ANNUAL MEAN	--		--		2913	1999
LOWEST ANNUAL MEAN	--		--		800	1989
HIGHEST DAILY MEAN	6720	Jul 5	10600	May 31	16600	Jun 8 1991
LOWEST DAILY MEAN	1200	Jan 9	1010	Apr 20	276	Jul 27 1988
ANNUAL SEVEN-DAY MINIMUM	1340	Dec 16	1170	Apr 15	292	Jul 24 1988
INSTANTANEOUS PEAK FLOW	--		10800	Jun 9	19500	Jun 7 1991
INSTANTANEOUS PEAK STAGE	--		8.93	Jun 9	10.49	Jun 7 1991
ANNUAL RUNOFF (AC-FT)	1731000		2109000		1353000	
10 PERCENT EXCEEDS	3240		6340		3160	
50 PERCENT EXCEEDS	2200		1730		1450	
90 PERCENT EXCEEDS	1530		1450		726	

e Estimated.



YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY--Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	
OCT 26...	1315	1670	852	8.7	10.0	20.5	668	9.7	
FEB 25...	1245	1640	822	8.3	4.0	15.5	659	11.4	
MAY 24...	1445	7420	623	8.2	15.0	28.5	670	8.7	
AUG 10...	1245	1870	619	8.0	22.5	40.0	659	7.5	
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 26...	98	33	<.01	.14	.04	<.01	108	487	
FEB 25...	101	K14	<.01	.14	<.02	<.01	128	567	
MAY 24...	99	280	<.01	.13	.03	.02	1140	22700	
AUG 10...	101	380	<.01	.47	<.02	.03	239	1210	

K Results based on colony count outside the acceptable range (non-ideal colony count).

06276500 GREYBULL RIVER AT MEETEETSE, WY

LOCATION.--Lat 44°09'20", long 108°52'35", in sec.4, T.48 N., R.100 W., Park County, Hydrologic Unit 10080009, on right bank at Meeteetse, 0.3 mi upstream from bridge on State Highway 120, and 3.0 mi upstream from Meeteetse Creek.

DRAINAGE AREA.--681 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1897, April to October 1903 (gage heights and discharge measurements only), July 1920 to current year (no winter records since 1971). Partial records only for some periods prior to 1931, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1923(M), 1924, 1925(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,739.42 ft above sea level. See WSP 1916 for history of changes prior to Apr. 28, 1938. Apr. 28, 1938 to May 24, 1961, at site on left bank at datum 2.00 ft higher. May 25, 1961, to May 9, 1967, at site 100 ft downstream at present datum.

REMARKS.--Records fair except those for discharges over 2,000 cfs, which are poor. Some regulation by Sunshine Reservoir beginning May 1940, capacity, 52,990 acre-ft, and Lower Sunshine Reservoir beginning December 1972, capacity, 58,900 acre-ft. Diversions for irrigation of about 10,600 acres upstream from station. Several diversions upstream from station for irrigation downstream from station. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 1 . . . 240
Oct. 28 . . . 106
Feb. 26 . . . 71.9
Mar. 25 . . . 52.5

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	121	354	1320	945	853	609
2	---	---	---	---	---	---	117	350	1400	1050	832	594
3	---	---	---	---	---	---	110	329	1600	1190	785	625
4	---	---	---	---	---	---	116	315	1610	1260	848	563
5	---	---	---	---	---	---	110	294	1780	1240	812	434
6	---	---	---	---	---	---	116	274	1790	1070	890	363
7	---	---	---	---	---	---	117	308	1910	1120	823	402
8	---	---	---	---	---	---	128	465	1860	1160	785	437
9	---	---	---	---	---	---	133	417	1750	973	762	429
10	---	---	---	---	---	---	121	328	1600	957	726	420
11	---	---	---	---	---	---	124	291	1660	938	719	429
12	---	---	---	---	---	---	157	274	1830	908	741	429
13	---	---	---	---	---	---	192	279	1870	918	707	420
14	---	---	---	---	---	---	246	283	2010	896	660	408
15	---	---	---	---	---	---	231	290	2160	820	632	383
16	---	---	---	---	---	---	247	287	2280	779	617	362
17	---	---	---	---	---	---	279	278	3010	784	608	358
18	---	---	---	---	---	---	339	294	e2950	814	637	358
19	---	---	---	---	---	---	385	434	e3100	845	674	374
20	---	---	---	---	---	---	405	472	2890	846	724	370
21	---	---	---	---	---	---	229	661	1900	884	732	356
22	---	---	---	---	---	---	303	708	1610	918	713	336
23	---	---	---	---	---	---	357	907	1560	868	682	326
24	---	---	---	---	---	---	362	1320	1670	870	675	321
25	---	---	---	---	---	---	376	1540	1670	888	669	311
26	---	---	---	---	---	---	405	1480	1420	813	668	302
27	---	---	---	---	---	---	445	1520	1130	815	644	283
28	---	---	---	---	---	---	442	1930	953	842	644	233
29	---	---	---	---	---	---	605	2060	945	856	650	220
30	---	---	---	---	---	---	381	2000	930	895	615	233
31	---	---	---	---	---	---	---	1660	---	861	643	---
TOTAL	---	---	---	---	---	---	7699	22402	54168	29023	22170	11688
MEAN	---	---	---	---	---	---	257	723	1806	936	715	390
MAX	---	---	---	---	---	---	605	2060	3100	1260	890	625
MIN	---	---	---	---	---	---	110	274	930	779	608	220
AC-FT	---	---	---	---	---	---	15270	44430	107400	57570	43970	23180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1999, BY WATER YEAR (WY)

	MEAN	167	107	78.3	64.5	63.7	77.3	132	575	1175	811	497	273
MAX	593	248	134	105	104	117	441	1422	3185	2219	1704	662	
(WY)	1924	1942	1931	1943	1962	1942	1952	1924	1957	1965	1941	1941	
MIN	72.5	52.8	45.0	27.0	33.9	35.1	26.8	154	284	188	137	84.2	
(WY)	1956	1956	1970	1963	1960	1963	1978	1978	1934	1934	1940	1939	

YELLOWSTONE RIVER BASIN

06276500 GREYBULL RIVER AT MEETEETSE, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1921 - 1999*

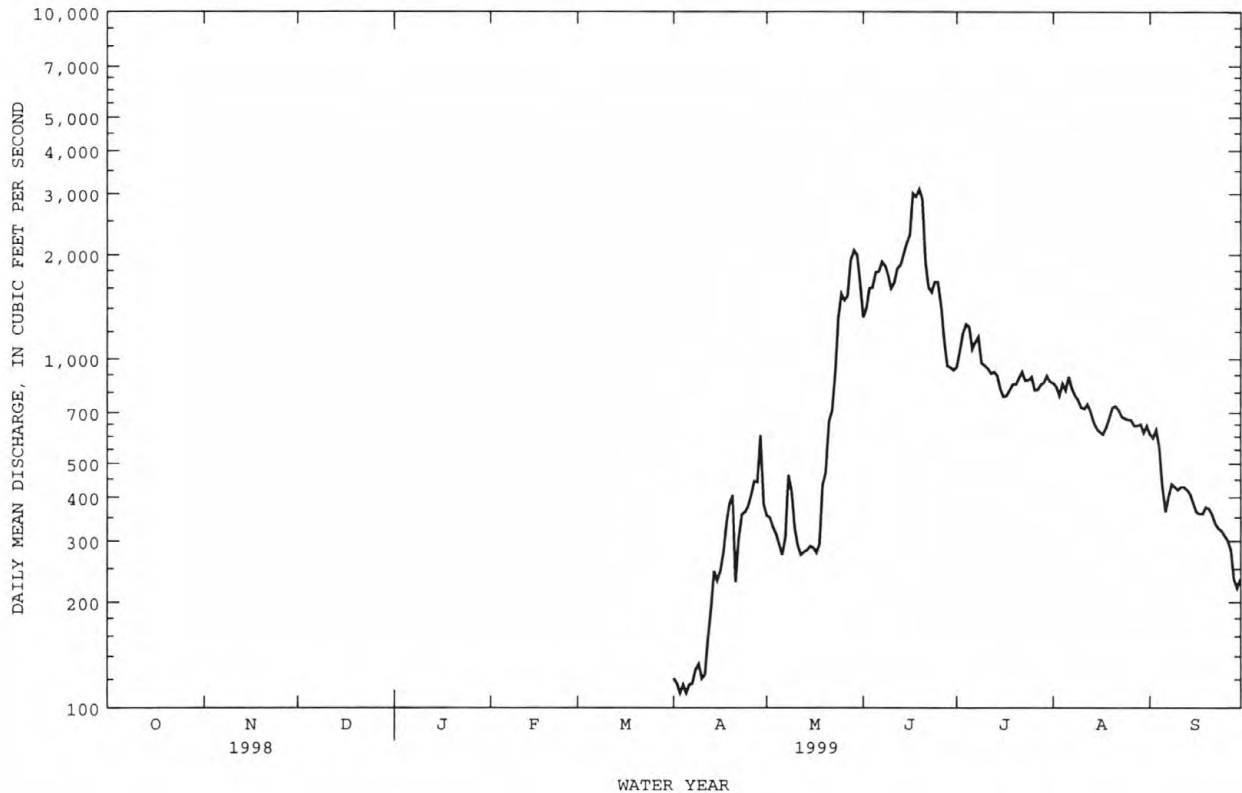
ANNUAL MEAN	--	333	
HIGHEST ANNUAL MEAN	--	566	1957
LOWEST ANNUAL MEAN	--	130	1940
HIGHEST DAILY MEAN	3100	Jun 19	6770
LOWEST DAILY MEAN	110	Apr 3,5	13
INSTANTANEOUS PEAK FLOW	Not determined		13600 ^a
INSTANTANEOUS PEAK STAGE	Not determined		9.20 ^b
ANNUAL RUNOFF (AC-FT)	--		241200

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a From rating curve extended above 4,600 ft³/s on basis of velocity-area study.

b From floodmark.

e Estimated.



06276500 GREYBULL RIVER AT MEETEETSE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 28...	0925	106	485	8.2	7.0	10.0	664	10.6	100	K16	9	2.6
FEB 26...	1430	75	435	8.5	0.0	7.0	616	12.8	109	K10	24	4.9
MAY 25...	1500	1070	164	8.0	12.0	31.0	702	8.9	90	390	1930	5570
AUG 18...	1330	520	288	8.4	14.5	29.5	625	12.0	144	K21	E93	E131

E Estimated.

K Results based on colony count outside the acceptable range (non-ideal colony count).

YELLOWSTONE RIVER BASIN

06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY

LOCATION.--Lat 44°30'29", long 107°24'11", in sec.1, T.52 N., R.88 W., Big Horn County, Hydrologic Unit 10080010, Bighorn National Forest, on right bank 0.2 mi upstream from Shell Reservoir, 1.1 mi downstream from Buckley Creek, 6.0 mi southeast of Shell Creek ranger station, and 19 mi east of Shell.

DRAINAGE AREA.--23.1 mi².

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1969, published as Shell Creek above Shell Creek Reservoir.

REVISED RECORD.--WSP 1629: 1958. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,050 ft above sea level, from topographic map.

REMARKS.--Records fair except those for discharges below 70 ft³/s, which are poor. No diversions upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	2400	528	5.07
June 3	0230	541	5.12
June 8	2215	566	5.23
June 19	2020	*634	*5.46

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	e13	6.0	e3.9	4.4	2.4	3.3	e40	166	73	14	7.5
2	13	13	5.8	3.8	4.9	2.4	3.5	e21	250	70	13	6.7
3	14	12	5.8	3.8	4.3	2.6	3.4	e25	372	80	13	9.7
4	15	11	5.7	3.9	4.9	2.3	3.3	e45	218	95	13	14
5	13	9.8	5.5	3.8	4.0	2.1	3.2	e30	253	84	13	12
6	16	10	5.4	e4.0	4.6	2.5	3.1	27	183	63	12	12
7	16	10	5.0	e3.8	4.4	2.3	3.2	29	262	55	12	11
8	17	11	4.9	e3.7	3.7	2.4	3.1	25	350	55	11	9.9
9	16	9.9	4.4	e3.6	4.3	2.4	3.1	22	316	47	10	9.3
10	16	9.3	4.4	e3.8	3.7	2.1	2.9	21	159	40	9.6	8.9
11	15	11	4.2	e3.9	3.9	2.5	3.2	19	167	39	9.3	9.3
12	15	12	4.2	e3.8	3.6	2.3	3.1	19	213	36	11	9.2
13	15	12	4.3	3.8	3.4	2.5	3.1	15	229	34	11	8.5
14	14	11	4.3	3.6	3.2	2.9	3.0	20	236	32	9.6	8.1
15	14	10	4.2	3.3	3.0	3.1	3.0	22	190	37	8.6	7.9
16	14	9.0	3.9	3.0	3.3	2.9	3.2	12	205	35	8.2	7.5
17	13	8.9	4.0	2.8	3.1	3.5	3.4	18	353	35	7.8	7.3
18	14	8.8	3.6	3.0	3.0	4.7	3.7	15	353	30	7.6	7.2
19	13	8.2	3.6	3.5	2.7	5.8	e4.4	12	401	27	7.4	7.6
20	14	7.9	3.3	3.8	2.6	6.6	e4.7	19	326	25	7.4	7.5
21	16	7.8	2.9	3.5	3.2	6.6	e4.5	29	276	23	7.2	7.2
22	14	7.3	2.8	4.0	2.7	5.7	e4.2	50	229	21	7.1	6.9
23	12	7.7	2.5	4.5	2.8	5.6	e4.0	90	159	20	6.7	6.7
24	12	7.4	2.5	4.2	2.6	5.6	e4.5	173	150	19	6.6	6.4
25	12	6.9	2.7	4.3	2.6	6.1	e7.0	244	155	18	6.3	6.6
26	11	6.9	2.7	4.3	2.2	5.9	e6.6	277	130	17	5.9	7.6
27	11	6.8	2.9	3.6	2.8	4.4	e5.5	365	91	16	5.9	7.4
28	12	6.9	2.9	3.9	2.7	4.5	e7.8	386	75	15	6.1	7.2
29	13	6.5	3.0	4.1	---	4.4	e16	389	65	14	6.7	7.1
30	13	6.2	e3.3	4.1	---	4.0	e50	402	69	15	6.1	7.6
31	e14	---	e3.7	4.5	---	3.5	---	248	---	15	5.9	---
TOTAL	431	278.2	124.4	117.6	96.6	116.6	177.0	3109	6601	1185	279.0	251.8
MEAN	13.9	9.27	4.01	3.79	3.45	3.76	5.90	100	220	38.2	9.00	8.39
MAX	17	13	6.0	4.5	4.9	6.6	50	402	401	95	14	14
MIN	11	6.2	2.5	2.8	2.2	2.1	2.9	12	65	14	5.9	6.4
AC-FT	855	552	247	233	192	231	351	6170	13090	2350	553	499

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

	8.63	5.91	3.84	2.73	2.25	2.16	5.66	104	209	49.4	13.5	10.0
MEAN	8.63	5.91	3.84	2.73	2.25	2.16	5.66	104	209	49.4	13.5	10.0
MAX	17.6	11.2	7.18	4.50	3.67	3.76	28.4	289	353	188	45.6	44.9
(WY)	1962	1962	1995	1995	1998	1999	1987	1958	1968	1975	1968	1968
MIN	3.10	2.91	1.95	1.55	1.09	1.14	1.23	15.2	48.9	11.7	4.08	2.77
(WY)	1989	1976	1970	1980	1980	1961	1970	1975	1994	1961	1961	1988

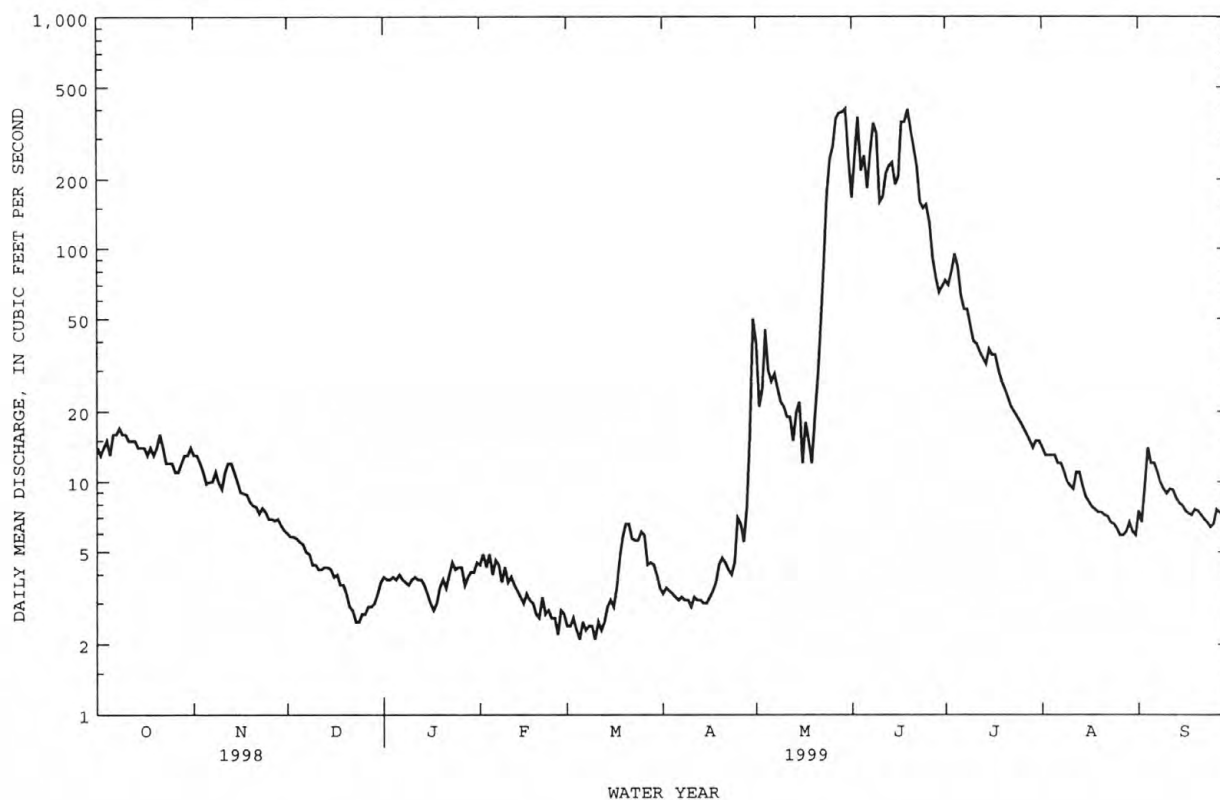
06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	10742.7		12767.2		--	
ANNUAL MEAN	29.4		35.0		34.7	
HIGHEST ANNUAL MEAN	--		--		50.2	
LOWEST ANNUAL MEAN	--		--		18.6	
HIGHEST DAILY MEAN	278	May 30	402	May 30	1010	Jun 15 1963
LOWEST DAILY MEAN	2.5	Dec 23,24	2.1	Mar 5,10	.60	Mar 7 1967
ANNUAL SEVEN-DAY MINIMUM	2.7	Dec 21	2.3	Mar 4	.90	Jan 27 1980
INSTANTANEOUS PEAK FLOW	--		634	Jun 19	1870 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	--		5.46	Jun 19	7.84 ^b	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	21310		25320		25150	
10 PERCENT EXCEEDS	94		90		99	
50 PERCENT EXCEEDS	11		7.5		5.9	
90 PERCENT EXCEEDS	3.2		3.0		1.9	

a From rating curve extended above 725 ft³/s on basis of velocity-area study.

b From floodmarks.

e Estimated.



YELLOWSTONE RIVER BASIN

06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44°33'54", long 107°42'44", in SE¹/₄ SW¹/₄ sec.17, T.53 N., R.90 W., Big Horn County, Hydrologic Unit 10080010, on right bank 0.9 mi upstream from White Creek and 5.0 mi northeast of Shell.

DRAINAGE AREA.--145 mi².

PERIOD OF RECORD.--October 1940 to current year (no winter records since 1971). Prior to December 1940, monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1941, 1945(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,370.05 ft above sea level.

REMARKS.--Records good. Some regulation by two small reservoirs, capacity, 3,650 acre-ft. Diversions upstream from station for irrigation of about 80 acres downstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 7 . . . 69.8

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	0400	1,000	4.89
June 9	0300	*1,240	*5.31
June 20	0300	921	4.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	41	143	546	285	144	113
2	---	---	---	---	---	---	41	158	606	259	134	113
3	---	---	---	---	---	---	42	156	860	247	135	125
4	---	---	---	---	---	---	42	135	651	249	132	135
5	---	---	---	---	---	---	41	120	770	245	135	123
6	---	---	---	---	---	---	41	111	708	223	132	117
7	---	---	---	---	---	---	41	113	812	204	133	112
8	---	---	---	---	---	---	42	133	935	196	125	109
9	---	---	---	---	---	---	44	143	992	190	123	107
10	---	---	---	---	---	---	42	124	675	179	120	104
11	---	---	---	---	---	---	42	112	597	169	122	93
12	---	---	---	---	---	---	43	106	634	162	128	89
13	---	---	---	---	---	---	44	109	639	155	123	87
14	---	---	---	---	---	---	45	106	680	151	118	87
15	---	---	---	---	---	---	42	104	589	149	117	86
16	---	---	---	---	---	---	41	100	560	147	114	85
17	---	---	---	---	---	---	43	94	670	156	110	83
18	---	---	---	---	---	---	46	96	767	142	110	83
19	---	---	---	---	---	---	54	112	761	134	109	86
20	---	---	---	---	---	---	58	123	742	128	107	85
21	---	---	---	---	---	---	62	168	638	125	107	83
22	---	---	---	---	---	---	53	228	579	118	106	82
23	---	---	---	---	---	---	48	279	465	140	99	82
24	---	---	---	---	---	---	48	432	417	133	94	82
25	---	---	---	---	---	---	56	603	395	132	94	82
26	---	---	---	---	---	---	63	698	379	128	93	83
27	---	---	---	---	---	---	72	831	328	128	104	83
28	---	---	---	---	---	---	82	929	299	125	115	81
29	---	---	---	---	---	---	105	871	273	142	125	82
30	---	---	---	---	---	---	126	907	283	147	118	83
31	---	---	---	---	---	---	---	694	---	149	114	---
TOTAL	---	---	---	---	---	---	1590	9038	18250	5237	3640	2845
MEAN	---	---	---	---	---	---	53.0	292	608	169	117	94.8
MAX	---	---	---	---	---	---	126	929	992	285	144	135
MIN	---	---	---	---	---	---	41	94	273	118	93	81
AC-FT	---	---	---	---	---	---	3150	17930	36200	10390	7220	5640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

	57.0	47.2	41.5	36.9	35.2	35.1	50.9	274	511	172	99.9	77.8
MEAN	57.0	47.2	41.5	36.9	35.2	35.1	50.9	274	511	172	99.9	77.8
MAX	95.2	76.4	60.4	48.7	44.6	48.0	138	553	990	473	158	134
(WY)	1942	1969	1969	1948	1947	1946	1946	1988	1968	1975	1979	1968
MIN	35.3	31.5	30.0	28.3	26.9	25.9	29.0	80.4	149	69.2	57.7	36.0
(WY)	1955	1955	1941	1967	1961	1961	1961	1995	1994	1961	1966	1954

06278500 SHELL CREEK NEAR SHELL, WY--Continued

SUMMARY STATISTICS

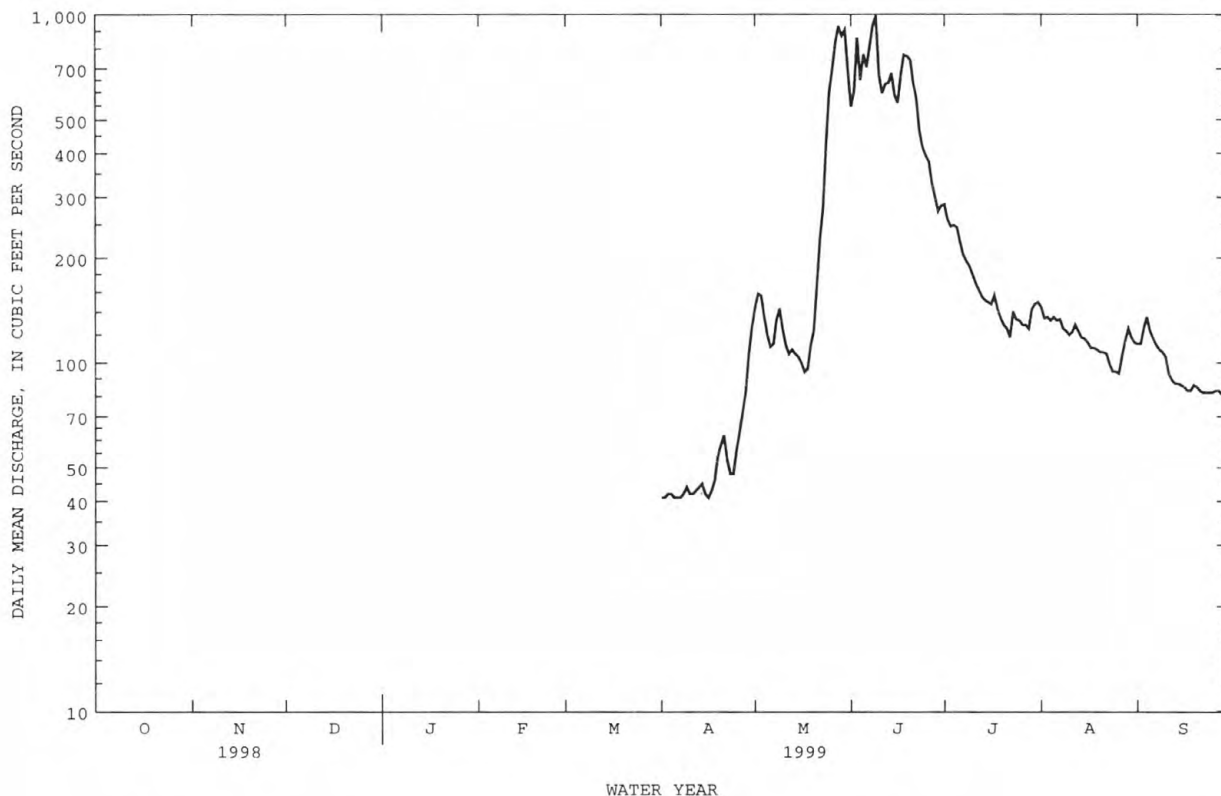
FOR 1999 WATER YEAR*

WATER YEARS 1941 - 1999*

ANNUAL MEAN	--		119	
HIGHEST ANNUAL MEAN	--		160	1968
LOWEST ANNUAL MEAN	--		77.3	1966
HIGHEST DAILY MEAN	922	Jun 9	1980	Jun 4 1968
LOWEST DAILY MEAN	41	Apr 1,2,5-7,16	13	Apr 10 1989
INSTANTANEOUS PEAK FLOW	1240	Jun 9	3020 ^a	Jun 24 1945
INSTANTANEOUS PEAK STAGE	5.31	Jun 9	7.49	Jun 24 1945
ANNUAL RUNOFF (AC-FT)	--		85900	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

^a From rating curve extended above 1,600 ft³/s.



YELLOWSTONE RIVER BASIN

06279500 BIGHORN RIVER AT KANE, WY
(National Water-Quality Assessment Program)

LOCATION.--Lat 44°45'31", long 108°10'51", in NW¹/₄ NE¹/₄ SW¹/₄ sec. 9, T.55 N., R.94 W., Big Horn County, Hydrologic Unit 10080010, on right bank 180 ft upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft, 1.3 mi upstream from Five Springs Creek, and 5.9 mi south of Kane.

DRAINAGE AREA.--15,765 mi². Area at sites used prior to May 17, 1956, 15,846 mi².

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above sea level, from topographic map. Aug. 29, 1928, to Apr. 25, 1932, nonrecording gage, and Apr. 25, 1932, to May 16, 1956, water-stage recorder at site 12.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Boysen Reservoir (station 06258900) since October 1951. Diversions for irrigation of about 376,000 acres upstream from station. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station. Water-quality data are published in the special studies section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft, Sept. 30, 1923, site and datum in use April 1932 to May 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2800	2200	1930	2300	1820	e1870	2720	e5400	11900	6580	2060	2060
2	2810	2170	1920	e2150	1850	1870	2930	5620	10900	6340	2210	2100
3	2820	2180	1930	e2000	1810	1850	2930	5300	11300	6420	2160	2320
4	2950	2240	1930	e1950	1790	1850	2920	5430	11800	7000	2020	3440
5	3690	2200	1930	e1900	1810	1840	2930	5920	11200	7460	2590	4800
6	3430	2120	1910	e1850	1850	1810	2720	5230	11800	6820	2270	3560
7	2930	2130	1810	e1900	1840	1740	1790	4840	12000	6370	2350	3120
8	2680	2160	e1750	e1950	1890	1750	1590	4580	12200	6880	2450	2880
9	2390	2100	e1800	1980	1940	1800	1540	5490	12300	6860	2410	2850
10	2190	2080	e1850	1960	e2000	2450	1510	6330	12000	6470	2160	2820
11	2110	2010	e1900	1950	e1950	3030	1610	6050	10800	6320	2000	2750
12	1980	1930	e1930	1970	e1900	3020	1500	5880	10400	6300	2170	2740
13	1940	1940	1940	2000	1860	3030	1400	5630	10100	6180	2350	2780
14	1930	2080	1940	2010	1850	3000	1330	5930	10200	6080	2440	2770
15	1920	2180	1950	1940	1940	3020	1290	6190	10300	6100	2400	2740
16	1970	2200	1930	1920	2010	3010	1290	6190	10300	6150	2340	2280
17	2910	2230	1910	1920	1910	3000	1270	6280	10200	6030	2090	2230
18	2840	2140	e1800	1910	1900	2990	1220	6210	11400	5310	1980	2210
19	2210	2100	e1400	1870	1910	2970	1150	6330	11800	4620	1920	2210
20	2080	2040	e1300	1880	1900	2950	1100	6360	12300	3770	1900	2290
21	2020	2000	e1400	1890	1780	2970	1270	6720	12300	3070	1910	2340
22	2030	2020	e1500	1900	1780	3000	1400	7320	11500	3030	1990	1780
23	2040	2020	e1700	e1800	1770	4020	1400	7670	10800	2990	2080	1620
24	1970	2010	e1900	e1700	1800	3780	1490	8210	9390	2860	1980	1580
25	1930	2000	e2400	e1600	1840	3040	1380	8880	8380	2760	1920	1540
26	1910	1980	e2300	e1550	e1850	2970	1360	9370	8370	2160	1900	1550
27	1900	1950	e2600	e1600	e1860	2920	1670	9960	7870	2040	1900	1570
28	1980	1980	e2400	e1650	e1860	2930	1870	11000	7030	1940	1910	1620
29	2170	1940	e2300	e1700	---	2930	e3000	11700	6460	1900	2020	1660
30	2220	1950	2560	e1750	---	2740	e4500	12100	6160	1900	2240	1680
31	2180	---	2450	e1800	---	2650	---	12800	---	1960	2140	---
TOTAL	72930	62280	60270	58250	52270	82800	56080	220920	313460	150670	66260	71890
MEAN	2353	2076	1944	1879	1867	2671	1869	7126	10450	4860	2137	2396
MAX	3690	2240	2600	2300	2010	4020	4500	12800	12300	7460	2590	4800
MIN	1900	1930	1300	1550	1770	1740	1100	4580	6160	1900	1900	1540
AC-FT	144700	123500	119500	115500	103700	164200	111200	438200	621700	298900	131400	142600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)

MEAN	1827	1692	1472	1379	1554	1851	1848	3247	5978	3245	1482	1557
MAX	3994	2871	2506	2871	3164	3171	3454	7505	14680	11650	6388	3673
(WY)	1983	1984	1983	1972	1983	1972	1943	1947	1944	1967	1930	1973
MIN	524	737	627	580	550	740	696	1005	1032	501	305	386
(WY)	1936	1961	1961	1937	1933	1989	1961	1960	1934	1961	1940	1935

06279500 BIGHORN RIVER AT KANE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1930 - 1999*	
ANNUAL TOTAL	1014050		1268080		--	
ANNUAL MEAN	2778		3474		2261	
HIGHEST ANNUAL MEAN	--		--		3524	
LOWEST ANNUAL MEAN	--		--		915	
HIGHEST DAILY MEAN	8020	Jul 5	12800	May 31	24800	Jun 15 1935
LOWEST DAILY MEAN	1300	Dec 20	1100	Apr 20	179	Jul 22 1934
ANNUAL SEVEN-DAY MINIMUM	1570	Dec 18	1230	Apr 15	184	Jul 18 1934
INSTANTANEOUS PEAK FLOW	--	--	12800 ^a	May 30	25200 ^b	Jun 16 1935
INSTANTANEOUS PEAK STAGE	--	--	7.59 ^c	May 31	11.10 ^b	Jun 16 1935
ANNUAL RUNOFF (AC-FT)	2011000		2515000		1638000	
10 PERCENT EXCEEDS	3730		7540		4120	
50 PERCENT EXCEEDS	2650		2160		1680	
90 PERCENT EXCEEDS	1800		1690		800	

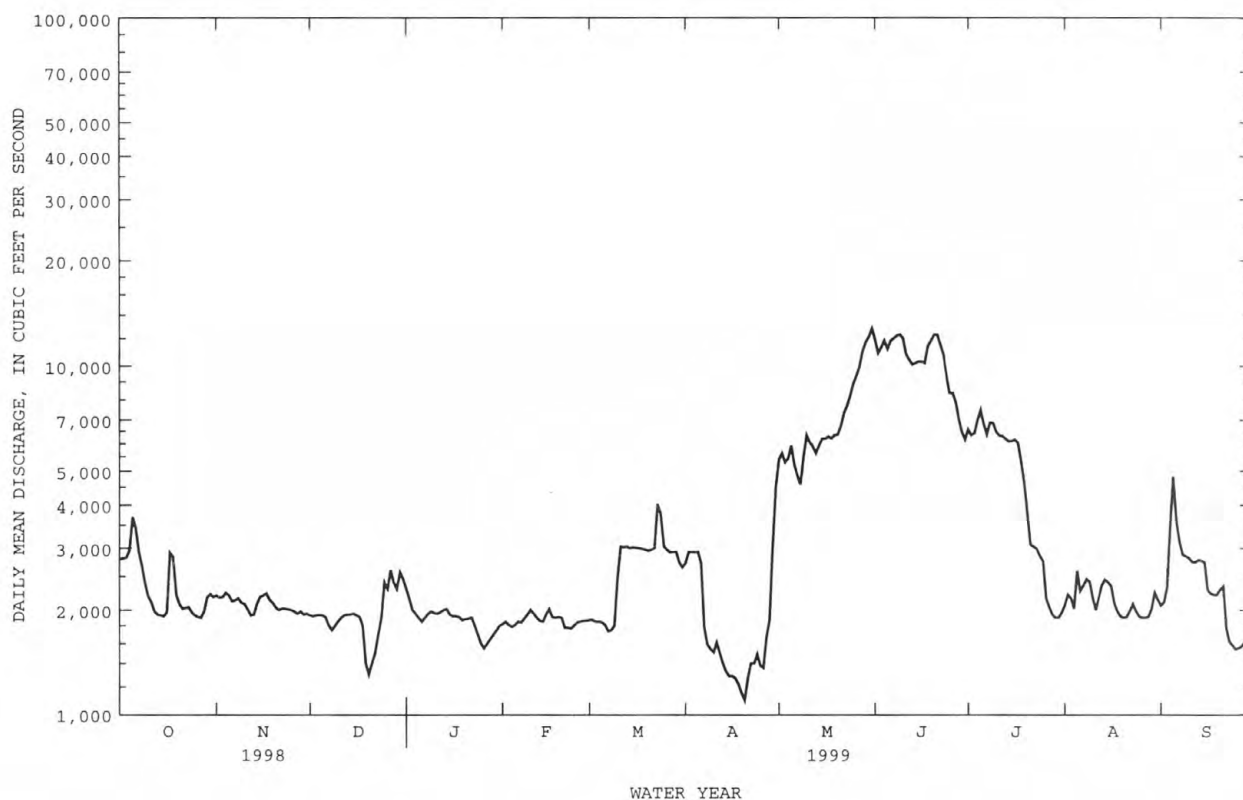
* August 1928 to September 1929 not included in computations, monthly only for selected months.

a Gage height, 7.57 ft.

b Site and datum then in use.

c Discharge, 12,800 ft³/s.

e Estimated.



YELLOWSTONE RIVER BASIN

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY

LOCATION.--Lat 44°28'10", long 109°25'49", in SE¹/₄ NW¹/₄ NW¹/₄ sec.19, T.52 N., R.104 W., Park County, Hydrologic Unit 10080012, on left bank 1,000 ft downstream from bridge on U.S. Highway 14-20, 0.3 mi upstream from Jim Creek, and 0.3 mi downstream from Wapiti.

DRAINAGE AREA.--699 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,580 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion for irrigation of about 1,500 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1981, at station 06280000 North Fork Shoshone River near Wapiti, 4.2 mi downstream, reached a discharge of 20,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0015	5,670	6.95
June 20	0115	*8,630	*7.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	221	216	173	e125	168	262	1660	2900	3430	1180	472
2	302	225	208	168	e140	145	237	1730	2880	3460	1140	732
3	319	236	209	e160	e160	141	231	1310	3050	3700	1200	738
4	357	226	214	e180	157	144	230	1090	2950	4220	1130	746
5	331	222	173	180	151	142	220	911	3080	4070	1090	527
6	325	225	125	166	e140	120	215	803	3250	3620	1030	454
7	324	218	e110	162	147	147	213	959	3320	3730	957	418
8	309	208	e110	160	145	145	233	1230	3620	3800	941	394
9	293	198	e120	e150	144	143	243	979	3020	3320	904	377
10	285	182	e110	156	148	146	224	849	2690	3220	848	360
11	281	e180	e120	158	e140	144	205	760	2690	3110	840	351
12	272	e190	e150	156	149	147	240	694	2870	3070	859	341
13	265	e200	e170	e150	148	156	309	688	3070	3130	854	333
14	260	215	e160	e140	148	201	317	639	3590	3120	752	325
15	265	214	e170	149	150	257	276	654	4200	2900	710	312
16	282	207	e180	e155	e140	245	275	658	4840	2560	642	301
17	272	207	195	e155	146	199	329	636	5380	2510	612	294
18	264	211	184	e150	144	225	527	686	6540	2390	598	292
19	246	200	121	151	141	338	729	834	6950	2190	582	301
20	238	187	82	152	e140	460	788	1170	7050	2090	581	296
21	237	204	e76	149	e135	500	744	1700	7260	2020	623	283
22	238	229	e90	146	e140	404	583	2250	6940	1950	636	275
23	241	198	e110	147	e145	438	520	2740	6130	1810	583	267
24	245	235	e130	145	146	508	479	3300	5890	1770	548	261
25	243	212	e160	134	150	594	582	3840	6640	1690	528	266
26	238	203	e190	125	151	646	739	3910	5610	1490	514	260
27	232	209	e235	e120	150	470	948	4340	4370	1420	497	256
28	234	239	e230	e130	155	362	1150	4620	3640	1410	523	266
29	238	236	e220	e140	---	334	1540	4900	3300	1450	517	254
30	232	221	206	e140	---	320	1440	4540	3810	1530	461	252
31	232	---	177	e130	---	287	---	3630	---	1290	580	---
TOTAL	8395	6358	4951	4677	4075	8676	15028	58710	131530	81470	23460	11004
MEAN	271	212	160	151	146	280	501	1894	4384	2628	757	367
MAX	357	239	235	180	160	646	1540	4900	7260	4220	1200	746
MIN	232	180	76	120	125	120	205	636	2690	1290	461	252
AC-FT	16650	12610	9820	9280	8080	17210	29810	116500	260900	161600	46530	21830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	268	220	165	149	151	214	532	2072	3832	2127
MAX	330	304	283	199	184	294	792	3459	6251	3130
(WY)	1998	1997	1996	1997	1997	1997	1990	1997	1997	1996
MIN	221	157	139	121	123	144	282	1221	1840	595
(WY)	1995	1995	1993	1992	1994	1991	1993	1990	1994	1994

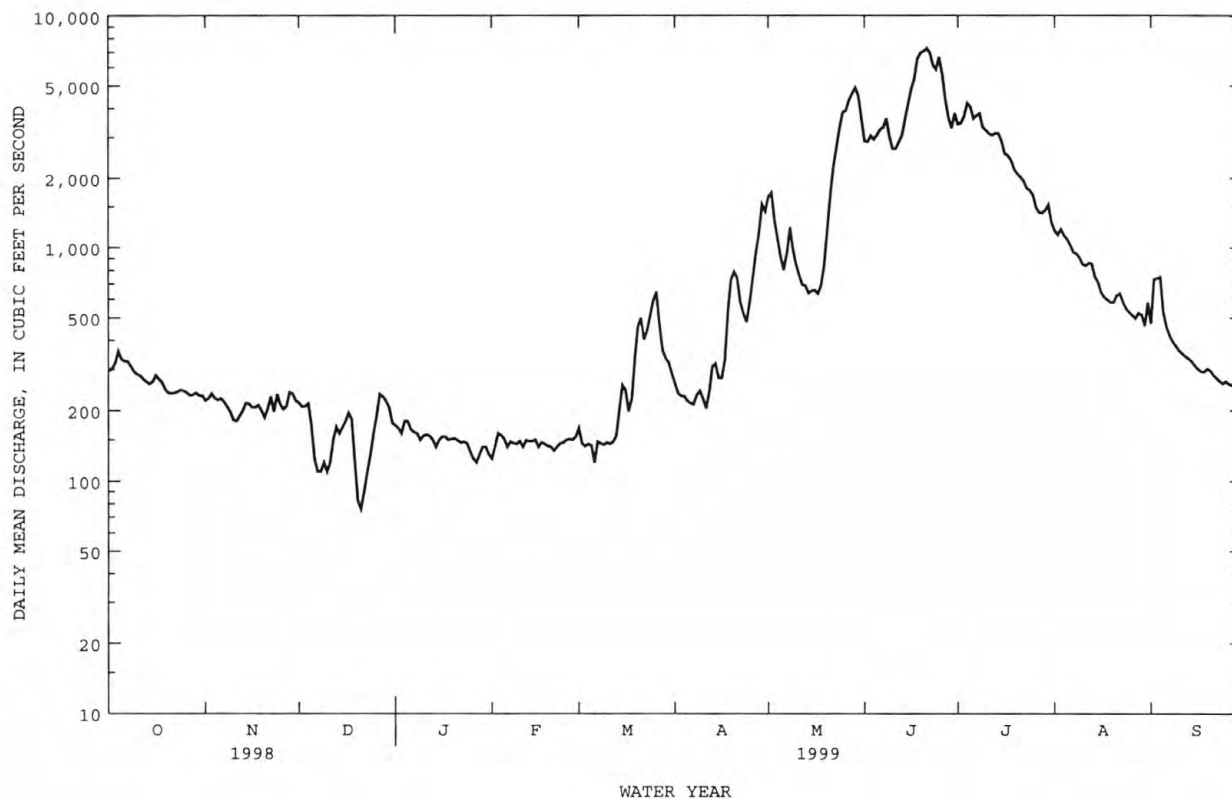
06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1990 - 1999
ANNUAL TOTAL	296084	358334	--
ANNUAL MEAN	811	982	896
HIGHEST ANNUAL MEAN	--	--	1324
LOWEST ANNUAL MEAN	--	--	551
HIGHEST DAILY MEAN	5040	7260	8940
LOWEST DAILY MEAN	76	76	74
ANNUAL SEVEN-DAY MINIMUM	110	110	81
INSTANTANEOUS PEAK FLOW	--	8630	11000 ^a
INSTANTANEOUS PEAK STAGE	--	7.96	9.54 ^b
ANNUAL RUNOFF (AC-FT)	587300	710800	649400
10 PERCENT EXCEEDS	2320	3270	2800
50 PERCENT EXCEEDS	272	283	280
90 PERCENT EXCEEDS	145	144	139

a Gage height, 8.63 ft, from floodmarks.

b Discharge, 9,460 ft³/s.

e Estimated.



LOCATION.--Lat 44°12'30", long 109°33'15", in NE¹/₄, NE¹/₄ sec.24, T.49 N., R.106 W., Park County, Hydrologic Unit 10080013, Shoshone National Forest, on left bridge abutment of U.S. Forest Service bridge, 0.4 mi downstream from Boulder Creek, 3.2 mi northeast of Valley, and 34 mi southwest of Cody.

PERIOD OF RECORD.--October 1956 to September 1958, October 1959 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above sea level, from topographic map. Prior to Nov. 22, 1961, at site 75 ft upstream at same datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 20	2245	*4,640	*8.22
July 4	2215	3,350	7.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	151	123	95	e86	86	132	370	1160	1660	946	305
2	204	156	120	90	e84	77	129	460	1150	1750	902	498
3	207	157	119	83	e80	77	123	346	1250	2180	892	535
4	211	148	118	79	81	76	123	292	1180	2530	862	640
5	205	146	93	93	85	79	120	256	1250	2200	810	424
6	210	144	58	94	80	72	121	235	1180	1870	730	352
7	207	141	42	94	85	78	119	303	1240	1980	692	322
8	199	143	42	91	81	79	120	421	1290	2000	647	298
9	192	129	42	89	82	80	125	321	1100	1720	617	280
10	188	126	41	92	85	83	120	268	1050	1680	575	266
11	184	123	42	93	e80	83	114	247	1090	1630	556	258
12	181	111	43	92	e82	83	118	229	1230	1620	525	245
13	179	115	43	91	e80	82	128	226	1380	1700	512	235
14	180	121	45	77	e76	92	137	220	1640	1690	479	227
15	185	121	50	91	74	105	130	234	1920	1560	433	220
16	191	123	59	94	73	107	128	233	2350	1450	390	214
17	192	126	67	89	75	102	131	222	2850	1360	372	209
18	188	127	69	89	75	107	161	260	3030	1340	360	205
19	175	121	59	89	76	135	223	323	3280	1310	350	219
20	171	116	e33	90	75	176	235	404	3470	1300	355	206
21	170	125	e31	88	71	197	210	653	3710	1310	360	199
22	170	127	e34	88	73	160	192	926	3370	1280	371	194
23	170	123	e41	86	73	160	178	1160	2710	1230	341	190
24	169	124	e49	74	77	180	168	1390	2750	1260	324	190
25	170	119	e58	71	80	205	187	1570	2870	1210	317	188
26	168	119	e70	67	82	222	199	1570	2430	1100	306	185
27	167	122	e82	75	75	179	237	1700	1850	1090	290	185
28	166	128	e93	72	82	154	278	1830	1650	1070	311	184
29	165	126	100	e78	---	147	371	1850	1650	1120	308	179
30	162	123	98	e78	---	145	322	1680	1740	1220	288	177
31	159	---	93	e76	---	139	---	1400	---	1040	392	---
TOTAL	5687	3881	2057	2648	2208	3747	5079	21599	58820	47460	15613	8029
MEAN	183	129	66.4	85.4	78.9	121	169	697	1961	1531	504	268
MAX	211	157	123	95	86	222	371	1850	3710	2530	946	640
MIN	159	111	31	67	71	72	114	220	1050	1040	288	177
AC-FT	11280	7700	4080	5250	4380	7430	10070	42840	116700	94140	30970	15930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

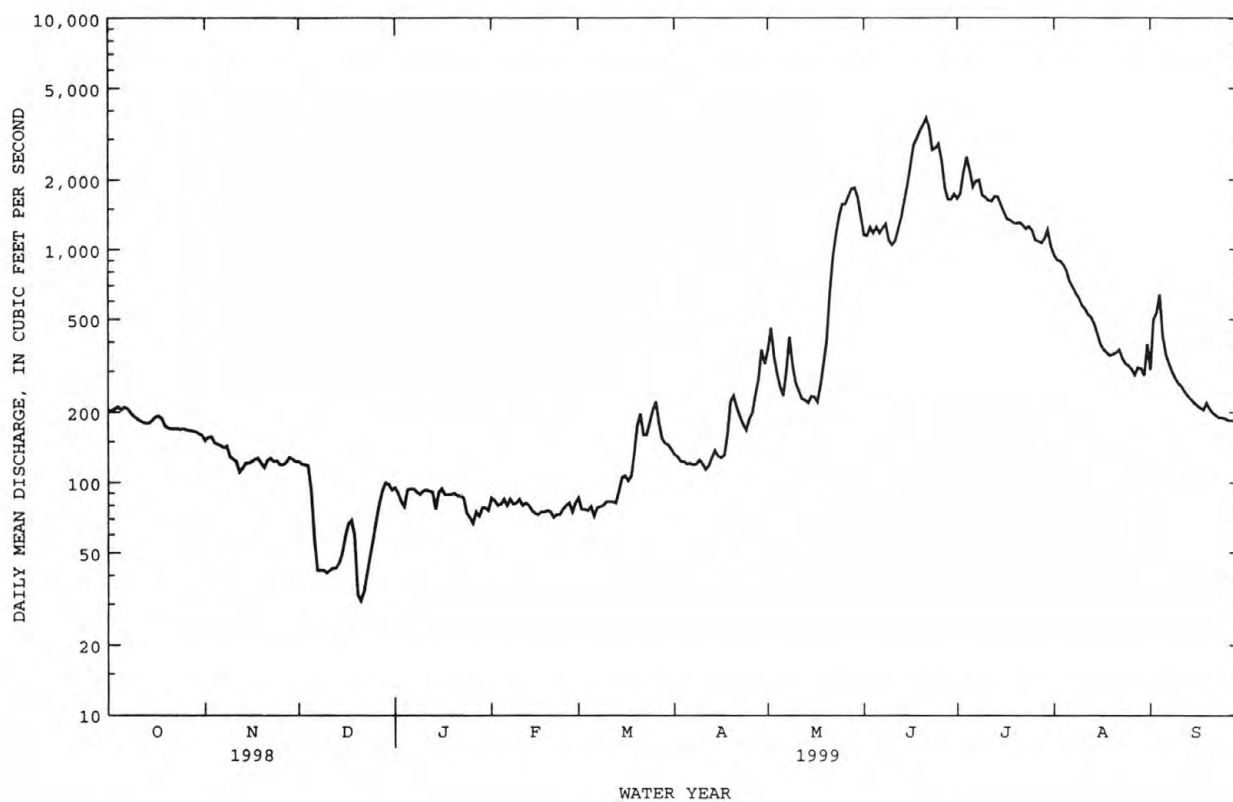
MEAN	157	109	83.7	77.2	73.2	80.1	163	741	1762	1150	387	216
MAX	244	147	109	100	93.8	128	341	1387	2920	2287	834	341
(WY)	1983	1985	1966	1997	1962	1986	1962	1958	1997	1975	1982	1982
MIN	92.5	70.6	56.2	55.2	54.8	59.8	69.6	252	856	308	156	110
(WY)	1989	1980	1989	1989	1989	1975	1970	1977	1994	1988	1988	1988

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	150212		176828		--	
ANNUAL MEAN	412		484		418	
HIGHEST ANNUAL MEAN	--		--		609	1997
LOWEST ANNUAL MEAN	--		--		221	1977
HIGHEST DAILY MEAN	2910	Jul 3	3710	Jun 21	6100	Jun 9 1981
LOWEST DAILY MEAN	31	Dec 21	31	Dec 21	31	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	42	Dec 7	42	Dec 7	40	Dec 18 1990
INSTANTANEOUS PEAK FLOW	--		4640	Jun 20	10000	Jun 9 1981
INSTANTANEOUS PEAK STAGE	--		8.22	Jun 20	9.24 ^a	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	297900		350700		302500	
10 PERCENT EXCEEDS	1140		1570		1260	
50 PERCENT EXCEEDS	170		179		140	
90 PERCENT EXCEEDS	83		76		68	

a From floodmarks.

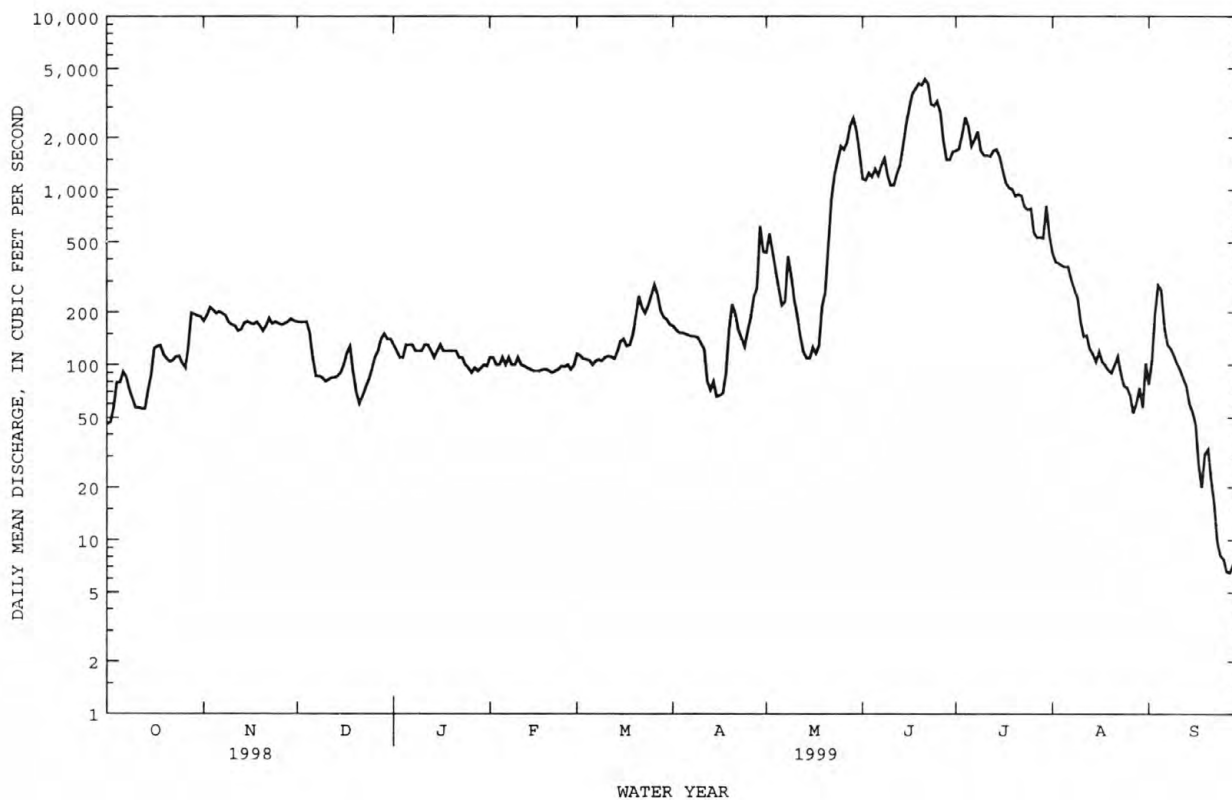
e Estimated.



06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1903 - 1999	
ANNUAL TOTAL	124778.2		165624.9		--	
ANNUAL MEAN	342		454		389	
HIGHEST ANNUAL MEAN	--		--		705	1907
LOWEST ANNUAL MEAN	--		--		181	1988
HIGHEST DAILY MEAN	3060	Jul 4	4350	Jun 21	7370	Jun 9 1981
LOWEST DAILY MEAN	3.7	Sep 11	5.9	Sep 30	.00	Several days, 1992-1993
ANNUAL SEVEN-DAY MINIMUM	11	Aug 31	7.0	Sep 24	.00	Sep 15 1992
INSTANTANEOUS PEAK FLOW	--		5190	Jun 21	9960	Jun 9 1981
INSTANTANEOUS PEAK STAGE	--		8.20	Jun 21	9.41 ^a	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	247500		328500		282100	
10 PERCENT EXCEEDS	885		1560		1290	
50 PERCENT EXCEEDS	150		130		127	
90 PERCENT EXCEEDS	54		72		34	

a Site and datum then in use.
e Estimated.



YELLOWSTONE RIVER BASIN

06281500 BUFFALO BILL RESERVOIR NEAR CODY, WY

LOCATION.--Lat 44°30'05", long 109°11'00", in NE¹/₄ sec.12, T.52 N., R.103 W., Park County, Hydrologic Unit 10080013, at dam on Shoshone River, 5.0 mi upstream from Trail Creek, and 6.0 mi southwest of Cody.

DRAINAGE AREA.--1,498 mi².

PERIOD OF RECORD.--May to July 1909, January 1910 to current year. Monthend contents only prior to October 1938, published in WSP 1309. Prior to October 1944, published as Shoshone Reservoir near Cody.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to July 8, 1959, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by masonry dam completed by Bureau of Reclamation in 1909. Height of dam was increased 25 ft, effective 1992, increasing capacity to 604,800 acre-ft, elevation 5,393.50 ft, from 424,000 acre-ft, elevation 5,360.00 ft. Crest of dam is at elevation 5,395.00 ft. Dead storage negligible. Figures given herein represent total contents. Water used for power generation and irrigation of lands east of Cody.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 647,000 acre-ft, July 30, 1996, elevation, 5,393.51 ft; minimum daily contents, 19,000 acre-ft, Jan 23-25, 1941, elevation, 5,225.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 631,000 acre-ft, July 24-28, 30, maximum elevation, 5,391.67 ft, July 25; minimum daily contents, 337,000 acre-ft, May 20, 21, minimum elevation, 5,350.27 ft, May 20.

Capacity table (elevation in feet,
and contents, in acre-feet)

5,345	304,000	5,375	502,000
5,355	364,000	5,385	577,000
5,365	430,000	5,395	659,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

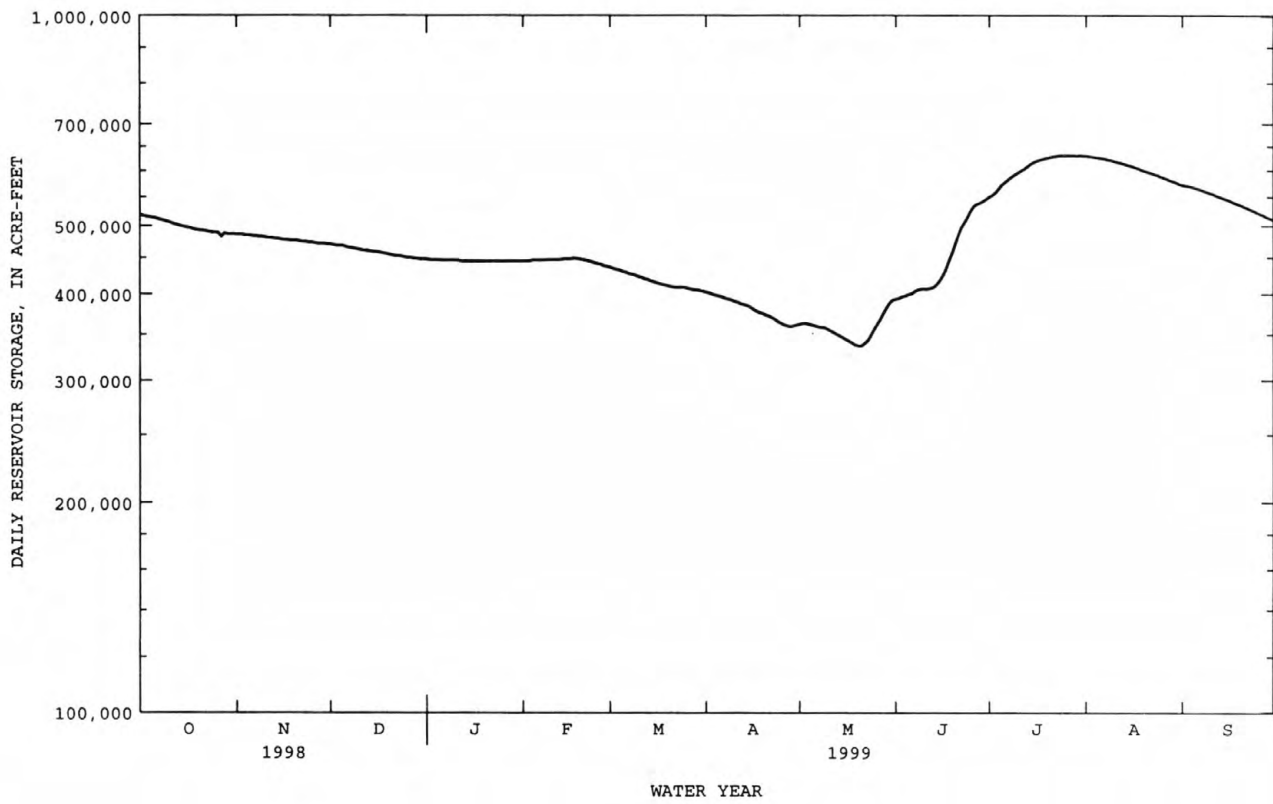
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519000	486000	471000	448000	445000	436000	402000	362000	393000	550000	630000	572000
2	517000	486000	470000	447000	445000	434000	401000	363000	394000	553000	629000	571000
3	516000	486000	469000	447000	445000	433000	399000	363000	396000	558000	628000	570000
4	515000	485000	469000	447000	446000	432000	398000	362000	397000	565000	627000	569000
5	514000	485000	469000	447000	446000	430000	397000	361000	399000	572000	626000	567000
6	513000	484000	467000	446000	446000	429000	396000	360000	400000	577000	625000	565000
7	511000	484000	466000	446000	446000	427000	394000	359000	403000	582000	624000	563000
8	510000	483000	465000	446000	446000	426000	393000	358000	405000	587000	622000	561000
9	508000	483000	464000	446000	447000	425000	392000	358000	406000	591000	621000	559000
10	507000	482000	463000	446000	447000	423000	390000	356000	406000	595000	619000	557000
11	505000	481000	462000	446000	447000	422000	389000	354000	406000	599000	617000	555000
12	503000	481000	461000	445000	447000	420000	387000	352000	407000	602000	616000	552000
13	502000	480000	461000	445000	447000	419000	386000	350000	408000	607000	614000	550000
14	500000	480000	460000	445000	448000	417000	385000	348000	412000	612000	612000	548000
15	499000	479000	459000	445000	448000	416000	383000	346000	417000	616000	610000	546000
16	498000	478000	459000	445000	448000	414000	380000	344000	424000	619000	608000	544000
17	497000	478000	458000	445000	449000	413000	378000	342000	433000	621000	606000	541000
18	495000	477000	457000	445000	449000	412000	376000	340000	445000	623000	604000	539000
19	494000	477000	456000	445000	448000	411000	375000	338000	457000	625000	601000	537000
20	493000	477000	455000	445000	447000	410000	373000	337000	471000	626000	599000	535000
21	493000	476000	454000	445000	446000	409000	372000	337000	484000	628000	597000	532000
22	492000	475000	453000	445000	445000	408000	370000	340000	497000	629000	595000	530000
23	491000	475000	453000	445000	444000	408000	368000	343000	505000	630000	593000	527000
24	490000	474000	452000	445000	442000	408000	365000	349000	514000	631000	591000	525000
25	490000	474000	451000	445000	441000	408000	363000	356000	524000	631000	588000	522000
26	489000	473000	450000	445000	440000	407000	361000	362000	533000	631000	586000	520000
27	483000	472000	450000	445000	438000	406000	360000	368000	537000	631000	584000	518000
28	488000	472000	449000	445000	437000	405000	359000	375000	539000	631000	581000	515000
29	487000	472000	449000	445000	---	405000	360000	382000	542000	630000	579000	513000
30	487000	471000	448000	445000	---	404000	361000	388000	546000	631000	577000	511000
31	487000	---	448000	445000	---	403000	---	392000	---	630000	574000	---
MAX	519000	486000	471000	448000	449000	436000	402000	392000	546000	631000	630000	572000
MIN	483000	471000	448000	445000	437000	403000	359000	337000	393000	550000	574000	511000
MAX	519000	486000	471000	448000	449000	436000	402000	392000	546000	631000	630000	572000
MIN	483000	471000	448000	445000	437000	403000	359000	337000	393000	550000	574000	511000
(#)	5,372.63	5,370.50	5,367.24	5,366.82	5,365.68	5,360.68	5,354.12	5,359.02	5,380.77	5,391.53	5,384.40	5,375.93
(*)	-33,000	-16,000	-23,000	-3,000	-8,000	-34,000	-42,000	+31,000	+154,000	+84,000	-56,000	-63,000

WTR YR 1999 MAX 631,000 MIN 337,000 (*) -9,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06281500 BUFFALO BILL RESERVOIR NEAR CODY, WY--Continued



YELLOWSTONE RIVER BASIN

06281700 SHOSHONE RIVER ABOVE DEMARIS SPRINGS, NEAR CODY, WY

LOCATION.--Lat 44°30'39", long 109°08'47", in NW¹/₄ SE¹/₄ sec.5, T.52 N., R.102 W, Park County, Hydrologic Unit 10080014, at bridge on State Highway 16, 1.9 mi downstream from Buffalo Bill Reservoir, and 3.8 mi west of Cody city limits.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL AS CACO3) (00900)
OCT 27...	1300	666	149	7.5	12.0	17.0	637	5.6	9.5	106	50
DEC 01...	1600	630	168	7.3	5.5	6.0	636	5.1	10.7	102	55
FEB 03...	0900	171	259	7.0	1.5	-2.0	630	4.1	11.8	102	110
26...	1240	870	188	7.6	1.5	3.0	632	2.0	11.7	101	66
APR 28...	0915	1300	209	7.6	5.5	13.5	631	9	10.8	104	78
JUL 08...	1535	1990	104	7.2	10.5	25.0	636	15	10.7	115	34
AUG 11...	0915	1150	102	8.0	11.5	22.0	620	10	12.4	140	35
SEP 13...	1710	1010	108	8.0	13.0	20.0	644	9.0	10.4	117	38

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
OCT 27...	14	3.5	11	.7	.8	60	17	.5	<.1	15
DEC 01...	16	3.7	11	.6	1.1	63	18	.6	.1	15
FEB 03...	33	7.2	15	.6	1.8	107	39	1.8	.2	16
26...	19	4.5	13	.7	1.1	73	26	.8	.1	17
APR 28...	22	5.4	15	.8	1.1	79	29	1.2	.1	15
JUL 08...	9.7	2.5	7.9	.6	.7	43	8.5	.4	<.1	15
AUG 11...	9.9	2.5	7.4	.5	.7	43	9.0	.5	<.1	16
SEP 13...	11	2.7	7.6	.5	1	46	9.1	.5	<.1	15

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 27...	99	.13	177	<.01	<.05	.04	<.1	E.04	<.05	.04
DEC 01...	104	.14	177	<.01	.06	<.02	<.1	.06	<.05	.04
FEB 03...	178	.24	82.2	<.01	.06	.03	.2	E.04	E.04	.03
26...	124	.17	292	<.01	<.05	<.02	E.09	E.04	<.05	.03
APR 28...	137	.19	481	<.01	<.05	<.02	.1	.06	<.05	.02
JUL 08...	70	.10	378	<.01	.10	<.02	--	E.04	E.04	.04
AUG 11...	72	.10	223	<.01	<.05	<.02	E.08	.10	E.03	.03
SEP 13...	75	.10	205	<.01	.08	<.02	E.06	.05	E.04	.04

E Estimated.

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°31'00", long 109°05'50", in lot 71, NE¹/₄ sec.3, T.52 N., R.102 W., Park County, Hydrologic Unit 10080014, on left bank 0.5 mi downstream from Trail Creek, 1.0 mi west of Cody city limits, and 5.5 mi downstream from Buffalo Bill Reservoir.

DRAINAGE AREA.--1,538 mi². Area at site prior to Oct. 1, 1949, 1,502 mi².

PERIOD OF RECORD.--January 1921 to current year. Prior to October 1944, published as "below Shoshone Reservoir".

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above sea level, from topographic map. Prior to Oct. 1, 1949, at site 2.5 mi upstream at different datum.

REMARKS.--Records good. Flow completely regulated by Buffalo Bill Reservoir (station 06281500). Diversions upstream from station for irrigation of about 56,100 acres, of which about 37,900 acres are downstream from station. Diversion, 2.1 mi upstream, to Heart Mountain Canal began in 1943. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since construction of Buffalo Bill Reservoir in 1909, 18,700 ft³/s, June 15, 1918, by computation of flow over Corbett Dam, 10 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	691	697	695	596	251	939	1050	1360	2860	2560	1240	1140
2	666	706	700	498	233	944	1060	1370	2840	2570	1250	1130
3	662	700	702	447	231	943	1060	1360	2850	2570	1280	1140
4	662	699	710	446	231	935	1070	1370	2840	2570	1300	1150
5	664	698	689	435	230	939	1060	1380	2820	2570	1310	1140
6	739	703	690	443	230	959	1070	1370	2830	2580	1290	1130
7	802	698	689	450	228	959	1080	1380	2960	2600	1260	1140
8	802	696	714	451	232	957	1080	1380	3040	2590	1260	1170
9	800	698	713	452	231	957	1080	1370	3050	2280	1230	1110
10	813	702	713	450	227	958	1080	1370	3060	2070	1190	1090
11	812	703	712	450	217	980	1080	1370	3080	2070	1200	1100
12	808	704	712	452	221	1060	1090	1380	3050	1780	1200	1080
13	807	705	709	450	223	1060	1080	1380	3050	1560	1200	1080
14	807	703	711	442	222	1060	1080	1380	3060	1580	1200	1060
15	805	699	718	339	224	1060	1210	1390	3100	1560	1210	1050
16	804	698	719	318	221	1060	1360	1400	3110	1560	1230	1050
17	812	700	716	321	223	1060	1360	1410	3120	1560	1150	1050
18	806	691	703	320	271	1060	1360	1400	3100	1570	1140	1050
19	807	695	647	319	511	1060	1360	1400	3080	1460	1140	1050
20	793	696	641	318	775	1060	1350	1400	3070	1360	1130	1050
21	773	704	642	326	773	1060	1340	1400	3380	1360	1130	1050
22	771	707	634	322	812	1060	1350	1400	3610	1350	1130	1050
23	759	705	635	325	921	768	1350	1420	3630	1340	1120	1050
24	758	700	634	325	927	831	1360	1660	3660	1330	1170	1050
25	758	704	633	325	933	1060	1350	1880	3670	1330	1160	1040
26	756	697	632	324	939	1050	1350	2120	3610	1330	1140	1040
27	757	694	632	318	939	1060	1350	2620	3620	1340	1140	1020
28	760	700	631	320	942	1060	1330	2880	3290	1340	1140	969
29	733	698	640	326	---	731	1360	2890	3070	1290	1140	975
30	713	700	639	324	---	1050	1360	2900	2750	1250	1140	873
31	712	---	642	318	---	1040	---	2900	---	1230	1140	---
TOTAL	23612	21000	20997	11950	12618	30780	36520	51690	94260	55510	36960	32077
MEAN	762	700	677	385	451	993	1217	1667	3142	1791	1192	1069
MAX	813	707	719	596	942	1060	1360	2900	3670	2600	1310	1170
MIN	662	691	631	318	217	731	1050	1360	2750	1230	1120	873
AC-FT	46830	41650	41650	23700	25030	61050	72440	102500	187000	110100	73310	63620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	MEAN	683	529	529	497	495	527	856	1463	2502	2619	1312	941
MAX	1198	966	944	894	904	1638	3013	3162	6440	6556	3397	2113	
(WY)	1953	1952	1951	1952	1997	1997	1997	1997	1943	1943	1958	1958	
MIN	187	128	111	115	65.4	72.5	113	827	807	1017	685	582	
(WY)	1989	1989	1989	1989	1959	1959	1959	1995	1992	1993	1977	1988	

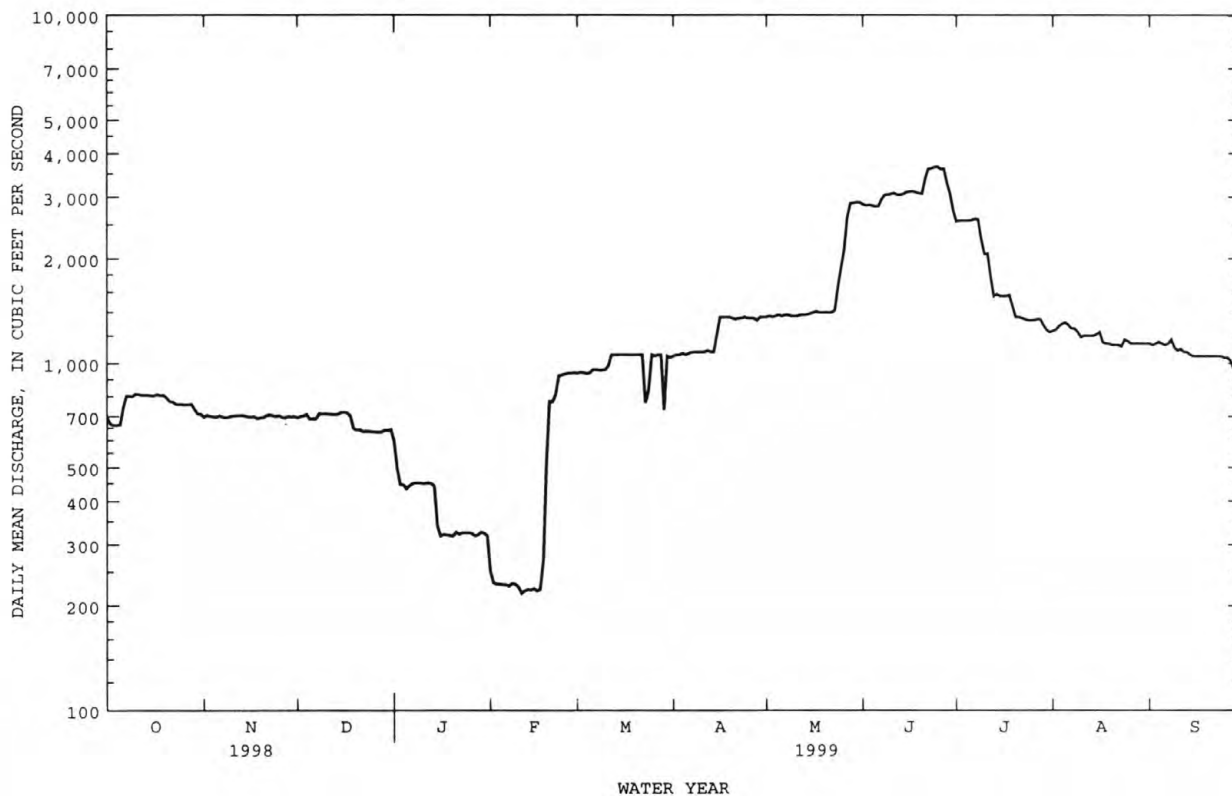
YELLOWSTONE RIVER BASIN

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999*	
ANNUAL TOTAL	380631		427974		--	
ANNUAL MEAN	1043		1173		1082 ^a	
HIGHEST ANNUAL MEAN	--		--		1764	1943
LOWEST ANNUAL MEAN	--		--		556	1988
HIGHEST DAILY MEAN	7920	Jul 5	3670	Jun 25	15100	Jun 9 1981
LOWEST DAILY MEAN	497	Jan 16	217	Feb 11	59	Nov 19 1933#
ANNUAL SEVEN-DAY MINIMUM	502	Jan 10	222	Feb 11	64	Jan 21 1959
INSTANTANEOUS PEAK FLOW	--		3790	Jun 21	17300	Jun 9 1981#
INSTANTANEOUS PEAK STAGE	--		6.87	Jun 21	11.57	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	755000		848900		784200	
10 PERCENT EXCEEDS	1370		2590		1950	
50 PERCENT EXCEEDS	758		1050		841	
90 PERCENT EXCEEDS	510		439		306	

* Period following Heart Mountain Diversion. See REMARKS.

For period of record through 1999.

a Average discharge (water years 1922-1942) prior to Heart Mountain Diversion, 1,256 ft³/s.

06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW¹/₄ SW¹/₄ SW¹/₄ sec.7, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, 100 ft downstream from bridge on county road, 1.0 mi upstream from mouth, 4.0 mi southeast of Garland, and 5.0 mi southwest of Byron.

DRAINAGE AREA.--80.5 mi².

PERIOD OF RECORD.--Water years 1951-53, 1958-61, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to September 1983.

WATER TEMPERATURES: July 1969 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT							
26...	1640	63	1110	8.7	12.0	16.5	662
FEB							
26...	0715	20	1570	8.1	2.5	1.0	656
MAR							
15...	1150	19	1530	8.5	7.5	22.5	656
MAY							
25...	0705	368	560	7.8	11.5	13.0	662
AUG							
11...	1040	373	570	8.0	15.5	23.5	--
17...	2000	327	601	8.0	17.5	26.0	667
		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT							
26...	9.9	106	87	.01	4.7	.05	.02
FEB							
26...	10.8	93	120	--	--	--	--
MAR							
15...	10.8	105	--	.04	4.2	.02	.01
MAY							
25...	8.9	94	340	.02	1.7	.03	.04
AUG							
11...	11.3	--	--	.01	3.2	<.02	.07
17...	10.9	131	340	--	--	--	--

YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44°50'19", long 108°26'04", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on left bank 20 ft downstream from bridge on County Road 9 and 1.5 mi west of Lovell.

DRAINAGE AREA.--2,350 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above sea level, from topographic map. Prior to Oct. 1, 1976, at site 500 ft downstream, at datum 2.00 ft higher. Oct. 1, 1976 to Sept. 30, 1980, at site 500 ft downstream, at datum 1.00 ft higher. Oct. 1, 1981 to Nov. 13, 1986, at site 500 ft downstream at same datum.

REMARKS.--Records fair except those for Oct. 1-21, Feb. 23 to Mar. 11, May 31 to June 3, and those for estimated daily discharges, which are poor. Flow regulated by Buffalo Bill Reservoir (station 06281500). Natural flow of stream affected by storage reservoirs, power development, diversions upstream from station for irrigation of about 143,000 acres, of which about 8,000 acres are downstream from station, and return flow from irrigated areas. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	674	883	1010	875	422	1180	1270	937	2630	2390	632	709
2	696	863	996	755	e360	1180	1290	868	2590	2420	731	788
3	725	940	996	660	371	1190	1290	861	2700	2440	654	938
4	733	1020	1020	e650	366	1200	1280	971	2720	2500	717	1170
5	748	942	999	646	368	1180	1280	995	2750	2490	791	1200
6	685	1030	956	629	362	1180	1220	965	2840	2350	902	1160
7	790	1100	968	642	368	1280	1200	929	3200	2230	902	1060
8	823	1090	972	639	373	1290	1190	937	3390	2090	981	1040
9	796	1080	994	642	365	1190	1130	1000	3260	1860	985	1010
10	812	1070	989	643	367	1180	1090	1020	3220	1330	801	846
11	838	1060	995	644	e335	1160	1100	1020	3160	1330	700	868
12	835	1060	995	648	e330	1260	916	981	3140	1280	785	898
13	831	1070	986	645	e340	1300	741	974	3160	672	832	953
14	801	1090	989	634	344	1320	812	1010	3110	649	930	856
15	797	1090	992	619	347	1320	739	1000	3090	670	954	841
16	906	1060	1000	505	339	1290	864	1060	3070	640	946	838
17	981	1050	1000	492	338	1280	803	1100	3180	708	832	869
18	946	1050	985	494	337	1290	584	1070	3270	807	687	910
19	959	1030	892	494	513	1290	556	1090	3240	796	624	977
20	809	1020	811	495	970	1290	433	1030	3270	586	626	1010
21	798	1030	817	493	1200	1290	493	967	3340	543	656	964
22	841	1040	834	497	1220	1290	397	919	3590	464	695	947
23	965	1040	e840	494	1380	1180	487	957	3560	451	686	948
24	1100	1030	e845	e485	1200	862	465	980	3590	e480	635	988
25	996	1010	e850	e480	1180	1210	495	1430	3560	e520	623	1000
26	979	1010	e850	e480	1180	1290	523	1370	3500	e560	573	1030
27	984	1010	e850	e475	1190	1260	511	1920	3540	547	574	1070
28	999	1000	e855	e470	1170	1290	451	2450	3460	555	620	969
29	931	1020	e855	e455	---	1270	1650	e2500	2920	537	753	992
30	838	1010	886	456	---	916	1430	e2600	2860	546	780	1010
31	895	---	870	443	---	1270	---	2670	---	507	721	---
TOTAL	26511	30798	28897	17679	17635	37978	26690	38581	94910	35948	23328	28859
MEAN	855	1027	932	570	630	1225	890	1245	3164	1160	753	962
MAX	1100	1100	1020	875	1380	1320	1650	2670	3590	2500	985	1200
MIN	674	863	811	443	330	862	397	861	2590	451	573	709
AC-FT	52580	61090	57320	35070	34980	75330	52940	76530	188300	71300	46270	57240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1999, BY WATER YEAR (WY)

	775	724	658	588	614	690	839	914	1973	1869	759	787
MEAN	775	724	658	588	614	690	839	914	1973	1869	759	787
MAX	1251	1146	1168	1065	1139	1951	3353	2925	4935	4686	1305	1354
(WY)	1972	1969	1969	1973	1973	1997	1997	1996	1981	1982	1982	1991
MIN	369	297	306	226	228	243	248	193	203	149	207	245
(WY)	1989	1986	1995	1991	1989	1995	1981	1977	1977	1977	1977	1977

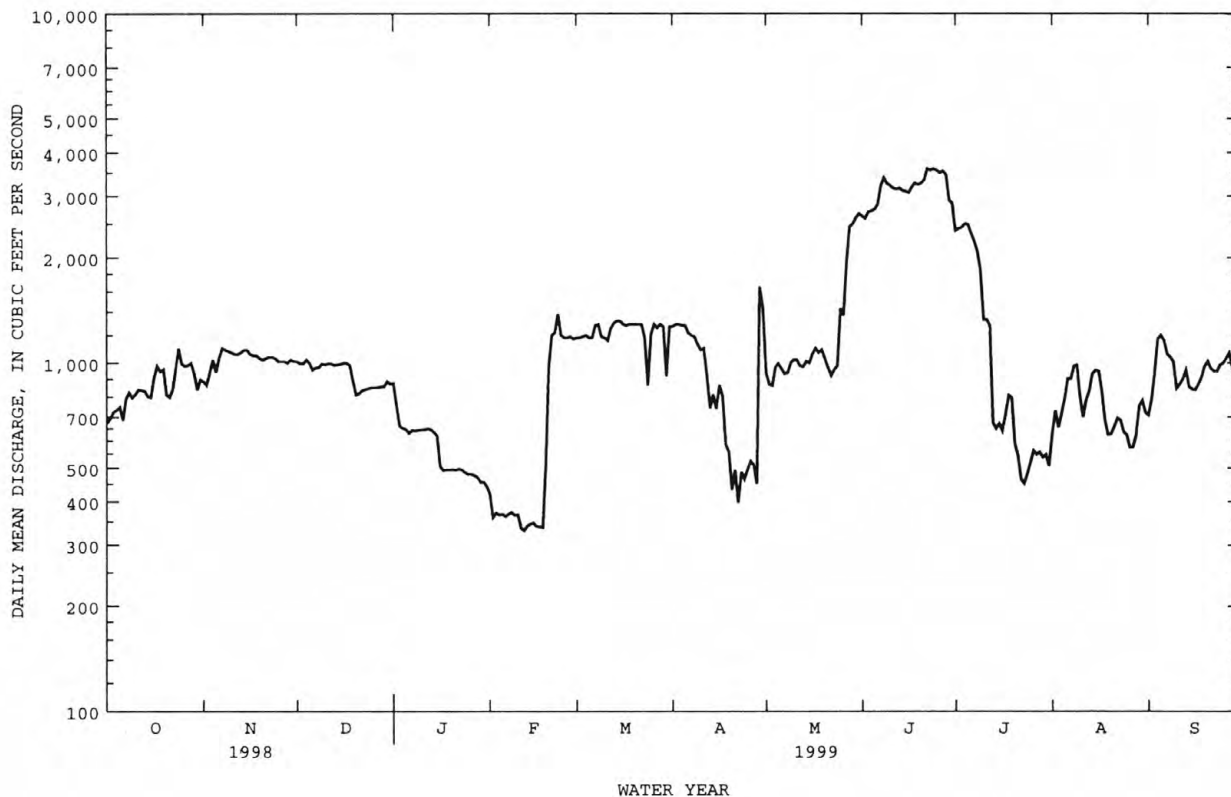
06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1967 - 1999	
ANNUAL TOTAL	356465		407814		--	
ANNUAL MEAN	977		1117		933	
HIGHEST ANNUAL MEAN	--		--		1659	
LOWEST ANNUAL MEAN	--		--		359	
HIGHEST DAILY MEAN	7750	Jul 5	3590	Jun 22	15200	Jun 10 1981
LOWEST DAILY MEAN	260	May 7	330	Feb 12	27	May 31 1977
ANNUAL SEVEN-DAY MINIMUM	329	May 3	339	Feb 11	48	May 30 1977
INSTANTANEOUS PEAK FLOW	--		4240	Jun 17	16400 ^a	Jun 10 1981
INSTANTANEOUS PEAK STAGE	--		8.31	Jun 17	10.86 ^b	Feb 5 1996
ANNUAL RUNOFF (AC-FT)	707000		808900		676100	
10 PERCENT EXCEEDS	1130		2440		1590	
50 PERCENT EXCEEDS	812		965		681	
90 PERCENT EXCEEDS	623		493		337	

a Gage height, 9.16 ft, site then in use, at present datum.

b Backwater from ice.

e Estimated.



YELLOWSTONE RIVER BASIN

06286400 BIGHORN LAKE NEAR ST. XAVIER, MT

LOCATION.--Lat 45°18'27", long 107°57'26", in SW¹/₄SE¹/₄ sec.18, T.6 S., R.30 E., Big Horn County, Hydrologic Unit 10080010, in block 13 of Yellowtail Dam on Bighorn River, 1.3 mi upstream from Grapevine Creek, 15.5 mi southwest of St. Xavier, and at river mile 86.6.

DRAINAGE AREA.--19,626 mi².

PERIOD OF RECORD.--November 1965 to current year (monthend contents only). Prior to October 1969, published as "Yellowtail Reservoir." Records of daily elevations and contents on file in Montana district office.

GAGE.--Water-stage recorder in powerhouse control room. Datum of gage is referenced to sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by thin concrete-arch dam; construction began in 1961; completed in 1967. Storage began Nov. 3, 1965. Usable capacity, 1,312,000 acre-ft, between elevation 3,296.50 ft, river outlet invert, and 3,657.00 ft, top of flood control. Elevation of spillway crest, 3,593.00 ft. Normal maximum operating level, 1,097,000 acre-ft, elevation, 3,640.00 ft. Minimum operating level, 483,400 acre-ft, elevation, 3,547.00 ft. Dead storage, 16,010 acre-ft, below elevation 3,296.50 ft. Figures given herein represent usable contents. Water is used for power production, flood control, irrigation, and recreation. Records provided by the Montana District.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,346,000 acre-ft, July 6, 1967, elevation, 3,656.43 ft; minimum since first filling, 641,900 acre-ft, Apr. 14, 1989, elevation 3,583.30 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,185,000 acre-ft, July 14, elevation, 3,649.26 ft; minimum, 757,200 acre-ft, Apr. 23, elevation, 3,605.06 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
Sept. 30	3,638.18	1,032,000	--
Oct. 31	3,636.32	1,010,000	-22,000
Nov. 30	3,635.20	997,200	-12,800
Dec. 31	3,630.06	944,100	-53,100
CAL YR 1998			-20,700
Jan. 31	3,620.84	864,100	-80,000
Feb. 28	3,612.01	800,200	-63,900
Mar. 31	3,609.27	782,600	-17,600
Apr. 30	3,607.43	771,300	-11,300
May 31	3,626.53	911,500	+140,200
June 30	3,647.66	1,161,000	+249,500
July 31	3,642.87	1,092,000	-69,000
Aug. 31	3,638.31	1,033,000	-59,000
Sept. 30	3,638.64	1,037,000	+4,000
WTR YR 1999			+5,000

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05", in NW¹/₄NW¹/₄NE¹/₄ sec.16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft downstream from Yellowtail afterbay dam, 1,500 ft downstream from Lime Kiln Creek, 14 mi southwest of St. Xavier, and at river mile 83.9.

DRAINAGE AREA.--19,667 mi². Area at site used prior to Apr. 16, 1963, 19,626 mi².

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,158.38 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Apr. 16, 1963, and June 13, 1964, to Mar. 31, 1965, water-stage recorder at site 1.2 mi upstream at different datum. Apr. 1, 1965, to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present datum.

REMARKS.--Records fair. Figures of discharge given herein are sum of river flow and flow of Bighorn Canal. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake (see station 06286400) since Nov. 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4720	3560	2920	3420	3550	4040	5590	2750	8020	7460	5980	4190
2	4700	3560	2960	3450	3580	4030	5630	3190	8230	7480	5480	4140
3	4680	3580	2960	3430	3580	4020	5600	3700	8730	7480	5040	4120
4	4640	3630	2960	3440	3570	3960	5610	4340	10200	7480	5040	4140
5	4640	3650	3010	3410	3540	3600	5620	5030	10200	7490	5020	4160
6	4620	3640	2990	3430	3600	3560	5500	5800	10200	7500	4980	4140
7	4660	3580	3010	3450	3580	3550	5020	6300	10300	7550	4920	4110
8	4700	3430	3020	3440	3580	3540	4450	6690	10200	7510	4920	4120
9	4750	3420	3040	3450	3570	3550	3770	6850	10200	7480	4880	4100
10	4750	3460	3060	3430	3580	3550	3400	7360	10300	7460	4860	4110
11	4780	3450	3160	3440	3580	3540	3360	7760	10300	7510	4830	4110
12	4810	3470	3160	3450	3580	3700	3350	7790	10300	7500	4860	4100
13	4620	3490	3390	3450	3580	4070	3180	7770	10200	7480	4980	4100
14	3850	3510	3390	3620	3610	4060	2810	7820	10300	7480	4920	4120
15	3750	3530	3410	4080	3620	4080	2750	7830	10300	7480	4870	4120
16	3410	3370	3400	4090	3600	4080	2750	7800	10300	7470	4780	4100
17	3440	2940	3400	4090	3600	4070	2730	7780	10300	7470	4710	4090
18	3080	2760	3400	4070	3580	4070	2680	7810	10300	7490	4610	4070
19	2620	2750	3400	4070	3600	4080	2670	7800	10300	7480	4530	4080
20	2010	2790	3390	4070	3610	4230	2650	7850	10300	7450	4460	4070
21	1780	2780	3400	4070	3580	4610	2610	7850	10300	7410	4390	3930
22	4030	2800	3420	4080	3580	4600	2570	7870	10300	7380	4300	2730
23	3920	2830	3420	4020	3730	4590	2580	7850	10000	7360	4160	2760
24	3790	2830	3420	3780	4010	4710	2580	7840	8890	7340	4020	2890
25	3480	2840	3420	3570	4030	5230	2610	7770	7850	7300	4110	3780
26	3280	2860	3420	3560	4010	5590	2610	7820	7700	7250	4220	3870
27	3470	2880	3390	3560	4030	5600	2620	7830	7760	7210	4220	3760
28	3460	2900	3400	3560	4050	5600	2640	7780	7640	7190	4230	3000
29	3470	2920	3430	3560	---	5610	2650	7800	7530	7130	4210	3910
30	3500	2910	3430	3550	---	5620	2650	7800	7540	6970	4180	3970
31	3540	---	3410	3570	---	5630	---	7820	---	6450	4160	---
TOTAL	120950	96120	101190	113660	102710	134770	105240	216050	284990	228690	144870	116890
MEAN	3902	3204	3264	3666	3668	4347	3508	6969	9500	7377	4673	3896
MAX	4810	3650	3430	4090	4050	5630	5630	7870	10300	7550	5980	4190
MIN	1780	2750	2920	3410	3540	3540	2570	2750	7530	6450	4020	2730
AC-FT	239900	190700	200700	225400	203700	267300	208700	428500	565300	453600	287300	231900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1999, BY WATER YEAR (WY)

MEAN	2978	2942	2751	2613	2681	2948	2935	3918	7289	5676	2921	2771
MAX	5142	5151	4999	5267	4384	4809	6675	8744	17900	18890	6784	4544
(WY)	1972	1983	1968	1968	1976	1976	1972	1947	1935	1967	1997	1973
MIN	1224	856	1095	1090	888	327	678	900	1078	1144	1260	1074
(WY)	1978	1966	1935	1935	1936	1966	1966	1966	1966	1960	1966	1966

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1935 - 1999
ANNUAL TOTAL	1429280	1766130	--
ANNUAL MEAN	3916	4839	3537
HIGHEST ANNUAL MEAN	--	--	5059
LOWEST ANNUAL MEAN	--	--	1565
HIGHEST DAILY MEAN	7100	10300	37400
LOWEST DAILY MEAN	1780	1780	112
ANNUAL SEVEN-DAY MINIMUM	2690	2600	195
INSTANTANEOUS PEAK FLOW	--	10400	37400
ANNUAL RUNOFF (AC-FT)	2835000	3503000	2562000
10 PERCENT EXCEEDS	5060	7800	5910
50 PERCENT EXCEEDS	3680	4070	2900
90 PERCENT EXCEEDS	2840	2920	1590

YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

SUMMARY STATISTICS

ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN
ANNUAL SEVEN-DAY MINIMUM
INSTANTANEOUS PEAK FLOW
ANNUAL RUNOFF (AC-FT)
10 PERCENT EXCEEDS
50 PERCENT EXCEEDS
90 PERCENT EXCEEDS

WATER YEARS 1935 - 1961*

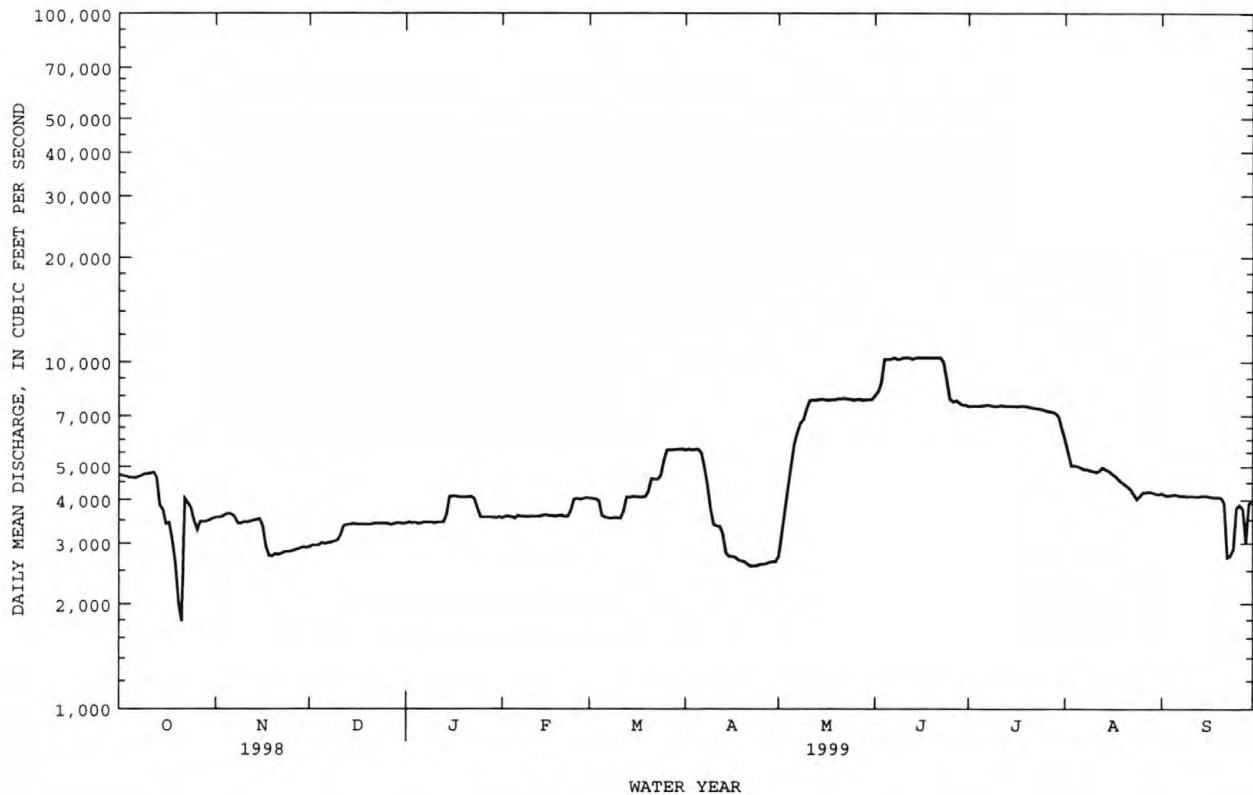
3426
5059
1706
37400 Jun 16 1935
300 Dec 20 1951
656 Dec 25 1934
37400 Jun 16 1935
2482000
6440
2450
1370

WATER YEARS 1967 - 1999**

3617
4839
1868
24800 Jul 6 1967
112 Apr 2 1967
518 Mar 25 1970
25300 Jul 5 1967
2621000
5680
3250
1920

* Prior to construction of Yellowtail Dam.

** After completion of Yellowtail Dam.



06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°36'52", in SW¹/₄NW¹/₄ sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft downstream from county bridge, 0.5 mi north of Wyoming-Montana State line, 1 mi downstream from West Fork, 13 mi southwest of Wyola, and at river mile 115.2.

DRAINAGE AREA.--193 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State Line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft above sea level, from topographic map.

REMARKS.--Records good. Diversions for irrigation of 163 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	89	83	74	66	67	70	332	738	339	149	105
2	94	97	83	72	65	65	70	367	789	315	145	106
3	99	95	83	70	66	65	69	347	928	303	143	109
4	102	91	84	72	66	65	68	309	868	296	143	117
5	93	83	78	72	66	65	67	263	1020	280	145	107
6	95	85	69	71	65	61	67	238	1150	267	144	103
7	96	87	66	71	66	67	67	231	1150	257	140	102
8	99	85	80	71	66	65	70	245	1120	252	136	100
9	97	87	82	70	65	64	73	246	972	245	134	100
10	96	83	76	70	69	65	72	237	787	236	130	100
11	96	82	79	69	65	64	71	219	703	230	129	102
12	94	83	79	69	66	63	72	215	650	220	133	100
13	94	88	79	69	68	63	74	222	608	216	129	99
14	94	90	80	68	66	64	79	222	605	213	128	98
15	94	89	79	69	67	65	74	225	575	207	124	98
16	102	87	78	69	66	66	74	219	562	201	121	96
17	96	87	78	68	66	64	76	214	587	193	119	95
18	94	87	72	67	66	64	86	225	568	187	117	96
19	92	85	38	67	66	65	98	254	556	181	116	98
20	89	83	29	67	65	66	118	288	529	178	115	97
21	90	87	32	67	65	70	123	382	514	176	114	96
22	93	88	45	67	66	72	116	483	502	172	114	95
23	96	86	49	66	64	73	109	530	473	169	113	94
24	94	87	62	54	65	73	108	614	455	165	109	94
25	94	85	85	61	66	77	117	800	432	165	107	97
26	93	85	88	69	66	81	132	992	406	162	105	99
27	92	85	81	72	65	79	153	1090	385	158	105	98
28	105	85	83	68	65	72	177	1110	365	152	107	98
29	115	87	81	67	---	71	222	1160	351	151	108	95
30	97	84	78	66	---	72	260	1030	357	152	103	96
31	94	---	75	66	---	73	---	793	---	150	106	---
TOTAL	2973	2602	2234	2118	1843	2106	3032	14102	19705	6588	3831	2990
MEAN	95.9	86.7	72.1	68.3	65.8	67.9	101	455	657	213	124	99.7
MAX	115	97	88	74	69	81	260	1160	1150	339	149	117
MIN	89	82	29	54	64	61	67	214	351	150	103	94
AC-FT	5900	5160	4430	4200	3660	4180	6010	27970	39080	13070	7600	5930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1999, BY WATER YEAR (WY)

	MEAN	87.4	76.2	68.2	63.0	61.8	61.9	85.8	327	532	225	125	99.2
MAX	120	104	91.2	84.9	88.0	86.4	172	533	1125	689	228	151	151
(WY)	1976	1942	1976	1946	1946	1946	1946	1977	1975	1975	1975	1975	1975
MIN	64.0	55.2	48.3	43.6	47.8	48.6	50.7	127	169	101	69.8	67.9	67.9
(WY)	1961	1986	1990	1963	1990	1961	1961	1953	1985	1961	1961	1961	1961

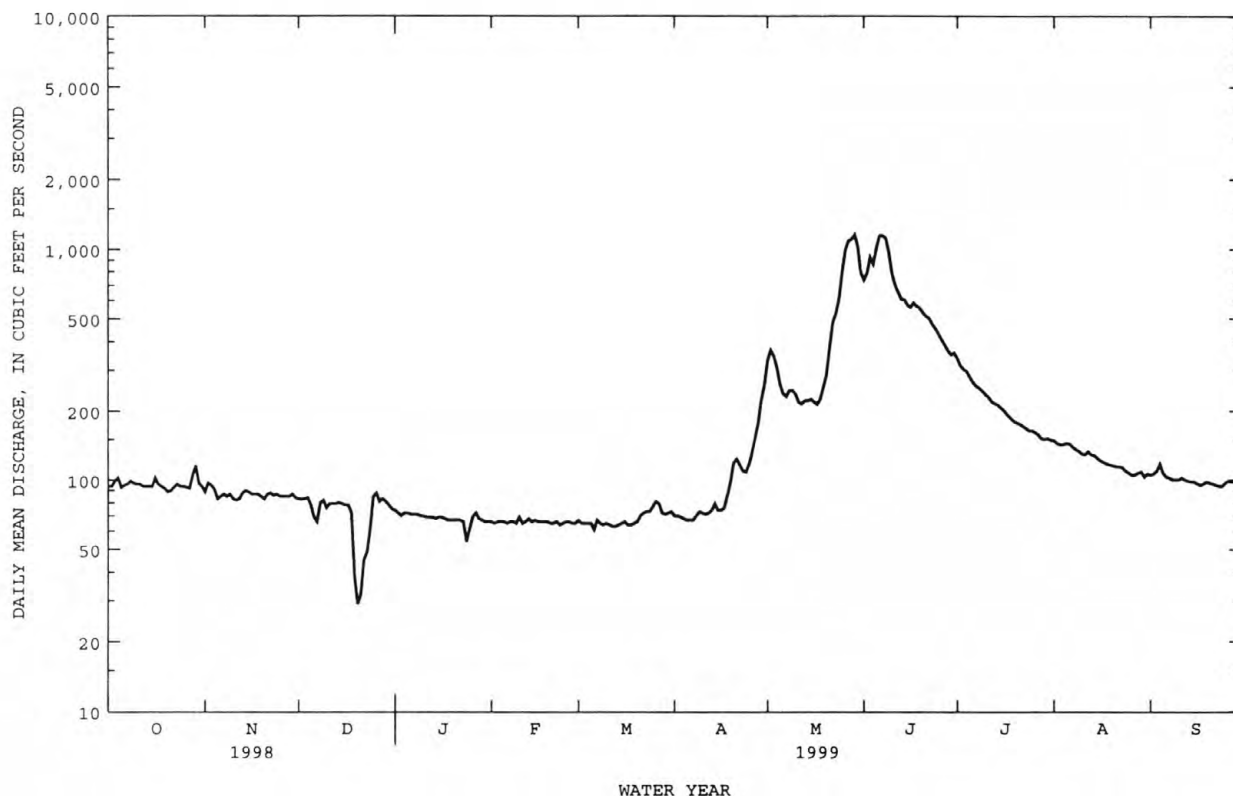
YELLOWSTONE RIVER BASIN

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1940 - 1999	
ANNUAL TOTAL	54451		64124		--	
ANNUAL MEAN	149		176		151	
HIGHEST ANNUAL MEAN	--		--		253	1975
LOWEST ANNUAL MEAN	--		--		90.3	1961
HIGHEST DAILY MEAN	536	May 27	1160	May 29	2340	Jun 4 1944
LOWEST DAILY MEAN	29	Dec 20	29	Dec 20	18	Feb 2 1989
ANNUAL SEVEN-DAY MINIMUM	47	Dec 18	47	Dec 18	27	Dec 18 1983
INSTANTANEOUS PEAK FLOW	--		1500	Jun 5	2730 ^a	Jun 3 1944
INSTANTANEOUS PEAK STAGE	--		3.88	Jun 5	5.93 ^b	Jun 9 1944
ANNUAL RUNOFF (AC-FT)	108000		127200		109200	
10 PERCENT EXCEEDS	369		393		344	
50 PERCENT EXCEEDS	94		94		84	
90 PERCENT EXCEEDS	66		66		57	

a Gage height, 4.97 ft, from rating curve extended above 1,400 ft³/s.

b Log jam.



06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1993 to current year.

REMARKS.--Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)			
JAN 1999											
12...	0830	69	5.0	3.0	K2	K2	8.8	350			
FEB											
23...	0840	64	5.0	2.5	46	37	8.8	312			
MAR											
16...	0840	66	13.0	4.0	K1	140	8.8	319			
MAY											
18...	0915	216	18.0	6.5	K9	32	8.2	318			
JUN											
29...	0830	355	20.0	7.5	K3	K6	8.7	302			
AUG											
31...	0840	110	24.0	11.0	K12	29	8.7	328			
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)			
JAN 1999											
12...	.01	.25	<.02	<.01	<.05	10	1.9	77			
FEB											
23...	.01	.19	<.02	<.01	<.05	29	5.0	79			
MAR											
16...	<.01	.13	<.02	<.01	<.05	20	3.6	44			
MAY											
18...	<.01	.06	.02	.01	<.05	23	13	90			
JUN											
29...	.01	.10	.02	.02	<.05	26	25	81			
AUG											
31...	<.01	.07	<.02	<.01	<.05	20	5.9	44			
DATE	TIME	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
JAN 1999											
12...	0830	180	45	17	.6	.04	1.2	184	.6	.1	5.9
JUN											
29...	0830	150	41	12	.7	.04	1.1	169	.4	.1	4.9
DATE		SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFILTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
JAN 1999											
12...	9.0	<1	<1	<1	<1	20	<1	<1	<1	<1	<10
JUN											
29...	5.5	<1	<1	<1	1	64	<1	<1	<1	<1	<40

K Colony count outside the acceptable range (non-ideal colony count).

YELLOWSTONE RIVER BASIN

06289600 WEST PASS CREEK NEAR PARKMAN, WY

LOCATION.--Lat 44°59'16", long 107°28'56", in NE¹/₄ NE¹/₄ SE¹/₄ sec.21, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank, anchored to concrete headwall of culvert on county road and 7.6 mi northwest of Parkman.

DRAINAGE AREA.--15.4 mi².

PERIOD OF RECORD.--October 1982 to current year (no winter records water years 1985-87).

GAGE.--Water-stage recorder. Elevation of gage is 4,550 ft above sea level, from topographic map. Prior to Apr. 2, 1985, at site 100 ft north (on abandoned channel) at datum 4.28 ft lower. Apr. 2, 1985 to Mar. 27, 1986, at site 300 ft upstream at datum 0.95 ft higher. Apr. 2, 1985 to Sept. 30, 1998, at same site at datum 1.00 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 4	1230	56	2.65
May 15	1945	*60	*2.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.6	9.8	8.5	8.3	7.7	7.6	8.1	47	44	20	12	9.4
2	e8.6	9.8	8.3	8.2	7.5	7.1	9.0	50	43	19	12	9.7
3	e8.5	10	8.2	e8.2	7.6	6.9	9.0	47	45	19	12	10
4	e8.4	9.9	8.4	8.2	7.6	6.8	8.7	48	45	18	12	12
5	e8.4	9.8	8.3	8.3	7.7	6.3	9.0	40	45	18	12	10
6	e8.3	9.6	6.4	8.3	7.5	6.3	10	35	49	17	12	9.9
7	e8.4	9.6	6.5	8.1	7.5	6.8	14	34	48	17	12	9.8
8	8.2	9.1	e6.5	8.0	7.6	7.2	13	33	44	16	11	9.8
9	8.2	9.3	e6.8	7.9	7.5	7.0	12	41	40	16	11	9.8
10	8.4	9.0	e8.0	7.9	7.8	7.2	13	44	36	16	11	9.7
11	8.9	8.9	7.9	10	7.0	6.9	14	36	34	16	11	9.8
12	8.7	8.8	7.7	9.1	7.2	6.8	15	34	32	15	11	9.7
13	8.6	e8.8	8.1	8.5	7.9	7.3	13	35	30	15	11	9.6
14	8.4	e8.9	8.3	8.4	7.6	8.9	13	35	30	15	11	9.4
15	8.6	e9.0	8.2	9.1	7.1	8.6	12	44	29	15	11	9.6
16	12	9.0	8.4	8.4	6.9	7.7	12	42	27	15	11	9.4
17	12	9.0	8.4	8.2	7.0	7.3	16	37	27	15	10	9.3
18	9.7	9.0	7.6	8.1	6.9	7.4	15	37	27	14	10	9.2
19	9.1	8.7	e6.0	8.2	6.9	7.3	15	39	26	14	10	9.4
20	9.0	8.5	e3.0	8.0	6.8	7.2	20	40	25	14	10	9.5
21	9.0	8.5	e2.0	7.9	6.6	7.3	28	44	24	14	9.9	9.2
22	8.8	8.5	e1.2	7.9	6.8	7.3	28	49	24	13	9.8	8.8
23	8.7	8.6	e.80	7.7	6.8	7.4	28	50	23	13	9.7	8.6
24	8.7	8.4	.37	e6.8	6.8	7.5	25	51	22	13	9.6	9.0
25	8.7	8.2	.00	e6.4	6.8	7.6	24	54	22	13	9.6	9.2
26	8.7	8.2	e2.0	e6.4	7.0	7.7	27	57	21	13	9.4	9.3
27	8.7	8.2	3.4	e6.2	6.8	8.1	28	55	21	12	9.3	9.2
28	10	8.2	8.1	e7.2	6.9	8.1	32	54	20	12	9.5	9.5
29	13	8.2	7.9	7.7	---	8.2	38	55	20	12	9.5	9.2
30	10	8.3	8.3	7.7	---	8.2	45	54	21	12	9.3	9.3
31	10	---	8.2	7.7	---	8.3	---	49	---	12	9.3	---
TOTAL	283.3	267.8	191.77	247.0	201.8	230.3	553.8	1370	944	463	327.9	286.3
MEAN	9.14	8.93	6.19	7.97	7.21	7.43	18.5	44.2	31.5	14.9	10.6	9.54
MAX	13	10	8.5	10	7.9	8.9	45	57	49	20	12	12
MIN	8.2	8.2	.00	6.2	6.6	6.3	8.1	33	20	12	9.3	8.6
AC-FT	562	531	380	490	400	457	1100	2720	1870	918	650	568

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)*

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	7.87	7.60	6.66	6.51	6.31	7.63	14.0	34.6	26.5	13.7	9.28	8.09					
MAX	9.95	9.30	9.02	8.10	7.98	10.5	25.2	79.9	60.6	26.9	14.9	11.6					
(WY)	1996	1996	1996	1996	1996	1997	1994	1995	1995	1995	1995	1995					
MIN	5.76	6.34	4.92	4.25	4.02	5.64	9.14	13.0	7.82	5.21	5.07	5.09					
(WY)	1990	1990	1991	1988	1989	1991	1992	1985	1985	1985	1985	1989					

06289600 WEST PASS CREEK NEAR PARKMAN, WY--Continued

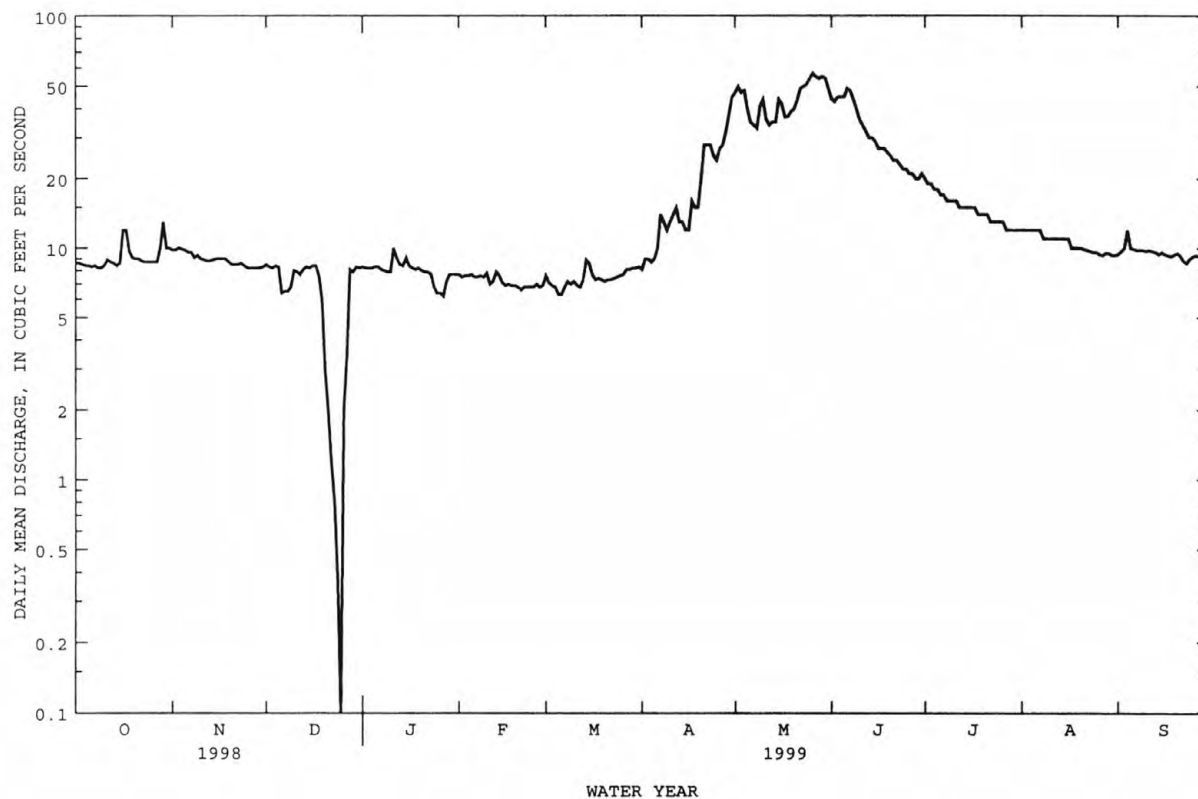
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1983 - 1999
ANNUAL TOTAL	4184.27	5366.97	--
ANNUAL MEAN	11.5	14.7	13.2
HIGHEST ANNUAL MEAN	--	--	21.2
LOWEST ANNUAL MEAN	--	--	7.76
HIGHEST DAILY MEAN	33 May 6	57 May 26	291 May 9 1995
LOWEST DAILY MEAN	.00 Dec 25	.00 Dec 25	.00 ^a Dec 25 1998
ANNUAL SEVEN-DAY MINIMUM	1.3 Dec 20	1.3 Dec 20	--
INSTANTANEOUS PEAK FLOW	--	60 May 15	340 May 9 1995
INSTANTANEOUS PEAK STAGE	--	2.71 May 15	4.76 ^b Apr 28 1984
ANNUAL RUNOFF (AC-FT)	8300	10650	9550
10 PERCENT EXCEEDS	23	36	--
50 PERCENT EXCEEDS	9.1	9.3	--
90 PERCENT EXCEEDS	6.4	7.0	--

* During period of operation.

a Result of channel blockage or diversion upstream.

b Backwater from ice, site and datum then in use.

e Estimated.



YELLOWSTONE RIVER BASIN

06289820 EAST PASS CREEK NEAR DAYTON, WY

LOCATION.--Lat 44°59'26", long 107°25'20", in NE¹/₄ SE¹/₄ NE¹/₄ sec.24, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank 0.4 mi downstream from bridge on Sheridan County Road 144, 5.0 mi northwest of Parkman, and 11.2 mi northwest of Dayton.

DRAINAGE AREA.--21.7 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft above sea level, from topographic map. October 1982 to August 1995, at site 270 ft upstream at different datum. August 1995 to April 1996, at site 0.3 mi downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Several small reservoirs upstream from station, ombined capacity, 415 acre-ft, for irrigation. Diversions for irrigation of about 2,900 acres upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 25 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 26	1900	*128	*6.42

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	12	9.7	9.9	9.7	10	12	58	78	26	9.4	1.6
2	9.8	12	9.7	e9.2	9.7	9.8	12	63	76	25	9.8	2.1
3	10	12	9.4	e9.4	9.8	9.8	12	65	79	24	9.5	2.6
4	11	11	9.5	e10	e9.7	9.7	12	63	80	23	9.0	3.7
5	11	11	9.4	11	9.7	e9.4	11	59	80	23	8.9	2.6
6	10	11	e8.8	10	9.4	e9.4	12	54	89	22	8.3	2.4
7	10	11	e9.2	10	9.7	e9.8	13	52	88	21	6.3	2.3
8	10	10	9.3	11	9.7	e9.5	14	52	79	21	5.5	3.9
9	9.7	10	9.3	11	9.6	e9.4	15	58	70	20	4.7	6.4
10	9.8	10	e9.0	10	e9.5	9.7	16	61	61	19	3.9	6.4
11	9.9	10	9.4	12	e8.0	9.5	16	62	58	18	4.2	6.6
12	9.7	10	9.4	12	e11	9.6	17	62	52	18	6.5	6.5
13	9.7	10	9.3	11	10	9.7	18	64	48	17	8.9	6.3
14	9.4	e10	9.4	11	10	10	20	64	47	17	9.2	6.3
15	9.5	10	9.1	11	9.7	11	20	68	45	17	8.9	6.2
16	12	e9.8	9.3	11	e9.6	11	20	69	43	16	8.6	6.2
17	13	11	9.4	11	9.6	11	23	68	41	15	8.3	6.0
18	11	11	8.9	10	e9.5	11	26	70	42	15	8.1	6.1
19	11	10	4.8	11	9.6	11	28	74	40	15	7.9	6.3
20	10	10	4.8	10	9.5	11	33	75	38	14	7.7	6.2
21	9.9	9.7	e6.0	10	e9.4	11	39	75	36	14	7.6	5.9
22	10	9.8	e9.0	10	e9.4	11	39	87	35	14	7.7	5.5
23	10	9.7	e12	e9.5	9.4	11	37	88	33	13	7.6	5.4
24	10	9.7	e15	7.7	9.5	11	36	91	30	13	7.2	6.2
25	9.7	9.7	e13	e10	9.7	12	35	104	29	13	7.0	7.4
26	9.8	9.6	e11	e13	e9.5	12	37	112	28	13	6.8	7.9
27	9.7	9.4	e10	e11	e9.5	13	41	103	27	12	6.9	7.5
28	11	9.4	e10	e10	9.4	12	43	107	26	11	7.3	6.9
29	16	9.4	10	e10	---	12	43	112	25	9.3	7.4	6.5
30	14	9.5	10	10	---	12	53	103	27	9.5	6.3	6.3
31	13	---	9.7	9.7	---	12	---	88	---	9.2	2.9	---
TOTAL	329.3	307.7	292.8	322.4	268.8	330.3	753	2331	1530	517.0	228.3	162.2
MEAN	10.6	10.3	9.45	10.4	9.60	10.7	25.1	75.2	51.0	16.7	7.36	5.41
MAX	16	12	15	13	11	13	53	112	89	26	9.8	7.9
MIN	9.4	9.4	4.8	7.7	8.0	9.4	11	52	25	9.2	2.9	1.6
AC-FT	653	610	581	639	533	655	1490	4620	3030	1030	453	322

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	9.11	9.12	8.51	8.72	8.66	9.96	17.4	45.5	38.6	13.9	7.72	7.58					
MAX	13.9	11.4	10.5	10.5	10.6	14.2	32.4	90.8	82.8	32.9	14.8	14.8					
(WY)	1996	1996	1996	1996	1996	1997	1994	1995	1995	1992	1993	1995					
MIN	5.73	6.90	6.69	6.96	6.78	7.29	9.30	15.2	6.65	5.06	2.73	4.02					
(WY)	1991	1986	1988	1988	1989	1990	1992	1985	1985	1985	1988	1989					

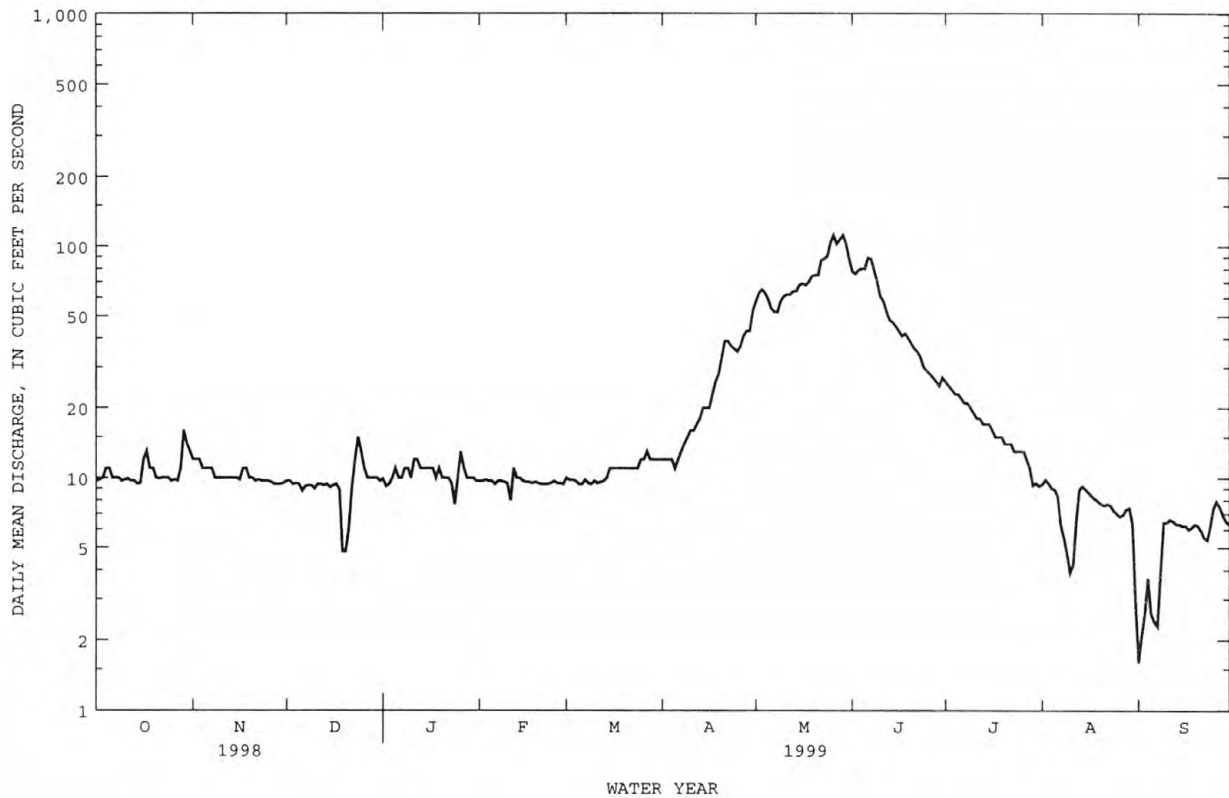
06289820 EAST PASS CREEK NEAR DAYTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	5037.7		7372.8		--	
ANNUAL MEAN	13.8		20.2		15.4	
HIGHEST ANNUAL MEAN	--		--		23.6	
LOWEST ANNUAL MEAN	--		--		8.57	
HIGHEST DAILY MEAN	42	Jun 19	112	May 26,29	304	May 9 1995
LOWEST DAILY MEAN	4.8	Dec 19,20	1.6	Sep 1	1.6	Sep 1 1999
ANNUAL SEVEN-DAY MINIMUM	5.7	Aug 19	2.5	Sep 1	2.1	Aug 20 1988
INSTANTANEOUS PEAK FLOW	--		128	May 26	511 ^a	May 9 1995
INSTANTANEOUS PEAK STAGE	--		6.42	May 26	9.00 ^b	Feb 6 1996
ANNUAL RUNOFF (AC-FT)	9990		14620		11170	
10 PERCENT EXCEEDS	30		58		32	
50 PERCENT EXCEEDS	10		10		9.5	
90 PERCENT EXCEEDS	7.6		6.6		6.3	

a Gage height, 4.47 ft, site and datum then in use. From rating curve extended above 221 ft³/s.

b Ice jam, site and datum then in use.

c Estimated.



YELLOWSTONE RIVER BASIN

06298000 TONGUE RIVER NEAR DAYTON, WY
(National Water-Quality Assessment Program)

LOCATION.--Lat 44°50'58", long 107°18'14", in NE¹/₄ NE¹/₄ NE¹/₄ sec.11, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank 0.5 mi upstream from Crystal Draw, 0.6 mi downstream from intake of Highline Ditch, and 2.5 mi southwest of Dayton.

DRAINAGE AREA.--204 mi².

PERIOD OF RECORD.--October 1918 to September 1929, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1921.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft above sea level, from topographic map.

REMARKS.--Records fair. Small diversion upstream from station for Dayton municipal supply. Figures of daily discharge do not include water diverted 0.6 mi upstream from station by Highline ditch for irrigation downstream from station. National Weather Service data collection platform with satellite telemetry at station. Water-quality data are published in the special studies section of this report.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 980 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height
May 27	2300	*1,560	*4.84

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	82	79	66	60	60	67	637	938	394	134	87
2	90	104	75	63	58	56	65	610	977	350	130	89
3	95	101	76	62	56	52	65	510	1100	331	129	101
4	105	94	76	63	58	56	63	396	941	315	132	129
5	90	59	60	64	59	55	63	324	1130	300	136	117
6	99	68	41	64	59	44	63	289	1240	287	141	107
7	105	79	35	65	59	57	67	308	1170	276	135	93
8	115	75	54	66	59	57	69	352	1230	265	124	87
9	103	77	61	65	58	55	70	340	1120	248	116	85
10	97	64	58	64	59	60	60	300	918	240	113	83
11	98	54	70	65	55	55	62	266	861	235	113	91
12	95	62	74	64	53	56	63	250	835	225	122	88
13	96	90	74	64	59	56	67	275	794	215	129	86
14	95	98	76	61	59	61	75	282	825	208	121	85
15	95	97	75	63	58	62	66	264	762	208	111	82
16	103	90	74	63	56	62	66	246	707	199	106	81
17	97	87	74	61	56	50	67	244	738	206	103	79
18	97	87	64	60	55	55	88	286	742	193	101	79
19	93	79	35	61	57	60	112	340	731	183	100	85
20	88	68	29	62	57	64	162	375	678	180	99	82
21	87	79	54	61	50	68	166	512	631	174	101	79
22	93	84	88	60	57	72	140	627	603	165	97	76
23	101	78	84	60	55	74	118	670	540	158	92	74
24	95	80	95	49	55	77	114	830	504	153	86	74
25	91	70	103	59	60	88	133	1030	478	151	85	75
26	86	78	95	65	60	101	173	1130	448	147	83	78
27	85	78	88	63	52	94	242	1240	422	142	82	76
28	110	78	82	57	58	71	310	1310	408	139	88	84
29	138	79	68	57	---	68	430	1320	382	137	95	86
30	99	73	67	59	---	76	529	1290	408	140	104	95
31	90	---	65	60	---	76	---	1000	---	136	90	---
TOTAL	3023	2392	2149	1916	1597	1998	3835	17853	23261	6700	3398	2613
MEAN	97.5	79.7	69.3	61.8	57.0	64.5	128	576	775	216	110	87.1
MAX	138	104	103	66	60	101	529	1320	1240	394	141	129
MIN	85	54	29	49	50	44	60	244	382	136	82	74
AC-FT	6000	4740	4260	3800	3170	3960	7610	35410	46140	13290	6740	5180
+	112	4.9	.00	.00	.00	.00	1.4	771	861	1090	1240	932

ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

MEAN	99.3	79.8	69.3	61.8	57.0	64.5	128	588	790	234	130	103
AC-FT	6112	4740	4260	3800	3170	3960	7610	36180	47000	14360	7980	6110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1999, BY WATER YEAR (WY)

MEAN	82.5	68.3	61.3	56.0	52.6	51.9	109	524	710	246	113	85.4
MAX	284	155	108	88.9	80.8	72.0	354	1048	1482	767	244	163
(WY)	1924	1924	1924	1924	1924	1924	1926	1926	1978	1975	1927	1968
MIN	49.6	41.1	39.6	36.1	34.1	38.1	44.2	266	214	81.1	52.8	42.8
(WY)	1955	1941	1941	1941	1941	1941	1975	1953	1919	1919	1966	1966

06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

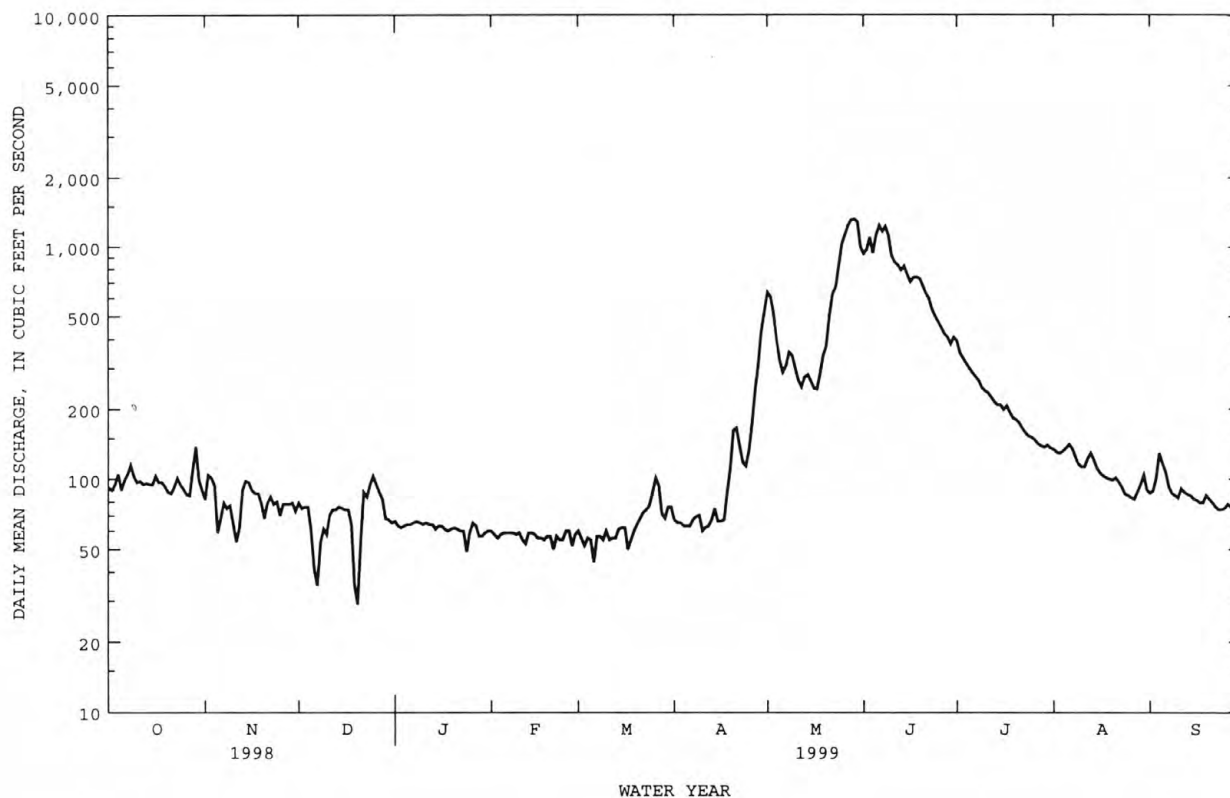
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR*		FOR 1999 WATER YEAR*		WATER YEARS 1919 - 1999*	
ANNUAL TOTAL	55663		70735		--	
ANNUAL MEAN	153		194		181	
HIGHEST ANNUAL MEAN	--		--		316	1924
LOWEST ANNUAL MEAN	--		--		98.4	1989
HIGHEST DAILY MEAN	613	May 22	1320	May 29	2590	Jun 5 1968
LOWEST DAILY MEAN	29	Dec 20	29	Dec 20	18	Nov 29 1919
ANNUAL SEVEN-DAY MINIMUM	46	Feb 20	54	Mar 3	31	Nov 9 1940
INSTANTANEOUS PEAK FLOW	--		1560	May 27	3400	Jun 3 1944
INSTANTANEOUS PEAK STAGE	--		4.84	May 27	6.45	Jun 3 1944
ANNUAL RUNOFF (AC-FT)	110400		140300		131400	
10 PERCENT EXCEEDS	426		519		485	
50 PERCENT EXCEEDS	90		88		74	
90 PERCENT EXCEEDS	49		58		48	

+ Diversion, in acre-feet, upstream from station by Highline Ditch.

* Unadjusted for diversion by Highline Ditch.

ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

	Annual Total	Annual Mean	Annual Runoff (ac-ft)
1998 Calendar Year	58901	161	116800
1999 Water Year	73194	201	145200



06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44°46'21", long 107°14'01", in NE¹/₄ SW¹/₄ NW¹/₄ sec.4, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on left bank at Wolf and 0.5 mi downstream from Red Canyon Creek.

DRAINAGE AREA.--37.8 mi².

PERIOD OF RECORD.--January 1945 to current year (no winter records since 1971). Monthly discharge for January to March 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,525 ft above sea level, from topographic map. Prior to May 26, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 1 . . . 12.1

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by the U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 5.0 ft, May 18, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 180 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	1830	*348	*3.04

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	7.0	70	247	59	18	9.6
2	---	---	---	---	---	---	7.2	75	239	51	17	9.9
3	---	---	---	---	---	---	7.2	75	234	50	16	14
4	---	---	---	---	---	---	7.0	69	215	46	16	24
5	---	---	---	---	---	---	7.2	61	226	45	16	18
6	---	---	---	---	---	---	7.2	58	250	41	16	15
7	---	---	---	---	---	---	7.8	59	228	40	17	12
8	---	---	---	---	---	---	8.3	59	226	38	15	11
9	---	---	---	---	---	---	8.3	59	213	36	13	9.9
10	---	---	---	---	---	---	7.8	56	172	36	13	9.2
11	---	---	---	---	---	---	8.1	54	157	35	13	9.9
12	---	---	---	---	---	---	8.3	52	147	33	14	9.9
13	---	---	---	---	---	---	8.9	53	133	32	16	8.9
14	---	---	---	---	---	---	9.2	54	139	31	15	8.6
15	---	---	---	---	---	---	8.6	53	131	31	12	8.3
16	---	---	---	---	---	---	8.3	53	117	29	12	8.3
17	---	---	---	---	---	---	8.9	52	119	30	11	8.3
18	---	---	---	---	---	---	12	59	114	27	11	8.3
19	---	---	---	---	---	---	16	68	114	26	10	9.6
20	---	---	---	---	---	---	21	73	103	25	10	9.6
21	---	---	---	---	---	---	24	90	94	24	12	8.6
22	---	---	---	---	---	---	20	123	90	22	10	8.3
23	---	---	---	---	---	---	19	137	80	21	9.9	8.1
24	---	---	---	---	---	---	19	175	76	21	9.2	8.1
25	---	---	---	---	---	---	21	228	72	20	8.9	8.1
26	---	---	---	---	---	---	25	255	65	19	8.3	8.6
27	---	---	---	---	---	---	33	273	62	19	8.3	8.3
28	---	---	---	---	---	---	36	284	60	19	8.6	8.3
29	---	---	---	---	---	---	54	297	56	18	11	8.3
30	---	---	---	---	---	---	61	278	61	18	11	9.9
31	---	---	---	---	---	---	---	253	---	18	8.9	---
TOTAL	---	---	---	---	---	---	496.3	3605	4240	960	387.1	306.9
MEAN	---	---	---	---	---	---	16.5	116	141	31.0	12.5	10.2
MAX	---	---	---	---	---	---	61	297	250	59	18	24
MIN	---	---	---	---	---	---	7.0	52	56	18	8.3	8.1
AC-FT	---	---	---	---	---	---	984	7150	8410	1900	768	601

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

MEAN	8.77	6.98	5.69	4.73	4.48	4.96	14.3	95.7	134	37.7	15.1	10.1
MAX	14.2	9.97	7.46	6.07	5.64	9.27	37.4	179	287	95.2	30.8	23.0
(WY)	1969	1952	1969	1962	1962	1972	1994	1978	1975	1975	1951	1968
MIN	6.46	5.73	3.83	2.80	3.15	3.65	6.39	33.6	34.3	16.0	6.23	6.62
(WY)	1957	1961	1950	1950	1957	1957	1958	1982	1985	1985	1961	1985

06299500 WOLF CREEK AT WOLF, WY--Continued

SUMMARY STATISTICS

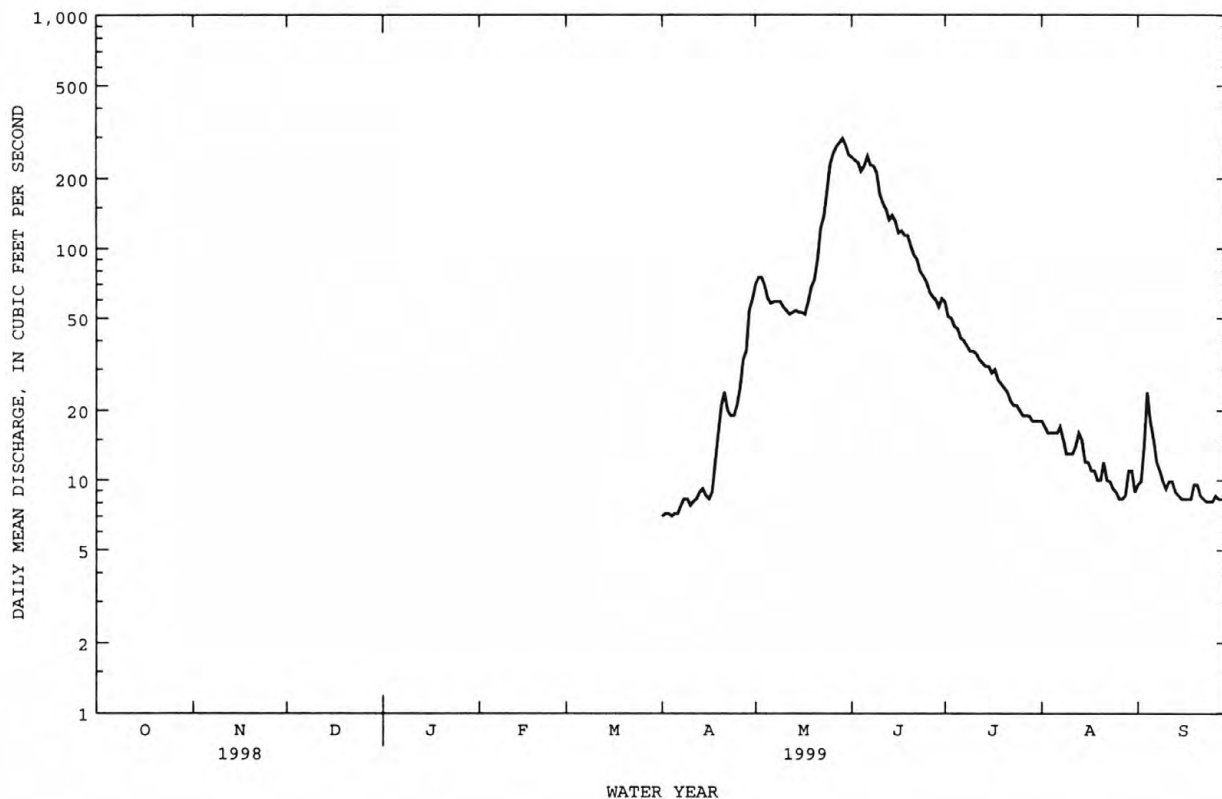
FOR 1999 WATER YEAR*

WATER YEARS 1946 - 1999*

ANNUAL MEAN	--		29.3	
HIGHEST ANNUAL MEAN	--		45.0	1964
LOWEST ANNUAL MEAN	--		13.8	1960
HIGHEST DAILY MEAN	297	May 29	601	Jun 9 1964
LOWEST DAILY MEAN	7.0	Apr 1, 4	1.8	Feb 26 1947
ANNUAL SEVEN-DAY MINIMUM	--		2.5	Jan 24 1957
INSTANTANEOUS PEAK FLOW	348	May 29	1130 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	3.04	May 29	4.60	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		21220	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a From rating curve extended above 500 ft³/s.



YELLOWSTONE RIVER BASIN

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°32'18", long 107°13'33", in SE¹/₄ SE¹/₄ NW¹/₄ sec.28, T.53 N., R.86 W., Johnson County, Hydrologic Unit 10090101, Bighorn National Forest, on right bank 0.7 mi upstream from Park Reservoir and 16 mi southwest of Big Horn.

DRAINAGE AREA.--20.1 mi².

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1973). Prior to October 1960, published as East Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Elevation of gage is 8,320 ft above sea level, from topographic map. Prior to June 28, 1960, water-stage recorder at site 1.1 mi downstream at different datum. June 28, 1960, to July 14, 1970, water-stage recorder at site 0.9 mi downstream at different datums and July 15 to Oct. 7, 1970, nonrecording gage at present site and datum.

REMARKS.--Records good. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 8 . . . 19.0

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	172	84	20	7.3
2	---	---	---	---	---	---	---	---	196	93	18	8.7
3	---	---	---	---	---	---	---	---	284	124	17	9.7
4	---	---	---	---	---	---	---	---	207	141	18	20
5	---	---	---	---	---	---	---	---	248	112	17	21
6	---	---	---	---	---	---	---	---	246	82	17	21
7	---	---	---	---	---	---	---	---	248	79	15	17
8	---	---	---	---	---	---	---	---	289	85	14	14
9	---	---	---	---	---	---	---	---	306	65	14	13
10	---	---	---	---	---	---	---	---	184	57	13	11
11	---	---	---	---	---	---	---	---	170	55	13	11
12	---	---	---	---	---	---	---	---	194	52	14	12
13	---	---	---	---	---	---	---	---	208	49	15	11
14	---	---	---	---	---	---	---	---	216	50	13	10
15	---	---	---	---	---	---	---	---	180	69	12	9.7
16	---	---	---	---	---	---	---	---	186	52	11	9.2
17	---	---	---	---	---	---	---	---	277	50	9.8	8.5
18	---	---	---	---	---	---	---	---	294	44	9.2	8.1
19	---	---	---	---	---	---	---	---	318	38	8.5	8.3
20	---	---	---	---	---	---	---	---	292	36	8.1	8.5
21	---	---	---	---	---	---	---	---	258	33	8.1	8.3
22	---	---	---	---	---	---	---	---	230	31	7.8	7.8
23	---	---	---	---	---	---	---	---	173	29	7.2	7.4
24	---	---	---	---	---	---	---	---	172	27	7.0	7.0
25	---	---	---	---	---	---	---	---	191	25	6.4	6.8
26	---	---	---	---	---	---	---	---	193	24	6.0	7.8
27	---	---	---	---	---	---	---	---	110	22	6.0	8.3
28	---	---	---	---	---	---	---	---	95	21	6.2	9.0
29	---	---	---	---	---	---	---	---	80	20	6.6	10
30	---	---	---	---	---	---	---	---	85	20	6.2	8.5
31	---	---	---	---	---	---	---	---	---	21	6.2	---
TOTAL	---	---	---	---	---	---	---	---	6302	1690	350.3	319.9
MEAN	---	---	---	---	---	---	---	---	210	54.5	11.3	10.7
MAX	---	---	---	---	---	---	---	---	318	141	20	21
MIN	---	---	---	---	---	---	---	---	80	20	6.0	6.8
AC-FT	---	---	---	---	---	---	---	---	12500	3350	695	635

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

	MEAN	8.61	5.47	3.65	3.04	2.60	2.52	4.78	83.6	177	59.4	17.7	11.7
MAX	16.9	8.43	5.32	4.16	3.30	3.52	18.6	152	372	177	46.5	37.0	
(WY)	1968	1969	1958	1962	1959	1962	1962	1958	1995	1975	1968	1968	
MIN	4.48	2.85	2.23	1.87	1.63	1.15	1.76	28.0	55.1	12.7	3.67	5.22	
(WY)	1971	1963	1963	1971	1971	1971	1971	1983	1994	1988	1988	1954	

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

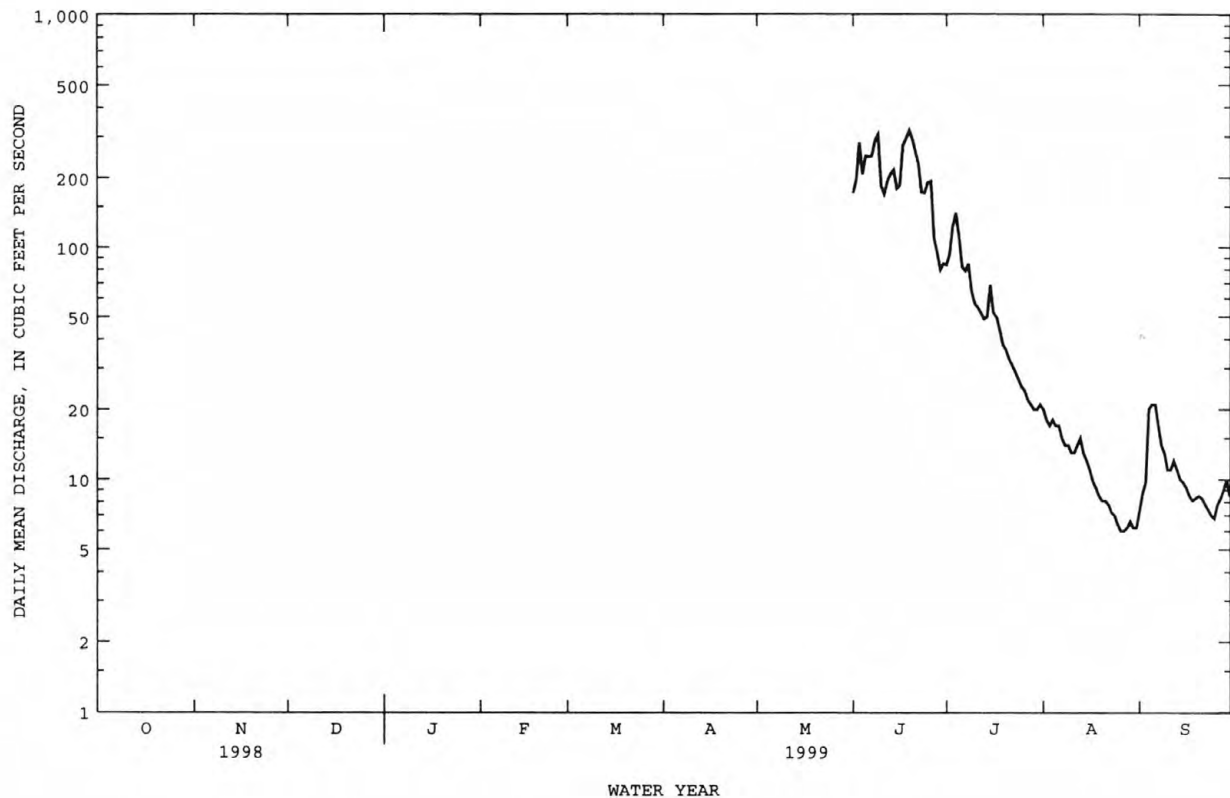
WATER YEARS 1954 - 1999*

ANNUAL MEAN	--		32.6	
HIGHEST ANNUAL MEAN	--		41.8	1963
LOWEST ANNUAL MEAN	--		21.4	1966
HIGHEST DAILY MEAN	318	Jun 19	775	Jun 15 1963
LOWEST DAILY MEAN	6.0	Aug. 26,27	1.0	Several days, 1963,1964, Mar 18 1971
INSTANTANEOUS PEAK FLOW	454	Jun 9	1230 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	5.37	Jun 9	4.59 ^b	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		23600	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a From rating curve extended above 250 ft³/s on basis of slope-area measurement of peak flow.

b Site and datum then in use.



YELLOWSTONE RIVER BASIN

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'05", long 107°19'01", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 0.2 mi upstream from Twin Lakes, and 17.0 mi southwest of Big Horn.

DRAINAGE AREA.--3.41 mi².

PERIOD OF RECORD.--October 1990 to current year (no winter records 1993 to 1996, 1998, and 1999).

GAGE.--Water-stage recorder. Elevation of gage is 8,690 ft above sea level, from topographic map.

REMARKS.--Records good except those for June 18 to July 26, which are fair, and those for estimated daily discharges, which are poor. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 20 . . . 1.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e3.0	26	14	1.6	.41
2	---	---	---	---	---	---	---	e3.0	31	13	1.5	.44
3	---	---	---	---	---	---	---	e3.4	47	12	1.5	.67
4	---	---	---	---	---	---	---	e3.6	38	14	1.5	1.4
5	---	---	---	---	---	---	---	e3.8	54	14	1.5	1.7
6	---	---	---	---	---	---	---	e4.0	60	11	1.5	1.9
7	---	---	---	---	---	---	---	e4.2	54	9.7	1.4	1.9
8	---	---	---	---	---	---	---	4.1	57	8.6	1.3	1.7
9	---	---	---	---	---	---	---	4.8	63	8.0	1.1	1.5
10	---	---	---	---	---	---	---	5.1	32	7.0	1.0	1.3
11	---	---	---	---	---	---	---	4.4	25	6.1	.96	1.3
12	---	---	---	---	---	---	---	3.8	28	5.6	1.0	1.1
13	---	---	---	---	---	---	---	3.5	29	5.1	1.0	1.0
14	---	---	---	---	---	---	---	3.4	33	4.6	.92	.97
15	---	---	---	---	---	---	---	3.2	27	4.3	.78	.91
16	---	---	---	---	---	---	---	3.0	26	4.0	.66	.83
17	---	---	---	---	---	---	---	2.5	35	4.5	.59	.75
18	---	---	---	---	---	---	---	2.6	45	4.5	.54	.73
19	---	---	---	---	---	---	---	3.7	48	3.6	.50	.81
20	---	---	---	---	---	---	---	5.4	43	3.2	.46	.79
21	---	---	---	---	---	---	---	9.0	35	3.0	.44	.73
22	---	---	---	---	---	---	---	14	30	2.4	.40	.68
23	---	---	---	---	---	---	---	20	26	2.2	.36	.64
24	---	---	---	---	---	---	---	29	24	1.9	.33	.59
25	---	---	---	---	---	---	---	45	23	1.7	.29	.60
26	---	---	---	---	---	---	---	50	22	1.7	.25	.70
27	---	---	---	---	---	---	---	48	17	1.8	.24	.69
28	---	---	---	---	---	---	---	57	15	1.6	.25	.70
29	---	---	---	---	---	---	---	54	14	1.5	.28	.62
30	---	---	---	---	---	---	---	56	14	1.5	.28	.61
31	---	---	---	---	---	---	---	31	---	1.6	.29	---
TOTAL	---	---	---	---	---	---	---	487.5	1021	177.7	24.72	28.67
MEAN	---	---	---	---	---	---	---	15.7	34.0	5.73	.80	.96
MAX	---	---	---	---	---	---	---	57	63	14	1.6	1.9
MIN	---	---	---	---	---	---	---	2.5	14	1.5	.24	.41
AC-FT	---	---	---	---	---	---	---	967	2030	352	49	57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY)*

MEAN	.57	.50	.27	.16	.13	.14	.58	18.3	29.7	7.47	1.68	.74
MAX	.71	.61	.36	.22	.20	.21	1.59	27.4	50.9	14.1	3.50	1.26
(WY)	1993	1993	1993	1992	1992	1992	1992	1992	1995	1995	1993	1998
MIN	.52	.43	.17	.12	.089	.055	.15	8.58	8.89	2.03	.67	.18
(WY)	1992	1997	1991	1997	1997	1997	1997	1995	1994	1994	1996	1996

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1991 - 1999*

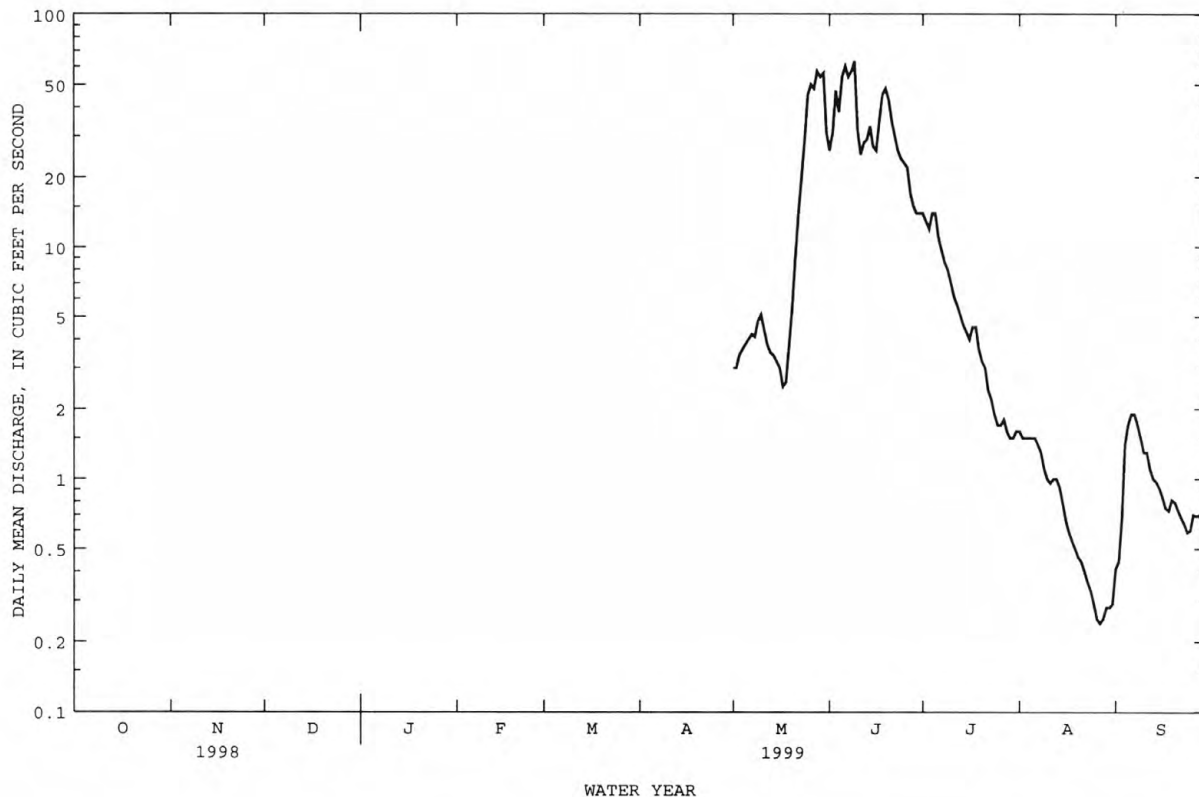
ANNUAL MEAN	--		5.43	
HIGHEST ANNUAL MEAN	--		5.84	1992
LOWEST ANNUAL MEAN	--		4.83	1991
HIGHEST DAILY MEAN	63	Jun 9	105	Jun 16 1995
LOWEST DAILY MEAN	.24	Aug 27	135 ^a	Sep 10 1996
INSTANTANEOUS PEAK FLOW	91	Jun 9	135 ^a	Jun 15 1995
INSTANTANEOUS PEAK STAGE	3.92	Jun 9	5.05 ^b	May 14 1991
ANNUAL RUNOFF (AC-FT)	--		3940	

* During period of operation.

a Gage height, 4.35 ft.

b Backwater from snow and ice.

e Estimated.



YELLOWSTONE RIVER BASIN

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'33", long 107°18'32", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 30 ft downstream from Twin Lakes Reservoir, 0.4 mi upstream from mouth, and 16.2 mi southwest of Big Horn.

DRAINAGE AREA.--8.07 mi².

PERIOD OF RECORD.--October 1990 to September 1994, October 1995 to current year (no winter records 1993, 1994, 1996, 1998, and 1999).

GAGE.--Water-stage recorder and concrete weir. Elevation of gage is 8,560 ft above sea level, from topographic map. October 1990 to September 1998, at site 0.2 mi downstream at different datum.

REMARKS.--Records good except those for June 28 to July 13, and those for estimated daily discharges, which are poor. Flow regulated by Twin Lakes Reservoir, capacity, 3,400 acre-ft. Seasonal records collected by State of Wyoming at site 0.2 mi downstream, at different datum, 1971-90. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 20 3.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	.14	33	3.4	12	13
2	---	---	---	---	---	---	---	.13	59	3.9	12	13
3	---	---	---	---	---	---	---	.13	74	3.7	12	13
4	---	---	---	---	---	---	---	.12	84	3.6	12	13
5	---	---	---	---	---	---	---	.12	85	3.6	12	13
6	---	---	---	---	---	---	---	.11	85	3.8	12	13
7	---	---	---	---	---	---	---	.11	85	4.0	12	15
8	---	---	---	---	---	---	---	.11	84	3.7	12	13
9	---	---	---	---	---	---	---	.11	83	4.1	12	13
10	---	---	---	---	---	---	---	.10	74	3.7	12	13
11	---	---	---	---	---	---	---	.10	36	3.5	12	13
12	---	---	---	---	---	---	---	.10	14	4.0	12	13
13	---	---	---	---	---	---	---	.11	14	4.1	12	13
14	---	---	---	---	---	---	---	.11	47	4.3	12	13
15	---	---	---	---	---	---	---	.10	49	4.3	12	13
16	---	---	---	---	---	---	---	.10	44	4.3	12	13
17	---	---	---	---	---	---	---	1.5	57	4.3	12	13
18	---	---	---	---	---	---	---	2.6	65	4.3	12	13
19	---	---	---	---	---	---	---	2.7	66	3.8	12	13
20	---	---	---	---	---	---	---	2.7	66	3.2	12	13
21	---	---	---	---	---	---	---	2.7	61	3.2	12	12
22	---	---	---	---	---	---	---	2.8	47	9.5	12	12
23	---	---	---	---	---	---	---	2.9	24	15	12	12
24	---	---	---	---	---	---	---	2.9	18	15	12	12
25	---	---	---	---	---	---	---	3.0	18	15	12	12
26	---	---	---	---	---	---	---	3.1	18	15	12	12
27	---	---	---	---	---	---	---	3.2	e12	12	12	12
28	---	---	---	---	---	---	---	3.2	5.5	13	12	12
29	---	---	---	---	---	---	---	3.3	3.0	17	12	12
30	---	---	---	---	---	---	---	3.3	2.7	14	12	12
31	---	---	---	---	---	---	---	3.4	---	12	12	---
TOTAL	---	---	---	---	---	---	---	45.10	1413.2	218.3	372	382
MEAN	---	---	---	---	---	---	---	1.45	47.1	7.04	12.0	12.7
MAX	---	---	---	---	---	---	---	3.4	85	17	12	15
MIN	---	---	---	---	---	---	---	.10	2.7	3.2	12	12
AC-FT	---	---	---	---	---	---	---	89	2800	433	738	758

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY)*

	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	1.68	.38	.20	.14	.17	.23	.52	33.0	53.5
MAX	4.50	.56	.32	.26	.32	.51	1.32	54.4	81.3
(WY)	1991	1997	1992	1992	1992	1992	1992	1993	1997
MIN	.50	.14	.13	.045	.040	.041	.20	1.45	18.9
(WY)	1992	1993	1997	1997	1997	1997	1993	1999	1994

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1991 - 1999*

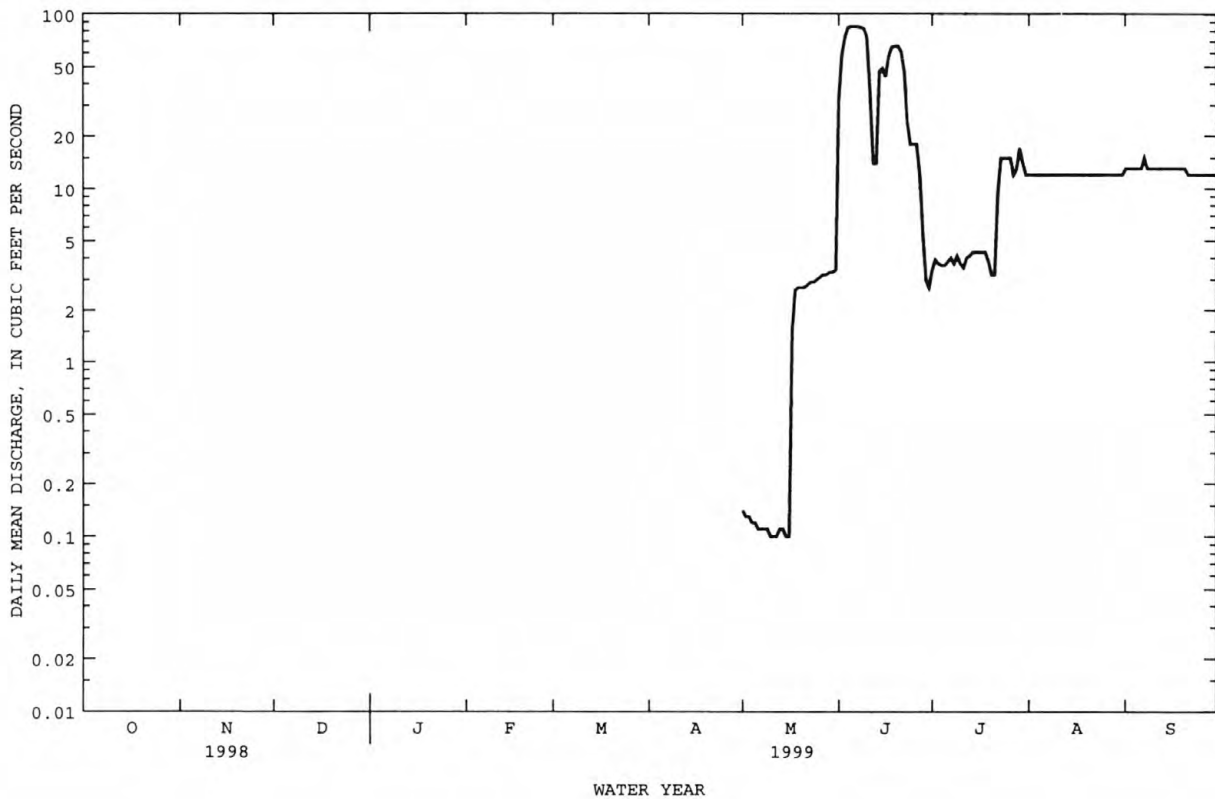
ANNUAL MEAN	--		12.0	
HIGHEST ANNUAL MEAN	--		12.6	1992
LOWEST ANNUAL MEAN	--		11.2	1991
HIGHEST DAILY MEAN	85.0	Jun 5-7	172	May 29 1993
LOWEST DAILY MEAN	.10	May 10-12,15,16	.03	Many days in 1997
INSTANTANEOUS PEAK FLOW	98.0	Sep 7	223 ^a	May 29 1993
INSTANTANEOUS PEAK STAGE	2.52	Sep 7	4.32 ^b	May 1 1997
ANNUAL RUNOFF (AC-FT)	--		8710	

* During period of operation.

a Gage height, 3.16 ft, site and datum then in use.

b Backwater from snow and ice, site and datum then in use.

e Estimated.



YELLOWSTONE RIVER BASIN

06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°36'47", long 107°17'49", in NE¹/₄ SE¹/₄ NE¹/₄ sec.35, T.54 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, on left bank 0.3 mi downstream from Twin Lakes Branch and 16 mi west of Big Horn.

DRAINAGE AREA.--24.4 mi².

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1971). Prior to October 1960, published as West Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Elevation of gage is 8,420 ft above sea level, from topographic map.

REMARKS.--Records good, except for those estimated daily discharges, which are poor. Some regulation by Twin Lakes, capacity, 1,520 acre-ft, and Dome Lake, capacity, 1,800 acre-ft. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 5 . . . 10.7

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e4.5	5.7	e180	100	47	24
2	---	---	---	---	---	---	e4.5	5.7	189	95	45	24
3	---	---	---	---	---	---	e5.0	5.4	290	100	36	25
4	---	---	---	---	---	---	e4.5	4.9	280	113	34	26
5	---	---	---	---	---	---	e4.5	4.2	305	109	35	26
6	---	---	---	---	---	---	e5.0	4.0	307	93	35	25
7	---	---	---	---	---	---	e4.5	4.3	310	85	34	26
8	---	---	---	---	---	---	e4.5	5.4	339	80	35	24
9	---	---	---	---	---	---	5.0	5.4	390	74	35	24
10	---	---	---	---	---	---	4.9	4.8	269	68	34	24
11	---	---	---	---	---	---	4.9	4.0	167	48	34	25
12	---	---	---	---	---	---	4.9	3.9	157	32	34	26
13	---	---	---	---	---	---	4.9	4.3	171	31	34	26
14	---	---	---	---	---	---	4.9	4.8	221	43	33	26
15	---	---	---	---	---	---	4.9	4.3	201	49	33	26
16	---	---	---	---	---	---	3.7	4.2	186	49	33	25
17	---	---	---	---	---	---	2.3	5.1	242	49	32	26
18	---	---	---	---	---	---	2.5	7.2	310	47	31	26
19	---	---	---	---	---	---	2.7	7.8	352	43	25	26
20	---	---	---	---	---	---	2.9	9.2	352	40	25	25
21	---	---	---	---	---	---	2.9	e10	289	38	25	25
22	---	---	---	---	---	---	2.5	e14	247	39	24	26
23	---	---	---	---	---	---	2.6	e18	186	42	24	30
24	---	---	---	---	---	---	2.7	e27	164	40	24	37
25	---	---	---	---	---	---	2.9	e41	164	39	24	48
26	---	---	---	---	---	---	3.0	e61	162	39	24	37
27	---	---	---	---	---	---	3.0	e90	128	38	24	23
28	---	---	---	---	---	---	3.4	e130	101	44	24	21
29	---	---	---	---	---	---	4.3	e150	82	56	24	20
30	---	---	---	---	---	---	4.9	e170	80	50	24	18
31	---	---	---	---	---	---	---	e180	---	47	23	---
TOTAL	---	---	---	---	---	---	117.7	995.6	6821	1820	948	790
MEAN	---	---	---	---	---	---	3.92	32.1	227	58.7	30.6	26.3
MAX	---	---	---	---	---	---	5.0	180	390	113	47	48
MIN	---	---	---	---	---	---	2.3	3.9	80	31	23	18
AC-FT	---	---	---	---	---	---	233	1970	13530	3610	1880	1570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

	MEAN	8.54	6.16	4.82	3.79	3.09	2.98	4.90	67.4	194	65.3	31.4	23.3
MAX		18.0	10.3	9.61	6.55	5.96	5.40	15.5	141	311	161	57.3	48.9
(WY)		1963	1969	1969	1965	1963	1963	1962	1994	1995	1975	1968	1968
MIN		2.67	1.22	1.03	1.05	1.06	1.46	1.71	5.23	59.1	28.5	19.4	4.48
(WY)		1964	1964	1964	1964	1964	1964	1957	1995	1994	1994	1969	1988

06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

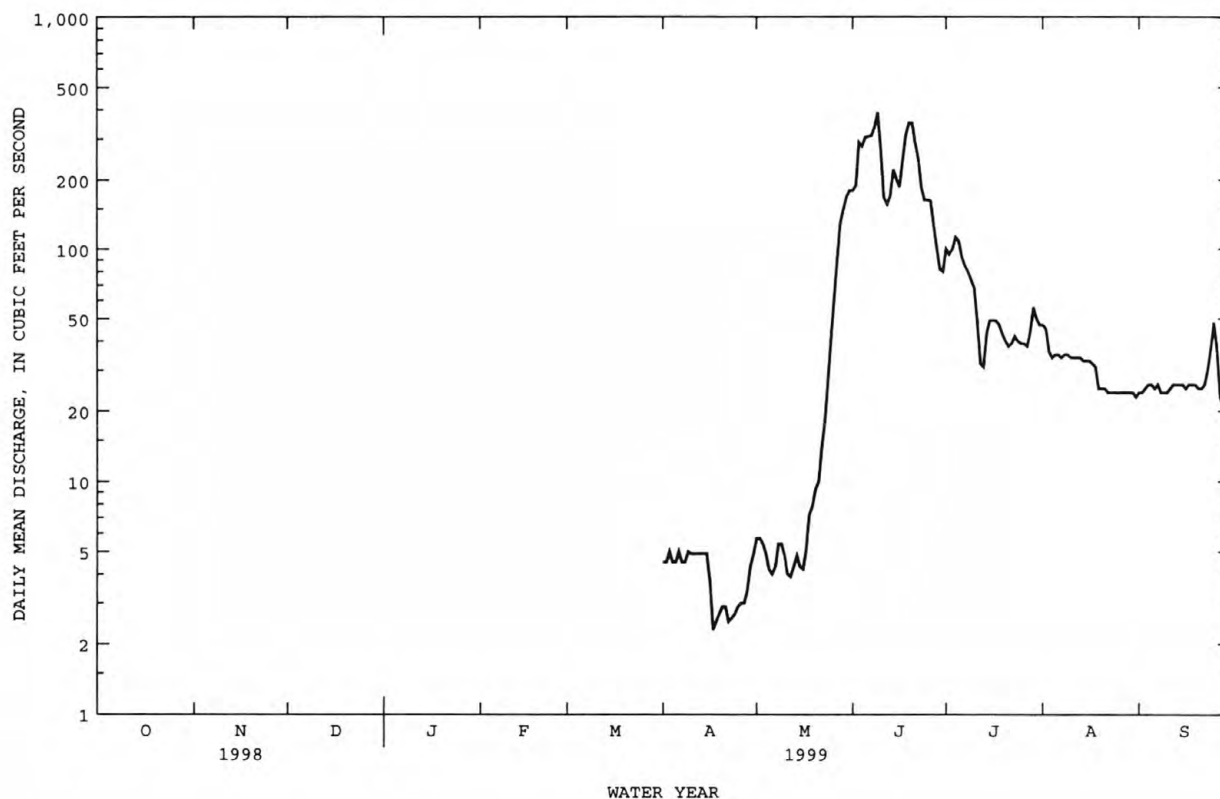
WATER YEARS 1954 - 1999*

ANNUAL MEAN	--		34.3	
HIGHEST ANNUAL MEAN	--		45.7	1965
LOWEST ANNUAL MEAN	--		21.7	1960
HIGHEST DAILY MEAN	390	Jun 9	674	Jun 16 1995
LOWEST DAILY MEAN	2.3	Apr 17	.80	Several days, 1963, 1964
INSTANTANEOUS PEAK FLOW	443	Jun 9	1030 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	4.01	Jun 9	5.37	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		24880	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a From rating curve extended above 410 ft³/s on basis of velocity-area study.

e Estimated.



YELLOWSTONE RIVER BASIN

06302000 BIG GOOSE CREEK NEAR SHERIDAN, WY

LOCATION.--Lat 44°42'08", long 107°10'51", in NW¹/₄ NE¹/₄ sec.35, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.4 mi upstream from Cave Creek and 14 mi southwest of Sheridan.

DRAINAGE AREA.--120 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1929 to current year (no winter records since 1971). Prior to October 1960, published as Goose Creek near Sheridan. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1006: Drainage area. WSP 1509: 1930(M), 1931.

GAGE.--Water-stage recorder. Elevation of gage is 4,505 ft above sea level, from topographic map.

REMARKS.--Records good except for those estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation of about 20 acres and to Sheridan Filtration plant, and return flow from irrigated areas. PK ditch diverts water 0.6 mi upstream from station for irrigation of lands downstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 2 . . . 13.0

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e20	154	525	152	34	32
2	---	---	---	---	---	---	e21	154	570	138	34	34
3	---	---	---	---	---	---	e21	148	754	129	29	43
4	---	---	---	---	---	---	e20	133	748	152	27	69
5	---	---	---	---	---	---	e20	111	772	172	28	57
6	---	---	---	---	---	---	e21	104	862	155	31	45
7	---	---	---	---	---	---	20	107	848	117	29	39
8	---	---	---	---	---	---	20	110	848	87	27	36
9	---	---	---	---	---	---	20	104	1020	74	29	35
10	---	---	---	---	---	---	21	98	784	63	32	30
11	---	---	---	---	---	---	19	87	560	52	32	26
12	---	---	---	---	---	---	21	86	445	30	35	27
13	---	---	---	---	---	---	21	90	472	24	36	24
14	---	---	---	---	---	---	23	93	545	28	33	22
15	---	---	---	---	---	---	20	89	515	38	31	21
16	---	---	---	---	---	---	20	85	436	36	30	23
17	---	---	---	---	---	---	19	85	481	38	27	26
18	---	---	---	---	---	---	25	102	688	36	25	22
19	---	---	---	---	---	---	31	123	766	29	21	23
20	---	---	---	---	---	---	40	131	796	27	21	23
21	---	---	---	---	---	---	42	157	700	24	24	21
22	---	---	---	---	---	---	36	187	585	21	24	21
23	---	---	---	---	---	---	33	201	418	28	25	23
24	---	---	---	---	---	---	32	227	327	31	27	31
25	---	---	---	---	---	---	36	243	292	24	27	42
26	---	---	---	---	---	---	44	257	280	22	26	40
27	---	---	---	---	---	---	61	389	240	20	26	29
28	---	---	---	---	---	---	69	472	189	21	30	26
29	---	---	---	---	---	---	126	540	138	30	30	25
30	---	---	---	---	---	---	150	585	138	31	28	22
31	---	---	---	---	---	---	---	550	---	34	27	---
TOTAL	---	---	---	---	---	---	1072	6002	16742	1863	885	937
MEAN	---	---	---	---	---	---	35.7	194	558	60.1	28.5	31.2
MAX	---	---	---	---	---	---	150	585	1020	172	36	69
MIN	---	---	---	---	---	---	19	85	138	20	21	21
AC-FT	---	---	---	---	---	---	2130	11900	33210	3700	1760	1860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)*

	MEAN	27.7	18.6	14.0	11.9	10.2	10.4	32.8	216	423	92.8	31.7	29.5
MAX	93.3	48.0	30.3	22.0	18.2	20.2	102	576	954	340	71.7	116	
(WY)	1947	1942	1951	1951	1951	1946	1943	1944	1995	1975	1968	1941	
MIN	9.68	7.08	5.19	2.66	2.90	2.75	11.5	37.2	49.6	22.3	10.3	11.3	
(WY)	1953	1940	1955	1955	1955	1937	1970	1960	1934	1961	1934	1931	

06302000 BIG GOOSE CREEK NEAR SHERIDAN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

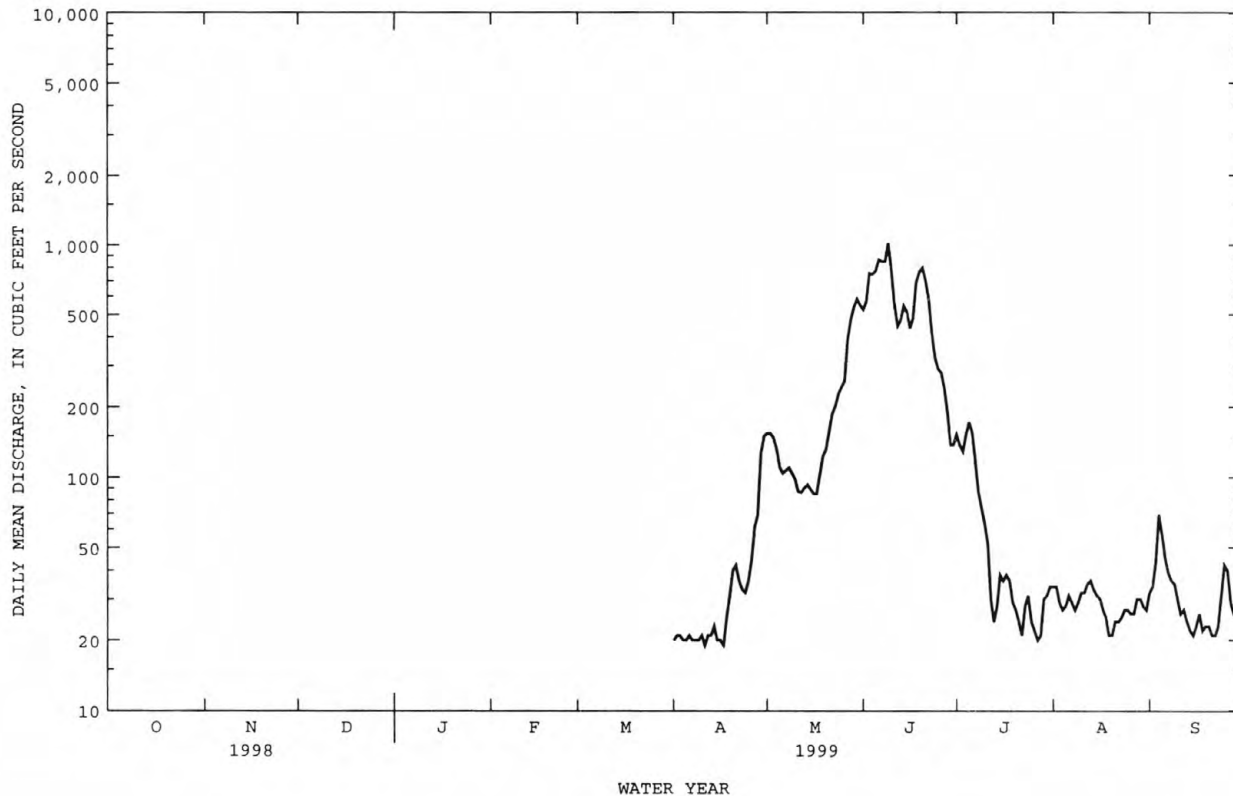
WATER YEARS 1930 - 1999*

ANNUAL MEAN	--		80.2	
HIGHEST ANNUAL MEAN	--		137	1944
LOWEST ANNUAL MEAN	--		26.6	1960
HIGHEST DAILY MEAN	1020	Jun 9	2050	Jun 16 1963
LOWEST DAILY MEAN	19	Apr 11,12	1.6	Nov 29 1954
INSTANTANEOUS PEAK FLOW	1310	Jun 9	3160 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	4.13	Jun 9	5.83	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		58100	

* During period of operation.

a From rating curve extended above 1,600 ft³/s.

e Estimated.



YELLOWSTONE RIVER BASIN

06302000 BIG GOOSE CREEK NEAR SHERIDAN, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1986 to March 1999 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 24...	1535	320	67	7.7	2.5	10.0	643	11.9	103	K7
FEB 18...	1605	19	88	7.7	1.0	4.0	635	11.1	94	K2

K Results based on colony count outside the acceptable range (non-ideal colony count).

06302200 BIG GOOSE CREEK ABOVE PARK CREEK, NEAR SHERIDAN, WY

LOCATION.--Lat 44°44'35", long 107°07'45", in NW¹/₄ SE¹/₄ NW¹/₄ sec.17, T.55 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on right bank 5 ft downstream from bridge on County Road 53, 0.5 mi south of Beckton, and 9.5 mi southwest of Sheridan.

DRAINAGE AREA.--Undetermined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to September 1999.

GAGE.--Water-stage recorder. Elevation of gage is 4,070 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which were poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation and to Sheridan Filtration plant, and return flow from irrigated areas. Data collection platform with satellite telemetry at station. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation are given below:

May 17. . . 115
June 18. . . 757

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e150	7.9	7.6
2	---	---	---	---	---	---	---	---	---	e140	8.3	13
3	---	---	---	---	---	---	---	---	---	e130	6.2	26
4	---	---	---	---	---	---	---	---	---	e150	4.3	73
5	---	---	---	---	---	---	---	---	---	e170	5.2	58
6	---	---	---	---	---	---	---	---	---	e150	6.6	43
7	---	---	---	---	---	---	---	---	---	e120	4.5	27
8	---	---	---	---	---	---	---	---	---	108	2.5	25
9	---	---	---	---	---	---	---	---	---	86	2.0	23
10	---	---	---	---	---	---	---	---	---	69	4.3	18
11	---	---	---	---	---	---	---	---	---	63	5.3	13
12	---	---	---	---	---	---	---	---	---	31	8.1	15
13	---	---	---	---	---	---	---	---	---	17	9.9	14
14	---	---	---	---	---	---	---	---	---	18	6.1	13
15	---	---	---	---	---	---	---	---	---	29	7.1	12
16	---	---	---	---	---	---	---	---	---	28	5.7	11
17	---	---	---	---	---	---	---	---	---	33	4.2	16
18	---	---	---	---	---	---	---	---	---	30	2.8	12
19	---	---	---	---	---	---	---	---	---	e1110	2.1	16
20	---	---	---	---	---	---	---	---	---	1200	1.9	14
21	---	---	---	---	---	---	---	---	1050	13	3.1	11
22	---	---	---	---	---	---	---	---	806	9.5	2.3	10
23	---	---	---	---	---	---	---	---	562	6.0	2.3	13
24	---	---	---	---	---	---	---	---	410	13	3.9	20
25	---	---	---	---	---	---	---	---	372	3.3	4.2	33
26	---	---	---	---	---	---	---	---	361	2.7	3.7	36
27	---	---	---	---	---	---	---	---	303	1.8	3.6	23
28	---	---	---	---	---	---	---	---	228	1.4	6.8	21
29	---	---	---	---	---	---	---	---	e150	3.6	8.6	19
30	---	---	---	---	---	---	---	---	e140	4.5	6.8	14
31	---	---	---	---	---	---	---	---	---	7.6	5.8	---
TOTAL	---	---	---	---	---	---	---	---	---	1627.4	156.1	649.6
MEAN	---	---	---	---	---	---	---	---	---	52.5	5.04	21.7
MAX	---	---	---	---	---	---	---	---	---	170	9.9	73
MIN	---	---	---	---	---	---	---	---	---	1.4	1.9	7.6
AC-FT	---	---	---	---	---	---	---	---	---	3230	310	1290

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

MEAN	---	---	---	---	---	---	---	---	---	52.5	5.04	21.7
MAX	---	---	---	---	---	---	---	---	---	52.5	5.04	21.7
(WY)	---	---	---	---	---	---	---	---	---	1999	1999	1999
MIN	---	---	---	---	---	---	---	---	---	52.5	5.04	21.7
(WY)	---	---	---	---	---	---	---	---	---	1999	1999	1999

YELLOWSTONE RIVER BASIN

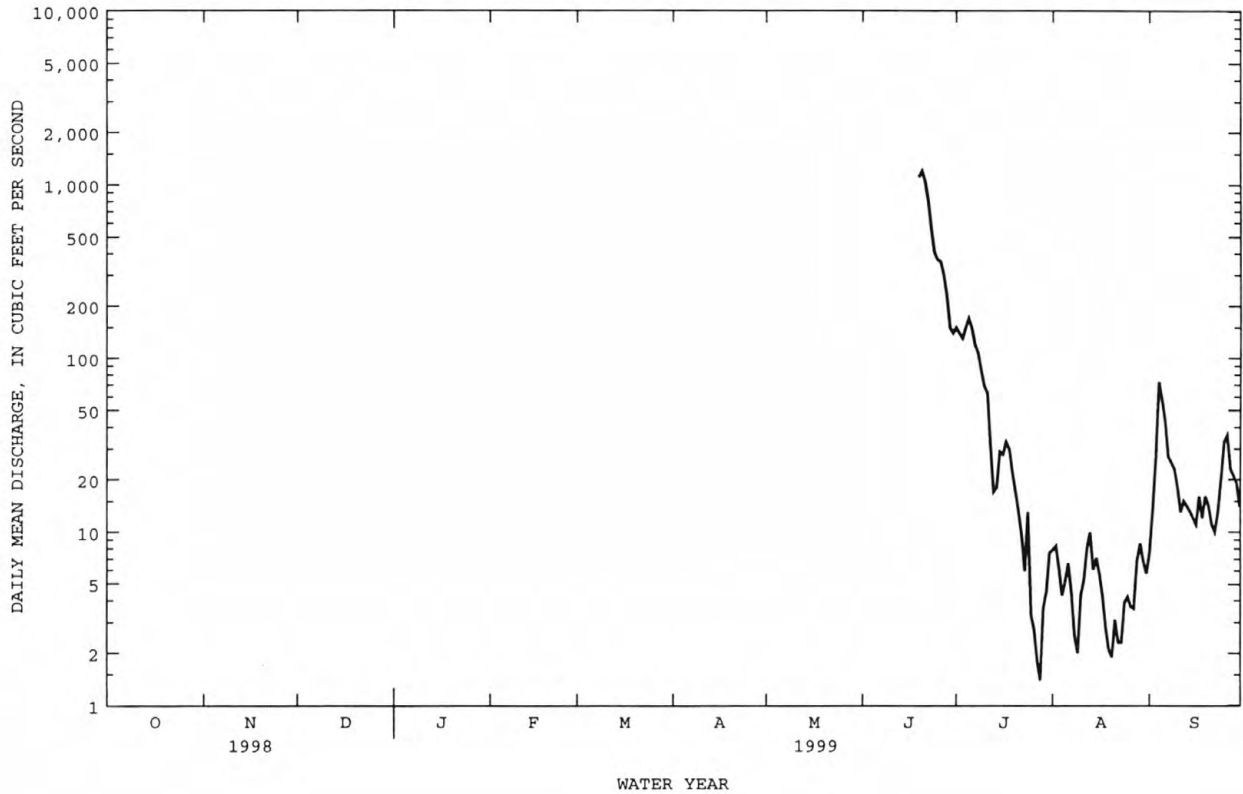
06302200 BIG GOOSE CREEK ABOVE PARK CREEK, NEAR SHERIDAN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

HIGHEST DAILY MEAN	1200	Jun 20
LOWEST DAILY MEAN	1.4	Jul 28
INSTANTANEOUS PEAK FLOW	1420	Jun 20
INSTANTANEOUS PEAK STAGE	6.97	Jun 20

* During period of operation.
e Estimated.



06302200 BIG GOOSE CREEK ABOVE PARK CREEK, NEAR SHERIDAN, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
MAY 17...	1500	116	162	8.4	9.5	17.0	659	10.3	104	K22
JUL 28...	1730	1.2	834	7.7	23.5	37.5	658	8.0	110	1000

K Results based on colony count outside the acceptable range (non-ideal colony count).

YELLOWSTONE RIVER BASIN

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY

LOCATION.--Lat 44°35'46", long 107°02'22", in SE¹/₄ SW¹/₄ NE¹/₄ sec.1, T.53 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on left bank 100 ft upstream from headgate of Lower Peralta ditch and 6.5 mi southwest of Big Horn.

DRAINAGE AREA.--51.6 mi².

PERIOD OF RECORD.--April 1941 to current year (no winter records since 1971).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above sea level, from topographic map.

REMARKS.--Records good. Three small reservoirs upstream from station, combined capacity, 860 acre-ft, two of which store some imported water. Water imported into drainage basin upstream from station from East Goose Creek basin is diverted downstream from station for irrigation. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 6 . . . 45.2

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	261	348	149	98	71
2	---	---	---	---	---	---	16	252	361	131	99	72
3	---	---	---	---	---	---	16	236	400	115	101	73
4	---	---	---	---	---	---	15	211	378	112	104	76
5	---	---	---	---	---	---	15	179	395	118	107	64
6	---	---	---	---	---	---	15	161	479	118	110	59
7	---	---	---	---	---	---	16	155	435	110	110	52
8	---	---	---	---	---	---	18	147	447	104	108	51
9	---	---	---	---	---	---	20	141	430	96	107	50
10	---	---	---	---	---	---	20	134	352	91	107	48
11	---	---	---	---	---	---	19	123	333	85	108	48
12	---	---	---	---	---	---	21	119	333	81	108	48
13	---	---	---	---	---	---	23	119	317	89	101	47
14	---	---	---	---	---	---	26	118	333	84	92	48
15	---	---	---	---	---	---	25	115	328	81	90	47
16	---	---	---	---	---	---	25	111	304	89	87	48
17	---	---	---	---	---	---	25	110	319	97	80	46
18	---	---	---	---	---	---	31	118	322	93	79	43
19	---	---	---	---	---	---	42	133	344	97	77	45
20	---	---	---	---	---	---	55	147	311	97	77	45
21	---	---	---	---	---	---	60	176	295	91	72	36
22	---	---	---	---	---	---	57	210	284	91	72	35
23	---	---	---	---	---	---	54	229	263	91	71	33
24	---	---	---	---	---	---	53	272	236	94	69	33
25	---	---	---	---	---	---	55	319	227	93	68	33
26	---	---	---	---	---	---	63	346	206	94	68	34
27	---	---	---	---	---	---	81	372	198	101	67	34
28	---	---	---	---	---	---	102	390	181	100	68	33
29	---	---	---	---	---	---	209	412	155	100	67	31
30	---	---	---	---	---	---	254	415	155	100	68	26
31	---	---	---	---	---	---	---	361	---	99	71	---
TOTAL	---	---	---	---	---	---	---	6592	9469	3091	2711	1409
MEAN	---	---	---	---	---	---	---	213	316	99.7	87.5	47.0
MAX	---	---	---	---	---	---	---	415	479	149	110	76
MIN	---	---	---	---	---	---	---	110	155	81	67	26
AC-FT	---	---	---	---	---	---	---	13080	18780	6130	5380	2790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)*

	MEAN	23.6	13.1	10.4	8.58	8.11	8.48	35.2	179	242	105	81.4	52.5
MAX	46.0	26.5	17.5	12.3	13.9	14.1	106	339	502	209	124	90.0	
(WY)	1959	1962	1942	1942	1962	1962	1943	1944	1995	1975	1968	1978	
MIN	12.7	8.51	6.49	4.99	5.38	5.76	9.46	80.4	83.2	66.6	41.1	20.4	
(WY)	1954	1955	1950	1950	1950	1950	1970	1950	1994	1981	1981	1960	

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY--Continued

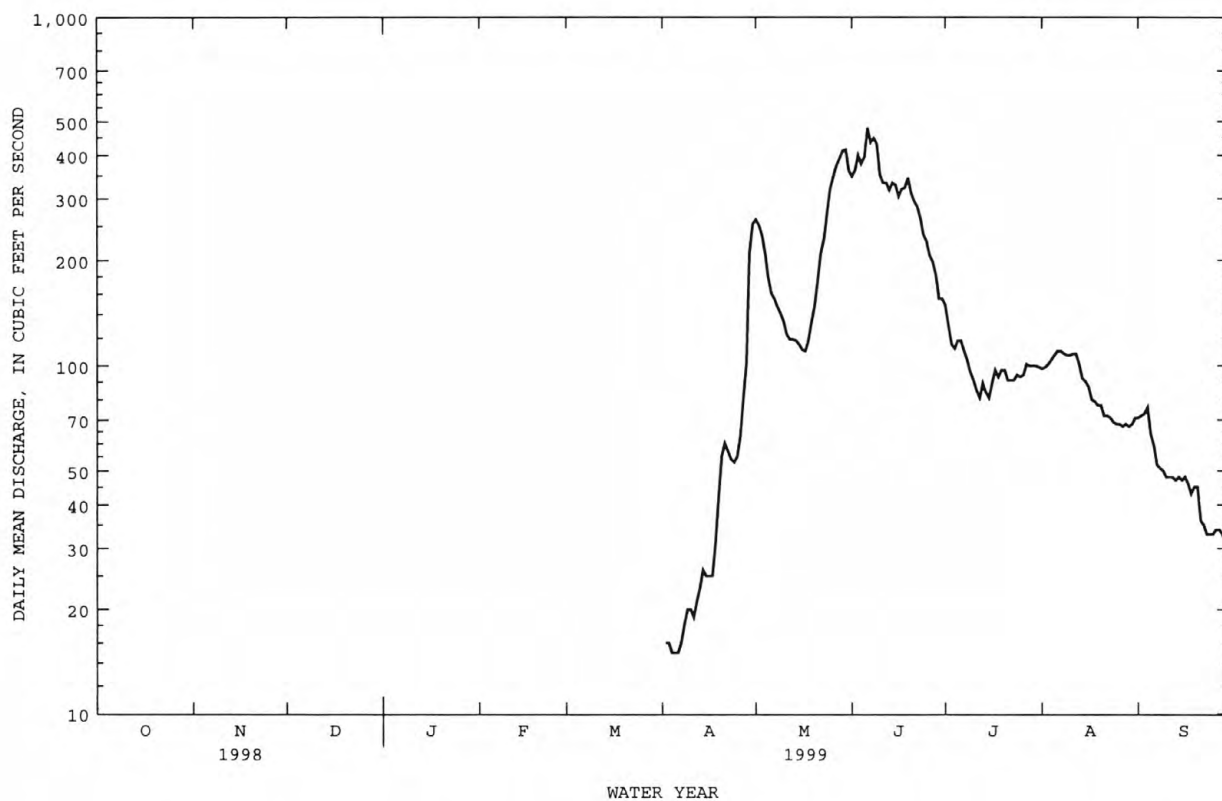
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1941 - 1999*

ANNUAL MEAN	--		63.4	
HIGHEST ANNUAL MEAN	--		83.9	1970
LOWEST ANNUAL MEAN	--		40.6	1960
HIGHEST DAILY MEAN	479	Jun 6	837	Jun 15 1963
LOWEST DAILY MEAN	26	Sep 30	3.0	Jan 3 1950
INSTANTANEOUS PEAK FLOW	589	Jun 6	1350 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	4.74	Jun 6	6.78	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		45900	

* During period of operation.

^a From rating curve extended above 900 ft³/s.

YELLOWSTONE RIVER BASIN

06303700 LITTLE GOOSE CREEK ABOVE DAVIS CREEK, NEAR BIG HORN, WY

LOCATION.--Lat 44°37'15", long 107°02'15", in NW¹/₄ SE¹/₄ SE¹/₄ sec.25, T.54 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on right bank 5 ft downstream from bridge on County Road 77, 0.25 mi south of General Crooks Camp, and 6.2 mi southwest of Big Horn.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 1999.

GAGE.--Water-stage recorder. Elevation of gage is 4,515 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas. U.S. Geological Survey data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

June 17. . . 302

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e150	62	52
2	---	---	---	---	---	---	---	---	---	e145	63	51
3	---	---	---	---	---	---	---	---	---	e140	66	53
4	---	---	---	---	---	---	---	---	---	e130	70	54
5	---	---	---	---	---	---	---	---	---	e110	72	43
6	---	---	---	---	---	---	---	---	---	e90	75	38
7	---	---	---	---	---	---	---	---	---	e81	74	34
8	---	---	---	---	---	---	---	---	---	78	72	35
9	---	---	---	---	---	---	---	---	---	72	72	33
10	---	---	---	---	---	---	---	---	---	63	72	31
11	---	---	---	---	---	---	---	---	---	58	73	31
12	---	---	---	---	---	---	---	---	---	56	73	31
13	---	---	---	---	---	---	---	---	---	61	68	31
14	---	---	---	---	---	---	---	---	---	58	61	32
15	---	---	---	---	---	---	---	---	---	58	60	32
16	---	---	---	---	---	---	---	---	---	64	57	33
17	---	---	---	---	---	---	---	---	---	71	55	31
18	---	---	---	---	---	---	---	---	---	65	56	28
19	---	---	---	---	---	---	---	---	---	69	56	30
20	---	---	---	---	---	---	---	---	e310	67	56	29
21	---	---	---	---	---	---	---	---	296	62	50	23
22	---	---	---	---	---	---	---	---	287	61	49	21
23	---	---	---	---	---	---	---	---	257	61	47	20
24	---	---	---	---	---	---	---	---	241	62	47	22
25	---	---	---	---	---	---	---	---	233	61	47	27
26	---	---	---	---	---	---	---	---	216	63	47	28
27	---	---	---	---	---	---	---	---	207	67	46	28
28	---	---	---	---	---	---	---	---	190	65	48	28
29	---	---	---	---	---	---	---	---	159	64	49	26
30	---	---	---	---	---	---	---	---	e150	63	50	21
31	---	---	---	---	---	---	---	---	---	63	52	---
TOTAL	---	---	---	---	---	---	---	---	---	2378	1845	976
MEAN	---	---	---	---	---	---	---	---	---	76.7	59.5	32.5
MAX	---	---	---	---	---	---	---	---	---	150	75	54
MIN	---	---	---	---	---	---	---	---	---	56	46	20
AC-FT	---	---	---	---	---	---	---	---	---	4720	3660	1940

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

MEAN	---	---	---	---	---	---	---	---	---	76.7	59.5	32.5
MAX	---	---	---	---	---	---	---	---	---	76.7	59.5	32.5
(WY)	---	---	---	---	---	---	---	---	---	1999	1999	1999
MIN	---	---	---	---	---	---	---	---	---	76.7	59.5	32.5
(WY)	---	---	---	---	---	---	---	---	---	1999	1999	1999

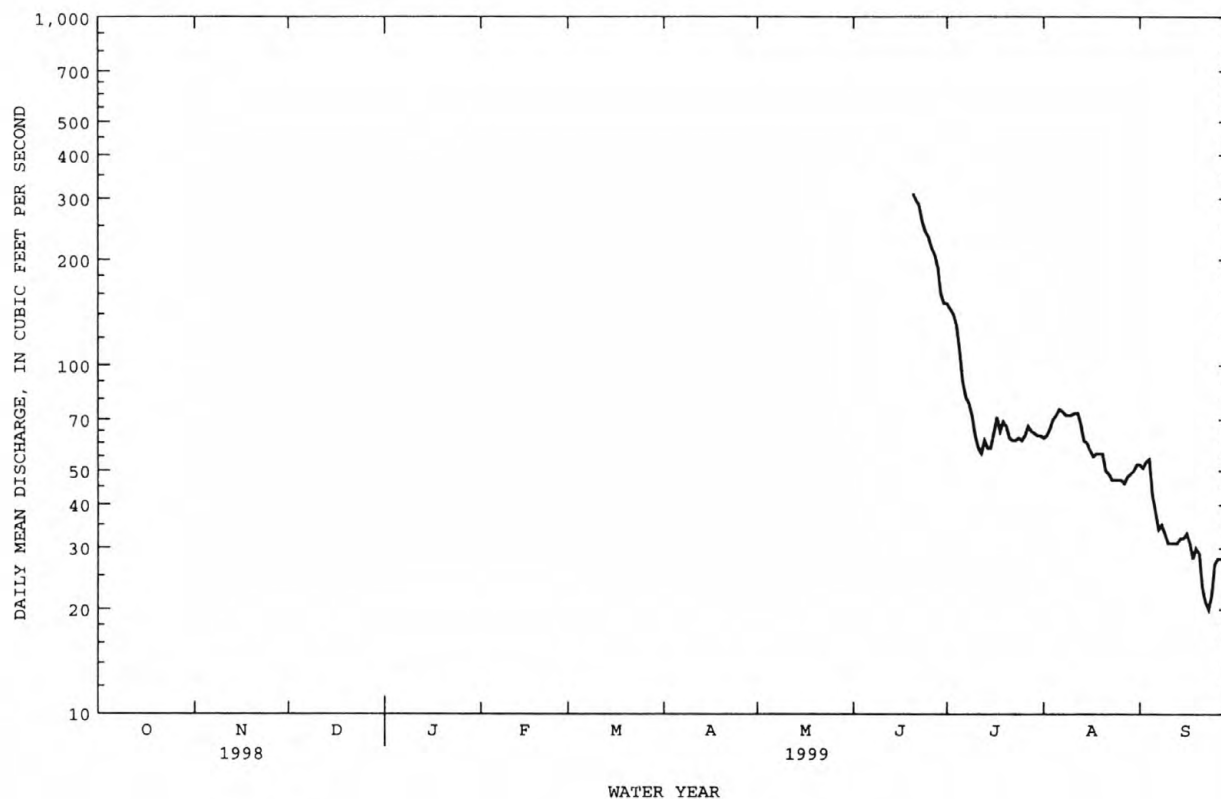
06303700 LITTLE GOOSE CREEK ABOVE DAVIS CREEK, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

HIGHEST DAILY MEAN	310	Jun 20
LOWEST DAILY MEAN	20	Sep 23
INSTANTANEOUS PEAK FLOW	371	Jun 20
INSTANTANEOUS PEAK STAGE	4.28	Jun 28

* During period of operation.
e Estimated.



YELLOWSTONE RIVER BASIN

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44°48'10", long 106°57'10", in NE¹/₄ NW¹/₄ SW¹/₄ sec.26, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on Sheridan Avenue in Sheridan and 0.6 mi upstream from mouth.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 23...	1450	70	504	8.5	4.0	7.0	666	12.3	108	K9
FEB 18...	1645	34	625	8.4	3.0	6.0	666	14.0	119	K8
MAY 17...	1655	199	375	8.5	11.5	18.0	666	11.0	116	K16
JUL 29...	0745	11	786	7.8	20.0	24.0	665	7.3	93	K240

K Results based on colony count outside the acceptable range (non-ideal colony count).

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44°49'25", long 106°57'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, 700 ft north of Sheridan city limits and 0.2 mi downstream from Soldier Creek.

DRAINAGE AREA.--392 mi².

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV 23...	1550	130	504	8.5	4.0	14.0	666
FEB 18...	1435	78	572	8.4	3.0	7.0	668
MAY 17...	1900	354	379	8.5	11.5	18.0	667
JUL 29...	0650	14	804	7.6	20.5	21.0	666
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 23...	13.5	118	400	<.01	.13	.03	.07
FEB 18...	13.5	115	K82	<.01	.31	.02	.11
MAY 17...	10.6	111	95	<.01	.10	<.02	.02
JUL 29...	6.1	78	480	<.01	.81	.03	.26

K Results based on colony count outside the acceptable range (non-ideal colony count).

YELLOWSTONE RIVER BASIN

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44°53'11", long 106°59'18", in SE¹/₄ SE¹/₄ NE¹/₄ sec.28, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.2 mi north of county road, 1.6 mi south of Acme, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--411 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	165	126	e110	e100	e105	98	626	1000	397	29	41
2	142	168	125	e100	e105	e99	91	626	1020	369	39	53
3	158	188	125	e91	e100	e93	93	601	1130	328	37	87
4	181	190	123	e100	e97	e87	87	609	1270	322	35	290
5	199	e160	122	e112	e98	e92	87	559	1220	334	35	241
6	167	e135	e84	e118	e105	e90	97	467	1440	332	38	168
7	175	e110	e79	e110	e115	e87	110	437	1630	298	49	132
8	168	e96	e86	e99	e110	e92	124	436	1520	237	48	120
9	162	e110	e90	e114	e104	e95	117	429	1610	199	42	117
10	149	e115	e87	e128	e100	e96	144	447	1530	164	42	114
11	136	e125	e85	e140	e95	e100	119	415	1170	153	46	115
12	132	e135	e96	e130	e90	e104	110	381	914	121	55	117
13	127	e150	e105	e126	e93	e108	107	371	915	90	69	114
14	126	e170	e110	e120	e96	e116	157	384	927	74	86	113
15	127	180	120	e120	e94	e120	151	386	1020	71	75	107
16	145	168	114	e116	e89	e104	131	420	905	71	66	97
17	198	160	115	e108	e94	88	121	383	850	68	60	89
18	172	152	e105	e110	e97	84	125	376	1030	71	52	90
19	151	149	e64	e120	e100	82	133	403	1170	65	49	86
20	143	e135	e58	e110	e105	84	155	416	1250	57	43	101
21	137	e140	e54	e110	e100	89	239	450	1170	58	42	94
22	132	146	e50	e120	e95	91	261	538	1050	53	44	84
23	130	143	e60	e110	e100	91	319	584	897	47	44	79
24	133	140	e80	e95	e108	92	245	644	682	46	43	79
25	135	131	e100	e83	e120	94	219	706	620	44	40	87
26	134	132	e115	e79	e130	98	233	730	576	36	36	109
27	134	130	e130	e86	e120	100	277	821	541	33	32	117
28	149	130	e140	e91	e110	94	294	942	503	33	31	125
29	215	127	e130	e95	---	85	431	1050	387	27	33	120
30	184	126	e130	e99	---	84	671	1160	368	24	38	116
31	169	---	e120	e98	---	82	---	1140	---	26	41	---
TOTAL	4753	4306	3128	3348	2870	2926	5546	17937	30315	4248	1419	3402
MEAN	153	144	101	108	102	94.4	185	579	1010	137	45.8	113
MAX	215	190	140	140	130	120	671	1160	1630	397	86	290
MIN	126	96	50	79	89	82	87	371	368	24	29	41
AC-FT	9430	8540	6200	6640	5690	5800	11000	35580	60130	8430	2810	6750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

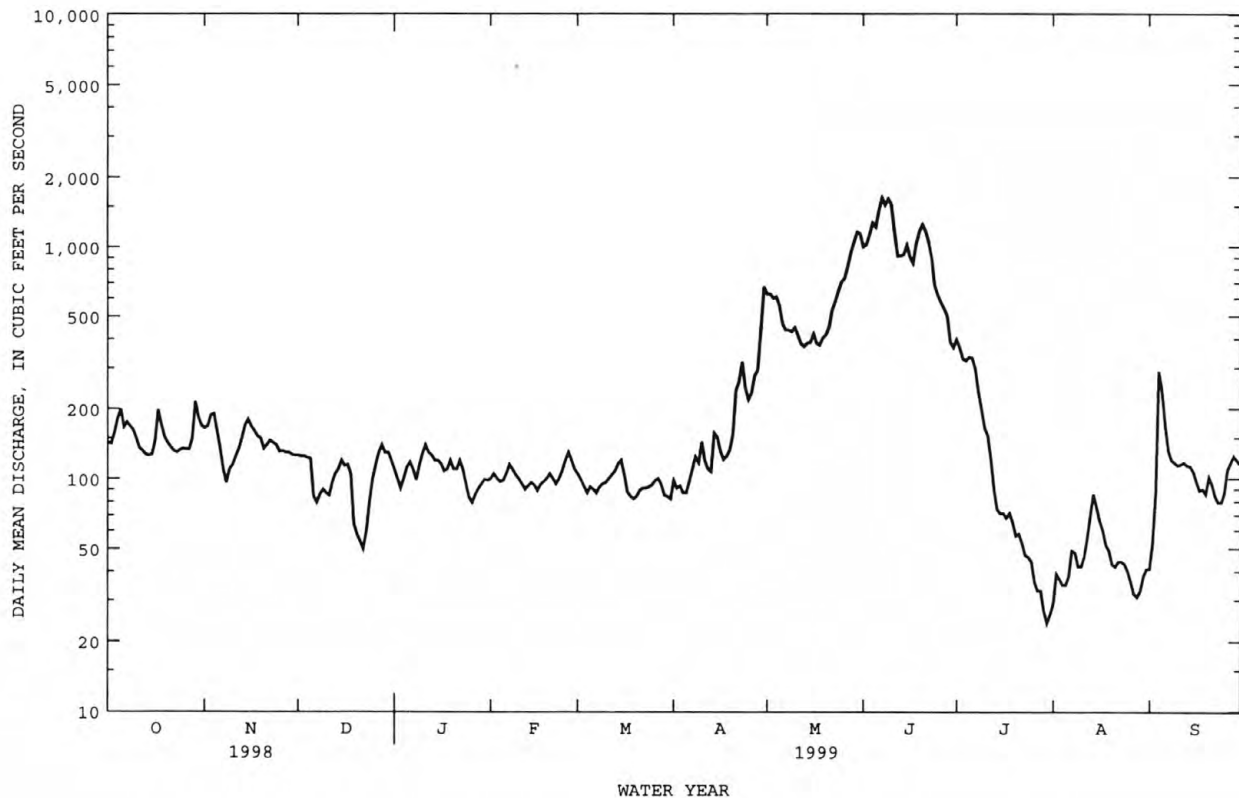
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	108	100	83.1	72.6	87.8	105	142	412	643	168	66.7	93.0				
MAX	156	144	107	109	137	185	195	891	1592	547	157	158				
(WY)	1985	1999	1996	1990	1996	1994	1994	1984	1995	1995	1998	1998				
MIN	49.9	59.4	54.2	48.4	36.7	70.3	72.0	98.4	90.6	20.1	15.6	33.3				
(WY)	1989	1989	1986	1989	1989	1992	1989	1989	1994	1988	1988	1988				

06305700 GOOSE CREEK NEAR ACME, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	59705		84198		--	
ANNUAL MEAN	164		231		167	
HIGHEST ANNUAL MEAN	--		--		303	
LOWEST ANNUAL MEAN	--		--		71.8	
HIGHEST DAILY MEAN	652	Jun 25	1630	Jun 7	3040	Jun 17 1995
LOWEST DAILY MEAN	33	Jul 22	24	Jul 30	8.4	Aug 26 1988
ANNUAL SEVEN-DAY MINIMUM	39	Jul 19	30	Jul 26	10	Aug 21 1988
INSTANTANEOUS PEAK FLOW	--		1770	Jun 9	3330	Jun 17 1995
INSTANTANEOUS PEAK STAGE	--		5.84	Jun 9	7.65 ^a	Feb 25 1986
ANNUAL RUNOFF (AC-FT)	118400		167000		120900	
10 PERCENT EXCEEDS	305		613		376	
50 PERCENT EXCEEDS	132		117		96	
90 PERCENT EXCEEDS	70		53		46	

a From floodmarks, backwater from ice.

e Estimated.



LOCATION.--Lat 45°00'32", long 106°50'08", in NW¼NW¼NE¼ sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi north of Wyoming-Montana State line, 1.4 mi southeast of Decker, 1.6 mi upstream from Badger Creek, and at river mile 200.9.

WATER-DISCHARGE RECORDS

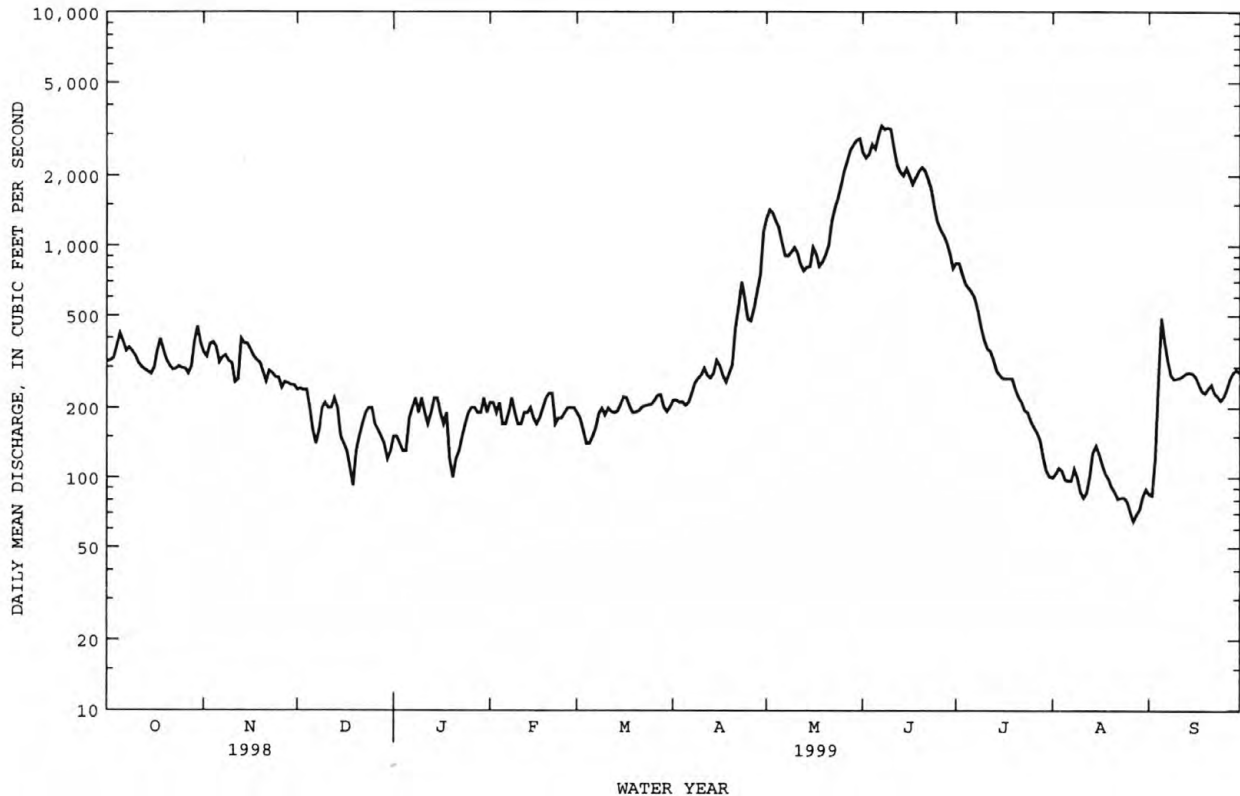
REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft. Diversions for irrigation of about 64,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

[illegible]

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1961 - 1999
ANNUAL TOTAL	141172	180573	--
ANNUAL MEAN	387	495	463
HIGHEST ANNUAL MEAN	--	--	862
LOWEST ANNUAL MEAN	--	--	187
HIGHEST DAILY MEAN	1310	3270	15400
LOWEST DAILY MEAN	92	65	5.4
ANNUAL SEVEN-DAY MINIMUM	126	74	7.2
INSTANTANEOUS PEAK FLOW	--	3350	17500
INSTANTANEOUS PEAK STAGE	--	7.41	14.25
ANNUAL RUNOFF (AC-FT)	280000	358200	335400
10 PERCENT EXCEEDS	813	1290	1110
50 PERCENT EXCEEDS	305	244	240
90 PERCENT EXCEEDS	160	120	122

e Estimated.



YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to September 1976, November 1980 to December 1986.

WATER TEMPERATURE: October 1965 to September 1976.

REMARKS.--Unpublished records for many days of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1966-76, 1981-87): Maximum daily, 1,490 microsiemens per centimeter (mS/cm) at 25.0°C, Aug. 12, 1966, Jan. 11, 1972; minimum daily, 192 microsiemens per centimeter (mS/cm) at 25.0°C, June 7, 1976.

WATER TEMPERATURE (water years 1966-76): Maximum, 30.5°C, July 16, 1966; minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV												
24...	1245	252	593	8.7	4.0	6.5	668	15.6	136	270	53	34
FEB												
18...	0925	183	676	8.0	0.0	9.0	676	13.2	102	320	63	39
MAY												
18...	0845	718	514	8.2	9.5	9.0	674	9.5	94	220	45	27
JUL												
28...	1530	140	540	8.3	27.0	39.5	672	8.6	123	240	52	27

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV											
24...	24	.6	2.3	201	120	3.2	.2	5.5	362	.49	247
FEB											
18...	29	.7	2.5	226	150	4.0	.1	7.3	428	.58	211
MAY											
18...	21	.6	2.4	167	110	3.0	.2	9.0	321	.44	622
JUL											
28...	19	.5	2.5	196	88	3.1	.2	3.6	313	.43	118

LOCATION.--Lat 43°34'40", long 107°08'16", in SE¹/₄ SW¹/₄ NE¹/₄ sec.26, T.42 N., R.86 W., Washakie County, Hydrologic Unit 10090201, on left bank 1,100 ft downstream from Rock Creek and 13 mi southwest of Barnum.

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,220 ft above sea level, from topographic map. Prior to Oct. 1, 1970, at site 1,000 ft upstream at different datum. Oct. 1, 1970 to Aug. 17, 1987, at site 100 ft upstream at datum 6.78 ft higher (gage operated concurrently with present site Sept. 15, 1983 to Aug. 17, 1987).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 29	1215	*1220	*9.75
May 26	2130	1150	9.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	34	15	e7.8	7.6	6.3	e17	875	185	26	12	10
2	7.8	34	14	e7.2	7.4	6.3	e15	618	170	21	11	10
3	8.4	33	14	e7.0	7.4	6.4	e14	431	158	19	10	14
4	9.4	31	14	e7.9	7.4	6.3	e15	286	135	18	11	17
5	8.6	35	e13	e8.8	7.2	6.4	e14	193	146	18	11	12
6	9.8	30	e11	e8.4	7.0	e6.0	e15	156	165	17	11	10
7	11	28	e9.7	7.9	7.0	e6.3	e16	153	130	16	10	9.6
8	12	31	e10	7.8	7.0	6.6	e17	205	120	16	10	9.3
9	11	25	e11	7.8	7.0	6.6	e16	318	110	15	10	9.1
10	9.9	26	e12	7.8	e6.8	6.5	14	240	105	14	10	8.7
11	10	e24	e13	7.8	e6.4	6.6	e17	177	97	15	11	8.7
12	10	e21	e14	7.8	e6.7	6.6	e19	153	85	15	12	8.7
13	10	e22	e13	7.8	e6.9	7.1	e20	183	78	14	11	8.5
14	9.8	23	12	7.5	7.0	7.5	e22	189	72	13	10	8.2
15	9.5	23	12	7.4	7.0	7.9	e23	169	70	13	10	8.2
16	9.5	22	11	7.4	7.0	8.2	e22	153	64	14	10	8.5
17	9.2	21	11	7.4	7.0	e7.8	e24	137	60	15	9.8	8.7
18	10	21	e11	7.4	6.8	e8.3	28	180	59	13	9.5	8.7
19	9.6	20	e9.3	7.4	7.0	8.8	37	276	52	13	9.3	8.7
20	9.7	e19	e7.6	7.6	7.0	10	72	353	47	13	9.1	8.7
21	9.3	e18	e6.0	7.8	7.0	11	117	493	43	13	9.1	8.7
22	10	19	e5.6	7.8	6.9	11	80	491	39	13	8.9	8.7
23	11	18	e6.0	7.8	7.0	12	60	464	35	12	8.7	8.7
24	11	16	e6.6	7.8	7.0	14	60	498	32	12	8.5	8.7
25	11	e15	e7.2	7.8	6.8	16	59	500	29	12	8.2	8.5
26	11	e16	e7.7	7.8	6.5	23	57	534	27	12	8.2	8.5
27	10	16	e8.3	7.8	6.3	e21	84	539	25	12	8.2	8.5
28	51	16	e8.7	7.8	6.3	e19	181	354	24	12	9.2	8.1
29	67	16	e9.2	7.8	---	e17	954	315	23	11	8.7	7.8
30	44	15	e8.8	7.8	---	e19	885	268	27	12	8.7	7.6
31	39	---	e8.2	7.8	---	e20	---	216	---	12	9.1	---
TOTAL	467.3	688	319.9	239.7	194.4	325.5	2974	10117	2412	451	303.2	279.1
MEAN	15.1	22.9	10.3	7.73	6.94	10.5	99.1	326	80.4	14.5	9.78	9.30
MAX	67	35	15	8.8	7.6	23	954	875	185	26	12	17
MIN	7.8	15	5.6	7.0	6.3	6.0	14	137	23	11	8.2	7.6
AC-FT	927	1360	635	475	386	646	5900	20070	4780	895	601	555

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

MEAN	7.17	6.67	5.76	5.19	5.33	6.70	34.7	163	95.5	18.7	8.83	7.41
MAX	15.1	22.9	10.3	7.78	10.1	14.2	106	326	299	39.9	18.3	17.0
(WY)	1999	1999	1999	1983	1969	1972	1987	1999	1975	1975	1968	1968
MIN	2.45	2.00	2.75	2.48	3.74	4.05	8.00	56.2	18.1	7.26	4.34	4.16
(WY)	1963	1963	1962	1962	1989	1965	1970	1992	1985	1974	1966	1969

YELLOWSTONE RIVER BASIN

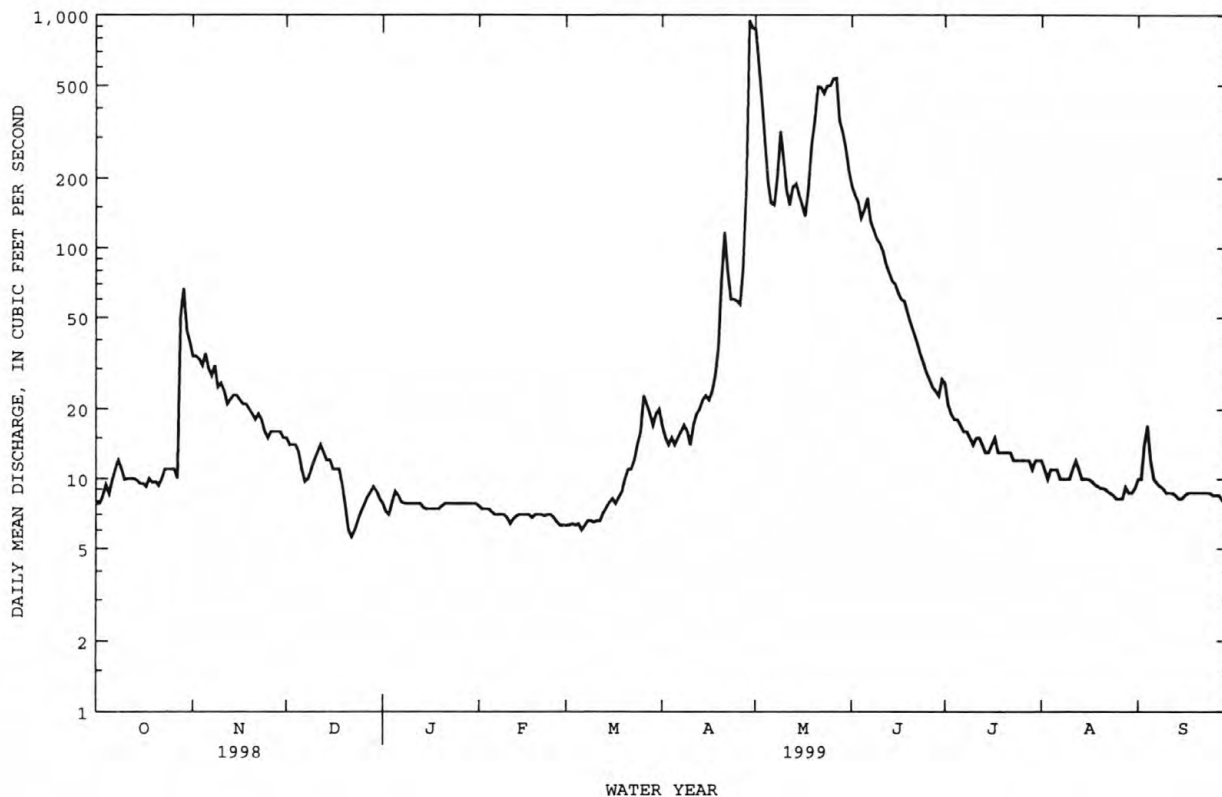
06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1962 - 1999
ANNUAL TOTAL	11397.1	18771.1	--
ANNUAL MEAN	31.2	51.4	30.6
HIGHEST ANNUAL MEAN	--	--	51.4
LOWEST ANNUAL MEAN	--	--	13.1
HIGHEST DAILY MEAN	403 May 4	954 Apr 29	954 Apr 29 1999
LOWEST DAILY MEAN	3.2 Feb 25	5.6 Dec 22	1.0 Dec 15 1964
ANNUAL SEVEN-DAY MINIMUM	4.2 Feb 25	6.3 Feb 28	1.2 Jan 22 1966
INSTANTANEOUS PEAK FLOW	--	1220 Apr 29	7110 ^a Jun 15 1963
INSTANTANEOUS PEAK STAGE	--	9.75 Apr 29	12.60 ^b Jun 15 1963
ANNUAL RUNOFF (AC-FT)	22610	37230	22150
10 PERCENT EXCEEDS	67	153	78
50 PERCENT EXCEEDS	12	11	7.2
90 PERCENT EXCEEDS	4.9	7.0	4.6

a On basis of slope-area measurement of peak flow.

b From floodmark, site and datum then in use.

e Estimated.



LOCATION.--Lat 44°01'40", long 107°04'49", in SW¹/₄ SE¹/₄ NW¹/₄ sec.21, T.47 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.5 mi upstream from Dullknife Reservoir, 0.6 mi downstream from Twin Creek, 7.2 mi southwest of Hazelton, and 19 mi northwest of Mayoworth.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 1	2000	*440	*4.35
May 26	2100	383	4.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	e5.2	4.5	3.0	2.8	3.0	3.9	e180	178	38	9.0	5.4
2	4.5	e5.0	4.5	3.0	2.8	3.0	3.9	113	178	29	7.8	5.7
3	5.5	e5.0	4.4	3.0	2.8	3.0	3.9	76	193	26	7.5	6.4
4	6.7	6.0	4.4	3.0	2.8	3.0	3.7	55	165	23	7.7	13
5	5.6	8.8	4.2	3.0	2.8	2.9	3.6	47	173	21	12	9.0
6	5.3	e11	4.1	3.0	2.8	2.9	3.6	43	161	21	11	6.3
7	5.9	e10	3.9	3.0	2.8	2.9	3.6	44	168	20	10	5.2
8	7.1	e9.0	3.9	2.8	2.8	3.0	3.7	54	162	19	7.8	4.9
9	5.6	e8.0	3.9	2.8	2.8	2.9	3.9	63	152	18	6.8	4.7
10	5.3	7.2	3.9	2.8	2.9	2.9	3.9	54	120	17	6.5	4.7
11	5.3	5.9	3.9	2.8	2.7	2.9	3.8	45	110	17	6.5	4.6
12	5.2	5.4	3.9	2.8	2.7	2.9	3.9	45	103	16	7.2	5.0
13	5.3	5.4	3.9	2.8	2.7	2.9	4.2	42	101	15	7.1	4.7
14	5.0	5.7	3.9	2.8	2.8	2.9	4.4	40	102	14	6.3	4.7
15	4.9	5.7	3.7	2.8	2.8	3.0	4.1	38	111	14	5.7	4.5
16	4.9	5.7	3.6	2.8	2.8	3.0	4.0	34	101	13	5.5	4.5
17	e5.0	5.3	3.6	2.8	2.8	3.0	4.0	34	88	13	5.4	4.3
18	e5.2	5.3	3.6	2.8	3.0	3.0	e4.0	40	89	13	5.3	4.2
19	e5.2	5.3	3.6	2.8	3.0	3.1	e5.0	63	78	12	5.2	4.6
20	e5.2	4.9	3.5	2.8	3.0	3.2	e7.0	94	68	12	5.3	4.9
21	e5.0	4.9	3.3	2.8	3.0	3.4	e15	129	62	11	5.1	4.6
22	e5.0	4.6	3.2	2.8	3.0	3.4	e8.4	155	58	10	5.1	4.3
23	e4.9	4.5	3.1	2.8	3.0	3.4	e7.0	198	52	9.9	4.7	4.2
24	e4.9	4.5	2.9	2.9	3.0	3.5	e10	207	47	9.7	4.7	4.0
25	e4.8	4.5	2.9	2.9	3.0	3.9	e14	221	44	9.5	4.5	4.0
26	e4.7	4.5	2.9	2.9	3.1	e4.5	e8.6	232	40	9.0	4.4	4.4
27	e4.7	4.5	2.9	2.9	3.1	4.7	e7.3	250	38	8.5	6.9	4.3
28	10	4.5	2.9	2.8	3.0	4.3	e50	228	37	8.5	11	4.0
29	12	4.5	3.0	2.8	---	4.0	e230	217	34	8.2	6.8	4.1
30	6.7	4.5	3.0	2.7	---	4.0	e170	211	46	8.4	5.3	4.6
31	e5.6	---	3.0	2.7	---	4.0	---	182	---	8.2	4.9	---
TOTAL	175.5	175.3	112.0	88.4	80.6	102.5	602.4	3434	3059	471.9	209.0	153.8
MEAN	5.66	5.84	3.61	2.85	2.88	3.31	20.1	111	102	15.2	6.74	5.13
MAX	12	11	4.5	3.0	3.1	4.7	230	250	193	38	12	13
MIN	4.5	4.5	2.9	2.7	2.7	2.9	3.6	34	34	8.2	4.4	4.0
AC-FT	348	348	222	175	160	203	1190	6810	6070	936	415	305

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

MEAN	4.39	3.54	2.83	2.32	2.15	2.28	9.14	60.8	65.6	17.5	7.16	5.08
MAX	10.4	10.1	6.96	4.50	4.00	4.99	35.7	119	178	46.8	13.3	9.74
(WY)	1983	1983	1983	1958	1958	1960	1987	1947	1967	1975	1997	1982
MIN	2.03	1.70	1.41	.80	1.00	1.19	1.09	23.4	13.2	4.88	2.85	2.47
(WY)	1961	1981	1967	1949	1959	1967	1961	1972	1960	1960	1960	1960

YELLOWSTONE RIVER BASIN

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1946 - 1999
ANNUAL TOTAL	6307.5	8664.4	--
ANNUAL MEAN	17.3	23.7	15.3
HIGHEST ANNUAL MEAN	--	--	26.7
LOWEST ANNUAL MEAN	--	--	6.91
HIGHEST DAILY MEAN	165 May 21	250 May 27	354 Jun 15 1967
LOWEST DAILY MEAN	2.4 Many days	2.7 Jan 30-31, Feb 11-13	.60 ^a Oct 30 1960
ANNUAL SEVEN-DAY MINIMUM	2.4 Mar 7	2.8 Feb 11	64 ^b Apr 12 1961
INSTANTANEOUS PEAK FLOW	--	440 May 1	886 ^b Jun 15 1953
INSTANTANEOUS PEAK STAGE	--	4.69 ^c Apr 29	6.21 ^d May 14 1984
ANNUAL RUNOFF (AC-FT)	12510	17190	11060
10 PERCENT EXCEEDS	61	71	44
50 PERCENT EXCEEDS	5.0	4.9	4.0
90 PERCENT EXCEEDS	2.6	2.9	1.9

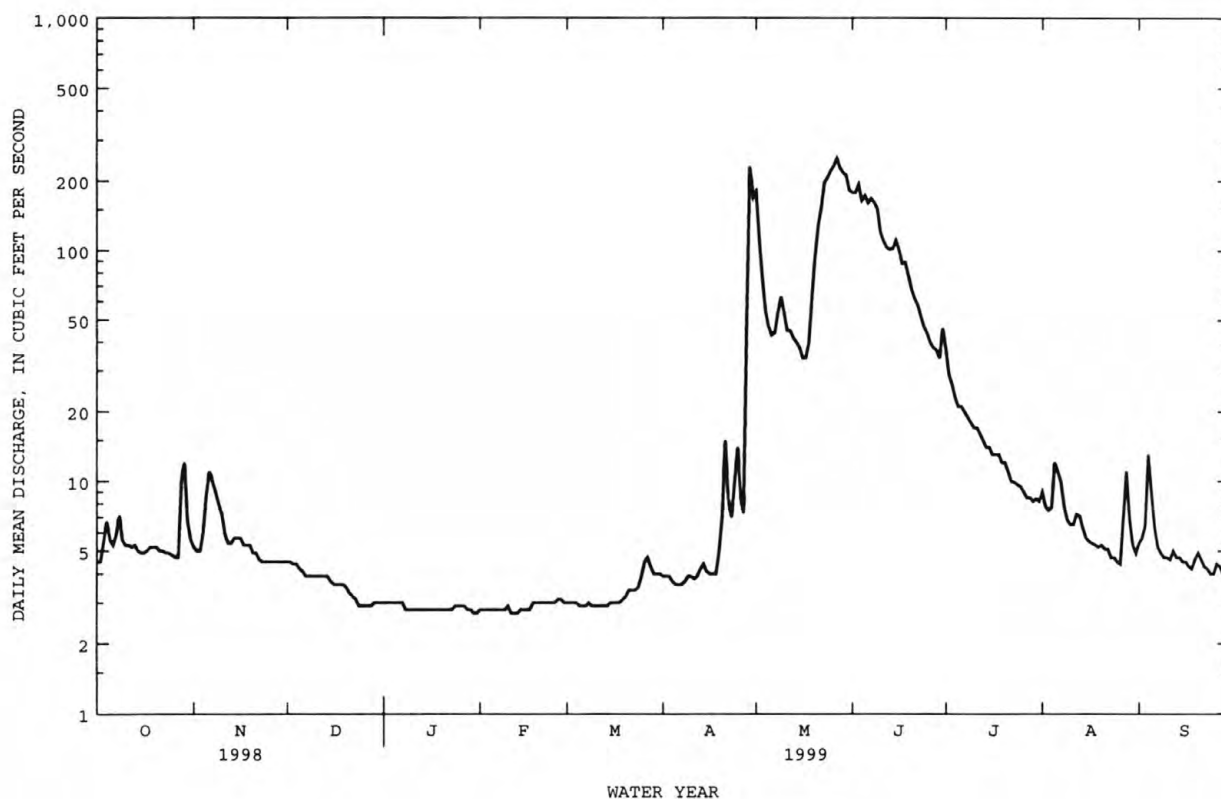
a May have been less during winter months of water years 1947 and 1948.

b Gage height, 4.34 ft, site and datum then in use, from rating curve extended above 110 ft³/s, on basis of slope-area measurement of peak flow.

c Backwater from ice.

d Backwater from ice, site and datum then in use.

e Estimated.



06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43°54'41", long 106°53'20", in NW¹/₄ NE¹/₄ SE¹/₄ sec.36, T.46 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.8 mi downstream from Pass Creek, 1.2 mi upstream from Hat Ranch, 7.2 mi northwest of Mayoworth, and 13 mi downstream from Dullknife Reservoir.

DRAINAGE AREA.--100 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above sea level, from topographic map. Prior to Sept. 15, 1983, at site 60 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation for irrigation by Dullknife Reservoir 13 mi upstream, capacity, 4,350 acre-ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	28	24	e21	21	20	21	183	209	83	69	46
2	30	28	24	e20	21	20	21	131	209	72	70	46
3	30	28	24	e18	21	20	21	109	228	64	81	46
4	31	28	24	e20	20	20	21	82	188	58	105	47
5	30	28	24	e21	20	20	21	66	189	55	60	46
6	30	27	22	e21	20	e20	21	58	190	52	57	44
7	29	27	21	e21	20	20	21	59	182	51	46	43
8	29	27	21	e20	20	20	21	77	177	50	40	41
9	29	27	23	e20	20	20	21	95	175	47	38	41
10	29	26	22	e19	e19	20	21	94	151	45	38	41
11	28	25	23	e19	e18	20	21	100	138	44	43	42
12	28	25	23	e19	e20	20	21	97	130	43	44	42
13	28	25	23	e19	21	20	21	100	126	42	43	41
14	28	25	23	19	21	20	22	99	122	40	45	41
15	28	25	23	20	21	20	21	94	127	40	46	41
16	29	24	23	20	21	20	21	93	132	40	46	41
17	28	24	23	20	21	20	21	92	120	39	46	41
18	28	24	e22	20	21	20	21	112	117	38	46	40
19	29	24	e21	20	21	20	24	117	111	38	46	40
20	29	24	e19	21	21	20	40	124	109	38	46	40
21	28	24	e21	21	21	21	48	147	104	37	46	39
22	28	24	e21	20	21	21	39	181	95	36	46	39
23	28	24	e21	e18	21	21	29	208	92	35	46	38
24	28	24	e22	e18	20	21	28	235	84	46	46	30
25	28	24	e22	20	20	21	29	249	80	51	44	27
26	28	24	e22	20	20	21	28	269	77	52	44	26
27	28	24	e22	20	20	22	31	378	74	53	43	25
28	30	24	e22	20	20	22	53	375	73	54	46	25
29	30	24	e22	20	---	21	253	302	69	56	46	24
30	29	24	e21	21	---	21	176	288	82	55	44	24
31	28	---	e21	21	---	21	---	236	---	64	44	---
TOTAL	894	759	689	617	571	633	1157	4850	3960	1518	1550	1147
MEAN	28.8	25.3	22.2	19.9	20.4	20.4	38.6	156	132	49.0	50.0	38.2
MAX	31	28	24	21	21	22	253	378	228	83	105	47
MIN	28	24	19	18	18	20	21	58	69	35	38	24
AC-FT	1770	1510	1370	1220	1130	1260	2290	9620	7850	3010	3070	2280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)

	MEAN	21.8	19.4	18.8	18.3	18.0	17.9	27.5	80.6	93.9	46.7	39.7	32.7
MAX	31.5	25.3	23.1	20.2	20.8	21.0	47.9	176	193	80.5	52.4	53.8	
(WY)	1983	1999	1977	1977	1980	1980	1977	1978	1995	1975	1998	1997	
MIN	16.1	15.8	14.9	15.1	14.2	14.6	16.9	25.5	39.7	30.8	26.1	20.0	
(WY)	1990	1990	1991	1991	1991	1991	1993	1980	1994	1977	1985	1974	

YELLOWSTONE RIVER BASIN

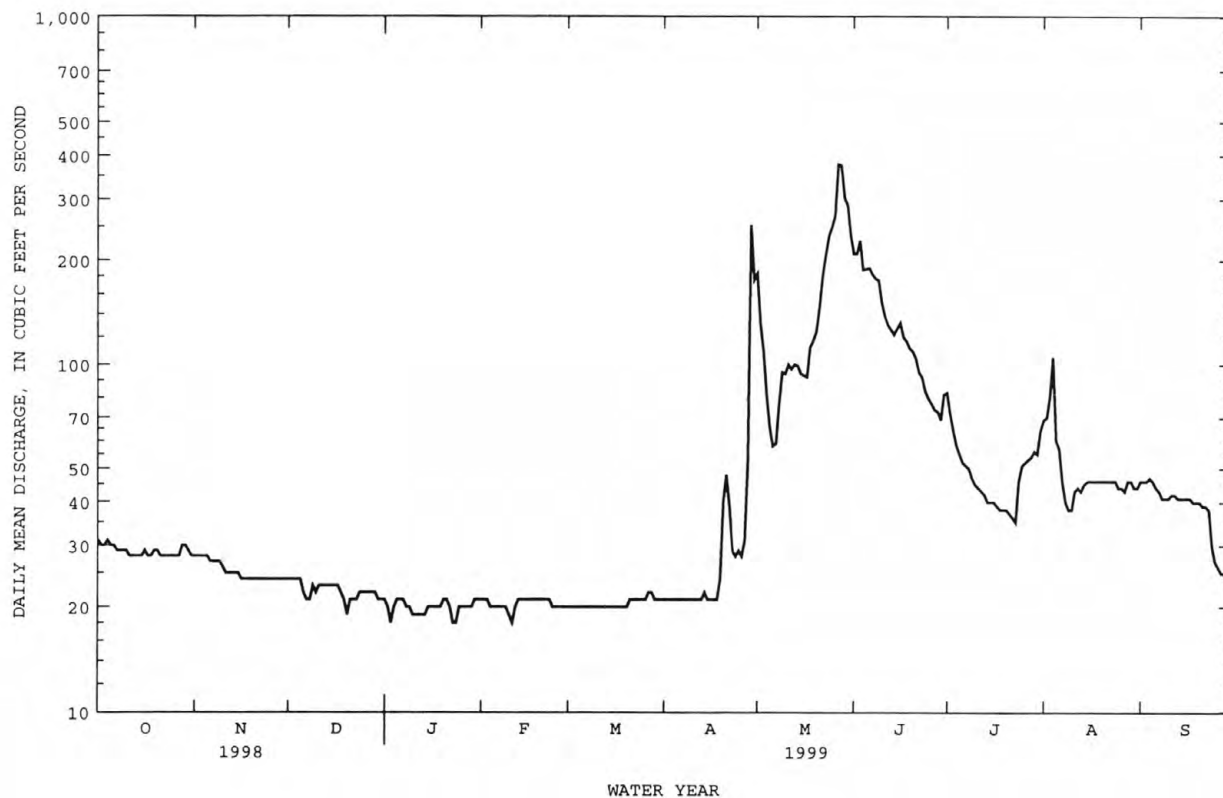
06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1974 - 1999	
ANNUAL TOTAL	15898		18345		--	
ANNUAL MEAN	43.6		50.3		36.3	
HIGHEST ANNUAL MEAN	--		--		51.6	1978
LOWEST ANNUAL MEAN	--		--		25.4	1989
HIGHEST DAILY MEAN	203	May 21	378	May 27	379	Jun 5 1995
LOWEST DAILY MEAN	14	Jan 11	18	Jan 3, 23, 24, Feb 11	9.5	Feb 6 1991
ANNUAL SEVEN-DAY MINIMUM	17	Jan 7	19	Jan 8	11	Feb 5 1991
INSTANTANEOUS PEAK FLOW	--		1440	Aug 3	1590 ^a	Aug 1 1984
INSTANTANEOUS PEAK STAGE	--		8.30 ^b	Aug 3	8.89 ^b	Aug 1 1984
ANNUAL RUNOFF (AC-FT)	31530		36390		26320	
10 PERCENT EXCEEDS	90		111		65	
50 PERCENT EXCEEDS	28		28		21	
90 PERCENT EXCEEDS	19		20		17	

a From rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.



06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43°37'19", long 106°22'04", in NE¹/₄ NE¹/₄ SE¹/₄ sec.8, T.42 N., R.79 W., Johnson County, Hydrologic Unit 10090204, on left bank 200 ft upstream from bridge on West Sussex Dugout oil field road, 6.3 mi southwest of Sussex, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--769 mi².

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to 1981, October 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV 12...	1020	20	7890	8.2	.0	3.0	654	15.0	123	1600	220	260
FEB 24...	1020	16	5950	8.1	.0	12.0	646	10.0	83	1000	210	120
MAY 19...	0930	25	--	8.4	14.0	19.5	650	--	--	1900	260	300
JUL 28...	0900	8.4	6830	8.1	19.5	29.5	649	6.8	89	550	110	69

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV 12...	1400	15	19	341	3900	420	1.2	15	6430	8.74	347
FEB 24...	1100	16	25	378	2100	730	2.1	24	4570	6.21	197
MAY 19...	1800	18	5.2	427	4300	670	1.6	15	7650	10.4	516
JUL 28...	1300	23	16	322	1300	1200	2.6	30	4210	5.73	95.6

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43°41'44", long 106°18'24", IN SW¹/₄ SW¹/₄ NW¹/₄ sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, 0.5 mi upstream from bridge on State Highway 192, 0.6 mi west of Sussex, and 2.7 mi downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi².

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to September 1984.

WATER TEMPERATURE: October 1982 to September 1984.

SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) UNITS (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
NOV 12...	1150	202	2240	8.2	.0	5.0	654	13.1	105	730	160	
FEB 24...	1215	174	2240	8.1	2.0	13.5	647	12.2	105	660	160	
MAY 19...	1125	680	1320	8.2	13.0	18.0	--	9.7	--	360	78	
JUL 28...	1100	24	4100	8.0	24.0	36.5	651	7.3	103	830	190	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV 12...	81	350	6	6.0	222	1100	90	.5	10	1960	2.67	
FEB 24...	66	340	6	6.5	229	890	150	.7	11	1760	2.40	
MAY 19...	39	150	3	3.3	169	460	41	.4	9.7	883	1.20	
JUL 28...	86	600	9	17	239	1200	510	1.1	17	2800	3.80	
DATE		SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
NOV 12...	1070	5	<1	18	<1	227	<1	<1	<1	1	<30	
FEB 24...	829	4	<1	40	<2	268	<2	9	<2	2	<30	
MAY 19...	1620	2	<1	30	<1	113	<1	<1	<1	2	<10	
JUL 28...	181	5	<1	77	<2	669	<2	<5	<2	4	<30	
DATE		LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
NOV 12...	<1	120	15	<.1	1	2	6	<1	1900	<30	1	
FEB 24...	<2	120	21	<.1	<2	5	4	<2	2200	<30	4	
MAY 19...	<1	51	4	<.1	2	3	1	<1	840	<10	3	
JUL 28...	<2	240	33	<.1	3	4	1	<2	3000	<30	2	

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION.--Lat 44°29'28", long 106°10'38", in NE¹/₄ SW¹/₄ sec.7, T.52 N., R.77 W., Johnson County, Hydrologic Unit 10090205, 1.1 mi upstream from Jewell Draw, 5.0 mi upstream from mouth, and 11 mi south of Arvada.

DRAINAGE AREA.--945 mi², approximately.

PERIOD OF RECORD.--Water years 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAR 30...	1300	46	1010	8.2	8.5	20.0	664	9.5
MAY 12...	1130	407	527	7.8	8.5	14.5	661	9.8
JUL 21...	1235	36	1360	8.2	23.5	34.0	667	7.1
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY) (80155)
MAR 30...	94	<.01	<.05	<.02	<.01		103	13
MAY 12...	97	<.01	<.05	<.02	<.01		1570	1720
JUL 21...	96	<.01	<.05	.02	.01		127	12

LOCATION.--Lat 44°39'00", long 106°07'37", in SW¹/₄ SE¹/₄ sec.16, T.54 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, on right bank 0.1 mi downstream from bridge on county road, 0.2 mi southeast of Arvada, and 0.2 mi upstream from Wild Horse Creek.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1509: 1921(M), 1923(M), 1924-26, 1927-28(M), 1929, 1930(M), 1931, 1932(M), 1933, 1934(M), 1935-36. See PERIOD OF RECORD.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 29,000 acres upstream from station. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.-- Peak discharges greater than base discharge of 2,800 ft³/s and maximum (*):

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999, BY WATER YEAR (WY)

MEAN	138	129	99.6	89.6	171	397	362	747	771	264	99.3	77.5
MAX	865	419	290	242	567	953	1107	4025	3319	1703	861	451
(WY)	1995	1999	1974	1974	1972	1978	1941	1978	1962	1937	1941	1982
MIN	.000	11.4	23.0	15.0	10.0	144	99.0	51.3	30.6	15.8	.000	.000
(WY)	1961	1936	1950	1933	1933	1961	1961	1936	1954	1974	1932	1932

YELLOWSTONE RIVER BASIN

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06317000 POWDER RIVER AT ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999	
ANNUAL TOTAL	135655		156330.8		--	
ANNUAL MEAN	372		428		280	
HIGHEST ANNUAL MEAN	--		--		735	
LOWEST ANNUAL MEAN	--		--		70.3	
HIGHEST DAILY MEAN	1900	Oct 18	3160	May 3	22600	May 20 1978
LOWEST DAILY MEAN	36	Sep 10,11	4.7	Aug 31	.00	Jul 13 1931
ANNUAL SEVEN-DAY MINIMUM	40	Sep 5	6.8	Aug 26	.00	Jul 24 1932
INSTANTANEOUS PEAK FLOW	--		3450 ^a	May 3	100000 ^b	Sep 29 1923
INSTANTANEOUS PEAK STAGE	--		5.74 ^c	Dec 9	23.70 ^d	Sep 29 1923
ANNUAL RUNOFF (AC-FT)	269100		310100		203100	
10 PERCENT EXCEEDS	784		1160		601	
50 PERCENT EXCEEDS	263		255		130	
90 PERCENT EXCEEDS	100		58		16	

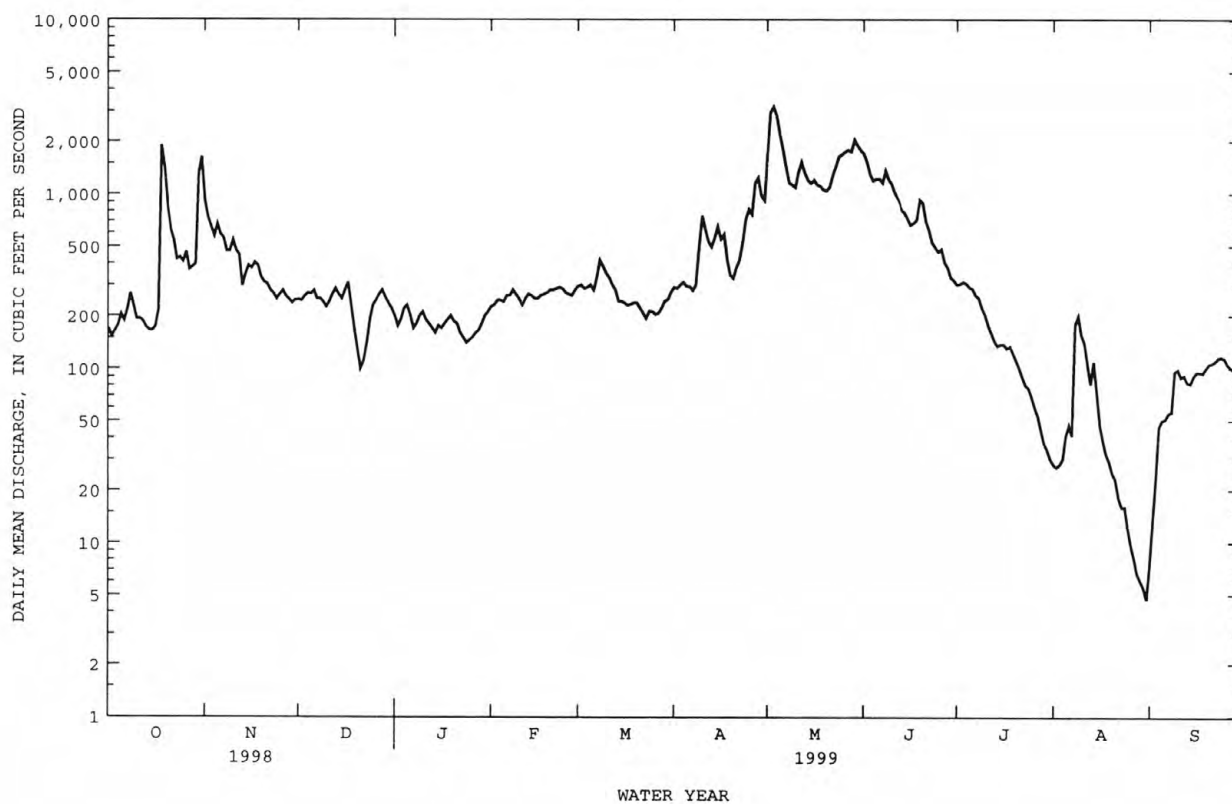
a Gage height, 5.54 ft.

b About, from rating curve extended above 20,000 ft³/s.

c Backwater from ice.

d From floodmarks, site and datum then in use.

e Estimated.



YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-57, 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1949 to September 1957, October 1967 to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: April 1946 to September 1957, October 1967 to September 1971, January 1975 to September 1978, April 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT 07...	1505	201	1930	8.3	13.5	17.0	672	8.2	90	590	140	59
JAN 28...	0925	168	2120	7.8	0.0	2.0	--	11.7	--	620	150	59
MAY 20...	1025	1090	1320	8.1	15.0	21.0	637	9.5	114	340	74	37
JUL 21...	1100	97	2170	8.3	24.0	28.5	669	7.6	104	650	150	69

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
OCT 07...	190	3	5.9	222	620	98	.5	7.1	1260	1.71	683
JAN 28...	230	4	5.4	247	750	120	.6	12	1480	2.01	672
MAY 20...	140	3	3.9	140	480	32	.4	10	860	1.17	2530
JUL 21...	260	4	6.5	205	780	130	.4	10	1520	2.07	398

193

LOCATION.--Lat 44°27'22", long 106°52'42", in NW¼ NW¼ NW¼ sec.29, T.52 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on left bank 300 ft downstream from confluence of North and South Forks and 11.5 mi northwest of Buffalo.

PERIOD OF RECORD.--April to August 1941, April to December 1942, May 1943 to November 1944, April 1945 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

REMARKS.--Records good. Water is imported into drainage basin upstream from station from South Piney Creek. Diversions for irrigation of about 250 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1999, BY WATER YEAR (WY)

MEAN	9.23	7.11	5.57	4.58	4.43	4.81	15.5	101	150	62.1	41.2	20.4
MAX	20.1	12.7	8.75	6.40	6.57	7.13	46.7	256	352	142	69.2	57.3
(WY)	1969	1969	1969	1965	1969	1960	1994	1978	1995	1975	1968	1982
MIN	3.44	2.74	3.08	1.88	2.27	2.22	4.63	27.1	37.8	28.3	4.22	1.57
(WY)	1955	1955	1967	1950	1957	1966	1966	1960	1954	1958	1954	1954

YELLOWSTONE RIVER BASIN

06320000 ROCK CREEK NEAR BUFFALO, WY--Continued

SUMMARY STATISTICS

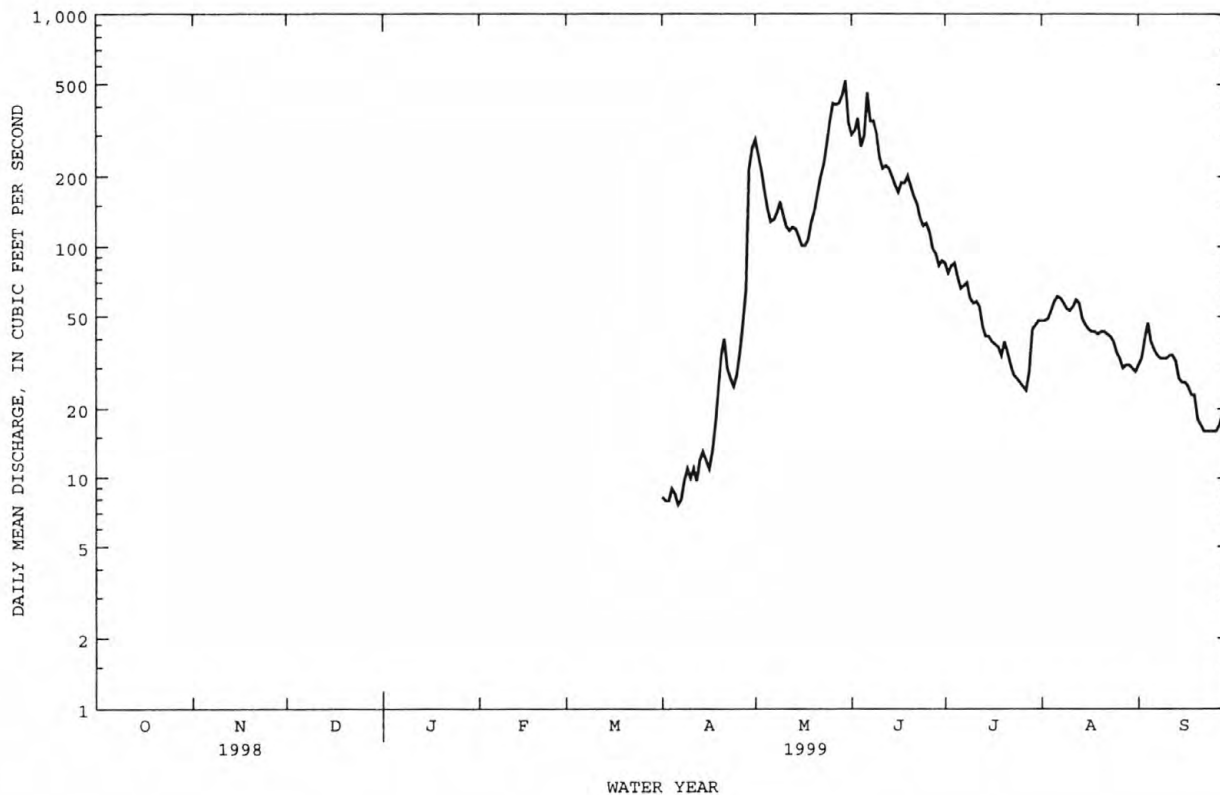
FOR 1999 WATER YEAR*

WATER YEARS 1945 - 1999*

ANNUAL MEAN	--		34.7	
HIGHEST ANNUAL MEAN	--		54.7	1963
LOWEST ANNUAL MEAN	--		16.1	1954
HIGHEST DAILY MEAN	519	May 30	1110	Jun 8 1997
LOWEST DAILY MEAN	7.6	Apr 6	50	Sep 19 1954
INSTANTANEOUS PEAK FLOW	675	May 30	2080 ^a	Jun 8 1997
INSTANTANEOUS PEAK STAGE	6.40	May 30	8.80	Jun 8 1997
ANNUAL RUNOFF (AC-FT)	--		25120	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

^a From rating curve extended above 610 ft³/s.



06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°23'21", long 106°37'23", in NW¹/₄ NE¹/₄ SE¹/₄ sec.17, T.51 N., R.81 W., Johnson County, Hydrologic Unit 10090206, 10 ft upstream from bridge on State Highway 16, 0.7 mi upstream from Kumor Draw, and 5 mi northeast of Buffalo.

PERIOD OF RECORD.--January 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV							
23...	1320	74	602	8.5	3.0	7.0	652
FEB							
20...	1150	59	734	8.4	0.0	2.0	658
MAY							
19...	1355	352	221	7.9	9.0	18.0	--
JUL							
28...	1315	8.9	752	8.2	24.5	36.0	655
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV							
23...	13.2	115	K5	<.01	<.05	.04	.01
FEB							
20...	13.9	110	K3	<.01	.10	.03	<.01
MAY							
19...	11.0	--	58	<.01	.05	.04	.01
JUL							
28...	9.2	129	300	<.01	<.05	<.02	.01

K Results based on colony count outside the acceptable range (non-ideal colony count).

LOCATION.--Lat 44°27'59", long 107°02'03", in NW¼ sec.24, T.52 N., R.85 W., Johnson County, Hydrologic Unit 10090206, Bighorn National Forest, on left bank about 300 ft downstream from Willow Park Dam, 1.4 mi upstream from Kearny Creek, and 10 mi southwest of Story.

PERIOD OF RECORD.--September 1945 to September 1957 (no winter records prior to 1948), October 1959 to current year (no winter records since 1971).

GAGE.--Water-stage recorder. Elevation of gage is 8,540 ft above sea level, from topographic map. Prior to Oct. 1, 1957, at site about 600 ft upstream at different datum. Oct. 1, 1959, to Sept. 30, 1965, at present site at datum 1.00 ft higher.

Oct. 9 . . . 25.2

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1999, BY WATER YEAR (WY)*

MEAN	15.0	9.77	8.20	6.93	6.21	6.29	10.0	49.5	166	114	87.1	49.5
MAX	26.8	16.8	14.2	12.4	11.7	10.6	27.0	153	332	281	130	118
(WY)	1962	1960	1968	1968	1968	1968	1949	1948	1995	1975	1998	1998
MIN	6.47	.52	1.94	1.26	1.27	1.58	1.27	2.77	66.4	74.1	30.9	17.0
(WY)	1967	1967	1964	1964	1964	1964	1960	1967	1954	1956	1954	1954

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1947 - 1999*

ANNUAL MEAN	--		42.4 ^a	
HIGHEST ANNUAL MEAN	--		55.9	1963
LOWEST ANNUAL MEAN	--		27.5	1960
HIGHEST DAILY MEAN	115	Aug 9,10	1100	Jun 8 1997
LOWEST DAILY MEAN	52 ^c	Sep 1	1620 ^{d,13b}	May 1 1989
INSTANTANEOUS PEAK FLOW	313 ^c	Jun 19	1620 ^d	Jun 15 1963
INSTANTANEOUS PEAK STAGE	3.72 ^e	Jun 19	5.68	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		30700	

* During period of operation.

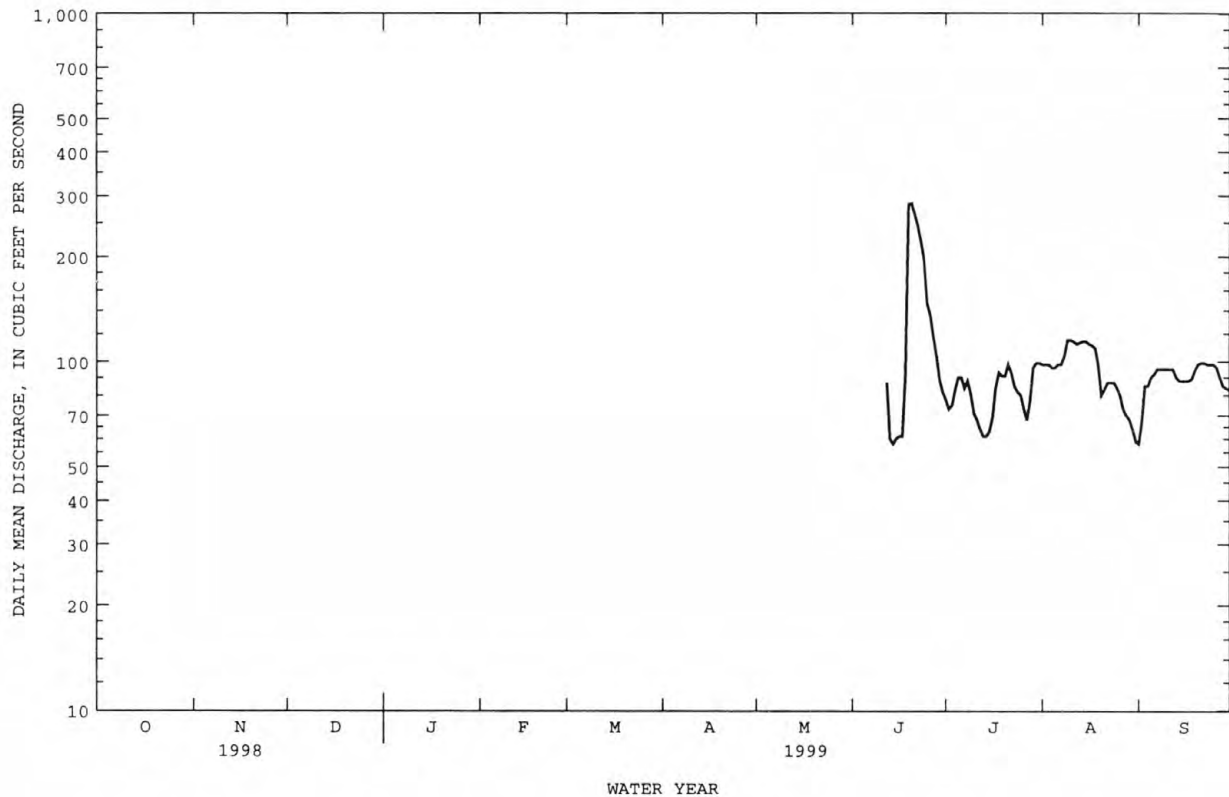
a Unadjusted for regulation by reservoirs.

b Minimum daily, prior to construction of Willow Park Reservoir, 4.5 ft³/s, Mar. 1 to Apr. 5, 1955.

c May have been higher prior to gage activation.

d From rating curve extended above 360 ft³/s on basis of slope-area measurement of peak flow.

e Highest recorded gage height, may have been higher prior to gage activation.



YELLOWSTONE RIVER BASIN

06323000 PINEY CREEK AT KEARNY, WY

LOCATION.--Lat 44°32'08", long 106°49'18", in NE¹/₄ NE¹/₄ SW¹/₄ sec.26, T.53 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on right bank at Kearny, 300 ft northeast of Historical Monument and 2.0 mi upstream from Little Piney Creek.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--September 1902 to June 1906, June to August 1910, May 1911 to July 1917, May 1919 to September 1923 (no winter records), October 1940 to Sept. 1998, Oct. 1998 to Sept. 1999 (no winter record). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1176: 1944. WSP 1309: 1913(M). WSP 1509: 1906, 1920(M), 1941(M), 1942, 1943(M). WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,655.11 ft above sea level. Sept. 6, 1902, to June 30, 1906, nonrecording gage at site 50 ft upstream at different datum. May 14, 1911, to July 31, 1917, and May 1, 1919, to Sept. 30, 1923, nonrecording gage at site 50 ft upstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, Willow Park Reservoir, capacity, 4,457 acre-ft, and Kearny Lake, capacity, 1,860 acre-ft. Diversion upstream from station from South Piney Creek into Rock Creek basin for irrigation. Diversions upstream from station for irrigation of about 240 acres, of which about 90 acres are downstream from station. Record includes flow in bypass channel (Spring Creek), 300 ft left of main channel.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	96	---	---	---	---	49	479	781	175	21	10
2	45	97	---	---	---	---	50	462	791	148	22	11
3	51	96	---	---	---	---	51	430	828	126	21	21
4	72	92	---	---	---	---	50	426	760	126	21	55
5	44	85	---	---	---	---	48	399	786	122	22	33
6	36	87	---	---	---	---	49	357	987	117	21	28
7	38	85	---	---	---	---	55	336	844	104	21	30
8	46	83	---	---	---	---	59	325	823	104	22	30
9	45	80	---	---	---	---	63	304	781	104	28	30
10	48	74	---	---	---	---	64	290	719	101	29	31
11	45	76	---	---	---	---	59	261	644	97	34	33
12	39	83	---	---	---	---	63	248	500	89	38	33
13	36	89	---	---	---	---	70	242	454	78	34	33
14	36	83	---	---	---	---	79	239	434	75	33	32
15	36	81	---	---	---	---	68	233	414	74	33	27
16	46	78	---	---	---	---	65	225	384	69	32	15
17	59	75	---	---	---	---	67	214	376	76	31	23
18	57	74	---	---	---	---	79	219	392	78	30	21
19	52	71	---	---	---	---	92	247	573	65	28	23
20	51	66	---	---	---	---	115	274	615	63	19	31
21	51	71	---	---	---	---	139	328	592	63	17	31
22	51	70	---	---	---	---	124	386	554	59	17	33
23	55	68	---	---	---	---	115	434	508	50	17	34
24	56	68	---	---	---	---	111	517	466	44	17	34
25	58	64	---	---	---	---	111	589	388	44	16	34
26	58	64	---	---	---	---	126	649	343	40	14	35
27	59	e63	---	---	---	---	157	676	277	36	14	34
28	87	e63	---	---	---	---	187	671	233	33	13	34
29	141	e62	---	---	---	---	383	724	206	27	13	32
30	104	e62	---	---	---	---	462	820	190	25	12	32
31	97	---	---	---	---	---	---	804	---	23	10	---
TOTAL	1745	2306	---	---	---	---	3210	12808	16643	2435	700	883
MEAN	56.3	76.9	---	---	---	---	107	413	555	78.5	22.6	29.4
MAX	141	97	---	---	---	---	462	820	987	175	38	55
MIN	36	62	---	---	---	---	48	214	190	23	10	10
AC-FT	3460	4570	---	---	---	---	6370	25400	33010	4830	1390	1750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1999, BY WATER YEAR (WY)*

	MEAN	30.4	36.1	31.1	27.3	26.3	30.8	70.3	275	381	96.0	31.1	26.0
MAX	85.4	76.9	53.6	44.3	54.4	72.8	204	683	911	413	153	185	
(WY)	1913	1999	1977	1997	1962	1972	1943	1944	1995	1975	1998	1923	
MIN	8.84	13.0	13.4	12.3	10.7	16.7	15.8	43.3	33.8	13.0	7.98	3.47	
(WY)	1965	1955	1966	1967	1960	1957	1981	1985	1985	1985	1980	1981	

06323000 PINEY CREEK AT KEARNY, WY--Continued

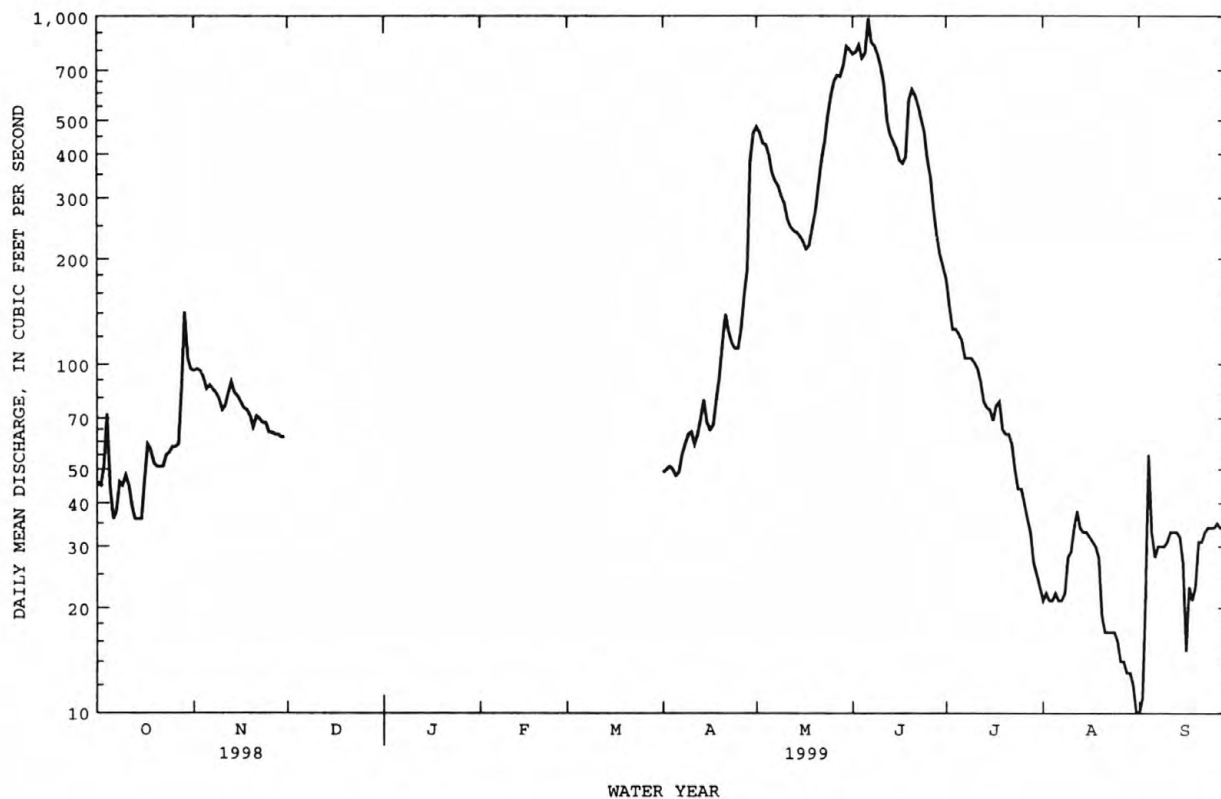
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1903 - 1999*

ANNUAL MEAN	--		86.4	
HIGHEST ANNUAL MEAN	--		168	1944
LOWEST ANNUAL MEAN	--		27.8	1985
HIGHEST DAILY MEAN	987	Jun 6	1780	Jun 15 1963
LOWEST DAILY MEAN	10	Aug 31, Sep 1	1.9	Oct 3 1981,
				Sep 14-18 1985
INSTANTANEOUS PEAK FLOW	1280	Jun 6	3410 ^a	Jun 15 1963
INSTANTANEOUS PEAK STAGE	4.60	Jun 6	6.05	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		62560	

* During period of operation.

^a From rating curve extended above 1,800 ft³/s.^e Estimated.

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°04'04", long 105°52'10", in NW¹/₄SE¹/₄NW¹/₄ sec.8, T.9 S., R.48 E., Powder River County, Hydrologic Unit 10090207, on left bank 500 ft downstream from discontinued post office at Moorhead, 6.2 mi upstream from Buffalo Creek, and at river mile 184.8.

DRAINAGE AREA.--8,088 mi².

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,334.6 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Aug. 28, 1931, nonrecording gage at site 0.3 mi upstream at different datum. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 1.2 mi upstream at different datum. Mar. 22 to July 24, 1956, nonrecording gage at site 0.3 mi downstream at different datum. July 25 to Sept. 12, 1956, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for period of estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 66,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 30, 1923, reached a stage of 19 ft, site and datum used 1931-56, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	287	1470	393	e240	e240	e370	457	2170	3590	908	68	46
2	277	1180	379	e230	e250	e350	474	3340	3220	883	65	46
3	299	1090	363	e220	e250	e340	451	3750	2940	822	97	48
4	347	978	e350	e230	e260	e310	439	3910	2790	798	94	62
5	451	986	e300	e240	e270	e300	435	3430	2790	830	85	126
6	474	986	e200	e260	e280	e310	399	2840	2930	874	89	248
7	411	926	e120	e240	e290	e320	399	2410	3200	814	91	277
8	406	858	e100	e230	e300	e320	438	2050	3190	709	106	270
9	471	760	e120	e220	e310	e320	507	1970	3040	645	161	225
10	444	702	e120	e230	e300	e300	965	1970	2820	622	290	211
11	424	664	e130	e240	e300	e320	1080	1980	2530	529	276	207
12	380	591	e180	e250	e290	e330	899	2050	2180	435	254	194
13	371	544	e200	e240	e300	e340	766	2050	2060	355	219	193
14	396	551	e220	e230	e300	e350	722	1920	1910	293	191	211
15	359	556	e240	e220	e300	394	915	1800	1850	245	176	215
16	333	553	e230	e210	e290	394	887	1700	1730	216	185	214
17	354	570	e230	e200	e300	402	872	1650	1640	214	146	215
18	664	579	e220	e190	e300	401	772	1560	1620	208	113	203
19	2170	544	e180	e200	e300	376	626	1490	1790	179	98	191
20	1290	519	e140	e200	e300	354	594	1460	2180	171	90	194
21	946	484	e120	e200	e300	352	678	1480	2130	145	84	204
22	842	459	e150	e200	e290	358	800	1570	1900	121	78	213
23	756	442	e170	e200	e330	343	861	1780	1760	106	70	208
24	656	424	e180	e190	e360	333	994	2000	1590	93	63	211
25	552	400	e200	e190	e400	346	1120	2220	1430	84	63	214
26	546	412	e220	e180	e380	360	1160	2620	1300	80	61	214
27	581	416	e240	e190	e380	362	1180	2890	1270	73	60	210
28	513	401	e250	e200	e390	380	1650	3080	1180	70	59	215
29	556	395	e250	e210	---	406	1390	3390	1060	65	56	217
30	577	373	e240	e220	---	409	1500	3560	969	79	52	229
31	2120	---	e250	e230	---	415	---	3710	---	75	49	---
TOTAL	19253	19813	6685	6730	8560	10965	24430	73800	64589	11741	3589	5731
MEAN	621	660	216	217	306	354	814	2381	2153	379	116	191
MAX	2170	1470	393	260	400	415	1650	3910	3590	908	290	277
MIN	277	373	100	180	240	300	399	1460	969	65	49	46
AC-FT	38190	39300	13260	13350	16980	21750	48460	146400	128100	23290	7120	11370

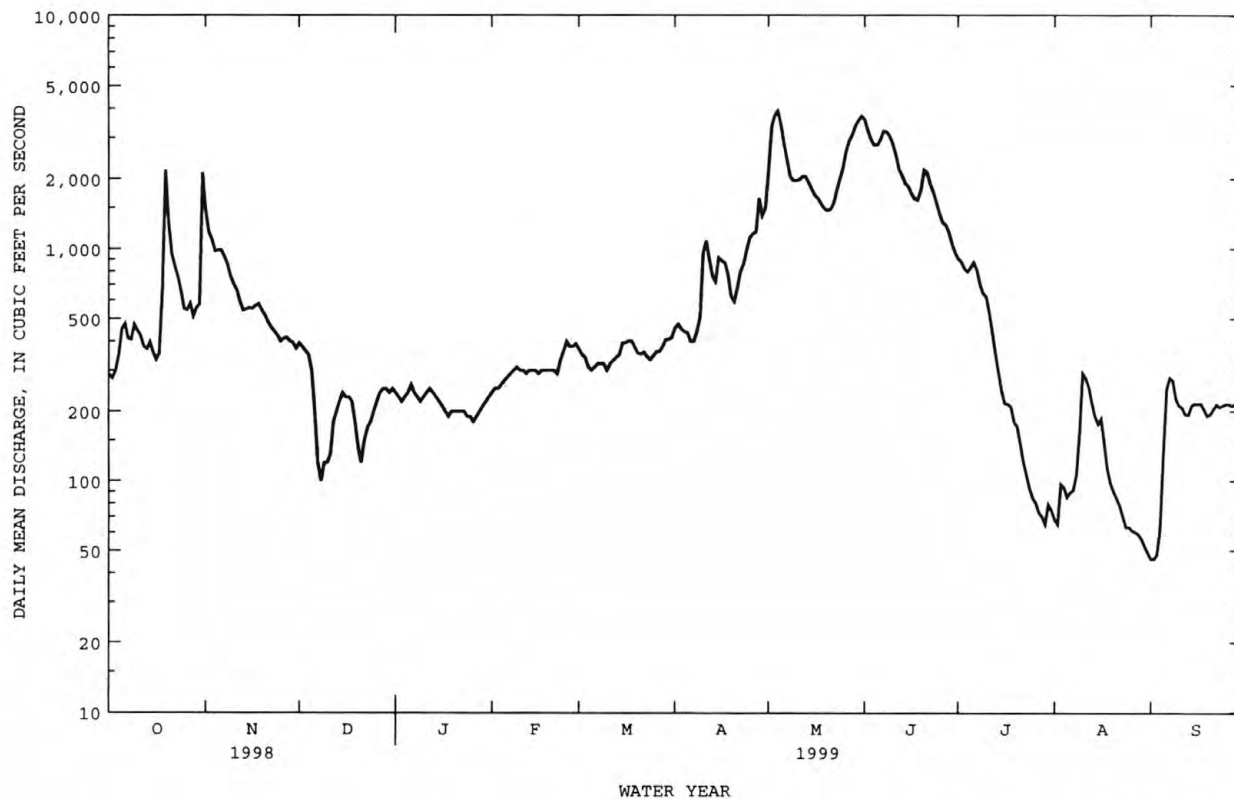
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1999, BY WATER YEAR (WY)*

	228	227	159	152	291	627	516	1083	1416	482	179	147
MEAN	228	227	159	152	291	627	516	1083	1416	482	179	147
MAX	897	660	326	445	1200	2290	1314	5553	4131	2500	1219	686
(WY)	1995	1999	1981	1981	1930	1947	1965	1978	1967	1937	1941	1982
MIN	16.1	80.0	56.2	27.2	20.9	210	117	82.6	39.5	33.9	.60	1.28
(WY)	1955	1936	1933	1950	1933	1935	1961	1934	1954	1961	1966	1960

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1930 - 1999*	
ANNUAL TOTAL	203739		255886		--	
ANNUAL MEAN	558		701		459	
HIGHEST ANNUAL MEAN	--		--		1091	
LOWEST ANNUAL MEAN	--		--		109	
HIGHEST DAILY MEAN	2170	Oct 19	3910	May 4	27500	May 20 1978
LOWEST DAILY MEAN	35	Sep 11	46	Sep 1-2	.00	Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	47	Sep 6	51	Aug 28	.00	Sep 4 1960
INSTANTANEOUS PEAK FLOW	--		3960	May 4	33000 ^a	May 20 1978
INSTANTANEOUS PEAK STAGE	--		5.53	May 4	17.70 ^b	Mar 21 1956
ANNUAL RUNOFF (AC-FT)	404100		507500		332400	
10 PERCENT EXCEEDS	1130		1970		1080	
50 PERCENT EXCEEDS	440		352		220	
90 PERCENT EXCEEDS	151		117		48	

* During period of operation (1930-32, 1975 to current year).

^a Gage height, 15.24 ft.^b Ice jam, site and datum then in use.^e Estimated.

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10", in NW¹/₄, SW¹/₄, SW¹/₄ sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi upstream from Dry Creek, 5.0 mi south of the Wyoming-Montana State line, and 20 mi north of Weston.

DRAINAGE AREA.--1,235 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 80 acres downstream from station. Flow occasionally affected by contributions from mine dewatering. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 7	1230	132	4.36
Oct 31	0500	174	4.91
Mar 17	1300	162	4.61
Apr 11	2400	*453	*6.38
Apr 22	2100	214	5.04
June 15	0200	212	5.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	98	7.5	e5.0	e5.0	e32	15	57	13	5.9	1.1	1.8
2	1.1	81	7.4	e4.7	e5.4	e60	16	37	12	5.5	1.1	1.4
3	1.5	64	7.1	e4.3	e5.1	e105	17	29	15	5.7	1.0	1.9
4	2.4	55	7.0	e4.5	e5.5	e88	17	34	12	5.7	.91	2.3
5	7.3	58	6.9	e4.3	e5.9	e43	18	87	11	4.7	1.2	2.5
6	81	65	e5.6	e4.1	e7.0	e30	28	96	13	4.3	2.5	2.2
7	115	42	e5.4	e4.0	e7.6	e27	125	70	61	3.9	7.4	1.9
8	34	28	e5.8	e4.2	e15	e23	153	65	111	3.4	4.7	1.5
9	16	35	e6.0	e4.4	e50	e21	160	50	99	3.0	2.3	1.5
10	13	e25	6.0	e4.6	e95	19	138	36	85	3.0	1.6	1.6
11	11	e18	6.3	e4.7	e60	17	287	30	67	3.0	1.3	1.5
12	11	e12	6.3	e4.8	e27	16	401	27	47	2.7	1.6	1.5
13	9.1	e13	6.3	e4.9	e23	17	249	25	33	2.7	2.1	1.4
14	7.2	e14	6.5	e5.0	e18	18	135	25	116	2.6	1.9	1.1
15	5.4	15	6.6	e4.9	e16	36	103	28	131	2.4	2.3	1.2
16	6.1	14	6.8	e4.9	13	116	84	35	88	2.7	2.8	1.2
17	37	12	6.6	e4.8	13	144	70	49	62	19	2.1	1.2
18	108	11	6.5	e4.6	e15	136	60	37	30	36	1.6	1.1
19	83	10	e4.3	e4.5	e19	125	45	30	21	31	1.2	1.2
20	44	9.8	e3.0	e4.5	e23	94	32	27	23	27	1.1	2.2
21	49	9.2	e2.5	e4.5	e25	70	35	22	32	9.1	.87	1.8
22	47	8.7	e3.0	e4.3	e27	37	118	19	18	5.5	.80	1.5
23	20	8.4	e3.3	e4.0	31	27	114	17	19	3.5	.65	1.4
24	11	8.0	e3.5	e3.5	35	22	112	16	13	2.4	.63	1.1
25	8.2	7.8	e3.9	e3.9	37	18	89	17	10	2.2	.67	1.1
26	7.1	7.7	e4.2	e4.2	38	16	71	16	9.0	2.3	.59	1.3
27	6.1	8.0	e4.5	e4.1	e39	15	70	15	8.0	1.7	.50	1.3
28	6.5	7.9	e4.7	e3.9	e35	15	70	14	7.6	1.5	.46	1.4
29	23	7.8	e4.5	e4.3	---	15	78	12	6.6	1.4	.46	1.5
30	106	7.4	e4.2	e4.9	---	14	68	11	6.5	1.3	2.6	1.5
31	126	---	e4.6	e4.6	---	14	---	12	---	1.1	3.2	---
TOTAL	1003.94	760.7	166.8	137.9	695.5	1430	2978	1045	1179.7	206.2	53.24	46.1
MEAN	32.4	25.4	5.38	4.45	24.8	46.1	99.3	33.7	39.3	6.65	1.72	1.54
MAX	126	98	7.5	5.0	95	144	401	96	131	36	7.4	2.5
MIN	.94	7.4	2.5	3.5	5.0	14	15	11	6.5	1.1	.46	1.1
AC-FT	1990	1510	331	274	1380	2840	5910	2070	2340	409	106	99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

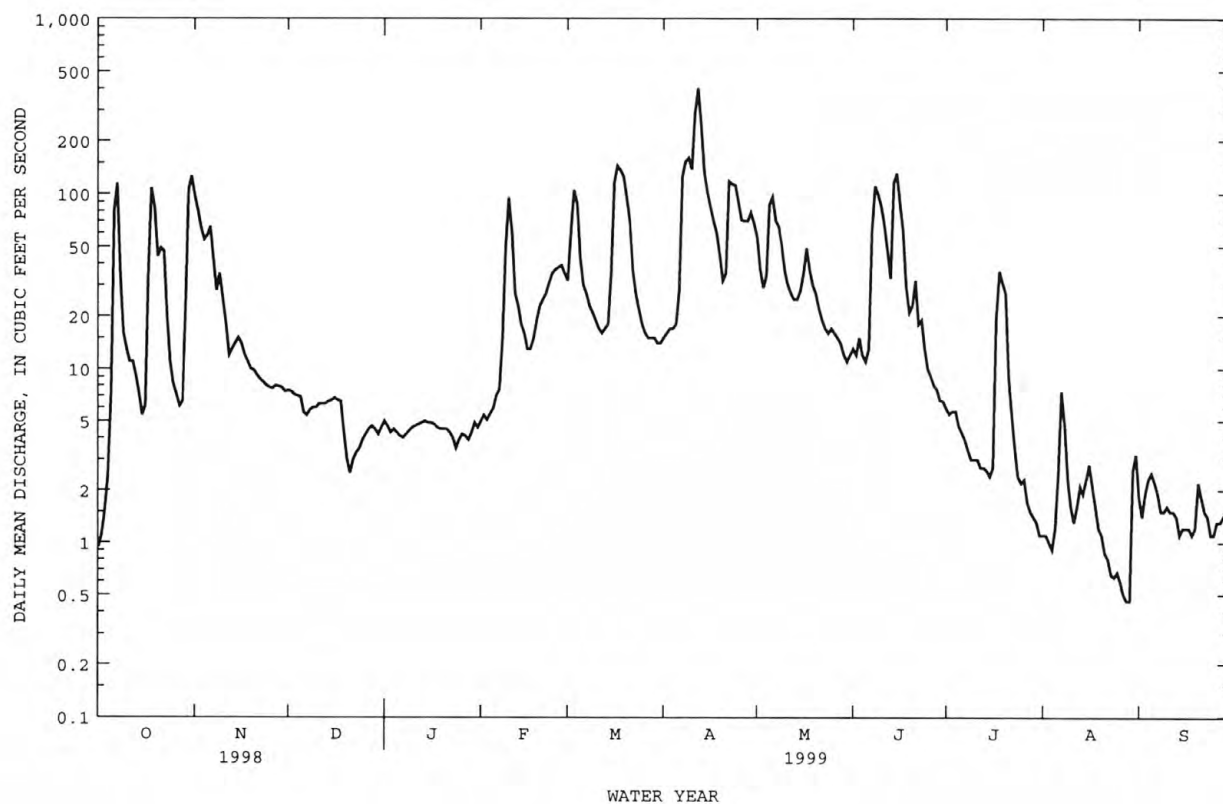
MEAN	12.4	4.06	2.63	8.76	41.5	65.0	25.0	63.6	31.1	11.3	6.11	4.44
MAX	172	25.4	9.97	89.0	336	613	99.3	703	187	68.8	44.8	60.8
(WY)	1995	1999	1995	1974	1997	1978	1999	1978	1984	1982	1993	1986
MIN	.009	.015	.21	.10	.46	1.34	.75	1.04	2.11	.044	.000	.002
(WY)	1992	1982	1982	1991	1989	1981	1981	1992	1988	1980	1991	1991

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1973 - 1999
ANNUAL TOTAL	5463.86	9703.08	--
ANNUAL MEAN	15.0	26.6	22.9
HIGHEST ANNUAL MEAN	--	--	127 1978
LOWEST ANNUAL MEAN	--	--	1.49 1992
HIGHEST DAILY MEAN	274 Jun 24	401 Apr 12	5000 May 19 1978
LOWEST DAILY MEAN	.35 Sep 10	.46 Aug 28-29	.00 Jul 18 1973
ANNUAL SEVEN-DAY MINIMUM	.38 Sep 5	.57 Aug 23	.00 Jul 27 1975
INSTANTANEOUS PEAK FLOW	--	453 Apr 11	5300 ^a May 19 1978
INSTANTANEOUS PEAK STAGE	--	6.38 Apr 11	11.63 Mar 20 1978
ANNUAL RUNOFF (AC-FT)	10840	19250	16610
10 PERCENT EXCEEDS	41	82	37
50 PERCENT EXCEEDS	5.8	9.1	3.0
90 PERCENT EXCEEDS	1.8	1.5	.03

a Gage height, 11.62 ft.

e Estimated.



YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued
(National Water-Quality Assessment Program)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-82, 1985 to current year.

REMARKS.--Additional water-quality data are published in the special studies section of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 07...	1150	127	405	8.0	6.5	20.5	680	10.3	94	66
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT 07...	14	7.3	49	3	5.3	56	120	6.6	.3	6.0

LOCATION.--Lat 44°05'06", long 104°03'36", in SE¹/₄ NE¹/₄ NE¹/₄ sec.4, T.47 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank in Mallo Campgrounds, 250 ft upstream from mouth, 750 ft upstream from dam on Stockade Beaver Creek, and 3.8 mi east of Four Corners.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

MEAN	1.82	1.71	1.63	1.57	1.75	2.06	2.31	2.20	2.41	2.13	1.95	1.89
MAX	2.66	2.48	2.68	2.95	2.90	5.83	4.07	3.44	4.05	3.09	2.89	2.94
(WY)	1999	1999	1999	1999	1999	1999	1994	1978	1980	1979	1978	1999
MIN	.31	.47	.44	.42	.46	.71	.88	.81	1.34	1.34	.75	.62
(WY)	1977	1977	1977	1993	1977	1977	1993	1993	1994	1993	1976	1976

CHEYENNE RIVER BASIN

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY--Continued

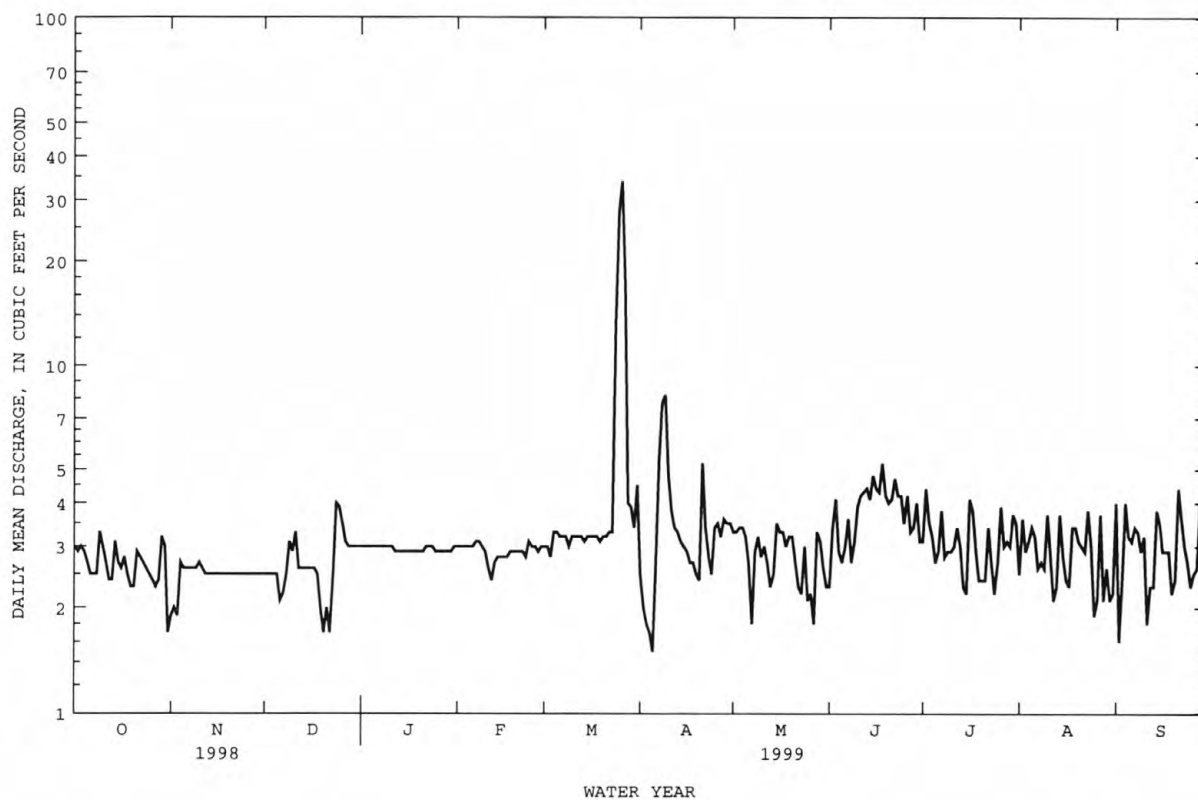
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1975 - 1999
ANNUAL TOTAL	847.59	1169.3	--
ANNUAL MEAN	2.32	3.20	1.97
HIGHEST ANNUAL MEAN	--	--	3.20
LOWEST ANNUAL MEAN	--	--	.94
HIGHEST DAILY MEAN	9.5 Jun 18	34 Mar 26	34 Mar 26 1999
LOWEST DAILY MEAN	.99 Jan 10	1.5 Apr 5	.10 Jan 20 1993
ANNUAL SEVEN-DAY MINIMUM	1.2 Jan 7	2.1 Dec 17	.12 Jan 17 1993
INSTANTANEOUS PEAK FLOW	--	87 ^a Mar 25	103 ^b Apr 22 1994
INSTANTANEOUS PEAK STAGE	--	2.88 ^c Dec 25	2.88 ^c Dec 25 1998
ANNUAL RUNOFF (AC-FT)	1680	2320	1420
10 PERCENT EXCEEDS	2.9	3.9	2.8
50 PERCENT EXCEEDS	2.3	2.9	1.9
90 PERCENT EXCEEDS	1.7	2.3	1.1

a Gage height, 2.05 ft.

b From rating curve extended above 85 ft³/s.

c Backwater from ice.

e Estimated.



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LOCATION.--Lat 43°51'32", long 104°06'24", in SW¹/₄, SE¹/₄ sec.19, T.45 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank 20 ft upstream of culvert on county road, 0.6 mi upstream from South Draw, 2.5 mi upstream from LAK Reservoir Dam, and 4.7 mi east of Newcastle.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above sea level, from topographic map. October 1974 to September 1982, at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions upstream from station for irrigation.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 50 ft³/s, and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Aug 29	0300	*137	*8.06

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	16	17	17	16	15	15	16	19	21	22
2	18	17	16	17	16	15	15	15	16	19	19	23
3	18	18	16	14	16	15	15	16	18	18	18	25
4	21	18	16	15	16	15	15	16	17	18	18	24
5	20	18	16	17	16	15	15	16	16	17	19	23
6	19	18	16	17	16	15	15	16	19	17	19	22
7	18	18	16	17	17	15	15	16	18	18	20	21
8	18	18	16	17	19	15	14	16	17	18	20	20
9	18	19	16	17	20	15	15	16	16	18	19	20
10	18	e16	16	17	21	15	16	17	15	18	19	20
11	18	e15	16	17	16	14	16	17	18	18	19	19
12	18	e16	16	17	15	14	15	16	19	17	20	20
13	18	17	16	17	16	14	15	17	19	16	20	20
14	17	18	16	17	16	15	15	18	17	16	20	20
15	17	18	16	17	16	15	15	20	19	17	19	20
16	19	18	16	17	15	15	15	19	19	17	19	20
17	20	17	16	17	15	15	15	17	17	17	19	19
18	18	17	e15	17	15	15	15	17	19	18	19	19
19	18	17	e14	17	15	15	15	16	18	17	20	20
20	18	17	e13	17	15	15	15	19	19	17	20	20
21	18	17	e12	17	15	14	17	17	18	17	20	19
22	18	17	e13	17	15	14	16	19	18	16	21	19
23	18	17	e14	17	15	14	15	18	18	15	21	19
24	18	17	e15	17	15	14	15	17	18	16	20	18
25	18	17	e16	15	16	14	16	17	18	17	20	18
26	18	17	17	16	16	14	16	16	18	17	20	18
27	18	16	17	16	15	15	15	16	18	16	18	18
28	19	17	17	14	15	15	15	16	19	15	20	18
29	22	17	17	15	---	15	15	16	19	14	57	18
30	19	16	17	15	---	15	15	16	19	16	23	18
31	18	---	17	16	---	15	---	16	---	17	22	---
TOTAL	570	515	486	510	450	457	456	519	535	526	649	600
MEAN	18.4	17.2	15.7	16.5	16.1	14.7	15.2	16.7	17.8	17.0	20.9	20.0
MAX	22	19	17	17	21	16	17	20	19	19	57	25
MIN	17	15	12	14	15	14	14	15	15	14	18	18
AC-FT	1130	1020	964	1010	893	906	904	1030	1060	1040	1290	1190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1999, BY WATER YEAR (WY)

MEAN	12.8	12.8	12.8	12.5	12.9	14.3	13.2	10.6	11.4	11.4	11.9	12.6
MAX	18.4	17.2	15.7	16.5	16.1	21.3	17.8	16.8	17.8	17.0	20.9	20.0
(WY)	1999	1999	1999	1999	1999	1996	1996	1998	1999	1999	1999	1999
MIN	9.40	9.74	10.2	9.52	10.6	10.8	9.53	6.45	5.92	8.24	6.33	8.89
(WY)	1982	1994	1993	1980	1993	1993	1981	1992	1992	1981	1992	1991

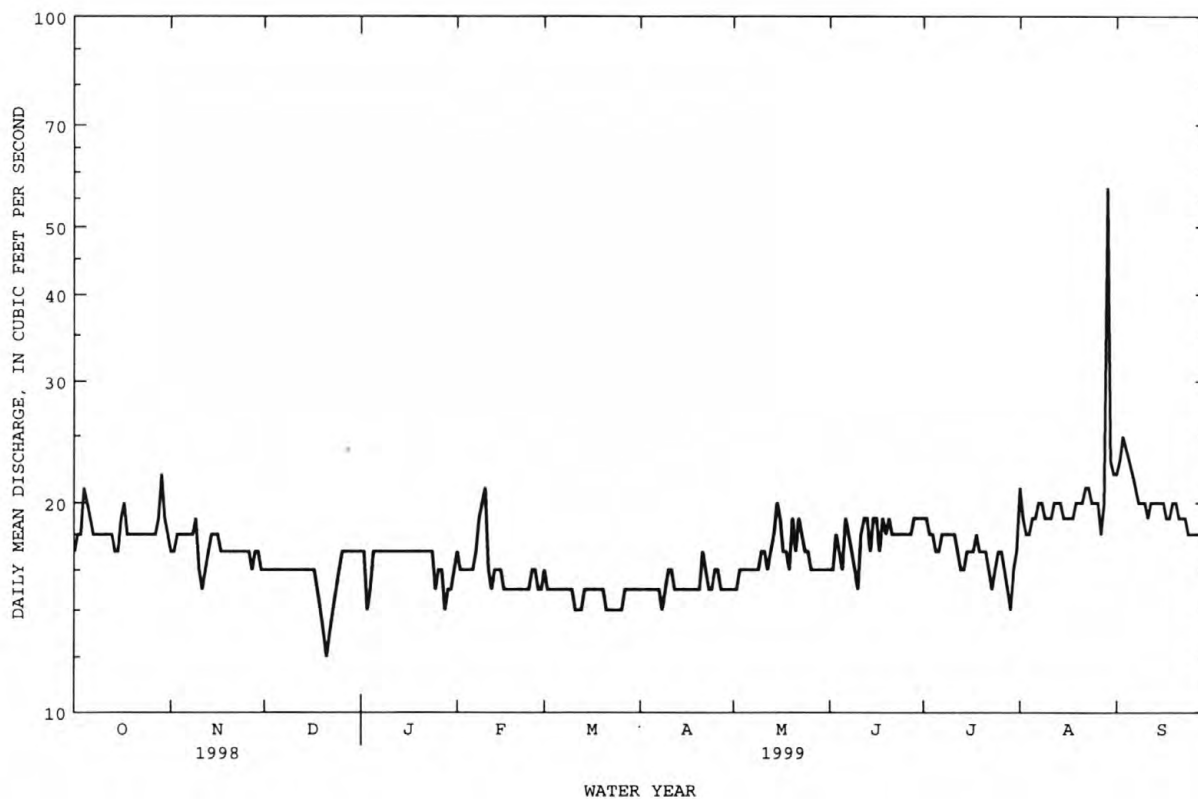
CHEYENNE RIVER BASIN

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1975 - 1999	
ANNUAL TOTAL	5966.8		6273		--	
ANNUAL MEAN	16.3		17.2		12.5	
HIGHEST ANNUAL MEAN	--		--		17.2	
LOWEST ANNUAL MEAN	--		--		9.80	
HIGHEST DAILY MEAN	32	Jun 18	57	Aug 29	143	Jul 16 1993
LOWEST DAILY MEAN	9.3	Jun 7	12	Dec 21	3.9	May 21 1992
ANNUAL SEVEN-DAY MINIMUM	12	Jun 1	14	Dec 18	4.6	Aug 2 1992
INSTANTANEOUS PEAK FLOW	--	--	137	Aug 29	776 ^a	Jul 16 1993
INSTANTANEOUS PEAK STAGE	--	--	8.06	Aug 29	12.44	Jul 16 1993
ANNUAL RUNOFF (AC-FT)	11840		12440		9030	
10 PERCENT EXCEEDS	18		20		16	
50 PERCENT EXCEEDS	16		17		12	
90 PERCENT EXCEEDS	14		15		8.7	

a From rating curve extended above 18 ft³/s on basis of culvert backwater computation.

e Estimated.



06395000 CHEYENNE RIVER AT EDMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¹/₄ SE¹/₄ sec.36, T.8 S., R.2 E., Fall River County, Hydrologic Unit 10120106, on right bank at downstream side of bridge on U.S. Highway 18, at Edgemont, 300 ft downstream from Burlington Northern Railroad bridge, and 600 ft upstream from Cottonwood Creek.

DRAINAGE AREA.--7,143 mi².

PERIOD OF RECORD.--June 1903 to November 1906 (no winter records), April 1928 to February 1933 (monthly discharge only), October 1946 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1116: 1947. WDR SD-78-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,414.56 ft above sea level. Prior to Dec. 1, 1906, nonrecording gage 20 ft upstream at datum 0.7 ft lower. Apr. 11, 1928, to Feb. 28, 1933, Oct. 4, 1946, to Oct. 23, 1947, and Jan. 11, 1961, to Apr. 24, 1963, nonrecording gage, and Oct. 24, 1947, to Jan. 10, 1961, and Apr. 25, 1963, to Sept. 30, 1972, water-stage recorder all at present site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Many small reservoirs upstream from station used for stock and irrigation water, total capacity, about 45,000 acre-ft. Bureau of Reclamation satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 1920, reached a stage of 13.0 ft and May 1, 1922, 14.0 ft, present datum, from floodmarks at railroad bridge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	902	78	e65	e30	e68	58	146	114	85	112	39
2	25	832	78	e55	e33	e69	61	140	137	81	97	32
3	24	568	74	e48	e35	e64	64	136	320	86	61	31
4	31	408	72	e40	e39	e74	65	131	441	84	50	43
5	48	370	71	e50	e36	e80	65	126	225	79	47	47
6	66	376	63	e68	e36	e68	66	110	226	68	41	57
7	87	444	50	e55	e40	e69	62	99	364	63	41	50
8	186	415	47	e45	e50	e66	64	97	274	60	39	40
9	318	408	55	e35	e55	e65	69	91	256	57	35	37
10	198	346	50	e35	e52	61	137	91	368	56	33	34
11	118	231	46	e35	e50	65	332	89	429	59	30	31
12	85	182	46	e35	e60	61	189	85	1230	60	28	29
13	68	180	42	e30	e80	62	133	80	2330	60	27	26
14	58	195	46	e30	e90	61	148	81	1940	61	26	26
15	50	184	48	e35	e110	60	236	80	2170	63	24	25
16	51	188	54	e35	e121	60	197	77	1550	60	23	25
17	112	180	53	e38	e120	61	152	79	1130	86	23	24
18	588	193	54	e35	e118	90	130	105	886	228	22	22
19	1480	184	e50	e33	e110	127	111	97	555	75	22	25
20	1000	160	e45	e31	e90	98	97	104	378	65	21	25
21	793	140	e40	e37	e90	80	91	247	470	64	20	24
22	484	127	e35	e40	e90	86	96	876	264	56	20	25
23	280	120	e30	e40	e95	79	98	326	169	47	19	25
24	192	111	e25	e35	e90	70	94	206	137	43	19	25
25	152	102	e25	e30	e84	64	141	156	111	39	19	26
26	117	97	e34	e25	e78	57	157	127	95	37	19	25
27	103	93	e30	e22	e69	56	149	118	84	36	20	25
28	109	89	e50	e20	e64	49	142	103	77	36	19	26
29	142	85	e50	e22	---	46	148	94	83	34	18	26
30	1140	82	e60	e25	---	47	147	88	94	31	22	26
31	881	---	e63	e28	---	50	---	82	---	32	31	---
TOTAL	9009	7992	1564	1157	2015	2113	3699	4467	16907	1991	1028	921
MEAN	291	266	50.5	37.3	72.0	68.2	123	144	564	64.2	33.2	30.7
MAX	1480	902	78	68	121	127	332	876	2330	228	112	57
MIN	23	82	25	20	30	46	58	77	77	31	18	22
AC-FT	17870	15850	3100	2290	4000	4190	7340	8860	33540	3950	2040	1830

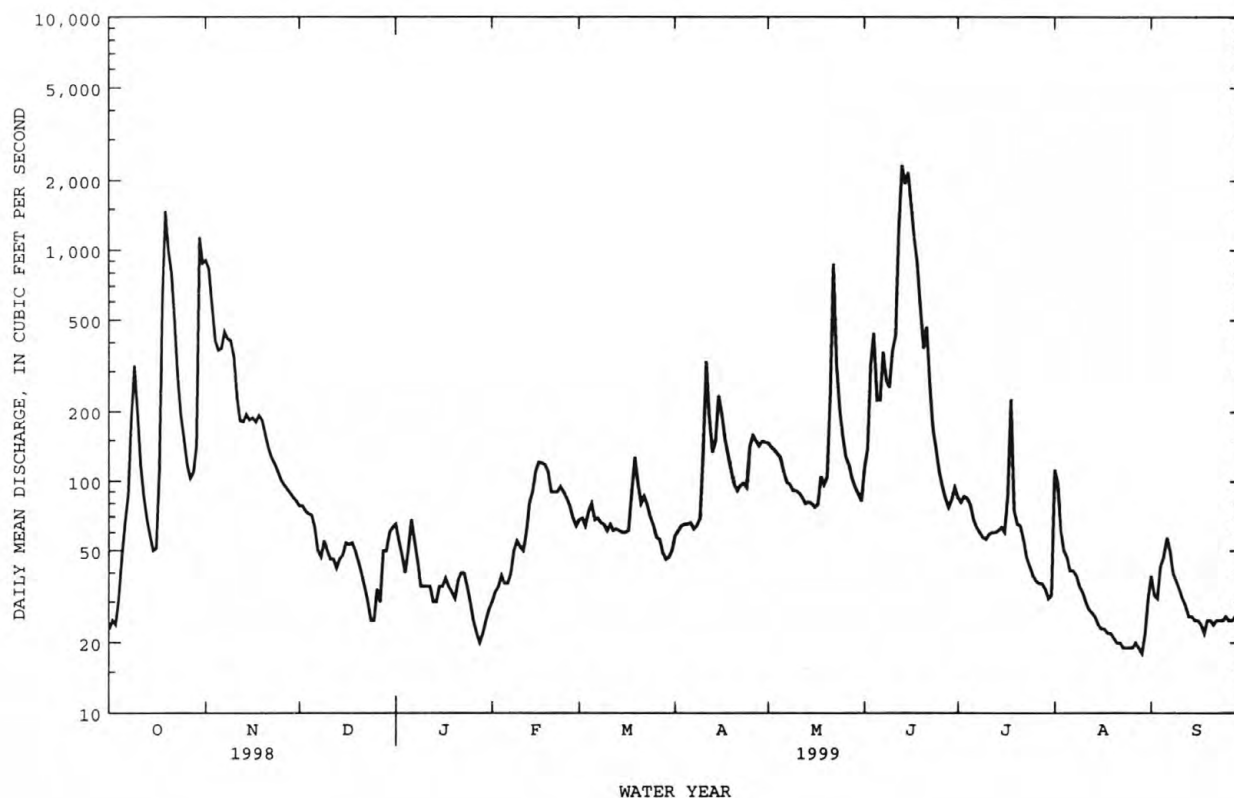
CHEYENNE RIVER BASIN

06395000 CHEYENNE RIVER AT EDMONT, SD--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1929-1999	
ANNUAL TOTAL	43464.0		52863		--	
ANNUAL MEAN	119		145		82.5	
HIGHEST ANNUAL MEAN	--		--		434	
LOWEST ANNUAL MEAN	--		--		12.0	
HIGHEST DAILY MEAN	1480	Oct 19	2330	Jun 13	24000	May 20 1978
LOWEST DAILY MEAN	9.0	Jan 15	18	Aug 29	.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	15	Jan 13	19	Aug 23	.00	Many years
INSTANTANEOUS PEAK FLOW	--		3110	Jun 13	28000	May 20 1978
INSTANTANEOUS PEAK STAGE	--		7.60	Jun 13	13.65	May 20 1978
ANNUAL RUNOFF (AC-FT)	86210		104900		59770	
10 PERCENT EXCEEDS	226		295		158 ^a	
50 PERCENT EXCEEDS	67		66		12 ^a	
90 PERCENT EXCEEDS	23		25		.10 ^a	

a Reflects water years 1947-99 only.

e Estimated.



06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY

LOCATION.--Lat 44°19'19", long 104°56'24", in NW¹/₄ NW¹/₄ sec.17, T.50 N., R.67 W., Crook County, Hydrologic Unit 10120201, on right bank 3.1 mi upstream from bridge on Highway 14, and 4.0 mi northeast of Moorcroft.

DRAINAGE AREA.--1,690 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1943 to September 1970, October 1975 to September 1983, October 1985 to September 1987, October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,110 ft above sea level, from topographic map. Prior to Mar. 28, 1947, nonrecording gage, and Mar. 28, 1947, to Jan. 16, 1951, water-stage recorder at site 4 mi downstream at different datum. Jan. 17, 1951, to September 1970, water-stage recorder at site 7.9 mi upstream at different datum. September 1970 to Oct. 22, 1993, water-stage recorder at site 8.0 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges and for those for September, which are poor. Numerous small stockwater and soil conservation reservoirs upstream from station. Diversions for irrigation upstream from station. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 360 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct 18	1430	684	9.71
Oct 30	1530	*770	*10.20
Apr 8	0200	410	7.51
Apr 11	0830	570	9.00
Jun 12	0430	654	9.53
Jun 16	0530	410	7.91

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	108	15	e10	e7.5	e15	14	27	33	23	10	5.1
2	3.0	53	15	e9.6	e6.8	e17	22	23	21	20	9.5	5.6
3	2.4	33	15	e9.0	e6.0	e20	19	23	19	18	9.7	6.2
4	2.9	26	15	e8.6	e6.8	e17	19	23	15	19	7.9	6.3
5	5.8	e25	14	e8.2	e6.0	e14	22	22	14	19	13	5.8
6	26	e22	e13	e8.6	e9.0	e16	27	29	21	18	5.3	5.9
7	92	e18	e11	e9.0	e8.4	e18	107	37	183	16	8.1	6.3
8	58	e20	e10	e9.3	e7.8	e16	294	30	135	15	5.4	8.7
9	19	e19	e11	e10	e6.7	e14	207	23	56	14	3.5	8.4
10	23	e18	e11	e10	e4.0	e13	232	21	47	12	1.9	8.7
11	21	e19	e11	e11	e4.5	e16	493	20	208	11	1.9	8.0
12	15	e20	e12	e12	e5.0	e22	395	19	395	12	3.1	6.0
13	10	e22	e13	e11	e5.6	e32	404	19	163	14	2.8	5.3
14	9.1	e23	e13	e11	e4.9	e43	264	19	86	13	4.9	4.8
15	7.4	e24	e12	e12	e4.4	e59	143	19	59	12	3.3	4.6
16	6.3	e22	e11	e11	e3.9	e81	95	20	238	11	4.7	4.5
17	9.3	e20	e11	e10	e4.2	e120	69	17	78	11	4.7	6.5
18	460	e18	e12	e9.5	e4.5	e70	57	15	94	14	3.4	6.3
19	233	e16	e9.0	e9.4	e5.0	43	43	15	246	14	2.9	6.0
20	99	16	e8.1	e10	e4.7	34	35	15	82	25	2.2	5.6
21	46	16	e7.0	e11	e5.3	27	34	22	41	16	1.8	4.9
22	29	15	e7.8	e9.7	e6.4	22	124	19	49	14	1.5	4.3
23	21	17	e8.2	e8.4	e8.2	19	110	18	35	13	1.0	5.9
24	20	16	e9.3	e7.0	e10	18	76	20	27	11	1.7	6.1
25	19	15	e11	e6.4	e12	18	57	15	21	8.8	1.4	5.8
26	17	15	e12	e7.0	e10	18	43	15	18	8.0	1.5	6.4
27	15	14	e12	e7.6	e12	16	48	14	17	7.8	3.1	5.8
28	15	14	e11	e7.8	e13	17	56	15	18	7.5	3.2	4.2
29	19	15	e10	e7.8	---	17	42	18	22	8.6	4.1	3.6
30	497	14	e9.1	e9.0	---	16	32	27	27	9.6	5.0	4.5
31	211	---	e10	e8.2	---	14	---	41	---	11	5.1	---
TOTAL	2015.5	693	349.5	289.1	192.6	882	3583	660	2468	426.3	137.6	176.1
MEAN	65.0	23.1	11.3	9.33	6.88	28.5	119	21.3	82.3	13.8	4.44	5.87
MAX	497	108	15	12	13	120	493	41	395	25	13	8.7
MIN	2.4	14	7.0	6.4	3.9	13	14	14	14	7.5	1.0	3.6
AC-FT	4000	1370	693	573	382	1750	7110	1310	4900	846	273	349

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	5.78	2.27	2.22	3.50	18.7	60.7	27.4	70.3	64.0	20.1	10.8	5.47
MEAN	5.78	2.27	2.22	3.50	18.7	60.7	27.4	70.3	64.0	20.1	10.8	5.47
MAX	68.0	23.1	22.3	53.5	260	374	190	1057	509	72.5	57.3	63.5
(WY)	1995	1999	1956	1997	1962	1978	1944	1978	1964	1948	1993	1951
MIN	.000	.000	.000	.000	.000	.10	.000	.045	.097	.000	.000	.000
(WY)	1944	1944	1944	1944	1944	1951	1961	1958	1966	1954	1944	1944

CHEYENNE RIVER BASIN

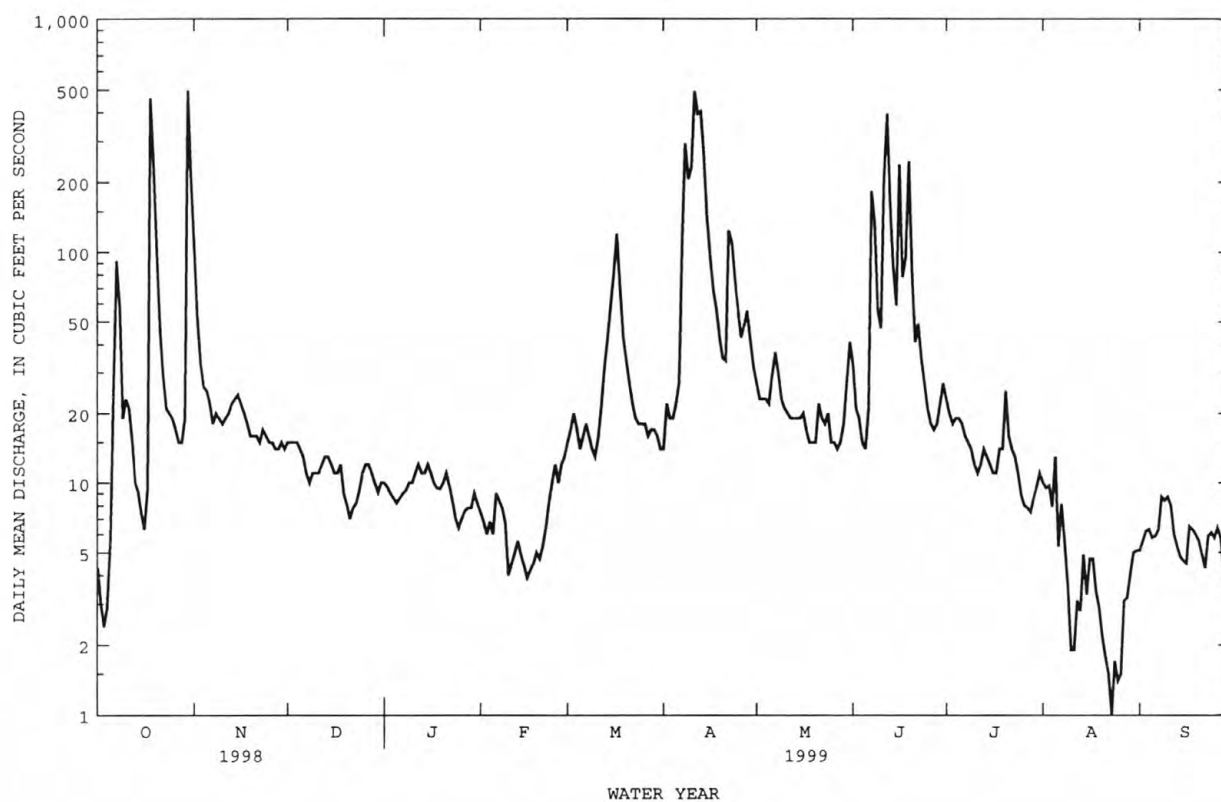
06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	8265.2		11872.7		--	
ANNUAL MEAN	22.6		32.5		24.3	
HIGHEST ANNUAL MEAN	--		--		136	
LOWEST ANNUAL MEAN	--		--		1.14	
HIGHEST DAILY MEAN	497	Oct 30	497	Oct 30	10300	May 19 1978
LOWEST DAILY MEAN	1.1	Sep 3	1.0	Aug 23	.00	Several days, most years
ANNUAL SEVEN-DAY MINIMUM	1.6	Aug 30	1.6	Aug 20	.00	Several days, most years
INSTANTANEOUS PEAK FLOW	--		770		15300 ^a	May 19 1978
INSTANTANEOUS PEAK STAGE	--		10.20		14.60 ^b	May 19 1978
ANNUAL RUNOFF (AC-FT)	16390		23550		17610	
10 PERCENT EXCEEDS	48		59		36	
50 PERCENT EXCEEDS	10		14		1.3	
90 PERCENT EXCEEDS	3.9		4.7		.00	

a From rating curve extended above 11,000 ft³/s, site and datum then in use.

b From floodmarks in shelter, site and datum then in use.

e Estimated.



06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-57, 1975-93, October 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 07...	0820	110	1520	8.1	6.0	2.5	663	10.4
FEB 17...	1400	4.2	2680	8.2	0.0	0.0	650	12.5
MAY 20...	1340	14	3390	8.3	20.5	22.5	--	10.0
JUL 21...	0755	17	3100	8.3	21.5	23.0	659	6.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 07...	97	>6000	<.01	.12	<.02	<.01	<3
FEB 17...	101	K1	<.01	1.5	.13	.13	42
MAY 20...	--	250	<.01	<.05	.07	.01	120
JUL 21...	82	490	<.01	<.05	<.02	.01	13

K Results based on colony count outside the acceptable range (non-ideal colony count).

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY

LOCATION.--Lat 44°22'55", long 104°46'45", in NW¹/₄ NW¹/₄ sec.27, T.51 N., R.66 W., Crook County, Hydrologic Unit 10120201, at reservoir dam on Belle Fourche River 12 mi northeast of Moorcroft.

DRAINAGE AREA.--1,953 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to May 15, 1958, and Oct. 1, 1968 to Mar. 13, 1970, nonrecording gages; May 15 1958, to Sept. 30, 1968, water-stage recorder; all at present site and datum.

REMARKS.--Reservoir is formed by a zoned earthfill dam completed by the Bureau of Reclamation Oct. 25, 1952. Storage began Feb. 12, 1952. Dead storage, below elevation 4,036.0 ft, 730 acre-ft. Inactive storage, between elevations 4,036.0 ft and 4,051.0 ft, 7,230 acre-ft. Total capacity below elevation 4,099.3 ft, crest of spillway, 193,800 acre-ft. Figures given herein represent total contents. The reservoir provides flood control and water for irrigation in Wyoming and near Belle Fourche, SD.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 210,000 acre-ft, May 21, 1978, elevation, 4,100.38 ft; minimum daily contents (since appreciable storage was attained), 6,000 acre-ft, May 8, 9, 1955, elevation, 4,046.35 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 192,000 acre-ft, June 14, elevation, 4,099.06 ft; minimum daily contents, 175,000 acre-ft, Sept. 24-30, minimum elevation, 4,097.20, Sept. 30.

Capacity table (elevation, in feet,
and contents, in acre-feet)

4,090	120,000
4,095	156,000
4,100	200,000

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

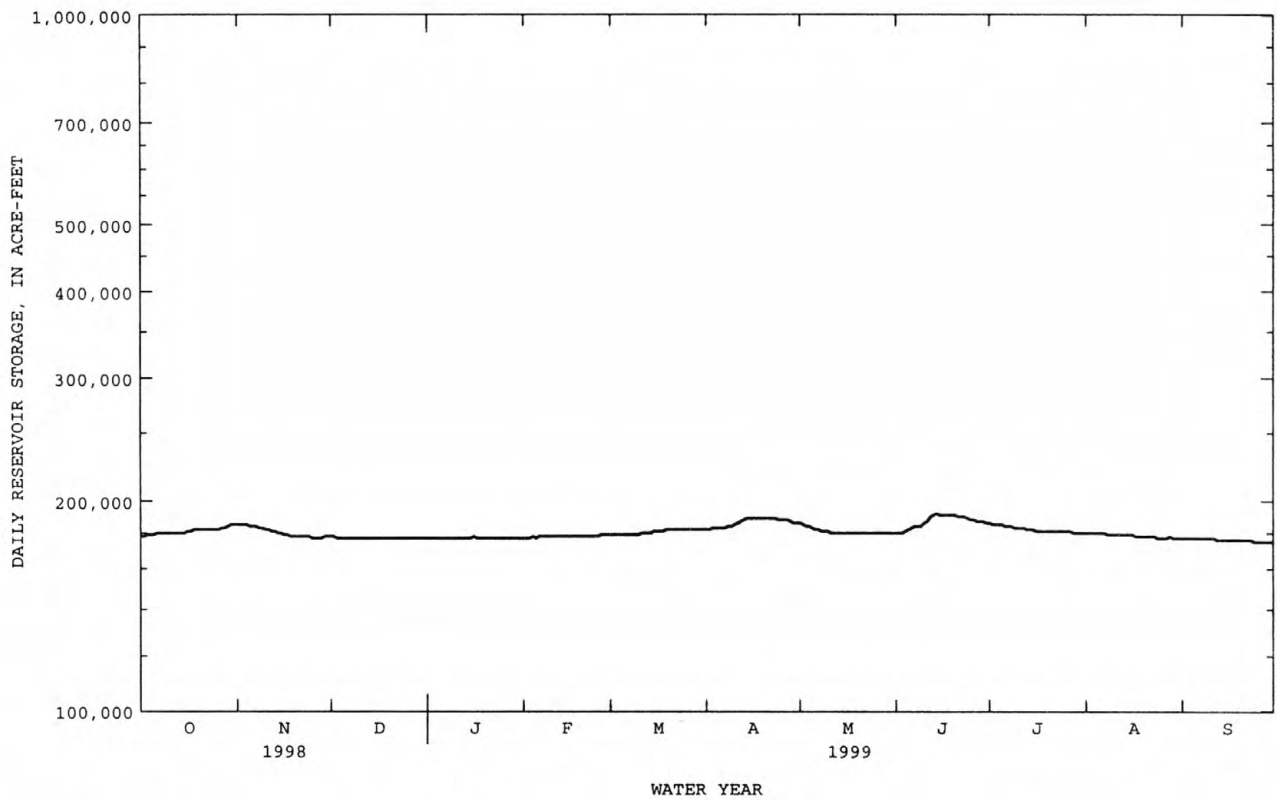
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178000	185000	178000	177000	177000	179000	182000	186000	180000	186000	180000	177000
2	178000	185000	178000	177000	177000	179000	182000	185000	180000	185000	180000	177000
3	179000	185000	177000	177000	177000	179000	183000	184000	180000	185000	180000	177000
4	179000	185000	177000	177000	178000	179000	183000	184000	181000	185000	180000	177000
5	179000	184000	177000	177000	177000	179000	183000	183000	182000	185000	180000	177000
6	180000	184000	177000	177000	178000	179000	183000	182000	183000	184000	180000	177000
7	180000	184000	177000	177000	178000	179000	183000	182000	184000	184000	180000	177000
8	180000	183000	177000	177000	178000	179000	184000	181000	184000	184000	179000	177000
9	180000	183000	177000	177000	178000	179000	184000	181000	184000	183000	179000	177000
10	180000	182000	177000	177000	178000	179000	185000	181000	186000	183000	179000	177000
11	180000	182000	177000	177000	178000	180000	186000	180000	187000	183000	179000	177000
12	180000	181000	177000	177000	178000	180000	187000	180000	190000	183000	179000	176000
13	180000	181000	177000	177000	178000	180000	188000	180000	191000	182000	179000	176000
14	180000	180000	177000	177000	178000	180000	189000	180000	192000	182000	179000	176000
15	180000	180000	177000	177000	178000	181000	189000	180000	191000	182000	179000	176000
16	181000	179000	177000	178000	178000	181000	189000	180000	191000	181000	179000	176000
17	181000	179000	177000	177000	178000	181000	189000	180000	191000	181000	178000	176000
18	182000	178000	177000	177000	178000	181000	189000	180000	191000	181000	178000	176000
19	182000	178000	177000	177000	178000	182000	189000	180000	191000	181000	178000	176000
20	182000	178000	177000	177000	178000	182000	189000	180000	191000	181000	178000	176000
21	182000	178000	177000	177000	178000	182000	189000	180000	190000	181000	178000	176000
22	182000	178000	177000	177000	178000	182000	189000	180000	190000	181000	178000	176000
23	182000	178000	177000	177000	178000	182000	189000	180000	190000	181000	178000	176000
24	182000	178000	177000	177000	178000	182000	188000	180000	189000	181000	177000	175000
25	182000	177000	177000	177000	178000	182000	188000	180000	188000	181000	177000	175000
26	182000	177000	177000	177000	179000	182000	188000	180000	188000	181000	177000	175000
27	183000	177000	177000	177000	179000	182000	188000	180000	187000	181000	177000	175000
28	183000	177000	177000	177000	179000	182000	187000	180000	187000	180000	178000	175000
29	184000	178000	177000	177000	---	182000	186000	180000	187000	180000	177000	175000
30	185000	178000	177000	177000	---	182000	186000	180000	186000	180000	177000	175000
31	185000	---	177000	177000	---	182000	---	180000	---	180000	177000	---
MAX	185000	185000	178000	178000	179000	182000	189000	186000	192000	186000	180000	177000
MIN	178000	177000	177000	177000	177000	179000	182000	180000	180000	180000	177000	175000
(#)	4,098.34	4,097.53	4,097.44	4,097.50	4,097.64	4,098.04	4,098.45	4,097.79	4,098.49	4,097.79	4,097.49	4,097.20
(*)	+7,000	-7,000	-1,000	0	+2,000	+3,000	+4,000	-6,000	+6,000	-6,000	-3,000	-2,000

WTR YR 1999 MAX 192,000 MIN 175,000 (*) -3,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY--Continued



CHEYENNE RIVER BASIN

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY

LOCATION.--Lat 44°42'04", long 104°35'07", in SW¹/₄ NE¹/₄ sec.6, T.54 N., R.64 W., Crook County, Hydrologic Unit 10120201, at bridge, 1.3 mi northeast of Hulett, and 4.7 mi downstream from Blacktail Creek.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 06...	1635	34	1760	8.1	10.5	16.0	672	10.5
FEB 17...	1130	50	1350	7.8	.0	8.0	660	10.0
MAY 20...	1535	97	1450	8.3	20.0	20.0	--	14.1
JUL 20...	1635	132	1460	8.1	25.5	29.0	667	9.7

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 06...	108	46	<.01	.08	<.02	.02	--
FEB 17...	79	K3	<.01	.22	.08	.01	220
MAY 20...	--	K10	<.01	<.05	.02	.01	22
JUL 20...	137	K2300	<.01	<.05	<.02	.01	20

K Results based on colony count outside the acceptable range (non-ideal colony count).

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE¹/₄ NW¹/₄ NW¹/₄ sec.18, T.9 N., R.1 E., Butte County, Hydrologic Unit 10120202, on left bank 0.3 mi downstream from State line, 3.7 mi downstream from Oak Creek, and 11 mi northwest of Belle Fourche, SD.

DRAINAGE AREA.--3,280 mi², approximately.

PERIOD OF RECORD.--December 1946 to current year. Records for water year 1947 incomplete, yearly estimate published in WSP 1729.

GAGE.--Water-stage recorder. Datum of gage is 3,095.7 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,400 acres. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 143 mi upstream since Oct. 25, 1952. Maximum discharge prior to regulation, 3,620 ft³/s, June 23, 1947, gage height, 12.51 ft; maximum gage height, 14.33 ft, Mar. 22, 1949, backwater from ice; no flow at times some years. Bureau of Reclamation satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	518	83	e31	e102	e90	165	539	148	351	76	80
2	22	362	78	e31	e105	e88	167	518	145	350	75	66
3	22	284	75	e30	e110	e87	163	514	175	334	76	62
4	30	259	e70	e30	e120	e85	156	517	170	271	81	58
5	226	251	e60	e29	e130	e83	158	548	162	240	78	55
6	226	253	e48	e29	e135	e81	236	579	561	226	80	53
7	122	264	e30	e29	e150	e80	447	562	530	217	127	54
8	100	336	28	e29	e150	e80	364	525	423	212	84	53
9	144	354	60	e31	e155	e78	376	505	500	188	78	48
10	96	350	69	e33	e150	e63	315	512	533	173	79	46
11	86	348	71	e50	e145	52	387	568	768	166	72	45
12	79	344	74	e78	e140	88	315	553	808	161	72	43
13	68	343	73	e82	e135	111	295	469	908	153	71	42
14	62	438	63	e90	e130	103	314	450	932	148	69	43
15	58	381	75	e105	e120	235	288	373	953	145	67	44
16	84	360	69	e110	e115	548	268	472	1150	145	76	44
17	461	355	63	e108	e110	617	242	373	730	155	68	43
18	249	353	61	e105	e105	558	223	333	640	219	62	42
19	227	278	59	e104	e103	410	206	290	562	209	57	41
20	176	258	e50	e102	e102	362	199	257	556	224	55	40
21	143	251	e28	e100	e101	282	257	233	490	199	53	40
22	119	203	e25	e98	e101	229	462	218	443	179	51	40
23	102	186	e27	e94	e100	211	677	210	415	161	49	39
24	86	178	e29	e90	e100	206	692	200	396	134	48	39
25	74	170	e31	e80	e98	199	627	191	378	114	46	39
26	68	164	e33	e75	e95	191	664	182	362	102	44	40
27	63	159	e35	e78	e90	195	651	174	351	95	43	42
28	65	132	e34	e80	e90	202	622	166	456	90	43	44
29	210	100	e33	e88	---	200	561	157	381	86	42	43
30	264	89	e32	e92	---	179	553	151	351	81	42	41
31	388	---	e31	e100	---	160	---	149	---	77	44	---
TOTAL	4141	8321	1597	2211	3287	6153	11050	11488	15377	5605	2008	1409
MEAN	134	277	51.5	71.3	117	198	368	371	513	181	64.8	47.0
MAX	461	518	83	110	155	617	692	579	1150	351	127	80
MIN	21	89	25	29	90	52	156	149	145	77	42	39
AC-FT	8210	16500	3170	4390	6520	12200	21920	22790	30500	11120	3980	2790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

	MEAN	28.9	27.3	17.6	21.3	45.6	160	167	229	190	96.7	73.1	34.0
MAX	134	277	51.5	247	459	931	823	1104	812	303	271	109	
(WY)	1999	1999	1999	1997	1996	1972	1971	1978	1984	1981	1980	1955	
MIN	.000	.000	.000	.000	.20	15.7	15.1	3.10	11.9	2.94	.10	.000	
(WY)	1955	1961	1961	1961	1959	1981	1992	1961	1961	1960	1961	1954	

BELLE FOURCHE RIVER BASIN

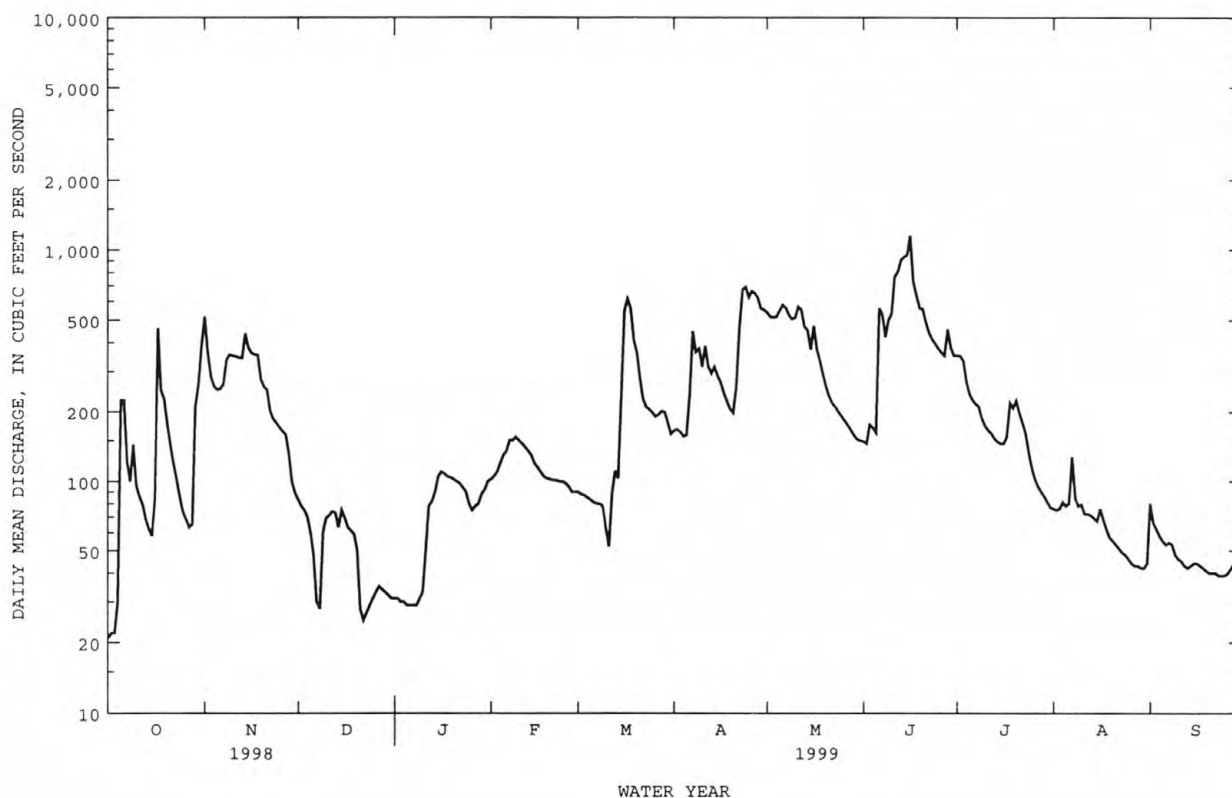
06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1954 - 1999	
ANNUAL TOTAL	39472		72647		--	
ANNUAL MEAN	108		199		91.0	
HIGHEST ANNUAL MEAN	--		--		229	
LOWEST ANNUAL MEAN	--		--		7.69	
HIGHEST DAILY MEAN	518	Nov 1	1150	Jun 16	4760	May 9 1995
LOWEST DAILY MEAN	16	Sep 11	21	Oct 1	.00 ^a	--
ANNUAL SEVEN-DAY MINIMUM	20	Sep 6	30	Jan 2	.00 ^a	--
INSTANTANEOUS PEAK FLOW	--		1260	Jun 16	6320	May 10 1995 ^b
INSTANTANEOUS PEAK STAGE	--		10.01	Jun 16	16.33	May 10 1995
ANNUAL RUNOFF (AC-FT)	78290		144100		65930	
10 PERCENT EXCEEDS	296		508		202	
50 PERCENT EXCEEDS	68		122		37	
90 PERCENT EXCEEDS	25		42		5.0	

a No flow at times in some years.

b Based on slope-area measurement of peak flow.

e Estimated



06429500 COLD SPRINGS CREEK AT BUCKHORN, WY

LOCATION.--Lat 44°09'15", long 104°04'37", in NW¹/₄ NW¹/₄ SW¹/₄ sec.9, T.48 N., R.60 W., Weston County, Hydrologic Unit 10120303, on right bank at downstream end of culvert at U.S. Highway 85 and 0.5 mi northeast of Buckhorn.

DRAINAGE AREA.--19.0 mi².

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above sea level, from topographic map. October 1974 to September 1982, 200 ft upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.6	7.0	e6.3	6.3	6.6	7.3	7.4	7.2	7.9	7.9	7.2
2	6.8	6.6	7.0	e5.0	6.3	6.4	7.2	7.4	7.2	7.9	7.5	7.2
3	6.8	6.6	7.0	e5.5	6.2	e6.3	7.1	7.4	7.5	7.8	7.2	7.2
4	6.9	6.6	7.0	e6.5	6.2	6.3	7.0	7.4	7.2	7.7	7.2	7.4
5	4.1	6.6	7.0	6.6	6.3	6.3	7.0	7.4	7.2	7.7	7.2	7.2
6	4.8	6.6	e6.0	6.6	6.3	6.3	7.1	7.4	7.6	7.7	7.2	7.2
7	6.8	6.6	e5.4	6.6	6.3	6.3	7.7	7.4	7.4	7.7	7.4	7.2
8	6.8	6.6	e5.8	6.6	6.3	6.3	7.6	7.2	7.4	7.7	7.4	7.2
9	6.8	6.5	e6.8	6.6	6.4	e6.3	7.7	7.2	7.8	7.7	7.4	7.2
10	6.8	4.2	e6.6	6.6	6.5	6.3	8.0	7.2	8.0	7.7	7.4	7.2
11	6.8	e5.0	6.9	6.6	e5.8	e6.3	7.4	7.2	8.0	7.4	7.4	7.2
12	6.6	e6.0	6.8	6.6	e6.4	6.3	7.4	7.2	7.9	7.4	7.4	7.2
13	6.6	7.2	e6.8	6.6	6.6	6.3	7.4	7.3	7.9	7.4	7.4	7.2
14	6.6	7.0	6.8	6.6	6.6	6.4	7.4	7.4	7.9	7.4	7.4	7.2
15	6.6	6.8	6.8	6.6	6.6	6.4	7.4	7.4	7.9	7.4	7.2	7.2
16	6.6	6.8	6.8	6.5	6.5	6.5	e7.3	7.2	7.9	7.4	7.2	7.2
17	6.7	6.8	6.8	6.6	6.6	6.3	e7.2	7.2	7.9	7.9	7.2	7.2
18	6.6	6.8	e6.6	6.6	6.6	e6.3	7.5	7.2	8.1	7.7	7.2	7.2
19	6.6	6.8	e6.0	6.6	6.6	6.6	7.5	7.2	8.1	7.7	7.2	7.2
20	6.6	e6.8	e5.0	6.6	6.6	7.0	7.5	7.2	7.9	7.6	7.2	7.2
21	6.6	6.8	e4.0	6.6	e6.3	7.2	7.8	7.3	7.9	7.4	7.2	7.1
22	6.6	6.8	e4.5	6.6	6.3	7.9	7.7	7.4	7.9	7.4	7.2	7.0
23	6.6	6.8	e5.0	6.6	e6.2	8.2	7.6	7.3	7.9	7.4	7.2	7.0
24	6.6	6.8	e5.6	6.6	6.4	12	7.4	7.2	7.9	7.4	7.2	7.0
25	6.6	6.8	e6.4	e6.4	6.3	19	7.5	7.2	7.9	7.4	7.2	7.0
26	6.6	6.8	6.7	6.8	4.9	22	7.6	7.5	7.9	7.4	7.2	7.0
27	6.6	6.9	6.6	6.7	e3.8	14	7.4	7.4	7.9	7.4	7.2	7.0
28	6.6	7.0	6.6	e6.4	e6.2	e8.0	7.4	7.2	7.9	7.4	7.0	7.0
29	6.8	7.0	6.6	e6.4	---	e7.5	7.4	7.2	7.9	7.6	7.2	7.0
30	6.8	7.0	6.6	6.6	---	7.8	7.4	7.2	7.9	7.7	7.2	7.0
31	6.6	---	6.6	6.3	---	7.6	---	7.2	---	7.8	7.2	---
TOTAL	202.7	198.2	196.1	200.8	174.4	249.0	222.9	226.0	233.0	235.1	225.6	214.3
MEAN	6.54	6.61	6.33	6.48	6.23	8.03	7.43	7.29	7.77	7.58	7.28	7.14
MAX	6.9	7.2	7.0	6.8	6.6	22	8.0	7.5	8.1	7.9	7.9	7.4
MIN	4.1	4.2	4.0	5.0	3.8	6.3	7.0	7.2	7.2	7.4	7.0	7.0
AC-FT	402	393	389	398	346	494	442	448	462	466	447	425

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1999, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	4.31	4.16	4.05	4.02	4.19	4.58	4.90	4.71	4.79	4.65	4.71	4.65	4.71	4.65	4.71	4.65	4.71	4.65	4.71	4.65	4.71	4.65	4.71	4.65	4.71
MAX	6.54	6.61	6.33	6.48	6.23	8.03	7.43	7.29	7.77	7.58	7.28	7.14	7.28	7.14	7.28	7.14	7.28	7.14	7.28	7.14	7.28	7.14	7.28	7.14	7.28
(WY)	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MIN	2.53	2.09	2.06	2.50	2.61	2.91	3.07	3.10	3.19	2.62	2.71	2.92	2.71	2.92	2.62	2.71	2.92	2.62	2.71	2.92	2.62	2.71	2.92	2.62	2.71
(WY)	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999

CHEYENNE RIVER BASIN

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY--Continued

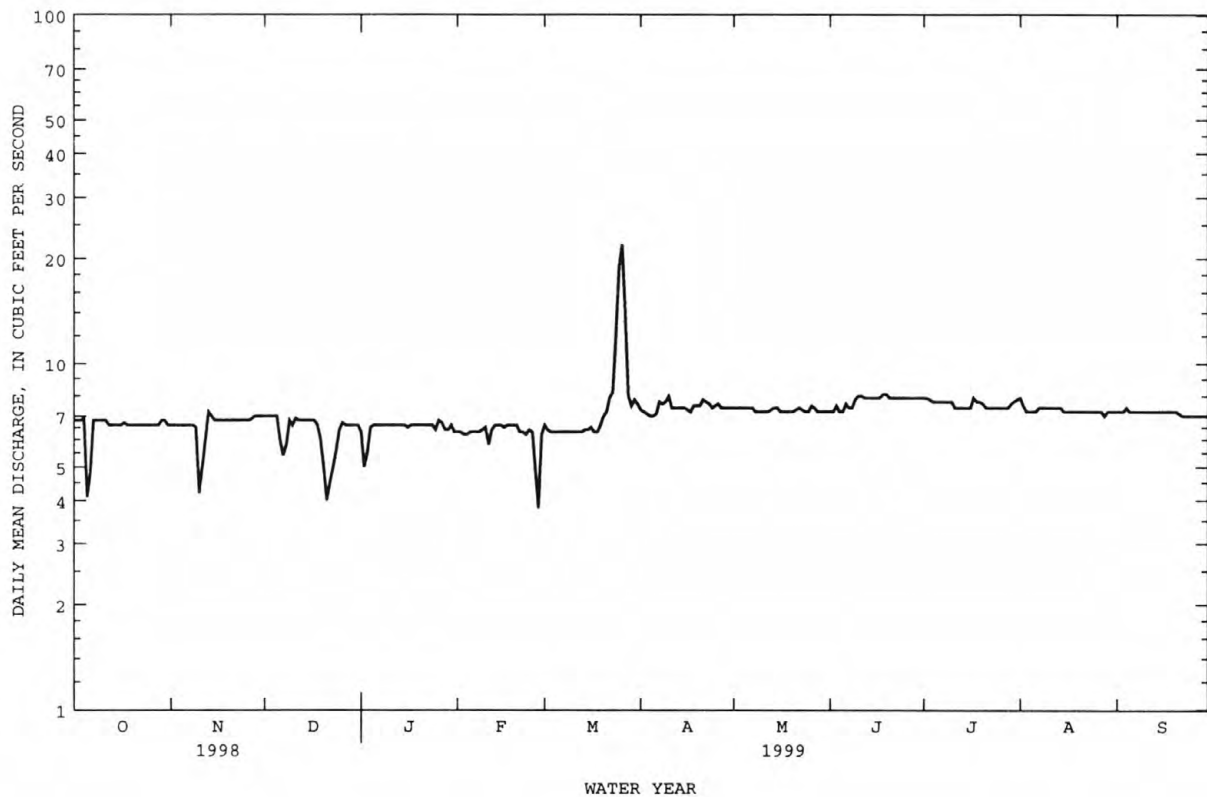
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1975 - 1999	
ANNUAL TOTAL	2310.6		2578.1		--	
ANNUAL MEAN	6.33		7.06		4.50	
HIGHEST ANNUAL MEAN	--		--		7.06	1999
LOWEST ANNUAL MEAN	--		--		2.92	1993
HIGHEST DAILY MEAN	8.0	Mar 4	22	Mar 26	22	Mar 26 1999
LOWEST DAILY MEAN	1.4	Feb 26	3.8	Feb 27	.30	Dec 20 1996
ANNUAL SEVEN-DAY MINIMUM	3.1	Feb 25	5.2	Dec 19	.75	Dec 18 1996
INSTANTANEOUS PEAK FLOW	--		42 ^a	Mar 26	42 ^a	Mar 26 1999
INSTANTANEOUS PEAK STAGE	--		3.42 ^b	Dec 8	8.61 ^c	Jan 12 1978
ANNUAL RUNOFF (AC-FT)	4580		5110		3260	
10 PERCENT EXCEEDS	7.0		7.8		6.3	
50 PERCENT EXCEEDS	6.6		7.1		4.4	
90 PERCENT EXCEEDS	5.2		6.3		2.8	

a Gage height, 3.33 ft.

b Backwater from ice.

c Backwater from ice, site and datum then in use.

e Estimated.



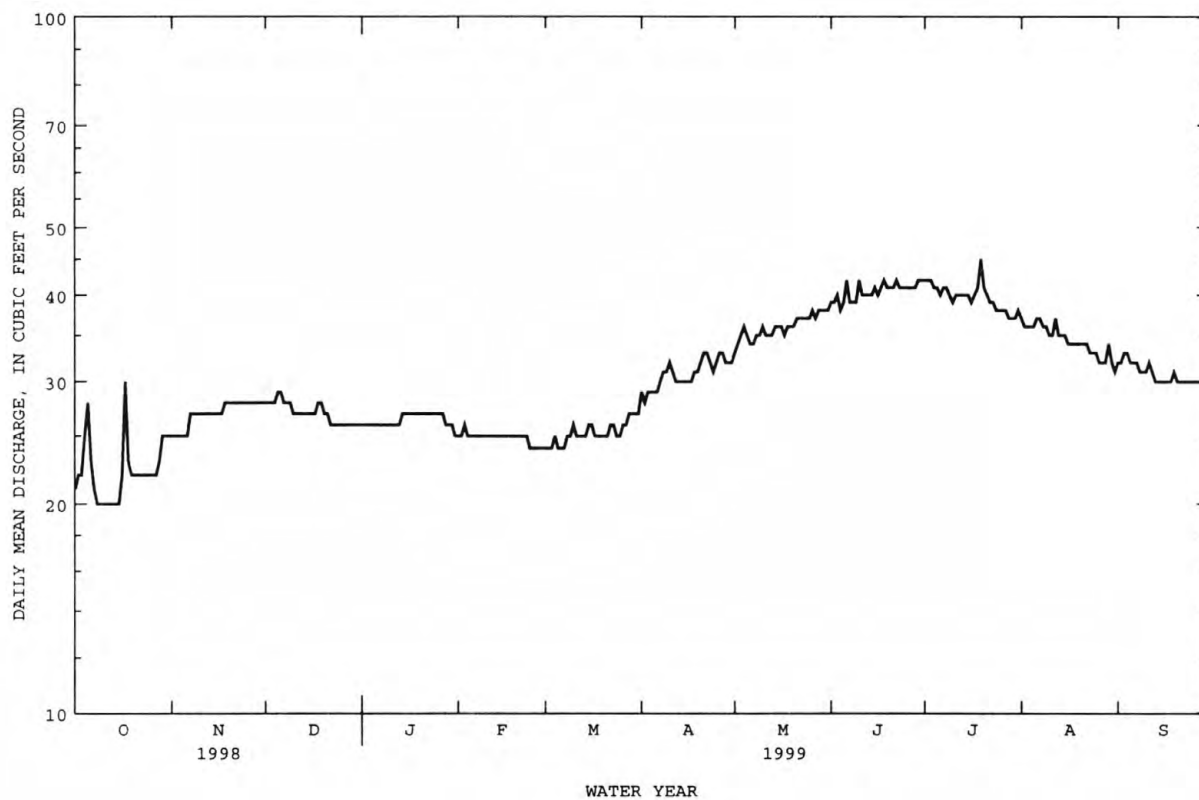
CHEYENNE RIVER BASIN

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1977 - 1999
ANNUAL TOTAL	9137	11124	--
ANNUAL MEAN	25.0	30.5	23.1
HIGHEST ANNUAL MEAN	--	--	30.5 1999
LOWEST ANNUAL MEAN	--	--	15.7 1992
HIGHEST DAILY MEAN	79 Jun 19	45 Jul 19	455 May 9 1995
LOWEST DAILY MEAN	19 Mar 11	20 Oct 8-15	12 Mar 10 1992
ANNUAL SEVEN-DAY MINIMUM	20 Oct 8	20 Oct 8	13 Mar 8 1992
INSTANTANEOUS PEAK FLOW	--	62 Jul 19	1230 May 8 1995
INSTANTANEOUS PEAK STAGE	--	1.96 Jul 19	3.80 ^a May 8 1995
ANNUAL RUNOFF (AC-FT)	18120	22060	16740
10 PERCENT EXCEEDS	29	40	30
50 PERCENT EXCEEDS	25	29	22
90 PERCENT EXCEEDS	22	25	16

a From floodmarks, present site and datum.

e Estimated.



06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW¹/₄ SW¹/₄ sec.7, T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on right bank at State line and 12 mi southwest of Belle Fourche, SD.

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

REVISED RECORDS.--WDR SD-96-1: September 1995 daily discharges, monthly, and water year statistics.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,440 ft above sea level, from topographic map. Prior to Apr. 23, 1987, published as 06430000 (below diversion at site 15 ft downstream).

REMARKS.--Records good except those for Sept. 9-27, which are fair, and those for estimated daily discharges, which are poor. Ditch diverts water from left bank of Redwater Creek, 2.0 mi upstream, for irrigation of about 700 acres. Flow maintained during irrigation season only. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.00	.00	.00	.00	.00	.00	3.0	6.5	9.4
2	e3.5	e.00	.00	.00	.00	.00	.00	.00	.00	2.6	6.5	9.5
3	e4.0	e.00	.00	.00	.00	.00	.00	.00	.00	2.0	6.5	9.9
4	e4.0	e.00	.00	.00	.00	.00	.00	.00	.00	1.7	8.2	7.1
5	e5.0	e.00	.00	.00	.00	.00	.00	.00	.00	1.8	10	3.1
6	e3.0	e.00	.00	.00	.00	.00	.00	.00	.00	2.1	11	3.7
7	e3.0	e.00	.00	.00	.00	.00	.00	.00	.00	4.7	11	3.8
8	e3.5	.00	.00	.00	.00	.00	.00	.00	.00	4.7	11	22
9	e4.0	.00	.00	.00	.00	.00	.00	.00	.00	3.8	11	28
10	e3.5	.00	.00	.00	.00	.00	.00	.00	.00	4.4	11	15
11	e3.0	.00	.00	.00	.00	.00	.00	.00	.00	3.3	11	15
12	e2.0	.00	.00	.00	.00	.00	.00	.00	.00	4.3	13	15
13	e.00	.00	.00	.00	.00	.00	.00	.00	.00	6.5	13	15
14	e.00	.00	.00	.00	.00	.00	.00	.00	.00	6.2	13	14
15	e.00	.00	.00	.00	.00	.00	.00	.00	.00	7.3	9.6	14
16	e.00	.00	.00	.00	.00	.00	.00	.00	.00	7.5	.13	13
17	e.00	.00	.00	.00	.00	.00	.00	.00	.00	7.8	.00	13
18	e.00	.00	.00	.00	.00	.00	.00	.00	.00	5.5	.00	12
19	e.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00	11
20	e.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00	11
21	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e1.0	.00	9.9
22	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e1.0	.00	9.2
23	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e4.0	.00	8.4
24	e.00	.00	.00	.00	.00	.00	.00	.00	3.4	e5.0	.00	8.0
25	e.00	.00	.00	.00	.00	.00	.00	.00	5.1	e5.0	.00	7.8
26	e.00	.00	.00	.00	.00	.00	.00	.00	3.9	e5.1	.00	7.1
27	e.00	.00	.00	.00	.00	.00	.00	.00	5.4	e5.0	.00	6.8
28	e.00	.00	.00	.00	.00	.00	.00	.00	3.7	e7.5	.00	6.5
29	e.00	.00	.00	.00	---	.00	.00	.00	3.6	e7.0	.00	6.8
30	e.00	.00	.00	.00	---	.00	.00	.00	3.5	6.6	4.2	7.4
31	e.00	---	.00	.00	---	.00	---	.00	---	6.5	7.0	---
TOTAL	38.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.60	137.8	163.63	322.4
MEAN	1.24	.000	.000	.000	.000	.000	.000	.000	.95	4.45	5.28	10.7
MAX	5.0	.00	.00	.00	.00	.00	.00	.00	5.4	7.8	13	28
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00	3.1
AC-FT	76	.00	.00	.00	.00	.00	.00	.00	57	273	325	639

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

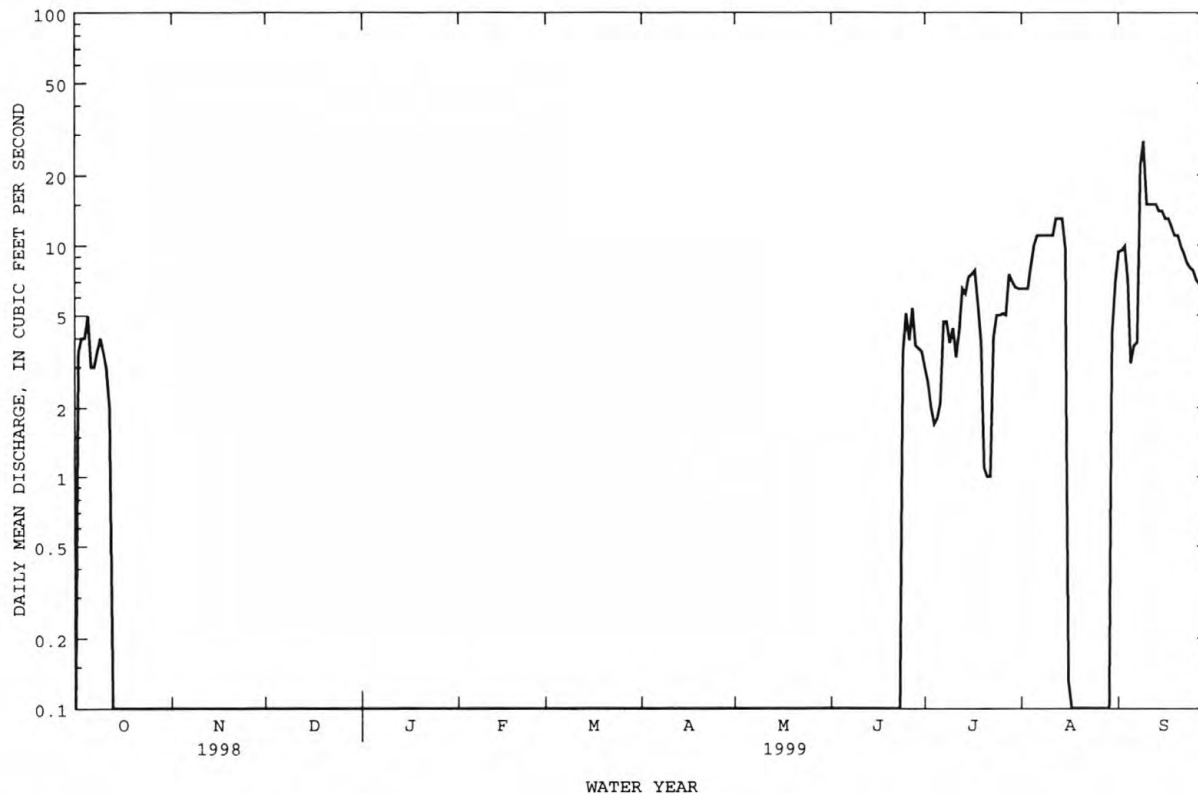
	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988
MEAN	5.52	.14	.000	.000	.000	.000	.012	1.32	4.87	9.90	8.26	8.78
MAX	20.6	.94	.000	.000	.000	.000	.085	6.30	13.9	16.4	18.2	18.8
(WY)	1991	1994	1988	1988	1988	1988	1988	1997	1992	1988	1991	1994
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.84	2.24	.80
(WY)	1988	1988	1988	1988	1988	1988	1988	1990	1991	1993	1998	1993

BELLE FOURCHE RIVER BASIN

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	766.42		690.93		--	
ANNUAL MEAN	2.10		1.89		3.26	
HIGHEST ANNUAL MEAN	--		--		5.32	
LOWEST ANNUAL MEAN	--		--		.92	
HIGHEST DAILY MEAN	28	Jul 23-24	28	Sep 9	46	Oct 8 1990
LOWEST DAILY MEAN	.00	Many days	.00	Many days	.00	Many days, each year
ANNUAL RUNOFF (AC-FT)	1520		1370		2360	
10 PERCENT EXCEEDS	9.3		7.4		12	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated.



06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW¹/₄ NW¹/₄ sec.18 T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on left bank 800 ft downstream from State line, 5.7 mi upstream from Crow Creek, and 12 mi southwest of Belle Fourche, SD.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--April 1929 to September 1931 and February 1936 to July 1937 (published as "near Beulah, WY"), June 1954 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1936-37(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above sea level, from topographic map. Apr. 25, 1929, to Sept. 30, 1931, and Feb. 28, 1936, to July 31, 1937, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records good except those for Oct. 31 to Dec. 25, Feb. 5 to Mar. 29, May 27 to June 4, which are fair, and those for estimated daily discharges, which are poor. Large diversions for irrigation upstream from station. Total flow passing State line may be obtained by adding flow of Murray ditch (see station 06429997). Satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	52	45	50	45	48	57	61	65	49	52	43
2	26	50	47	47	46	49	54	61	72	49	52	43
3	27	51	49	47	46	47	54	62	75	47	51	44
4	34	48	47	45	47	45	52	64	70	47	47	49
5	41	47	49	51	48	49	52	70	68	46	43	54
6	39	48	50	48	53	47	54	73	73	46	45	54
7	35	50	45	44	50	47	58	61	89	43	46	54
8	33	48	44	46	52	47	68	59	82	43	46	46
9	32	47	45	46	50	47	68	60	77	41	46	42
10	33	44	47	48	51	47	68	62	86	40	45	46
11	34	42	47	51	50	47	65	68	140	41	46	46
12	35	41	56	53	50	46	61	75	117	37	48	46
13	37	42	50	51	47	46	66	73	110	35	47	44
14	37	45	48	51	50	46	69	70	104	35	47	44
15	36	50	47	53	47	50	64	73	95	35	52	45
16	39	50	44	51	52	50	61	80	88	35	60	44
17	64	51	47	49	48	50	59	82	81	36	59	43
18	71	50	47	46	51	47	57	73	78	42	58	44
19	50	47	46	47	50	43	57	69	74	68	59	44
20	44	50	e44	47	50	42	58	66	70	95	59	44
21	41	49	e42	49	48	44	64	65	67	55	60	44
22	40	46	e42	50	48	44	104	65	64	50	60	44
23	38	44	e44	51	50	45	101	65	62	45	58	44
24	38	45	e48	47	50	44	82	64	56	43	60	44
25	39	45	e50	48	47	46	73	63	54	44	59	42
26	39	44	54	48	49	49	72	63	54	45	57	40
27	39	44	55	50	48	52	71	66	57	46	57	40
28	38	44	60	47	47	52	67	66	54	47	58	39
29	40	43	55	46	---	51	64	68	52	47	61	38
30	72	43	49	49	---	53	62	68	51	49	51	40
31	57	---	46	46	---	53	---	66	---	51	48	---
TOTAL	1259	1400	1489	1502	1370	1473	1962	2081	2285	1432	1637	1334
MEAN	40.6	46.7	48.0	48.5	48.9	47.5	65.4	67.1	76.2	46.2	52.8	44.5
MAX	72	52	60	53	53	53	104	82	140	95	61	54
MIN	26	41	42	44	45	42	52	59	51	35	43	38
AC-FT	2500	2780	2950	2980	2720	2920	3890	4130	4530	2840	3250	2650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1999, BY WATER YEAR (WY)

MEAN	28.5	32.5	32.2	31.6	32.8	34.4	37.6	54.2	46.8	23.4	23.2	25.4
MAX	45.0	47.9	48.0	48.5	57.8	66.0	65.4	168	128	54.9	58.9	50.4
(WY)	1973	1974	1999	1999	1971	1996	1999	1995	1976	1976	1973	1973
MIN	14.2	20.8	21.5	20.7	21.2	22.1	18.8	7.44	6.29	7.62	6.78	11.8
(WY)	1991	1961	1993	1993	1993	1962	1981	1985	1961	1990	1985	1985

BELLE FOURCHE RIVER BASIN

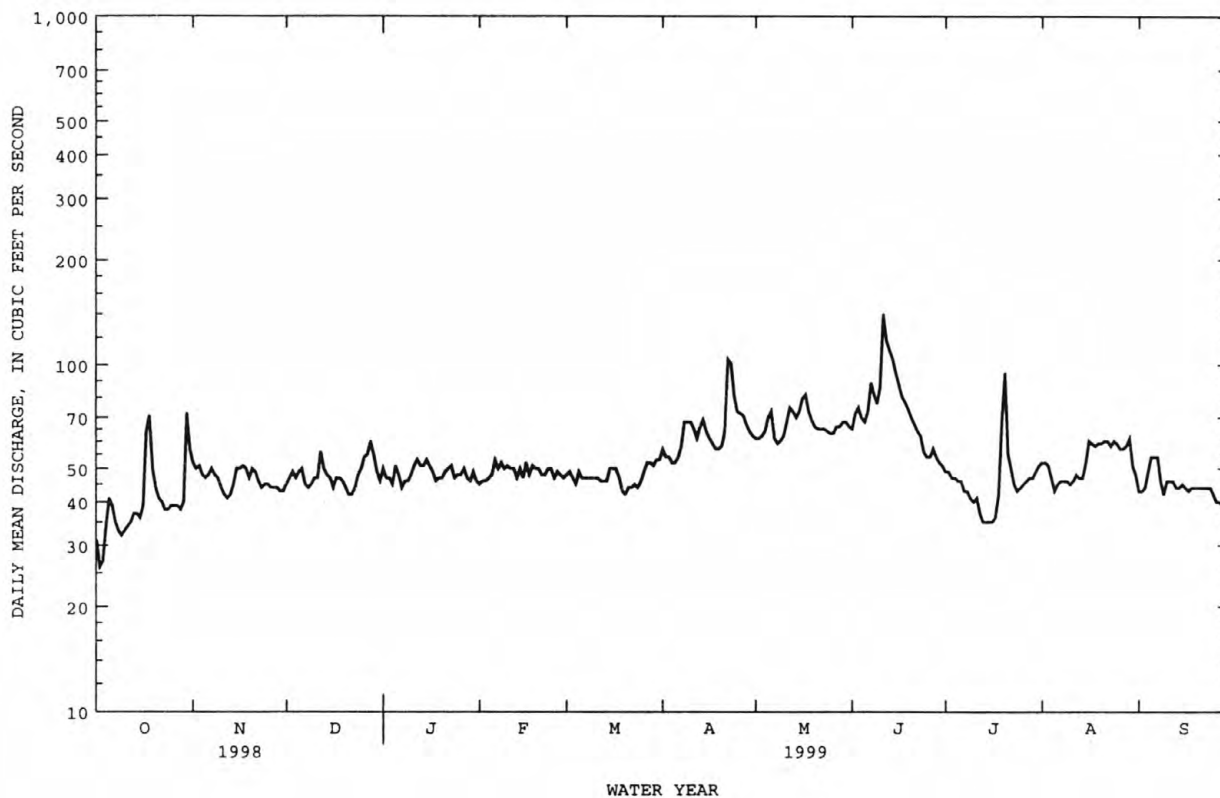
06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1955 - 1999	
ANNUAL TOTAL	14230		19224		--	
ANNUAL MEAN	39.0		52.7		33.5	
HIGHEST ANNUAL MEAN	--		--		56.0	1973
LOWEST ANNUAL MEAN	--		--		17.9	1961
HIGHEST DAILY MEAN	100	Jun 19	140	Jun 11	1330	May 9 1995 ^a
LOWEST DAILY MEAN	17	Jul 21-22	26	Oct 2	1.3	May 22 1985 ^a
ANNUAL SEVEN-DAY MINIMUM	19	Jul 21	33	Oct 1	1.9	May 21 1985 ^b
INSTANTANEOUS PEAK FLOW	--		200	Jul 20	2440	Aug 22 1973 ^b
INSTANTANEOUS PEAK STAGE	--		4.95	Jul 20	12.19	Aug 22 1973
ANNUAL RUNOFF (AC-FT)	28230		38130		24290	
10 PERCENT EXCEEDS	49		69		48	
50 PERCENT EXCEEDS	40		49		30	
90 PERCENT EXCEEDS	26		41		16	

a No flow Aug. 13-15, 1929, during partial year.

b From rating curve extended above 1,000 ft³/s on basis of slope-area measurement.

e Estimated.



06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

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

DRAINAGE AREA.--1,431 mi².

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 130,000 acres of hay meadows upstream from station. Transbasin diversions upstream from station to Cache la Poudre River basin. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	177	203	e140	e120	e170	577	839	1470	1010	530	175
2	137	188	200	e130	e120	e170	504	848	1400	888	465	166
3	153	222	179	e120	e120	e170	442	874	1260	880	394	173
4	172	258	160	e120	e130	e170	347	785	1250	863	342	181
5	190	239	e120	e130	e130	e160	398	669	1170	841	336	170
6	187	216	e110	e130	e130	e150	381	560	1150	800	354	145
7	181	189	e110	e120	e140	e150	390	502	1120	756	353	129
8	172	199	e120	e120	e140	e160	459	464	910	747	327	112
9	164	191	e130	e120	e140	e170	464	463	732	820	301	108
10	158	146	e120	e120	e130	e170	386	587	743	809	288	104
11	150	e180	e130	e130	e120	e170	331	736	836	789	268	106
12	148	e240	e140	e130	e120	e170	344	657	846	717	241	108
13	143	e290	e140	e120	e130	e170	388	561	876	643	235	108
14	133	268	e140	e120	e140	e170	453	607	903	586	218	103
15	135	310	e140	e130	e150	e170	455	815	1110	636	198	98
16	131	286	e150	e130	e150	e175	373	777	1450	739	196	94
17	132	279	e150	e120	e150	e180	300	665	1880	778	187	96
18	135	261	e150	e120	e150	e190	335	568	1940	702	190	90
19	132	238	e140	e130	e150	e220	366	505	1780	628	190	95
20	131	186	e130	e123	e140	e280	400	504	1810	652	189	116
21	131	178	e120	e120	e130	e320	460	556	1870	604	200	145
22	127	304	e110	e110	e140	e340	551	631	1930	539	219	146
23	129	216	e110	e120	e140	e400	555	707	1910	516	207	133
24	131	270	e110	e120	e150	e480	526	802	1810	503	191	126
25	129	223	e120	e120	e160	e600	557	962	1670	451	180	115
26	129	220	e130	e120	e160	e740	620	1090	1510	439	176	108
27	134	227	e130	e120	e150	e840	613	1100	1480	420	176	93
28	138	220	e130	e110	e160	e800	643	1190	1320	402	183	96
29	154	236	e130	e100	---	e677	695	1160	1180	473	201	104
30	169	230	e140	e100	---	e560	766	1210	1050	505	195	112
31	167	---	e140	e110	---	592	---	1350	---	546	179	---
TOTAL	4541	6887	4232	3753	3890	9884	14079	23744	40366	20682	7909	3655
MEAN	146	230	137	121	139	319	469	766	1346	667	255	122
MAX	190	310	203	140	160	840	766	1350	1940	1010	530	181
MIN	119	146	110	100	120	150	300	463	732	402	176	90
AC-FT	9010	13660	8390	7440	7720	19600	27930	47100	80070	41020	15690	7250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1999, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	163	154	104	84.1	89.3	177	757	1147	1491	647	269	151
MAX	538	366	215	177	199	722	2444	3649	3296	2367	763	712
(WY)	1962	1962	1998	1984	1986	1986	1962	1984	1983	1957	1983	1997
MIN	31.7	54.2	33.9	27.5	35.7	47.8	131	212	89.4	26.7	38.5	23.8
(WY)	1935	1935	1977	1977	1933	1964	1981	1981	1934	1934	1934	1934

PLATTE RIVER BASIN

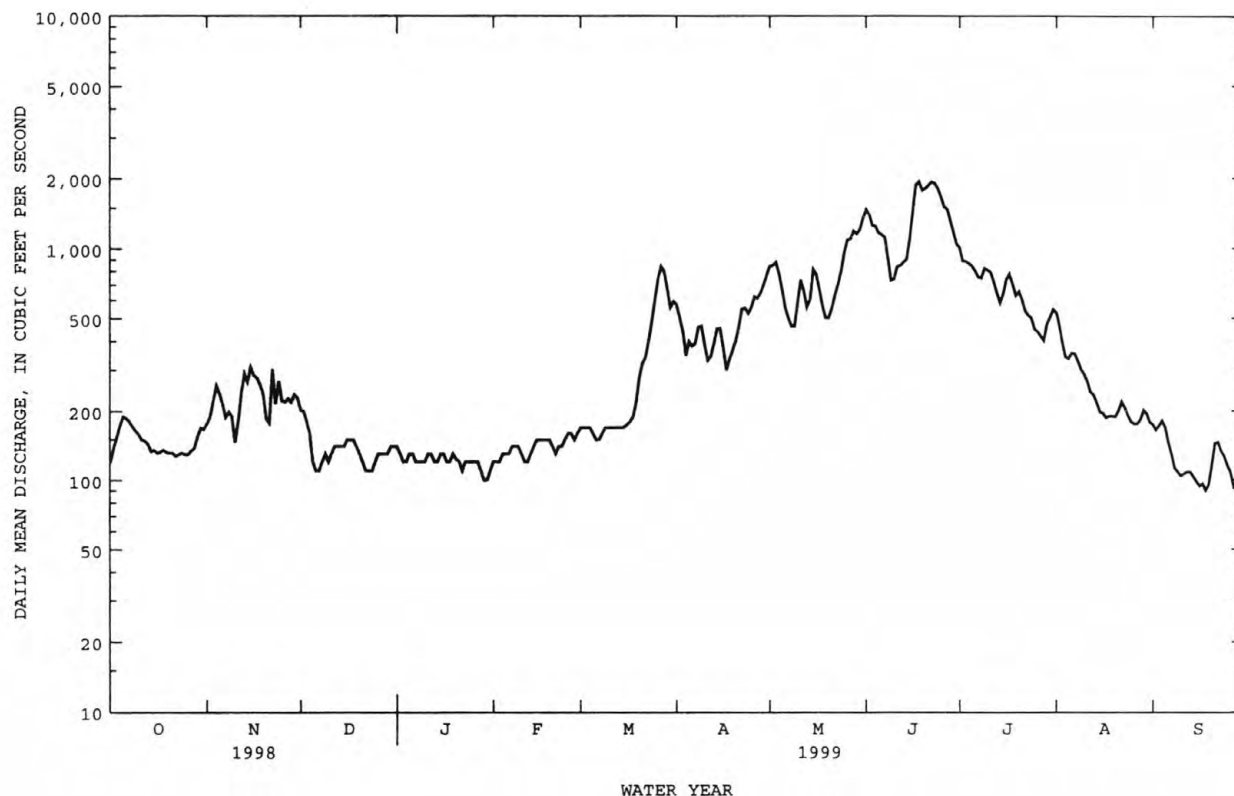
06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1904 - 1999
ANNUAL TOTAL	153340	143622	--
ANNUAL MEAN	420	393	437
HIGHEST ANNUAL MEAN	--	--	878
HIGHEST DAILY MEAN	2500 Mar 27	1940 Jun 18	6450 Jun 10 1917
LOWEST DAILY MEAN	110 Dec 6,7,22-24	90 Sep 18	19 Jul 17-19 1934
ANNUAL SEVEN-DAY MINIMUM	119 Dec 20	98 Sep 13	20 Jul 15 1934
INSTANTANEOUS PEAK FLOW	--	2030 Jun 17	6720 ^a Jun 11 1923
INSTANTANEOUS PEAK STAGE	--	4.82 Jun 17	9.65 ^b Apr 25 1980
ANNUAL RUNOFF (AC-FT)	304100	284900	316900
10 PERCENT EXCEEDS	996	875	1220
50 PERCENT EXCEEDS	203	190	164
90 PERCENT EXCEEDS	131	120	70

a Gage height, 6.24 ft, site and datum then in use.

b Backwater from ice jam.

e Estimated.



LOCATION.--Lat 41°22'13", long 106°31'12", in NW¹/₄ SW¹/₄ NE¹/₄ sec.8, T.16 N., R.81 W., Carbon County, Hydrologic Unit 101800002, Medicine Bow National Forest, on right bank 0.2 mi upstream from bridge on logging road, 0.5 mi downstream from Lincoln Creek, 1.6 mi upstream from South Brush Creek, and 16 mi southeast of Saratoga.

PERIOD OF RECORD.--May 1960 to current year.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	1900	826	4.33
June 3	2030	*884	*4.40
June 8	2400	703	4.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	24	17	14	14	12	18	58	477	237	28	17
2	28	26	17	14	13	12	18	57	507	264	21	27
3	24	25	18	14	13	e11	16	52	682	256	18	24
4	25	24	18	14	13	e11	e15	48	647	237	17	28
5	22	24	e17	14	13	e10	e15	42	511	203	17	24
6	23	21	e16	14	13	e10	16	54	368	177	18	16
7	23	e27	e14	14	13	e11	18	55	412	159	18	13
8	29	e26	e14	14	13	e11	18	55	501	147	17	11
9	29	e24	e15	14	13	e11	e17	73	598	114	15	11
10	26	e21	e14	14	12	e11	18	84	534	97	15	11
11	23	e18	e12	14	e12	e10	e17	73	498	83	15	11
12	20	e15	e13	14	e13	e10	19	67	530	74	15	11
13	21	e16	e14	14	14	e10	18	69	527	62	14	11
14	23	e17	15	14	14	e11	20	71	527	62	13	11
15	22	e18	15	15	14	e12	19	73	532	133	12	10
16	20	e17	15	14	13	e12	e19	77	474	72	12	10
17	20	e16	14	14	13	e11	e19	72	560	80	15	9.9
18	20	e16	14	14	13	e12	e21	83	530	53	20	10
19	20	e16	14	14	12	e13	22	108	519	49	15	12
20	20	e16	15	14	12	e15	25	146	495	45	19	20
21	20	e15	15	15	e12	e16	28	197	508	35	21	20
22	21	e16	14	14	e12	15	25	280	499	38	20	16
23	21	17	14	14	12	e15	23	404	481	29	15	13
24	21	17	14	14	12	16	24	485	430	26	13	12
25	19	e16	14	14	12	17	27	465	459	25	12	12
26	18	e16	14	14	12	19	25	487	410	23	12	11
27	18	e17	14	13	12	18	25	486	344	22	13	11
28	33	17	14	13	12	e18	30	559	316	22	13	11
29	27	18	14	e13	---	e18	47	609	273	22	14	13
30	27	17	14	e14	---	e19	59	659	239	22	12	17
31	27	---	14	15	---	19	---	662	---	27	13	---
TOTAL	702	573	456	434	356	416	681	6710	14388	2895	492	433.9
MEAN	22.6	19.1	14.7	14.0	12.7	13.4	22.7	216	480	93.4	15.9	14.5
MAX	33	27	18	15	14	19	59	662	682	264	28	28
MIN	12	15	12	13	12	10	15	42	239	22	12	9.9
AC-FT	1390	1140	904	861	706	825	1350	13310	28540	5740	976	86.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999, BY WATER YEAR (WY)

MEAN	14.2	11.7	10.1	9.32	9.31	10.6	23.5	166	266	58.5	14.0	12.7
MAX	38.7	21.3	15.1	14.0	12.7	20.1	73.4	262	534	224	29.5	27.2
(WY)	1966	1962	1984	1999	1999	1966	1962	1962	1983	1983	1983	1965
MIN	7.77	8.40	6.67	6.15	6.55	6.80	12.3	53.5	57.4	11.9	7.75	7.22
(WY)	1990	1977	1991	1970	1970	1970	1993	1995	1987	1994	1989	1989

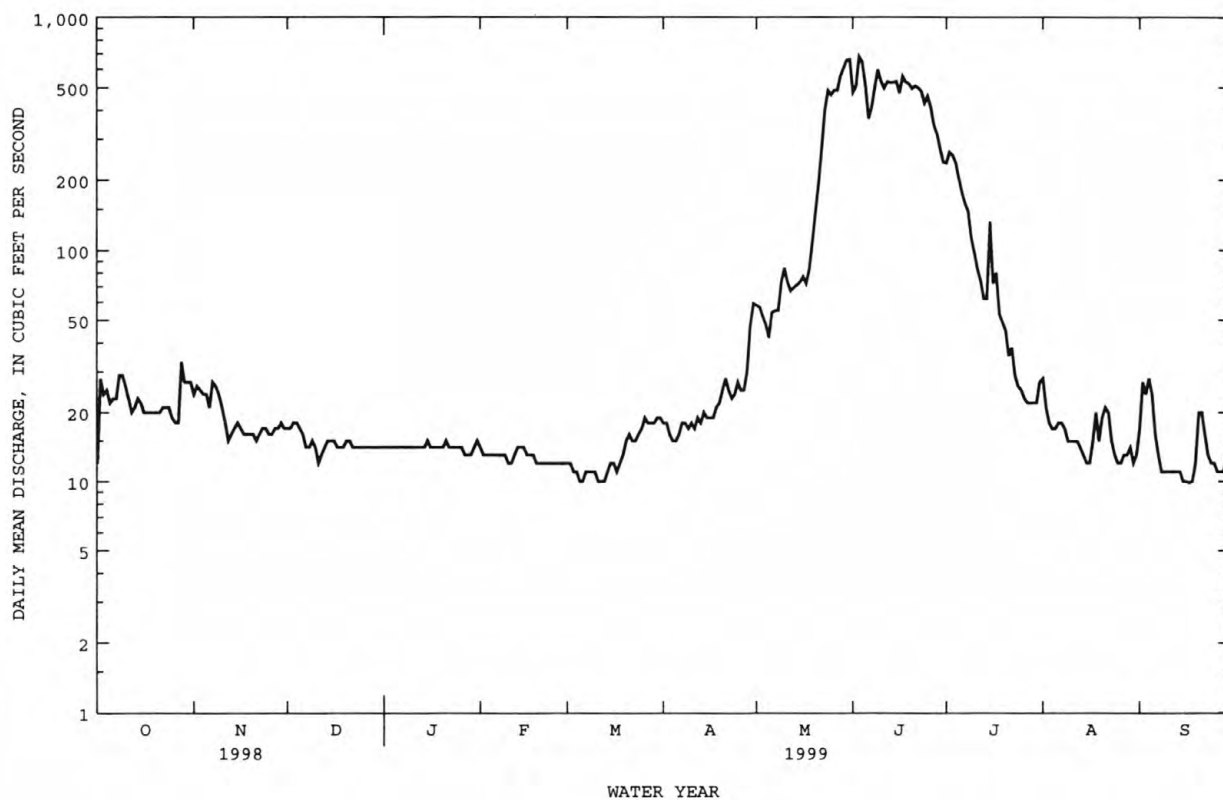
PLATTE RIVER BASIN

06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1961 - 1999
ANNUAL TOTAL	19222.2	28536.9	--
ANNUAL MEAN	52.7	78.2	50.5
HIGHEST ANNUAL MEAN	--	--	82.0
LOWEST ANNUAL MEAN	--	--	27.3
HIGHEST DAILY MEAN	416 May 28	682 Jun 3	955 Jun 25 1983
LOWEST DAILY MEAN	8.4 Mar 11,12	9.9 Sep 17	4.3 Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	8.6 Mar 7	10 Sep 12	5.1 Oct 25 1976
INSTANTANEOUS PEAK FLOW	--	884 Jun 3	1360 ^a Jun 25 1983
INSTANTANEOUS PEAK STAGE	--	4.40 Jun 3	4.59 Jun 1 1997
ANNUAL RUNOFF (AC-FT)	38130	56600	36600
10 PERCENT EXCEEDS	190	327	164
50 PERCENT EXCEEDS	16	17	12
90 PERCENT EXCEEDS	9.6	12	8.2

a Gage height, 4.23 ft, site and datum then in use.

e Estimated.



PLATTE RIVER BASIN

231

06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°20'38", long 106°31'33", in NE¹/₄ NW¹/₄ sec.20, T.16 N., R.81 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 300 ft upstream from culvert on State Highway 130, 1.6 mi upstream from North Brush Creek, and 17 mi southeast of Saratoga.

DRAINAGE AREA.--22.8 mi².

PERIOD OF RECORD.--May 1960 to September 1974, May 1976 to September 1977, May 1979 to current year (no winter records since 1972).

GAGE.--Water-stage recorder. Elevation of gage is 8,100 ft above sea level, from topographic map.

REMARKS.--Records poor. Transbasin diversion 0.3 mi upstream from station for irrigation in North Brush Creek basin.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	37	167	135	4.0	2.1
2	---	---	---	---	---	---	---	33	176	157	3.0	4.4
3	---	---	---	---	---	---	---	29	219	152	2.3	3.0
4	---	---	---	---	---	---	---	26	222	138	1.9	2.6
5	---	---	---	---	---	---	---	19	191	115	1.8	2.7
6	---	---	---	---	---	---	---	28	147	97	1.9	2.1
7	---	---	---	---	---	---	---	29	143	83	1.8	1.8
8	---	---	---	---	---	---	---	39	161	70	1.8	1.8
9	---	---	---	---	---	---	---	53	189	49	1.7	1.7
10	---	---	---	---	---	---	---	44	196	36	1.7	1.6
11	---	---	---	---	---	---	---	39	197	26	1.7	1.7
12	---	---	---	---	---	---	---	34	217	28	1.7	1.7
13	---	---	---	---	---	---	---	34	221	29	1.7	1.7
14	---	---	---	---	---	---	---	37	221	29	1.7	1.7
15	---	---	---	---	---	---	---	38	233	51	1.6	1.7
16	---	---	---	---	---	---	---	37	233	33	1.6	1.6
17	---	---	---	---	---	---	---	36	235	28	1.9	1.6
18	---	---	---	---	---	---	---	44	233	18	2.5	1.6
19	---	---	---	---	---	---	---	55	235	16	2.3	1.6
20	---	---	---	---	---	---	---	66	230	17	2.3	2.0
21	---	---	---	---	---	---	---	82	233	12	2.3	2.0
22	---	---	---	---	---	---	14	104	230	12	2.3	1.8
23	---	---	---	---	---	---	13	128	234	7.9	2.1	1.5
24	---	---	---	---	---	---	15	140	245	6.5	2.0	1.4
25	---	---	---	---	---	---	19	141	255	5.9	2.0	1.2
26	---	---	---	---	---	---	15	146	253	4.7	1.9	1.2
27	---	---	---	---	---	---	15	146	241	3.8	1.9	1.1
28	---	---	---	---	---	---	22	166	215	3.9	2.0	1.0
29	---	---	---	---	---	---	35	185	145	4.0	2.0	1.0
30	---	---	---	---	---	---	42	200	127	3.2	1.9	1.2
31	---	---	---	---	---	---	---	212	---	4.4	1.9	---
TOTAL	---	---	---	---	---	---	---	2407	6244	1375.3	63.2	54.1
MEAN	---	---	---	---	---	---	---	77.6	208	44.4	2.04	1.80
MAX	---	---	---	---	---	---	---	212	255	157	4.0	4.4
MIN	---	---	---	---	---	---	---	19	127	3.2	1.6	1.0
AC-FT	---	---	---	---	---	---	---	4770	12380	2730	125	107

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1999, BY WATER YEAR (WY)*

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
MEAN	11.7	9.02	7.14	5.83	6.01	6.63	15.3	86.8	153	43.2	10.2	8.00
MAX	33.8	25.9	17.2	9.61	9.46	11.3	54.2	147	295	139	29.4	24.8
(WY)	1962	1962	1962	1962	1962	1966	1962	1994	1968	1983	1983	1961
MIN	3.59	5.41	4.04	2.40	3.71	4.61	7.53	34.9	20.9	8.67	1.91	1.27
(WY)	1965	1964	1965	1965	1965	1963	1968	1982	1987	1988	1998	1998

PLATTE RIVER BASIN

06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY--Continued

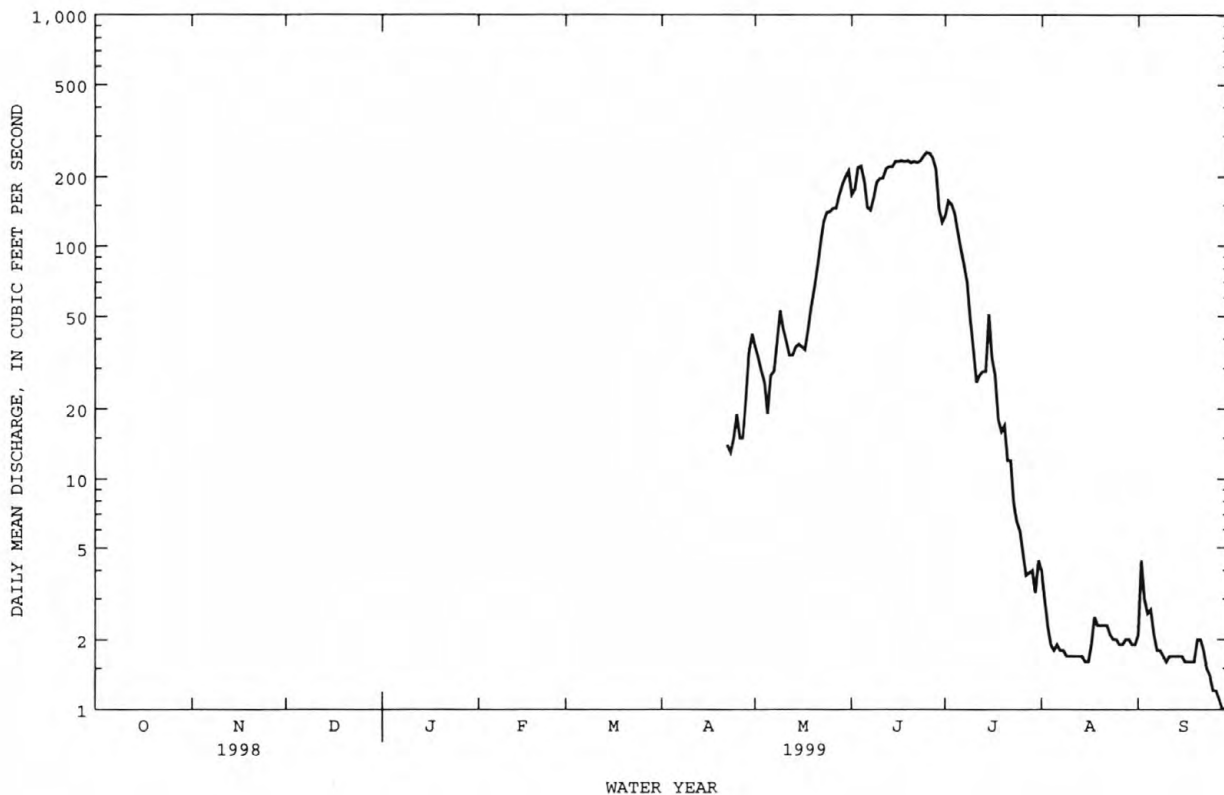
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1961 - 1999*

ANNUAL MEAN	--		31.8	
HIGHEST ANNUAL MEAN	--		45.9	1962
LOWEST ANNUAL MEAN	--		18.6	1963
HIGHEST DAILY MEAN	255	Jun 25	501	Jun 10 1965
LOWEST DAILY MEAN	1.0	Sep 28, 29	.80	Aug 15-20, 28, 29 1963
INSTANTANEOUS PEAK FLOW	338	Jun 25	559	Jun 10 1965
INSTANTANEOUS PEAK STAGE	3.61	Jun 25	4.09	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		23070	

* During period of operation.



233

LOCATION.--Lat 41°01'25", long 106°49'27", in NE¹/₄ SW¹/₄ sec.10, T.12 N., R.84 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 0.6 mi upstream from Hog Park Creek and 13 mi south of Encampment.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,270 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	1930	1,070	4.42
June 21	2130	*1,320	*4.78

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	46	e30	24	27	24	33	107	806	513	97	41
2	78	44	e29	24	26	23	33	98	804	530	81	64
3	57	42	e27	23	25	23	30	99	938	509	73	71
4	59	35	e28	24	25	23	e29	94	909	480	71	57
5	43	34	e26	24	25	22	e28	81	827	436	75	46
6	41	31	e25	23	25	21	e29	73	754	392	73	40
7	44	37	e24	24	25	23	e29	78	720	358	72	36
8	54	36	e25	24	25	23	34	111	e840	348	69	34
9	51	e35	e26	24	25	22	e32	174	909	302	62	33
10	45	e34	e25	24	24	22	29	188	874	257	62	32
11	39	e32	e24	24	23	21	e29	138	849	227	61	32
12	34	e31	e25	24	24	23	31	121	858	204	62	32
13	34	e32	e27	24	25	21	e35	122	864	185	59	30
14	35	e33	e29	23	24	e22	39	124	877	178	54	29
15	35	e34	e30	24	25	e23	37	134	e950	230	52	28
16	31	34	e30	23	24	e23	33	147	e906	172	60	28
17	32	33	e29	23	24	e23	e32	132	e1070	157	54	28
18	33	31	28	23	24	e24	e33	170	e1050	143	52	28
19	33	e34	27	24	24	e26	e36	242	e1080	136	49	43
20	32	e31	27	25	24	e28	52	292	e1050	130	55	60
21	31	e29	26	24	23	e29	60	335	1050	117	58	47
22	33	e29	25	24	24	e29	58	e398	1050	122	65	38
23	35	e30	24	24	24	e28	49	528	1030	108	51	33
24	35	e30	23	25	24	e28	49	565	961	100	47	31
25	32	e29	23	25	24	e31	53	598	946	95	45	31
26	31	e31	23	25	24	e32	53	633	905	90	43	28
27	31	e33	23	25	24	e32	51	627	807	87	45	27
28	50	e34	22	24	24	e31	61	692	688	103	55	28
29	42	34	23	24	---	e31	81	782	602	103	62	33
30	43	32	24	26	---	e32	108	947	534	119	47	36
31	47	---	24	27	---	33	---	973	---	116	41	---
TOTAL	1249	1010	801	748	684	796	1286	9803	26508	7047	1852	1124
MEAN	40.3	33.7	25.8	24.1	24.4	25.7	42.9	316	884	227	59.7	37.5
MAX	78	46	30	27	27	33	108	973	1080	530	97	71
MIN	29	29	22	23	23	21	28	73	534	87	41	27
AC-FT	2480	2000	1590	1480	1360	1580	2550	19440	52580	13980	3670	2230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1999, BY WATER YEAR (WY)

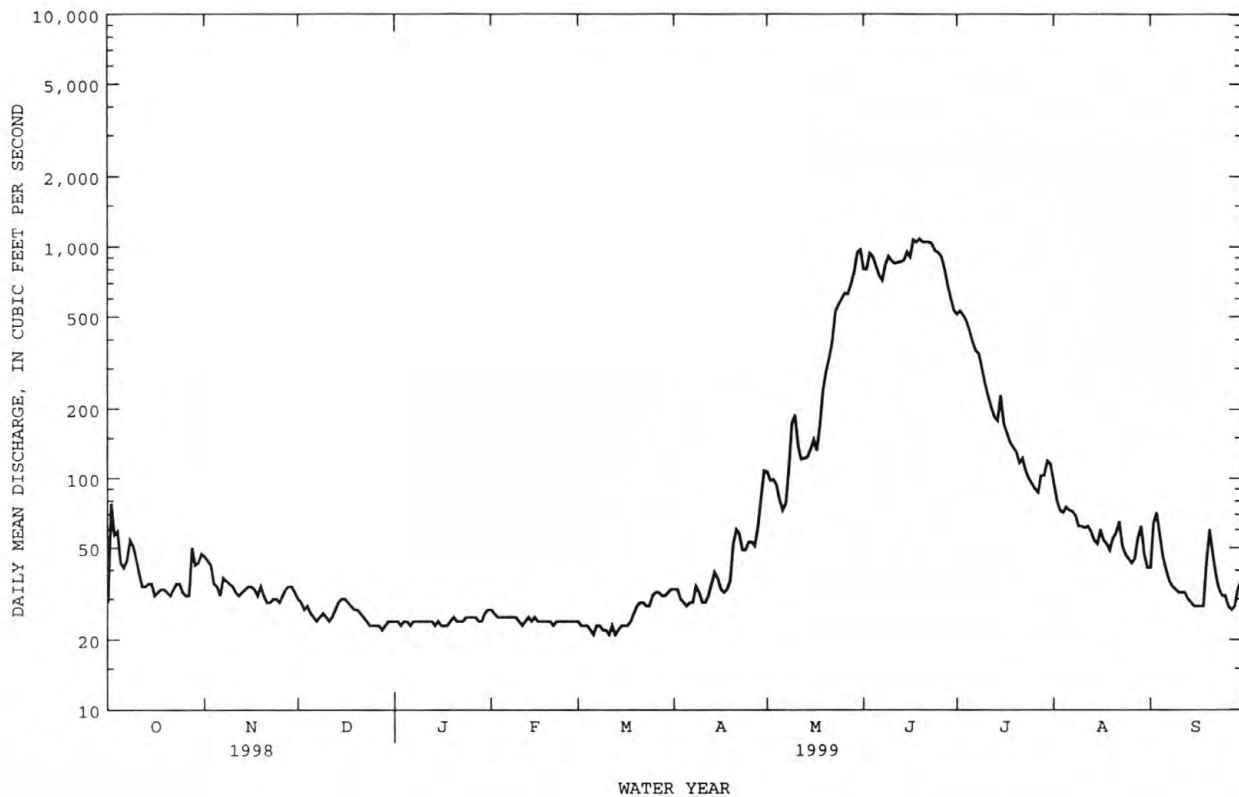
MEAN	31.6	25.5	22.5	20.0	18.9	20.1	40.4	276	618	213	48.4	33.4
MAX	71.5	45.2	33.9	28.9	28.1	31.4	76.5	468	919	581	83.3	82.2
(WY)	1998	1998	1998	1971	1971	1997	1989	1974	1997	1995	1995	1997
MIN	17.5	15.6	11.7	10.9	10.8	10.9	19.3	120	171	46.2	25.2	18.1
(WY)	1992	1978	1969	1969	1969	1969	1975	1995	1992	1994	1977	

PLATTE RIVER BASIN

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1965 - 1999	
ANNUAL TOTAL	46587		52908		--	
ANNUAL MEAN	128		145		114	
HIGHEST ANNUAL MEAN	--		--		159	1982
LOWEST ANNUAL MEAN	--		--		51.2	1977
HIGHEST DAILY MEAN	840	Jun 3	1080 ^e	Jun 19	1360	Jun 25 1983
LOWEST DAILY MEAN	22	Dec 28	21	Mar 6, 11, 13	9.5	Dec 31 1968
ANNUAL SEVEN-DAY MINIMUM	23	Dec 23	22	Mar 5	10	Mar 8 1969
INSTANTANEOUS PEAK FLOW	--		1320	Jun 21	1680 ^a	Jun 13 1965
INSTANTANEOUS PEAK STAGE	--		4.78	Jun 21	4.94	Jun 2 1997
ANNUAL RUNOFF (AC-FT)	92410		104900		82570	
10 PERCENT EXCEEDS	525		578		389	
50 PERCENT EXCEEDS	32		34		29	
90 PERCENT EXCEEDS	25		24		17	

a About June 13, 1965; from slope-area measurement of peak flow, gage height not determined.
e Estimated.



06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°18'12", long 106°42'53", in NE¹/₄ NW¹/₄ sec.3, T.15 N., R.83 W., Carbon County, Hydrologic Unit 10180002, on left bank 0.5 mi upstream from mouth and 8.0 mi northeast of Encampment.

DRAINAGE AREA.--265 mi².

PERIOD OF RECORD.--April 1940 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,970 ft above sea level, from topographic map. Prior to June 28, 1961, water-stage recorder at site 660 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Five small reservoirs upstream from station for irrigation, total capacity, about 400 acre-ft. Slight regulation by Hog Park Creek Reservoir, capacity, about 2,970 acre-ft. Diversions for irrigation of about 8,800 acres upstream from station. Transbasin diversion upstream from station into Hog Park Creek (tributary to Encampment River) from North Fork Little Snake River for municipal, industrial, and irrigation uses began September 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 31	0315	2,340	5.67
June 22	0315	*2,370	*5.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	147	118	e94	e92	101	126	364	1780	751	209	102
2	175	146	114	e92	e94	101	119	363	1630	768	157	117
3	183	148	104	e90	e94	101	115	389	1770	725	139	144
4	190	139	103	e90	e96	102	108	384	1750	677	134	159
5	162	121	e100	e90	e98	e98	110	342	1670	618	142	132
6	139	e118	e96	e92	e102	e96	110	311	1530	551	133	108
7	136	e118	e92	e94	104	101	111	314	1420	504	130	96
8	145	e120	e90	e96	102	97	124	365	1470	481	125	91
9	147	e118	e92	e96	106	96	117	505	1540	449	118	89
10	136	e114	e94	e94	106	102	113	631	1520	394	118	88
11	128	e110	e92	e90	e100	98	104	530	1450	363	117	88
12	119	e110	e92	e90	e98	106	118	455	1460	337	119	87
13	115	e120	e94	e92	e102	e104	124	436	1480	301	113	86
14	114	128	e98	e92	e100	111	142	445	1470	283	105	85
15	115	128	e102	e90	e100	115	135	432	1600	343	100	79
16	120	126	e108	e90	e98	117	128	461	1530	294	100	75
17	126	125	e112	e90	e98	116	122	410	1790	265	103	73
18	122	130	e110	e88	e96	115	126	420	1890	230	99	73
19	121	e122	e106	e88	98	119	131	509	1900	195	95	75
20	123	e120	e102	e90	e98	123	153	606	1860	196	102	119
21	115	e118	e98	e92	e98	128	191	725	1790	177	112	118
22	119	e120	e92	e92	e96	124	197	891	1930	177	122	99
23	119	122	e88	e90	e98	123	177	1150	1740	164	102	99
24	126	122	e84	e90	e100	128	167	1440	1600	153	95	94
25	121	e114	e86	e90	e100	132	182	1570	1450	148	92	96
26	119	e118	e90	e88	e100	143	180	1540	1380	138	86	90
27	118	e118	e90	e88	e98	157	175	1540	1230	125	82	88
28	136	e118	e90	e86	e100	135	204	1560	1060	128	97	98
29	141	125	e90	e84	---	131	233	1710	941	144	100	97
30	142	123	e92	e84	---	122	334	1920	839	154	101	109
31	146	---	e94	e86	---	123	---	2170	---	221	93	---
TOTAL	4105	3706	3013	2798	2772	3565	4476	24888	46470	10454	3540	2954
MEAN	132	124	97.2	90.3	99.0	115	149	803	1549	337	114	98.5
MAX	190	148	118	96	106	157	334	2170	1930	768	209	159
MIN	87	110	84	84	92	96	104	311	839	125	82	73
AC-FT	8140	7350	5980	5550	5500	7070	8880	49370	92170	20740	7020	5860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

	MEAN	78.7	78.8	69.3	62.0	62.7	70.3	148	765	1209	291	69.0	56.0
MAX	167	156	131	122	115	117	352	1258	2029	942	178	174	
(WY)	1998	1998	1998	1998	1962	1989	1962	1952	1971	1995	1982	1997	
MIN	29.4	42.6	49.2	34.2	35.8	44.5	71.3	340	193	29.2	21.5	14.2	
(WY)	1980	1977	1964	1963	1955	1964	1944	1977	1987	1994	1948	1954	

PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

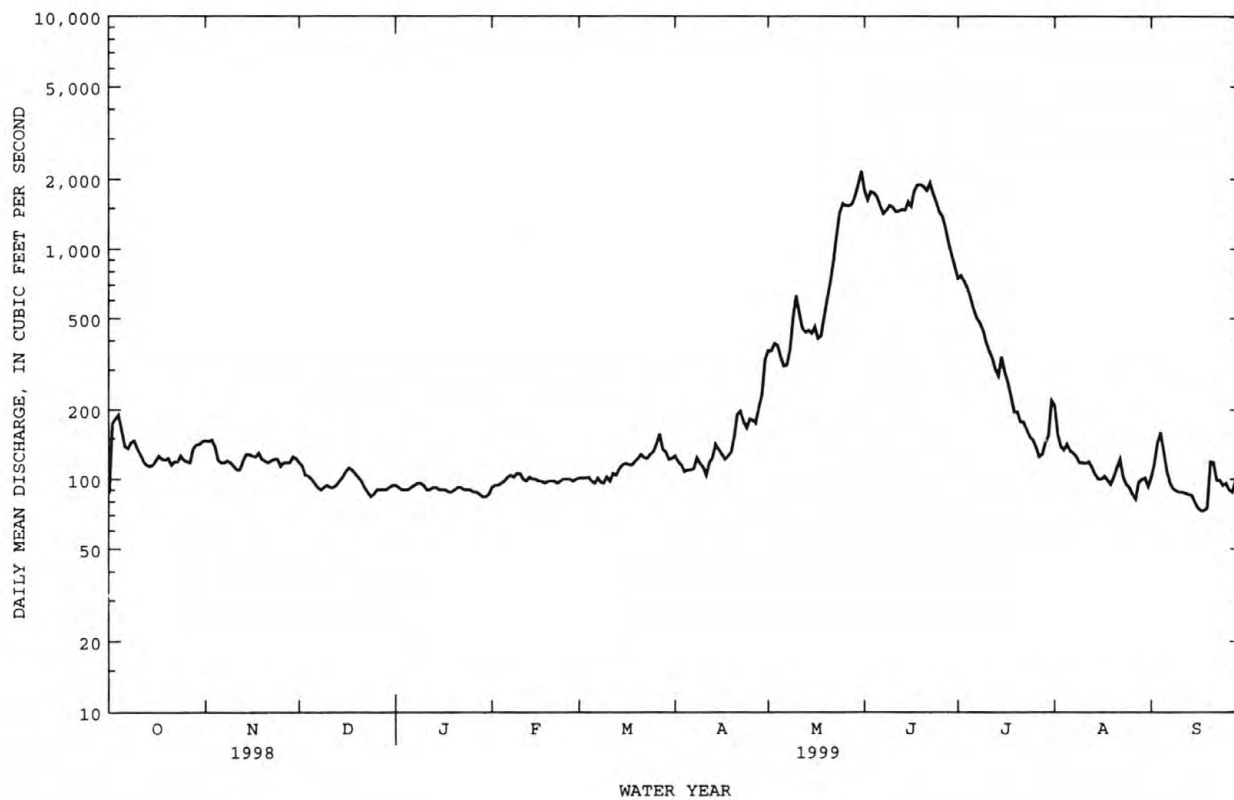
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1941 - 1999
ANNUAL TOTAL	106686	112741	--
ANNUAL MEAN	292	309	247
HIGHEST ANNUAL MEAN	--	--	375
LOWEST ANNUAL MEAN	--	--	102
HIGHEST DAILY MEAN	1560	May 22, Jun 3	2170
LOWEST DAILY MEAN	44	Sep 11	73
ANNUAL SEVEN-DAY MINIMUM	50	Sep 16	78
INSTANTANEOUS PEAK FLOW	--	2370	Jun 22
INSTANTANEOUS PEAK STAGE	--	5.70	Jun 22
ANNUAL RUNOFF (AC-FT)	211600	223600	178700
10 PERCENT EXCEEDS	956	1100	800
50 PERCENT EXCEEDS	126	119	74
90 PERCENT EXCEEDS	88	90	42

a Minimum daily discharge for period of record, 5.2 ft³/s, Aug. 15, 16, 1940.

b Gage height, 10.25 ft, present datum.

c Present datum.

e Estimated.



06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY

LOCATION.--Lat 41°26'21", long 106°58'16", in NW¹/₄ NE¹/₄ NW¹/₄ sec.21, T.17 N., R.85 W., Carbon County, Hydrologic Unit 10180002, on left bank 1.2 mi upstream from Coyote Draw and Blydenburg and Morgan Ditches, 2.0 mi downstream from Gartman Creek, and 8.2 mi west of Saratoga.

DRAINAGE AREA.-- 109 mi².

PERIOD OF RECORD.--April 1990 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above sea level, from topographic map.

REMARKS.--Records poor. Diversions for irrigation of about 2,000 acres upstream from station. Results of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

Oct. 7 . . . 13.7
Mar. 24 . . . 24.7

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	102	248	64	27	8.6
2	---	---	---	---	---	---	---	101	192	61	19	8.8
3	---	---	---	---	---	---	---	132	197	59	15	8.9
4	---	---	---	---	---	---	---	134	175	57	14	12
5	---	---	---	---	---	---	---	98	161	54	16	11
6	---	---	---	---	---	---	---	82	180	49	24	8.7
7	---	---	---	---	---	---	---	83	202	45	17	8.3
8	---	---	---	---	---	---	35	96	141	42	14	8.0
9	---	---	---	---	---	---	33	145	123	40	12	8.3
10	---	---	---	---	---	---	26	169	125	35	12	8.5
11	---	---	---	---	---	---	26	115	156	32	11	8.9
12	---	---	---	---	---	---	32	100	125	30	11	9.0
13	---	---	---	---	---	---	41	110	113	26	11	9.4
14	---	---	---	---	---	---	44	125	110	24	10	9.4
15	---	---	---	---	---	---	38	106	133	36	9.5	9.4
16	---	---	---	---	---	---	32	100	120	37	9.4	9.7
17	---	---	---	---	---	---	28	92	128	29	9.0	9.8
18	---	---	---	---	---	---	33	100	133	25	8.7	9.8
19	---	---	---	---	---	---	38	140	125	23	8.6	9.9
20	---	---	---	---	---	---	51	176	125	23	8.3	11
21	---	---	---	---	---	---	72	185	124	21	9.0	11
22	---	---	---	---	---	---	69	206	135	20	10	11
23	---	---	---	---	---	---	58	240	121	18	9.3	10
24	---	---	---	---	---	---	51	286	107	16	8.8	10
25	---	---	---	---	---	---	67	266	100	15	8.6	10
26	---	---	---	---	---	---	63	262	99	14	8.6	9.8
27	---	---	---	---	---	---	59	269	92	14	8.6	9.8
28	---	---	---	---	---	---	74	249	83	14	8.7	9.9
29	---	---	---	---	---	---	83	255	75	15	8.4	10
30	---	---	---	---	---	---	113	253	70	18	8.3	10
31	---	---	---	---	---	---	---	273	---	61	8.2	---
TOTAL	---	---	---	---	---	---	---	5050	4018	1017	363.0	288.9
MEAN	---	---	---	---	---	---	---	163	134	32.8	11.7	9.63
MAX	---	---	---	---	---	---	---	286	248	64	27	12
MIN	---	---	---	---	---	---	---	82	70	14	8.2	8.0
AC-FT	---	---	---	---	---	---	---	10020	7970	2020	720	573

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1999, BY WATER YEAR (WY)#

	MEAN	MAX	(WY)	MIN	(WY)
1990	29.9	44.0	1997	15.6	1991
1991	112	175	1997	39.7	1990
1992	108	230	1995	32.9	1992
1993	28.8	84.0	1995	8.07	1994
1994	8.12	14.0	1995	2.53	1994
1995	6.11	10.9	1997	2.76	1990

PLATTE RIVER BASIN

06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1990 - 1999*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 INSTANTANEOUS PEAK FLOW
 INSTANTANEOUS PEAK STAGE

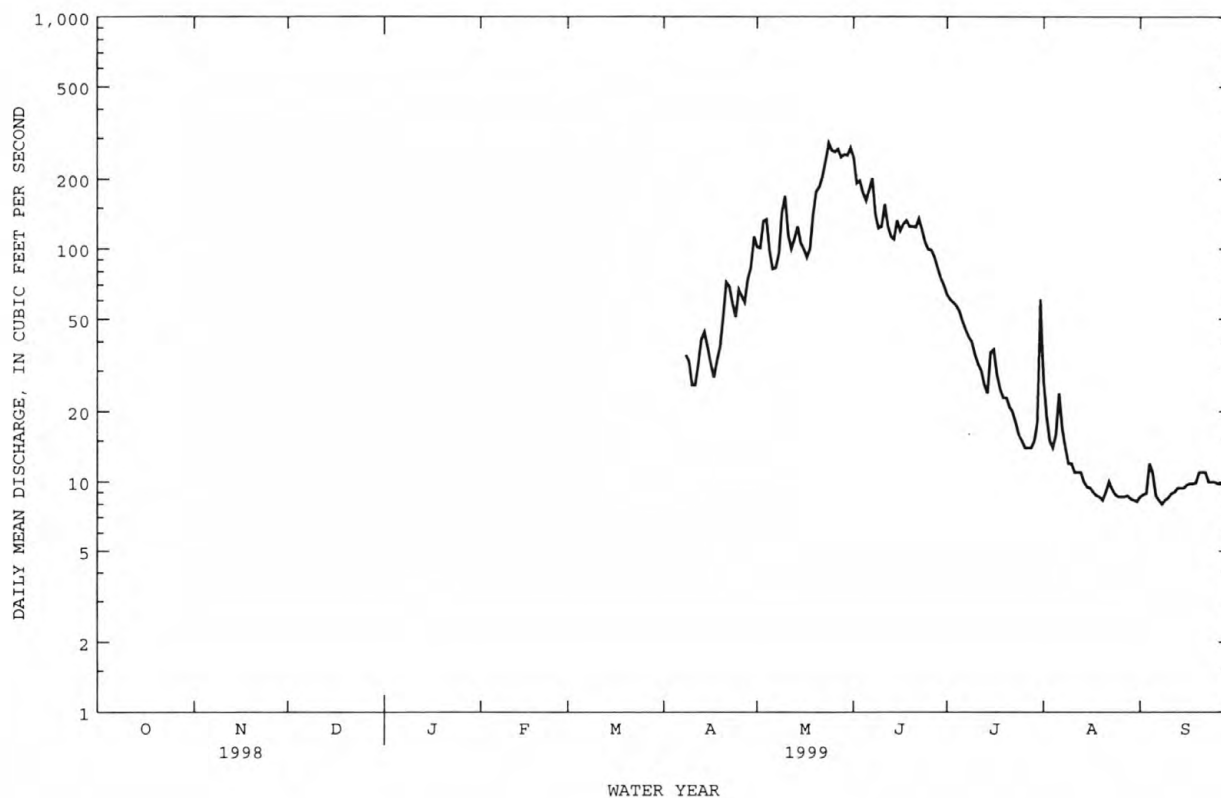
286 May 24
 8.0 Sep 8
 346 May 24
 6.61 May 24

379 Jun 9 1995
 40 Aug 27 1994
 461^a Jun 9 1993
 7.22 Jun 9 1995

For complete monthly records.

* During period of operation.

a Gage height, 7.08 ft.



LOCATION.--Lat 41°35'12", long 106°36'40", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.19 N., R.82 W., Carbon County, Hydrologic Unit 10180002, on right bank 500 ft upstream from bridge on county road, 700 ft upstream from Brush Creek, 12 mi southwest of town of Elk Mountain, and 14 mi northeast of Saratoga.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Diversions for irrigation of about 6,300 acres upstream from station. Diversion to Kerr ditch 7.5 mi upstream. Results of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 21	0100	369	6.82
May 3	unknown	unknown	unknown
May 8	1700	539	7.39
May 14	1500	406	6.95
May 31	0100	479	7.20
June 6	1300	*618	*7.62

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	53	e260	338	66	29	14
2	---	---	---	---	---	---	43	e290	307	57	22	15
3	---	---	---	---	---	---	40	e300	403	52	18	17
4	---	---	---	---	---	---	45	173	317	49	17	24
5	---	---	---	---	---	---	39	114	282	45	20	20
6	---	---	---	---	---	---	38	135	470	43	21	15
7	---	---	---	---	---	---	54	218	327	43	19	13
8	---	---	---	---	---	---	70	362	260	42	17	12
9	---	---	---	---	---	---	59	296	254	41	15	13
10	---	---	---	---	---	---	25	280	264	37	14	13
11	---	---	---	---	---	---	57	183	267	34	15	13
12	---	---	---	---	---	---	53	150	210	33	14	13
13	---	---	---	---	---	---	81	222	191	28	13	13
14	---	---	---	---	---	---	95	350	197	27	12	13
15	---	---	---	---	---	---	62	e307	230	53	11	13
16	---	---	---	---	---	---	56	e324	192	42	11	13
17	---	---	---	---	---	---	55	e240	174	40	11	13
18	---	---	---	---	---	---	65	e191	173	33	14	13
19	---	---	---	---	---	---	95	e203	159	37	14	14
20	---	---	---	---	---	---	201	e297	153	41	17	20
21	---	---	---	---	---	---	249	e355	152	31	18	19
22	---	---	---	---	---	---	e174	e419	190	29	18	15
23	---	---	---	---	---	---	e184	e460	155	27	14	14
24	---	---	---	---	---	---	e240	e440	122	25	12	14
25	---	---	---	---	---	---	e220	e380	113	24	11	13
26	---	---	---	---	---	---	e238	e359	104	22	11	12
27	---	---	---	---	---	---	e252	e381	100	20	12	11
28	---	---	---	---	---	---	e267	350	88	23	12	15
29	---	---	---	---	---	---	e294	384	77	22	13	19
30	---	---	---	---	---	---	e270	382	65	24	12	22
31	---	---	---	---	---	---	---	458	---	27	11	---
TOTAL	---	---	---	---	---	---	3674	9263	6334	1117	468	448
MEAN	---	---	---	---	---	---	122	299	211	36.0	15.1	14.9
MAX	---	---	---	---	---	---	294	460	470	66	29	24
MIN	---	---	---	---	---	---	25	114	65	20	11	11
AC-FT	---	---	---	---	---	---	7290	18370	12560	2220	928	881

MEAN	12.1	11.8	10.2	9.56	10.2	18.1	64.7	181	134	31.3	13.0	10.2
MAX	20.5	24.9	17.6	15.3	23.6	44.5	151	540	360	85.9	31.9	23.8
(WY)	1971	1974	1974	1984	1962	1960	1971	1984	1983	1983	1983	1982
MIN	4.98	5.20	6.87	5.43	4.37	7.31	14.8	62.0	36.1	6.81	3.14	3.37
(WY)	1964	1978	1978	1981	1982	1965	1966	1989	1989	1994	1989	1977

PLATTE RIVER BASIN

06628900 PASS CREEK NEAR ELK MOUNTAIN, WY--Continued

SUMMARY STATISTICS

For 1999 WATER YEAR*

WATER YEARS 1957 - 1999*

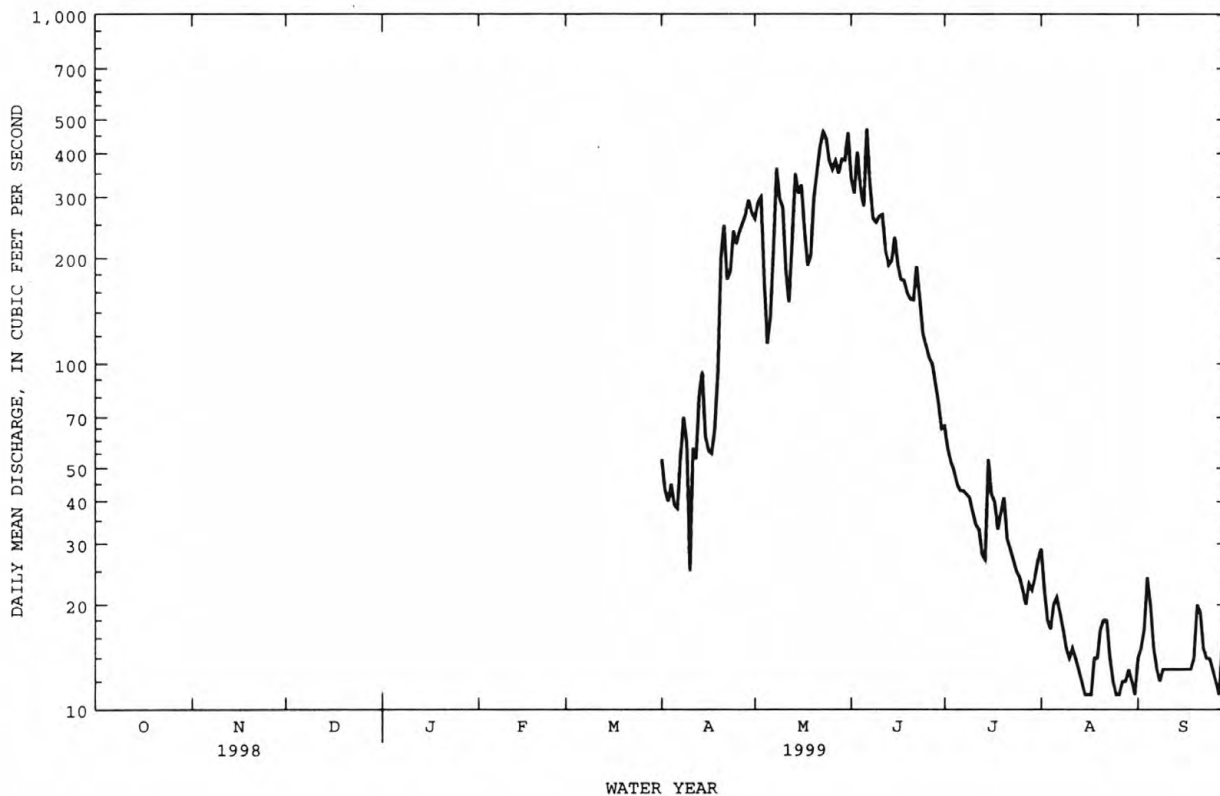
ANNUAL MEAN	--		41.1	
HIGHEST ANNUAL MEAN	--		86.4	1984
LOWEST ANNUAL MEAN	--		20.2	1959
HIGHEST DAILY MEAN	470	Jun 6	1780	May 12 1984
LOWEST DAILY MEAN	11	Aug 15-17, 25, 26, 31, Sep 27		Sep 7 1989
INSTANTANEOUS PEAK FLOW	618	Jun 6	4660 ^a	May 12 1984
INSTANTANEOUS PEAK STAGE	7.62	Jun 6	9.12 ^b	May 12 1984
ANNUAL RUNOFF (AC-FT)	--		29790	

* During period of operation.

a From rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks, site and datum then in use.

e Estimated.



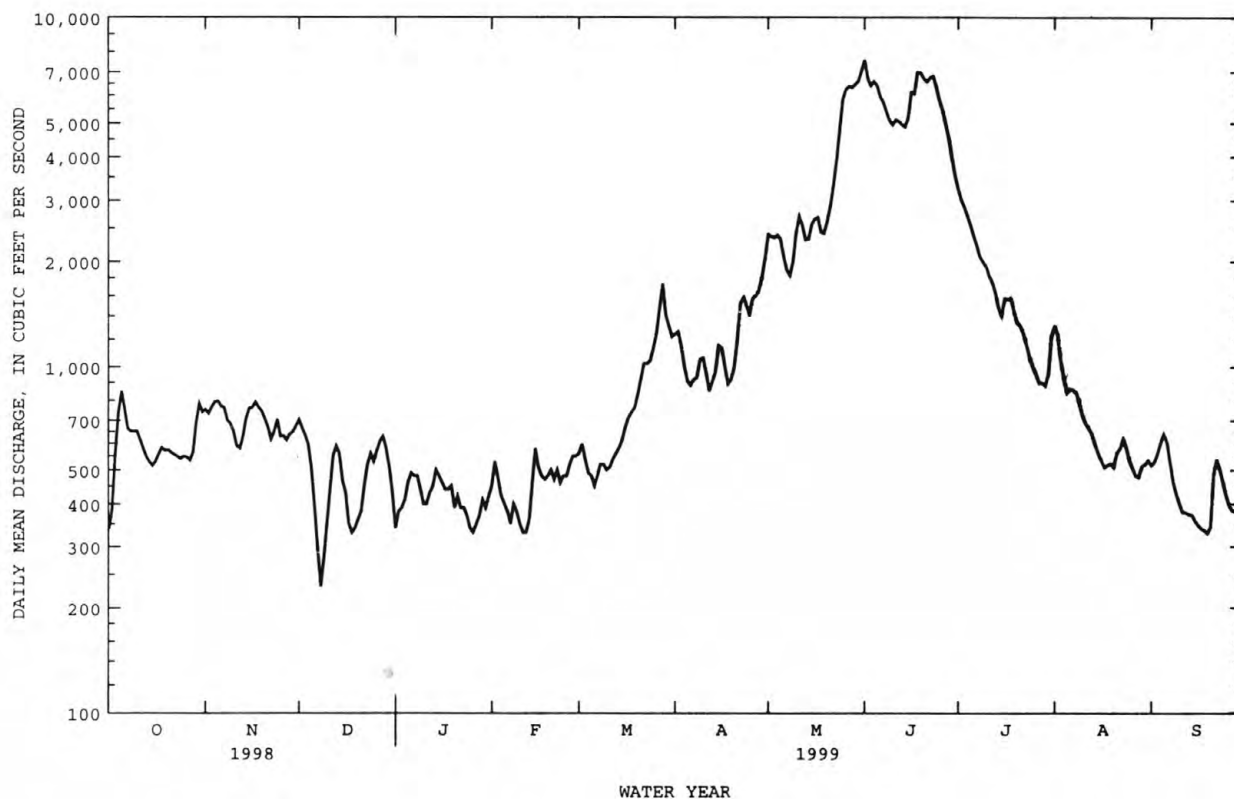
MEAN	416	431	352	318	348	554	1424	3179	4471	1445	512	318
MAX	1036	745	562	515	654	1190	4390	8568	9999	5256	1484	1198
(WY)	1966	1966	1998	1998	1996	1986	1962	1984	1983	1983	1983	1997
MIN	157	240	226	181	193	205	492	1149	830	204	135	93.3
(WY)	1957	1953	1953	1963	1964	1964	1995	1990	1954	1939	1940	1944

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	456914		507910		--	
ANNUAL MEAN	1252		1392		1150	
HIGHEST ANNUAL MEAN	--		--		2169	1984
LOWEST ANNUAL MEAN	--		--		467	1954
HIGHEST DAILY MEAN	6800	Jun 18	7580	Jun 1	14800	Jun 11 1986
LOWEST DAILY MEAN	230	Dec 8	230	Dec 8	70	Sep 17 1944
ANNUAL SEVEN-DAY MINIMUM	356	Sep 7	346	Sep 14	77	Sep 12 1944
INSTANTANEOUS PEAK FLOW	--		7750	May 31	16200	Jun 11 1986
INSTANTANEOUS PEAK STAGE	--		7.82	May 31	11.30	Jun 11 1986
INSTANTANEOUS LOW FLOW	--		--		70	Sep 17 1944
ANNUAL RUNOFF (AC-FT)	906300		1007000		833300	
10 PERCENT EXCEEDS	3130		4210		3210	
50 PERCENT EXCEEDS	667		649		450	
90 PERCENT EXCEEDS	430		385		230	

e Estimated.



06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1978 to October 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT								
23...	1120	560	456	8.2	8.0	7.5	612	9.8
NOV								
17...	1000	833	433	8.2	2.0	9.0	602	9.3
DEC								
15...	1015	480	487	7.8	0.0	8.0	610	11.1
JAN								
29...	1000	405	435	7.9	1.0	-7.0	610	10.9
FEB								
25...	1255	490	394	8.4	0.0	10.0	599	11.3
MAR								
24...	1200	984	353	8.1	7.0	16.0	605	10.3
APR								
21...	1115	1170	364	8.1	8.5	17.0	595	10.4
MAY								
26...	1050	6060	160	7.7	10.5	20.0	609	8.9
JUN								
22...	1210	6520	207	7.9	14.0	22.0	606	8.2
29...	0950	3890	206	8.0	14.5	20.0	608	8.1
JUL								
27...	1110	928	291	8.8	21.0	--	611	8.1
AUG								
17...	1010	488	374	8.4	17.0	21.5	638	9.8
SEP								
08...	1030	479	378	8.5	12.5	12.0	613	8.8

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)
OCT								
23...	103	--	<.01	<.05	.03	.01	310	13
NOV								
17...	85	--	<.01	<.05	<.02	<.01	300	20
DEC								
15...	95	--	.01	.06	.03	.01	365	3
JAN								
29...	96	--	<.01	<.05	.02	.01	314	4
FEB								
25...	99	--	<.01	<.05	<.02	<.01	281	6
MAR								
24...	107	--	<.01	<.05	.02	<.01	250	31
APR								
21...	114	--	<.01	<.05	.02	.01	252	33
MAY								
26...	100	--	<.01	<.05	.02	.02	119	101
JUN								
22...	101	--	<.01	<.05	<.02	.02	127	24
29...	100	--	<.01	<.05	.02	.03	130	17
JUL								
27...	114	K9	<.01	<.05	<.02	<.01	179	4
AUG								
17...	122	--	<.01	<.05	<.02	<.01	247	14
SEP								
08...	103	--	<.01	<.05	<.02	<.01	242	8

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY

LOCATION.--Lat 41°35'07", long 106°13'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T.19 N., R.79 W., Carbon County, Hydrologic Unit 10180004, on left bank 200 ft upstream from point of diversion to King Canyon Canal, 0.4 mi downstream from Overland Creek, 1.0 mi southwest of Arlington, and 6.9 mi southwest of McFadden.

DRAINAGE AREA.--62.9 mi².

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

REVISED RECORDS.--WDR WY-86: 1985(m). WDR WY-87: 1985.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minor regulation by Sand Lake, capacity, 1,100 acre-ft, on Deep Creek, 12 mi upstream. No diversion upstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 3	2000	*1,200	*4.49
June 22	2100	1,160	4.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	31	21	e16	e12	11	21	60	706	422	65	19
2	31	33	21	e16	e12	e11	22	62	793	462	49	26
3	30	30	21	e15	e13	e11	e21	60	982	448	42	26
4	31	27	19	e15	e13	e11	e20	58	890	416	39	28
5	23	24	e18	e15	e13	e10	e19	53	701	362	46	30
6	26	25	e16	e16	e13	e10	e19	55	503	324	55	22
7	32	19	e14	e16	e14	e11	19	54	520	304	42	19
8	35	23	e14	e16	e14	e11	21	63	662	284	36	18
9	37	e23	e15	e15	e13	e12	22	86	747	239	33	17
10	34	e23	e15	e15	13	e12	24	98	732	195	32	17
11	28	e22	e16	e16	e12	e11	e22	89	711	172	32	16
12	24	22	e16	e16	e12	11	23	83	710	158	32	15
13	25	25	e16	e16	e13	e11	24	82	716	143	29	15
14	26	25	e17	e15	e13	11	26	85	730	133	27	15
15	28	25	e17	e15	e14	12	25	90	738	155	26	15
16	25	23	e17	e14	e14	13	e24	96	696	134	24	15
17	23	22	e17	e14	e13	e12	e25	93	761	139	23	15
18	25	22	e16	e14	e13	e12	25	102	837	108	28	14
19	25	e22	e16	e15	e13	e13	27	141	845	96	26	15
20	25	e21	e15	e15	e12	e14	34	187	833	94	36	19
21	21	e21	e14	e15	e12	e16	41	233	824	80	34	22
22	25	22	e13	e14	e11	e17	39	309	941	77	32	19
23	27	21	e13	e14	e11	e17	39	398	868	71	26	17
24	26	21	e13	e15	e11	e18	37	483	752	64	24	15
25	25	e21	e14	e15	e12	19	36	493	727	61	23	14
26	25	21	e14	e15	e12	22	34	534	646	57	22	14
27	26	21	e14	e15	e11	22	35	544	531	54	22	14
28	59	21	e15	e15	e11	e21	41	608	492	62	22	15
29	37	21	e15	e14	---	e20	55	736	446	65	22	17
30	38	21	e15	e13	---	21	64	846	417	55	20	21
31	35	---	e16	e13	---	21	---	878	---	61	19	---
TOTAL	891	698	493	463	350	444	884	7759	21457	5495	988	544
MEAN	28.7	23.3	15.9	14.9	12.5	14.3	29.5	250	715	177	31.9	18.1
MAX	59	33	21	16	14	22	64	878	982	462	65	30
MIN	14	19	13	13	11	10	19	53	417	54	19	14
AC-FT	1770	1380	978	918	694	881	1750	15390	42560	10900	1960	1080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	17.1	14.0	11.9	10.9	10.6	10.7	22.9	227	516	135	32.1	21.7
MAX	40.0	23.3	18.8	15.3	17.0	15.6	45.8	409	1024	420	66.9	40.1
(WY)	1983	1999	1973	1966	1974	1979	1989	1974	1971	1982	1982	1971
MIN	9.57	8.85	6.81	7.74	7.03	7.08	10.9	59.3	158	30.9	14.2	10.3
(WY)	1990	1977	1968	1969	1969	1969	1995	1968	1987	1977	1994	1994

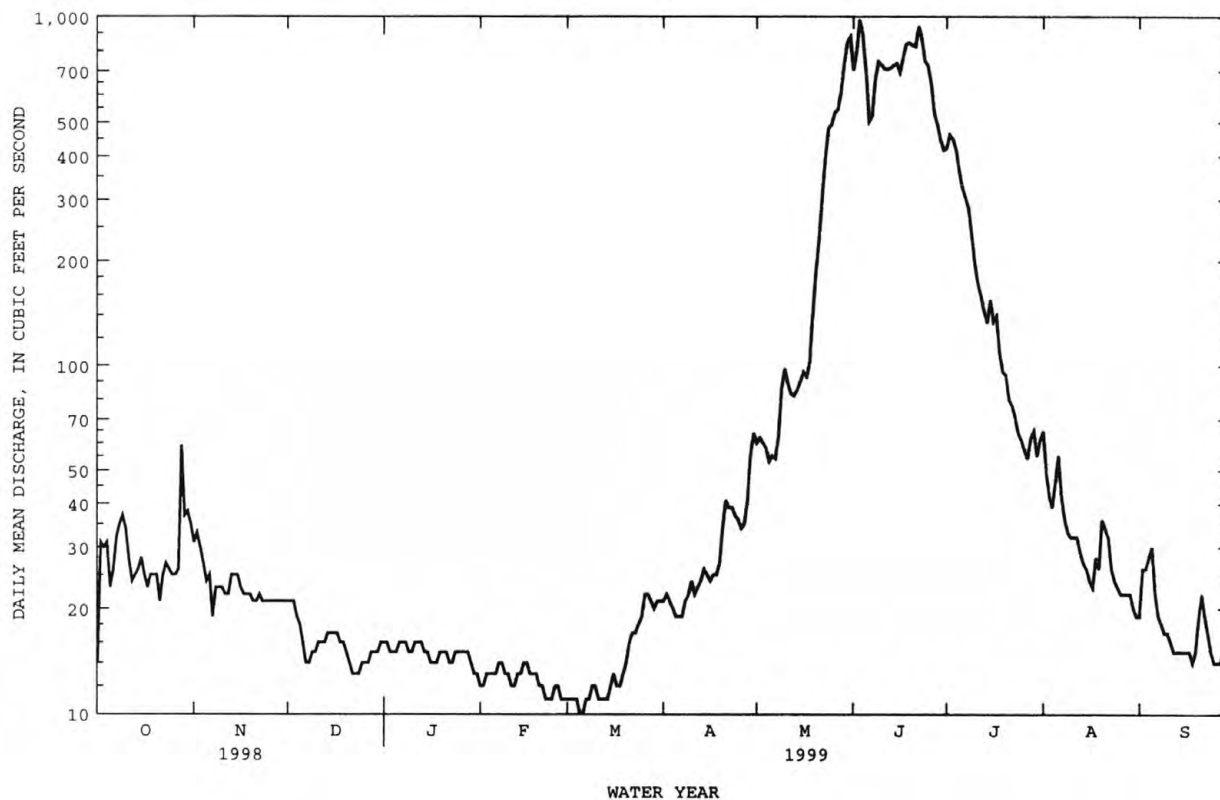
06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1966 - 1999
ANNUAL TOTAL	30228.3	40466	--
ANNUAL MEAN	82.8	111	85.7 ^a
HIGHEST ANNUAL MEAN	--	--	142 1971
LOWEST ANNUAL MEAN	--	--	48.9 1977
HIGHEST DAILY MEAN	640 May 30	982 Jun 3	1690 Jun 19 1971
LOWEST DAILY MEAN	8.9 Mar 13	10 Mar 5,6	4.8 Nov 2 1991
ANNUAL SEVEN-DAY MINIMUM	9.9 Mar 10	11 Feb 28	6.0 Oct 29 1991
INSTANTANEOUS PEAK FLOW	--	1200 Jun 3	2590 ^b Jun 19 1971
INSTANTANEOUS PEAK STAGE	--	4.49 Jun 3	5.92 ^c Jun 24 1983
ANNUAL RUNOFF (AC-FT)	59960	80260	62080 ^a
10 PERCENT EXCEEDS	336	470	286
50 PERCENT EXCEEDS	21	23	16
90 PERCENT EXCEEDS	11	13	9.0

a Mean, water year 1955-1999, 82.5 ft³/s; runoff, water years 1955-1999, 59,700 acre-feet; includes records for station 06632500, Rock Creek at Arlington for water years 1955-1965, adjusted for diversion by King Canyon Canal.

b Gage height, 5.83 ft.

c Estimated.



PLATTE RIVER BASIN

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY

LOCATION.--Lat 41°57'40", long 106°12'31", in NW¹/₄ SW¹/₄ SW¹/₄ sec.17, T.23 N., R.78 W., Carbon County, Hydrologic Unit 10180005, on right bank 50 ft downstream from Boles Spring, 3.9 mi downstream from State Highway 487, 4.3 mi north of Medicine Bow, and 8.7 mi downstream from Muddy Creek.

DRAINAGE AREA.--969 mi².

PERIOD OF RECORD.--October 1973 to current year. Records for October 1973 to September 1984 at site 5.5 mi upstream published as "near Medicine Bow" (station 06634600) do not include flow of Boles Spring. Discharge records considered equivalent except for low flow.

GAGE.--Water-stage recorder. Elevation of gage is 6,570 ft above sea level, from topographic map.

REMARKS.--Records fair except those for November to March and those for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 18	1830	676	4.97
Apr 22	1400	425	4.06
Apr 30	0830	*1,060	*5.85
May 28	1430	525	4.23
June 8	0430	849	5.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	58	28	e6.0	4.9	e16	148	765	274	52	7.5	3.3
2	5.0	53	25	e5.0	e6.6	e13	149	620	245	45	8.5	4.2
3	5.5	51	23	e4.0	6.5	e11	102	642	224	40	8.6	6.8
4	9.1	50	22	e5.0	e5.7	e10	85	510	221	35	8.5	7.4
5	11	49	e8.0	e8.0	6.8	e14	75	460	230	32	11	7.0
6	10	47	e4.5	e7.0	e6.0	e20	73	385	207	29	11	6.5
7	11	44	e5.0	e6.0	e11	e19	70	329	409	27	9.9	5.6
8	13	38	e4.5	e5.5	e15	e17	82	295	706	24	8.5	5.3
9	13	36	4.0	e5.0	e14	e15	120	303	467	22	7.4	5.6
10	14	e21	3.4	e5.6	e11	e20	168	335	378	20	7.1	5.1
11	14	23	3.1	5.8	e9.0	e30	117	389	376	18	6.8	4.9
12	14	27	3.1	4.6	e11	e40	104	350	493	19	6.2	4.4
13	13	36	2.6	e4.0	e13	e60	120	302	386	18	5.9	4.1
14	12	e44	2.4	e3.5	e15	e70	144	284	307	15	5.5	4.2
15	11	51	3.3	e3.0	e13	e80	216	284	300	14	5.5	4.3
16	13	57	4.6	e4.0	e12	e100	192	276	292	14	5.1	4.0
17	24	43	e6.0	e5.0	e11	e200	145	258	261	13	4.3	4.1
18	20	42	e3.5	e4.5	e10	e450	132	249	222	13	4.3	3.9
19	19	38	e2.8	e4.2	e11	437	191	240	197	13	4.1	3.7
20	17	e10	e2.5	e4.0	e10	457	265	254	175	12	4.0	4.3
21	16	e13	e2.6	e6.0	e9.0	543	283	270	152	12	4.0	4.9
22	15	e18	e2.5	e9.0	e10	417	379	300	138	11	4.8	5.0
23	15	e24	e2.0	e6.0	e12	244	317	296	123	9.9	5.1	5.2
24	15	e30	e4.0	e5.0	e16	185	251	298	110	8.6	4.8	4.8
25	15	e25	e4.5	e4.0	e14	221	215	291	96	8.2	4.5	5.0
26	15	e20	e5.0	e3.5	e13	262	274	284	82	7.3	3.8	5.0
27	15	e30	e4.5	e3.0	e12	338	265	296	74	6.4	3.8	5.1
28	25	e40	e6.5	e3.4	e13	328	273	430	67	6.1	3.7	5.6
29	35	34	e8.0	4.7	---	164	422	417	64	6.5	3.7	7.0
30	55	29	e10	5.1	---	110	938	329	62	5.7	3.6	7.0
31	69	---	e7.0	5.0	---	107	---	303	---	6.2	3.2	---
TOTAL	542.0	1081	217.9	154.4	301.5	4998	6315	11044	7338	562.9	184.7	153.3
MEAN	17.5	36.0	7.03	4.98	10.8	161	210	356	245	18.2	5.96	5.11
MAX	69	58	28	9.0	16	543	938	765	706	52	11	7.4
MIN	3.4	10	2.0	3.0	4.9	10	70	240	62	5.7	3.2	3.3
AC-FT	1080	2140	432	306	598	9910	12530	21910	14550	1120	366	304

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1999, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	9.46	11.1	4.88	2.43	13.1	73.1	117	167	92.1	18.0	8.14	7.02			
MAX	18.0	36.0	11.5	7.50	110	286	246	388	419	46.0	22.1	19.5			
(WY)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MIN	3.51	4.25	1.41	.68	1.05	15.0	28.5	21.2	5.96	3.76	1.40	.89			
(WY)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1985 - 1999
ANNUAL TOTAL	8389.08	32892.7	--
ANNUAL MEAN	23.0	90.1	43.8 ^a
HIGHEST ANNUAL MEAN	--	--	90.1
LOWEST ANNUAL MEAN	--	--	12.7
HIGHEST DAILY MEAN	194 Mar 27	938 Apr 30	1450 Mar 20 1997
LOWEST DAILY MEAN	.12 Jan 24	2.0 Dec 23	.12 ^b Jan 24 1998
ANNUAL SEVEN-DAY MINIMUM	.16 Jan 23	2.8 Dec 18	.16 ^c Jan 23 1998
INSTANTANEOUS PEAK FLOW	--	1060 Apr 30	9500 ^c May 17 1978
INSTANTANEOUS PEAK STAGE	--	5.85 Apr 30	14.10 ^d May 17 1978
ANNUAL RUNOFF (AC-FT)	16640	65240	31700
10 PERCENT EXCEEDS	63	300	133
50 PERCENT EXCEEDS	10	14	8.8
90 PERCENT EXCEEDS	1.3	4.0	1.4

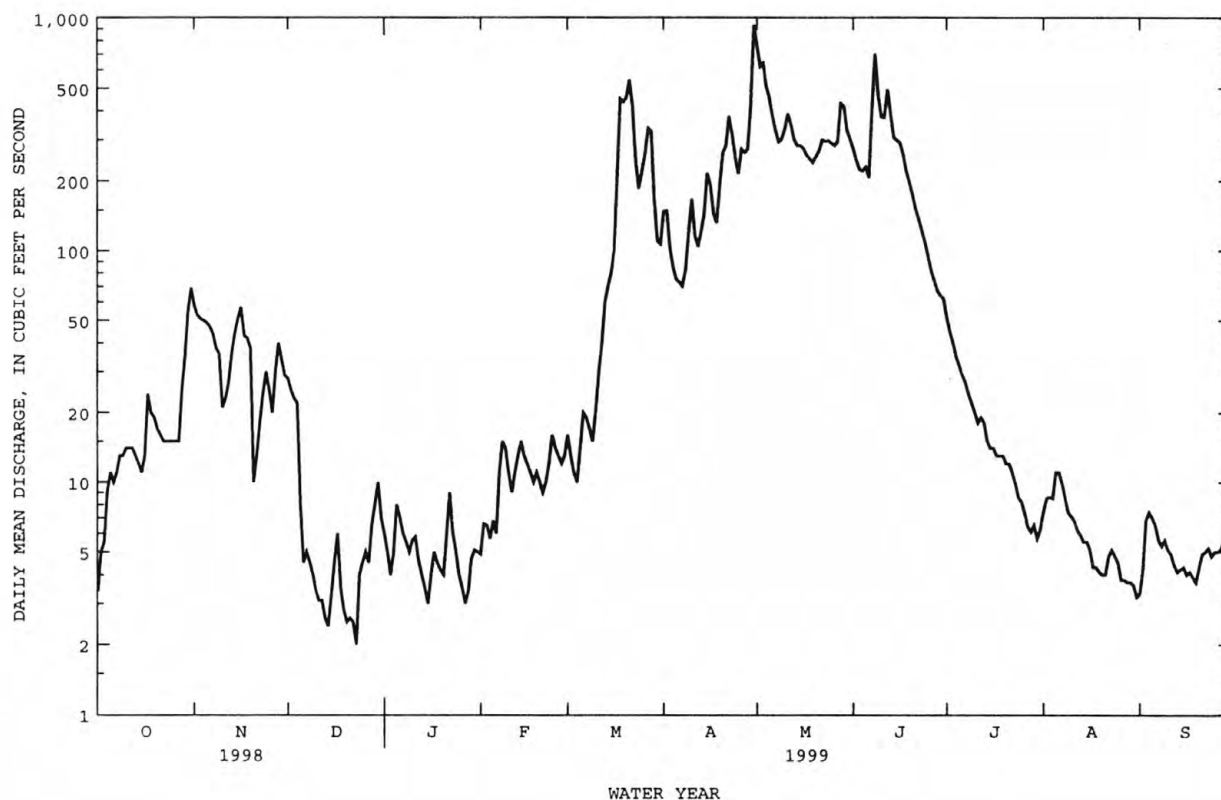
a Average discharge, water years 1974-1999, 52.8 ft³/s, unadjusted for flow from Boles Spring.

b No flow at times, water years 1974-84, site and datum then in use.

c From slope-area measurement of peak flow.

d From floodmarks in gage well, site and datum then in use.

e Estimated.



PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY

LOCATION.--Lat 42°00'35", long 106°30'45", in SE¹/₄ NW¹/₄ sec.34, T.24 N., R.81 W., Carbon County, Hydrologic Unit 10180004, on left bank 25 ft upstream from county highway bridge, 2.0 mi upstream from Troublesome Creek, 9.0 mi upstream from high-water line of Seminole Reservoir at elevation 6,357 ft, and 10 mi north of Hanna.

DRAINAGE AREA.--2,338 mi², of which 396 mi² probably is non-contributing.

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

REVISED RECORDS.--WSP 956: 1941(M). WSP 1440: 1940(M), 1941. WSP 1710: Drainage area. WDR WY-83-1: 1943.

GAGE.--Water-stage recorder. Concrete control since Nov. 20, 1990. Datum of gage is 6,415.40 ft above sea level.

REMARKS.--Records good except those for March to July, which are fair and those for estimated daily discharges, which are poor. Many small reservoirs upstream from station, total capacity, about 6,000 acre-ft, for irrigation. Diversions for irrigation of about 43,000 acres upstream from station. State of Wyoming data collection platform with satellite telemetry at station.

COOPERATION.--Seven discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	198	105	e52	e35	e80	250	1270	1330	714	72	25
2	93	177	104	e45	e40	e90	299	1010	1380	630	63	26
3	40	171	101	e40	e52	e80	280	1000	1320	564	63	29
4	61	158	94	e45	e54	e70	226	937	1260	518	67	33
5	71	159	e50	e54	e66	e60	209	839	1460	478	64	35
6	76	156	e29	e54	e58	e70	188	742	1470	466	66	36
7	78	145	e45	e54	e65	e90	193	656	1480	427	56	40
8	75	137	e48	e50	e72	e90	207	611	1880	375	47	40
9	71	125	e48	e45	e80	e75	238	607	1670	338	43	39
10	73	43	e30	e50	e64	e71	305	620	1400	342	42	36
11	66	40	e43	e54	e50	e75	316	665	1250	327	38	32
12	70	75	e50	e56	e55	e90	257	706	1240	294	31	29
13	67	92	55	e54	e70	107	242	625	1300	258	29	27
14	64	116	57	e47	e80	152	284	565	1190	220	27	26
15	59	156	59	e40	e70	159	352	608	1180	198	23	26
16	110	178	61	e52	e64	163	412	637	1190	190	21	25
17	92	143	64	e54	e60	174	325	595	1210	205	21	24
18	89	134	60	e52	e56	441	284	559	1140	198	22	25
19	97	117	49	e56	e60	581	266	495	1100	182	22	26
20	98	51	e30	e58	e58	556	377	497	1110	173	22	27
21	95	59	e31	e60	e54	618	434	606	1100	156	23	27
22	92	79	e28	e54	e60	668	602	669	1060	151	25	27
23	93	138	e20	e50	e75	492	664	714	1090	138	26	27
24	91	129	e35	e58	e87	356	526	788	1160	122	29	29
25	94	101	e50	e58	e97	318	441	846	1170	115	29	30
26	97	100	e54	e54	e86	357	520	929	1120	104	29	33
27	97	106	e50	e52	e75	431	601	990	1070	95	32	34
28	144	107	e56	e50	e70	498	591	1110	1050	87	29	33
29	149	126	e60	e46	---	427	716	1350	893	82	28	32
30	191	113	e60	e43	---	273	1020	1290	800	80	27	33
31	213	---	e56	e38	---	240	---	1350	---	74	25	---
TOTAL	2832	3629	1682	1575	1813	7952	11625	24886	37073	8301	1141	911
MEAN	91.4	121	54.3	50.8	64.8	257	388	803	1236	268	36.8	30.4
MAX	213	198	105	60	97	668	1020	1350	1880	714	72	40
MIN	26	40	20	38	35	60	188	495	800	74	21	24
AC-FT	5620	7200	3340	3120	3600	15770	23060	49360	73530	16470	2260	1810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

	MEAN	43.6	51.9	39.0	32.5	49.5	144	329	572	687	184	55.8	29.8
MAX	132	121	72.9	69.0	397	516	950	3059	2076	1030	246	236	
(WY)	1963	1999	1974	1997	1962	1943	1983	1973	1983	1983	1983	1973	
MIN	9.65	16.3	8.70	7.76	10.0	20.4	66.4	81.5	58.6	5.71	4.24	3.78	
(WY)	1957	1940	1979	1979	1949	1944	1995	1954	1954	1939	1994	1956	

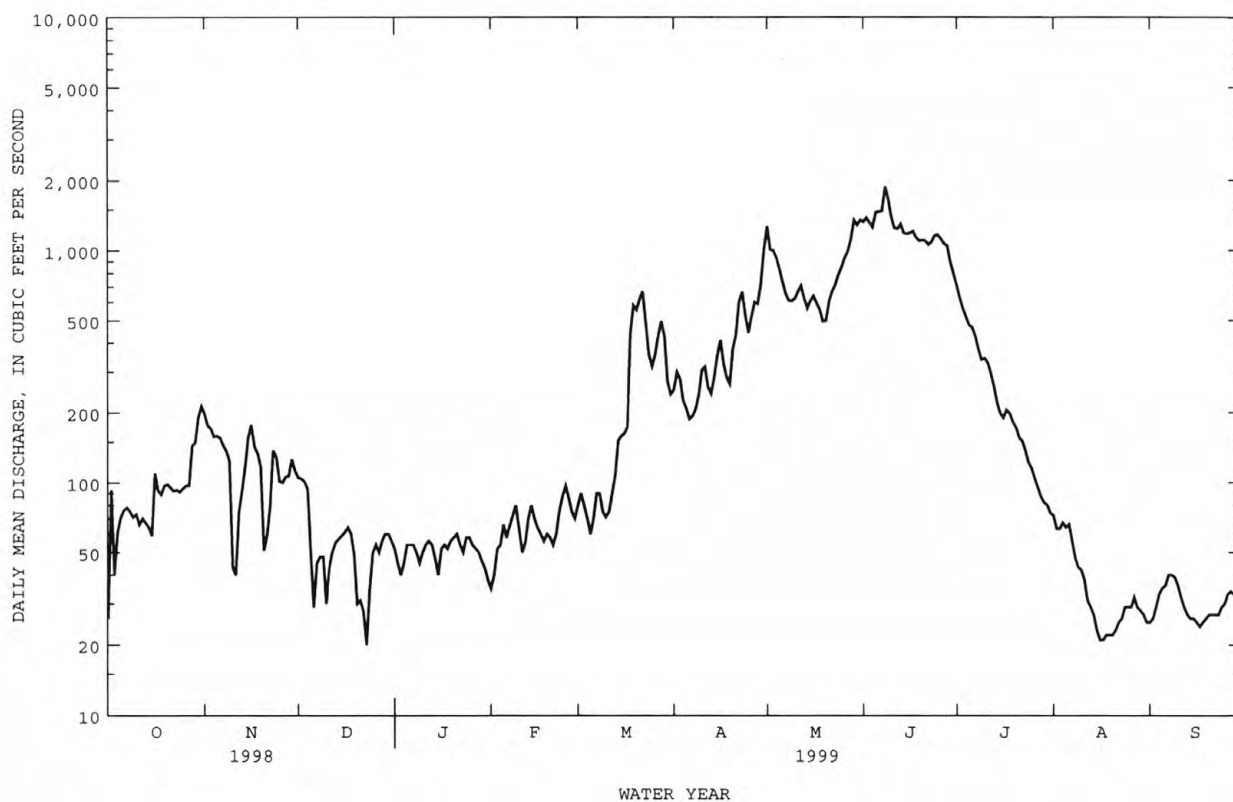
06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	56673		103420		--	
ANNUAL MEAN	155		283		185	
HIGHEST ANNUAL MEAN	--		--		531	1973
LOWEST ANNUAL MEAN	--		--		43.7	1954
HIGHEST DAILY MEAN	1110	Jun 19	1880	Jun 8	5330	May 11 1973
LOWEST DAILY MEAN	13	Sep 10-12	20	Dec 23	.71	Sep 5 1996
ANNUAL SEVEN-DAY MINIMUM	14	Sep 7	22	Aug 15	.89	Aug 31 1996
INSTANTANEOUS PEAK FLOW	--		2020	Jun 8	6010 ^a	May 12 1973
INSTANTANEOUS PEAK STAGE	--		4.84	Jun 8	8.20 ^b	Feb 26 1986
ANNUAL RUNOFF (AC-FT)	112400		205100		134200	
10 PERCENT EXCEEDS	361		994		544	
50 PERCENT EXCEEDS	94		90		54	
90 PERCENT EXCEEDS	31		29		15	

a Gage height, 6.74 ft.

b From floodmarks, backwater from ice.

e Estimated.



PLATTE RIVER BASIN

06635500 SEMINOLE RESERVOIR NEAR LEO, WY

LOCATION.--Lat 42°09'21", long 106°54'29", in NW¹/₄ NE¹/₄ sec.8, T.25 N., R.84 W., Carbon County, Hydrologic Unit 10180003, on upstream side near center of dam on North Platte River, 6.0 mi upstream from high-water line of Pathfinder Reservoir at elevation 5,850.1 ft, and 9.0 mi southwest of Leo.

DRAINAGE AREA.--7,230 mi², of which 589 mi² is probably noncontributing.

PERIOD OF RECORD.--February 1939 to current year. Monthend figures only for February, March 1939, October 1940 to September 1950, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,190.00 ft above sea level (levels by Bureau of Reclamation). Prior to Apr. 20, 1939, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch dam. Storage began Apr. 1, 1939, but some regulation for power development during period Jan. 1 to Mar. 31, 1939. Capacity, 1,017,000 acre-ft below elevation 6,357 ft, top of spillway gates. Figures given herein represent total contents, of which 31,700 acre-ft, capacity below elevation 6,239 ft, minimum operating level for power development, are not available for power development and 533 acre-ft, below elevation 6,185.09 ft, penstock invert, is dead storage. Water is used for irrigation and power development.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,073,000 acre-ft, June 20, 1949, elevation, 6,359.29 ft; minimum daily contents (since appreciable storage was attained), 19,040 acre-ft, Sept. 1, 1939, elevation, 6,228.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 969,000 acre-ft, June 28 to July 2, maximum elevation, 6,354.58 ft, July 1; minimum daily contents, 669,000 acre-ft, Mar. 20-23, minimum daily elevation, 6,336.84 ft, Mar. 22.

Capacity table (elevation, in feet,
and contents, in acre-feet)

6,330	575,000	6,350	883,000
6,340	716,000	6,360	1,080,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

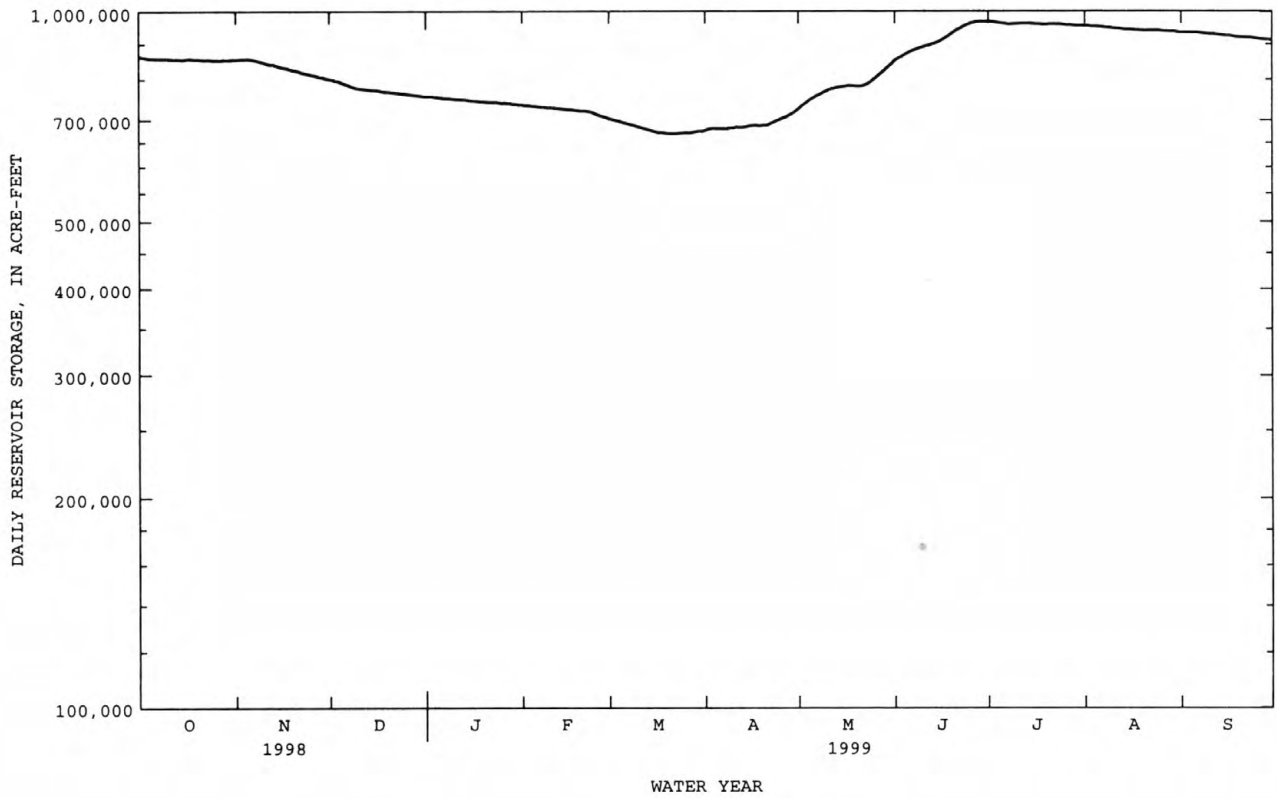
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	863000	854000	800000	756000	736000	703000	676000	726000	852000	969000	955000	935000
2	862000	855000	799000	756000	734000	701000	679000	733000	858000	969000	955000	935000
3	860000	855000	796000	756000	734000	699000	680000	738000	862000	967000	954000	935000
4	858000	856000	795000	755000	733000	698000	680000	744000	868000	966000	954000	935000
5	858000	856000	791000	754000	732000	695000	680000	750000	873000	964000	953000	935000
6	857000	855000	788000	753000	731000	693000	680000	754000	878000	963000	952000	934000
7	857000	853000	786000	752000	730000	691000	680000	759000	881000	961000	951000	933000
8	857000	851000	782000	752000	730000	689000	680000	762000	885000	960000	950000	932000
9	857000	849000	779000	751000	729000	688000	682000	767000	888000	961000	949000	931000
10	857000	846000	777000	750000	729000	685000	682000	770000	891000	962000	948000	930000
11	856000	843000	776000	749000	729000	683000	684000	774000	894000	962000	947000	930000
12	855000	841000	775000	749000	727000	681000	683000	776000	896000	963000	946000	929000
13	855000	841000	774000	748000	727000	679000	683000	778000	900000	963000	945000	927000
14	855000	838000	773000	748000	726000	677000	684000	780000	902000	963000	944000	927000
15	854000	835000	772000	746000	725000	675000	686000	781000	906000	962000	944000	925000
16	856000	833000	772000	745000	724000	673000	687000	782000	911000	961000	943000	925000
17	857000	831000	771000	745000	724000	671000	688000	784000	916000	961000	942000	924000
18	856000	829000	769000	744000	723000	671000	687000	783000	922000	960000	942000	922000
19	855000	826000	768000	744000	722000	670000	687000	783000	929000	960000	941000	921000
20	855000	825000	768000	743000	721000	669000	688000	782000	936000	960000	941000	920000
21	854000	823000	767000	742000	721000	669000	688000	782000	942000	961000	941000	920000
22	853000	819000	766000	742000	720000	669000	692000	784000	947000	961000	940000	919000
23	854000	817000	765000	741000	719000	669000	695000	787000	953000	960000	940000	919000
24	853000	815000	764000	741000	716000	670000	699000	792000	958000	961000	940000	918000
25	852000	813000	764000	740000	713000	670000	701000	799000	962000	959000	940000	916000
26	852000	811000	762000	740000	710000	671000	705000	806000	965000	958000	939000	915000
27	852000	809000	761000	739000	708000	670000	707000	813000	968000	958000	939000	914000
28	853000	806000	760000	739000	706000	672000	712000	820000	969000	957000	938000	913000
29	853000	806000	759000	737000	---	673000	715000	828000	969000	955000	937000	913000
30	853000	802000	758000	737000	---	675000	720000	836000	969000	955000	937000	911000
31	854000	---	757000	736000	---	674000	---	843000	---	955000	935000	---
MAX	863000	856000	800000	756000	736000	703000	720000	843000	969000	969000	955000	935000
MIN	852000	802000	757000	736000	706000	669000	676000	726000	852000	955000	935000	911000
(#)	6,348.39	6,345.39	6,342.66	6,341.30	6,339.35	6,337.23	6,340.31	6,347.80	6,354.57	6,353.88	6,352.83	6,351.55
(*)	-11,000	-52,000	-45,000	-21,000	-30,000	-32,000	+46,000	+123,000	+126,000	-14,000	-20,000	-24,000

WTR YR 1999 MAX 969,000 MIN 669,000 (*) +46,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued



PLATTE RIVER BASIN

06639000 SWEETWATER RIVER NEAR ALCOVA, WY

LOCATION.--Lat 42°29'24", long 107°08'00", in SE¹/₄ NE¹/₄ NE¹/₄ sec.16, T.29 N., R.86 W., Natrona County, Hydrologic Unit 10180006, on left bank 270 ft upstream from State Highway 220, 0.2 mi southwest of Independence Rock, 7 mi upstream from high-water line of Pathfinder Reservoir at elevation 5,850 ft, and 22 mi southwest of Alcovia.

DRAINAGE AREA.--2,338 mi². Area at site prior to Apr. 1, 1992, 2,327 mi².

PERIOD OF RECORD.--August 1913 to September 1924, October 1938 to current year (no winter records during 1974, 1975, 1977-81, and since 1983). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1921, 1923-24. WSP 1710: Drainage area.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 5,890 ft above sea level, from topographic map. Aug. 28, 1913, to Sept. 30, 1924, nonrecording gages at site 7.0 mi upstream at different datums. Oct. 1, 1938, to Mar. 31, 1992, at site 6.6 mi upstream at different datum.

REMARKS.--Records good. Several small reservoirs upstream from station, combined capacity, about 5,000 acre-ft, for irrigation. Diversions for irrigation of about 24,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	162	444	816	338	e80	40
2	---	---	---	---	---	---	174	629	797	303	e78	39
3	---	---	---	---	---	---	258	704	790	271	e76	45
4	---	---	---	---	---	---	119	765	796	247	e75	47
5	---	---	---	---	---	---	106	813	805	225	72	45
6	---	---	---	---	---	---	110	835	798	212	66	41
7	---	---	---	---	---	---	132	747	748	206	64	42
8	---	---	---	---	---	---	148	597	707	203	63	44
9	---	---	---	---	---	---	160	499	683	195	60	46
10	---	---	---	---	---	---	166	458	681	183	58	49
11	---	---	---	---	---	---	177	485	685	170	58	48
12	---	---	---	---	---	---	182	523	698	165	60	46
13	---	---	---	---	---	---	180	523	704	163	64	45
14	---	---	---	---	---	---	176	475	686	154	62	e44
15	---	---	---	---	---	---	177	451	646	149	51	e43
16	---	---	---	---	---	---	173	505	615	141	47	43
17	---	---	---	---	---	---	180	515	602	137	47	45
18	---	---	---	---	---	---	184	471	624	148	48	44
19	---	---	---	---	---	90	179	418	632	149	50	46
20	---	---	---	---	---	96	178	384	641	150	50	47
21	---	---	---	---	---	105	182	381	656	145	50	49
22	---	---	---	---	---	107	219	407	623	146	52	50
23	---	---	---	---	---	107	299	461	576	137	53	50
24	---	---	---	---	---	111	325	516	566	126	56	51
25	---	---	---	---	---	116	354	566	570	119	55	50
26	---	---	---	---	---	115	322	620	559	111	53	51
27	---	---	---	---	---	117	257	659	528	106	51	56
28	---	---	---	---	---	124	258	759	475	103	48	58
29	---	---	---	---	---	147	304	819	431	96	44	57
30	---	---	---	---	---	176	358	813	384	89	44	56
31	---	---	---	---	---	155	---	825	---	83	41	---
TOTAL	---	---	---	---	---	---	6199	18067	19522	5170	1776	1417
MEAN	---	---	---	---	---	---	207	583	651	167	57.3	47.2
MAX	---	---	---	---	---	---	358	835	816	338	80	58
MIN	---	---	---	---	---	---	106	381	384	83	41	39
AC-FT	---	---	---	---	---	---	12300	35840	38720	10250	3520	2810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1999, BY WATER YEAR (WY)

	45.8	50.2	38.7	31.6	36.9	80.0	251	419	400	112	43.0	30.2
MEAN	45.8	50.2	38.7	31.6	36.9	80.0	251	419	400	112	43.0	30.2
MAX	86.6	83.3	59.4	54.5	69.1	210	1869	1296	1130	436	104	114
(WY)	1916	1972	1972	1953	1968	1916	1924	1980	1983	1995	1998	1973
MIN	16.0	20.0	20.0	10.8	12.3	33.0	74.4	20.7	12.6	5.01	.92	1.90
(WY)	1941	1961	1941	1962	1949	1924	1963	1940	1977	1940	1940	1940

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

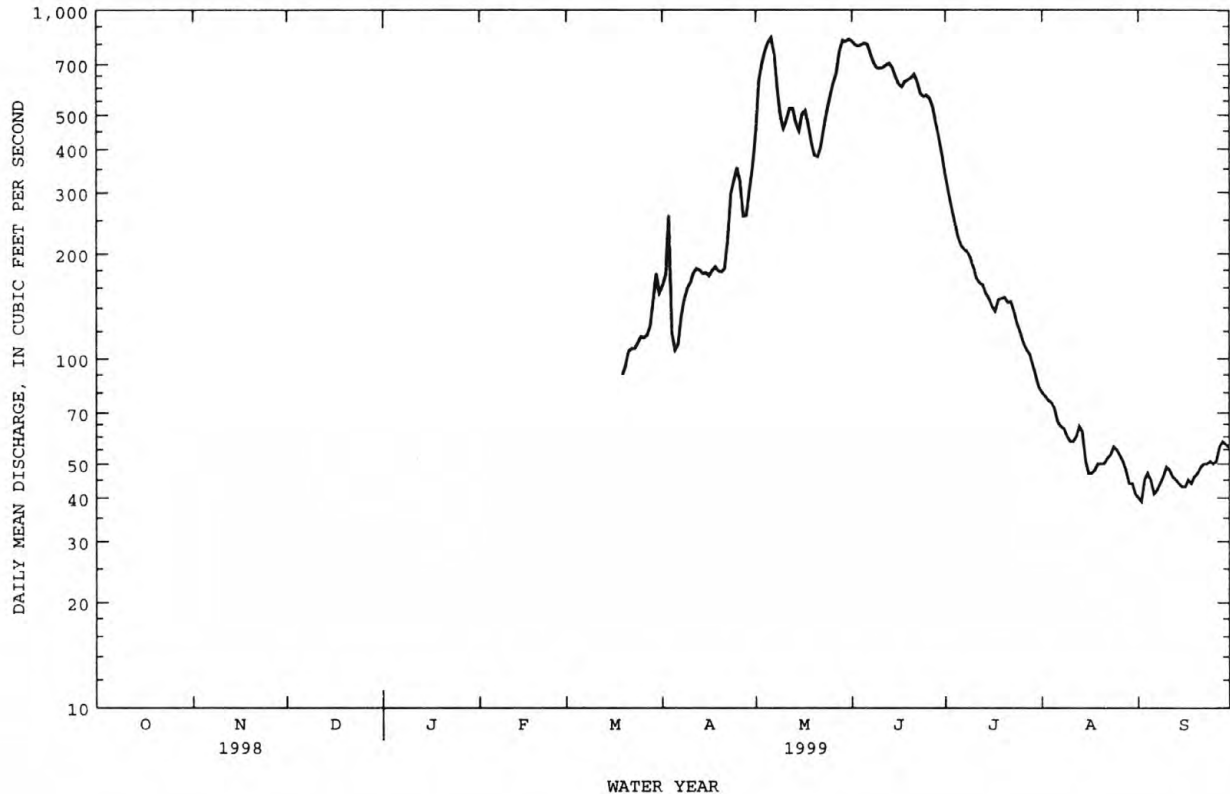
WATER YEARS 1914 - 1999*

ANNUAL MEAN	--		126	
HIGHEST ANNUAL MEAN	--		312	1924
LOWEST ANNUAL MEAN	--		25.8	1940
HIGHEST DAILY MEAN	835	May 6	4290	Apr 13 1924
LOWEST DAILY MEAN	39	Sep 2	.50	Jul 30 to
				Aug 12 1940
INSTANTANEOUS PEAK FLOW	849	May 28	4290 ^a	Apr 13 1924
INSTANTANEOUS PEAK STAGE	4.74	May 28	9.90	Apr 27 1983
ANNUAL RUNOFF (AC-FT)	--		91260	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.

a Maximum observed.

e Estimated.



PLATTE RIVER BASIN

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY

LOCATION.--Lat 42°28'06", long 106°51'12", in NW¹/₄ SW¹/₄ sec.24, T.29 N., R.84 W., Natrona County, Hydrologic Unit 10180003, in gatehouse near left end of dam on North Platte River and 9.0 mi southwest of Alcovia.

DRAINAGE AREA.--10,711 mi², of which 700 mi² probably is non-contributing.

PERIOD OF RECORD.--January 1909 to current year. Month end figures only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,678.1 ft above sea level. Prior to Apr. 12, 1950, nonrecording gages near present site, and Apr. 12 to Sept. 30, 1950, water-stage recorder at present site, all at Bureau of Reclamation datum which was 1.9 ft lower.

REMARKS.--Reservoir is formed by masonry dam. Storage began in April 1909. Capacity, 1,016,000 acre-ft between elevations 5,668.1 ft, north outlet trashrack sill, and 5,850.1 ft, crest of spillway. No dead storage. Figures given herein represent total contents. Water is used to irrigate lands in Wyoming and Nebraska under the North Platte project. Since December 1960, water has been diverted directly through a tunnel to Fremont Canyon Powerplant, bypassing a section of river channel immediately below Pathfinder Dam.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,182,000 acre-ft, June 25-27, 1917, elevation, 5,858.86 ft, present datum; no storage at times during 1909-12, 1931, 1958-59.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,010,000 acre-ft, June 8 to July 5, July 7, maximum daily elevation, 5,849.89 ft, June 26; minimum daily contents, 756,000 acre-ft, Oct. 3, elevation, 5,837.03 ft.

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,835	720,000	5,845	908,000
5,840	810,000	5,850	1,010,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

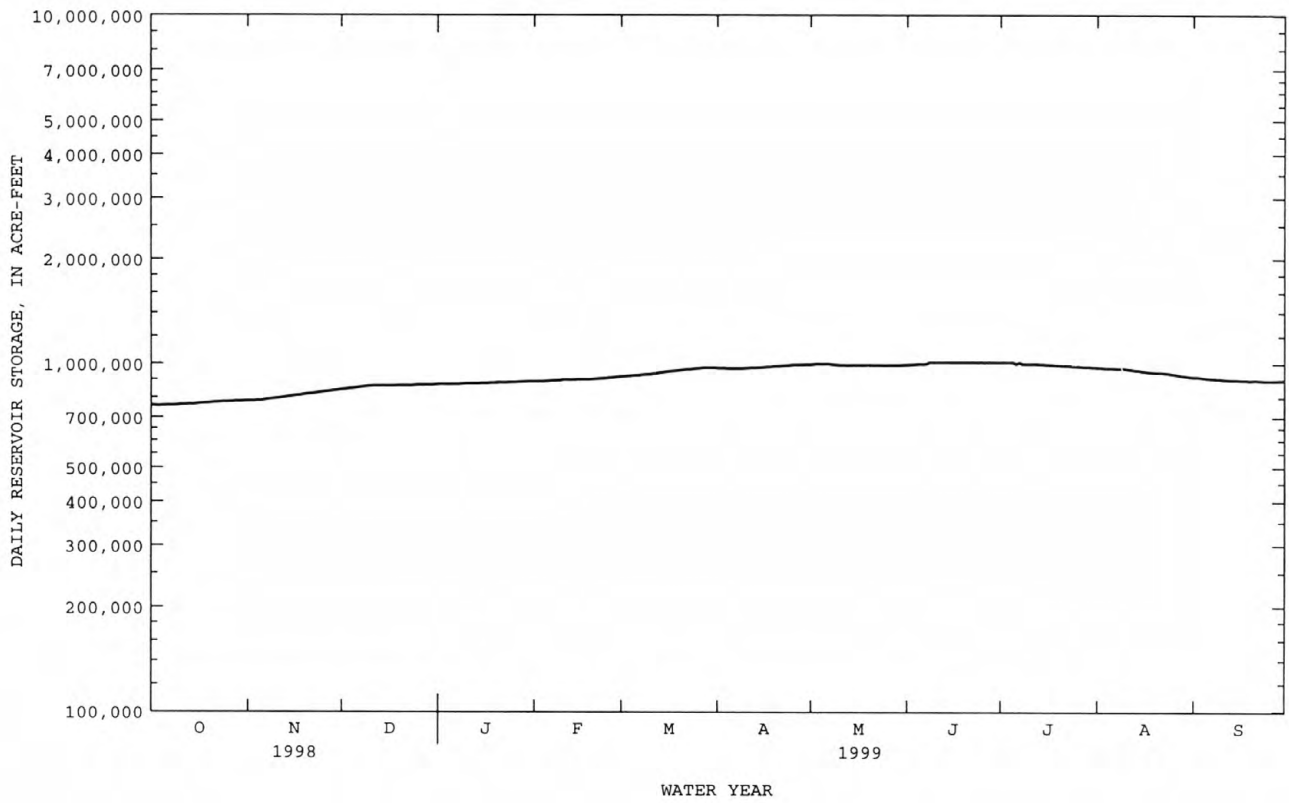
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	759000	781000	843000	872000	890000	919000	973000	996000	993000	1010000	977000	918000
2	758000	782000	844000	872000	890000	920000	972000	998000	995000	1010000	976000	919000
3	756000	782000	847000	872000	890000	921000	972000	999000	996000	1010000	974000	917000
4	757000	784000	849000	872000	890000	923000	971000	1000000	998000	1010000	972000	914000
5	758000	783000	851000	873000	891000	925000	971000	1000000	1000000	1010000	972000	911000
6	759000	786000	853000	874000	892000	926000	969000	1000000	1000000	1000000	972000	910000
7	759000	789000	856000	874000	894000	928000	970000	999000	1000000	1010000	971000	909000
8	759000	791000	857000	874000	895000	930000	969000	996000	1010000	1000000	971000	907000
9	760000	793000	860000	875000	895000	932000	970000	994000	1010000	1000000	970000	906000
10	761000	795000	861000	876000	898000	933000	972000	991000	1010000	1000000	969000	905000
11	761000	796000	862000	876000	898000	936000	973000	990000	1010000	1000000	966000	903000
12	762000	799000	863000	877000	898000	939000	974000	990000	1010000	999000	964000	902000
13	763000	801000	862000	877000	898000	942000	974000	989000	1010000	998000	961000	901000
14	763000	805000	863000	877000	899000	945000	975000	990000	1010000	998000	959000	900000
15	764000	806000	863000	878000	900000	948000	977000	990000	1010000	996000	956000	900000
16	767000	809000	863000	879000	900000	950000	978000	990000	1010000	995000	954000	899000
17	768000	810000	864000	879000	901000	953000	980000	990000	1010000	993000	950000	899000
18	769000	812000	864000	880000	902000	955000	981000	991000	1010000	992000	949000	898000
19	770000	816000	865000	880000	902000	957000	984000	991000	1010000	992000	946000	896000
20	771000	819000	865000	881000	903000	959000	986000	990000	1010000	990000	945000	898000
21	773000	820000	865000	882000	905000	961000	986000	990000	1010000	988000	945000	898000
22	774000	821000	865000	882000	906000	964000	987000	990000	1010000	988000	945000	897000
23	775000	824000	865000	882000	907000	965000	988000	990000	1010000	988000	943000	896000
24	776000	827000	866000	883000	909000	966000	989000	990000	1010000	986000	941000	896000
25	776000	829000	868000	884000	912000	969000	993000	989000	1010000	985000	937000	896000
26	777000	831000	869000	885000	913000	971000	993000	991000	1010000	984000	934000	895000
27	777000	833000	868000	886000	915000	973000	993000	992000	1010000	982000	931000	896000
28	780000	836000	869000	887000	917000	974000	993000	992000	1010000	981000	927000	896000
29	780000	838000	869000	888000	---	974000	994000	991000	1010000	980000	926000	896000
30	780000	840000	869000	889000	---	974000	995000	992000	1010000	979000	922000	897000
31	781000	---	870000	889000	---	974000	---	993000	---	978000	920000	---
MAX	781000	840000	870000	889000	917000	974000	995000	1000000	1010000	1010000	977000	919000
MIN	756000	781000	843000	872000	890000	919000	969000	989000	993000	978000	920000	895000
(#)	5,838.43	5,841.59	5,843.09	5,844.05	5,845.41	5,848.12	5,849.13	5,849.04	5,849.79	5,848.33	5,845.59	5,844.46
(*)	+21,000	+59,000	+30,000	+19,000	+28,000	+57,000	+21,000	-2,000	+17,000	-32,000	-58,000	-23,000

WTR YR 1999 MAX 1,010,000 MIN 756,000 (*) +137,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued



PLATTE RIVER BASIN

06641500 ALCOVA RESERVOIR AT ALCOVA, WY

LOCATION.--Lat 42°32'52", long 106°43'08", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.30 N., R.83 W., Natrona County, Hydrologic Unit 10180007, in elevator shaft at right end of dam on North Platte River and 0.2 mi southwest of Alcovia.

DRAINAGE AREA.--10,766 mi², of which 700 mi² probably is non-contributing.

PERIOD OF RECORD.--February 1938 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 5,447.00 ft. Datum of gage is 5,320 ft above sea level (levels by Bureau of Reclamation). Prior to June 27, 1955, nonrecording gages near present site at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in January 1938; storage began Feb. 8, 1938. Capacity, 184,300 acre-ft at elevation 5,500.00 ft, top of spillway gates. Dead storage, 100 acre-ft. Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in North Platte River basin.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 190,000 acre-ft, Aug. 14, 15, 1952, elevation, 5,499.92 ft; minimum daily contents (since appreciable storage was attained), 2,000 acre-ft, Sept. 30, 1940, elevation, 5,353.56 ft. No usable storage prior to February 1938.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 181,000 acre-ft, June 15 to July 13, July 17-18, 20-22, 27-29, Aug. 3-4, 7, 31, Sept. 1, 5, 12-14, 16, 18-19, 28, maximum daily elevation, 5,498.75 ft, June 30; minimum daily contents, 153,000 acre-ft, Mar. 5; elevation, 5,486.72 ft.

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,485	149,000	5,495	172,000
5,490	160,000	5,500	184,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

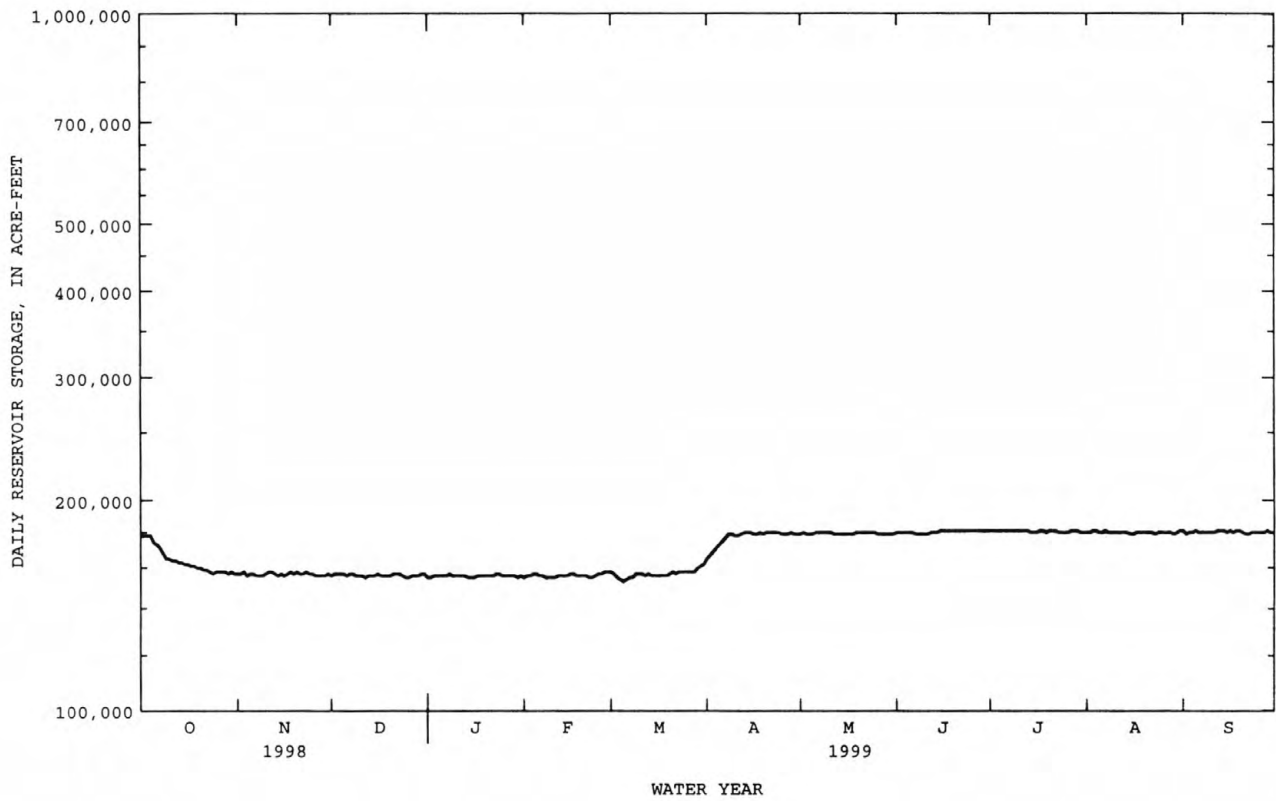
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178000	157000	156000	155000	155000	158000	165000	179000	180000	181000	180000	181000
2	178000	157000	157000	155000	156000	157000	167000	180000	180000	181000	180000	179000
3	178000	158000	157000	156000	156000	155000	169000	179000	180000	181000	181000	180000
4	178000	156000	157000	156000	157000	154000	171000	179000	180000	181000	181000	180000
5	174000	157000	157000	156000	157000	153000	173000	179000	180000	181000	180000	181000
6	173000	157000	156000	156000	156000	154000	175000	180000	180000	181000	180000	180000
7	171000	156000	157000	156000	156000	155000	177000	180000	179000	181000	181000	180000
8	168000	156000	157000	157000	155000	155000	179000	180000	179000	181000	180000	180000
9	165000	156000	156000	156000	155000	157000	179000	180000	179000	181000	180000	180000
10	165000	157000	156000	156000	155000	157000	178000	180000	179000	181000	180000	180000
11	164000	158000	156000	156000	155000	157000	178000	180000	179000	181000	180000	180000
12	164000	158000	155000	156000	156000	156000	179000	179000	180000	181000	180000	181000
13	163000	157000	156000	156000	156000	157000	180000	179000	180000	181000	180000	181000
14	163000	156000	156000	155000	156000	156000	180000	179000	180000	180000	180000	181000
15	162000	157000	156000	155000	156000	156000	180000	179000	181000	180000	179000	180000
16	162000	156000	157000	155000	157000	156000	179000	179000	181000	180000	179000	181000
17	161000	157000	156000	156000	157000	156000	179000	179000	181000	181000	180000	180000
18	161000	158000	156000	156000	156000	156000	180000	179000	181000	181000	180000	181000
19	160000	157000	156000	156000	156000	156000	179000	180000	181000	180000	180000	181000
20	160000	158000	156000	156000	156000	157000	180000	180000	181000	181000	180000	180000
21	159000	157000	157000	156000	156000	158000	180000	180000	181000	181000	180000	179000
22	159000	157000	157000	156000	155000	157000	180000	180000	181000	181000	180000	179000
23	158000	158000	157000	157000	155000	158000	180000	180000	181000	180000	179000	180000
24	157000	157000	156000	157000	156000	158000	180000	180000	181000	180000	180000	180000
25	158000	157000	155000	156000	157000	158000	179000	180000	181000	180000	180000	180000
26	158000	156000	155000	156000	157000	158000	179000	179000	181000	180000	180000	180000
27	158000	156000	156000	156000	158000	158000	179000	179000	181000	181000	180000	180000
28	158000	156000	156000	156000	158000	158000	180000	179000	181000	181000	180000	181000
29	157000	156000	156000	156000	---	160000	179000	179000	181000	181000	179000	180000
30	158000	157000	157000	155000	---	161000	179000	179000	181000	180000	180000	180000
31	157000	---	157000	156000	---	162000	---	179000	---	180000	181000	---
MAX	178000	158000	157000	157000	158000	162000	180000	180000	181000	181000	181000	181000
MIN	157000	156000	155000	155000	155000	153000	165000	179000	180000	180000	179000	179000
(#)	5,488.51	5,488.30	5,488.24	5,487.91	5,488.79	5,490.77	5,497.85	5,497.88	5,498.75	5,498.20	5,498.49	5,498.06
(*)	-21,000	0	0	-1,000	+2,000	+4,000	+17,000	0	+2,000	-1,000	+1,000	-1,000

WTR YR 1999 MAX 181,000 MIN 153,000 (*) +2,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

06641500 ALCOVA RESERVOIR AT ALCOVA, WY--Continued



PLATTE RIVER BASIN

06645000 NORTH PLATTE RIVER BELOW CASPER, WY

LOCATION.--Lat°42°51'40", long 106°12'53", in SE¹/₄ NW¹/₄ NW¹/₄ sec.4, T.33 N., R.78 W., Natrona County, Hydrologic Unit 10180007, at New Mystery Bridge, 0.1 mi upstream from Claude Creek, 0.6 mi north of U.S. Highways 20 and 87, 5.8 mi east of city hall in Casper, and 9.5 mi downstream from Casper Creek.

DRAINAGE AREA.--12,574 mi², of which 831 mi² probably is noncontributing.

PERIOD OF RECORD.--Water years 1947-52, 1957-59, 1968-89, October 1990 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 03...	0955	848	946	7.9	6.5	5.5	637	9.0	88	.01	.63	.05
FEB 23...	0900	570	668	8.4	.0	4.0	635	10.5	86	.01	.32	.08
MAY 17...	1100	3570	472	8.1	8.5	15.0	641	7.9	81	<.01	.09	.06
AUG 13...	0850	1600	544	8.2	16.0	22.5	640	7.1	86	<.01	.07	<.02

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 03...	.03	10	2	43	<1	111	<1	2	<1	1	E6
FEB 23...	.02	2	2	47	<1	75.2	<1	7	<1	1	<10
MAY 17...	.02	3	2	48	<1	47.9	<1	<1.0	<1	1	<10
AUG 13...	.01	4	1	52	<1	53.3	<1	<1.0	<1	2	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)
NOV 03...	<1	44	15	3	2	8	<1	670	<10	2	<1
FEB 23...	<1	33	21	3	3	6	<1	590	<10	2	<1
MAY 17...	<1	22	4	2	2	2	<1	390	<10	2	<1
AUG 13...	<1	23	7	2	2	1	<1	420	<10	1	2

E Estimated.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	0130	575	5.79
Mar. 26	2300	739	6.22
Mar. 31	0100	479	5.58
Apr. 8	2230	476	5.57
Apr. 13	2400	498	5.64
Apr. 20	2400	624	6.00
Apr. 29	2100	*934	*6.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	172	35	16	15	16	130	680	169	35	10	5.8
2	7.9	161	30	16	e14	17	96	637	144	32	10	6.2
3	9.4	151	e29	16	15	19	97	595	140	29	9.7	8.9
4	14	140	e30	16	15	20	86	545	116	25	8.7	11
5	22	119	e31	16	15	e18	83	496	128	22	8.3	9.5
6	16	e110	33	17	15	e21	85	431	266	22	8.6	8.2
7	20	113	e30	17	e14	e19	189	403	199	21	12	7.0
8	29	105	e28	17	e15	18	314	379	147	19	9.4	6.7
9	31	e81	e25	17	e17	e19	257	379	127	18	8.2	6.5
10	25	e78	e22	17	e15	24	143	416	133	17	7.8	6.6
11	21	e74	e18	17	e12	e21	132	387	233	16	7.6	6.6
12	19	e71	e20	17	e13	18	155	339	141	16	7.3	6.6
13	17	e67	e22	17	e14	e20	249	345	129	15	7.3	6.6
14	16	e66	23	17	e14	e21	281	338	112	14	7.1	6.6
15	16	e70	23	17	e15	e25	164	310	132	14	6.4	6.8
16	20	e62	22	17	e15	e38	153	293	116	14	6.1	6.8
17	27	59	20	18	e15	e54	160	276	104	14	5.8	6.6
18	30	57	21	18	e15	e51	249	261	122	13	5.8	6.4
19	34	50	e18	18	e15	e56	417	280	91	12	5.8	7.1
20	36	e34	e15	18	e15	e66	457	328	80	12	5.9	8.7
21	38	e40	e12	17	e13	e93	540	326	71	13	6.0	8.7
22	50	e44	e10	17	e15	e130	418	334	69	12	7.3	8.4
23	83	e39	e11	16	17	e120	297	323	62	11	8.1	7.9
24	90	43	e12	16	16	e160	362	304	56	10	7.7	7.6
25	78	e30	e12	16	15	e330	425	292	48	9.4	7.0	7.3
26	71	e37	e13	16	15	466	367	298	43	8.7	6.5	7.2
27	69	e35	14	15	e16	358	396	365	46	8.6	6.3	8.2
28	170	37	14	e13	e16	126	572	276	44	8.5	6.3	11
29	e430	37	15	e14	---	111	820	234	38	8.8	6.2	11
30	e280	35	16	15	---	152	765	220	35	10	6.0	10
31	209	---	16	15	---	256	---	198	---	11	5.9	---
TOTAL	1985.8	2217	640	509	416	2863	8859	11288	3341	491.0	231.1	232.5
MEAN	64.1	73.9	20.6	16.4	14.9	92.4	295	364	111	15.8	7.45	7.75
MAX	430	172	35	18	17	466	820	680	266	35	12	11
MIN	7.5	130	10	13	12	16	83	198	35	8.5	5.8	5.8
AC-FT	3940	4400	1270	1010	825	5680	17570	22390	6630	974	458	463

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

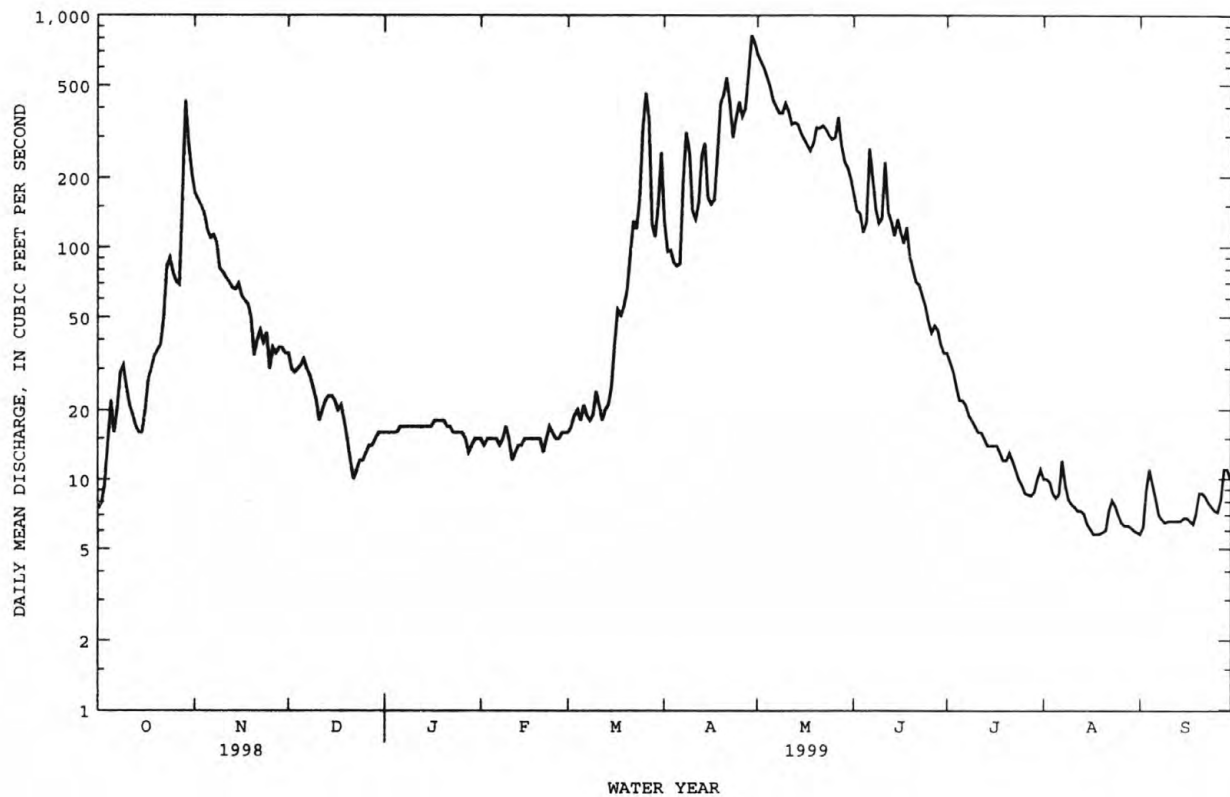
MEAN	11.5	14.9	10.3	9.04	9.92	36.0	191	274	93.2	15.3	6.04	5.83
MAX	64.1	73.9	34.2	26.0	21.5	92.4	352	805	435	57.4	15.5	11.8
(WY)	1999	1999	1996	1997	1997	1999	1987	1995	1995	1947	1997	1997
MIN	3.85	6.04	3.38	3.85	3.44	9.77	44.8	46.5	14.2	3.04	2.47	2.10
(WY)	1990	1993	1991	1991	1947	1950	1989	1989	1989	1989	1989	1990

PLATTE RIVER BASIN

06646000 DEER CREEK IN CANYON, NEAR GLENROCK, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1946 - 1999
ANNUAL TOTAL	17804.3	33073.4	--
ANNUAL MEAN	48.8	90.6	57.8
HIGHEST ANNUAL MEAN	--	--	124 1995
LOWEST ANNUAL MEAN	--	--	13.9 1989
HIGHEST DAILY MEAN	430 Oct 29	820 Apr 29	1920 Jun 10 1986
LOWEST DAILY MEAN	6.3 Sep 10, 20	5.8 Aug 17-19, Sep 1	1.1 Sep 17 1990
ANNUAL SEVEN-DAY MINIMUM	6.9 Sep 4	6.0 Aug 15	1.4 Sep 12 1990
INSTANTANEOUS PEAK FLOW	--	934 Apr 29	3200 Jun 10 1986
INSTANTANEOUS PEAK STAGE	--	6.70 Apr 29	9.42 Jun 10 1986
ANNUAL RUNOFF (AC-FT)	35310	65600	41900
10 PERCENT EXCEEDS	146	306	169
50 PERCENT EXCEEDS	21	21	11
90 PERCENT EXCEEDS	9.4	7.6	3.8

e Estimated.



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LOCATION.--Lat 42°36'44", long 105°51'29", in NE¹/₄ NE¹/₄ SW¹/₄ sec.32, T.31 N., R.75 W., Converse County, Hydrologic Unit 10180007, on left bank at Echo Mountain Ranch (old Boxelder Post Office), 0.8 mi downstream from Snowshoe Creek, and 17 mi south of Glenrock.

PERIOD OF RECORD.--April 1946 to September 1951, October 1961 to September 1967, October 1971 to current year.

REMARKS.--Records poor except those for April to June, which are fair. Diversions upstream from station for irrigation of about 60 acres, of which about 40 acres are downstream from station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 21	0230	309	3.67
Apr. 29	2100	*733	*4.73
May 26	2300	475	4.17

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	74	9.9	5.5	6.0	e4.9	64	568	204	31	5.1	.68
2	e3.1	71	9.3	5.3	5.9	5.2	58	533	176	27	4.8	.65
3	e3.6	65	8.9	4.8	5.8	e5.1	60	482	177	24	4.0	.69
4	e5.0	60	8.6	4.5	5.9	e5.0	64	433	139	20	3.2	.85
5	e7.2	54	5.8	4.2	6.2	5.2	56	373	157	19	2.8	.94
6	e7.0	51	5.6	4.2	5.9	5.1	53	313	313	18	2.8	.69
7	e7.6	e41	e5.4	4.4	e5.4	5.1	65	277	266	16	2.9	.53
8	e9.7	e39	e5.0	4.7	e5.2	5.4	97	273	236	15	2.6	.45
9	e11	39	e5.6	5.0	e5.0	5.2	95	302	209	13	2.1	.42
10	e10	e36	e5.8	5.3	e4.5	5.5	77	338	216	12	1.9	.40
11	e10	e31	e6.4	5.2	e4.9	5.4	85	303	254	12	1.8	.40
12	e9.0	e26	e7.0	5.7	e5.2	5.2	85	266	183	11	1.5	.50
13	e8.2	e28	e8.2	5.8	5.5	5.5	106	265	166	9.1	1.6	.61
14	e8.4	30	e9.9	5.6	e5.4	e6.0	116	260	151	8.0	1.3	.66
15	e8.4	26	11	5.5	5.5	e7.6	102	238	162	8.3	.99	.69
16	e9.0	23	10	5.5	5.2	e9.0	103	234	132	8.3	.84	.69
17	e10	21	9.4	5.5	5.0	e11	103	225	121	7.7	.88	.66
18	e11	20	8.4	5.3	5.3	e23	124	226	114	6.6	.98	.65
19	e11	e16	7.1	5.5	5.7	e27	164	254	97	6.3	1.0	.90
20	e12	e13	6.8	5.5	5.6	e30	211	294	90	7.5	1.0	1.1
21	e12	e15	6.1	5.6	5.4	e32	271	321	77	6.6	1.1	1.1
22	e14	17	5.7	5.7	5.4	33	229	348	71	5.6	1.3	1.0
23	e17	14	5.2	5.7	e6.2	37	193	362	64	5.6	1.3	.89
24	e16	13	4.6	5.9	e5.9	43	216	350	57	5.3	1.2	.80
25	e15	e13	4.4	5.7	5.5	53	251	340	50	5.2	1.0	.80
26	e15	e12	4.7	e5.3	5.3	73	229	347	46	4.7	.83	.99
27	e14	12	4.9	e5.0	5.0	80	258	377	56	4.2	.75	1.6
28	e40	11	5.4	e5.3	5.0	66	359	314	42	4.0	.89	2.5
29	155	11	5.5	e5.6	---	65	582	289	37	6.2	.78	2.4
30	97	10	5.7	5.8	---	65	609	276	33	5.8	.74	2.5
31	84	---	5.5	5.7	---	74	---	239	---	4.8	.66	---
TOTAL	643.3	892	211.8	164.3	152.8	802.4	5085	10020	4096	337.8	54.64	27.74
MEAN	20.8	29.7	6.83	5.30	5.46	25.9	170	323	137	10.9	1.76	.92
MAX	155	74	11	5.9	6.2	80	609	568	313	31	5.1	2.5
MIN	3.1	10	4.4	4.2	4.5	4.9	53	225	33	4.0	.66	.40
AC-FT	1280	1770	420	326	303	1590	10090	19870	8120	670	108	5

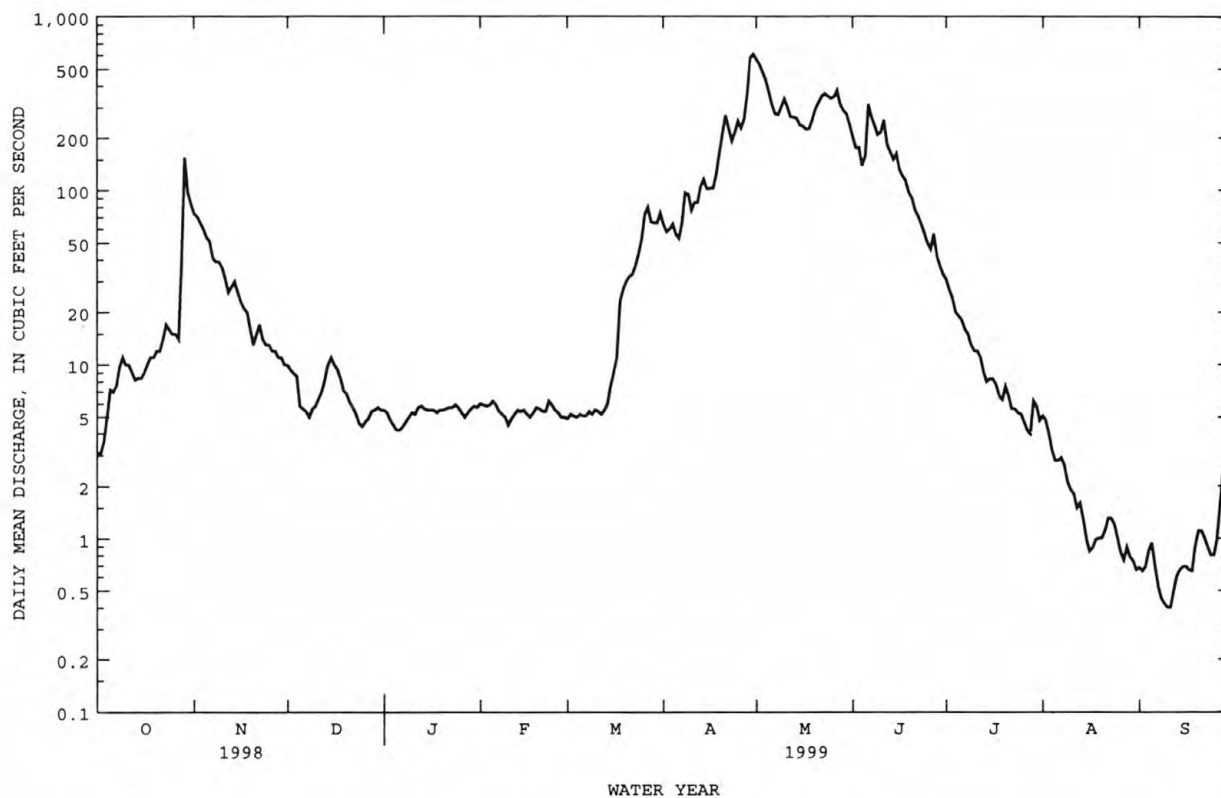
MEAN	2.71	3.89	2.86	2.51	2.83	9.17	79.0	242	81.5	9.17	1.77	.89
MAX	20.8	29.7	15.0	8.12	9.25	31.8	220	562	332	48.8	12.3	4.11
(WY)	1999	1999	1996	1997	1962	1997	1962	1973	1995	1947	1998	1973
MIN	.24	.60	.46	.66	.093	1.47	9.33	39.5	8.28	.21	.021	.058
(WY)	1965	1964	1964	1981	1966	1981	1981	1989	1985	1989	1989	1981

PLATTE RIVER BASIN

06647500 BOX ELDER CREEK AT BOXELDER, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1946 - 1999
ANNUAL TOTAL	9542.3	22487.78	--
ANNUAL MEAN	26.1	61.6	36.7
HIGHEST ANNUAL MEAN	--	--	85.8
LOWEST ANNUAL MEAN	--	--	6.95
HIGHEST DAILY MEAN	168	609	2460
LOWEST DAILY MEAN	1.9	.40	.00
ANNUAL SEVEN-DAY MINIMUM	2.4	.47	.00
INSTANTANEOUS PEAK FLOW	--	733	4530
INSTANTANEOUS PEAK STAGE	--	4.73	8.58 ^a
ANNUAL RUNOFF (AC-FT)	18930	44600	26570
10 PERCENT EXCEEDS	73	238	110
50 PERCENT EXCEEDS	9.4	8.3	3.0
90 PERCENT EXCEEDS	2.7	1.0	.41

a Site and datum then in use.
e Estimated.



06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'10", long 105°09'32", in NE¹/₄ SE¹/₄ SW¹/₄ sec.17, T.31 N., R.69 W., Converse County, Hydrologic Unit 10180008, on right bank 0.5 mi downstream from bridge on U.S. Highway 87, 0.1 mi downstream from Shawnee Creek, and 1.5 mi east of Orin. Prior to Mar. 6, 1994, at site 0.3 mi upstream.

DRAINAGE AREA.--15,025 mi², of which 1,203 mi² probably is noncontributing.

PERIOD OF RECORD.--January, April to November 1895, April to October 1896, January 1897 to December 1898, April to November 1899, April to September 1917, April to September 1918, May to September 1924, April 1958 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Orin Junction" 1895, 1897-99 and as "at McKinley" 1917-18.

REVISED RECORDS.--WSP 1310: 1896, 1899. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder, and concrete weir since Mar. 6, 1994. Elevation of gage is 4,660 ft above sea level, from topographic map. Jan. 1, 1895, to Nov. 30, 1899, and May 1 to Sept. 30, 1924, nonrecording gage at railroad bridge just upstream from U.S. Highway 87 at different datum. Apr. 1, 1917, to Sept. 30, 1918, nonrecording gage at site 1.9 mi downstream at different datum. Apr. 1958 to Mar. 5, 1994, at site 0.3 mi upstream at different datum.

REMARKS.--Records good except those for November to May, which are fair, and those for estimated daily discharges, which are poor. Major regulation began after completion of Pathfinder Reservoir in April 1909. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas. U.S. Geological Survey data collection platform with satellite telemetry at station.

COOPERATION.--Nine discharge measurements provided by the the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2430	1780	802	e760	592	657	1170	4820	5270	5470	1410	1350
2	2460	1580	783	e760	623	660	1200	4540	5130	4930	1460	1350
3	2480	1500	739	782	620	1340	1220	4180	5240	4350	1430	1610
4	2650	1480	775	e840	556	1570	1120	3850	5230	4200	1390	1870
5	2730	1460	773	e880	663	1720	1060	3590	5170	4150	1390	1650
6	2200	1410	751	e940	835	1730	1080	3540	5430	4090	1400	1570
7	2050	1370	663	984	783	1570	1060	3670	5860	4070	1410	1530
8	1960	1320	656	986	868	892	1150	3910	5610	3550	1410	1510
9	1950	1260	590	950	913	796	1340	4130	5680	3210	1390	1350
10	1930	1220	772	935	935	767	1490	4270	5640	2780	1360	1270
11	1760	1150	713	1010	881	754	1430	4390	6160	2390	1360	1060
12	1050	1130	718	984	801	761	1460	4360	6010	2300	1350	1050
13	953	1190	748	952	760	765	1490	4220	5930	2270	1370	1100
14	895	1200	778	855	783	771	1670	4210	5830	2210	1410	1090
15	842	1220	751	793	950	797	1870	4490	5900	2230	1380	1110
16	930	1210	734	805	992	804	1680	4370	5840	2190	1350	1100
17	1400	1220	731	783	914	835	1600	4300	5760	2160	1360	1090
18	1520	1200	731	771	886	817	1640	4240	5810	2150	1340	1080
19	1250	1170	686	812	886	878	1660	4380	5820	2140	1310	1100
20	1110	1070	e640	890	857	897	1940	4750	5870	2150	1360	1110
21	1030	1010	e580	886	874	906	2220	4860	5850	2150	1380	1100
22	982	927	e540	886	857	936	2480	4870	5710	1900	1370	1070
23	957	897	e560	888	846	951	2560	4970	5660	1650	1430	1040
24	998	880	e580	884	866	953	2200	5030	5580	1460	1390	961
25	1030	867	e600	803	889	995	2560	4990	5540	1460	1380	880
26	975	819	e640	674	846	1060	2920	4950	5560	1450	1390	808
27	953	827	e660	725	695	1180	2770	5150	5610	1430	1430	801
28	1050	824	e680	873	772	1420	2990	5680	5540	1410	1430	843
29	1960	819	e700	732	---	1220	3720	5630	5470	1410	1440	839
30	2760	811	e720	681	---	1010	4640	5500	5430	1410	1400	803
31	2210	---	e740	608	---	996	---	5430	---	1400	1360	---
TOTAL	49455	34821	21534	26112	22743	31408	57390	141270	169140	80120	43040	35095
MEAN	1595	1161	695	842	812	1013	1913	4557	5638	2585	1388	1170
MAX	2760	1780	802	1010	992	1730	4640	5680	6160	5470	1460	1870
MIN	842	811	540	608	556	657	1060	3540	5130	1400	1310	801
AC-FT	98090	69070	42710	51790	45110	62300	113800	280200	335500	158900	85370	69610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1999, BY WATER YEAR (WY)

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
MEAN	1193	1078	895	907	995	1222	1921	3365	3284	2645	2282	1624
MAX	1708	2191	1223	1171	1472	2911	4578	9274	14430	9970	5258	4150
(WY)	1986	1987	1974	1986	1980	1984	1974	1973	1917	1917	1924	1917
MIN	571	639	544	600	594	618	670	839	958	982	583	399
(WY)	1961	1959	1991	1992	1993	1981	1981	1992	1990	1967	1898	1898

PLATTE RIVER BASIN

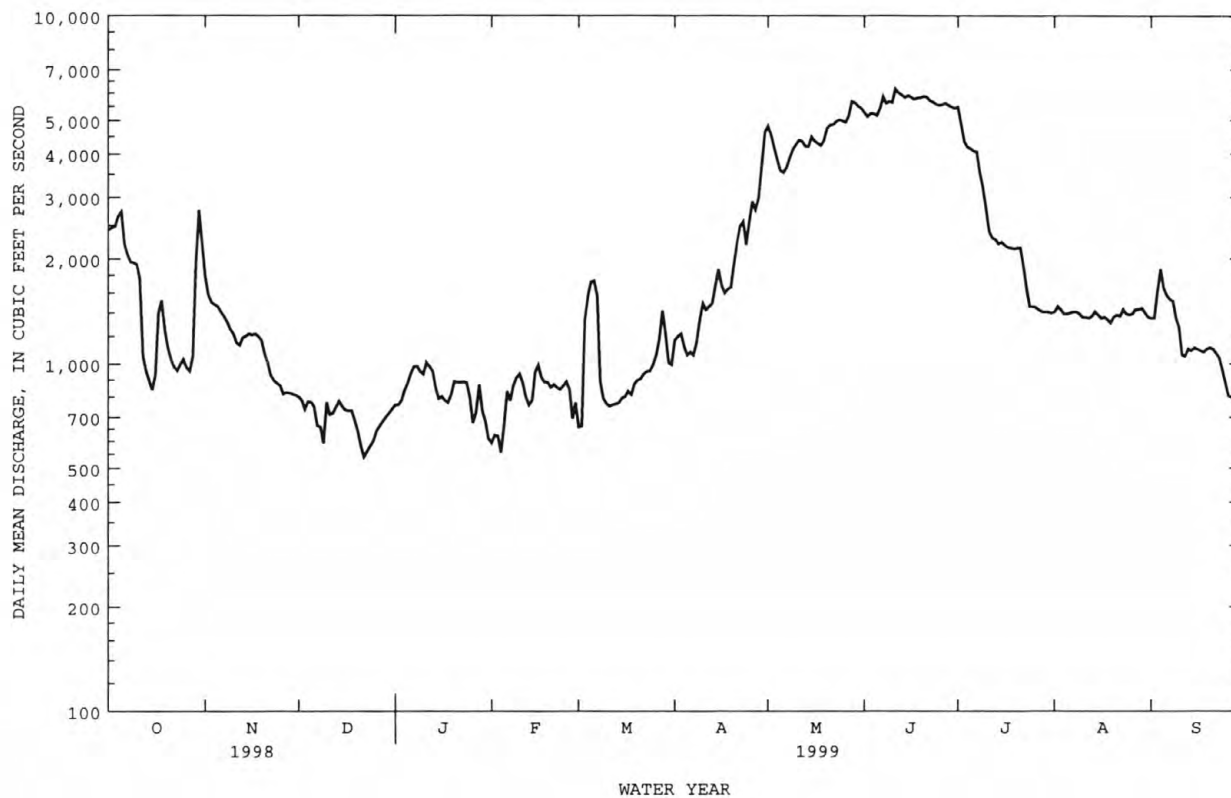
06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1895 - 1999	
ANNUAL TOTAL	659845		712128		--	
ANNUAL MEAN	1808		1951		1651	
HIGHEST ANNUAL MEAN	--		--		3110	1984
LOWEST ANNUAL MEAN	--		--		935	1961
HIGHEST DAILY MEAN	4090	Mar 26	6160	Jun 11	20300	Jun 27 1917
LOWEST DAILY MEAN	525	Jan 10	540	Dec 22	140	Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	572	Feb 26	591	Dec 20	324	Sep 25 1966
INSTANTANEOUS PEAK FLOW	--		6620	Jun 26	23800 ^a	May 15 1965
INSTANTANEOUS PEAK STAGE	--		6.33	Jun 26	10.45 ^b	Jun 12 1970
ANNUAL RUNOFF (AC-FT)	1309000		1413000		1196000	
10 PERCENT EXCEEDS	3400		5070		3830	
50 PERCENT EXCEEDS	1840		1320		1300	
90 PERCENT EXCEEDS	644		750		697	

a Gage height, 10.00 ft, site and datum then in use.

b Site and datum then in use.

e Estimated.



PLATTE RIVER BASIN

265

06652700 GLENDO RESERVOIR NEAR GLENDO, WY

LOCATION.--Lat 42°28'21", long 104°57'28", in SW¹/₄ NE¹/₄ sec.24, T.29 N., R.68 W., Platte County, Hydrologic Unit 10180008, on right bank in gate shaft house on North Platte River, 0.5 mi southwest of Glendo Dam, and 5.0 mi southeast of Glendo.

DRAINAGE AREA.--15,545 mi², of which 1,215 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 4,543.50 ft. Datum of gage is 4,543.50 ft above sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by rock-fill dam completed in October 1957. Storage began Oct. 17, 1957. Capacity, 789,400 acre-ft at elevation 4,653.00 ft, spillway crest. Dead storage, 11,030 acre-ft. Figures given herein represent total contents. Water is used for irrigation in North Platte River basin, and for power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 758,800 acre-ft, May 28, 1973, elevation, 4,650.94 ft; minimum daily contents(since appreciable storage was attained), 15,140 acre-ft, Sept. 28, 1966, elevation, 4,548.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 618,000 acre-ft, June 23, maximum daily elevation, 4,642.49 ft; minimum daily contents, 115,000 acre-ft, Sept. 14-15, minimum elevation, 5,383.85 ft, Sept. 14.

Capacity table (elevation in feet,
and contents, in acre-feet)

4,580	98,000	4,620	385,000
4,590	114,000	4,630	459,000
4,600	202,000	4,640	583,000
4,610	274,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129000	237000	308000	361000	417000	464000	516000	542000	566000	605000	358000	143000
2	134000	241000	310000	363000	418000	465000	517000	544000	568000	598000	346000	139000
3	140000	244000	312000	365000	420000	468000	517000	546000	569000	592000	333000	136000
4	146000	247000	314000	366000	421000	471000	516000	547000	572000	586000	323000	134000
5	152000	250000	316000	368000	423000	474000	516000	547000	573000	579000	317000	132000
6	157000	253000	318000	370000	425000	478000	516000	547000	576000	572000	311000	130000
7	161000	256000	319000	372000	428000	481000	516000	548000	579000	564000	305000	128000
8	165000	258000	321000	374000	429000	483000	516000	549000	581000	555000	300000	126000
9	169000	261000	322000	376000	431000	485000	517000	550000	583000	545000	293000	124000
10	173000	263000	324000	378000	433000	486000	519000	551000	587000	534000	286000	122000
11	177000	265000	326000	380000	434000	488000	519000	552000	590000	523000	279000	120000
12	179000	268000	328000	382000	436000	489000	520000	553000	593000	511000	272000	118000
13	181000	270000	330000	384000	437000	491000	520000	554000	596000	510000	265000	116000
14	183000	273000	332000	386000	439000	492000	521000	555000	599000	512000	258000	115000
15	185000	275000	334000	388000	441000	494000	522000	555000	602000	513000	252000	115000
16	187000	277000	336000	390000	443000	495000	522000	555000	604000	507000	245000	116000
17	191000	279000	338000	392000	445000	497000	521000	555000	607000	499000	238000	117000
18	194000	282000	340000	394000	446000	498000	521000	554000	609000	491000	231000	118000
19	197000	284000	341000	396000	448000	500000	521000	553000	612000	483000	225000	119000
20	199000	286000	342000	398000	450000	502000	522000	552000	615000	476000	218000	120000
21	201000	288000	343000	399000	451000	504000	523000	552000	617000	468000	212000	121000
22	204000	290000	343000	401000	453000	506000	525000	552000	617000	460000	205000	121000
23	206000	292000	344000	403000	454000	508000	526000	551000	618000	452000	199000	121000
24	208000	294000	345000	405000	456000	509000	527000	551000	617000	443000	192000	121000
25	211000	296000	347000	406000	458000	511000	528000	552000	616000	434000	185000	122000
26	213000	298000	348000	408000	459000	512000	530000	554000	616000	424000	179000	123000
27	216000	300000	350000	409000	460000	514000	531000	556000	615000	415000	172000	125000
28	220000	302000	352000	411000	462000	515000	533000	558000	614000	406000	166000	127000
29	224000	304000	354000	412000	---	516000	535000	560000	612000	395000	160000	129000
30	229000	306000	357000	414000	---	516000	539000	563000	608000	383000	154000	130000
31	234000	---	359000	415000	---	516000	---	564000	---	370000	148000	---
MAX	234000	306000	359000	415000	462000	516000	539000	564000	618000	605000	358000	143000
MIN	129000	237000	308000	361000	417000	464000	516000	542000	566000	370000	148000	115000
(#)	4,604.63	4,614.01	4,620.04	4,625.84	4,630.25	4,634.92	4,636.69	4,638.65	4,641.80	4,621.29	4,590.77	4,587.21
(*)	+110,000	+72,000	+53,000	+56,000	+47,000	+54,000	+23,000	+25,000	+44,000	-238,000	-222,000	-18,000

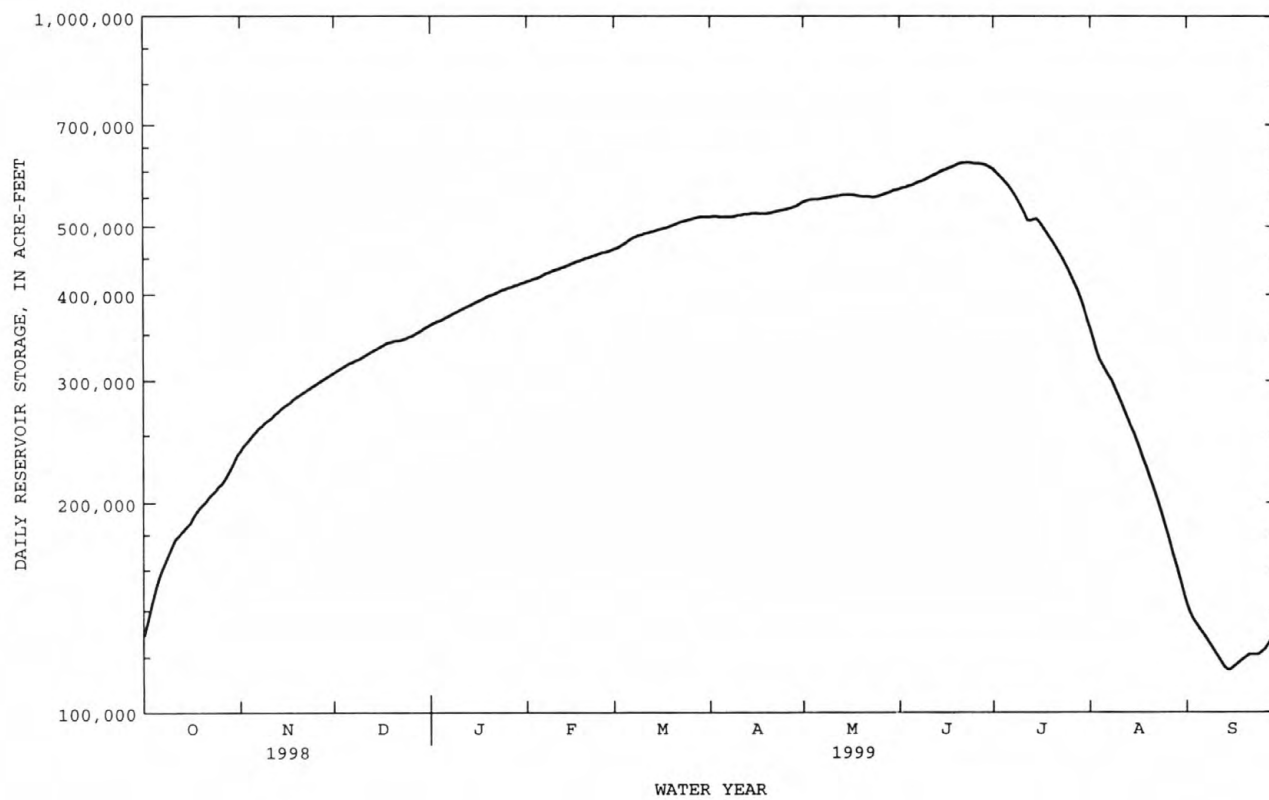
WTR YR 1999 MAX 618,000 MIN 115,000 (*) +6,000

(#) Elevation, in feet, at end of month.

(*) Change in elevation, in acre-feet.

PLATTE RIVER BASIN

06652700 GLEND0 RESERVOIR NEAR GLEND0, WY--Continued



06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY

LOCATION.--Lat 42°27'25", long 104°56'50", in SW¹/₄ SW¹/₄ NW¹/₄ sec.30, T.29 N., R.67 W., Platte County, Hydrologic Unit 10180008, on right bank opposite Sand Draw, 1.3 mi upstream from Horseshoe Creek, 3.1 mi downstream from Glendo Dam, and 5.2 mi southeast of Glendo.

DRAINAGE AREA.--15,548 mi², of which 1,215 mi² probably is non-contributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,488.94 ft above sea level (levels by Bureau of Reclamation).

REMARKS.--Records good except those less than 500 ft³/s, which are fair and those for estimated daily discharges, which are poor. Flow completely regulated by Glendo Reservoir since Oct. 17, 1957 (station 06652700). Natural flow of stream affected by transbasin diversions, storage reservoirs, power generation, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	30	27	27	26	29	1090	3300	4300	7170	7860	3980
2	24	31	27	e25	29	29	1160	3310	4300	7410	7840	3530
3	25	29	27	e22	28	29	1160	3300	4310	7400	7810	3190
4	28	30	27	e25	27	30	1160	3310	4320	7400	6780	2840
5	28	29	27	28	28	30	1140	3290	4330	7400	4750	2720
6	25	29	27	26	28	30	1150	3310	4310	7700	4330	2690
7	25	28	27	25	28	30	1150	3320	4280	8120	4420	2580
8	26	28	27	26	28	30	1160	3430	4320	8250	4520	2410
9	27	28	27	e23	28	30	1160	3430	4470	8280	4730	2330
10	28	28	27	25	28	31	1160	3530	4460	8260	4940	2280
11	28	27	27	27	e25	31	1140	3590	4510	8240	4980	2280
12	29	28	27	28	e26	31	1270	3770	4520	8270	4970	2290
13	29	28	26	28	29	31	1360	3880	4490	3010	4970	2150
14	29	28	26	29	29	31	1360	4060	4510	1220	4970	1590
15	30	28	26	28	29	30	1480	4270	4520	1500	4960	1060
16	32	27	26	28	29	29	1570	4270	4520	5410	4940	711
17	34	27	26	28	28	30	1560	4380	4520	6070	4920	703
18	30	27	e24	28	28	30	1540	4690	4500	6160	4860	745
19	30	27	e19	27	28	30	1640	4750	4510	6160	4840	807
20	30	27	e18	27	28	31	1730	4770	4500	6160	4820	796
21	30	26	e17	27	28	32	1740	4860	4690	6100	4810	866
22	30	27	e17	27	29	32	1830	4970	5540	6060	4790	1020
23	30	27	e20	27	29	33	1900	4970	5810	6130	4800	1300
24	30	26	e23	e26	29	41	1820	4590	5900	6160	4850	1170
25	30	26	e26	e25	29	248	1830	4410	6010	6210	4850	289
26	30	26	e30	5.6	29	453	2060	4460	6110	6210	4760	276
27	30	27	34	5.4	29	676	2310	4290	6120	6170	4720	41
28	34	26	31	17	30	767	2320	4290	6380	6420	4630	27
29	35	27	28	23	---	833	2570	4270	6710	7070	4550	26
30	30	27	27	23	---	1010	3060	4290	6910	7830	4370	25
31	30	---	26	22	---	1030	---	4300	---	7860	4230	---
TOTAL	901	829	794	758.0	789	5757	47580	125660	148680	201810	158570	46722
MEAN	29.1	27.6	25.6	24.5	28.2	186	1586	4054	4956	6510	5115	1557
MAX	35	31	34	29	30	1030	3060	4970	6910	8280	7860	3980
MIN	24	26	17	5.4	25	29	1090	3290	4280	1220	4230	25
AC-FT	1790	1640	1570	1500	1560	11420	94370	249200	294900	400300	314500	92670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1999, BY WATER YEAR (WY)

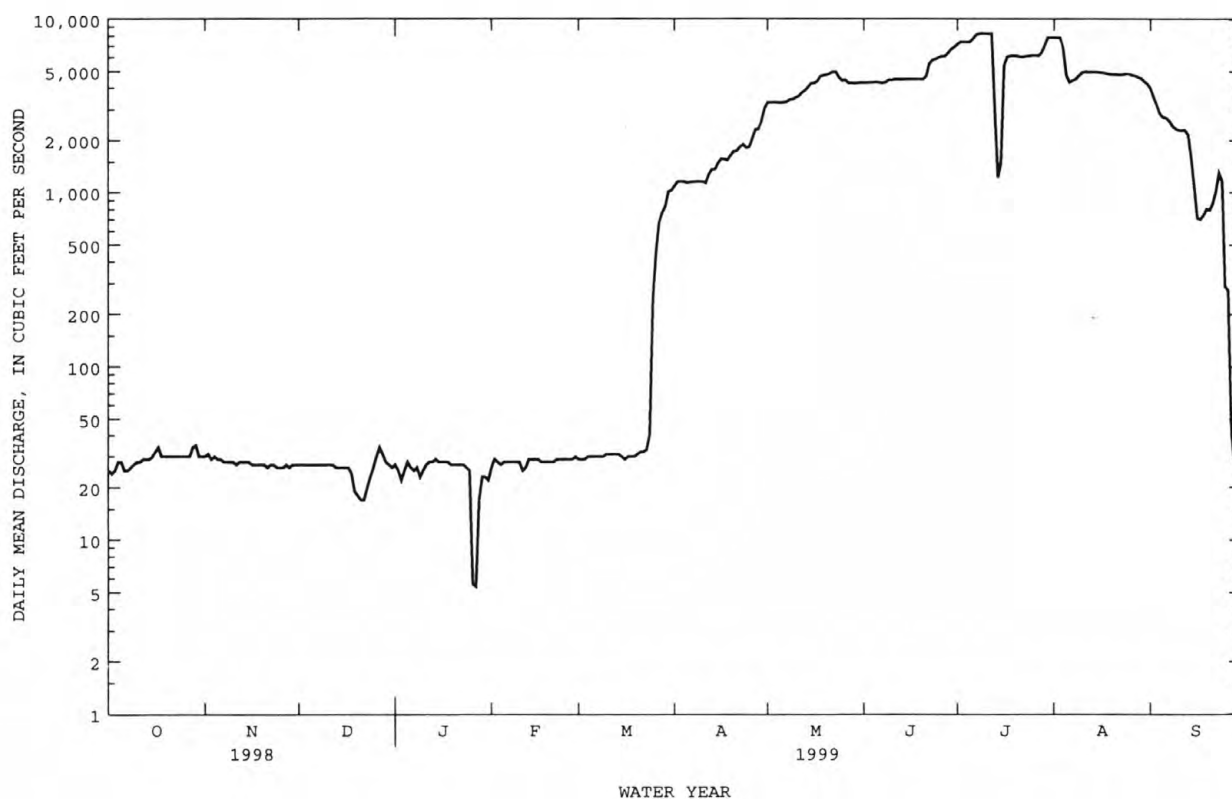
	MEAN	69.2	30.4	16.4	14.4	105	514	1211	2247	2799	4918	4937	2516
MAX	951	857	324	173	1054	3837	3868	4688	8916	8681	8923	6027	
(WY)	1987	1987	1959	1963	1984	1974	1974	1984	1973	1983	1983	1983	
MIN	1.51	1.09	1.00	1.30	1.33	1.58	203	15.4	66.1	3104	3871	906	
(WY)	1992	1991	1991	1992	1990	1990	1960	1990	1962	1962	1977	1961	

PLATTE RIVER BASIN

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1958 - 1999	
ANNUAL TOTAL	691047		738850.0		--	
ANNUAL MEAN	1893		2024		1626	
HIGHEST ANNUAL MEAN	--		--		3126	1984
LOWEST ANNUAL MEAN	--		--		920	1961
HIGHEST DAILY MEAN	7570	Jul 26	8280	Jul 9	10300	Jun 30 1984
LOWEST DAILY MEAN	17	Dec 21,22	5.4	Jan 27	.41	Oct 17 1977
ANNUAL SEVEN-DAY MINIMUM	20	Dec 18	17	Jan 25	.64	Dec 20 1990
INSTANTANEOUS PEAK FLOW	--		8320	Jul 9	10300	Jun 29 1984
INSTANTANEOUS PEAK STAGE	--		10.27	Jul 9	11.16	Jun 29 1984
ANNUAL RUNOFF (AC-FT)	1371000		1466000		1178000	
10 PERCENT EXCEEDS	4900		6030		4930	
50 PERCENT EXCEEDS	1190		453		230	
90 PERCENT EXCEEDS	27		26		2.1	

e Estimated.



06655500 GUERNSEY RESERVOIR NEAR GUERNSEY, WY

LOCATION.--Lat 42°17'23", long 104°45'48", in NE¹/₄ NW¹/₄ sec.27, T.27 N., R.66 W., Platte County, Hydrologic Unit 10180008, on gate structure at right end of dam on North Platte River and 1.2 mi northwest of Guernsey.

DRAINAGE AREA.--16,224 mi², of which 1,216 mi² probably is non-contributing.

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area. WDR WY-82-1: 1981 (capacity).

GAGE.--Water-stage recorder. Datum of gage is 4,370.00 ft above sea level (levels by Bureau of Reclamation). Prior to Sept. 20, 1966, nonrecording gages at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in July 1927. Capacity, 45,600 acre-ft, at elevation 4,420 ft, top of spillway gate. Dead storage is negligible. Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in eastern Wyoming and western Nebraska and for power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 73,240 acre-ft, Oct. 17, 1929, elevation, 4,420.95 ft, no storage Oct. 11, 1982, Oct. 6, 7, Oct. 10 to Dec. 4, 1983, Oct. 19, Oct. 25, 1984 to Jan. 14, 1985, Dec. 6-7, 1986; minimum daily elevation, 4,361.50 ft, Oct. 5, 6, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 40,400 acre-ft, May 4, elevation, 4,417.75 ft; minimum daily contents, 5.0 acre-ft, Sept. 30, elevation, 4,371.58 ft.

Capacity table (elevation in feet,
and contents, in acre-feet)

4,371	2	4,385	1,200	4,400	9,690	4,415	34,300
4,375	50	4,390	2,710	4,405	16,000	4,420	45,600
4,380	375	4,395	5,360	4,410	24,300		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11400	7000	11300	14500	17400	19500	31100	39100	33800	36100	14200	33500
2	9660	7210	11400	14500	17600	19500	32400	40000	33800	36000	19800	33900
3	7890	7300	11500	14600	17600	19600	33500	40300	33700	35900	25500	34500
4	6110	7440	11600	14700	17600	19700	34400	40400	33500	36100	30800	34800
5	4390	7600	11700	14800	17700	19700	35100	39900	33500	36000	32000	34800
6	3390	7940	11800	14900	17800	19800	35900	39300	33300	35700	32100	34900
7	3300	8100	11900	15100	17800	19900	36500	38500	33200	35800	32000	34800
8	3580	8290	12000	15200	17900	20000	37400	37800	33100	35900	32000	34300
9	3720	8480	12100	15200	17900	20000	38300	37000	33000	35800	31900	33900
10	3870	8530	12200	15400	18100	20100	39100	36100	33400	35900	31900	33400
11	3970	8720	12300	15500	18100	20200	39700	35300	33600	36000	32000	32900
12	4100	8770	12400	15500	18200	20300	39300	34600	34100	36100	32000	32400
13	4220	9020	12500	15700	18200	20400	38800	34200	34200	29600	32100	31900
14	4320	9170	12700	15700	18300	20500	38300	33800	34600	16100	32200	30500
15	4450	9320	12700	15900	18400	20600	37700	33800	34900	6600	32200	28400
16	4620	9440	12800	16000	18500	20600	37300	33700	35200	1530	32300	25300
17	4760	9590	13000	16000	18600	20700	36900	33600	35500	1700	32400	22100
18	4820	9720	13100	16100	18600	20700	36400	33700	35700	1940	32300	18800
19	4990	9860	13100	16200	18700	20800	36000	33600	35900	1940	32200	15600
20	5050	10000	13200	16300	18800	20900	36100	33300	36100	1950	32000	11900
21	5200	10100	13300	16400	18900	21000	36100	33100	36000	1900	31800	8550
22	5320	10200	13400	16500	19000	21100	36100	33200	36000	1560	31700	5120
23	5440	10300	13500	16600	19000	21200	35700	33300	36000	1350	31700	2940
24	5550	10500	13600	16700	19100	21200	35100	33200	35800	1240	31800	3170
25	5650	10600	13600	16800	19200	21300	34900	33100	35500	1160	32000	1900
26	5760	10700	13700	16900	19300	22100	34800	33400	35400	1120	32300	719
27	5890	10800	13800	16900	19300	23300	34800	33500	35900	648	32500	87
28	6240	11000	14000	17000	19400	24700	34800	33600	36100	630	32700	56
29	6410	11100	14100	17100	---	26100	35300	33700	36200	871	32800	51
30	6620	11200	14200	17200	---	28000	37200	33600	36300	5050	33000	5.0
31	6830	---	14300	17300	---	29900	---	33800	---	9140	33000	---
MAX	11400	11200	14300	17300	19400	29900	39700	40400	36300	36100	33000	34900
MIN	3300	7000	11300	14500	17400	19500	31100	33100	33000	630	14200	5.0
(#)	4,396.96	4,401.36	4,403.83	4,405.85	4,407.16	4,412.85	4,416.34	4,414.77	4,415.91	4,399.47	4,414.38	4,371.58
(*)	-6,370	+4,370	+3,100	+3,000	+2,100	+10,500	+7,300	-3,400	+2,500	-27,160	+23,860	-32,995

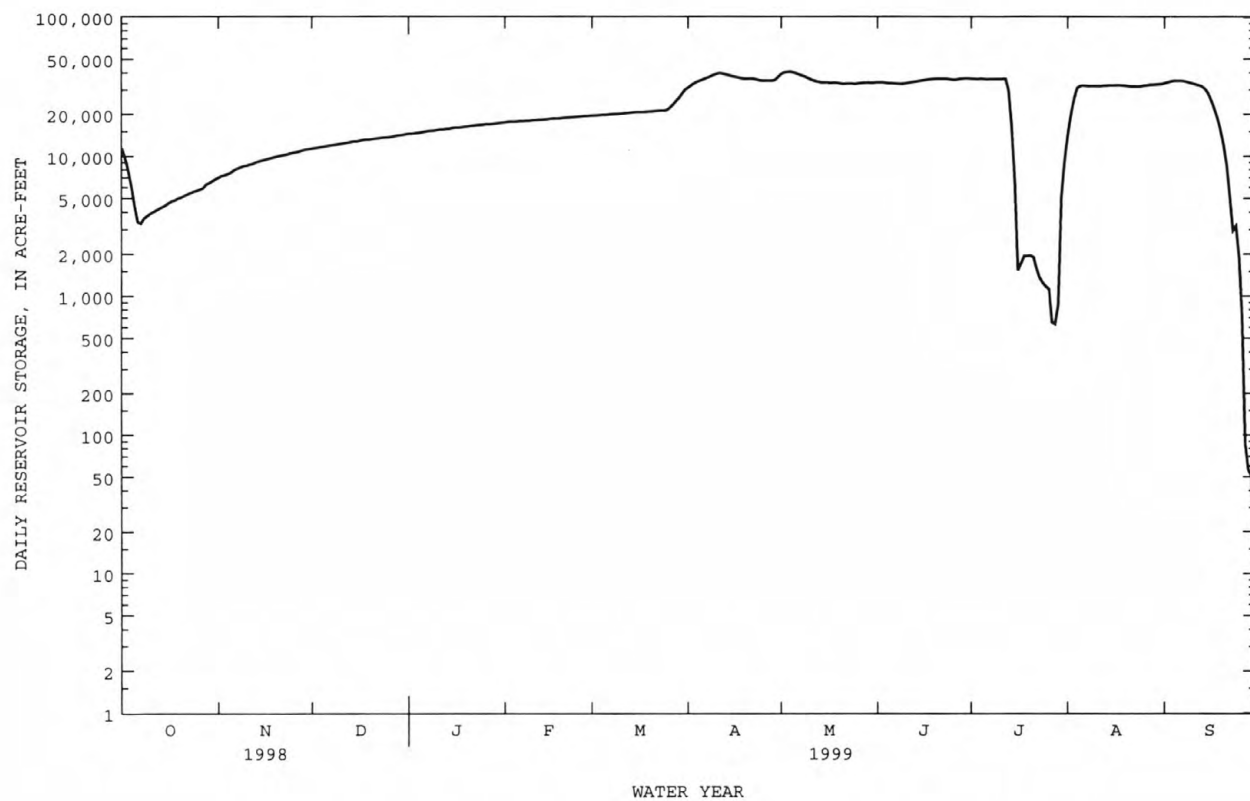
WTR YR 1999 MAX 40,400 MIN 5.0 (*) -13,195

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

PLATTE RIVER BASIN

06655500 GUERNSEY RESERVOIR NEAR GUERNSEY, WY--Continued



LOCATION.--Lat 42°14'17", long 104°37'41", in SW¹/₄ SW¹/₄ sec.11, T.26 N., R.65 W., Goshen County, Hydrologic Unit 10180009, on left bank 0.7 mi downstream from Whalen diversion dam, and 6.0 mi northwest of Fort Laramie.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only, prior to January 1915, published in WSP 1910. Prior to Apr. 16, 1938, published as "below Whalen", and Apr. 16, 1938, to Sept. 30, 1974, as "at recorder station, below Whalen".

GAGE.--Water-stage recorder and sheet piling weir since Apr. 25, 1994. Elevation of gage is 4,280 ft above sea level, from topographic map. Prior to Apr. 16, 1938, nonrecording gages at Whalen Diversion Dam and canals 0.7 mi upstream at different datums. Apr. 16, 1938, to Nov. 17, 1955, water-stage recorder at site 1.9 mi downstream, and Nov. 18, 1955, to Apr. 25, 1994, at site 1.8 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Whalen Diversion Dam 0.7 mi upstream. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Nine discharge measurements provided by the Wyoming State Engineer's Office.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	19	9.0	12	16	16	262	2160	3590	4180	1780	766
2	91	20	9.2	7.4	e14	16	405	2400	3670	4320	1440	553
3	65	21	9.0	e10	e13	14	537	2450	3680	4110	1330	514
4	83	19	9.4	e12	16	13	659	2400	3670	3990	1090	457
5	94	17	10	13	15	14	672	2470	3660	3970	940	402
6	99	17	10	13	15	14	572	2470	3670	4100	785	398
7	234	17	10	12	15	13	681	2520	3650	4410	772	402
8	147	16	10	13	14	14	711	2530	3670	4580	869	393
9	79	17	11	12	13	14	717	2540	3680	4600	993	379
10	65	13	11	13	14	15	723	2580	3750	4570	1220	305
11	55	16	11	13	e10	15	709	2630	3650	4600	1230	281
12	48	15	11	12	e13	15	678	2570	3670	4580	1220	269
13	43	14	10	12	16	15	702	2520	3670	4510	1220	293
14	39	13	10	12	14	15	738	2570	3690	4510	1230	268
15	36	13	10	12	14	13	771	2690	3750	2830	1230	197
16	37	13	10	12	15	13	874	2610	3730	2280	1230	205
17	36	13	11	12	15	12	889	2520	3730	2210	1230	207
18	29	12	e8.4	12	16	12	888	2690	3720	2350	1230	203
19	26	12	e7.8	12	17	12	890	2970	3750	2460	1220	448
20	25	11	e7.6	12	18	12	908	2990	3710	2420	1240	1140
21	23	11	e6.8	12	17	13	930	2980	3820	2410	1240	1210
22	23	10	e8.4	12	18	14	1050	2940	3820	2470	1200	1180
23	22	9.6	e11	11	18	13	1310	2970	3930	2500	1160	1000
24	21	10	e13	11	17	13	1320	3040	4020	2500	1160	167
25	20	9.7	16	13	16	12	1330	3230	3870	2490	1130	77
26	19	8.8	16	14	17	13	1310	3540	3760	2500	1040	75
27	19	8.4	14	14	15	12	1730	3520	3560	2540	1080	288
28	31	8.4	15	e13	16	12	1620	3500	3390	2510	1040	281
29	33	9.0	14	14	---	11	1460	3490	3820	2630	1000	214
30	21	8.8	14	14	---	10	1840	3480	4030	2590	973	165
31	20	---	13	14	---	13	---	3550	---	2360	874	---
TOTAL	1704	401.7	336.6	380.4	427	413	27886	87520	111780	103080	35396	12737
MEAN	55.0	13.4	10.9	12.3	15.2	13.3	930	2823	3726	3325	1142	425
MAX	234	21	16	14	18	16	1840	3550	4030	4600	1780	1210
MIN	19	8.4	6.8	7.4	10	10	262	2160	3390	2210	772	75
AC-FT	3380	797	668	755	847	819	55310	173600	221700	204500	70210	25260

MEAN	189	96.1	62.1	55.2	81.0	275	514	1266	2004	1868	1395	688
MAX	1389	1130	405	494	604	3885	5410	6175	14360	8330	5465	3976
(WY)	1918	1987	1930	1927	1930	1974	1924	1924	1917	1917	1983	1983
MIN	4.20	.71	.30	.24	.013	.000	2.83	13.6	126	559	86.6	43.8
(WY)	1967	1967	1967	1962	1967	1976	1954	1990	1982	1934	1934	1934

PLATTE RIVER BASIN

06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY--Continued

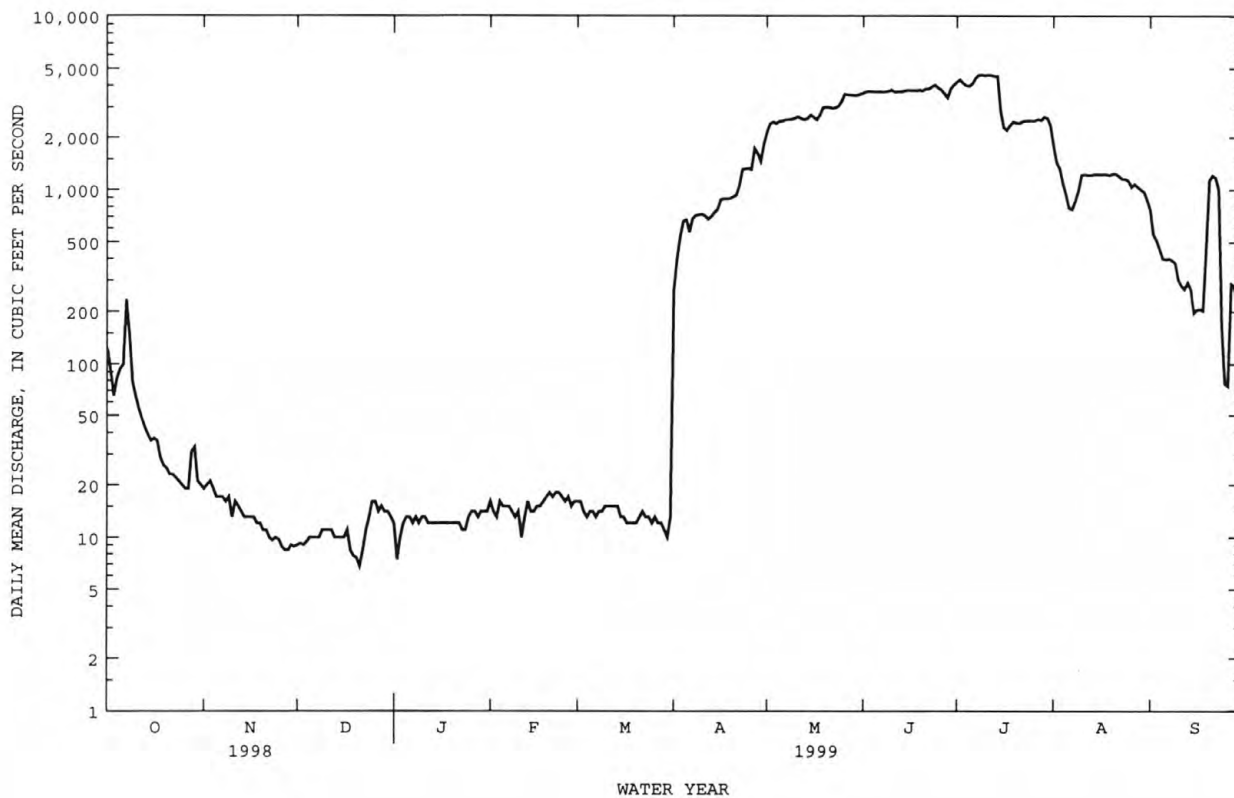
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1917 - 1999*	
ANNUAL TOTAL	281904.2		382061.7		--	
ANNUAL MEAN	772		1047		711	
HIGHEST ANNUAL MEAN	--		--		2992	
LOWEST ANNUAL MEAN	--		--		178	
HIGHEST DAILY MEAN	3560	Apr 6	4600	Jul 9, 11	19500	Jun 28 1917
LOWEST DAILY MEAN	6.0	Jan 13	6.8	Dec 21	.00	Many days, 1917
ANNUAL SEVEN-DAY MINIMUM	7.2	Jan 9	8.6	Dec 16	.00	Several years, 1917
INSTANTANEOUS PEAK FLOW	--		4690	Jul 7	22000 ^a	Jan 8 1962
INSTANTANEOUS PEAK STAGE	--		8.62	Jul 7	9.85 ^b	Jun 26 1955
ANNUAL RUNOFF (AC-FT)	559200		757800		515300	
10 PERCENT EXCEEDS	2950		3670		1910	
50 PERCENT EXCEEDS	273		147		144	
90 PERCENT EXCEEDS	10		11		3.8	

* Period of record to 1917 water year not used in computations, monthly and seasonal records only.

a From rating curve extended above 4,500 ft³/s on basis of peak-flow measurement of upstream floods.

b Site and datum then in use.

e Estimated.



06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY

LOCATION.--River: Lat 41°08'17", long 105°58'49", in NW¹/₄ SE¹/₄ sec.36, T.14 N., R.77 W., Albany County, Hydrologic Unit 10180010, on left bank 100 ft upstream from diversion dam for Pioneer Canal, 2.2 mi downstream from Fox Creek, 2.5 mi northeast of Woods, and 23 mi southwest of Laramie.

Canal: Lat 41°08'21", long 105°58'45", in SE¹/₄ NE¹/₄ sec.36, T.14 N., R.77 W., Albany County, on left bank 400 ft downstream from headgate.

DRAINAGE AREA.--434 mi².

PERIOD OF RECORD.--April 1912 to September 1924, October 1926 to September 1927, October 1931 to current year (no winter records for river since 1972; no winter records for canal 1972 to 1996). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1918-20, 1922, 1924. WSP 1710: Drainage area. WDR WY-84-1: 1983.

GAGE.--River: Water-stage recorder and concrete control. Datum of gage is 7,388.99 ft above sea level. Apr. 16 to Nov. 15, 1912, nonrecording gage and Nov. 16, 1912, to Sept. 22, 1915, water-stage recorder 90 ft downstream between dam crest and canal headgates at datum 1.00 ft higher. Sept. 23, 1915, to Sept. 30, 1924, Apr. 19 to Sept. 30, 1927, and Apr. 11, 1932, to Sept. 30, 1935, water-stage recorder at site 50 ft downstream at datum 1.00 ft higher. Oct. 1, 1935, to July 13, 1950, water-stage recorder at site 50 ft downstream at present datum.

Canal: Water-stage recorder and Parshall flume. Elevation of gage is 7,390 ft above sea level, from topographic map. Apr. 16, 1912, to Apr. 10, 1923, nonrecording gage; Apr. 11, 1923, to Sept. 30, 1924, and Apr. 19 to June 9, 1927, water-stage recorder; June 10 to Sept. 30, 1927, and Apr. 11, 1932, to May 8, 1938, nonrecording gage; May 9, 1938, to Apr. 26, 1966, water-stage recorder at site 1.5 mi downstream at different datums. Apr. 27, 1966, to May 8, 1967, at present site, at datum 0.06 ft lower.

REMARKS.--Records fair. Pioneer Canal diverts from left bank of river at diversion dam 100 ft downstream for irrigation in vicinity of Laramie. Records show combined flow of river and canal. Three small reservoirs upstream from station in Wyoming, total capacity, about 600 acre-ft for irrigation, stock water, and domestic use. Diversions for irrigation of about 5,200 acres upstream from station. Transbasin diversions upstream from station to Cache la Poudre River and tributaries. National Weather Service, in cooperation with State of Wyoming, has data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	81	209	1190	412	156	49
2	---	---	---	---	---	---	75	203	1090	388	127	51
3	---	---	---	---	---	---	67	198	1170	373	101	59
4	---	---	---	---	---	---	62	203	1170	347	90	58
5	---	---	---	---	---	---	62	187	1090	317	105	51
6	---	---	---	---	---	---	61	164	993	278	113	44
7	---	---	---	---	---	---	66	166	1010	262	103	40
8	---	---	---	---	---	---	80	195	901	248	89	37
9	---	---	---	---	---	---	78	251	932	265	82	35
10	---	---	---	---	---	---	68	308	964	226	85	34
11	---	---	---	---	---	---	64	281	938	193	88	36
12	---	---	---	---	---	---	66	252	909	176	77	43
13	---	---	---	---	---	---	74	252	879	151	70	55
14	---	---	---	---	---	---	107	310	873	139	66	54
15	---	---	---	---	---	---	112	337	985	133	59	52
16	---	---	---	---	---	---	82	332	1220	134	60	52
17	---	---	---	---	---	---	74	313	1080	134	62	51
18	---	---	---	---	---	---	91	328	1180	131	63	51
19	---	---	---	---	---	---	103	374	1120	123	59	55
20	---	---	---	---	---	---	135	479	1100	171	60	70
21	---	---	---	---	---	---	153	640	1100	144	73	81
22	---	---	---	---	---	---	155	748	1130	118	71	74
23	---	---	---	---	---	---	138	866	1080	109	66	65
24	---	---	---	---	---	---	125	1040	1010	103	56	60
25	---	---	---	---	---	---	138	1050	920	99	53	58
26	---	---	---	---	---	---	143	992	888	93	51	55
27	---	---	---	---	---	---	138	1060	826	86	55	53
28	---	---	---	---	---	---	153	1080	755	86	57	58
29	---	---	---	---	---	---	171	1100	584	97	59	64
30	---	---	---	---	---	---	216	1250	480	110	57	68
31	---	---	---	---	---	---	---	1350	---	150	52	---
TOTAL	---	---	---	---	---	---	3138	16518	29567	5796	2365	1613
MEAN	---	---	---	---	---	---	105	533	986	187	76.3	53.8
MAX	---	---	---	---	---	---	216	1350	1220	412	156	81
MIN	---	---	---	---	---	---	61	164	480	86	51	34
AC-FT	---	---	---	---	---	---	6220	32760	58650	11500	4690	3200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1999, BY WATER YEAR (WY)

	MEAN	63.4	51.9	42.0	38.5	40.1	51.0	128	560	818	207	81.1	58.6
MAX	160	94.9	77.4	57.1	74.5	84.9	355	1131	2441	1019	194	190	
(WY)	1962	1962	1966	1966	1962	1966	1962	1984	1983	1983	1983	1997	
MIN	33.7	32.0	28.3	24.3	24.6	27.7	51.7	233	62.9	20.2	24.8	15.1	
(WY)	1953	1934	1961	1961	1955	1964	1995	1953	1934	1934	1954	1934	

PLATTE RIVER BASIN

06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY--Continued

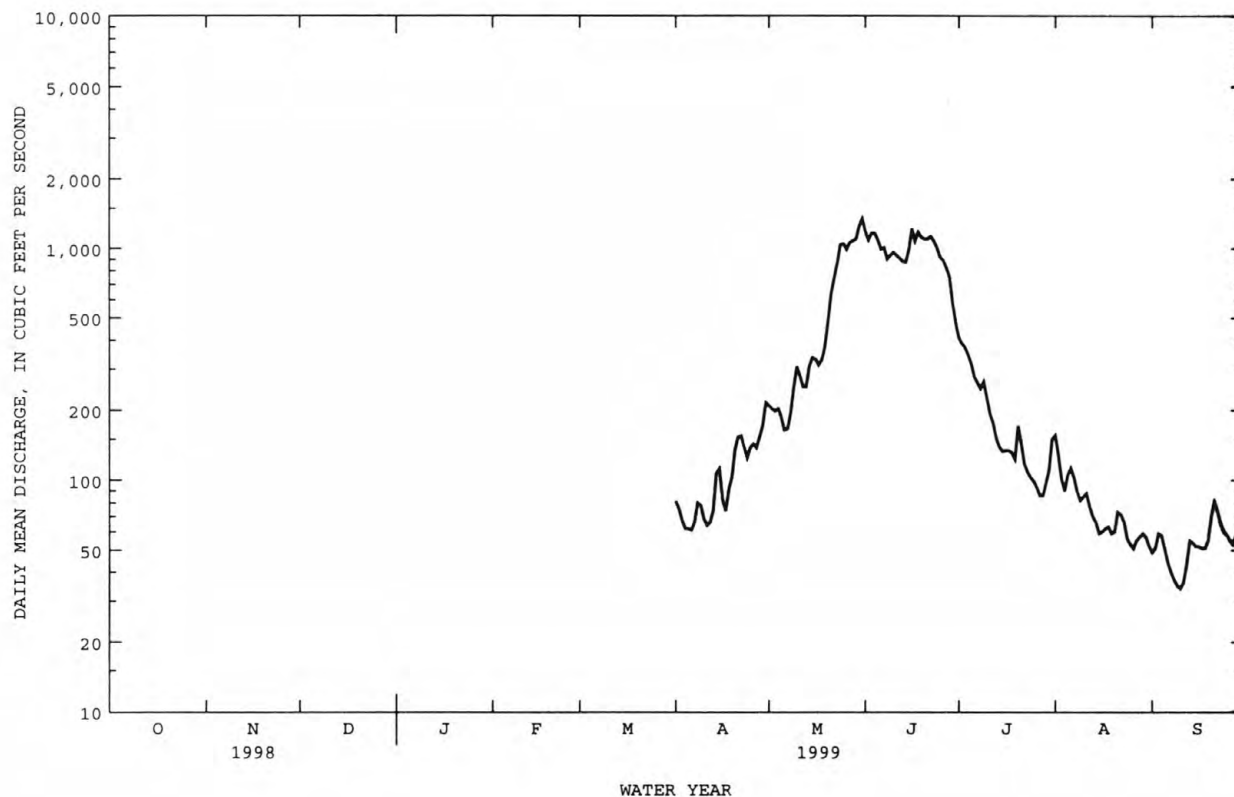
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1912 - 1999*

ANNUAL MEAN	--		170	
HIGHEST ANNUAL MEAN	--		319	1957
LOWEST ANNUAL MEAN	--		64.9	1934
HIGHEST DAILY MEAN	1350	May 31	3320	Jun 14 1957
LOWEST DAILY MEAN	34	Sep 10	.00	May 1 1912
INSTANTANEOUS PEAK FLOW	1890	May 25	5060	Jun 10 1923
ANNUAL RUNOFF (AC-FT)	--		123100	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.



06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE

LOCATION.--Lat 40°59'37", long 105°45'35", in NW¹/₄ NW¹/₄ SW¹/₄ sec.24, T.12 N., R.75 W., Larimer County, CO, Hydrologic Unit 10180010, on right bank 1,200 ft south of Colorado-Wyoming State line and 17 mi southwest of Tie Siding, WY.

DRAINAGE AREA.--29.2 mi².

PERIOD OF RECORD.--October 1968 to current year (no winter records since 1971).

GAGE.--Water-stage recorder. Elevation of gage is 7,580 ft above sea level, from topographic map. Prior to July 19, 1977, gage at site 700 ft upstream at different datum.

REMARKS.--Records good. Natural flow affected by diversion upstream from station to Cache la Poudre River basin through Wilson Supply ditch. Water imported upstream from station from Deadman Creek in Laramie River basin is rediverted through Wilson Supply ditch but is wasted down Sand Creek at times. Diversions for irrigation of about 170 acres upstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.7	26	95	8.8	8.4	1.2
2	---	---	---	---	---	---	4.8	26	114	9.5	6.6	1.2
3	---	---	---	---	---	---	4.3	26	124	8.3	4.6	1.3
4	---	---	---	---	---	---	4.2	25	116	7.4	3.4	1.4
5	---	---	---	---	---	---	4.1	23	110	7.1	4.8	1.3
6	---	---	---	---	---	---	3.8	20	88	6.5	5.9	1.2
7	---	---	---	---	---	---	4.1	20	97	5.9	4.6	.99
8	---	---	---	---	---	---	4.8	20	87	7.4	3.5	.95
9	---	---	---	---	---	---	5.2	21	84	8.4	2.8	.92
10	---	---	---	---	---	---	4.5	26	80	8.0	2.7	.85
11	---	---	---	---	---	---	4.1	25	77	5.9	3.2	.91
12	---	---	---	---	---	---	3.8	23	61	5.1	2.9	1.0
13	---	---	---	---	---	---	4.7	23	54	4.8	2.5	1.2
14	---	---	---	---	---	---	7.5	25	42	4.3	2.2	1.3
15	---	---	---	---	---	---	6.4	26	46	4.2	2.1	1.3
16	---	---	---	---	---	---	5.4	25	54	4.2	1.8	1.2
17	---	---	---	---	---	---	5.4	25	55	4.1	1.8	1.2
18	---	---	---	---	---	---	5.6	23	65	4.0	2.0	1.1
19	---	---	---	---	---	---	7.8	23	37	5.0	2.0	1.3
20	---	---	---	---	---	---	10	26	31	5.2	1.9	2.0
21	---	---	---	---	---	---	12	27	28	5.6	2.1	2.4
22	---	---	---	---	---	---	12	27	30	4.3	2.5	2.2
23	---	---	---	---	---	---	11	27	24	5.4	2.1	1.9
24	---	---	---	---	---	---	8.7	28	19	6.3	1.9	1.6
25	---	---	---	---	---	---	12	36	15	5.2	1.5	1.5
26	---	---	---	---	---	---	12	37	14	4.6	1.4	1.3
27	---	---	---	---	---	---	12	46	13	4.0	1.3	1.3
28	---	---	---	---	---	---	15	42	11	3.7	1.4	1.9
29	---	---	---	---	---	---	22	38	9.9	3.8	1.4	2.3
30	---	---	---	---	---	---	27	52	9.0	3.9	1.4	2.6
31	---	---	---	---	---	---	---	55	---	6.1	1.2	---
TOTAL	---	---	---	---	---	---	249.9	892	1689.9	177.0	87.9	42.82
MEAN	---	---	---	---	---	---	8.33	28.8	56.3	5.71	2.84	1.43
MAX	---	---	---	---	---	---	27	55	124	9.5	8.4	2.6
MIN	---	---	---	---	---	---	3.8	20	9.0	3.7	1.2	.85
AC-FT	---	---	---	---	---	---	496	1770	3350	351	174	85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1999, BY WATER YEAR (WY)*

	1970	1969	1970	1970	1969	1969	1995	1977	1977	1989	1978	1978
MEAN	3.13	3.34	2.66	2.27	2.46	2.73	8.74	39.8	52.8	9.84	2.45	1.82
MAX	3.68	4.41	2.97	2.53	3.19	2.85	18.7	95.0	234	72.6	8.58	6.85
(WY)	1971	1971	1971	1971	1971	1971	1986	1984	1983	1977	1983	1997
MIN	2.75	2.47	2.39	1.83	1.84	2.65	2.90	17.9	6.55	1.33	.56	.32
(WY)	1970	1969	1970	1970	1969	1969	1995	1977	1977	1989	1978	1978

PLATTE RIVER BASIN

06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

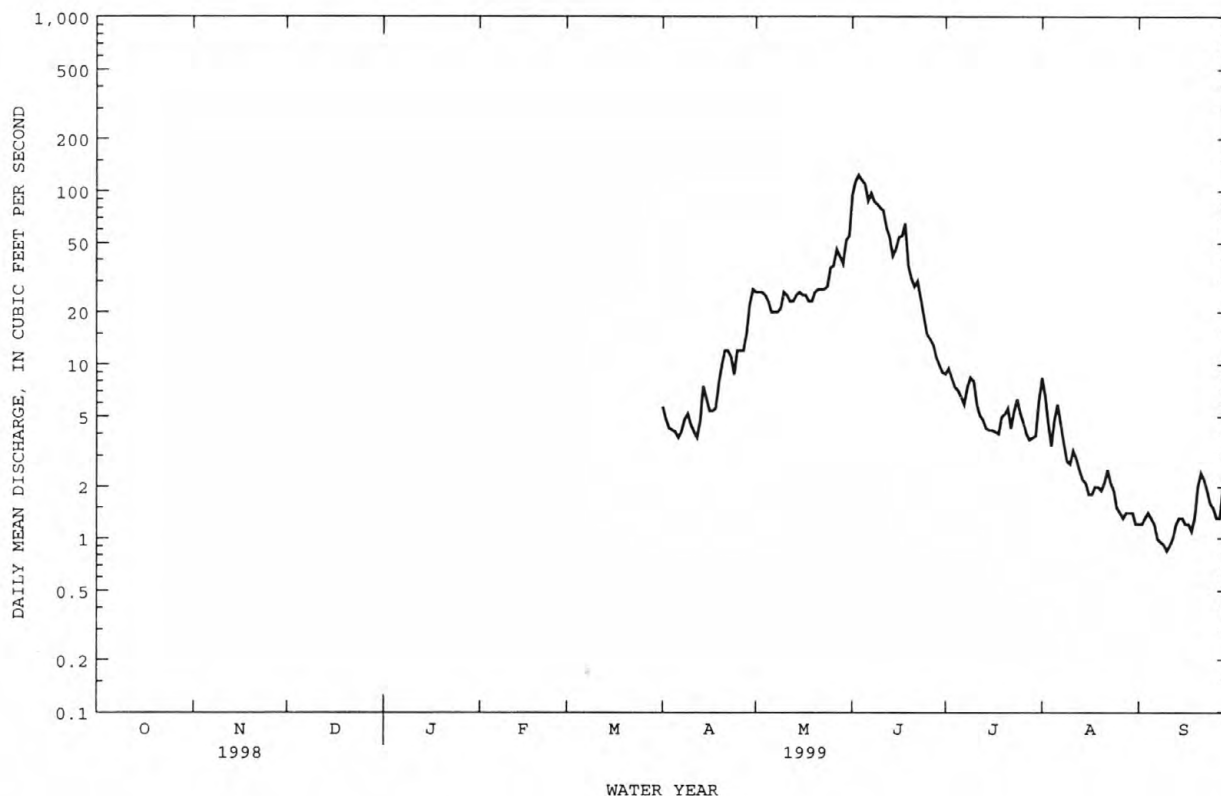
WATER YEARS 1969 - 1999*

ANNUAL MEAN	--	12.7	
HIGHEST ANNUAL MEAN	--	18.0	1971
LOWEST ANNUAL MEAN	--	6.41	1969
HIGHEST DAILY MEAN	124	Jun 3	1500 Jul 19 1977
LOWEST DAILY MEAN	.85	Sep 10	.13 Jul 26-28 1972
ANNUAL SEVEN-DAY MINIMUM	--		14 Sep 8 1978
INSTANTANEOUS PEAK FLOW	147	Jun 3	6710 ^a Jul 19 1977
INSTANTANEOUS PEAK STAGE	1.78	Jun 3	6.65 ^b Jul 19 1977
ANNUAL RUNOFF (AC-FT)	--		9240

* During period of operation.

a From slope-area measurement of peak flow.

b From floodmarks.



LOCATION.--Lat 41°17'42", long 106°02'03", in SE¹/₄ NE¹/₄ SE¹/₄ sec.4, T.15 N., R.77 W., Albany County, Hydrologic Unit 10180010, on right bank 40 ft downstream from State Highway 130, 1.2 mi west of Filmore, and 4.4 mi downstream from North Fork.

PERIOD OF RECORD.--July 1902 to September 1903 (published as "near Hatton"), May 1911 to November 1926, October 1932 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Elevation of gage is 7,610 ft above sea level, from topographic map. Prior to Sept. 16, 1938, nonrecording gages, and Sept. 16, 1938 to Sept. 7, 1976, water-stage recorder, at sites 0.7 mi upstream at different datums.

REMARKS.--Records good. Ten small reservoirs upstream from station, combined capacity, about 160 acre-ft, for irrigation, stock water, recreation, and domestic use. Diversions upstream from station for irrigation of about 11,020 acres, of which about 20 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	42	89	616	460	131	43
2	---	---	---	---	---	---	37	83	590	473	107	46
3	---	---	---	---	---	---	38	86	664	459	93	49
4	---	---	---	---	---	---	39	80	704	429	90	49
5	---	---	---	---	---	---	40	75	683	388	108	48
6	---	---	---	---	---	---	41	68	652	344	138	41
7	---	---	---	---	---	---	44	64	538	315	100	37
8	---	---	---	---	---	---	46	61	496	305	85	34
9	---	---	---	---	---	---	44	70	568	282	76	34
10	---	---	---	---	---	---	38	82	644	244	72	33
11	---	---	---	---	---	---	38	77	626	222	70	34
12	---	---	---	---	---	---	42	74	644	208	68	33
13	---	---	---	---	---	---	44	74	635	188	64	33
14	---	---	---	---	---	---	46	106	648	182	59	33
15	---	---	---	---	---	---	43	101	718	205	56	33
16	---	---	---	---	---	---	41	91	692	194	55	33
17	---	---	---	---	---	---	41	88	693	202	54	32
18	---	---	---	---	---	---	43	88	740	173	58	32
19	---	---	---	---	---	---	43	97	835	169	55	34
20	---	---	---	---	---	---	46	115	802	171	65	51
21	---	---	---	---	---	---	50	137	819	150	68	51
22	---	---	---	---	---	---	53	166	793	145	66	42
23	---	---	---	---	---	---	48	222	865	136	57	38
24	---	---	---	---	---	---	47	326	835	126	51	36
25	---	---	---	---	---	---	61	365	745	125	48	34
26	---	---	---	---	---	---	61	395	734	119	47	31
27	---	---	---	---	---	---	101	449	612	115	50	32
28	---	---	---	---	---	---	156	480	551	131	51	39
29	---	---	---	---	---	---	226	519	500	156	49	46
30	---	---	---	---	---	---	132	572	477	122	46	48
31	---	---	---	---	---	---	---	656	---	137	43	---
TOTAL	---	---	---	---	---	---	1771	5956	20119	7075	2180	1159
MEAN	---	---	---	---	---	---	59.0	192	671	228	70.3	38.6
MAX	---	---	---	---	---	---	226	656	865	473	138	51
MIN	---	---	---	---	---	---	37	61	477	115	43	31
AC-FT	---	---	---	---	---	---	3510	11810	39910	14030	4320	2301

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1999, BY WATER YEAR (WY)*

MEAN	31.1	28.2	23.9	19.6	20.5	26.4	54.1	234	538	162	51.5	29.5
MAX	77.2	50.0	40.0	35.0	53.8	47.9	136	502	1217	572	126	74.7
(WY)	1913	1913	1913	1913	1962	1971	1924	1926	1903	1917	1984	1912
MIN	13.2	10.0	10.0	8.76	8.00	9.97	17.6	69.5	48.3	17.9	12.6	8.80
(WY)	1936	1920	1934	1955	1955	1955	1955	1968	1934	1934	1934	1913

PLATTE RIVER BASIN

06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY--Continued

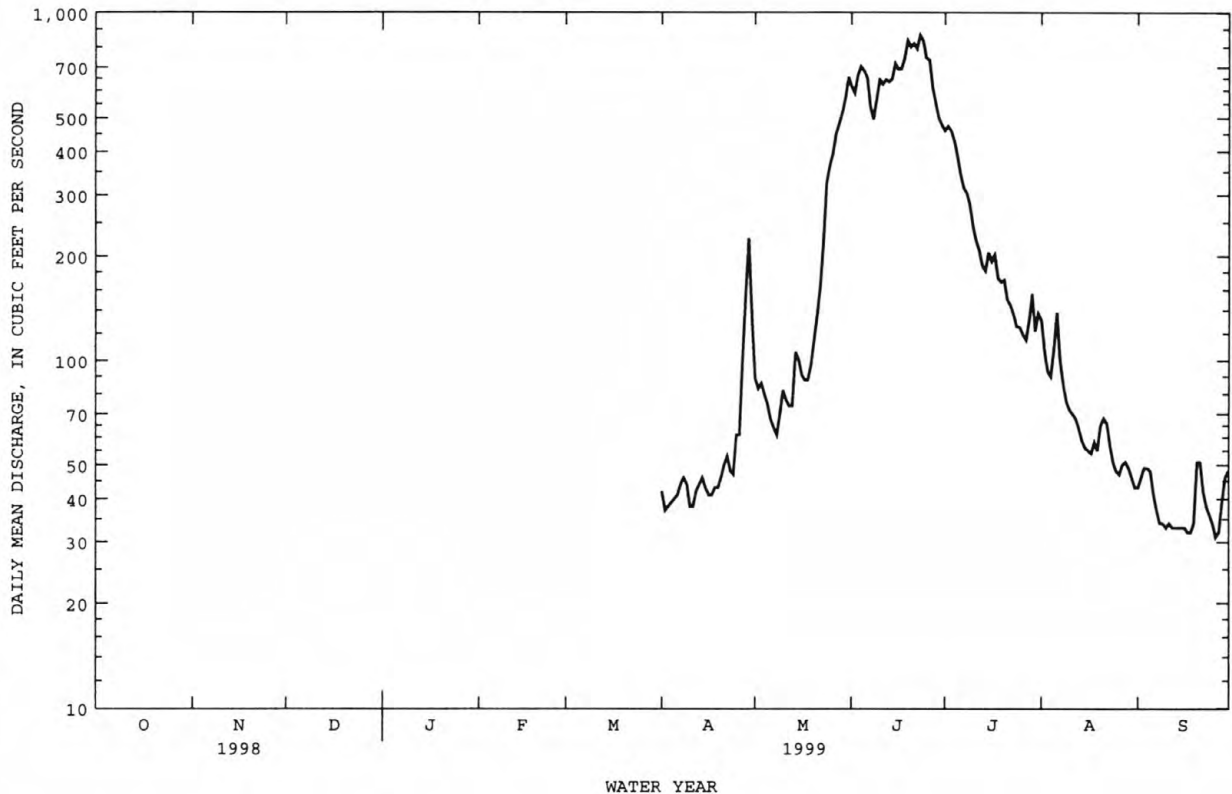
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1903 - 1999*

ANNUAL MEAN	--		103	
HIGHEST ANNUAL MEAN	--		184	1917
LOWEST ANNUAL MEAN	--		32.7	1934
HIGHEST DAILY MEAN	865	Jun 23	2400	Jun 1 1914
LOWEST DAILY MEAN	31	Sep 26	1.0	Sep 17-20 1913
INSTANTANEOUS PEAK FLOW	977	Jun 23	3450	Jun 10 1965
INSTANTANEOUS PEAK STAGE	3.99	Jun 23	5.33	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		74380	

* During period of operation.



06661585 LARAMIE RIVER NEAR BOSLER, WY

LOCATION.--Lat 41°33'17", long 105°40'58", in NW¹/₄, NW¹/₄, NE¹/₄ sec.10, T.18 N., R.74 W., Albany County, Hydrologic Unit 10180010, on left bank 50 ft upstream from bridge on U.S. Highways 30 and 287, 0.2 mi northwest of Bosler Junction, 1.7 mi south of Bosler, and 2.0 mi downstream from Soil Bank Boughton Canal diversion dam.

DRAINAGE AREA.--1,790 mi², of which 283 mi² probably is noncontributing.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,030 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharge, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversion upstream from station for irrigation of about 54,700 acres, of which about 2,300 acres are downstream from station, and return flow from irrigated areas. National Weather Service data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	131	112	e56	e76	190	140	279	804	710	98	26
2	28	138	111	e40	e78	189	137	240	847	578	109	27
3	55	148	109	e40	e82	169	124	220	888	491	123	30
4	57	158	108	e46	e92	181	121	211	821	435	116	29
5	63	160	e80	e52	e92	222	128	204	715	402	113	26
6	67	154	e72	e58	e84	256	125	199	752	368	99	25
7	69	145	e66	e64	e100	219	125	191	829	340	102	21
8	67	137	e66	e62	e96	320	122	177	838	296	103	16
9	65	117	e68	e60	e98	316	114	164	809	263	91	14
10	63	e70	e60	e74	e100	275	105	143	754	239	84	12
11	63	e90	e64	e80	e64	e200	113	156	725	214	77	10
12	64	e105	e64	e82	e58	e160	104	171	754	202	69	8.0
13	63	e125	e64	e78	e66	e170	102	172	766	193	63	7.6
14	64	e150	e66	e82	e68	e180	106	157	752	190	57	6.9
15	65	e160	e68	e78	e66	e190	109	159	729	182	50	7.6
16	64	156	e70	e70	e66	e180	87	159	727	180	43	10
17	68	147	e68	e64	e70	161	101	177	716	180	39	15
18	76	143	e62	e62	e67	153	136	181	764	170	36	17
19	80	131	e56	e66	e63	162	153	167	788	172	35	18
20	82	102	e50	e76	e63	169	139	149	734	178	35	20
21	82	68	e46	e68	e66	173	125	157	737	178	30	22
22	80	145	e42	e64	e73	171	124	175	729	158	34	31
23	79	139	e43	e62	e86	171	147	225	752	146	34	35
24	78	135	e47	e66	e100	164	155	266	764	132	31	40
25	80	109	e50	e76	e130	160	166	324	778	110	33	40
26	87	113	e50	e76	e150	155	200	415	758	100	37	32
27	89	135	e47	e76	e160	154	213	480	767	90	29	28
28	116	124	e47	e64	175	153	227	577	837	82	26	28
29	196	118	e50	e70	---	145	265	652	862	75	24	28
30	159	113	e54	e70	---	143	266	695	820	82	24	32
31	136	---	e60	e68	---	138	---	754	---	94	31	---
TOTAL	2424	3866	2020	2050	2489	5789	4279	8396	23316	7230	1875	662.1
MEAN	78.2	129	65.2	66.1	88.9	187	143	271	777	233	60.5	22.1
MAX	196	160	112	82	175	320	266	754	888	710	123	40
MIN	19	68	42	40	58	138	87	143	715	75	24	6.9
AC-FT	4810	7670	4010	4070	4940	11480	8490	16650	46250	14340	3720	1310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

	MEAN	59.0	77.6	57.9	48.0	57.5	109	158	288	749	266	84.9	32.6
MAX	196	155	101	92.7	120	209	531	1198	2512	1529	428	140	
(WY)	1985	1987	1984	1986	1986	1986	1984	1984	1983	1983	1984	1984	
MIN	3.26	7.37	8.09	18.8	29.8	44.0	10.3	17.0	86.4	9.45	4.43	.96	
(WY)	1993	1995	1995	1991	1989	1995	1995	1990	1994	1994	1994	1994	

PLATTE RIVER BASIN

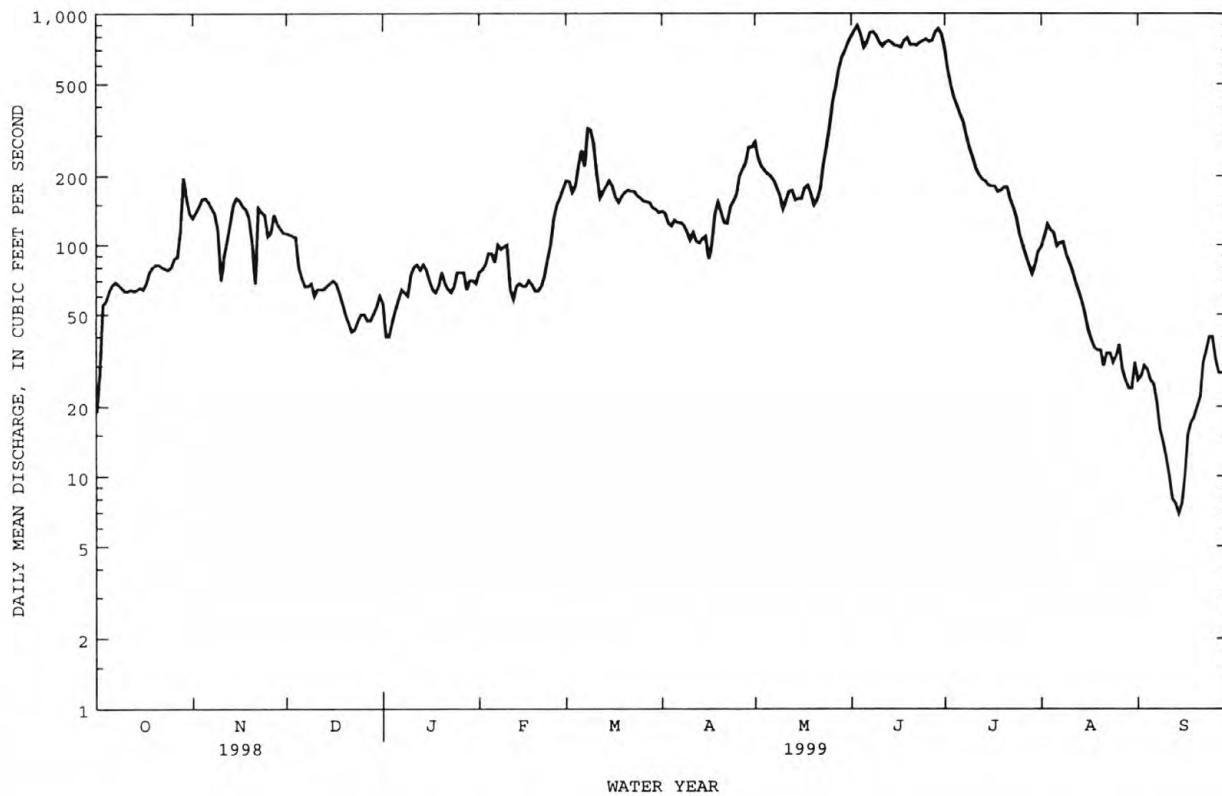
06661585 LARAMIE RIVER NEAR BOSLER, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1973 - 1999	
ANNUAL TOTAL	53805		64396.1		--	
ANNUAL MEAN	147		176		166	
HIGHEST ANNUAL MEAN	--		--		475	1983
LOWEST ANNUAL MEAN	--		--		39.4	1977
HIGHEST DAILY MEAN	982	Jun 20	888	Jun 3	4390	Jun 28 1983
LOWEST DAILY MEAN	19	Sep 30, Oct 1	6.9	Sep 14	.00	Oct 10 1987
ANNUAL SEVEN-DAY MINIMUM	23	Sep 26	8.9	Sep 10	.03	Oct 9 1987
INSTANTANEOUS PEAK FLOW	--		904	Jun 3	4480 ^a	Jun 11 1986
INSTANTANEOUS PEAK STAGE	--		4.27	Jun 3	8.40 ^b	Apr 22 1973
ANNUAL RUNOFF (AC-FT)	106700		127700		119900	
10 PERCENT EXCEEDS	327		525		379	
50 PERCENT EXCEEDS	90		106		66	
90 PERCENT EXCEEDS	50		33		15	

a Gage height, 7.39 ft.

b Ice jam

e Estimated.



06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY

LOCATION.--Lat 41°50'39", long 105°13'15", in NE¹/₄ SW¹/₄ SE¹/₄ sec.27, T.22 N., R.70 W., Platte County, Hydrologic Unit 10180011, on right bank just upstream from bridge on U.S. Highway 34, 900 ft upstream from Mule Creek, 2.9 mi upstream from Bluegrass Creek, and 20 mi southwest of Wheatland.

DRAINAGE AREA.--194 mi².

PERIOD OF RECORD.--April 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,340 ft above sea level, from topographic map.

REMARKS.--Records good. Seven small diversions upstream from station, combined capacity, about 400 acre-ft, for irrigation. Diversions upstream from station for irrigation of about 2,020 acres, of which about 80 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	9.3	202	68	31	22	6.6
2	---	---	---	---	---	---	9.5	185	61	29	23	9.2
3	---	---	---	---	---	---	9.4	177	56	28	20	12
4	---	---	---	---	---	---	9.4	148	52	26	18	13
5	---	---	---	---	---	---	9.5	130	51	26	18	11
6	---	---	---	---	---	---	9.5	119	56	25	19	9.6
7	---	---	---	---	---	---	9.6	108	53	23	18	8.2
8	---	---	---	---	---	---	9.6	101	49	24	16	8.2
9	---	---	---	---	---	---	10	96	45	23	15	8.2
10	---	---	---	---	---	---	10	90	44	23	15	7.8
11	---	---	---	---	---	---	10	82	49	22	14	7.8
12	---	---	---	---	---	---	10	74	47	22	14	7.8
13	---	---	---	---	---	---	10	69	47	20	14	8.0
14	---	---	---	---	---	---	11	73	45	18	13	8.1
15	---	---	---	---	---	---	12	84	46	20	12	8.1
16	---	---	---	---	---	---	11	70	47	20	11	7.9
17	---	---	---	---	---	---	11	80	45	56	10	7.3
18	---	---	---	---	---	---	11	90	43	38	7.6	7.0
19	---	---	---	---	---	---	11	79	41	33	7.4	7.5
20	---	---	---	---	---	---	12	74	39	31	7.4	8.3
21	---	---	---	---	---	---	13	81	38	26	8.1	8.4
22	---	---	---	---	---	---	15	75	37	24	9.1	7.9
23	---	---	---	---	---	---	17	72	36	24	8.8	7.7
24	---	---	---	---	---	---	18	68	33	23	8.1	7.5
25	---	---	---	---	---	---	25	65	31	22	7.4	6.7
26	---	---	---	---	---	---	37	64	31	22	7.1	7.0
27	---	---	---	---	---	---	57	63	37	20	6.6	7.6
28	---	---	---	---	---	---	87	67	35	19	6.5	8.7
29	---	---	---	---	---	---	154	60	34	18	6.8	9.5
30	---	---	---	---	---	---	190	62	33	18	6.3	9.1
31	---	---	---	---	---	---	---	70	---	19	6.3	---
TOTAL	---	---	---	---	---	---	817.8	2878	1329	773	375.5	251.7
MEAN	---	---	---	---	---	---	27.3	92.8	44.3	24.9	12.1	8.39
MAX	---	---	---	---	---	---	190	202	68	56	23	13
MIN	---	---	---	---	---	---	9.3	60	31	18	6.3	6.6
AC-FT	---	---	---	---	---	---	1620	5710	2640	1530	745	499

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY)*

MEAN	4.24	---	---	---	---	7.75	31.8	68.0	45.9	24.5	14.3	6.41
MAX	4.24	---	---	---	---	7.75	201	533	382	193	62.7	23.3
(WY)	1989	---	---	---	---	1987	1983	1983	1983	1983	1983	1983
MIN	4.24	---	---	---	---	7.75	2.27	4.14	2.67	.89	.65	.92
(WY)	1989	---	---	---	---	1987	1977	1977	1989	1989	1989	1977

PLATTE RIVER BASIN

06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1974 - 1999*

HIGHEST DAILY MEAN

202 May 1

1280 Aug 20 1990

LOWEST DAILY MEAN

6.3 Aug 30,31

19900^a 49 Sep 8,9 1977

INSTANTANEOUS PEAK FLOW

206 May 1

19900^a 49 Aug 20 1990

INSTANTANEOUS PEAK STAGE

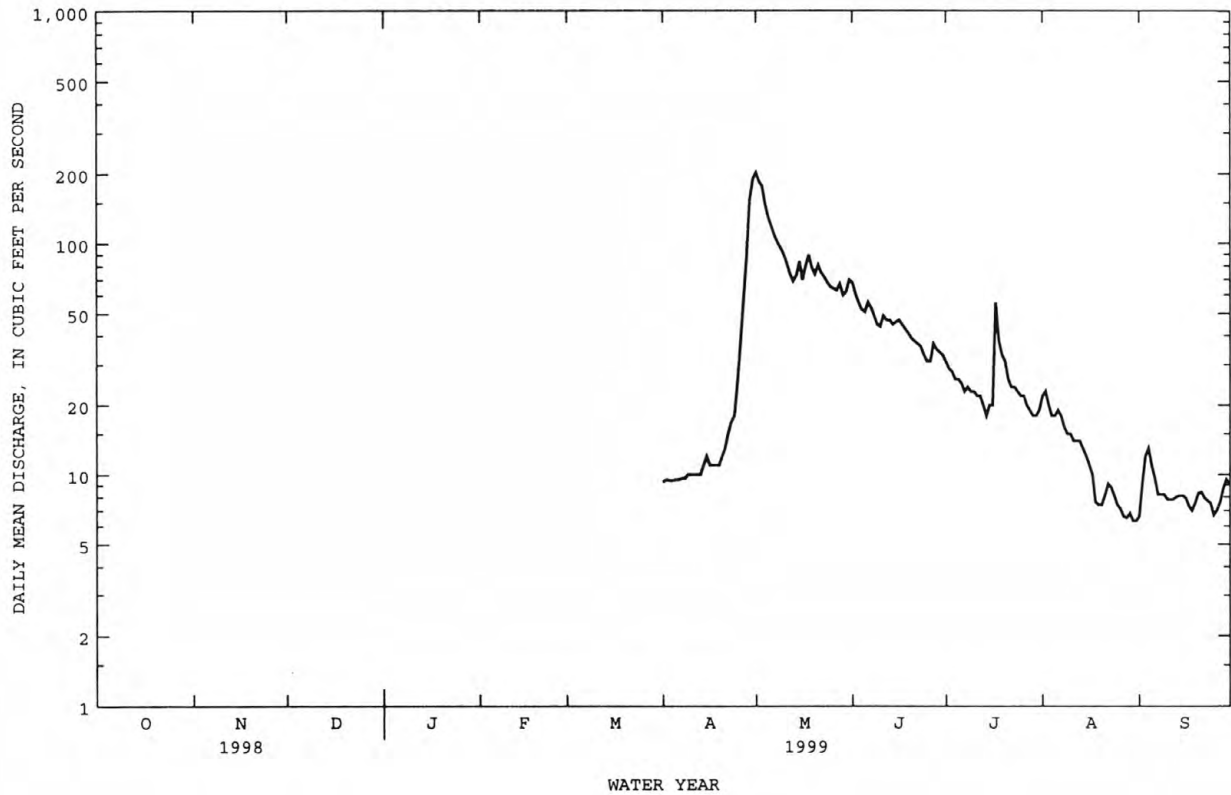
3.51 May 1

15.60^b Aug 20 1990

* During period of operation.

a On basis of slope-area measurement of peak flow at site 1.2 mi upstream.

b From floodmarks.



06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY

LOCATION.--Lat 41°54'40", long 105°07'36", in NW¹/₄ SW¹/₄ NE¹/₄ sec.4, T.22 N., R.69 W., Platte County, Hydrologic Unit 10180011, on right bank 100 ft upstream from State Highway 34, 200 ft downstream from Deadhead Creek, 2.7 mi upstream from Canal No. 3, and 19.7 mi southwest of Wheatland.

PERIOD OF RECORD.--April 1980 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,040 ft above sea level, from topographic map.

REMARKS.--Records fair. Most of flow during irrigation season is water released from Wheatland Reservoir No. 2, capacity 98,930 acre-ft, on the Laramie River and diverted down Bluegrass Creek for irrigation of land near Wheatland. Diversions for irrigation of about 4,400 acres upstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	17	236	48	114	78	127
2	---	---	---	---	---	---	18	222	47	111	72	155
3	---	---	---	---	---	---	19	210	46	97	63	112
4	---	---	---	---	---	---	18	188	64	81	79	110
5	---	---	---	---	---	---	18	167	66	99	80	120
6	---	---	---	---	---	---	18	153	94	105	81	48
7	---	---	---	---	---	---	17	142	84	97	87	33
8	---	---	---	---	---	---	18	136	72	54	108	29
9	---	---	---	---	---	---	19	133	63	46	105	26
10	---	---	---	---	---	---	20	125	69	52	101	23
11	---	---	---	---	---	---	20	119	97	50	96	21
12	---	---	---	---	---	---	19	104	113	46	61	21
13	---	---	---	---	---	---	20	95	89	45	66	20
14	---	---	---	---	---	---	22	100	89	68	71	20
15	---	---	---	---	---	---	24	115	105	57	67	26
16	---	---	---	---	---	---	23	107	101	85	65	22
17	---	---	---	---	---	---	22	94	91	158	70	21
18	---	---	---	---	---	---	21	55	87	134	86	22
19	---	---	---	---	---	---	22	63	83	121	94	23
20	---	---	---	---	---	---	22	50	81	119	88	25
21	---	---	---	---	---	---	25	55	80	109	79	24
22	---	---	---	---	---	---	32	77	73	76	83	22
23	---	---	---	---	---	---	39	63	68	74	76	22
24	---	---	---	---	---	---	37	60	65	88	82	22
25	---	---	---	---	---	---	45	70	69	65	74	21
26	---	---	---	---	---	---	57	79	96	62	81	47
27	---	---	---	---	---	---	72	79	132	62	99	50
28	---	---	---	---	---	---	109	97	120	65	100	34
29	---	---	---	---	---	---	174	90	119	71	103	26
30	---	---	---	---	---	---	225	86	119	65	98	22
31	---	---	---	---	---	---	---	31	---	68	113	---
TOTAL	---	---	---	---	---	---	1212	3401	2530	2544	2606	1294
MEAN	---	---	---	---	---	---	40.4	110	84.3	82.1	84.1	43.1
MAX	---	---	---	---	---	---	225	236	132	158	113	155
MIN	---	---	---	---	---	---	17	31	46	45	61	20
AC-FT	---	---	---	---	---	---	2400	6750	5020	5050	5170	2570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)*

	MEAN	29.0	---	---	---	---	25.5	58.1	115	88.9	88.6	74.5	37.0
MAX	29.0	---	---	---	---	---	25.5	260	665	347	191	192	68.3
(WY)	1989	---	---	---	---	---	1987	1983	1983	1983	1983	1983	1983
MIN	29.0	---	---	---	---	---	25.5	7.85	16.5	20.2	34.5	31.8	3.09
(WY)	1989	---	---	---	---	---	1987	1982	1989	1992	1992	1981	1989

PLATTE RIVER BASIN

06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

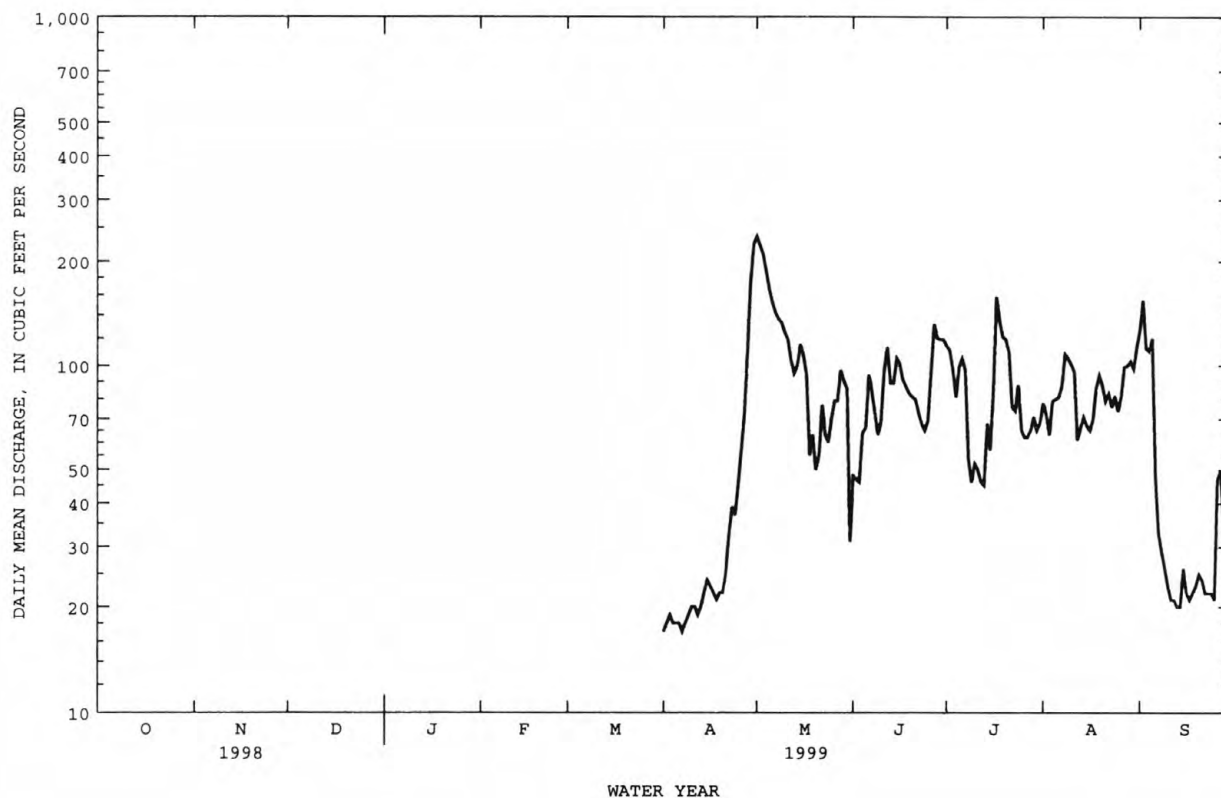
WATER YEARS 1980 - 1999*

HIGHEST DAILY MEAN	236	May 1	1280	May 22 1983
LOWEST DAILY MEAN	17	Apr 1, 7	6900 ^a	Sep 1, 4-11 1981
INSTANTANEOUS PEAK FLOW	256	May 1	8.35 ^b	Aug 20 1990
INSTANTANEOUS PEAK STAGE	1.85	May 1		Aug 20 1990

* During period of operation.

a From rating curve extended above 1,300 ft³/s on basis of contracted opening measurement of peak flow.

b From floodmarks.



PLATTE RIVER BASIN

285

06669050 WHEATLAND CREEK BELOW WHEATLAND, WY

LOCATION.--Lat 42°05'05", long 104°57'02", in SW¹/₄ SW¹/₄ NE¹/₄ sec.1, T.24 N., R.68 W., Platte County, Hydrologic Unit 10180011, 50 ft upstream from bridge on U.S. Highway 87, 50 ft downstream from sewage lagoons, and 1.6 mi north of Wheatland city limits.

PERIOD OF RECORD.--Water years 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV 10...	1000	4.7	1210	8.8	2.0	2.0	640
MAR 03...	1000	2.1	1210	8.6	2.0	7.0	640
MAY 13...	1000	4.0	1220	8.6	10.0	14.0	637
JUL 29...	1030	1.9	1180	8.5	20.0	30.0	645
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 10...	11.7	101	120	.05	4.2	.28	.06
MAR 03...	13.0	112	28	.03	4.6	1.5	.27
MAY 13...	9.7	103	140	.04	3.7	.02	.07
JUL 29...	8.1	106	K2100	.03	4.2	.23	.37

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY

LOCATION.--Lat 42°12'02", long 104°32'16", in NE¹/₄ SE¹/₄ NE¹/₄ sec.28, T.26 N., R.64 W., Goshen County, Hydrologic Unit 10180011, on right bank 600 ft upstream from bridge on county road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Fort Laramie.

DRAINAGE AREA.--4,564 mi², of which 631 mi² probably is non-contributing. Drainage area at mouth, 4,565 mi².

PERIOD OF RECORD.--April 1915 to current year (no winter records prior to 1927). Monthly discharge only for some periods, published in WSP 1310. Records for water years 1926-39, previously published including diversions to Gering-Fort Laramie Canal, were adjusted to exclude flow in the canal in WSP 1310. Prior to October 1931, published as "at Fort Laramie." No diversion to Gering-Fort Laramie Canal since 1956.

REVISED RECORDS.--WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,220 ft above sea level, from topographic map. Apr. 4, 1915, to Mar. 31, 1925, nonrecording gage at site 0.1 mi downstream at different datum. Apr. 1, 1925, to Sept. 30, 1932, nonrecording gage and Oct. 1, 1932, to Aug. 20, 1935, water-stage recorder at site 4.3 mi upstream at different datum. Aug. 21, 1935, to Nov. 2, 1970, water-stage recorder at site 0.3 mi upstream at different datum. Nov. 3, 1970, to May 9, 1973, water-stage recorder 0.1 mi downstream at different datum. May 10, 1973, to Apr. 5, 1977, water-stage recorder 4.3 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion, at times, to Gering-Fort Laramie Canal, 5.4 mi upstream. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation of about 176,000 acres upstream from station, and return flow from irrigated areas. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

COOPERATION.--Four discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	48	50	e43	49	46	59	735	282	343	67	56
2	51	50	49	e42	50	46	59	944	335	281	65	63
3	52	52	49	e42	48	44	59	959	332	233	64	93
4	55	52	50	e43	48	45	59	1000	321	235	64	201
5	56	52	50	e46	48	45	60	1000	349	212	63	201
6	56	52	e49	48	47	45	57	980	411	169	63	205
7	52	49	e45	46	47	46	56	943	364	126	64	134
8	51	48	e48	52	46	46	53	899	263	107	62	80
9	50	47	e48	56	47	45	53	858	275	82	60	74
10	53	46	e44	52	47	46	56	843	317	75	56	93
11	55	46	46	56	46	46	57	947	342	70	58	85
12	55	46	48	57	52	46	57	985	416	67	76	74
13	54	45	49	56	46	46	56	723	490	66	83	73
14	53	45	49	56	46	46	59	363	477	66	76	76
15	52	45	48	53	45	45	57	350	489	65	64	81
16	51	45	48	53	45	45	56	344	532	66	58	73
17	51	44	50	54	45	45	56	339	497	71	52	82
18	50	43	50	55	47	45	56	338	413	65	51	78
19	50	42	e48	54	45	45	56	338	332	67	56	73
20	49	42	e45	52	45	45	56	335	247	72	56	73
21	47	42	e41	52	46	45	55	304	243	66	56	70
22	47	43	e39	51	46	45	56	213	244	71	57	76
23	47	48	e38	49	46	46	57	212	254	65	54	85
24	47	48	e36	50	48	46	57	201	414	61	54	76
25	46	48	e39	e50	47	46	59	161	523	60	55	67
26	46	48	e48	50	48	46	59	162	540	58	54	64
27	47	48	e46	49	47	46	57	158	566	57	54	63
28	55	48	46	49	46	46	62	161	546	61	54	59
29	55	48	44	55	---	46	99	229	503	61	53	67
30	48	48	e44	55	---	48	271	240	385	64	48	94
31	48	---	e44	50	---	58	---	252	---	63	48	---
TOTAL	1580	1408	1428	1576	1313	1426	1969	16516	11702	3225	1845	2689
MEAN	51.0	46.9	46.1	50.8	46.9	46.0	65.6	533	390	104	59.5	89.6
MAX	56	52	50	57	52	58	271	1000	566	343	83	205
MIN	46	42	36	42	45	44	53	158	243	57	48	56
AC-FT	3130	2790	2830	3130	2600	2830	3910	32760	23210	6400	3660	5330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

	MEAN	70.9	83.1	89.7	87.6	92.1	108	156	398	324	136	66.1	62.9
MAX	350	388	464	360	418	425	1056	3145	2967	1925	390	245	
(WY)	1985	1985	1985	1985	1984	1984	1984	1973	1983	1983	1984	1973	
MIN	13.9	10.4	6.35	6.32	17.3	21.7	37.5	25.3	17.3	23.1	8.73	15.0	
(WY)	1965	1981	1981	1981	1981	1983	1981	1963	1966	1966	1975	1964	

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

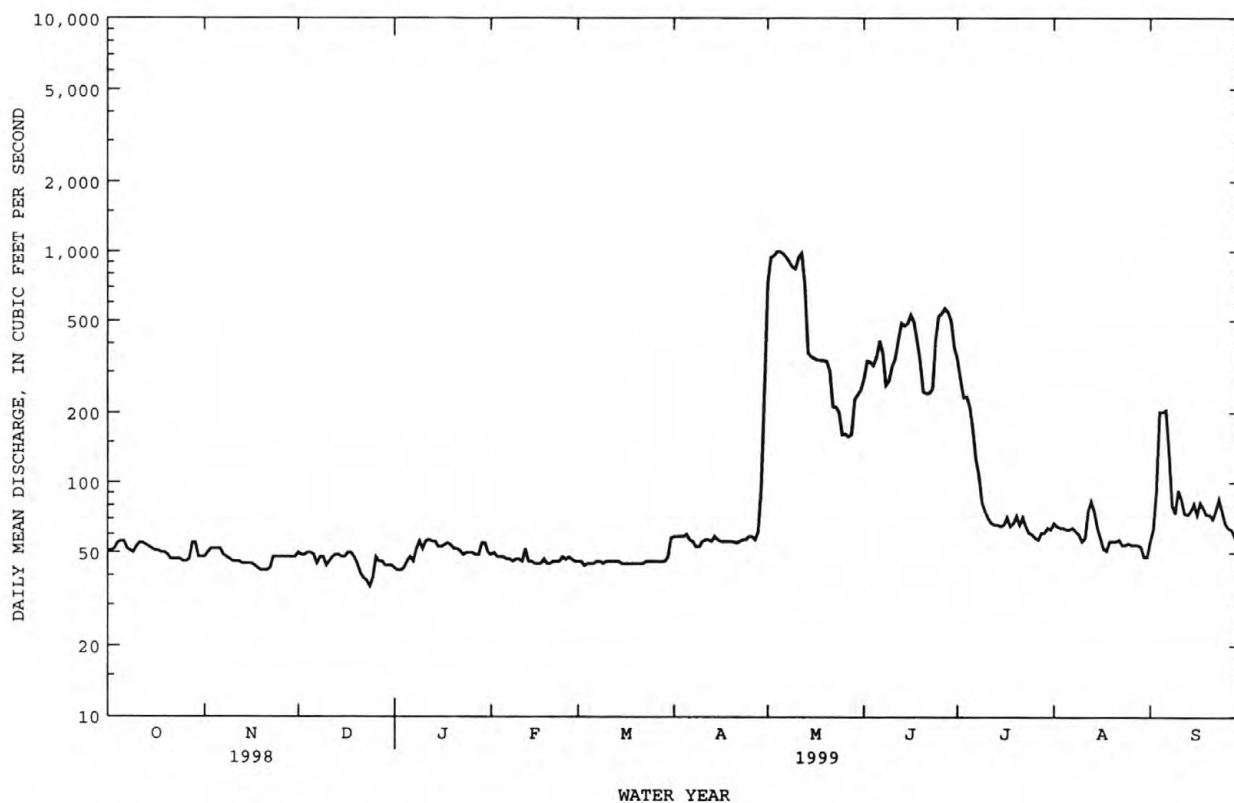
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL TOTAL	18788		46677		--	
ANNUAL MEAN	51.5		128		140	
HIGHEST ANNUAL MEAN	--		--		672	
LOWEST ANNUAL MEAN	--		--		26.1	
HIGHEST DAILY MEAN	85	Jan 4	1000	May 4,5	5810	May 10 1973
LOWEST DAILY MEAN	36	Dec 24	36	Dec 24	2.0 ^a	Jan 23 1981
ANNUAL SEVEN-DAY MINIMUM	41	Dec 19	41	Dec 19	3.1	Jan 21 1981
INSTANTANEOUS PEAK FLOW	--		1010	May 4	6260	May 10 1973#
INSTANTANEOUS PEAK STAGE	--		5.02	May 4	9.40 ^b	May 10 1973#
ANNUAL RUNOFF (AC-FT)	37270		92580		101200	
10 PERCENT EXCEEDS	62		338		224	
50 PERCENT EXCEEDS	50		55		65	
90 PERCENT EXCEEDS	44		45		29	

For period of record, 1915-1999.

a No flow Jan. 31 to Mar. 20, Oct. 24 to Dec. 17, 1926, Mar. 1-26, 1927, Apr. 14, 1938; all flow diverted by Gering-Fort Laramie Canal.

b Site and datum then in use.

e Estimated.



PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'19", long 104°03'10", in SE¹/₄ SE¹/₄ SE¹/₄ sec.3, T.23 N., R.60 W., Goshen County, Hydrologic Unit 10180009, on right bank 2000 ft upstream from bridge on NE State Highway 86, 250 ft upstream from Wyoming-Nebraska State line, and 0.7 mi southeast of Henry, NE.

DRAINAGE AREA.--22,218 mi², of which 1,929 mi² probably is non-contributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Sheet-piling control since Mar. 9, 1994. Datum of gage is 4,025 ft above sea level, from topographic map. Prior to Nov. 6, 1929, non-recording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder at site 0.2 mi upstream at different datum. Oct. 7, 1959 to Feb. 22, 1972 water-stage recorder at site 0.2 mi upstream at different datum. Feb. 22, 1972 to Mar. 9, 1994, water-stage recorder at site 0.3 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.5 mi upstream. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	654	373	270	277	223	200	186	2210	3750	4180	2400	1190
2	566	378	269	e250	220	200	216	2760	3820	4320	1940	1270
3	520	385	269	e160	218	197	328	3190	3940	4350	1710	1140
4	528	376	266	e180	216	201	457	3270	3930	4150	1560	1210
5	542	371	262	261	218	202	591	3370	3930	4020	1350	1120
6	547	366	261	261	217	197	661	3450	4010	3920	1210	1080
7	525	362	260	251	215	197	653	3480	4020	3960	1070	1020
8	561	356	259	247	216	201	730	3560	3980	4080	1010	937
9	564	356	261	246	211	198	771	3570	3950	4210	1020	913
10	509	337	260	242	213	203	806	3550	3990	4220	1090	852
11	489	333	255	246	210	197	826	3610	4250	4190	1230	788
12	473	333	255	246	e220	197	829	3670	4090	4230	1190	739
13	463	326	256	244	212	197	839	3620	4120	4190	1200	695
14	448	322	254	240	214	197	855	3300	4180	4150	1220	702
15	438	315	251	239	211	197	874	3230	4270	4070	1200	690
16	431	308	246	239	212	194	906	3220	4330	2860	1190	679
17	437	307	247	236	212	191	979	3050	4250	2550	1180	671
18	419	307	247	232	213	189	1030	2960	4190	2410	1180	666
19	406	302	e230	232	211	184	1030	3080	4110	2510	1170	650
20	396	300	e200	232	211	186	1030	3200	4090	2620	1200	799
21	390	300	e180	232	208	184	1050	3210	4020	2530	1210	1200
22	389	294	e165	232	210	188	1060	3200	4070	2570	1240	1300
23	386	290	e180	232	207	187	1160	3140	4060	2540	1190	1280
24	381	291	e200	230	203	184	1320	3140	4120	2520	1170	1120
25	375	284	e220	225	204	184	1420	3190	4240	2510	1180	705
26	373	279	e235	227	203	183	1430	3320	4230	2530	1130	546
27	367	276	e250	226	200	187	1470	3520	4250	2530	1090	482
28	398	276	e270	225	202	184	1740	3550	4160	2560	1130	522
29	437	276	296	219	---	183	1760	3570	4000	2580	1120	684
30	408	276	283	219	---	184	1690	3620	4100	2660	1080	685
31	385	---	284	220	---	183	---	3660	---	2620	1080	---
TOTAL	14205	9655	7641	7248	5930	5956	28697	102470	122450	103340	38940	26335
MEAN	458	322	246	234	212	192	957	3305	4082	3334	1256	878
MAX	654	385	296	277	223	203	1760	3670	4330	4350	2400	1300
MIN	367	276	165	160	200	183	186	2210	3750	2410	1010	482
AC-FT	28180	19150	15160	14380	11760	11810	56920	203200	242900	205000	77240	52240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1999, BY WATER YEAR (WY)

	MEAN	508	424	375	332	338	513	672	1205	1703	1555	1269	868
MAX	1666	1454	895	751	1063	4202	4407	7226	10360	7170	5751	4766	
(WY)	1987	1987	1930	1930	1984	1974	1974	1971	1929	1983	1983	1983	
MIN	150	174	191	166	148	141	141	43.9	49.1	611	154	230	
(WY)	1957	1935	1991	1993	1993	1991	1991	1990	1992	1934	1934	1934	

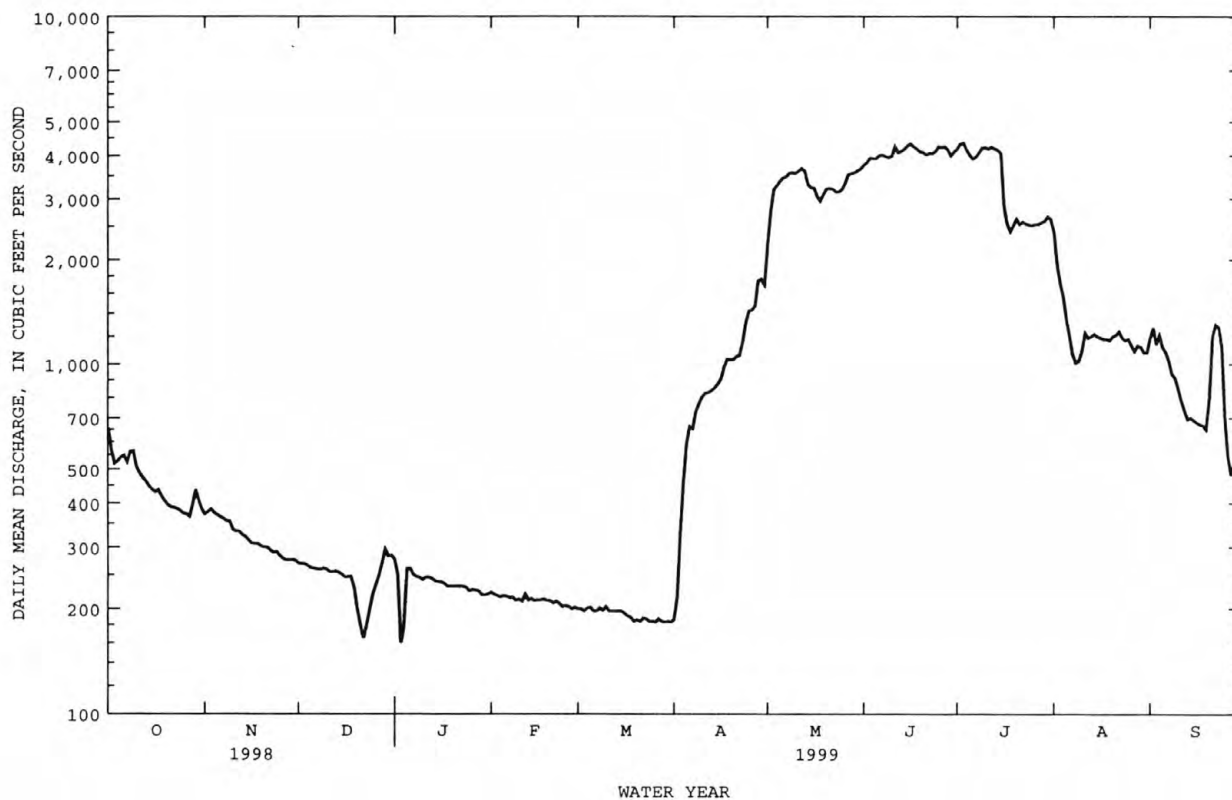
06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1929 - 1999	
ANNUAL TOTAL	330714		472867		--	
ANNUAL MEAN	906		1296		797	
HIGHEST ANNUAL MEAN	--		--		2863	1984
LOWEST ANNUAL MEAN	--		--		388	1992
HIGHEST DAILY MEAN	3960	Apr 7	4350	Jul 3	17600	Jun 2 1929
LOWEST DAILY MEAN	140	Jan 12	160	Jan 3	3.9	May 13 1992
ANNUAL SEVEN-DAY MINIMUM	160	Feb 26	184	Mar 25	4.4	Jun 20 1992
INSTANTANEOUS PEAK FLOW	--		4480	Jun 14	17900 ^a	Jun 2 1929
INSTANTANEOUS PEAK STAGE	--		5.22	Jun 14	7.04 ^b	Jun 2 1929
ANNUAL RUNOFF (AC-FT)	656000		937900		577400	
10 PERCENT EXCEEDS	2860		3980		1480	
50 PERCENT EXCEEDS	510		542		488	
90 PERCENT EXCEEDS	197		201		209	

a Maximum observed.

b Site and datum then in use.

e Estimated.



PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 18...	1455	310	934	8.0	9.0	8.2	660	10.5
FEB 13...	1535	211	892	7.5	12.5	8.1	661	10.6
MAY 18...	1010	2980	682	12.5	21.0	8.2	664	8.7
JUL 22...	1525	2650	545	22.5	25.5	7.8	662	8.3

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 18...	103	.02	2.2	.03	.01	104	87
FEB 13...	102	.02	2.4	.12	.03	117	67
MAY 18...	94	<.01	.20	<.02	<.01	119	957
JUL 22...	111	.01	.45	<.02	.04	453	3240

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY

LOCATION.--Lat 41°07'52", long 104°49'41", in NW¹/₄ NW¹/₄ NW¹/₄ sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, on right bank at upstream side of 19th Street, at Cheyenne, and 0.5 mi upstream from Clear Creek.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--October 1993 to current year.

REVISED RECORDS.--WDR WY-96-1: 1994; WDR WY-99-1: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above sea level, from topographic map.

REMARKS.--Records fair except those greater than 100 ft³/s and those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 20, 1904, stage unknown, estimated 8,500 ft³/s; flood of August 1, 1985, reached a stage of 9.6 ft, present datum, from floodmarks, discharge, 2,980 ft³/s, on basis of indirect measurement of peak flow.

REVISIONS.--The maximum discharge for the water year 1997 has been revised to 482 ft³/s, Aug. 12, 1997, gage height, 4.80 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.8	5.8	6.2	e9.0	12	4.8	579	149	23	18	8.7
2	1.2	6.5	6.1	e5.8	e8.2	12	4.6	430	141	21	15	19
3	1.3	6.6	6.3	e5.6	6.9	12	5.8	359	128	20	15	16
4	5.2	7.3	6.2	5.7	9.9	11	6.1	373	123	18	16	10
5	1.6	7.5	5.9	6.4	11	11	6.1	399	115	16	15	9.3
6	1.5	7.5	5.0	6.9	11	9.7	6.3	362	116	15	16	8.2
7	1.4	8.5	4.2	8.0	11	9.3	6.1	345	122	15	15	7.4
8	1.3	7.8	4.6	e8.0	12	9.8	5.4	306	116	15	15	6.6
9	1.2	7.8	4.8	e8.6	11	9.6	5.3	285	106	15	14	6.1
10	1.2	6.1	4.9	9.0	12	9.8	5.0	275	107	14	12	5.5
11	1.2	4.9	5.3	10	e9.6	9.8	4.9	263	99	14	11	5.4
12	1.2	5.6	5.4	e10	e9.6	11	5.0	239	110	14	9.4	5.0
13	1.2	6.7	5.9	e10	9.8	11	5.1	222	114	13	8.4	4.9
14	1.2	7.2	6.6	e10	11	11	5.9	213	109	12	7.8	5.0
15	1.2	6.9	7.2	10	e9.8	11	6.2	203	104	13	6.7	5.2
16	1.4	6.6	8.0	e10	e10	11	6.9	204	107	14	5.9	5.4
17	1.4	6.4	8.3	e10	e10	11	8.2	216	90	15	5.4	5.2
18	1.4	6.4	7.7	e11	e9.8	11	8.7	203	89	14	5.2	4.5
19	1.4	6.3	e7.6	12	e10	11	9.2	194	92	23	4.7	7.3
20	1.4	5.8	e7.6	11	e9.8	10	8.2	202	89	24	4.3	7.1
21	1.3	5.5	e7.4	10	e9.6	10	8.7	198	81	20	4.2	7.1
22	1.3	5.9	e7.6	9.1	e9.4	10	13	189	74	18	4.6	7.2
23	1.4	5.6	e8.0	e9.4	e10	11	18	179	64	16	5.1	7.1
24	1.4	5.5	e8.4	e9.8	9.7	8.7	18	167	56	14	5.6	7.1
25	1.3	5.4	e9.0	e10	12	11	30	161	47	12	5.5	7.2
26	1.3	5.2	9.8	10	13	12	43	153	40	11	5.1	7.2
27	2.7	5.6	10	e9.4	11	11	39	153	35	11	4.8	7.9
28	5.4	5.7	8.8	e9.4	11	7.6	40	202	29	11	4.3	11
29	2.2	5.7	7.8	e9.4	---	5.7	103	204	27	11	4.3	10
30	2.1	5.7	7.5	e9.4	---	4.9	383	174	25	10	3.9	11
31	2.4	---	6.8	10	---	5.0	---	155	---	25	4.1	---
TOTAL	52.9	188.0	214.5	280.1	287.1	310.9	819.5	7807	2704	487	271.3	234.6
MEAN	1.71	6.27	6.92	9.04	10.3	10.0	27.3	252	90.1	15.7	8.75	7.82
MAX	5.4	8.5	10	12	13	12	383	579	149	25	18	19
MIN	1.2	3.8	4.2	5.6	6.9	4.9	4.6	153	25	10	3.9	4.5
AC-FT	105	373	425	556	569	617	1630	15490	5360	966	538	465

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1999, BY WATER YEAR (WY)

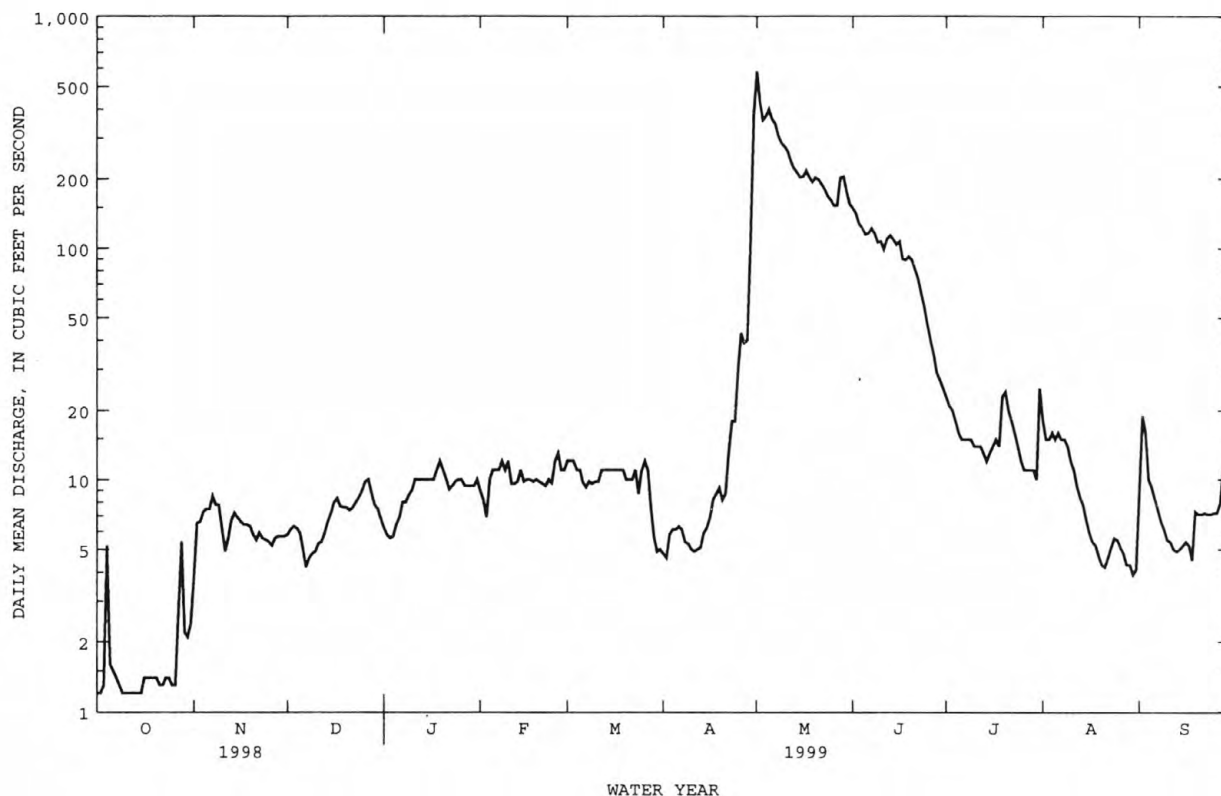
	1994	1995	1996	1997	1998	1999
MEAN	6.88	8.88	6.98	6.90	7.65	8.96
MAX	26.3	29.7	19.9	14.8	13.0	17.5
(WY)	1998	1998	1998	1998	1998	1999
MIN	1.71	1.46	1.39	1.48	1.61	1.60
(WY)	1999	1995	1995	1995	1995	1995

PLATTE RIVER BASIN

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1994 - 1999
ANNUAL TOTAL	5316.11	13656.9	--
ANNUAL MEAN	14.6	37.4	14.7
HIGHEST ANNUAL MEAN	--	--	37.4
LOWEST ANNUAL MEAN	--	--	2.64
HIGHEST DAILY MEAN	72 May 17	579 May 1	579 May 1 1999
LOWEST DAILY MEAN	.54 Sep 2	1.2 Oct 1,2,9-15	.54 Sep 2 1998
ANNUAL SEVEN-DAY MINIMUM	.59 Sep 2	1.2 Oct 9	.59 Sep 2 1998
INSTANTANEOUS PEAK FLOW	--	687 Apr 30	687 Apr 30 1999
INSTANTANEOUS PEAK STAGE	--	5.56 Apr 30	5.56 Apr 30 1999
ANNUAL RUNOFF (AC-FT)	10540	27090	10640
10 PERCENT EXCEEDS	32	122	28
50 PERCENT EXCEEDS	10	9.6	6.1
90 PERCENT EXCEEDS	1.3	4.3	1.4

e Estimated.



06756060 CROW CREEK NEAR ARCHER, WY

LOCATION.--Lat 41°07'35", long 104°39'04", in NE¹/₄ SW¹/₄ NW¹/₄ sec.3, T. 13 N., R.65 W., Laramie County, Hydrologic Unit 10190009, 0.4 mi upstream from highwater line of Wyoming Hereford Ranch Reservoir No. 2, and 2.3 mi southeast of Archer.

PERIOD OF RECORD.--November 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV							
10...	1500	12	771	8.1	3.0	-2.0	613
MAR							
03...	1445	23	676	8.5	7.0	16.0	610
MAY							
13...	1400	179	417	8.0	13.0	18.0	610
JUL							
29...	1415	15	800	7.9	24.0	22.0	618
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV							
10...	10.2	95	K60	.18	2.6	5.2	1.4
MAR							
03...	10.2	105	65	.13	1.4	5.3	1.2
MAY							
13...	7.9	94	200	.08	.58	.97	.24
JUL							
29...	5.2	76	1500	.66	3.5	2.5	1.3

K Results based on colony count outside the acceptable range (non-ideal colony count).

COLORADO RIVER BASIN

GREEN RIVER BASIN

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY

LOCATION.--Lat 43°01'08", long 110°07'03", in SE¹/₄ SE¹/₄ NE¹/₄ sec.8, T.35 N., R.111 W., Sublette County, Hydrologic Unit 14040101, on right bank 100 ft upstream from bridge on U.S. Highways 189 and 191, 3.4 mi upstream from Beaver Creek, and 12 mi north of Daniel.

DRAINAGE AREA.--468 mi².

PERIOD OF RECORD.--October 1931 to September 1992, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,468.09 ft above sea level. Prior to Oct. 6, 1977, on left bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 10,200 acres, of which about 6,100 acres are downstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	248	e206	e150	e160	e132	e170	699	2630	1450	1060	454
2	291	241	e200	e150	e150	e122	e160	759	2200	1440	885	494
3	297	245	e200	e150	e150	e120	e170	650	2200	1580	757	497
4	311	242	e180	e160	e150	e120	e168	533	2180	1850	699	509
5	315	228	e160	e165	e140	e114	e170	461	1970	2140	693	505
6	307	233	e130	e164	e140	e115	e180	413	1860	2310	699	460
7	305	228	e130	e165	e140	e120	e190	482	1820	2160	714	421
8	297	e170	e150	e160	e134	e120	e200	605	1860	1970	717	383
9	290	e160	e160	e157	e132	e120	e200	613	1650	1960	684	356
10	286	e160	e170	e160	e130	e120	e170	507	1440	1950	639	331
11	277	e175	e180	e156	e130	e125	e170	447	1350	1720	612	309
12	271	e195	e190	e164	e130	e125	e180	423	1380	1520	592	290
13	264	e210	e170	e160	e140	e130	e200	480	1480	1450	563	277
14	253	e250	e160	e150	e140	e130	e220	504	1650	1420	532	268
15	246	e240	e170	e148	e140	e140	e250	519	1890	1480	480	257
16	253	e230	e180	e160	e140	e147	e230	472	2180	1420	458	249
17	255	e220	e170	e160	e140	e130	e250	433	2500	1330	440	240
18	251	e200	e150	e160	e150	e130	e260	486	2730	1170	420	234
19	270	e180	e130	e160	e150	e140	321	607	2830	1070	407	251
20	262	e174	e120	e164	e150	e140	375	669	2940	1050	404	265
21	255	e200	e130	e162	e140	e150	422	771	3050	1020	398	252
22	248	e220	e140	e160	e140	e158	408	878	3150	1030	406	248
23	249	e220	e130	e170	e140	e160	355	1090	3130	1080	402	241
24	249	e200	e140	e170	e140	e170	303	1380	3000	1100	391	233
25	248	e220	e140	e160	e130	e200	240	1710	2770	1030	396	226
26	245	e210	e150	e150	e125	e250	260	2040	2650	995	385	219
27	239	e200	e160	e148	e122	e200	337	2280	2520	934	375	211
28	246	e200	e150	e147	e130	e210	397	2470	2100	850	379	207
29	246	e206	e150	e160	---	e200	481	2590	1700	831	389	202
30	243	e200	e160	e164	---	e200	556	2740	1540	856	390	197
31	248	---	e160	e150	---	e180	---	2860	---	1020	421	---
TOTAL	8312	6305	4916	4904	3903	4618	7993	31571	66350	43186	16787	9286
MEAN	268	210	159	158	139	149	266	1018	2212	1393	542	310
MAX	315	250	206	170	160	250	556	2860	3150	2310	1060	509
MIN	239	160	120	147	122	114	160	413	1350	831	375	197
AC-FT	16490	12510	9750	9730	7740	9160	15850	62620	131600	85660	33300	18420

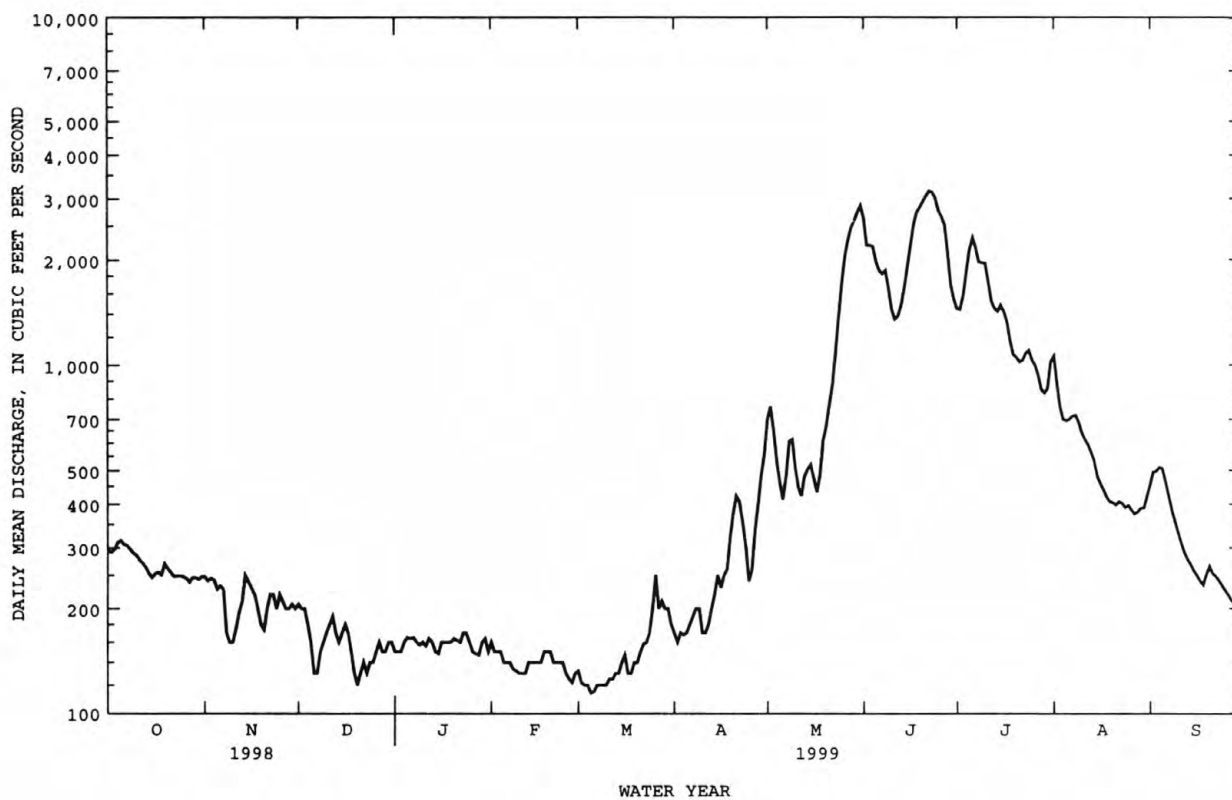
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

	MEAN	202	145	125	110	111	124	287	1032	1815	1278	547	304
MAX	433	223	215	176	166	240	600	1811	3813	2424	997	592	
(WY)	1984	1983	1997	1967	1967	1932	1943	1956	1986	1975	1982	1963	
MIN	102	67.7	70.0	50.0	60.0	70.0	129	269	610	399	213	150	
(WY)	1989	1994	1933	1933	1933	1933	1970	1977	1934	1988	1988	1988	

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL TOTAL	212309		208131		--	
ANNUAL MEAN	582		570		508	
HIGHEST ANNUAL MEAN	--		--		768	
LOWEST ANNUAL MEAN	--		--		281	
HIGHEST DAILY MEAN	2690	Jul 6	3150	Jun 22	5620	Jun 11 1997
LOWEST DAILY MEAN	102	Mar 9	114	Mar 5	36	Nov 26 1933
ANNUAL SEVEN-DAY MINIMUM	108	Mar 4	118	Mar 3	43	Nov 24 1933
INSTANTANEOUS PEAK FLOW	--		3230	Jun 22	5930	Jun 11 1997
INSTANTANEOUS PEAK STAGE	--		4.85	Jun 22	6.04	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	421100		412800		368100	
10 PERCENT EXCEEDS	1690		1710		1440	
50 PERCENT EXCEEDS	249		248		200	
90 PERCENT EXCEEDS	120		140		100	

e Estimated.



GREEN RIVER BASIN

09197000 PINE CREEK BELOW FREMONT LAKE, WY

LOCATION.--Lat 42°53'42", long 109°50'35", in NE¹/₄ NE¹/₄ NE¹/₄ sec.27, T.34 N., R.109 W., Sublette County, Hydrologic Unit 14040102, on left bank at Lot Number 93, 0.9 mi downstream from Fremont Lake, and 2.1 mi northeast of Pinedale.

DRAINAGE AREA.--114 mi².

PERIOD OF RECORD.--October 1910 to September 1912, October 1915 to September 1918, April 1985 to September 1986, April 1988 to current year, (no winter records since 1918). Published as "near Pinedale" prior to October 1912 and as "at Fremont Lake Outlet" October 1915 to September 1918. Records since April 1985 equivalent to earlier records if diversions to Highland Ditch (station 09196960) are added to flow past station.

GAGE.--Water-stage recorder. Elevation of gage is 7,390 ft above sea level, from topographic map. Prior to September 30, 1918, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--Records good. Some regulation by Fremont Lake. Fremont Ditch and Highland Ditch divert water upstream from station for irrigation downstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Mar. 29 . . . 27.1

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	27	28	558	892	94	88
2	---	---	---	---	---	---	27	28	549	855	94	87
3	---	---	---	---	---	---	27	28	556	843	94	87
4	---	---	---	---	---	---	27	28	555	883	94	86
5	---	---	---	---	---	---	27	29	550	946	96	87
6	---	---	---	---	---	---	27	30	540	963	97	87
7	---	---	---	---	---	---	27	30	531	946	95	87
8	---	---	---	---	---	---	27	31	524	923	95	85
9	---	---	---	---	---	---	27	31	503	905	95	85
10	---	---	---	---	---	---	27	32	485	859	95	85
11	---	---	---	---	---	---	27	32	382	696	95	85
12	---	---	---	---	---	---	27	33	307	558	95	85
13	---	---	---	---	---	---	27	58	323	525	95	84
14	---	---	---	---	---	---	27	75	353	484	95	83
15	---	---	---	---	---	---	27	75	398	449	95	82
16	---	---	---	---	---	---	27	70	451	449	95	82
17	---	---	---	---	---	---	27	58	542	443	95	82
18	---	---	---	---	---	---	27	58	638	436	95	82
19	---	---	---	---	---	---	27	59	755	435	95	81
20	---	---	---	---	---	---	27	60	837	433	95	79
21	---	---	---	---	---	---	28	78	856	428	94	79
22	---	---	---	---	---	---	28	97	945	420	94	79
23	---	---	---	---	---	---	27	97	1050	325	94	79
24	---	---	---	---	---	---	27	148	1080	218	94	79
25	---	---	---	---	---	---	27	239	1100	183	94	78
26	---	---	---	---	---	---	27	239	1110	161	93	77
27	---	---	---	---	---	---	27	243	1120	114	92	72
28	---	---	---	---	---	---	27	317	1080	92	83	68
29	---	---	---	---	---	---	28	400	1020	92	67	68
30	---	---	---	---	---	---	28	412	946	92	67	68
31	---	---	---	---	---	---	---	491	---	92	76	---
TOTAL	---	---	---	---	---	---	814	3634	20644	16140	2847	2436
MEAN	---	---	---	---	---	---	27.1	117	688	521	91.8	81.2
MAX	---	---	---	---	---	---	28	491	1120	963	97	88
MIN	---	---	---	---	---	---	27	28	307	92	67	68
AC-FT	---	---	---	---	---	---	1610	7210	40950	32010	5650	4830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1999, BY WATER YEAR (WY)

MEAN	63.2	36.8	27.5	23.3	24.3	26.2	33.5	154	652	521	161	69.7
MAX	86.2	40.0	34.2	26.3	33.0	36.0	93.0	299	1273	1258	300	131
(WY)	1916	1911	1918	1918	1916	1916	1986	1997	1918	1917	1917	1917
MIN	49.9	30.0	20.0	20.0	18.0	20.0	14.9	63.3	215	95.0	43.9	22.8
(WY)	1917	1917	1917	1916	1917	1917	1988	1990	1992	1992	1988	1988

09197000 PINE CREEK BELOW FREMONT LAKE, WY--Continued

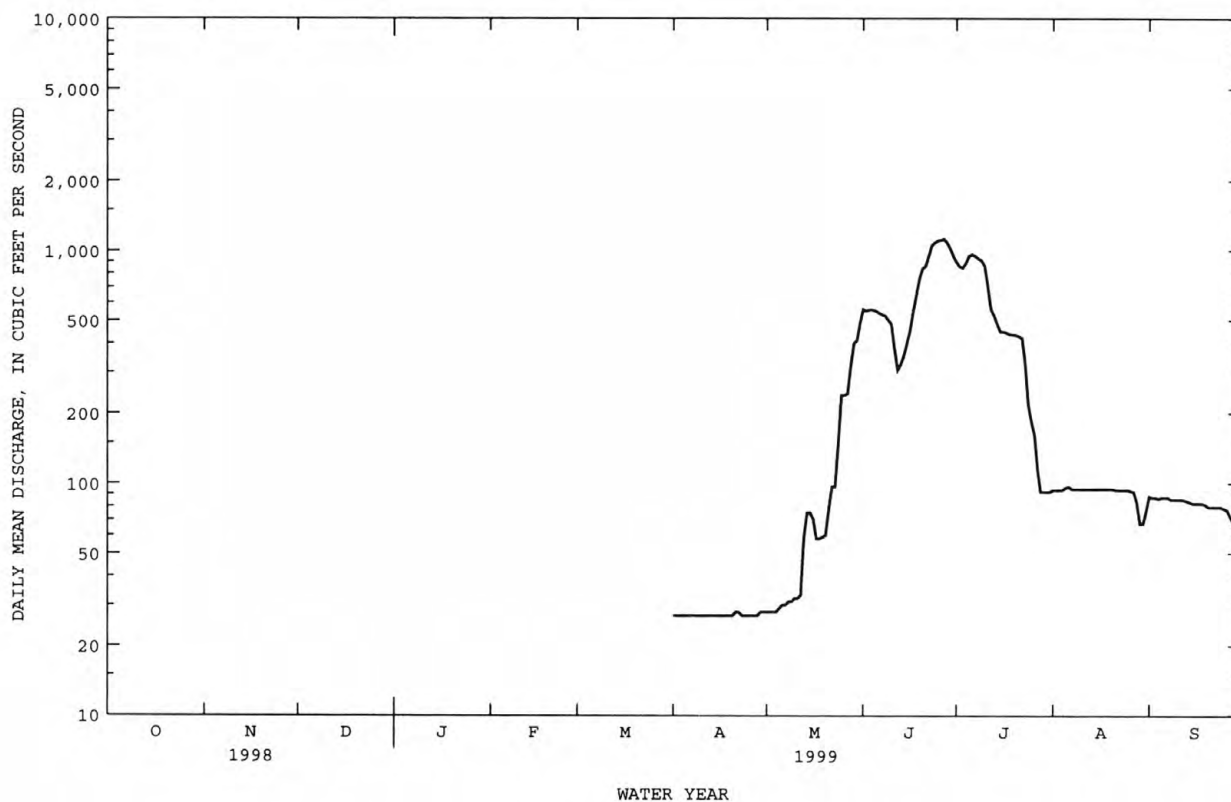
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1911 - 1999*

ANNUAL MEAN	--		197	
HIGHEST ANNUAL MEAN	--		211	1917
LOWEST ANNUAL MEAN	--		183	1912
HIGHEST DAILY MEAN	1120	Jun 27	2330	Jun 17 1918
LOWEST DAILY MEAN	27	Many days	9.6	Apr 23 1990
INSTANTANEOUS PEAK FLOW	1150	Jun 25	2330	Jun 17 1918
ANNUAL RUNOFF (AC-FT)	--		143000	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.



GREEN RIVER BASIN

09205000 NEW FORK RIVER NEAR BIG PINEY, WY

LOCATION.--Lat 42°34'02", long 109°55'46", in SE¹/₄ NE¹/₄ NE¹/₄ sec.22, T.30 N., R.110 W., Sublette County, Hydrologic Unit 14040102, on right bank 350 ft downstream from old highway bridge, 3.4 mi upstream from mouth, and 9.5 mi northeast of Big Piney.

DRAINAGE AREA.--1,230 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power development, and diversions for irrigation of about 62,100 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e350	398	345	e260	e260	e270	354	857	4710	3110	834	404
2	e340	398	343	e260	e250	e250	330	810	3920	2930	803	415
3	e430	398	345	e260	e250	e240	319	789	3550	2850	777	484
4	e490	398	345	e250	e260	e230	297	733	3530	2990	763	540
5	e480	398	310	e260	e260	e220	295	664	3510	3270	736	540
6	e440	398	e180	e270	e260	e220	296	608	3390	3260	737	501
7	e420	396	e200	e270	e270	e235	308	578	3280	3170	737	469
8	e410	381	e250	e270	e270	e235	343	577	3640	2980	683	450
9	e400	e330	e300	e260	e270	e240	405	640	3640	2860	635	442
10	e390	e310	e300	e260	e270	e235	367	764	3500	2730	610	446
11	e380	e300	e310	e260	e250	e235	336	713	3250	2510	586	459
12	e380	e300	e320	e270	e240	e230	320	667	2910	2200	598	453
13	e370	e330	e330	e260	e250	e230	337	647	3080	1970	577	442
14	362	e370	e320	e250	e270	e230	373	656	3380	1820	539	437
15	362	404	e300	e250	e270	e250	386	668	3680	1720	508	435
16	382	396	e300	e260	e260	e260	346	651	4270	1720	494	433
17	415	380	e300	e260	e270	e280	329	627	4820	1800	481	420
18	426	380	e280	e260	e270	e250	352	592	5410	1790	469	405
19	429	371	e260	e260	e270	e290	433	576	5460	1750	457	436
20	420	346	e170	e260	e250	e340	529	577	5670	1680	444	548
21	403	419	e190	e270	e250	e380	582	718	6010	1550	442	525
22	398	365	e210	e260	e260	e380	528	776	6140	1440	442	498
23	398	362	e210	e260	e260	e350	478	842	6150	1370	428	479
24	392	356	e220	e260	e260	e400	421	995	6110	1210	423	463
25	386	349	e235	e240	e250	e450	440	1330	5690	1050	413	460
26	385	358	e230	e250	e250	e600	497	1700	5280	959	410	443
27	375	376	e240	e250	e240	541	546	2290	4780	872	399	443
28	380	362	e260	e240	e250	448	576	2900	4180	806	433	442
29	387	349	e250	e250	---	381	641	3630	3650	797	425	435
30	386	345	e270	e260	---	368	807	4220	3330	928	396	435
31	392	---	e260	e250	---	365	---	4580	---	882	399	---
TOTAL	12358	11023	8383	8000	7240	9633	12571	37375	129920	60974	17078	13782
MEAN	399	367	270	258	259	311	419	1206	4331	1967	551	459
MAX	490	419	345	270	270	600	807	4580	6150	3270	834	548
MIN	340	300	170	240	240	220	295	576	2910	797	396	404
AC-FT	24510	21860	16630	15870	14360	19110	24930	74130	257700	120900	33870	27340

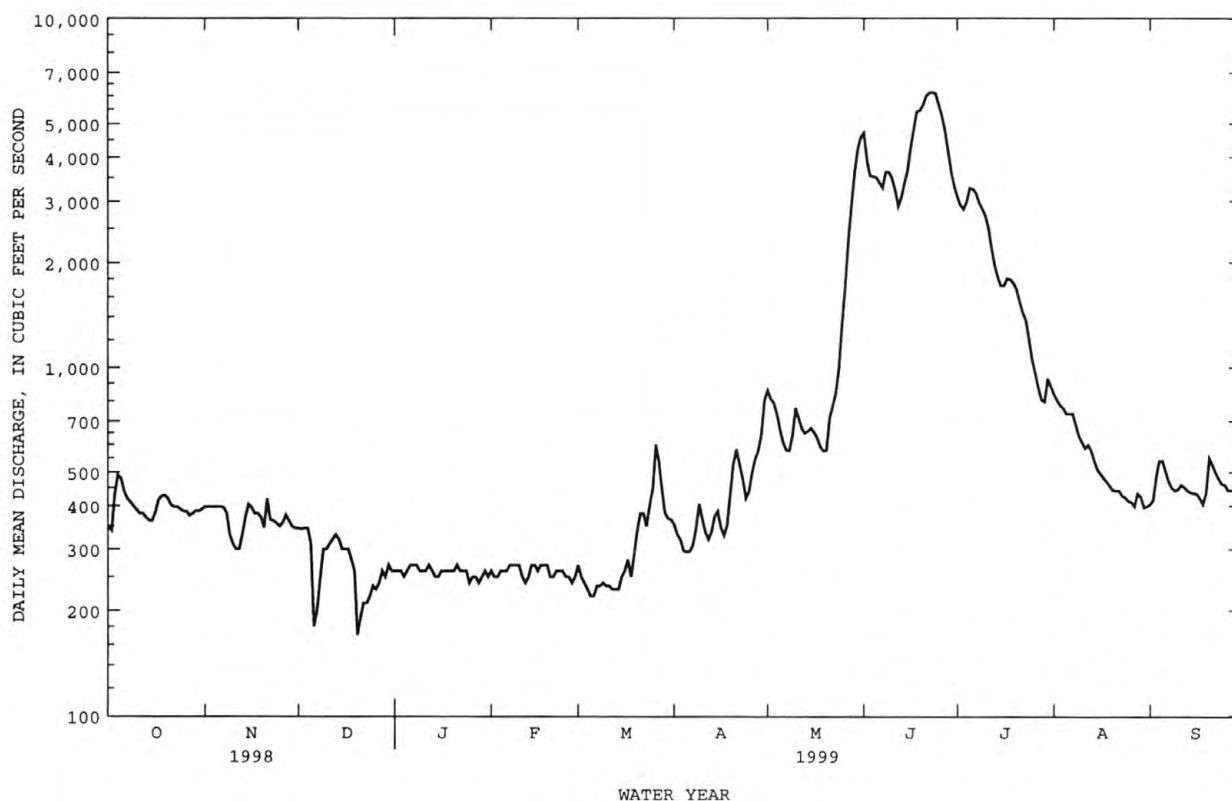
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

	MEAN	379	324	242	202	212	270	439	1147	3083	1686	599	379
MAX	989	608	397	277	337	597	1114	2539	7065	4155	1279	766	
(WY)	1983	1984	1983	1969	1969	1972	1969	1969	1986	1982	1982	1983	
MIN	171	188	139	129	135	161	181	254	699	405	225	164	
(WY)	1989	1989	1989	1963	1989	1977	1981	1977	1992	1961	1988	1988	

09205000 NEW FORK RIVER NEAR BIG PINEY, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1954 - 1999	
ANNUAL TOTAL	314755		328337		--	
ANNUAL MEAN	862		900		748	
HIGHEST ANNUAL MEAN	--		--		1288	1986
LOWEST ANNUAL MEAN	--		--		313	1977
HIGHEST DAILY MEAN	4360	Jul 5	6150	Jun 23	9110	Jun 7 1986
LOWEST DAILY MEAN	170	Dec 20	170	Dec 20	90	Jan 13 1963
ANNUAL SEVEN-DAY MINIMUM	206	Jan 21	209	Dec 20	104	Jan 9 1963
INSTANTANEOUS PEAK FLOW	--		6230	Jun 22	9190	Jun 7 1986
INSTANTANEOUS PEAK STAGE	--		6.67	Jun 22	8.28	Jun 7 1986
ANNUAL RUNOFF (AC-FT)	624300		651300		541600	
10 PERCENT EXCEEDS	2610		3030		1900	
50 PERCENT EXCEEDS	411		399		332	
90 PERCENT EXCEEDS	226		250		190	

e Estimated.



GREEN RIVER BASIN

09209400 GREEN RIVER NEAR LA BARGE, WY

LOCATION.--Lat 42°11'34", long 110°09'45", in SE¹/₄ SE¹/₄ NW¹/₄ sec.33, T.26 N., R.112 W., Lincoln County, Hydrologic Unit 14040101, on right bank 1.7 mi upstream from high-water line of Fontenelle Reservoir at elevation 6,513 ft, 4.0 mi upstream from Muddy Creek, and 5.0 mi south of La Barge.

DRAINAGE AREA.--3,910 mi².

PERIOD OF RECORD.--October 1963 to current year. Records are equivalent to those published August 1946 to March 1965 as Green River near Fontenelle (station 09209500).

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 198,000 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	752	891	e670	e530	e580	e610	853	4510	10200	6040	2580	1030
2	728	887	e670	e530	e580	e640	785	4460	9780	5590	2550	1050
3	939	856	e670	e530	e580	e600	706	4310	8460	5320	2370	1280
4	1070	843	e600	e520	e600	e580	695	3970	8120	5330	2210	1540
5	1060	824	e500	e540	e600	e570	706	3350	8660	5720	2120	1610
6	960	847	e400	e550	e600	e540	752	2790	8450	6080	2130	1530
7	906	828	e330	e600	e600	e520	806	2420	8180	6300	2120	1330
8	887	e750	e400	e590	e600	e550	893	2580	8420	6080	2070	1180
9	866	e700	e500	e580	e620	e570	1000	3200	8420	5710	1970	1090
10	854	e620	e560	e590	e620	e580	1010	3530	7830	5500	1870	1030
11	839	e480	e620	e590	e580	e570	886	3080	7040	5210	1790	1000
12	834	e520	e630	e590	e560	e600	832	2590	6260	4740	1750	968
13	819	e570	e650	e600	e560	e600	823	2420	6110	4260	1740	925
14	811	e660	e630	e620	e580	e600	895	2580	6400	4010	1630	905
15	804	e760	e600	e630	e590	e610	994	2720	6830	4230	1440	879
16	814	e780	e600	e600	e580	e640	939	2740	7720	4500	1330	868
17	873	e750	e580	e590	e580	e650	858	2580	8780	4820	1250	842
18	891	e750	e550	e560	e580	e670	879	2300	10200	4720	1170	819
19	886	e740	e530	e560	e580	e640	1140	2290	11100	4360	1100	839
20	876	e700	e500	e590	e600	e760	1600	2620	11400	4090	1040	1090
21	852	e710	e460	e610	e560	e940	1980	2890	11600	3840	1010	1210
22	837	e730	e450	e640	e560	e1200	1940	3250	11900	3540	1040	1120
23	837	e720	e480	e610	e580	1090	1850	3470	12100	3360	1040	1030
24	837	e710	e490	e580	e600	1240	1580	3940	12200	3310	1000	982
25	837	e700	e500	e580	e600	1440	1550	4570	11900	3080	982	943
26	837	e700	e490	e560	e570	1610	1710	5200	11000	2860	974	908
27	828	e720	e520	e560	e570	1590	1920	6060	10100	2720	937	878
28	816	e730	e530	e540	e600	1270	2200	6970	9120	2500	975	855
29	822	e700	e530	e540	---	1040	2580	7850	7860	2380	1000	856
30	831	e670	e540	e560	---	924	4020	8840	6710	2540	961	877
31	862	---	e530	e580	---	882	---	9580	---	2620	986	---
TOTAL	26665	21846	16710	17850	16410	25326	39382	123660	272850	135360	47135	31464
MEAN	860	728	539	576	586	817	1313	3989	9095	4366	1520	1049
MAX	1070	891	670	640	620	1610	4020	9580	12200	6300	2580	1610
MIN	728	480	330	520	560	520	695	2290	6110	2380	937	819
AC-FT	52890	43330	33140	35410	32550	50230	78110	245300	541200	268500	93490	62410

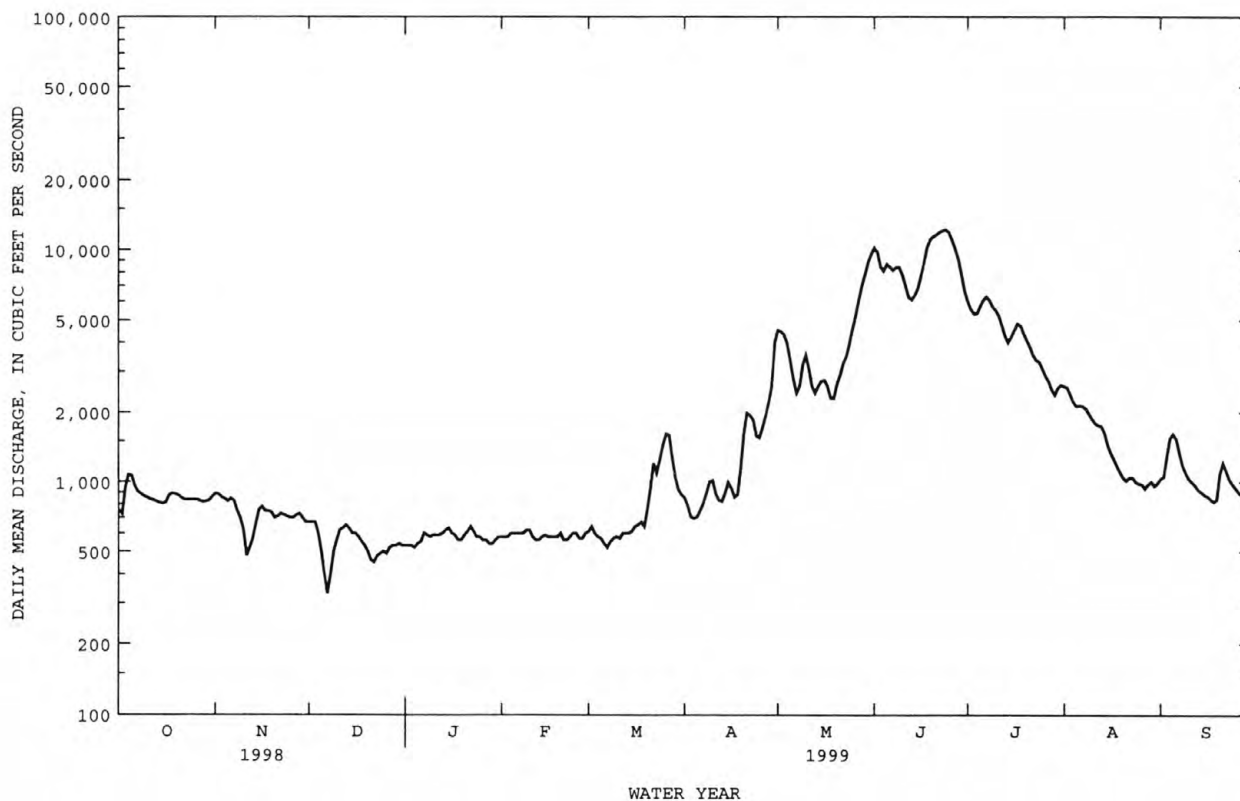
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

	MEAN	841	742	537	468	500	717	1417	2929	5950	3598	1515	909
MAX	2049	1306	866	608	681	1565	2692	5357	14230	7993	3185	1768	
(WY)	1983	1984	1984	1966	1998	1972	1986	1997	1986	1982	1982	1983	
MIN	368	469	367	314	270	426	469	305	1080	710	466	365	
(WY)	1989	1989	1989	1989	1989	1970	1977	1977	1992	1994	1988	1988	

09209400 GREEN RIVER NEAR LA BARGE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	684699		774658		--	
ANNUAL MEAN	1876		2122		1679	
HIGHEST ANNUAL MEAN	--		--		2908	1986
LOWEST ANNUAL MEAN	--		--		668	1977
HIGHEST DAILY MEAN	7400	Jul 6	12200	Jun 24	18800	Jun 9 1986
LOWEST DAILY MEAN	330	Dec 7	330	Dec 7	188	May 17 1977
ANNUAL SEVEN-DAY MINIMUM	440	Jan 4	470	Dec 4	215	May 13 1977
INSTANTANEOUS PEAK FLOW	--		12200	Jun 24	18800	Jun 9 1986
INSTANTANEOUS PEAK STAGE	--		9.18	Jun 24	10.50	Jun 9 1986
ANNUAL RUNOFF (AC-FT)	1358000		1537000		1217000	
10 PERCENT EXCEEDS	5090		6080		4130	
50 PERCENT EXCEEDS	905		886		820	
90 PERCENT EXCEEDS	500		560		435	

e Estimated.



GREEN RIVER BASIN

09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY

LOCATION.--Lat 42°05'46", long 110°24'57", in NW¹/₄ SW¹/₄ NE¹/₄ sec.2, T.24 N., R.115 W., Lincoln County, Hydrologic Unit 14040101, on left bank 2.0 mi downstream from Dutch George Creek and 14 mi west of Fontenelle.

DRAINAGE AREA.--152 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,950 ft above sea level, from topographic map. Prior to May 5, 1970, at site 300 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 780 acres upstream from station. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 19	2215	300	7.29
Apr 30	1530	*773	*9.50
May 9	0300	616	8.94
May 30	0915	550	8.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	39	e28	e28	e30	e28	45	560	440	270	93	60
2	43	38	e27	e27	e29	e30	41	546	418	260	91	58
3	66	37	e29	e25	e32	e30	44	454	453	248	88	72
4	51	34	e30	e25	e33	e28	56	335	410	228	87	73
5	40	e34	e32	e24	e34	e27	47	280	445	217	92	61
6	37	e33	e30	e26	e37	e26	40	269	424	207	102	55
7	36	e34	e25	e27	e35	e25	48	341	489	196	92	51
8	37	e34	e21	e29	e33	e25	50	457	462	187	84	50
9	36	e35	e22	e27	e32	e26	55	493	436	177	80	51
10	36	e36	e25	e27	e28	e27	57	333	424	167	73	50
11	36	e35	e25	e30	e27	e28	61	282	396	156	71	48
12	35	e34	e26	e33	e27	e27	59	279	386	151	76	47
13	35	e33	e26	e35	e27	e27	64	359	385	141	71	47
14	35	e32	e26	e35	e28	e28	81	348	402	142	65	47
15	36	e34	e25	e34	e29	e28	88	321	428	164	63	49
16	36	e33	e25	e33	e30	e27	86	288	482	152	60	59
17	37	e31	e26	e34	e30	e29	87	290	503	158	60	53
18	36	e29	e28	e35	e30	e32	123	320	507	135	58	53
19	36	e28	e26	e36	e27	e33	204	361	504	125	57	57
20	35	e29	e22	e37	e27	e35	238	358	500	120	57	67
21	35	e30	e20	e36	e27	e36	193	377	492	114	63	56
22	35	e30	e19	e37	e29	e40	153	397	484	109	63	53
23	36	e28	e20	e35	e28	e41	107	412	454	105	58	53
24	39	e28	e21	e34	e27	e45	98	442	421	103	55	53
25	38	e30	e22	e37	e29	51	98	450	391	100	55	53
26	38	e31	e23	e39	e30	53	137	440	366	97	53	51
27	37	e32	e23	e38	e30	56	220	450	342	95	53	53
28	37	e30	e24	e38	e28	e50	261	470	320	96	61	51
29	38	e28	e25	e35	---	e46	463	491	300	99	57	53
30	45	e29	e26	e33	---	46	713	528	284	102	56	50
31	46	---	e28	e30	---	52	---	502	---	94	71	---
TOTAL	1198	968	775	999	833	1082	4017	12233	12748	4715	2165	1634
MEAN	38.6	32.3	25.0	32.2	29.8	34.9	134	395	425	152	69.8	54.5
MAX	66	39	32	39	37	56	713	560	507	270	102	73
MIN	35	28	19	24	27	25	40	269	284	94	53	47
AC-FT	2380	1920	1540	1980	1650	2150	7970	24260	25290	9350	4290	3240

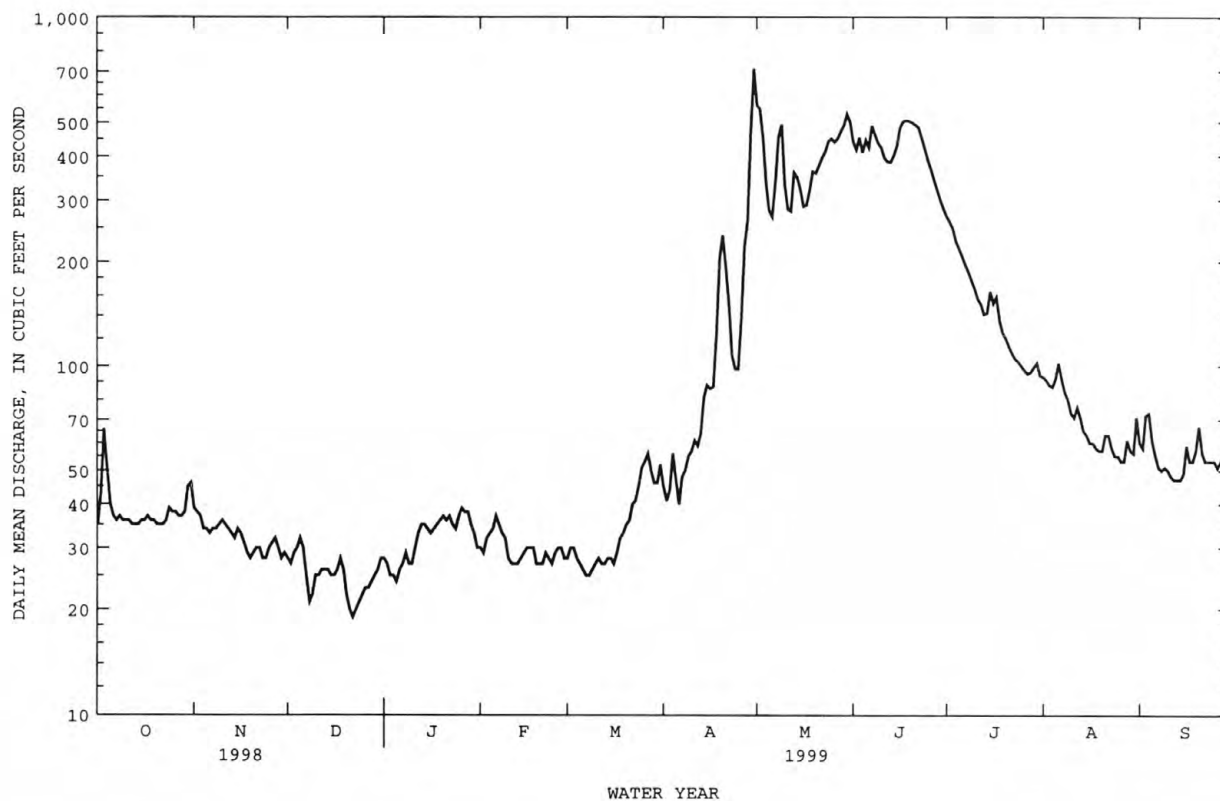
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1999, BY WATER YEAR (WY)

MEAN	32.3	30.2	26.3	25.7	26.7	32.8	101	219	234	79.3	38.6	31.3
MAX	55.3	47.1	42.1	41.3	51.3	76.3	280	437	628	185	76.0	63.1
(WY)	1987	1998	1985	1985	1985	1986	1986	1980	1986	1975	1983	1997
MIN	19.1	18.6	13.5	14.3	15.0	18.7	35.1	32.1	20.3	17.2	10.2	12.7
(WY)	1978	1994	1990	1991	1958	1962	1977	1977	1977	1977	1992	1977

09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1952 - 1999
ANNUAL TOTAL	28036		43367		--
ANNUAL MEAN	76.8		119		73.2
HIGHEST ANNUAL MEAN	--		--		155 1986
LOWEST ANNUAL MEAN	--		--		24.8 1977
HIGHEST DAILY MEAN	385	Jun 18	713	Apr 30	865 Jun 6 1986
LOWEST DAILY MEAN	19	Dec 22	19	Dec 22	5.6 Aug 14 1992
ANNUAL SEVEN-DAY MINIMUM	21	Dec 20	21	Dec 20	6.2 Aug 10 1992
INSTANTANEOUS PEAK FLOW	--		773	Apr 30	907 Apr 23 1986
INSTANTANEOUS PEAK STAGE	--		9.50	Apr 30	9.51 Apr 23 1986
ANNUAL RUNOFF (AC-FT)	55610		86020		53020
10 PERCENT EXCEEDS	192		405		188
50 PERCENT EXCEEDS	38		47		33
90 PERCENT EXCEEDS	27		27		20

e Estimated.



09211150 FONTENELLE RESERVOIR NEAR FONTENELLE, WY

LOCATION.--Lat 42°02'00", long 110°04'00", in S¹/₂ sec.25 T.24 N., R.112 W., Lincoln County, Hydrologic Unit 14040101, at dam on Green River, 3.0 mi north of Fontenelle, and 3.5 mi upstream from Slate Creek.

DRAINAGE AREA.--4,280 mi².

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WSP 2125: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum).

REMARKS.--Reservoir is formed by earthfill dam completed by Bureau of Reclamation in April 1964. Capacity, 344,800 acre-ft between elevations 6,506.0 ft, crest of spillway, and 6,408.0 ft, invert of outlet pipe. Dead storage, below elevation 6,408.0 ft, 560 acre-ft. Figures given herein represent total contents. Water used for irrigation and power generation. Capacity table is available from the Bureau of Reclamation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 387,000 acre-ft, June 29, 1965, elevation, 6,511.01 ft; minimum daily, 5,680 acre-ft, July 28, 1967, elevation, 6,423.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 329,000 acre-ft, Aug. 13, 14, maximum elevation, 6,503.79 ft; minimum daily, 115,000 acre-ft, Apr. 16-19, elevation, 6,468.77, Apr. 18.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

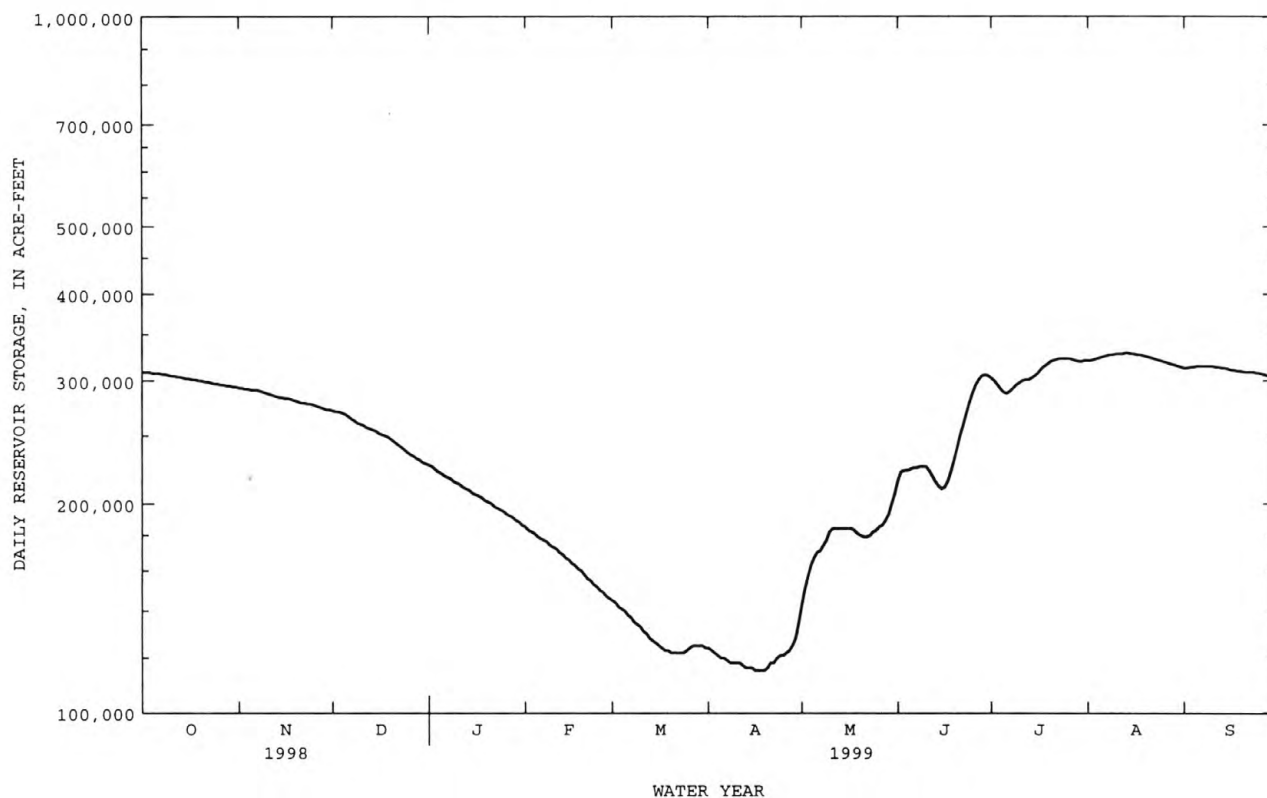
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	309000	293000	272000	227000	185000	145000	124000	143000	216000	303000	321000	313000
2	309000	293000	271000	226000	183000	144000	123000	151000	222000	300000	321000	313000
3	309000	292000	271000	224000	182000	142000	122000	157000	223000	296000	322000	314000
4	308000	292000	270000	222000	181000	141000	121000	163000	223000	292000	323000	314000
5	308000	291000	269000	221000	179000	140000	120000	167000	224000	289000	324000	315000
6	308000	291000	267000	219000	178000	138000	120000	170000	225000	288000	325000	315000
7	307000	291000	265000	218000	177000	137000	119000	171000	225000	290000	326000	315000
8	307000	290000	263000	217000	176000	135000	118000	174000	226000	293000	327000	315000
9	306000	289000	261000	215000	174000	134000	118000	177000	226000	296000	327000	315000
10	305000	288000	260000	214000	173000	133000	118000	182000	226000	298000	328000	315000
11	305000	287000	259000	213000	172000	131000	118000	184000	223000	300000	328000	314000
12	304000	286000	257000	211000	170000	130000	117000	184000	219000	301000	328000	314000
13	304000	285000	256000	210000	169000	128000	116000	184000	215000	301000	329000	313000
14	303000	284000	255000	209000	167000	127000	116000	184000	212000	303000	329000	313000
15	302000	284000	254000	207000	166000	126000	116000	184000	210000	305000	328000	312000
16	302000	283000	252000	206000	164000	125000	115000	184000	211000	308000	328000	311000
17	301000	283000	251000	205000	163000	124000	115000	184000	215000	312000	327000	311000
18	301000	282000	250000	204000	161000	123000	115000	183000	222000	315000	327000	310000
19	300000	281000	249000	202000	160000	123000	115000	181000	231000	317000	326000	310000
20	300000	280000	247000	201000	158000	122000	116000	180000	240000	320000	325000	309000
21	299000	279000	245000	200000	156000	122000	118000	179000	250000	321000	324000	309000
22	299000	279000	243000	198000	155000	122000	118000	179000	259000	322000	323000	309000
23	298000	278000	241000	197000	153000	122000	120000	180000	269000	323000	322000	309000
24	297000	278000	239000	196000	152000	122000	121000	182000	279000	323000	321000	308000
25	297000	277000	237000	195000	150000	123000	121000	183000	288000	323000	320000	308000
26	296000	276000	235000	193000	149000	124000	122000	185000	296000	323000	319000	307000
27	296000	275000	234000	192000	147000	125000	123000	186000	301000	322000	318000	306000
28	295000	274000	232000	191000	146000	125000	125000	189000	305000	321000	317000	305000
29	295000	273000	231000	189000	---	125000	128000	193000	306000	320000	316000	305000
30	294000	273000	229000	188000	---	125000	135000	200000	305000	320000	315000	304000
31	294000	---	228000	186000	---	124000	---	207000	---	321000	314000	---
MAX	309000	293000	272000	227000	185000	145000	135000	207000	306000	323000	329000	315000
MIN	294000	273000	228000	186000	146000	122000	115000	143000	210000	288000	314000	304000
(#)	6,499.23	6,496.37	6,489.94	6,483.31	6,475.79	6,471.03	6,473.53	6,486.74	6,500.76	6,502.77	6,501.90	6,500.58
(*)	-16,000	-21,000	-45,000	-42,000	-40,000	-22,000	+11,000	+72,000	+98,000	+16,000	-7,000	-10,000

WTR YR 1999 MAX 329,000 MIN 115,000 (*) -6,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

09211150 FONTENELLE RESERVOIR NEAR FONTENELLE, WY--Continued



GREEN RIVER BASIN

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY

LOCATION.--Lat 42°01'16", long 110°02'57", in NW¹/₄ NW¹/₄ NE¹/₄ sec.31, T.24 N., R.111 W., Sweetwater County, Hydrologic Unit 14040103, on right bank 1.0 mi downstream from Fontenelle Dam, 2.5 mi upstream from Slate Creek, and 6.0 mi southeast of Fontenelle.

DRAINAGE AREA.--4,280 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1963 to current year.

REVISED RECORDS.--WSP 2125: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,378.13 ft above sea level.

REMARKS.--Records good. Flow completely regulated by Fontenelle Reservoir (station 09211150) 1.0 mi upstream. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 202,000 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1180	1210	1200	1240	1310	1260	1510	6430	7420	2410	1370
2	1360	1170	1210	1210	1240	1280	1250	1620	7320	7430	2420	1310
3	1350	1150	1210	1200	1230	1270	1260	1680	8320	7450	2120	1320
4	1350	1150	1210	1200	1220	1280	1260	1730	8780	7420	1800	1310
5	1360	1150	1210	1200	1200	1280	1270	1760	8730	7400	1660	1320
6	1360	1150	1230	1190	1210	1280	1260	1830	8720	6860	1660	1320
7	1360	1140	1210	1180	1210	1280	1260	1780	8730	5600	1660	1290
8	1380	1130	1200	1190	1210	1290	1260	1800	8740	4760	1660	1320
9	1380	1130	1200	1190	1210	1300	1260	1770	8700	4490	1670	1300
10	1370	1140	1200	1200	1190	1310	1250	1910	8770	4400	1670	1300
11	1380	1140	1200	1220	1210	1310	1250	2370	8790	4360	1650	1290
12	1370	1180	1200	1220	1230	1310	1230	2790	8760	4300	1630	1300
13	1220	1180	1200	1220	1240	1310	1240	3010	8770	4220	1620	1290
14	1190	1190	1200	1220	1250	1320	1230	3000	8850	3810	1630	1290
15	1180	1190	1190	1220	1250	1320	1240	2990	8490	3380	1640	1290
16	1170	1190	1200	1220	1280	1310	1240	2980	7820	3120	1640	1290
17	1170	1190	1210	1220	1290	1320	1240	2940	7480	3120	1620	1290
18	1180	1190	1210	1220	1290	1300	1240	3260	7190	3100	1630	1270
19	1190	1180	1210	1220	1290	1300	1260	3540	7100	3090	1650	1250
20	1180	1180	1200	1210	1290	1300	1260	3520	7150	3080	1670	1260
21	1180	1190	1200	1200	1290	1290	1260	3520	7190	3070	1680	1220
22	1190	1230	1210	1210	1300	1290	1390	3530	7210	3070	1670	1280
23	1200	1240	1200	1230	1320	1290	1560	3530	7220	3060	1670	1290
24	1190	1230	1200	1230	1310	1270	1530	3730	7330	3060	1660	1270
25	1200	1210	1210	1230	1310	1250	1540	4410	7440	3060	1660	1270
26	1220	1220	1200	1250	1310	1250	1530	4990	7510	3060	1660	1250
27	1220	1230	1200	1250	1310	1250	1520	5860	7480	3080	1650	1210
28	1190	1200	1210	1240	1310	1250	1510	6300	7460	3090	1650	1210
29	1190	1210	1200	1240	---	1240	1450	6270	7470	2850	1650	1200
30	1190	1210	1200	1240	---	1240	1120	6250	7460	2490	1660	1190
31	1180	---	1200	1240	---	1240	---	6220	---	2410	1570	---
TOTAL	38900	35470	37340	37710	35240	39840	39430	102400	237410	131110	53290	38370
MEAN	1255	1182	1205	1216	1259	1285	1314	3303	7914	4229	1719	1279
MAX	1380	1240	1230	1250	1320	1320	1560	6300	8850	7450	2420	1370
MIN	1170	1130	1190	1180	1190	1240	1120	1510	6430	2410	1570	1190
AC-FT	77160	70350	74060	74800	69900	79020	78210	203100	470900	260100	105700	76110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

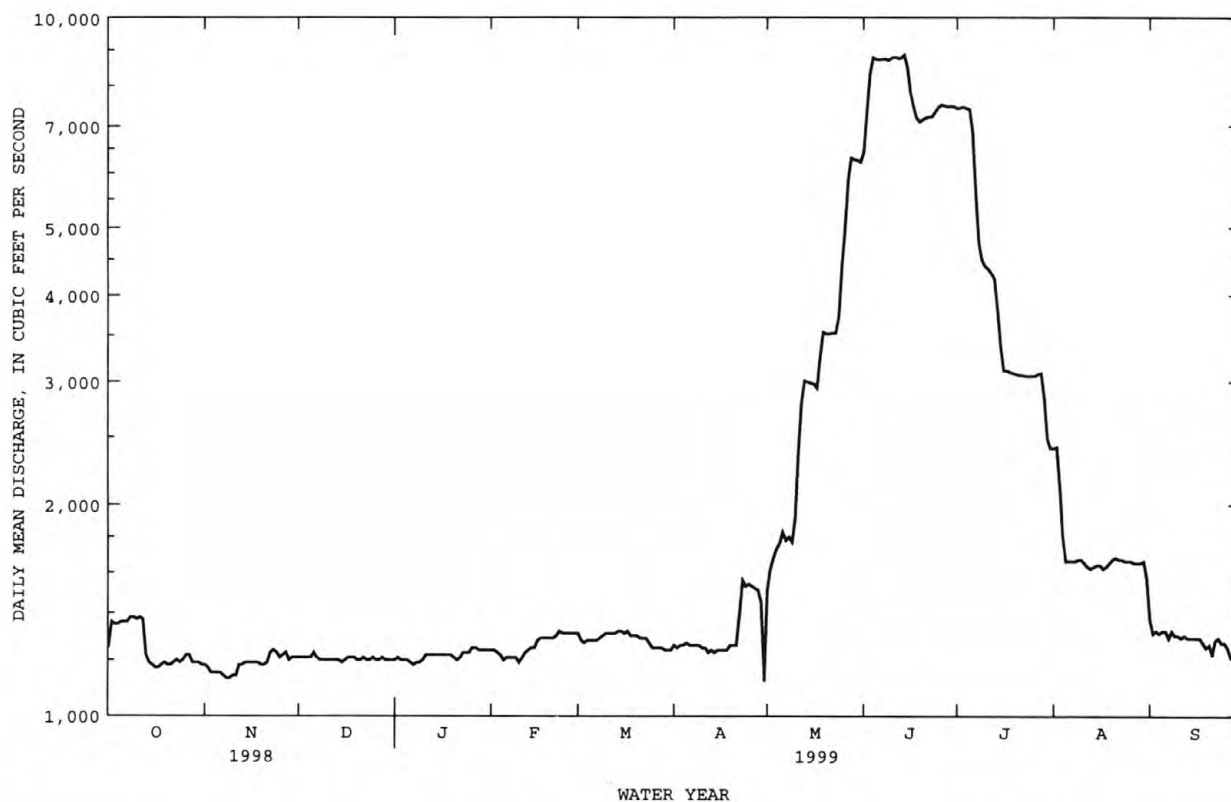
	MEAN	1024	891	820	832	885	959	1506	2487	4694	3360	1662	1248
MAX	3138	1522	1308	1312	1818	1576	3134	5588	11240	8868	3466	7893	
(WY)	1983	1984	1998	1998	1974	1986	1986	1985	1986	1986	1982	1965	
MIN	291	308	272	273	262	365	370	463	465	364	367	285	
(WY)	1989	1989	1968	1968	1968	1989	1968	1992	1977	1977	1977	1988	

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	704880		826510		--	
ANNUAL MEAN	1931		2264		1701	
HIGHEST ANNUAL MEAN	--		--		3060	
LOWEST ANNUAL MEAN	--		--		690	
HIGHEST DAILY MEAN	6990	Jul 11,12	8850	Jun 14	18600	Sep 6 1965
LOWEST DAILY MEAN	1100	Sep 2	1120	Apr 30	209	Nov 22 1968
ANNUAL SEVEN-DAY MINIMUM	1140	Sep 1	1140	Nov 5	251	Dec 25 1967
INSTANTANEOUS PEAK FLOW	--	--	8910	Jun 13	19400 ^a	Sep 5 1965
INSTANTANEOUS PEAK STAGE	--	--	15.99	Jun 13	18.74 ^b	Sep 5 1965
ANNUAL RUNOFF (AC-FT)	1398000		1639000		1233000	
10 PERCENT EXCEEDS	3800		6350		3740	
50 PERCENT EXCEEDS	1330		1290		1130	
90 PERCENT EXCEEDS	1180		1190		500	

a Caused by emergency release from Fontenelle Reservoir.

b From floodmarks.



GREEN RIVER BASIN

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1967 to September 1976.

WATER TEMPERATURES: October 1967 to September 1976.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 04...	1340	1150	347	8.6	9.5	8.0	608	11.9	131	140
DEC 16...	1350	1200	350	8.6	3.0	5.0	615	11.6	107	150
JAN 27...	1300	1250	406	8.1	3.5	-1.0	605	10.8	103	170
MAR 22...	1330	1290	446	7.9	4.0	10.0	605	10.2	98	200
APR 28...	1330	1540	440	8.3	8.0	16.0	600	9.4	101	180
MAY 20...	1300	3530	423	8.4	10.0	19.0	610	9.8	109	180
JUN 15...	1300	8550	300	8.3	14.0	19.5	610	9.4	114	140
JUL 14...	1210	3800	265	8.3	17.0	26.0	605	8.0	105	120
AUG 04...	1230	1790	315	8.2	17.0	23.0	610	9.2	120	130
SEP 07...	1415	1290	315	8.5	18.0	18.0	610	8.0	106	130
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
NOV 04...	38	12	15	.6	1.2	128	52	2.6	.2	7.1
DEC 16...	42	12	15	.5	1.3	133	54	2.9	.2	4.9
JAN 27...	47	14	17	.6	1.3	148	67	3.3	.2	6.6
MAR 22...	53	15	19	.6	1.4	151	77	3.8	.2	7.4
APR 28...	49	15	19	.6	2.0	150	77	4.5	.2	6.6
MAY 20...	48	15	17	.6	2.1	164	59	5.4	.2	7.3
JUN 15...	36	11	8.6	.3	1.2	130	27	2.2	.2	7.9
JUL 14...	31	9.7	7.6	.3	1.3	114	22	1.6	.1	7.7
AUG 04...	35	11	12	.4	1.2	122	35	1.2	.1	7.9
SEP 07...	35	11	13	.5	1.3	126	40	1.8	.1	6.9

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV										
04...	204	.28	633	<.01	<.05	<.02	.2	<.05	<.05	.01
DEC										
16...	212	.29	687	.03	<.05	.03	.2	<.05	<.05	.01
JAN										
27...	245	.33	826	<.01	<.05	<.02	.1	<.05	<.05	<.01
MAR										
22...	272	.37	949	.04	.75	.65	.2	<.05	<.05	<.01
APR										
28...	263	.36	1100	<.01	.05	<.02	.3	E.03	<.05	<.01
MAY										
20...	253	.34	2410	<.01	<.05	.02	.3	<.05	<.05	.01
JUN										
15...	172	.23	3980	<.01	<.05	.02	.5	E.04	<.05	.02
JUL										
14...	149	.20	1530	<.01	<.05	<.02	.3	--	<.05	<.01
AUG										
04...	177	.24	854	<.01	<.05	<.02	.2	<.05	<.05	.01
SEP										
07...	185	.25	643	<.01	<.05	<.02	.2	<.05	<.05	.01

LOCATION.--Lat 42°19'01", long 19°29'06", in NW¼ SE¼ NW¼ sec.17, T.27 N., R.106 W., Sublette County, Hydrologic Unit 14040104, on left upstream side of Eden Canal diversion, about 1.0 mi upstream from high-water line of Big Sandy Reservoir, 14.5 mi north of Farson, and 24.5 mi upstream from Little Sandy Creek.

PERIOD OF RECORD.--October 1914 to September 1917, October 1920 to October 1924, October 1926 to September 1934, April 1953 to current year (no winter records since 1971). Prior to October 1968, published as Big Sandy Creek near Farson. Monthly discharge only for some periods, published in WSP 1313.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,770 ft above sea level, from topographic map. Prior to Apr. 28, 1921, nonrecording gage, and Apr. 28, 1921, to Aug. 3, 1934, water-stage recorder at site 0.5 mi upstream at different datum. Apr. 17, 1953, to Nov. 11, 1954, water-stage recorder at site 1.5 mi upstream at different datum.

Oct. 1 32.6

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	2400	890	7.16
June 21	0800	*1060	*7.45
July 5	0300	587	6.50

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e64	192	667	370	96	43
2	---	---	---	---	---	---	e56	136	526	361	92	49
3	---	---	---	---	---	---	e54	150	525	425	85	57
4	---	---	---	---	---	---	e50	144	522	513	82	64
5	---	---	---	---	---	---	e45	116	492	519	78	77
6	---	---	---	---	---	---	e48	99	538	451	77	69
7	---	---	---	---	---	---	e64	89	504	380	74	61
8	---	---	---	---	---	---	e99	100	620	357	75	54
9	---	---	---	---	---	---	e56	130	578	415	69	49
10	---	---	---	---	---	---	49	159	552	333	64	47
11	---	---	---	---	---	---	46	131	500	288	60	44
12	---	---	---	---	---	---	46	114	458	250	59	43
13	---	---	---	---	---	---	47	121	525	221	67	41
14	---	---	---	---	---	---	49	127	604	213	63	41
15	---	---	---	---	---	---	53	118	663	210	55	38
16	---	---	---	---	---	---	50	105	809	212	52	36
17	---	---	---	---	---	---	50	96	836	198	50	36
18	---	---	---	---	---	---	52	94	838	186	48	35
19	---	---	---	---	---	---	55	98	821	168	47	34
20	---	---	---	---	---	---	79	123	889	153	46	37
21	---	---	---	---	---	---	118	156	945	140	45	52
22	---	---	---	---	---	---	104	205	903	133	45	49
23	---	---	---	---	---	---	88	267	838	125	44	47
24	---	---	---	---	---	---	66	407	788	119	44	46
25	---	---	---	---	---	---	70	552	719	111	42	43
26	---	---	---	---	---	---	69	637	690	108	41	40
27	---	---	---	---	---	---	78	679	559	102	40	37
28	---	---	---	---	---	---	99	704	465	96	39	35
29	---	---	---	---	---	---	112	784	412	91	38	34
30	---	---	---	---	---	---	180	810	409	105	39	34
31	---	---	---	---	---	---	---	789	---	100	41	---
TOTAL	---	---	---	---	---	---	2096	8432	19195	7453	1797	1372
MEAN	---	---	---	---	---	---	69.9	272	640	240	58.0	45.7
MAX	---	---	---	---	---	---	180	810	945	519	96	77
MIN	---	---	---	---	---	---	45	89	409	91	38	34
AC-FT	---	---	---	---	---	---	4160	16720	38070	14780	3560	2720

MEAN	30.2	21.2	13.2	11.1	12.1	21.8	60.3	237	426	181	50.5	30.9
MAX	75.6	41.0	21.7	22.9	26.0	46.7	148	454	905	510	155	83.9
(WY)	1928	1934	1969	1969	1969	1967	1983	1928	1986	1995	1930	1927
MIN	8.90	9.17	3.00	.30	.10	2.98	22.1	89.1	55.5	14.3	8.48	2.07
(WY)	1932	1961	1960	1960	1960	1961	1975	1933	1934	1934	1931	1931

09213500 BIG SANDY RIVER NEAR FARSON, WY--Continued

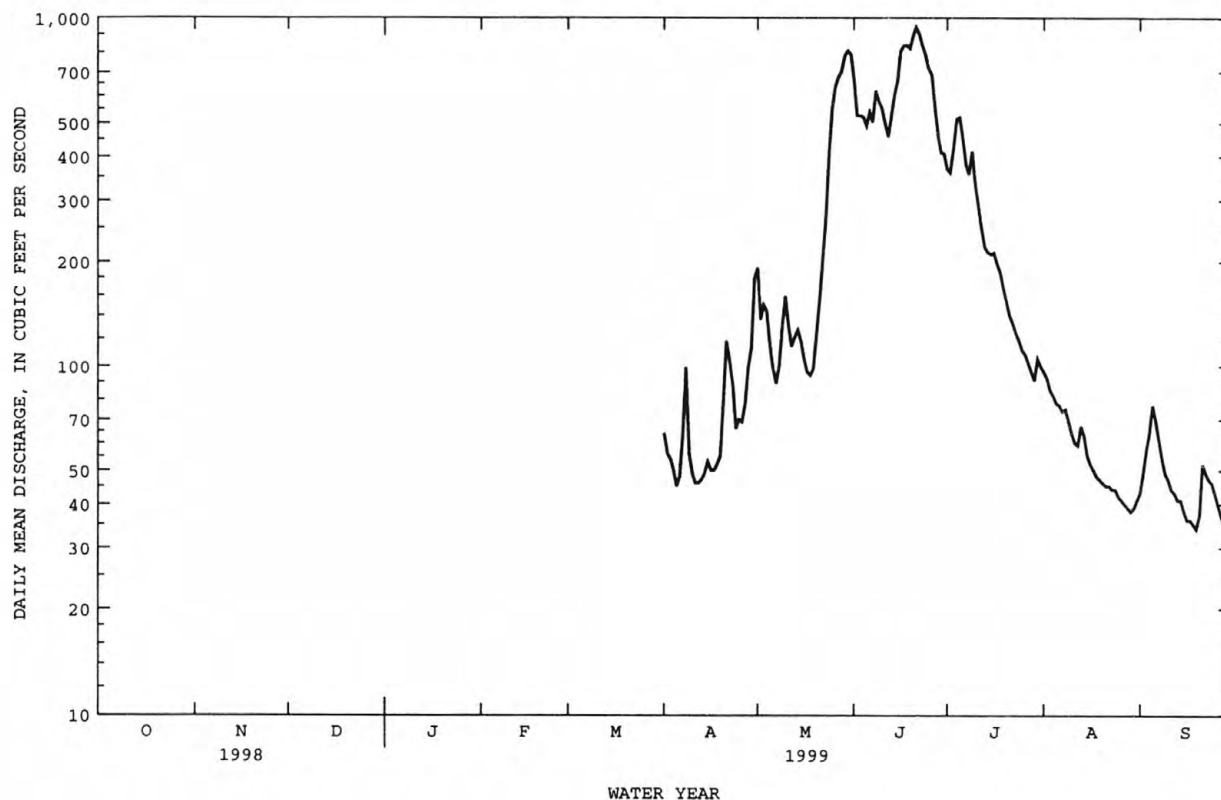
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1915 - 1999*

ANNUAL MEAN	--		86.7	
HIGHEST ANNUAL MEAN	--		148	1917
LOWEST ANNUAL MEAN	--		33.0	1934
HIGHEST DAILY MEAN	945	Jun 21	1690	Jun 4 1986
LOWEST DAILY MEAN	34	Sep 19, 29, 30	.00	Jan 27-31 1963
INSTANTANEOUS PEAK FLOW	1060	Jun 21	1890	Jun 3 1986
INSTANTANEOUS PEAK STAGE	7.45	Jun 21	8.46	Jun 3 1986
ANNUAL RUNOFF (AC-FT)	--		62800	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.
e Estimated.



GREEN RIVER BASIN

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY

LOCATION.--Lat 42°14'57", long 109°25'43", in NE¹/₄ NW¹/₄ NW¹/₄ sec.11, T.26 N., R.106 W., Sweetwater County, Hydrologic Unit 14040104, 10.1 mi north of Farson and 20.5 mi upstream from Little Sandy Creek.

DRAINAGE AREA.--386 mi².

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

REVISED. --WDR WY-98-1: 1996, 1997.

GAGE.--Water-stage recorder. Datum of gage is 6,770.00 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except those for estimated contents, which are poor. Reservoir is formed by an earthfill dam, storage began in April 1953. Total capacity, 54,385 acre-ft at elevation 6,762.8 ft, crest of spillway, including 1,425 acre-ft of dead storage in a permanent pool at elevation 6,720.0 ft, trash-rack sill. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent active storage. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents recorded, 41,400 acre-ft, June 12, 1997, elevation, 6,758.71 ft, June 12, 1997; minimum contents recorded, 920 acre-ft, Sept. 15, 1988, elevation, 6,724.66 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, e39,400 acre-ft, July 5, elevation, (**); minimum contents recorded, 15,600 acre-ft, Sept. 16-18, elevation, 6,746.09 ft.

Capacity table (elevation, in feet,
and contents, in acre-feet)

6,720	0	6,740	8,655	6,760	44,905
6,730	2,545	6,750	22,155		

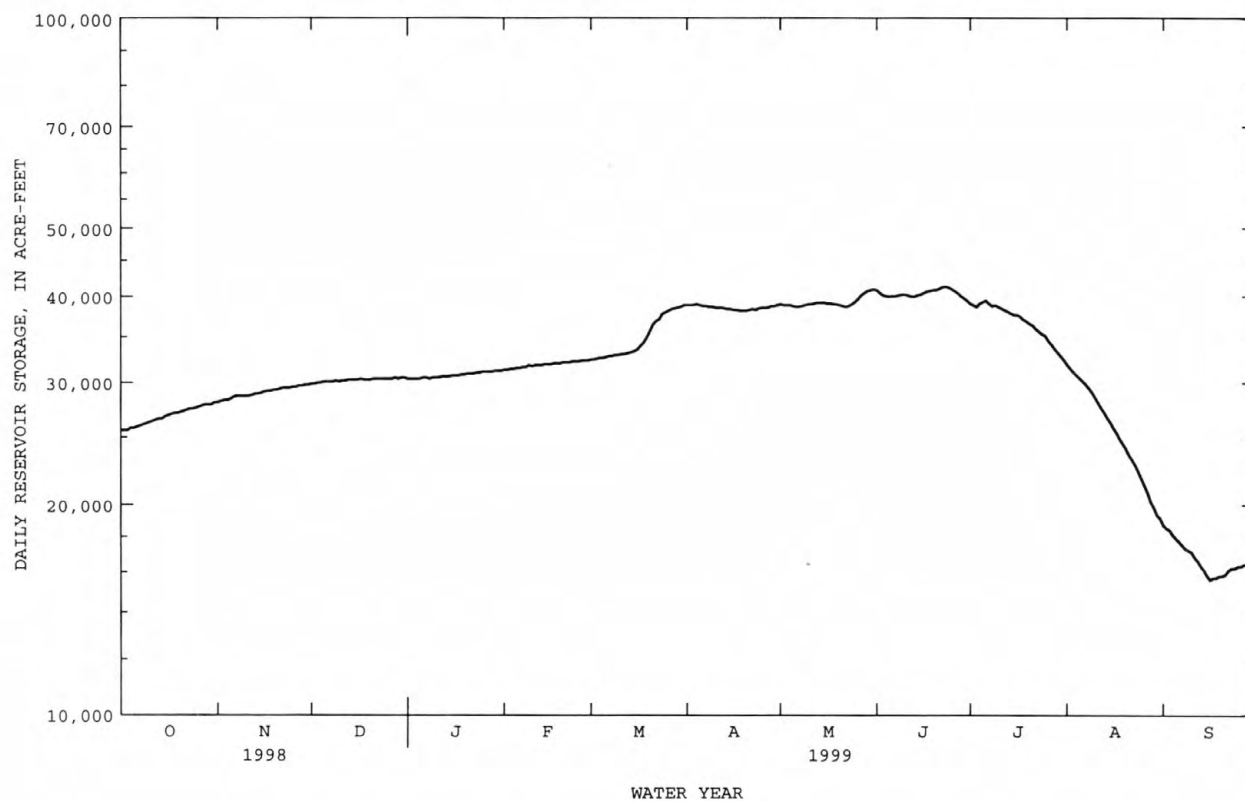
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25600	28100	e29900	30400	31300	32400	38800	38900	40800	e39000	31900	18700
2	25600	28200	e29900	30400	31300	32400	38800	38800	40400	e38800	31500	18500
3	25600	28300	e30000	30400	31400	32500	38800	38800	40100	e38600	31100	e18400
4	25800	28300	e30000	30400	31400	32600	38900	38800	40000	e39000	30800	e18100
5	25800	28400	e30100	30400	31500	32600	38800	38700	39900	e39200	30500	e17900
6	25900	28600	e30100	30500	31500	32700	38700	38600	40000	e39400	30200	e17700
7	26000	28700	e30100	30500	31600	32800	38700	38600	40000	e39000	29900	e17500
8	26100	28700	30100	30400	31600	32800	38600	38700	40100	e38700	29500	e17300
9	26200	28700	30200	30500	31800	32900	38600	38800	40200	e38800	29100	e17200
10	26300	28700	30100	30500	31700	32900	38500	38900	40200	e38600	28600	e17100
11	26400	28700	30200	30500	31800	33000	38500	38900	40100	e38400	28100	16800
12	26500	28800	30200	30600	31800	33000	38500	39000	39900	e38200	27600	16600
13	26600	28900	30300	30600	31800	33100	38400	39100	39900	e38000	27200	16300
14	26600	28900	30300	30600	31900	33200	38300	39100	e40100	e37800	26700	16100
15	26800	29000	30300	30700	31900	33300	38300	39100	e40200	e37600	26300	15800
16	26900	29100	30300	30700	31900	33500	38200	39000	e40400	e37600	25800	15600
17	27000	29200	30400	30700	32000	33900	38200	39000	e40600	e37400	25400	15700
18	27100	29200	30300	30800	32000	34300	38100	38900	e40700	e37000	24900	15700
19	27100	29300	30300	30800	32000	34900	38100	38900	e40800	e36800	24500	15800
20	27200	29300	30300	30900	32100	35600	38100	38800	e40800	e36500	24100	15800
21	27300	29400	30400	30900	32100	36400	38200	38700	e41000	e36300	23600	15900
22	27400	29500	30400	30900	32100	36800	38300	38600	e41200	35900	23200	16100
23	27500	e29500	30400	31000	32200	37000	38200	38700	e41300	35600	22800	16200
24	27500	e29500	30400	31000	32200	37700	38400	38900	e41200	35300	22300	16200
25	27600	e29600	30400	31100	32200	37900	38500	39200	e41000	35100	21800	16300
26	27700	e29600	30400	31100	32300	38100	38500	39600	e40700	34500	21300	16300
27	27800	e29700	30400	31100	32300	38300	38500	40100	e40400	34100	20800	16400
28	27900	e29700	30500	31100	32300	38400	38700	40400	e40000	33600	20200	16400
29	27900	e29800	30400	31200	---	38500	38700	40700	e39700	33200	19800	16500
30	27900	e29800	30500	31200	---	38600	38800	40800	e39400	32800	19300	16500
31	28100	---	30500	31200	---	38800	---	40900	---	32400	19100	---
MAX	28100	29800	30500	31200	32300	38800	38900	40900	41300	39400	31900	18700
MIN	25600	28100	29900	30400	31300	32400	38100	38600	39400	32400	19100	15600
(#)	6,753.0	**	6,754.1	6,754.5	6,755.0	6,757.7	6,757.7	6,758.5	**	6,755.0	6,748.2	6,746.7
(*)	+2,600	+1,700	+700	+700	+1,100	+6,500	0	+2,100	-1,500	-7,000	-13,300	-2,600

CAL YR 1998 MAX 39300 MIN 22400 (*)+8,000
WTR YR 1999 MAX 41300 MIN 15600 (*)-9,000

(#) Elevation, in feet, at end of month.
(*) Change in contents, in acre-feet.
(**) Unknown.
(e) Estimated.

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY--Continued



GREEN RIVER BASIN

09215550 BIG SANDY RIVER BELOW FARSON, WY

LOCATION.--Lat 42°04'24", long 109°28'43", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.12, T.24 N., R.107 W., Sweetwater County, Hydrologic Unit 14040104, on left bank 2.7 mi northwest of Eden, 3.0 mi southwest of Farson, and 3.8 mi downstream from Little Sandy Creek

DRAINAGE AREA.--1,097 mi², of which 12.9 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1981 to September 1999 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 19,300 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	29	25	e11	e6.4	e9.3	61	176	520	247	77	58
2	38	29	25	e10	e6.1	e9.0	64	164	464	217	73	57
3	38	28	26	e9.2	e6.6	e8.6	76	145	369	191	69	66
4	39	29	28	e8.5	e7.2	e9.5	79	101	312	177	64	68
5	37	28	e28	e10	e7.4	e8.4	76	99	292	201	61	66
6	35	29	e25	e9.5	e6.4	e7.1	76	98	267	247	66	67
7	36	33	e17	e9.0	e7.0	e8.0	76	73	273	246	67	64
8	35	30	e13	e8.6	e7.4	e9.5	71	67	286	175	69	57
9	34	e28	e14	e8.2	e7.9	e11	71	70	309	131	65	54
10	33	e36	e11	e7.6	e8.0	e14	76	75	306	116	61	52
11	32	e37	e11	e7.8	e4.5	e16	71	78	305	105	63	54
12	33	e37	e12	e8.2	e5.6	e21	65	84	289	89	68	52
13	34	e35	e12	e9.0	e6.2	e30	59	100	251	77	66	50
14	32	e37	e12	e8.5	e6.8	e52	52	115	244	72	69	50
15	31	e39	e12	e8.0	e7.3	e60	47	120	279	66	69	52
16	34	e37	e13	e8.0	e6.8	e64	46	118	317	74	67	57
17	36	e40	e14	e8.2	e6.1	e71	44	103	373	102	63	54
18	36	e42	e14	e8.8	e5.8	e100	43	86	427	108	54	49
19	34	e36	e12	e8.2	e5.4	e170	43	74	463	109	57	49
20	34	e35	e9.5	e7.0	e5.1	e190	43	68	477	99	57	52
21	33	e33	e7.4	e8.4	e5.4	e210	41	60	509	92	57	51
22	32	e31	e7.0	e8.2	e6.0	e230	38	57	579	85	60	49
23	32	e31	e8.0	e8.2	e6.5	213	35	52	687	81	58	51
24	32	29	e7.2	e8.5	e7.5	176	38	46	706	79	58	52
25	32	e30	e8.0	e9.1	e8.7	171	42	46	691	80	58	52
26	32	e32	e9.1	e8.0	e8.2	151	51	73	627	80	58	49
27	35	e34	e11	e6.8	e7.6	134	58	137	576	79	53	48
28	34	e30	e10	e3.9	e8.2	103	57	238	492	74	55	48
29	32	e27	e11	e4.5	---	69	75	326	386	73	56	42
30	30	26	e12	e5.2	---	55	151	410	292	68	53	33
31	30	---	e13	e5.8	---	52	---	488	---	74	56	---
TOTAL	1053	977	437.2	249.9	188.1	2432.4	1825	3947	12368	3714	1927	1603
MEAN	34.0	32.6	14.1	8.06	6.72	78.5	60.8	127	412	120	62.2	53.4
MAX	39	42	28	11	8.7	230	151	488	706	247	77	68
MIN	30	26	7.0	3.9	4.5	7.1	35	46	244	66	53	33
AC-FT	2090	1940	867	496	373	4820	3620	7830	24530	7370	3820	3180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999, BY WATER YEAR (WY)

	MEAN	26.0	26.0	13.5	8.58	10.6	68.8	66.7	56.0	134	78.6	43.5	35.3
MAX	51.4	105	39.2	30.5	37.8	372	224	138	515	309	78.9	53.9	
(WY)	1984	1984	1984	1984	1982	1997	1985	1983	1986	1995	1984	1984	
MIN	11.4	7.24	3.82	.34	2.17	6.77	15.7	7.62	14.7	17.9	18.8	17.5	
(WY)	1991	1990	1990	1991	1990	1988	1989	1990	1989	1989	1989	1994	

09215550 BIG SANDY RIVER BELOW FARSON, WY--Continued

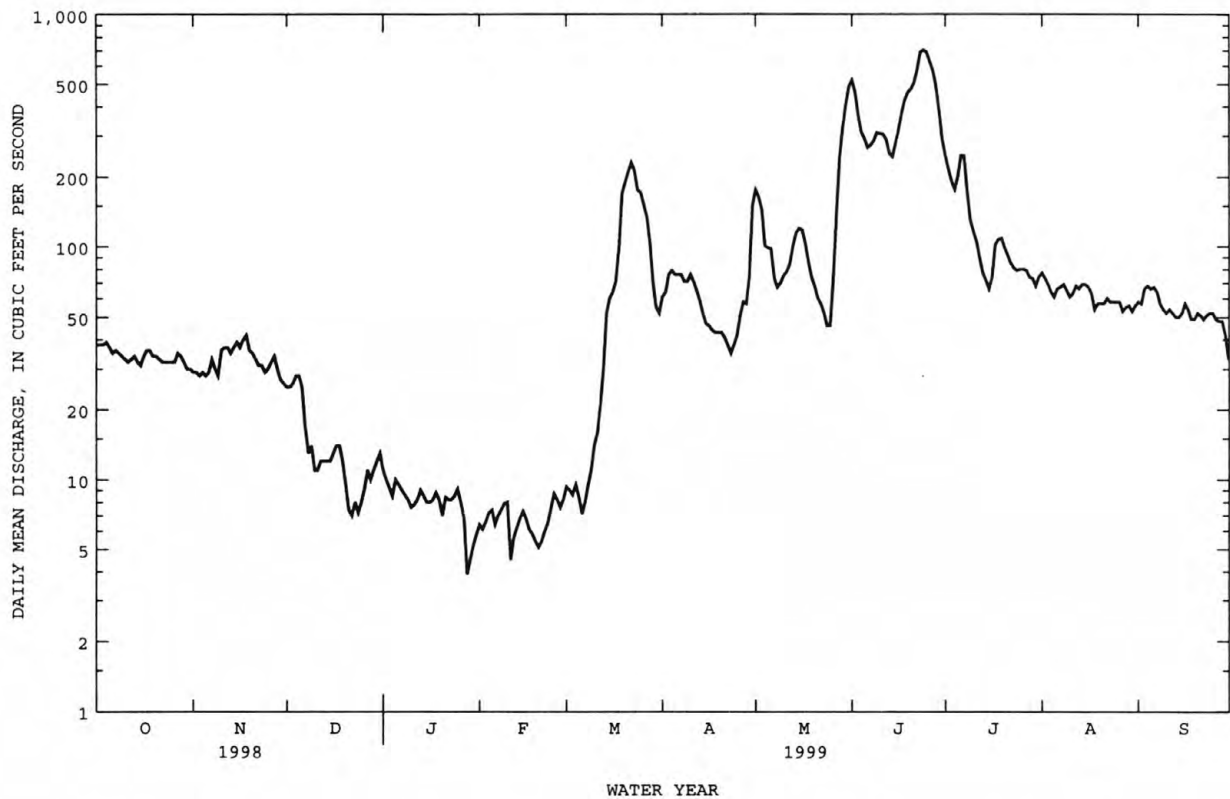
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1981 - 1999	
ANNUAL TOTAL	13962.9		30721.6		--	
ANNUAL MEAN	38.3		84.2		48.1	
HIGHEST ANNUAL MEAN	--		--		97.7	
LOWEST ANNUAL MEAN	--		--		12.0	
HIGHEST DAILY MEAN	190	Mar 27	706	Jun 24	1410	Mar 21 1997
LOWEST DAILY MEAN	7.0	Dec 22	3.9	Jan 28	.00	Dec 23-27 1990,
ANNUAL SEVEN-DAY MINIMUM	8.0	Dec 20	5.5	Jan 28		Jan 22 to
						Feb 4 1991
						Jan 22 1991
INSTANTANEOUS PEAK FLOW	--		721 ^a	Jun 24	1690 ^b	Mar 21 1997
INSTANTANEOUS PEAK STAGE	--		5.51 ^c	Mar 18	8.30 ^c	Mar 12 1995
ANNUAL RUNOFF (AC-FT)	27700		60940		34850	
10 PERCENT EXCEEDS	62		240		75	
50 PERCENT EXCEEDS	34		49		25	
90 PERCENT EXCEEDS	11		8.0		7.0	

a Gage height, 5.24 ft.

b Gage height, 7.40 ft.

c Backwater from ice.

e Estimated.



GREEN RIVER BASIN

09215550 BIG SANDY RIVER BELOW FARSON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982 to January 1999 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1981 to September 1986.

WATER TEMPERATURES: December 1981 to September 1986.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV												
05...	1100	28	2300	8.6	4.0	5.0	600	12.3	120	620	160	54
DEC												
17...	0830	14	2640	7.8	0.0	-5.5	607	10.7	93	760	200	63
JAN												
28...	1255	3.9	2350	7.6	0.0	-14.0	605	8.7	76	740	190	61
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV												
05...	310	5	2.9	236	940	43	.9	9.8	1660	2.25	125	
DEC												
17...	340	5	2.6	281	1100	54	.9	14	1980	2.69	74.7	
JAN												
28...	300	5	2.4	238	1000	41	.9	14	1800	2.44	18.9	

09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY

LOCATION.--Lat 41°56'51", long 109°41'15", in NW¹/₄ NW¹/₄ NW¹/₄ sec.29, T.23 N., R.108 W., Sweetwater County, Hydrologic Unit 14040104, on right bank 20 ft downstream from Gasson Bridge and 14.5 mi southwest of Eden.

DRAINAGE AREA.--1,720 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map. Prior to June 10, 1998, at site 1,250 ft upstream at present datum.

REMARKS.--Records good except those for Mar. 14-19, which are fair and those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 19,300 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	66	58	e48	e32	e40	75	230	533	307	117	97
2	67	64	57	e46	e32	e38	70	231	519	251	121	96
3	71	63	55	e44	e33	e37	84	220	442	214	119	105
4	76	63	55	e42	e34	e38	96	177	377	193	117	117
5	74	64	46	e44	e35	e36	101	141	341	204	113	115
6	71	68	e44	e44	e33	e34	98	146	331	252	115	118
7	70	65	e40	e43	e34	e37	94	123	308	285	104	118
8	70	66	e40	e40	e35	e39	96	105	321	235	112	115
9	69	56	e42	e38	e36	e41	93	101	332	163	113	104
10	67	47	e40	e39	e35	e44	98	109	347	140	109	98
11	67	57	e43	e41	e26	e46	97	109	343	125	106	94
12	65	60	e47	e42	e29	e50	91	119	346	117	109	96
13	66	58	e52	e44	e32	e56	83	153	315	102	104	93
14	68	60	e52	e41	e33	63	81	150	282	100	102	92
15	68	60	e50	e38	e34	70	71	152	308	111	103	87
16	76	62	e51	e37	e33	73	62	169	329	106	104	95
17	77	65	e54	e37	e32	77	61	148	364	130	104	104
18	76	65	e54	e38	e31	113	56	128	419	153	96	84
19	73	58	e52	e37	e30	193	58	111	470	156	89	84
20	72	53	e45	e33	e28	208	58	101	495	151	94	87
21	71	53	e40	e35	e30	231	58	91	522	141	95	80
22	68	e52	e37	e35	e32	321	56	87	574	132	100	78
23	69	e50	e39	e35	e34	278	62	85	666	122	101	75
24	69	e49	e38	e36	e37	231	66	78	714	115	97	81
25	70	e50	e41	e37	e40	210	80	70	720	121	95	79
26	69	51	e43	e35	e38	187	93	80	673	122	93	74
27	71	53	e45	e33	e36	168	93	127	618	121	88	74
28	83	59	e44	e25	e37	141	100	205	554	109	86	73
29	73	58	e47	e28	---	101	97	310	460	108	94	71
30	70	59	e49	e30	---	80	143	395	373	112	93	58
31	65	---	e50	e31	---	70	---	484	---	118	94	---
TOTAL	2189	1754	1450	1176	931	3351	2471	4935	13396	4816	3187	2742
MEAN	70.6	58.5	46.8	37.9	33.2	108	82.4	159	447	155	103	91.4
MAX	83	68	58	48	40	321	143	484	720	307	121	118
MIN	65	47	37	25	26	34	56	70	282	100	86	58
AC-FT	4340	3480	2880	2330	1850	6650	4900	9790	26570	9550	6320	5440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1999, BY WATER YEAR (WY)

	MEAN	62.9	55.2	39.0	31.7	34.3	87.7	115	156	112	82.0	74.9
MAX	102	149	60.4	55.5	74.0	393	462	208	627	340	119	100
(WY)	1984	1984	1976	1984	1982	1997	1980	1984	1986	1995	1983	1983
MIN	36.0	31.5	22.1	17.4	16.4	36.4	28.3	19.7	29.4	30.5	32.4	40.3
(WY)	1990	1991	1991	1990	1993	1976	1990	1990	1990	1989	1989	1989

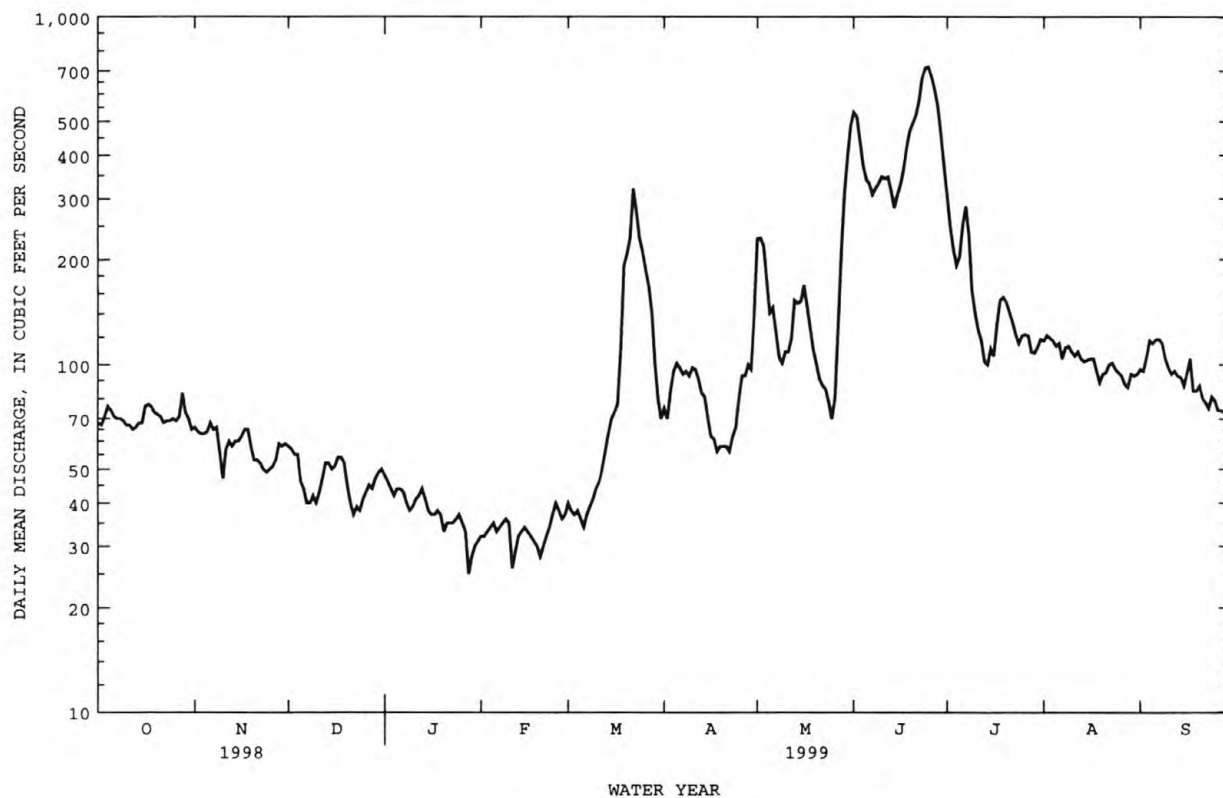
GREEN RIVER BASIN

09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1972 - 1999	
ANNUAL TOTAL	24966		42398		--	
ANNUAL MEAN	68.4		116		76.6	
HIGHEST ANNUAL MEAN	--		--		139	
LOWEST ANNUAL MEAN	--		--		30.6	
HIGHEST DAILY MEAN	222	Mar 27	720	Jun 25	5530	Apr 24 1980
LOWEST DAILY MEAN	23	Jan 7	25	Jan 28	7.0	Dec 24 1990
ANNUAL SEVEN-DAY MINIMUM	26	Jan 4	30	Jan 27	11	Dec 22 1990
INSTANTANEOUS PEAK FLOW	--	--	728	Jun 25	7430 ^a	Apr 24 1980
INSTANTANEOUS PEAK STAGE	--	--	5.96	Jun 25	10.58	Apr 24 1980
ANNUAL RUNOFF (AC-FT)	49520		84100		55490	
10 PERCENT EXCEEDS	101		280		115	
50 PERCENT EXCEEDS	65		76		56	
90 PERCENT EXCEEDS	31		36		29	

^a From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow.

^e Estimated.



09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1975 to January 1980, June 1981 to January 1999.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to September 1986.

WATER TEMPERATURES: October 1981 to September 1986.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV 04...	1145	64	3280	8.3	5.0	5.0	610	10.8	107	990	210	120
DEC 16...	1200	51	3780	8.2	0.0	-3.0	615	11.5	99	1200	260	140
JAN 28...	1055	25	3860	7.9	0.0	-15.0	610	10.0	87	1300	250	160

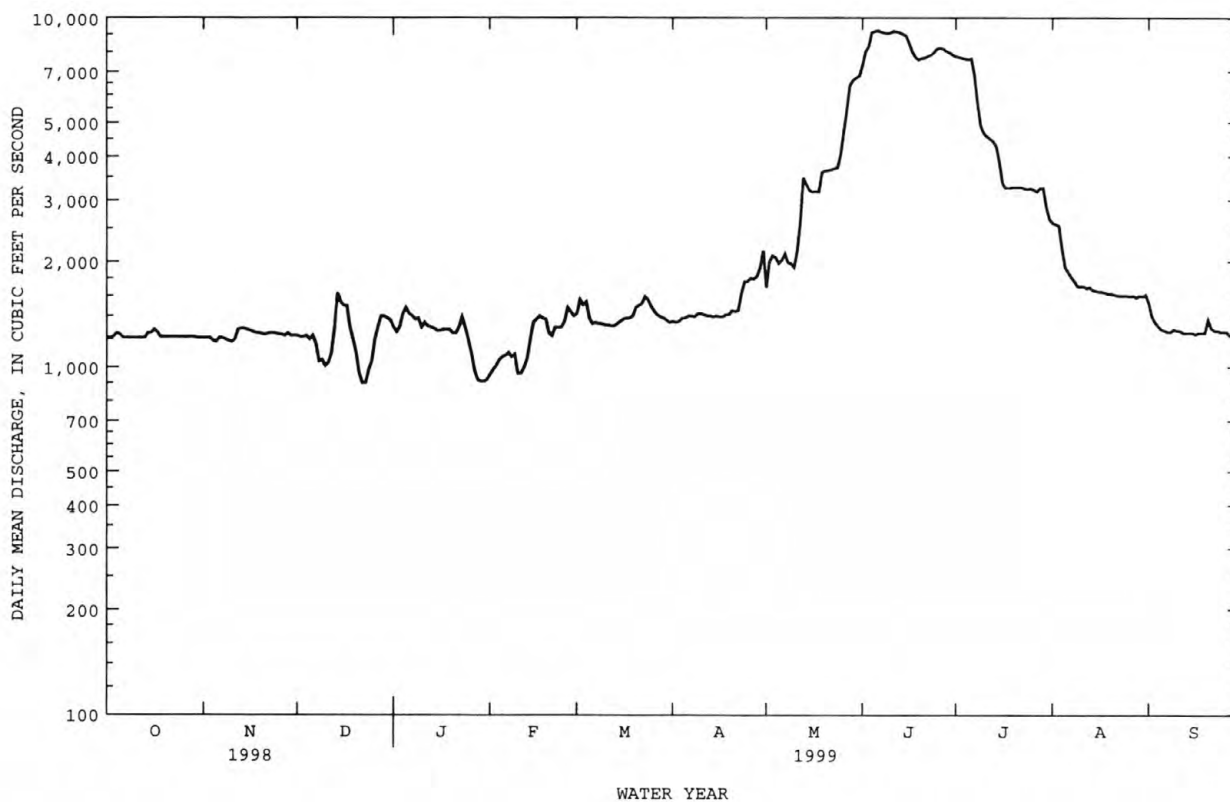
DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
NOV 04...	450	6	3.2	266	1600	38	.9	10	2560	3.49	443
DEC 16...	500	6	3.7	295	1900	43	1.0	14	3080	4.18	424
JAN 28...	550	7	3.6	298	2100	42	1	14	3270	4.45	221

09217000 GREEN RIVER NEAR GREEN RIVER, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1952 - 1999
ANNUAL TOTAL	722000	866070	--
ANNUAL MEAN	1978	2373	1713
HIGHEST ANNUAL MEAN	--	--	3089
LOWEST ANNUAL MEAN	--	--	689
HIGHEST DAILY MEAN	7010	9220	16700
LOWEST DAILY MEAN	900	900	170
ANNUAL SEVEN-DAY MINIMUM	1010	939	214
INSTANTANEOUS PEAK FLOW	--	9410	16800 ^a
INSTANTANEOUS PEAK STAGE	--	5.95	8.53
ANNUAL RUNOFF (AC-FT)	1432000	1718000	1241000
10 PERCENT EXCEEDS	3700	7020	3800
50 PERCENT EXCEEDS	1370	1380	1100
90 PERCENT EXCEEDS	1210	1200	450

a Caused by emergency release from Fontenelle Reservoir.

e Estimated.



GREEN RIVER BASIN

09217000 GREEN RIVER NEAR GREEN RIVER, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1951 to September 1992.

WATER TEMPERATURES: May 1951 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE: May 1951 to September 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV 05...	0725	1180	534	8.7	6.0	0.0	610	10.1	102	180	44	17
JAN 27...	1515	980	553	8.5	0.0	-1.0	610	11.3	97	220	55	19
MAR 24...	1425	1570	574	8.5	6.0	15.0	615	10.1	101	210	54	19
MAY 21...	0915	3650	497	8.6	12.0	10.0	615	8.8	102	190	47	17
JUL 15...	0715	3880	330	8.4	16.0	16.0	615	7.8	98	130	34	11
SEP 09...	1030	1280	467	8.9	14.5	11.0	620	8.5	103	160	39	16

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV 05...	39	1	1.3	138	130	5.4	.3	5.6	324	.44	1030
JAN 27...	36	1	1.9	160	130	6.1	.2	6.4	349	.47	924
MAR 24...	46	1	1.6	159	140	6.9	.2	6.9	370	.50	1570
MAY 21...	26	.8	2.2	167	90	6.2	.2	6.5	295	.40	2910
JUL 15...	15	.6	1.2	119	45	2.5	.1	6.5	187	.25	1960
SEP 09...	32	1	1.3	134	110	4.7	.2	5.4	288	.39	995

09217010 GREEN RIVER BELOW GREEN RIVER, WY

LOCATION.--Lat 41°29'46", long 109°26'17", in SW¹/₄ SE¹/₄ NW¹/₄ sec.36, T.18 N., R.107 W., Sweetwater County, Hydrologic Unit 14040106, at bridge on county road, 1.7 mi downstream from Bitter Creek, 2.7 mi southeast of town of Green River, and 3.3 mi upstream from Logan Draw.

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV												
05...	0855	1190	590	6.0	3.0	<.01	.09	<.02	.2	<.05	<.05	.02
JAN												
27...	1620	980	620	.0	-2.0	<.01	.09	.04	.3	.04	<.05	.02
MAR												
24...	1600	1580	658	6.5	16.0	<.01	.14	.03	.5	.20	<.05	.01
MAY												
21...	1110	3660	543	12.5	13.0	<.01	<.05	<.02	.5	.11	E.04	.01
JUL												
15...	1000	3890	400	17.0	19.5	<.01	.08	<.02	.4	<.05	<.05	.01
SEP												
09...	0850	1290	570	14.5	8.5	<.01	.12	.02	.3	E.04	E.03	.03

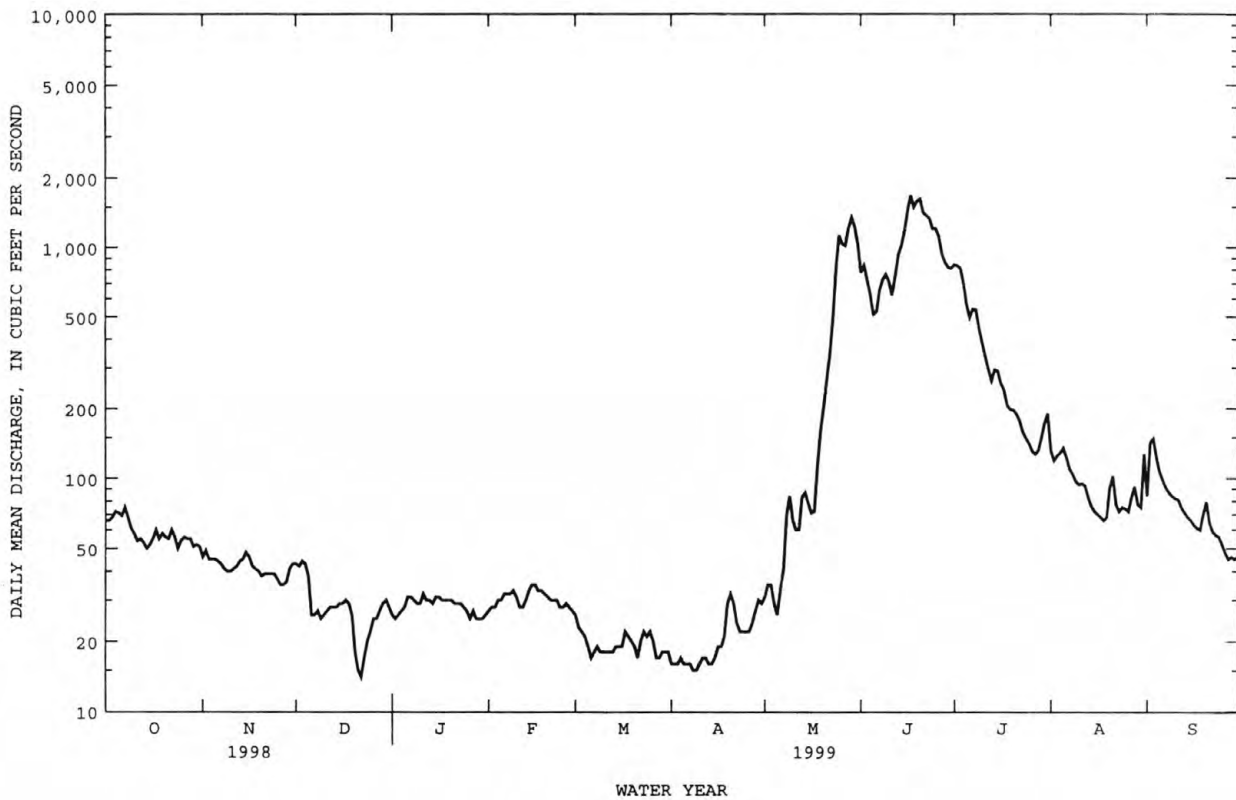
E Estimated.

09217900 BLACKS FORK NEAR ROBERTSON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	74040		64173		--	
ANNUAL MEAN	203		176		166	
HIGHEST ANNUAL MEAN	--		--		228	1983
LOWEST ANNUAL MEAN	--		--		79.3	1977
HIGHEST DAILY MEAN	1640	Jun 30	1680	Jun 17	1880	Jun 19 1983
LOWEST DAILY MEAN	14	Dec 22	14	Dec 22	3.2	Apr 2 1994
ANNUAL SEVEN-DAY MINIMUM	19	Feb 20	16	Apr 3	3.9	Apr 2 1994
INSTANTANEOUS PEAK FLOW	--		2030	Jun 20	2480 ^a	Jun 19 1983
INSTANTANEOUS PEAK STAGE	--		4.58	Jun 20	5.17	Jun 15 1995
ANNUAL RUNOFF (AC-FT)	146900		127300		120300	
10 PERCENT EXCEEDS	620		705		516	
50 PERCENT EXCEEDS	55		45		46	
90 PERCENT EXCEEDS	21		19		21	

a Gage height, 4.91 ft, site and datum then in use.

e Estimated.



GREEN RIVER BASIN

09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 41°03'15", long 110°23'52", in NE¹/₄ NW¹/₄ NE¹/₄ sec.5, T.12 N., R.115 W., Uinta County, Hydrologic Unit 14040107, Wasatch National Forest, on left bank 60 ft downstream from bridge, 1.0 mi upstream from Gilbert Creek, 6.1 mi downstream from State Line Reservoir, and 9.0 mi south of Robertson.

DRAINAGE AREA.--53.0 mi².

PERIOD OF RECORD.--July 1939 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1313. Prior to Oct. 1, 1978, published as East Fork of Smith Fork near Robertson.

REVISED RECORDS.--WSP 979: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,470 ft above sea level, from topographic map. Prior to July 12, 1957, at datum 3.96 ft higher.

REMARKS.--Records fair. Flow completely regulated by State Line Reservoir, 6.1 mi upstream, total capacity, 14,000 acre-ft, dead storage is about 2,000 acre-ft, since May 1979. Result of discharge measurement, in cubic feet per second, made during the period when the station was not in operation is given below:

Oct. 9 . . . 34.2

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e14	322	186	100	87
2	---	---	---	---	---	---	---	e14	271	185	100	92
3	---	---	---	---	---	---	---	e14	223	186	89	92
4	---	---	---	---	---	---	---	13	223	186	84	91
5	---	---	---	---	---	---	---	11	218	168	83	90
6	---	---	---	---	---	---	---	10	213	146	84	90
7	---	---	---	---	---	---	---	11	163	140	83	90
8	---	---	---	---	---	---	---	14	161	152	83	89
9	---	---	---	---	---	---	---	11	158	156	83	89
10	---	---	---	---	---	---	---	9.2	121	143	83	90
11	---	---	---	---	---	---	---	10	121	142	83	89
12	---	---	---	---	---	---	---	9.0	121	142	83	88
13	---	---	---	---	---	---	---	13	121	154	82	88
14	---	---	---	---	---	---	---	13	123	162	81	79
15	---	---	---	---	---	---	---	11	123	162	81	70
16	---	---	---	---	---	---	---	11	123	164	81	69
17	---	---	---	---	---	---	---	11	123	164	68	69
18	---	---	---	---	---	---	---	15	147	163	61	69
19	---	---	---	---	---	---	---	17	372	163	66	71
20	---	---	---	---	---	---	---	22	568	153	73	69
21	---	---	---	---	---	---	---	33	446	150	72	68
22	---	---	---	---	---	---	---	34	397	150	72	68
23	---	---	---	---	---	---	---	35	360	149	72	68
24	---	---	---	---	---	---	---	69	296	149	80	68
25	---	---	---	---	---	---	---	152	276	148	85	68
26	---	---	---	---	---	---	---	263	264	148	84	68
27	---	---	---	---	---	---	---	317	234	117	85	68
28	---	---	---	---	---	---	---	310	207	101	86	68
29	---	---	---	---	---	---	---	309	194	103	85	68
30	---	---	---	---	---	---	---	315	186	103	84	68
31	---	---	---	---	---	---	---	320	---	102	83	---
TOTAL	---	---	---	---	---	---	---	2410.2	6875	4637	2519	2341
MEAN	---	---	---	---	---	---	---	77.7	229	150	81.3	78.0
MAX	---	---	---	---	---	---	---	320	568	186	100	92
MIN	---	---	---	---	---	---	---	9.0	121	101	61	68
AC-FT	---	---	---	---	---	---	---	4780	13640	9200	5000	4640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	15.9	10.9	8.10	7.15	7.19	8.00	19.3	105	216	106	42.4	28.0
MAX	34.8	19.0	16.9	16.4	13.4	15.0	90.0	221	628	374	120	91.2
(WY)	1962	1952	1966	1966	1966	1943	1946	1974	1983	1975	1965	1995
MIN	5.21	5.50	2.11	1.34	1.55	2.14	3.71	26.6	59.3	15.9	6.64	6.68
(WY)	1957	1957	1963	1963	1963	1963	1982	1983	1954	1940	1940	1956

09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY--Continued

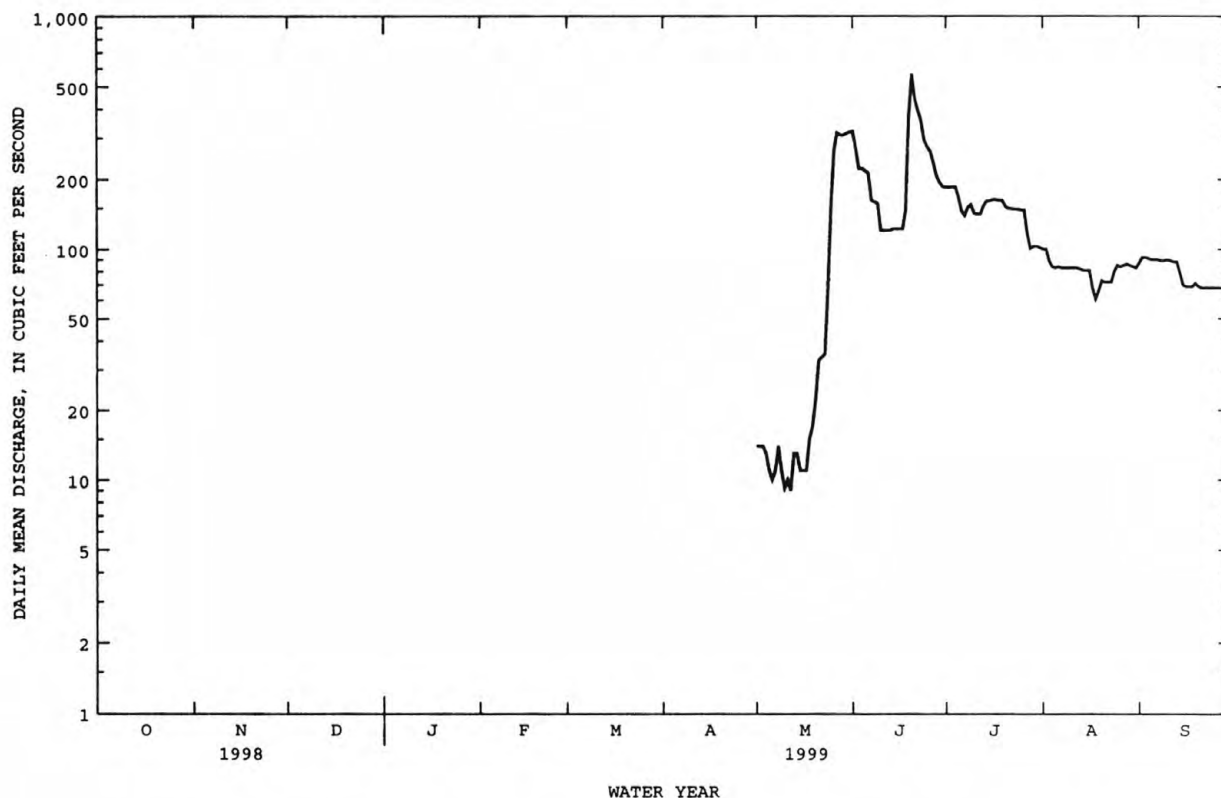
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1939 - 1999*

ANNUAL MEAN	--		47.1	
HIGHEST ANNUAL MEAN	--		88.9	1965
LOWEST ANNUAL MEAN	--		25.4	1954
HIGHEST DAILY MEAN	568	Jun 20	1200	Jun 24 1983
LOWEST DAILY MEAN	9.0	May 12	1.0	Dec 17 1962
INSTANTANEOUS PEAK FLOW	707	Jun 20	1450	Jun 10 1965
INSTANTANEOUS PEAK STAGE	6.17	Jun 20	6.75	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		34160	

* All statistics, except HIGHEST and LOWEST DAILY MEANS, and INSTANTANEOUS PEAK FLOW and STAGE, are based on period(s) using complete water years only.
e Estimated.



GREEN RIVER BASIN

09222000 BLACKS FORK NEAR LYMAN, WY

LOCATION.--Lat 41°27'08", long 110°10'20", in SW¹/₄ NW¹/₄ SW¹/₄ sec.15, T.17 N., R.113 N., Uinta County, Hydrologic Unit 14040107, 200 ft downstream from bridge on old U.S. Highway 30S, 8.5 mi downstream from Smiths Fork, and 11 mi northeast of Lyman.

DRAINAGE.--821 mi².

PERIOD OF RECORD.--Water years 1962 to 1989, October 1995 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1962 to September 1983.

WATER TEMPERATURES: May 1962 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
NOV 25...	0845	91	1330	8.5	0.0	-5.5	610	11.1	95	K5	194	48
MAR 24...	0930	218	940	8.7	5.0	10.0	605	10.0	99	K10	548	323
JUN 16...	1030	305	1060	8.5	17.0	20.0	610	7.5	98	220	253	208
AUG 05...	0915	130	1260	8.4	18.0	22.0	610	7.4	99	110	84	29

K Results based on colony count outside the acceptable range (non-ideal colony count).

LOCATION.--Lat 42°06'38", long 110°42'32", in NE¹/₄ SE¹/₄ NW¹/₄ sec.35, T.25 N., R.117 W., Lincoln County, Hydrologic Unit 14040107, on left bank 2.0 mi downstream from Pole Creek, 4.6 mi upstream from Taylor Creek, and 22 mi northwest of Frontier.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1970, published as "near Elk Creek ranger station."

GAGE.--Water-stage recorder. Elevation of gage is 7,455 ft above sea level, from topographic map. October 1952 to Sept. 2, 1971, at site 270 ft upstream at present datum, Sept. 3, 1971, to July 30, 1980, at site 150 ft upstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station. National Weather Service data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 1	0030	432	4.33
May 8	2200	471	4.42
May 25	0730	*1,180	*5.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	26	e19	e16	e17	e14	e21	380	753	295	62	40
2	29	25	e19	e16	e17	e13	e20	369	711	280	59	37
3	38	24	e20	e15	e18	e13	e19	302	767	264	56	44
4	42	24	e21	e14	e18	e12	e21	225	716	251	55	46
5	35	23	e23	e13	e19	e12	e24	179	754	236	57	41
6	33	23	e22	e14	e20	e11	e28	159	709	218	58	37
7	33	e22	e21	e14	e19	e11	e30	213	823	198	55	33
8	32	e24	e16	e15	e19	e11	e30	360	795	184	53	32
9	30	e25	e16	e13	e18	e11	e31	415	709	169	50	32
10	29	e30	e19	e14	e18	e12	e35	278	668	153	48	31
11	28	e26	e20	e15	e16	e12	e40	202	610	141	50	30
12	28	e24	e21	e16	e16	e12	e45	204	588	132	54	31
13	27	e23	e22	e17	e15	e11	e48	239	600	124	49	31
14	24	e22	e21	e17	e15	e11	e50	288	634	129	45	31
15	23	e24	e20	e16	e16	e11	e50	271	670	150	43	31
16	23	e23	e19	e16	e16	e11	e51	232	718	129	43	30
17	23	e21	e19	e16	e15	e10	e60	238	742	126	40	30
18	23	e20	e18	e17	e15	e10	e64	343	717	110	38	28
19	23	e19	e17	e17	e14	e11	e80	433	683	101	38	29
20	23	e20	e16	e18	e14	e11	e70	501	668	98	40	36
21	23	e20	e13	e17	e14	e11	e80	588	650	92	43	32
22	23	e20	e12	e18	e14	e10	e75	615	625	86	45	30
23	23	e19	e13	e19	e14	e10	e64	782	582	82	40	30
24	23	e19	e14	e18	e15	e11	e56	991	535	77	38	30
25	23	e20	e15	e18	e15	e12	e61	981	487	74	37	32
26	24	e21	e15	e17	e16	e14	e72	872	455	72	37	29
27	24	e22	e16	e16	e15	e14	e90	911	414	69	36	29
28	24	e21	e16	e16	e14	e15	e100	946	367	67	39	28
29	25	e20	e15	e16	---	e16	e110	1030	331	69	37	28
30	25	e20	e16	e16	---	e20	e200	1060	309	68	36	28
31	26	---	e17	e17	---	e20	---	956	---	63	46	---
TOTAL	837	670	551	497	452	383	1725	15563	18790	4307	1427	976
MEAN	27.0	22.3	17.8	16.0	16.1	12.4	57.5	502	626	139	46.0	32.5
MAX	42	30	23	19	20	20	200	1060	823	295	62	46
MIN	23	19	12	13	14	10	19	159	309	63	36	28
AC-FT	1660	1330	1090	986	897	760	3420	30870	37270	8540	2830	1940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1999, BY WATER YEAR (WY)

MEAN	22.3	19.6	16.3	14.8	15.3	20.8	103	425	407	100	30.6	21.9
MAX	54.2	34.4	27.8	26.4	29.1	38.2	398	970	1039	296	64.0	51.9
(WY)	1983	1983	1984	1984	1958	1958	1971	1971	1986	1975	1983	1984
MIN	11.1	9.37	9.37	6.23	5.61	6.77	19.8	40.5	24.0	9.32	4.55	7.47
(WY)	1993	1961	1991	1967	1967	1965	1975	1977	1977	1992	1994	1994

GREEN RIVER BASIN

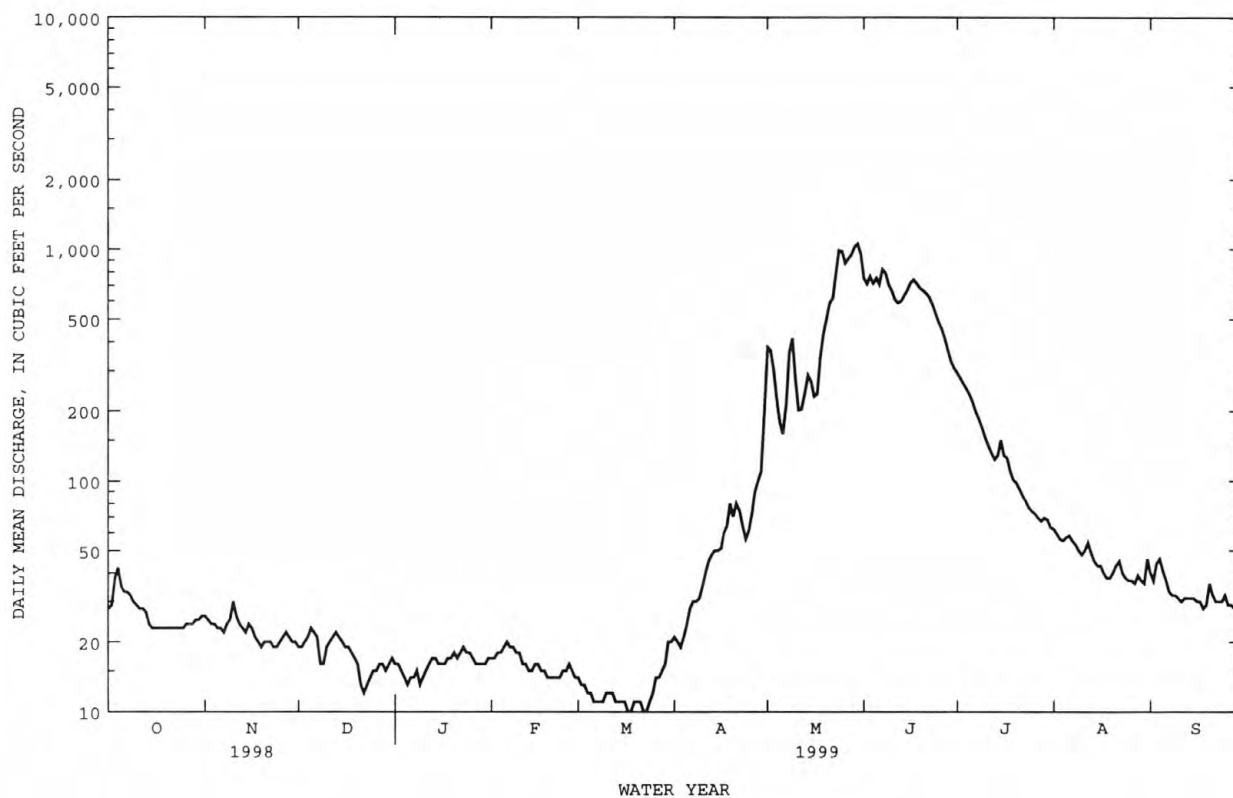
09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1953 - 1999	
ANNUAL TOTAL	34654		46178		--	
ANNUAL MEAN	94.9		127		100	
HIGHEST ANNUAL MEAN	--		--		214	1971
LOWEST ANNUAL MEAN	--		--		17.7	1977
HIGHEST DAILY MEAN	534	Jun 16	1060	May 30	2000	Jun 5 1986
LOWEST DAILY MEAN	12	Dec 22	10	Mar 17, 18, 22, 23	.10	Aug 17 1977
ANNUAL SEVEN-DAY MINIMUM	14	Dec 20	10	Mar 17	.62	Aug 11 1977
INSTANTANEOUS PEAK FLOW	--		1180	May 25	2230 ^a	Jun 5 1986
INSTANTANEOUS PEAK STAGE	--		5.71	May 25	8.10 ^b	May 28 1971
ANNUAL RUNOFF (AC-FT)	68740		91590		72450	
10 PERCENT EXCEEDS	334		493		315	
50 PERCENT EXCEEDS	29		29		23	
90 PERCENT EXCEEDS	16		14		12	

a Gage height, 6.72 ft.

b Site then in use.

e Estimated.



GREEN RIVER BASIN

331

09224050 HAMS FORK NEAR DIAMONDVILLE, WY

LOCATION.--Lat 41°45'06", long 110°31'57", in NW¹/₄ SE¹/₄ SW¹/₄ sec.36, T.21 N., R.116 W., Lincoln County, Hydrologic Unit 14040107, at bridge on U.S. Highway 30 North, 1.9 mi south of Diamondville, and 2.8 mi south of Kemmerer.

PERIOD OF RECORD.--Water years 1974 to September 1989, October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
NOV 23...	1520	35	535	8.8	3.0	9.0	605
MAR 22...	1645	140	616	8.4	0.0	8.0	594
JUN 16...	1330	369	393	8.5	16.0	22.0	600
AUG 04...	1500	128	354	8.8	20.0	21.0	600
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 23...	13.0	122	<1	<.01	.32	.03	.03
MAR 22...	11.2	99	26	.01	.22	<.02	.01
JUN 16...	8.8	114	K14	<.01	<.05	<.02	.03
AUG 04...	8.3	117	28	<.01	.06	.02	<.01

K Results based on colony count outside the acceptable range (non-ideal colony count).

LOCATION.--Lat 41°32'46", long 109°41'34", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.18 N., R.109 W., Sweetwater County, Hydrologic Unit 14040107, on right bank 200 ft upstream from bridge on U.S. Highway 30, 4.2 mi upstream from Meadow Springs Wash, and 8.5 mi east of Little America.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 6,127.66 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation from Meeks Cabin Reservoir, capacity, 32,470 acre-ft, since June 1971, Viva Naughton Reservoir, capacity, 42,400 acre-ft, from State Line Reservoir, capacity, 14,000 acre-ft, since April 1980, numerous smaller reservoirs, and diversions for upstream mines and irrigation of about 76,100 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	223	206	e110	e110	e450	345	2080	2820	838	487	77
2	211	230	194	e96	e120	e620	344	1960	2730	750	397	79
3	205	229	198	e92	e130	e718	333	1830	2480	607	310	101
4	227	224	185	e96	e140	e680	300	1930	2550	484	258	110
5	381	222	105	e105	e150	e600	309	1930	2420	404	228	150
6	354	221	88	e110	e155	e550	313	1780	2400	341	219	164
7	324	227	81	e130	e160	e520	311	1680	2340	332	220	153
8	295	236	e82	e135	e155	468	323	1550	2390	344	226	131
9	254	e210	e88	e125	e150	408	338	1510	2280	324	216	115
10	226	e230	e84	e120	e130	354	347	1610	2060	329	205	104
11	206	e250	e92	e135	e110	349	356	1660	1890	332	198	100
12	200	e251	e95	e120	e98	268	338	1510	1770	329	186	108
13	190	e260	e98	e110	e96	311	327	1940	1630	300	178	114
14	183	e270	e100	e105	e100	314	311	2520	1520	280	162	113
15	181	e280	e109	e110	e110	372	305	2260	1430	299	145	116
16	194	e290	e110	e120	e120	435	333	1930	1300	313	131	119
17	193	e280	e120	e125	e130	540	321	1640	1130	358	115	118
18	213	e260	e110	e130	e150	669	289	1480	1010	346	106	117
19	228	e240	e100	e120	e160	656	268	1340	1130	367	102	108
20	225	e220	e90	e120	e140	526	285	1300	1340	317	101	137
21	218	e180	e80	e125	e120	542	349	1450	1640	282	99	142
22	216	e178	e66	e125	e130	545	539	1550	1820	283	89	171
23	215	228	e64	e130	e140	515	623	1660	1730	272	85	170
24	209	252	e62	e120	e150	473	722	1730	1630	248	79	161
25	211	213	e64	e120	e180	454	941	1990	1490	225	77	145
26	214	199	e70	e115	e220	453	1450	2340	1390	204	72	132
27	215	186	e76	e110	e270	480	2310	2560	1300	199	65	120
28	217	190	e78	e92	e310	504	2640	2670	1250	189	63	120
29	222	214	e80	e90	---	468	2310	2810	1110	188	65	123
30	226	246	e90	e92	---	362	1960	3000	954	185	78	131
31	221	---	e95	e98	---	339	---	2960	---	221	85	---
TOTAL	7094	6939	3160	3531	4134	14943	20240	60160	52934	10490	5047	3749
MEAN	229	231	102	114	148	482	675	1941	1764	338	163	125
MAX	381	290	206	135	310	718	2640	3000	2820	838	487	171
MIN	181	178	62	90	96	268	268	1300	954	185	63	77
AC-FT	14070	13760	6270	7000	8200	29640	40150	119300	105000	20810	10010	7440

MEAN	102	109	79.4	81.6	113	343	517	997	1137	334	116	90.0
MAX	376	336	230	371	318	912	1310	2918	4573	1349	542	576
(WY)	1983	1983	1984	1971	1984	1997	1973	1984	1983	1975	1983	1983
MIN	7.05	13.6	5.44	3.94	26.4	33.9	51.2	21.1	14.0	4.36	.55	.000
(WY)	1980	1995	1995	1991	1989	1964	1990	1977	1977	1977	1994	1994

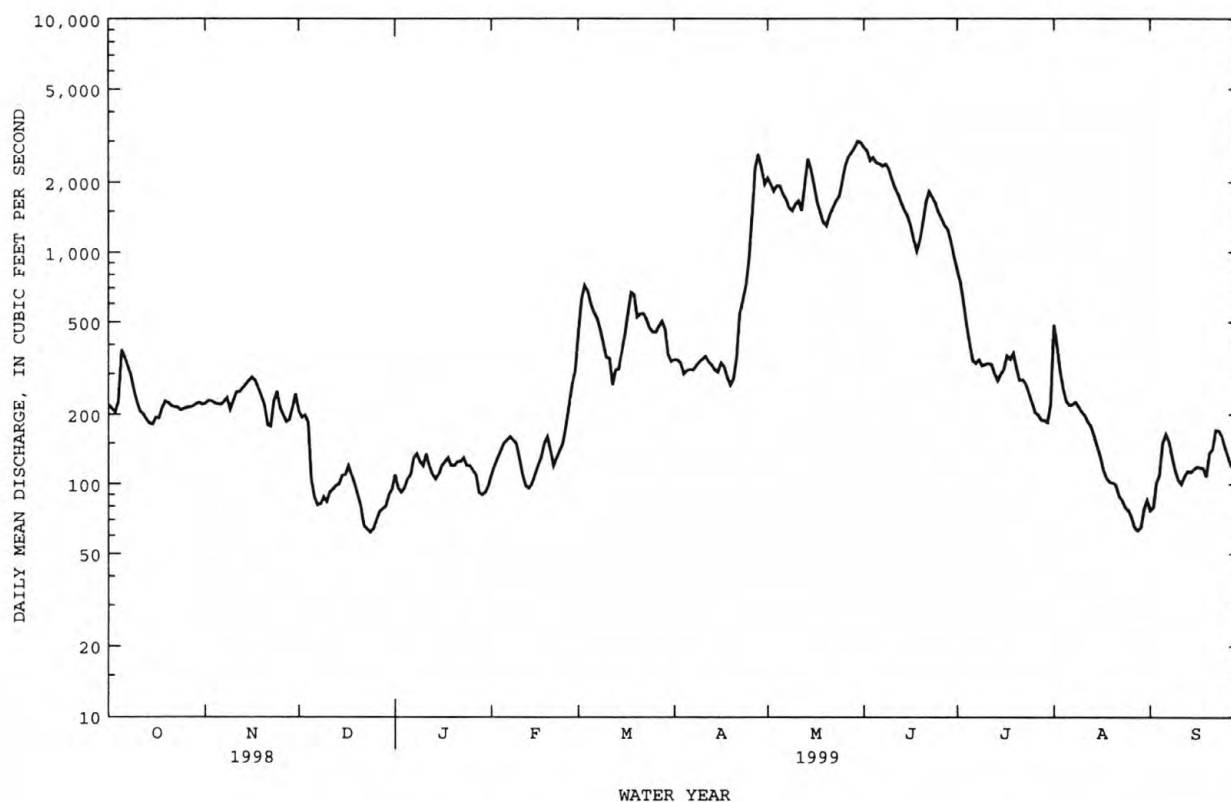
09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1962 - 1999	
ANNUAL TOTAL	178310		192421		--	
ANNUAL MEAN	489		527		336	
HIGHEST ANNUAL MEAN	--		--		888	1983
LOWEST ANNUAL MEAN	--		--		29.0	1977
HIGHEST DAILY MEAN	4900	Jun 19	3000	May 30	9340	Jun 13 1965
LOWEST DAILY MEAN	62	Dec 24	62	Dec 24	.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	69	Dec 22	69	Dec 22	9980 ^a	Sep 20 1962
INSTANTANEOUS PEAK FLOW	--		3130	May 30	11.18 ^b	Jun 13 1965
INSTANTANEOUS PEAK STAGE	--		8.55	May 30		Mar 13 1997
ANNUAL RUNOFF (AC-FT)	353700		381700		243700	
10 PERCENT EXCEEDS	1160		1700		974	
50 PERCENT EXCEEDS	228		224		120	
90 PERCENT EXCEEDS	115		96		21	

a Gage height, 10.90 ft.

b Backwater from ice.

e Estimated.



GREEN RIVER BASIN

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1951 to September 1999 (discontinued).

WATER TEMPERATURES: March 1951 to September 1963, December 1964 to September 1999 (discontinued).

INSTRUMENTATION.--Water-quality monitor for specific conductance and water temperature.

REMARKS.--Published as "near Green River" prior to October 1953 and as "near Marston" October 1953 to September 1964. Partial record of specific conductance and temperature for water years 1979 and 1980 are available at District Office.
 Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,010 microsiemens/cm, Oct. 1, 1953; minimum daily, 194 microsiemens/cm, May 17, 1984.

WATER TEMPERATURES: Maximum, 40.0°C, July 31, Aug. 1-4, 1984; minimum, 0.0°C on many days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum mean daily, 1,920 microsiemens/cm, Dec. 26; minimum mean daily, 449 microsiemens/cm, May 26.

WATER TEMPERATURES: Maximum, 29.8°C, July 12; minimum, 0.0°C on many days November through April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
NOV 04...	1535	220	1230	4.5	7.0	390	95	37	120	3	3.3
DEC 16...	1600	110	1620	0.0	7.0	570	140	52	140	3	4.2
JAN 28...	0815	92	1330	0.0	-8.0	440	110	41	130	3	3.7
MAR 24...	1230	448	960	6.0	14.0	320	74	33	86	2	4.7
APR 28...	1545	2650	810	9.0	15.0	190	48	17	99	3	3.6
MAY 20...	1530	1250	640	15.0	23.0	240	63	21	41	1	2.7
JUN 15...	1515	1410	635	18.5	23.0	250	66	20	37	1	2.5
JUL 14...	1530	277	1050	21.0	18.0	340	85	31	91	2	3.1
AUG 05...	1200	230	1170	20.5	24.5	360	90	32	110	3	3.8
SEP 08...	1500	131	1510	18.0	19.0	440	100	45	160	3	4.3
DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 04...	209	--	360	57	.5	6.9	799	1.09	475	245	<10
DEC 16...	283	--	480	72	.6	12	1080	1.47	320	372	<10
JAN 28...	249	--	390	66	.5	10	895	1.22	222	332	<10
MAR 24...	--	209	230	52	.3	9.9	--	--	--	208	<10
APR 28...	--	177	180	38	.4	11	--	--	--	136	<10
MAY 20...	197	--	110	28	.2	8.0	391	.53	1320	97.9	<10
JUN 15...	216	--	120	18	.3	9.7	398	.54	1520	119	<10
JUL 14...	239	--	260	39	.5	12	669	.91	500	203	<10
AUG 05...	171	--	320	51	.5	9.8	722	.98	448	233	<10
SEP 08...	215	--	520	68	.5	9.0	1040	1.42	368	287	<10

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	15.1	12.0	6.9	3.8	---	---	.0	.0	.0	.0	.0	.0
2	13.2	10.8	6.5	5.3	---	---	.0	.0	.0	.0	.0	.0
3	11.3	8.2	5.3	3.6	---	---	.0	.0	.0	.0	---	.0
4	8.2	6.0	4.6	1.7	---	---	.0	.0	.0	.0	---	---
5	7.6	4.2	5.2	2.3	---	---	.0	.0	.0	.0	---	---
6	8.2	4.0	4.5	1.8	---	---	.1	.0	.0	.0	---	---
7	10.0	5.7	2.8	.2	---	---	.1	.0	.0	.0	---	---
8	11.5	7.4	1.5	.0	---	---	.0	.0	.0	.0	---	---
9	11.8	7.8	.2	.0	---	---	.0	.0	.0	.0	---	---
10	11.3	7.9	.0	.0	---	---	.0	.0	.0	.0	---	---
11	10.2	5.6	.0	.0	---	---	.0	.0	.0	.0	---	---
12	10.7	5.8	.0	.0	---	---	.0	.0	.0	.0	---	---
13	11.2	6.8	.1	.0	---	---	.0	.0	.0	.0	---	---
14	11.7	7.0	.9	.0	---	---	.0	.0	.0	.0	---	---
15	11.6	7.9	4.2	.0	---	.0	.0	.0	.0	.0	---	---
16	7.9	5.4	1.5	.0	.1	.0	.0	.0	.0	.0	---	---
17	8.5	4.6	2.2	.1	.1	.0	.0	.0	.0	.0	---	---
18	8.2	4.4	2.6	.6	.0	.0	.0	.0	.0	.0	---	---
19	7.9	4.7	4.3	.0	.0	.0	.0	.0	.0	.0	3.2	---
20	8.1	4.5	1.3	.0	.0	.0	.0	.0	.0	.0	5.7	.0
21	7.9	4.0	3.0	.0	.0	.0	.0	.0	.0	.0	6.2	4.2
22	9.3	5.7	5.6	.0	.0	.0	.0	.0	.0	.0	7.0	2.9
23	9.0	6.7	---	.0	.0	.0	.0	.0	.0	.0	6.9	3.2
24	8.4	5.0	---	---	.0	.0	.0	.0	.1	.0	8.3	3.6
25	8.6	6.7	---	---	.0	.0	.0	.0	.1	.0	9.1	4.6
26	10.2	7.7	---	---	.0	.0	.0	.0	.0	.0	8.0	5.8
27	9.1	7.2	---	---	.0	.0	.0	.0	.1	.0	7.2	4.5
28	8.6	6.6	---	---	.0	.0	.0	.0	.1	.0	5.3	2.2
29	8.0	5.9	---	---	.0	.0	.0	.0	---	---	6.1	1.1
30	7.2	5.4	---	---	.0	.0	.0	.0	---	---	6.2	2.8
31	7.6	5.1	---	---	.0	.0	.0	.0	---	---	5.7	2.8
MONTH	15.1	4.0	---	---	---	---	.1	.0	.1	.0	---	---
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	2.8	.3	10.4	7.3	13.9	12.2	24.2	17.4	21.8	16.2	---	15.3
2	1.8	.0	9.7	8.4	13.2	12.4	25.5	19.9	23.0	17.4	17.1	13.9
3	3.8	.0	9.0	7.8	13.6	---	26.8	20.7	22.2	18.2	14.2	---
4	5.9	1.3	8.2	6.4	14.6	12.5	26.7	21.6	21.5	17.8	15.7	8.6
5	7.6	2.7	6.6	5.1	14.9	13.1	27.6	19.8	23.6	17.9	18.5	9.7
6	8.2	4.0	8.5	4.2	14.5	12.9	29.5	21.9	24.3	19.0	---	8.6
7	9.2	4.7	10.3	6.5	15.3	13.0	27.2	24.3	24.6	18.2	17.8	11.4
8	8.6	4.9	12.0	8.9	16.4	14.3	27.6	22.3	25.0	18.5	18.7	9.4
9	6.9	2.2	11.2	8.3	17.1	14.6	27.8	19.1	25.2	18.5	19.1	10.6
10	4.3	.0	8.6	6.5	16.3	14.8	27.8	21.0	22.8	18.4	17.8	13.2
11	6.3	1.5	8.4	5.5	16.8	13.8	28.6	21.9	20.9	16.3	18.7	11.4
12	9.5	3.6	9.3	6.6	18.0	14.7	29.8	22.2	18.8	13.9	18.2	9.1
13	11.1	6.4	9.3	7.0	19.6	16.1	28.8	22.9	22.3	14.0	18.4	9.6
14	10.4	6.2	9.7	8.0	19.5	17.5	26.0	21.2	24.2	16.1	18.8	10.1
15	9.1	4.5	10.7	8.7	19.1	17.2	22.6	18.5	21.2	15.3	19.4	10.6
16	8.6	4.0	9.3	8.0	19.5	16.9	20.5	16.9	22.3	13.4	19.6	10.8
17	10.0	4.1	11.4	7.5	20.0	17.5	20.9	15.0	24.6	14.8	19.3	11.4
18	11.9	6.7	12.9	9.2	20.0	16.2	23.3	17.2	25.7	15.8	19.2	11.4
19	12.2	8.4	14.4	11.1	20.0	17.7	21.8	17.9	23.1	17.2	14.9	10.9
20	10.5	8.2	15.5	11.5	20.1	18.1	22.7	17.3	23.6	15.7	16.6	10.3
21	9.2	6.7	15.4	12.8	20.1	18.1	24.0	17.7	24.2	15.8	16.9	9.3
22	7.8	3.8	16.7	13.0	19.1	17.1	23.8	18.2	26.1	15.8	17.4	10.2
23	3.8	1.8	17.4	14.0	19.0	16.8	25.5	17.9	27.0	16.3	17.1	10.9
24	4.9	1.9	17.4	14.8	20.1	16.8	24.0	20.5	23.8	18.1	14.2	11.2
25	4.7	3.8	17.3	14.9	20.4	17.9	24.4	17.4	25.0	16.1	14.6	8.9
26	7.2	3.7	16.5	14.5	20.6	17.7	25.3	16.7	25.0	15.9	11.6	6.6
27	8.0	6.6	16.6	14.2	20.2	18.3	26.2	19.1	23.8	17.4	9.1	2.9
28	9.0	7.3	16.8	14.6	19.5	16.8	25.6	20.2	---	15.9	9.2	2.0
29	9.4	8.2	17.4	15.3	18.9	16.8	24.9	20.6	24.6	16.5	10.7	1.9
30	9.0	7.9	16.7	15.2	21.5	16.6	25.2	18.4	22.7	14.4	12.1	4.0
31	---	---	15.2	---	---	---	21.3	17.7	24.1	14.8	---	---
MONTH	12.2	.0	17.4	---	21.5	---	29.8	15.0	---	13.4	---	---

GREEN RIVER BASIN

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1310	1400	1440	1420	1160	1030	---	464	742	1140	1610
2	1090	1280	1400	1370	1430	761	1040	---	459	792	1110	1460
3	1210	1270	1410	1400	1430	---	1010	---	471	835	1160	1480
4	1170	1240	1380	1490	1390	---	1070	---	491	959	1110	1470
5	1140	1240	---	1540	1310	---	1170	---	481	1050	1150	1430
6	1390	1220	---	1480	1250	---	1310	---	572	1140	1130	1700
7	1330	1200	---	1410	1210	---	1330	625	602	1190	1120	1670
8	1240	1200	---	1350	1210	---	1300	612	627	1160	1110	1510
9	1200	1230	---	1290	1210	---	1250	605	616	1140	1080	1500
10	1150	1220	---	1280	1250	---	1180	593	595	1110	1090	1520
11	1150	1400	---	1230	1330	---	1130	548	637	1150	1130	1500
12	1210	1390	---	1170	1430	---	1120	526	635	1140	1160	1480
13	1250	1320	---	1140	1460	---	1190	506	587	1080	1130	1500
14	1300	1320	---	1160	1610	---	1230	643	609	1060	1150	1470
15	1290	1230	---	1170	1630	---	1240	761	620	1080	1160	1390
16	1280	1320	1630	1170	1580	---	1160	693	630	1050	1150	1370
17	1270	1340	1550	1170	1530	---	1060	650	640	1080	1220	1340
18	1300	1430	1460	1190	1470	---	1040	644	667	1120	1270	1310
19	1340	1380	1460	1230	1390	---	1060	631	700	1160	1280	1320
20	1350	1400	1490	1260	1370	1080	1070	634	722	1150	1300	1290
21	1320	1460	1600	1330	1360	1070	1040	629	687	1110	1270	1310
22	1270	1450	1710	1310	1360	1020	897	566	664	1180	1230	1340
23	1260	1420	1750	1330	1350	989	746	520	647	1180	1220	1480
24	1260	1420	1810	1370	1310	971	701	552	642	1150	1220	1470
25	1270	1420	1870	1350	1320	977	636	508	640	1160	1290	1380
26	1280	1430	1920	1360	1280	985	764	449	641	1160	1390	1350
27	1310	1430	1900	1360	1260	991	956	463	651	1140	1450	1390
28	1340	1420	1830	1340	1180	970	---	457	656	1130	1450	1420
29	1320	1400	1740	1340	---	919	---	472	665	1120	1490	1410
30	1290	1400	1600	1400	---	917	---	470	675	1100	1610	1360
31	1340	---	1510	1420	---	955	---	462	---	1070	1620	---
MEAN	1260	1340	---	1320	1370	---	---	---	613	1090	1240	1440
MAX	1390	1460	---	1540	1630	---	---	---	722	1190	1620	1700
MIN	1090	1200	---	1140	1180	---	---	---	459	742	1080	1290

09234400 FLAMING GORGE RESERVOIR AT FLAMING GORGE DAM, UT

LOCATION.--Lat 40°54'23", long 109°25'15", in NW¹/₄ NE¹/₄ sec.15, T.2 N., R.22 E., Daggett County, Hydrologic Unit 14040106, at Flaming Gorge Dam on Green River, 1.8 mi southwest of Dutch John, and 4.9 mi northeast of Greendale.

DRAINAGE AREA.--19,350 mi², of which about 4,260 mi², including 3,959 mi² in Great Divide Basin in southern Wyoming, probably is noncontributing.

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

REVISED RECORDS.--WDR UT-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,871 ft above sea level, (levels by Bureau of Reclamation). Prior to Jan. 1, 1964, on left bank 600 ft upstream from face of dam.

REMARKS.--Reservoir is formed by concrete arch-type dam; storage began Nov. 1, 1962; mass concrete of dam completed Nov. 15, 1962. Total capacity, 3,789,000 acre-ft, consisting of the following: Dead storage, 39,700 acre-ft below elevation 5,740 ft; inactive usable storage, 233,500 acre-ft between elevations 5,740 ft and 5,871 ft; active usable storage, 3,516,000 acre-ft between elevations 5,871 ft and 6,040 ft (top of conservation pool). Reservoir is used for flood control, storage replacement to meet downstream requirements under the Colorado River Compact of 1922, and power generation. Figures given herein represent usable contents. Transbasin diversions and diversions for irrigation above station.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,911,000 acre-ft, July 13, 1983, elevation, 6,043.80 ft; minimum, 582,900 acre-ft Apr. 26, 1965, elevation, 5908.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,580,000 acre-ft, Oct. 1, 2, maximum elevation, 6,035.76 ft, Oct. 1: minimum observed, 3,130,000 acre-ft, Apr. 18-27, minimum elevation, 6,024.12 ft, Apr. 25.

Capacity table (elevation, in feet,
and usable contents, in acre-feet)

6,020	2,980,000	6,035	3,546,000
6,025	3,160,000	6,040	3,752,000
6,030	3,349,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3580000	3520000	3470000	3400000	3340000	3260000	3190000	3150000	3240000	3400000	3480000	3470000
2	3580000	3520000	3460000	3400000	3330000	3260000	3180000	3150000	3240000	3400000	3480000	3460000
3	3570000	3520000	3460000	3390000	3330000	3260000	3180000	3150000	3250000	3410000	3480000	3460000
4	3570000	3520000	3460000	3390000	3330000	3260000	3180000	3150000	3260000	3420000	3480000	3460000
5	3570000	3520000	3460000	3390000	3330000	3260000	3180000	3160000	3270000	3430000	3480000	3460000
6	3570000	3520000	3450000	3390000	3330000	3250000	3180000	3160000	3270000	3430000	3480000	3460000
7	3570000	3510000	3450000	3390000	3320000	3250000	3170000	3160000	3280000	3440000	3480000	3460000
8	3570000	3510000	3450000	3390000	3320000	3250000	3170000	3160000	3290000	3440000	3480000	3460000
9	3560000	3510000	3450000	3380000	3320000	3250000	3170000	3160000	3290000	3440000	3480000	3460000
10	3560000	3510000	3440000	3380000	3320000	3240000	3160000	3160000	3300000	3440000	3480000	3460000
11	3560000	3500000	3440000	3380000	3310000	3240000	3160000	3160000	3300000	3440000	3480000	3450000
12	3560000	3500000	3440000	3380000	3310000	3240000	3160000	3160000	3310000	3440000	3480000	3450000
13	3560000	3500000	3440000	3370000	3310000	3240000	3150000	3170000	3310000	3440000	3480000	3450000
14	3550000	3500000	3440000	3370000	3310000	3230000	3150000	3170000	3310000	3450000	3480000	3450000
15	3550000	3500000	3430000	3370000	3300000	3230000	3140000	3170000	3310000	3450000	3480000	3450000
16	3550000	3500000	3430000	3370000	3300000	3230000	3140000	3170000	3310000	3450000	3480000	3440000
17	3550000	3490000	3430000	3370000	3300000	3220000	3140000	3180000	3310000	3450000	3470000	3440000
18	3550000	3490000	3430000	3370000	3300000	3220000	3130000	3180000	3310000	3450000	3470000	3440000
19	3550000	3490000	3420000	3360000	3290000	3220000	3130000	3180000	3310000	3460000	3470000	3440000
20	3540000	3490000	3420000	3360000	3290000	3220000	3130000	3180000	3310000	3460000	3470000	3440000
21	3540000	3490000	3420000	3360000	3290000	3220000	3130000	3180000	3310000	3460000	3470000	3440000
22	3540000	3480000	3420000	3360000	3290000	3210000	3130000	3180000	3310000	3460000	3470000	3440000
23	3540000	3480000	3410000	3360000	3280000	3210000	3130000	3190000	3320000	3470000	3470000	3440000
24	3540000	3480000	3410000	3360000	3280000	3210000	3130000	3190000	3330000	3470000	3470000	3440000
25	3540000	3480000	3410000	3360000	3280000	3210000	3130000	3190000	3340000	3470000	3470000	3430000
26	3530000	3480000	3410000	3350000	3270000	3200000	3130000	3190000	3350000	3470000	3460000	3430000
27	3530000	3470000	3410000	3350000	3270000	3200000	3130000	3200000	3360000	3470000	3470000	3430000
28	3530000	3470000	3400000	3350000	3270000	3200000	3140000	3200000	3370000	3470000	3470000	3430000
29	3530000	3470000	3400000	3350000	---	3190000	3140000	3210000	3380000	3480000	3470000	3430000
30	3530000	3470000	3400000	3340000	---	3190000	3150000	3220000	3390000	3480000	3470000	3420000
31	3530000	---	3400000	3340000	---	3190000	---	3230000	---	3480000	3470000	---
MAX	3580000	3520000	3470000	3400000	3340000	3260000	3190000	3230000	3390000	3480000	3480000	3470000
MIN	3530000	3470000	3400000	3340000	3270000	3190000	3130000	3150000	3240000	3400000	3460000	3420000
(#)	6,034.48	6,033.06	6,031.31	6,029.80	6,027.81	6,025.82	6,024.60	6,026.83	6,031.01	6,033.38	6,032.98	6,031.95
(*)	-50,000	-60,000	-70,000	-60,000	-70,000	-80,000	-40,000	+80,000	+160,000	+90,000	-10,000	-50,000

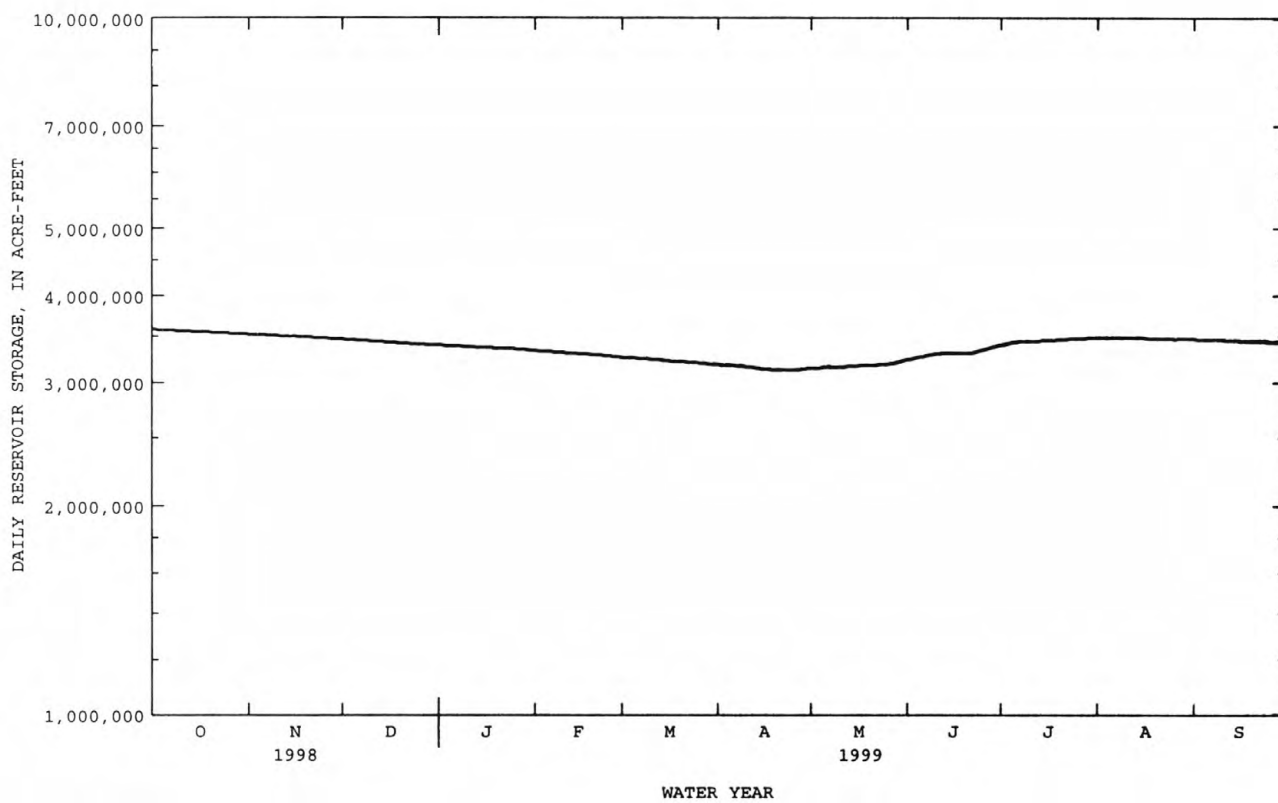
WTR YR 1999 MAX 3,580,000 MIN 3,130,000 (*) -160,000

(#) Elevation, in feet, at end of month.

(*) Change in contents, in acre-feet.

GREEN RIVER BASIN

09234400 FLAMING GORGE RESERVOIR AT FLAMING GORGE DAM, UT--Continued



09234500 GREEN RIVER NEAR GREENDALE, UT

LOCATION.--Lat 40°54'30", long 109°25'20", in NW¹/₄NW¹/₄SE¹/₄ sec. 15. T. 2 N., R. 22 E., Daggett County, Hydrologic Unit 14040106, Ashley National Forest on right bank 0.5 mi downstream from Flaming Gorge Dam, 2 mi south of Dutch John, 4 mi northeast of Greendale, and 407 mi from mouth.

DRAINAGE AREA.--19,350 mi², approximately, including about 4,260 mi² which is probably noncontributing. This noncontributing area includes 3,959 mi² in Great Divide Basin in southern Wyoming.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR UT-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,594.48 ft above sea level. Prior to Sept. 2, 1959, water-stage recorder at site 2.2 mi upstream at different datum. Sept. 3, 1959, to Sept. 30, 1985, at datum 5.0 ft lower.

REMARKS.--Records good. Flow completely regulated by Flaming Gorge Reservoir 0.5 mi upstream, beginning Nov. 1, 1962. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2370	2410	2400	2420	2760	3240	3410	3420	6530	4440	2090	2070
2	2370	2410	2400	2420	2770	3240	3410	3410	6530	4450	2080	2070
3	2370	2410	2400	2420	2770	3250	3410	3410	7460	4380	2100	2070
4	2370	2420	2400	2430	2770	3240	3410	3410	8350	4450	2100	2070
5	2380	2440	2400	2420	2760	3240	3080	3400	8420	4470	2080	2070
6	2390	2400	2400	2430	2760	3240	2970	3410	8400	4480	2080	2070
7	2390	2410	2400	2420	2760	3250	2970	3420	8500	4490	2080	2070
8	2390	2410	2400	2420	2760	3250	2970	3420	8520	4490	2080	2080
9	2380	2400	2400	2420	2760	2870	3120	3420	8360	4490	2080	2080
10	2380	2410	2400	2420	2770	3250	3410	3710	8540	4490	2080	2080
11	2390	2420	2410	2410	2770	3250	3410	4490	9060	4490	2080	2040
12	2390	2410	2410	2400	2780	3250	3410	4430	10900	4490	2080	2080
13	2390	2420	2410	2400	2780	3250	3410	4420	10900	4180	2080	2080
14	2390	2410	2410	2400	2780	3250	3410	4420	10900	3720	2080	2090
15	2410	2410	2410	2400	2790	3250	3410	4410	10900	3360	2080	2090
16	2400	2710	2410	2400	2790	3350	3410	4420	10900	2960	2080	2090
17	2430	2710	2430	2400	2780	3400	3420	4420	10900	2520	2080	2080
18	2420	2150	2410	2400	2790	3400	3390	4420	10900	2140	2080	2080
19	2420	2390	2460	2400	2780	3400	2730	4400	10900	2110	2080	2090
20	2420	2390	2470	2400	3160	3400	2090	4390	10900	2110	2080	1640
21	2400	2400	2410	2390	3240	3400	3200	4370	9600	2100	2080	1620
22	2400	2400	2410	2400	3240	3400	3420	4380	7580	2100	2080	2100
23	2410	2400	2410	2400	3240	3410	3420	4360	6090	2100	2080	2080
24	2410	2390	2410	2400	3240	3400	3420	5470	4790	2100	2080	2080
25	2410	2400	2410	2400	3240	3410	3420	6000	4420	2100	2080	2080
26	2410	2400	2410	2410	3240	3410	3410	6150	4410	2100	2080	2080
27	2410	2400	2420	2750	3240	3400	3420	6460	4410	2090	1330	2080
28	2400	2400	2420	2760	3240	3410	3420	6460	4410	2090	1290	2090
29	2410	2400	2420	2760	---	3410	3420	6460	4420	2090	1290	2090
30	2410	2400	2420	2760	---	3410	3420	6510	4430	2090	2050	2090
31	2410	---	2430	2760	---	3410	---	6490	---	2090	2070	---
TOTAL	74330	72530	74800	76420	81760	102740	98220	141760	241330	99760	62160	61480
MEAN	2398	2418	2413	2465	2920	3314	3274	4573	8044	3218	2005	2049
MAX	2430	2710	2470	2760	3240	3410	3420	6510	10900	4490	2100	2100
MIN	2370	2150	2400	2390	2760	2870	2090	3400	4410	2090	1290	1620
AC-FT	147400	143900	148400	151600	162200	203800	194800	281200	478700	197900	123300	121900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

	1921	2087	2286	2205	2190	1853	1999	2515	2631	2412	2057	1921
MEAN	1921	2087	2286	2205	2190	1853	1999	2515	2631	2412	2057	1921
MAX	3911	3655	3626	4145	4090	3818	4271	7146	8044	10130	5056	3729
(WY)	1983	1983	1973	1985	1984	1977	1997	1986	1999	1983	1983	1983
MIN	128	312	743	903	773	599	587	984	916	474	497	734
(WY)	1964	1964	1964	1971	1971	1964	1964	1990	1992	1965	1965	1965

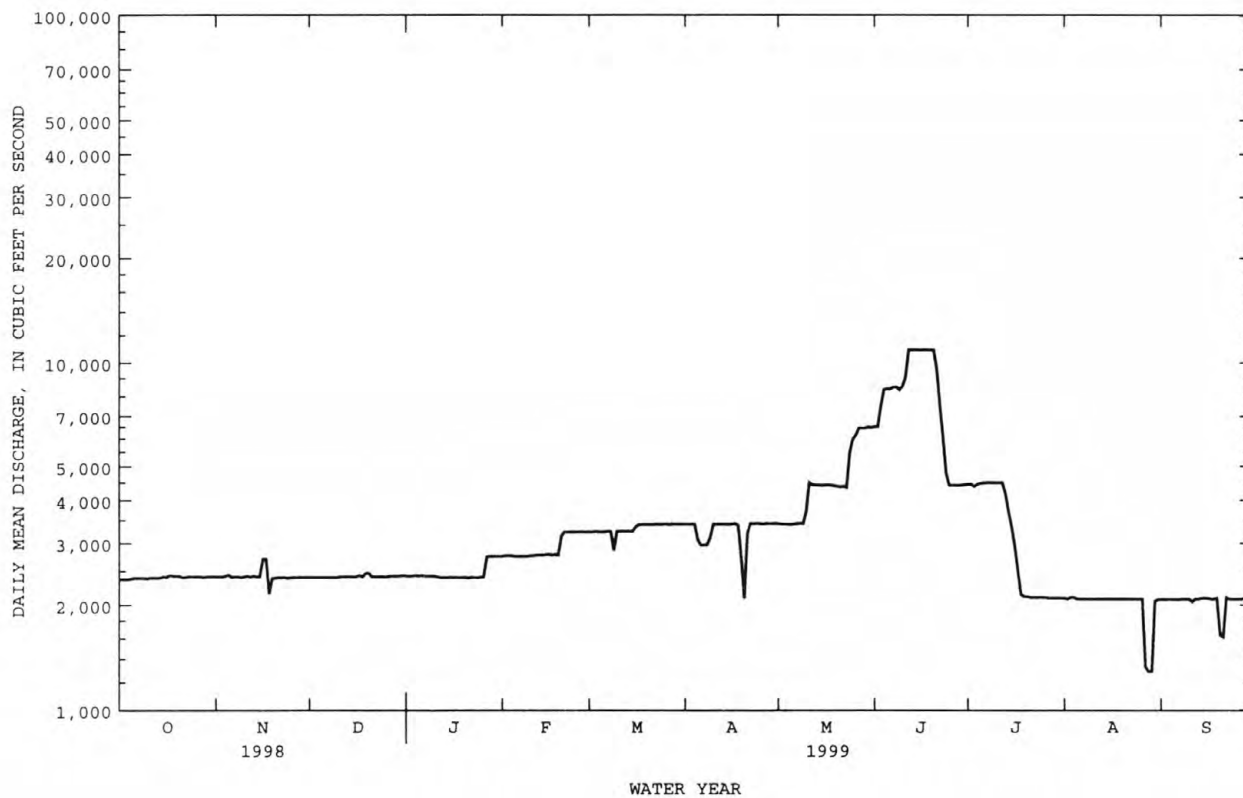
GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	970530		1187290		--	
ANNUAL MEAN	2659		3253		2173	
HIGHEST ANNUAL MEAN	--		--		4270	1983
LOWEST ANNUAL MEAN	--		--		1044	1989
HIGHEST DAILY MEAN	4520	Jun 10	10900	Jun 12	12300	Jul 16 1983
LOWEST DAILY MEAN	1630	Sep 22	1290	Aug 28-29	90	Oct 8 1963
ANNUAL SEVEN-DAY MINIMUM	1820	Jul 1	1740	Aug 27	112	Oct 2 1963
INSTANTANEOUS PEAK FLOW	--		11200	Jun 14	19600 ^a	Jun 12 1957#
INSTANTANEOUS PEAK STAGE	--		16.20	Jun 14	14.51	Jun 6 1986#
ANNUAL RUNOFF (AC-FT)	1925000		2355000		1574000	
10 PERCENT EXCEEDS	3120		4490		3790	
50 PERCENT EXCEEDS	2410		2420		1920	
90 PERCENT EXCEEDS	2190		2080		896	

For period of record, 1950 to current year.

a Gage height 10.60 ft, site and datum then in use.



09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1956 to September 1959, October 1963 to current year.

WATER TEMPERATURES: October 1956 to September 1959, October 1963 to current year.

SEDIMENT DATA: October 1956 to September 1959.

INSTRUMENTATION.--Water-quality monitor since December 1986.

REMARKS.--Storage in Flaming Gorge Reservoir began on Nov. 1, 1962. Samples for daily records are taken inside Penstock.

Extremes are given for two separate periods--water years 1957-62, and water years 1964 to current year. Extremes for the 1963 water year (October 1962 to September 1963) are not included. Temperature extremes for the 1994 water year are not included. Unpublished daily records of specific conductance obtained before 1965 were included in the determination of extremes for period of daily record and are available in files of Utah district office. Daily records provided by Bureau of Reclamation. Water-quality monitor located in separate shelter 0.6 mi downstream from Flaming Gorge Dam. Instrument failure, resulted in lost record for 1999.

EXTREMES FOR PERIOD OF DAILY RECORD.--(water years 1957-62, 1964 to current year).

SPECIFIC CONDUCTANCE (water years 1957-58, 1960-62): Maximum daily, 1,340 microsiemens, Aug. 30, 1961; minimum daily, 325 microsiemens, June 2, 1961.

WATER TEMPERATURES (water years 1957-59): Maximum, 24.0°C July 24, 25, 1959; minimum, 0.0°C on many days during winter period each year.

SPECIFIC CONDUCTANCE (water years 1964 to current year): Maximum daily, 1,060 microsiemens, Nov. 9, 1971; minimum recorded, 507 microsiemens, July 29, 1998.

WATER TEMPERATURES: Maximum recorded, 17.2°C July 9, 1989; minimum recorded 1.6°C Mar. 1, 2, 1987.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: None determined this year.

WATER TEMPERATURE: None determined this year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
OCT										
13...	1710	9.70	2310	610	6.6	21.0	11.5	--	--	--
NOV										
30...	1500	9.71	2280	620	7.3	11.0	7.0	8.6	87	624
JAN										
05...	1245	9.73	2390	630	8.3	7.0	6.0	9.1	90	618
FEB										
16...	1415	10.11	2790	640	8.4	5.0	4.0	9.9	94	615
MAR										
23...	1610	10.71	3430	340	8.2	15.0	4.0	10.3	98	612
MAY										
12...	1220	11.65	4450	620	8.6	12.0	6.0	9.9	99	614
JUN										
10...	1340	14.81	8400	600	8.5	14.5	9.7	9.7	106	616
JUL										
22...	1220	9.64	2070	610	8.5	23.0	12.5	8.5	98	621
AUG										
25...	1610	9.70	2080	620	8.2	24.0	14.5	8.2	--	618

DATE	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl) (00940)
OCT										
13...	230	56	21	42	29	1	2.3	74	150	13
NOV										
30...	230	58	22	44	29	1	2.5	15	150	14
JAN										
05...	230	59	21	46	30	1	2.5	1.5	160	14
FEB										
16...	240	61	22	47	29	1	2.7	1.2	160	14
MAR										
23...	240	59	22	46	29	1	2.6	1.9	160	15
MAY										
12...	240	59	22	46	29	1	2.5	.8	150	48
JUN										
10...	240	60	21	45	29	1	2.2	.9	150	14
JUL										
22...	220	54	20	45	31	1	2.3	.9	150	15
AUG										
25...	230	55	21	47	31	1	2.3	1.9	150	15

E Estimate.

GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
OCT										
13...	.26	5.4	405	379	.55	2530	.031	.20	.23	152
NOV										
30...	.22	5.8	411	393	.56	2530	.057	.17	.22	155
JAN										
05...	.25	5.9	422	398	.57	2720	.101	.21	.31	156
FEB										
16...	.20	6.5	423	407	.58	3190	.096	.22	.32	157
MAR										
23...	.24	5.3	428	404	.58	3960	.051	.23	.28	161
MAY										
12...	.25	3.6	404	439	.55	4850	.021	.45	.47	176
JUN										
10...	.25	4.0	401	385	.55	9090	.025	.23	.25	153
JUL										
22...	.23	3.0	406	379	.55	2270	.013	.27	.28	153
AUG										
25...	.22	3.1	397	392	.54	2230	.013	.25	.26	160

DATE	TIME	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT		
13...	1710	<1
NOV		
30...	1500	<1
JAN		
05...	1245	<1
FEB		
16...	1415	<1
MAR		
23...	1610	<1
MAY		
12...	1220	<1
JUN		
10...	1340	<1
JUL		
22...	1220	<1
AUG		
25...	1610	<1

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

[illegible]

GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	e10.0	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	e12.5	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	e14.5	10.8	10.2	10.5
26	---	---	---	---	---	---	---	---	---	11.4	10.4	10.9
27	---	---	---	---	---	---	---	---	---	12.0	10.5	11.4
28	---	---	---	---	---	---	---	---	---	12.2	11.5	11.9
29	---	---	---	---	---	---	---	---	---	12.1	11.2	11.7
30	---	---	---	---	---	---	---	---	---	11.5	10.9	11.3
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40-59'58", long 107-08'34", in SW¹/₄NW¹/₄ sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi².

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to September 1999 (discontinued).

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,831.00 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Station operated and record provided by the Colorado District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	83	56	e49	e50	e48	186	1050	1650	333	113	59
2	84	85	57	e49	e46	e48	161	996	1490	312	78	65
3	85	86	50	e48	e48	e49	142	947	1580	285	68	72
4	89	77	51	e49	e48	e49	134	783	1530	253	64	74
5	88	63	44	e45	e49	e47	127	627	1410	226	65	54
6	78	66	e43	e49	e50	e46	128	553	1470	205	68	43
7	81	63	e42	e49	e48	e49	157	562	1300	181	68	37
8	82	64	e50	e45	e47	e48	197	783	1290	174	66	34
9	82	61	e52	e44	e46	e49	165	1160	1320	175	55	33
10	79	56	e50	e45	e49	e50	151	1200	1270	148	53	33
11	76	64	e49	e45	e48	e49	147	850	1200	134	56	32
12	69	71	e50	e42	e50	e51	161	719	1170	128	61	32
13	63	67	e51	e47	e52	e51	216	753	1100	119	56	31
14	60	66	e51	e46	e51	e52	274	885	1070	115	47	30
15	58	65	e51	e49	e50	e51	235	805	1070	158	43	29
16	53	63	e52	e47	e48	e60	210	849	1090	125	47	29
17	52	62	e52	e48	e48	e60	202	737	1290	113	45	29
18	51	63	e52	e49	e47	e70	260	869	1250	110	44	28
19	49	63	e53	e50	e47	e80	373	1190	1200	101	41	39
20	49	50	e53	e49	e46	e95	533	1370	1160	101	43	77
21	46	59	e54	e50	e45	115	607	1520	1100	91	48	55
22	47	60	e54	e49	e50	114	460	1710	1060	98	63	42
23	48	57	e52	e46	e51	113	379	1960	927	90	45	37
24	59	55	e51	e50	e50	121	463	2060	837	81	37	35
25	53	50	e51	e51	e50	140	583	2010	775	77	36	36
26	49	52	e51	e53	e51	166	458	1910	698	74	35	33
27	48	52	e50	e50	e50	177	457	1850	614	71	35	31
28	106	55	e50	e48	e49	151	622	1840	546	70	44	34
29	87	61	e50	e49	---	145	887	1880	499	85	53	37
30	81	60	e50	e51	---	158	1100	2010	426	109	53	40
31	86	---	e49	e51	---	186	---	2020	---	140	50	---
TOTAL	2071	1899	1571	1492	1364	2688	10175	38458	33392	4482	1680	1240
MEAN	66.8	63.3	50.7	48.1	48.7	86.7	339	1241	1113	145	54.2	41.3
MAX	106	86	57	53	52	186	1100	2060	1650	333	113	77
MIN	33	50	42	42	45	46	127	553	426	70	35	28
AC-FT	4110	3770	3120	2960	2710	5330	20180	76280	66230	8890	3330	2460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

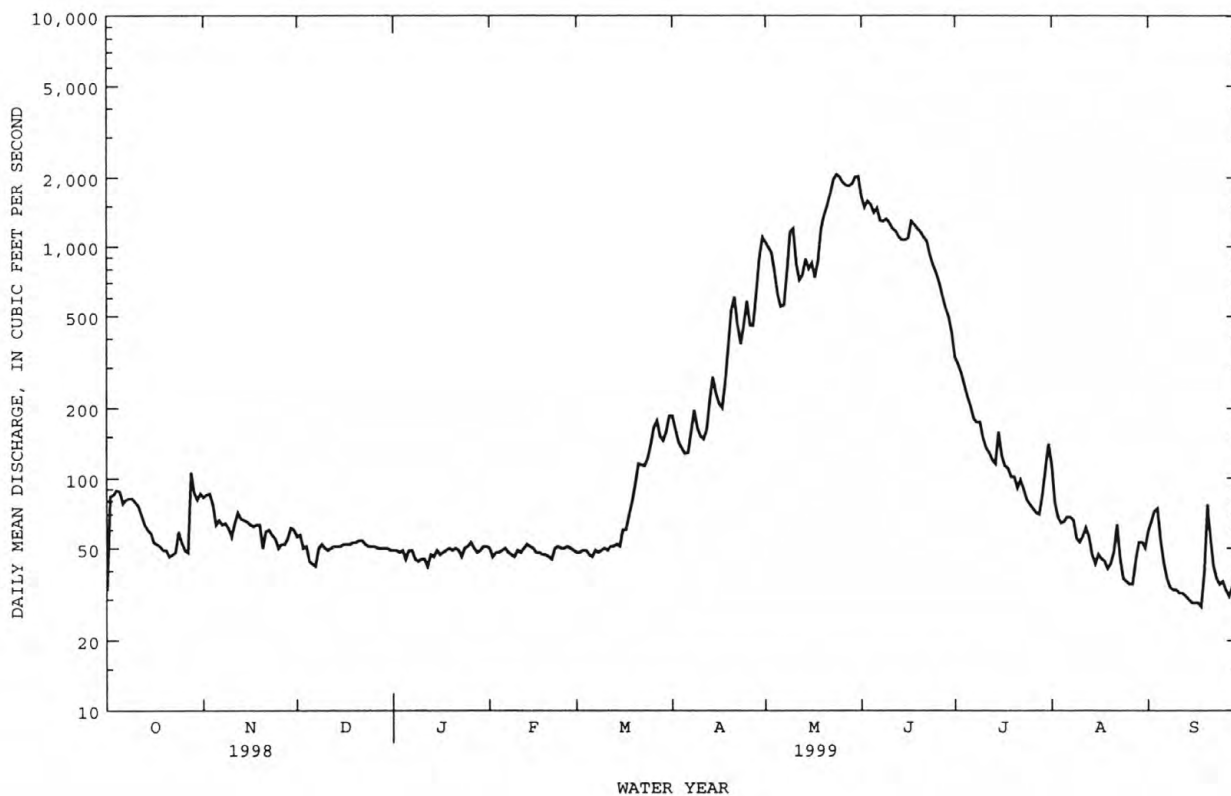
MEAN	39.6	36.5	32.4	31.9	32.8	51.4	263	1095	959	163	40.1	29.8
MAX	91.8	77.8	59.4	74.5	59.5	139	842	2122	2231	519	97.3	80.5
(WY)	1962	1962	1983	1983	1962	1989	1974	1984	1983	1983	1945	1997
MIN	17.6	18.4	14.8	16.3	20.4	23.8	77.6	405	178	33.4	17.0	11.0
(WY)	1953	1959	1977	1945	1945	1977	1973	1977	1987	1977	1954	1944

GREEN RIVER BASIN

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1944 - 1999	
ANNUAL TOTAL	102195		100512		--	
ANNUAL MEAN	280		275		232	
HIGHEST ANNUAL MEAN	--		--		423	
LOWEST ANNUAL MEAN	--		--		86.6	
HIGHEST DAILY MEAN	1870	May 21	2060	May 24	3960	May 24 1984
LOWEST DAILY MEAN	31	Sep 6-11	28	Sep 18	4.2	Sep 9 1988
ANNUAL SEVEN-DAY MINIMUM	31	Sep 5	30	Sep 12	6.2	Sep 4 1988
INSTANTANEOUS PEAK FLOW	--		2580	May 23	4780 ^a	May 23 1984
INSTANTANEOUS PEAK STAGE	--		7.32	May 23	8.95	Apr 25 1974
ANNUAL RUNOFF (AC-FT)	202700		199400		167900	
10 PERCENT EXCEEDS	1100		1070		836	
50 PERCENT EXCEEDS	66		61		41	
90 PERCENT EXCEEDS	38		44		21	

a Gage height, 8.78 ft.
e Estimated.



09253455 HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°09'02", long 107°07'06", in SE¹/₄ SE¹/₄ SE¹/₄ sec.25, T.14 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, 0.5 mi upstream from State Highway 70, 1.6 mi upstream from mouth, and 17 mi west of Encampment, WY.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
MAY 27...	1010	113	25	7.2	2.0	6.0	E560	E9.6	E94	10	2.9	
SEP 01...	0845	3.0	42	7.7	9.0	11.0	562	8.6	102	18	5.3	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
MAY 27...	.69	.8	.1	.3	11	1.2	.3	<.1	6.5	20	.03	
SEP 01...	1.1	1.3	.1	.4	21	1.6	.2	<.1	9.3	32	.04	
DATE		SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
MAY 27...	6.08	128	<1	12	<1	<16.0	<1	<1	<1	26	130	
SEP 01...	.26	10	<1	16	<1	<16.0	<1	<1.0	<1	18	42	
DATE		LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
MAY 27...	<1	<6	3	<.1	<1	<1	<1	<1	<1	14	<10	2
SEP 01...	<1	<4	7	<.1	<1	<1	<1	<1	<1	23	<10	1

E Estimated.

GREEN RIVER BASIN

09253465 WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY

LOCATION.--Lat 41°05'37", long 107°09'31", in SW¹/₄ NE¹/₄ SE¹/₄ sec.15, T.13 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, at Battle Creek Campground, 1.1 mi upstream from mouth, and 15 mi east of Savery.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
MAY 26...	1515	305	46	7.6	5.0	18.0	E585	E11.1	E113	20	6.1	
AUG 31...	1200	1.3	175	8.0	14.0	19.0	587	7.9	100	69	21	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AC-FT) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
MAY 26...	1.1	1.1	.1	.5	20	2.5	.7	<.1	7.2	31	.04	
AUG 31...	3.6	6.4	.3	.7	57	24	3.8	.4	11	106	.14	
DATE		SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAY 26...	25.9	288	<1	18	<1	<16.0	<1	<1.0	<1	9	180	
AUG 31...	.38	5	<1	43	<1	19.7	<1	<1.0	<1	6	E5	
DATE		LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAY 26...	<1	<6	5	<.1	<1	<1	<1	<1	<1	30	<10	4
AUG 31...	<1	E2	2	<.1	<1	<1	<1	<1	<1	160	<10	1

E Estimated.

09255000 SLATER FORK NEAR SLATER, CO

LOCATION.--Lat 40°58'57", long 107°22'56", in SW¹/₄NE¹/₄ sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi².

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,600 ft above sea level, from river-profile map. May 28, 1910 to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931 to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Station operated and record provided by the Colorado District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	30	e23	e22	32	40	78	488	536	86	19	19
2	12	28	e23	e22	25	39	65	485	480	78	15	26
3	15	29	22	23	31	38	56	519	556	67	13	29
4	26	28	22	24	29	39	53	429	498	58	13	35
5	30	24	18	25	30	36	48	279	453	51	14	25
6	24	26	7.6	25	30	24	50	236	427	43	20	19
7	24	24	10	25	29	27	61	268	385	37	15	14
8	29	27	16	25	29	24	87	391	424	38	13	13
9	30	25	19	24	36	25	70	637	428	43	11	9.7
10	25	29	20	24	33	26	60	604	399	37	10	9.1
11	21	32	19	25	24	25	59	359	361	32	13	9.6
12	19	25	19	25	21	27	68	289	325	25	16	12
13	18	32	20	23	30	26	102	327	307	20	14	13
14	18	33	20	19	30	30	138	428	298	17	11	13
15	17	28	20	25	30	34	98	368	309	27	9.0	13
16	17	27	20	23	27	36	77	399	325	28	9.5	12
17	18	26	20	24	30	38	68	306	409	21	12	13
18	19	26	21	25	28	42	85	369	407	21	12	13
19	18	26	20	26	32	43	138	530	322	19	9.2	16
20	19	17	20	25	27	50	227	579	310	19	8.7	29
21	17	34	22	26	26	56	316	592	275	17	13	22
22	18	25	e22	25	35	54	241	641	255	16	21	19
23	19	22	e22	24	32	59	188	695	223	15	16	e17
24	25	23	e22	28	33	76	262	682	205	14	12	e16
25	24	21	e22	27	34	89	323	648	198	13	12	e16
26	22	24	e22	29	36	83	255	622	156	13	14	e14
27	21	24	e22	28	30	98	263	666	134	12	14	e13
28	51	24	e22	24	36	64	333	665	121	17	15	e15
29	42	e24	e22	18	---	55	490	688	106	23	22	e17
30	34	e24	e22	26	---	60	622	760	96	19	22	e19
31	32	---	e22	28	---	78	---	751	---	20	17	---
TOTAL	713.2	787	621.6	762	845	1441	4981	15700	9728	946	435.4	510.4
MEAN	23.0	26.2	20.1	24.6	30.2	46.5	166	506	324	30.5	14.0	17.0
MAX	51	34	23	29	36	98	622	760	556	86	22	35
MIN	9.2	17	7.6	18	21	24	48	236	96	12	8.7	9.1
AC-FT	1410	1560	1230	1510	1680	2860	9880	31140	19300	1880	864	1010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

	MEAN	20.1	19.3	17.5	17.2	18.7	29.9	118	384	257	38.7	10.1	11.7
MAX	62.4	49.2	44.1	36.9	46.5	144	323	801	660	189	38.4	55.0	
(WY)	1986	1985	1985	1985	1986	1998	1985	1984	1995	1983	1945	1984	
MIN	7.29	7.73	7.30	4.42	9.82	12.6	25.2	45.7	23.6	1.27	1.39	3.20	
(WY)	1934	1934	1932	1992	1981	1965	1933	1934	1977	1977	1994	1960	

GREEN RIVER BASIN

09255000 SLATER FORK NEAR SLATER, CO--Continued

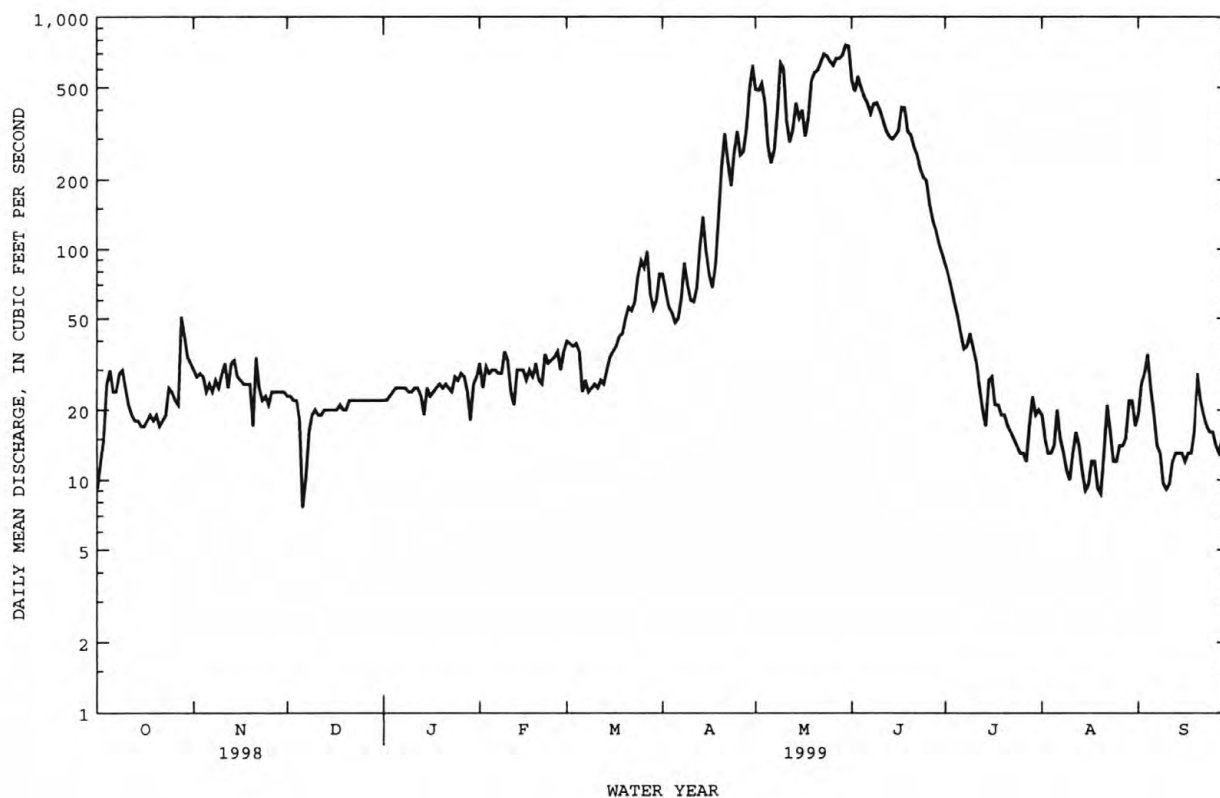
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL TOTAL	41777.9		37470.6		--	
ANNUAL MEAN	114		103		78.7	
HIGHEST ANNUAL MEAN	--		--		157	
LOWEST ANNUAL MEAN	--		--		20.5	
HIGHEST DAILY MEAN	728	May 21	760	May 30	1500	May 16 1984
LOWEST DAILY MEAN	6.0	Sep 2	7.6	Dec 6	.00 ^a	Aug 2 1934
ANNUAL SEVEN-DAY MINIMUM	6.8	Sep 1	10	Aug 14	.00 ^b	Aug 2 1934
INSTANTANEOUS PEAK FLOW	--	--	886	May 31	2250 ^b	May 16 1984
INSTANTANEOUS PEAK STAGE	--	--	8.20	May 31	11.78 ^c	May 16 1984
ANNUAL RUNOFF (AC-FT)	82870		74320		57020	
10 PERCENT EXCEEDS	414		375		258	
50 PERCENT EXCEEDS	26		26		20	
90 PERCENT EXCEEDS	11		14		7.2	

a Also occurred several days during years 1936, 1954, and 1977.

b From rating curve extended above 1000 ft³/s.

c From floodmark.

e Estimated.



09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE¹/₄ NW¹/₄ NW¹/₄ sec.7, T.12 N., R.92 W., Carbon County, Hydrologic Unit 14050003, 0.8 mi downstream from Ledford Slough, 1.5 mi southwest of Baggs, and 3.5 mi downstream from bridge on State Highway 789 in Baggs.

PERIOD OF RECORD.--Water years 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
MAY									
05...	1130	2080	256	8.3	3.0	1.0	606	10.2	95
26...	1100	4690	117	7.7	9.0	19.0	E610	E9.1	E99
JUL									
08...	1200	236	230	8.0	20.0	23.0	612	7.3	101
AUG									
31...	1615	10	467	8.6	23.0	25.0	609	8.9	131

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAY								
05...	100	27	8.1	15	.6	1.7	96	37
26...	48	14	3.3	4.1	.3	1.0	50	10
JUL								
08...	94	26	7.0	11	.5	1.3	98	18
AUG								
31...	180	47	16	32	1	3.1	195	47

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
MAY								
05...	3.4	.1	14	165	.22	928	446	2500
26...	1.5	<.1	11	75	.10	947	444	5620
JUL								
08...	2.8	.2	14	139	.19	88.3	22	14
AUG								
31...	7.8	.3	13	283	.39	7.96	12	.34

E Estimated.

BEAR RIVER BASIN

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE

LOCATION.--Lat 40°57'55", long 11°05'10", in SE¹/₄NW¹/₄SE¹/₄ sec. 30, T. 3 N., R. 10 E., Summit County, Utah, Hydrologic Unit 16010101, on left bank 400 ft downstream from West Fork and 2.8 mi upstream from Utah-Wyoming State line.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--July 1942 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,965 ft above sea level, from river-profile map. Prior to Oct. 1, 1986 at datum 3.0 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated slightly by Whitney Reservoir, total capacity, 4,700 acre-ft since 1966. Three diversions upstream from station for irrigation of about 265 acres upstream and 2,600 acres downstream from station. Station operated and record provided by the Utah District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	2330	1,830	6.53
Jun 20	0130	*2,090	*6.73

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	79	67	56	31	54	60	159	996	835	e210	91
2	68	82	66	55	30	52	60	178	1080	809	e180	125
3	78	76	64	55	21	54	61	180	992	777	e160	161
4	107	62	56	56	24	54	57	149	855	683	e140	140
5	103	74	42	57	41	48	57	131	764	586	e130	111
6	100	75	e34	55	49	54	57	126	739	515	e120	99
7	112	58	e32	53	52	53	57	155	955	504	e120	93
8	110	74	e40	53	53	53	59	229	1110	504	e123	87
9	99	67	e34	53	54	53	60	268	1190	433	e128	83
10	93	71	e30	53	50	52	57	209	1130	378	e130	81
11	87	74	e32	52	58	54	57	179	1010	338	e127	79
12	87	72	38	52	59	53	58	185	1160	305	e122	74
13	84	81	40	51	40	48	63	277	1330	283	e120	70
14	83	78	55	57	30	55	69	269	1400	286	e120	67
15	78	78	62	52	28	56	68	235	1520	292	e120	66
16	84	73	59	50	29	55	67	205	1660	251	e130	64
17	86	74	59	50	26	53	75	197	1760	269	e120	62
18	78	72	59	52	26	57	95	262	1700	220	e110	63
19	84	68	e50	53	37	61	122	355	1710	e220	e98	87
20	84	52	e40	54	50	64	140	398	1730	e230	89	100
21	82	77	e37	55	48	63	123	494	1550	e240	129	76
22	87	72	e32	55	47	61	107	626	1480	e270	95	89
23	85	71	e31	55	48	61	98	822	1420	e220	88	114
24	78	67	e30	55	50	62	96	1230	1340	e180	94	113
25	82	70	e32	55	51	68	96	1520	1280	e175	90	110
26	83	72	e38	55	51	73	102	1410	1230	e160	84	106
27	83	70	e45	55	52	68	128	1290	1050	e150	83	109
28	83	69	56	59	53	61	141	1400	955	e150	86	111
29	79	68	57	69	---	64	154	1590	875	e150	76	110
30	85	68	59	53	---	64	148	1510	824	e150	72	111
31	83	---	57	44	---	62	---	1370	---	e160	134	---
TOTAL	2684	2144	1433	1679	1188	1790	2592	17608	36795	10723	3628	2852
MEAN	86.6	71.5	46.2	54.2	42.4	57.7	86.4	568	1226	346	117	95.1
MAX	112	82	67	69	59	73	154	1590	1760	835	210	161
MIN	68	52	30	44	21	48	57	126	739	150	72	62
AC-FT	5320	4250	2840	3330	2360	3550	5140	34930	72980	21270	7200	5660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

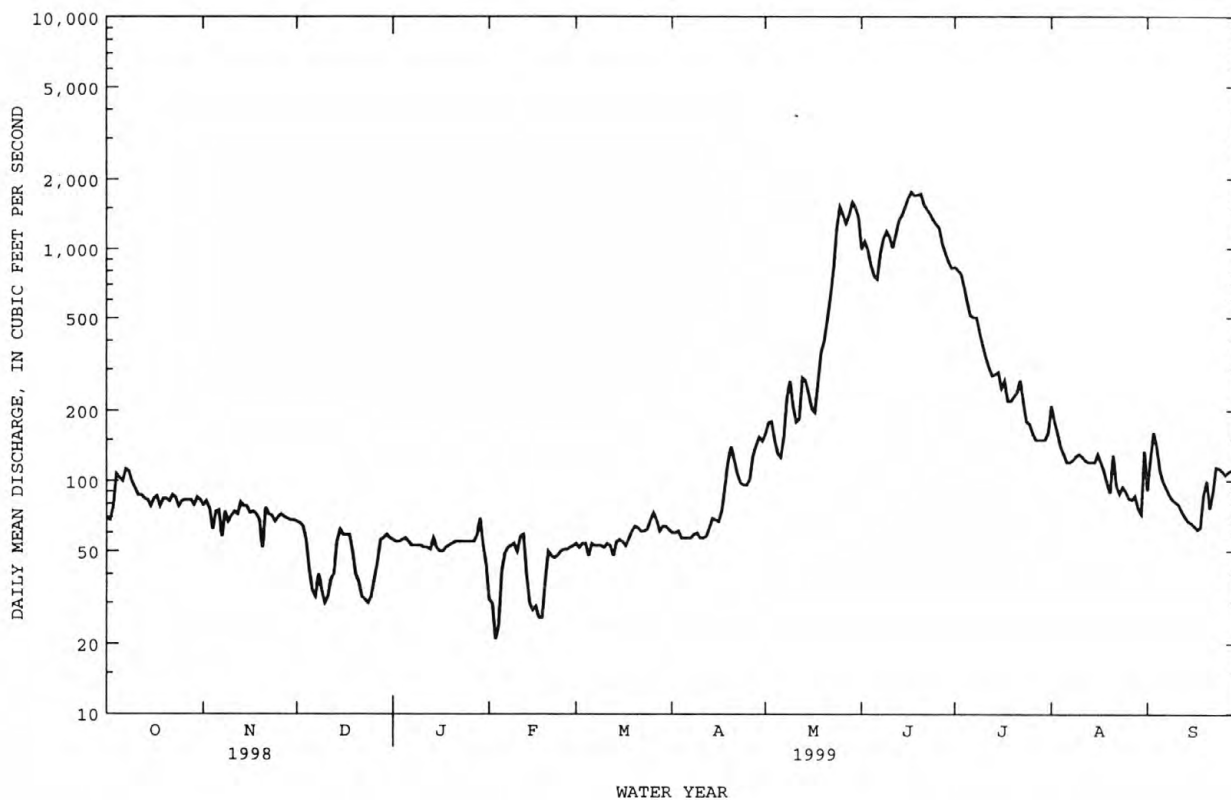
	MEAN	63.7	54.9	46.9	42.2	40.2	44.0	111	598	880	311	96.6	74.8
MAX	208	106	94.9	72.4	64.3	69.0	316	1044	1990	1105	244	229	
(WY)	1983	1984	1984	1984	1984	1986	1946	1984	1986	1995	1965	1983	
MIN	30.8	32.5	27.7	29.6	25.3	26.0	37.2	162	204	67.4	37.5	23.9	
(WY)	1959	1955	1960	1991	1964	1964	1944	1977	1992	1961	1954	1956	

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	87887		85116		--	
ANNUAL MEAN	241		233		197	
HIGHEST ANNUAL MEAN	--		--		335	1986
LOWEST ANNUAL MEAN	--		--		81.5	1977
HIGHEST DAILY MEAN	1430	Jun 30	1760	Jun 17	2680	Jun 4 1986
LOWEST DAILY MEAN	29	Jan 22	21	Feb 3	18	Jan 3 1960
ANNUAL SEVEN-DAY MINIMUM	34	Dec 6	31	Feb 13	21	Dec 28 1959
INSTANTANEOUS PEAK FLOW	--		2090	Jun 20	3230	Jun 6 1986
INSTANTANEOUS PEAK STAGE	--		6.73	Jun 20	4.05 ^a	Jun 6 1986
ANNUAL RUNOFF (AC-FT)	174300		168800		142900	
10 PERCENT EXCEEDS	728		828		619	
50 PERCENT EXCEEDS	83		79		59	
90 PERCENT EXCEEDS	38		50		34	

a Datum then in use.

e Estimated.



BEAR RIVER BASIN

10016900 BEAR RIVER AT EVANSTON, WY

LOCATION.--Lat 41°16'13", long 110°57'47", in NE¹/₄ NW¹/₄ NW¹/₄ sec.21, T.15 N., R.120 W., Uinta County, Hydrologic Unit 16010101, on left bank 100 ft downstream from bridge on State Highway 89, in the City of Evanston.

DRAINAGE AREA.--433 mi².

PERIOD OF RECORD.--May 1984 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,730 ft above sea level, from topographic map.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	183	560	1490	646	261	94
2	---	---	---	---	---	---	148	504	1430	607	167	87
3	---	---	---	---	---	---	150	690	1430	582	131	138
4	---	---	---	---	---	---	146	689	1220	533	124	171
5	---	---	---	---	---	---	153	526	1130	462	128	122
6	---	---	---	---	---	---	170	407	1010	352	124	92
7	---	---	---	---	---	---	201	397	1210	311	99	69
8	---	---	---	---	---	---	253	461	1270	365	84	58
9	---	---	---	---	---	---	269	631	1280	298	82	56
10	---	---	---	---	---	---	189	540	1210	230	87	52
11	---	---	---	---	---	---	201	439	1020	201	115	52
12	---	---	---	---	---	---	213	438	1040	183	123	49
13	---	---	---	---	---	---	242	762	1200	160	100	49
14	---	---	---	---	---	---	278	886	1310	123	82	47
15	---	---	---	---	---	---	264	701	1410	141	72	43
16	---	---	---	---	---	---	246	567	1580	123	68	37
17	---	---	---	---	---	---	248	484	1790	159	62	37
18	---	---	---	---	---	---	281	498	1780	149	70	46
19	---	---	---	---	---	---	313	682	1670	127	85	53
20	---	---	---	---	---	---	379	783	1700	131	84	84
21	---	---	---	---	---	---	374	951	1500	126	110	77
22	---	---	---	---	---	---	352	1090	1430	103	127	64
23	---	---	---	---	---	---	328	1280	1320	80	106	68
24	---	---	---	---	---	---	318	1710	1210	60	98	65
25	---	---	---	---	---	---	382	2190	1120	45	104	55
26	---	---	---	---	---	---	384	2230	1110	31	99	50
27	---	---	---	---	---	---	546	1940	950	46	96	52
28	---	---	---	---	---	---	616	2060	870	59	105	61
29	---	---	---	---	---	---	537	2180	738	87	104	66
30	---	---	---	---	---	---	610	2150	665	228	99	67
31	---	---	---	---	---	---	---	2030	---	361	93	---
TOTAL	---	---	---	---	---	---	8974	31456	38093	7109	3289	2061
MEAN	---	---	---	---	---	---	299	1015	1270	229	106	68.7
MAX	---	---	---	---	---	---	616	2230	1790	646	261	171
MIN	---	---	---	---	---	---	146	397	665	31	62	37
AC-FT	---	---	---	---	---	---	17800	62390	75560	14100	6520	4090

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	328	857	885	233	74.5	62.4
MAX	---	---	---	---	---	---	602	2469	1890	980	181	225
(WY)	---	---	---	---	---	---	1985	1984	1986	1995	1984	1984
MIN	---	---	---	---	---	---	133	330	121	40.0	16.4	11.8
(WY)	---	---	---	---	---	---	1995	1990	1992	1994	1988	1988

10016900 BEAR RIVER AT EVANSTON, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

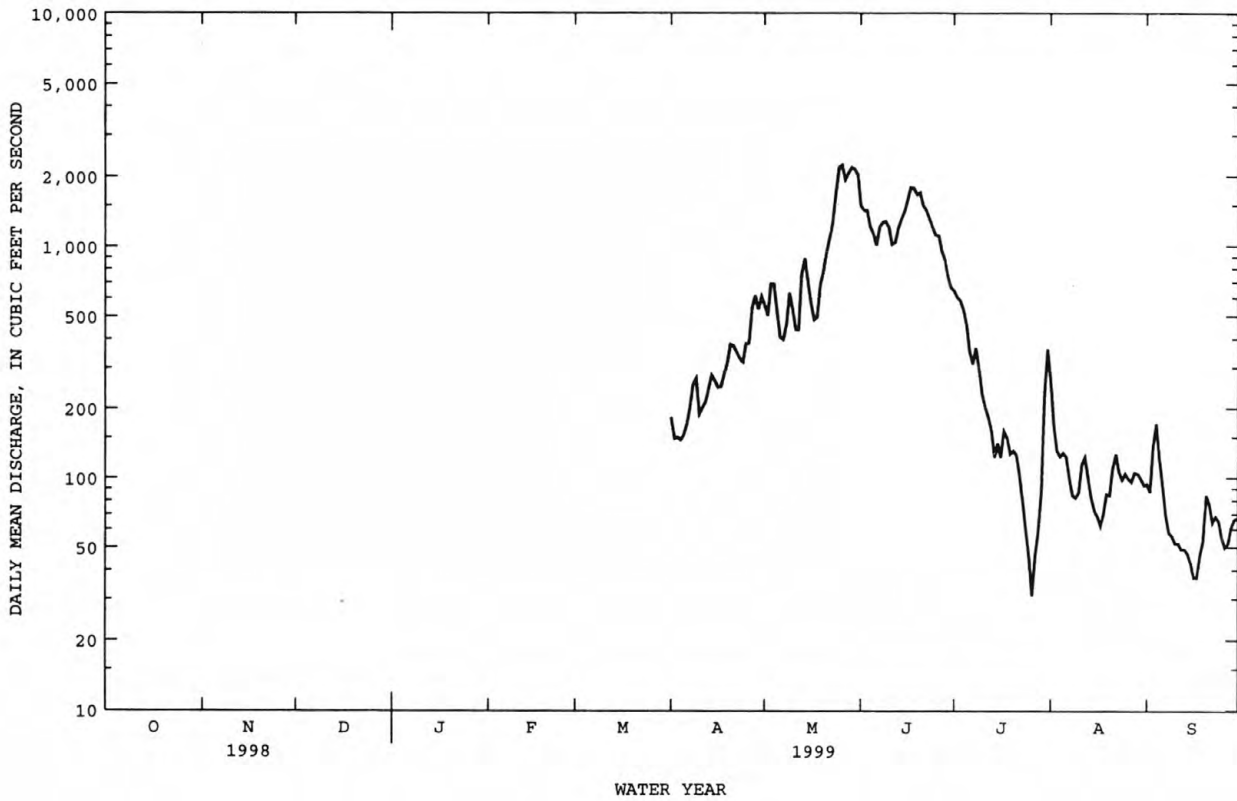
WATER YEARS 1984 - 1999*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 INSTANTANEOUS PEAK FLOW
 INSTANTANEOUS PEAK STAGE
 ANNUAL RUNOFF (AC-FT)

2230 May 26
 31 Jul 26
 2490 May 26
 5.88 May 26
 --

3160 May 16 1984
 3.8 Sep 30 1992
 3680 May 16 1984
 7.35 May 16 1984
 293500

* During period of operation.



BEAR RIVER BASIN

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°26'04", long 111°01'01", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 17 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 9.3 mi upstream from Woodruff Narrows Dam and 10 mi southeast of Woodruff.

DRAINAGE AREA.--752 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,455 ft above sea level, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	90	155	e100	e95	e100	280	819	1850	473	208	45
2	27	76	153	e80	e100	e90	229	609	1550	442	128	37
3	45	82	147	e78	e90	e80	197	645	1580	420	86	46
4	84	78	143	e82	e102	e84	201	848	1450	402	71	120
5	127	69	134	e102	e110	e80	196	777	1360	357	74	96
6	118	105	e110	e104	e90	e96	195	597	1160	301	75	63
7	116	101	e120	e90	e84	e90	220	491	1180	229	66	42
8	136	92	e128	e90	e76	e100	271	447	1350	216	48	30
9	125	98	e129	e100	e68	e100	308	514	1360	226	40	24
10	109	109	e129	e90	e68	e120	289	629	1280	172	42	23
11	98	121	e100	e90	e80	e110	244	556	1230	129	48	40
12	91	116	e120	e90	e76	e130	246	448	918	114	74	40
13	87	95	e111	e88	e80	e145	261	522	1050	101	62	37
14	83	108	e110	e80	e72	e160	293	918	1160	85	45	37
15	85	123	e110	e90	e73	e182	309	928	1180	72	32	33
16	89	130	e110	e88	e80	e192	301	755	1180	73	25	29
17	106	149	e114	e94	e84	e219	284	609	1180	56	23	25
18	115	150	e115	e96	e100	e249	283	528	1180	94	19	28
19	107	139	e112	e92	e110	e303	302	571	1180	55	26	36
20	110	161	e110	e90	e102	e369	339	734	1180	45	32	57
21	109	144	e68	e96	e110	e425	397	866	1180	43	37	74
22	113	196	e72	e92	e96	e440	406	1070	1180	33	57	60
23	120	177	e73	e90	e80	e449	422	1200	1190	24	53	68
24	107	185	e68	e94	e84	e424	389	1390	1170	12	41	71
25	82	158	e86	e80	e100	e444	396	1720	1070	5.5	37	67
26	73	162	e110	e90	e94	e520	427	1980	985	3.1	40	57
27	74	181	e100	e70	e90	e531	470	2040	888	1.3	37	57
28	73	180	e110	e70	e96	e378	727	1890	749	1.2	42	66
29	73	172	e120	e72	---	e281	729	1950	629	10	47	72
30	74	170	e110	e74	---	e275	778	2070	525	56	47	74
31	94	---	e112	e76	---	e307	---	2030	---	176	44	---
TOTAL	2871	3917	3489	2718	2490	7473	10389	31151	35124	4427.1	1706	1554
MEAN	92.6	131	113	87.7	88.9	241	346	1005	1171	143	55.0	51.8
MAX	136	196	155	104	110	531	778	2070	1850	473	208	120
MIN	21	69	68	70	68	80	195	447	525	1.2	19	23
AC-FT	5690	7770	6920	5390	4940	14820	20610	61790	69670	8780	3380	3080

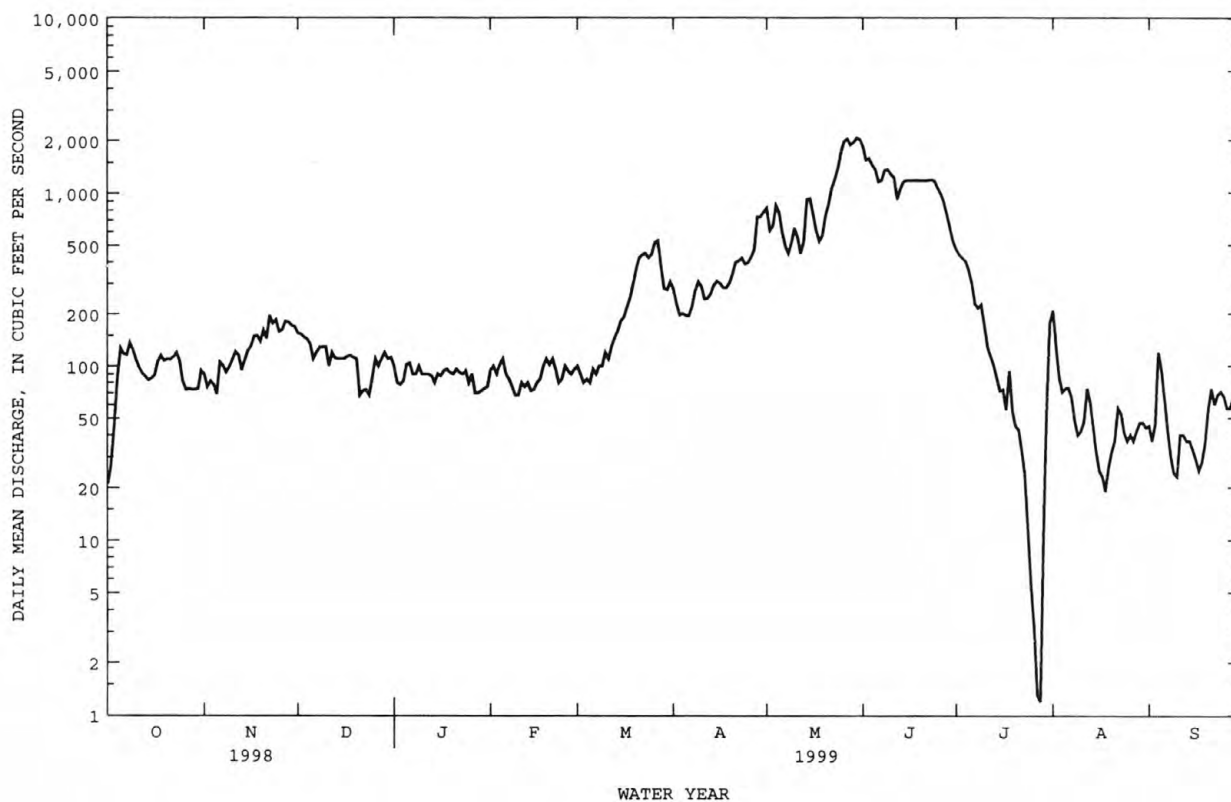
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

	MEAN	76.1	74.9	73.3	69.3	85.2	169	349	826	898	211	53.0	51.7
MAX	437	198	181	147	312	627	671	1957	2564	1191	340	288	
(WY)	1983	1974	1984	1984	1986	1986	1969	1984	1986	1995	1983	1983	
MIN	3.03	6.06	7.21	6.76	13.8	26.8	77.7	104	54.6	4.84	2.26	.49	
(WY)	1965	1989	1989	1989	1993	1977	1977	1977	1992	1988	1988	1988	

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1962 - 1999
ANNUAL TOTAL	124566	107309.1	--
ANNUAL MEAN	341	294	245
HIGHEST ANNUAL MEAN	--	--	583
LOWEST ANNUAL MEAN	--	--	45.1
HIGHEST DAILY MEAN	2340	2070	3900
LOWEST DAILY MEAN	21	1.2	.00
ANNUAL SEVEN-DAY MINIMUM	30	8.2	.00
INSTANTANEOUS PEAK FLOW	--	2130	4150
INSTANTANEOUS PEAK STAGE	--	5.37	6.17
ANNUAL RUNOFF (AC-FT)	247100	212800	177400
10 PERCENT EXCEEDS	979	922	727
50 PERCENT EXCEEDS	127	110	86
90 PERCENT EXCEEDS	79	42	10

e Estimated.



BEAR RIVER BASIN

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 24...	1415	198	474	8.3	3.0	6.0	605	10.9	102	230
MAR 23...	1400	477	531	8.4	4.0	15.0	600	10.4	101	240
MAY 24...	1510	1300	259	8.1	13.0	22.0	E600	E8.2	E99	120
JUN 17...	0830	1080	180	8.3	12.0	14.0	605	8.2	96	81
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 24...	54	23	13	.4	2.0	216	--	19	20	.2
MAR 23...	51	28	19	.5	3.8	--	211	26	36	.1
MAY 24...	31	11	5.4	.2	1.6	--	115	10	7.4	<.1
JUN 17...	22	6.7	3.5	.2	.8	87	--	3.8	4.7	.2
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 24...	6.5	267	.36	143	<.01	<.05	.03	.01	56	30
MAR 23...	9.8	--	--	--	.01	.06	<.02	.02	363	468
MAY 24...	6.4	--	--	--	<.01	.10	.04	.01	1030	3600
JUN 17...	5.1	99	.13	287	<.01	<.05	<.02	.02	174	509

E Estimate.

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°30'20", long 111°00'50", in NE 1/4 NE 1/4 NW 1/4 sec. 32, T. 18 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 1,100 ft downstream from Woodruff Narrows Dam, 1.6 mi upstream from Salt Creek, 5.4 mi upstream from Wyoming-Utah State line, and 7.7 mi east of Woodruff.

DRAINAGE AREA.--784 mi².

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,398.96 ft above sea level (levels by Utah Water Resources Division from Bureau of Reclamation bench mark). Prior to Sept. 26, 1962, at site 175 ft upstream at same datum.

REMARKS.--Records good. Flow regulated by Woodruff Narrows Reservoir (station 10020200) beginning January 1962. Diversions for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296	46	49	47	48	51	318	804	2240	609	212	148
2	295	46	49	47	48	51	290	720	1850	549	212	148
3	296	46	50	47	48	51	255	685	1690	509	212	148
4	295	46	49	47	48	51	230	781	1570	467	211	148
5	292	47	49	47	48	51	215	773	1450	421	210	148
6	292	47	50	47	48	51	215	677	1280	458	210	148
7	292	46	50	46	48	51	217	581	1200	663	210	148
8	292	47	50	47	48	51	248	514	1260	541	184	148
9	292	48	49	47	48	51	272	514	1300	523	155	148
10	294	48	49	47	48	51	288	571	1270	523	154	148
11	295	48	49	46	48	52	271	560	1210	518	153	148
12	295	49	49	46	48	52	262	508	1060	516	153	148
13	293	49	49	47	48	52	261	567	1040	423	153	148
14	293	50	48	47	49	52	268	771	1120	221	153	148
15	292	50	49	47	49	52	284	845	1230	220	153	148
16	368	50	49	47	49	53	293	770	1350	220	152	148
17	431	51	50	47	50	53	290	669	1510	219	151	148
18	431	51	49	47	50	53	287	585	1710	220	151	146
19	431	51	49	47	50	53	300	560	1760	220	151	146
20	431	50	49	47	50	53	324	638	1700	218	153	107
21	428	50	49	47	50	80	363	735	1680	217	153	41
22	427	50	49	47	50	182	388	878	1540	217	152	40
23	424	50	48	47	50	288	422	1020	1420	216	151	40
24	423	50	48	47	50	354	408	1240	1300	215	151	40
25	419	50	48	47	51	394	421	1620	1190	215	151	40
26	419	50	48	47	51	455	447	1980	1090	215	151	39
27	224	50	48	47	51	509	487	2240	1020	215	151	40
28	47	50	47	48	51	478	621	2200	889	215	149	40
29	46	49	47	48	---	387	691	2210	793	213	148	39
30	46	49	47	48	---	331	759	2300	687	212	148	40
31	46	---	47	48	---	325	---	2340	---	212	148	---
TOTAL	9445	1464	1510	1458	1375	4818	10395	31856	40409	10620	5146	3314
MEAN	305	48.8	48.7	47.0	49.1	155	346	1028	1347	343	166	110
MAX	431	51	50	48	51	509	759	2340	2240	663	212	148
MIN	46	46	47	46	48	51	215	508	687	212	148	39
AC-FT	18730	2900	3000	2890	2730	9560	20620	63190	80150	21060	10210	6570

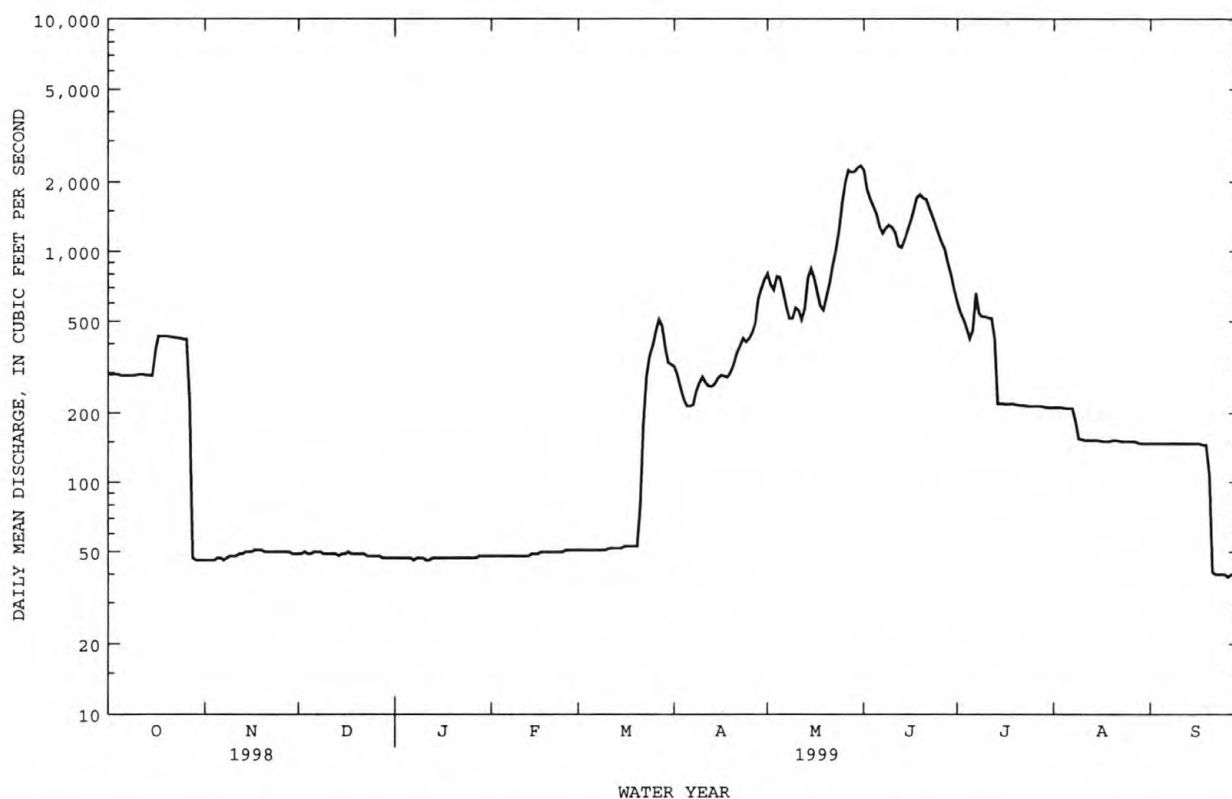
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

	MEAN	61.4	56.8	49.1	46.8	49.8	102	295	802	1017	306	83.3	63.2
MAX	425	421	184	153	171	473	891	1828	2437	913	331	278	
(WY)	1983	1983	1983	1985	1971	1972	1985	1984	1983	1975	1983	1983	
MIN	3.89	.12	4.28	4.37	4.71	4.70	.34	27.8	396	20.0	3.91	3.65	
(WY)	1990	1981	1978	1978	1978	1978	1977	1977	1977	1966	1979	1979	

BEAR RIVER BASIN

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1962 - 1999	
ANNUAL TOTAL	130550		121810		--	
ANNUAL MEAN	358		334		245	
HIGHEST ANNUAL MEAN	--		--		509	1983
LOWEST ANNUAL MEAN	--		--		44.3	1977
HIGHEST DAILY MEAN	2400	Jun 21	2340	May 31	3630	Jun 3 1983
LOWEST DAILY MEAN	46	Many days	39	Sep 26, 29	.00	Several days, 1962, 1979, 1980
ANNUAL SEVEN-DAY MINIMUM	46	Oct 29	40	Sep 23	.07	Nov 26 1980
INSTANTANEOUS PEAK FLOW	--		2400	May 30	3820	Jun 2 1983
INSTANTANEOUS PEAK STAGE	--		7.02	May 30	8.26	Jun 2 1983
ANNUAL RUNOFF (AC-FT)	258900		241600		177200	
10 PERCENT EXCEEDS	965		941		817	
50 PERCENT EXCEEDS	148		151		45	
90 PERCENT EXCEEDS	49		47		9.3	



BEAR RIVER BASIN

361

10027000 TWIN CREEK AT SAGE, WY

LOCATION.--Lat 41°48'36", long 110°58'12", in NE¹/₄ SW¹/₄ SE¹/₄ sec.7, T.21 N., R.119 W., Lincoln County, Hydrologic Unit 16010101, 0.5 mi downstream from Bulldog Hollow, 0.5 mi southwest of Sage, 0.8 mi southeast of junction of U.S. Highway 30 and State Highway 89, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--246 mi².

PERIOD OF RECORD.--Water years 1975 to 1981, October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL AS CACO3 (00900)
NOV 24...	1200	20	995	8.5	2.0	0.5	605	10.7	98	420
MAR 23...	0830	144	530	8.5	0.0	-5.0	605	11.4	99	180
APR 29...	0930	63	952	8.2	7.0	7.0	600	9.1	96	360
MAY 24...	1800	63	835	8.5	18.0	16.0	607	7.6	101	360
JUN 17...	1150	14	892	8.5	15.0	21.0	610	8.1	101	360
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
NOV 24...	87	49	60	1	3.2	251	--	260	38	.4
MAR 23...	37	22	38	1	4.6	--	120	120	20	.2
APR 29...	74	42	68	2	4.6	229	229	240	37	.4
MAY 24...	79	40	40	.9	2.9	238	--	170	23	.3
JUN 17...	74	43	41	.9	2.1	--	212	200	27	.4
DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV 24...	11	656	.89	34.7	<.01	<.05	.03	<.01	140	7.4
MAR 23...	6.9	--	--	--	<.01	.08	.03	.11	730	284
APR 29...	12	612	.83	105	<.01	.08	<.02	.04	1150	197
MAY 24...	12	508	.69	85.9	<.01	<.05	.02	.02	225	38
JUN 17...	13	--	--	--	<.01	<.05	<.02	.02	142	5.3

BEAR RIVER BASIN

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY

LOCATION.--Lat 41°56'20", long 110°59'05", in SE¹/₄SE¹/₄ sec. 25, T. 23 N., R. 120 W., Lincoln County, Hydrologic Unit 16010102, 800 ft downstream from Pixley Dam, 11 mi south of Cokeville, and 17.5 mi downstream from Twin Creek.

DRAINAGE AREA.--2,032 mi².

PERIOD OF RECORD.--October 1941 to November 1943 (published as Bear River near Cokeville), October 1952 to September 1956, May 1958 to current year (seasonal only). Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,185 ft above sea level, from river-profile map. Oct. 31, 1941 to Nov. 30, 1943, at site 200 ft downstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by diversions for irrigation, return flow from irrigated areas, and regulation by upstream reservoirs. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	969	812	635	279	153
2	---	---	---	---	---	---	---	981	940	587	272	166
3	---	---	---	---	---	---	---	992	980	522	269	177
4	---	---	---	---	---	---	---	1020	998	407	267	190
5	---	---	---	---	---	---	---	1020	1040	427	265	196
6	---	---	---	---	---	---	---	981	1050	391	279	193
7	---	---	---	---	---	---	---	968	1040	428	283	187
8	---	---	---	---	---	---	---	943	1010	375	279	186
9	---	---	---	---	---	---	---	888	1060	374	275	183
10	---	---	---	---	---	---	---	829	1050	379	259	181
11	---	---	---	---	---	---	---	792	1000	388	240	178
12	---	---	---	---	---	---	---	789	981	461	241	167
13	---	---	---	---	---	---	---	805	969	508	237	162
14	---	---	---	---	---	---	---	850	955	562	230	163
15	---	---	---	---	---	---	---	840	900	619	216	160
16	---	---	---	---	---	---	---	850	868	524	200	160
17	---	---	---	---	---	---	---	871	822	474	187	149
18	---	---	---	---	---	---	---	869	806	450	157	158
19	---	---	---	---	---	---	---	822	803	424	182	174
20	---	---	---	---	---	---	---	673	839	402	181	175
21	---	---	---	---	---	---	---	507	863	370	179	176
22	---	---	---	---	---	---	---	494	879	347	179	184
23	---	---	---	---	---	---	---	474	889	328	179	165
24	---	---	---	---	---	---	---	473	902	307	178	147
25	---	---	---	---	---	---	---	496	908	297	181	139
26	---	---	---	---	---	---	---	578	897	280	182	134
27	---	---	---	---	---	---	---	637	878	259	185	133
28	---	---	---	---	---	---	---	683	840	245	169	134
29	---	---	---	---	---	---	---	709	776	249	154	135
30	---	---	---	---	---	---	---	751	695	275	152	132
31	---	---	---	---	---	---	---	773	---	282	151	---
TOTAL	---	---	---	---	---	---	---	24327	27450	12576	6687	4937
MEAN	---	---	---	---	---	---	---	785	915	406	216	165
MAX	---	---	---	---	---	---	---	1020	1060	635	283	196
MIN	---	---	---	---	---	---	---	473	695	245	151	132
AC-FT	---	---	---	---	---	---	---	48250	54450	24940	13260	9790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	232	463	545	332	124	89.1
MAX	---	---	---	---	---	---	666	1361	1729	890	471	453
(WY)	---	---	---	---	---	---	1998	1986	1983	1983	1983	1983
MIN	---	---	---	---	---	---	1.06	.87	1.43	5.10	6.26	7.79
(WY)	---	---	---	---	---	---	1991	1977	1977	1977	1977	1977

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

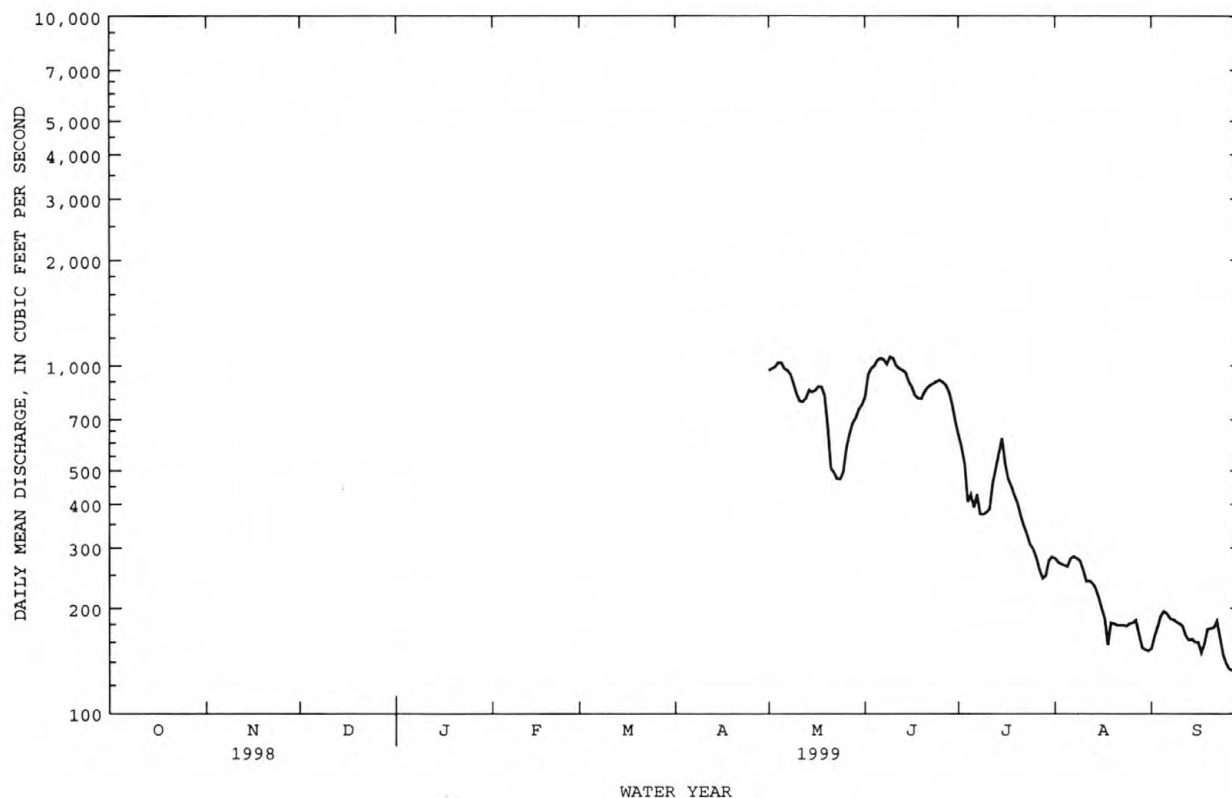
WATER YEARS 1966 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN
INSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE

1060 Jun 9
132 Sep 30
1120 Jun 9
7.66 Jun 9

2040 Jun 5 1983
.56 May 12 1977
--
--

* For period of operation.



BEAR RIVER BASIN

10032000 SMITHS FORK NEAR BORDER, WY

LOCATION.--Lat 42°17'36", long 110°52'18", in NE¹/₄SW¹/₄ sec. 28, T. 27 N., R. 118 W., Lincoln County, Hydrologic Unit 16010102, on left bank 4.9 mi upstream from Howland Creek, 5.6 mi downstream from Hobbie Creek, and 12.4 mi northeast of Border.

DRAINAGE AREA.--165 mi².

PERIOD OF RECORD.--May 1942 to current year.

REVISED RECORDS.--WSP 1734: 1952(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above sea level, from topographic map. Prior to Oct. 16, 1945, at site 1.2 mi downstream at different datum. Oct. 16, 1945 to November 1986 at site 0.4 mi down-stream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. One diversion for irrigation of about 200 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	87	e64	e72	e58	61	72	537	1010	774	254	158
2	107	87	e68	e74	e56	59	70	497	980	764	249	157
3	120	84	e66	e64	e54	60	69	441	1030	744	244	162
4	114	83	e62	e64	e56	61	66	355	1010	724	242	161
5	107	83	e58	e70	60	60	70	304	1040	690	242	151
6	105	83	e64	e66	65	56	70	278	1020	655	233	146
7	104	80	e70	e66	61	64	71	311	1060	625	224	142
8	102	84	e68	e68	57	60	77	411	1060	603	218	140
9	101	78	e64	e64	59	60	80	417	1030	569	213	138
10	100	80	e62	e60	60	59	75	358	1030	536	212	137
11	98	79	e64	e61	58	59	74	319	990	510	215	135
12	98	79	e66	e64	60	60	80	303	995	486	214	133
13	97	80	e70	61	74	57	89	332	1010	467	207	131
14	96	82	e68	62	75	58	99	315	1030	469	200	130
15	96	78	e62	61	63	59	101	323	1060	489	196	129
16	96	75	e50	64	68	59	103	295	1130	438	193	127
17	94	77	e50	64	62	59	110	286	1120	414	189	126
18	92	78	e52	62	61	59	144	328	1090	391	186	125
19	91	76	e50	62	60	60	195	446	1080	371	183	130
20	91	73	e60	62	59	63	229	532	1070	351	182	131
21	90	76	e76	62	63	67	216	630	1090	334	183	124
22	89	76	e70	61	59	67	202	755	1080	321	182	123
23	91	74	e74	61	58	66	185	878	1060	311	175	121
24	93	e80	e80	60	59	68	174	999	1010	301	172	122
25	92	e78	e74	59	60	73	194	1020	982	293	169	119
26	90	e79	e72	72	61	79	188	1030	946	285	166	117
27	90	e76	e78	61	58	79	196	1040	892	278	165	118
28	91	e76	e64	54	61	74	250	1070	851	274	166	116
29	89	e62	e58	e54	---	72	370	1110	818	275	159	115
30	90	e60	e58	e54	---	74	498	1120	791	271	162	114
31	89	---	e64	e56	---	73	---	1090	---	262	172	---
TOTAL	3009	2343	2006	1945	1705	1985	4417	18130	30365	14275	6167	3978
MEAN	97.1	78.1	64.7	62.7	60.9	64.0	147	585	1012	460	199	133
MAX	120	87	80	74	75	79	498	1120	1130	774	254	162
MIN	89	60	50	54	54	56	66	278	791	262	159	114
AC-FT	5970	4650	3980	3860	3380	3940	8760	35960	60230	28310	12230	7890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

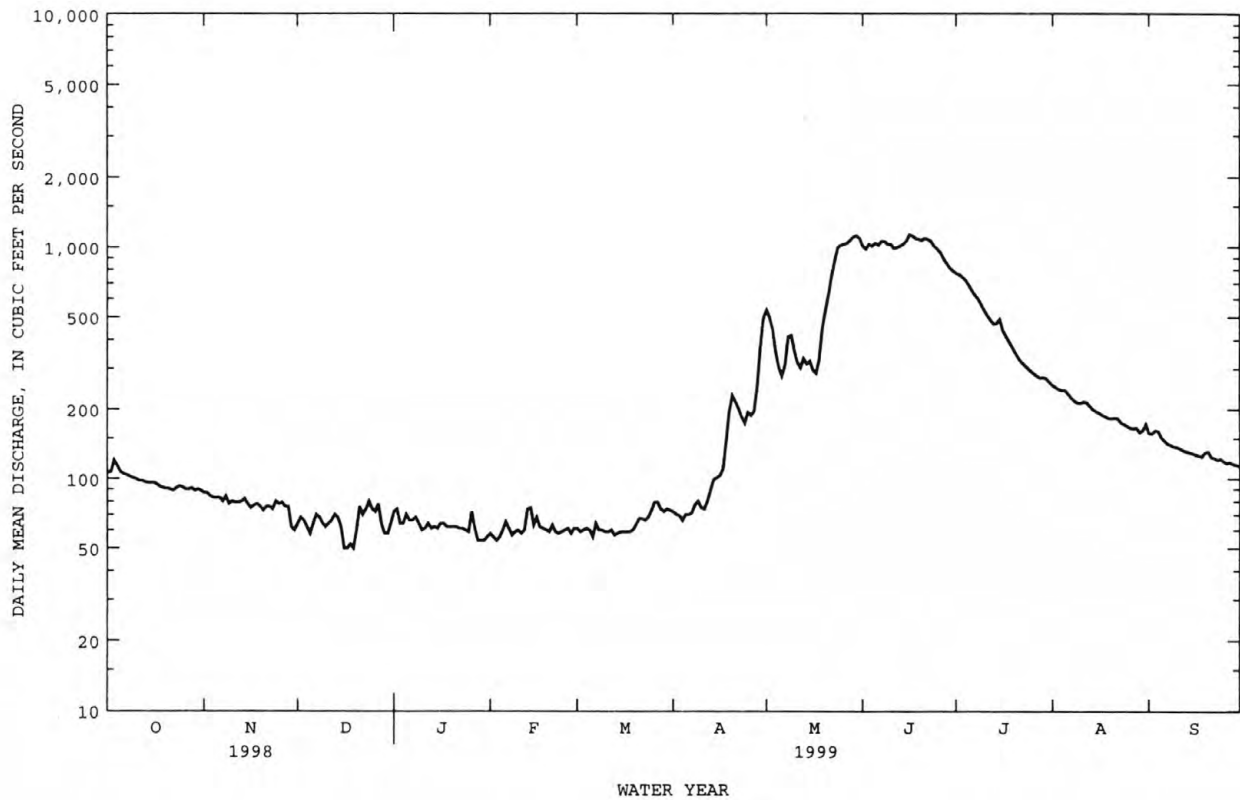
MEAN	91.4	78.5	69.7	64.0	61.5	63.0	161	551	645	302	155	110
MAX	156	113	88.4	85.0	82.8	99.4	385	1072	1377	602	242	166
(WY)	1987	1986	1983	1983	1984	1986	1946	1997	1986	1975	1983	1986
MIN	51.0	50.7	45.3	40.1	38.1	39.5	58.6	99.1	96.2	61.4	55.1	52.1
(WY)	1978	1978	1995	1988	1988	1988	1975	1977	1977	1977	1977	1977

10032000 SMITHS FORK NEAR BORDER, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1943 - 1999	
ANNUAL TOTAL	72037		90325		--	
ANNUAL MEAN	197		247		197	
HIGHEST ANNUAL MEAN	--		--		324	1986
LOWEST ANNUAL MEAN	--		--		71.1	1977
HIGHEST DAILY MEAN	764	Jun 4	1130	Jun 16	2000	Jun 4 1986
LOWEST DAILY MEAN	50	Dec 16,17,19	50	Dec 16,17,19	32	Dec 6 1993
ANNUAL SEVEN-DAY MINIMUM	56	Dec 14	55	Jan 28	35	Dec 1 1993
INSTANTANEOUS PEAK FLOW	--		1440	May 30	2100	Jun 4 1986
INSTANTANEOUS PEAK STAGE	--		3.70	May 30	5.86 ^a	Jun 4 1986
ANNUAL RUNOFF (AC-FT)	142900		179200		142400	
10 PERCENT EXCEEDS	561		862		532	
50 PERCENT EXCEEDS	92		97		91	
90 PERCENT EXCEEDS	62		60		59	

a Site and datum then in use.

e Estimated.



BEAR RIVER BASIN

10035000 SMITHS FORK AT COKEVILLE, WY

LOCATION.--Lat 42°05'47", long 110°56'24", in NE¹/₄ NW¹/₄ NW¹/₄ sec.4, T.24 N., R.119 W., Lincoln County, Hydrologic Unit 16010102, 900 ft upstream from U.S. Highway 30N, 1 mi northeast of Cokeville, and 2 mi upstream from mouth.

DRAINAGE AREA.--275 mi².

PERIOD OF RECORD.--Water years 1983-88, 1989-1992, 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 24...	0945	54	385	8.2	2.0	-1.0	605	11.0
MAR 23...	1030	92	404	8.4	0.5	0.5	602	11.3
MAY 25...	0945	1310	314	8.0	7.0	17.0	608	9.5
JUN 17...	1430	1100	296	8.3	10.0	23.0	608	9.2

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 24...	100	<.01	<.05	.03	.01	44	6.4
MAR 23...	100	<.01	<.05	<.02	<.01	34	8.5
MAY 25...	97	<.01	.09	.03	.04	738	2610
JUN 17...	103	<.01	.06	<.02	.03	372	1100

MEAN	225	235	206	187	213	373	703	1020	1277	603	246	209
MAX	755	692	536	344	429	1159	1945	2794	3712	1556	707	658
(WY)	1983	1983	1983	1984	1986	1986	1985	1984	1983	1983	1983	1983
MIN	55.6	83.1	96.5	86.2	82.4	116	69.2	115	96.7	71.4	80.1	55.9
(WY)	1978	1978	1978	1993	1993	1988	1977	1977	1977	1977	1977	1977

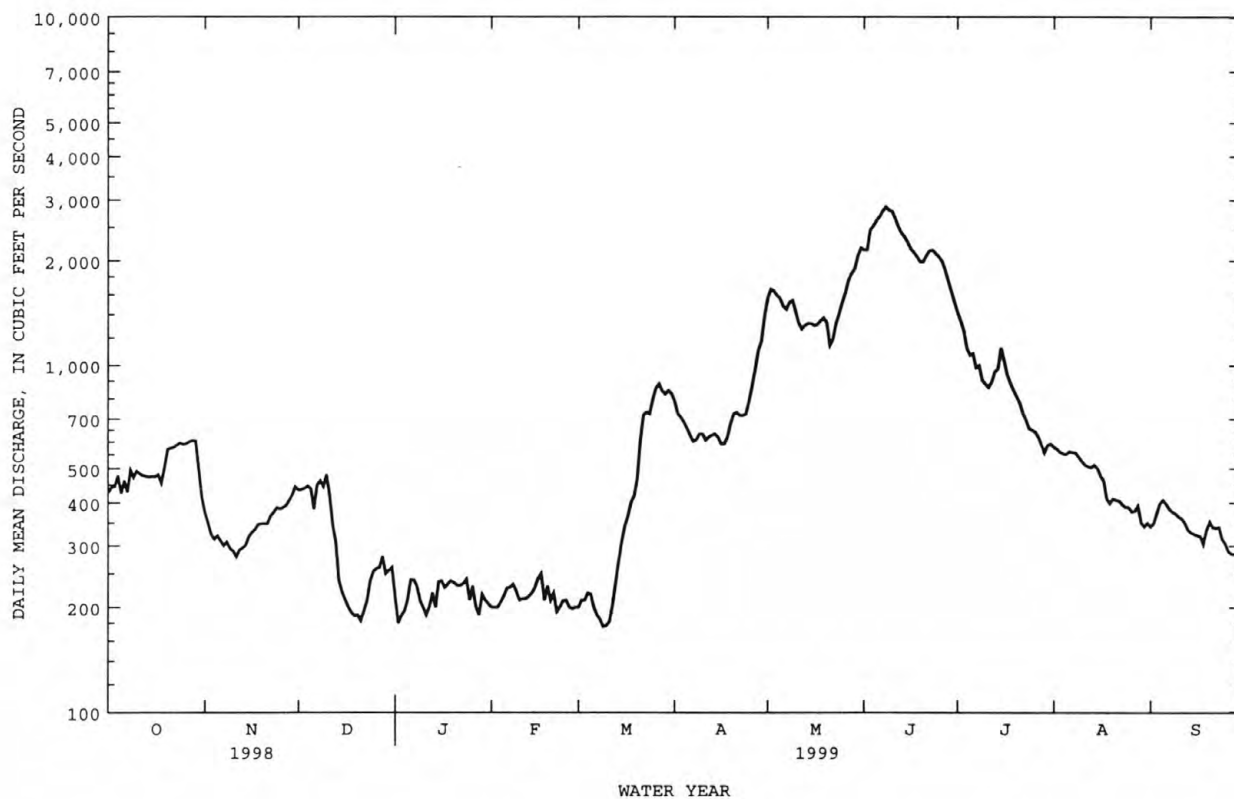
BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CAL YEAR*	FOR 1999 WATER YEAR	WATER YEARS 1955 - 1999*
ANNUAL TOTAL	--	250614	--
ANNUAL MEAN	--	687	456
HIGHEST ANNUAL MEAN	--	--	1049
LOWEST ANNUAL MEAN	--	--	112
HIGHEST DAILY MEAN	1220 Apr 11	2860 Jun 8	5400 Jun 7 1983
LOWEST DAILY MEAN	183 Dec 21	176 Mar 9	31 Oct 5 1977
ANNUAL SEVEN-DAY MINIMUM	--	188 Mar 6	36 Oct 1 1977
INSTANTANEOUS PEAK FLOW	--	2870 Jun 8	5620 Jun 7 1983
INSTANTANEOUS PEAK STAGE	--	6.59 Jun 8	8.75 Jun 7 1983
ANNUAL RUNOFF (AC-FT)	--	497100	330600
10 PERCENT EXCEEDS	--	1630	1120
50 PERCENT EXCEEDS	--	444	236
90 PERCENT EXCEEDS	--	210	115

* For period of operation.

e Estimated.



10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Temperature November 1998 to present.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1998 to September 30, 1999.

INSTRUMENTATION.--Temperature data logger.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 21.3°C, Jul 27, Aug 2, 1999; minimum, 0.0°C, many days during the winter period.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.3°C, Jul 27, Aug 2; minimum, 0.0°C, many days during the winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 1998										
29...	1350	604	444	8.6	8.00	8.0	617	10.1	105	190
NOV										
13...	1350	270	629	8.6	2.00	5.50	615	13.1	118	270
DEC										
15...	1040	241	638	8.5	.500	-.500	619	12.8	109	290
JAN 1999										
27...	0915	250	384	8.1	-.500	-.800	610	11.1	95.0	250
FEB										
16...	1715	240	--	--	.500	--	--	--	--	--
17...	0940	220	601	7.9	.500	1.00	604	10.8	95	260
MAR										
16...	1030	349	616	8.3	1.00	9.00	605	11.7	104	270
APR										
22...	1020	690	567	8.4	6.5	1.50	604	9.32	96	250
MAY										
20...	1000	1360	533	8.4	11.0	13.5	611	8.39	95	240
JUN										
23...	1240	2140	452	8.4	15.5	19.0	611	7.94	100	200
JUL										
20...	1025	828	514	8.2	15.8	20.0	557	7.57	104	220
AUG										
17...	0900	442	484	8.2	15.5	13.5	617	9.10	114	210
SEP										
22...	1020	332	507	8.3	12.5	8.00	616	10.2	119	240

BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 1998									
29...	47	19	15	1.7	210	3.0	178	32	.2
NOV									
13...	64	28	27	1.9	259	8.4	226	58	.2
DEC									
15...	71	27	26	1.7	289	--	237	62	.2
JAN 1999									
27...	63	23	21	1.6	270	--	221	57	.2
FEB									
16...	--	--	--	--	--	--	--	--	--
17...	64	25	23	2.1	270	--	221	58	.2
MAR									
16...	61	28	30	4.5	264	--	216	59	.2
APR									
22...	60	25	24	2.4	248	5.8	213	55	.2
MAY									
20...	58	23	21	2.2	261	2.0	218	41	.2
JUN									
23...	47	21	18	2.0	250	--	205	23	.1
JUL									
20...	52	22	19	1.5	265	--	217	33	.1
AUG									
17...	54	19	15	1.5	234	--	192	41	.1
SEP									
22...	58	22	19	1.7	242	--	199	49	.1
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 1998									
29...	4.0	262	244	--	<.05	<.02	<.01	.2	.4
NOV									
13...	7.8	379	354	--	.10	<.02	<.01	.2	.2
DEC									
15...	7.5	383	367	<1	.09	.03	.02	.1	.1
JAN 1999									
27...	7.3	347	331	--	.13	.03	<.01	.1	.1
FEB									
16...	--	--	--	K2	--	--	--	--	--
17...	7.8	358	341	--	.11	<.02	<.01	.2	.2
MAR									
16...	8.2	397	359	--	.08	.03	<.01	.4	.6
APR									
22...	7.4	339	328	--	.09	.03	<.01	.2	.8
MAY									
20...	7.8	334	307	170	<.05	.03	<.01	.3	.8
JUN									
23...	9.7	283	261	--	.05	<.02	<.01	.4	.9
JUL									
20...	8.6	308	288	--	--	--	--	--	--
AUG									
17...	7.5	286	269	30	<.05	<.02	<.01	.2	.2
SEP									
22...	6.4	307	295	--	<.05	<.02	<.01	.2	.3

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 1998									
29...	.09	<.05	<.01	<10	E3	3.8	1.7	74	121
NOV									
13...	E.03	<.05	<.01	E7	15	--	--	59	42
DEC									
15...	<.05	<.05	<.01	<10	15	2.1	.4	95	62
JAN 1999									
27...	.016	<.004	<.01	E8	22	1.8	.2	35	23
FEB									
16...	--	--	--	--	--	--	--	--	--
17...	.018	<.004	<.01	E6	24	2.3	.2	46	28
MAR									
16...	.083	.022	.01	23	38	5.4	.5	26	24
APR									
22...	.27	.015	.02	<10	6	3.7	4.0	174	326
MAY									
20...	.28	.02	.02	<10	5	4.2	>5.0	252	925
JUN									
23...	.27	.024	.02	E5	7	6.5	3	173	1000
JUL									
20...	--	--	--	<10	7	--	--	107	239
AUG									
17...	.08	.007	<.01	<10	6	2.6	--	42	50
SEP									
22...	.05	<.004	<.01	<10	6	2.9	.6	60	54

E Estimated.

K Results based on colony count outside the acceptable range (non-ideal colony count).

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	3.2	2.0	2.6	.1	.0	.0
2	---	---	---	---	---	---	3.2	1.7	2.6	.1	.0	.0
3	---	---	---	---	---	---	3.2	1.9	2.6	.1	.0	.0
4	---	---	---	---	---	---	2.5	.3	1.6	.1	.0	.0
5	---	---	---	---	---	---	.3	.0	.0	.3	.0	.1
6	---	---	---	---	---	---	.1	.0	.0	.1	.0	.0
7	---	---	---	---	---	---	.1	.0	.0	.3	.0	.0
8	---	---	---	---	---	---	.1	.0	.0	.3	.0	.0
9	---	---	---	---	---	---	.1	.0	.0	.1	.0	.0
10	---	---	---	---	---	---	.1	.0	.0	.1	.0	.1
11	---	---	---	---	---	---	.1	.0	.0	.3	.0	.1
12	---	---	---	---	---	---	.1	.0	.0	.3	.0	.1
13	---	---	---	1.9	.0	.8	.1	.0	.0	.3	.0	.1
14	---	---	---	2.8	.1	1.5	.1	.0	.0	.1	.0	.0
15	---	---	---	2.8	1.6	2.2	.3	.0	.0	.4	.0	.1
16	---	---	---	2.5	.9	1.9	.3	.0	.0	.4	.0	.0
17	---	---	---	3.6	1.7	2.8	.3	.0	.0	.3	.0	.1
18	---	---	---	3.3	1.7	2.7	.1	.0	.0	.3	.0	.1
19	---	---	---	1.9	.8	1.4	.0	.0	.0	.3	.0	.1
20	---	---	---	2.2	.4	1.3	.0	.0	.0	.3	.0	.1
21	---	---	---	2.8	1.1	1.9	.0	.0	.0	.1	.0	.0
22	---	---	---	3.6	2.5	2.9	.0	.0	.0	.4	.0	.1
23	---	---	---	3.5	2.0	2.8	.0	.0	.0	.3	.0	.1
24	---	---	---	3.3	1.7	2.5	.1	.0	.0	.3	.0	.1
25	---	---	---	2.0	.8	1.4	.1	.0	.0	.3	.0	.0
26	---	---	---	2.0	.3	1.2	.1	.0	.0	.1	.0	.0
27	---	---	---	2.4	.4	1.4	.1	.0	.0	.3	.0	.1
28	---	---	---	2.7	1.6	2.1	.1	.0	.0	.1	.0	.0
29	---	---	---	2.4	1.6	2.1	.1	.0	.0	.1	.0	.0
30	---	---	---	3.9	1.9	2.8	.3	.0	.1	.1	.0	.0
31	---	---	---	---	---	---	.1	.0	.0	.1	.0	.0
MONTH	---	---	---	---	---	---	3.2	.0	.3	.4	.0	.0

BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	.3	.0	.1	.8	.0	.2	3.9	2.8	3.4	9.4	7.0	8.1
2	.1	.0	.0	.8	.0	.2	4.6	1.9	3.4	9.1	7.8	8.3
3	.3	.0	.1	1.1	.0	.3	4.6	2.7	3.8	8.1	7.2	7.7
4	.1	.0	.0	1.2	.0	.3	5.5	2.8	4.4	7.7	6.6	7.1
5	.4	.0	.1	1.2	.0	.3	5.5	3.6	4.8	7.7	5.6	6.7
6	.1	.0	.0	1.1	.0	.3	7.3	4.4	5.8	9.2	5.8	7.5
7	.3	.0	.1	1.2	.0	.4	7.8	5.0	6.5	11.2	7.8	9.5
8	.3	.0	.1	2.2	.0	.6	8.4	6.0	7.1	11.0	10.0	10.6
9	.4	.0	.1	1.4	.0	.5	7.8	4.7	6.7	10.7	8.7	9.7
10	.3	.0	.0	2.7	.0	.8	6.9	3.2	5.0	9.5	7.3	8.0
11	.1	.0	.0	1.7	.0	.5	7.8	3.9	6.0	9.2	6.1	7.6
12	.1	.0	.0	3.0	.0	.9	9.5	5.5	7.6	9.7	7.3	8.5
13	.1	.0	.0	2.8	.0	.9	10.4	7.0	8.7	10.4	8.3	9.3
14	.3	.0	.1	3.3	.0	1.2	9.7	6.7	8.3	10.5	8.3	9.5
15	.4	.0	.1	3.6	.0	1.4	9.1	5.8	7.5	10.2	8.9	9.5
16	.3	.0	.1	4.1	.0	1.6	8.7	5.3	7.1	10.0	7.8	9.0
17	.3	.0	.1	3.9	.0	1.5	10.0	5.8	7.9	11.3	7.7	9.4
18	.3	.0	.1	3.8	.0	1.5	11.3	7.7	9.5	12.9	10.0	11.4
19	.3	.0	.1	4.1	.0	1.7	12.1	9.1	10.5	13.0	11.3	12.2
20	.3	.0	.0	3.6	.3	1.7	10.5	8.1	9.2	13.8	10.7	12.2
21	.3	.0	.0	2.4	.6	1.3	8.6	6.9	7.7	13.6	11.6	12.8
22	.4	.0	.1	3.2	.4	1.4	7.7	5.2	6.4	14.0	11.2	12.6
23	.4	.0	.1	5.6	.6	3.6	5.2	3.8	4.2	14.4	11.8	13.1
24	.6	.0	.2	6.4	3.3	5.0	6.7	3.0	4.8	14.4	12.1	13.3
25	.6	.0	.1	7.5	4.2	6.1	6.1	5.2	5.5	14.0	11.5	12.1
26	.3	.0	.1	7.5	6.0	6.8	7.2	4.4	5.8	12.9	10.7	11.8
27	.4	.0	.1	6.7	4.7	5.8	8.0	6.3	7.2	14.7	10.4	12.5
28	.6	.0	.2	4.7	3.3	4.1	9.2	7.3	8.3	15.2	11.8	13.6
29	---	---	---	5.8	2.7	4.4	10.4	8.0	9.2	15.1	12.3	13.0
30	---	---	---	6.0	4.4	5.3	10.2	8.0	8.7	13.8	11.2	12.4
31	---	---	---	5.5	3.8	4.2	---	---	---	12.7	10.2	11.0
MONTH	.6	.0	.1	7.5	.0	2.1	12.1	1.9	6.7	15.2	5.6	10.3
JUNE				JULY			AUGUST			SEPTEMBER		
1	13.2	8.9	10.9	16.6	13.2	15.0	20.3	15.7	17.9	17.8	14.6	16.1
2	12.9	11.3	11.9	17.8	15.4	16.6	21.3	16.8	19.0	16.0	14.1	15.1
3	13.0	10.4	11.7	18.4	15.8	17.2	20.2	17.8	19.1	14.1	12.3	12.9
4	12.9	11.9	12.4	18.4	16.3	17.3	19.5	17.0	18.1	14.0	10.7	12.4
5	12.3	11.0	11.8	17.9	15.1	16.5	19.4	17.0	18.3	15.4	11.2	13.2
6	12.7	11.9	12.3	19.2	15.8	17.5	19.7	17.0	18.2	15.8	12.1	14.1
7	13.0	11.0	12.0	19.2	17.1	18.2	20.3	17.0	18.7	15.4	12.6	14.1
8	12.9	11.8	12.5	19.5	17.3	18.4	20.8	16.8	18.9	15.4	11.5	13.5
9	14.1	11.3	12.7	18.6	15.7	17.2	19.9	17.0	18.5	15.7	11.9	13.9
10	14.1	12.6	13.4	19.2	15.7	17.5	18.7	16.3	17.7	16.0	13.5	14.8
11	15.2	12.3	13.7	20.0	16.6	18.2	17.6	15.8	16.8	15.4	12.6	14.1
12	16.3	14.1	15.3	20.5	17.0	18.7	17.0	14.1	15.6	14.9	11.3	13.3
13	17.3	15.2	16.2	20.8	17.8	19.3	18.4	14.7	16.5	14.9	11.3	13.3
14	17.4	15.5	16.6	20.0	17.4	18.7	18.9	14.7	16.8	15.4	11.5	13.6
15	17.9	16.0	17.1	18.2	16.3	17.2	19.2	15.5	17.4	15.7	11.9	14.0
16	17.9	15.4	16.8	17.4	14.7	15.8	18.6	14.6	16.7	15.2	12.1	13.8
17	17.4	15.1	15.8	17.1	13.8	15.4	18.7	14.7	16.8	15.4	12.1	13.8
18	16.6	13.2	14.8	18.6	15.4	16.8	19.5	15.1	17.3	15.4	11.9	13.7
19	16.8	14.7	15.9	17.8	16.0	16.8	19.9	16.0	18.0	14.9	12.6	13.3
20	17.8	14.7	16.3	19.0	15.7	17.2	19.0	16.8	18.2	14.4	10.9	12.6
21	17.4	15.5	16.3	20.0	16.3	18.1	20.3	17.1	18.7	14.6	11.0	12.9
22	17.0	14.6	15.8	20.7	16.8	18.6	20.2	16.5	18.4	14.6	11.3	13.2
23	17.0	14.4	15.8	20.5	16.2	18.3	19.7	16.3	18.2	15.4	12.3	13.8
24	17.3	15.2	16.2	20.8	17.1	18.9	19.0	16.6	18.0	14.6	12.6	13.5
25	17.1	15.7	16.4	20.2	16.3	18.2	20.0	16.0	18.1	14.3	11.0	12.7
26	16.2	14.4	15.4	19.9	15.8	17.9	19.7	16.2	18.0	12.7	9.4	10.5
27	16.6	14.6	15.7	21.3	16.6	18.9	19.0	17.0	18.1	9.7	7.0	8.4
28	16.3	14.1	15.5	21.2	17.8	19.4	19.4	16.0	17.7	9.2	5.6	7.5
29	16.3	14.9	15.7	21.2	18.6	19.7	19.7	16.3	18.0	9.7	5.6	7.7
30	16.0	15.1	15.4	20.0	17.3	18.6	18.2	15.5	17.0	10.7	6.6	8.7
31	---	---	---	19.0	16.6	17.9	17.9	14.6	16.3	---	---	---
MONTH	17.9	8.9	14.6	21.3	13.2	17.7	21.3	14.1	17.8	17.8	5.6	12.8

10039500 BEAR RIVER AT BORDER, WY

LOCATION.--Lat 42°12'40", long 111°03'11", in NE¹/₄NE¹/₄NE¹/₄ sec. 15, T. 14 S., R. 46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi west of Wyoming-Idaho State line, 0.5 mi west of Border, and 2.1 mi upstream from Thomas Fork.

DRAINAGE AREA.--2,486 mi².

PERIOD OF RECORD.--October 1937 to September 1996, October 1996 to current year (seasonal).

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,051.63 ft above sea level, unadjusted.

REMARKS.--Records good. Natural flow of stream affected by regulation of upstream reservoirs, diversions for irrigation, and return flow from irrigated areas. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	421	---	---	---	---	880	1580	2380	1560	585	339
2	444	390	---	---	---	---	793	1670	2340	1470	571	345
3	499	361	---	---	---	---	761	1750	2460	1380	555	368
4	537	348	---	---	---	---	742	1760	2570	1280	545	395
5	534	347	---	---	---	---	719	1730	2630	1180	538	410
6	532	346	---	---	---	---	698	1680	2690	1210	551	405
7	533	332	---	---	---	---	687	1640	2750	1110	555	391
8	524	331	---	---	---	---	695	1670	2810	1110	550	380
9	527	326	---	---	---	---	748	1740	2820	1030	540	377
10	521	313	---	---	---	---	758	1700	2790	983	528	372
11	512	301	---	---	---	---	716	1610	2760	956	521	366
12	505	304	---	---	---	---	712	1540	2650	961	509	357
13	504	307	---	---	---	---	744	1560	2530	1000	496	341
14	491	315	---	---	---	---	762	1580	2450	1040	515	331
15	501	318	---	---	---	---	718	1600	2380	1180	505	327
16	529	320	---	---	---	---	694	1590	2270	1150	479	321
17	535	320	---	---	---	---	678	1590	2220	1050	460	319
18	538	321	---	---	---	---	707	1590	2170	989	424	307
19	585	320	---	---	---	---	773	1620	2110	974	360	318
20	634	316	---	---	---	---	852	1620	2070	927	380	355
21	645	307	---	---	---	---	895	1460	2110	872	379	344
22	646	314	---	---	---	---	884	1450	2150	810	375	338
23	661	315	---	---	---	---	885	1560	2180	760	376	341
24	671	319	---	---	---	---	881	1650	2160	718	373	316
25	663	313	---	---	---	---	931	1740	2120	685	374	309
26	662	305	---	---	---	---	1030	1840	2070	674	370	290
27	673	304	---	---	---	---	1100	1990	1990	645	370	281
28	676	306	---	---	---	---	1220	2080	1870	606	387	277
29	673	312	---	---	---	---	1240	2130	1760	571	355	273
30	612	327	---	---	---	---	1390	2250	1680	584	338	267
31	477	---	---	---	---	---	---	2350	---	593	344	---
TOTAL	17473	9779	---	---	---	---	25293	53320	69940	30058	14208	10160
MEAN	564	326	---	---	---	---	843	1720	2331	970	458	339
MAX	676	421	---	---	---	---	1390	2350	2820	1560	585	410
MIN	429	301	---	---	---	---	678	1450	1680	571	338	267
AC-FT	34660	19400	---	---	---	---	50170	105800	138700	59620	28180	20150

BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

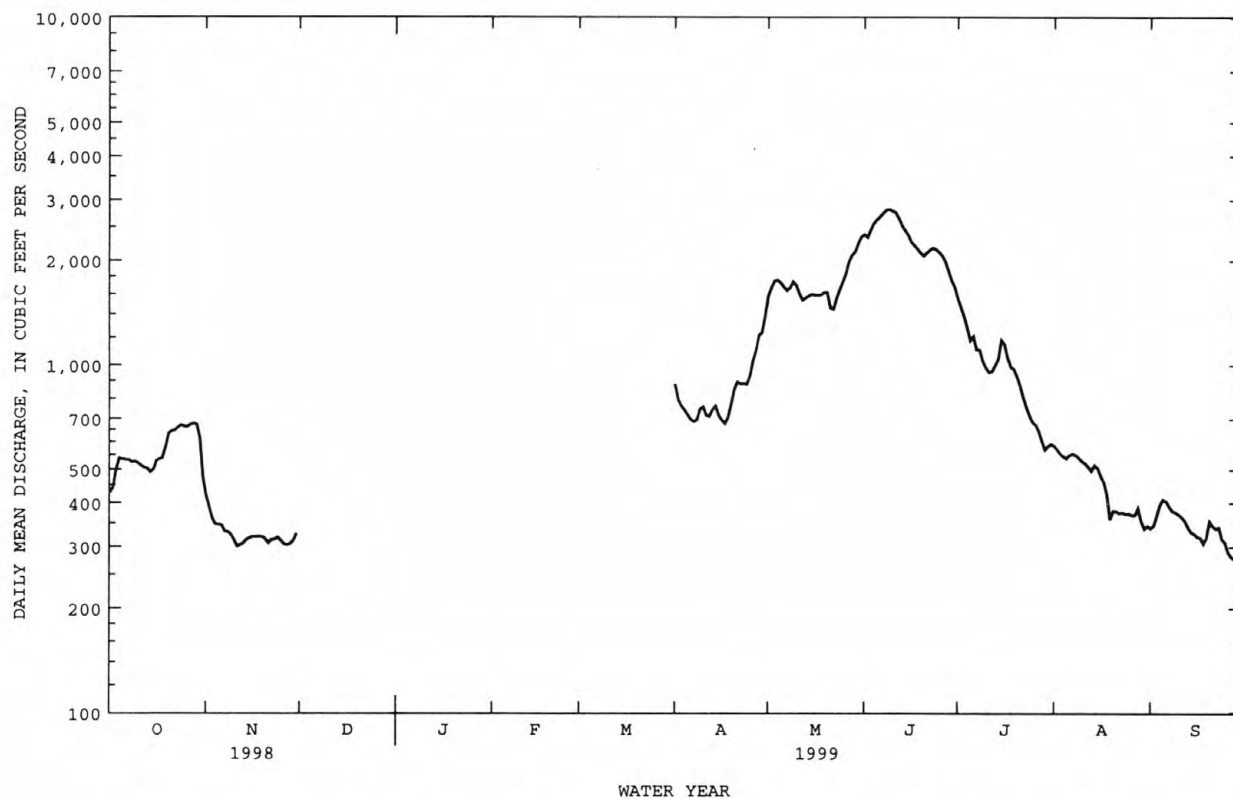
WATER YEARS 1938 - 1999*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 INSTANTANEOUS PEAK FLOW
 INSTANTANEOUS PEAK STAGE

2820 Jun 9
 267 Sep 30
 2820 Jun 9
 8.13 Jun 9

4840 Jun 8 1983
 25 Apr 29,30 1977
 4880 Jun 7 1983
 9.69 Jun 7 1983

* For period of operation.



13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY

LOCATION.--Lat 44°05'21", long 110°41'38", in Hydrologic Unit 17040101, Grand Teton National Park, on left bank 50 ft upstream from State Highway 89 bridge, 2 mi downstream from the south boundary of Yellowstone National Park, 600 ft downstream from the confluence with Sheffield Creek.

DRAINAGE AREA.--486 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Prior to 1988 water year, published as station 13010200.

GAGE.--Water-stage recorder. Datum of the gage is 6,801.61 ft above sea level, (levels by U.S. Coast and Geodetic Survey). A nonrecording cantilever chain gage was used from 1913-18 at a site 2.5 mi upstream at a different datum. In 1918, an auxiliary chain gage was installed at the current site and read periodically. Water-stage recorder installed July 1921 at the current site at a different datum and operated until July 1925. Records probably not comparable.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	376	529	461	438	480	393	1590	5410	3050	735	541
2	405	384	526	448	432	465	371	1810	5950	2890	722	669
3	423	385	532	436	441	454	374	1690	6530	2830	710	655
4	414	371	529	431	430	458	369	1420	5820	2840	708	613
5	397	373	496	427	434	452	365	1210	5580	2590	707	572
6	385	374	472	426	433	440	384	1070	5530	2330	693	538
7	e380	369	476	429	457	436	379	1160	5740	2330	668	517
8	e380	386	469	419	467	440	392	1530	5810	2170	649	505
9	e380	388	453	413	481	438	387	1570	4780	1950	629	497
10	e380	369	448	410	510	427	375	1450	4430	1820	619	489
11	e360	384	438	408	495	420	364	1300	4720	1730	635	482
12	e360	384	450	401	500	411	372	1200	5240	1630	661	474
13	360	376	450	399	484	407	387	1230	5530	1550	647	464
14	357	380	422	391	480	401	402	1180	6160	1470	621	461
15	356	376	422	407	483	404	389	1280	6600	1390	600	454
16	373	371	416	415	478	396	385	1200	6490	1290	581	447
17	367	373	412	423	487	388	396	1100	6550	1270	568	443
18	361	383	406	439	477	374	442	1170	6410	1220	559	439
19	353	373	380	445	482	381	511	1480	6330	1150	555	442
20	349	371	380	466	469	389	594	2150	6220	1120	551	439
21	347	391	360	458	469	399	627	3050	6230	1060	548	433
22	352	441	360	454	469	390	570	3970	5820	1000	567	429
23	384	463	360	474	475	382	523	4730	5070	952	539	425
24	410	509	380	454	477	385	495	5890	4780	913	527	424
25	397	499	400	460	474	395	516	6750	4940	878	517	416
26	384	485	408	460	483	411	570	7220	4200	841	508	412
27	376	478	407	464	468	412	658	7730	3520	814	508	406
28	379	509	415	466	463	399	906	7770	3170	795	544	400
29	385	525	448	458	---	404	1040	8110	3090	817	546	394
30	386	528	462	449	---	406	1230	7240	3130	812	522	391
31	388	---	467	446	---	393	---	6710	---	767	595	---
TOTAL	11722	12374	13573	13537	13136	12837	15166	96960	159780	48269	18739	14271
MEAN	378	412	438	437	469	414	506	3128	5326	1557	604	476
MAX	423	528	532	474	510	480	1230	8110	6600	3050	735	669
MIN	347	369	360	391	430	374	364	1070	3090	767	508	391
AC-FT	23250	24540	26920	26850	26060	25460	30080	192300	316900	95740	37170	28310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	367	369	370	365	353	360	710	3035	3403	975	458	366				
MAX	679	607	531	720	469	506	1509	5484	6701	1633	861	644				
(WY)	1984	1984	1997	1997	1999	1986	1990	1997	1996	1995	1997	1997				
MIN	185	213	247	275	267	279	424	1818	827	331	202	168				
(WY)	1989	1988	1988	1992	1989	1988	1993	1987	1992	1988	1988	1994				

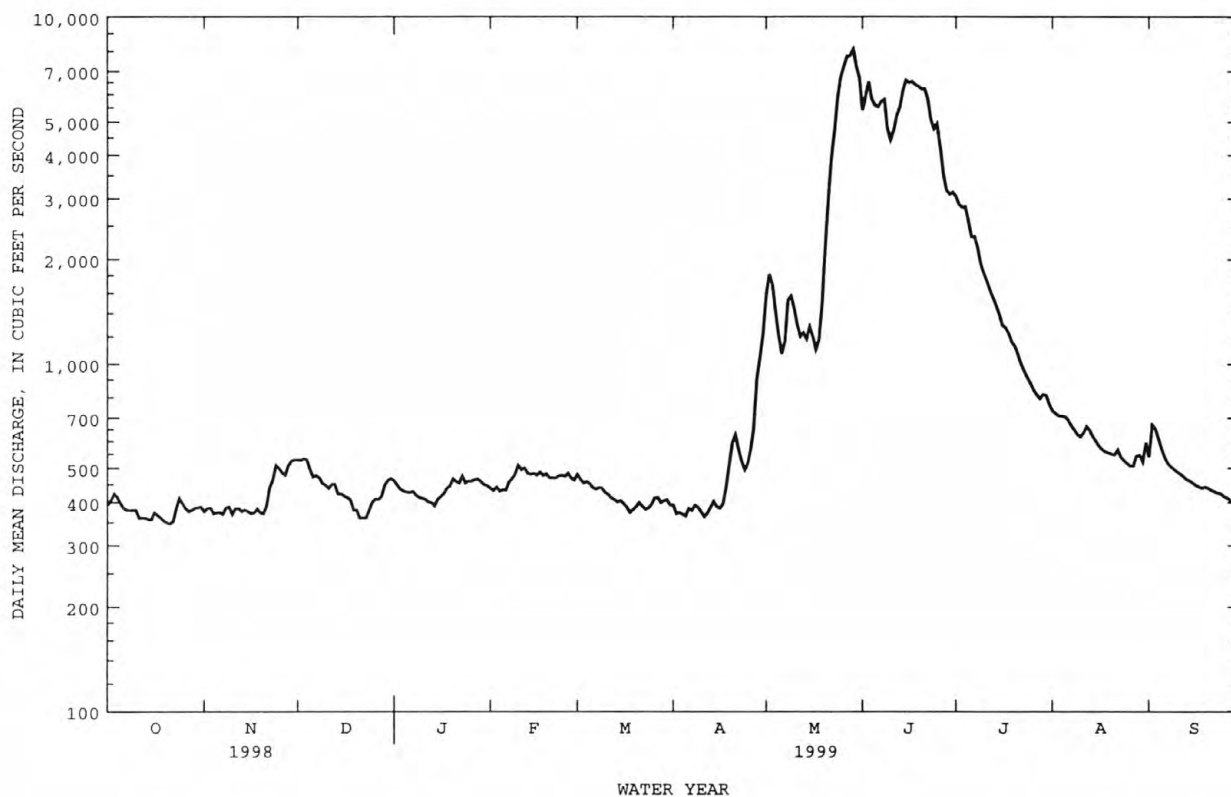
SNAKE RIVER MAIN STEM

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999		
ANNUAL TOTAL	391594		430364		--		
ANNUAL MEAN	1073		1179		929		
HIGHEST ANNUAL MEAN	--		--		1538		1997
LOWEST ANNUAL MEAN	--		--		526		1988
HIGHEST DAILY MEAN	5160	May 30	8110	May 29	11300	Jun 5	1996
LOWEST DAILY MEAN	347	Oct 21	347	Oct 21	161	Sep 6,7,28	1994
ANNUAL SEVEN-DAY MINIMUM	357	Oct 16	357	Oct 16	163	Sep 4	1994
INSTANTANEOUS PEAK FLOW	--		9490	May 28	15000	Jun 5	1996
INSTANTANEOUS PEAK STAGE	--		8.55	May 28	10.75 ^a	Jun 5	1996
ANNUAL RUNOFF (AC-FT)	776700		853600		672900		
10 PERCENT EXCEEDS	3320		3700		2520		
50 PERCENT EXCEEDS	476		468		407		
90 PERCENT EXCEEDS	380		378		268		

a Backwater affected.

e Estimated.



13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1986 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 1994, June to September 1995, May to September 1996.

INSTRUMENTATION:--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.5°C July 22, 24, Aug. 11, 1994.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV												
18...	1415	375	251	7.0	4.0	1.0	595	10.2	100	52	16	2.9
JAN												
22...	0945	452	235	7.8	0.0	-5.0	595	11.2	98	43	13	2.5
MAR												
30...	1300	400	250	7.3	2.5	0.0	589	10.5	100	52	16	3.0
MAY												
26...	0930	6900	92	8.0	3.0	12.0	600	10.8	102	33	10	1.9
JUL												
21...	1530	1040	162	8.2	16.0	23.0	601	8.4	108	42	13	2.4
SEP												
02...	1330	706	208	8.2	14.0	15.0	595	8.4	105	51	16	2.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV												
18...	29	2	4.2	69	27	16	1.9	34	184	172	.25	186
JAN												
22...	28	2	4.0	62	22	16	2.4	35	169	160	.23	206
MAR												
30...	28	2	4.1	71	25	15	2.2	33	180	170	.24	194
MAY												
26...	5.0	.4	1.1	42	4.4	3.3	.5	11	82	63	.11	1530
JUL												
21...	15	1	2.6	51	14	6.2	1.3	25	109	109	.15	306
SEP												
02...	20	1	3.1	59	22	11	1.6	27	148	140	.20	282

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHOR, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV											
18...	.06	.03	<.1	<.05	<.01	18	<3	1.2	.4	10	9.6
JAN											
22...	.09	.02	.1	<.05	.01	11	E2	1.4	.4	4	4.9
MAR											
30...	.06	<.02	E.06	<.05	.01	10	3	1.2	<.2	4	4.3
MAY											
26...	.06	.02	.4	.41	.02	30	6	3.6	2.4	604	11300
JUL											
21...	<.05	<.02	E.08	<.05	<.01	11	4	1.5	.2	5	14
SEP											
02...	<.05	<.02	.2	<.05	<.01	13	4	1.7	.3	14	26

E Estimated.

SNAKE RIVER BASIN

13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZIN- PHOS WAT FLT 0.7 U (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
NOV 18...	1415	375	4.0	1.0	<.002	<.002	<.001	<.002	<.001	<.002	<.002
MAY 26...	0930	6900	3.0	12.0	<.002	<.002	<.001	<.002	<.001	<.002	<.002
DATE		CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
NOV 18...		<.003	<.003	<.004	<.004	<.002	<.006	<.002	<.001	<.003	<.017
MAY 26...		<.003	<.003	<.004	<.004	<.002	<.006	<.002	<.001	<.003	<.017
DATE		EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
NOV 18...		<.002	<.004	<.003	<.003	<.002	<.004	<.002	<.005	<.002	<.006
MAY 26...		<.002	<.004	<.003	<.003	<.002	<.004	<.002	<.005	<.002	<.006
DATE		METRI- BUZIN WATER FLTRD 0.7 U DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
NOV 18...		<.004	<.004	<.003	<.004	<.004	<.004	<.005	<.002	<.018	<.003
MAY 26...		<.004	<.004	<.003	<.004	<.004	<.004	<.005	<.002	<.018	<.003
DATE		PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV 18...		<.007	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002
MAY 26...		<.007	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002

13010500 JACKSON LAKE NEAR MORAN, WY

LOCATION.--Lat 43°51'33", long 110°35'23", in SE¹/₄ SW¹/₄ sec.18, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, at Jackson Lake Dam on Snake River, 4.3 mi west of Moran, and at mile 988.9.

DRAINAGE AREA.--807 mi².

PERIOD OF RECORD.--July 1908 to September 1979, (1908-10 fragmentary), October 1984 to current year. Prior to October 1968, published as "at Moran".

REVISED RECORDS.--WDR Idaho 1974: Drainage area.

GAGE.--Shaft encoder connected to a stilling well float. Datum of gage is 6,700.00 ft, Bureau of Reclamation datum, sea level is 2.08 ft lower. July 1908 to June 1, 1941, nonrecording gage at site 300 ft upstream at same datum. June 1, 1941 to Feb. 17, 1978, nonrecording gage at same site and datum.

REMARKS.--Station equipment includes satellite telemetry. Reservoir was formed by log crib dam built in the outlet of the natural lake in 1906. Usable capacity was 300,000 acre-ft. This dam washed out in July 1910 and was replaced by an earth dam, forming a reservoir with a usable capacity of 380,000 acre-ft. The earth dam was raised in 1916, increasing the usable capacity to 790,000 acre-ft. In 1917, by dredging the outlet, the usable capacity was further increased to 847,000 acre-ft between elevations 6,730 ft (top of baffles to sluices) and 6,769 ft (top of spillway gates). The dam was rebuilt during 1987-89, with the usable capacity remaining the same. Reservoir is used to store water for irrigation in Snake River valley, Idaho. Figures given herein represent usable contents. Records provided by the Idaho District.

COOPERATION.--Reservoir elevations and capacity table provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 874,100 acre-ft, June 11, 1997, elevation, 6,770.06 ft; no usable contents for several days during period August to October 1919.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 842,100 acre-ft, July 20, elevation, 6,768.81 ft; minimum, 520,300 acre-ft, May 19, elevation, 6,755.59 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,750	392,900
6,760	624,400
6,770	872,600

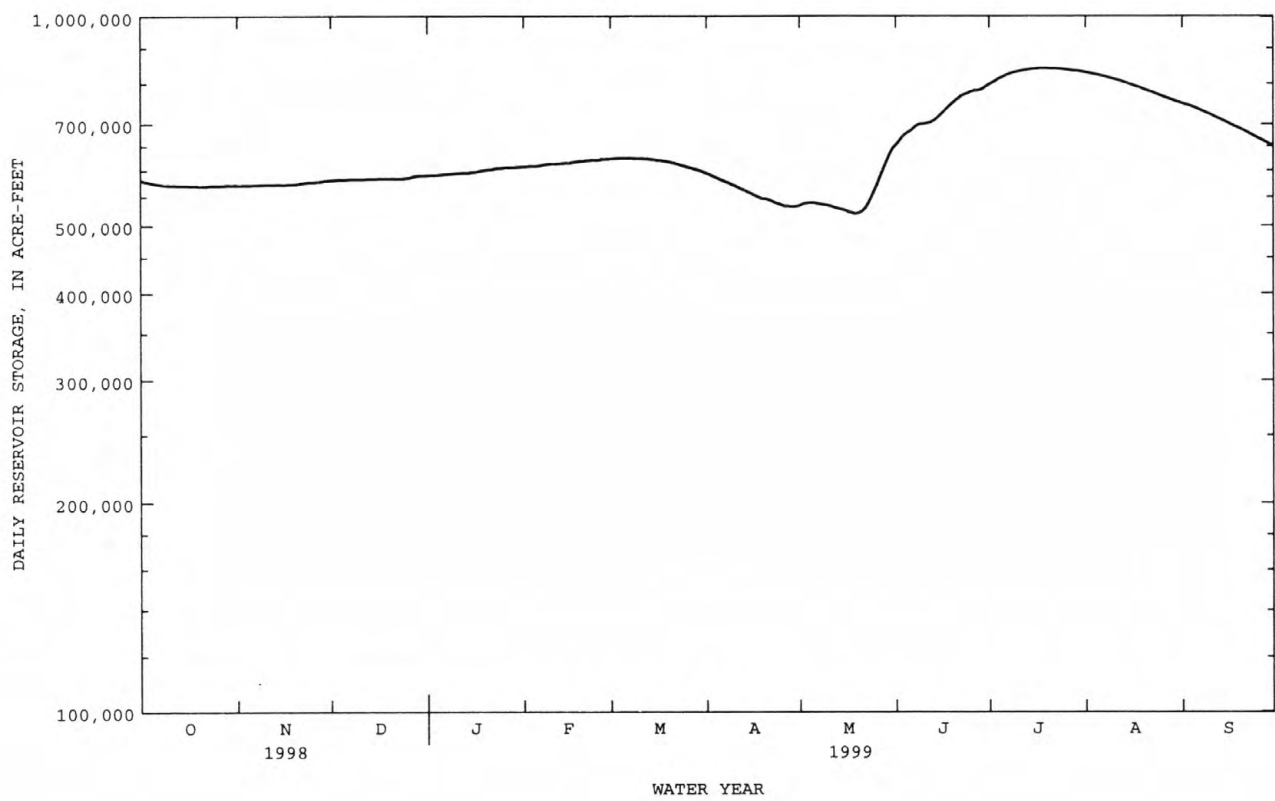
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	581000	572000	581000	590000	607000	624000	594000	535000	652000	798000	831000	749000
2	579000	572000	582000	591000	608000	624000	592000	537000	660000	803000	829000	747000
3	578000	572000	582000	591000	608000	624000	589000	539000	670000	807000	827000	745000
4	577000	572000	583000	591000	608000	624000	586000	539000	676000	813000	825000	743000
5	576000	572000	e582000	592000	608000	624000	584000	540000	681000	817000	824000	740000
6	575000	e572000	583000	592000	609000	624000	582000	539000	686000	820000	822000	736000
7	574000	e572000	e583000	593000	611000	624000	579000	538000	693000	825000	820000	732000
8	573000	573000	583000	593000	612000	624000	576000	537000	698000	828000	817000	729000
9	572000	e573000	583000	594000	613000	624000	573000	536000	700000	831000	815000	726000
10	572000	573000	583000	594000	613000	624000	571000	535000	700000	833000	812000	723000
11	572000	573000	584000	594000	613000	624000	568000	534000	701000	834000	810000	719000
12	571000	573000	584000	595000	614000	624000	565000	532000	703000	836000	808000	715000
13	571000	573000	584000	595000	614000	623000	562000	530000	707000	838000	805000	712000
14	571000	573000	584000	595000	615000	623000	560000	528000	712000	839000	803000	708000
15	571000	573000	584000	596000	615000	622000	557000	528000	719000	841000	799000	705000
16	571000	573000	584000	597000	615000	621000	554000	526000	727000	841000	796000	701000
17	570000	573000	584000	598000	617000	620000	552000	523000	734000	842000	794000	698000
18	570000	574000	584000	599000	618000	619000	549000	521000	741000	842000	791000	695000
19	570000	574000	e584000	600000	619000	618000	547000	520000	748000	842000	788000	691000
20	570000	e574000	584000	601000	619000	617000	547000	521000	755000	842000	785000	688000
21	570000	575000	585000	601000	620000	616000	545000	524000	762000	841000	782000	685000
22	570000	576000	585000	602000	620000	614000	543000	529000	768000	841000	779000	681000
23	571000	577000	585000	604000	621000	612000	540000	538000	772000	841000	776000	677000
24	571000	578000	585000	604000	621000	610000	538000	548000	775000	840000	773000	673000
25	571000	578000	585000	605000	621000	608000	536000	561000	778000	839000	769000	670000
26	571000	578000	586000	606000	623000	606000	534000	574000	782000	838000	766000	666000
27	571000	578000	587000	606000	623000	605000	534000	589000	782000	837000	764000	662000
28	571000	579000	589000	606000	623000	603000	533000	604000	784000	836000	761000	658000
29	572000	580000	590000	606000	---	601000	533000	619000	788000	835000	758000	654000
30	572000	581000	590000	606000	---	600000	533000	634000	793000	834000	754000	651000
31	572000	---	590000	607000	---	597000	---	646000	---	832000	752000	---
MAX	581000	581000	590000	607000	623000	624000	594000	646000	793000	842000	831000	749000
MIN	570000	572000	581000	590000	607000	597000	533000	520000	652000	798000	752000	651000
(#)	6757.79	6758.17	6758.56	6759.27	6759.96	6758.84	6756.14	6760.90	6766.87	6768.43	6765.25	6761.11
(*)	+11100	+9000	+9200	+16900	+16500	-26500	-63800	+112900	+47000	+39500	-80000	-101500

CAL YR 1998 MAX 850300 MIN 569900 (*) -54600
WTR YR 1999 MAX 842100 MIN 520300 (*) +68100

(#) Elevation, in feet, at end of month.
(*) Change in contents, in acre-feet.
e Estimated.

Snake River Main Stem
13010500 Jackson Lake Near Moran, WY--Continued



13011000 SNAKE RIVER NEAR MORAN, WY

LOCATION.--Lat 43°51'31", long 110°35'09", in SW¹/₄SE¹/₄ sec.18, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 1,000 ft downstream from Jackson Lake Dam, 4.1 mi west of Moran, and at mile 988.7.

DRAINAGE AREA.--807 mi². Mean elevation, 8,040 ft.

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "South Fork Snake River at Moran" prior to October 1910 and as "Snake River at Moran" October 1910 to September 1968.

REVISED RECORDS.--WSP 1217: 1944(m). WSP 1347: 1906-10. WDR Idaho 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,727.84 ft above sea level (levels by Bureau of Reclamation). Prior to June 13, 1917, nonrecording gage, and June 14, 1917 to May 20, 1940, water-stage recorder, at site 1.5 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

COOPERATION.--Water District 1.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood during early June 1894 was considerably higher than that of June 12, 1918.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	429	396	414	401	476	1920	2070	4890	2300	2300	2440
2	1500	430	396	414	401	536	2020	2060	5240	2310	2300	2450
3	1410	430	396	414	400	556	2060	2050	5650	2310	2310	2450
4	1320	431	396	414	400	557	2060	2050	5660	2310	2300	2450
5	1150	433	396	414	400	558	2060	2040	5970	2310	2300	2450
6	1020	433	396	414	400	560	2060	2310	6000	2310	2290	2450
7	948	433	397	414	400	560	2060	2800	6220	2300	2300	2460
8	882	433	400	414	399	560	2060	3010	6520	2300	2310	2460
9	724	433	400	414	400	560	2060	3000	6520	2310	2310	2460
10	598	433	400	414	400	582	2060	2990	6520	2310	2320	2450
11	563	433	402	414	401	632	2060	2990	6520	2300	2320	2450
12	549	433	405	414	401	648	2060	3000	6530	2300	2360	2460
13	512	433	405	414	402	649	2070	3010	6510	2300	2400	2460
14	478	433	405	414	401	647	2070	3000	6510	2310	2410	2450
15	464	433	405	414	400	706	2070	2990	6530	2300	2410	2450
16	467	431	405	418	401	792	2080	3010	6550	2310	2410	2450
17	466	432	404	419	402	910	2080	3010	6560	2310	2410	2450
18	465	433	404	419	404	1010	2080	3010	6560	2300	2410	2450
19	467	433	405	419	403	1110	2080	3000	6520	2310	2410	2460
20	467	433	405	419	401	1200	2090	3000	6510	2310	2400	2450
21	447	421	405	419	400	1300	2100	3000	6510	2300	2410	2450
22	433	414	405	415	400	1410	2090	3010	6540	2300	2410	2450
23	433	426	405	400	400	1510	2100	3020	6550	2300	2410	2450
24	433	435	405	400	400	1550	2100	3020	6490	2300	2410	2450
25	433	433	406	402	400	1550	2100	3300	6250	2300	2400	2450
26	432	435	407	404	417	1550	2100	3520	5790	2300	2400	2450
27	428	436	414	403	447	1550	2100	3630	5210	2300	2420	2460
28	428	438	414	404	447	1550	2110	4030	4320	2290	2440	2450
29	428	438	414	404	---	1610	2110	4070	3120	2290	2450	2450
30	429	414	414	404	---	1710	2090	4120	2390	2290	2450	2450
31	429	---	414	403	---	1810	---	4420	---	2290	2450	---
TOTAL	20803	12935	12521	12762	11328	30909	62160	93540	177660	71380	73630	73560
MEAN	671	431	404	412	405	997	2072	3017	5922	2303	2375	2452
MAX	1600	438	414	419	447	1810	2110	4420	6560	2310	2450	2460
MIN	428	414	396	400	399	476	1920	2040	2390	2290	2290	2440
AC-FT	41260	25660	24840	25310	22470	61310	123300	185500	352400	141600	146000	145900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1999, BY WATER YEAR (WY)

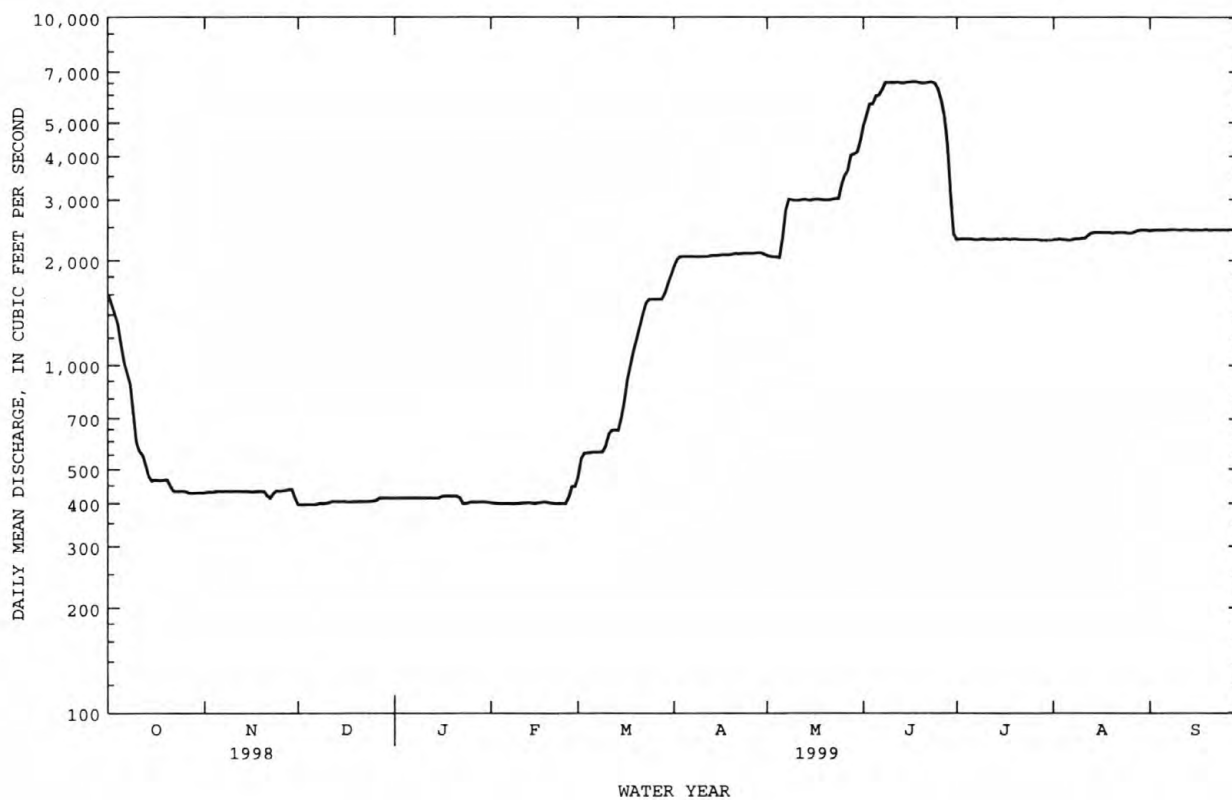
	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	352	293	332	309	373	480	758	1483	3510	3965	3509	1983
MAX	1605	3009	4280	1362	2489	3053	3828	5658	8594	8182	7370	5265
(WY)	1913	1957	1957	1912	1961	1951	1974	1971	1918	1921	1918	1984
MIN	5.06	3.00	2.00	2.00	2.00	2.00	2.53	6.48	51.7	983	987	146
(WY)	1948	1949	1945	1945	1945	1945	1945	1945	1932	1989	1919	1910

SNAKE RIVER MAIN STEM

13011000 SNAKE RIVER NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1904 - 1999	
ANNUAL TOTAL	642939		653188		--	
ANNUAL MEAN	1761		1790		1452	
HIGHEST ANNUAL MEAN	--		--		2548	1997
LOWEST ANNUAL MEAN	--		--		687	1989
HIGHEST DAILY MEAN	6120	Jun 7	6560	Jun 17,18	14700	Jun 13 1918
LOWEST DAILY MEAN	396	Dec 1-6	396	Dec 1-6	.30	Oct 28 1969
ANNUAL SEVEN-DAY MINIMUM	396	Dec 1	396	Dec 1	1.4	Oct 24 1969
INSTANTANEOUS PEAK FLOW	--		6610	Jun 18	15100 ^a	Jun 12 1918
INSTANTANEOUS PEAK STAGE	--		8.24	Jun 18	10.96 ^b	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	1275000		1296000		1052000	
10 PERCENT EXCEEDS	4300		3060		4310	
50 PERCENT EXCEEDS	676		1920		497	
90 PERCENT EXCEEDS	428		402		17	

a Gage height, 10.41 ft, site and datum then in use.

b Discharge, 12,100 ft³/s.

LOCATION.--Lat 43°51'04", long 110°30'59", in SW¹/₄NW¹/₄ sec.23, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 40 ft upstream from bridge on U.S. Highway 287, at Moran, and at mile 0.5.

PERIOD OF RECORD.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1975, July 1978 to current year. Published as "near Moran" prior to October 1968.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. No diversion or regulation. Station operated and record provided by the Idaho District.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 28	0130	*4,740	*7.36
June 3	0500	3,070	6.98
June 7	0030	3,170	7.01
June 15	0200	4,040	7.14

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	58	59	e55	e50	e55	72	611	1770	1230	130	105
2	67	59	59	e50	e48	e55	e70	792	1940	1110	123	124
3	73	59	59	e46	e50	e55	e70	757	2520	1090	118	138
4	74	58	59	e50	e55	e55	69	635	2070	1140	117	129
5	70	59	e55	e55	e50	e50	70	532	2080	1050	118	110
6	68	58	e46	e55	e48	e46	69	464	2080	884	139	97
7	68	58	e50	e55	e60	e50	69	541	2360	847	122	89
8	66	59	e48	e55	e55	e55	71	754	2400	784	116	86
9	65	e55	e46	e55	e60	e60	72	682	1920	684	109	83
10	65	e55	e42	e60	e50	e55	70	587	1710	617	104	81
11	64	e55	e50	e65	e46	e50	e70	521	1710	567	104	78
12	64	e55	e55	e60	e48	e55	70	480	1850	513	114	77
13	62	e55	e55	e55	e48	e55	72	482	1920	470	113	75
14	61	58	e50	e50	e50	e60	74	499	2320	434	102	74
15	61	58	e48	e60	e55	e65	e75	566	3300	412	96	72
16	63	58	e55	e55	e55	e70	e75	508	3310	363	93	71
17	63	58	e55	e55	e55	e65	76	459	3280	367	92	69
18	61	58	e50	e55	e55	e65	83	499	3160	342	90	69
19	60	57	e44	e60	e55	e65	98	657	3040	302	87	70
20	59	e55	e38	e55	e50	e70	120	1010	2970	277	87	68
21	58	58	e34	e55	e55	e70	140	1580	3030	255	89	66
22	59	57	e38	e60	e60	e70	113	2180	2780	229	101	65
23	60	56	e36	e60	e65	e70	99	2590	2410	211	96	64
24	62	59	e38	e50	e65	70	97	2800	2240	192	90	63
25	62	58	e46	e38	e70	71	108	3230	2180	177	89	63
26	60	e55	e55	e46	e65	72	134	3430	1950	164	87	62
27	59	e55	e55	e42	e55	e70	204	3730	1560	155	86	61
28	60	58	e60	e40	e50	e70	296	3420	1350	147	87	59
29	61	59	e65	e38	---	71	358	3160	1240	145	98	58
30	61	59	e60	e36	---	71	460	2560	1160	158	94	57
31	60	---	e55	e44	---	71	---	2700	---	141	124	---
TOTAL	1962	1719	1565	1615	1528	1932	3524	43416	67610	15457	3215	2383
MEAN	63.3	57.3	50.5	52.1	54.6	62.3	117	1401	2254	499	104	79.4
MAX	74	59	65	65	70	72	460	3730	3310	1230	139	138
MIN	58	55	34	36	46	46	69	459	1160	141	86	57
AC-FT	3890	3410	3100	3200	3030	3830	6990	86120	134100	30660	6380	4730

MEAN	65.7	55.1	49.0	44.7	46.1	52.7	152	974	1299	355	99.6	72.0
MAX	142	105	93.5	70.7	72.2	94.5	418	2314	2884	1527	191	127
(WY)	1973	1973	1984	1951	1995	1972	1946	1997	1997	1982	1982	1972
MIN	34.6	32.6	29.7	25.3	26.6	34.6	53.3	345	238	70.0	43.0	37.2
(WY)	1988	1953	1955	1979	1955	1963	1970	1975	1994	1994	1988	1994

PACIFIC CREEK BASIN

13011500 PACIFIC CREEK AT MORAN, WY--Continued

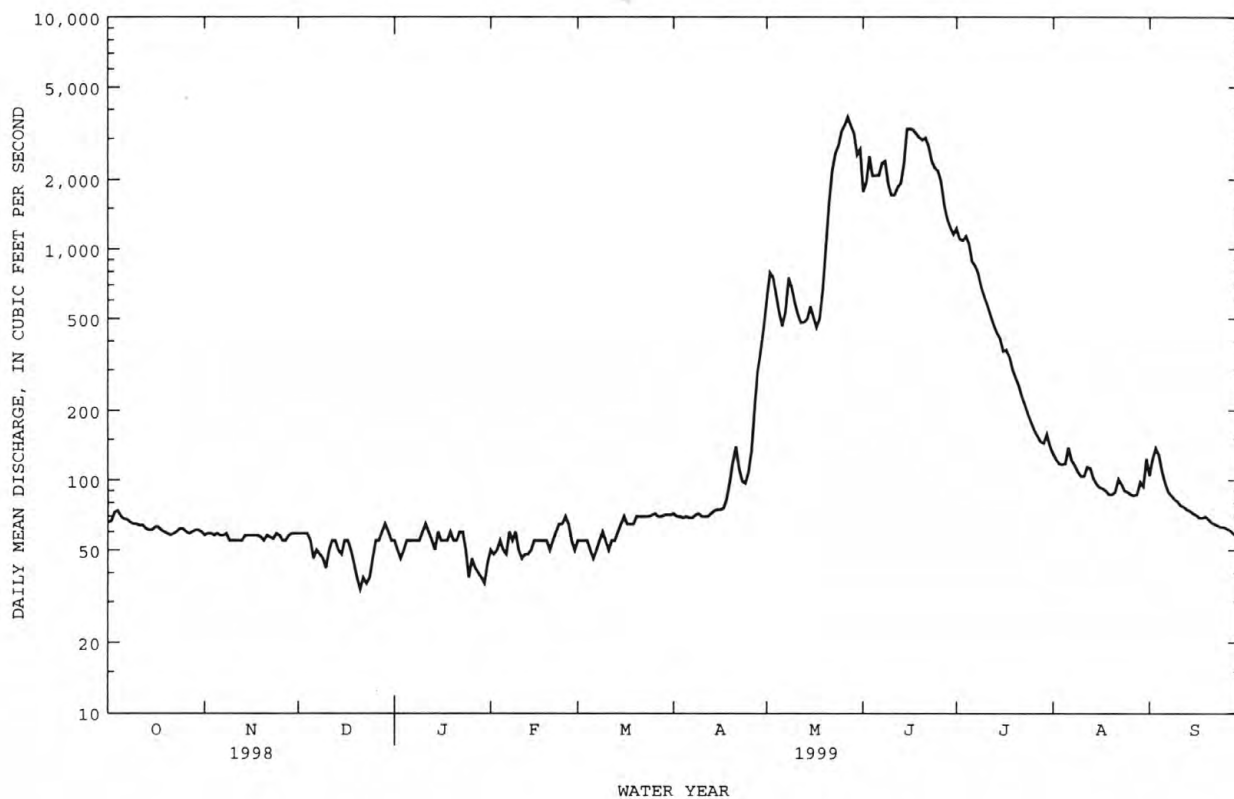
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1917 - 1999*	
ANNUAL TOTAL	123473		145926		--	
ANNUAL MEAN	338		400		272	
HIGHEST ANNUAL MEAN	--		--		560	1997
LOWEST ANNUAL MEAN	--		--		132	1994
HIGHEST DAILY MEAN	2540	May 30	3730	May 27	4170	Jun 1 1997
LOWEST DAILY MEAN	34	Dec 21	34	Dec 21	19	Dec 31 1978
ANNUAL SEVEN-DAY MINIMUM	39	Dec 19	39	Dec 19	23	Jan 6 1993
INSTANTANEOUS PEAK FLOW	--		4740	May 28	5350 ^a	May 29 1983
INSTANTANEOUS PEAK STAGE	--		7.36	May 28	7.20 ^b	Jun 12 1996
ANNUAL RUNOFF (AC-FT)	244900		289400		197200	
10 PERCENT EXCEEDS	1200		1630		940	
50 PERCENT EXCEEDS	73		70		66	
90 PERCENT EXCEEDS	55		50		39	

* For period of operation.

a Gage height, 6.33 ft.

b Extrapolated from gage height record.

e Estimated.



LOCATION.--Lat 43°50'14", long 110°26'21", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.45 N., R.113 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank below bridge on U.S. Highway 26/287, about 2 mi upstream from Lava Creek, 3.5 mi east of Moran, and 4.0 mi upstream from mouth.

PERIOD OF RECORD.--September 1965 to current year. July to November 1906, July 1917 to September 1918, and September 1944 to September 1960 at sites about 3 mi downstream.

GAGE.--Water-stage recorder. Datum of gage is 6,772.78 ft above sea level (Federal Highway Administration bench mark).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	0415	3,180	5.51
June 22	0630	*5,200	*7.25
July 5	0615	4,150	6.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	172	162	e120	e120	e120	146	520	2080	2570	931	390
2	216	179	158	e110	e110	e110	e130	614	2080	2640	868	426
3	236	182	156	e110	e120	e120	e140	584	2440	2930	828	524
4	239	175	157	e120	e130	e110	e140	520	2280	3480	803	492
5	223	176	e130	e140	e120	e110	141	457	2170	3570	777	453
6	221	171	e110	e140	e120	e100	142	401	2060	2840	754	400
7	220	171	e140	e130	e150	e130	140	433	2430	2810	711	373
8	216	177	e170	e130	e130	e120	144	529	2700	2830	676	360
9	208	164	e140	e140	e140	e130	147	520	2250	2550	649	351
10	203	e150	e110	e150	e120	e130	139	454	2040	2410	619	343
11	200	e160	e140	e140	e100	e120	133	429	2090	2320	603	337
12	195	e150	e170	e130	e110	e130	144	397	2260	2150	636	325
13	196	e160	e160	e120	e110	e120	155	390	2320	2330	605	318
14	192	178	e150	e120	e120	e130	161	374	2600	2350	566	313
15	191	174	e160	e160	e130	e140	151	382	3220	2330	535	308
16	203	168	e170	e140	e120	e160	150	375	3620	2000	508	303
17	196	165	e150	e130	e130	e140	168	349	4170	1820	489	297
18	193	e160	e130	e140	e120	e150	188	362	4520	1770	475	294
19	184	e150	e120	e150	e140	e180	227	403	4450	1700	456	328
20	182	e140	e100	e140	e110	e180	265	493	4490	1610	449	313
21	181	e160	e95	e140	e120	e170	278	622	4770	1590	442	296
22	184	e150	e100	e150	e130	e170	247	865	4870	1560	455	288
23	188	152	e95	e150	e140	e170	226	1150	4350	1450	431	283
24	201	e150	e110	e120	e160	e170	217	1520	4090	1380	416	281
25	197	e140	e120	e100	e130	e180	233	1890	3930	1360	409	286
26	191	e140	e140	e130	e130	186	243	2310	3790	1190	394	274
27	185	e150	e130	e120	e110	178	296	2450	2960	1130	384	271
28	196	e150	e150	e110	e140	e160	353	2690	2440	1080	387	268
29	196	e160	e160	e110	---	165	420	2870	2410	1030	392	267
30	185	160	e140	e100	---	161	484	2720	2440	1270	374	271
31	182	---	e120	e110	---	155	---	2700	---	1040	451	---
TOTAL	6209	4834	4243	4000	3510	4495	6148	30773	92320	63090	17473	10033
MEAN	200	161	137	129	125	145	205	993	3077	2035	564	334
MAX	239	182	170	160	160	186	484	2870	4870	3570	931	524
MIN	181	140	95	100	100	100	130	349	2040	1030	374	267
AC-FT	12320	9590	8420	7930	6960	8920	12190	61040	183100	125100	34660	19900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

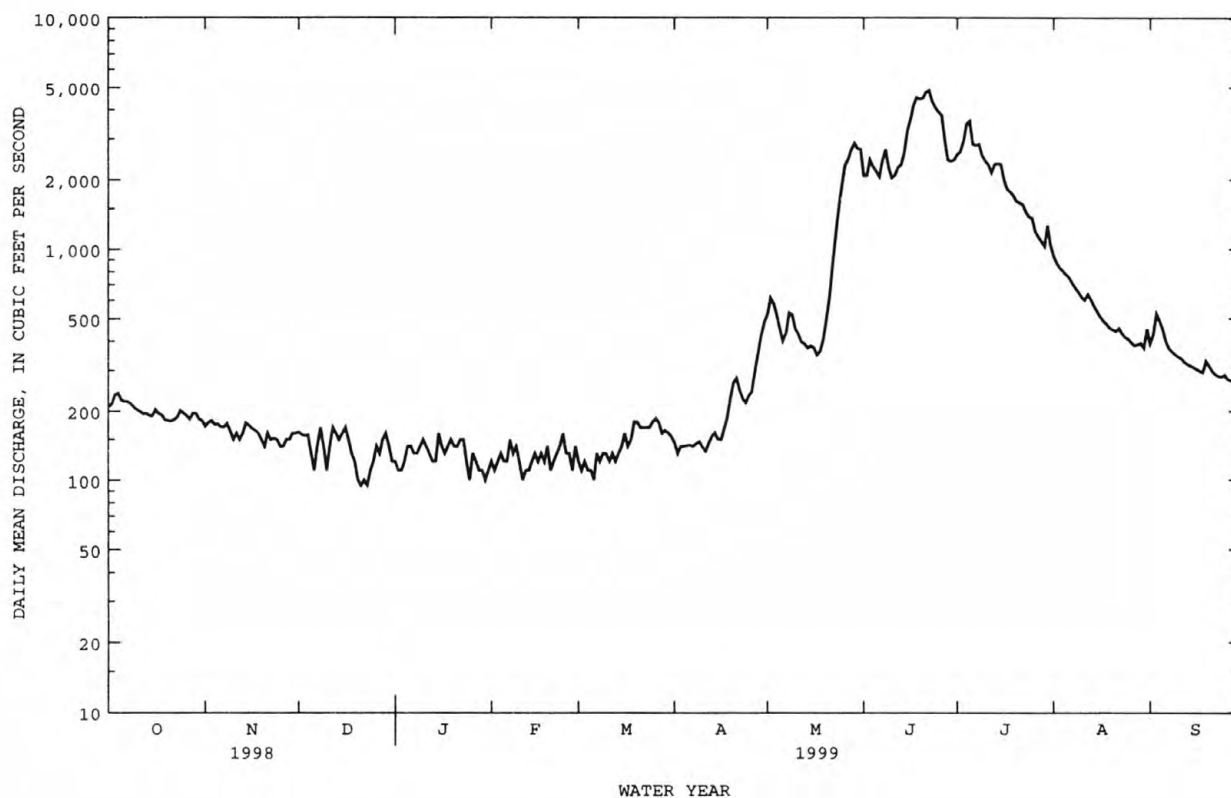
MEAN	216	172	140	122	118	127	217	1014	2350	1408	433	265
MAX	304	229	180	145	191	175	367	1768	4533	3056	946	428
(WY)	1973	1984	1985	1994	1984	1984	1987	1969	1997	1975	1982	1982
MIN	128	122	99.5	87.3	93.1	98.5	124	397	1049	230	163	135
(WY)	1988	1988	1980	1989	1969	1995	1967	1975	1992	1977	1977	1994

BUFFALO FORK BASIN

13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	201442		247128		--	
ANNUAL MEAN	552		677		550	
HIGHEST ANNUAL MEAN	--		--		890	
LOWEST ANNUAL MEAN	--		--		286	
HIGHEST DAILY MEAN	3910	Jul 4	4870	Jun 22	5880	Jun 9 1981
LOWEST DAILY MEAN	95	Dec 21,23	95	Dec 21,23	73	Jan 25 1989
ANNUAL SEVEN-DAY MINIMUM	106	Dec 19	106	Dec 19	81	Jan 23 1989
INSTANTANEOUS PEAK FLOW	--		5200	Jun 22	6540	Jun 9 1981
INSTANTANEOUS PEAK STAGE	--		7.25	Jun 22	8.61	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	399600		490200		398200	
10 PERCENT EXCEEDS	1710		2340		1680	
50 PERCENT EXCEEDS	193		196		195	
90 PERCENT EXCEEDS	130		120		112	

e Estimated.



13013650 SNAKE RIVER AT MOOSE, WY

LOCATION.--Lat 43°39'14", long 110°42'52", in NW¹/₄ NW¹/₄ NE¹/₄ sec.36, T.43 N., R.116 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank at downstream side of bridge on Teton Park Road, 0.2 miles east of Grand Teton National Park Headquarters visitor Center at Moose, and 0.3 miles west of U.S. Highway 191.

DRAINAGE AREA.--1,677 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,431.12 ft above sea level, by survey.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3350	e1270	1050	e910	1040	e1050	2630	3820	11300	7700	4360	3620
2	3230	e1250	1040	e910	966	1050	2690	4040	11800	7570	4260	3700
3	3100	e1230	1040	e910	974	1100	2790	3970	13900	7710	4200	3890
4	3100	1210	1040	e914	1050	1080	2780	3760	13200	8140	4180	3890
5	2780	1210	976	855	1050	1050	2740	3640	13100	8430	4130	3770
6	2510	1210	885	873	1090	1020	2870	3620	13000	7640	4150	3660
7	2310	1180	891	886	1100	1010	2850	4180	13800	7430	4060	3600
8	2200	1180	916	878	1090	1000	2840	4980	14600	7450	4020	3600
9	1990	1150	920	898	1100	1050	2830	5040	13900	7110	3970	3570
10	1760	1130	893	922	1090	1070	2710	4770	13300	6820	3900	3600
11	1650	1080	882	953	1000	1130	2670	4640	12800	6640	3880	3560
12	1600	1100	896	916	931	1160	2770	4620	13300	6400	3990	3560
13	1550	1070	931	911	907	1140	2840	4570	13700	6460	4010	3560
14	1500	1120	916	920	935	1140	2820	4470	14300	6420	3920	3570
15	1460	1090	911	996	1020	1150	2790	4420	14300	6480	3860	3560
16	1490	1080	942	1020	1010	1240	2770	4440	14600	6080	3800	3560
17	1460	1070	961	977	1040	1310	2790	4470	15400	5880	3750	3550
18	1430	1090	964	997	e1040	1410	2860	4410	15700	5760	3710	3550
19	1410	1070	937	1050	e1040	1470	2960	4440	15600	5580	3680	3670
20	1400	1010	994	963	e1040	1600	3080	4960	15400	5420	3670	3720
21	1390	1090	e950	958	e1040	1750	3090	5590	15700	5370	3650	3650
22	1360	1090	e900	956	e1040	1860	3040	6480	15800	5290	3670	3650
23	1360	1060	e870	960	e1040	1960	2900	7430	15200	5110	3640	3640
24	1380	1110	e900	961	e1040	2070	2840	8340	14600	4970	3600	3640
25	1360	1070	e900	845	e1050	2110	2930	9090	14300	4920	3560	3660
26	1340	1050	e900	941	e1050	2290	2970	10400	13600	4710	3530	e3600
27	1320	1040	e900	960	e1050	2240	3050	12000	11900	4580	3530	e3400
28	1310	1110	e910	886	e1050	2100	3270	12800	10400	4490	3560	e3200
29	e1330	1110	e910	865	---	2120	3440	13000	8810	4440	3610	e3000
30	e1310	1090	e910	822	---	2310	3630	12100	7750	4750	3580	e2800
31	e1290	---	e910	869	---	2520	---	12500	---	4510	3720	---
TOTAL	56030	33620	28945	28682	28873	46560	87240	196990	405060	190260	119150	107000
MEAN	1807	1121	934	925	1031	1502	2908	6355	13500	6137	3844	3567
MAX	3350	1270	1050	1050	1100	2520	3630	13000	15800	8430	4360	3890
MIN	1290	1010	870	822	907	1000	2630	3620	7750	4440	3530	2800
AC-FT	111100	66690	57410	56890	57270	92350	173000	390700	803400	377400	236300	212200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)

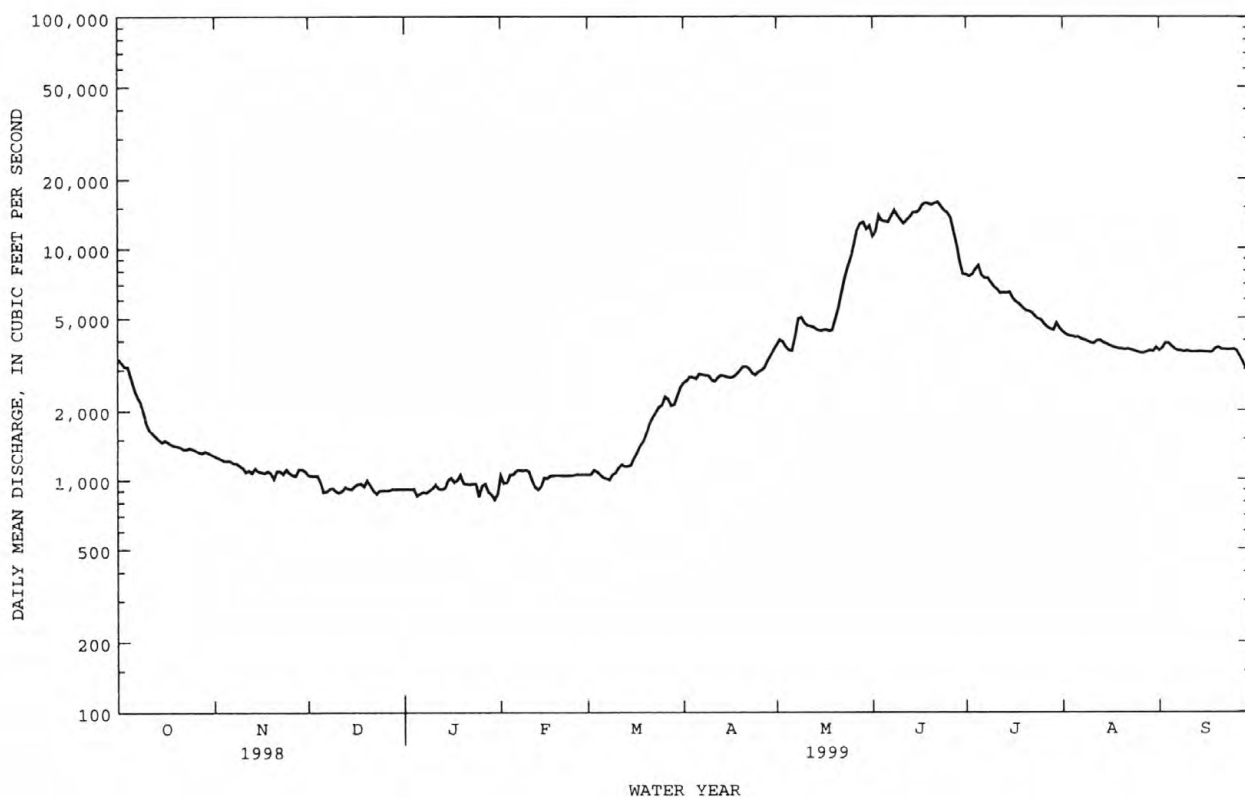
	1995	1996	1997	1998	1999
MEAN	1658	1192	1118	1221	1392
MAX	2124	1382	1315	1615	2083
(WY)	1998	1998	1998	1997	1997
MIN	1342	1067	934	925	1031
(WY)	1996	1996	1999	1999	1999

SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1995 - 1999	
ANNUAL TOTAL	1290355		1328410		--	
ANNUAL MEAN	3535		3639		4060	
HIGHEST ANNUAL MEAN	--		--		4874	1997
LOWEST ANNUAL MEAN	--		--		3616	1998
HIGHEST DAILY MEAN	11700	Jun 4	15800	Jun 22	24500	Jun 11 1997
LOWEST DAILY MEAN	870	Dec 23	822	Jan 30	822	Jan 30 1999
ANNUAL SEVEN-DAY MINIMUM	897	Dec 22	884	Jan 25	884	Jan 25 1999
INSTANTANEOUS PEAK FLOW	--		16900	Jun 18	25300	Jun 11 1997
INSTANTANEOUS PEAK STAGE	--		13.79	Jun 18	15.25	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	2559000		2635000		2941000	
10 PERCENT EXCEEDS	8260		8580		9350	
50 PERCENT EXCEEDS	1390		2770		3050	
90 PERCENT EXCEEDS	1070		920		1050	

e Estimated.



13013650 SNAKE RIVER AT MOOSE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NOV 17...	1000	1080	194	8.3	4.0	1.0	598	10.6	103	83	24	5.4
JAN 21...	1300	978	203	7.9	1.0	1.0	595	11.6	105	83	24	5.4
MAR 30...	0930	2280	172	7.9	2.0	-2.0	595	10.6	98	68	20	4.3
MAY 25...	1230	9160	143	8.1	8.0	16.5	610	9.5	100	61	18	3.7
JUL 21...	1200	5610	127	8.1	15.0	22.0	610	8.4	105	51	15	3.2
SEP 02...	0845	3720	147	8.1	14.0	10.0	605	8.0	98	57	17	3.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
NOV 17...	7.6	.4	1.9	89	10	3.4	.4	15	122	.18	376
JAN 21...	8.0	.4	1.8	89	9.9	4.1	.6	16	124	.17	333
MAR 30...	9.6	.5	2.0	72	10	5.2	.7	16	112	.15	689
MAY 25...	5.2	.3	1.3	72	5.7	2.7	.3	11	92	.15	2720
JUL 21...	5.1	.3	1.4	56	5.6	.8	.3	14	79	.10	1170
SEP 02...	6.8	.4	1.4	60	6.9	3.8	.5	13	89	.13	944

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHOS, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY) (80155)
NOV 17...	.06	<.02	<.1	<.05	.02	E9	E2	1.1	--	8	23
JAN 21...	.10	<.02	E.07	<.05	.02	<10	3	1.0	.2	3	7.9
MAR 30...	.05	<.02	E.06	<.05	<.01	E9	4	1.6	.2	8	49
MAY 25...	<.05	.03	.6	.52	.02	14	7	3.0	3.8	648	16000
JUL 21...	<.05	<.02	.4	.05	.01	E6	<3	1.5	.2	26	386
SEP 02...	<.05	<.02	.2	<.05	<.01	E6	<3	1.5	.5	9	90

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	ACETO- CHLOR, WATER FLTRD REC (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
NOV 17...	1000	1080	4.0	1.0	<.002	<.002	<.001	<.002	<.001	<.002	<.002
MAY 25...	1230	9160	8.0	16.5	<.002	<.002	<.001	<.002	<.001	<.002	<.002

E Estimated.

SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P,P'- DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
NOV 17...	<.003	<.003	<.004	<.004	<.002	<.006	<.002	<.001	<.003	<.017
MAY 25...	<.003	<.003	<.004	<.004	<.002	<.006	<.002	<.001	<.003	<.017
DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
NOV 17...	<.002	<.004	<.003	<.003	<.002	<.004	<.002	<.005	<.002	<.006
MAY 25...	<.002	<.004	<.003	<.003	<.002	<.004	<.002	<.005	<.002	<.006
DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
NOV 17...	<.004	<.004	<.003	<.004	<.004	<.004	<.005	<.002	<.018	<.003
MAY 25...	<.004	<.004	<.003	<.004	<.004	<.004	<.005	<.002	<.018	<.003
DATE	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
NOV 17...	<.007	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002
MAY 25...	<.007	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002

391

LOCATION.--Lat 43°33'00", long 110°47'00", in SW¹/₄NW¹/₄SW¹/₄ sec.34., T.42 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040102, on left bank, 20 ft upstream from county road bridge, 0.5 mi southwest of Jackson Hole Country Club, and 5.5 mi north of Jackson, Wyoming.

PERIOD OF RECORD.--July to September 1917, July to September 1918 (monthly discharge only, published in WSP 1317), October 1987 to current year (no winter records).

REMARKS.--Records fair. Station equipment includes satellite telemetry. Diversions of about 300 ft³/s for irrigation upstream from station. No regulation. Station operated and record provided by the Idaho District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1927, when landslide about 12 mi upstream washed out, released about 60,000 acre-ft of impounded water (discharge not determined).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	88	547	2290	1730	316	119
2	---	---	---	---	---	---	74	666	1560	1830	294	124
3	---	---	---	---	---	---	65	652	1670	2040	277	145
4	---	---	---	---	---	---	63	465	1720	2200	267	182
5	---	---	---	---	---	---	65	342	1390	2370	252	185
6	---	---	---	---	---	---	67	254	1250	2290	228	167
7	---	---	---	---	---	---	74	204	1860	1930	232	145
8	---	---	---	---	---	---	79	281	2360	1830	218	127
9	---	---	---	---	---	---	92	363	2160	1710	202	116
10	---	---	---	---	---	---	92	309	1740	1470	188	107
11	---	---	---	---	---	---	82	254	1570	1280	178	102
12	---	---	---	---	---	---	77	214	1620	1030	176	97
13	---	---	---	---	---	---	87	207	1710	978	175	93
14	---	---	---	---	---	---	104	213	1800	963	170	90
15	---	---	---	---	---	---	114	215	2150	993	161	86
16	---	---	---	---	---	---	109	227	2490	978	148	84
17	---	---	---	---	---	---	108	190	2860	915	134	82
18	---	---	---	---	---	---	131	167	3070	792	124	80
19	---	---	---	---	---	---	165	203	2930	778	120	83
20	---	---	---	---	---	---	214	320	2710	778	130	88
21	---	---	---	---	---	---	247	526	2900	694	127	88
22	---	---	---	---	---	---	231	886	2930	666	127	85
23	---	---	---	---	---	---	191	1260	2860	609	127	82
24	---	---	---	---	---	---	159	1760	2600	556	120	81
25	---	---	---	---	---	---	149	2100	2500	520	114	80
26	---	---	---	---	---	---	156	2350	2630	486	111	79
27	---	---	---	---	---	---	184	2620	2490	417	107	78
28	---	---	---	---	---	---	236	2910	2060	389	101	77
29	---	---	---	---	---	---	333	2880	1810	360	103	77
30	---	---	---	---	---	---	461	2830	1780	355	99	77
31	---	---	---	---	---	---	---	2770	---	331	108	---
TOTAL	---	---	---	---	---	---	4297	29185	65470	34268	5234	3106
MEAN	---	---	---	---	---	---	143	941	2182	1105	169	104
MAX	---	---	---	---	---	---	461	2910	3070	2370	316	185
MIN	---	---	---	---	---	---	63	167	1250	331	99	77
AC-FT	---	---	---	---	---	---	8520	57890	129900	67970	10380	6160

MEAN	---	---	---	---	---	---	141	902	1372	595	178	80.6
MAX	---	---	---	---	---	---	219	2954	3189	1410	406	215
(WY)	---	---	---	---	---	---	1990	1997	1997	1995	1917	1997
MIN	---	---	---	---	---	---	41.1	293	88.3	10.5	.86	.000
(WY)	---	---	---	---	---	---	1993	1995	1992	1994	1994	1994

GROS VENTRE RIVER BASIN

13015000 GROS VENTRE RIVER AT ZENITH, WY--Continued

SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1917 - 1999*

HIGHEST DAILY MEAN

3070 Jun 18

6170 Jun 6 1997

LOWEST DAILY MEAN

63 Apr 4

.00 Many days,
some years

INSTANTANEOUS PEAK FLOW

--

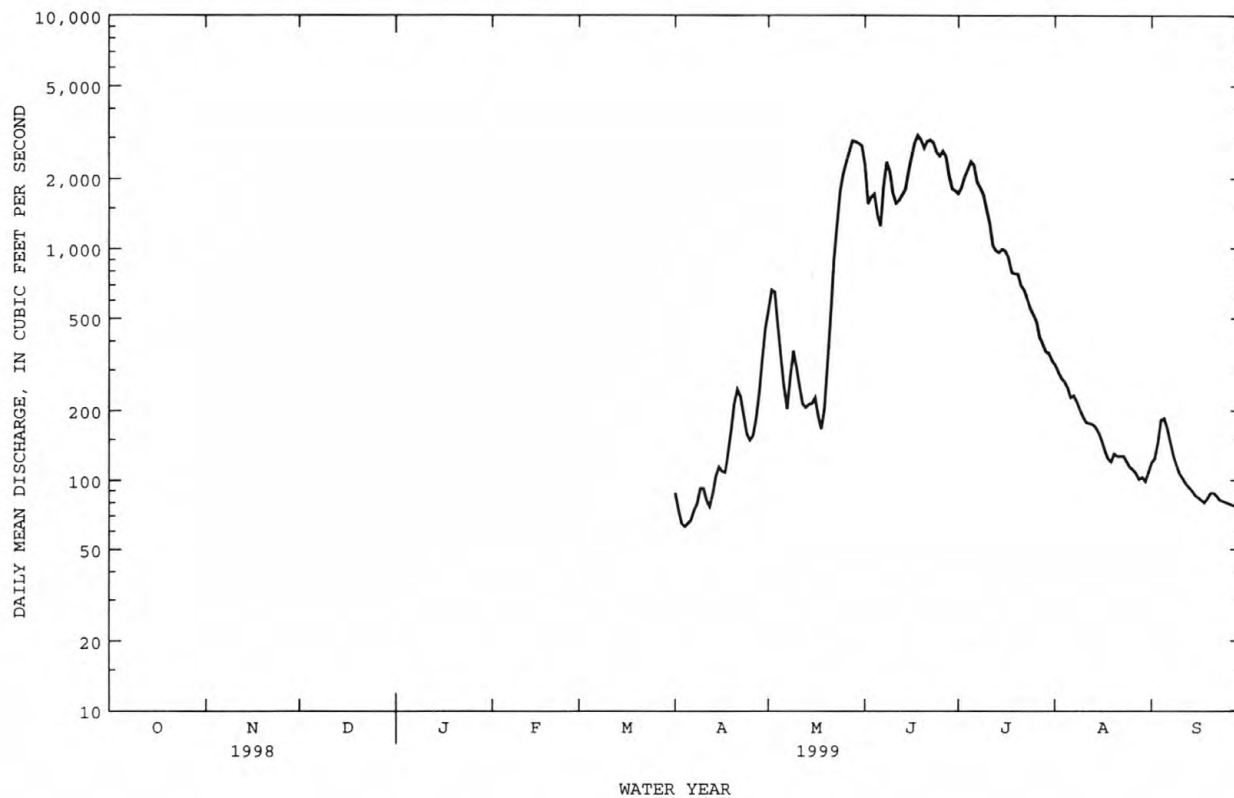
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INSTANTANEOUS PEAK STAGE

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22.77 Jun 10 1996

* During period of operation.



13016240 LAKE CREEK BELOW GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY

LOCATION.--Lat 43°36'49", long 110°46'44", in NE¹/₄ SW¹/₄ SW¹/₄ sec.9, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on left bank 60 ft downstream from Granite Creek Supplemental, and 4.3 mi southwest of Moose.

DRAINAGE AREA.--22.2 mi².

PERIOD OF RECORD.--June 1995 to September 1999, discontinued (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversion 60 ft upstream, into and out of Lake Creek through Granite Creek Supplemental, which diverts water from Snake River main stem for irrigation in Fish Creek Basin. See stations 13016305, 13016310, 13016315 and 13016450. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 5 . . . 80.5
Mar. 29 . . . 6.30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e6.3	27	145	195	76	39
2	---	---	---	---	---	---	e6.3	32	131	214	72	40
3	---	---	---	---	---	---	e6.3	34	138	230	70	40
4	---	---	---	---	---	---	e6.3	33	130	244	69	41
5	---	---	---	---	---	---	e6.3	43	121	249	69	40
6	---	---	---	---	---	---	e6.2	50	120	210	66	37
7	---	---	---	---	---	---	e6.2	39	134	204	62	36
8	---	---	---	---	---	---	e6.2	33	131	214	60	35
9	---	---	---	---	---	---	e6.2	28	117	170	59	35
10	---	---	---	---	---	---	e6.2	26	106	150	56	34
11	---	---	---	---	---	---	e6.2	24	96	143	53	33
12	---	---	---	---	---	---	e6.2	23	96	134	51	33
13	---	---	---	---	---	---	6.2	22	107	128	50	32
14	---	---	---	---	---	---	5.6	21	136	121	48	32
15	---	---	---	---	---	---	5.3	20	189	105	47	31
16	---	---	---	---	---	---	5.3	19	225	106	46	31
17	---	---	---	---	---	---	5.5	17	234	103	45	31
18	---	---	---	---	---	---	5.7	54	253	96	44	30
19	---	---	---	---	---	---	6.0	79	261	88	43	29
20	---	---	---	---	---	---	6.7	82	267	81	42	29
21	---	---	---	---	---	---	8.1	85	277	78	42	28
22	---	---	---	---	---	---	8.5	105	280	74	41	27
23	---	---	---	---	---	---	8.5	121	250	61	41	26
24	---	---	---	---	---	---	8.6	157	230	53	41	25
25	---	---	---	---	---	---	9.5	186	227	48	40	23
26	---	---	---	---	---	---	10	198	236	50	40	22
27	---	---	---	---	---	---	11	206	184	53	39	22
28	---	---	---	---	---	---	14	196	145	59	38	21
29	---	---	---	---	---	---	19	180	116	76	38	20
30	---	---	---	---	---	---	22	181	155	84	38	20
31	---	---	---	---	---	---	---	171	---	79	39	---
TOTAL	---	---	---	---	---	---	240.4	2492	5237	3900	1565	922
MEAN	---	---	---	---	---	---	8.01	80.4	175	126	50.5	30.7
MAX	---	---	---	---	---	---	22	206	280	249	76	41
MIN	---	---	---	---	---	---	5.3	17	96	48	38	20
AC-FT	---	---	---	---	---	---	477	4940	10390	7740	3100	1830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY) *

	1995	1996	1997	1998	1999
MEAN	---	---	---	---	---
MAX	---	---	---	---	---
(WY)	---	---	---	---	---
MIN	---	---	---	---	---
(WY)	---	---	---	---	---

FISH CREEK BASIN

13016240 LAKE CREEK BELOW GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY--Continued

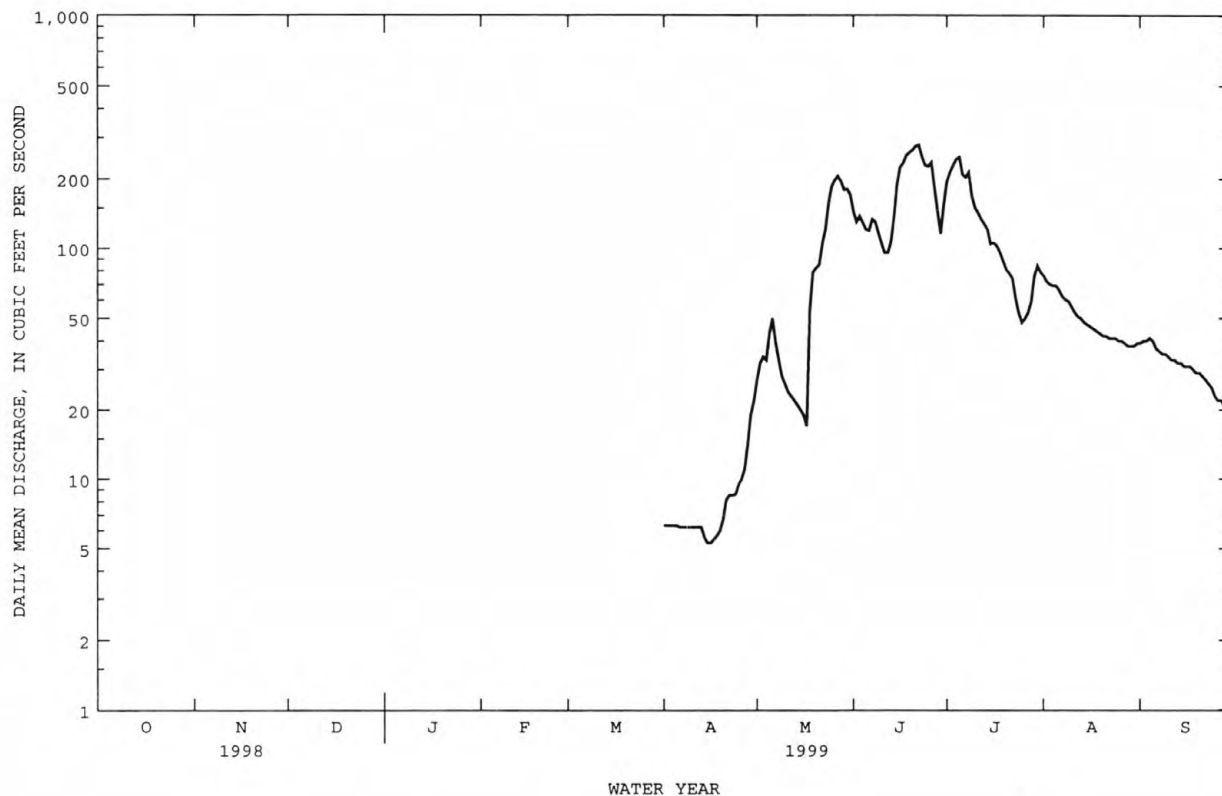
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1995 - 1999*

HIGHEST DAILY MEAN	280	Jun 22	483	Jun 19 1997
LOWEST DAILY MEAN	5.3	Apr 15,16	4.8	Apr 14 1997
INSTANTANEOUS PEAK FLOW	288	Jun 22	499	Jun 19 1997
INSTANTANEOUS PEAK STAGE	2.93	Jun 22	3.64	Jun 19 1997

* During period of operation.
e Estimated.



13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY

LOCATION.--Lat 43°36'14", long 110°48'17", in SW¹/₄ SE¹/₄ NE¹/₄ sec.18, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on right bank 0.7 mi upstream from Granite Creek Supplemental, and 5.7 mi southwest of Moose.

DRAINAGE AREA.--14.9 mi².

PERIOD OF RECORD.--June 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station. See stations 13016240, 13016310, 13016315, and 13016450.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	8.1	e7.4	7.0	e6.1	6.4	6.4	25	67	181	51	e20
2	12	8.2	e7.4	6.9	6.1	6.4	6.2	28	63	190	48	e21
3	11	8.0	e7.4	7.0	5.6	6.2	5.9	26	74	191	46	e22
4	11	7.7	e7.4	7.0	6.5	6.1	5.9	23	71	200	45	e23
5	11	7.9	e7.4	7.2	6.5	6.1	5.6	21	67	192	42	e23
6	10	7.9	e9.2	7.1	6.4	5.8	5.6	20	74	179	40	e22
7	10	8.0	e9.1	7.0	6.5	6.2	5.6	20	76	185	39	e21
8	10	e8.0	e9.0	7.0	6.3	5.9	5.6	22	69	182	37	e20
9	9.7	e8.0	e9.8	7.0	6.7	5.9	5.6	21	61	169	35	e20
10	9.7	e7.8	e9.4	7.0	6.5	5.7	5.3	21	53	167	33	e20
11	9.7	e7.6	e10	7.0	6.5	5.6	e5.3	20	53	166	33	e19
12	9.6	e7.4	e10	6.7	5.8	5.6	5.2	19	62	166	32	e19
13	9.3	e7.3	e10	6.7	e5.8	5.6	5.5	20	76	164	30	e19
14	9.3	7.3	10	6.6	e6.0	5.4	5.9	20	95	163	29	e18
15	9.3	7.2	10	6.7	e6.2	5.5	e5.9	19	116	e151	27	e18
16	9.3	7.0	10	6.3	6.3	5.6	e6.2	19	132	e144	26	e18
17	9.2	7.1	10	6.4	6.3	5.5	6.3	18	153	e136	25	e18
18	9.1	7.0	10	6.5	6.3	5.4	7.4	19	162	e130	25	e18
19	8.8	7.0	e9.6	6.3	6.5	5.7	9.8	20	170	e125	25	e18
20	8.7	7.0	e7.9	6.2	6.3	5.9	12	25	156	121	24	e18
21	8.6	7.4	e6.4	6.2	6.1	6.4	12	36	194	117	24	e17
22	8.6	7.5	e6.4	6.1	5.7	6.4	11	58	196	109	23	e16
23	8.7	7.6	e6.2	6.3	6.8	6.4	11	83	165	102	23	e15
24	8.7	7.7	e6.6	6.2	6.9	6.4	10	109	154	98	22	e15
25	8.5	7.5	e7.0	5.7	6.7	6.7	11	138	191	88	21	e15
26	8.4	e7.5	e7.4	6.5	6.6	7.3	11	163	184	77	20	e14
27	8.3	e7.4	e7.6	6.2	6.5	7.1	11	178	148	71	20	e14
28	8.7	7.4	e7.8	6.0	6.4	6.9	14	130	144	67	20	e14
29	8.5	e7.4	7.8	e6.0	---	6.7	17	107	160	69	20	e14
30	8.4	e7.4	7.1	e6.0	---	6.6	21	102	181	64	19	e13
31	8.2	---	6.7	e6.1	---	6.4	---	87	---	57	20	---
TOTAL	290.3	226.3	258.0	202.9	176.9	189.8	256.2	1617	3567	4221	924	542
MEAN	9.36	7.54	8.32	6.55	6.32	6.12	8.54	52.2	119	136	29.8	18.1
MAX	12	8.2	10	7.2	6.9	7.3	21	178	196	200	51	23
MIN	8.2	7.0	6.2	5.7	5.6	5.4	5.2	18	53	57	19	13
AC-FT	576	449	512	402	351	376	508	3210	7080	8370	1830	1080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)

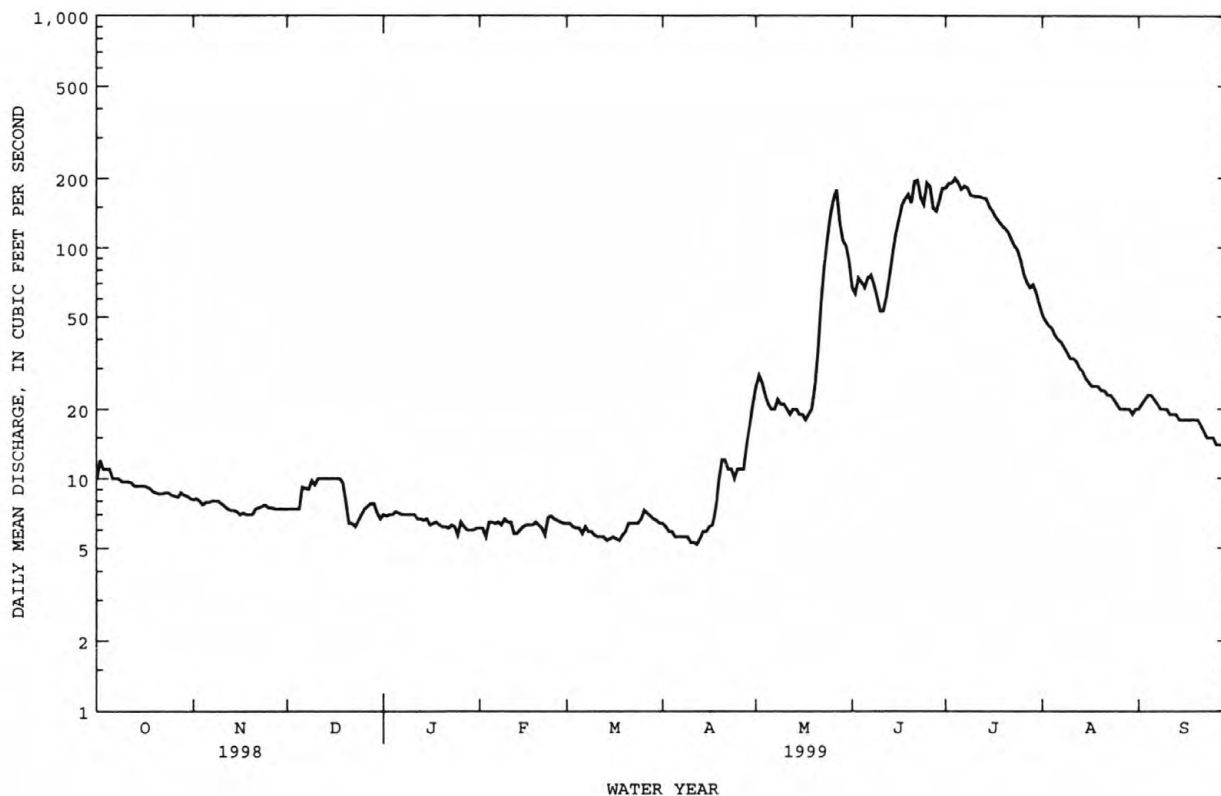
	1995	1996	1997	1998	1999
MEAN	11.0	9.64	7.26	6.13	5.24
MAX	16.0	14.5	8.73	8.10	6.32
(WY)	1998	1998	1998	1998	1999
MIN	8.54	7.54	4.97	2.34	3.44
(WY)	1997	1999	1996	1996	1996

FISH CREEK BASIN

13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1995 - 1999	
ANNUAL TOTAL	15948.7		12471.4		--	
ANNUAL MEAN	43.7		34.2		47.3	
HIGHEST ANNUAL MEAN	--		--		63.2	1997
LOWEST ANNUAL MEAN	--		--		34.2	1999
HIGHEST DAILY MEAN	315	Jul 3	200	Jul 4	490	Jun 9 1997
LOWEST DAILY MEAN	5.2	Feb 28	5.2	Apr 12	1.2	Jan 9 1996
ANNUAL SEVEN-DAY MINIMUM	5.5	Feb 25	5.4	Apr 7	1.3	Jan 5 1996
INSTANTANEOUS PEAK FLOW	--		255	Jun 21	518	Jun 9 1997
INSTANTANEOUS PEAK STAGE	--		5.66	Jun 21	6.58	Jun 9 1997
ANNUAL RUNOFF (AC-FT)	31630		24740		34300	
10 PERCENT EXCEEDS	151		130		176	
50 PERCENT EXCEEDS	9.6		9.7		12	
90 PERCENT EXCEEDS	5.7		6.1		5.4	

e Estimated.



13016310 GRANITE CREEK SUPPLEMENTAL ABOVE LAKE CREEK, NEAR MOOSE, WY

LOCATION.--Lat 43°37'09", long 110°46'27", in SE¹/₄ SE¹/₄ NW¹/₄ sec.9, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on left bank 0.3 mi downstream from headgate, 0.4 mi upstream from Lake Creek, and 4.0 mi southwest of Moose.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June 1995 to September 1999, discontinued (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,370 ft above sea level, from topographic map.

REMARKS.--Records good. This is a transbasin diversion from Snake River for irrigation in Fish Creek Basin. Diversion point is 0.3 mi northeast of this site, at the right bank of Snake River in SW¹/₄ NE¹/₄ sec.9, T.42 N., R.116 W. See stations 13016240, 13016305, 13016315, and 13016450. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 5 . . . 84.1
Mar. 29 . . . 3.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3.5	2.9	37	133	188	158
2	---	---	---	---	---	---	3.5	2.8	37	136	184	160
3	---	---	---	---	---	---	3.5	2.4	35	138	183	165
4	---	---	---	---	---	---	3.5	2.3	30	136	182	165
5	---	---	---	---	---	---	3.5	2.2	28	125	181	161
6	---	---	---	---	---	---	3.5	2.1	28	122	181	156
7	---	---	---	---	---	---	3.7	2.0	28	125	179	154
8	---	---	---	---	---	---	3.8	.99	28	124	175	153
9	---	---	---	---	---	---	3.8	.87	26	116	173	151
10	---	---	---	---	---	---	3.8	.77	24	108	172	149
11	---	---	---	---	---	---	3.8	.77	23	102	172	147
12	---	---	---	---	---	---	3.8	.74	22	96	174	146
13	---	---	---	---	---	---	3.8	.72	22	95	174	146
14	---	---	---	---	---	---	3.8	.70	32	95	170	144
15	---	---	---	---	---	---	3.8	.70	52	93	168	144
16	---	---	---	---	---	---	3.8	.70	53	118	166	143
17	---	---	---	---	---	---	3.8	.70	55	129	164	143
18	---	---	---	---	---	---	3.8	42	57	125	165	141
19	---	---	---	---	---	---	3.8	64	55	120	164	140
20	---	---	---	---	---	---	3.8	66	51	117	163	139
21	---	---	---	---	---	---	3.8	66	46	114	163	135
22	---	---	---	---	---	---	3.8	86	42	113	164	132
23	---	---	---	---	---	---	3.7	85	37	109	164	128
24	---	---	---	---	---	---	3.7	112	30	105	162	126
25	---	---	---	---	---	---	3.7	115	23	104	159	123
26	---	---	---	---	---	---	3.6	97	19	112	158	117
27	---	---	---	---	---	---	3.1	82	15	120	157	116
28	---	---	---	---	---	---	3.0	63	10	128	158	114
29	---	---	---	---	---	---	3.1	50	8.4	166	159	113
30	---	---	---	---	---	---	3.1	42	77	203	156	111
31	---	---	---	---	---	---	---	38	---	193	160	---
TOTAL	---	---	---	---	---	---	108.7	1032.36	1030.4	3820	5238	4220
MEAN	---	---	---	---	---	---	3.62	33.3	34.3	123	169	141
MAX	---	---	---	---	---	---	3.8	115	77	203	188	165
MIN	---	---	---	---	---	---	3.0	.70	8.4	93	156	111
AC-FT	---	---	---	---	---	---	216	2050	2040	7580	10390	8370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	6.10	33.2	13.2	77.4	162	142
MAX	---	---	---	---	---	---	18.6	62.2	34.3	123	244	231
(WY)	---	---	---	---	---	---	1997	1996	1999	1999	1998	1998
MIN	---	---	---	---	---	---	.60	11.9	4.01	41.6	71.9	93.5
(WY)	---	---	---	---	---	---	1998	1997	1998	1995	1997	1995

FISH CREEK BASIN

13016310 GRANITE CREEK SUPPLEMENTAL ABOVE LAKE CREEK, NEAR MOOSE, WY--Continued

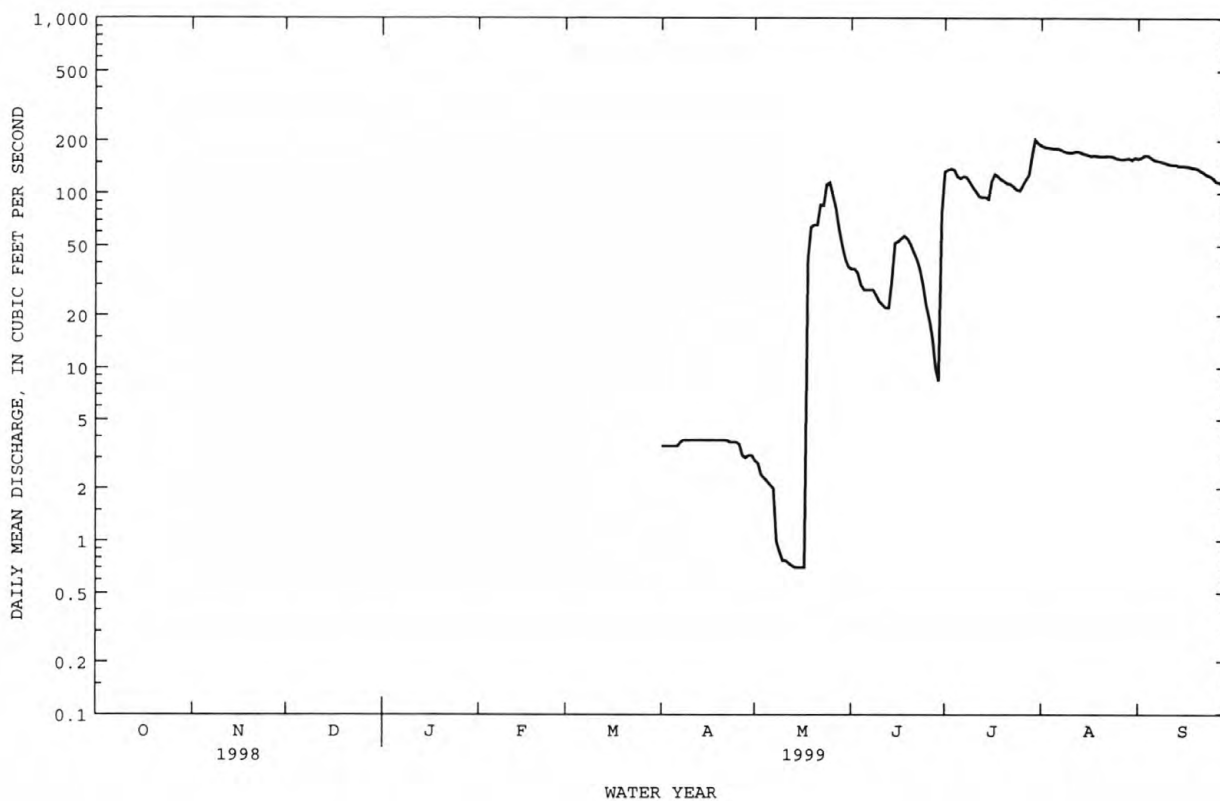
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1995 - 1999*

HIGHEST DAILY MEAN	203	Jul 30	274	Sep 13 1998
LOWEST DAILY MEAN	.70	May 14-17	.00	Apr 1-29 1998
INSTANTANEOUS PEAK FLOW	210	Jul 30	278	Sep 13 1998
INSTANTANEOUS PEAK STAGE	3.87	Jul 30	4.40	Sep 13 1998

* During period of operation.



13016315 GRANITE CREEK SUPPLEMENTAL BELOW LAKE CREEK, NEAR MOOSE, WY

LOCATION.--Lat 43°36'22", long 110°47'24", in NW¹/₄ SW¹/₄ NE¹/₄ sec.17, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on left bank 800 ft upstream from bridge on Moose-Wilson road, 0.9 mi upstream from mouth, and 5.4 mi southwest of Moose.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June 1995 to September 1999, discontinued (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map.

REMARKS.--Records good. Canal diverts water from Snake River in SW¹/₄ NE¹/₄ sec.9, T.42 N., R.16 W., for irrigation in Fish Creek Basin. Figures given herein represent water diverted from main stem of Snake River, less that which may divert into Lake Creek, 0.8 mi upstream. Figures given herein also represent water diverted into this canal from Lake Creek, 0.8 mi upstream. See stations 13016240, 13016305, 13016310, and 13016450. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 5 . . . 2.98

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	66	170	198	130
2	---	---	---	---	---	---	.00	.00	60	177	190	134
3	---	---	---	---	---	---	.00	.00	64	180	186	135
4	---	---	---	---	---	---	.00	.00	58	187	187	137
5	---	---	---	---	---	---	.00	.00	55	186	184	133
6	---	---	---	---	---	---	.00	.00	55	171	182	129
7	---	---	---	---	---	---	.00	.00	60	173	178	125
8	---	---	---	---	---	---	.00	.00	58	183	174	123
9	---	---	---	---	---	---	.00	.00	50	184	170	121
10	---	---	---	---	---	---	.00	.00	44	173	166	119
11	---	---	---	---	---	---	.00	.00	41	166	166	117
12	---	---	---	---	---	---	.00	.00	43	166	168	116
13	---	---	---	---	---	---	.00	.00	52	175	165	115
14	---	---	---	---	---	---	.00	.00	73	182	161	113
15	---	---	---	---	---	---	.00	.00	101	196	157	112
16	---	---	---	---	---	---	.00	.00	112	195	152	111
17	---	---	---	---	---	---	.00	.00	120	195	148	110
18	---	---	---	---	---	---	.00	.00	129	184	145	109
19	---	---	---	---	---	---	.00	.00	131	176	143	107
20	---	---	---	---	---	---	.00	.00	133	177	142	107
21	---	---	---	---	---	---	.00	.75	136	182	140	105
22	---	---	---	---	---	---	.00	21	135	180	139	101
23	---	---	---	---	---	---	.00	37	121	175	138	98
24	---	---	---	---	---	---	.00	69	115	167	135	97
25	---	---	---	---	---	---	.00	96	120	158	133	95
26	---	---	---	---	---	---	.00	104	117	161	131	91
27	---	---	---	---	---	---	.00	106	95	165	130	90
28	---	---	---	---	---	---	.00	98	76	164	129	89
29	---	---	---	---	---	---	.00	93	97	184	131	88
30	---	---	---	---	---	---	.00	91	146	218	128	85
31	---	---	---	---	---	---	---	82	---	208	131	---
TOTAL	---	---	---	---	---	---	0.00	797.75	2663	5558	4827	3342
MEAN	---	---	---	---	---	---	.000	25.7	88.8	179	156	111
MAX	---	---	---	---	---	---	.00	106	146	218	198	137
MIN	---	---	---	---	---	---	.00	.00	41	158	128	85
AC-FT	---	---	---	---	---	---	.00	1580	5280	11020	9570	6630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	.000	37.1	79.1	151	158	109
MAX	---	---	---	---	---	---	.000	77.5	123	179	197	166
(WY)	---	---	---	---	---	---	1997	1996	1996	1999	1998	1998
MIN	---	---	---	---	---	---	.000	10.5	27.8	128	116	55.5
(WY)	---	---	---	---	---	---	1997	1998	1998	1995	1997	1995

FISH CREEK BASIN

13016315 GRANITE CREEK SUPPLEMENTAL BELOW LAKE CREEK, NEAR MOOSE, WY--Continued

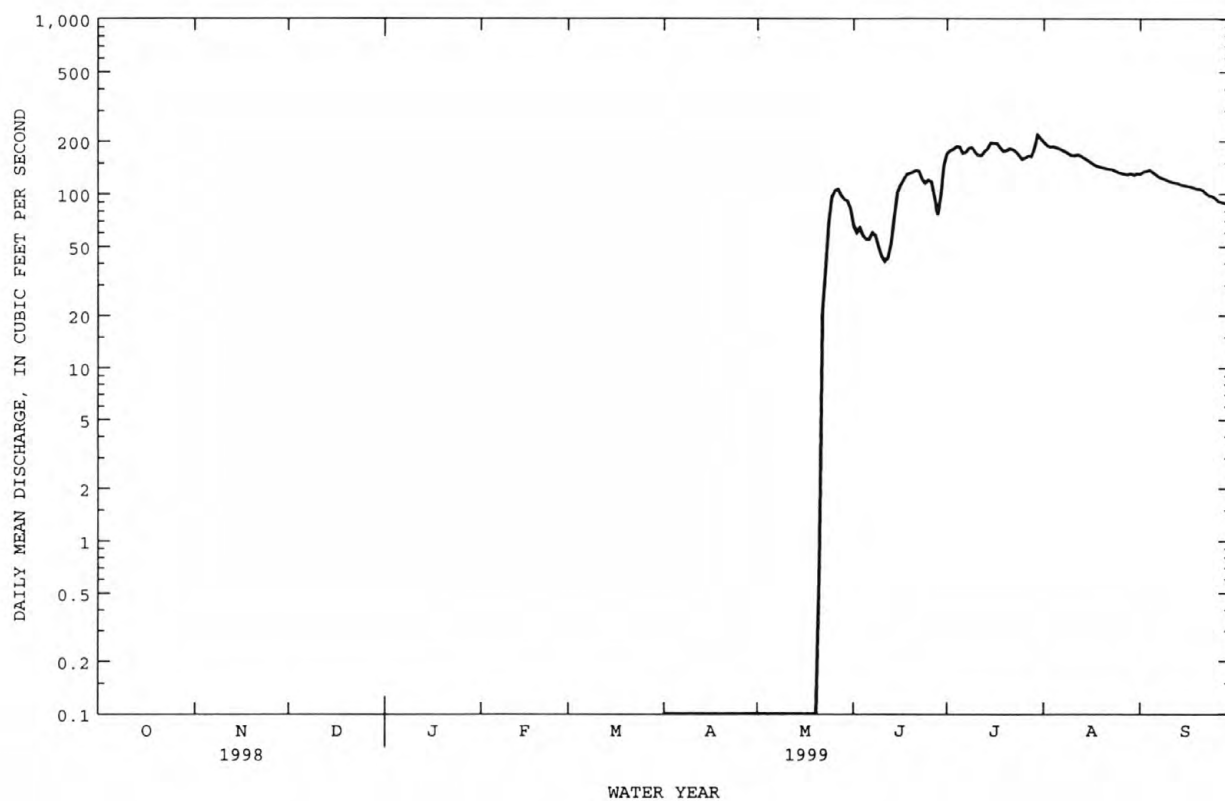
SUMMARY STATISTICS

FOR 1999 WATER YEAR*

WATER YEARS 1995 - 1999*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN218 Jul 30
.00 Apr 1 to May 20251 Jul 29 1998
.00 Many days,
most yearsINSTANTANEOUS PEAK FLOW
INSTANTANEOUS PEAK STAGE220 Jul 29
3.50 Jul 29266 Jul 29 1998
3.82 Jul 29 1998

* During period of operation.



13016450 FISH CREEK AT WILSON, WY

LOCATION.--Lat 43°30'03", long 110°52'15", in NW¹/₄ NW¹/₄ SE¹/₄ sec.22, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on left bank 20 ft downstream from bridge on Fish Creek Road (County Road 3) in Wilson.

DRAINAGE AREA.--71.1 mi².

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above sea level, from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transbasin diversion from Snake River through Granite Creek Supplemental for irrigation in Fish Creek Basin and by additional diversions upstream from station within Fish Creek Basin. See stations 13016240, 13016305, 13016310, and 13016315.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	62	49	35	47	37	41	98	567	710	366	193
2	204	60	49	35	46	45	41	102	515	751	359	230
3	190	60	47	35	44	43	42	104	569	785	347	246
4	179	60	44	35	43	42	42	100	523	815	348	248
5	167	60	43	33	40	40	42	93	490	844	342	247
6	158	58	43	34	36	39	42	98	474	805	337	234
7	146	55	43	34	38	39	44	96	532	786	331	225
8	137	55	43	34	45	38	48	91	564	790	317	218
9	130	55	43	34	45	38	52	91	500	736	304	208
10	122	55	43	35	45	38	53	88	441	687	298	199
11	115	55	41	36	42	38	53	85	402	643	292	193
12	110	54	41	36	41	37	53	85	392	610	288	191
13	104	53	41	36	37	36	58	85	412	576	282	189
14	98	49	40	37	39	36	65	84	464	573	273	185
15	94	49	39	38	44	39	65	84	539	556	262	182
16	92	51	39	39	43	44	65	82	609	542	253	176
17	88	51	39	39	41	40	69	80	720	566	245	174
18	86	51	39	41	36	37	78	81	810	544	239	174
19	83	51	37	48	36	36	85	92	861	498	232	180
20	81	49	e37	47	35	36	93	101	904	467	233	175
21	78	46	e37	44	36	37	93	118	952	439	233	166
22	77	47	e37	41	38	43	90	128	1000	425	227	159
23	73	48	e37	43	36	45	83	160	961	402	211	148
24	69	48	e37	42	36	43	82	207	904	375	204	144
25	65	46	e37	48	36	40	83	268	890	353	210	143
26	66	45	37	47	35	41	83	323	906	338	209	137
27	68	45	36	45	35	42	83	371	828	325	205	133
28	67	44	36	45	35	42	84	421	688	321	196	134
29	64	45	36	44	---	47	94	464	583	330	192	133
30	64	48	36	39	---	48	99	512	596	370	192	133
31	62	---	36	42	---	47	---	602	---	373	195	---
TOTAL	3366	1555	1242	1221	1110	1253	2005	5394	19596	17335	8222	5497
MEAN	109	51.8	40.1	39.4	39.6	40.4	66.8	174	653	559	265	183
MAX	229	62	49	48	47	48	99	602	1000	844	366	248
MIN	62	44	36	33	35	36	41	80	392	321	192	133
AC-FT	6680	3080	2460	2420	2200	2490	3980	10700	38870	34380	16310	10900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1999, BY WATER YEAR (WY)

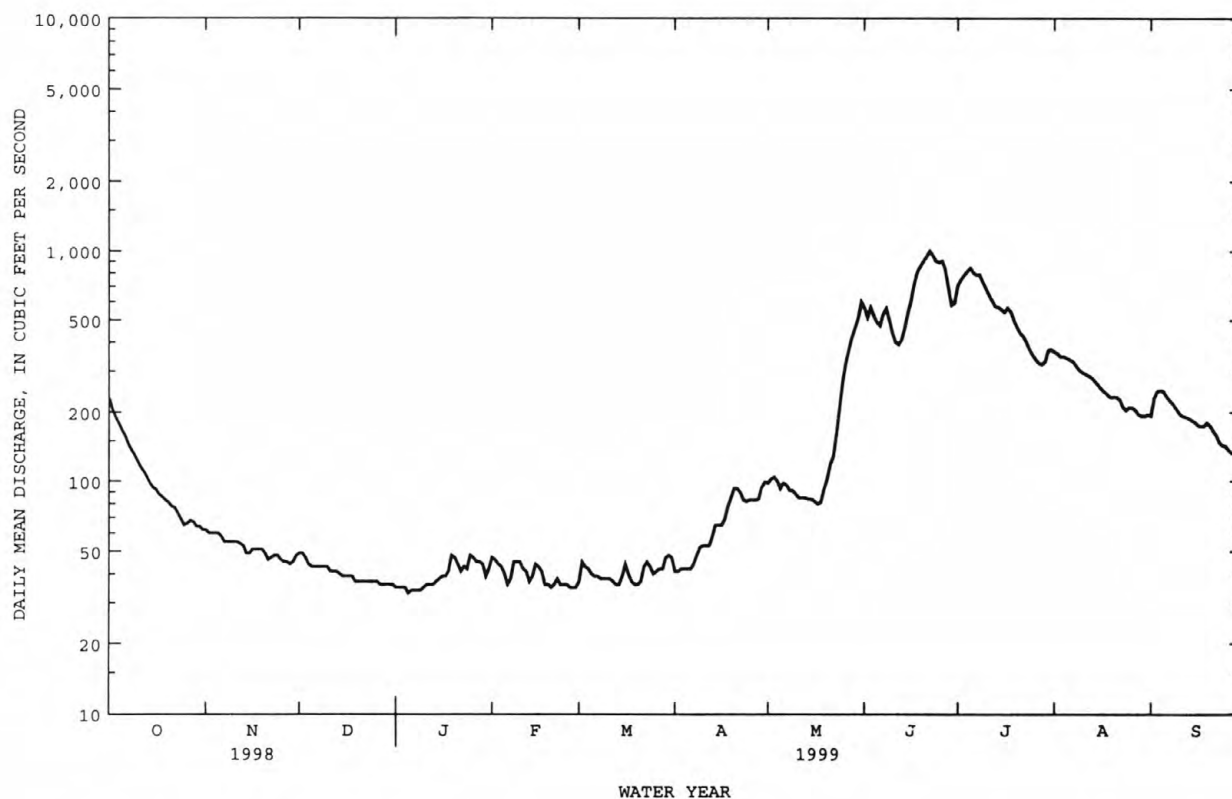
	1994	1995	1996	1997	1998	1999
MEAN	91.0	55.4	47.3	44.4	41.7	46.3
MAX	109	59.8	57.3	57.3	45.0	51.1
(WY)	1999	1996	1996	1997	1997	1997
MIN	69.7	48.3	40.1	38.8	38.2	40.4
(WY)	1995	1995	1999	1995	1998	1999

FISH CREEK BASIN

13016450 FISH CREEK AT WILSON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1994 - 1999	
ANNUAL TOTAL	63924		67796		--	
ANNUAL MEAN	175		186		187	
HIGHEST ANNUAL MEAN	--		--		222	1997
LOWEST ANNUAL MEAN	--		--		161	1995
HIGHEST DAILY MEAN	665	Jul 5	1000	Jun 22	1350	Jun 9, 10 1997
LOWEST DAILY MEAN	34	Mar 13-15	33	Jan 5	33	Jan 5 1999
ANNUAL SEVEN-DAY MINIMUM	36	Mar 11	34	Jan 3	34	Jan 3 1999
INSTANTANEOUS PEAK FLOW	--		1020	Jun 22	1430	Jun 8 1997
INSTANTANEOUS PEAK STAGE	--		4.48	Jun 22	5.41	Jun 8 1997
ANNUAL RUNOFF (AC-FT)	126800		134500		135600	
10 PERCENT EXCEEDS	404		543		474	
50 PERCENT EXCEEDS	75		81		87	
90 PERCENT EXCEEDS	38		37		41	

e Estimated.



13018300 CACHE CREEK NEAR JACKSON, WY
(Hydrologic Benchmark station)

LOCATION.--Lat 43°27'08", long 110°42'12", in SW¹/₄ SW¹/₄ SE¹/₄ sec.1, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, Teton National Forest, on right bank 0.7 mi upstream from Salt Lick Draw, 2.4 mi southeast of Jackson, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--10.6 mi².

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

REVISED RECORDS.--WDR WY-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,750 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Data collection platform with satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 52 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 16	2330	*91	*3.54

No other peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	5.2	6.1	e6.6	e5.6	5.1	5.6	17	54	45	16	12
2	7.9	5.2	6.1	e6.2	e5.4	5.2	5.6	18	52	43	15	12
3	7.9	5.2	6.1	e5.8	5.4	5.2	5.9	17	65	42	14	12
4	7.9	5.0	6.0	e6.0	5.4	5.2	6.1	15	61	41	14	13
5	7.6	5.0	6.1	e6.0	5.4	5.3	5.6	13	57	40	14	12
6	7.4	5.0	e6.1	e6.0	5.4	e5.3	5.6	13	57	39	14	12
7	7.3	5.0	e6.1	e5.8	5.3	e5.4	5.6	14	65	38	15	11
8	7.3	5.1	e6.1	e5.8	5.2	5.4	5.6	15	75	36	15	11
9	7.2	5.2	e6.1	e5.8	5.2	5.4	5.5	15	67	35	14	11
10	7.1	5.8	e6.4	e5.8	5.2	5.4	5.4	14	61	34	14	11
11	6.8	6.1	e6.7	e5.8	5.2	5.3	7.0	12	59	32	14	11
12	6.7	6.1	e7.0	e5.6	5.2	5.1	5.6	12	61	31	14	11
13	6.6	6.1	7.4	e5.4	5.2	5.0	5.5	12	64	31	14	11
14	6.4	6.2	7.3	e5.4	e5.3	5.0	5.7	12	69	30	14	11
15	6.3	6.3	7.1	e5.6	5.5	5.0	6.1	11	78	29	14	10
16	6.3	6.3	7.2	e5.7	5.4	5.0	6.6	11	85	26	14	10
17	6.3	6.3	7.3	e5.7	5.4	4.8	6.5	11	89	26	13	10
18	6.3	6.3	7.3	e5.7	5.4	4.8	7.4	11	85	24	13	10
19	6.1	6.3	7.3	e5.7	5.4	4.8	8.4	12	85	20	13	10
20	6.1	6.1	7.3	e5.7	5.4	4.9	9.0	15	83	19	13	10
21	5.7	6.1	7.3	5.6	5.4	5.0	9.1	19	79	19	13	10
22	5.6	6.3	7.3	5.6	5.4	5.0	8.6	23	75	19	13	9.8
23	5.6	6.3	7.3	5.6	5.4	5.0	8.3	27	69	18	13	9.8
24	5.6	6.3	7.3	5.6	5.3	5.1	8.3	33	64	18	12	9.8
25	5.6	6.1	e7.2	5.8	5.2	5.4	8.6	39	62	18	12	9.8
26	5.6	5.9	e7.2	6.1	5.1	5.8	8.8	43	60	17	12	9.8
27	5.4	5.8	e7.2	5.8	5.2	5.8	9.2	47	56	17	11	9.8
28	5.4	5.9	e7.2	5.9	5.1	6.1	12	54	52	17	11	9.6
29	5.3	6.1	e7.2	e5.8	---	5.6	15	59	49	16	11	9.5
30	5.2	6.1	e7.2	e5.6	---	5.6	17	63	47	16	12	9.5
31	5.2	---	e7.0	e5.6	---	5.6	---	64	---	16	12	---
TOTAL	199.6	174.7	212.5	179.1	149.0	162.6	229.2	741	1985	852	413	318.4
MEAN	6.44	5.82	6.85	5.78	5.32	5.25	7.64	23.9	66.2	27.5	13.3	10.6
MAX	7.9	6.3	7.4	6.6	5.6	6.1	17	64	89	45	16	13
MIN	5.2	5.0	6.0	5.4	5.1	4.8	5.4	11	47	16	11	9.5
AC-FT	396	347	421	355	296	323	455	1470	3940	1690	819	632

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

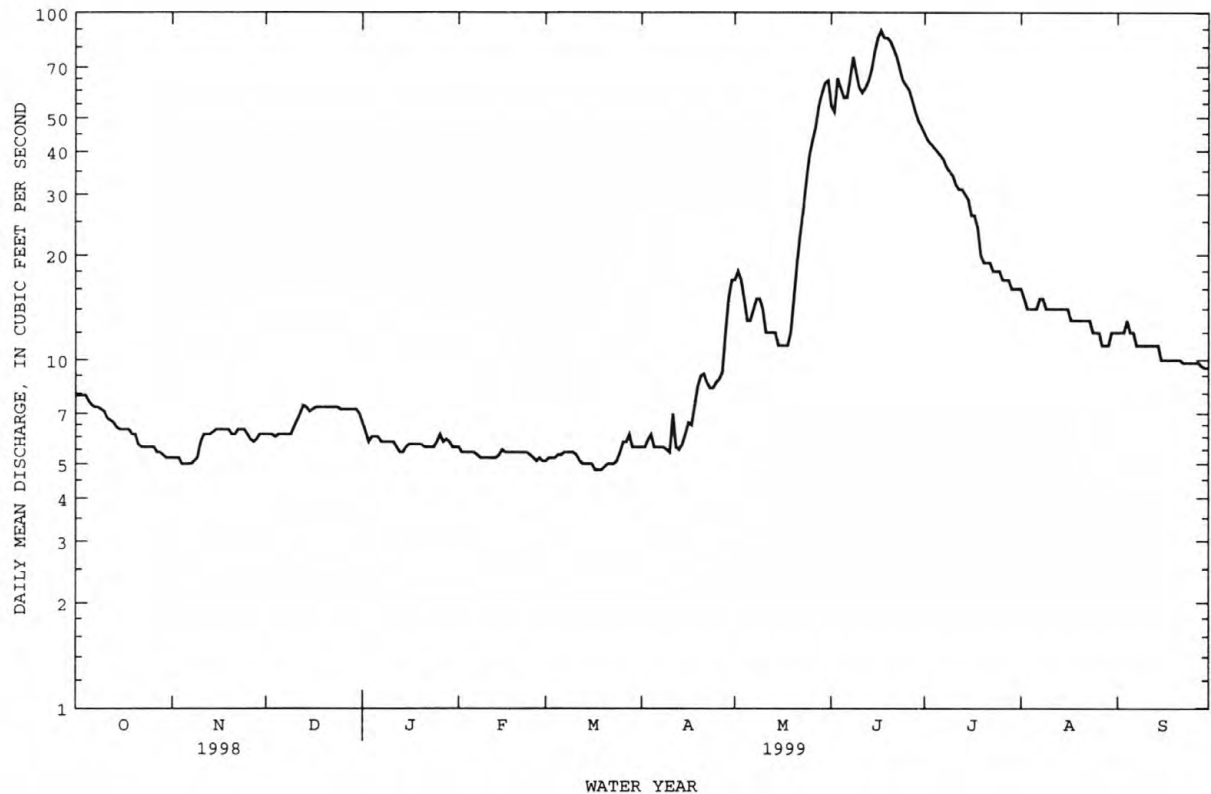
MEAN	6.84	5.72	4.99	4.34	4.02	4.06	6.52	26.2	51.0	24.9	12.4	8.50
MAX	9.43	7.57	6.85	5.91	6.09	7.25	14.2	52.1	103	42.0	18.5	12.3
(WY)	1972	1997	1999	1981	1984	1984	1987	1997	1971	1965	1971	1971
MIN	3.83	3.14	1.53	2.42	2.06	2.23	3.21	5.86	10.6	6.51	4.19	3.83
(WY)	1993	1978	1991	1978	1992	1991	1991	1977	1992	1977	1992	1992

FLAT CREEK BASIN

13018300 CACHE CREEK NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1962 - 1999
ANNUAL TOTAL	5799.9	5616.1	--
ANNUAL MEAN	15.9	15.4	13.3
HIGHEST ANNUAL MEAN	--	--	20.5 1997
LOWEST ANNUAL MEAN	--	--	5.64 1992
HIGHEST DAILY MEAN	66 Jun 4	89 Jun 17	161 Jun 24 1971
LOWEST DAILY MEAN	4.3 Mar 17-19	4.8 Mar 17-19	1.1 Dec 23 1990
ANNUAL SEVEN-DAY MINIMUM	4.5 Mar 14	4.9 Mar 14	1.3 Dec 20 1990
INSTANTANEOUS PEAK FLOW	--	91 Jun 16	225 ^a Jun 24 1971
INSTANTANEOUS PEAK STAGE	--	3.54 Jun 16	4.30 Jun 10 1996
ANNUAL RUNOFF (AC-FT)	11500	11140	9640
10 PERCENT EXCEEDS	48	44	34
50 PERCENT EXCEEDS	7.2	7.3	6.6
90 PERCENT EXCEEDS	5.0	5.2	3.6

a Gage height, 3.90 ft.
e Estimated.



LOCATION.--Lat 43°22'20", long 110°44'17", in NE¹/₄SE¹/₄ sec.3, T.39 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040103, on left bank 20 ft upstream from county road bridge, about 1 mi downstream from Flat Creek, 4.8 mi upstream from Hoback River, 7.0 mi south of Jackson, and at mile 938.9.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3740	1830	1810	1530	e1300	1570	3050	5260	14700	9460	4930	3810
2	3400	1820	1770	e1500	e1400	1620	3080	5540	14300	9340	4800	3960
3	3260	1820	1750	e1500	e1500	1630	3190	5600	15700	9500	4710	4190
4	3230	1820	1740	e1500	1500	1620	3210	5240	15800	9900	4670	4340
5	3050	1800	1700	e1500	1500	1640	3200	4850	15200	10400	4620	4200
6	2870	1820	e1600	1540	1490	1600	3260	4560	15000	9900	4600	4020
7	2720	1800	e1500	1540	1550	1620	3290	4960	15900	9290	4540	3870
8	2610	1830	1480	1520	1520	1620	3360	5730	17300	9210	4460	3810
9	2500	1800	1490	1540	1550	1650	3450	6000	16700	8890	4350	3760
10	2330	e1800	1510	1540	e1500	1630	3360	5790	15400	8400	4280	3730
11	2200	1750	1510	1530	e1300	1640	3300	5610	14900	8090	4250	3690
12	2150	1750	1500	1530	e1400	1680	3310	5490	15000	7760	4320	3670
13	2120	1740	1540	1520	e1500	1680	3420	5490	15300	e7600	4350	3650
14	2060	1760	1540	1480	e1500	1670	3530	5460	15700	e7700	4250	3630
15	2010	1800	1520	1530	1520	1700	3500	5500	17100	7730	4150	3610
16	2030	1790	1530	1540	1490	1800	3450	5540	18000	7470	4060	3590
17	2020	1780	1550	1520	1530	1890	3490	5420	19000	7190	3980	3590
18	2000	1790	1550	1540	1490	1980	3640	5360	20000	6970	3920	3590
19	1990	1770	e1500	1530	1500	2070	3820	5500	19900	6720	3890	3660
20	1940	1730	e1400	1560	1480	2230	4030	5890	19300	6520	3910	3660
21	1920	1750	e1300	1550	e1500	2370	4080	6560	19200	6360	3880	3610
22	1900	1880	e1400	1530	e1500	2540	3970	7490	19300	6200	3870	3570
23	1900	1820	e1400	1570	1500	2640	3790	8640	18800	6010	3850	3540
24	1910	1800	e1400	1510	1500	2750	3690	9820	17700	5780	3750	3530
25	1900	1800	e1500	e1400	1490	2820	3750	11100	17000	5660	3700	3510
26	1880	1750	e1500	e1500	1500	2910	3790	12700	16500	5490	3650	3520
27	1860	1720	e1500	e1400	1490	2930	3910	13400	14900	5270	3640	3520
28	1850	1770	1610	e1300	1520	2810	4260	14500	12800	5150	3660	3540
29	1860	1900	1600	e1200	---	2770	4740	15400	10900	5060	3680	3540
30	1890	1870	1570	e1100	---	2890	5090	15300	9780	5220	3690	3550
31	1860	---	1530	e1200	---	2990	---	15800	---	5110	3800	---
TOTAL	70960	53860	47800	45750	41520	64960	109010	239500	487080	229350	128210	111460
MEAN	2289	1795	1542	1476	1483	2095	3634	7726	16240	7398	4136	3715
MAX	3740	1900	1810	1570	1550	2990	5					

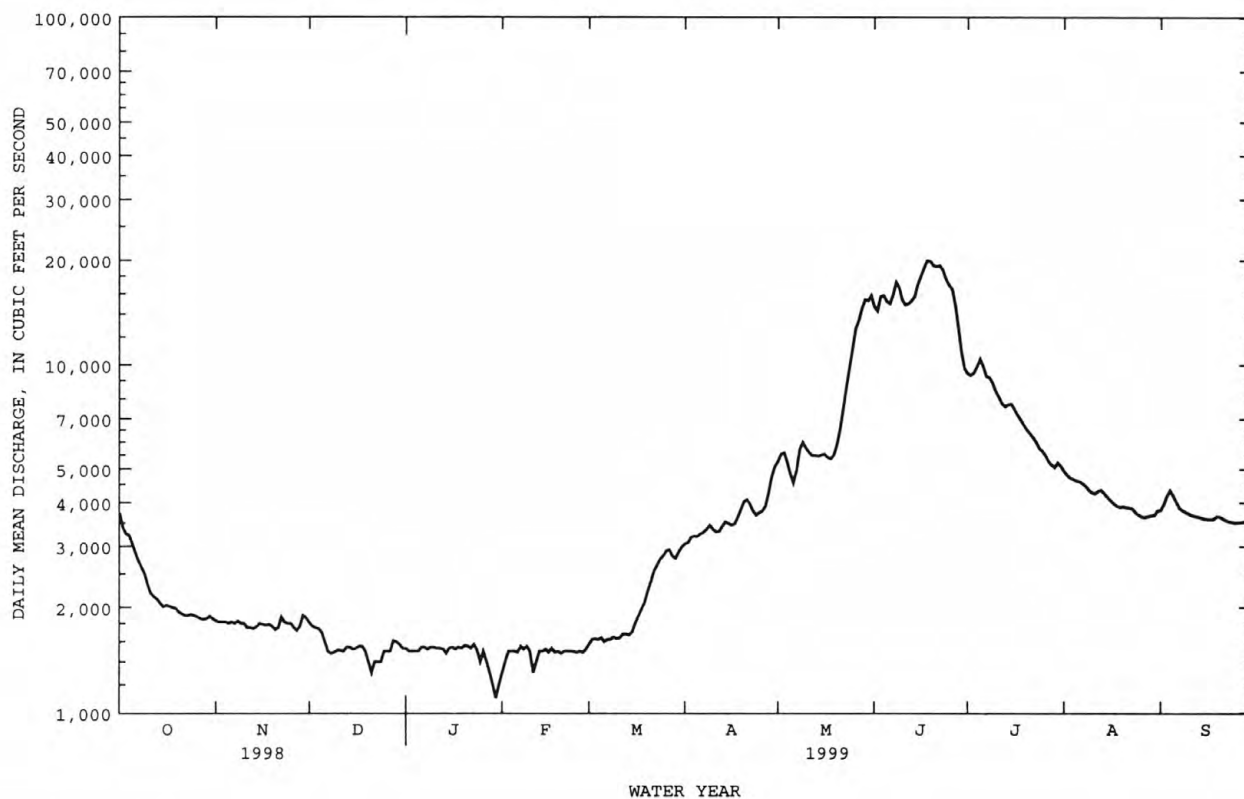
MEAN	1874	1568	1412	1332	1366	1644	2749	6905	11580	7002	4370	3476
MAX	3093	2747	1998	2345	2491	3686	5435	12060	22180	14090	7253	6464
(WY)	1983	1984	1984	1997	1997	1997	1985	1997	1997	1982	1976	1984
MIN	977	967	846	879	825	910	1292	2570	5356	3245	2305	1801
(WY)	1989	1988	1988	1988	1989	1977	1977	1977	1994	1988	1981	1979

SNAKE RIVER MAIN STEM

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999	
ANNUAL TOTAL	1670940		1629460		--	
ANNUAL MEAN	4578		4464		3741	
HIGHEST ANNUAL MEAN	--		--		6110	1997
LOWEST ANNUAL MEAN	--		--		2469	1977
HIGHEST DAILY MEAN	15200	Jul 4	20000	Jun 18	30200	Jun 11 1997
LOWEST DAILY MEAN	1300	Dec 21	1100	Jan 30	690	Jan 19 1988
ANNUAL SEVEN-DAY MINIMUM	1410	Dec 19	1270	Jan 27	785	Feb 4 1989
INSTANTANEOUS PEAK FLOW	--		20700	Jun 18	--	
INSTANTANEOUS PEAK STAGE	--		9.16	Jun 18	--	
ANNUAL RUNOFF (AC-FT)	3314000		3232000		2710000	
10 PERCENT EXCEEDS	11600		10600		8910	
50 PERCENT EXCEEDS	2150		3210		2120	
90 PERCENT EXCEEDS	1680		1500		1140	

e Estimated.



LOCATION.--Lat 43°11'47", long 110°53'18", Lincoln County, Wyoming, Hydrologic Unit 17040103, on right bank 0.3 mi downstream from Wolf Creek, 6.4 mi upstream from Greys River, 7.4 mi east of Alpine, 16.1 mi upstream from Palisades Dam, and at mile 917.5.

PERIOD OF RECORD.--March 1937 to March 1939 (published as "above Greys River, near Alpine"), July 1953 to current year.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4140	2220	2190	e1700	e1500	1800	3160	7860	18000	12300	6380	4780
2	3760	2210	2150	e1600	e1600	1810	3170	8420	17100	12400	6200	4890
3	3700	2210	2120	e1600	e1700	1810	3260	7940	19700	12700	6070	5220
4	3640	2190	2110	e1600	e1600	1800	3280	7090	19400	13200	6030	5400
5	3500	2180	2030	e1700	e1600	1830	3290	6380	18500	13700	5960	5230
6	3290	2190	1810	1780	1690	1760	3330	5850	18400	12900	5920	5020
7	3130	2170	e1700	1740	1770	1820	3380	6410	19400	12100	5850	4830
8	3020	2200	e1700	1720	1740	1800	3470	7580	20600	12100	5770	4750
9	2910	2160	e1600	1720	1760	1860	3630	7770	20000	11500	5600	4680
10	2740	2100	e1600	1730	e1700	1830	3510	7210	18500	10900	5500	4630
11	2600	2100	e1700	1720	e1500	1820	3440	6790	17800	10500	5440	4570
12	2530	2070	e1700	1710	e1600	1870	3460	6600	18000	10100	5520	4530
13	2490	2080	e1800	1700	e1600	1850	3630	6860	18400	9940	5560	4490
14	2450	2100	1830	1620	e1700	1860	3800	6850	18800	10000	5420	4460
15	2410	2160	1800	1730	e1700	1900	3790	6880	20300	10100	5290	4440
16	2430	2160	1800	1720	1710	2000	3760	6780	21400	9660	5160	4410
17	2420	2150	1820	1690	1750	2070	3820	6580	22500	9180	5050	4400
18	2370	2170	1860	1710	1700	2170	4100	6660	23400	9090	4960	4390
19	2370	2130	e1700	1690	1730	2270	4480	7160	22900	8700	4910	4500
20	2340	2080	e1600	1730	1680	2430	4880	7810	22800	8420	4900	4550
21	2310	2090	e1500	1720	1670	2570	4960	8780	23200	8250	4880	4440
22	2290	2290	e1600	1690	1710	2700	4760	10100	23200	8110	4860	4390
23	2290	2210	e1600	1750	1720	2800	4480	11600	22500	7850	4800	4350
24	2310	2180	e1600	1680	1720	2890	4400	13200	21300	7550	4670	4320
25	2290	2170	e1700	e1500	1720	2980	4480	15000	20700	7430	4620	4300
26	2260	2080	e1700	e1600	1720	3080	4600	16800	20200	7180	4570	4290
27	2240	2040	e1700	e1600	1660	3110	5030	17400	18500	6880	4540	4300
28	2240	2100	e1800	e1500	1740	2990	5740	18200	16100	6720	4560	4310
29	2240	2320	e1800	e1400	---	2930	6790	19000	14200	6600	4580	4300
30	2280	2260	e1800	e1300	---	3020	7700	19100	12900	6770	4610	4310
31	2270	---	e1700	e1400	---	3100	---	19500	---	6660	4780	---
TOTAL	83260	64770	55120	51050	46990	70530	125580	310160	588700	299490	162960	137480
MEAN	2686	2159	1778	1647	1678	2275	4186	10010	19620	9661	5257	4583
MAX	4140	2320	2190	1780	1							

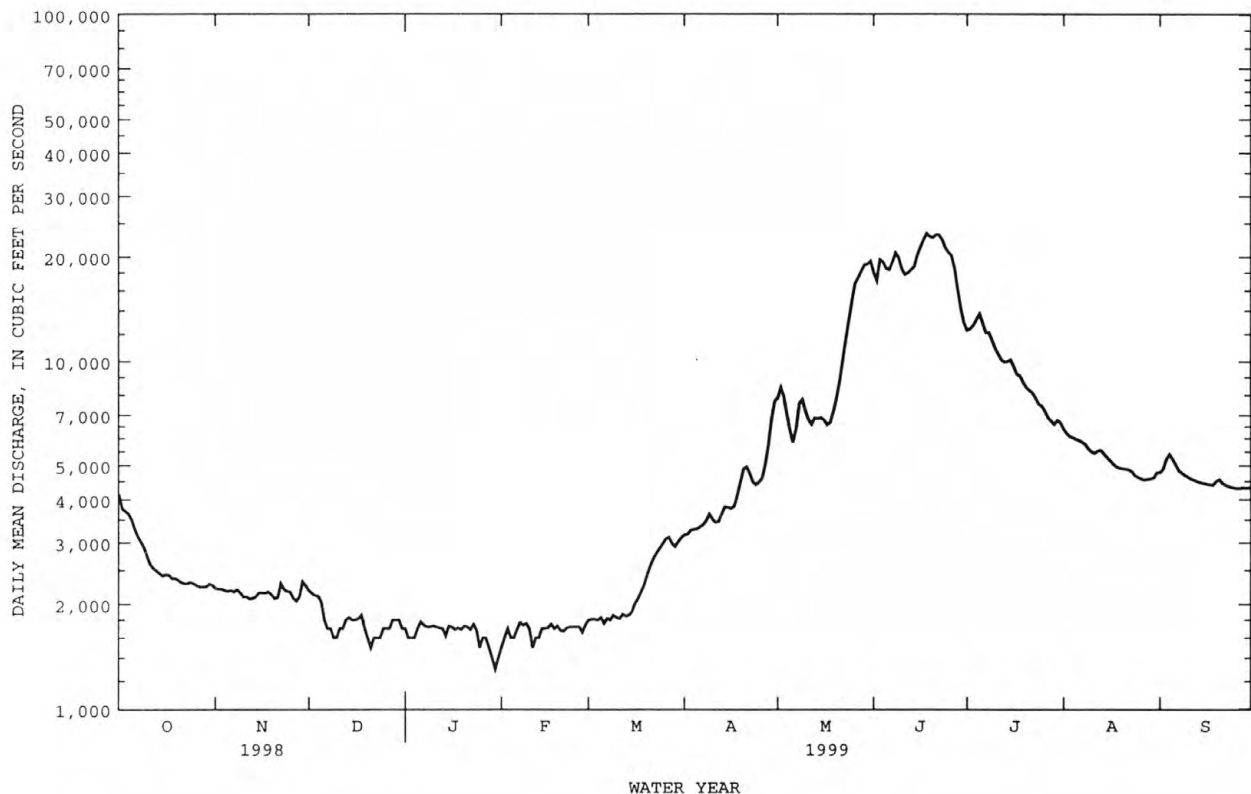
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1999, BY WATER YEAR (WY)

MEAN	2191	1864	1701	1522	1612	1860	3400	8994	13730	8712	5403	4078
MAX	3605	4244	5795	2694	3381	4116	6820	15890	28180	15790	7541	7595
(WY)	1983	1957	1957	1997	1961	1997	1985	1997	1997	1982	1956	1984
MIN	1325	1225	1101	1069	1071	1099	1506	2995	6257	3802	2494	2241
(WY)	1978	1978	1988	1964	1938	1955	1955	1977	1994	1988	1981	1977

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1937 - 1999	
ANNUAL TOTAL	1943690		1996090		--	
ANNUAL MEAN	5325		5469		4616	
HIGHEST ANNUAL MEAN	--		--		7525	
LOWEST ANNUAL MEAN	--		--		2726	
HIGHEST DAILY MEAN	17000	Jul 4	23400	Jun 18	38100	Jun 11 1997
LOWEST DAILY MEAN	1500	Dec 21	1300	Jan 30	900	Dec 31 1978
ANNUAL SEVEN-DAY MINIMUM	1610	Dec 19	1470	Jan 25	957	Jan 9 1964
INSTANTANEOUS PEAK FLOW	--		--		38600	
INSTANTANEOUS PEAK STAGE	--		--		14.04	
ANNUAL RUNOFF (AC-FT)	3855000		3959000		3344000	
10 PERCENT EXCEEDS	13200		13900		10900	
50 PERCENT EXCEEDS	2780		3330		2470	
90 PERCENT EXCEEDS	1900		1700		1320	

e Estimated.



LOCATION.--Lat 43°08'35", long 110°58'34", in SW¹/₄ SE¹/₄ sec.34, T.37 N., R.118 W. (unsurveyed), Lincoln County, Wyoming, Hydrologic Unit 17040103, on right bank at Bridge Campground, 3.6 mi southeast of Alpine, 3.0 mi upstream from maximum flowline of Palisades Reservoir.

PERIOD OF RECORD.--July to September 1917, June to September 1918, March 1937 to March 1939, October 1953 to current year.
Published as "Greys River near Alpine, Idaho", 1917-1918, and as "Greys River near Alpine, Wyo.", 1937-39.

GAGE.--Water-stage recorder. Elevation of gage is 5,729 ft above sea level, from topographic map. July 6 to Sept. 30, 1917, and June 4 to Sept. 30, 1918, nonrecording gage, and Mar. 17, 1937 to Mar. 31, 1939, water-stage recorder at site 1.8 mi downstream, and Oct. 1953 to Sept. 22, 1965, water-stage recorder at site 1 mi downstream at different datums.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. Less than 500 acres irrigated by diversions from Greys River and tributaries upstream from station. Station operated and record provided by the Idaho District.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 1	2330	2,350	4.01
May 31	---	Unknown	Unknown

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	345	331	e200	e170	e200	345	2010	e3200	e1800	840	580
2	429	343	328	e180	e160	e220	330	1950	e2900	e1800	821	572
3	445	338	332	e170	e170	e200	313	1730	e3000	e1900	793	589
4	440	329	333	e180	e180	e200	303	1440	e2700	e1700	782	635
5	424	328	299	e190	e190	e200	307	1230	e2600	e1900	780	578
6	411	331	250	e200	e180	e190	305	1130	e2800	e1700	772	544
7	405	320	e210	e190	e190	e190	298	1240	e3000	e1600	752	526
8	400	334	e190	e190	e180	e200	321	1410	e3400	e1500	731	518
9	394	e325	e180	e190	e170	e220	357	1340	e3100	e1600	710	512
10	392	e315	e170	e200	e170	e220	341	1180	e2800	e1500	687	505
11	387	309	e180	e200	e160	e190	324	1070	e2600	e1400	700	501
12	383	306	e190	e190	e150	e190	364	1030	e2400	e1300	715	494
13	376	306	e210	e190	e160	e180	454	1160	e2300	e1300	679	489
14	368	329	e200	e180	e160	e190	527	1110	e2300	e1200	662	484
15	373	325	e200	e190	e170	e200	538	1080	e2400	e1300	643	479
16	386	320	e220	e200	e170	e220	529	991	e2600	e1500	633	474
17	377	320	e240	e200	e180	e240	583	943	e2700	e1300	622	469
18	366	335	e210	e210	e180	270	750	1030	e2800	e1200	608	466
19	360	321	e180	e210	e190	289	906	1290	e2600	e1100	600	489
20	356	303	e160	e190	e190	320	1060	1550	e2500	e1100	598	508
21	352	327	e140	e180	e170	361	1050	e1700	e2600	e1050	602	473
22	355	360	e150	e180	e180	344	919	e1900	e2700	e1050	598	462
23	366	336	e130	e190	e180	331	817	e2100	e2800	e1000	582	457
24	377	341	e140	e170	e190	353	830	e2300	e2700	985	575	457
25	359	316	e160	e150	e200	408	901	e2500	e2500	992	571	452
26	352	299	e180	e170	e190	472	920	e2800	e2400	951	560	443
27	347	308	e160	e170	e180	438	992	e2900	e2300	922	562	450
28	355	340	e180	e160	e190	386	1190	e3000	e2100	906	586	443
29	360	356	e200	e160	---	358	1600	e2800	e2000	896	558	437
30	360	344	e220	e150	---	372	2000	e3000	e1900	899	568	435
31	355	---	e200	e160	---	349	---	e3500	---	868	658	---
TOTAL	11823	9809	6473	5690	4950	8501	20474	54414	78700	40219	20548	14921
MEAN	381	327	209	184	177	274	682	1755	2623	1297	663	497
MAX	445	360	333	210	200	472	2000	3500	3400	1900	840	635
MIN	347	299	130	150	150	180	298	943	1900	868	558	435
AC-FT	23450	19460	12840	11290	9820	16860	40610	107900	156100	79770	40760	29600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1999, BY WATER YEAR (WY)

MEAN	316	268	233	214	205	232	634	1795	2055	967	491	374
MAX	472	455	366	315	293	406	1324	3032	3998	1904	809	569
(WY)	1983	1984	1984	1971	1963	1986	1962	1997	1971	1975	1971	1997
MIN	191	150	142	133	132	173	238	333	387	228	205	198
(WY)	1993	1993	1993	1993	1993	1967	1975	1977	1977	1977	1977	1977

GREYS RIVER BASIN

13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

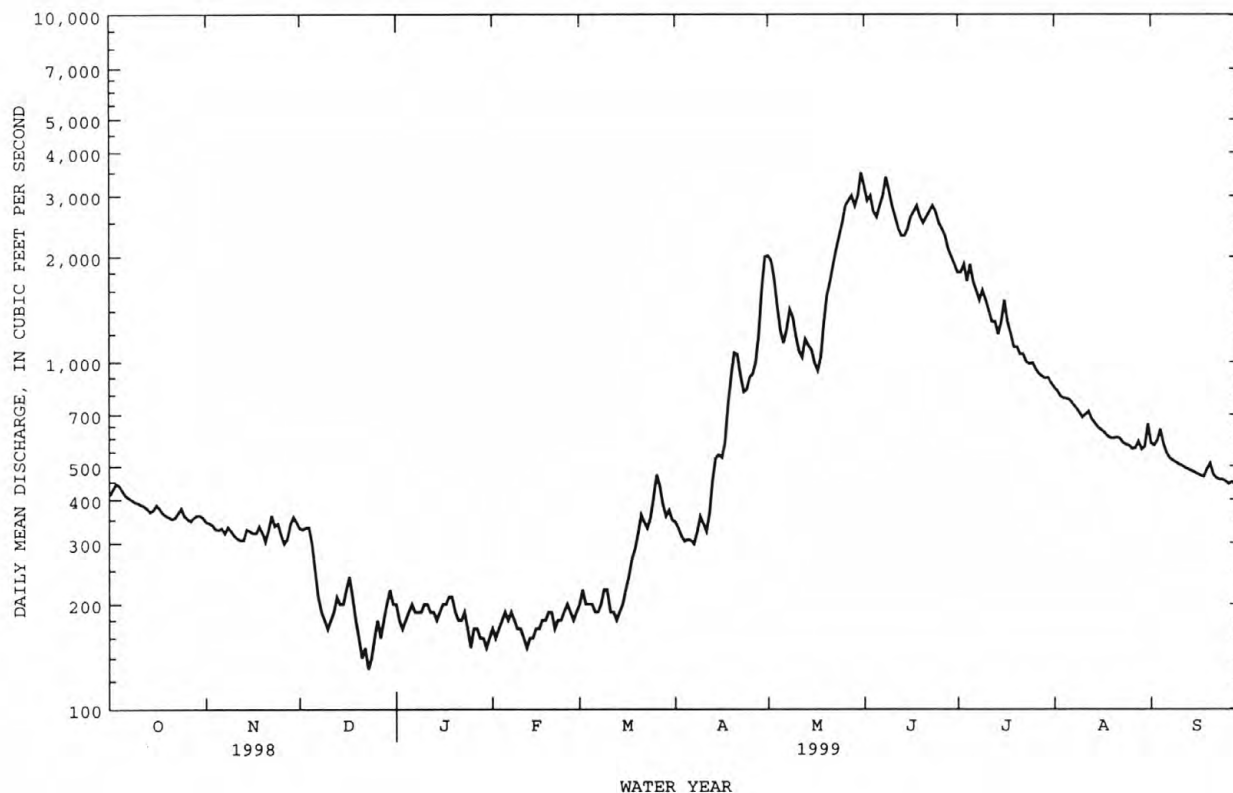
SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1937 - 1999	
ANNUAL TOTAL	256862		276522		--	
ANNUAL MEAN	704		758		654	
HIGHEST ANNUAL MEAN	--		--		1022	
LOWEST ANNUAL MEAN	--		--		259	
HIGHEST DAILY MEAN	2300	Jun 14	3500	May 31	6170	Jun 19 1971
LOWEST DAILY MEAN	130	Dec 23	130	Dec 23	92	Jan 2 1978
ANNUAL SEVEN-DAY MINIMUM	151	Dec 19	151	Dec 19	124	Feb 26 1993
INSTANTANEOUS PEAK FLOW	--		Unknown	May 31	7230 ^a	Jun 19 1971 ^c
INSTANTANEOUS PEAK STAGE	--		Unknown	May 31	19.1 ^b	Dec 18 1965 ^c
ANNUAL RUNOFF (AC-FT)	509500		548500		473800	
10 PERCENT EXCEEDS	1840		2100		1760	
50 PERCENT EXCEEDS	427		394		321	
90 PERCENT EXCEEDS	240		180		190	

a Gage height, 6.33 ft.

b Site and datum the in use, backwater from ice.

c On or about this date.

e Estimated.



13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY

LOCATION.--Lat 43°04'47", long 111°02'12", in SW¹/₄NE¹/₄ sec.28, T.36 N., R.119 W., Lincoln County, Wyoming, Hydrologic Unit 17040105, on right bank 3.4 mi northwest of Etna, and 8.0 mi upstream from maximum flowline of Palisades Reservoir.

DRAINAGE AREA.--829 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,675.78 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. Station equipment includes satellite telemetry. Diversions upstream from station for power developments, industry, municipal supply, and irrigation of about 60,500 acres of which about 1,000 acres are below station (1966 determination). For details on adjudication of diversions, see Remarks for this station in WSP 1347. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	693	632	618	488	464	448	551	2080	3650	1620	728	718
2	700	625	610	487	420	452	536	2120	3330	1560	720	716
3	717	619	599	476	455	446	529	2090	3330	1530	729	727
4	720	619	596	478	446	442	524	1870	3200	1520	769	802
5	704	616	584	485	451	434	530	1670	3110	1480	771	757
6	691	617	550	481	445	421	535	1540	3120	1430	727	727
7	692	614	550	481	457	427	587	1510	3340	1380	700	710
8	684	612	546	481	470	428	637	1620	3560	1350	692	701
9	678	609	547	481	465	428	717	1620	3400	1300	684	695
10	671	604	514	481	484	427	674	1550	3080	1250	672	695
11	663	596	502	479	454	419	653	1480	2850	1190	692	697
12	658	595	526	478	429	420	680	1440	2670	1130	724	713
13	656	588	525	481	436	415	775	1550	2600	1060	705	709
14	650	590	518	475	447	413	908	1600	2620	1000	685	709
15	654	593	510	489	450	416	942	1530	2660	1020	676	705
16	685	594	502	489	442	416	931	1500	2720	1030	657	699
17	680	588	500	481	445	419	989	1430	2860	1020	651	692
18	667	594	505	489	439	422	1150	1420	2910	995	651	688
19	659	590	488	494	444	425	1320	1530	2800	951	650	697
20	651	583	433	494	433	432	1420	1660	2740	910	649	726
21	650	581	414	497	431	446	1410	1820	2730	855	653	708
22	644	598	418	483	434	466	1250	2000	2710	829	652	698
23	645	602	403	491	434	497	1150	2170	2670	799	646	688
24	658	600	443	486	429	506	1120	2410	2550	777	643	685
25	641	592	466	473	434	544	1230	2700	2370	764	644	677
26	629	578	476	472	439	599	1280	3030	2240	757	635	667
27	623	572	479	472	429	614	1320	3190	2090	747	635	677
28	627	586	497	450	433	573	1480	3220	1920	742	671	676
29	621	628	511	420	---	553	1620	3300	1790	746	661	670
30	628	636	502	431	---	557	1910	3410	1700	762	672	665
31	648	---	490	441	---	552	---	3780	---	747	728	---
TOTAL	20587	18051	15822	14784	12439	14457	29358	63840	83320	33251	21172	21094
MEAN	664	602	510	477	444	466	979	2059	2777	1073	683	703
MAX	720	636	618	497	484	614	1910	3780	3650	1620	771	802
MIN	621	572	403	420	420	413	524	1420	1700	742	635	665
AC-FT	40830	35800	31380	29320	24670	28680	58230	126600	165300	65950	41990	41840

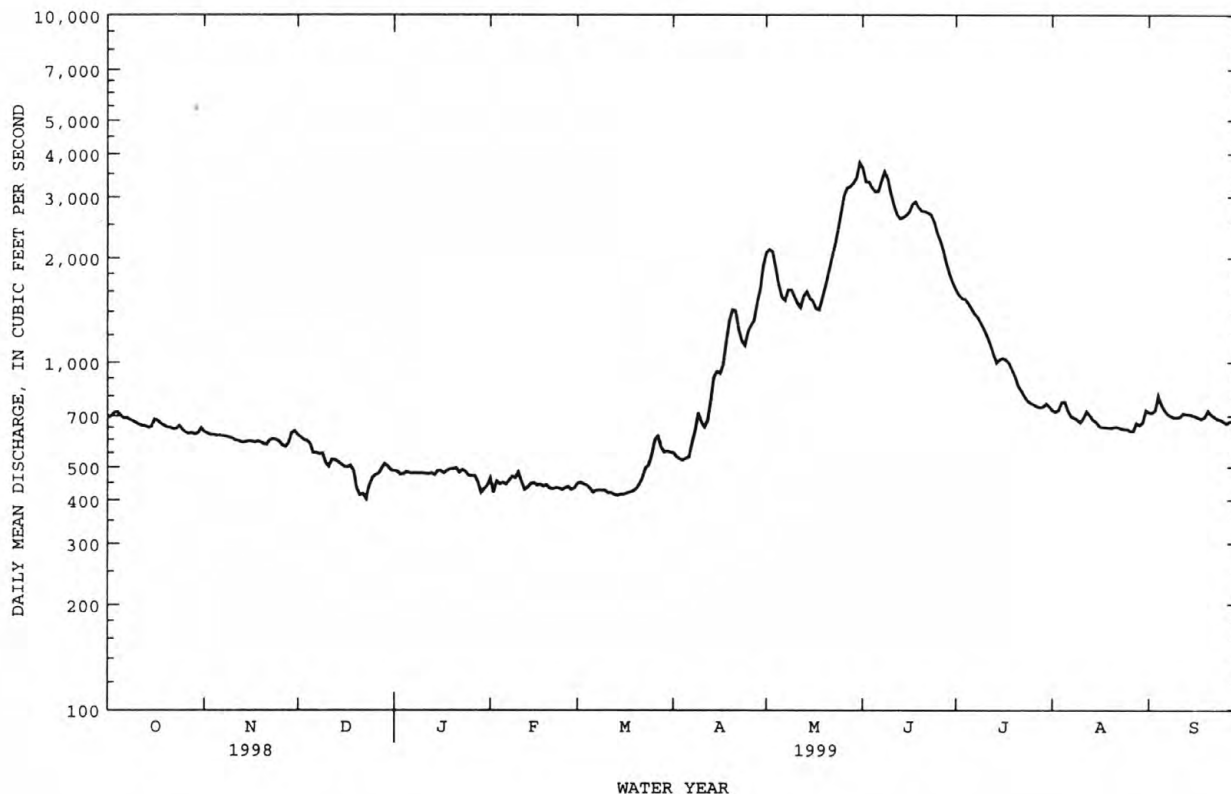
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1999, BY WATER YEAR (WY)

	MEAN	623	591	517	452	440	480	968	1762	1526	875	636	648
MAX	912	838	712	584	702	1121	2204	3586	3486	1809	997	961	
(WY)	1983	1984	1984	1997	1963	1986	1986	1997	1997	1975	1983	1971	
MIN	336	347	342	318	309	362	503	306	275	271	266	342	
(WY)	1978	1978	1993	1993	1993	1988	1977	1977	1977	1977	1977	1977	

SALT RIVER BASIN

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1954 - 1999	
ANNUAL TOTAL	332127		348175		--	
ANNUAL MEAN	910		954		794	
HIGHEST ANNUAL MEAN	--		--		1272	
LOWEST ANNUAL MEAN	--		--		430	
HIGHEST DAILY MEAN	2340	Jun 5	3780	May 31	5030	Jun 2 1986
LOWEST DAILY MEAN	403	Dec 23	403	Dec 23	180	Jan 7 1971
ANNUAL SEVEN-DAY MINIMUM	436	Dec 20	417	Mar 11	226	May 10 1977
INSTANTANEOUS PEAK FLOW	--		3850		5090	
INSTANTANEOUS PEAK STAGE	--		5.24		5.71	
ANNUAL RUNOFF (AC-FT)	658800		690600		575400	
10 PERCENT EXCEEDS	1980		2100		1570	
50 PERCENT EXCEEDS	656		653		588	
90 PERCENT EXCEEDS	487		442		385	



13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 16...	1430	594	505	8.3	6.0	11.0	621	12.2
MAR 29...	1600	547	550	8.3	8.0	12.0	620	9.6
JUN 18...	0945	2930	391	8.3	10.0	12.0	623	9.3
SEP 01...	1500	718	496	8.3	14.0	18.0	620	9.4

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 16...	121	K1	<.01	.87	<.02	<.01	52	84
MAR 29...	100	<1	<.01	.98	.03	.01	60	89
JUN 18...	101	500	<.01	.27	.02	.03	105	831
SEP 01...	113	25	<.01	.98	<.02	<.01	24	47

K Results based on colony count outside the acceptable range (non-ideal colony count).

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY

LOCATION.--Lat 44°11'09", long 111°00'19", T.49 N., R.118 W., Teton County, Yellowstone National Park, Hydrologic Unit 17040203, on right bank 0.4 mi upstream from confluence with the Bechler River, 3.8 mi north of the Bechler Ranger Station, and 28.0 mi northeast of Ashton, Idaho.

DRAINAGE AREA.--86.9 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,360 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges in December, July and August, which are fair, and in May and June, which are poor. No diversion or regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	95	97	82	78	76	78	233	308	252	e100	99
2	102	95	96	81	79	74	77	237	308	244	e100	102
3	102	96	96	81	79	75	77	241	e380	246	e100	101
4	101	95	98	81	77	75	77	202	e340	263	e100	99
5	100	96	e95	82	77	74	78	170	301	276	e100	98
6	100	97	e95	82	78	74	79	154	307	e240	e100	97
7	99	96	e90	82	82	75	78	165	314	e220	e100	96
8	99	99	e90	80	78	74	81	201	308	e200	e100	96
9	98	97	e90	82	79	76	80	226	298	e180	e100	96
10	98	95	e90	81	79	75	79	220	275	e170	e100	96
11	98	95	e90	81	76	74	78	203	264	e160	e100	95
12	98	94	89	80	76	74	79	210	262	e150	e110	95
13	97	94	89	80	76	74	82	218	265	e140	e110	95
14	97	94	89	79	77	75	83	200	270	136	e110	94
15	97	94	88	84	78	76	83	187	288	131	e100	94
16	98	94	87	84	76	75	83	159	305	126	e100	94
17	97	96	88	80	78	75	87	148	321	125	e100	94
18	97	98	88	81	76	76	94	161	e420	124	e100	94
19	96	95	87	81	77	78	100	194	e400	119	e100	94
20	96	94	86	83	75	80	108	e320	e380	117	e100	93
21	95	99	e85	81	77	81	105	e380	e360	115	e100	93
22	96	106	e85	79	76	80	96	e420	e380	112	e100	93
23	104	98	e85	85	79	79	94	e480	e380	111	e100	92
24	104	100	84	80	78	81	95	e500	e360	e110	e100	93
25	99	96	85	78	76	84	103	e520	e360	e110	e100	92
26	97	96	85	80	78	86	110	e500	e380	e110	e100	92
27	96	95	84	78	75	83	121	e520	314	e100	98	93
28	96	98	90	78	75	79	140	e500	271	e100	101	92
29	97	102	84	78	---	79	163	e500	246	e100	99	92
30	96	98	83	78	---	79	198	e520	247	e110	100	92
31	95	---	83	78	---	78	---	e550	---	e100	107	---
TOTAL	3045	2897	2751	2500	2165	2394	2886	9439	9612	4797	3135	2846
MEAN	98.2	96.6	88.7	80.6	77.3	77.2	96.2	304	320	155	101	94.9
MAX	104	106	98	85	82	86	198	550	420	276	110	102
MIN	95	94	83	78	75	74	77	148	246	100	98	92
AC-FT	6040	5750	5460	4960	4290	4750	5720	18720	19070	9510	6220	5650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1999, BY WATER YEAR (WY)

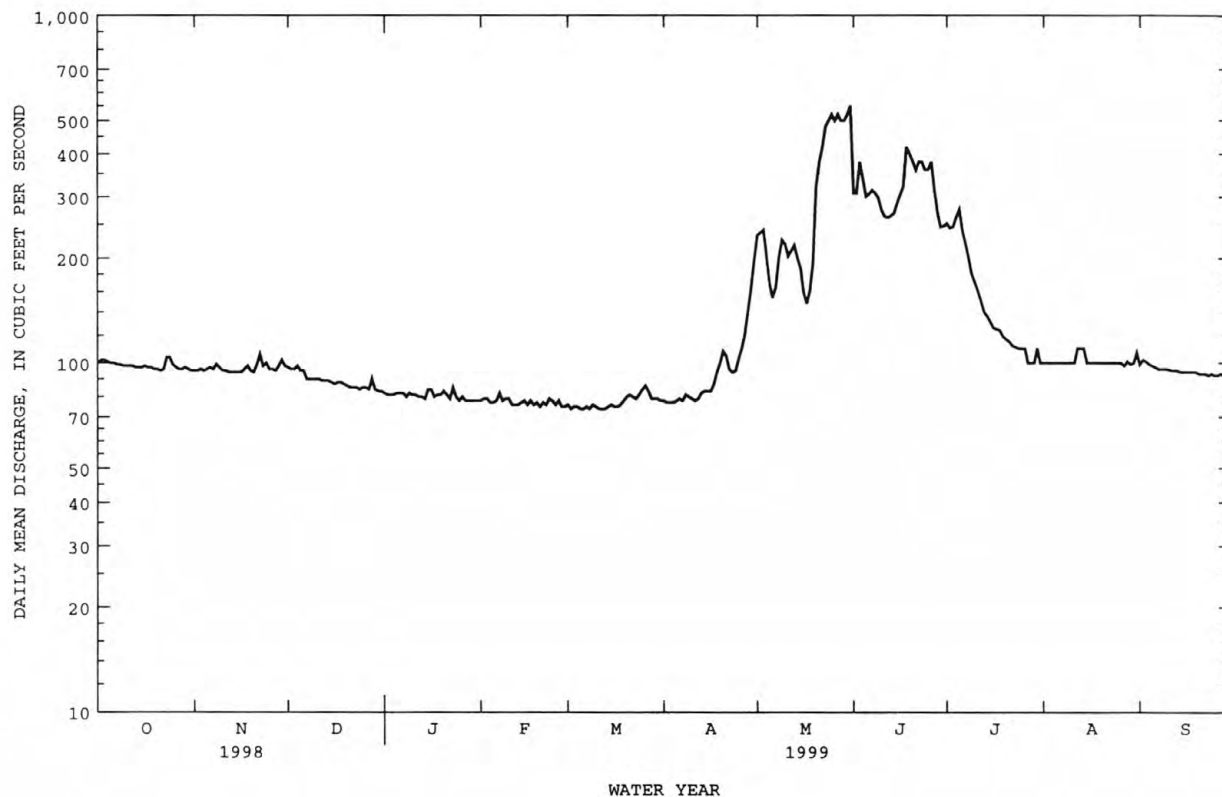
	MEAN	82.1	81.9	78.0	73.8	69.9	71.5	123	288	247	108	86.9	83.1
MAX	120	108	101	100	88.5	91.3	215	460	566	179	139	129	
(WY)	1998	1998	1996	1997	1998	1997	1990	1997	1986	1997	1997	1997	1997
MIN	61.6	61.9	58.8	58.1	53.8	58.0	68.8	150	83.3	68.1	62.2	59.4	
(WY)	1993	1993	1993	1993	1989	1993	1991	1990	1987	1988	1988	1988	1988

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1984 - 1999	
ANNUAL TOTAL	51085		48467		--	
ANNUAL MEAN	140		133		116	
HIGHEST ANNUAL MEAN	--		--		169	1997
LOWEST ANNUAL MEAN	--		--		84.4	1992
HIGHEST DAILY MEAN	550	Jun 26	550	May 31	810	Jun 2 1986
LOWEST DAILY MEAN	83	Dec 30,31	74	Mar 2,5-6,8, 11-13	53	Many days in 1989
ANNUAL SEVEN-DAY MINIMUM	84	Mar 6	74	Mar 2	53	Feb 12 1989
INSTANTANEOUS PEAK FLOW	--		--		--	
INSTANTANEOUS PEAK STAGE	--		--		5.68 ^a	May 11 1997
ANNUAL RUNOFF (AC-FT)	101300		96130		84240	
10 PERCENT EXCEEDS	278		273		237	
50 PERCENT EXCEEDS	99		96		84	
90 PERCENT EXCEEDS	87		78		62	

a Backwater from Bechler River.

e Estimated.



Discharge measurements made at miscellaneous sites during water year 1999

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Discharge (cfs)
Yellowstone River basin						
Dinwoody Canal 432302109215601	Wind River	Lat 43°23'02", long°109 21'56", in NE ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ sec.28, T.5 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 600 ft downstream from headgate, 2.7 mi upstream from aqueduct, and 2.7 mi south of Wilderness.		1988-96	6-29-99	117
					7-12-99	101
					8-05-99	156
					9-08-99	145
37-C Lateral 425716108520401	Little Wind River	Lat 42°57'16", long 108°52'04", in SW ¹ / ₄ SE ¹ / ₄ SW ¹ / ₄ sec.22, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank at headgate, 1.1 mi upstream from crossing on unimproved dirt road, and 2.4 mi southeast of Wind River.		1988-97	6-14-99	64.3
					7-13-99	78.6
					8-09-99	59.5
					9-09-99	21.4
65-C Lateral at Headworks 425515108485401	Little Wind River	Lat 42°55'15", long 108°48'54", in NE ¹ / ₄ SE ¹ / ₄ NE ¹ / ₄ sec.1, T.2 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank at headgate, 1.1 mi upstream from crossing on light-duty road, and 3.4 mi northwest of Milford.		1991-97	6-14-99	87.6
					7-13-99	71.7
					8-09-99	50.4
					9-09-99	40.3
Ray Canal below 65 "C" Lateral 425513108485801	Little Wind River	Lat 42°55'13", long 108°48'58", in NE ¹ / ₄ SE ¹ / ₄ NE ¹ / ₄ sec.1, T.2 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 400 ft downstream from 65-C Lateral, 0.9 mi upstream from crossing on unimproved dirt road, and 3.4 mi northwest of Milford.		1988-97	6-14-99	27.5
					7-13-99	12.7
					8-09-99	14.8
					9-09-99	4.62
Snake River basin						
Lake Creek near Wilson 433247110491701	Fish Creek	Lat 43°32'47", long 110°49'17", in SW ¹ / ₄ SW ¹ / ₄ NW ¹ / ₄ sec.6, T.41 N., R.116 W., Teton County, Hydrologic Unit 17040103, at bridge on State Highway 390, 2.8 miles south of Teton Village, and 4.1 mi northeast of Wilson.		1994-98	6-17-99	382

CHEYENNE WATER SUPPLY LAKE STUDY

411153106154401 ROB ROY RESERVOIR (LAT 41 11 53 LONG 106 15 44)
(1 foot below water surface)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH			OXYGEN						SODIUM	
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	
SEP 1997	02...											
	1040	25	6.9	20	11	10	3.1	.64	1.4	22	.2	
		ANC										
		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
DATE												
SEP 1997	02...	.4	13	1.3	.3	<.1	4.0	19	39	<.02	<.01	<.05
		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	
DATE												
SEP 1997	02...	<.01	<1	<1	16	4.0	51	<1	2	45	<1	

411153106154402 ROB ROY RESERVOIR (LAT 41 11 53 LONG 106 15 44)
(3 feet above lake bottom)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH			OXYGEN						SODIUM	
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT LEVEL) (MG/L) (00080)	DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	
SEP 1997	02...	1215	24	6.2	30	11	10	3.0	.63	1.3	21	.2
		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
SEP 1997	02...	.4	12	1.4	.3	<.1	6.9	22	45	<.02	<.01	.08
		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	
SEP 1997	02...	<.01	2	<1.0	17.0	4	69	<1	69	123	<1	

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

CHEYENNE WATER SUPPLY LAKE STUDY--Continued

411031105132501 GRANITE SPRINGS RESERVOIR (LAT 41 10 31 LONG 105 13 25)
(1 foot below water surface)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT LEVEL) (MG/L) (00080)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	
		ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
		DATE	TIME	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
AUG 1997 28...	1340	95	8.0	22	19	40	13	1.8	2.7	13	.2
AUG 1997 28...	1.0	40	3.4	2.4	.3	5.8	55	69	.15	<.01	<.05

411031105132502 GRANITE SPRINGS RESERVOIR (LAT 41 10 31 LONG 105 13 25)
(3 feet above lake bottom)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH			OXYGEN						SODIUM	
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	AD- SORP- TION RATIO (00931)	
AUG 1997	28...	101	6.7	22	10	43	14	1.9	2.8	13	.2	
		ANC POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
AUG 1997	28...	1	41	3.4	2.5	.4	8.3	59	79	<.02	<.01	<.05
		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	
AUG 1997	28...	<.01	<1	<1	8.4	4	21	4	76	<5.0	<1	

CHEYENNE WATER SUPPLY LAKE STUDY--Continued

410928105115201 CRYSTAL LAKE RESERVOIR (LAT 41 09 28 LONG 105 11 52)
(1 foot below water surface)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH WATER		OXYGEN DEMAND,		HARD-NESS		MAGNE-SIUM,		SODIUM,		SODIUM
		SPE-CIFIC CON-DUCT-ANCE	WHOLE FIELD (STAND-ARD	COLOR (PLAT-INUM- COBALT	CHEM-ICAL (HIGH LEVEL)	TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	DIS-DIS-SOLVED (MG/L AS MG)	DIS-DIS-SOLVED (MG/L AS NA)	DIS-DIS-SOLVED (MG/L AS NA)	PERCENT	AD-SORP-TION RATIO
DATE	TIME	(US/CM) (00095)	(00400)	(00080)	(00340)	(00900)	(00915)	(00925)	(00930)	(00932)	(00931)	
SEP 1997	04...	0950	108	8.4	12	15	46	15	2.3	3.0	12	.2
		ANC	UNFLTRD	SULFATE	CHLO-RIDE,	FLUO-RIDE,	SILICA,	SUM OF	SOLIDS,	GEN,	GEN,	GEN,
		POTAS-SIUM,	TIT 4.5	DIS-	DIS-	DIS-	DIS-	CONSTI-TUENTS,	RESIDUE	AMMONIA	NITRITE	NO2+NO3
		DIS-	LAB	DIS-	DIS-	DIS-	DIS-	DIS-	AT 105	DIS-	DIS-	DIS-
		SOLVED	(MG/L	SOLVED	SOLVED	SOLVED	(MG/L	DIS-	DEG. C,	SOLVED	SOLVED	SOLVED
DATE		(MG/L	AS	(MG/L	(MG/L	(MG/L	AS	SOLVED	TOTAL	(MG/L	(MG/L	(MG/L
		AS K)	CACO3)	AS SO4)	AS CL	AS F)	SIO2)	(MG/L)	(MG/L)	AS N)	AS N)	AS N)
		(00935)	(90410)	(00945)	(00940)	(00950)	(00955)	(70301)	(00500)	(00608)	(00613)	(00631)
SEP 1997	04...	1.1	46	4.5	2.4	.5	2.1	58	80	<.02	<.01	<.05
		PHOS-PHORUS	OIL AND GREASE,	ARSENIC	BORON,	COPPER,	IRON,	LEAD,	MANGA-NESE,	ALUM-INUM,	SELE-NIUM,	
		ORTHO,	TOTAL	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	
		DIS-	RECOV.	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	
		SOLVED	GRAVI-	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	
DATE		(MG/L	METRIC	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS P)	(MG/L)	AS AS)	AS B)	AS CU)	AS FE)	AS PB)	AS MN)	AS AL)	AS SE)	
		(00671)	(00556)	(01000)	(01020)	(01040)	(01046)	(01049)	(01056)	(01106)	(01145)	
SEP 1997	04...	<.01	2	<1	12	2	10	<1	<1	6.4	<1	

410928105115203 CRYSTAL LAKE RESERVOIR (LAT 41 09 28 LONG 105 11 52)
(30 feet below water surface)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
DATE	TIME	COBALT UNITS (00080)								
SEP 1997 11...	1300	12	15	47	15	2.3	3.0	12	.2	1.3
DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, SOLVED TOTAL (MG/L) (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
SEP 1997 11...	45	4.3	2.7	.5	3.9	60	87	.09	<.01	<.05
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
SEP 1997 11...	<.01	<1	<1	18	2	28	<1	2	8.4	<1

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

CHEYENNE WATER SUPPLY LAKE STUDY--Continued

410928105115202 CRYSTAL LAKE RESERVOIR (LAT 41 09 28 LONG 105 11 52)
(3 feet above lake bottom)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH			OXYGEN							
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT LEVEL) (MG/L) (00080)	DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	
SEP 1997 04...	1200	114	6.7	13	<10	48	15	2.3	3.0	12	.2	
		ANC						SOLIDS,				
		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L (00500)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
SEP 1997 04...	1.2	44	4.4	3.4	.5	6.4	63	90	.14	<.01	<.05	
		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	
SEP 1997 04...	<.01	<1	<1	12	7	24	<1	31	10	<1		

410858106060901 LAKE OWEN (LAT 41 08 58 LONG 106 06 09)
(1 foot below water surface)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		PH			OXYGEN						SODIUM											
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	COLOR (PLAT- INUM- COBALT LEVEL) (MG/L) (00080)	DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)											
SEP 1997 02...	1540	30	7.2	16	11	13	3.9	.7	1.4	19	.2											
		ANC																				
		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (00500)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L AS N) (00608)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00631)											
SEP 1997 02...	.3	15	1.1	.7	<.1	2.5	20	42	<.02	<.01	<.05											
		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)			OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)		BORON, DIS- SOLVED (UG/L AS B) (01020)		COPPER, DIS- SOLVED (UG/L AS CU) (01040)		IRON, DIS- SOLVED (UG/L AS FE) (01046)		LEAD, DIS- SOLVED (UG/L AS PB) (01049)		MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)		ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)		SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	
SEP 1997 02...	<.01	<1	<1.0	19.0	4	130	2	8	24.0	<1												

COAL BED METHANE STUDY

Water Disposal Ponds, Campbell County

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

STATION NUMBER	DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	OXYGEN, (PER- CENT FIELD MG/L AS HCO3 (00453)	BICAR- BONATE DIS IT FIELD HCO3 (00453)
434119105224201	07-19-99	1400	4785	761	8.4	22.5	24.0	645	12.8	176	532
440146105293401	07-22-99	0900	4730	1420	8.6	20.0	18.0	647	6.2	81	820
435857105263801	07-16-99	0915	4625	3710	8.5	21.5	27.0	650	2.8	38	1060
435903105313201	07-21-99	1000	4830	236	9.4	28.0	34.0	643	11.4	174	51
435732105310101	07-21-99	1400	4765	1020	9.6	27.0	36.0	643	9.4	141	400
440720105294101	07-20-99	0900	4555	868	9.7	22.5	24.0	647	10.8	148	68
442636105335001	07-22-99	1415	4210	1840	9.3	31.0	29.5	658	13.0	205	862
440648105341401	07-20-99	1330	4695	560	8.3	23.0	32.0	647	14.0	194	539

DATE	CAR- BONATE WATER DIS IT FIELD	ALUM- INUM, DIS- SOLVED	ARSENIC DIS- SOLVED	CADMIUM DIS- SOLVED	CHRO- MIUM, DIS- SOLVED	COPPER, DIS- SOLVED	LEAD, DIS- SOLVED	MERCURY DIS- SOLVED	NICKEL, DIS- SOLVED	SELE- NIUM, DIS- SOLVED	ZINC, DIS- SOLVED	
	MG/L AS	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	
	CO3	AS AL)	AS AS)	AS CD)	AS CR)	AS CU)	AS PB)	AS HG)	AS NI)	AS SE)	AS ZN)	
	(00452)	(01106)	(01000)	(01025)	(01030)	(01040)	(01049)	(71890)	(01065)	(01145)	(01090)	
434119105224201	07-19-99	14	16.8	8	<1	<1.0	2	<1	<.1	1	<1	<20
440416105293401	07-22-99	29	<10.0	9	<1	<1.0	2	<1	<.1	9	2	<20
435857105263801	07-16-99	34	<30.0	19	<1	<1.0	<1	<1	<.1	2	<1	<60
435903105313201	07-21-99	24	E9.4	16	<1	<1.0	1	<1	<.1	4	1	<20
435732105310101	07-21-99	122	E7.3	4	<1	<1.0	<1	<1	<.1	<1	1	<20
440720105294101	07-20-99	235	<10.0	14	<1	<1.0	<1	<1	<.1	2	<1	<20
442636105335001	07-22-99	190	10.2	15	<1	<1.0	5	<1	<.1	2	<1	<20
440648105341401	07-20-99	5	<10.0	7	<1	<1.0	<1	<1	<.1	1	<1	<20

STATION NUMBER	DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	OXYGEN, (PER- CENT FIELD MG/L AS HCO3 (00453)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
433412105270301	07-24-99	0845	5005	788	8.7	21.0	31.5	638	7.3	99	<1
434433105193601	07-24-99	1320	4715	14500	9.3	27.0	33.0	643	11.7	184	10
440207105303801	07-23-99	1350	4718	1070	9.1	26.0	34.0	648	16.0	234	<1
440232105303101	07-26-99	0920	4700	848	9.2	23.0	18.0	649	8.7	120	<1
440139105253401	07-23-99	1210	4700	1110	9.1	22.0	31.0	648	9.3	126	<1
440035105271001	07-23-99	1015	4660	622	9.0	22.0	27.0	649	7.7	104	2
435832105280301	07-23-99	0830	4680	1060	9.2	20.0	24.0	648	11.8	154	<1
440639105302201	07-25-99	0850	4610	715	8.4	19.0	22.0	647	8.6	110	<1
440526105323201	07-25-99	1230	4595	1610	9.3	24.0	27.0	647	12.4	175	2
440505105314001	07-25-99	1345	4595	689	9.5	26.0	29.0	647	12.6	185	<1
440540105303201	07-25-99	1020	4610	587	9.1	22.0	23.0	648	8.9	121	3
440436105353001	07-25-99	1510	4730	1000	8.2	25.0	30.0	643	5.7	83	2

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

FREMONT COUNTY WEED AND PEST DISTRICT STUDY

YELLOWSTONE RIVER BASIN

425008108445401 SQUAW CREEK AT SMITH STREET, AT LANDER, WY (LAT 42 50 08 LONG 108 44 54)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	DICAMBA TOTAL (UG/L) (82052)	PIC- LORAM UNFILT RECOVER (UG/L) (39720)
AUG 24...	1500	17	925	18.5	25.0	<.01	.20

DATE	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
AUG 24...	<.01	<.01	<.01	<.01	54	2.5

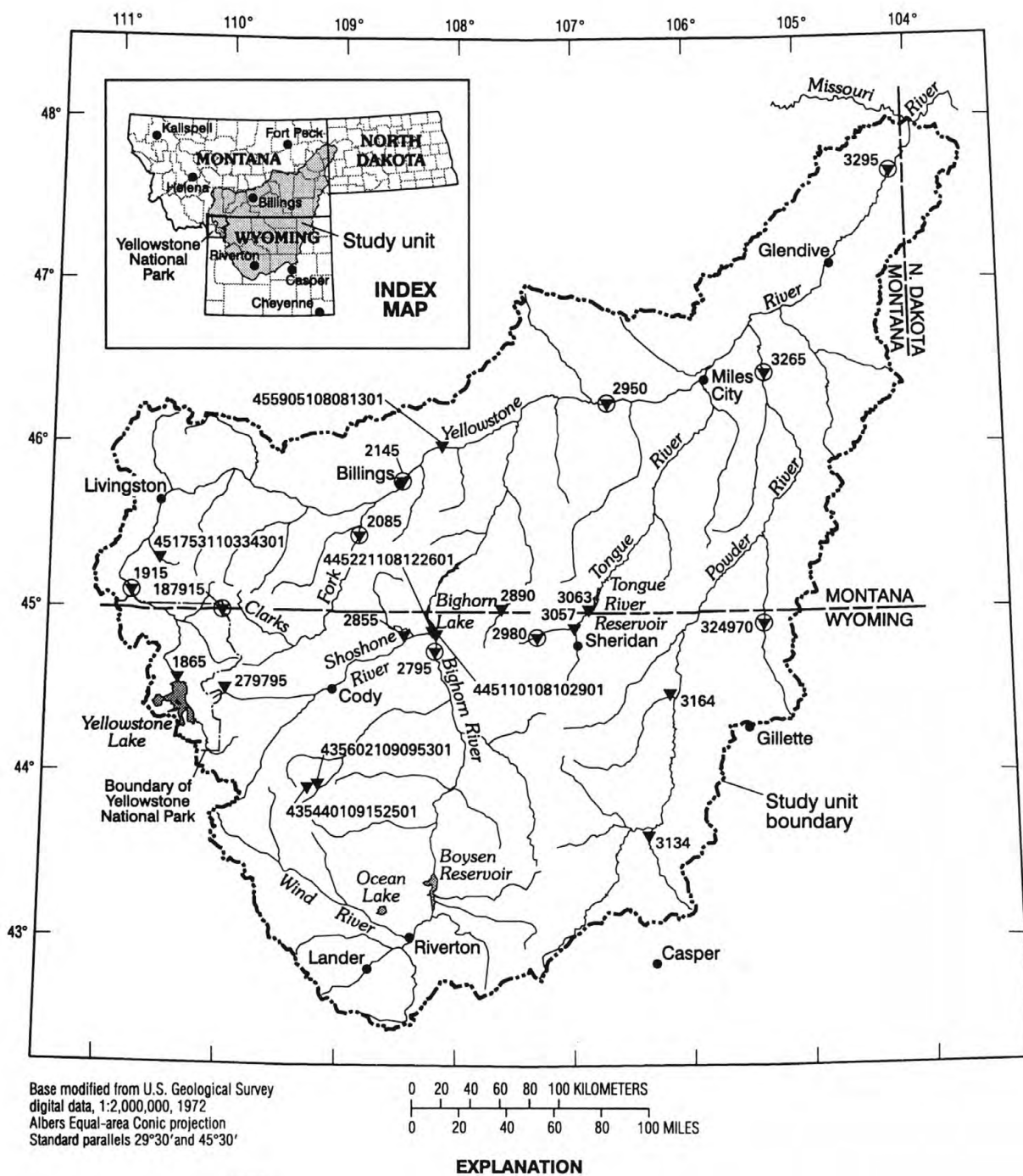


Figure 4. Location of surface-water sampling sites in the Yellowstone River Basin NAWQA study unit, Montana, North Dakota, and Wyoming.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JAN												
21...	1000	2.0	238	7.7	-3.0	.0	570	12.0	110	120	34	34
FEB												
09...	1400	2.6	240	7.7	.5	.5	569	11.1	103	120	34	34
MAR												
03...	1400	1.8	266	7.7	.0	.0	579	12.2	110	110	33	32
APR												
05...	1500	2.4	236	8.3	.0	2.0	572	11.3	109	110	33.9	33
MAY												
14...	1100	E20	219	8.3	3.5	4.0	580	10.4	105	110	31.7	30
25...	1215	213	121	8.1	21.0	6.0	583	8.6	91	54	16.8	16
JUN												
08...	1330	261	130	7.8	3.0	5.0	576	10.1	105	60	16.9	18
22...	0800	545	81	7.9	10.0	3.5	574	10.5	105	34	15.8	10
JUL												
13...	1530	294	81	7.7	30.0	10.5	580	10.8	128	33	9.6	9.6
AUG												
10...	0800	45	140	8.1	17.0	6.0	582	12.4	130	64	18.4	19
SEP												
13...	0930	19	180	8.1	6.0	1.5	585	10.4	96	79	23.3	23

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K) (00937)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT.DIS FET LAB CACO3 (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
JAN												
21...	8.0	7.5	3.0	4.1	.2	.5	.5	139	114	--	10	.4
FEB												
09...	7.2	7.5	4.9	3.9	.2	.4	.5	143	117	--	11	.4
MAR												
03...	8.4	7.2	4.5	4.1	.2	.5	.5	142	116	--	10	.5
APR												
05...	7.5	7.6	4.4	4.4	.2	.4	.5	151	124	116	9.7	.5
MAY												
14...	7.3	7.2	3.8	4.0	.2	.5	.6	124	102	108	11	.4
25...	4.8	3.6	3.6	3.5	.2	.5	.3	65	54	59	5.0	.5
JUN												
08...	4.5	4.0	3.4	3.3	.2	.5	.5	74	61	63	4.3	.3
22...	6.8	2.2	3.3	2.6	.2	1.2	.3	46	38	40	2.4	.1
JUL												
13...	2.8	2.2	3.2	3.1	.2	5.5	.3	45	37	38	2.6	.5
AUG												
10...	4.7	4.4	3.8	4.0	.2	.4	.4	82	67	68	5.7	.2
SEP												
13...	6.2	5.5	4.3	3.9	.2	.4	.4	--	--	85	7.4	E.2

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
JAN 21...	<.1	11	148	136	.20	.80	<.01	.14	.02	<.1	<.1	.025
FEB 09...	<.1	10	145	139	.20	1.02	<.01	.12	<.02	E.06	E.06	.025
MAR 03...	<.1	9.6	144	135	.20	.70	<.01	.10	<.02	E.05	<.1	.026
APR 05...	<.1	9.2	140	140	.19	.92	<.01	<.05	.02	E.08	E.06	.021
MAY 14...	<.1	9.1	130	124	.02	--	<.01	<.05	<.02	E.07	<.1	.017
25...	<.1	9.2	96	70	.13	55.2	<.01	.08	<.02	.2	E.09	.094
JUN 08...	<.1	10	90	77	.12	63.4	<.01	.05	<.02	.1	E.09	.051
22...	<.1	8.5	40	49	.05	58.9	<.01	<.05	<.02	.4	<.1	.34
JUL 13...	<.1	9.4	55	50	.07	43.7	<.01	<.05	<.02	.1	<.1	.072
AUG 10...	<.1	11	84	85	.11	10.2	<.01	<.05	<.02	E.06	<.1	.045
SEP 13...	<.1	11	95	--	--	--	<.01	<.05	<.02	E.08	E.08	.034

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)
JAN 21...	.025	.02	200	1	<1	<1	1	<1	19	<10	<1
FEB 09...	.024	.02	20	<1	<1	<1	<1	<1	18	<10	<1
MAR 03...	.022	.02	E14	<1	<1	<1	1	<1	17	<10	<1
APR 05...	.018	.02	58	2	<1	<1	1	<1	17	<4	<1
MAY 14...	.012	.01	78	2	<1	<1	<1	<1	21	<4	<1
25...	.034	.03	<28	11	<1	<1	<1	<1	12	<4	<1
JUN 08...	.029	.03	541	8	<1	<1	<1	<1	14	<4	<1
22...	.029	.03	4640	15	<1	<1	4	<1	7	<4	<1
JUL 13...	.035	.04	600	7	<1	<1	<1	<1	8	<4	<1
AUG 10...	.035	.03	236	3	<1	<1	<1	2	13	<4	<1
SEP 13...	.029	.03	197	2	<1	<1	<1	<1	16	<5	<1

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
JAN 21...	<1	<1	<1.0	2	<1	<1	<10	<1	60	<10	<1
FEB 09...	<1	<1	<1.0	4	<1	<1	10	<1	50	<10	<1
MAR 03...	<1	<1	<1.0	7	<1	<1	<10	<1	50	<10	<1
APR 05...	<1	<1	<1.0	<1.0	<1	<1	<12	<1	84	<10	<1
MAY 14...	<1	<1	<1.0	<1.0	<1	<1	<10	<1	198	<10	<1
25...	<1	<1	1.5	<1.0	2	<1	E11	2	1730	16	1
JUN 08...	<1	<1	1.3	--	<1	<1	<12	1	842	15	<1
22...	<1	<1	4.8	<1.0	5	<1	22	2	6260	12	13
JUL 13...	<1	<1	<1.0	<1.0	<1	<1	<12	<1	753	E9	<1
AUG 10...	<1	<1	<1.0	<1.0	<1	<1	<12	<1	395	<10	<1
SEP 13...	<1	<1	<1.0	<1.0	<1	<1	<20	<1	445	<10	<1

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
JAN 21...	<1	<10	<10	<1	<1	--	1.5	1	<1	<1	1
FEB 09...	<1	<10	<10	<1	<1	<1	1.6	1	<1	<1	<1
MAR 03...	<1	<10	<10	<1	<1	<1	1.4	<1	<1	1	<1
APR 05...	<1	<12	<3	<1	<1	<1	1.4	1	<1	<1	<1
MAY 14...	<1	<16	6.8	3	<1	<1	<1.0	<1	<1	<1	<1
25...	<1	<12	37.7	3	<1	<1	<1.0	<1	5	<1	<1
JUN 08...	<1	<12	18.0	2	<1	<1	<1.0	<1	2	<1	<1
22...	<1	<12	210	3	<1	<1	<1.0	<1	13	<1	<1
JUL 13...	<1	<12	15.1	1	<2	<1	<1.0	<1	2	<1	<1
AUG 10...	<1	<12	7.0	2	<1	<1	<1.0	<1	<1	1	<1
SEP 13...	<1	<7	5.6	2	<1	<1	1.6	<1	<1	<1	<1

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 21...	<1	<1	<1	100	<10	<1	<1	.6	.2	1	.01
FEB 09...	1	<1	<1	140	<10	1	<1	.7	<.2	1	.01
MAR 03...	<1	<1	<1	130	<10	1	<1	.6	<.2	1	.00
APR 05...	<1	<1	<1	134	E31.1	<1	<1	.7	.2	1	.01
MAY 14...	<1	<1	<1	117	E30.2	<1	<1	1.2	<.2	1	--
25...	<1	<1	<1	68.6	<40	<1	<1	2.2	.6	55	32
JUN 08...	<1	<1	<1	65.0	<40	1	<1	2.3	.3	23	16
22...	<1	<1	<1	75.9	E23.3	<1	<1	1.6	1.3	289	425
JUL 13...	<1	<1	<1	41.3	<40	<1	<1	.9	<.2	27	21
AUG 10...	1	<1	<1	71.5	<40	2	<1	.7	.2	3	.36
SEP 13...	<1	<1	<1	88.4	<31	<1	<1	.9	<.2	2	.10

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (LAT 45 06 43 LONG 110 47 37)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JAN												
21...	1730	1170	257	7.5	3.0	4.0	--	12.3	--	64	16	5.5
FEB												
10...	1000	1150	261	7.6	-4.0	3.0	619	11.9	109	67	17	5.7
MAR												
04...	0930	1140	264	7.7	2.0	2.0	625	12.7	112	65	17	5.6
APR												
06...	0930	1210	255	7.6	10.0	--	--	--	--	69	18	6.0
MAY												
13...	1030	3610	153	7.7	4.0	7.0	630	10.7	107	47	12	4.1
26...	0900	15500	82	7.7	14.0	6.0	635	9.6	93	29	7.6	2.4
JUN												
09...	0830	13400	93	7.7	12.0	6.0	633	11.3	110	32	8.4	2.8
21...	1200	18500	79	7.9	32.0	9.0	626	10.8	114	26	6.7	2.2
JUL												
13...	1200	9350	109	7.6	33.0	15.0	630	9.6	115	31	7.6	2.8
AUG												
09...	1430	4420	138	8.2	29.0	18.0	632	9.8	125	37	9.3	3.3
SEP												
15...	1000	2300	175	8.4	10.0	12.0	635	9.2	102	46	12	4.0

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
JAN												
21...	22	1	4.6	78	64	--	37	12	1	27	177	166
FEB												
10...	22	1	5.1	78	64	--	39	13	1	28	184	170
MAR												
04...	22	1	5.1	79	65	--	36	14	1.1	27	183	167
APR												
06...	22	1	4.9	88	72	70	34	13	.9	28	180	171
MAY												
13...	10	.7	2.5	65	53	54	14	5.7	.5	20	--	101
26...	4.2	.3	1.1	--	--	34	4.4	1.6	.2	15	81	--
JUN												
09...	6.2	.5	1.5	--	--	37	7.1	3.2	.3	17	85	--
21...	5.1	.4	1.3	42	34	31	5.0	2.1	.2	13	60	57
JUL												
13...	8.6	.7	1.9	42	34	37	9.1	4.9	.4	15	83	71
AUG												
09...	12	.8	2.4	49	40	42	13	6.7	.6	17	89	88
SEP												
15...	15	1	3.1	--	--	53	20	8.7	.7	19	123	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (LAT 45 06 43 LONG 110 47 37)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
JAN 21...	.24	559	.01	.21	.19	.3	.2	.022	.013	.01	--
FEB 10...	.25	571	.01	.22	.17	.3	.2	.025	.013	.01	103
MAR 04...	.25	563	.01	.17	.17	.3	.3	.023	.011	.01	--
APR 06...	.24	588	<.01	.13	.14	.3	.2	.032	.014	.01	--
MAY 13...	.01	105	<.01	<.05	.04	.2	.2	.051	.02	.02	--
MAY 26...	--	--	<.01	.07	.05	.5	.2	.43	.031	.03	--
JUN 09...	--	--	<.01	.05	.03	.2	.2	.14	.023	.03	--
JUN 21...	.08	3000	<.01	<.05	<.02	.4	.1	.31	.021	.02	28
JUL 13...	.11	2100	<.01	<.05	.03	.2	E.09	.069	.021	.02	--
AUG 09...	.12	1060	<.01	<.05	<.02	.2	E.05	.028	.018	<.01	--
SEP 15...	--	--	.01	.08	.02	.1	.1	.019	.011	<.01	46
DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
JAN 21...	--	--	--	--	--	--	--	--	56	--	13
FEB 10...	<1	34	24	<1	<1	2	<1	<1	55	<1	21
MAR 04...	--	--	--	--	--	--	--	--	46	--	14
APR 06...	--	--	--	--	--	--	--	--	48	--	16
MAY 13...	--	--	--	--	--	--	--	--	35	--	8
MAY 26...	--	--	--	--	--	--	--	--	42	--	10
JUN 09...	--	--	--	--	--	--	--	--	30	--	7
JUN 21...	<1	6	10	<1	<1	<1.0	<1	<1	22	<1	5
JUL 13...	--	--	--	--	--	--	--	--	14	--	3
AUG 09...	--	--	--	--	--	--	--	--	25	--	E2
SEP 15...	<1	21	18	<1	<1	<1.0	<1	<1	19	<1	3
DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY) (80155)
JAN 21...	--	--	--	--	--	--	--	1.4	<.2	4	13
FEB 10...	<.1	2	<1	<1	<1	2	<1	1.5	.2	8	25
MAR 04...	--	--	--	--	--	--	--	1.5	.2	5	15
APR 06...	--	--	--	--	--	--	--	1.6	.4	7	23
MAY 13...	--	--	--	--	--	--	--	4.2	.2	18	175
MAY 26...	--	--	--	--	--	--	--	4.6	2.9	524	21900
JUN 09...	--	--	--	--	--	--	--	3.9	.6	131	4740
JUN 21...	--	<1	<1	<1	<1	<1	<1	2.6	2.2	300	15000
JUL 13...	--	--	--	--	--	--	--	2.0	.3	60	1510
AUG 09...	--	--	--	--	--	--	--	1.7	.2	10	119
SEP 15...	<.1	2	<1	<1	<1	<1	<1	1.7	.3	3	19

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
JAN 29...	1045	E440	632	8.2	--	.0	673	13.9	108	270	74	22	
FEB 16...	1045	E380	653	8.1	7.0	2.0	668	9.6	79	290	78	23	
MAR 09...	1015	339	648	8.0	17.0	3.0	666	12.3	105	280	75	22	
APR 01...	0930	394	578	7.9	2.0	4.0	672	12.7	110	250	66	20	
30...	0900	1950	417	8.0	13.0	7.5	674	9.8	92	87	25	5.9	
MAY 12...	1100	839	335	7.8	15.0	9.0	670	10.6	105	140	37	11	
24...	1230	E2500	176	8.1	26.0	13.0	675	9.1	97	67	18	5.0	
JUN 10...	1030	3010	188	8.0	16.5	11.0	676	10.1	103	75	21	5.6	
16...	1400	5110	138	8.0	24.0	14.0	676	9.4	103	54	15	3.8	
22...	1600	8080	120	8.0	23.0	14.0	674	9.3	102	46	14	3.0	
JUL 14...	1030	2570	203	8.1	24.0	17.5	666	8.5	102	80	22	6.1	
AUG 10...	1430	1070	--	--	28.0	--	666	--	--	160	43	13	
SEP 08...	1600	747	495	8.3	19.0	16.0	678	10.9	125	200	52	17	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
JAN 29...	27	.7		1.7	206	--	169	--	160	2.1	.3	9.4	418
FEB 16...	29	.7		1.7	217	--	178	--	170	2.1	.3	8.5	436
MAR 09...	25	.7		1.6	210	--	172	--	170	2.5	.3	8.2	436
APR 01...	25	.7		1.5	193	--	158	157	140	2.0	.3	8.6	381
30...	50	2		2.7	--	--	--	94	100	2.5	.3	9.8	268
MAY 12...	16	.6		1.0	124	--	102	102	42	15	.2	11	222
24...	7.7	.4		.8	82	--	67	77	19	.6	<.1	11	113
JUN 10...	8.3	.4		.7	78	--	64	67	25	.6	<.1	9.3	122
16...	5.3	.3		.6	68	--	56	53	13	.3	<.1	8.2	93
22...	4.4	.3		.6	56	--	46	47	13	.3	<.1	7.0	77
JUL 14...	9.0	.4		.9	83	--	68	70	28	1	<.1	7.5	124
AUG 10...	20	.7		1.6	149	--	122	127	74	1.7	.2	8.9	246
SEP 08...	26	.8		3.0	146	5	128	163	99	1.6	.2	7.0	310

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
JAN 29...	397	.57	--	.01	.69	.02	.1	E.09	.018	<.004	<.01	--
FEB 16...	422	.59	--	<.01	.61	<.02	.2	E.08	.025	<.004	<.01	<1
MAR 09...	409	.59	399	<.01	.52	<.02	.2	.1	.019	<.004	<.01	--
APR 01...	363	.52	405	<.01	.34	<.02	.2	.1	.02	<.004	<.01	--
30...	--	--	--	.01	.52	.1	11	.3	8.1	.02	.02	--
MAY 12...	194	.30	503	<.01	.17	.06	.3	.1	.089	.018	.03	--
24...	103	.15	--	<.01	<.05	<.02	1.4	<.1	1.5	.04	.04	--
JUN 10...	109	.17	991	<.01	.21	<.02	.3	.2	.26	.034	.03	10
16...	81	.13	1280	<.01	.12	<.02	.4	.1	.80	.027	.03	--
22...	69	.10	1680	<.01	.08	<.02	.7	.1	.73	.031	.03	--
JUL 14...	116	.17	860	<.01	.21	<.02	.3	E.06	.20	.024	.02	--
AUG 10...	239	.33	711	<.01	.49	<.02	.5	.1	.16	.02	<.01	--
SEP 08...	284	.42	625	<.01	.59	<.02	.3	.1	.062	.007	<.01	2
DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
JAN 29...	--	--	--	--	--	--	--	--	<10	--	12	--
FEB 16...	<1	<1	38	<1	<1	4	<1	1	<10	<1	15	<.1
MAR 09...	--	--	--	--	--	--	--	--	<10	--	13	--
APR 01...	--	--	--	--	--	--	--	--	<10	--	12	--
30...	--	--	--	--	--	--	--	--	<10	--	<3	--
MAY 12...	--	--	--	--	--	--	--	--	11	--	4	--
24...	--	--	--	--	--	--	--	--	14	--	13	--
JUN 10...	<1	<1	16	<1	<1	--	<1	1	10	<1	4	<.1
16...	--	--	--	--	--	--	--	--	10	--	E2	--
22...	--	--	--	--	--	--	--	--	12	--	4	--
JUL 14...	--	--	--	--	--	--	--	--	E6	--	3	--
AUG 10...	--	--	--	--	--	--	--	--	E7	--	8	--
SEP 08...	<1	<1	41	<1	<1	<1.0	<1	1	<10	<1	7	<.1

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JAN 29...	--	--	--	--	--	--	1.1	.7	<.002	<.002	<.001	<.002
FEB 16...	2	2	1	<1	<1	5	1.1	.2	<.002	<.002	E.003	<.002
MAR 09...	--	--	--	--	--	--	1.3	.4	<.002	<.002	<.001	<.002
APR 01...	--	--	--	--	--	--	1.9	.5	<.002	<.002	<.001	<.002
30...	--	--	--	--	--	--	3.3	>17	<.002	<.002	<.001	<.002
MAY 12...	--	--	--	--	--	--	3.9	1.0	<.002	<.002	--	<.002
24...	--	--	--	--	--	--	3.6	6.9	<.002	<.002	<.001	<.002
JUN 10...	<1	<1	<1	<1	<1	<1	2.8	1.4	<.002	<.002	<.001	<.002
16...	--	--	--	--	--	--	2.4	2.2	<.002	<.002	<.001	<.002
22...	--	--	--	--	--	--	2.1	2.8	<.002	<.002	<.001	<.002
JUL 14...	--	--	--	--	--	--	1.4	.7	<.002	<.002	E.002	<.002
AUG 10...	--	--	--	--	--	--	1.8	2.0	<.002	<.002	<.001	<.002
SEP 08...	<1	2	<1	<1	1	3	1.9	.7	<.002	<.002	.159	E.020
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
JAN 29...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	87.8	<.001
FEB 16...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	E.0004	<.002	93.0	<.001
MAR 09...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	92.9	<.001
APR 01...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	72.5	<.001
30...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	E.001	<.006	<.002	107	<.001
MAY 12...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	105	<.001
24...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	95.6	<.001
JUN 10...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	102	<.001
16...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	104	<.001
22...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	102	<.001
JUL 14...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	113	<.001
AUG 10...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	E.001	<.002	99.7	<.001
SEP 08...	<.001	<.002	<.002	E.008	<.003	<.004	<.004	<.002	<.006	<.002	93.0	<.001

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
JAN 29...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	78.6	<.004	<.002	<.005	<.002
FEB 16...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	84.1	<.004	<.002	<.005	<.002
MAR 09...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	79.3	<.004	<.002	<.005	<.002
APR 01...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	73.4	<.004	<.002	<.005	<.002
30...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	102	<.004	<.002	<.005	<.002
MAY 12...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	92.3	<.004	<.002	<.005	<.002
24...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	95.4	<.004	<.002	<.005	<.002
JUN 10...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	76.9	<.004	<.002	<.005	<.002
16...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	98.6	<.004	<.002	<.005	<.002
22...	<.003	<.017	<.008	<.004	<.003	<.003	<.002	107	<.004	<.002	<.005	<.002
JUL 14...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	93.3	<.004	<.002	<.005	<.002
AUG 10...	<.003	<.017	<.002	E.003	<.003	<.003	<.002	93.1	<.004	<.002	<.005	<.002
SEP 08...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	94.8	<.004	<.002	<.005	<.002
DATE	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	METHYL-THION, DIS- SOLVED (UG/L) (39542)	METHYL-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)
JAN 29...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
FEB 16...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAR 09...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
APR 01...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
30...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAY 12...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
24...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUN 10...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
16...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
22...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUL 14...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
AUG 10...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
SEP 08...	<.004	<.004	<.003	<.004	<.006	<.03	<.004	<.005	<.002	<.018	<.003	<.007

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 29...	<.004	<.013	<.005	<.010	<.007	<.013	90.6	<.002	<.001	<.002	18	--
FEB 16...	<.004	<.013	<.005	<.010	<.007	<.013	99.4	<.002	<.001	<.002	41	--
MAR 09...	<.004	<.013	<.005	<.010	<.007	<.013	96.6	<.002	<.001	<.002	24	22
APR 01...	<.004	<.013	<.005	<.010	<.007	<.013	79.1	<.002	<.001	<.002	17	18
30...	<.004	<.013	<.005	<.010	<.007	<.013	119	<.002	<.001	<.002	11000	57800
MAY 12...	<.004	<.013	<.005	<.010	<.007	<.013	113	<.002	<.001	<.002	74	168
24...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	1710	--
JUN 10...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.004	<.002	221	1800
16...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	792	10900
22...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	E.003	612	13400
JUL 14...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.004	E.002	188	1300
AUG 10...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	.005	162	468
SEP 08...	<.004	<.013	.014	E.008	<.007	<.013	--	<.002	<.001	<.002	56	113

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS STIES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JAN												
19...	1430	2780	385	8.1	--	.5	673	12.9	102	140	37	12
FEB												
17...	1000	2840	395	7.6	7.0	.0	669	--	--	140	38	12
MAR												
11...	1100	2500	390	7.7	5.0	5.5	681	12.1	108	140	35	12
APR												
15...	1130	2530	455	8.1	2.0	8.0	--	--	--	140	36	11
MAY												
03...	1430	10200	230	8.1	16.0	13.5	664	10.4	114	78	20	6.5
19...	1100	5160	277	8.3	24.0	15.5	678	9.9	112	95	25	7.9
JUN												
04...	1100	24500	134	7.8	26.0	13.0	675	9.7	104	50	14	3.9
23...	1200	41600	113	8.2	24.0	14.0	676	9.2	101	41	11	3.0
JUL												
09...	1030	19200	137	7.8	22.0	16.5	688	9.4	106	50	13	4.1
AUG												
13...	1030	6820	269	8.4	26.0	18.5	683	--	--	94	24	8.4
SEP												
09...	1500	5270	303	8.5	27.0	16.5	--	12.5	--	110	29	10

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
JAN												
19...	21	.8	3.3	145	--	119	--	64	6.9	.5	16	240
FEB												
17...	22	.8	3.1	163	--	134	--	68	7.4	.5	14	250
MAR												
11...	23	.8	3.2	142	--	116	--	65	8.3	.6	14	251
APR												
15...	22	.8	3.2	148	--	122	119	63	8.6	.5	14	242
MAY												
03...	12	.6	2.0	96	--	79	79	27	.7	.3	16	--
19...	14	.6	2.2	107	--	88	92	36	5.0	.4	14	167
JUN												
04...	6.4	.4	1.4	--	--	--	52	12	1.7	.2	13	103
23...	4.8	.3	1.1	52	--	42	45	7.9	1.4	.2	11	69
JUL												
09...	7.4	.5	1.4	59	--	48	51	13	2.4	.3	12	110
AUG												
13...	15	.7	2.4	116	--	95	91	36	4.9	.4	13	167
SEP												
09...	17	.7	2.5	122	5	107	107	41	5.4	.4	11	182

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)
JAN 19...	234	.33	1800	<.01	.35	.02	.2	E.10	.023	.008	<.01	--
FEB 17...	247	.34	1920	<.01	.21	.03	.2	.1	.031	.005	<.01	16
MAR 11...	232	.34	1690	<.01	.22	.02	.2	.2	.022	.004	.02	--
APR 15...	232	.33	1650	<.01	.10	<.02	.3	.2	.026	.007	<.01	--
MAY 03...	133	.18	3660	.01	.21	.09	1.1	.3	.40	.025	.03	--
19...	157	.23	2330	<.01	<.05	.02	.3	.1	.064	.005	.01	--
JUN 04...	--	--	--	<.01	.24	.03	.5	.2	.32	.027	.04	21
23...	66	.09	7750	<.01	.08	<.02	.9	.2	.69	.022	.02	--
JUL 09...	82	.15	5700	<.01	.08	<.02	.3	.1	.13	.016	.02	--
AUG 13...	162	.23	3080	<.01	.15	<.02	.3	.2	.081	.013	<.01	--
SEP 09...	182	.25	2590	<.01	.09	<.02	.2	.1	.025	.005	<.01	8
DATE	ANTI- MONY, DIS- SOLVED (UG/L) AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LEAD, DIS- SOLVED (UG/L) AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	MERCURY DIS- SOLVED (UG/L) AS HG) (71890)
JAN 19...	--	--	--	--	--	--	--	--	12	--	E4	--
FEB 17...	<1	12	42	<1	<1	3	<1	<1	12	<1	9	<.1
MAR 11...	--	--	--	--	--	--	--	--	E9	--	12	--
APR 15...	--	--	--	--	--	--	--	--	18	--	9	--
MAY 03...	--	--	--	--	--	--	--	--	16	--	<3	--
19...	--	--	--	--	--	--	--	--	13	--	3	--
JUN 04...	<1	5	19	<1	<1	<1.0	<1	<1	18	<1	4	<.1
23...	--	--	--	--	--	--	--	--	16	--	3	--
JUL 09...	--	--	--	--	--	--	--	--	<10	--	<3	--
AUG 13...	--	--	--	--	--	--	--	--	<10	--	E3	--
SEP 09...	<1	10	33	<1	<1	<1.0	<1	<1	<10	<1	2	<.1
DATE	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L) AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE) (01145)	SILVER, DIS- SOLVED (UG/L) AS AG) (01075)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L) AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L) AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JAN 19...	--	--	--	--	--	--	1.2	.4	<.002	<.002	<.001	<.002
FEB 17...	2	1	<1	<1	2	2	1.2	.3	<.002	<.002	E.003	<.002
MAR 11...	--	--	--	--	--	--	1.6	.2	<.002	<.002	<.001	<.002
APR 15...	--	--	--	--	--	--	1.8	.9	<.002	<.002	<.001	<.002
MAY 03...	--	--	--	--	--	--	3.5	3.2	--	--	--	--
19...	--	--	--	--	--	--	3.0	.9	<.002	<.002	<.001	<.002
JUN 04...	<1	<1	<1	<1	<1	<1	3.5	1.0	<.002	<.002	<.001	<.002
23...	--	--	--	--	--	--	2.5	4.3	<.002	<.002	<.001	<.002
JUL 09...	--	--	--	--	--	--	1.7	.7	<.002	<.002	<.001	<.002
AUG 13...	--	--	--	--	--	--	2.0	1.0	<.002	<.002	E.003	E.003
SEP 09...	1	1	<1	<1	<1	1	2.0	.4	<.002	<.002	.008	E.003

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	METHYL- AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
JAN 19...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	95.9	<.001
FEB 17...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	98.1	<.001
MAR 11...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	104	<.001
APR 15...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	99.1	<.001
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	106	<.001
JUN 04...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	109	<.001
23...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	101	<.001
JUL 09...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	110	<.001
AUG 13...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	108	<.001
SEP 09...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	87.9	<.001
DATE	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
JAN 19...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	87.4	<.004	<.002	<.005	<.002
FEB 17...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	88.5	<.004	<.002	<.005	<.002
MAR 11...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	94.0	<.004	<.002	<.005	<.002
APR 15...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	94.4	<.004	<.002	<.005	<.002
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	99.2	<.004	<.002	<.005	<.002
JUN 04...	<.003	<.017	<.03	<.004	<.003	<.003	<.002	109	<.004	<.002	<.005	<.002
23...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	95.6	<.004	<.002	<.005	<.002
JUL 09...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	111	<.004	<.002	<.005	<.002
AUG 13...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	102	<.004	<.002	<.005	E.004
SEP 09...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	93.4	<.004	<.002	<.005	<.002
DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
JAN 19...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
FEB 17...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAR 11...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
APR 15...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUN 04...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
23...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUL 09...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
AUG 13...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
SEP 09...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	CARBON DI-SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	1,1,1-TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)
JAN 19...	<.004	<.013	<.005	<.010	<.007	<.013	97.4	<.002	<.001	<.002	<.37	<.032
FEB 17...	<.004	<.013	E.003	<.010	<.007	<.013	102	<.002	<.001	<.002	<.37	<.032
MAR 11...	<.004	<.013	<.005	<.010	<.007	<.013	114	<.002	<.001	<.002	<.37	<.032
APR 15...	<.004	<.013	<.005	<.010	<.007	<.013	113	<.002	<.001	<.002	<.37	<.032
MAY 03...	--	--	--	--	--	--	--	--	--	--	E.021	<.032
19...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	<.37	<.032
JUN 04...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.004	<.002	E.018	<.032
23...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	E.031	<.032
JUL 09...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	<.37	<.032
AUG 13...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	<.37	<.032
SEP 09...	<.004	--	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	<.37	<.032

DATE	1,1,2-TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI- CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- CHLORO- ETHENE TOTAL (UG/L) (34546)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER (UG/L) (73547)
JAN 19...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
FEB 17...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
MAR 11...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
APR 15...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
MAY 03...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
19...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
JUN 04...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
23...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
JUL 09...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
AUG 13...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7
SEP 09...	<.064	<.066	<.044	<.026	<.16	<.036	<.13	<.068	<.032	<.078	<.7

DATE	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI METHYL UNFILT RECOVER (UG/L) (77222)	BENZENE 135-TRI METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL- SURROG VOC UNFLTRD REC (99834)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)
JAN 19...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	93	<.05
FEB 17...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	83.6	<.05
MAR 11...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	86.6	<.05
APR 15...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	94.6	<.05
MAY 03...	<.7	E1.66	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	95.9	<.05
19...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	102	<.05
JUN 04...	<.7	E1.35	<1.2	<.27	<.12	<.19	E.008	<.044	<.054	96.0	<.05
23...	<.7	E1.31	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	100	<.05
JUL 09...	<.7	E1.27	<1.2	<.27	<.12	<.19	E.003	<.044	<.054	79.7	<.05
AUG 13...	<.7	<5	<1.2	<.27	<.12	<.19	<.056	<.044	<.054	89.4	<.05
SEP 09...	<.7	<5	<1.2	<.27	<.12	<.19	E.029	<.044	<.054	99.8	<.05

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPYL WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON TETRA- CHLOR- RIDE TOTAL (UG/L) (32102)
JAN 19...	<.032	<.19	<.042	<.048	<.048	<.1	E.012	<.036	<.1	<.1	<.088
FEB 17...	<.032	<.19	<.042	<.048	<.048	<.1	E.017	<.036	<.1	<.1	<.088
MAR 11...	<.032	<.19	<.042	<.048	<.048	<.1	E.014	<.036	<.1	<.1	<.088
APR 15...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
MAY 03...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
19...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
JUN 04...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
23...	<.032	<.19	<.042	<.048	<.048	<.1	E.010	<.036	<.1	<.1	<.088
JUL 09...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
AUG 13...	<.032	<.19	<.042	<.048	<.048	<.1	<.1	<.036	<.1	<.1	<.088
SEP 09...	<.032	<.19	E.006	<.048	<.048	<.1	E.031	<.036	<.1	<.1	<.088
DATE	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)
JAN 19...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
FEB 17...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
MAR 11...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
APR 15...	<.028	<.18	<.12	E.009	<.038	<.09	<.21	<.05	<.048	<.14	<.098
MAY 03...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
19...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
JUN 04...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
23...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
JUL 09...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
AUG 13...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
SEP 09...	<.028	<.18	<.12	<.052	<.038	<.09	<.21	<.05	<.048	<.14	<.098
DATE	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 12DICL SURROG VOC UNFLTRD REC PERCENT (99832)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL METHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)
JAN 19...	<.044	<.13	104	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
FEB 17...	<.044	<.13	107	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
MAR 11...	<.044	<.13	106	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
APR 15...	<.044	<.13	105	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
MAY 03...	<.044	<.13	104	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
19...	<.044	<.13	101	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
JUN 04...	<.044	<.13	97.3	<.36	<.17	<.054	<.11	E.006	<.032	<.9	<.14
23...	<.044	<.13	106	<.36	<.17	<.054	<.11	E.006	<.032	<.9	<.14
JUL 09...	<.044	<.13	104	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
AUG 13...	<.044	<.13	104	<.36	<.17	<.054	<.11	<.03	<.032	<.9	<.14
SEP 09...	<.044	<.13	92.6	<.36	<.17	<.054	<.11	E.020	<.032	<.9	<.14

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ISO-DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)	METH- ACRYLO- NITRITE WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO- CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)
JAN 19...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
FEB 17...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
MAR 11...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
APR 15...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	E.045	<.38
MAY 03...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
19...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
JUN 04...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
23...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
JUL 09...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
AUG 13...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
SEP 09...	<.2	<.28	<.35	<.57	<.044	<1.4	<.21	<.17	<.15	<.25	<.38
DATE	METHYL- ETHYL- KETONE WATER WHOLE TOTAL (UG/L) (81595)	METHYL ISO- BUTYL KETONE WAT. WH. TOTAL (UG/L) (78133)	META/ PARA- XYLENE WATER UNFLTRD REC (UG/L) (85795)	NAPHTH- ALENE TOTAL (UG/L) (34696)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	PREH- NITENE WATER UNFLTRD RECOVER (UG/L) (49999)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)
JAN 19...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	<.042
FEB 17...	<1.6	<.37	E.015	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.020
MAR 11...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.018
APR 15...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.013
MAY 03...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.016
19...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.010
JUN 04...	<1.6	<.37	E.014	<.25	<.042	E.006	E.004	<.23	<.12	<.2	E.045
23...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.049
JUL 09...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.055
AUG 13...	<1.6	<.37	<.06	<.25	<.042	<.06	<.11	<.23	<.12	<.2	E.014
SEP 09...	<1.6	<.37	E.073	<.25	<.042	E.033	<.11	<.23	<.12	<.2	E.014
DATE	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE D8 SURROG UNFLTRD REC PERCENT (99833)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 19...	<.1	98	<.1	<.056	E.017	<.13	<.038	<.09	<.11	14	105
FEB 17...	<.1	94.4	<.1	<.056	E.043	<.13	<.038	<.09	<.11	24	184
MAR 11...	<.1	93.4	<.1	<.056	<.05	<.13	<.038	<.09	<.11	12	81
APR 15...	<.1	100	<.1	<.056	E.028	<.13	<.038	<.09	<.11	15	102
MAY 03...	<.1	102	<.1	<.056	E.073	<.13	<.038	<.09	<.11	338	9310
19...	<.1	105	<.1	<.056	E.068	<.13	<.038	<.09	<.11	50	697
JUN 04...	<.1	94.7	<.1	<.056	E.057	<.13	<.038	<.09	<.11	286	18900
23...	<.1	99.8	<.1	<.056	.256	<.13	<.038	<.09	<.11	646	72600
JUL 09...	<.1	95.8	<.1	<.056	E.079	<.13	<.038	<.09	<.11	124	6430
AUG 13...	<.1	99.8	<.1	<.056	E.030	<.13	<.038	<.09	<.11	54	994
SEP 09...	<.1	103	E.007	<.056	.102	<.13	<.038	<.09	<.11	16	228

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06279500 BIGHORN RIVER AT KANE, WY (44 45 31 LONG 108 10 51)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JAN												
20...	1125	1860	844	8.0	7.0	.0	663	11.2	89	260	67	23
FEB												
25...	1600	1880	840	8.2	17.0	4.5	661	12.1	109	300	76	26
MAR												
15...	1810	3020	774	8.4	19.0	8.5	662	9.7	96	250	63	22
APR												
13...	1630	1410	901	8.0	--	--	--	--	--	300	76	27
27...	1000	1640	906	8.3	15.0	12.5	--	9.2	--	300	76	26
MAY												
01...	1425	5850	714	8.0	22.0	13.0	650	9.0	101	220	57	18
11...	1045	5940	724	8.0	10.0	9.0	670	9.9	98	200	53	17
28...	0930	10600	530	8.2	25.0	15.0	670	8.8	100	160	43	14
JUN												
09...	1000	12000	501	8.3	15.0	14.0	670	8.6	95	160	42	14
23...	0945	10800	412	8.3	20.0	17.0	665	8.2	98	130	34	11
JUL												
01...	1240	6690	522	7.9	24.0	18.0	667	8.0	97	160	43	12
08...	1000	6790	453	8.2	26.5	20.0	670	7.2	90	150	39	12
28...	1000	1920	668	8.4	26.5	22.0	670	7.6	99	210	57	18
AUG												
05...	1600	2520	647	7.9	28.0	24.0	666	9.2	126	200	54	16
17...	1230	2050	660	7.9	28.0	21.0	674	12.5	159	200	54	17
SEP												
02...	1030	2080	657	8.4	16.0	18.0	666	--	--	210	56	17
14...	0900	2770	632	8.3	14.5	14.0	677	9.1	100	220	58	18
21...	1515	2300	723	8.3	13.0	15.0	678	11.6	130	230	60	20

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT MG/L AS CACO3 (39086)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
JAN												
20...	67	2	3.2	211	--	173	--	240	13	.4	7.7	552
FEB												
25...	74	2	3.5	203	7	178	--	250	13	.4	7.3	577
MAR												
15...	66	2	3.3	182	7	161	167	230	11	.4	6.8	525
APR												
13...	77	2	3.7	227	--	186	181	280	14	.4	6.0	624
27...	79	2	3.6	227	--	186	176	290	13	.4	7.5	640
MAY												
01...	74	2	4.6	173	--	142	--	230	12	.4	8.0	--
11...	70	2	3.7	171	--	140	148	200	10	.4	8.0	484
28...	43	1	2.3	155	--	127	119	140	6.4	.3	7.2	342
JUN												
09...	38	1	2.2	135	--	111	117	130	6.0	.3	8.3	325
23...	30	1	1.8	122	--	100	107	95	4.5	.2	8.5	262
JUL												
01...	41	1	3.0	138	--	113	118	140	6.2	.3	8.9	345
08...	33	1	2.2	124	--	102	224	110	5.4	.3	8.7	297
28...	51	2	2.7	165	--	136	140	180	6.3	.3	9.9	431
AUG												
05...	51	2	3.5	174	--	143	139	180	5.6	.3	8.2	430
17...	49	1	3.3	164	--	135	170	180	7.3	.3	10	430
SEP												
02...	54	2	3.1	166	--	136	152	180	8.1	.4	12	439
14...	48	1	2.7	166	2	140	149	180	7.3	.3	10	422
21...	53	2	3.0	183	2	153	160	200	8.7	.3	9.6	472

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06279500 BIGHORN RIVER AT KANE, WY (44 45 31 LONG 108 10 51)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)
JAN												
20...	524	.75	2770	<.01	.28	.03	.2	.2	.025	.006	.02	--
FEB												
25...	562	.78	2930	<.01	.23	<.02	.3	.2	.083	.004	.01	2
MAR												
15...	496	.71	4280	<.01	.14	<.02	.6	.2	.22	.007	<.01	--
APR												
13...	599	.85	2380	<.01	.15	<.02	.5	.2	.088	<.004	<.01	--
27...	613	.87	2830	.02	.68	.02	1.1	.3	.35	.016	.02	--
MAY												
01...	488	.66	7710	.01	.64	.10	7.7	.5	5.2	.014	.02	--
11...	454	.66	7760	<.01	.65	.07	3.7	.3	2.3	.022	.03	--
28...	334	.47	9790	<.01	.18	.04	2.4	.3	1.9	.023	.02	--
JUN												
09...	303	.44	10500	<.01	.19	<.02	.7	.3	.53	.025	.02	7
23...	249	.36	7640	<.01	.66	<.02	.7	.2	.62	.047	.04	--
JUL												
01...	321	.47	6230	.01	.40	<.02	3.6	.2	<.05	.024	.02	--
08...	271	.40	5440	<.01	.20	.03	.6	.3	.39	.027	.03	--
28...	407	.59	2230	<.01	.51	<.02	.2	.3	.19	.026	.02	--
AUG												
05...	403	.58	2930	.01	.36	<.02	1.4	.3	.87	.018	.02	--
17...	400	.58	2380	<.01	.44	<.02	.7	.2	.17	.026	.01	4
SEP												
02...	412	.60	2470	<.01	.49	<.02	.5	.2	.17	.03	.02	--
14...	409	.57	3160	<.01	.27	<.02	.4	.2	.13	.02	.01	--
21...	452	.64	2930	<.01	.19	<.02	.4	.2	.071	.011	<.01	--
DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (01890)
JAN												
20...	--	--	--	--	--	--	--	--	<10	--	8	--
FEB												
25...	<1	2	46	<1	<1	8	<1	1	<10	<1	14	<.1
MAR												
15...	--	--	--	--	--	--	--	--	<10	--	6	--
APR												
13...	--	--	--	--	--	--	--	--	<10	--	9	--
27...	--	--	--	--	--	--	--	--	<10	--	E2	--
MAY												
01...	--	--	--	--	--	--	--	--	<10	--	E3	--
11...	--	--	--	--	--	--	--	--	<10	--	<3	--
28...	--	--	--	--	--	--	--	--	<10	--	3	--
JUN												
09...	<1	1	41	<1	<1	<1.0	<1	1	<10	<1	2	<.1
23...	--	--	--	--	--	--	--	--	10	--	E2	--
JUL												
01...	--	--	--	--	--	--	--	--	<10	--	<3	--
08...	--	--	--	--	--	--	--	--	<10	--	<3	--
28...	--	--	--	--	--	--	--	--	<10	--	<3	--
AUG												
05...	--	--	--	--	--	--	--	--	<10	--	<3	--
17...	<1	2	50	<1	<1	<1.0	<1	2	<10	<1	2	<.1
SEP												
02...	--	--	--	--	--	--	--	--	<10	--	<2	--
14...	--	--	--	--	--	--	--	--	<10	--	<2	--
21...	--	--	--	--	--	--	--	--	<10	--	3	--

E Estiamted.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06279500 BIGHORN RIVER AT KANE, WY (44 45 31 LONG 108 10 51)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JAN												
20...	--	--	--	--	--	--	2.8	.2	<.002	<.002	.005	E.003
FEB												
25...	2	2	<1	<1	2	7	3.0	.6	<.002	<.002	.005	<.002
MAR												
15...	--	--	--	--	--	--	2.8	2.4	<.002	<.002	.005	<.002
APR												
13...	--	--	--	--	--	--	3.5	1.4	<.002	<.002	E.004	E.004
27...	--	--	--	--	--	--	3.5	2.8	<.002	<.002	<.001	<.002
MAY												
01...	--	--	--	--	--	--	4.7	>10	<.002	<.002	<.001	<.002
11...	--	--	--	--	--	--	4.1	>5.0	<.002	<.002	.007	<.002
28...	--	--	--	--	--	--	4.1	12	<.002	<.002	E.004	<.002
JUN												
09...	1	1	1	<1	<1	4	4.4	3.4	<.002	<.002	E.003	<.002
23...	--	--	--	--	--	--	3.7	>5.0	<.002	<.002	<.004	<.002
JUL												
01...	--	--	--	--	--	--	4.5	7.4	<.002	<.002	.007	<.002
08...	--	--	--	--	--	--	3.9	1.8	<.002	<.002	E.002	<.002
28...	--	--	--	--	--	--	3.3	1.6	<.002	<.002	.007	E.004
AUG												
05...	--	--	--	--	--	--	4.2	2.5	<.002	<.002	<.001	<.002
17...	2	2	1	<1	1	5	4.1	.6	<.002	<.002	.005	E.003
SEP												
02...	--	--	--	--	--	--	4.1	1.5	<.002	<.002	.009	E.006
14...	--	--	--	--	--	--	3.6	1.0	<.002	<.002	.005	E.005
21...	--	--	--	--	--	--	3.7	.4	<.002	<.002	.006	E.005
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P,P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
JAN												
20...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	105	<.001
FEB												
25...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	99.0	<.001
MAR												
15...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	108	<.001
APR												
13...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	103	<.001
27...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	79.1	<.001
MAY												
01...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	109	<.001
11...	<.001	<.002	<.002	E.004	<.003	<.004	.014	<.002	<.006	<.002	96.3	<.001
28...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	110	<.001
JUN												
09...	<.001	<.002	<.002	<.003	E.020	E.003	.006	<.002	<.006	<.002	114	<.001
23...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	99.3	<.001
JUL												
01...	<.001	<.002	<.002	<.003	<.003	E.004	<.02	<.002	<.006	<.002	114	<.001
08...	<.001	<.002	<.002	<.003	<.020	E.001	.008	<.002	<.006	<.002	132	<.001
28...	<.001	<.002	<.002	<.003	<.003	<.004	.010	E.002	<.006	<.002	117	<.001
AUG												
05...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	106	<.001
17...	<.001	<.002	<.002	<.003	<.010	<.004	<.004	<.002	<.006	<.002	102	<.001
SEP												
02...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	E.002	<.006	<.002	117	<.001
14...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	125	<.001
21...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.004	<.006	<.002	103	<.001

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06279500 BIGHORN RIVER AT KANE, WY (44 45 31 LONG 108 10 51)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
JAN 20...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	89.7	<.004	<.002	<.005	<.002
FEB 25...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	86.1	<.004	<.002	<.005	<.002
MAR 15...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	109	<.004	<.002	<.005	<.002
APR 13...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	96.4	<.004	<.002	<.005	<.002
27...	<.003	<.017	.021	<.004	<.003	<.003	<.002	94.8	<.004	<.002	<.005	<.002
MAY 01...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	108	<.004	<.002	<.005	<.002
11...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	92.6	<.004	<.002	.025	.019
28...	<.003	<.017	<.007	<.004	<.003	<.003	<.002	112	<.004	<.002	.006	<.002
JUN 09...	<.003	<.017	.006	<.004	<.003	<.003	<.002	109	<.004	<.002	<.005	.004
23...	<.003	<.017	<.005	<.004	<.003	<.003	<.002	92.7	<.004	<.002	<.005	<.002
JUL 01...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	100	<.004	<.002	.012	.008
08...	<.003	<.017	E.001	<.004	<.003	<.003	<.002	106	<.004	<.002	.012	<.002
28...	<.003	<.017	<.002	E.002	<.003	<.003	<.002	118	<.004	<.002	.010	.008
AUG 05...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	90.2	<.004	<.002	<.005	<.002
17...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	99.6	<.004	<.002	<.005	E.002
SEP 02...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	105	<.004	<.002	<.005	E.003
14...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	108	<.004	<.002	<.005	E.002
21...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	102	<.004	<.002	<.005	.005
DATE	METRI-BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA-THION, DIS- SOLVED (UG/L) (39542)	METHYL- PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (UG/L) (04024)
JAN 20...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
FEB 25...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAR 15...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
APR 13...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
27...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAY 01...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
11...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
28...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUN 09...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
23...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUL 01...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
08...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
28...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.004	<.003	<.007
AUG 05...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
17...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
SEP 02...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.003	<.003	<.007
14...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.003	<.003	<.007
21...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.007	<.003	<.007

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06279500 BIGHORN RIVER AT KANE, WY (44 45 31 LONG 108 10 51)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN												
20...	<.004	<.013	<.005	<.010	<.007	<.013	112	<.002	<.001	<.002	38	191
FEB												
25...	<.004	<.013	<.005	E.006	<.007	<.013	100	<.002	<.001	<.002	111	563
MAR												
15...	<.004	<.013	<.005	E.008	<.007	<.013	115	<.002	<.001	<.002	379	3090
APR												
13...	<.004	<.013	<.005	<.010	<.007	<.013	107	<.002	<.001	<.002	156	594
27...	<.004	<.013	<.005	<.010	<.007	.031	105	<.002	E.003	<.002	421	1860
MAY												
01...	<.004	<.013	<.005	E.008	<.007	<.013	120	<.002	<.001	<.002	6570	104000
11...	<.004	<.013	<.005	<.010	<.007	<.013	107	<.002	<.001	<.002	4450	71400
28...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.003	<.002	2460	70400
JUN												
09...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.007	<.002	803	26000
23...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	1080	31600
JUL												
01...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.005	E.002	3790	68500
08...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	<.002	518	9500
28...	<.004	--	<.005	E.003	<.007	<.013	--	<.002	.001	<.002	193	1000
AUG												
05...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	1190	8080
17...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	172	952
SEP												
02...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	<.002	162	910
14...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	158	1180
21...	<.004	<.013	<.005	E.003	<.007	<.013	--	<.002	<.001	<.002	77	478

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06286200 SHOSHONE RIVER AT KANE, WY (LAT 44 51 31 LONG 108 19 52)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
MAR													
15...	1410	1290	565	8.2	23.5	8.0	662	11.1	108	200	53	17	
APR													
13...	1110	768	667	8.5	18.5	7.5	670	10.2	97	220	57	18	
26...	1200	638	770	8.1	17.0	13.5	595	9.1	113	250	65	20	
MAY													
10...	1450	994	690	7.8	14.0	10.0	665	9.5	97	220	58	18	
27...	1400	1830	544	8.2	28.0	17.0	670	8.5	100	180	47	14	
JUN													
08...	1500	3060	465	8.2	15.5	13.0	664	8.8	96	140	39	11	
22...	1400	3400	392	8.2	24.0	14.0	665	9.1	102	120	32	10	
JUL													
07...	1400	2000	458	8.3	28.0	17.0	665	8.4	100	140	38	12	
27...	1330	766	828	8.5	34.0	21.0	670	9.2	118	260	67	22	
AUG													
17...	1600	795	750	8.1	31.0	20.0	672	10.4	130	230	57	20	
SEP													
13...	1245	1120	745	8.4	15.5	11.0	676	11.8	121	260	66	23	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	ALKA-LINITY WAT.DIS FET LAB CAC03 (29801)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAR													
15...	43	1	2.5	--	--	--	152	140	3.8	.4	13	381	
APR													
13...	59	2	3.0	193	--	158	162	190	5.2	.4	13	467	
26...	65	2	2.9	190	--	156	168	220	6.4	.4	14	525	
MAY													
10...	57	2	2.7	190	--	156	162	200	10	.4	13	467	
27...	44	1	2.2	161	--	132	140	130	3.4	.3	14	358	
JUN													
08...	40	1	2.3	122	--	100	121	100	3.2	.3	13	323	
22...	27	1	1.6	123	--	101	108	82	2.9	.3	15	254	
JUL													
07...	36	1	1.8	131	--	107	153	110	2.7	.3	15	305	
27...	71	2	2.8	214	2	178	181	230	3.4	.5	13	553	
AUG													
17...	61	2	2.8	211	--	173	175	200	5.2	.5	15	506	
SEP													
13...	65	2	2.6	--	--	192	185	210	5.4	.5	14	520	
DATE		SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
MAR													
15...	--	--	--	--	<.01	.24	<.02	.3	.1	.12	.012	.01	<10.0
APR													
13...	444	.64	968	<.01	.27	<.02	1.4	.1	.79	.007	.01	--	--
26...	496	.71	904	.04	1.7	.09	1.1	.4	.35	.074	.09	--	--
MAY													
10...	464	.64	1250	.02	1.4	.07	1.1	.2	.63	.041	.05	--	--
27...	342	.49	1770	.01	.75	.07	1.3	.5	.95	.04	.03	--	--
JUN													
08...	276	.44	2670	<.01	.84	.03	1.8	.2	1.5	.038	.03	E6.7	--
22...	233	.35	2330	<.01	.16	<.02	1	.3	.82	.022	.02	--	--
JUL													
07...	280	.41	1650	<.01	.82	.04	.5	.3	.33	.056	.05	--	--
27...	528	.75	1140	.02	1.7	<.02	.7	.4	.24	.051	.04	--	--
AUG													
17...	474	.69	1090	.01	1.6	<.02	.5	.3	.2	.055	.04	<10.0	--
SEP													
13...	506	.71	1570	<.01	1.4	<.02	.4	.3	.17	.035	.03	--	--

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06286200 SHOSHONE RIVER AT KANE, WY (LAT 44 51 31 LONG 108 19 52)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS-SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
MAR 15...	<1	1	<10	21	--	<1	1.7	.9	<.002	<.002	<.001	<.002
APR 13...	--	--	<10	22	--	--	2.2	.6	<.002	<.002	<.001	<.002
26...	--	--	<10	16	--	--	3.6	3.3	<.002	<.002	.010	E.003
MAY 10...	--	--	<10	9	--	--	3.0	.2	<.002	<.002	.008	E.004
27...	--	--	<10	19	--	--	2.6	4.0	<.002	<.002	.004	<.002
JUN 08...	<1	1	<10	6	<.1	1	2.8	10	<.002	<.002	.005	<.002
22...	--	--	<10	9	--	--	3.0	3	<.002	<.002	<.006	<.002
JUL 07...	--	--	<10	6	--	--	3.2	1.4	<.002	<.002	.007	<.002
27...	--	--	<10	12	--	--	4.1	2.4	<.002	<.002	.016	E.006
AUG 17...	<1	1	<10	6	<.1	1	4.0	--	<.002	<.002	.009	E.004
SEP 13...	--	--	<10	8	--	--	3.6	.9	<.002	<.002	.008	E.002
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (UG/L) (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
MAR 15...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	96.5	<.001
APR 13...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	103	<.001
26...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	73.4	<.001
MAY 10...	<.001	<.002	<.002	<.003	<.003	<.004	.015	<.002	<.006	<.002	111	<.001
27...	<.001	<.002	<.002	<.003	<.003	<.004	.024	<.002	<.006	<.002	108	<.001
JUN 08...	<.001	<.002	<.002	E.006	E.021	<.004	<.004	<.002	<.006	<.002	111	<.001
22...	<.001	<.002	<.002	<.003	E.098	<.004	<.004	<.002	<.006	<.002	102	<.001
JUL 07...	<.001	E.004	<.002	<.003	<.030	E.002	.008	<.002	<.006	<.002	117	<.001
27...	<.001	<.002	<.002	E.006	E.094	<.004	.009	<.002	<.006	<.002	114	<.001
AUG 17...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	125	<.001
SEP 13...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	110	<.001
DATE	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
MAR 15...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	94.8	<.004	<.002	<.005	<.002
APR 13...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	92.2	<.004	<.002	<.005	<.002
26...	<.003	<.017	.011	<.004	<.003	<.003	<.002	90.1	<.004	<.002	<.005	<.002
MAY 10...	<.003	<.017	.006	<.004	<.003	<.003	<.002	90.8	<.004	<.002	<.005	<.002
27...	<.003	<.017	.011	E.003	<.003	<.003	<.002	109	<.004	<.002	<.005	<.002
JUN 08...	<.003	<.017	.004	<.004	<.003	<.003	<.002	103	<.004	<.002	<.005	<.002
22...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	93.1	<.004	<.002	<.005	<.004
JUL 07...	<.003	<.017	E.002	.004	<.003	<.003	<.002	96.3	<.004	<.002	.080	<.002
27...	<.003	<.017	<.002	E.004	<.003	<.003	<.002	116	<.004	<.002	.015	.006
AUG 17...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	96.3	<.004	<.002	E.002	E.003
SEP 13...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	109	<.004	<.002	<.005	<.002

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06286200 SHOSHONE RIVER AT KANE, WY (LAT 44 51 31 LONG 108 19 52)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	METRI- BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
MAR 15...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
APR 13...	.018	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
26...	.009	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAY 10...	.013	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
27...	.049	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUN 08...	.005	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.002	<.003	<.007
22...	.007	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUL 07...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
27...	.014	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.005	<.003	<.007
AUG 17...	<.010	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.005	<.003	<.007
SEP 13...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (UG/L) (91064)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
MAR 15...	<.004	<.013	<.005	<.010	<.007	<.013	107	<.002	<.001	<.002	112	390
APR 13...	<.004	<.013	<.005	<.010	<.007	<.013	113	<.002	<.001	<.002	1090	2250
26...	<.004	<.013	<.005	<.010	<.007	.105	110	<.002	.020	<.002	367	632
MAY 10...	<.004	<.013	<.005	<.010	<.007	.015	121	<.002	.023	<.002	694	1860
27...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.006	E.002	1040	5140
JUN 08...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.019	E.001	2170	17900
22...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.008	<.002	726	6660
JUL 07...	<.004	<.013	<.005	<.010	<.007	E.010	--	<.002	.009	<.002	247	1330
27...	<.004	--	<.005	E.004	<.007	<.013	--	<.002	.005	E.003	182	376
AUG 17...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	E.001	152	326
SEP 13...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.005	<.002	182	550

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
JAN 26...	1500	6450	675	8.1	--	.5	687	13.0	100	230	57	20	
FEB 22...	1300	6680	657	8.4	3.0	3.5	693	--	--	230	59	20	
MAR 16...	1300	6830	735	8.0	10.0	7.5	679	11.1	104	250	62	22	
APR 07...	1330	8560	736	8.3	20.0	9.0	--	--	--	250	62	22	
20...	1100	5310	754	8.4	23.0	17.0	--	9.0	--	230	56	21	
MAY 04...	1400	14400	447	7.8	13.0	13.5	682	8.1	88	140	35	12	
18...	1100	14700	602	8.3	17.0	13.5	694	9.1	96	200	52	18	
27...	1100	31200	330	8.0	29.0	16.5	700	8.2	91	110	29	9.1	
JUN 01...	1430	42300	269	7.9	25.0	12.0	690	9.6	99	85	23	6.9	
15...	1300	30400	388	8.0	23.0	16.0	700	9.0	100	130	34	11	
24...	1130	51800	259	7.7	32.0	17.0	691	8.7	99	84	22	6.8	
JUL 08...	1100	26000	297	8.0	25.0	20.5	694	8.8	108	95	25	8.2	
28...	1100	14700	388	8.1	33.0	24.5	693	7.7	102	130	32	11	
AUG 16...	1130	12000	425	8.3	23.0	21.0	699	8.1	100	130	33	12	
SEP 07...	1130	10500	423	8.7	19.0	18.5	695	12.3	144	150	37	13	
23...	1100	7410	545	8.7	23.0	17.0	--	9.5	--	180	45	17	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
JAN 26...	54	2		3.2	198	--	162	--	180	8.7	.4	12	447
FEB 22...	53	2		3.1	195	--	160	--	180	8.6	.5	9.5	437
MAR 16...	55	2		3.4	235	--	192	--	200	10	.5	8.9	478
APR 07...	56	2		3.0	190	--	156	167	210	10	.5	9.8	494
20...	54	2		3.3	193	--	158	160	190	9.8	.5	9.7	460
MAY 04...	31	1		2.5	--	--	--	116	100	5.9	.4	13	285
18...	45	1		2.7	--	--	--	143	160	7.9	.4	11	398
27...	21	.9		1.9	94	--	77	90	69	3.8	.2	12	213
JUN 01...	16	.8		1.5	--	--	--	75	51	2.7	.2	11	179
15...	28	1		2.0	133	--	109	101	84	5.2	.3	11	252
24...	17	.8		1.6	90	--	74	73	48	2.8	.2	9.9	167
JUL 08...	21	.9		1.8	--	--	--	81	58	4.5	.3	9.9	191
28...	29	1		2.3	137	--	112	100	78	5.4	.4	8.9	242
AUG 16...	31	1		2.9	124	--	102	110	86	5.3	.3	11	265
SEP 07...	30	1		2.8	--	--	--	122	89	6.0	.3	10	265
23...	42	1		3.0	124	2	106	143	130	6.3	.5	7.3	350

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
JAN												
26...	433	.61	7780	<.01	.44	.04	.3	.2	.031	.008	<.01	--
FEB												
22...	428	.59	7880	<.01	.22	<.02	.3	.1	.028	<.004	<.01	3
MAR												
16...	475	.65	8810	<.01	.17	<.02	.3	.2	.053	.005	<.01	--
APR												
07...	464	.67	11400	<.01	.23	<.02	.3	.2	.039	.005	<.01	--
20...	437	.63	6600	<.01	.15	<.02	.4	.2	.059	.009	<.01	--
MAY												
04...	--	--	--	.01	.25	.11	1.3	.3	.38	.019	.03	--
18...	--	--	--	<.01	.18	<.02	.5	.1	.096	.01	.02	--
27...	193	.29	17900	.01	.19	.08	1.5	.3	.73	.021	.02	--
JUN												
01...	--	--	--	<.01	.15	.05	1.2	.2	.61	.021	.03	--
15...	242	.34	20700	<.01	.21	.02	.4	.2	.18	.018	.02	7
24...	154	.23	23400	<.01	.16	<.02	.9	.2	.74	.025	.03	--
JUL												
08...	--	--	--	<.01	.15	.03	.3	.2	.10	.021	.03	--
28...	235	.33	9600	<.01	.06	<.02	.4	.1	.091	.01	<.01	--
AUG												
16...	244	.36	8590	<.01	.27	<.02	.4	E.09	.15	.029	.03	--
SEP												
07...	--	--	--	<.01	.14	<.02	.3	.1	.063	.008	<.01	2
23...	318	.48	7000	<.01	.09	<.02	.6	.2	.022	<.004	<.01	--
DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
JAN												
26...	--	--	--	--	--	--	--	--	<10	--	11	--
FEB												
22...	<1	5	48	<1	<1	<1	<1	1	<10	<1	10	<.1
MAR												
16...	--	--	--	--	--	--	--	--	<10	--	14	--
APR												
07...	--	--	--	--	--	--	--	--	E5	--	11	--
20...	--	--	--	--	--	--	--	--	34	--	7	--
MAY												
04...	--	--	--	--	--	--	--	--	E7	--	<3	--
18...	--	--	--	--	--	--	--	--	<10	--	E3	--
27...	--	--	--	--	--	--	--	--	10	--	E2	--
JUN												
01...	--	--	--	--	--	--	--	--	12	--	E2	--
15...	<1	5	37	<1	<1	<1.0	<1	1	E6	<1	2	<.1
24...	--	--	--	--	--	--	--	--	<10	--	E2	--
JUL												
08...	--	--	--	--	--	--	--	--	<10	--	<3	--
28...	--	--	--	--	--	--	--	--	<10	--	E2	--
AUG												
16...	--	--	--	--	--	--	--	--	<10	--	E2	--
SEP												
07...	<1	6	39	<1	<1	<1.0	<1	1	<10	<1	1	<.1
23...	--	--	--	--	--	--	--	--	<10	--	E1	--

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JAN												
26...	--	--	--	--	--	--	2.4	.3	<.002	<.002	.006	<.002
FEB												
22...	2	2	<1	<1	<1	4	2.4	.4	<.002	<.002	.006	<.002
MAR												
16...	--	--	--	--	--	--	2.3	1.0	<.002	<.002	.008	<.002
APR												
07...	--	--	--	--	--	--	2.3	.6	<.002	<.002	.008	<.002
20...	--	--	--	--	--	--	2.7	.8	<.002	<.002	.328	E.002
MAY												
04...	--	--	--	--	--	--	4.2	4.0	<.002	<.002	.012	<.002
18...	--	--	--	--	--	--	2.8	1.8	<.002	<.002	.005	E.002
27...	--	--	--	--	--	--	3.4	6.8	<.002	<.002	.004	<.002
JUN												
01...	--	--	--	--	--	--	5.2	6.6	<.002	<.002	<.001	<.002
15...	1	1	1	<1	<1	2	2.8	1.4	<.002	<.002	E.004	<.002
24...	--	--	--	--	--	--	2.8	3.3	<.002	<.002	E.004	<.002
JUL												
08...	--	--	--	--	--	--	2.5	.9	<.002	<.002	.006	E.0004
28...	--	--	--	--	--	--	2.9	.6	<.002	<.002	.007	E.004
AUG												
16...	--	--	--	--	--	--	2.7	1.9	<.002	<.002	.008	E.003
SEP												
07...	2	2	<1	<1	<1	2	2.6	.9	<.002	<.002	E.004	E.003
23...	--	--	--	--	--	--	2.9	<.2	<.002	<.002	.004	E.003
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
JAN												
26...	<.001	<.002	<.002	<.003	<.003	<.004	.006	<.002	<.006	<.002	97.9	<.001
FEB												
22...	<.001	<.002	<.002	<.003	<.003	<.004	E.003	<.002	<.006	<.002	99.1	<.001
MAR												
16...	<.001	<.002	<.002	<.003	<.003	<.004	E.003	<.002	<.006	<.002	100	<.001
APR												
07...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	108	<.001
20...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	95.8	<.001
MAY												
04...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	94.5	<.001
18...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	73.6	<.001
27...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	102	<.001
JUN												
01...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	94.5	<.001
15...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	114	<.001
24...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	93.1	<.001
JUL												
08...	<.001	<.002	<.002	<.003	<.003	<.004	.009	<.002	E.0001	<.002	127	<.001
28...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	126	<.001
AUG												
16...	<.001	<.002	<.002	<.003	<.003	E.002	<.004	<.002	<.006	<.002	112	<.001
SEP												
07...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	94.8	<.001
23...	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	99.7	<.001

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (826660)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (826777)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (826668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (826663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)
JAN 26...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	78.7	<.004	<.002	<.005	.004
FEB 22...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	77.6	<.004	<.002	<.005	.004
MAR 16...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	97.7	<.004	<.002	<.005	E.003
APR 07...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	96.3	<.004	<.002	<.005	<.002
20...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	107	<.004	<.002	<.005	<.002
MAY 04...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	83.0	<.004	<.002	<.005	<.002
18...	<.003	<.017	.006	<.004	<.003	<.003	<.002	82.1	<.004	<.002	<.005	<.002
27...	<.003	<.017	<.010	<.004	<.003	<.003	<.002	105	<.004	<.002	<.005	<.002
JUN 01...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	85.0	<.004	<.002	<.005	<.002
15...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	114	<.004	<.002	<.005	<.004
24...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	106	<.004	<.002	<.005	<.005
JUL 08...	<.003	<.017	E.002	<.004	<.003	<.003	<.002	102	<.004	<.002	<.005	E.004
28...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	98.7	<.004	<.002	<.005	.008
AUG 16...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	104	<.004	<.002	<.005	E.004
SEP 07...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	98.6	<.004	<.002	<.005	<.002
23...	<.003	<.017	<.002	<.004	<.003	<.003	<.002	99.8	<.004	<.002	<.005	E.003
DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	METHYL- PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL- PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
JAN 26...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
FEB 22...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAR 16...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.003	<.003	<.007
APR 07...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.003	<.003	<.007
20...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
MAY 04...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
18...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
27...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.003	<.003	<.007
JUN 01...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
15...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
24...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
JUL 08...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
28...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
AUG 16...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007
SEP 07...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.004	<.003	<.007
23...	<.004	<.004	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN												
26...	<.004	<.013	<.005	<.010	<.007	<.013	104	<.002	<.001	<.002	25	435
FEB												
22...	<.004	<.013	<.005	<.010	<.007	<.013	109	<.002	<.001	<.002	18	325
MAR												
16...	<.004	<.013	<.005	<.010	<.007	<.013	108	<.002	<.001	<.002	26	479
APR												
07...	<.004	<.013	<.005	<.010	<.007	<.013	110	<.002	<.001	<.002	28	647
20...	<.004	<.013	<.005	<.010	<.007	<.013	112	<.002	E.001	<.002	46	660
MAY												
04...	<.004	<.013	<.005	<.010	<.007	<.013	98.9	<.002	<.001	<.002	434	16900
18...	<.004	<.030	<.005	<.010	<.007	<.013	85.8	<.002	E.003	<.002	109	4330
27...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.003	<.002	797	67100
JUN												
01...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	.006	<.002	740	84500
15...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	<.002	165	13500
24...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.003	<.002	773	108000
JUL												
08...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.001	<.002	120	8330
28...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	73	2900
AUG												
16...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.002	<.002	147	4760
SEP												
07...	<.004	<.013	E.003	<.010	<.007	<.013	--	<.002	E.002	<.002	46	1300
23...	<.004	<.013	<.005	<.010	<.007	<.013	--	<.002	E.001	<.002	13	260

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06298000 TONGUE RIVER NEAR DAYTON, WY (LAT 44 50 58 LONG 107 18 14)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
JAN 14...	1100	57	243	8.2	4.0	1.5	658	9.8	81	130	34	11
FEB 18...	1200	56	252	8.1	6.0	1.0	660	13.2	107	140	36	12
MAR 16...	1025	61	243	8.3	17.0	3.0	646	11.3	99	130	34	12
APR 06...	1355	43	265	8.4	12.5	5.0	655	10.6	97	140	35	12
30...	0955	456	136	8.0	11.0	4.0	660	12.1	107	70	19	5.5
MAY 18...	1150	258	197	7.9	20.0	7.0	657	10.8	103	100	27	8.2
JUN 08...	1030	1160	132	7.4	13.5	6.5	657	10.8	102	66	18	5.0
17...	1200	710	150	8.2	20.0	10.0	656	10.2	105	77	21	6.1
JUL 16...	0915	199	219	7.3	14.0	10.5	672	10.8	110	120	30	9.9
AUG 23...	1620	91	245	8.3	32.0	15.5	660	8.8	102	120	31	11
31...	0830	93	232	8.3	22.0	15.0	653	9.1	105	120	31	11

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
JAN 14...	1.4	.1	.6	163	--	134	--	4.3	.7	<.1	7.2	144
FEB 18...	1.5	.1	.7	160	--	131	--	4.7	.8	<.1	7.2	145
MAR 16...	1.5	.1	.7	150	1	125	132	4.5	.7	<.1	6.6	138
APR 06...	1.4	.1	.7	141	2	120	141	4.5	.6	<.1	5.9	151
30...	.9	.0	1.4	92	--	76	74	2.3	.7	<.1	5.1	--
MAY 18...	1.4	.1	.7	127	--	102	104	3.3	1.2	.1	7.4	116
JUN 08...	.9	.1	.5	79	--	65	68	1.9	.7	<.1	6.1	96
17...	1.0	.1	.5	106	--	87	81	1.9	<.3	<.1	6.2	105
JUL 16...	1.2	.0	.6	138	--	113	117	3.4	.8	<.1	6.8	123
AUG 23...	1.3	.1	.8	154	--	126	128	3.8	.7	<.1	5.7	134
31...	1.3	.1	.8	152	--	125	123	3.8	.8	<.1	6.0	129

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JAN 14...	141	.20	22.2	<.01	.20	<.02	.06	<.1	.007	<.004	<.01	--
FEB 18...	142	.20	21.9	<.01	.12	<.02	E.06	<.1	<.004	<.004	<.01	--
MAR 16...	134	.19	22.7	<.01	.08	<.02	.1	E.07	.006	<.004	<.01	<1
APR 06...	131	.21	17.5	<.01	<.05	<.02	E.09	E.09	.007	<.004	<.01	--
30...	81	.11	99.5	<.01	.08	.04	.5	.2	.17	.066	.07	9
MAY 18...	112	.16	80.8	<.01	.05	<.02	.2	.1	.016	.004	<.01	--
JUN 08...	73	.13	301	<.01	.07	<.02	.3	.2	.053	.01	.01	--
17...	--	--	--	<.01	.06	<.02	.3	.1	.019	.005	.01	--
JUL 16...	121	.17	66.1	<.01	<.05	<.02	.2	.1	.013	.004	<.01	8
AUG 23...	131	.18	32.9	<.01	<.05	<.02	E.10	.1	.005	<.004	<.01	--
31...	129	.18	32.4	<.01	<.05	<.02	E.09	E.05	.009	<.004	<.01	--

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06298000 TONGUE RIVER NEAR DAYTON, WY (LAT 44 50 58 LONG 107 18 14)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
JAN 14...	--	--	--	--	--	--	--	--	<10	--	<3
FEB 18...	--	--	--	--	--	--	--	--	E7	--	<3
MAR 16...	<1	<1	27	<1	<1	4	<1	<1	<10	<1	<1
APR 06...	--	--	--	--	--	--	--	--	<10	--	<3
30...	<1	<1	21	<1	<1	<1.0	<1	<1	40	<1	3
MAY 18...	--	--	--	--	--	--	--	--	17	--	<3
JUN 08...	--	--	--	--	--	--	--	--	43	--	E2
17...	--	--	--	--	--	--	--	--	20	--	<3
JUL 16...	<1	<1	25	<1	<1	<1.0	<1	<1	<10	<1	<1
AUG 23...	--	--	--	--	--	--	--	--	<10	--	E2
31...	--	--	--	--	--	--	--	--	E6	--	<3

DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
JAN 14...	--	--	--	--	--	--	--	1.0	<.2	2	.31
FEB 18...	--	--	--	--	--	--	--	.8	.2	1	.15
MAR 16...	<.1	<1	1	1	<1	<1	<1	1.1	.3	1	.16
APR 06...	--	--	--	--	--	--	--	1.1	.2	4	.46
30...	<.1	<1	<1	<1	<1	<1	<1	4.9	2.1	86	106
MAY 18...	--	--	--	--	--	--	--	2.9	.3	5	3.5
JUN 08...	--	--	--	--	--	--	--	5.2	1.3	37	116
17...	--	--	--	--	--	--	--	4.0	.6	13	25
JUL 16...	<.1	<1	<1	<1	<1	2	<1	2.1	.6	5	2.7
AUG 23...	--	--	--	--	--	--	--	1.5	--	1	.25
31...	--	--	--	--	--	--	--	2.1	.4	4	1.0

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
OCT 07...	1150	127	405	8.0	20.5	6.5	680	10.3	94	66	14	7.3	
JAN 28...	1545	3.9	3300	7.9	.0	.0	678	12.6	98	980	210	110	
FEB 17...	1655	13	2980	8.2	3.0	.0	668	13.2	104	850	160	110	
MAR 16...	1510	125	1650	8.1	17.5	6.5	665	10.4	98	460	89	59	
23...	1020	26	1780	8.3	15.5	8.0	675	--	--	530	100	68	
APR 07...	1235	149	2430	8.1	16.0	6.0	685	10.7	96	760	130	100	
28...	1115	73	2820	8.3	21.0	13.5	677	7.6	83	1000	190	140	
MAY 18...	1800	33	3330	8.2	20.5	18.0	672	8.4	102	1200	200	160	
JUN 02...	1215	13	3610	8.1	27.0	19.5	674	8.4	105	1100	190	160	
10...	1315	82	1230	7.8	15.0	17.5	676	7.4	88	310	62	38	
JUL 15...	1320	2.6	3580	8.0	27.0	26.0	680	8.6	121	940	160	130	
AUG 23...	1145	.67	3650	8.1	26.0	20.0	683	7.3	91	780	130	110	
SEP 29...	1115	1.6	3150	8.2	15.0	8.0	674	10.2	99	800	140	110	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT DIS FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 07...	49	3	5.3	--	--	--	56	120	6.6	.3	6.0	--	--
JAN 28...	450	6	22	562	--	461	--	1500	50	.7	14	2760	
FEB 17...	400	6	20	451	--	370	--	1300	70	.5	11	2390	
MAR 16...	180	4	13	213	--	174	183	680	22	.4	6.8	1250	
23...	200	4	14	267	--	219	--	740	22	.4	9.4	1370	
APR 07...	280	4	16	305	--	250	256	1100	38	.4	6.0	2010	
28...	300	4	19	366	--	300	306	1300	67	.5	10	2370	
MAY 18...	370	5	19	430	--	353	364	1600	78	.5	7.2	2920	
JUN 02...	440	6	21	453	--	372	366	1800	36	.6	7.6	3130	
10...	140	3	9.4	151	--	124	124	470	7.7	.3	8.7	860	
JUL 15...	510	7	21	385	--	316	342	1700	38	.6	13	2900	
AUG 23...	560	9	23	377	--	309	316	1800	35	.7	4.1	2940	
SEP 29...	480	7	20	282	2	235	300	1500	26	.7	1.4	2560	

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	2620	3.75	29.0	.01	.27	.16	.8	.7	.031	.012	<.01	--
FEB 17...	2280	3.25	85.3	<.01	<.05	.02	.8	.8	.074	.037	<.01	--
MAR 16...	1150	1.70	423	<.01	.08	<.02	4.0	.6	.80	.019	.01	--
23...	1290	1.87	96.5	<.01	<.05	<.02	1.0	.7	.095	.019	<.01	6
APR 07...	1830	2.74	810	<.01	.09	<.02	2.9	1.2	.62	.012	<.01	--
28...	2200	3.23	468	<.01	.06	<.02	1.1	.6	.097	.075	.02	<2
MAY 18...	2610	3.97	260	<.01	<.05	.02	1.2	.6	.13	.011	<.01	--
JUN 02...	2860	4.26	110	<.01	<.05	.04	.7	.5	.04	.006	.01	--
10...	811	1.17	190	<.01	.20	<.02	--	.6	1.2	.011	.02	--
JUL 15...	2750	3.94	20.4	<.01	<.05	<.02	.6	.4	.032	.007	<.01	3
AUG 23...	2800	3.99	5.31	<.01	<.05	<.02	.7	.6	.037	.006	<.01	--
SEP 29...	2430	3.48	11.1	<.01	<.05	<.02	.4	.3	.012	E.003	.01	--

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	E17	--	350
FEB 17...	--	--	--	--	--	--	--	--	44	--	210
MAR 16...	--	--	--	--	--	--	--	--	E5	--	97
23...	<1	<1	47	<1	<1	3	<1	4	13	<1	73
APR 07...	--	--	--	--	--	--	--	--	<10	--	34
28...	<2	1	79	<2	<2	<1.0	<2	5	<10	<2	56
MAY 18...	--	--	--	--	--	--	--	--	<30	--	64
JUN 02...	--	--	--	--	--	--	--	--	<30	--	85
10...	--	--	--	--	--	--	--	--	<10	--	<3
JUL 15...	<1	1	65	<1	<1	<1.0	<1	4	<30	<1	66
AUG 23...	--	--	--	--	--	--	--	--	<30	--	65
SEP 29...	--	--	--	--	--	--	--	--	<30	--	33

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	9.0	.6	171	1.8
FEB 17...	--	--	--	--	--	--	--	12	.7	32	1.1
MAR 16...	--	--	--	--	--	--	--	13	>5.0	2670	901
23...	<.1	3	4	<1	<1	9	9	11	1.3	211	15
APR 07...	--	--	--	--	--	--	--	9.6	10	2480	999
28...	<.1	3	6	<1	<2	3	12	13	1.6	319	63
MAY 18...	--	--	--	--	--	--	--	13	3.3	619	55
JUN 02...	--	--	--	--	--	--	--	9.9	>4.1	153	5.4
10...	--	--	--	--	--	--	--	11	4.2	9230	2040
JUL 15...	<.1	3	5	<1	<1	3	17	9.5	.7	83	.58
AUG 23...	--	--	--	--	--	--	--	9.3	.5	67	.12
SEP 29...	--	--	--	--	--	--	--	7.7	.5	25	.11

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06326500 POWDER RIVER NEAR LOCATE, MT (LAT 46 25 48 LONG 105 18 34)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JAN 27...	1230	E200	1720	7.4	-3.0	.0	699	12.3	92	540	120	55
FEB 23...	1145	E400	1400	8.0	7.0	.0	691	--	--	400	88	44
26...	1300	E400	924	7.8	3.0	.0	688	12.3	94	230	52	23
MAR 17...	0930	765	1920	7.9	5.0	5.0	702	12.3	105	510	110	55
25...	1030	472	1880	8.3	21.0	8.0	696	10.9	101	560	130	58
APR 08...	0930	654	2020	8.3	18.0	12.0	--	--	--	470	110	49
MAY 05...	0900	5170	1240	7.9	13.0	10.5	692	9.6	95	310	67	36
17...	1130	1890	1280	8.2	20.0	12.0	700	9.9	101	330	71	37
JUN 14...	1300	2320	832	8.0	22.0	18.0	705	8.6	99	220	50	22
JUL 07...	1300	788	1100	8.2	29.0	26.0	696	7.6	104	300	72	30
AUG 11...	1600	65	2510	8.3	21.0	23.0	694	7.7	99	580	120	66
SEP 25...	1115	299	1880	8.4	20.0	15.0	--	9.3	--	530	110	61
DATE		SODIUM AD- SORP- TION RATIO (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY FET LAB CACO3 (MG/L) (29801)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
JAN 27...	180	3	6.4	289	--	237	--	610	63	.3	12	1270
FEB 23...	160	3	6.1	217	--	178	--	500	46	.3	8.7	996
26...	100	3	4.5	151	--	124	--	300	26	.2	6.4	632
MAR 17...	220	4	5.8	220	--	180	--	760	58	.4	8.0	1450
25...	230	4	6.9	242	17	227	--	730	67	.4	9.3	1450
APR 08...	200	4	5.7	242	5	207	214	640	61	.4	8.1	1260
MAY 05...	140	3	4.7	156	--	128	118	500	20	.4	7.3	912
17...	130	3	4.5	146	--	120	136	490	23	.3	9.4	922
JUN 14...	90	3	3.5	96	--	79	93	300	16	.2	9.2	576
JUL 07...	110	3	4.2	235	--	192	148	360	29	.3	10	772
AUG 11...	340	6	9.4	254	7	220	220	1000	80	.3	14	1880
SEP 25...	210	4	7.7	208	17	199	219	720	69	.4	7.1	1370

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06326500 POWDER RIVER NEAR LOCATE, MT (LAT 46 25 48 LONG 105 18 34)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOSPHATE DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
JAN 27...	1190	1.72	--	<.01	.36	.03	.3	.3	.037	.022	.01	--
FEB 23...	959	1.35	--	<.01	.21	.03	.7	.5	.11	.036	.01	1
FEB 26...	586	.86	--	<.01	.17	.09	2.6	.4	--	.034	.03	--
MAR 17...	1330	1.97	2990	<.01	.26	<.02	2.8	.2	1.5	.019	.01	--
MAR 25...	1370	1.97	1850	<.01	.10	.02	1	.3	.50	.017	.01	--
APR 08...	1190	1.72	2230	<.01	.11	<.02	.9	.2	.47	.013	.01	--
MAY 05...	855	1.24	12700	<.01	.51	.04	1.2	.3	.81	.011	.02	--
MAY 17...	838	1.25	4700	<.01	.26	<.02	3.1	.1	1.9	.011	.03	--
JUN 14...	538	.78	3610	<.01	.13	<.02	2.4	.3	1.9	.013	.02	3
JUL 07...	732	1.05	1640	<.01	<.05	.02	.9	.2	.56	.015	.03	--
AUG 11...	1800	2.56	331	<.01	<.05	<.02	.4	.2	.021	.005	<.01	--
SEP 25...	1300	1.87	1110	<.01	<.05	<.02	.9	.2	.12	<.004	<.01	3

DATE	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
JAN 27...	--	--	--	--	--	--	--	--	E8	--	E2
FEB 23...	<1	1	41	<1	<1	10	<1	3	11	<1	4
FEB 26...	--	--	--	--	--	--	--	--	11	--	9
MAR 17...	--	--	--	--	--	--	--	--	<10	--	<3
MAR 25...	--	--	--	--	--	--	--	--	<10	--	<3
APR 08...	--	--	--	--	--	--	--	--	<10	--	<3
MAY 05...	--	--	--	--	--	--	--	--	<10	--	<3
MAY 17...	--	--	--	--	--	--	--	--	<10	--	E2
JUN 14...	<1	<1	31	<1	<1	--	<1	3	<10	<1	<1
JUL 07...	--	--	--	--	--	--	--	--	<10	--	E2
AUG 11...	--	--	--	--	--	--	--	--	<10	--	4
SEP 25...	<1	E1	68	<1	<1	<.8	<1	4	<10	<1	2

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
JAN 27...	--	--	--	--	--	--	--	4.9	.2	8	--
FEB 23...	<.1	1	4	<1	<1	<1	7	6.6	.9	80	--
FEB 26...	--	--	--	--	--	--	--	6.5	6.1	3540	--
MAR 17...	--	--	--	--	--	--	--	4.8	9.4	3190	6600
MAR 25...	--	--	--	--	--	--	--	5.4	2.1	973	1240
APR 08...	--	--	--	--	--	--	--	4.1	3.9	1440	2540
MAY 05...	--	--	--	--	--	--	--	5.4	14	16300	228000
MAY 17...	--	--	--	--	--	--	--	6.0	17	4260	21700
JUN 14...	<.1	2	2	1	<1	<1	3	6.1	14	3630	22800
JUL 07...	--	--	--	--	--	--	--	5.4	5.4	1070	2270
AUG 11...	--	--	--	--	--	--	--	6.1	.4	24	4.2
SEP 25...	--	4	3	<2	<1	2	11	5.3	<.2	129	104

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN
Fixed Station Network

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
JAN 28...	1000	E7200	668	7.5	3.0	.5	708	14.6	109	230	56	21	
FEB 24...	0845	E8400	681	7.8	7.0	.0	626	--	--	220	52	21	
MAR 16...	1245	8590	852	8.5	5.0	7.0	702	9.80	88	270	63	27	
APR 13...	0845	8480	915	8.4	7.0	7.0	716	10.1	89	280	67	27	
21...	1000	7010	1010	8.3	10.0	10.0	--	10.3	--	300	68	31	
MAY 03...	1200	12600	926	8.2	12.0	15.5	700	7.90	87	280	63	29	
11...	1400	17600	652	8.1	7.0	9.0	705	10.4	97	180	43	18	
19...	0800	17100	706	8.3	10.0	15.0	713	8.10	86	220	51	22	
JUN 02...	1530	46400	320	7.9	27.0	16.0	707	9.1	100	100	27	9.3	
10...	0800	42500	413	8.2	10.0	17.0	721	8.25	90	130	32	12	
23...	0815	52300	311	8.0	21.0	20.0	711	6.30	74	100	27	8.5	
JUL 13...	1315	23500	325	8.5	29.0	23.0	712	8.02	100	110	27	9.4	
27...	0715	14700	402	8.7	22.0	22.0	715	8.10	99	130	33	11	
AUG 11...	0730	9520	442	8.7	21.0	23.5	711	7.40	94	150	38	14	
SEP 08...	0745	11100	487	8.2	14.0	16.0	720	8.20	88	160	37	15	
28...	1100	7400	628	8.8	10.0	12.0	722	10.1	99	210	49	20	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT DIS FET LAB CACO3 (29801)	TUR- BID- ITY (NTU) (00076)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
JAN 28...	58	2		3.8	200	--	164	--	--	180	9.7	.4	11
FEB 24...	61	2		3.6	180	--	148	--	--	180	10	.4	8.9
MAR 16...	79	2		4.0	194	6	169	180	98	240	14	.4	8.1
APR 13...	84	2		3.8	207	5	177	179	200	280	14	.4	8.3
21...	97	2		4.2	217	--	178	179	--	340	16	.5	9.9
MAY 03...	89	2		4.2	201	--	164	162	400	300	14	.4	11
11...	68	2		3.3	156	--	128	135	--	190	7.6	.3	10
19...	60	2		3.0	194	2	161	145	240	190	8.2	.4	11
JUN 02...	21	.9		1.9	91	--	75	84	--	67	3.5	.2	11
10...	32	1		2.3	109	--	89	96	260	98	5.4	.2	11
23...	22	1		2.0	95	--	78	81	240	66	4.0	.2	10
JUL 13...	26	1		6.1	98	2	83	88	36	70	5.0	.3	10
27...	31	1		2.4	115	6	104	105	20	88	3.2	.3	8.1
AUG 11...	34	1		2.8	127	10	120	120	15	94	6.3	.4	10
SEP 08...	46	2		3.2	161	--	132	132	130	120	7.2	.4	9.9
28...	53	2		3.2	165	10	152	156	--	160	8.1	.5	6.6

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
JAN												
28...	454	442	.62	--	.01	.43	.07	.3	.3	.037	.012	<.01
FEB												
24...	452	432	.61	--	<.01	.25	.04	.6	.3	.13	.015	<.01
MAR												
16...	574	543	.78	13300	.003	.10	.004	.5	.2	.15	.005	.003
APR												
13...	618	592	.84	14100	.003	.26	.007	.8	.2	.27	<.004	.002
21...	718	674	.98	13600	<.01	.29	.02	1.1	.3	.38	.007	<.01
MAY												
03...	636	609	.86	21600	.009	.28	.017	1.7	.2	.82	.013	.006
11...	448	419	.61	21300	<.01	.57	.09	2.6	.3	1.4	.009	.03
19...	466	443	.63	21500	.003	.19	.006	.8	.3	.33	.008	.006
JUN												
02...	210	187	.29	26300	.01	.29	.05	2.2	.2	1.4	.014	.03
10...	268	248	.36	30800	.004	.21	.007	1	.2	.67	.015	.013
23...	197	188	.27	27800	.005	.15	.004	1.8	.1	1.4	.016	.011
JUL												
13...	207	204	.28	13100	.003	.035	.002	.4	.1	.20	.007	.022
27...	253	240	.34	10000	<.001	<.005	.002	.4	.2	.11	.004	<.001
AUG												
11...	356	273	.48	9150	.001	<.005	<.002	.7	.1	.086	.008	.002
SEP												
08...	333	325	.45	9980	.001	.31	.007	.8	.2	.27	.012	.008
28...	390	388	.53	7790	<.01	<.05	<.02	.3	.2	.025	E.004	.03

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
JAN											
28...	--	--	--	--	--	--	--	--	--	--	E6
FEB											
24...	<1	<1	5	43	<1	--	<1	9	<1	2	<10
MAR											
16...	<1	<1	4	49	<1	149	<1	<1.0	<1	2	<10
APR											
13...	--	--	3	--	--	144	--	--	--	--	<10
21...	--	--	--	--	--	--	--	--	--	--	<10
MAY											
03...	--	--	4	--	--	152	--	--	--	--	<10
11...	--	--	--	--	--	--	--	--	--	--	<10
19...	--	--	3	--	--	103	--	--	--	--	<10
JUN											
02...	4	<1	2	33	<1	--	<1	<1.0	<1	<1	E7
10...	5	<1	3	35	<1	65.3	<1	<1.0	<1	2	<10
23...	--	--	2	--	--	46.5	--	--	--	--	<10
JUL											
13...	--	--	5	--	--	71.9	--	--	--	--	<10
27...	4	<1	5	40	<1	88.6	<1	<1.0	<1	2	<10
AUG											
11...	--	--	6	--	--	113	--	--	--	--	<10
SEP											
08...	--	--	4	--	--	115	--	--	--	--	<10
28...	4	<1	6	54	<1	--	<1	<.8	<1	1	E7

E Estimated.

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES, 1999

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JAN											
28...	--	--	5	--	--	--	--	--	--	--	--
FEB											
24...	<1	--	3	<.1	2	3	<1	<1	--	--	<1
MAR											
16...	<1	42	10	--	2	2	<1	<1	670	<10	<1
APR											
13...	--	43	--	--	--	--	2	--	730	<10	--
21...	--	--	E2	--	--	--	--	--	--	--	--
MAY											
03...	--	47	--	--	--	--	1	--	660	<10	--
11...	--	--	<3	--	--	--	--	--	--	--	--
19...	--	31	--	--	--	--	<1	--	520	<10	--
JUN											
02...	<1	--	1	<.1	1	1	<1	<1	--	--	<1
10...	<1	18	<1	--	1	1	<1	<1	320	<10	<1
23...	--	17	--	--	--	--	1	--	230	<10	--
JUL											
13...	--	20	--	--	--	--	<1	--	250	<10	--
27...	<1	27	<1	--	2	1	<1	<1	300	<10	<1
AUG											
11...	--	31	--	--	--	--	<1	--	350	<10	--
SEP											
08...	--	30	--	--	--	--	<1	--	410	<10	--
28...	<1	--	4	--	2	1	E2	<1	--	--	<1

DATE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
JAN											
28...	--	2.8	.2	<.002	<.002	.007	<.002	<.001	<.002	<.002	<.003
FEB											
24...	4	4.6	1.8	<.002	<.002	.005	<.002	<.001	<.002	<.002	<.003
MAR											
16...	5	3.3	1.4	.0160	<.002	.0350	E.0011	<.001	<.002	<.002	<.003
APR											
13...	--	3.0	4.1	<.002	<.002	.0060	<.002	<.001	<.002	<.002	<.003
21...	--	3.5	3.7	<.002	<.002	<.001	<.002	<.001	<.002	<.002	<.003
MAY											
03...	--	3.4	9.2	<.002	<.002	.0050	<.002	<.001	<.002	<.002	<.003
11...	--	4.0	18	<.002	<.002	.006	E.002	<.001	<.002	<.002	<.003
19...	--	3.2	3.1	<.002	<.002	.0056	<.002	<.001	<.002	<.002	<.003
JUN											
02...	2	3.5	14	<.002	<.002	<.003	<.002	<.001	<.002	<.002	<.003
10...	2	3.4	4.5	<.002	<.002	.0041	<.002	<.001	<.002	<.002	<.003
23...	--	2.9	6.7	<.002	<.002	.0042	<.002	<.001	<.002	<.002	<.003
JUL											
13...	--	2.8	1.2	--	--	--	--	--	--	--	--
27...	2	2.6	.6	<.002	<.004	.0092	E.0030	<.001	<.002	<.002	<.003
AUG											
11...	--	2.9	.9	<.002	<.002	.0075	E.0028	<.001	<.002	<.002	<.003
SEP											
08...	--	3.2	2.9	<.002	<.002	<.006	<.004	<.001	<.002	<.002	<.003
28...	4	3.1	.8	<.002	<.002	.006	E.005	<.001	<.002	<.002	<.003

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (UG/L) (91063)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
JAN											
28...	<.003	<.004	.004	<.002	E.0009	<.002	95.0	<.001	<.003	<.017	<.002
FEB											
24...	<.003	<.004	<.004	<.002	<.006	<.002	101	<.001	<.003	<.017	<.002
MAR											
16...	<.003	<.004	E.0031	<.002	<.006	<.002	98.4	<.001	<.003	<.017	<.002
APR											
13...	<.003	<.004	<.004	<.002	<.006	<.002	135	<.001	<.003	<.017	<.002
21...	<.003	<.004	<.004	<.002	<.006	<.002	84.3	<.001	<.003	<.017	<.002
MAY											
03...	<.003	<.004	<.004	<.002	<.006	<.002	93.0	<.001	<.003	<.017	.0047
11...	<.003	<.004	<.004	<.002	<.006	<.002	94.6	<.001	<.003	<.017	<.002
19...	<.003	<.004	<.004	<.002	<.006	<.002	122	<.001	<.003	<.017	.0070
JUN											
02...	<.003	<.004	<.004	<.002	<.006	<.002	114	<.001	<.003	<.017	<.002
10...	<.003	<.004	<.004	E.00057	E.00063	<.002	113	<.001	<.003	<.017	.0102
23...	<.003	<.004	<.004	<.002	<.006	<.002	123	<.001	<.003	<.017	<.002
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	<.003	<.004	<.004	<.002	<.006	<.002	105	<.001	<.003	<.017	<.002
AUG											
11...	<.003	<.004	<.004	<.002	<.006	<.002	106	<.001	<.003	<.017	<.002
SEP											
08...	<.003	<.004	<.004	<.002	<.006	<.002	114	<.001	<.003	<.017	<.002
28...	<.003	<.004	<.004	<.002	<.006	<.002	115	<.001	<.003	<.017	<.002
DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
JAN											
28...	<.004	<.003	<.003	<.002	83.7	<.004	<.002	<.005	.004	<.004	<.004
FEB											
24...	<.004	<.003	<.003	<.002	86.1	<.004	<.002	<.005	.004	<.004	<.004
MAR											
16...	<.004	<.003	<.003	<.002	98.3	<.004	<.002	<.005	E.0022	<.004	<.004
APR											
13...	<.004	<.003	<.003	<.002	103	<.004	<.002	<.005	<.002	<.004	<.004
21...	<.004	<.003	<.003	<.002	97.9	<.004	<.002	<.005	<.002	<.004	<.004
MAY											
03...	<.004	<.003	<.003	<.002	99.8	<.004	<.002	<.005	<.002	<.004	<.004
11...	<.004	<.003	<.003	<.002	98.2	<.004	<.002	<.005	E.002	<.004	<.004
19...	<.004	<.003	<.003	<.002	117	<.004	<.002	<.005	.0048	<.004	<.004
JUN											
02...	<.004	<.003	<.003	<.002	114	<.004	<.002	<.005	<.002	<.004	<.004
10...	<.004	<.003	<.003	<.002	100	<.004	<.002	<.005	<.002	<.004	<.004
23...	<.004	<.003	<.003	<.002	114	<.004	<.002	<.005	.0043	<.004	<.004
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	<.004	<.003	<.003	<.002	110	<.004	<.002	<.005	.0082	<.004	<.004
AUG											
11...	<.004	<.003	<.003	<.002	102	<.004	<.002	<.005	.0058	<.004	<.004
SEP											
08...	<.004	<.003	<.003	<.002	112	<.004	<.002	<.005	<.002	<.004	<.004
28...	<.004	<.003	<.003	<.002	116	<.004	<.002	<.005	.006	<.004	<.004

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
JAN											
28...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
FEB											
24...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
MAR											
16...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
APR											
13...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
21...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
MAY											
03...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
11...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
19...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
JUN											
02...	<.02	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
10...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
23...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
AUG											
11...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.0067	<.003	<.007	<.004
SEP											
08...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004
28...	<.003	<.004	<.006	<.004	<.004	<.005	<.002	E.007	<.003	<.007	<.004
DATE	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (PERCENT) (91064)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
JAN											
28...	<.013	<.005	<.010	<.007	<.013	98.6	<.002	<.001	<.002	15	--
FEB											
24...	<.013	<.005	<.010	<.007	<.013	110	<.002	<.001	<.002	162	--
MAR											
16...	<.013	<.005	<.010	<.007	<.013	104	<.002	<.001	<.002	291	6750
APR											
13...	<.013	<.005	<.010	<.007	<.013	129	<.002	E.0021	<.002	485	11100
21...	<.013	<.005	<.010	<.007	<.013	88.4	<.002	E.002	<.002	485	9180
MAY											
03...	<.013	<.005	<.010	<.007	<.013	104	<.002	<.001	<.002	1280	43500
11...	<.030	<.005	<.010	<.007	<.013	105	<.002	E.002	<.002	3310	157000
19...	<.013	<.005	<.010	<.007	<.013	--	<.002	E.0027	<.002	501	23100
JUN											
02...	<.013	<.005	<.010	<.007	<.013	--	<.002	E.003	<.002	1910	240000
10...	<.013	<.005	<.010	<.007	<.013	--	<.002	.0047	<.002	1240	142000
23...	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	1310	185000
JUL											
13...	--	--	--	--	--	--	--	--	--	232	14700
27...	--	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	160	6470
AUG											
11...	<.013	<.005	<.0767	<.007	<.013	--	<.002	<.001	<.002	86	2210
SEP											
08...	<.013	<.005	<.010	<.007	<.013	--	<.002	<.001	<.002	508	15200
28...	<.013	<.005	E.002	<.007	<.013	--	<.002	<.002	<.002	24	480

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Physio-chemical measurements

STATION NUMBER	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)
06186500	09-04-98	1400	1610	8.30	8.4	83.0	25.0	17.5
06187915	09-03-98	1900	--	7.99	8.4	172	24.0	15.0
06191500	08-27-98	1000	2730	8.69	7.6	170	--	14.5
06208500	08-26-98	1100	532	8.55	8.1	612	--	17.0
06214500	08-25-98	1300	5110	9.65	8.4	301	--	21.0
06279500	08-31-98	0930	2110	6.74	8.4	676	28.0	22.0
06279795	08-05-98	1230	E30	8.6	7.4	65.8	--	12.5
06285500	09-01-98	1640	--	8.01	8.1	1130	31.5	20.0
06289000	09-22-98	1330	104	9.89	8.2	320	--	8.43
06295000	07-27-98	1130	7930	7.80	8.6	401	35.0	24.5
06298000	09-23-98	1200	110	9.50	8.2	207	15.0	9.35
06305700	09-21-98	1300	276	9.13	8.1	452	15.0	13.4
06306300	09-24-98	1230	416	10.4	8.5	483	--	15.5
06313400	08-01-98	1300	E12	6.70	7.9	2010	20.0	22.0
06316400	07-31-98	0930	--	7.51	8.3	1180	23.5	20.5
06324970	07-30-98	1600	6.4	8.06	8.2	1930	23.5	22.0
06326500	07-29-98	1100	45	7.50	8.3	1940	27.0	23.0
06329500	07-28-98	1100	11300	6.80	8.6	433	25.0	24.5
435440109152501	08-03-98	1900	E70	9.00	7.5	155	23.0	10.0
435602109095301	08-06-98	1200	--	8.76	7.8	161	--	11.5
445110108102901	09-02-98	1520	--	--	--	--	--	--
445221108122601	09-02-98	0900	--	9.04	8.1	878	--	14.5
451753110334301	08-27-98	1700	35	9.07	7.8	123	--	10.5
455905108081301	09-25-98	1130	--	7.47	7.8	519	25.0	20.2

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Fish liver trace element analysis
 (* Indicates whole-body analysis)

STATION NUMBER	DATE	TIME	SPECIES	WATER, PRESENT BIO TIS DRY WGT REC PERCENT (49273)	ALUMI- NUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49237)	ANTI- MONY, BIOTA, TISSUE, DRY WGT REC (UG/G) (49246)	ARSENIC BIOTA, TISSUE, DRY WGT REC (UG/G) (49247)	BARIUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49238)	BERYL- LIUM-, BIOTA, TISSUE, DRY WGT REC (UG/G) (49248)
06186500	09-04-98	1230	Cutthroat Trout	79.1	6.6	<.2	.7	3.4	<.2
06187915	09-03-98	1400	Cutthroat Trout	79.8	4.6	<.3	1.1	3.4	<.3
06191500	08-27-98	1200	Brown Trout	70.6	3.3	<.4	<.4	<.1	<.4
06208500	08-26-98	1200	White Sucker	76.9	14.1	<.3	<.3	.3	<.3
06214500	08-25-98	1100	White Sucker	80.5	7.9	<.3	.8	.3	<.3
06279500	09-01-98	1030	Carp	74.2	11.7	<.2	1.1	.3	<.2
06279795	08-05-98	1302	*Brook Trout	73.2	147	<.2	.3	3.7	<.2
	10-29-98	1130	Brook Trout	76.7	7.4	<.6	<.6	<.1	<.6
06285500	10-30-98	0800	White Sucker	79.3	40.3	<.2	.9	.8	<.2
06289000	09-22-98	1100	Brown Trout	76.4	1.4	<.2	1.6	<.1	<.2
06295000	07-27-98	1202	Carp	67.2	15.8	<.2	1.2	.3	<.2
06298000	09-23-98	1100	Brown Trout	77.1	3.3	<.2	.8	<.1	<.2
06305700	09-21-98	1000	Carp	75.8	15.0	<.2	.5	.1	<.2
	09-21-98	1200	White Sucker	76.2	23.4	<.2	.3	.3	<.2
06306300	10-07-98	1700	White Sucker	76.5	1.5	<.1	.5	.1	<.1
06316400	07-31-98	1500	White Sucker	82.2	35.1	<.4	.7	1.0	<.4
06324970	10-09-98	0900	White Sucker	79.6	60.3	<.1	.5	.4	<.1
06329500	07-28-98	1332	Carp	65.6	43.1	<.1	.4	1.4	<.1
435602109095301	08-06-98	1212	*Brook Trout	74.1	57.0	<.2	<.2	3.6	<.2
445110108102901	09-02-98	1400	Carp	69.9	8.9	<.1	1.3	.2	<.1
445221108122601	09-02-98	1000	Carp	72.5	14.8	<.2	.7	.2	<.2
451753110334301	08-27-98	1600	Cutthroat Trout	77.0	1.2	<.4	.5	<.1	<.4
455905108081301	08-24-98	1302	White Trout	80.1	18.3	<.3	.3	.2	<.3

STATION NUMBER	DATE	SPECIES	BORON,	CADMIUM	CHROM-	COBALT,	COPPER,	IRON,
			BIOTA,	BIOTA,	IUM-,	BIOTA,	BIOTA,	BIOTA,
			TISSUE,	TISSUE,	TISSUE,	TISSUE,	TISSUE,	TISSUE,
			DRY WGT	DRY WGT	DRY WGT	DRY WGT	DRY WGT	DRY WGT
REC	REC	REC	REC	REC	REC	REC		
(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)		
(49239)	(49249)	(49240)	(49250)	(49241)	(49242)			
06186500	09-04-98	Cutthroat Trout	.3	.5	.7	<.2	229	889
06187915	09-03-98	Cutthroat Trout	.7	1.2	1.1	.6	207	757
06191500	08-27-98	Brown Trout	.6	<.4	<.5	<.4	200	295
06208500	08-26-98	White Sucker	.5	<.3	<.5	.3	20.6	677
06214500	08-25-98	White Sucker	.9	<.3	.6	<.3	80.1	782
06279500	09-01-98	Carp	<.2	41.2	<.5	.3	138	1300
06279795	08-05-98	*Brook Trout	.6	<.2	2.2	.4	4.0	437
	10-29-98	Brook Trout	2.3	<.6	.9	.8	71.9	878
06285500	10-30-98	White Sucker	.9	<.2	.6	.3	66.1	638
06289000	09-22-98	Brown Trout	.6	.3	.6	.4	397	489
06295000	07-27-98	Carp	.4	7.6	<.5	.3	78.2	677
06298000	09-23-98	Brown Trout	.9	<.2	.6	.3	194	450
06305700	09-21-98	Carp	.5	2.2	<.5	.4	62.5	369
	09-21-98	White Sucker	.6	<.2	<.5	<.2	48.2	344
06306300	10-07-98	White Sucker	.6	.2	.7	.3	55.5	212
06316400	07-31-98	White Sucker	1.2	1.0	.6	<.4	162	1080
06324970	10-09-98	White Sucker	.5	.2	.8	.3	98.8	358
06329500	07-28-98	Carp	.3	4.6	<.5	.2	62.0	660
435602109095301	08-06-98	*Brook Trout	.3	<.2	1.6	.5	5.3	138
445110108102901	09-02-98	Carp	.3	6.3	<.5	.3	62.2	457
445221108122601	09-02-98	Carp	.5	12.0	<.5	.3	71.3	892
451753110334301	08-27-98	Cutthroat Trout	.6	.6	.7	<.4	196	537
455905108081301	08-24-98	White Trout	.9	<.3	.6	<.3	7.4	1000

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Fish liver trace element analysis--Continued
(* Indicates whole-body analysis)

STATION NUMBER	DATE	SPECIES	LEAD, BIOTA, TISSUE, DRY WGT	MANGAN- ESE, BIOTA, TISSUE, DRY WGT	MERCURY BIOTA, TISSUE, DRY WGT	MOLYB- DENUM, BIOTA, TISSUE, DRY WGT	NICKEL, BIOTA, TISSUE, DRY WGT	SELEN- IUM, BIOTA, TISSUE, DRY WGT
			REC (UG/G) (49251)	REC (UG/G) (49243)	REC (UG/G) (49258)	REC (UG/G) (49252)	REC (UG/G) (49253)	REC (UG/G) (49254)
06186500	09-04-98	Cutthroat Trout	<.2	5.7	.54	.9	<.2	7.9
06187915	09-03-98	Cutthroat Trout	<.3	9.5	.09	1.3	<.3	22.0
06191500	08-27-98	Brown Trout	<.4	2.3	.1	.7	<.4	13.2
06208500	08-26-98	White Sucker	<.3	7.2	.3	.7	<.3	5.2
06214500	08-25-98	White Sucker	<.3	9.2	<.4	.9	<.3	5.5
06279500	09-01-98	Carp	.2	4.6	.77	1.7	<.2	11.5
06279795	08-05-98	*Brook Trout	<.2	12.5	.04	<.2	.5	2.9
	10-29-98	Brook Trout	<.6	3.9	<.6	.9	<.6	10.9
06285500	10-30-98	White Sucker	<.2	16.0	<.2	.7	.2	19.2
06289000	09-22-98	Brown Trout	<.2	3.7	.13	.9	<.2	44.9
06295000	07-27-98	Carp	<.2	6.6	.29	1.4	.2	7.8
06298000	09-23-98	Brown Trout	<.2	6.5	.14	.8	<.2	22.4
06305700	09-21-98	Carp	<.2	5.7	.33	1.6	<.2	8.4
	09-21-98	White Sucker	<.2	10.8	.08	.9	<.2	4.9
06306300	10-07-98	White Sucker	<.1	9.1	<.1	.9	<.1	6.7
06316400	07-31-98	White Sucker	<.4	12.4	<.4	1.3	<.4	11.7
06324970	10-09-98	White Sucker	<.1	7.4	.2	.7	<.1	6.4
06329500	07-28-98	Carp	.2	4.7	.14	.7	.3	5.7
435602109095301	08-06-98	*Brook Trout	<.2	5.8	.01	<.2	.4	2.8
445110108102901	09-02-98	Carp	<.1	4.7	.47	1.5	<.1	7.8
445221108122601	09-02-98	Carp	<.2	4.7	.71	1.8	<.2	9.2
451753110334301	08-27-98	Cutthroat Trout	<.4	4.8	<.080	.8	<.4	13.5
455905108081301	08-24-98	White Trout	<.3	4.4	<.3	.3	<.3	5.9

STATION NUMBER	DATE	SPECIES	SILVER, BIOTA, TISSUE, DRY WGT	STRON- TIUM, BIOTA, TISSUE, DRY WGT	VANA- DIUM BIO TIS DRY WGT	ZINC, BIOTA, TISSUE, DRY WGT	URANIUM BIOTA, TISSUE, DRY WGT
			REC (UG/G) (49255)	REC (UG/G) (49244)	REC (UG/G) (49465)	REC (UG/G) (49245)	REC (UG/G) (49257)
06186500	09-04-98	Cutthroat Trout	.6	.5	1.1	126	<.2
06187915	09-03-98	Cutthroat Trout	.3	.3	1.6	128	<.3
06191500	08-27-98	Brown Trout	<.4	.4	<.4	75.5	<.4
06208500	08-26-98	White Sucker	.3	1.0	.5	80.0	<.3
06214500	08-25-98	White Sucker	.5	1.2	.4	120	<.3
06279500	09-01-98	Carp	.3	2.1	2.9	882	<.2
06279795	08-05-98	*Brook Trout	<.2	39.1	1.5	60.7	<.2
	10-29-98	Brook Trout	<.6	.5	.7	103	<.6
06285500	10-30-98	White Sucker	.7	3.2	.6	113	<.2
06289000	09-22-98	Brown Trout	1.6	<.1	.4	90.2	<.2
06295000	07-27-98	Carp	.6	1.4	1.2	976	<.2
06298000	09-23-98	Brown Trout	2.3	<.1	.3	98.5	<.2
06305700	09-21-98	Carp	.5	.5	1.8	634	<.2
	09-21-98	White Sucker	.7	.5	.5	98.7	<.2
06306300	10-07-98	White Sucker	.3	.8	.3	115	<.1
06316400	07-31-98	White Sucker	1.0	2.1	.7	199	<.4
06324970	10-09-98	White Sucker	.6	1.6	.4	135	<.1
06329500	07-28-98	Carp	.3	1.0	.8	713	<.1
435602109095301	08-06-98	*Brook Trout	<.2	52.0	.3	66.2	<.2
445110108102901	09-02-98	Carp	.2	.7	2.2	856	<.1
445221108122601	09-02-98	Carp	.3	.8	3.4	762	<.2
451753110334301	08-27-98	Cutthroat Trout	<.4	.4	<.4	94.6	<.4
455905108081301	08-24-98	White Trout	<.3	.8	.5	61.2	<.3

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Fish whole body organic analysis

STATION NUMBER	DATE	TIME	SPECIES	LIPIDS, BIOTA, WH ORG WW, REC PERCENT (49289)	ALDRIN, BIOTA, WH ORG WW, REC (UG/KG) (49353)	ALPHA- BHC, BIOTA, WH ORG WW, REC (UG/KG) (49366)	BENZENE HEXA- CHLORO- BIOTA, WH ORG WW, REC (UG/KG) (49367)	BETA- BHC, BIOTA, WH ORG WW, REC (UG/KG) (49365)	CIS- CHLOR- DANE, BIOTA, WH ORG WW, REC (UG/KG) (49380)	CIS- NONA- CHLOR BIOTA WH ORG WW, REC (UG/KG) (49359)
06186500	09-04-98	1200	Cutthroat Trout	6.3	<5.0	<5.0	<5.0	<46	5.3	<5.0
06187915	09-03-98	1300	Cutthroat Trout	6.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06191500	08-27-98	1300	Brown Trout	6.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06208500	08-26-98	1300	White Sucker	8.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06214500	08-25-98	1302	White Sucker	4.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06279500	09-01-98	1200	Carp	4.1	<5.0	<5.0	<5.0	<17	<5.0	<5.0
06279795	10-29-98	1200	Brook Trout	4.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06285500	10-30-98	0830	White Sucker	1.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06289000	09-22-98	1000	Brown Trout	4.6	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06295000	07-27-98	1201	Carp	7.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06298000	09-23-98	1000	Brown Trout	4.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06305700	09-21-98	0900	Carp	4.8	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	09-21-98	1100	White Sucker	6.1	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06306300	10-07-98	1800	White Sucker	7.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06316400	07-31-98	1600	White Sucker	1.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06324970	10-09-98	0800	White Sucker	2.4	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06329500	07-28-98	1331	Carp	8.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
435602109095301	08-06-98	1211	Brook Trout	7.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
445110108102901	09-02-98	1500	Carp	5.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
445221108122601	09-02-98	1030	Carp	4.9	<5.0	<5.0	<5.0	<5.0	5.2	<5.0
451753110334301	08-27-98	1700	Cutthroat Trout	6.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
455905108081301	08-24-98	1301	White Sucker	5.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

STATION NUMBER	DATE	SPECIES	DCPA, BIOTA, WH ORG WW REC (UG/KG) (49378)	DELTA- BHC, BIOTA, WH ORG WW, REC (UG/KG) (49364)	DIEL- DRIN, BIOTA, WH ORG WW, REC (UG/KG) (49371)	ENDRIN, BIOTA, WH ORG WW, REC (UG/KG) (49370)	HEPTA- CHLOR EPOXIDE BIOTA, WH ORG WW, REC (UG/KG) (49368)	HEPTA- CHLOR, BIOTA, WH ORG WW, REC (UG/KG) (49369)	LINDANE BIOTA, WH ORG WW, REC (UG/KG) (49363)
06186500	09-04-98	Cutthroat Trout	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0
06187915	09-03-98	Cutthroat Trout	<5.0	<14	<5.0	<5.0	<5.0	<5.0	<8.8
06191500	08-27-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06208500	08-26-98	White Sucker	<5.0	<5.0	10	<5.0	<5.0	<5.0	<5.0
06214500	08-25-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06279500	09-01-98	Carp	<5.0	<17	8.8	<5.0	<5.4	<8.7	<5.0
06279795	10-29-98	Brook Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06285500	10-30-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06289000	09-22-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06295000	07-27-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06298000	09-23-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06305700	09-21-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	09-21-98	White Sucker	<5.0	<5.0	<5.0	<6.7	<5.0	<5.0	<5.0
06306300	10-07-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06316400	07-31-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06324970	10-09-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
06329500	07-28-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
435602109095301	08-06-98	Brook Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
445110108102901	09-02-98	Carp	<5.0	<23	7.6	<5.0	<5.0	<5.0	<5.0
445221108122601	09-02-98	Carp	<5.0	<49	17	<5.0	<7.0	<8.2	<5.0
451753110334301	08-27-98	Cutthroat Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
455905108081301	08-24-98	White Sucker	<5.0	<5.0	11	<5.0	<5.0	<5.0	<5.0

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Fish whole body organic analysis

STATION NUMBER	DATE	SPECIES	METHOXY	METHOXY		O, P'-	O, P'-	O, P'-	OXY-	
			CHLOR,	CHLOR,		DDD,	DDE,	DDT,	CHLOR	
			O, P'-,	P, P'-,	MIREX,	BIOTA,	BIOTA,	BIOTA,	DANE,	
			BIOTA,	BIOTA,	BIOTA,	BIOTA,	BIOTA,	BIOTA,	BIOTA,	
WH ORG	WH ORG	WH ORG	WH ORG	WH ORG	WH ORG	WH ORG	WH ORG	WH ORG		
WW, REC	WW, REC	WW, REC	WW, REC	WW, REC	WW, REC	WW, REC	WW, REC	WW, REC		
(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)		
(49362)	(49361)	(49360)	(49374)	(49373)	(49377)	(49357)				
06186500	09-04-98	Cutthroat Trout	<5.0	<5.0	<5.0	<12	<5.0	<5.0	<5.0	
06187915	09-03-98	Cutthroat Trout	<5.0	<5.0	<5.0	<5.0	<12	<5.0	<5.0	
06191500	08-27-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06208500	08-26-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<11	<5.0	<5.0	
06214500	08-25-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06279500	09-01-98	Carp	<5.0	8.4	<5.0	6.6	<5.0	<5.0	<5.0	
06279795	10-29-98	Brook Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06285500	10-30-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06289000	09-22-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06295000	07-27-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06298000	09-23-98	Brown Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06305700	09-21-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	09-21-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06306300	10-07-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06316400	07-31-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06324970	10-09-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
06329500	07-28-98	Carp	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
435602109095301	08-06-98	Brook Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
445110108102901	09-02-98	Carp	<5.0	<5.0	<5.0	<5.0	<7.7	<5.0	5.3	
445221108122601	09-02-98	Carp	<5.0	6.2	<5.0	<5.0	<5.0	<5.0	<47	
451753110334301	08-27-98	Cutthroat Trout	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
455905108081301	08-24-98	White Sucker	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
STATION NUMBER	DATE	SPECIES	P, P'-	P, P'-	P, P'-	PCB,	PENTA	TOXA-	TRANS-	TRANS-
			DDD,	DDE,	DDT,		CHLORO		CHLOR-	NONA-
			BIOTA,	BIOTA,	BIOTA,	BIOTA,	ANISOLE	PHENE,	DANE,	CHLOR,
			WH ORG	WH ORG	WH ORG	WH ORG	BIOTA,	BIOTA,	BIOTA,	BIOTA,
			WW, REC	WW, REC	WW, REC	WW, REC	WH ORG	WH ORG	WH ORG	WH ORG
			(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)	(UG/KG)
			(49375)	(49372)	(49376)	(49354)	(49356)	(49355)	(49379)	(49358)
06186500	09-04-98	Cutthroat Trout	6.9	51	6.3	<50	<5.0	<200	<5.0	<5.0
06187915	09-03-98	Cutthroat Trout	<5.0	7.4	<5.0	<50	<5.0	<200	<5.0	<5.0
06191500	08-27-98	Brown Trout	<5.0	19	<5.0	<50	<5.0	<200	<5.0	<5.0
06208500	08-26-98	White Sucker	5.4	24	<5.0	<50	E5.0	<200	<5.0	<7.7
06214500	08-25-98	White Sucker	<5.0	6.7	<5.0	<50	<5.0	<200	<5.0	<5.0
06279500	09-01-98	Carp	<5.0	39	<5.0	<50	<5.0	<200	5.1	<5.0
06279795	10-29-98	Brook Trout	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
06285500	10-30-98	White Sucker	<5.0	10	<5.0	<50	<5.0	<200	<5.0	<5.0
06289000	09-22-98	Brown Trout	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
06295000	07-27-98	Carp	<5.0	17	<5.0	<50	<5.0	<200	<5.0	<5.0
06298000	09-23-98	Brown Trout	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
06305700	09-21-98	Carp	8.6	58	<5.0	190	<5.0	<200	<5.0	5.9
	09-21-98	White Sucker	<5.0	13	<5.0	50	<5.0	<200	<5.0	5.4
06306300	10-07-98	White Sucker	<5.0	11	<5.0	56	<5.0	<200	<5.0	<5.0
06316400	07-31-98	White Sucker	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
06324970	10-09-98	White Sucker	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
06329500	07-28-98	Carp	<5.0	E13	<5.0	<50	<5.0	<200	<5.0	<5.0
435602109095301	08-06-98	Brook Trout	<5.0	<5.0	<5.0	<50	<5.0	<200	<5.0	<5.0
445110108102901	09-02-98	Carp	7.2	43	<5.0	<50	<5.0	<200	<5.0	6.4
445221108122601	09-02-98	Carp	5.8	51	<5.0	<50	<5.0	<200	<5.0	6.7
451753110334301	08-27-98	Cutthroat Trout	<5.0	35	5.7	<50	<5.0	<200	<5.0	<5.0
455905108081301	08-24-98	White Sucker	5.7	7.8	<5.0	<50	<5.0	<200	<5.0	<5.0

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment trace metal analysis - sieved <63 microns

STATION NUMBER	DATE	TIME	CALCIUM	MAGNE-	PHOS-	POTAS-	SODIUM	SULFUR	CARBON, INORG,	CARBON, ORGANIC
			BOT MAT <63U WS FIELD PERCENT (34830)	SIMUM BOT MAT <63U WS FIELD PERCENT (34900)	BOT MAT <63U WS FIELD PERCENT (34935)	SIMUM BOT MAT <63U WS FIELD PERCENT (34940)	BOT MAT <63U WS FIELD PERCENT (34960)	BOT MAT <63U WS FIELD PERCENT (34970)	SED, BM WS, <63U DW, REC (PER- CENT) (49269)	SED, BM WS, <63U DW, REC (PER- CENT) (49266)
06186500	09-03-98	1404	2.2	1.2	.094	1.7	1.8	.06	.01	1.89
06187915	09-03-98	1904	4.7	4.0	.10	1.7	2.2	<.05	.07	.63
06191500	08-27-98	1004	3.0	2.1	.10	1.6	1.5	.25	.12	1.15
06208500	08-26-98	1104	3.3	2.2	.1	2.1	.67	.05	.7	1
06214500	08-25-98	1304	2.7	1.8	.10	1.9	.95	.16	.62	1.31
06279500	09-01-98	0934	1.9	.97	.074	1.7	.49	<.05	.58	.47
06279795	08-05-98	1234	3.2	2.4	.16	1.4	1.7	<.05	.01	1.97
06285500	09-01-98	1644	2.9	1.5	.090	1.8	.67	<.05	1.14	.30
06289000	09-22-98	1334	11	2.3	.11	2.0	.19	.06	3.63	3.08
06295000	07-27-98	1134	2.8	1.5	.10	1.7	.92	.09	.71	.72
06298000	09-23-98	1204	5.1	1.8	.14	2.0	.51	.11	1.73	3.46
06305700	09-21-98	1304	3.3	1.6	.11	1.6	.37	.17	1.19	2.37
06306300	09-24-98	1234	3.5	1.6	.10	1.7	.35	.11	1.23	1.96
06313400	08-03-98	1304	2.0	1.5	.068	2.1	.38	.07	.65	.64
06316400	07-31-98	0934	1.9	1.2	.079	1.9	.34	.08	.65	.77
06324970	07-30-98	1604	2.0	.92	.042	1.6	.26	.24	.53	.94
06326500	07-29-98	1104	3.7	1.2	.085	1.8	.44	.12	1.23	.78
06329500	07-28-98	1104	2.7	1.4	.092	1.8	.77	.06	.83	.69
435440109152501	08-04-98	1904	3.0	2.2	.16	1.7	1.9	<.05	.10	.25
435602109095301	08-06-98	1204	2.9	2.3	.14	1.6	1.8	<.05	.05	.54
445110108102901	09-02-98	1524	1.7	1.6	.081	2.0	.29	<.05	.37	.54
445221108122601	09-02-98	0904	2.7	1.3	.085	1.8	.52	.05	.98	.54
451753110334301	08-27-98	1704	2	1.1	.15	1.9	1.4	.05	.02	3.14
455905108081301	09-25-98	1134	2.1	1.5	.11	1.8	1.1	.19	.37	1.30
STATION NUMBER	DATE	CARBON, ORG + INORG, SED, BM WS, <63U DW, REC PERCENT (49267)	ALUM-	ANTI-	ARSENIC	BARIUM	BERYL-	BISMUTH	CADMIUM	CERIUM
			INUM BOT MAT <63U WS FIELD PERCENT (34790)	MONY BOT MAT <63U WS FIELD (UG/G) (34795)	BOT MAT <63U WS FIELD (UG/G) (34800)	BOT MAT <63U WS FIELD (UG/G) (34805)	LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BOT MAT <180UWS FIELD (UG/G) (34816)	BOT MAT <63U WS FIELD (UG/G) (34825)	BOT MAT <63U WS FIELD (UG/G) (34835)
06186500	09-03-98	1.90	6.5	.9	15	1100	2	<1	.1	78
06187915	09-03-98	.70	9.2	.2	2.3	1400	1	<1	.2	61
06191500	08-27-98	1.27	6.8	1	41	1000	2	<1	.3	88
06208500	08-26-98	1.7	6.9	.5	6	640	2	<1	.3	68
06214500	08-25-98	1.93	6.6	.7	15	800	2	<1	.3	67
06279500	09-01-98	1.05	5.2	.6	6.1	690	1	<1	.2	65
06279795	08-05-98	1.98	7.6	.2	3.6	1200	2	<1	.1	69
06285500	09-01-98	1.44	5.6	.6	8.6	700	2	<1	.2	68
06289000	09-22-98	6.71	5.1	.2	4.3	370	1	<1	.2	71
06295000	07-27-98	1.43	6.0	.5	11	780	2	<1	.2	70
06298000	09-23-98	5.19	5.4	.2	4.3	640	1	<1	.2	120
06305700	09-21-98	3.56	5.8	.5	5.2	530	1	<1	.4	72
06306300	09-24-98	3.19	6.3	.5	6.1	560	2	<1	.3	72
06313400	08-03-98	1.29	7.5	.9	7.8	650	3	<1	.3	63
06316400	07-31-98	1.42	5.7	.8	7.6	650	2	<1	.4	70
06324970	07-30-98	1.47	8.4	.8	4.9	510	2	<1	.3	60
06326500	07-29-98	2.01	6.0	.7	8.0	720	2	<1	.3	70
06329500	07-28-98	1.52	5.7	.6	8.8	810	2	<1	.2	69
435440109152501	08-04-98	.35	8.3	.1	3.6	1500	2	<1	.2	110
435602109095301	08-06-98	.59	7.8	.2	7.4	1400	2	<1	.2	96
445110108102901	09-02-98	.91	9.7	.8	6.7	590	2	<1	.5	81
445221108122601	09-02-98	1.52	5.6	.5	7.5	610	2	<1	.2	63
451753110334301	08-27-98	3.16	7.1	.5	7	1200	2	<1	.4	79
455905108081301	09-25-98	1.67	7.1	.5	12	730	1	<1	.3	58

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment trace metal analysis - sieved <63 microns--Continued.

STATION NUMBER	DATE	CHRO-	COBALT	COPPER	EURO-	GALLIUM	GOLD	HOLMIUM	IRON	LANTHA-
		MNIUM	BOT MAT	BOT MAT	PIUM	BOT MAT	BOT MAT	BOT MAT	BOT MAT	NUM
		<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS
		FIELD (UG/G) (34840)	FIELD (UG/G) (34845)	FIELD (UG/G) (34850)	FIELD (UG/G) (34855)	FIELD (UG/G) (34860)	FIELD (UG/G) (34870)	FIELD (UG/G) (34875)	PERCENT (34880)	FIELD (UG/G) (34885)
06186500	09-03-98	130	11	17	1	16	<1	1	2.4	48
06187915	09-03-98	170	28	43	1	14	<1	<1	5.2	32
06191500	08-27-98	180	24	39	1	17	<1	1	5.5	53
06208500	08-26-98	78	17	42	1	17	<1	<1	4.2	38
06214500	08-25-98	100	14	36	1	15	<1	1	3.6	40
06279500	09-01-98	63	7	18	1	12	<1	1	2.0	39
06279795	08-05-98	160	23	38	1	18	<1	<1	4.8	42
06285500	09-01-98	66	8	18	1	13	<1	1	2.4	40
06289000	09-22-98	55	8	11	<1	10	<1	1	2.2	37
06295000	07-27-98	93	11	23	1	14	<1	<1	2.9	41
06298000	09-23-98	62	9	14	2	11	<1	2	2.7	74
06305700	09-21-98	54	9	17	1	12	<1	1	2.3	39
06306300	09-24-98	56	10	17	1	13	<1	1	2.7	40
06313400	08-03-98	74	10	22	1	18	<1	<1	2.9	39
06316400	07-31-98	53	8	19	1	13	<1	<1	2.3	41
06324970	07-30-98	73	9	20	1	20	<1	<1	2.4	36
06326500	07-29-98	68	8	19	1	14	<1	<1	2.5	42
06329500	07-28-98	74	10	20	1	13	<1	<1	2.5	41
435440109152501	08-04-98	120	20	64	2	19	<1	<1	3.6	65
435602109095301	08-06-98	130	21	67	2	18	<1	<1	3.9	59
445110108102901	09-02-98	86	12	22	1	21	<1	1	3.3	46
445221108122601	09-02-98	68	9	21	1	13	<1	1	2.5	37
451753110334301	08-27-98	100	18	39	2	18	<1	<1	4.6	46
455905108081301	09-25-98	83	11	23	1	14	<1	1	3.0	37

STATION NUMBER	DATE	LEAD	LITHIUM	MANGA- NESE	MERCURY	MOLYB- DENUM	NEODYM- IUM	NICKEL	NIOBIUM	SCAN- DIUM
		BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT
		<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	<63U WS
		FIELD (UG/G) (34890)	FIELD (UG/G) (34895)	FIELD (UG/G) (34905)	FIELD (UG/G) (34910)	FIELD (UG/G) (34915)	FIELD (UG/G) (34920)	FIELD (UG/G) (34925)	FIELD (UG/G) (34930)	FIELD (UG/G) (34945)
06186500	09-03-98	22	20	370	.05	1	34	41	20	7
06187915	09-03-98	23	20	920	.02	<.5	25	88	7	19
06191500	08-27-98	21	20	720	.20	1	38	51	19	14
06208500	08-26-98	18	30	550	.06	.9	34	38	10	12
06214500	08-25-98	29	30	630	.04	.9	31	36	14	10
06279500	09-01-98	17	30	350	.02	.6	30	21	14	6
06279795	08-05-98	20	20	830	.03	.5	30	52	7	14
06285500	09-01-98	18	30	380	.03	.9	31	23	15	6
06289000	09-22-98	12	30	460	.02	.7	31	26	10	7
06295000	07-27-98	18	30	470	.03	.6	32	38	8	10
06298000	09-23-98	18	30	410	.03	<.5	62	21	12	8
06305700	09-21-98	20	30	760	.04	.7	33	21	11	7
06306300	09-24-98	17	30	770	.05	.9	32	22	12	7
06313400	08-03-98	23	40	350	.04	.8	30	25	11	11
06316400	07-31-98	18	30	380	.03	1	33	20	10	8
06324970	07-30-98	21	40	400	.06	.9	26	20	12	11
06326500	07-29-98	18	40	370	.03	1	33	22	10	9
06329500	07-28-98	17	20	420	.03	.7	33	24	9	9
435440109152501	08-04-98	36	20	670	<.02	1	44	58	10	12
435602109095301	08-06-98	33	20	670	.02	.9	39	60	10	12
445110108102901	09-02-98	23	50	350	.04	1	37	31	17	11
445221108122601	09-02-98	18	30	470	.03	.8	29	25	14	7
451753110334301	08-27-98	37	20	710	.09	1	35	39	10	12
455905108081301	09-25-98	18	30	490	.04	.9	30	27	11	9

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment trace metal analysis - sieved <63 microns--Continued.

STATION NUMBER	DATE	SELE-	SILVER	STRON-	TANTA-	THAL-	TITA-	VANA-
		NIUM		TIUM	LUM	LIIUM	NIUM,	
		BOT MAT	BOT MAT	BOT MAT	BOT MAT	BED MAT	SED, BM	DIIUM
		<63U WS	<63U WS	<63U WS	<63U WS	D SIEVE	WS, <63U	BOT MAT
		FIELD	FIELD	FIELD	FIELD	TOTAL	REC	FIELD
	(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)	PERCENT	(UG/G)
		(34950)	(34955)	(34965)	(34975)	(04064)	(34985)	(49274)
								(35005)
06186500	09-03-98	.1	.7	600	1	<1	2	.30
06187915	09-03-98	.1	.7	760	<1	<1	1	.50
06191500	08-27-98	.4	.7	560	1	<1	2	.51
06208500	08-26-98	.5	<1	310	1	<1	2	.33
06214500	08-25-98	.7	.5	320	1	<1	2	.35
06279500	09-01-98	.4	.5	170	<1	<1	1	.29
06279795	08-05-98	.4	.4	660	<1	<1	1	.47
06285500	09-01-98	.6	.5	200	<1	<1	2	.27
06289000	09-22-98	.8	<1	150	<1	<1	2	.27
06295000	07-27-98	.5	.7	280	1	<1	2	.36
06298000	09-23-98	1.1	<1	150	<1	<1	2	.34
06305700	09-21-98	.8	<1	160	<1	<1	3	.28
06306300	09-24-98	.6	.1	170	<1	<1	3	.25
06313400	08-03-98	.6	.6	190	1	<1	3	.32
06316400	07-31-98	.7	.6	120	1	<1	2	.32
06324970	07-30-98	.5	.6	190	1	<1	3	.39
06326500	07-29-98	.7	.7	190	1	<1	2	.32
06329500	07-28-98	.4	.5	210	1	<1	2	.34
435440109152501	08-04-98	.1	.6	740	1	<1	1	.43
435602109095301	08-06-98	.2	.5	680	2	<1	1	.44
445110108102901	09-02-98	.5	<1	170	1	<1	4	.39
445221108122601	09-02-98	.6	.5	180	<1	<1	2	.28
451753110334301	08-27-98	.7	<1	380	1	<1	2	.41
455905108081301	09-25-98	.7	<1	320	<1	<1	2	.32

STATION NUMBER	DATE	YTTER-	YTTRIUM	ZINC	THORIUM	URANIUM	BED MAT. SIEVE
		BIUM					
		BOT MAT	BOT MAT	BOT MAT	BOT MAT	BOT MAT	DIAM.
		<63U WS	<63U WS	<63U WS	<63U WS	<63U WS	% FINER
		FIELD	FIELD	FIELD	FIELD	FIELD	THAN
		(UG/G)	(UG/G)	(UG/G)	(UG/G)	(UG/G)	.062 MM
		(35015)	(35010)	(35020)	(34980)	(35000)	(80164)
06186500	09-03-98	2	22	65	9.0	2.0	100
06187915	09-03-98	1	8	76	3.6	.85	100
06191500	08-27-98	2	23	100	9.4	1.7	100
06208500	08-26-98	2	20	100	10	3	100
06214500	08-25-98	2	21	100	9.6	2.5	100
06279500	09-01-98	2	20	71	11	2.7	100
06279795	08-05-98	1	14	88	6.6	2.1	100
06285500	09-01-98	2	22	76	11	2.7	100
06289000	09-22-98	3	24	53	12	2.3	100
06295000	07-27-98	2	20	75	12	3.0	100
06298000	09-23-98	5	34	53	22	3.8	100
06305700	09-21-98	3	22	93	12	2.8	100
06306300	09-24-98	3	20	75	12	2.7	100
06313400	08-03-98	2	20	96	12	3.7	100
06316400	07-31-98	2	21	68	13	3.6	100
06324970	07-30-98	2	17	87	12	3.6	100
06326500	07-29-98	2	22	76	13	4.0	100
06329500	07-28-98	2	20	67	11	3.3	100
435440109152501	8-04-98	1	14	80	11	2.3	100
435602109095301	08-06-98	1	13	83	9.9	2.3	100
445110108102901	09-02-98	3	26	110	14	4.0	100
445221108122601	09-02-98	2	21	80	10	2.6	100
451753110334301	08-27-98	2	19	120	9.3	3.6	100
455905108081301	09-25-98	3	21	86	10	2.7	100

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters

STATION NUMBER	DATE	TIME	2,2'-BI QUINO- LINE, SED, BM WS, <2MM DW, REC (UG/KG) (49391)	3,5- XYLENOL SED, BM WS, <2MM DW, REC (UG/KG) (49421)	4-BROMO PHNPHNL ETHER SED, BM WS, <2MM DW, REC (UG/KG) (49454)	4CHLORO PHNPHN LETHRE SED, BM WS, <2MM DW, REC (UG/KG) (49455)	4HCYPEN PHENAN THRENE SED, BM WS, <2MM DW, REC (UG/KG) (49411)	9,10- ANTHRA- QUINONE SED, BM WS, <2MM DW, REC (UG/KG) (49437)	9H-FLU- ORENE, 1METHYL SED, BM WS, <2MM DW, REC (UG/KG) (49398)
06186500	09-03-98	1405	<50	<50	<50	<50	<50	<50	<50
06187915	09-03-98	1905	<50	<50	<50	<50	<50	<50	<50
06191500	08-27-98	1005	<50	<50	<50	<50	<50	<50	<50
06208500	08-26-98	1105	<50	<50	<50	<50	<50	<50	<50
06214500	08-25-98	1305	<50	<50	<50	<50	<50	<50	<50
06279500	09-01-98	0935	<50	<50	<50	<50	<50	<50	<50
06279795	08-05-98	1235	<50	<50	<50	<50	<50	<50	<50
06285500	09-01-98	1645	<50	<50	<50	<50	<50	<50	<50
06289000	09-22-98	1335	<100	<100	<100	<100	<100	<100	<100
06295000	07-27-98	1135	<50	<50	<50	<50	<50	<50	<50
06298000	09-23-98	1205	<50	E29	<50	<50	<50	<50	<50
06305700	09-21-98	1305	<50	E13	<50	<50	E8	E42	<50
06306300	09-24-98	1235	<50	<50	<50	<50	<50	<50	<50
06313400	08-03-98	1305	<50	<50	<50	<50	<50	<50	<50
06316400	07-31-98	0935	<50	<50	<50	<50	<50	<50	<50
06324970	07-30-98	1605	<50	<50	<50	<50	<50	<50	<50
06326500	07-29-98	1105	<50	<50	<50	<50	<50	<50	<50
06329500	07-28-98	1105	<50	<50	<50	<50	<50	<50	<50
435602109095301	08-06-98	1205	<50	<50	<50	<50	<50	<50	<50
445110108102901	09-02-98	1525	<50	<50	<50	<50	<50	<50	<50
445221108122601	09-02-98	0905	<50	<50	<50	<50	<50	<50	<50
451753110334301	08-27-98	1705	<50	<50	<50	<50	<50	<50	<50
455905108081301	09-25-98	1135	<50	<50	<50	<50	<50	<50	<50

STATION NUMBER	DATE	9H-FLU- ORENE SED, BM WS, <2MM DW, REC (UG/KG) (49399)	ACENAPH THENE SED, BM WS, <2MM DW, REC (UG/KG) (49429)	ACENAPH THYLENE SED, BM WS, <2MM DW, REC (UG/KG) (49428)	ACRI- DINE SED, BM WS, <2MM DW, REC (UG/KG) (49430)	ALDRIN, SED, BM WS, <2MM DW, REC (UG/KG) (49319)	ALPHA- BHC, SED, BM WS, <2MM DW, REC (UG/KG) (49338)	ANTHRA- CENE, 2- METHYL- SED, BM WS, <2MM DW, REC (UG/KG) (49435)	ANTHRA- CENE SED, BM WS, <2MM DW, REC (UG/KG) (49434)	AZO- BENZENE SED, BM WS, <2MM DW, REC (UG/KG) (49443)
06186500	09-03-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06187915	09-03-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06191500	08-27-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06208500	08-26-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06214500	08-25-98	<50	<50	<50	<50	<1.0	<1.0	<50	E12	<50
06279500	09-01-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06279795	08-05-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06285500	09-01-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06289000	09-22-98	<100	<100	<100	<100	<3	<3	<100	<100	<100
06295000	07-27-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06298000	09-23-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06305700	09-21-98	E10	E5	<50	E2	<1.0	<1.0	E2	E43	<50
06306300	09-24-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06313400	08-03-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06316400	07-31-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06324970	07-30-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06326500	07-29-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
06329500	07-28-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
435602109095301	08-06-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
445110108102901	09-02-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
445221108122601	09-02-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
451753110334301	08-27-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50
455905108081301	09-25-98	<50	<50	<50	<50	<1.0	<1.0	<50	<50	<50

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters--Continued

		BENZ (A) ANTHRA- CENE SED, BM WS, <2MM DW, REC (UG/KG) (49436)	BENZENE 124TRI- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49438)	BENZENE HEXA- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49343)	BENZENE M-DI- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49441)	BENZENE NITRO- SED, BM WS, <2MM DW, REC (UG/KG) (49444)	BENZENE O-DI- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49439)	BENZENE P-DI- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49442)	BENZENE PNTCHLR NITRO- SED, BM WS, <2MM DW, REC (UG/KG) (49446)	BENZO (A) PYRENE SED, BM WS, <2MM DW, REC (UG/KG) (49389)	
	06186500	09-03-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06187915	09-03-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06191500	08-27-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06208500	08-26-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06214500	08-25-98	E22	<50	<1.0	<50	<50	<50	<50	E26	
	06279500	09-01-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06279795	08-05-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06285500	09-01-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06289000	09-22-98	<100	<100	<3	<100	<100	<100	<100	<100	
	06295000	07-27-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06298000	09-23-98	<50	<50	<1.0	<50	<50	<50	<50	E1	
	06305700	09-21-98	75	<50	<1.0	<50	<50	<50	<50	79	
	06306300	09-24-98	<50	<50	<1.0	<50	<50	<50	<50	E5	
	06313400	08-03-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06316400	07-31-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06324970	07-30-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06326500	07-29-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	06329500	07-28-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	435602109095301	08-06-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	445110108102901	09-02-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	445221108122601	09-02-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	451753110334301	08-27-98	<50	<50	<1.0	<50	<50	<50	<50	<50	
	455905108081301	09-25-98	<50	<50	<1.0	<50	<50	<50	<50	E2	
STATION NUMBER	DATE	BENZOB FLUOR- ANTHENE SED, BM WS, <2MM DW, REC (UG/KG) (49458)	BENZO(G HI)PERY LENE SED, BM WS, <2MM DW, REC (UG/KG) (49408)	BENZO K FLUOR- ANTHENE SED, BM WS, <2MM DW, REC (UG/KG) (49397)	BENZOCIN NNOLINE BED MAT WS <2MM DRY WGT REC (UG/KG) (49468)	BETA- BHC, SED, BM WS, <2MM DW, REC (UG/KG) (49339)	CARBA- ZOLE SED, BM WS, <2MM DW, REC (UG/KG) (49449)	CHLORO- NEB, SED, BM WS, <2MM DW, REC (UG/KG) (49322)	CHRY- SENE SED, BM WS, <2MM DW, REC (UG/KG) (49450)	CIS- CHLOR- DANE, SED, BM WS, <2MM DW, REC (UG/KG) (49320)	CIS- NONA- CHLOR, SED, BM WS, <2MM DW, REC (UG/KG) (49316)
	06186500	09-03-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06187915	09-03-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06191500	08-27-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06208500	08-26-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06214500	08-25-98	E26	E24	E24	<50	<1.0	<50	<5.0	E17	<1.0
	06279500	09-01-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06279795	08-05-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06285500	09-01-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06289000	09-22-98	<100	<100	<100	<100	<3	<100	<15	<100	<3
	06295000	07-27-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06298000	09-23-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06305700	09-21-98	120	52	E41	<50	<1.0	E10	<5.0	110	<1.0
	06306300	09-24-98	E8	E10	<50	<50	<1.0	<50	<5.0	E.3	<1.0
	06313400	08-03-98	E9	<50	E11	<50	<1.0	<50	<5.0	<50	<1.0
	06316400	07-31-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06324970	07-30-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06326500	07-29-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	06329500	07-28-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	435602109095301	08-06-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	445110108102901	09-02-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	445221108122601	09-02-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	451753110334301	08-27-98	<50	<50	<50	<50	<1.0	<50	<5.0	<50	<1.0
	455905108081301	09-25-98	E5	E7	<50	<50	<1.0	<50	<5.0	<50	<1.0

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters--Continued

STATION NUMBER	DATE	CIS- PER- METHRIN SED, BM WS, <2MM DW, REC (UG/KG) (49349)	DCPA, SED, BM WS, <2MM DW, REC (UG/KG) (49324)	DIBENZ (AH), AN THRACEN SED, BM WS, <2MM DW, REC (UG/KG) (49461)	DIEL- DRIN, SED, BM WS, <2MM DW, REC (UG/KG) (49331)	DIPHNYL AMINE, N NITROSO SED, BM WS, <2MM DW, REC (UG/KG) (49433)	DPROPYL AMINE, N NITROSO SED, BM WS, <2MM DW, REC (UG/KG) (49431)	ENDO- SULFAN I, SED, BM WS, <2MM DW, REC (UG/KG) (49332)	ENDRIN, SED, BM WS, <2MM DW, REC (UG/KG) (49335)	FLUOR- ANTHENE BED MAT WS <2MM DRY WGT REC (UG/KG) (49466)	HEPTA- CHLOR EPOXIDE SED, BM WS, <2MM DW, REC (UG/KG) (49342)
06186500	09-03-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06187915	09-03-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06191500	08-27-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06208500	08-26-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06214500	08-25-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	E31	<1.0
06279500	09-01-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06279795	08-05-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06285500	09-01-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06289000	09-22-98	<15	<15	<100	<3	<100	<100	<3	<6	<100	<3
06295000	07-27-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06298000	09-23-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06305700	09-21-98	<5.0	<5.0	E19	<1.0	<50	<50	<1.0	<2.0	210	<1.0
06306300	09-24-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	E.007	<1.0
06313400	08-03-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06316400	07-31-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06324970	07-30-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06326500	07-29-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
06329500	07-28-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
435602109095301	08-06-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
445110108102901	09-02-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
445221108122601	09-02-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
451753110334301	08-27-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	<50	<1.0
455905108081301	09-25-98	<5.0	<5.0	<50	<1.0	<50	<50	<1.0	<2.0	E.6	<1.0

STATION NUMBER	DATE	HEPTA- CHLOR, SED, BM WS, <2MM DW, REC (UG/KG) (49341)	INDENO 123-CD PYRENE SED, BM WS, <2MM DW, REC (UG/KG) (49390)	ISODRIN SED, BM WS, <2MM DW, REC (UG/KG) (49344)	ISOPHOR ONE SED, BM WS, <2MM DW, REC (UG/KG) (49400)	ISO- QUINO- LINE, LINDANE SED, BM WS, <2MM DW, REC (UG/KG) (49394)	M-CRE- SOL, 4- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49422)	METHANE 2CHLORO ETHOXY SED, BM WS, <2MM DW, REC (UG/KG) (49401)	METHOXY O, P'-, SED, BM WS, <2MM DW, REC (UG/KG) (49347)
06186500	09-03-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06187915	09-03-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06191500	08-27-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06208500	08-26-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06214500	08-25-98	<1.0	E27	<1.0	<50	<50	<1.0	<50	<5.0
06279500	09-01-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06279795	08-05-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06285500	09-01-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06289000	09-22-98	<3	<100	<3	<100	<100	<3	<100	<15
06295000	07-27-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06298000	09-23-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06305700	09-21-98	<1.0	E47	<1.0	<50	<50	<1.0	<50	<5.0
06306300	09-24-98	<1.0	E12	<1.0	<50	<50	<1.0	<50	<5.0
06313400	08-03-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06316400	07-31-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06324970	07-30-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06326500	07-29-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
06329500	07-28-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
435602109095301	08-06-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
445110108102901	09-02-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
445221108122601	09-02-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
451753110334301	08-27-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0
455905108081301	09-25-98	<1.0	<50	<1.0	<50	<50	<1.0	<50	<5.0

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters--Continued

STATION NUMBER	DATE	METHOXY CHLOR P, P'-, SED, BM WS, <2MM DW, REC (UG/KG) (49346)	MIREX SED, BM WS, <2MM DW, REC (UG/KG) (49348)	NAPHTHAL ENE, 12 DIMETHL SED, BM WS, <2MM DW, REC (UG/KG) (49403)	NAPHTHAL ENE, 16 DIMETHL SED, BM WS, <2MM DW, REC (UG/KG) (49404)	NAPHTHAL ENE, 236 TRIMETH SED, BM WS, <2MM DW, REC (UG/KG) (49405)	NAPHTHAL ENE, 26 DIMETHL SED, BM WS, <2MM DW, REC (UG/KG) (49406)	NAPHTHAL ENE, 2- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49407)	NAPHTHAL ENE, 2- ETHYL- SED, BM WS, <2MM DW, REC (UG/KG) (49948)	NAPHTH- ALENE, SED, BM WS, <2MM DW, REC (UG/KG) (49402)	O, P'- DDD, SED, BM WS, <2MM DW, REC (UG/KG) (49325)
06186500	09-03-98	<5.0	<1.0	<50	<50	<50	E18	<50	<50	<50	<1.0
06187915	09-03-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06191500	08-27-98	<5.0	<1.0	<50	E2	<50	E15	<50	<50	<50	<1.0
06208500	08-26-98	<5.0	<1.0	<50	<50	<50	E46	<50	<50	<50	<1.0
06214500	08-25-98	<5.0	<1.0	<50	E8	<50	E24	<50	E10	<50	<1.0
06279500	09-01-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06279795	08-05-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06285500	09-01-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06289000	09-22-98	<15	<3	<100	E13	<100	190	<100	<100	<100	<3
06295000	07-27-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06298000	09-23-98	<5.0	<1.0	<50	<50	<50	E50	<50	<50	<50	<1.0
06305700	09-21-98	<5.0	<1.0	<50	<50	<50	110	<50	<50	E20	<1.0
06306300	09-24-98	<5.0	<1.0	<50	E5	<50	78	<50	<50	<50	<1.0
06313400	08-03-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06316400	07-31-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06324970	07-30-98	<5.0	<1.0	<50	<50	<50	E27	<50	<50	<50	<1.0
06326500	07-29-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
06329500	07-28-98	<5.0	<1.0	<50	<50	<50	<50	<50	E1	<50	<1.0
435602109095301	08-06-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
445110108102901	09-02-98	<5.0	<1.0	<50	<50	<50	E13	<50	<50	<50	<1.0
445221108122601	09-02-98	<5.0	<1.0	<50	<50	<50	E12	<50	<50	<50	<1.0
451753110334301	08-27-98	<5.0	<1.0	<50	<50	<50	<50	<50	<50	<50	<1.0
455905108081301	09-25-98	<5.0	<1.0	<50	E7	<50	52	<50	<50	E4	<1.0

STATION NUMBER	DATE	O, P'- DDE, SED, BM WS, <2MM DW, REC (UG/KG) (49327)	O, P'- DDT, SED, BM WS, <2MM DW, REC (UG/KG) (49329)	OXY- CHLOR- DANE, SED, BM WS, <2MM DW, REC (UG/KG) (49318)	P, P'- DDD, SED, BM WS, <2MM DW, REC (UG/KG) (49326)	P, P'- DDE, SED, BM WS, <2MM DW, REC (UG/KG) (49328)	P, P'- DDT, SED, BM WS, <2MM DW, REC (UG/KG) (49330)	PCB, SED, BM WS, <2MM DW, REC (UG/KG) (49459)	P- CRESOL SED, B WS, <2M DW, RE (UG/KG) (49451)	PENTA- CHLORO- ANISOLE SED, BM WS, <2MM DW, REC (UG/KG) (49460)	PHENAN THRENE 1METHYL SED, BM WS, <2MM DW, REC (UG/KG) (49410)	PHENAN THRENE SED, BM WS, <2MM DW, REC (UG/KG) (49409)
06186500	09-03-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	150	<1.0	<50	<50
06187915	09-03-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06191500	08-27-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	120	<1.0	<50	<50
06208500	08-26-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	E39	<1.0	<50	<50
06214500	08-25-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	390	<1.0	<50	E7
06279500	09-01-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06279795	08-05-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06285500	09-01-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06289000	09-22-98	<3	<6	<3	<3	<6	<150	7400	<3	<100	<100	<100
06295000	07-27-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06298000	09-23-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	1200	<1.0	<50	<50
06305700	09-21-98	<1.0	<2.0	<1.0	<1.0	<1.0	2.2	<50	2600	<1.0	E10	120
06306300	09-24-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	2600	<1.0	<50	E.6
06313400	08-03-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06316400	07-31-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06324970	07-30-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06326500	07-29-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
06329500	07-28-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
435602109095301	08-06-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
445110108102901	09-02-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
445221108122601	09-02-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
451753110334301	08-27-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	<50	<1.0	<50	<50
455905108081301	09-25-98	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<50	140	<1.0	<50	E6

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters--Continued

STATION NUMBER	DATE	PHENAN- THRI- DINE SED, BM WS, <2MM DW, REC (UG/KG) (49393)	PHENOL C8- ALKYL- SED, BM WS, <2MM DW, REC (UG/KG) (49424)	PHENOL, 2CHLORO BED MAT WS <2MM DRY WGT REC (UG/KG) (49467)	PHENOL PENTA- CHLORO- SED, BM WS, <2MM DW, REC (UG/KG) (49425)	PHENOL ETHHEXL SED, BM WS, <2MM DW, REC (UG/KG) (49413)	PHTHALA TE, BIS2 SED, BM WS, <2MM DW, REC (UG/KG) (49426)	PHTHALA TEBUTYL SED, BM WS, <2MM DW, REC (UG/KG) (49427)	PHTHAL- ATE, D DIBUTYL SED, BM WS, <2MM DW, REC (UG/KG) (49381)	PHTHAL- ATE, D IETHYL SED, BM WS, <2MM DW, REC (UG/KG) (49383)	PHTHAL- ATE, DI- METHYL SED, BM WS, <2MM DW, REC (UG/KG) (49384)
06186500	09-03-98	<50	<50	<50	E150	E15	E31	<50	E36	<50	<50
06187915	09-03-98	<50	<50	<50	--	E23	E25	<50	E30	<50	<50
06191500	08-27-98	<50	<50	<50	--	E4	E21	E14	E35	E29	<50
06208500	08-26-98	<50	<50	<50	--	E15	<50	<50	<50	E14	<50
06214500	08-25-98	<50	<50	<50	--	E9	E28	E17	E37	E39	<50
06279500	09-01-98	<50	<50	<50	--	<50	E21	<50	E29	<50	<50
06279795	08-05-98	<50	<50	<50	--	E4	E17	E19	E44	<50	<50
06285500	09-01-98	<50	<50	<50	--	<50	E18	<50	E24	<50	<50
06289000	09-22-98	<100	<100	<100	--	140	E60	E37	110	<100	<100
06295000	07-27-98	<50	<50	<50	--	<50	E29	E26	E43	<50	<50
06298000	09-23-98	<50	<50	<50	--	E39	E29	E19	E36	E2	<50
06305700	09-21-98	<50	<50	<50	--	92	95	E23	E35	E.6	<50
06306300	09-24-98	<50	<50	<50	--	86	E38	E18	E33	E.6	<50
06313400	08-03-98	<50	<50	<50	--	<50	E38	E18	E38	<50	<50
06316400	07-31-98	<50	<50	<50	--	E8	67	E27	E37	<50	<50
06324970	07-30-98	<50	<50	<50	--	<50	E42	E36	66	<50	<50
06326500	07-29-98	<50	<50	<50	--	<50	E35	E15	E18	<50	<50
06329500	07-28-98	<50	<50	<50	--	<50	E30	E24	E37	<50	<50
435602109095301	08-06-98	<50	<50	<50	--	<50	E20	E16	E20	<50	<50
445110108102901	09-02-98	<50	<50	<50	--	<50	E29	E18	E39	<50	<50
445221108122601	09-02-98	<50	<50	<50	--	<50	E25	<50	E29	<50	<50
451753110334301	08-27-98	<50	<50	<50	--	<50	<50	<50	<50	E31	<50
455905108081301	09-25-98	<50	<50	<50	--	E22	E27	E13	E28	<50	<50

STATION NUMBER	DATE	PHTHAL ATE, D IOCTYL SED, BM WS, <2MM DW, REC (UG/KG) (49382)	PYRENE, 1- METHYL, SED, BM WS, <2MM DW, REC (UG/KG) (49388)	PYRENE, SED, BM WS, <2MM DW, REC (UG/KG) (49387)	QUINO- LINE, SED, BM WS, <2MM DW, REC (UG/KG) (49392)	THIOPH ENE, DI- BENZO- SED, BM WS, <2MM DW, REC (UG/KG) (49452)	TOLUENE 2,4-DI- NITRO- SED, BM WS, <2MM DW, REC (UG/KG) (49395)	TOLUENE 2,6-DI- NITRO- SED, BM WS, <2MM DW, REC (UG/KG) (49396)	TOXA- PHENE SED, BM WS, <2MM DW, REC (UG/KG) (49351)	TRANS- CHLOR- DANE, SED, BM WS, <2MM DW, REC (UG/KG) (49321)	TRANS- NONA- CHLOR, SED, BM WS, <2MM DW, REC (UG/KG) (49317)
06186500	09-03-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06187915	09-03-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06191500	08-27-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06208500	08-26-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06214500	08-25-98	<50	<50	E31	<50	<50	<50	<50	<200	<1.0	<1.0
06279500	09-01-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06279795	08-05-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06285500	09-01-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06289000	09-22-98	<100	<100	<100	<100	<100	<100	<100	<3	<3	<3
06295000	07-27-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06298000	09-23-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06305700	09-21-98	E28	<50	170	<50	<50	<50	<50	<200	1.6	<1.0
06306300	09-24-98	<50	<50	E4	<50	55	<50	<50	<200	<1.0	<1.0
06313400	08-03-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06316400	07-31-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06324970	07-30-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06326500	07-29-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
06329500	07-28-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
435602109095301	08-06-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
445110108102901	09-02-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
445221108122601	09-02-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
451753110334301	08-27-98	<50	<50	<50	<50	<50	<50	<50	<200	<1.0	<1.0
455905108081301	09-25-98	E20	<50	E4	<50	<50	<50	<50	<200	<1.0	<1.0

E Estimated.

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

BED SEDIMENT AND FISH TISSUE OCCURRENCE AND DISTRIBUTION STUDY

Bed sediment organic analysis - sieved <2 millimeters--Continued

STATION NUMBER	DATE	TRANS- PER- METHRIN SED, BM WS, <2MM DW, REC (UG/KG) (49350)	CARBON, INORG, SED, BM WS, <2MM DW, REC (G/KG) (49270)	CARBON, ORG + INORG SED, BM WS, <2MM DW, REC (G/KG) (49272)	CARBON, ORGANIC SED, BM WS, <2MM DW, REC (G/KG) (49271)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)
06186500	09-03-98	<5.0	<.20	6.9	6.9	22	35	57	80	93	100
06187915	09-03-98	<5.0	.6	5.8	5.2	44	61	76	91	98	100
06191500	08-27-98	<5.0	.4	4.3	3.9	20	49	87	96	98	100
06208500	08-26-98	<5.0	5.7	16	10	63	82	96	99	99	100
06214500	08-25-98	<5.0	2.7	7.8	5.1	26	50	86	97	99	100
06279500	09-01-98	<5.0	4.6	9.3	4.7	57	88	96	100	100	100
06279795	08-05-98	<5.0	<.1	2.9	2.9	12	27	58	83	95	100
06285500	09-01-98	<5.0	9.5	11	1.5	46	91	100	100	100	100
06289000	09-22-98	<15	40	70	30	65	100	100	100	100	100
06295000	07-27-98	<5.0	3.4	7.8	4.4	36	80	100	100	100	100
06298000	09-23-98	<5.0	10	29	19	22	100	100	100	100	100
06305700	09-21-98	<5.0	9.7	30	20	36	100	100	100	100	100
06306300	09-24-98	<5.0	11	32	21	69	100	100	100	100	100
06313400	08-03-98	<5.0	5.2	12	6.8	69	72	82	95	99	100
06316400	07-31-98	<5.0	3.2	17	14	54	72	88	98	99	100
06324970	07-30-98	<5.0	3.4	13	9.6	69	83	97	99	100	100
06326500	07-29-98	<5.0	1.3	4.4	3.1	8	28	60	89	98	100
06329500	07-28-98	<5.0	5.8	12	6.2	46	87	98	100	100	100
435602109095301	08-06-98	<5.0	.4	1.6	1.2	16	35	66	90	98	100
445110108102901	09-02-98	<5.0	2.7	7.2	4.5	100	100	100	100	100	100
445221108122601	09-02-98	<5.0	6.2	10	3.8	42	62	94	100	100	100
451753110334301	08-27-98	<5.0	<.20	8.5	8.5	22	31	52	80	96	100
455905108081301	09-25-98	<5.0	2.8	23	20	36	100	100	100	100	100

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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