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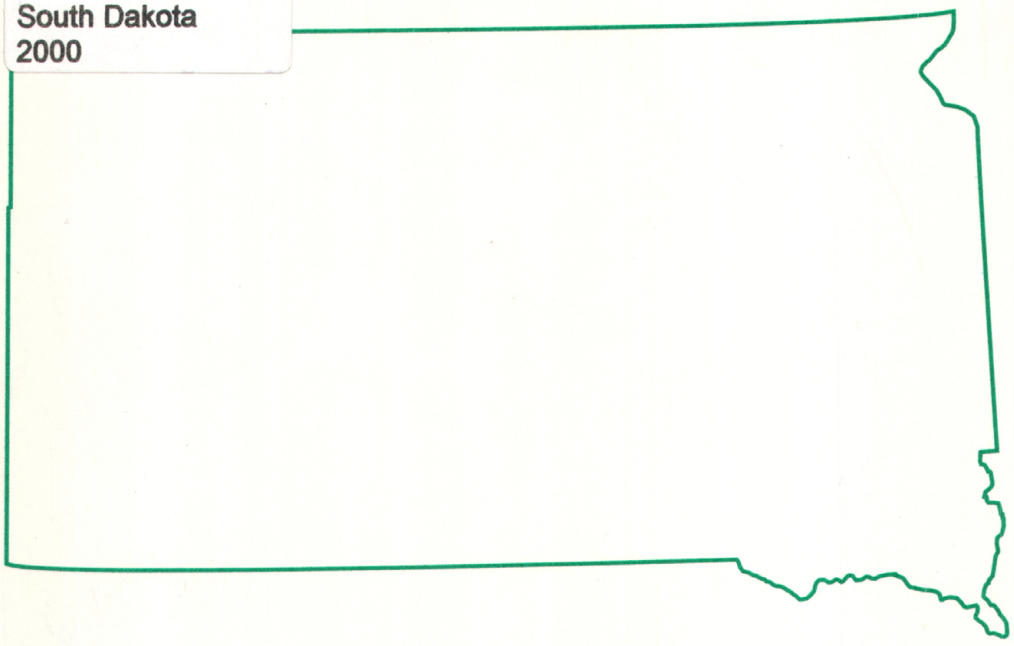
Water Resources Data South Dakota Water Year 2000

Water-Data Report SD-00-1



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

Prepared in cooperation with the
State of South Dakota
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By M.J. Burr, R.W. Teller, and K.M. Neitzert

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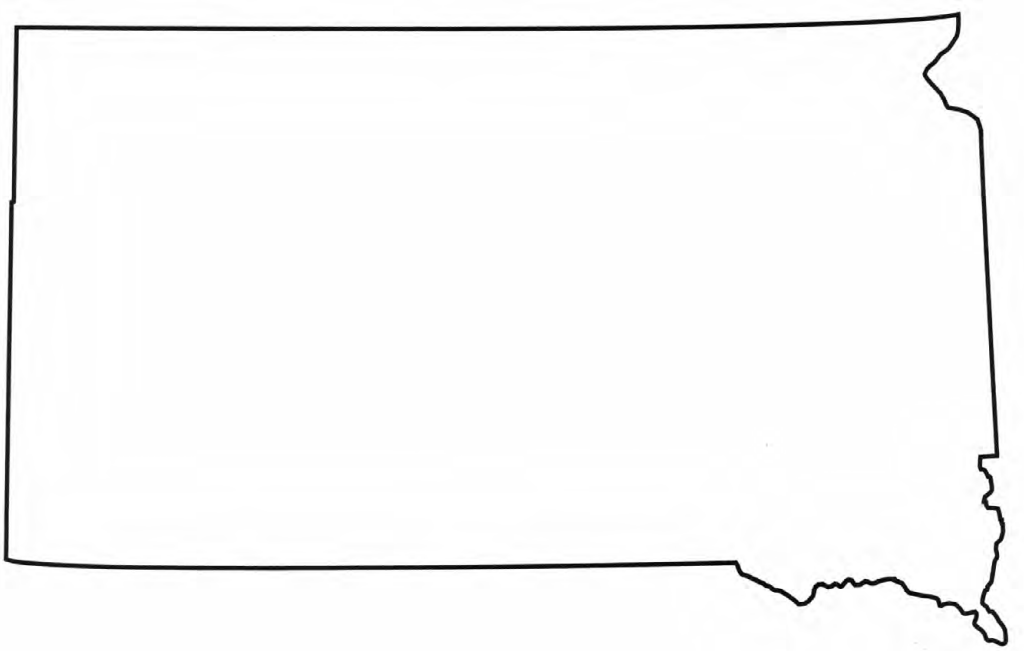

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2001

PREFACE

This volume of the annual hydrologic data report of South Dakota is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by state, local, and federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report was prepared by personnel of the South Dakota District of the Water Resources Division of the U.S. Geological Survey under the supervision of D.J. Fitzpatrick, District Chief, and R.W. Teller, Chief, Hydrologic Data Collection and Analysis Section. South Dakota personnel who contributed significantly to the collecting, processing, and tabulating of the data, and typing the manuscript were:

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2000 water year for South Dakota consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; precipitation; and water levels in wells. This report contains discharge records for 128 streamflow-gaging stations; stage and contents records for 10 lakes and reservoirs, stage for 12 streams and 2 lakes; water-quality records for 3 streamflow-gaging stations, 2 daily sediment stations, 3 wells, 7 ungaged stream sites, 5 lakes, 1 sewage lagoon, and 1 precipitation site; water levels for 7 wells; daily precipitation records at 4 sites; and 66 partial-record crest-stage gage sites. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in South Dakota.

14. SUBJECT TERMS

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

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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Note.--Data for partial-record stations and miscellaneous sites are published in separate sections of the data report. See references at the end of this list for page numbers for these sections.

[Letters after station names designate type of data: (d) discharge, (e) elevation, gage height, or contents, (c) chemical, (b) biological, (m) microbiological, (p) pesticide, (r) precipitation, (s) sediment]

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

HYDROLOGIC STATIONS FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

GROUND-WATER WELLS, BY COUNTY, FOR WHICH WATER LEVELS ARE PUBLISHED IN THIS VOLUME

DISCONTINUED SURFACE-WATER STATIONS

The following surface-water stations in South Dakota have been discontinued. Surface-water stations include: daily or monthly discharge stations; daily or monthend stage stations; peak-flow only stations (crest-stage gages); and stations where water quality and/or sediment were collected on at least a quarterly basis for 1 year. Those stations with an asterisk (*) in the period of record column currently are operated as a surface-water station of another type; see index. Information regarding these stations or stations of a type not included in this list may be obtained from the District office at the address given on the back side of the title page of this report.

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
05050000	Bois De Sioux River near White Rock	1,160	1964-66*	Water quality/sediment
05051650	LaBelle Creek near Veblen	8.74	1988-99*	Daily discharge
05289950	Little Minnesota River tributary at Sisseton	4.21	1970-79	Peak flow
05290300	North Fork Whetstone River tributary near Wilmot	.96	1970-79	Peak flow
05290500	Whetstone River near Corona	170	1954-57	Daily discharge
05291000	Whetstone River near Big Stone City	389	1974-88*	Water quality/sediment
05291500	Big Stone Lake near Big Stone City (formerly "at Ortonville, MN")	--	1937-93	Stage/monthend
05292600	North Fork Yellow Bank River tributary near Stockholm	8.15	1970-79	Peak flow
06334500	Little Missouri River at Camp Crook	1,970	1972-73*	Water quality/sediment
06354830	Lake Oahe near Kenel	--	1972	Water quality
06354845	Spring Creek tributary near Greenway	.99	1970-79	Peak flow
06354860	Spring Creek near Herreid	220	1963-86 1978 1989-97	Daily discharge Water quality/sediment Peak flow
06354880	Spring Creek near Pollock	1,530	1959-62	Daily discharge
06355400	North Fork Grand River tributary near Lodgepole	3.07	1970-79	Peak flow
06355500	North Fork Grand River near White Butte	1,190	1950-51*	Water quality/sediment
06356000	South Fork Grand River at Buffalo	148	1955-94	Daily discharge
06356050	Wide Sandy Creek near Buffalo	38.8	1956, 1958-73	Peak flow
06356150	North Jack Creek near Ludlow	1.69	1970-79	Peak flow
06356500	South Fork Grand River near Cash	1,350	1950-51*	Water quality/sediment
06356600	South Fork Grand River tributary near Bison	1.00	1970-79	Peak flow
06357000	Shadehill Reservoir at Shadehill	3,120	1960-76*	Water quality/sediment
06357500	Grand River at Shadehill	3,120	1951-88, 1991-92 1943-51 1950-80	Daily discharge Monthly discharge Water quality/sediment
06357800	Grand River at Little Eagle	5,370	1975-90*	Water quality/sediment
06358000	Grand River near Wakpala	5,510	1949-64 1912-18, 1928-48 1950-53	Daily discharge Monthly discharge Water quality/sediment
06358320	Claymore Creek near Mobridge	2.18	1956-68	Peak flow
06358350	Claymore Creek tributary near Trail City	1.98	1956-73	Peak flow
06358400	Claymore Creek tributary No. 2 near Trail City	.15	1956-73	Peak flow
06358500	Missouri River near Mobridge	208,700	1934-62 1928-34	Daily discharge Monthly discharge
06358520	Deadman Creek tributary near Mobridge	.30	1956-80	Peak flow
06358540	Blue Blanket Creek tributary near Glenham	.62	1970-79	Peak flow
06358550	Battle Creek tributary near Castle Rock	1.57	1969-79	Peak flow
06358600	South Fork Moreau River tributary near Redig	2.33	1956, 1958-80	Peak flow
06358620	Sand Creek tributary near Redig	.06	1956, 1958-72	Peak flow

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06358750	North Fork Moreau River tributary near Redig	4.00	1956, 1958-73	Peak flow
06359000	Moreau River at Bixby	1,570	1948-69 1970-73	Daily discharge Peak flow
06359300	Deep Creek tributary near Maurine	1.26	1970-79	Peak flow
06359700	Thunder Butte Creek tributary near Meadow	3.00	1970-79	Peak flow
06359800	Thunder Butte Creek tributary near Glad Valley	8.0	1970-77	Peak flow
06359850	Elm Creek tributary near Dupree	4.16	1970-79	Peak flow
06360000	Moreau River near Eagle Butte	4,320	1943-58 1950-51	Daily discharge Water quality/sediment
06360350	Little Moreau River tributary near Firesteel	2.09	1970-79	Peak flow
06360500	Moreau River near Whitehorse	4,880	1969, 1972-76, 1978-93*	Water quality/sediment
06361000	Moreau River at Promise	5,223	1935-58 1928-34 1950-51	Daily discharge Monthly discharge Water quality/sediment
06361020	Swan Lake tributary near Bowdle	27.1	1970-79	Peak flow
06394500	Beaver Creek near Burdock	1,540	1905-06, 1928-32	Monthly discharge
06394600	Hell Canyon near Jewel Cave, near Custer	Not determined	1978-80	Daily discharge
06394605	Hell Canyon near Custer	Not determined	1978-80	Daily discharge
06395000	Cheyenne River at Edgemont	7,143	1970-74*	Water quality/sediment
06396200	Fiddle Creek near Edgemont	.64	1956-80	Peak flow
06396300	Cottonwood Creek tributary near Edgemont	.09	1956-80	Peak flow
06396350	Red Canyon Creek tributary near Pringle	.20	1970-79	Peak flow
06399300	Hat Creek tributary near Ardmore	3.74	1956-79	Peak flow
06399700	Pine Creek near Ardmore	5.47	1956-75	Peak flow
06400497	Cascade Springs near Hot Springs	.47	1976-95 1996	Daily discharge Peak flow
06400500	Cheyenne River near Hot Springs	8,710	1914-20, 1943-72 1950-51	Daily discharge Water quality/sediment
06400870	Horsehead Creek near Oelrichs	108	1981-83	Daily discharge
06400900	Horsehead Creek tributary near Smithwick	1.52	1969-79	Peak flow
06401500	Cheyenne River below Angostura Dam	9,100	1968-80*	Water quality/sediment
06402100	Fall River tributary at Hot Springs	3.81	1970-79	Peak flow
06402470	Beaver Creek above Buffalo Gap	111	1991-97*	Daily discharge
06402600	Cheyenne River near Buffalo Gap	9,810	1969-80 1969-80	Daily discharge Water quality/sediment
06402990	French Creek below Custer	53.4	1990-92	Daily discharge
06402995	French Creek above Stockade, near Custer	68.7	1991-97*	Daily discharge
06403000	French Creek near Custer	98	1945-47	Monthly discharge
06403500	French Creek near Fairburn	129	1945-47	Monthly discharge
06403800	Battle Creek tributary near Keystone	.63	1956-80	Peak flow
06403845	Grizzly Creek above E. Bear Falls, near Keystone	4.26	1999	Peak flow
06404000	Battle Creek near Keystone	66.0	1994	Water quality/sediment
06404500	Battle Creek near Hermosa	173	1945-47	Monthly discharge
06404800	Grace Coolidge Creek near Hayward	7.48	1989* 1989-98	Water quality/sediment Daily discharge

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06404998	Grace Coolidge Creek near Game Lodge, near Custer	25.2	1989*	Water quality/sediment
06405000	Grace Coolidge Creek near Custer	25.3	1967-76 1945-47	Daily discharge Monthly discharge
06405400	Grace Coolidge Creek near Fairburn	Not determined	1978-80	Daily discharge
06405500	Grace Coolidge Creek near Hermosa	27.5	1978-80 1945-47	Daily discharge Monthly discharge
06405800	Bear Gulch near Hayward	4.23	1989-98*	Daily discharge
06406100	Battle Creek tributary near Hermosa	3.49	1970-79	Peak flow
06406750	Sunday Gulch near Hill City	6.56	1956-69	Peak flow
06406800	Newton Fork near Hill City	8.17	1969-79	Peak flow
06406900	Palmer Creek near Hill City	13.3	1956-80	Peak flow
06406950	Horse Creek at 385, near Hill City	10.1	1972-73	Peak flow
06407000	Spring Creek near Hill City	142	1937-40	Monthly discharge
06408000	Spring Creek near Rapid City	171	1903-05, 1945-47	Monthly discharge
06408850	Silver Creek near Rochford	6.23	1969-79	Peak flow
06408860	Rapid Creek near Rochford	101	1989-94 1989-90	Daily discharge Water quality/sediment
06408900	Heeley Creek near Hill City	4.88	1969-79	Peak flow
06409000	Castle Creek above Deerfield Reservoir, near Hill City	79.2	1964-96*	Water quality/sediment
06411500	Rapid Creek below Pactola Dam	320	1969-92*	Water quality/sediment
06412000	Rapid Creek at Big Bend	332	1915-17, 1932-43	Monthly discharge
06412200	Rapid Creek above Victoria Creek, near Rapid City	355	1989-90, 1992 1989-97*	Water quality/sediment Daily discharge
06412510	Rapid Creek above Rapid City	371	1991	Daily discharge
06412600	Cleghorn Springs main channel at Fish Hatchery	--	1988-92	Daily discharge
06412700	Cleghorn Springs south channel at Fish Hatchery, at Rapid City	--	1988-92	Daily discharge
06412800	Cleghorn Springs north channel at Fish Hatchery, at Rapid City	--	1988-92	Daily discharge
06412900	Rapid Creek below Cleghorn Springs, at Rapid City	378	1988-94	Daily discharge and water quality/sediment
06413000	Bennett Ditch at Rapid City	--	1946-50	Monthly discharge
06413200	Rapid Creek below Park Drive, at Rapid City	384	1987-89	Daily discharge and water quality/sediment
06413300	Leedy Ditch at headgate below Canyon Lake Dam, at Rapid City	--	1987-89	Daily discharge and monthly discharge
06413550	Leedy Ditch at mouth, at Rapid City	--	1946-50, 1988-89	Daily discharge
06413570	Rapid Creek above Jackson Boulevard, at Rapid City	391	1987-89	Daily discharge
06413660	Storybook Ditch at headgate, at Rapid City	--	1988-89	Daily discharge
06413670	Storybook Ditch at mouth, at Rapid City	--	1987-89	Daily discharge
06413700	Rapid Creek above Water Treatment Plant, at Rapid City	404	1980-82, 1987-89	Daily discharge
06413800	Deadwood Avenue Drain at mouth, at Rapid City	2.18	1981-82, 1987-90	Daily discharge
06414500	Iowa Ditch at Rapid City	--	1946-50	Monthly discharge
06414700	Rapid Creek at East Main St., at Rapid City	416	1980-82	Daily discharge
06415000	Lockhart Ditch at Rapid City	--	1946-50	Monthly discharge

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06415500	Hawthorne Ditch at Rapid City	--	1981-82 1946-53	Daily discharge Monthly discharge
06416000	Rapid Creek below Hawthorne Ditch, at Rapid City	418	1980-82* 1946-53 1953	Daily discharge Monthly discharge Water quality/sediment
06416300	Meade Street Drain at Rapid City	3.15	1973-77, 1980 1980-82	Daily discharge Water quality/sediment
06416500	Murphy Ditch near Rapid City	--	1946-50	Monthly discharge
06417000	Cyclone Ditch near Rapid City	--	1946-50	Monthly discharge
06417500	South Side Ditch near Rapid City	--	1946-50	Monthly discharge
06418000	Little Giant Ditch near Rapid City	--	1946-50	Monthly discharge
06418500	Rapid Creek below Little Giant Ditch, near Rapid City	447	1946-50	Monthly discharge
06419000	Lone Tree Ditch near Rapid City	--	1946-50	Monthly discharge
06419500	St. Germain Ditch at Caputa	--	1946-50	Monthly discharge
06420000	Rapid Creek at Caputa	509	1946-50	Monthly discharge
06420500	Hammerquist Ditch near Farmingdale	--	1946-50	Monthly discharge
06421500	Rapid Creek near Farmingdale	602	1953, 1956-58, 1969-80, 1989, 1992*	Water quality/sediment
06421750	Rapid Creek tributary near Farmingdale	1.50	1970-79	Peak flow
06422000	Rapid Creek at Creston	710	1989-90 1929-32	Daily discharge Monthly discharge
06422395	Boxelder Creek at Benchmark, near Nemo	37.2	1972-73	Peak flow
06422398	Boxelder Creek at Nemo	Not determined	1978-80	Daily discharge
06422400	Estes Creek near Nemo	6.15	1969-72	Peak flow
06422500	Boxelder Creek near Nemo	96.0	1989*	Water quality/sediment
06422600	Boxelder Creek at Camp Columbus, near Nemo	Not determined	1978-80	Daily discharge
06422650	Boxelder Creek at Doty School, near Blackhawk	Not determined	1978-80	Daily discharge
06423000	Boxelder Creek at Blackhawk	128	1903-06, 1945-47	Monthly discharge
06423250	Boxelder Creek tributary at New Underwood	.14	1970-73	Peak flow
06423400	Bull Creek tributary near Wall	.39	1970-78	Peak flow
06423500	Cheyenne River near Wasta	12,800	1956-57, 1983-84*	Water quality/sediment
06424500	Elk Creek above Piedmont	49	1945-47	Monthly discharge
06428500	Belle Fourche at Wyoming-South Dakota State line	3,280	1966-85*	Water quality/sediment
06429000	Belle Fourche River at Belle Fourche	3,360	1903-06	Monthly discharge
06430000	Murray Ditch at Wyoming-South Dakota State line		1954-87	Daily discharge
06430500	Redwater Creek at Wyoming-South Dakota State line	471	1969-70*	Water quality/sediment
06430540	Cox Lake Outlet near Beulah, WY	.07	1991-95	Daily discharge
06430770	Spearfish Creek near Lead	63.5	1989* 1998	Water quality/sediment Peak flow
06430800	Annie Creek near Lead	3.55	1989-93*	Water quality/sediment
06430850	Little Spearfish Creek near Lead	25.8	1989 1999*	Water quality/sediment Peak flow
06430865	Iron Creek near Lead	Not determined	1989	Water quality/sediment
06430898	Squaw Creek near Spearfish	6.95	1989-92* 1989-98	Water quality/sediment Daily discharge

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06430900	Spearfish Creek above Spearfish	139	1989 1989-97*	Water quality/sediment Daily discharge
06430950	Spearfish Creek below Robinson Gulch, near Spearfish	Not determined	1989-92	Water quality/sediment
06431000	Spearfish Creek near Spearfish	157	1904-07	Monthly discharge
06432000	Spearfish Creek at Toomey Ranch, near Spearfish	179	1903	Monthly discharge
06432020	Spearfish Creek below Spearfish	204	1989* 1989-98	Water quality/sediment Daily discharge
06432200	Polo Creek near Whitewood	10.3	1956-73	Peak flow
06432230	Miller Creek near Whitewood	6.72	1956-68	Peak flow
06432250	Polo Creek tributary near Whitewood	.06	1956-67	Peak flow
06432500	Redwater Canal at Minnesala	--	1903-06	Monthly discharge
06433500	Hay Creek at Belle Fourche	121	1954-96	Daily discharge
06434000	Redwater Creek at Belle Fourche	1,020	1903-06	Monthly discharge
06434500	Inlet Canal near Belle Fourche	--	1945-94 1969-94	Daily discharge Water quality/sediment
06434800	Owl Creek tributary near Belle Fourche	3.06	1970-79	Peak flow
06435500	Belle Fourche River near Belle Fourche	4,310	1904-05	Monthly discharge
06436000	Belle Fourche River near Fruitdale	4,540	1983-84*	Water quality/sediment
06436150	Whitewood Creek above Lead	Not determined	1983-84	Water quality/sediment
06436156	Whitetail Creek at Lead	6.15	1989-94* 1989-98	Water quality/sediment Daily discharge
06436170	Whitewood Creek at Deadwood	40.6	1981-95	Daily discharge
06436190	Whitewood Creek near Whitewood	77.4	1983-84*	Water quality/sediment
06436210	Belle Fourche River below Whitewood, near Vale	Not determined	1951	Water quality/sediment
06436250	Belle Fourche River at Vale	Not determined	1983-84	Water quality/sediment
06436500	Horse Creek near Newell	67	1962-69	Daily discharge
06436700	Indian Creek near Arpan	315	1962-81 1965, 1967	Daily discharge Water quality/sediment
06436760	Horse Creek above Vale	464	1988-91*	Water quality/sediment
06436770	Dry Creek tributary near Newell	.20	1970-74	Peak flow
06436800	Horse Creek near Vale	530	1962-80 1964-82	Daily discharge Water quality/sediment
06437000	Belle Fourche River near Sturgis	5,870	1954-58, 1969-98*	Water quality/sediment
06437020	Bear Butte Creek near Deadwood	16.6	1989-90, 1992-93*	Water quality/sediment
06437100	Boulder Creek near Deadwood	1.32	1956-80	Peak flow
06437200	Bear Butte Creek near Galena	47.6	1965-69	Daily discharge
06437500	Bear Butte Creek near Sturgis	192	1962-72* 1945-62	Daily discharge Peak flow
06437600	Belle Fourche River near Hereford	Not determined	1960	Water quality/sediment
06438000	Belle Fourche River near Elm Springs	7,210	1957-62, 1970-94*	Water quality/sediment
06438500	Cheyenne River near Plainview	21,600	1983-84*	Water quality/sediment
06439050	Cherry Creek tributary near Avance	.60	1956-80	Peak flow
06439060	Cherry Creek tributary No 2 near Avance	.11	1956-73	Peak flow
06439080	Cherry Creek tributary No 3 near Avance	4.58	1956-80	Peak flow
06439100	Beaver Creek near Faith	37.1	1956-80	Peak flow

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06439300	Cheyenne River at Cherry Creek	23,900	1961-94 1971-95	Daily discharge Water quality/sediment
06439400	Plum Creek tributary near Milesville	.50	1970-79	Peak flow
06439430	Cottonwood Creek near Cherry Creek	120	1983-99	Daily discharge
06439500	Cheyenne River near Eagle Butte	24,500	1929-67 1950-53, 1973-81	Daily discharge Water quality/sediment
06440200	South Fork Bad River near Cottonwood	250	1989-95*	Water quality/sediment
06440500	North Fork Bad River at Phillip	164	1938-44	Monthly discharge
06440700	Brady Creek tributary near Phillip	4.84	1970-78	Peak flow
06441000	Bad River near Midland	1,460	1950-51, 1956-57*	Water quality/sediment
06441110	Plum Creek below Hayes	252	1990-95*	Daily discharge and water quality/sediment
06441200	Powell Creek tributary near Fort Pierre	.40	1970-79	Peak flow
06441400	Willow Creek near Fort Pierre	102	1990	Daily discharge and water quality/sediment
06441530	Hilgers Gulch tributary near Pierre	1.33	1968-79	Peak flow
06441580	Hilgers Gulch at Pierre	6.49	1967-79	Peak flow
06441650	Mush Creek near Pierre	14.2	1956-80	Peak flow
06441670	Missouri River tributary near Pierre	.42	1956-74	Peak flow
06441750	Missouri River tributary near Canning	.20	1956-74	Peak flow
06442000	Medicine Knoll Creek near Blunt	317	1951-90 1991-97	Daily discharge Peak flow
06442050	Missouri River tributary near De Grey	1.73	1956-80	Peak flow
06442350	North Fork Medicine Creek near Vivian	47.0	1956-80	Peak flow
06442380	Medicine Creek tributary near Vivian	.30	1956-73	Peak flow
06442400	Medicine Creek tributary No 2 near Vivian	9.21	1956-80	Peak flow
06442500	Medicine Creek at Kennebec	464	1955-90 1991-97	Daily discharge Peak flow
06442850	Elm Creek tributary near Ree Heights	.70	1969-79	Peak flow
06442900	Elm Creek near Gann Valley	381	1988-99	Daily flow
06442950	Crow Creek near Gann Valley	670	1972-84	Daily discharge
06442960	Smith Creek tributary near Gann Valley	5.85	1972-80	Peak flow
06443000	Missouri River at Chamberlain	250,800	1945-54 1882, 1908-29	Daily discharge Monthly discharge
06445700	White River at Slim Butte	1,500	1962-70, 1991-97 1965-67	Daily discharge Water quality/sediment
06445980	White Clay Creek near Oglala	340	1966-81, 1988-99*	Daily discharge
06445990	South Fork Blacktail Creek tributary near Oelrichs	3.60	1969-79	Peak flow
06446000	White River near Oglala	340	1950-51*	Water quality/sediment
06446100	Wounded Knee Creek at Wounded Knee	82.5	1992-97*	Daily discharge
06446200	White River near Rockyford	3,000	1964-70 1971-73 1965-67	Daily discharge Peak flow Water quality/sediment
06446250	Porcupine Creek tributary near Rockyford	1.65	1968, 1970-79	Peak flow
06446300	Big Hollow Creek tributary near Scenic	2.71	1968, 1970-76	Peak flow
06446400	Cain Creek tributary at Imlay	15.8	1956-80	Peak flow

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06446430	White River tributary near Conata	.17	1956-58, 1960-73	Peak flow
06446500	White River near Interior	4,120	1904-06, 1912-18, 1928-32, 1939-42	Monthly discharge
06446550	White River tributary near Interior	.32	1956-80	Peak flow
06446800	Cottonwood Creek near Wanblee	1.7	1971-79	Peak flow
06447000	White River near Kadoka	5,000	1950-51*	Water quality/sediment
06447200	Blackpipe Creek tributary near Norris	4.19	1971-79	Peak flow
06447490	Little White River tributary near Martin	8.9	1971-80	Peak flow
06448500	Elm Creek near Tuthill	10	1938-40	Monthly discharge
06449100	Little White River near Vetal	415	1986-89*	Water quality/sediment
06449250	Spring Creek near St. Francis	10.0	1960-74	Daily discharge
06449300	Little White River above Rosebud	630	1982-99	Daily discharge
06449400	Rosebud Creek at Rosebud	50.8	1975-97	Daily discharge
06449700	Little Oak Creek near Mission	2.58	1956-80	Peak flow
06449750	West Branch Horse Creek near Mission	6.31	1956-70	Peak flow
06449800	Little (South Fork) White River tributary near White River	9.50	1956-67	Peak flow
06450000	Little (South Fork) White River at White River	1,420	1929-32, 1938-40	Monthly discharge
06450500	Little White River below White River	1,310	1951-58*	Water quality/sediment
06451000	Little (South Fork) White River near Westover	1,640	1913-18	Monthly discharge
06451500	White River at Westover	7,850	1913-18	Monthly discharge
06451750	Cottonwood Creek tributary near Winner	4.00	1971-80	Peak flow
06452000	White River near Oacoma	9,940	1946-53, 1969, 1972-95*	Water quality
06452250	Fivemile Creek tributary near Iona	2.35	1970-79	Peak flow
06452278	Lake Francis Case (Ft. Randall Reservoir) near Platte		1989-98	Daily stage
06452330	Campbell Creek near Geddes	8.37	1989-93	Peak flow
06452392	Lake Andes near Lake Andes	--	1983-86, 1988-89	Water quality/sediment
06452410	Lake Andes below Lake Andes	--	1986-88	Water quality/sediment
06453000	Missouri River at Fort Randall Dam	263,500	1947-87 1975-86	Daily discharge Water quality/sediment
06453007	Missouri River above Greenwood	Not determined	1989	Stage
06453010	Missouri River at Greenwood	Not determined	1957-85, 1988	Stage
06453150	Choteau Creek tributary near Tripp	.54	1970-79	Peak flow
06453250	Choteau Creek tributary near Wagner	15.6	1970-79*	Peak flow
06463950	Rock Creek tributary near Olsonville	8.1	1970-76	Peak flow
06464000	Keya Paha River near Hidden Timber	320	1948-53	Daily discharge
06464100	Keya Paha River near Keyapaha	466	1991*	Water quality/sediment
06467500	Missouri River at Yankton	279,500	1931-95* 1957-59, 1971-72*	Daily discharge Water quality/sediment
06470980	James River near Hecla	2,188	1983-90 1985	Daily stage Water quality/sediment
06470985	Mud Lake near Houghton	--	1985-88	Water quality
06470988	Sand Lake Bay site near Houghton	--	1988-89	Water quality
06470990	Sand Lake open water site near Columbia	--	1989-93	Water quality
06470991	Sand Lake Bay site #2 near Houghton	--	1989-93	Water quality

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06470992	Sand Lake near Columbia	--	1985-93	Water quality
06471000	James River at Columbia	2,481	1958, 1960-64, 1967-93*	Water quality/sediment
06471050	Elm River tributary near Leola	18.0	1956-80	Peak flow
06471350	Maple River at Frederick	423	1956-69	Peak flow
06471400	Willow Creek tributary near Leola	6.69	1956-80	Peak flow
06471450	Willow Creek tributary near Barnard	.26	1956-76	Peak flow
06471550	James River below Columbia	3,573	1989-94	Daily discharge
06471750	Snake Creek tributary near Leola	4.49	1971-78	Peak flow
06471898	Moccasin Creek near Warner	304	1976-80	Daily discharge
06471900	Moccasin Creek near Nahon	Not determined	1960-62	Water quality/sediment
06472000	James River near Stratford	4,860	1950-72, 1977 1995, 1997*	Daily discharge Peak flow
06472200	Mud Creek tributary near Groton	56.7	1960-69, 1974-80	Peak flow
06472250	Mud Creek tributary No. 2 near Groton	75.8	1960-80	Peak flow
06472500	Mud Creek near Stratford	674	1955-69, 1977 1970-73	Daily discharge Peak flow
06473000	James River at Ashton	5,673	1978-90	Water quality/sediment
06473350	South Fork Snake Creek tributary near Seneca	4.54	1971-80	Peak flow
06473400	North Fork Snake Creek tributary near Wecota	2.69	1971-79	Peak flow
06473500	South Fork Snake Creek near Athol	1,695	1950-72 1973	Daily discharge Peak flow
06473700	Snake Creek near Ashton	2,609	1956-69, 1985-89 1970-72, 1977-79 1985-87 1997	Daily discharge Peak flow Water quality/sediment Peak flow
06473750	Wolf Creek near Ree Heights	334	1960-81, 1985-89	Daily discharge
06473800	Matter Creek tributary near Orient	5.41	1956-71	Peak flow
06473820	Shaefer Creek near Orient	51.3	1956-80	Peak flow
06473850	Shaefer Creek tributary near Orient	5.17	1956-80	Peak flow
06473880	Shaefer Creek tributary near Miller	5.95	1956-80	Peak flow
06474000	Turtle Creek near Tulare	1,124	1953-56, 1965-81, 1985-89* 1985-87	Daily discharge Daily discharge Water quality/sediment
06474300	Medicine Creek near Zell	202	1960-81, 1985-89 1985-87	Daily discharge Water quality/sediment
06474500	Turtle Creek at Redfield	1,481	1946-72 1960-65 1997	Daily discharge Water quality/sediment Peak flow
06475000	James River near Redfield	9,793	1950-90 1991-97*	Daily discharge Peak flow
06475500	Dry Run near Frankfort	201	1955-69 1970-78	Daily discharge Peak flow
06475550	Dry Run tributary near Frankfort	4.19	1967-79	Peak flow
06475950	Shue Creek tributary near Yale	6.90	1968-79	Peak flow
06476000	James River at Huron	11,721	1929-32, 1949-52, 1956-93*	Monthly discharge Water quality/sediment
06476050	James River at 21st Street bridge, at Huron	Not determined	1973	Water quality/sediment

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06476500	Sand Creek near Alpena	261	1950-89 1990-97	Daily discharge Peak flow
06477140	Rock Creek tributary near Roswell	5.67	1970-79	Peak flow
06477150	Rock Creek near Fulton	240	1966-72 1973-79*	Daily discharge Peak flow
06477400	Firesteel Creek tributary near Wessington Springs	.22	1968-79	Peak flow
06478000	James River near Mitchell	14,916	1954-58, 1966-72 1967-72 1995, 1997	Daily discharge Water quality/sediment Peak flow
06478050	Enemy Creek tributary near Mount Vernon	3.38	1969-79	Peak flow
06478052	Enemy Creek near Mitchell	163	1976-87* 1981-93	Daily discharge Sediment
06478053	Pierre Creek near Alexandria	78.7	1982-83	Daily discharge
06478200	Coffee Creek tributary near Parkston	.81	1968-79	Peak flow
06478250	North Branch Dry Creek tributary near Parkston	3.19	1956-67	Peak flow
06478260	North Branch Dry Creek near Parkston	54.1	1956-78	Peak flow
06478280	South Branch Dry Creek near Parkston	25.8	1956-80	Peak flow
06478300	Dry Creek near Parkston	97.2	1956-80, 1989-97	Peak flow
06478320	Plum Creek near Milltown	55.2	1982-83	Daily discharge and water quality/sediment
06478390	Wolf Creek near Clayton	396	1976-88*	Daily discharge
06478400	Lonetree Creek tributary near Kaylor	3.65	1970-79	Peak flow
06478420	Lonetree Creek at Olivet	110	1982-83	Daily discharge and water quality/sediment
06478500	James River near Scotland	16,505	1956-64, 1967-73, 1975-95*	Water quality/sediment
06478513	James River near Yankton	16,794	1982-95*	Daily discharge
06478514	Beaver Creek near Yankton	145	1982-83	Daily discharge and water quality/sediment
06478530	Lake Thompson near Oldham	472	1989-95	Daily stage
06478533	Lake Thompson near Ramona	494	1987-88	Daily stage
06478630	West Fork Vermillion River near De Smet	5.34	1970-79	Peak flow
06478650	West Fork Vermillion River tributary near Monroe	2.74	1969-79	Peak flow
06478800	Saddlerock Creek near Canton	13.0	1956-78	Peak flow
06478820	Saddlerock Creek tributary near Beresford	2.22	1956-80	Peak flow
06478840	Saddlerock Creek near Beresford	23.1	1956-70, 1972-80	Peak flow
06478950	Ash Creek near Beresford	5.00	1969-79	Peak flow
06479000	Vermillion River near Wakonda	1,676	1952-83* 1945-51 1967-72	Daily discharge Monthly discharge Water quality/sediment
06479020	Smoky Run near Irene	4.96	1969-79	Peak flow
06479200	Big Sioux River near Ortley	53.8	1956-68	Peak flow
06479230	Big Sioux River tributary near Summit	1.27	1956-67	Peak flow
06479240	Big Sioux River tributary No. 2 near Summit	.26	1956-73	Peak flow
06479260	Big Sioux River tributary No. 3 near Summit	6.61	1956-78	Peak flow
06479350	Soo Creek tributary near South Shore	1.56	1970-79	Peak flow
06479370	Big Sioux River tributary near Wallace	.50	1969-74	Peak flow

DISCONTINUED SURFACE-WATER STATIONS

Station number	Station name	Contributing drainage area (mi^2)	Period of record for discontinued activity (water years)	Type of record discontinued
06479500	Big Sioux River at Watertown	350	1946-72 1973-79 1997*	Daily discharge Water quality/sediment Peak flow
06479515	Willow Creek near Watertown	110	1972-86 1972-74 1997*	Daily discharge Water quality/sediment Peak flow
06479529	Stray Horse Creek near Castlewood	74.5	1969-85 1972-74	Daily discharge Water quality/sediment
06479550	Dolph Creek tributary near Lake Norden	5.91	1970-79	Peak flow
06479640	Hidewood Creek near Estelline	164	1969-85* 1972-74	Daily discharge Water quality/sediment
06479750	Peg Munky Run near Estelline	25.2	1956-80	Peak flow
06479800	North Deer Creek near Estelline	48.3	1956-80	Peak flow
06479810	North Deer Creek tributary near Brookings	.33	1969-79	Peak flow
06479900	Sixmile Creek tributary near Brookings	9.78	1956-76	Peak flow
06479910	Sixmile Creek near Brookings	54	1971-80 1972-74	Daily discharge Water quality/sediment
06479928	Battle Creek near Nunda	158	1988-97 1988-89	Daily discharge Sediment
06479950	Deer Creek near Brookings	4.04	1956-80	Peak flow
06479980	Medary Creek near Brookings	200	1981-90*	Daily discharge
06480000	Big Sioux River near Brookings	2,419	1967-73*	Water quality/sediment
06480400	Spring Creek near Flandreau	63.2	1983-93	Daily discharge
06480500	Big Sioux River near Flandreau	Not determined	1929-32	Daily discharge
06480650	Flandreau Creek above Flandreau	100	1982-91*	Daily discharge
06480720	Bachelor Creek tributary near Wentworth	1.03	1969-79	Peak flow
06481000	Big Sioux River near Dell Rapids	3,004	1960-62, 1968-84*	Water quality/sediment
06481480	Skunk Creek near Chester	247	1985-87	Daily discharge
06481489	West Branch Skunk Creek near Hartford	80.5	1985-86	Daily discharge
06481500	Skunk Creek at Sioux Falls	613	1967-69, 1971-74*	Water quality/sediment
06482000	Big Sioux River at Sioux Falls	3,710	1944-60	Daily discharge
06482020	Big Sioux River at North Cliff Avenue, at Sioux Falls	3,729	1973-81*	Water quality/sediment
06482100	Big Sioux River at Brandon	3,774	1960-72 1967, 1970-72	Daily discharge Water quality/sediment
06482600	West Pipestone Creek tributary near Garretson	2.16	1969-79	Peak flow
06482610	Split Rock Creek at Corson	464	1966-89 1972-74 1990-97	Daily discharge Water quality/sediment Peak flow
06482700	Split Rock Creek near Brandon	Not determined	1967-69	Water quality/sediment
06482830	Beaver Creek near Canton	Not determined	1967, 1971-74	Water quality/sediment
06482848	Beaver Creek at Canton	124	1983-89*	Daily discharge
06482870	Little Beaver Creek tributary near Canton	.31	1956-73	Peak flow
06482875	Big Sioux River near Hudson	Not determined	1973	Water quality/sediment
06485500	Big Sioux River at Akron, IA	6,937	1966-94*	Water quality/sediment
06485550	West Union Creek near Alcester	3.48	1969-79	Peak flow
06485696	Brule Creek near Elk Point	204	1983-94	Daily discharge

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INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with Federal, State, and local agencies, obtains a large amount of data pertaining to the water resources of South Dakota 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 - South Dakota."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 128 streamflow-gaging stations; (2) stage and contents records for 10 lakes and reservoirs, stage for 12 stream sites and 2 lakes; (3) water-quality records for 3 streamflow-gaging stations, 2 daily sediment stations, 3 wells, 7 ungaged stream sites, 5 lakes, 1 sewage lagoon, and 1 precipitation site; (4) water levels for 7 wells; (5) precipitation records at 4 sites; and (6) 66 partial-record crest-stage gage stations. Locations of these sites are shown in figures 4, 5, and 6. Miscellaneous hydrologic data were collected at 17 measuring sites not involved in the systematic data-collection program. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey.

This series of annual reports for South Dakota began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for South Dakota were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above-mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the Books and Open-File Reports Section, Federal Center, Box 25425, Denver Colorado 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have 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 SD-00-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in 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 back of title page or by telephone (605) 355-4560.

COOPERATION

The U.S. Geological Survey and agencies of the State of South Dakota have had cooperative agreements for the collection of surface-water records since 1914, for ground-water levels since 1935, and for water-quality since 1947. Organizations that assisted in collecting the data in this report through cooperative agreements with the Survey are: South Dakota Department of Environment and Natural Resources; South Dakota Department of Transportation; South Dakota Department of Game, Fish and Parks; East Dakota Water Development District; James River Water Development District; Vermillion Basin Water Development District; West Dakota Water Development District; West River Water Development District; City of Aberdeen; City of Huron; City of Rapid City; City of Watertown; Codington County; Pennington County; Lawrence County; Meade County; Rapid Valley Water Conservation District; Stanley County Conservation District; Angostura Irrigation District; Belle Fourche Irrigation District; Lake Kampeska Water Project District; State of Wyoming; and Minnesota Area II Department of Natural Resources.

Assistance in the form of funds or services was given by the U.S. Army Corps of Engineers; U.S. Department of Agriculture, U.S. Fish and Wildlife Service, U.S. Forest Service; U.S. Department of Interior, Bureau of Indian Affairs; U.S. Department of Interior, Bureau of Reclamation; U.S. Department of Interior, U.S. Geological Survey, EROS Data Center; Rosebud Sioux Tribe, Sisseton-Wahpeton Sioux Tribe, Standing Rock Sioux Tribe, Ogalalla Sioux Tribe, and Yankton Sioux Tribe. Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

By R.W. Teller, S.K. Sando, L.D. Putnam, and K.M. Neitzert

Hydrologic conditions for water year 2000 were uneventful compared to the last 7 years. Precipitation and streamflows generally were near or below normal. This followed 1993, 1995, and 1997 flooding, when several streamflow-gaging stations had peaks exceeding the 100-year recurrence interval. The above-normal precipitation patterns also moderated in the northeast part of the State, reversing a trend that had prevailed for the past several years. For example, precipitation at the Waubay National Wildlife Refuge station during April-September of 2000 was 12.85 inches, compared to 21.28 inches during the same period in 1999. Within the Waubay Lakes Chain closed basin, Bitter Lake rose about another three-quarters of a foot to an elevation of about 1,792.75 feet on September 30, which is almost 20 feet higher than the lake elevation of 1,772.8 feet that existed in September 1992. This recent rise is attributed almost entirely to inflows from Rush Lake. Waubay Lake dropped about 2.1 feet, to an elevation of about 1.801.55 feet on September 30. This drop is attributed to a combination of reduced precipitation and outflows from the upper Waubay Lake system via Rush Lake into Bitter Lake. The level of Lake Oahe on the Missouri River on September 30, 2000, was 15.2 feet lower than at the same time in 1999. However, several western South Dakota reservoirs continued to experience unusually high inflows during water year 2000, resulting in record reservoir storage.

Table 1. Cumulative precipitation and departures from normal[1], in inches

National Weather Service Division[2]	October-December		October-March		October-June		October-September	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Northwest	1.29	-0.68	3.95	+0.32	12.97	+1.56	16.15	-0.06
North Central	.69	-1.39	3.83	-.08	11.91	+.12	17.36	-.10
Northeast	.57	-1.94	2.73	-1.95	10.25	-2.56	17.39	-2.71
Black Hills	1.29	-1.59	3.91	-1.73	14.33	-1.14	18.10	-3.67
Southwest	1.10	-.92	4.25	+.43	12.98	+1.27	16.52	-.30
Central	.90	-1.20	2.72	-1.31	10.30	-1.39	14.11	-3.36
East Central	.76	-2.23	2.43	-3.06	11.91	-2.29	18.24	-3.41
South Central	.73	-1.78	2.79	-2.04	12.58	-1.25	16.09	-4.59
Southeast	.58	-2.65	3.13	-2.76	11.99	-3.39	18.63	-4.95

[1]Based on data from 1961 to 1990.
[2]Shown in figure 1.

Precipitation

Precipitation for the water year was below normal in all of the State's nine National Weather Service divisions shown in table 1. Cumulative precipitation was below normal at the end of all four quarters of the water year in six of the nine divisions. Cumulative precipitation for the nine divisions for water year 2000 ranged from 14.11 inches in the Central to 18.63 inches in the Southeast. Departures ranged from -4.95 inches below normal at the end of the fourth quarter in the Southeast to +1.56 inches above normal at the end of the third quarter in the Northwest.

Surface Water

Annual streamflow for water year 2000, as recorded at five representative gaging stations, averaged about 124 percent of the long-term median (normal) streamflow. Annual streamflow ranged from 244 percent of the median for the James River near Scotland, to 82 percent of the median for the Big Sioux River at Akron. Monthly and annual streamflow for water year 2000 are compared with the maximum, minimum, and selected percentiles in figure 1 for the five representative gaging stations.

Only two of the five representative gaging stations had streamflow that was consistently greater than normal during water year 2000. Monthly mean flows for Castle Creek above Deerfield Reservoir, near Hill City, equaled previous maximum values for two months of the water year and the annual mean streamflow was the fourth highest on record. Monthly mean flows for the Moreau River near Whitehorse were above normal through May and below normal for the rest of the year; in addition, the annual mean was slightly below normal. Monthly values for the White River near Oacoma were above normal through May and below normal for the following four months. Streamflow for water year 2000 at the James River near Scotland was above normal all months except March, and the monthly mean for October was the highest on record. Monthly values for the Big Sioux River at Akron, Iowa, were significantly below normal in March, April, and September, and the annual mean was below normal. Peak flows for the five representative gaging stations are shown in table 2. Peak flow during water year 2000 did not exceed the previous recorded maximum at any of the five stations.

Table 2. Comparison of water year 2000 peak streamflow to peak for long-term period

[ft^3/s, cubic feet per second]

Gaging-station number and name		Long-term period used for frequency analysis (water years)	Peak streamflow					
			Water year 2000			Long-term period		
			Peak (ft^3/s)	Date	Recurrence interval (years)	Peak	Date	Recurrence interval (years)
06360500	Moreau River near Whitehorse	1955-99	3,680	04-27-00	<2	29,700	03-23-97	27
06409000	Castle Creek above Deerfield Reservoir, near Hill City	1949-99	291	04-19-00	18	1,120	05-22-52	>100
06452000	White River near Oacoma	1929-99	8,310	04-27-00	<2	51,900	03-30-52	92
06478500	James River near Scotland	1929-99	1,050	08-08-00	<2	29,400	06-23-84	87
06485500	Big Sioux River at Akron, Iowa	1929-99	5,110	05-21-00	<2	80,800	04-09-69	>100

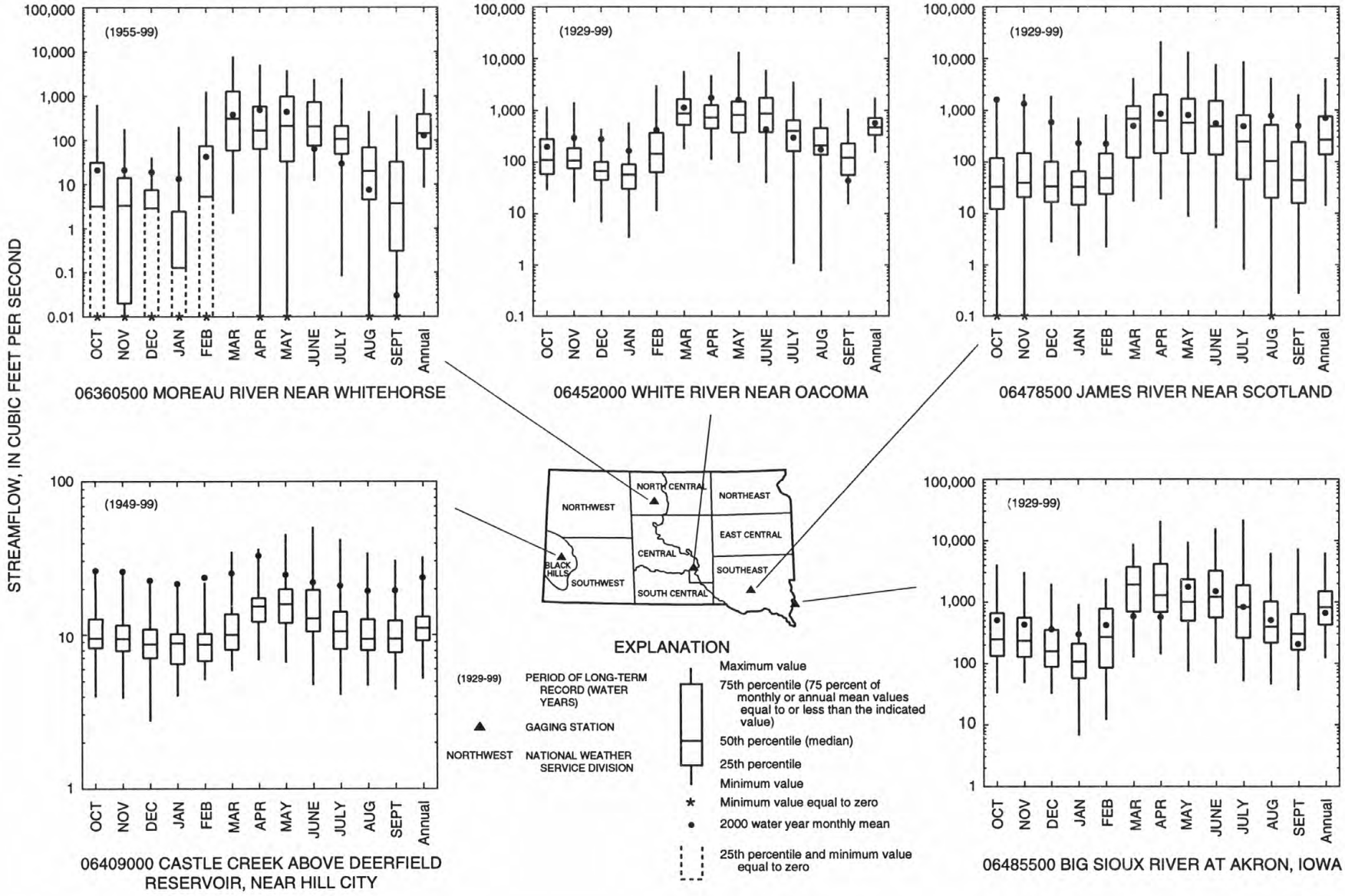


Figure 1. Comparison of 2000 monthly and annual means to long-term distributions of monthly and annual mean flows at five representative gaging stations.

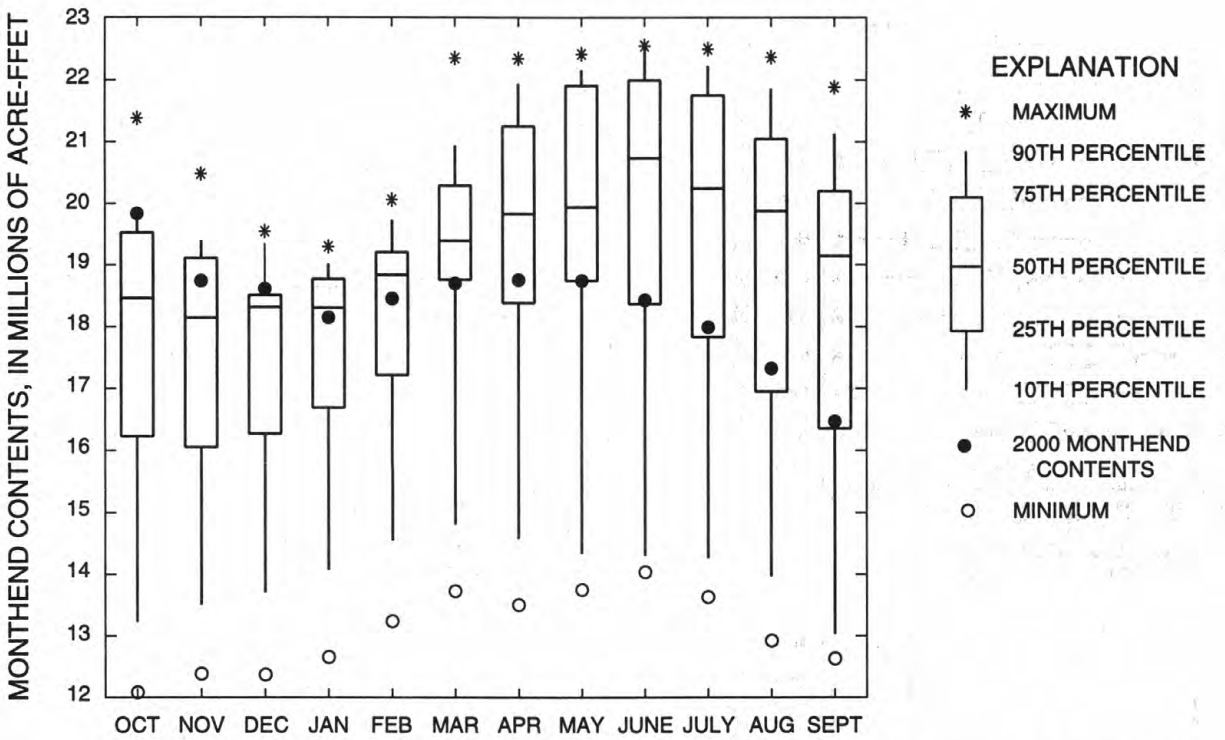


Figure 2. Comparison of monthend contents of Lake Oahe for water year 2000 with distributions of monthend contents for water years 1969-99.

Oahe, Sharpe, Francis Case, and Lewis and Clark) was 21,802,000 acre-feet on September 30, 2000, a decrease of 4,665,000 acre-feet during water year 2000. The maximum reservoir contents for Lake Oahe of 22,764,000 acre-feet was recorded on May 14, 1986, and the maximum contents for water year 2000 was 21,081,000 acre-feet on October 1. The highest monthend content for Lake Oahe was 19,850,000 acre feet on October 31, or 2,703,000 acre feet less than the record of 22,553,000 acre-feet, which occurred on June 30, 1996. In figure 2, monthend contents for water year 2000 are compared to the distribution of monthend contents since Lake Oahe first reached its normal maximum pool level in 1968.

Water Quality

Specific conductance measurements of surface-water samples collected during water year 2000 for five selected stations are compared to measurements in previous years using boxplots (fig 3). Because specific conductance varies similarly to dissolved solids concentration, it provides a general indication of the total ionic concentration of a water sample.

Boxplots are a useful graphical technique to display water-quality data because they display the central tendency, variation, and skewness of a data set, as well as the presence or absence of unusual values. A boxplot consists of a centerline (the median) dividing a rectangle defined by the 75th and 25th percentiles. Whiskers are drawn from the ends of the box (75th and 25th percentiles) to the most extreme observation within 1.5 times the interquartile range (the distance from the 25th to the 75th percentile values) beyond the ends of the box. Values more than 1.5 interquartile ranges from the box ends are unusual and may indicate extreme hydrologic and chemical conditions or sampling and analytical errors. Observations from 1.5 to 3 interquartile ranges from the box in either direction are three interquartile ranges from the ends of the box are plotted with an open circle. Water year 2000 values are plotted with a closed circle to show where these data lie with respect to the historic distribution of data. The small numbers located near the month represents the total number of samples measured during that specific month over the period of record.

The boxplots of specific conductance for selected South Dakota stations (fig. 3) generally illustrate an inverse relation with discharge (fig. 1). Smaller median specific conductance measurements generally occur during months that have larger mean discharges. Larger median specific conductance measurements generally occur during months that have smaller mean discharges. Of the five selected stations shown in figure 3, the inverse relation between discharge and specific conductance is especially strong for the Moreau River near Whitehorse, the James River near Scotland, and the Big Sioux River at Akron, Iowa; not as strong for the White River near Oacoma, and may not hold true during some years; and generally does not hold true for Castle Creek above Deerfield Reservoir near Hill City.

Some of the sites show seasonal differences in the variability of specific conductance measurements. At some sites during some years, the discharge remains at base flow during the winter and into the spring. During other years, the base flow during this period may be diluted by the melting of ice and snow and by seasonal precipitation. This may explain the large variability of specific conductance measurements at some sites during the winter and spring months. Small variability in specific conductance measurements often occurs during the months of August through November when base-flow conditions may occur.

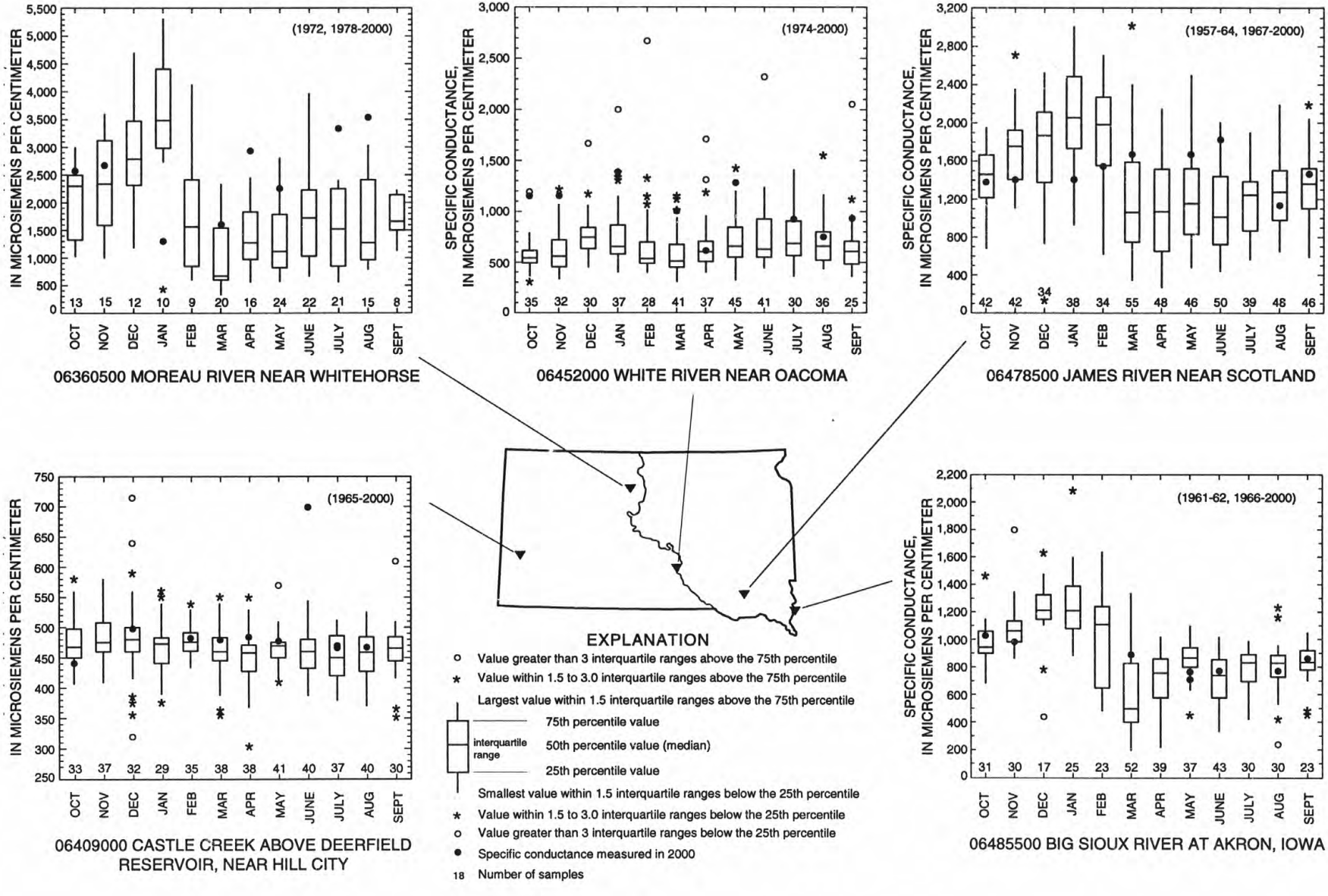


Figure 3. Comparison of 2000 specific conductance measurements to the distributions of long-term monthly values.

Specific conductance measurements at the five selected stations ranged from as little as 440 microsiemens per centimeter for the October sample at the station on Castle Creek above Deerfield Reservoir, near Hill City to as much as 3,540 microsiemens per centimeter for the August sample at the station on the Moreau River near Whitehorse.

For the three selected stations west of the Missouri River, patterns of specific conductance measurements were variable and generally were associated with above-normal streamflow conditions during most of water year 2000. The station on Castle Creek above Deerfield Reservoir, near Hill City probably is representative of small streams draining the Black Hills that have flows dominated by ground-water discharge. There is very little variability in specific conductance measurements at this site due to the large contribution of ground-water discharge to the streamflow. Long-term monthly median specific conductances range from about 455 microsiemens per centimeter for July to about 480 microsiemens per centimeter for December, a difference of only 25 microsiemens per centimeter. Because there is little variability in long-term specific conductance measurements at this site, unusually large or small measurements in a given year may appear as very extreme values relative to the long-term distributions, even though the differences between the measurements and the long-term medians are relatively small in terms of specific conductance units. During fall and winter months in water year 2000, specific conductance measurements were within 5 percent of long-term medians, and were made during much above-normal base-flow conditions. During spring and summer months, all specific conductance measurements exceeded (but were within 5 percent of) the long-term medians and generally were made during much above-normal base-flow conditions. The April 24 measurement was made on the falling limb of a large runoff event and was greater than the long-term 75th percentile.

The Moreau River near Whitehorse station probably is representative of moderately large basins draining the Great Plains physiographic region (Fenneman, 1946) in northwestern South Dakota. During fall months in water year 2000, specific conductance measurements were above (but were within about 15 percent of) the long-term medians, and were made during above-normal base-flow conditions. During winter months, specific conductance measurements varied in relation to long-term medians. The January 4 specific conductance measurement was near the record-low measurement for the month of January, and was made during much above-normal base-flow conditions. The March 16 specific conductance measurement was above the long-term 75th percentile and was made during the falling limb of a large streamflow event. During spring and summer months, specific conductance measurements were greater than long-term 75th percentiles, and generally were associated with below-normal streamflow conditions. The specific conductance measurements for April 17, July 12, and August 21, exceeded the previous maximum measurements for those respective months.

The White River near Oacoma station probably is representative of large streams draining the Great Plains physiographic region in southwestern South Dakota that also are influenced by the Sand Hills region of Nebraska. During fall and winter months in water year 2000, specific conductance measurements were greater than long-term 75th percentiles and were associated with much above-normal base-flow conditions. During spring and summer months, specific conductance measurements generally were near or above the 75th percentiles and generally were associated with above-normal to near-normal base-flow conditions. The notable exception to this pattern was the April 26 specific conductance measurement, which was near normal and was made near the peak of a large streamflow event. The greater-than-normal specific conductance measurements for water year 2000 may have been caused by above-normal base-flow conditions, due to extended above-normal moisture.

The two selected stations east of the Missouri River (the James River near Scotland and the Big Sioux River at Akron, Iowa) probably are representative of large rivers draining the Central Lowlands physiographic region in eastern South Dakota. For the James River near Scotland station, water year 2000 fall and winter specific conductance measurements generally were below the long-term medians, and were associated with much above-normal streamflow conditions. During spring and early summer, the specific conductance measurements generally were above the 75th percentiles, and were associated with below-normal streamflow conditions. Streamflow conditions rose to slightly above normal in late July, and the July and August specific conductance measurements were near the long-term medians for those respective months.

For the Big Sioux River at Akron station, water year 2000 fall and winter specific conductance measurements were near long-term medians and were associated with near-normal base-flow conditions. During spring, specific conductance measurements varied in relation to long-term medians. The March 29 specific conductance measurement was above the long-term 75th percentile and was associated with below-normal streamflow conditions. The May 11 and 19 specific conductance measurements were below the long-term 25th percentile and were made on the rising limb of a large streamflow event. During summer months, specific conductance measurements were near normal and generally were associated with near normal streamflow conditions.

Ground Water

During water year 2000, the U.S. Geological Survey participated with other Federal, State, and local agencies in monitoring trends in ground-water levels and selected water-quality data for about 2,000 wells in the State as part of the observation-well network and various site-specific studies. These key measurements are useful for observing short- and long-term ground-water trends as affected by climatic variations and land use. Hydrographs from seven wells in the observation-well network are shown in figure 4.

The Aurora County well in the southeast part of the State is completed in the Niobrara aquifer and is 134 feet deep. In most years, sharp declines in water levels occur during the summer months in response to nearby irrigation pumping. During wet years, such as 1986, 1993, 1995, and 1997, water-level declines related to irrigation did not occur, whereas significant water-level declines occurred during the less-than-normal precipitation period from 1987 through 1990. During water year 2000, water levels steadily declined about 2 feet without any abrupt declines from pumping.

The Beadle County well in the east-central part of the State is completed in the Warren aquifer and is 74 feet deep. Water levels are affected by nearby city wells. Annually, water levels decline during winter months due to pumping and minimal recharge, rise due to recharge during spring and fall months, and slightly decline

during the summer probably due to irrigation and evapotranspiration. Long-term trends show changes in water levels related to climatic variations, such as a general decline during the drought of 1975-81. A general rise occurred during wet years in the 1990's. Some of the long-term decline from 1975-90 possibly is related to increased demand on water supplies taken from the aquifer. Water levels in water year 2000 declined about 18 feet during October through March, recovered about 16 feet during April through June, then declined about 16 feet during July through September. The larger decline than normal in July through August probably was due to increased municipal pumping.

The Codington County well in the northeast part of the State is completed in the Prairie Coteau aquifer and is 172 feet deep. Water levels show a long-term trend that generally is steady, but fluctuations are common throughout each year in response to pumping for irrigation. Long-term trends show response to climatic variations. Water levels in water year 2000 followed a similar pattern of recovery in early fall, steady through the winter, small increases in the spring, and sharp declines in the summer from irrigation. The decline in water levels in the summer was about 21 feet compared to as much as 30 feet during very dry periods.

The Lincoln County well in the southeast part of the State is completed in the Dakota Sandstone aquifer and is 383 feet deep. Long-term trends generally show a steady decline in water levels since 1979. The water-level decline probably is related to pumping. Climatic variations generally are not apparent in this well due to the great depth; however, slight water-level rises in 1987, 1992, and 1994 may be due either to delayed recharge from wet years in 1986, 1991, and 1993 or to decreased water use associated with these wet periods. Water levels in water year 1999 rose through the spring and summer similar to the water-level rises noted in 1987, 1992, and 1994. This rise probably was due to a similar delayed response to above-normal precipitation in 1998. Water levels in water year 2000 continued to rise in the first half of the year, declined about 5 feet during the summer, then began to rise in the fall.

The Marshall County well in the northeast part of the State is completed in the Dakota Sandstone aquifer and is 1,060 feet deep. Long-term trends in water levels show only slight fluctuations. Slight rises and declines probably are related to changes in pumping during wet or dry periods. Water levels during water year 2000 fluctuated between 38.2 and 38.7 feet below land surface, possibly in response to pumping.

The Shannon County wells in the southwest part of the State both are completed in the Arikaree aquifer; one is 180 feet deep and the other is 835 feet deep. Water levels in the shallow well fluctuated little between 1989 through 1993. Water levels in water year 2000 rose about 1.5 feet, which continued the steady increase in water levels since 1993 in response to generally wet years. Minor fluctuations in the water levels probably are due to pumping. Water levels in the deep well generally rose slightly between 1989 and mid-1994. Sharp 1- to 1.5-feet fluctuations during 1994-96 were in response to pumping from the aquifer. The water levels during water year 2000 followed a similar pattern to 1999; however, the sharp decline of about 8 feet in the summer (due to nearby pumping) began earlier and was more abrupt. Water levels recovered about 3 feet during September.

Water levels recorded during water year 2000 for the seven wells shown on the map in figure 4 are presented in the Ground-Water Levels section of this report.

SPECIAL NETWORKS AND PROGRAMS

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

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 39 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 for determining global cycles of carbon, nutrients, and other chemicals.

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) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 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.nrel.colostate.edu/NADP

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; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

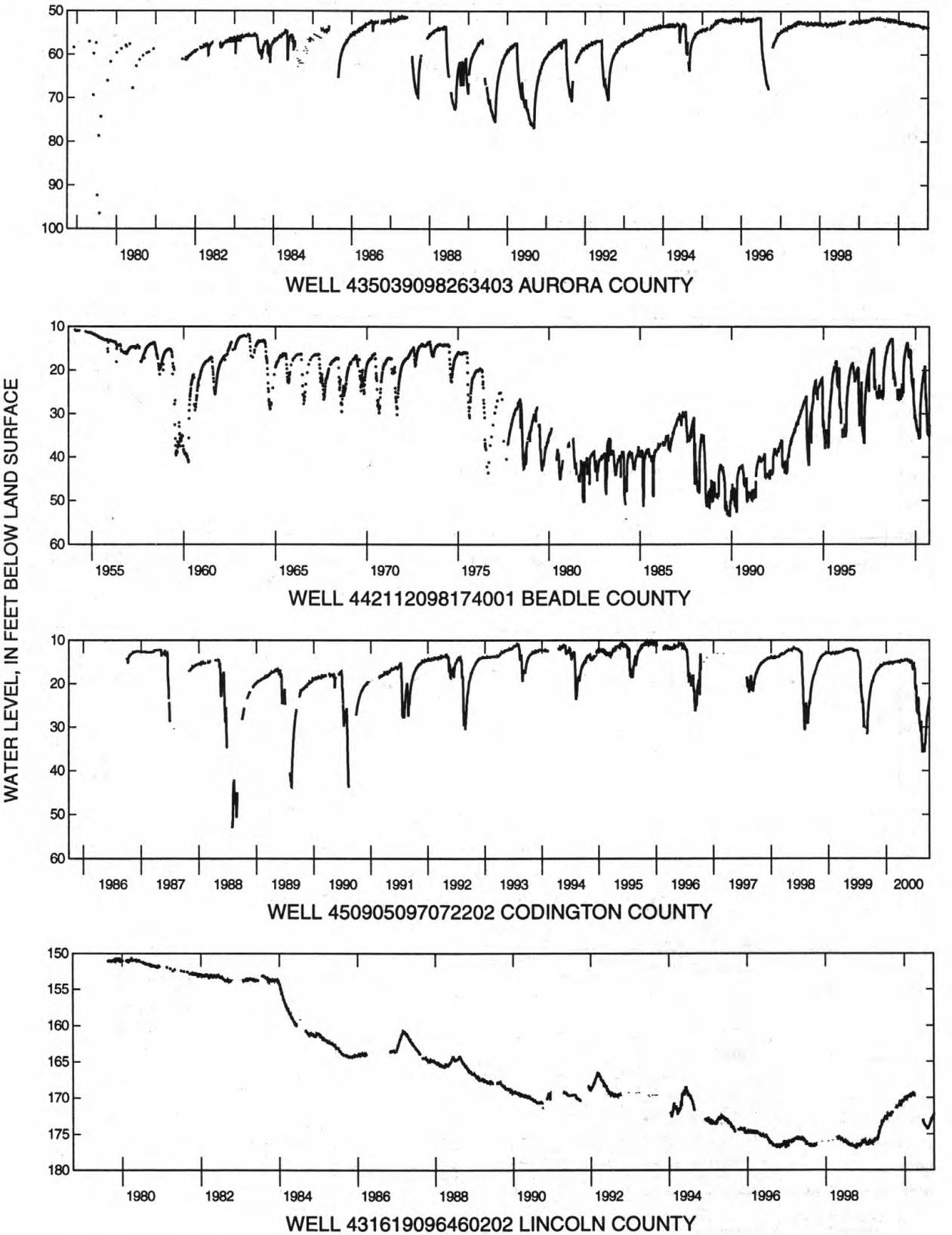


Figure 4. Water levels from selected observation wells.

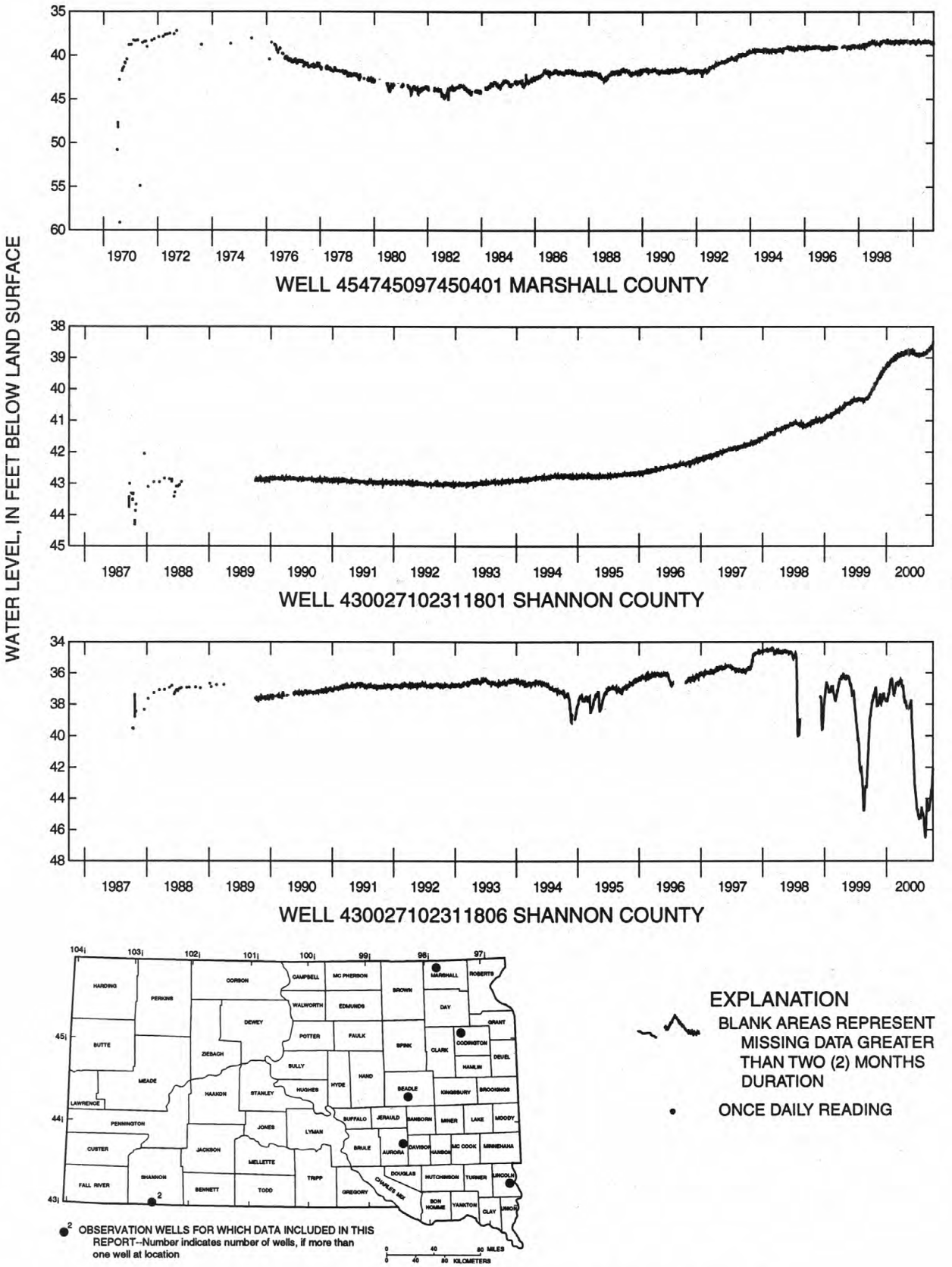


Figure 4. Water levels from selected observation wells.--Continued

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 will be 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.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

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

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 2000 water year that began October 1, 1999, and ended September 30, 2000. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data; precipitation data; stage and content data for lakes and reservoirs; water-quality data for precipitation, surface water, and ground water; and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 4, 5, and 6. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite, precipitation site, or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The system used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for precipitation sites, wells, and in South Dakota, for surface-water stations where only miscellaneous measurements are made.

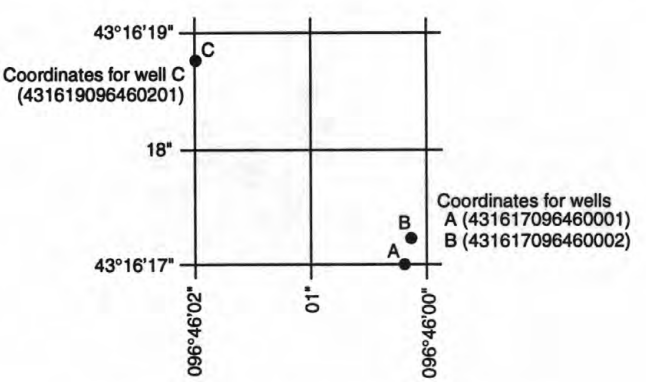
Downstream Order System

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 main-stream station are listed before that station. A station on a tributary that enters between two main-stream 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 indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06452000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "452000." The Part number designates the major river basin; for example, part "06" is the Missouri River basin.

Latitude-Longitude System

The identification numbers for precipitation sites, wells, and miscellaneous surface-water-quality sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and does not necessarily have locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



System for numbering wells and 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 mean discharges commonly are published for such stations, they are referred to as "daily stations." By contrast, partial records are obtained through discrete measurements. The nature of the partial record is indicated by table title such as "Monthend elevation and contents."

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 relation 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 relation 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, with digital recorders that punch stage values on paper tapes at selected time intervals, and/or with electronic data loggers that record stage at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may 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 gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross section area. Discharge is computed by multiplying path velocity by the appropriate stage related coefficient and area.

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

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

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

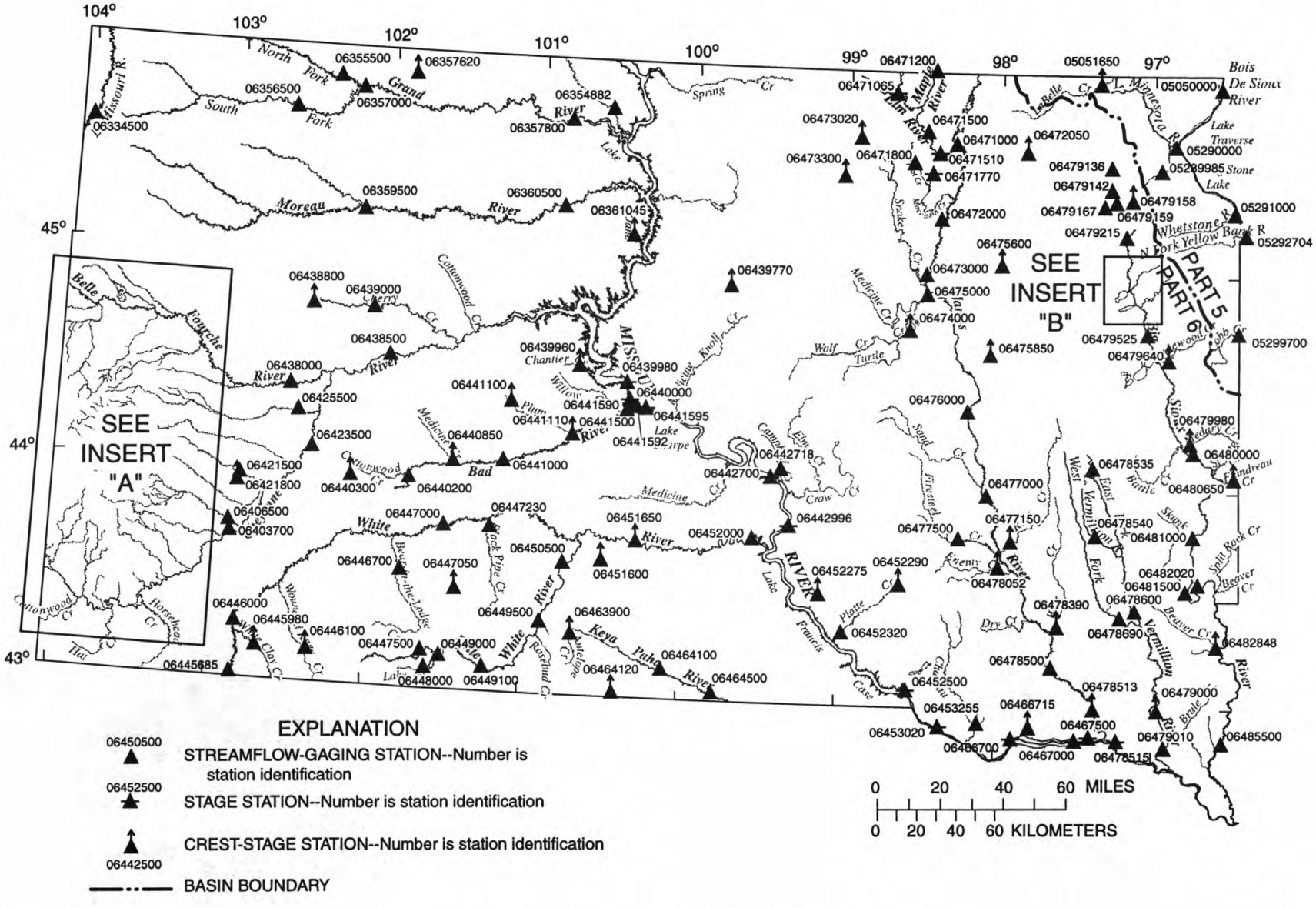


Figure 5. Location of surface-water gaging stations.

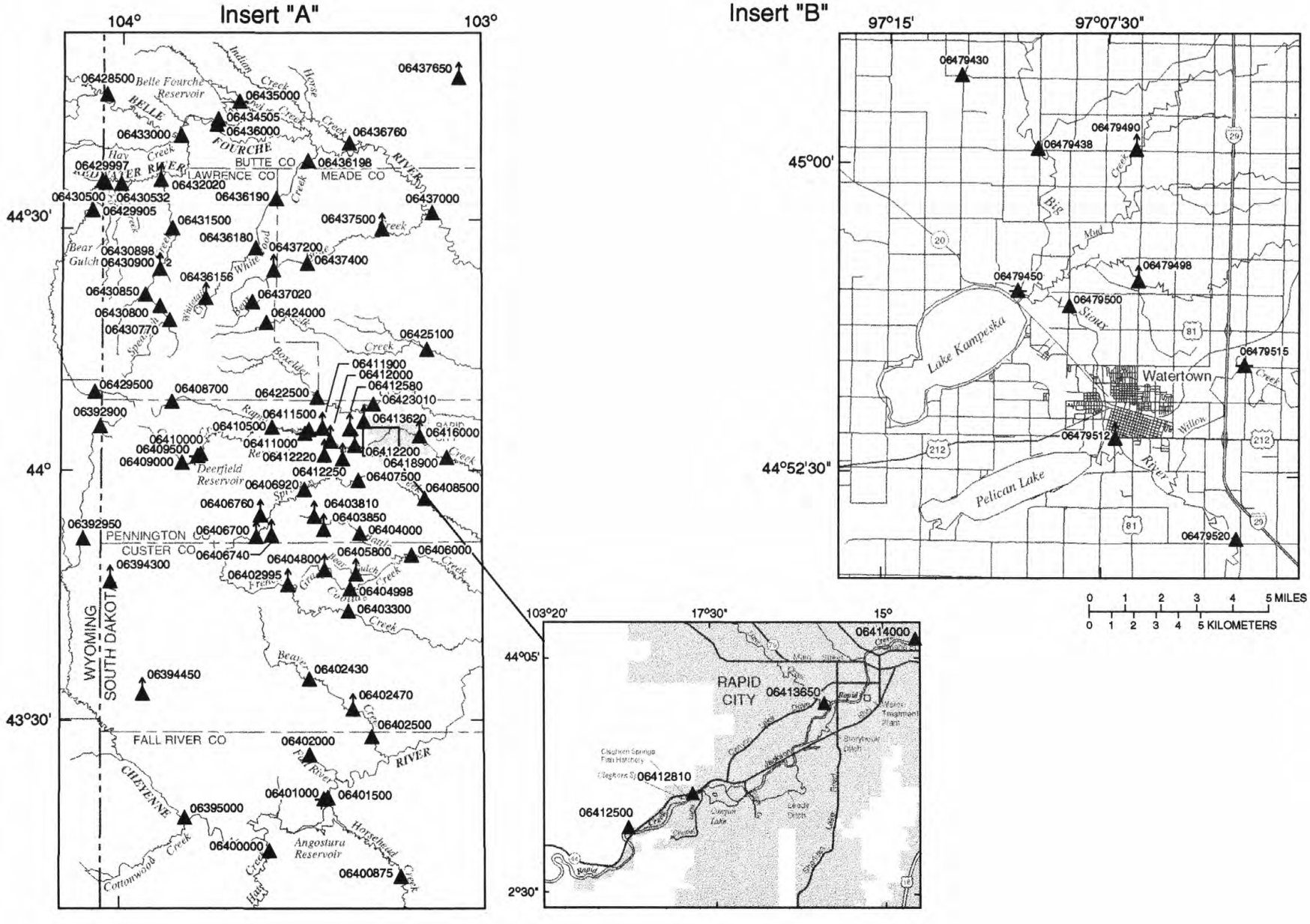


Figure 5. Location of surface-water gaging stations.--Continued

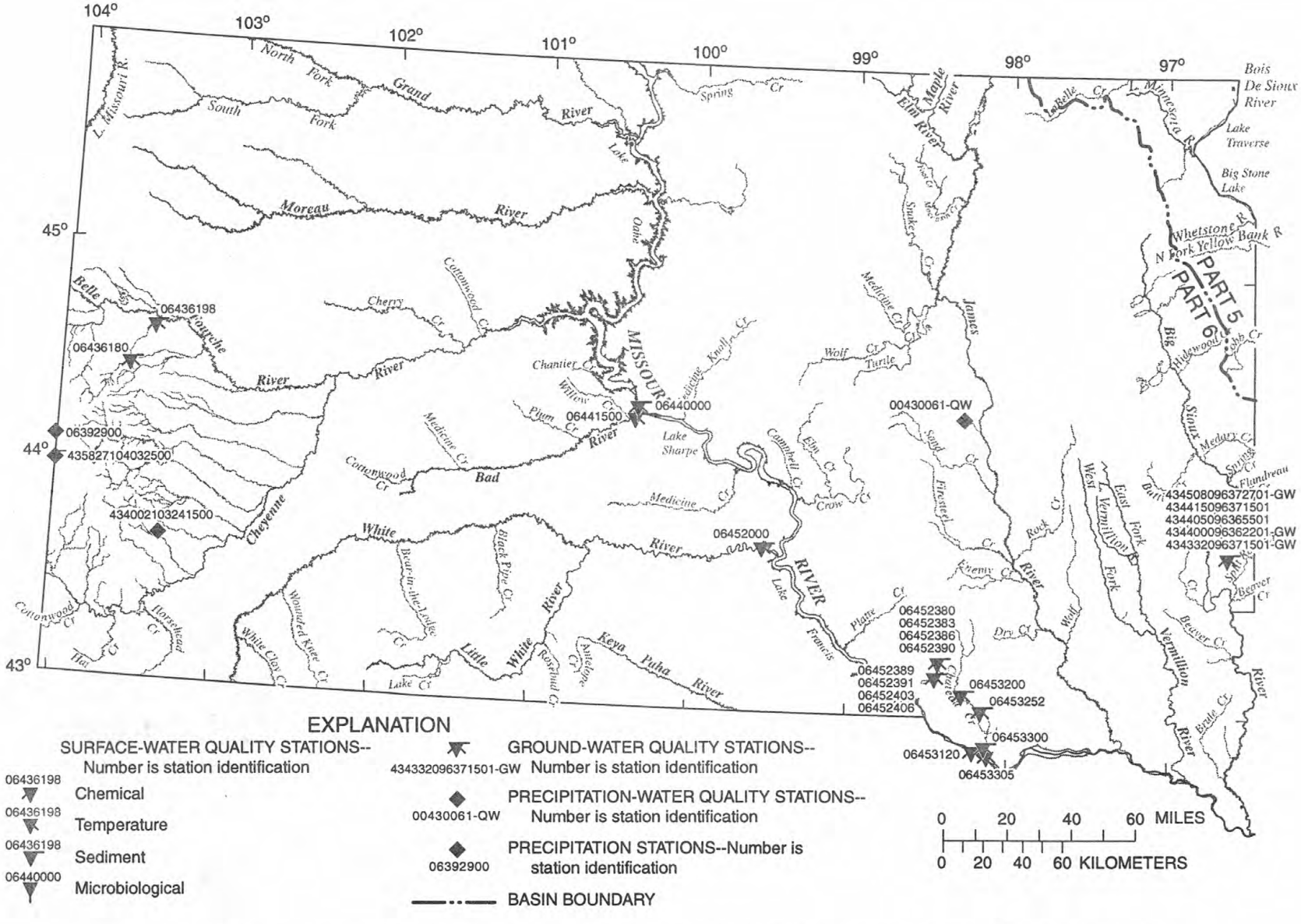


Figure 6. Location of surface-water, ground-water, and precipitation-water quality stations and precipitaiton stations.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of five 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; a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and a graphic representation of the daily mean discharge values for the current year.

Station manuscript

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

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

PERIOD OF RECORD.--This indicates the period for which 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 can reasonably 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 sea level (see glossary); and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, 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 ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, and EXTREMES FOR CURRENT YEAR have been deleted. The information previously contained in these paragraphs is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents. Secondary instantaneous peak discharges can be obtained from the District office.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the 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 also is usually expressed in acre-feet (line headed "AC-FT").

At some stations monthly and (or) yearly observed discharge 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 complete years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

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

The date and 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 REMARKS paragraph or in 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.

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

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

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

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

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

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

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

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

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

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Annual runoff data are given in acre-feet:

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

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 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 the true; "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 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the South Dakota 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 from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records of the quality of surface water are shown in figure 8.

Arrangement of Records

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

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major objective is assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

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

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

Historical and current (2000) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If other than ultraclean techniques were used, then those concentrations could reflect contamination introduced during some phase of the procedure.

Water Temperature

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

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements can be found in the sections titled "MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS" or "MISCELLANEOUS DISCHARGE MEASUREMENTS."

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

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

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

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

Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

Laboratory Measurements

Samples for biochemical oxygen demand, indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Iowa City, Ia. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

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

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

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

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

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

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

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it

impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

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

Records for Hydrologic Stations

Data collected at PARTIAL-RECORD STATIONS follow the information for continuous-record sites. Data for partial-record discharge stations contain the annual and period-of-record maximum stage and discharge at crest-stage stations. The table of partial-record stations is followed by the section, "DAILY PRECIPITATION STATIONS," which is a listing of daily-precipitation tables at sites not located with continuous-record stations. The next section is titled, "MISCELLANEOUS WATER QUALITY DATA," and consists of water-quality data from a precipitation site, operated in cooperation with the Acid Rain National Trends Network, water-quality samples obtained at sites not located with continuous-record stations. This section is followed by the section "MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS" which is a listing, obtained at continuous-record or partial-record sites, of air/water temperatures, specific conductance, and discharge for which no other water-quality sample was obtained. Following is a section listing discharge measurements and/or gage heights made at sites other than continuous-record or partial-record stations titled, "MISCELLANEOUS DISCHARGE MEASUREMENTS." These measurements are made for a variety of reasons including in times of drought or flood to give better areal coverage to those events. The final section is titled, "GROUND-WATER LEVELS," for which tables of ground-water levels at selected sites are given.

Records of Ground-Water Levels

Records of water levels are presented for 7 wells. Records are obtained through cooperative efforts of many Federal, State, and local agencies and are placed in computer storage. Information about the availability of the data in the water-level file may be obtained from the District Chief, South Dakota District. (See address on back of front page.)

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape, from an analog chart or punched paper tape of a water-stage recorder, or from the memory of an electronic data logger. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Maximum depth to water level in wells equipped with recording gages is reported for each day.

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

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

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

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base, etc.), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level (see Definition of Terms); it is reported with a precision dependant on the method of determination.

PERIOD OF RECORD.--This entry indicates the period for which there are records for the well. It reports the month and year of the start of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

A table of water levels follows the station description for each well. Water levels are reported in feet above or below land-surface datum. Taped measurements of water level are listed for sites with no recording device. For wells equipped with recorders, generally, only daily water-level lows are listed for each day. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water generally changes slowly; therefore, for most purposes, annual or intermittent sampling is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring trends in nitrate concentration. In special cases where the quality of ground water may change rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey TWRI publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Historical and current (2000) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If other than ultraclean techniques were used, then those concentrations could reflect contamination introduced during some phase of the procedure.

Data Presentation

Data for quality of ground water are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.

ACCESS TO USGS WATER DATA

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

http://water.usgs.gov

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. 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).

REFERENCE CITED

Fenneman, N.M., 1946, Physical divisions of the United States: Washington, D.C., U.S. Geological Survey special map, scale 1:7,000,000.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data 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.

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.

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

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

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

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

Continuous-record station is a site 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, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 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").

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.

Ground-water level is the elevation of the water table or another potentiometric surface at a particular location.

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.

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

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

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

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

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

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

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

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

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.

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.

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.

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 (ft^3/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, $7Q_{10}$) 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.

Stage: See "Gage height."

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

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

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.

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, 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.

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.

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 table is the surface of a ground-water body at which the water is at atmospheric pressure.

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

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, 2000, is called the "2000 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual

hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

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

Well is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

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 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. *Application of surface geophysics to ground-water investigations,* by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

2-E1. *Application of borehole geophysics to water-resources investigations,* by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 pages.

2-E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 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 soluable 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 B. Ground-Water Techniques

3-B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 pages.

3-B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 pages.

3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction,* by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 pages.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 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 T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 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 6. Modeling Techniques

Section A. Ground Water

6-A1. *A modular three-dimensional finite-difference ground-water flow model,* by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 pages.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 pages.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 pages.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 pages.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details,* by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 pages.

6-A6. A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5,1996. 125 pages.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water,* by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 pages.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. *Methods of measuring water levels in deep wells,* by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 pages.

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 Gibs, 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 Gibs, 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 Gibs, 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 Gibs, 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 Gibs, 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.

SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

Remarks Codes

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

PRINT OUTPUT	REMARK
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.

Dissolved Trace-Element Concentrations

NOTE.—Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE.—Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

Water Quality-Control Data

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

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 a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collect 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).

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. 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:

Duplicate sample - a type of replicate sample that is collected during the same time period as the primary sample but is composited and processed separately.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD

LOCATION.--Lat 45°51'45", long 96°34'25", in SW¼SW¼ sec. 27, T.128 N., R.47 W., Roberts County, Hydrologic Unit 09020101, on Sisseton Indian Reservation, on left bank at Big Slough Outlet, 300 ft downstream from White Rock Dam, 4 mi south of White Rock and 5 mi northwest of Wheaton, MN.

DRAINAGE AREA.--1,160 mi^2 (approximately).

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

GAGE.--Water-stage recorder. Datum of gage is 960.00 ft. above sea level, (adjustment of 1912, levels by U.S. Army Corps of Engineers). Prior to Jan. 14, 1943, nonrecording gage at same site at datum 0.11 ft lower. Jan. 15, 1943 to Sept. 30, 1963, water-stage recorder at same site at datum 0.11 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Lake Traverse-Boise de Sioux Flood Control and Water Conservation project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	7.6	5.7	e3.6	e2.6	248	19	152	9.2	6.3	2.2	e.07
2	8.2	5.5	5.1	e3.3	e2.7	416	18	151	8.0	7.8	1.6	.06
3	9.3	5.8	5.7	e3.2	e2.7	509	13	154	8.4	11	1.3	.10
4	9.1	6.7	5.6	e3.2	e2.7	539	18	148	9.2	9.6	1.1	.11
5	7.1	5.1	3.7	e3.2	e2.7	529	18	152	13	13	1.1	.10
6	8.0	6.2	e4.3	e3.2	e2.7	527	13	149	13	23	1.1	.14
7	9.1	6.4	e4.1	e3.2	e2.7	526	12	146	10	101	.91	.07
8	11	12	e4.0	e3.2	e2.7	529	17	150	8.1	178	.97	.07
9	12	8.2	e4.0	e3.2	e2.7	462	11	157	15	182	.79	.04
10	9.9	4.9	e3.9	e3.3	e2.7	438	12	154	6.7	186	.56	.00
11	11	7.0	e3.9	e3.3	e2.7	433	13	152	4.3	263	.42	.00
12	6.6	5.8	e4.0	e3.2	e2.6	418	17	164	5.7	451	.33	.00
13	8.3	5.0	e4.1	e3.1	e2.6	411	15	151	6.1	550	.23	.00
14	9.8	4.7	e4.3	e3.0	e2.6	349	13	150	6.6	535	.19	.00
15	8.1	4.9	e4.2	e2.9	e2.6	281	12	147	9.2	526	.16	.00
16	7.8	5.3	e3.9	e2.8	e2.6	277	16	130	15	521	.13	.00
17	8.3	5.5	e3.7	e2.7	e2.6	268	20	99	13	514	.21	.00
18	8.6	4.5	e3.5	e2.6	e2.6	270	18	94	9.9	508	.25	.00
19	8.3	4.8	e3.3	e2.5	e2.6	261	16	97	10	505	.27	.00
20	11	5.3	e3.2	e2.5	e2.7	216	36	94	10	422	.26	.00
21	8.0	5.2	e3.2	e2.5	e2.7	146	81	91	9.4	277	.46	.00
22	5.9	5.1	e3.2	e2.5	e2.8	141	147	89	4.4	239	.48	.01
23	6.6	4.9	e3.3	e2.5	e3.3	75	142	86	7.2	230	.47	.03
24	8.7	6.0	e3.4	e2.5	e11	26	143	84	5.7	224	.38	.23
25	6.7	6.2	e3.6	e2.5	e45	26	142	63	6.3	220	.31	.66
26	7.1	5.4	e3.7	e2.5	146	22	143	22	7.4	188	.28	.65
27	6.8	e4.3	e3.8	e2.5	96	19	143	8.3	6.9	139	.23	.28
28	6.8	e3.7	e3.9	e2.5	51	18	144	12	5.6	85	.20	.21
29	6.4	e3.9	e3.9	e2.6	53	19	145	11	5.5	46	.12	.30
30	6.4	6.4	e3.8	e2.6	---	19	147	8.4	6.6	45	.08	.31
31	9.1	---	e3.7	e2.6	---	20	---	8.4	---	23	.07	---
TOTAL	258.6	172.3	123.7	89.0	463.9	8438	1704	3274.1	255.4	7228.7	17.16	3.44
MEAN	8.34	5.74	3.99	2.87	16.0	272	56.8	106	8.51	233	.55	.11
MAX	12	12	5.7	3.6	146	539	147	164	15	550	2.2	.66
MIN	5.9	3.7	3.2	2.5	2.6	18	11	8.3	4.3	6.3	.07	.00
AC-FT	513	342	245	177	920	16740	3380	6490	507	14340	34	6.8
CFSM	.01	.00	.00	.00	.01	.23	.05	.09	.01	.20	.00	.00
IN.	.01	.01	.00	.00	.01	.27	.05	.10	.01	.23	.00	.00

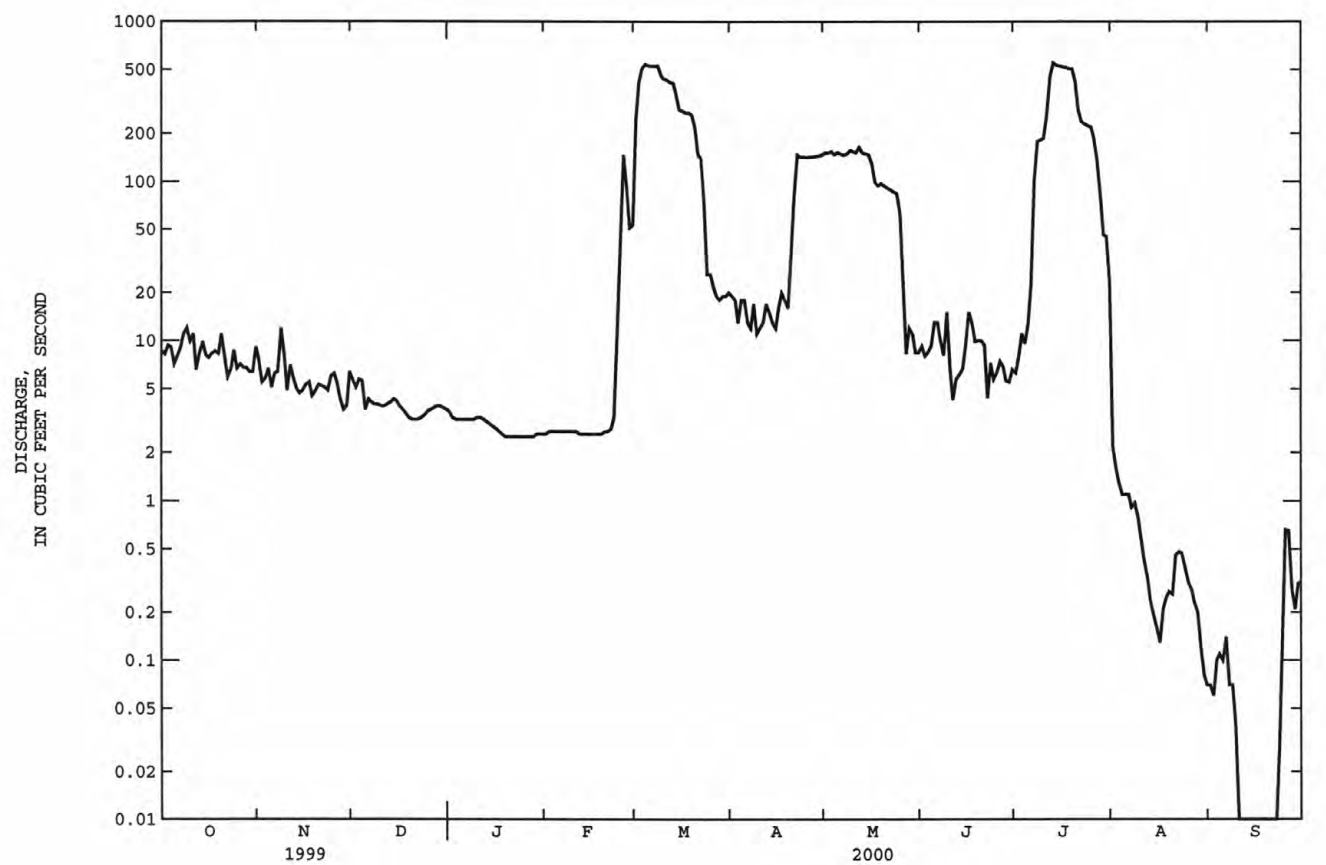
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2000, BY WATER YEAR (WY)

MEAN	29.4	16.5	8.77	3.42	7.64	64.1	302	301	244	162	71.0	36.2
MAX	535	307	207	42.4	148	628	3814	1445	1103	1035	1182	1062
(WY)	1994	1996	1999	1997	1997	1996	1997	1997	1986	1962	1993	1993
MIN	.000	.000	.000	.000	.000	.000	.000	.23	.010	.000	.000	.000
(WY)	1942	1942	1942	1942	1942	1942	1942	1977	1977	1961	1970	1960

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000	
ANNUAL TOTAL	47437.01		22028.30			
ANNUAL MEAN	130		60.2		104a	
HIGHEST ANNUAL MEAN					536	1997
LOWEST ANNUAL MEAN					.38	1977
HIGHEST DAILY MEAN	734	Jun 11	550	Jul 13	7710	Apr 16 1997
LOWEST DAILY MEAN	.76	Aug 3	.00	Sep 10	.00	Oct 1 1941b
ANNUAL SEVEN-DAY MINIMUM	3.3	Dec 18	.00	Sep 10	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW			593	Mar 3	8750	Apr 20 1997
INSTANTANEOUS PEAK STAGE			7.92	Mar 3	16.90	Apr 20 1997c
ANNUAL RUNOFF (AC-FT)	94090		43690		75410	
ANNUAL RUNOFF (CFSM)	.11		.052		.090	
ANNUAL RUNOFF (INCHES)	1.52		.71		1.22	
10 PERCENT EXCEEDS	414		187		340	
50 PERCENT EXCEEDS	30		6.5		3.1	
90 PERCENT EXCEEDS	4.3		.26		.00	

a Median of annual mean discharges is 60 ft^3/s.
b Many days, several years; result of regulation.
c Estimated, from observed readings made under non-ideal conditions. Some evidence that peak occurred Apr. 16 at 7930 ft^3/s.
e Estimated.



05289985 BIG COULEE CREEK NEAR PEEVER, SD

LOCATION.--Lat 45°29'14", long 96°57'26", in SW¼ SW¼ SW¼ SW¼ sec.29, T.124 N., R.50 W., Roberts County, Hydrologic Unit 07020001, on right downstream side of county highway bridge, 1.5 mi downstream of I-29, 7 mi northeast of Wilmot, and 3.9 mi south of Peever.

DRAINAGE AREA.--12.1 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,240 ft above sea level, from topographic map.

REMARKS.--Records good except those for Aug. 21 to Sept. 30, which are fair, and those for estimated daily discharges, which are poor. Satellite data-collection platform station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.72	.93	e.40	e.50	e2.0	11	e11	e.90	e.20	e1.2	.21
2	.55	.63	.93	e.35	e.70	e3.0	10	e5.4	e.80	e.49	e1.2	.10
3	.57	.62	.93	e.35	e.90	e3.5	9.1	e3.0	e1.0	e.92	e1.2	.13
4	.61	.71	.93	e.35	e.80	e3.2	5.3	e2.1	e1.8	e.42	e1.3	.41
5	.65	.72	.81	e.35	e.90	e4.0	4.0	e2.0	e2.8	e2.5	e1.5	.57
6	.61	.70	.82	e.35	e1.0	1.8	1.8	e1.7	e2.8	e2.1	e1.1	.34
7	.69	.72	.91	e.35	e1.1	3.0	.80	e1.6	e2.6	e1.2	e1.3	.10
8	.90	.75	.93	e.40	e1.5	e16	.73	e1.9	e1.4	e.74	e1.4	.05
9	.89	.73	.82	e.40	e1.4	e10	.50	e1.5	e.72	e.66	e1.6	.03
10	.77	.75	.73	e.38	e1.0	e3.5	.52	e1.3	e.70	e.46	e1.5	.01
11	.74	.72	.92	e.35	e1.0	e3.3	.63	e3.7	e.70	e.48	e1.3	.02
12	.75	.75	.86	e.35	e1.0	e1.1	.65	e2.5	e.70	e3.5	e1.1	.01
13	.75	.78	.83	e.35	e1.0	e3.5	1.5	e1.5	e.75	e1.9	e.44	.00
14	.78	.70	.97	e.35	e1.0	e1.0	.82	e1.0	e.60	e.91	e.05	.00
15	.81	.71	e.75	e.35	e1.0	e1.8	e.50	e1.0	e.60	e.46	e.01	.00
16	.78	.73	e.50	e.35	e1.0	e1.6	e.50	e1.0	e.50	e19	e.03	.00
17	.75	.79	e.50	e.35	e1.0	e2.7	e.50	e1.0	e.50	e7.0	e.27	.00
18	.78	.86	e.45	e.35	e1.1	e2.1	e.55	e.93	e.50	e7.8	e.30	.00
19	.84	.86	e.38	e.33	e1.4	e4.2	e4.6	e1.0	e.40	e11	e.20	.00
20	.87	.82	e.32	e.33	e2.5	e9.0	e21	e1.0	e.40	e5.0	e.20	.00
21	.87	.86	e.35	e.33	e4.0	5.9	e9.8	e1.0	e.20	e3.0	e.20	.01
22	.77	.86	e.37	e.33	e8.0	9.8	e3.1	e1.0	e.20	e2.9	e.20	.06
23	.66	.84	e.38	e.33	e10	14	e2.3	e1.1	e.20	e3.7	e.10	.01
24	.71	.84	e.40	e.33	e30	19	e2.0	e1.0	e.20	e3.9	e.05	.01
25	.74	.85	e.43	e.32	e50	18	e2.0	e1.0	e.25	e4.3	e.04	.01
26	.70	.85	e.45	e.33	e30	13	e2.0	e1.0	e.30	e2.8	e.06	.01
27	.76	.82	e.45	e.35	e20	13	e3.9	e.95	e.40	e2.2	e.03	.01
28	.73	.74	e.45	e.38	e10	11	e4.9	e1.5	e.30	e1.7	e.06	.01
29	1.1	.68	e.45	e.40	e3.5	11	e2.8	e.85	e.30	e1.4	.21	.02
30	.79	.92	e.45	e.45	---	9.2	e5.3	e.73	e.30	e1.5	.22	.03
31	.76	---	e.45	e.48	---	12	---	e.91	---	e1.3	.32	---
TOTAL	23.26	23.03	19.85	11.17	187.30	216.2	113.10	57.17	23.82	95.44	18.69	2.16
MEAN	.75	.77	.64	.36	6.46	6.97	3.77	1.84	.79	3.08	.60	.072
MAX	1.1	.92	.97	.48	50	19	21	11	2.8	19	1.6	.57
MIN	.55	.62	.32	.32	.50	1.0	.50	.73	.20	.20	.01	.00
AC-FT	46	46	39	22	372	429	224	113	47	189	37	4.3

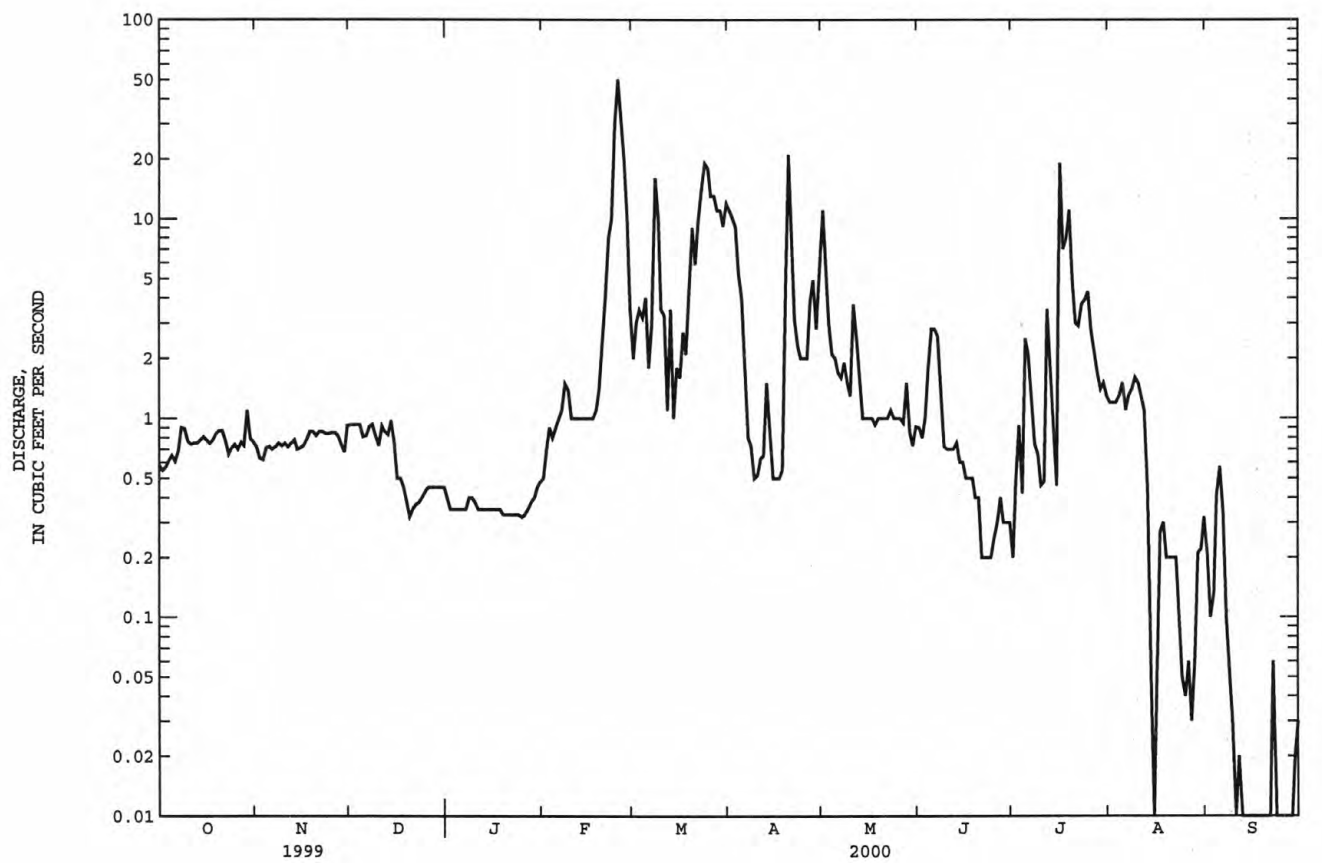
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

MEAN	1.54	1.21	.66	.33	2.48	10.6	11.1	6.77	4.22	3.82	1.29	.93
MAX	4.48	3.69	1.66	.96	7.15	23.4	34.0	22.5	11.1	16.6	3.69	2.91
(WY)	1996	1994	1999	1997	1998	1995	1997	1998	1991	1993	1993	1992
MIN	.000	.000	.000	.000	.000	1.42	1.52	1.09	.013	.000	.000	.000
(WY)	1988	1988	1988	1988	1989	1991	1990	1988	1988	1988	1988	1988

05289985 BIG COULEE CREEK NEAR PEEVER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	1142.32		791.19			
ANNUAL MEAN	3.13		2.16		3.74	
HIGHEST ANNUAL MEAN					6.86	1995
LOWEST ANNUAL MEAN					.63	1990
HIGHEST DAILY MEAN	59	Jul 8	50	Feb 25	305	May 12 1998
LOWEST DAILY MEAN	.10	Jan 7	.00	Sep 13	.00	Oct 1 1987a
ANNUAL SEVEN-DAY MINIMUM	.10	Jan 7	.00	Sep 13	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			79	Feb 25	614	May 12 1998b
INSTANTANEOUS PEAK STAGE			5.22	Feb 25c	9.43	Mar 27 1997d
ANNUAL RUNOFF (AC-FT)	2270		1570		2710	
10 PERCENT EXCEEDS	7.3		4.7		9.0	
50 PERCENT EXCEEDS	.93		.80		1.0	
90 PERCENT EXCEEDS	.25		.20		.00	

a No flow for many days in most years.
b Gage height, 7.42 ft.
c Backwater from ice.
d Backwater from beaver dam.
e Estimated.



05290000 LITTLE MINNESOTA RIVER NEAR PEEVER, SD

LOCATION.--Lat 45°36'05", long 96°52'18", in SW¼ sec. 13, T.125 N., R.50 W., Roberts County, Hydrologic Unit 07020001, on Sisseton Indian Reservation, on right bank 2 mi northwest of town of Browns Valley, MN, 5.3 mi northeast of Peever, 7.2 mi downstream from Jorgenson River, and 8 mi upstream from Big Stone Lake.

DRAINAGE AREA.--438 mi^2.

PERIOD OF RECORD.--October 1939 to September 1981, October 1989 to current year.

REVISED RECORDS.--WSP 1308: 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 1,002.20 ft above sea level. Oct. 1, 1939 to Mar. 20, 1940, nonrecording gage at site 4.5 mi downstream at different datum. Mar. 21 to Apr. 12, 1940, nonrecording gage at site 100 ft downstream at present datum. April 13 to Aug. 27, 1940, nonrecording gage at present site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jul 20	0800	*238	3.96	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	13	8.9	6.9	e3.2	e158	49	107	22	3.0	69	3.0
2	17	12	9.7	e7.0	e3.2	e165	45	121	20	5.8	61	2.8
3	15	11	11	e6.9	e3.3	e140	43	109	18	5.6	54	2.9
4	14	11	10	e6.7	e3.6	e102	41	104	19	13	54	2.9
5	14	9.8	8.3	e6.5	e4.1	92	38	95	22	18	55	2.9
6	13	9.2	8.7	e6.4	e4.6	97	35	82	23	33	56	2.9
7	14	9.0	8.7	e6.3	e5.1	97	32	73	21	48	54	3.5
8	14	11	8.3	e6.2	e6.0	e104	28	72	17	32	52	2.8
9	15	15	8.7	e6.3	e6.3	e110	25	74	14	35	47	2.4
10	17	11	9.2	e6.3	e6.5	e114	25	71	12	39	42	2.1
11	16	9.7	9.6	e6.2	e6.7	e118	24	77	11	44	36	2.0
12	15	9.1	7.4	e6.0	e6.8	e120	26	87	8.9	52	30	1.7
13	15	9.1	7.0	e5.7	e6.5	114	27	84	8.9	48	24	1.5
14	14	8.7	9.2	e5.3	e6.3	123	29	75	9.6	44	20	1.4
15	14	8.9	8.1	e5.1	e6.1	113	33	68	10	38	16	1.2
16	14	8.9	9.8	e4.8	e6.0	88	32	63	9.2	50	14	1.2
17	14	8.7	9.5	e4.6	e6.0	74	36	59	12	114	14	1.2
18	14	8.7	7.6	e4.5	e5.9	87	38	56	13	133	12	1.1
19	14	8.7	7.3	e4.4	e5.9	78	45	52	12	172	11	1.2
20	14	8.7	e7.2	e4.2	e6.0	76	106	46	9.2	231	11	1.2
21	14	9.0	e7.1	e4.1	e6.1	73	176	42	7.5	213	11	1.2
22	14	8.9	e6.8	e4.0	e6.4	69	161	39	6.1	215	9.9	1.7
23	12	9.2	e6.4	e3.8	e7.6	66	151	37	5.6	211	8.5	2.6
24	12	9.2	e6.0	e3.7	e12	70	125	34	5.1	193	7.6	2.3
25	12	9.2	5.7	e3.6	e23	78	104	31	5.5	170	6.4	2.2
26	12	9.2	6.2	e3.5	e40	75	88	27	5.6	146	5.6	2.1
27	12	9.2	6.2	e3.4	e100	71	90	25	5.1	123	5.0	2.1
28	12	8.6	6.2	e3.3	e120	65	118	24	4.9	107	4.4	2.2
29	11	8.4	6.7	e3.2	e145	58	106	24	4.3	96	3.9	2.2
30	12	8.9	6.9	e3.2	---	55	95	24	3.9	85	3.5	2.2
31	14	---	6.8	e3.2	---	51	---	24	---	76	3.3	---
TOTAL	432	291.0	245.2	155.3	568.2	2901	1971	1906	345.4	2793.4	801.1	62.7
MEAN	13.9	9.70	7.91	5.01	19.6	93.6	65.7	61.5	11.5	90.1	25.8	2.09
MAX	18	15	11	7.0	145	165	176	121	23	231	69	3.5
MIN	11	8.4	5.7	3.2	3.2	51	24	24	3.9	3.0	3.3	1.1
AC-FT	857	577	486	308	1130	5750	3910	3780	685	5540	1590	124
CFSM	.03	.02	.02	.01	.04	.21	.15	.14	.03	.20	.06	.00
IN.	.04	.02	.02	.01	.05	.24	.16	.16	.03	.23	.07	.01

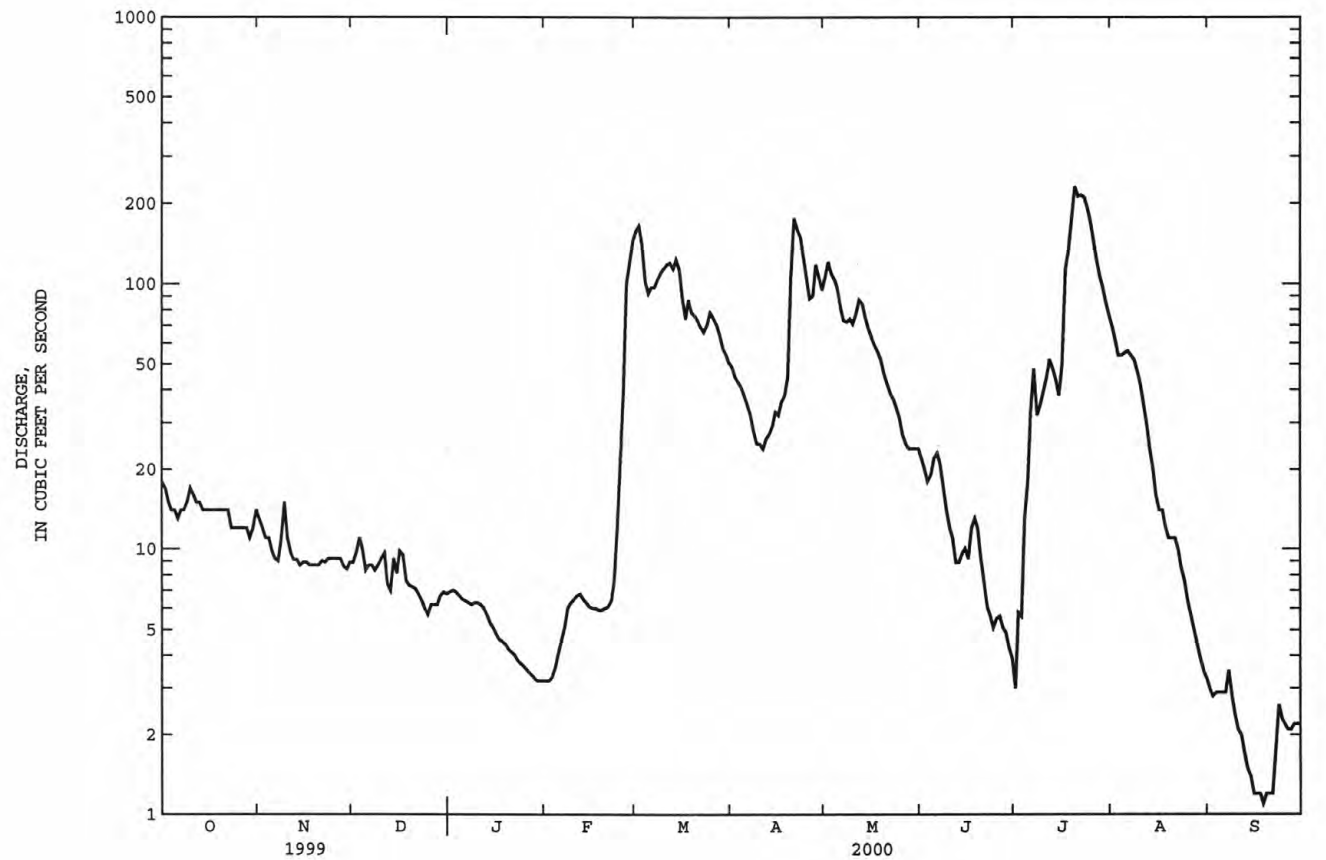
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

MEAN	6.28	7.14	4.27	1.72	4.86	119	223	102	73.9	55.4	13.1	5.22
MAX	73.9	74.5	61.2	11.4	57.0	603	1321	531	355	865	235	52.0
(WY)	1996	1999	1999	1994	1998	1997	1952	1962	1942	1993	1993	1999
MIN	.21	.25	.10	.000	.000	.51	2.89	2.20	.41	.041	.059	.074
(WY)	1940	1940	1940	1940	1940	1956	1981	1981	1976	1976	1976	1976

05290000 LITTLE MINNESOTA RIVER NEAR PEEVER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1940 - 2000	
ANNUAL TOTAL	22086.0		12472.3			
ANNUAL MEAN	60.5		34.1		51.4a	
HIGHEST ANNUAL MEAN					172	1997
LOWEST ANNUAL MEAN					1.37	1981
HIGHEST DAILY MEAN	289	Jun 7	231	Jul 20	5400	Jul 25 1993
LOWEST DAILY MEAN	4.5	Aug 27	1.1	Sep 18	.00	Jan 1 1940b
ANNUAL SEVEN-DAY MINIMUM	5.9	Jan 11	1.2	Sep 15	.00	Jan 1 1940
INSTANTANEOUS PEAK FLOW			238	Jul 20	8900	Jul 25 1993
INSTANTANEOUS PEAK STAGE			5.10	Mar 2c	14.40	Mar 27 1997
INSTANTANEOUS LOW FLOW			1.1	Sep 18	.00	Jan 1 1940b
ANNUAL RUNOFF (AC-FT)	43810		24740		37250	
ANNUAL RUNOFF (CFSM)	.14		.076		.12	
ANNUAL RUNOFF (INCHES)	1.84		1.04		1.56	
10 PERCENT EXCEEDS	176		104		117	
50 PERCENT EXCEEDS	31		12		4.0	
90 PERCENT EXCEEDS	6.4		3.3		.30	

a Median of annual mean discharges is 38 ft^3/s.
b Many days, several years.
c Backwater from ice.
e Estimated.



05291000 WHETSTONE RIVER NEAR BIG STONE CITY, SD

LOCATION.--Lat 45°17'32", long 96°29'14", in SE¼NW¼ sec. 18, T.121 N., R.46 W., Grant County, Hydrologic Unit 07020001, on right bank 20 ft downstream from former highway bridge site, 1.5 mi west of Big Stone City, S.D., and 4.5 mi upstream from Big Stone Lake.

DRAINAGE AREA.--398 mi^2.

PERIOD OF RECORD.--March 1910 to November 1912 (no winter records), and March 1931 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 895: Drainage area. WSP 1308: 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 996.96 ft in sea level (NGVD of 1912). Mar. 8, 1910 to Nov. 30, 1912, nonrecording gage 2 mi downstream at different datum. Mar. 18, 1931 to May 3, 1939, nonrecording gage, at site 20 ft upstream at present datum. May 4, 1939 to Nov. 8, 1952, water-stage recorder at site 80 ft down-stream at present datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 26 ft in June 1919, present site and datum, from information by local resident, discharge 29,000 ft^3/s, from dam break.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 22	2100	*62	1.97	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	12	14	e10	e6.5	e32	22	35	15	5.6	4.7	2.5
2	8.3	14	15	e10	e6.8	e29	21	33	15	10	4.3	2.7
3	9.0	14	15	e9.9	e7.0	e28	19	30	16	10	4.2	3.0
4	9.1	12	16	e9.7	e7.1	e29	19	28	16	8.7	4.3	3.5
5	8.7	11	18	e9.5	e7.2	e30	19	25	18	8.7	4.7	3.7
6	8.7	11	21	e9.4	e7.2	e31	19	22	15	10	4.7	3.4
7	8.8	12	17	e9.4	e7.4	e32	20	21	13	9.5	4.9	3.8
8	9.1	12	15	e9.4	e7.6	e34	17	26	12	7.5	5.1	3.4
9	8.9	11	16	e9.4	e7.8	e37	15	27	11	6.9	4.6	3.3
10	8.0	11	17	e9.4	e7.9	38	16	24	11	7.9	4.5	3.0
11	8.2	12	15	e9.4	e8.0	36	16	30	10	9.1	4.4	2.6
12	8.6	14	17	e9.4	e8.0	36	15	31	11	15	e4.3	2.3
13	9.2	13	18	e9.4	e7.8	34	16	32	12	14	e4.0	2.1
14	9.6	13	15	e9.3	e7.6	31	17	27	11	10	e3.7	2.2
15	9.7	13	14	e9.2	e7.4	29	18	23	11	8.3	e3.2	2.3
16	9.7	13	e11	e9.0	e7.2	28	22	22	10	12	e3.0	2.2
17	9.2	13	e10	e8.8	e7.2	26	24	21	10	16	e3.3	2.2
18	10	13	e9.0	e8.5	e7.2	24	25	21	10	16	e3.8	2.3
19	11	13	e10	e8.2	e7.2	24	26	19	10	14	e3.8	2.2
20	12	14	e11	e7.9	e7.2	24	33	17	8.4	12	e3.6	2.2
21	15	15	e12	e7.4	e7.2	24	45	17	6.8	11	e3.4	2.3
22	11	14	e11	e7.1	e7.2	23	57	17	7.1	10	e3.2	3.9
23	12	13	e11	e6.8	e7.4	23	56	18	9.0	9.5	e3.1	4.6
24	11	14	e10	e6.6	e7.7	25	49	19	7.6	9.1	e3.0	4.8
25	11	15	e10	e6.4	e10	27	41	15	7.8	13	e2.9	4.0
26	11	15	e10	e6.3	e14	29	36	15	9.2	11	e2.8	3.5
27	11	14	e10	e6.2	e18	27	35	15	9.6	8.3	e2.7	3.6
28	11	15	e10	e6.2	e25	25	40	15	8.0	6.5	e2.6	4.5
29	11	16	e10	e6.2	e35	24	43	15	7.1	6.0	e2.5	4.0
30	11	13	e10	e6.2	---	22	37	15	6.9	5.7	e2.4	3.7
31	14	---	e10	e6.2	---	22	---	14	---	5.2	2.2	---
TOTAL	312.7	395	408.0	256.8	278.8	883	838	689	324.5	306.5	113.9	93.8
MEAN	10.1	13.2	13.2	8.28	9.61	28.5	27.9	22.2	10.8	9.89	3.67	3.13
MAX	15	16	21	10	35	38	57	35	18	16	5.1	4.8
MIN	7.9	11	9.0	6.2	6.5	22	15	14	6.8	5.2	2.2	2.1
AC-FT	620	783	809	509	553	1750	1660	1370	644	608	226	186
CFSM	.03	.03	.03	.02	.02	.07	.07	.06	.03	.02	.01	.01
IN.	.03	.04	.04	.02	.03	.08	.08	.06	.03	.03	.01	.01

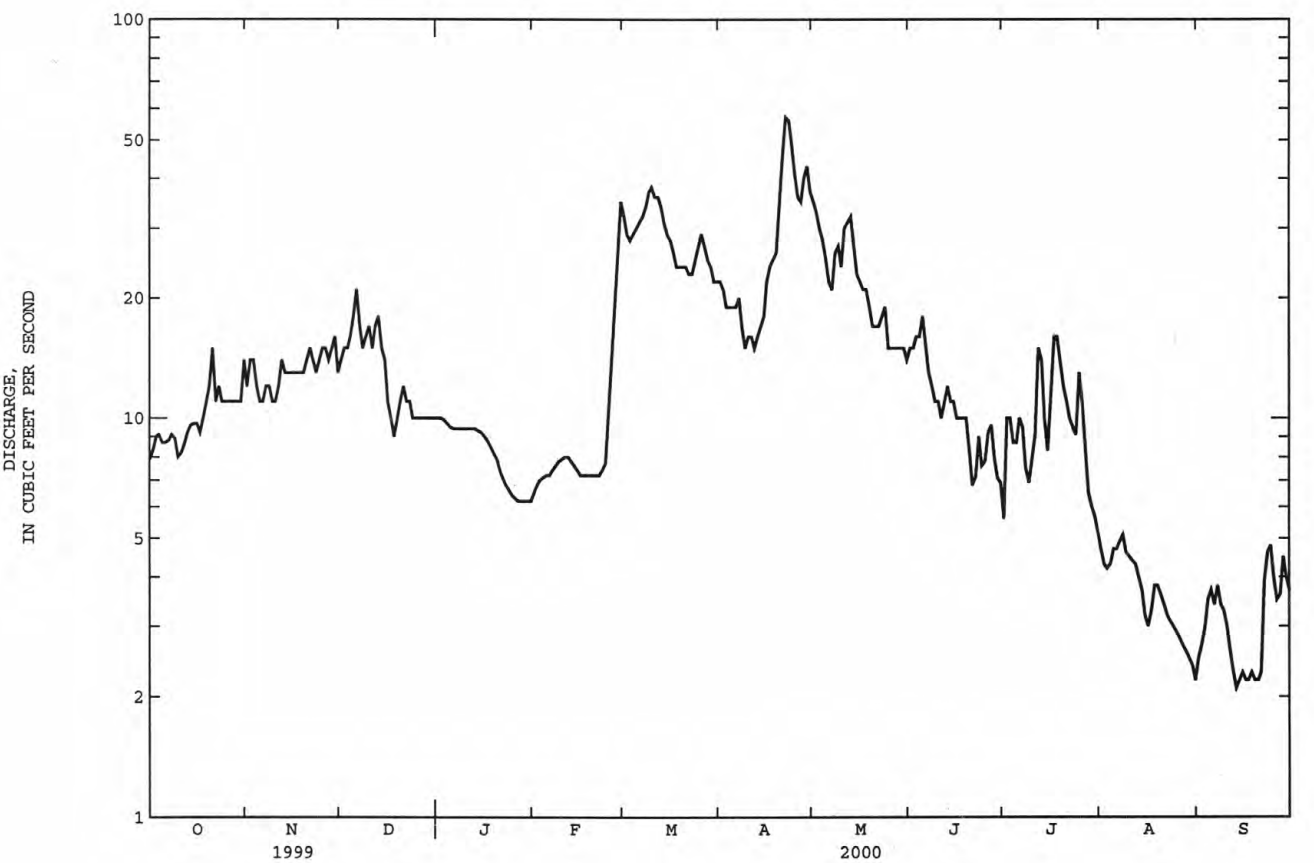
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2000, BY WATER YEAR (WY)

MEAN	14.9	14.7	9.85	6.40	15.1	159	210	91.8	75.9	58.2	19.7	10.5
MAX	280	122	56.0	36.3	168	612	1677	491	478	885	327	77.0
(WY)	1996	1996	1999	1994	1998	1978	1997	1972	1984	1993	1991	1995
MIN	.60	.40	.20	.000	.000	2.85	3.63	.77	1.42	.035	.000	.36
(WY)	1932	1935	1935	1934	1934	1969	1934	1934	1936	1934	1934	1935

05291000 WHETSTONE RIVER NEAR BIG STONE CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1910 - 2000	
ANNUAL TOTAL	17159.3		4900.0			
ANNUAL MEAN	47.0		13.4		58.9a	
HIGHEST ANNUAL MEAN					232	1997
LOWEST ANNUAL MEAN					1.52	1934
HIGHEST DAILY MEAN	277	Mar 18	57	Apr 22	6600	Apr 6 1997
LOWEST DAILY MEAN	5.2	Aug 27	2.1	Sep 13	.00	Sep 13 1931b
ANNUAL SEVEN-DAY MINIMUM	5.8	Aug 21	2.2	Sep 13	.00	Jul 31 1933
INSTANTANEOUS PEAK FLOW			62	Apr 22c	7930	Apr 6 1997
INSTANTANEOUS PEAK STAGE			2.37	Feb 28a	14.32	Apr 8 1969a
INSTANTANEOUS LOW FLOW			1.9	Sep 13	.00	Sep 13 1931b
ANNUAL RUNOFF (AC-FT)	34040		9720		42670	
ANNUAL RUNOFF (CFSM)	.12		.034		.15	
ANNUAL RUNOFF (INCHES)	1.60		.46		2.01	
10 PERCENT EXCEEDS	125		27		108	
50 PERCENT EXCEEDS	17		10		8.5	
90 PERCENT EXCEEDS	8.9		3.7		1.4	

a Median of annual mean discharges is 46 ft^3/s.
b Many days, several years.
c Gage-height, 1.97 ft.
d Backwater from ice.
e Estimated.



05292704 NORTH FORK YELLOW BANK RIVER NEAR ODESSA, MN

LOCATION.--Lat 45°11'21", long 96°24'54", in NW¼ NW¼ SW¼ sec.22, T.120 N., R.46 W., Lac qui Parle County, Hydrologic Unit 07020001, on left bank at upstream side of County Highway #7 bridge, 11.0 mi east-southeast of Milbank, SD, 6.4 mi southwest of Odessa, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--208 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,020 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.4	4.9	e4.0	e5.8	e45	12	15	9.1	2.6	1.3	.36
2	2.9	3.6	5.0	e3.8	e6.5	e40	11	15	8.6	5.1	1.2	.39
3	2.9	3.7	e5.0	e3.5	e8.0	e38	11	15	8.7	4.0	1.2	.52
4	2.8	3.6	e4.5	e3.0	e8.0	e32	11	14	10	2.8	1.2	.55
5	2.8	3.6	e4.8	e3.2	e7.8	e30	11	14	11	3.1	1.3	.57
6	2.7	3.9	e5.0	e4.0	e9.0	30	10	13	13	3.0	1.2	.79
7	2.6	4.0	e5.0	e5.0	e8.5	23	12	13	19	2.6	1.1	.74
8	2.6	4.1	e5.2	e6.0	e10	e18	9.1	18	16	2.3	1.1	.65
9	2.7	4.4	5.5	e6.0	e9.0	e15	8.9	18	13	2.2	.99	.56
10	2.6	4.4	6.2	e5.0	e8.0	e16	9.0	21	9.4	2.5	.89	.47
11	2.6	5.0	5.4	e4.0	e7.0	e17	9.3	28	8.1	3.3	.86	.39
12	2.6	5.0	5.4	e3.8	e7.2	e15	9.3	25	6.9	6.2	.79	.36
13	2.5	4.8	6.0	e4.0	e7.5	e15	9.7	23	6.9	4.8	.69	.32
14	2.7	4.7	e5.0	e4.0	e7.5	e13	9.5	22	6.8	3.5	.63	.30
15	2.7	4.6	e4.0	e4.3	e7.5	e11	9.7	20	6.4	3.2	.59	.29
16	3.0	4.4	e3.0	e4.5	e7.5	e11	10	18	6.1	4.9	.64	.27
17	2.7	4.5	e3.0	e4.5	e7.5	e11	11	17	5.9	6.7	.74	.25
18	5.2	4.6	e3.0	e4.5	e8.0	13	11	16	5.8	6.0	.85	.27
19	4.5	4.6	e3.0	e4.5	e8.0	15	12	14	5.2	6.0	.84	.29
20	3.5	4.7	e2.0	e4.5	e9.0	15	14	12	4.7	5.6	.69	.29
21	3.2	4.9	e2.2	e3.8	e10	13	18	11	4.0	4.5	.68	.31
22	3.0	4.9	e2.3	e3.8	e14	13	23	11	3.6	3.9	.65	.49
23	3.0	5.0	e2.5	e3.9	e17	13	21	11	3.6	3.1	.59	.97
24	3.1	4.9	e2.8	e4.0	e22	13	18	10	3.3	3.2	.54	.87
25	3.1	5.1	e3.0	e4.1	e28	14	16	8.9	3.8	3.2	.52	.66
26	3.1	5.0	e3.5	e4.1	e35	14	15	8.7	4.5	2.6	.52	.54
27	3.1	5.0	e4.0	e4.2	e42	14	15	9.2	3.4	2.1	.50	.49
28	3.0	e5.0	e4.5	e4.8	e50	14	15	8.8	3.3	1.9	.45	.49
29	3.4	e5.0	e5.0	e5.0	e45	13	14	8.5	3.1	1.7	.41	.55
30	3.5	5.1	e5.0	e5.0	---	12	14	8.7	2.9	1.6	.39	.44
31	3.7	---	e5.0	e5.2	---	12	---	8.6	---	1.4	.36	---
TOTAL	94.4	135.5	130.7	134.0	420.3	568	379.5	455.4	216.1	109.6	24.41	14.44
MEAN	3.05	4.52	4.22	4.32	14.5	18.3	12.6	14.7	7.20	3.54	.79	.48
MAX	5.2	5.1	6.2	6.0	50	45	23	28	19	6.7	1.3	.97
MIN	2.5	3.4	2.0	3.0	5.8	11	8.9	8.5	2.9	1.4	.36	.25
AC-FT	187	269	259	266	834	1130	753	903	429	217	48	29

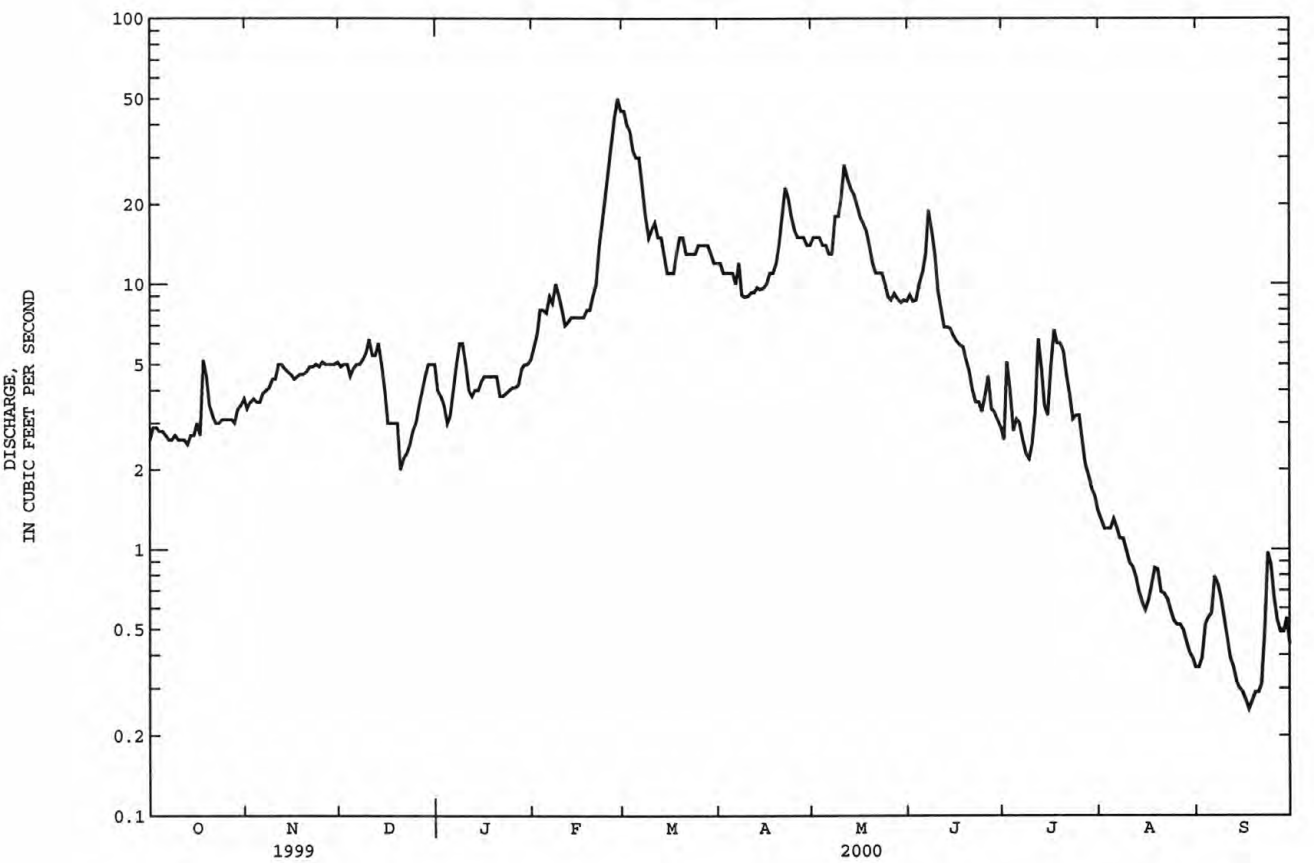
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2000, BY WATER YEAR (WY)

MEAN	52.4	31.3	15.8	9.07	41.5	184	250	95.8	83.4	133	27.8	18.9
MAX	342	122	32.7	19.5	166	422	977	267	212	501	107	72.5
(WY)	1996	1996	1996	1996	1996	1997	1997	1995	1992	1993	1995	1995
MIN	3.05	4.52	4.22	2.68	5.55	18.3	12.6	9.14	7.20	3.54	.79	.48
(WY)	2000	2000	2000	1999	1993	2000	2000	1992	2000	2000	2000	2000

05292704 NORTH FORK YELLOW BANK RIVER NEAR ODESSA, MN--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1992 - 2000	
ANNUAL TOTAL	13812.4		2682.35			
ANNUAL MEAN	37.8		7.33		78.6	
HIGHEST ANNUAL MEAN					134	1997
LOWEST ANNUAL MEAN					7.33	2000
HIGHEST DAILY MEAN	1340	Jun 10	50	Feb 28	4210	Mar 31 1997
LOWEST DAILY MEAN	1.5	Jan 25	.25	Sep 17	.25	Sep 17 2000
ANNUAL SEVEN-DAY MINIMUM	1.7	Jan 22	.28	Sep 14	.28	Sep 14 2000
INSTANTANEOUS PEAK FLOW			60	Feb 27	4670	Mar 31 1997a
INSTANTANEOUS PEAK STAGE			4.63	Feb 27b	18.02	Mar 29 1997b
ANNUAL RUNOFF (AC-FT)	27400		5320		56980	
10 PERCENT EXCEEDS	91		15		161	
50 PERCENT EXCEEDS	7.1		4.8		18	
90 PERCENT EXCEEDS	2.6		.65		4.3	

a Gage height, 15.94 ft.
b Backwater from ice.
e Estimated.



05299700 COBB CREEK NEAR GARY, SD

LOCATION.--Lat 44°44'22", long 96°27'26", in NW¼ NW¼ SW¼ sec.27, T.115 N., R.47 W., Deuel County, Hydrologic Unit 07020003, on right bank at upstream side of State Highway 22 (revised), 2.8 mi downstream from mouth of North Branch Cobb Creek, 0.3 mi upstream from South Dakota-Minnesota State line, and 3.5 mi south of Gary.

DRAINAGE AREA.--70.3 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,580 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	4.2	4.8	e7.0	e1.8	e9.0	6.0	5.6	8.7	2.5	4.0	2.2
2	6.2	4.8	4.6	e6.4	e1.7	e11	5.8	4.9	10	2.5	3.6	2.7
3	5.7	5.1	4.5	e5.8	e1.7	e12	5.6	4.5	7.6	3.1	3.4	2.8
4	5.3	5.5	4.3	e4.0	e1.6	10	5.1	4.2	9.1	2.8	3.2	2.8
5	5.1	5.4	4.2	e4.5	e1.6	9.2	5.2	3.9	10	3.7	4.3	2.6
6	4.9	5.1	3.9	e4.0	e1.7	9.9	5.2	3.3	8.0	4.5	4.8	2.2
7	5.1	4.5	4.1	e4.5	e1.8	10	5.5	3.7	6.5	3.3	3.5	2.0
8	5.6	4.9	4.5	e5.0	e1.9	e8.0	5.8	13	5.3	3.0	3.4	1.9
9	4.7	4.3	3.9	e5.0	e2.0	e7.0	5.6	10	3.9	3.5	3.2	1.8
10	4.6	4.0	3.7	e5.0	e1.8	e8.0	5.4	7.4	3.3	8.8	2.9	1.9
11	4.4	4.0	4.5	e4.7	e1.6	e9.0	5.6	8.3	2.9	6.2	2.6	1.9
12	4.5	4.2	4.1	e4.3	e1.7	8.0	5.5	9.0	2.8	8.8	2.4	2.4
13	4.7	4.0	4.2	e4.0	e1.7	7.8	6.0	6.9	2.8	6.7	2.3	2.5
14	4.8	3.9	4.8	e3.7	e1.8	8.8	6.0	5.6	3.8	5.3	2.2	2.6
15	4.8	3.9	4.1	e3.6	e1.9	8.8	5.5	5.0	4.2	4.8	2.1	2.6
16	4.7	4.0	e3.0	e3.6	e2.0	7.3	5.7	6.2	4.4	8.5	2.1	2.5
17	e4.5	4.0	e2.5	e3.6	e2.1	6.7	5.9	6.8	3.8	8.5	2.7	2.6
18	4.4	4.0	e2.5	e3.6	e2.0	6.7	7.9	8.7	3.7	7.8	2.7	2.5
19	4.6	4.3	e2.5	e3.4	e1.9	e6.0	7.9	7.4	3.1	8.8	2.4	2.9
20	4.5	4.3	e2.2	e3.2	e1.9	e6.0	11	6.6	3.3	8.0	2.4	3.6
21	4.5	4.4	e2.0	e2.8	e2.2	e6.0	9.9	6.0	2.9	7.3	2.5	4.3
22	4.4	4.3	e1.7	e2.8	e2.5	6.6	8.1	5.9	2.6	7.2	2.3	5.0
23	4.1	4.2	e1.6	e2.8	e10	7.7	6.9	6.7	4.5	6.8	2.2	6.2
24	4.3	4.2	e1.6	e2.8	e20	10	6.0	5.6	4.9	6.5	2.1	4.2
25	4.3	4.2	e2.0	e2.7	e18	10	5.2	4.3	4.0	6.8	2.1	3.3
26	4.2	4.3	e2.5	e2.5	e17	8.8	5.0	4.1	7.8	6.4	2.8	2.5
27	4.3	4.5	4.3	e2.6	e16	7.9	6.9	6.2	4.3	5.8	2.5	2.0
28	4.4	4.5	9.4	e2.5	e10	6.9	8.2	9.1	3.3	5.3	2.3	1.6
29	4.4	4.1	9.2	e2.4	e10	6.4	7.1	6.9	3.0	5.1	2.2	1.4
30	4.3	4.6	8.1	e2.3	---	6.2	6.1	7.6	2.7	4.9	2.0	1.2
31	4.1	---	e7.5	e2.0	---	6.2	---	9.3	---	4.5	2.0	---
TOTAL	145.8	131.7	126.8	117.1	141.9	251.9	191.6	202.7	147.2	177.7	85.2	80.7
MEAN	4.70	4.39	4.09	3.78	4.89	8.13	6.39	6.54	4.91	5.73	2.75	2.69
MAX	6.2	5.5	9.4	7.0	20	12	11	13	10	8.8	4.8	6.2
MIN	4.1	3.9	1.6	2.0	1.6	6.0	5.0	3.3	2.6	2.5	2.0	1.2
AC-FT	289	261	252	232	281	500	380	402	292	352	169	160

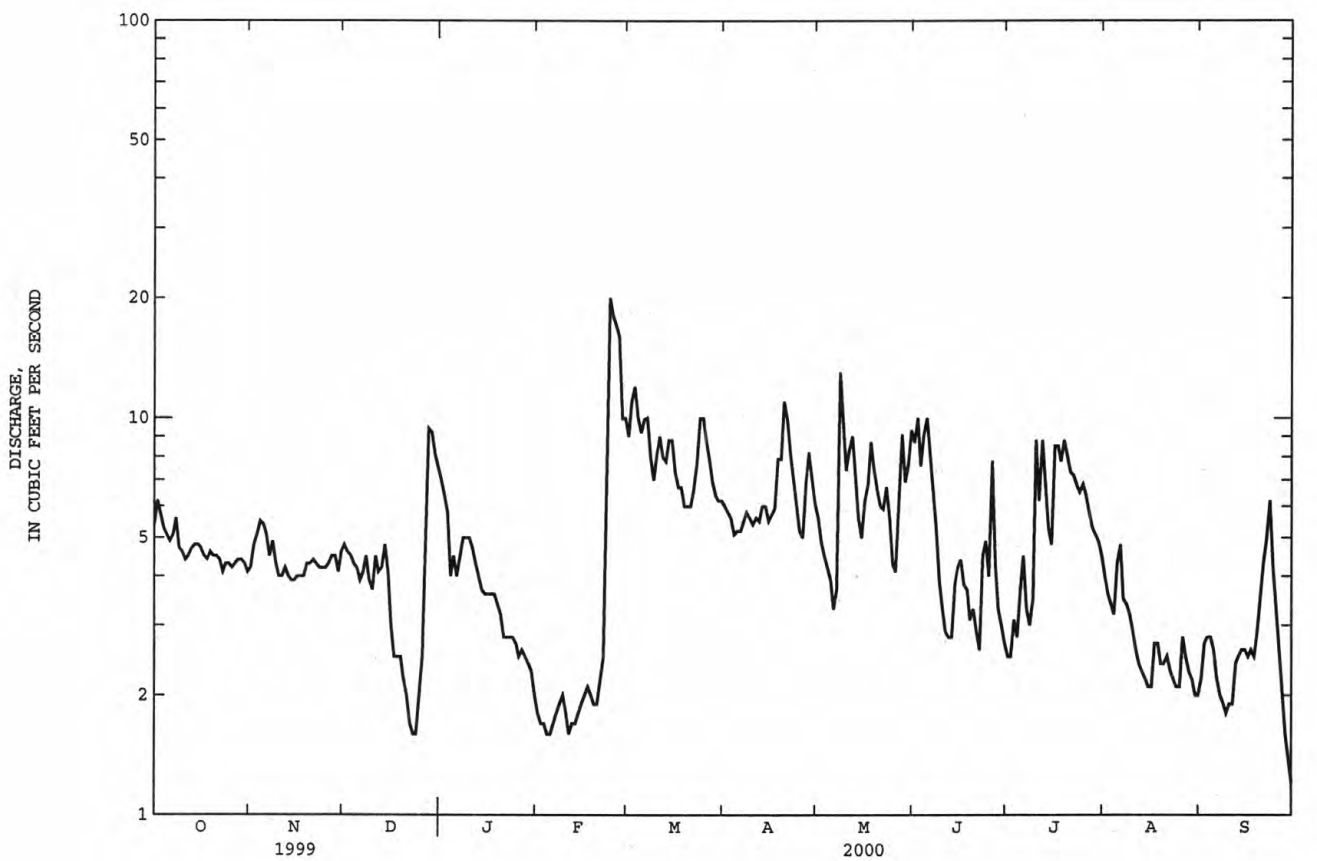
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

MEAN	11.7	9.86	6.83	4.21	10.7	52.9	100	43.7	48.9	23.0	24.2	8.39
MAX	28.4	19.1	9.33	5.62	37.2	119	317	98.9	159	84.9	65.2	17.3
(WY)	1996	1996	1999	1997	1998	1994	1997	1995	1993	1993	1993	1993
MIN	4.61	4.39	4.09	2.33	3.06	8.13	6.39	6.54	4.91	4.40	2.75	2.69
(WY)	1993	2000	2000	1999	1993	2000	2000	2000	2000	1996	2000	2000

05299700 COBB CREEK NEAR GARY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	4195.1		1800.3			
ANNUAL MEAN	11.5		4.92		28.7	
HIGHEST ANNUAL MEAN					53.8	1993
LOWEST ANNUAL MEAN					4.92	2000
HIGHEST DAILY MEAN	54	Apr 12	20	Feb 24	1420	Apr 1 1997
LOWEST DAILY MEAN	1.6	Dec 23	1.2	Sep 30	1.2	Sep 30 2000
ANNUAL SEVEN-DAY MINIMUM	1.9	Dec 19	1.7	Feb 1	1.7	Feb 1 2000
INSTANTANEOUS PEAK FLOW			30	Feb 24	2100	Mar 31 1997
INSTANTANEOUS PEAK STAGE			7.39	Feb 24a	13.99	Mar 31 1997a
ANNUAL RUNOFF (AC-FT)	8320		3570		20800	
10 PERCENT EXCEEDS	25		8.7		58	
50 PERCENT EXCEEDS	5.6		4.4		8.0	
90 PERCENT EXCEEDS	2.5		2.1		3.4	

a Backwater from ice.
e Estimated.



06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD

LOCATION.--Lat 45°32'49", long 103°58'23", in SW¼ sec.2, T.18 N., R.1 E., Harding County, Hydrologic Unit 10110201, on left bank 15 ft upstream from bridge on State Highway 20 at east edge of Camp Crook.

DRAINAGE AREA.--1,970 mi^2, approximately.

PERIOD OF RECORD.--September 1903 to November 1906, May 1956 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1904. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,108.98 ft above sea level. Sept. 2, 1903, to Nov. 30, 1906, nonrecording gage at site 0.5 mi upstream at different datum. May 1956 to Oct. 8, 1957, nonrecording gage at site 15 ft downstream, and Oct. 9, 1957, to Sept. 30, 1976, water-stage recorder at present site both at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1952 reached a stage of about 18 ft, present datum, from local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.8	e11	e10	e8.8	e43	15	21	11	3.3	.91	.70
2	10	7.6	e11	e9.1	e8.9	e41	15	19	11	3.2	1.3	.63
3	12	8.0	e11	e8.3	e8.9	e39	15	17	9.6	3.4	1.5	.82
4	13	7.6	e11	e8.0	e8.9	e39	14	14	8.7	6.2	1.5	.93
5	12	7.8	e10	e8.0	e9.0	e46	13	13	7.6	4.9	1.5	.93
6	11	7.8	e10	e8.2	e9.0	e47	13	15	7.2	3.7	1.4	1.1
7	9.2	8.3	e10	e8.6	e9.5	e42	13	13	6.9	2.4	1.5	1.2
8	8.1	8.2	e9.5	e9.0	e10	e36	15	19	6.7	2.1	1.6	1.0
9	6.6	8.1	e9.4	e9.4	e10	e30	15	19	6.6	1.6	1.5	.70
10	7.6	8.1	e9.4	e9.3	e9.0	e27	15	29	10	2.0	1.4	.71
11	10	14	e9.4	e9.2	e7.9	e26	14	23	8.6	3.8	1.6	.72
12	7.8	11	e9.6	e9.0	e7.4	e25	17	27	13	6.3	1.9	.77
13	6.8	10	e10	e8.7	e7.0	e24	16	30	11	3.8	8.1	1.2
14	6.7	9.1	e10	e8.3	e6.9	e24	14	24	8.1	2.4	4.5	1.1
15	6.9	8.4	e9.6	e8.3	e6.8	e23	14	25	8.5	2.5	3.1	.98
16	7.4	8.0	e9.5	e8.4	e7.0	e26	13	23	9.3	2.3	3.1	.91
17	7.3	7.8	e9.4	e8.4	e8.0	34	13	24	9.0	2.3	2.6	.81
18	7.7	10	e9.3	e8.5	e9.0	40	11	28	7.2	3.2	2.3	.77
19	8.1	12	e9.0	e8.5	e10	32	10	20	6.2	3.1	2.0	.91
20	7.5	13	e9.0	e8.5	e11	30	11	17	6.5	3.2	1.8	1.5
21	8.2	13	e9.0	e8.5	e12	31	11	16	5.6	2.7	.81	1.7
22	8.3	17	e9.0	e8.6	e13	32	11	15	5.8	2.6	1.1	3.8
23	7.5	e13	e9.1	e8.6	e15	26	11	13	5.5	2.0	.86	3.3
24	7.5	e15	e9.4	e8.6	e18	25	15	11	4.5	1.9	.89	2.4
25	7.4	e13	e9.8	e8.6	e22	21	16	11	5.5	2.9	1.8	2.6
26	8.0	e13	e10	e8.7	e35	19	16	13	5.5	1.3	1.1	3.7
27	7.9	e13	e10	e8.7	e52	18	14	15	4.7	.86	.83	2.5
28	7.7	e12	e10	e8.7	e54	17	13	14	5.0	1.3	1.1	2.2
29	7.9	e12	e11	e8.7	e52	16	16	12	3.5	1.1	.66	3.0
30	7.8	e12	e11	e8.8	---	16	25	10	3.5	1.1	.63	2.6
31	8.0	---	e11	e8.8	---	15	---	10	---	.98	.70	---
TOTAL	262.9	315.6	306.4	269.0	446.0	910	424	560	221.8	84.44	55.59	46.19
MEAN	8.48	10.5	9.88	8.68	15.4	29.4	14.1	18.1	7.39	2.72	1.79	1.54
MAX	13	17	11	10	54	47	25	30	13	6.3	8.1	3.8
MIN	6.6	7.6	9.0	8.0	6.8	15	10	10	3.5	.86	.63	.63
AC-FT	521	626	608	534	885	1800	841	1110	440	167	110	92

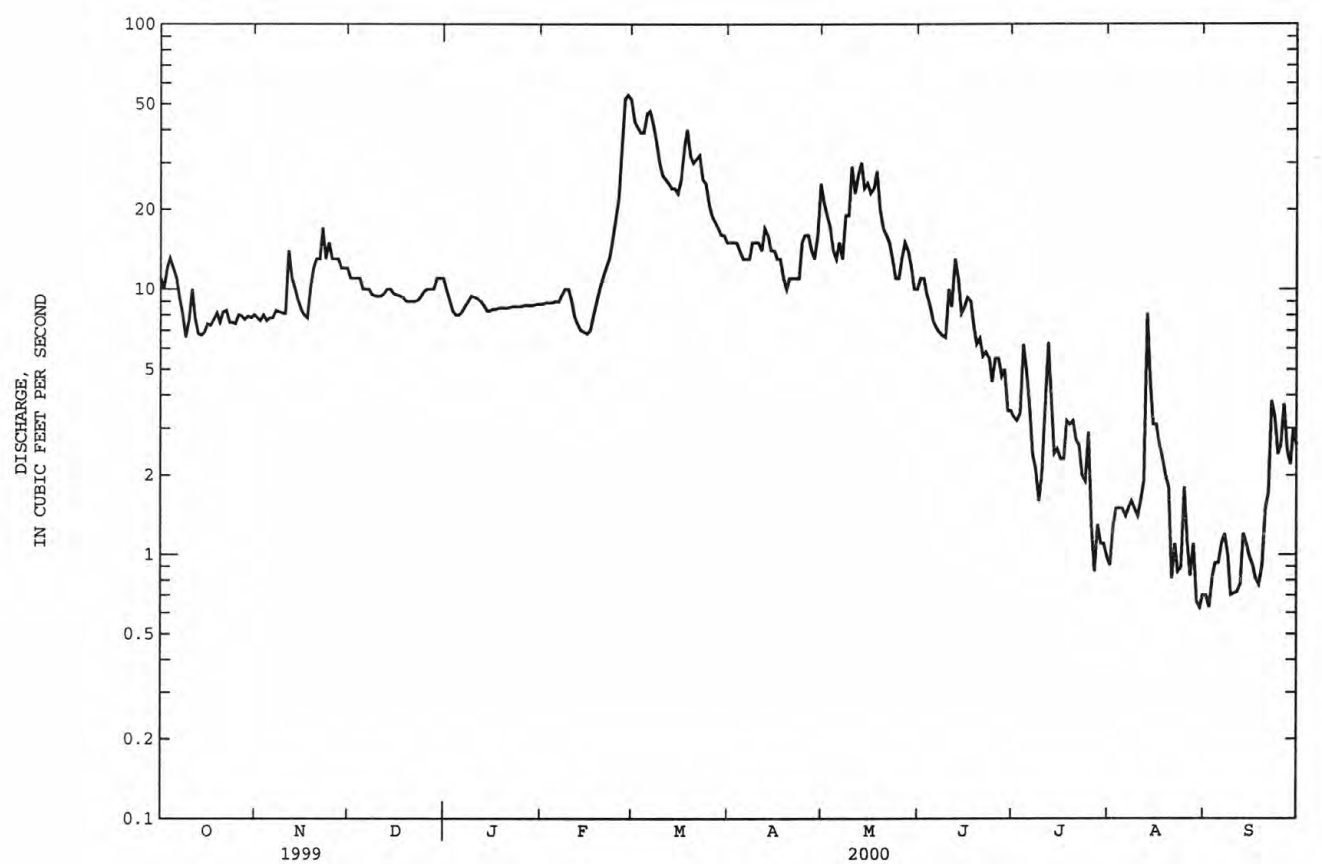
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1905, 1957 - 2000, BY WATER YEAR (WY)

MEAN	59.4	12.6	6.89	7.70	87.4	352	211	351	260	93.5	42.0	31.4
MAX	876	103	34.9	59.7	1112	2121	1198	1894	1107	961	537	244
(WY)	1972	1972	1972	1974	1996	1978	1971	1978	1967	1905	1906	1905
MIN	.29	.000	.000	.000	.000	1.95	1.97	1.12	.11	.000	.000	.61
(WY)	1905	1905	1905	1905	1969	1992	1981	1992	1961	1961	1904	1958

06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1904-1905, 1957-2000	
ANNUAL TOTAL	47066.6		3901.92			
ANNUAL MEAN	129		10.7		127a	
HIGHEST ANNUAL MEAN					492	1978
LOWEST ANNUAL MEAN					4.68	1961
HIGHEST DAILY MEAN	1780	Jun 10	54	Feb 28	8560	Mar 24 1978
LOWEST DAILY MEAN	6.3	Sep 30	.63	Aug 30	.00	Jul 31 1904b
ANNUAL SEVEN-DAY MINIMUM	7.2	Oct 12	.72	Aug 29	.00	Jul 31 1904
INSTANTANEOUS PEAK FLOW			79	Feb 26	9420	Mar 24 1978
INSTANTANEOUS PEAK STAGE			3.29	Feb 26c	16.90	Mar 24 1978
ANNUAL RUNOFF (AC-FT)	93360		7740		91760	
10 PERCENT EXCEEDS	290		23		240	
50 PERCENT EXCEEDS	27		8.9		11	
90 PERCENT EXCEEDS	8.1		1.3		1.2	

a Median of annual mean discharges, 110 ft^3/s.
b No flow at times in some years.
c Backwater from ice.
e Estimated.



MISSOURI RIVER MAIN STEM

06342500 MISSOURI RIVER AT BISMARCK, ND

LOCATION.--Lat 46°48'51", long 100°49'12", in SE¼NW¼SE¼ sec.31, T.139 N., R.80 W., Burleigh County, Hydrologic Unit 10130101, on left bank 40 ft upstream from Bismarck City waterplant, 2,100 ft downstream from Burlington Northern Railway bridge, 1.6 mi northwest of Bismarck Post Office, 3.5 mi upstream from Heart River and at mile 1,314.5.

DRAINAGE AREA.--186,400 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to November 1927, April 1928 to current year. See WSP 1729 or 1917 for history of data prior to April 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,618.28 ft above sea level, revised. See WSP 1729 or 1917 for history of changes prior to Sept. 30, 1937.

REMARKS.--Records good except for period of estimated discharge, which are fair. Flow regulated by Lake Sakakawea (station 06338000) 75.4 mi upstream since November 1953.

EXTREMES PRIOR TO COMPLETION OF GARRISON DAM.--Maximum discharge, 500,000 ft^3/s, Apr. 6, 1952, gage height, 27.90 ft.

EXTREMES SINCE COMPLETION OF GARRISON DAM.--Since completion of Garrison Dam in 1953, maximum discharge, 68,900 ft^3/s, July 13, 1975, gage height, 14.24 ft; maximum gage height, 14.58 ft, Dec. 18, 1979, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 31.6 ft, Mar. 31, 1881, present site and datum.

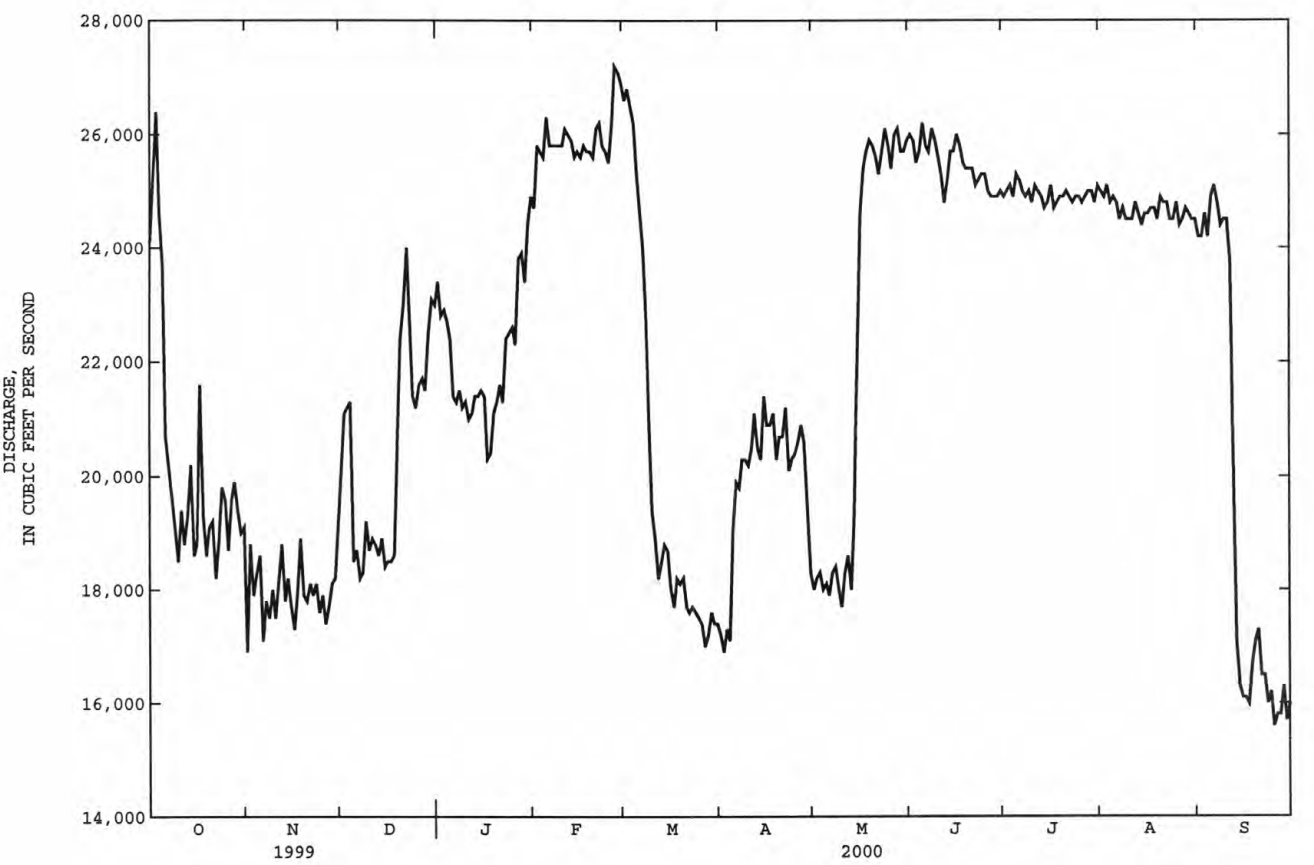
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24100	16900	20200	e23400	e24700	26600	17200	18000	26000	24900	25000	24200
2	25400	18800	21100	e22800	e25800	26800	16900	18200	25900	25000	24900	24200
3	26400	17900	21200	e22900	e25700	26500	17300	18300	25500	25100	25100	24600
4	24600	18300	21300	e22700	e25600	26200	17100	18000	25700	24900	24800	24200
5	23700	18600	18500	e22400	e26300	25300	19000	18100	26200	25300	24900	24900
6	20700	17100	18700	e21400	e25800	24700	19900	17900	25800	25200	24800	25100
7	20100	17800	18200	e21300	e25800	24000	19800	18300	25700	25000	24500	24800
8	19600	17500	18300	e21500	e25800	22800	20300	18400	26100	24900	24700	24400
9	19100	18000	19200	e21200	e25800	20800	20300	18000	25900	25000	24500	24500
10	18500	17500	18700	e21300	e25800	19400	20200	17700	25600	24800	24500	24500
11	19400	18100	18900	e21000	e26100	18900	20500	18300	25300	25100	24500	23800
12	18800	18800	18800	e21100	e26000	18200	21100	18600	24800	25000	24800	19700
13	19300	17800	18600	e21400	e25900	18500	20500	18000	25200	24900	24600	17100
14	20200	18200	18900	e21400	e25600	18800	20300	19200	25700	24700	24400	16300
15	18600	17700	18400	e21500	e25700	18700	21400	22300	25700	24800	24600	16100
16	18800	17300	18500	e21400	e25600	18000	20900	24600	26000	25100	24600	16100
17	21600	18000	18500	e20300	e25800	17700	20900	25400	25800	24700	24700	16000
18	19300	18900	18600	e20400	e25700	18200	21100	25700	25500	24800	24700	16700
19	18600	17900	20300	e21100	e25700	18100	20300	25900	25400	24900	24500	17100
20	19100	17800	22400	e21300	e25600	18200	20700	25800	25400	24900	24900	17300
21	19200	18100	e23000	e21600	e26100	17700	20700	25600	25400	25000	24800	16500
22	18200	17900	e24000	e21300	e26200	17600	21200	25300	25100	24900	24800	16500
23	18900	18100	e22800	e22400	e25800	17700	20100	25700	25200	24800	24500	16000
24	19800	17600	e21400	e22500	e25700	17600	20300	26100	25300	24900	24500	16200
25	19600	17900	e21200	e22600	e25500	17500	20400	25800	25300	24900	24800	15600
26	18700	17400	e21600	e22300	e26200	17400	20600	25400	25000	24800	24400	15800
27	19600	17700	e21700	e23800	e27200	17000	20900	26000	24900	24900	24500	15800
28	19900	18100	e21500	e23900	27100	17200	20600	26100	24900	25000	24700	16300
29	19400	18200	e22500	e23400	26900	17600	19400	25700	24900	25000	24600	15700
30	19000	19200	e23100	e24400	---	17400	18300	e25700	25000	24800	24500	16000
31	19100	---	e23000	e24900	---	17400	---	e25900	---	25100	24500	---
TOTAL	627300	539100	633100	684900	751500	618500	598200	688000	764200	773100	764600	582000
MEAN	20240	17970	20420	22090	25910	19950	19940	22190	25470	24940	24660	19400
MAX	26400	19200	24000	24900	27200	26800	21400	26100	26200	25300	25100	25100
MIN	18200	16900	18200	20300	24700	17000	16900	17700	24800	24700	24400	15600
AC-FT	1244000	1069000	1256000	1358000	1491000	1227000	1187000	1365000	1516000	1533000	1517000	1154000
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)												
MEAN	21660	21520	20890	23040	25230	22830	21630	23200	24610	25620	25410	22520
MAX	48180	43240	31690	32350	34840	34370	40370	42030	43540	64610	57010	45060
(WY)	1998	1998	1970	1969	1969	1972	1972	1972	1975	1975	1975	1997
MIN	8399	8155	7890	6519	5883	6317	10420	9234	8445	10840	9271	8121
(WY)	1963	1963	1955	1955	1956	1955	1993	1963	1960	1960	1962	1962

06342500 MISSOURI RIVER AT BISMARCK, ND--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000a	
ANNUAL TOTAL	9181600		8024500			
ANNUAL MEAN	25160		21920		23170	
HIGHEST ANNUAL MEAN					35630	1975
LOWEST ANNUAL MEAN					14320	1960
HIGHEST DAILY MEAN	33000	Mar 20	27200	Feb 27	68800	Jul 13 1975
LOWEST DAILY MEAN	16900	Nov 1	15600	Sep 25	4000	Mar 25 1955
ANNUAL SEVEN-DAY MINIMUM	17800	Nov 5	15900	Sep 23	4860	Mar 21 1955
INSTANTANEOUS PEAK FLOW			27500	Feb 28	68900	Jul 13 1975
INSTANTANEOUS PEAK STAGE			13.01	Jan 15b	14.80	Jan 13 1983
ANNUAL RUNOFF (AC-FT)	18210000		15920000		16790000	
10 PERCENT EXCEEDS	29800		25800		34200	
50 PERCENT EXCEEDS	25700		22000		22100	
90 PERCENT EXCEEDS	18600		17600		12100	

a Since completion of Garrison Dam.
b Backwater from ice.
e Estimated.



06354882 OAK CREEK NEAR WAKPALA, SD

LOCATION.--Lat 45°42'43", long 100°33'32", in SW¼ SE¼ NW¼ sec.9, T.20 N., R.29 E., Corson County, Hydrologic Unit 10130102, on right bank at upstream side of bridge on farm access road, 1.6 mi east of Rattlesnake Butte, and 4.0 mi northwest of Wakpala.

DRAINAGE AREA.--356 mi^2, approximately.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,690 ft above sea level, from topographic map.

REMARKS.--Records poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

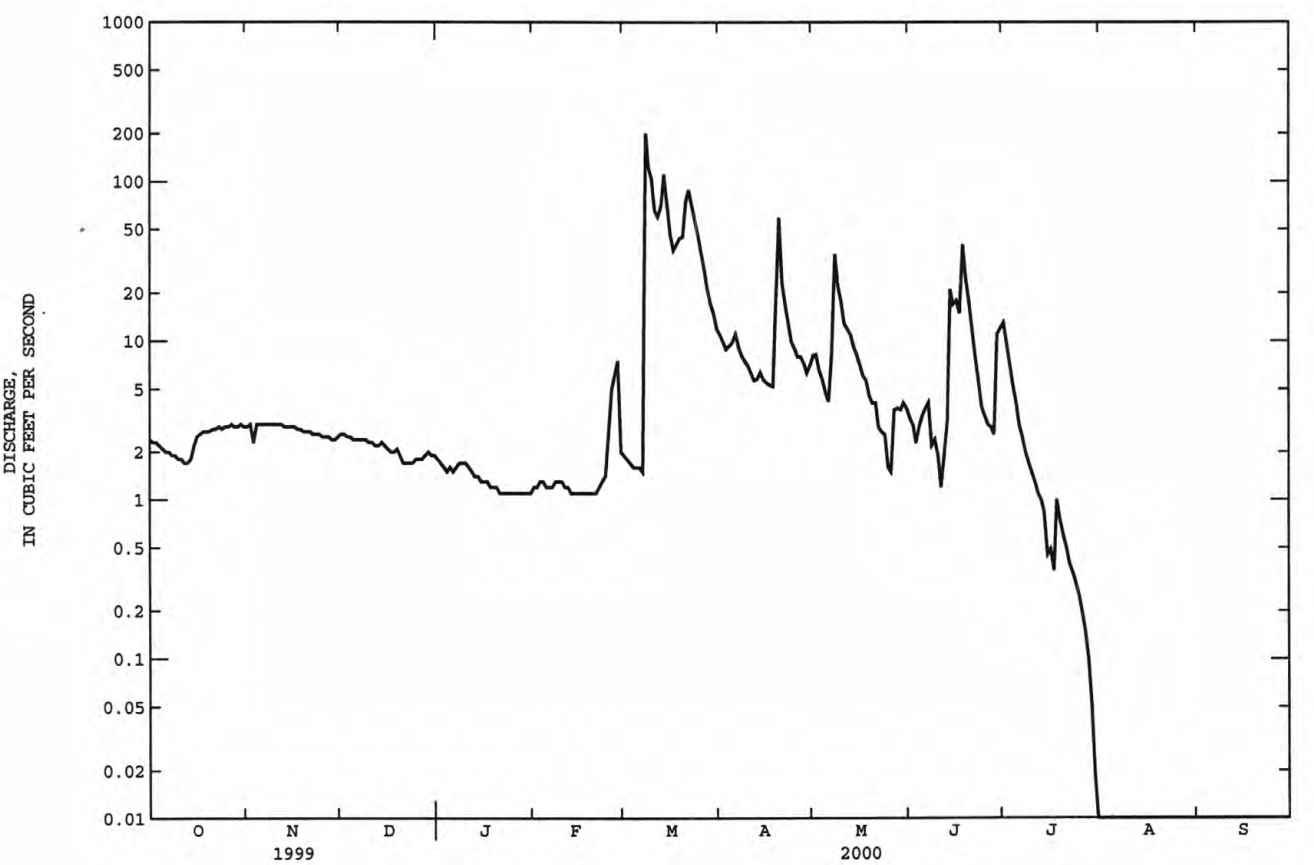
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.4	e2.9	e2.6	e1.8	e1.2	e1.9	11	8.1	3.3	13	e.00	.00
2	e2.3	e3.0	e2.6	e1.7	e1.2	e1.8	9.9	8.2	3.0	10	e.00	.00
3	e2.3	e2.3	e2.5	e1.6	e1.3	e1.7	8.9	6.5	2.3	7.4	e.00	.00
4	e2.2	e3.0	e2.5	e1.5	e1.3	e1.6	9.3	5.7	2.9	5.3	e.00	.00
5	e2.1	e3.0	e2.4	e1.6	e1.2	e1.6	9.8	4.7	3.4	4.1	e.00	.00
6	e2.0	e3.0	e2.4	e1.5	e1.2	e1.6	11	4.2	3.8	e3.0	.00	.00
7	e2.0	e3.0	e2.4	e1.6	e1.2	e1.5	9.1	8.4	4.1	e2.5	.00	.00
8	e1.9	e3.0	e2.4	e1.7	e1.3	e200	8.1	35	2.2	e2.0	.00	.00
9	e1.9	e3.0	e2.4	e1.7	e1.3	e120	7.5	22	2.4	e1.7	.00	.00
10	e1.8	e3.0	e2.3	e1.7	e1.3	e105	7.0	18	1.9	e1.5	.00	.00
11	e1.8	e3.0	e2.3	e1.6	e1.2	e66	6.3	13	1.2	e1.3	.00	.00
12	e1.7	e3.0	e2.2	e1.5	e1.2	e60	5.7	12	2.0	e1.1	.00	.00
13	e1.7	e2.9	e2.2	e1.4	e1.1	e70	5.8	11	3.1	e1.0	.00	.00
14	e1.8	e2.9	e2.3	e1.4	e1.1	e110	6.4	9.3	21	.83	.00	.00
15	e2.2	e2.9	e2.2	e1.3	e1.1	e70	5.7	8.2	17	.45	.00	.00
16	e2.5	e2.9	e2.1	e1.3	e1.1	e47	5.5	7.1	18	.49	.00	.00
17	e2.6	e2.8	e2.0	e1.3	e1.1	37	5.3	6.0	15	.36	.00	.00
18	e2.7	e2.8	e2.0	e1.2	e1.1	40	5.2	5.7	40	e1.0	.00	.00
19	e2.7	e2.7	e2.1	e1.2	e1.1	44	18	4.6	25	e.75	.00	.00
20	e2.7	e2.7	e1.9	e1.2	e1.1	45	59	4.1	18	e.60	.00	.00
21	e2.8	e2.7	e1.7	e1.1	e1.1	76	23	4.1	12	e.50	.00	.00
22	e2.8	e2.6	e1.7	e1.1	e1.2	88	17	2.9	7.9	e.40	.00	.00
23	e2.9	e2.6	e1.7	e1.1	e1.3	70	13	2.7	5.6	e.35	.00	.00
24	e2.8	e2.6	e1.7	e1.1	e1.4	56	10	2.6	3.9	e.30	.00	.00
25	e2.9	e2.5	e1.8	e1.1	e2.5	45	9.0	1.6	3.4	e.25	.00	.00
26	e2.9	e2.5	e1.8	e1.1	e5.0	36	8.0	1.5	3.0	e.20	.00	.00
27	e3.0	e2.5	e1.8	e1.1	e6.0	28	8.0	3.7	2.9	e.15	.00	.00
28	e2.9	e2.4	e1.9	e1.1	e7.5	21	7.3	3.8	2.6	e.10	.00	.00
29	e2.9	e2.4	e2.0	e1.1	e2.0	17	6.3	3.7	11	e.05	.00	.00
30	e3.0	e2.5	e1.9	e1.1	---	15	7.0	4.1	12	e.02	.00	.00
31	e2.9	---	e1.9	e1.1	---	12	---	3.8	---	e.01	.00	---
TOTAL	75.1	83.1	65.7	41.9	51.7	1489.7	323.1	236.3	253.9	60.71	0.00	0.00
MEAN	2.42	2.77	2.12	1.35	1.78	48.1	10.8	7.62	8.46	1.96	.000	.000
MAX	3.0	3.0	2.6	1.8	7.5	200	59	35	40	13	.00	.00
MIN	1.7	2.3	1.7	1.1	1.1	1.5	5.2	1.5	1.2	.01	.00	.00
AC-FT	149	165	130	83	103	2950	641	469	504	120	.00	.00
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)												
MEAN	5.48	2.91	1.71	1.48	23.4	179	76.0	50.6	12.6	12.0	2.92	1.39
MAX	33.5	17.7	6.80	5.53	149	820	511	240	49.0	106	20.3	13.3
(WY)	1997	1999	1999	1996	1995	1997	1997	1999	1995	1993	1998	1999
MIN	.000	.000	.000	.000	.000	1.81	.79	.096	.000	.000	.000	.000
(WY)	1985	1989	1989	1989	1985	1992	1992	1992	1992	1985	1987	1987

06354882 OAK CREEK NEAR WAKPALA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1985 - 2000	
ANNUAL TOTAL	14734.03		2681.21			
ANNUAL MEAN	40.4		7.33		30.9a	
HIGHEST ANNUAL MEAN					126	1997
LOWEST ANNUAL MEAN					.65	1992
HIGHEST DAILY MEAN	1330	May 11	200	Mar 8	6800	Mar 28 1997
LOWEST DAILY MEAN	.93	Aug 10	.00	Aug 1	.00	Oct 1 1984b
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 5	.00	Aug 1	.00	Oct 1 1984
INSTANTANEOUS PEAK FLOW			653	Mar 8	7500	Mar 27 1997
INSTANTANEOUS PEAK STAGE			8.87	Mar 8	19.83	Mar 27 1997c
ANNUAL RUNOFF (AC-FT)	29220		5320		22400	
10 PERCENT EXCEEDS	51		15		31	
50 PERCENT EXCEEDS	6.1		2.2		1.4	
90 PERCENT EXCEEDS	2.1		.00		.00	

a Median of annual discharges, 20 ft^3/s.
b No flow for many days in most years.
c Backwater from ice.
e Estimated.



06355500 NORTH FORK GRAND RIVER NEAR WHITE BUTTE, SD

LOCATION.--Lat 45°48'08", long 102°21'43", in SW¼ NW¼ NW¼ sec.11, T.21 N., R.14 E., Perkins County, Hydrologic Unit 10130301, on left bank on upstream side of highway bridge and 9.8 mi south of White Butte.

DRAINAGE AREA.--1,190 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1947, 1950.

GAGE.--Water-stage recorder. Elevation of gage is 2,296 ft above sea level, from topographic map. See WSP 1917 for history of changes prior to June 12, 1951. June 12, 1951, to Aug. 20, 1975, water-stage recorder, and Aug. 21 to Sept. 10, 1975, nonrecording gage at site 100 ft upstream; Sept. 11, 1975, to Mar. 22, 1976, nonrecording gage, and July 29, 1976, to Sept. 30, 1989, water-stage recorder at site 1,400 ft upstream, and Mar. 23 to July 28, 1976, nonrecording gage at present site, all at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Bowman-Haley Dam, capacity, 93,000 acre-ft, 71 mi upstream, beginning August 1966. Maximum discharge prior to October 1966, 30,900 ft^3/s, Apr. 16, 1950, gage height, 20.0 ft, from floodmarks, from rating curve extended above 19,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times most years. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	15	e10	e11	e32	15	7.3	5.9	7.8	1.8	.00
2	11	12	15	e9.5	e12	e31	16	6.5	6.7	8.5	1.2	.00
3	11	12	14	e9.0	e11	e29	17	5.9	8.6	8.6	1.2	.00
4	11	12	e13	e8.5	e10	e29	17	5.4	9.2	8.0	.91	.00
5	11	12	e12	e10	e11	e29	16	5.5	9.0	7.6	.69	.00
6	10	12	e12	e11	e11	e26	15	5.1	77	6.9	.53	.00
7	11	13	e12	e11	e12	e25	16	6.6	95	6.3	.18	.00
8	11	13	e12	e11	e13	e22	16	9.3	64	5.8	.00	.00
9	11	13	e12	e12	e12	e21	15	11	44	5.4	.00	.00
10	11	13	e12	e12	e9.5	e20	14	12	31	5.5	.00	.00
11	11	13	e12	e11	e9.5	e19	14	12	22	6.3	.00	.00
12	11	13	e13	e11	e9.5	e20	13	12	18	7.1	.00	.00
13	11	13	e13	e11	e9.5	e20	14	13	17	7.1	.00	.00
14	11	13	e13	e11	e9.5	e20	14	12	16	8.2	.00	.00
15	12	13	e11	e11	e9.5	e21	12	10	14	9.5	.00	.00
16	12	13	e11	e11	e9.0	22	10	8.9	13	6.6	.00	.00
17	12	14	e11	e11	e10	22	9.5	9.3	11	4.4	.00	.00
18	13	14	e11	e11	e11	22	9.0	9.0	12	6.5	.00	.00
19	13	14	e11	e10	e12	23	8.2	9.0	13	12	.00	.00
20	13	14	e9.0	e10	e13	23	7.8	8.7	14	13	.00	.00
21	13	14	e10	e11	e14	22	7.7	8.5	13	11	.00	.00
22	13	14	e10	e11	e15	21	7.4	7.9	13	9.9	.00	.00
23	13	14	e10	e11	e16	21	7.5	6.6	12	7.8	.00	.00
24	13	e13	e10	e11	e17	21	8.8	5.5	11	6.4	.00	.00
25	13	e13	e10	e11	e18	21	15	4.7	11	4.9	.00	.00
26	12	e13	e10	e11	e19	20	14	4.4	11	3.8	.00	.00
27	12	e13	e11	e11	e23	19	12	4.7	11	3.2	.00	.00
28	12	13	e11	e11	e24	17	11	4.8	9.4	2.7	.00	.00
29	12	13	e11	e11	e30	17	8.6	4.5	12	2.3	.00	.00
30	12	14	e10	e11	---	17	8.3	5.2	10	2.0	.00	.00
31	12	---	e10	e11	---	16	---	5.7	---	2.1	.00	---
TOTAL	364	392	357.0	333.0	391.0	688	368.8	241.0	613.8	207.2	6.51	0.00
MEAN	11.7	13.1	11.5	10.7	13.5	22.2	12.3	7.77	20.5	6.68	.21	.000
MAX	13	14	15	12	30	32	17	13	95	13	1.8	.00
MIN	10	12	9.0	8.5	9.0	16	7.4	4.4	5.9	2.0	.00	.00
AC-FT	722	778	708	661	776	1360	732	478	1220	411	13	.00

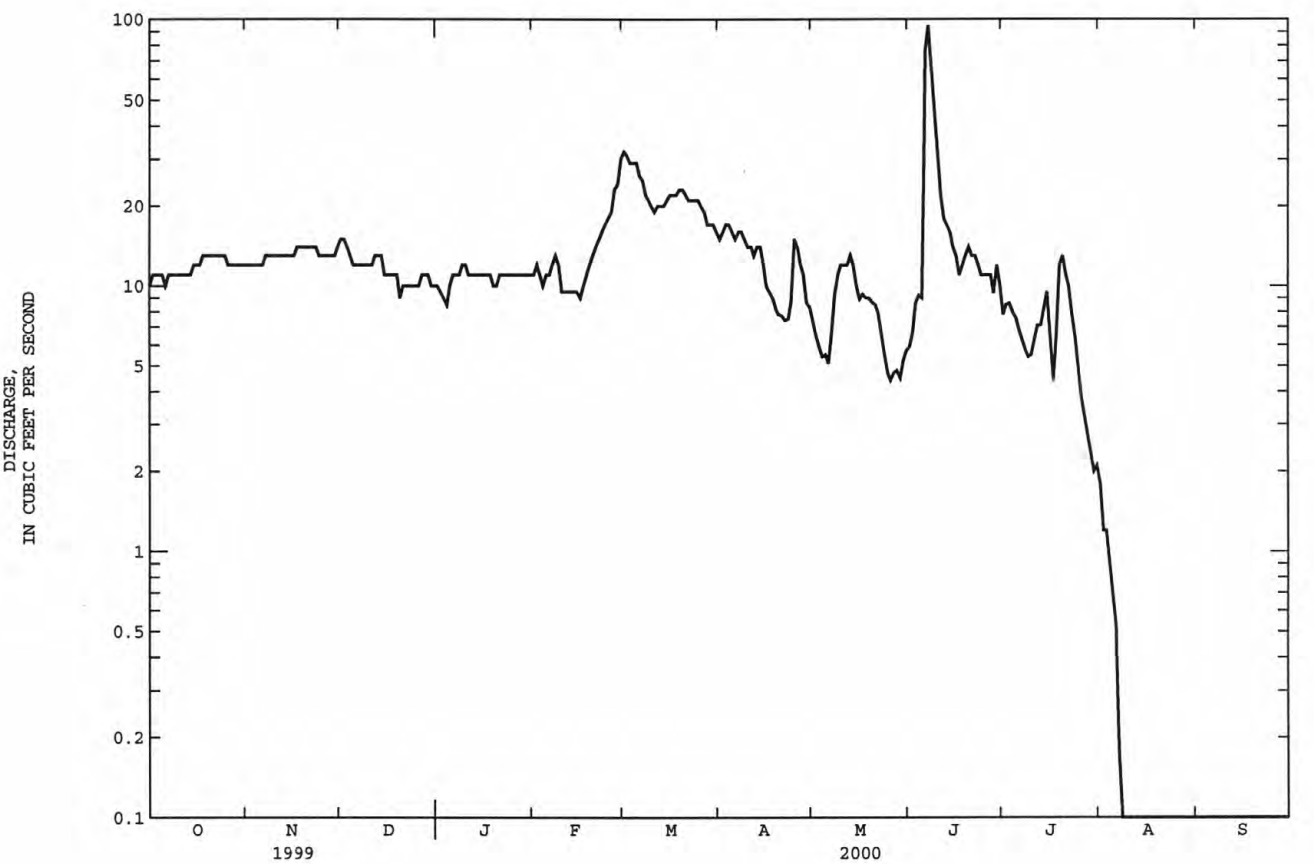
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)*

MEAN	7.88	7.69	4.78	6.88	17.7	169	130	94.1	57.6	26.0	9.21	3.65
MAX	72.1	56.9	21.2	61.1	169	964	895	414	230	154	65.9	27.1
(WY)	1983	1983	1983	1973	1999	1978	1997	1982	1982	1993	1993	1979
MIN	.000	.000	.000	.000	.000	2.22	.007	.071	.032	.000	.000	.000
(WY)	1969	1989	1989	1991	1969	1975	1981	1981	1981	1980	1968	1968

06355500 NORTH FORK GRAND RIVER NEAR WHITE BUTTE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000*	
ANNUAL TOTAL	20266.0		3962.31			
ANNUAL MEAN	55.5		10.8		44.7a	
HIGHEST ANNUAL MEAN					160	1978
LOWEST ANNUAL MEAN					2.72	1981
HIGHEST DAILY MEAN	705	Mar 3	95	Jun 7	6030	Mar 28 1978
LOWEST DAILY MEAN	4.7	Jan 3	.00	Aug 8	.00	Aug 3 1967b
ANNUAL SEVEN-DAY MINIMUM	5.4	Jan 1	.00	Aug 8	.00	Aug 3 1967
INSTANTANEOUS PEAK FLOW			119	Jun 6	6710	Mar 28 1978c
INSTANTANEOUS PEAK STAGE			2.29	Jun 6	12.08	Mar 23 1978d
ANNUAL RUNOFF (AC-FT)	40200		7860		32380	
10 PERCENT EXCEEDS	133		19		90	
50 PERCENT EXCEEDS	21		11		5.9	
90 PERCENT EXCEEDS	8.6		.00		.00	

* Regulated period only (1967-2000). See REMARKS.
a Median of annual mean discharges, 36 ft^3/s.
b No flow at times in most years.
c Gage height, 11.63 ft.
d Backwater from ice.
e Estimated.



06356500 SOUTH FORK GRAND RIVER NEAR CASH, SD

LOCATION.--Lat 45°38'56", long 102°38'27", in SE¼ NE¼ SE¼ SE¼ sec.33, T.20 N., R.12 E., Perkins County, Hydrologic Unit 10130302, on left bank at downstream side of highway bridge, 1.0 mi upstream from Little Nasty Creek, 4.0 mi north of Cash, 10 mi south of Lodgepole, 12 mi northwest of Bison, and 16 mi downstream from Big Nasty Creek.

DRAINAGE AREA.--1,350 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year, seasonal records only beginning October 1995. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 2,422.75 ft above sea level. Prior to Oct. 25, 1946, nonrecording gage, and Oct. 25, 1946, to May 16, 1966, water-stage recorder, at site 500 ft upstream. May 17, 1966, to May 2, 1968, nonrecording gage, at present site, all at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s, Apr. 15, 1950, gage height, 15.40 ft, from rating curve extended above 14,000 ft^3/s, on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period March through June, 315 ft^3/s, May 9, gage height, 3.13 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e52	27	27	33	---	---	---
2	---	---	---	---	---	e55	28	24	25	---	---	---
3	---	---	---	---	---	e54	27	23	23	---	---	---
4	---	---	---	---	---	e51	26	22	24	---	---	---
5	---	---	---	---	---	e43	28	20	20	---	---	---
6	---	---	---	---	---	e37	27	20	19	---	---	---
7	---	---	---	---	---	e33	27	28	18	---	---	---
8	---	---	---	---	---	e31	27	90	16	---	---	---
9	---	---	---	---	---	e27	25	261	16	---	---	---
10	---	---	---	---	---	e28	25	170	18	---	---	---
11	---	---	---	---	---	e29	25	100	18	---	---	---
12	---	---	---	---	---	e32	24	85	30	---	---	---
13	---	---	---	---	---	e40	24	67	56	---	---	---
14	---	---	---	---	---	e50	25	52	32	---	---	---
15	---	---	---	---	---	e65	27	41	24	---	---	---
16	---	---	---	---	---	e74	27	36	22	---	---	---
17	---	---	---	---	---	64	25	33	27	---	---	---
18	---	---	---	---	---	61	25	31	35	---	---	---
19	---	---	---	---	---	62	24	35	27	---	---	---
20	---	---	---	---	---	59	23	38	26	---	---	---
21	---	---	---	---	---	59	23	40	22	---	---	---
22	---	---	---	---	---	52	23	31	20	---	---	---
23	---	---	---	---	---	47	23	27	20	---	---	---
24	---	---	---	---	---	44	25	24	19	---	---	---
25	---	---	---	---	---	38	31	22	18	---	---	---
26	---	---	---	---	---	37	48	23	18	---	---	---
27	---	---	---	---	---	33	77	27	17	---	---	---
28	---	---	---	---	---	31	54	53	17	---	---	---
29	---	---	---	---	---	30	38	80	16	---	---	---
30	---	---	---	---	---	30	32	61	16	---	---	---
31	---	---	---	---	---	28	---	38	---	---	---	---
TOTAL	---	---	---	---	---	1376	890	1629	692	---	---	---
MEAN	---	---	---	---	---	44.4	29.7	52.5	23.1	---	---	---
MAX	---	---	---	---	---	74	77	261	56	---	---	---
MIN	---	---	---	---	---	27	23	20	16	---	---	---
AC-FT	---	---	---	---	---	2730	1770	3230	1370	---	---	---

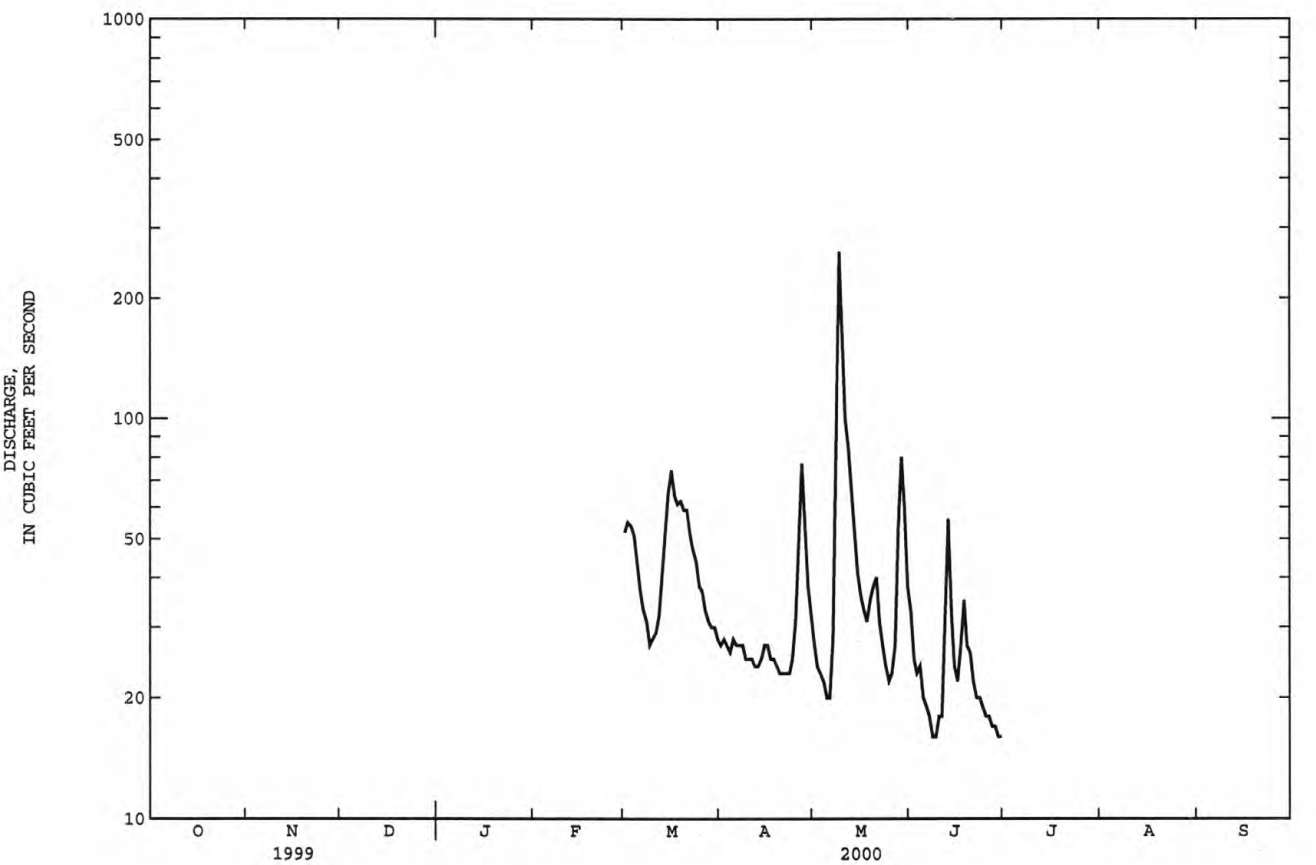
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1995, BY WATER YEAR (WY)*

MEAN	22.1	11.6	6.75	6.42	21.9	149	166	83.2	74.5	46.8	20.4	14.5
MAX	135	26.6	20.5	64.1	267	807	2446	523	336	590	85.6	62.8
(WY)	1983	1973	1973	1973	1972	1972	1952	1995	1967	1993	1981	1986
MIN	6.32	3.57	.000	.000	.000	5.58	10.7	9.39	5.37	2.84	1.16	4.40
(WY)	1959	1956	1956	1949	1949	1975	1981	1992	1961	1961	1959	1981

06356500 SOUTH FORK GRAND RIVER NEAR CASH, SD--Continued

SUMMARY STATISTICS	WATER YEARS 1947 - 1995*	
ANNUAL MEAN	52.0	
HIGHEST ANNUAL MEAN	221	1950
LOWEST ANNUAL MEAN	10.1	1961
HIGHEST DAILY MEAN	15600	Apr 16 1950
LOWEST DAILY MEAN	.00	Feb 6 1948
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 6 1948
INSTANTANEOUS PEAK FLOW	27000	Apr 15 1950
INSTANTANEOUS PEAK STAGE	15.40	Apr 15 1950
ANNUAL RUNOFF (AC-FT)	37660	
10 PERCENT EXCEEDS	73	
50 PERCENT EXCEEDS	12	
90 PERCENT EXCEEDS	2.0	

* Period reflects only complete water years.
e Estimated.



06357000 SHADEHILL RESERVOIR AT SHADEHILL, SD

LOCATION.--Lat 45°45'12", long 102°12'12", in E$^1/_2$ sec.25, T.21 N., R.15 E., Perkins County, Hydrologic Unit 10130302, at dam on Grand River, 1.3 mi southwest of Shadehill.

DRAINAGE AREA.--3,120 mi^2, approximately.

PERIOD OF RECORD.--June 1950 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Apr. 3, 1952, occasional elevations obtained by level circuits and Apr. 3, 1952, to Apr. 28, 1970, nonrecording gage at same site and datum.

REMARKS.--Reservoir formed by earthfill dam. Storage began July 1, 1950; dam completed August 1951. Conservation storage, 81,400 acre-ft between elevations 2,250.8 ft (invert of canal and river outlet) and elevation 2,272.0 ft (crest of morning-glory spillway). Dead storage, 58,231 acre-ft below elevation 2,250.8 ft. Flood control, 217,708 acre-ft between elevations 2,272.0 ft and 2,302.0 ft (crest of emergency spillway). Surcharge, 111,203 acre-ft at elevation 2,312.0 ft (maximum pool elevation). Total reservoir capacity is 468,585 acre-ft at elevation 2,312.0 ft. The reservoir provides flood control and water for irrigation purposes. Figures given herein represent usable contents above elevation 2,250.8 ft. Prior to Oct. 1, 1968, reservoir contents published as total contents and included dead storage.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum usable contents observed, 259,900 acre-ft, Apr. 10, 1952, elevation, 2,297.86 ft; minimum usable observed since first filling to spillway level, 24,941 acre-ft, Nov. 17, 1981, elevation, 2,258.62 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,200 acre-ft, Oct. 1, elevation, 2,269.16 ft; minimum, 29,400 acre-ft, Sept. 30, elevation, 2,264.83 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,269.17	48,300	--
Oct. 31	2,268.51	45,200	-3,100
Nov. 30	2,267.82	42,100	-3,100
Dec. 31	2,267.65	41,400	-700
CAL YR 1999	--	--	-1,100
Jan. 31	2,267.21	39,400	-2,000
Feb. 29	2,267.14	39,100	-300
Mar. 31	2,267.79	42,000	+2,900
Apr. 30	2,267.66	41,400	-600
May 31	2,267.75	41,800	+400
June 30	2,267.48	40,600	-1,200
July 31	2,266.97	38,400	-2,200
Aug. 31	2,265.78	33,300	-5,100
Sept. 30	2,264.83	29,400	-3,900
WTR YR 2000	--	--	-18,900

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06357800 GRAND RIVER AT LITTLE EAGLE, SD

LOCATION.--Lat 45°39'28", long 100°49'04", in NE¼ NE¼ sec.32, T.20 N., R.27 E., Corson County, Hydrologic Unit 10130303, on left bank at downstream side of bridge on State Highway 63, 1.3 mi southwest of Little Eagle, and 4.7 mi downstream from Little Oak Creek.

DRAINAGE AREA.--5,370 mi^2, approximately.

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,624.63 ft above sea level. Prior to May 12, 1959, nonrecording gage, and May 12, 1959, to Aug. 11, 1970, water-stage recorder at site 0.6 mi downstream at datum 2.00 ft higher. From Aug. 12, 1970, to Sept. 30, 1997, at present site at datum 4.00 ft higher than original datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Flow regulated by Shadehill Dam 144 mi upstream since July 1, 1950. (See station 06357000.) Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	98	103	e55	e60	e400	127	326	100	62	51	37
2	123	97	102	e53	e60	e300	124	895	96	67	49	38
3	123	97	e100	e51	e61	e250	124	474	93	74	48	41
4	124	99	e98	e49	e62	e230	118	289	93	73	48	41
5	122	98	e84	e50	e63	e220	109	232	88	77	47	41
6	122	100	e90	e50	e63	e225	112	193	87	111	46	39
7	119	101	e88	e52	e62	209	105	208	87	98	44	37
8	109	101	e85	e54	e65	463	99	292	82	78	43	37
9	101	102	e85	e57	e70	1030	105	2200	71	67	43	45
10	98	102	e83	e58	e75	1280	96	1530	64	63	42	40
11	97	103	e81	e58	e80	695	90	724	60	59	40	33
12	97	103	e80	e56	e78	524	88	496	59	56	38	30
13	97	102	e80	e55	e76	405	86	397	63	54	38	30
14	98	103	e80	e55	e75	338	89	314	230	53	37	30
15	105	103	e75	e55	e74	345	89	268	272	52	36	30
16	106	103	e70	e54	e73	554	88	222	491	70	36	30
17	107	102	e71	e55	e73	504	87	190	275	349	36	31
18	112	103	e72	e56	e73	374	87	174	210	251	38	30
19	110	101	e73	e56	e74	317	98	159	201	277	38	29
20	110	103	e65	e55	e75	380	102	144	170	612	37	30
21	109	104	e60	e55	e77	496	97	132	132	295	39	32
22	106	104	e55	e55	e79	474	101	124	105	218	42	33
23	105	104	e56	e54	e85	370	104	115	91	217	42	33
24	105	e100	e57	e55	e95	317	98	107	80	147	43	34
25	103	e90	e58	e56	e120	265	96	101	79	112	43	34
26	104	e102	e59	e56	e200	222	282	96	75	93	42	35
27	104	e110	e60	e56	e200	205	1540	100	71	70	42	35
28	102	e104	e60	e57	e350	188	625	96	67	39	40	34
29	102	e103	e60	e58	e550	165	399	111	64	52	39	34
30	102	103	e58	e59	---	152	299	130	63	63	37	33
31	100	---	e56	e60	---	137	---	114	---	53	37	---
TOTAL	3357	3045	2304	1705	3148	12034	5664	10953	3719	3962	1281	1036
MEAN	108	102	74.3	55.0	109	388	189	353	124	128	41.3	34.5
MAX	135	110	103	60	550	1280	1540	2200	491	612	51	45
MIN	97	90	55	49	60	137	86	96	59	39	36	29
AC-FT	6660	6040	4570	3380	6240	23870	11230	21730	7380	7860	2540	2050

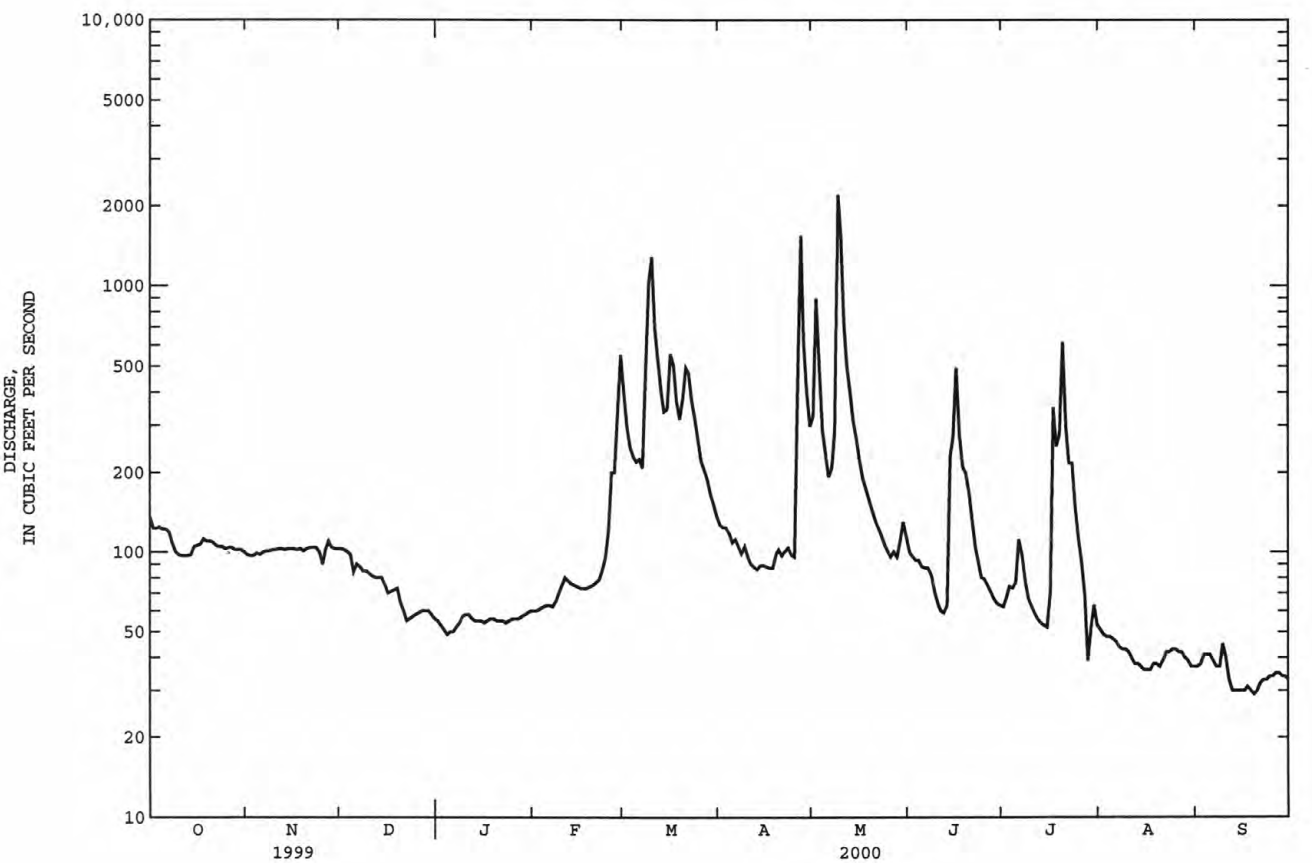
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

MEAN	94.5	59.5	37.0	48.9	159	871	598	513	338	207	113	90.3
MAX	317	204	103	867	1564	3866	4919	2292	1045	2298	554	318
(WY)	1995	1961	1983	1973	1999	1987	1997	1986	1967	1993	1993	1996
MIN	2.92	2.14	.000	.000	.000	18.2	10.3	5.45	20.5	10.8	.000	2.29
(WY)	1959	1960	1960	1959	1959	1981	1981	1981	1989	1991	1959	1960

06357800 GRAND RIVER AT LITTLE EAGLE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1959 - 2000	
ANNUAL TOTAL	156586		52208			
ANNUAL MEAN	429		143		261a	
HIGHEST ANNUAL MEAN					1007	1997
LOWEST ANNUAL MEAN					46.3	1992
HIGHEST DAILY MEAN	4550	May 11	2200	May 9	26500	Mar 23 1987
LOWEST DAILY MEAN	55	Dec 22	29	Sep 19	.00	Oct 2 1958b
ANNUAL SEVEN-DAY MINIMUM	58	Dec 21	30	Sep 13	.00	Oct 2 1958
INSTANTANEOUS PEAK FLOW			2460	May 9	31000	Mar 23 1987c
INSTANTANEOUS PEAK STAGE			9.56	May 9	21.76	Mar 18 1966d
ANNUAL RUNOFF (AC-FT)	310600		103600		189400	
10 PERCENT EXCEEDS	1120		299		500	
50 PERCENT EXCEEDS	185		90		70	
90 PERCENT EXCEEDS	70		39		4.8	

a Median of annual mean discharges, 190 ft^3/s.
b No flow at times.
c Gage height, 19.16 ft, datum then in use.
d From floodmarks, ice jam, site and datum then in use.
e Estimated.



06359500 MOREAU RIVER NEAR FAITH, SD

LOCATION.--Lat 45°11'52", long 102°09'22", in NW¼ NW¼ sec.10, T.14 N., R.16 E., Perkins County, Hydrologic Unit 10130306, on left bank 10 ft downstream from bridge on State Highway 73, 3.1 mi downstream from Rabbit Creek, and 13.5 mi northwest of Faith.

DRAINAGE AREA.--2,660 mi^2, approximately.

PERIOD OF RECORD.--March 1943 to current year.

REVISED RECORDS.--WSP 1176: 1944. WSP 1279: 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 2,238.68 ft above sea level. Prior to Oct. 5, 1949, nonrecording gage 0.3 mi upstream and Oct. 5, 1949, to July 16, 1959, nonrecording gage and crest-stage gage at present site; both at datum 1.0 ft higher. July 17, 1959, to Sept. 1, 1971, recording gage at site 500 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	e21	e14	e10	e71	34	94	48	17	18	.00
2	18	16	e21	e13	e11	e73	32	66	41	14	13	.00
3	20	16	e20	e12	e10	e73	30	49	46	12	11	.00
4	20	23	e20	e11	e10	e72	29	35	46	9.1	8.2	.00
5	19	17	e20	e11	e11	e71	27	29	39	8.2	6.8	.00
6	18	16	e20	e12	e11	e70	24	33	33	7.6	4.4	.00
7	18	15	e19	e13	e12	e69	25	203	28	5.5	4.3	.00
8	18	15	e19	e14	e12	e140	26	301	24	5.4	4.5	.00
9	18	15	e18	e15	e11	e80	25	230	20	8.1	4.9	.00
10	18	16	e18	e16	e10	e123	23	135	18	12	4.3	.00
11	17	16	e18	e15	e10	92	21	146	16	16	3.1	.00
12	18	17	e17	e14	e9.0	77	22	164	14	18	2.9	.00
13	17	18	e16	e13	e8.4	73	22	182	15	20	4.4	.00
14	16	18	e15	e12	e8.0	81	20	117	20	23	4.4	.00
15	17	17	e15	e13	e8.2	89	19	97	25	25	4.5	.00
16	17	18	e16	e14	e8.7	81	19	74	26	26	2.3	.00
17	17	18	e17	e14	e9.0	80	19	62	21	30	1.4	.00
18	19	17	e17	e12	e10	74	19	52	21	82	1.4	.00
19	19	17	e14	e12	e12	80	20	43	19	102	.99	.00
20	19	18	e13	e12	e14	88	19	37	19	118	1.3	.00
21	20	19	e13	e12	e20	88	18	32	15	82	1.4	.00
22	17	19	e14	e11	e28	88	18	28	14	66	1.5	.00
23	18	e20	e15	e11	e34	81	17	26	15	52	1.8	.00
24	17	e21	e16	e10	e38	74	23	23	16	44	1.5	.00
25	17	e22	e17	e9.0	e41	62	130	21	23	41	1.4	.00
26	17	e23	e18	e9.2	e46	56	68	20	24	46	1.0	.00
27	19	e24	e19	e10	e53	49	62	28	17	37	.23	.00
28	18	e23	e18	e10	e61	46	54	27	16	45	.00	.01
29	16	e22	e17	e10	e67	42	45	25	17	54	.00	.27
30	16	e21	e17	e10	---	39	182	34	15	38	.00	.75
31	16	---	e16	e10	---	36	---	39	---	23	.00	---
TOTAL	550	553	534	374.2	593.3	2318	1092	2452	711	1086.9	114.92	1.03
MEAN	17.7	18.4	17.2	12.1	20.5	74.8	36.4	79.1	23.7	35.1	3.71	.034
MAX	20	24	21	16	67	140	182	301	48	118	18	.75
MIN	16	15	13	9.0	8.0	36	17	20	14	5.4	.00	.00
AC-FT	1090	1100	1060	742	1180	4600	2170	4860	1410	2160	228	2.0

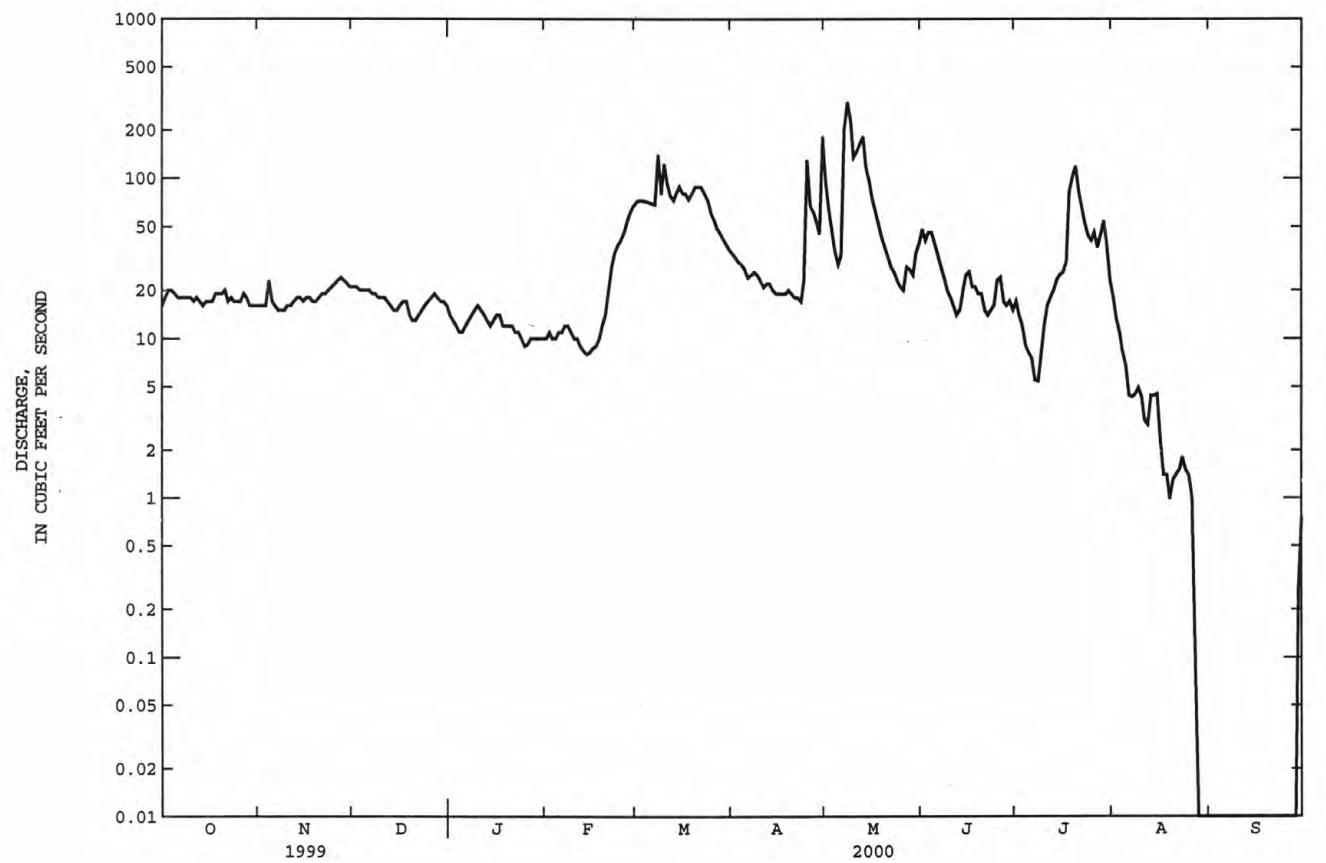
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2000, BY WATER YEAR (WY)

MEAN	34.5	15.3	7.59	7.35	76.0	404	392	315	291	119	34.2	16.4
MAX	463	139	44.8	99.0	1045	2757	4355	2203	1850	1530	258	262
(WY)	1983	1999	1999	1973	1996	1978	1952	1982	1944	1993	1993	1986
MIN	.000	1.10	.000	.000	.000	.19	5.27	4.60	12.6	.36	.000	.003
(WY)	1959	1946	1956	1944	1944	1944	1981	1980	1989	1955	1949	1958

06359500 MOREAU RIVER NEAR FAITH, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1944 - 2000	
ANNUAL TOTAL	58314		10380.35			
ANNUAL MEAN	160		28.4		143a	
HIGHEST ANNUAL MEAN					496	1997
LOWEST ANNUAL MEAN					7.60	1961
HIGHEST DAILY MEAN	1700	Feb 2	301	May 8	25300	Apr 8 1944
LOWEST DAILY MEAN	12	Sep 24	.00	Aug 28-Sept 27	.00	Dec 15 1943b
ANNUAL SEVEN-DAY MINIMUM	13	Sep 21	.00	Aug 28	.00	Dec 15 1943
INSTANTANEOUS PEAK FLOW			586	May 7	26000	Apr 9 1944c
INSTANTANEOUS PEAK STAGE			3.96	May 7	20.90	Apr 9 1944d
ANNUAL RUNOFF (AC-FT)	115700		20590		103400	
10 PERCENT EXCEEDS	552		72		200	
50 PERCENT EXCEEDS	36		18		12	
90 PERCENT EXCEEDS	15		1.0		.19	

a Median of annual mean discharges, 95 ft^3/s.
b No flow at times in most years.
c From rating curve extended above 12,000 ft^3/s on basis of slope-area measurement of peak flow.
d From floodmarks site and datum then in use.
e Estimated.



06360500 MOREAU RIVER NEAR WHITEHORSE, SD

LOCATION.--Lat 45°15'21", long 100°50'33", in SW¼ SE¼ sec.17, T.15 N., R.27 E., Dewey County, Hydrologic Unit 10130306, on left bank 30 ft downstream from bridge, 2.4 mi southeast of Whitehorse, 8.8 mi downstream from Little Moreau River, and 16.3 mi southeast of town of Timber Lake.

DRAINAGE AREA.--4,880 mi^2, approximately.

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

REVISED RECORDS.--WDR SD-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 1,661.48 ft above sea level. Prior to Nov. 24, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1953 reached a stage of about 26.2 ft. Flood in March 1947 was probably higher.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	24	e16	e11	e220	105	432	91	33	13	.31
2	19	21	24	e15	e12	e200	96	835	83	72	16	.26
3	20	20	e23	e14	e12	e190	93	825	85	71	14	.17
4	22	18	e22	e14	e13	e165	84	500	83	41	10	.11
5	22	18	e22	e14	e14	e150	75	322	86	29	13	.07
6	21	19	e21	e14	e14	166	72	242	85	24	71	.00
7	20	18	e21	e15	e14	162	68	201	77	21	35	.00
8	20	19	e21	e16	e14	1280	62	419	69	18	21	.00
9	21	19	e20	e17	e14	1040	54	1740	66	16	12	.00
10	21	20	e20	e16	e15	1110	51	1870	60	15	5.8	.00
11	21	21	e20	e15	e15	821	48	1300	53	13	3.3	.00
12	20	22	e20	e14	e16	564	45	807	47	8.7	2.3	.00
13	23	23	e20	e13	e15	437	45	532	44	5.3	1.5	.00
14	24	23	e20	e13	e15	513	e47	517	60	4.0	1.1	.00
15	23	22	e19	e14	e15	488	e45	419	71	25	.77	.00
16	23	22	e18	e13	e15	355	e43	381	64	25	.59	.00
17	24	21	e17	e13	e16	479	41	300	76	18	.53	.00
18	24	22	e17	e14	e17	423	40	256	76	72	.40	.00
19	24	22	e17	e14	e17	358	607	213	68	46	.31	.00
20	23	23	e16	e13	e17	333	2080	180	73	30	.28	.00
21	22	23	e15	e13	e17	354	1000	160	69	21	.33	.00
22	22	23	e14	e13	e18	310	568	141	56	16	.43	.00
23	21	23	e14	e12	e18	289	436	121	49	11	.34	.00
24	20	e23	e15	e12	e20	269	290	103	39	39	.21	.00
25	20	e22	e15	e12	e30	249	235	89	43	64	2.5	.00
26	20	e22	e15	e12	e90	214	1690	80	74	50	2.3	.00
27	20	e23	e16	e12	e250	192	3230	75	53	40	1.4	.00
28	21	e23	e17	e12	e250	168	1740	69	40	33	.90	.00
29	23	e23	e18	e11	e260	146	883	68	33	27	.58	.00
30	21	24	e18	e11	---	133	549	77	30	21	.42	.00
31	19	---	e17	e11	---	120	---	98	---	16	.40	---
TOTAL	659	640	576	418	1244	11898	14422	13372	1903	925.0	231.69	0.92
MEAN	21.3	21.3	18.6	13.5	42.9	384	481	431	63.4	29.8	7.47	.031
MAX	24	24	24	17	260	1280	3230	1870	91	72	71	.31
MIN	15	18	14	11	11	120	40	68	30	4.0	.21	.00
AC-FT	1310	1270	1140	829	2470	23600	28610	26520	3770	1830	460	1.8

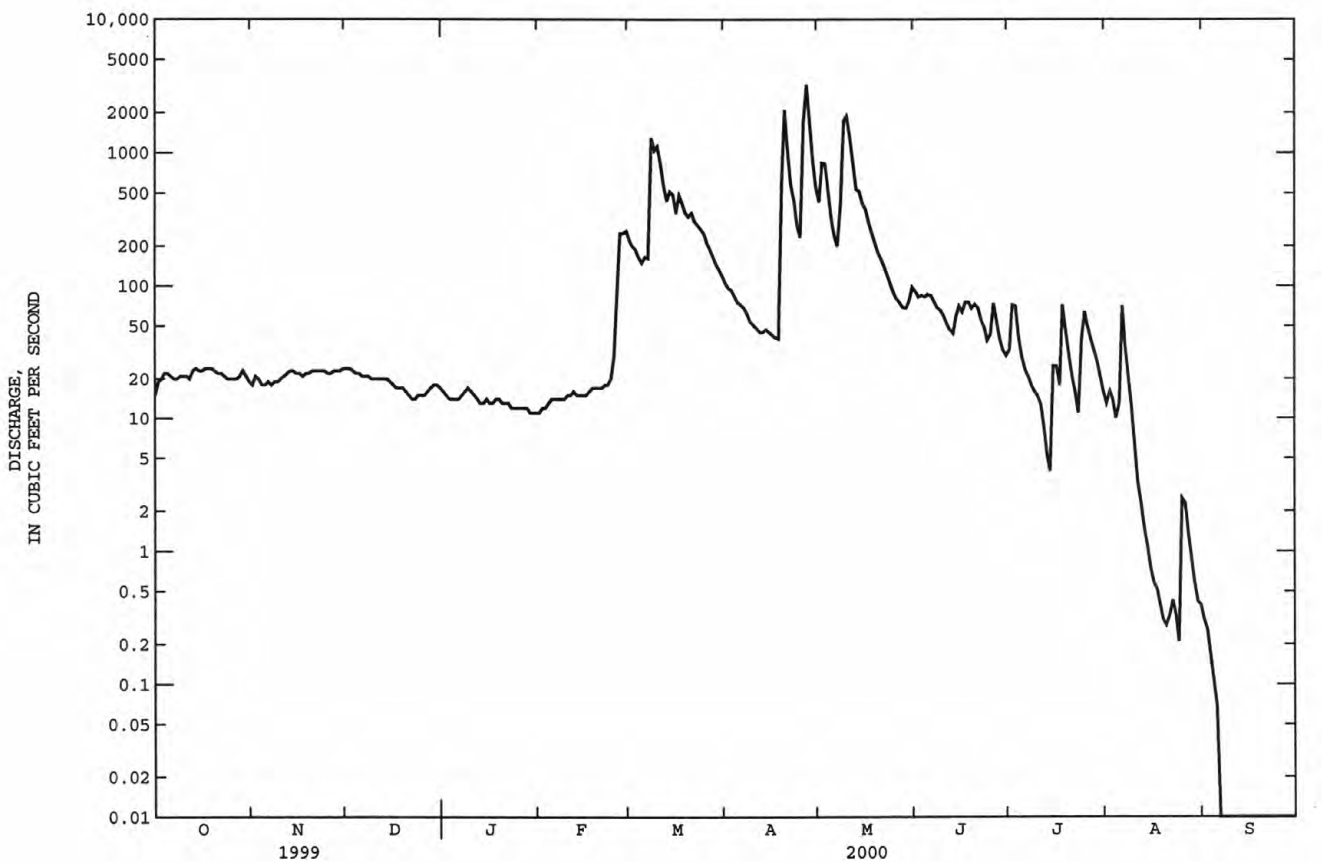
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2000, BY WATER YEAR (WY)

MEAN	56.5	16.7	7.01	8.25	106	986	505	669	409	197	57.5	28.7
MAX	642	182	59.1	210	1253	8022	5071	3759	2433	2438	452	362
(WY)	1983	1999	1999	1973	1996	1997	1997	1982	1967	1993	1993	1996
MIN	.000	.000	.000	.000	.000	2.28	.000	.000	12.0	.084	.000	.000
(WY)	1957	1959	1956	1956	1955	1964	1981	1981	1989	1955	1955	1958

06360500 MOREAU RIVER NEAR WHITEHORSE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1955 - 2000	
ANNUAL TOTAL	114152.0		46289.61			
ANNUAL MEAN	313		126		255a	
HIGHEST ANNUAL MEAN					1428	1997
LOWEST ANNUAL MEAN					8.39	1980
HIGHEST DAILY MEAN	3130	May 16	3230	Apr 27	28100	Mar 23 1997
LOWEST DAILY MEAN	9.0	Jan 26	.00	Sep 6	.00	Jan 12 1955b
ANNUAL SEVEN-DAY MINIMUM	9.4	Jan 24	.00	Sep 6	.00	Jan 12 1955
INSTANTANEOUS PEAK FLOW			3680	Apr 27	29700	Mar 23 1997c
INSTANTANEOUS PEAK STAGE			9.53	Apr 27	27.68	Mar 21 1997d
ANNUAL RUNOFF (AC-FT)	226400		91820		184900	
10 PERCENT EXCEEDS	1090		339		483	
50 PERCENT EXCEEDS	63		21		13	
90 PERCENT EXCEEDS	15		.40		.00	

a Median of annual mean discharges, 140 ft^3/s.
b No flow at times in most years.
c Gage height, 26.93 ft.
d Backwater from ice.
e Estimated.



06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY

LOCATION.--Lat 44°05'06", long 104°03'36", in SE¼ NE¼ NE¼ 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.

DRAINAGE AREA.--10.3 mi^2.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

REVISED RECORD.--WDR-85-1: 1981, 1982.

GAGE.--Water-stage recorder. Elevation of gage is 6,030 ft above sea level, from topographic map. October 1974 to September 1982, at site 50 ft upstream and datum 3.11 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.4	2.9	2.6	2.2	2.8	2.6	3.4	2.1	2.6	2.1	2.9
2	2.6	e2.3	2.9	2.6	2.4	2.8	2.6	3.2	2.9	2.5	1.8	2.9
3	2.5	2.6	2.9	e2.0	2.4	2.8	2.6	3.2	3.1	2.0	1.8	2.8
4	4.0	4.2	2.8	e1.5	2.3	2.8	2.6	3.0	2.7	1.9	1.7	2.6
5	3.7	4.0	e2.1	e2.3	2.5	2.8	2.6	2.7	2.6	1.8	3.1	3.6
6	2.3	4.0	2.9	2.2	2.5	2.8	4.1	2.6	3.4	2.8	2.7	3.1
7	2.4	4.0	2.8	2.1	2.5	2.8	3.6	2.6	2.7	2.5	2.6	3.0
8	3.9	4.0	e2.4	2.1	2.4	2.8	3.6	3.4	2.7	2.2	2.9	2.9
9	2.2	4.0	e1.7	2.2	2.4	2.8	3.6	3.2	3.4	1.8	3.1	2.9
10	2.3	3.9	e2.4	2.1	2.4	2.8	3.5	3.3	2.7	1.9	3.0	2.9
11	2.5	3.9	2.6	2.2	2.4	2.6	3.1	4.0	2.7	1.7	2.9	2.9
12	2.5	3.5	2.6	2.3	2.4	2.6	2.9	3.5	2.6	1.6	2.9	2.9
13	4.0	3.5	2.6	2.1	2.4	2.6	3.8	3.1	2.6	1.6	2.9	2.6
14	3.6	3.5	2.6	2.2	2.4	2.6	3.5	2.8	2.3	2.7	3.5	3.4
15	1.9	3.5	2.5	2.4	2.3	2.6	3.5	2.8	2.2	2.6	3.1	3.2
16	2.5	3.5	2.5	2.4	2.3	2.6	3.2	3.5	3.0	2.6	3.0	3.1
17	2.5	3.5	2.5	2.3	2.3	2.6	2.9	2.9	2.7	2.8	2.9	3.1
18	2.5	3.4	2.5	2.3	2.3	2.6	2.9	2.7	2.6	2.6	2.9	3.1
19	2.4	3.2	e2.4	2.3	2.2	2.6	3.0	2.5	2.6	2.3	2.9	3.1
20	4.3	3.2	e2.0	e2.0	e2.1	2.6	3.8	2.4	2.7	2.2	2.9	3.4
21	3.9	3.2	2.9	2.4	2.3	2.6	3.4	2.2	2.7	2.1	2.7	3.3
22	3.3	3.2	2.6	2.4	2.3	2.6	3.5	3.1	2.5	3.3	2.5	3.2
23	3.2	3.2	2.6	e2.3	2.3	2.7	4.2	3.0	3.2	2.4	2.4	3.2
24	4.2	e2.0	2.5	e2.1	2.3	2.8	3.5	2.8	2.8	2.4	2.3	3.2
25	4.1	e2.5	2.6	e2.2	2.3	2.8	3.5	2.7	2.4	2.3	3.4	3.2
26	3.8	3.0	2.6	2.4	2.1	2.8	3.1	2.7	2.0	2.2	3.1	3.2
27	3.2	3.0	2.6	2.4	e3.0	2.8	3.0	2.6	1.9	1.9	3.0	3.2
28	4.3	2.9	2.6	2.4	2.9	2.8	2.9	3.1	1.8	1.6	2.9	3.2
29	4.0	2.9	2.6	2.4	2.8	2.8	2.9	2.6	1.7	2.7	2.9	3.2
30	3.5	2.9	2.6	2.2	---	2.7	2.8	2.4	2.8	2.4	2.9	3.2
31	3.3	---	2.6	2.1	---	2.6	---	2.2	---	2.3	2.9	---
TOTAL	97.9	98.9	79.4	69.5	69.4	84.0	96.8	90.2	78.1	70.3	85.7	92.5
MEAN	3.16	3.30	2.56	2.24	2.39	2.71	3.23	2.91	2.60	2.27	2.76	3.08
MAX	4.3	4.2	2.9	2.6	3.0	2.8	4.2	4.0	3.4	3.3	3.5	3.6
MIN	1.9	2.0	1.7	1.5	2.1	2.6	2.6	2.2	1.7	1.6	1.7	2.6
AC-FT	194	196	157	138	138	167	192	179	155	139	170	183

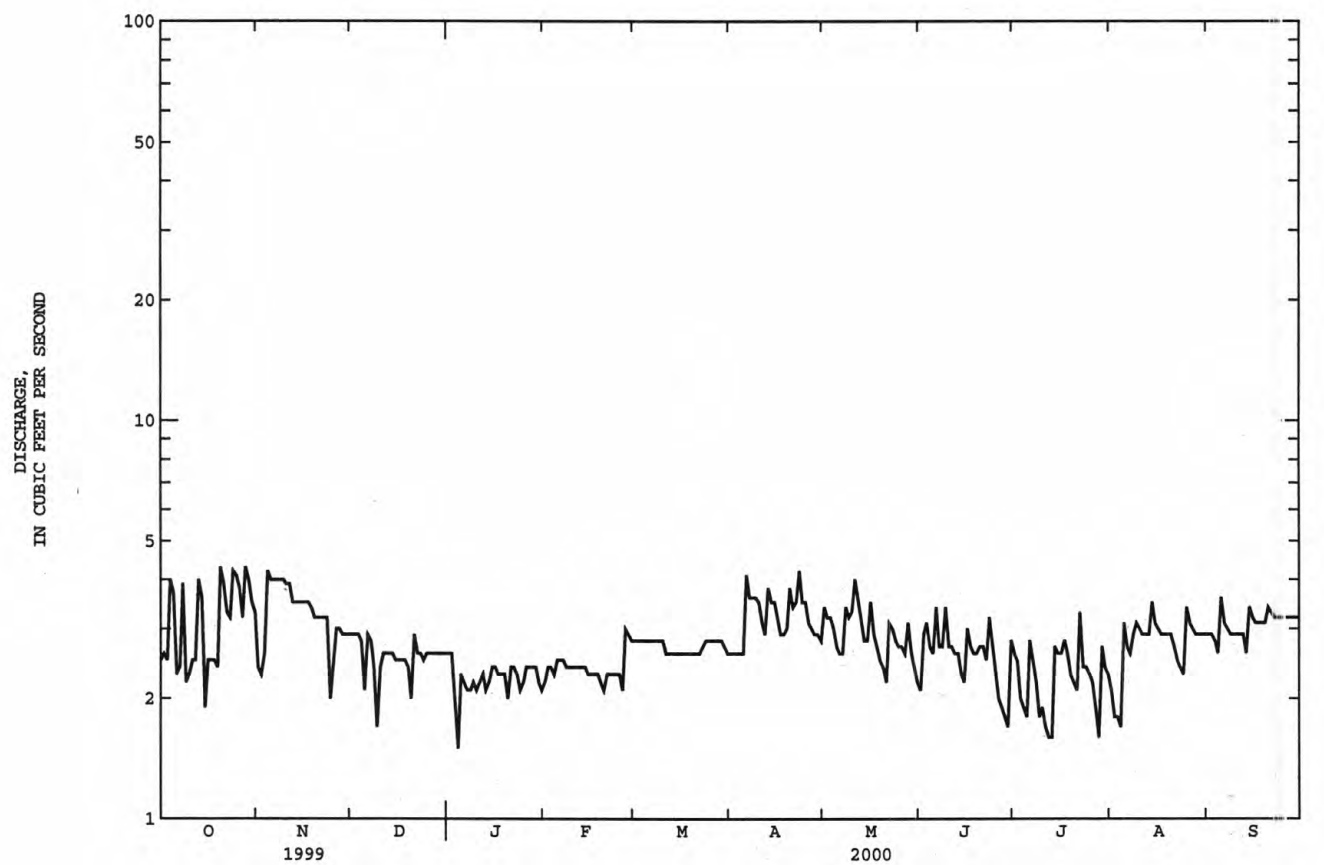
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)

MEAN	1.90	1.80	1.69	1.61	1.79	2.10	2.37	2.24	2.42	2.13	1.99	1.95
MAX	3.16	3.30	2.68	2.95	2.90	5.83	4.07	3.44	4.05	3.09	2.89	3.08
(WY)	2000	2000	1999	1999	1999	1999	1994	1978	1980	1979	1978	2000
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

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1975 - 2000	
ANNUAL TOTAL	1205.5		1012.7		--	
ANNUAL MEAN	3.30		2.77		2.01	
HIGHEST ANNUAL MEAN	--		--		3.20	1999
LOWEST ANNUAL MEAN	--		--		.94	1977
HIGHEST DAILY MEAN	34	Mar 26	4.3	Oct 20	34	Mar 26 1999
LOWEST DAILY MEAN	1.5	Apr 5	1.5	Jan 4	.10	Jan 20 1993
ANNUAL SEVEN-DAY MINIMUM	2.3	May 21	1.9	Jul 7	.12	Jan 17 1993
INSTANTANEOUS PEAK FLOW	--		30	Apr 6a	103	Apr 22 1994b
INSTANTANEOUS PEAK STAGE	--		2.19	Jan 4c	2.88	Dec 25 1998c
ANNUAL RUNOFF (AC-FT)	2390		2010		1460	
10 PERCENT EXCEEDS	4.0		3.5		2.9	
50 PERCENT EXCEEDS	3.0		2.7		1.9	
90 PERCENT EXCEEDS	2.3		2.2		1.1	

a Gage height, 1.60 ft.
b From rating curve extended above 85 ft^3/s.
c Backwater from ice.
e Estimated.



06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY-Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 1989 to current year.

INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 6,000 ft above sea level, from topographic map.

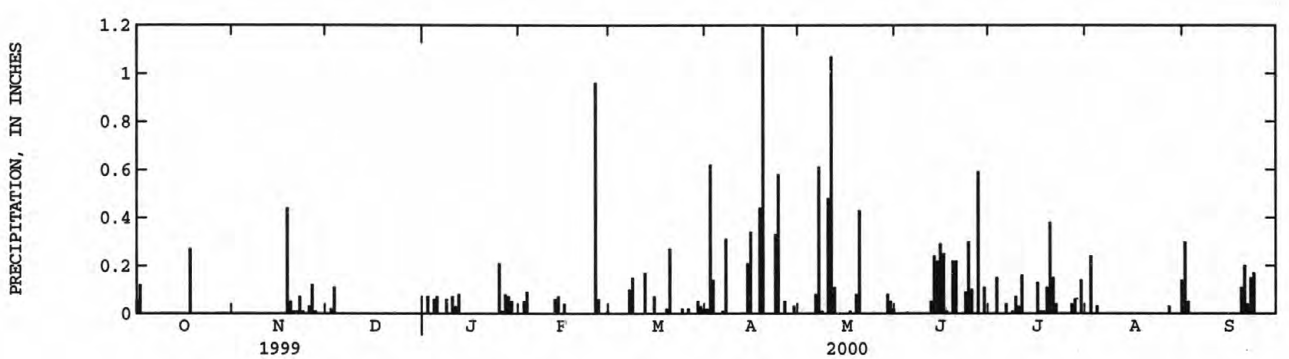
REMARKS.--Records fair except those for estimated periods, which are poor. No record available for period Dec. 4-27. Precipitation gage is located 0.2 mi south of streamflow gaging station.

PRECIPITATION INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.30
2	.12	.00	.02	.07	.05	.00	.62	.00	.00	.00	.24	.05
3	.00	.00	.11	.00	.09	.00	.14	.00	.00	.15	.00	.00
4	.00	.00	---	.06	.00	.00	.00	.00	.00	.00	.03	.00
5	.00	.00	---	.07	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	---	.00	.00	.00	.01	.08	.00	.04	.00	.00
7	.00	.00	---	.00	.00	.10	.31	.61	.00	.00	.00	.00
8	.00	.00	---	.06	.00	.15	.00	.01	.00	.01	.00	.00
9	.00	.00	---	.00	.00	.00	.00	.00	.00	.07	.00	.00
10	.00	.00	---	.07	.00	.00	.00	.48	.00	.03	.00	.00
11	.00	.00	---	.03	.00	.00	.00	1.07	.00	.16	.00	.00
12	.00	.00	---	.08	.06	.17	.00	.11	.05	.00	.00	.00
13	.00	.00	---	.00	.07	.00	.00	.00	.24	.00	.00	.00
14	.00	.00	---	.00	.00	.00	.21	.00	.22	.00	.00	.00
15	.00	.00	---	.00	.04	.07	.34	.00	.29	.00	.00	.00
16	.00	.00	---	.00	.00	.00	.00	.00	.25	.13	.00	.00
17	.00	.00	---	.00	.00	.00	.00	.01	.01	.01	.00	.00
18	.27	.44	---	.00	.00	.00	.44	.00	.00	.01	.00	.00
19	.00	.05	---	.00	.00	.02	1.19	.08	.22	.11	.00	.11
20	.00	.01	---	.00	.00	.27	.00	.43	.22	.38	.00	.20
21	.00	.01	---	.00	.00	.00	.00	.00	.00	.15	.00	.04
22	.00	.07	---	.00	.00	.00	.00	.00	.00	.04	.00	.15
23	.00	.01	---	.00	.00	.00	.33	.00	e.09	.00	.00	.17
24	.00	.00	---	.00	.00	.02	.58	.00	e.30	.00	.00	.00
25	.00	.03	---	.21	.96	.00	.00	.00	e.10	.00	.00	.00
26	.00	.12	---	.01	.06	.02	.05	.00	.00	.00	.00	.00
27	.00	.01	---	.08	.00	.00	.00	.00	.59	.04	.03	.00
28	.00	.00	.00	.07	.00	.00	.00	.00	.00	.06	.00	.00
29	.00	.00	.00	.05	.01	.05	.03	.08	.11	.00	.00	.00
30	.00	.00	.00	.00	---	.03	.00	.05	.00	.14	.00	.00
31	.00	---	.00	.00	---	.02	---	.02	---	.00	.14	---
TOTAL	0.45	0.75	---	0.86	1.34	0.92	4.27	3.03	2.69	1.53	0.44	1.02

CAL YR 1999 TOTAL 24.56
WTR YR 2000 TOTAL 17.43

e Estimated.



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06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'32", long 104°06'24", in SW¼ SE¼ 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.

DRAINAGE AREA.--107 mi^2.

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. A few small diversions upstream from station for irrigation.

EXTREMES FOR CURRENT YEAR.--No peak discharge greater than base discharge of 50 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)
May 11	1500	*22	*6.89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	19	19	18	18	19	21	19	17	15	16	14
2	19	19	19	18	18	19	21	19	17	15	16	15
3	19	18	19	17	18	18	21	19	16	14	16	15
4	19	18	18	17	18	18	19	19	15	15	17	14
5	19	18	18	17	17	18	19	19	14	15	17	14
6	19	18	18	17	17	19	19	19	14	15	17	14
7	19	18	18	18	17	19	19	19	14	14	17	14
8	19	18	18	18	18	19	18	19	14	14	17	14
9	19	18	18	18	18	19	18	19	14	14	17	14
10	19	18	18	18	18	19	18	19	13	14	16	14
11	18	18	18	18	18	19	18	21	14	16	16	15
12	18	18	18	18	18	19	19	21	14	16	17	15
13	18	19	18	18	18	19	18	20	15	16	16	15
14	19	19	18	18	18	19	18	19	15	16	16	15
15	19	18	18	17	18	19	19	19	15	16	16	15
16	19	18	18	17	17	19	19	19	16	16	14	15
17	19	18	18	17	17	19	20	19	16	16	14	15
18	19	19	18	17	17	19	19	18	16	16	13	15
19	19	19	18	17	17	19	21	18	16	16	13	15
20	19	19	18	17	17	19	21	18	16	16	13	16
21	19	19	18	17	17	19	21	18	16	16	13	17
22	19	19	18	17	17	20	20	18	16	16	13	17
23	19	19	18	18	17	20	19	18	16	16	13	17
24	19	19	18	18	18	20	20	17	16	16	13	18
25	19	19	18	18	18	20	20	17	17	16	13	17
26	19	19	18	18	18	20	20	17	16	16	13	17
27	19	19	18	18	18	20	20	17	16	16	13	16
28	19	19	18	18	18	20	19	17	15	17	13	16
29	19	19	18	18	18	20	19	17	16	17	13	16
30	19	19	18	18	---	21	19	17	16	17	13	16
31	19	---	18	18	---	21	---	17	---	16	14	---
TOTAL	585	557	561	546	511	598	582	572	461	484	458	460
MEAN	18.9	18.6	18.1	17.6	17.6	19.3	19.4	18.5	15.4	15.6	14.8	15.3
MAX	19	19	19	18	18	21	21	21	17	17	17	18
MIN	18	18	18	17	17	18	18	17	13	14	13	14
AC-FT	1160	1100	1110	1080	1010	1190	1150	1130	914	960	908	912

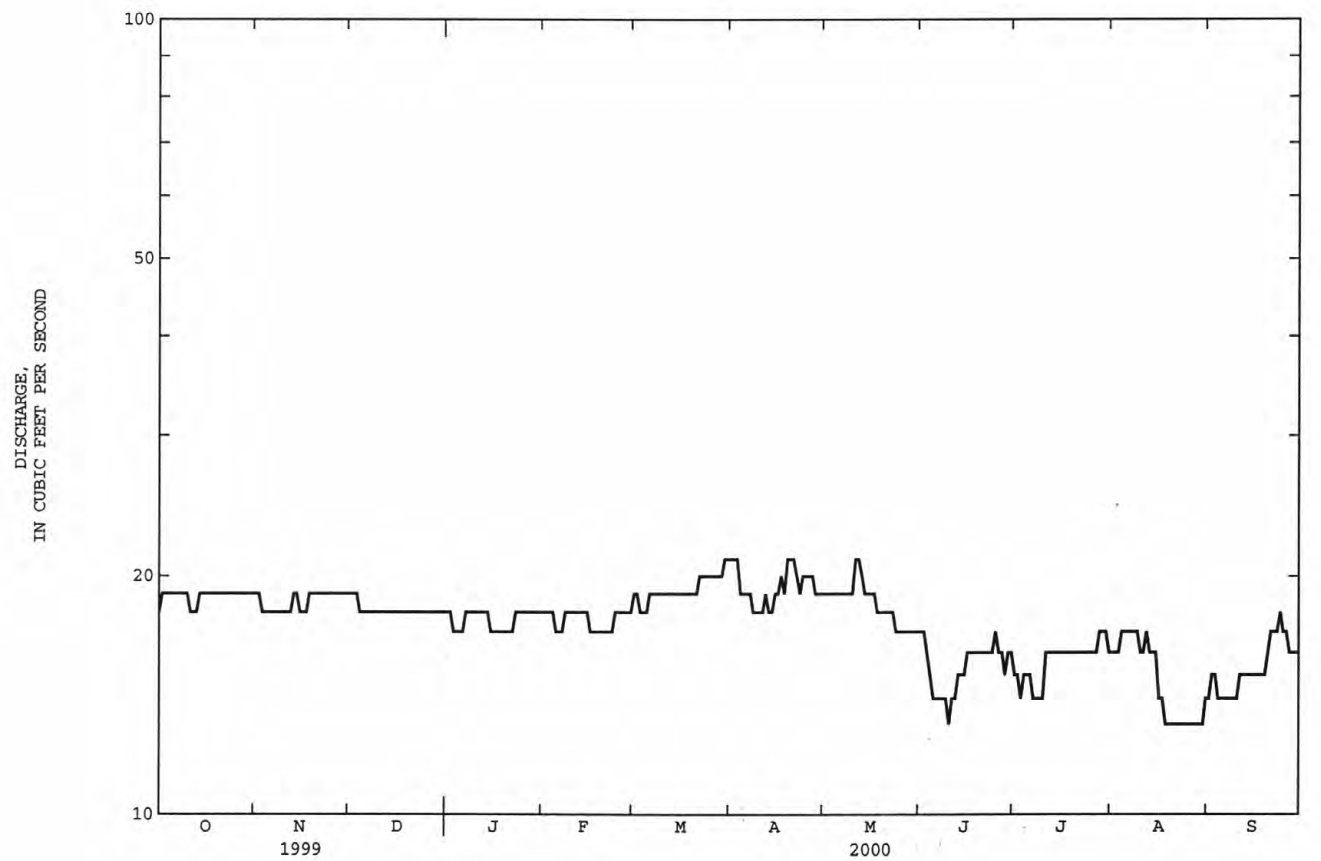
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)

MEAN	13.1	13.2	13.1	12.8	13.2	14.6	13.6	11.1	11.6	11.6	12.0	12.8
MAX	18.9	18.6	18.1	17.6	17.6	21.3	19.4	18.5	17.8	17.0	20.9	20.0
(WY)	2000	2000	2000	2000	2000	1996	2000	2000	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

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1975 - 2000	
ANNUAL TOTAL	6405		6375		--	
ANNUAL MEAN	17.5		17.4		12.8	
HIGHEST ANNUAL MEAN	--		--		17.4	2000
LOWEST ANNUAL MEAN	--		--		9.80	1992
HIGHEST DAILY MEAN	57	Aug 29	21	Many days	143	Jul 16 1993
LOWEST DAILY MEAN	14	Jan 3	13	Jun 10	3.9	May 21 1992
ANNUAL SEVEN-DAY MINIMUM	14	Mar 20	13	Aug 18	4.6	Aug 2 1992
INSTANTANEOUS PEAK FLOW	--		22	May 11	776	Jul 16 1993a
INSTANTANEOUS PEAK STAGE	--		6.89	May 11	12.44	Jul 16 1993
ANNUAL RUNOFF (AC-FT)	12700		12640		9240	
10 PERCENT EXCEEDS	20		19		17	
50 PERCENT EXCEEDS	18		18		12	
90 PERCENT EXCEEDS	15		14		8.8	

a From rating curve extended above 18 ft^3/s on basis of culvert backwater computation.



06395000 CHEYENNE RIVER AT EDGEMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¼ SE¼ SE¼ 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 mi^2.

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 above station used for stock and irrigation water, total capacity, about 45,000 acre-ft. U.S. Bureau of Reclamation satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 1920, reached a stage of 13.0 ft and May 1, 1922, 14.0 ft, present datum, from floodmarks at railroad bridge.

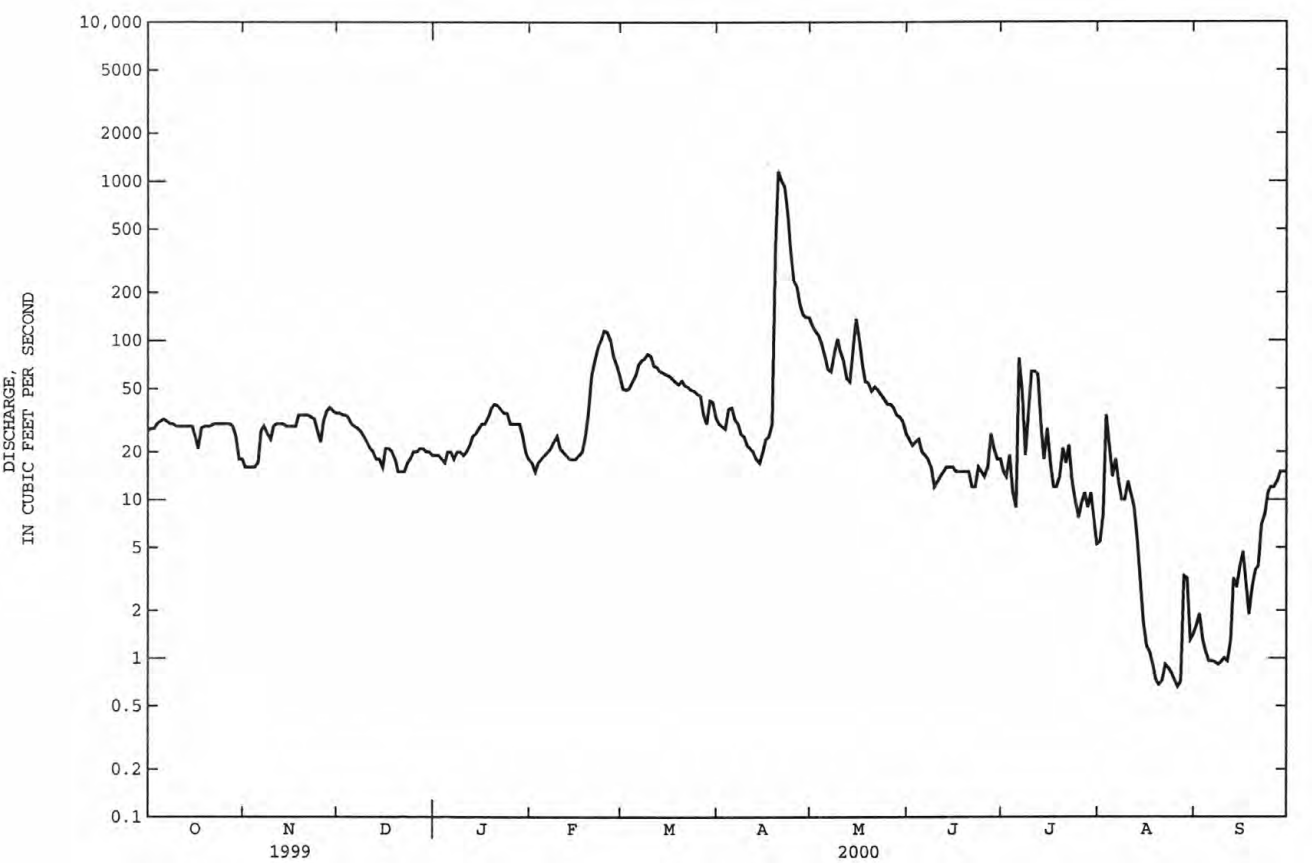
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	16	35	e19	e17	e50	30	123	24	15	5.4	1.6
2	28	16	34	e19	e15	e49	29	115	22	14	8.2	1.9
3	28	16	34	e18	e17	e50	28	108	23	19	34	1.3
4	30	16	33	e17	e18	e55	37	94	24	11	22	1.1
5	31	17	e30	e20	e19	e60	38	79	20	8.9	14	.96
6	32	27	e29	e20	e20	e70	32	66	19	77	18	.96
7	31	29	e28	e18	e21	e75	30	64	18	48	13	.94
8	30	26	e27	e20	e23	77	26	83	16	19	10	.91
9	30	24	e25	e20	e25	82	25	102	12	37	10	.94
10	29	29	e23	e19	e21	80	22	85	13	64	13	1.0
11	29	30	e21	e20	e20	69	21	74	14	64	11	.96
12	29	30	e20	e22	e19	68	20	58	15	61	9.0	1.3
13	29	30	e18	e25	e18	64	18	55	16	29	5.6	3.2
14	29	29	e18	e26	e18	63	17	86	16	18	3.1	2.8
15	29	29	e16	e28	e18	61	20	137	16	28	1.7	3.8
16	25	29	e21	e30	e19	60	24	102	15	17	1.2	4.7
17	21	29	e21	e30	e20	57	25	70	15	12	1.1	3.1
18	28	34	e20	e33	e25	55	30	55	15	12	.91	1.9
19	29	34	e18	e38	e35	53	392	54	15	14	.74	2.8
20	29	34	e15	e40	e60	56	1160	48	15	21	.68	3.6
21	29	34	e15	e39	e75	52	1010	51	12	17	.72	3.8
22	30	33	e15	e37	e90	51	930	49	12	22	.91	7.0
23	30	32	e17	e35	e100	49	621	46	16	13	.87	8.0
24	30	27	e18	e35	e115	48	361	43	15	9.8	.81	11
25	30	23	e20	e30	e113	46	239	40	14	7.7	.73	12
26	30	31	e20	e30	e100	45	219	40	16	9.4	.66	12
27	30	36	e21	e30	e80	34	167	38	26	11	.71	13
28	29	38	e21	e30	e70	30	146	34	21	8.9	3.3	15
29	25	36	e20	e25	e60	42	140	33	18	11	3.2	15
30	18	35	e20	e20	---	41	139	31	18	7.7	1.3	15
31	18	---	e19	e18	---	33	---	26	---	5.2	1.4	---
TOTAL	872	849	692	811	1251	1725	5996	2089	511	711.6	197.24	151.57
MEAN	28.1	28.3	22.3	26.2	43.1	55.6	200	67.4	17.0	23.0	6.36	5.05
MAX	32	38	35	40	115	82	1160	137	26	77	34	15
MIN	18	16	15	17	15	30	17	26	12	5.2	.66	.91
AC-FT	1730	1680	1370	1610	2480	3420	11890	4140	1010	1410	391	301
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2000, BY WATER YEAR (WY)												
MEAN	22.1	16.7	8.91	8.74	42.2	122	68.1	217	254	125	67.7	26.9
MAX	291	266	50.5	37.3	302	506	558	2192	2084	806	388	275
(WY)	1999	1999	1999	1999	1997	1994	1955	1978	1962	1958	1955	1973
MIN	.000	.023	.000	.000	.000	3.39	.22	.27	1.76	.15	.000	.000
(WY)	1961	1962	1960	1950	1960	1961	1961	1960	1966	1985	1960	1956

06395000 CHEYENNE RIVER AT EDGEMONT, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929-1932, 1947-2000	
ANNUAL TOTAL	36711		15856.41			
ANNUAL MEAN	101		43.3		81.8a	
HIGHEST ANNUAL MEAN					434	1962
LOWEST ANNUAL MEAN					12.0	1988
HIGHEST DAILY MEAN	2330	Jun 13	1160	Apr 20	24000	May 20 1978
LOWEST DAILY MEAN	15	Dec 20	.66	Aug 26	.00	Jan 5 1947b
ANNUAL SEVEN-DAY MINIMUM	17	Oct 30	.77	Aug 20	.00	Aug 31 1947c
INSTANTANEOUS PEAK FLOW			1450	Apr 20	28000	May 20 1978
INSTANTANEOUS PEAK STAGE			5.64	Apr 20	13.65	May 20 1978
ANNUAL RUNOFF (AC-FT)	72820		31450		59240	
10 PERCENT EXCEEDS	147		71		155c	
50 PERCENT EXCEEDS	43		25		12c	
90 PERCENT EXCEEDS	21		3.7		.10c	

a Median of annual mean discharge, 68 ft^3/s.
b No flow at times in most years.
c Reflects water years 1947-2000 only.
e Estimated.



06400000 HAT CREEK NEAR EDGEMONT, SD

LOCATION.--Lat 43°14'24", long 103°35'16", in SW¼ SE¼ NE¼ sec.25, T.9 S., R.4 E., Fall River County, Hydrologic Unit 10120108, on right bank at upstream side of bridge on State Highway 71, 2.4 mi upstream from mouth, 2.0 mi west of Heppner, and 12.5 mi southeast of Edgemont.

DRAINAGE AREA.--1,044 mi^2.

PERIOD OF RECORD.--April 1905 to September 1906, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 3,295.71 ft above sea level. Nonrecording gage Apr. 8, 1905, to May 2, 1906, at site 0.6 mi downstream and May 3 to July 7, 1906, at site 0.4 mi upstream at different datum. Nov. 6, 1950, to May 1, 1951, and July 18 to Sept. 7, 1975, nonrecording gage and May 2, 1951, to July 17, 1975, recording gage, at site 0.4 mi downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions upstream from station for irrigation. Lander ditch diverts water from Hat Creek 0.4 mi upstream from gaging station for irrigating hay meadows downstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Results of discharge measurements, in cubic feet per second, of Lander ditch during water year 2000 are given herewith:

Oct. 4	0	Mar. 16	0	May 3	e3.0	July 24	0
Nov. 29	0	Apr. 21	e12	May 8	1.36	Aug. 14	0
Jan. 18	0	Apr. 22	e50	June 13	0	Sept. 12	0

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	3.3	e4.3	e4.3	4.2	e25	15	474	24	7.5	2.8	.00
2	.40	3.4	e4.2	e4.3	4.3	e20	11	408	22	7.3	2.4	.00
3	.74	3.4	e4.1	e4.3	4.5	e19	9.9	274	21	7.5	2.5	.00
4	1.2	3.4	e4.1	4.3	4.4	e20	9.7	186	20	7.1	2.5	.00
5	1.2	3.5	e4.0	4.3	4.4	e24	9.5	133	19	6.6	2.2	.00
6	1.6	3.5	e4.0	4.1	4.5	e25	9.6	106	18	6.5	15	.00
7	1.6	3.4	e4.0	4.2	4.6	e22	9.1	95	17	6.1	3.8	.00
8	1.6	3.6	e4.0	4.4	4.6	e20	9.2	89	16	5.9	1.5	.00
9	1.8	3.8	e4.0	4.1	4.8	e20	10	76	15	5.8	.90	.00
10	2.0	3.9	e4.0	4.4	4.7	e27	7.0	65	14	5.8	.66	.00
11	2.0	4.0	e4.1	4.5	4.6	38	7.2	60	13	6.0	.53	.00
12	2.1	4.1	e4.5	4.4	4.7	46	7.1	58	13	5.6	.56	.00
13	2.1	4.1	e4.5	4.5	4.5	64	7.5	52	13	17	.54	.00
14	2.4	4.2	e4.5	4.4	4.6	85	7.2	47	12	8.2	.50	.00
15	2.5	4.2	e4.4	4.4	4.7	87	7.1	46	12	5.8	.36	.00
16	2.8	4.2	4.5	4.1	4.7	86	8.9	43	11	4.7	.36	.00
17	2.8	4.2	4.5	4.1	4.7	78	11	42	11	4.7	.29	.00
18	3.0	4.3	4.4	4.1	4.7	65	9.7	40	10	4.8	.29	.00
19	3.0	4.3	4.3	4.2	4.8	52	209	52	10	4.4	.27	.00
20	3.1	4.3	4.4	4.3	5.4	49	382	54	10	3.8	.21	.00
21	3.3	4.3	4.4	4.2	e15	45	1070	107	9.8	3.9	.15	.00
22	3.1	4.3	4.4	4.3	e30	48	2560	98	9.5	4.7	.11	.00
23	3.2	4.3	4.5	4.3	e40	52	4510	67	9.1	4.4	.08	.00
24	3.2	e4.1	4.5	4.4	e30	76	1680	46	9.0	3.2	.05	.00
25	3.3	e4.2	4.5	4.4	e25	96	909	38	8.9	2.7	.03	.00
26	3.3	e4.3	4.5	4.5	e24	90	661	35	8.6	2.3	.02	.00
27	3.4	e4.2	4.5	4.5	e27	66	534	32	8.3	2.2	.01	.00
28	3.4	e4.3	e4.3	4.4	e25	47	380	28	8.3	2.4	.00	.00
29	3.4	e4.5	e4.3	4.4	e30	31	256	26	8.0	2.7	.00	.00
30	3.3	e4.5	e4.2	4.3	---	22	363	27	7.8	2.9	.00	.00
31	3.4	---	e4.2	4.3	---	19	---	27	---	3.1	.00	---
TOTAL	74.64	120.1	133.1	133.7	338.4	1464	13679.7	2931	388.3	165.6	38.62	0.00
MEAN	2.41	4.00	4.29	4.31	11.7	47.2	456	94.5	12.9	5.34	1.25	.000
MAX	3.4	4.5	4.5	4.5	40	96	4510	474	24	17	15	.00
MIN	.40	3.3	4.0	4.1	4.2	19	7.0	26	7.8	2.2	.00	.00
AC-FT	148	238	264	265	671	2900	27130	5810	770	328	77	.00

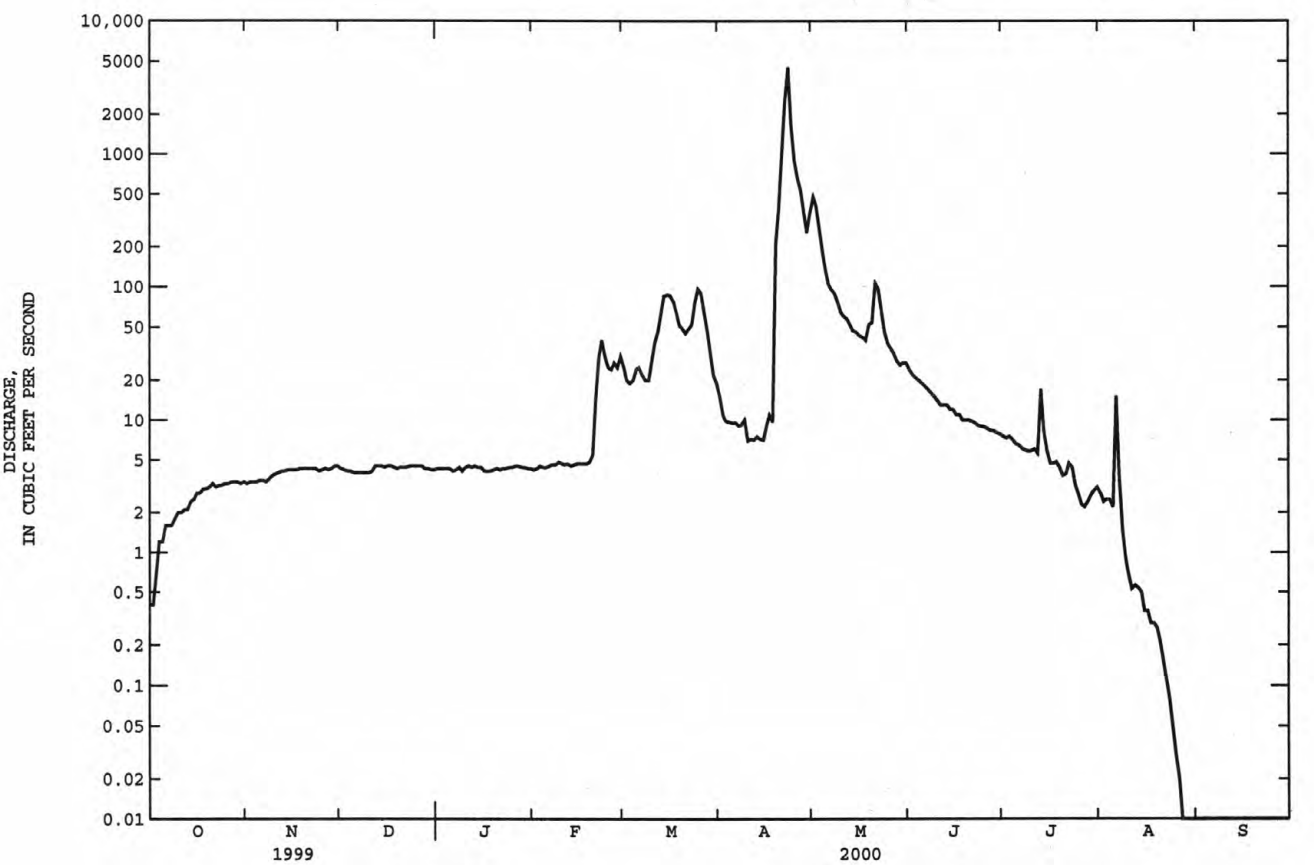
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2000, BY WATER YEAR (WY)

MEAN	1.66	2.56	1.59	2.24	5.42	23.3	29.8	47.3	71.3	18.8	6.35	2.80
MAX	19.8	68.7	16.0	25.5	52.6	150	456	444	1223	174	68.4	70.1
(WY)	1999	1999	1956	1974	1980	1993	2000	1957	1967	1951	1955	1955
MIN	.000	.000	.000	.000	.000	.097	.040	.20	.062	.000	.000	.000
(WY)	1954	1951	1954	1954	1954	1981	1981	1989	1980	1953	1960	1954

06400000 HAT CREEK NEAR EDGEMONT, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1951 - 2000	
ANNUAL TOTAL	10508.07		19467.16			
ANNUAL MEAN	28.8		53.2		17.8a	
HIGHEST ANNUAL MEAN					112	1967
LOWEST ANNUAL MEAN					.16	1989
HIGHEST DAILY MEAN	492	Jun 18	4510	Apr 23	8350	Jun 16 1967
LOWEST DAILY MEAN	.05	Sep 24	.00	Aug 28	.00	Nov 1 1950b
ANNUAL SEVEN-DAY MINIMUM	.14	Sep 23	.00	Aug 28	.00	Nov 1 1950
INSTANTANEOUS PEAK FLOW			6210	Apr 23	13300	Jun 16 1967c
INSTANTANEOUS PEAK STAGE			15.40	Apr 23	15.40	Apr 23 2000
ANNUAL RUNOFF (AC-FT)	20840		38610		12860	
10 PERCENT EXCEEDS	62		59		21	
50 PERCENT EXCEEDS	6.5		4.4		.50	
90 PERCENT EXCEEDS	1.6		.03		.00	

a Median of annual mean discharges, 12 ft^3/s.
b No flow for many days in most years.
c Gage height, 13.35 ft at different site, same datum.
e Estimated.



06400875 HORSEHEAD CREEK AT OELRICHS, SD

LOCATION.--Lat 43°11'17", long 103°13'34", in SW¼ SW¼ SW¼ SW¼ sec.7, T.10 S., R.8 E., Fall River County, Hydrologic Unit 10120106, on left bank on downstream side of bridge on Highway 18, 1.5 mi upstream from Lone Well Creek, and 0.6 mi northeast of Oelrichs.

DRAINAGE AREA.--187 mi^2.

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

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,320 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of 624 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.14	.30	.42	e.31	.73	10	459	4.5	.62	.04	.00
2	.02	.12	.31	.42	e.39	.64	9.6	232	3.8	.51	.04	.00
3	.02	.09	.32	e.40	e.40	.55	8.8	109	3.0	.40	.03	.00
4	.03	.08	.33	e.39	e.40	.43	8.0	65	2.4	.50	.03	.00
5	.03	.09	.33	e.40	e.40	.38	7.5	46	2.2	.23	.03	.00
6	.03	.09	.33	e.40	e.40	.36	6.9	31	2.0	.23	.03	.00
7	.03	.10	.37	e.38	e.40	.33	6.1	31	1.8	.17	.03	.00
8	.03	.15	.38	e.37	e.45	1.4	5.5	28	1.7	.13	.03	.00
9	.03	.19	.41	e.38	e.52	5.8	5.1	22	1.5	.15	.03	.00
10	.07	.19	.41	e.39	e.53	4.3	4.7	16	1.2	.15	.02	.00
11	.05	.17	.41	e.37	e.47	2.7	6.7	14	.94	.16	.02	.00
12	.05	.15	.37	e.36	e.40	4.4	6.3	12	.85	.13	.01	.00
13	.09	.17	.40	e.30	e.40	6.1	4.8	11	.80	.16	.00	.00
14	.11	.17	.42	e.30	e.40	2.5	3.7	9.1	.65	.14	.00	.00
15	.08	.19	.37	e.30	e.45	1.6	2.7	7.8	.84	.13	.00	.00
16	.08	.17	.39	e.28	e.50	6.6	2.1	6.6	1.0	.14	.00	.00
17	.05	.19	.39	e.29	e.59	8.9	1.4	6.2	.67	.16	.00	.00
18	.04	.32	e.40	e.31	e.61	7.0	1.2	27	.44	.65	.00	.00
19	.05	.45	e.40	e.32	e.70	8.1	7.6	178	.73	.45	.00	.00
20	.07	.51	.40	e.31	e.81	10	13	83	.87	.32	.00	.00
21	.10	.51	.39	e.31	.91	11	466	51	.73	.22	.00	.00
22	.49	.47	.36	e.31	1.0	14	1670	37	.46	.61	.00	.00
23	2.5	.43	.37	e.28	1.1	11	1360	30	.51	.50	.00	.00
24	3.6	.39	.37	e.27	1.3	11	619	24	.43	.38	.00	.00
25	2.8	.37	.37	e.27	1.3	8.1	188	18	.36	.26	.00	.00
26	1.5	.35	.38	e.27	1.1	5.8	122	13	.50	.16	.00	.00
27	.84	.33	.39	e.27	.89	6.8	77	11	.50	.13	.00	.00
28	.54	.31	.40	e.25	.82	5.9	54	9.6	.67	.11	.00	.00
29	.39	.32	.41	e.26	.82	3.1	44	7.8	.54	.07	.00	.00
30	.25	.32	.40	e.26	---	1.5	193	6.0	.97	.06	.00	.00
31	.18	---	.40	e.28	---	6.8	---	5.0	---	.05	.00	---
TOTAL	14.15	7.53	11.68	10.12	18.77	157.82	4914.7	1606.1	37.56	8.08	0.34	0.00
MEAN	.46	.25	.38	.33	.65	5.09	164	51.8	1.25	.26	.011	.000
MAX	3.6	.51	.42	.42	1.3	14	1670	459	4.5	.65	.04	.00
MIN	.00	.08	.30	.25	.31	.33	1.2	5.0	.36	.05	.00	.00
AC-FT	28	15	23	20	37	313	9750	3190	75	16	.7	.00

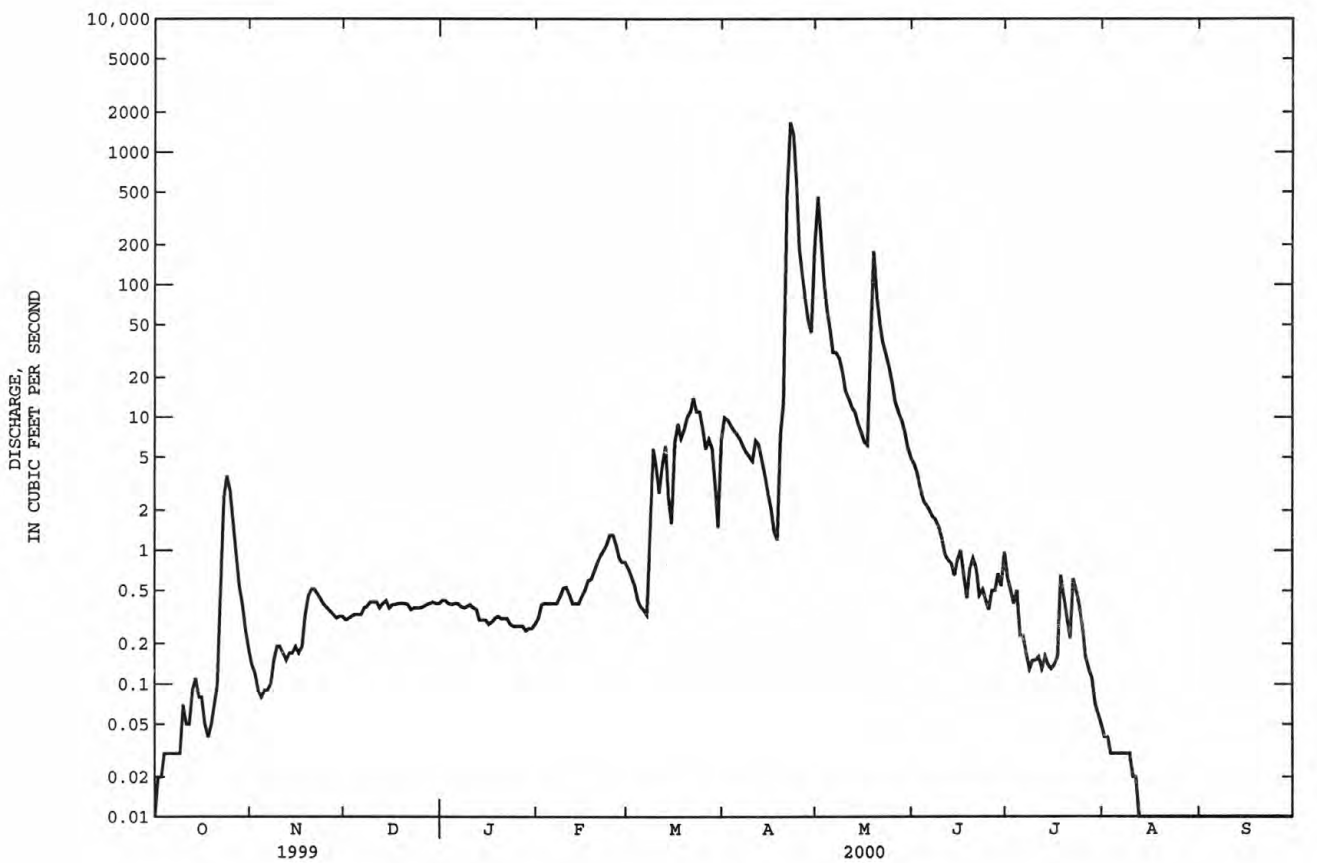
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000, BY WATER YEAR (WY)

MEAN	.056	.39	.23	.47	1.59	7.81	23.8	24.8	29.3	3.13	.14	.005
MAX	.46	5.66	2.72	6.39	11.6	58.9	164	246	187	31.4	.74	.070
(WY)	2000	1999	1997	1997	1994	1986	2000	1991	1986	1993	1986	1999
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1984	1984	1984	1985	1989	1989	1989	1985	1985	1985	1985	1984

06400875 HORSEHEAD CREEK AT OELRICHS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1984 - 2000	
ANNUAL TOTAL	3451.16		6786.85			
ANNUAL MEAN	9.46		18.5		7.62	
HIGHEST ANNUAL MEAN					29.3	1986
LOWEST ANNUAL MEAN					.000	1990
HIGHEST DAILY MEAN	369	Jun 16	1670	Apr 22	4080	May 11 1991
LOWEST DAILY MEAN	.00	Aug 27	.00	Oct 1	.00	Oct 1 1983a
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 27	.00	Aug 13	.00	Oct 1 1983
INSTANTANEOUS PEAK FLOW			2170	Apr 22	8270	May 11 1991
INSTANTANEOUS PEAK STAGE			14.42	Apr 22	18.57	May 11 1991
ANNUAL RUNOFF (AC-FT)	6850		13460		5520	
10 PERCENT EXCEEDS	18		11		4.8	
50 PERCENT EXCEEDS	.39		.39		.01	
90 PERCENT EXCEEDS	.04		.00		.00	

a No flow for many days in most years.
e Estimated.



06401000 ANGOSTURA RESERVOIR NEAR HOT SPRINGS, SD

LOCATION.--Lat 43°20'35", long 103°26'16", in $SW^1/_4$ $NW^1/_4$ sec.20, T.8 S., R.6 E., Fall River County, Hydrologic Unit 10120106, at dam on Cheyenne River, 6.5 mi southeast of Hot Springs.

DRAINAGE AREA.--9,100 mi^2, approximately.

PERIOD OF RECORD.--October 1949 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Aug. 26, 1965, nonrecording gage at same site and datum.

REMARKS.--Reservoir formed by concrete gravity dam with earth embankment with gated concrete gravity spillway section. Storage began Oct. 3, 1949; dam completed December 1949. Conservation capacity, 82,400 acre-ft between elevations 3,163.0 ft and 3,187.2 ft (top of spillway gates). Inactive storage, 39,700 acre-ft between elevations 3,139.75 ft (invert of lowest outlet) and 3,163.0 ft. Dead storage below elevation 3,139.75 ft, 8,600 acre-ft. Surcharge capacity, 56,400 acre-ft between elevations 3,187.2 ft and 3,198.1 ft (maximum water surface). Figures given herein represent contents above elevation 3,139.75 ft. Water stored for irrigation.

COOPERATION.--Records of elevation, contents, and diversions to Angostura project provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 145,200 acre-ft, June 18, 1962, elevation, 3,189.00 ft; minimum observed since normal operating level reached, 45,350 acre-ft, Sept. 28, 1960, elevation, 3,162.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 122,800 acre-ft, Apr. 23, elevation, 3,187.33 ft; minimum, 79,800 acre-ft, Sept. 21, elevation, 3,176.73 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,181.88	99,200	--
Oct. 31	3,182.21	100,600	+1,400
Nov. 30	3,182.83	103,100	+2,500
Dec. 31	3,183.40	105,500	+2,400
CAL YR 1999	--	--	-5,600
Jan. 31	3,184.21	108,900	+3,400
Feb. 29	3,185.30	113,600	+4,700
Mar. 31	3,186.84	120,500	+6,900
Apr. 30	3,186.92	120,900	+400
May 31	3,186.71	119,900	-1,000
June 30	3,185.02	112,400	-7,500
July 31	3,181.95	99,500	-12,900
Aug. 31	3,178.12	84,800	-14,700
Sept. 30	3,176.73	79,800	-5,000
WTR YR 2000	--	--	-19,400

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06401500 CHEYENNE RIVER BELOW ANGOSTURA DAM, SD

LOCATION.--Lat 43°20'42", long 103°26'12", in NE¼ NW¼ NW¼ sec.20, T.8 S., R.6 E., Fall River County, Hydrologic Unit 10120109, on right bank 800 ft downstream from Angostura Dam, 4.8 mi upstream from Fall River, and 6.5 mi southeast of Hot Springs.

DRAINAGE AREA.--9,100 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year, seasonal records only beginning October 1978. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1946(M). WDR SD-78-1: 1962(M), 1967(M), 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 3,058.02 ft above sea level (Bureau of Reclamation bench mark). Prior to Oct. 17, 1946, nonrecording gage and Oct. 17, 1946, to July 7, 1953, water-stage recorder at site 4.8 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Angostura Dam 800 ft upstream since October 1949. Bureau of Reclamation satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,300 ft^3/s, May 20, 1978, gage height, 15.97 ft, from rating curve extended above 12,000 ft^3/s; no flow Oct. 9, 1949, to Feb. 5, 1950, Apr. 28, Aug. 26, 30, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period February through July, 6,150 ft^3/s, Apr. 23, gage height, 10.02 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	3.8	4.6	77	558	12	6.2	---	---
2	---	---	---	---	3.8	4.6	75	753	12	6.0	---	---
3	---	---	---	---	4.0	4.8	60	664	12	5.9	---	---
4	---	---	---	---	3.9	4.9	50	437	13	5.6	---	---
5	---	---	---	---	3.9	4.8	48	323	13	5.9	---	---
6	---	---	---	---	3.9	4.8	49	296	12	5.7	---	---
7	---	---	---	---	4.0	4.9	49	196	11	6.0	---	---
8	---	---	---	---	4.1	5.5	49	297	12	5.8	---	---
9	---	---	---	---	4.1	5.2	47	401	12	6.2	---	---
10	---	---	---	---	4.5	5.2	50	273	12	6.4	---	---
11	---	---	---	---	4.6	5.7	71	157	12	6.4	---	---
12	---	---	---	---	4.5	7.4	82	92	12	6.3	---	---
13	---	---	---	---	4.5	6.8	71	89	12	6.2	---	---
14	---	---	---	---	4.4	5.7	63	105	13	6.3	---	---
15	---	---	---	---	4.3	4.4	27	134	12	6.5	---	---
16	---	---	---	---	4.0	2.8	26	186	12	7.2	---	---
17	---	---	---	---	3.9	2.6	24	143	12	7.6	---	---
18	---	---	---	---	4.1	6.3	25	191	12	7.5	---	---
19	---	---	---	---	4.2	7.5	789	98	12	7.5	---	---
20	---	---	---	---	4.2	11	1300	168	12	8.0	---	---
21	---	---	---	---	4.3	11	2190	193	10	8.0	---	---
22	---	---	---	---	4.3	40	3310	220	10	7.8	---	---
23	---	---	---	---	4.2	119	5920	209	10	7.5	---	---
24	---	---	---	---	4.3	157	5320	127	9.4	7.6	---	---
25	---	---	---	---	4.7	149	2620	114	8.9	7.8	---	---
26	---	---	---	---	4.5	144	1200	89	8.5	7.6	---	---
27	---	---	---	---	4.6	158	738	96	8.5	7.4	---	---
28	---	---	---	---	4.6	157	607	91	7.7	7.2	---	---
29	---	---	---	---	4.6	135	496	66	7.5	7.2	---	---
30	---	---	---	---	---	88	561	18	6.7	7.2	---	---
31	---	---	---	---	---	79	---	12	---	7.2	---	---
TOTAL	---	---	---	---	122.8	1346.5	25994	6796	329.2	211.7	---	---
MEAN	---	---	---	---	4.23	43.4	866	219	11.0	6.83	---	---
MAX	---	---	---	---	4.7	158	5920	753	13	8.0	---	---
MIN	---	---	---	---	3.8	2.6	24	12	6.7	5.6	---	---
AC-FT	---	---	---	---	244	2670	51560	13480	653	420	---	---

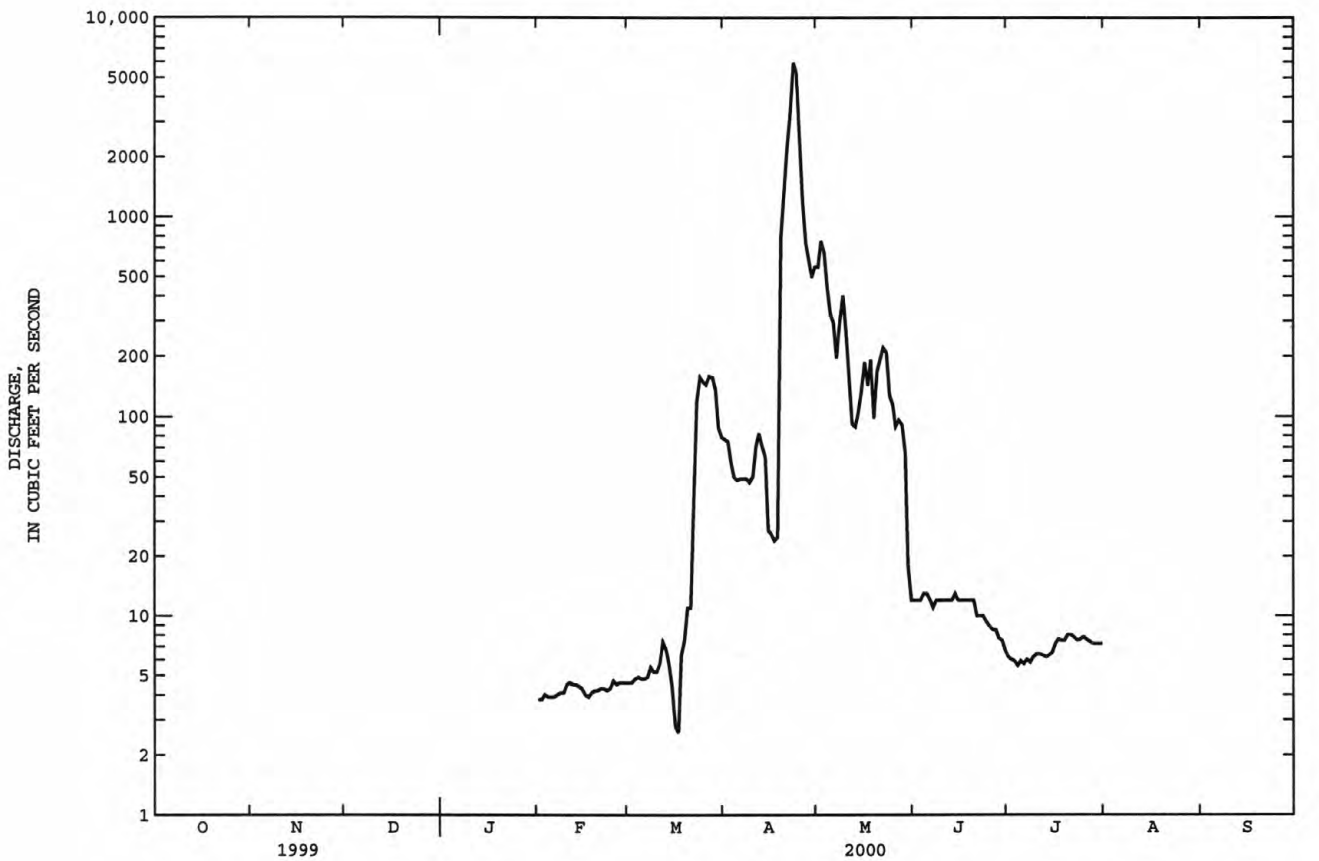
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1978, BY WATER YEAR (WY)

MEAN	9.65	11.2	14.1	18.1	27.7	31.7	30.5	205	314	108	25.2	10.9
MAX	104	103	108	118	211	174	188	2203	2802	1210	201	158
(WY)	1953	1953	1953	1953	1974	1967	1952	1978	1962	1962	1958	1952
MIN	.81	.79	.75	.84	.66	.82	.87	.42	.78	.89	.70	.70
(WY)	1961	1961	1961	1961	1970	1970	1962	1951	1977	1961	1961	1960

06401500 CHEYENNE RIVER BELOW ANGOSTURA DAM, SD--Continued

SUMMARY STATISTICS	WATER YEARS 1951 - 1978*	
ANNUAL MEAN	67.1	
HIGHEST ANNUAL MEAN	404	1962
LOWEST ANNUAL MEAN	.83	1961
HIGHEST DAILY MEAN	20600	Jun 18 1962
LOWEST DAILY MEAN	.00	Apr 28 1951
ANNUAL SEVEN-DAY MINIMUM	.20	Apr 26 1951
INSTANTANEOUS PEAK FLOW	30300	May 20 1978
INSTANTANEOUS PEAK STAGE	15.97	May 20 1978
ANNUAL RUNOFF (AC-FT)	48630	
10 PERCENT EXCEEDS	107	
50 PERCENT EXCEEDS	1.4	
90 PERCENT EXCEEDS	.91	

* Period reflects regulated and and complete water years.



06402000 FALL RIVER AT HOT SPRINGS, SD

LOCATION.--Lat 43°25'50", long 103°28'33", in NW¼ NW¼ sec.24, T.7 S., R.5 E., Fall River County, Hydrologic Unit 10120109, on left bank at intersection of River Street and University Avenue in Hot Springs, and 6.0 mi upstream from mouth.

DRAINAGE AREA.--137 mi^2.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1938, 1941(M), 1947(M). WSP 1729: 1959(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,413.20 ft above sea level. Prior to June 2, 1939, nonrecording gage at site 300 ft upstream at datum 3.00 ft higher.

REMARKS.--Records good. Flow regulated by dam forming Coldbrook Reservoir, capacity, 7,200 acre-ft, since September 1952, and dam forming Cottonwood Springs Lake, capacity, 8,385 acre-ft since June 1969. Maximum discharge prior to Oct. 1, 1969, 13, 100 ft^3/s, Sept. 4, 1938, gage height, 18.4 ft, site and datum then in use, from rating curve extended above 51 ft^3/s on basis of weir formula and slope-area measurement of peak flow; minimum, 4.0 ft^3/s, Sept. 23, 1940. Some diversion above station for municipal supply of Hot Springs. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	31	32	30	30	31	30	30	28	26	32	29
2	32	32	31	30	30	30	31	29	28	26	32	30
3	32	31	31	29	30	31	30	29	27	26	32	29
4	32	31	31	29	29	31	31	30	27	26	32	29
5	32	31	31	29	29	30	30	29	27	27	31	29
6	33	32	31	29	30	31	30	29	27	27	32	29
7	32	32	31	29	29	30	30	30	26	26	32	29
8	32	33	31	29	29	33	30	28	26	26	33	28
9	32	32	31	29	30	31	31	28	26	26	32	29
10	32	32	31	29	29	31	34	28	27	27	32	29
11	32	32	31	29	29	31	36	29	26	26	32	29
12	32	32	31	29	29	31	37	28	25	27	32	29
13	31	32	30	29	29	31	31	28	25	27	31	28
14	31	32	30	29	31	31	31	27	26	27	31	28
15	31	32	30	29	31	31	31	27	25	27	31	29
16	32	32	30	29	31	30	30	28	25	27	31	29
17	32	32	30	29	30	30	30	28	25	27	31	29
18	31	34	30	29	30	30	33	27	26	30	31	28
19	32	32	30	29	30	30	41	27	26	29	31	29
20	33	32	30	29	30	32	34	28	26	29	30	29
21	32	32	30	29	31	30	32	27	26	29	30	29
22	32	32	30	30	31	30	31	27	26	29	30	29
23	32	32	30	29	31	30	30	27	25	29	30	29
24	32	32	30	29	31	30	32	27	30	29	30	29
25	32	32	30	29	31	30	30	28	26	29	30	29
26	32	32	30	29	31	30	30	28	26	29	30	29
27	32	31	30	29	30	30	30	28	26	32	30	28
28	32	31	30	29	30	30	30	27	26	32	29	28
29	31	31	30	29	30	30	34	27	26	31	29	28
30	31	31	30	30	---	30	30	28	26	31	29	28
31	31	---	30	29	---	30	---	28	---	31	29	---
TOTAL	987	955	943	903	871	946	950	869	787	870	957	863
MEAN	31.8	31.8	30.4	29.1	30.0	30.5	31.7	28.0	26.2	28.1	30.9	28.8
MAX	33	34	32	30	31	33	41	30	30	32	33	30
MIN	31	31	30	29	29	30	30	27	25	26	29	28
AC-FT	1960	1890	1870	1790	1730	1880	1880	1720	1560	1730	1900	1710

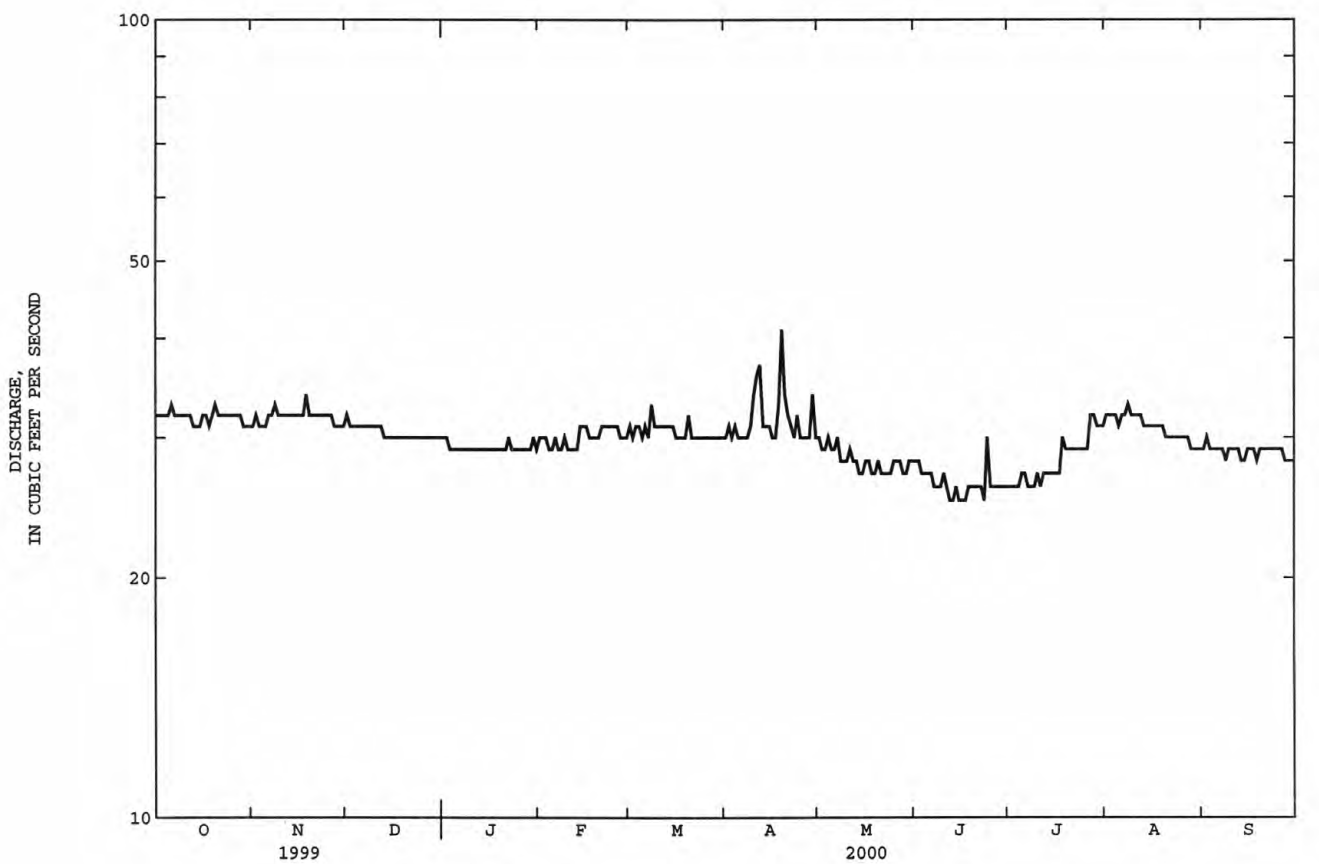
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2000, BY WATER YEAR (WY)*

MEAN	22.7	22.5	23.0	22.5	22.9	23.3	22.7	22.8	22.7	21.8	22.0	22.4
MAX	31.8	31.8	30.4	29.1	30.0	30.5	31.7	34.9	41.3	38.8	33.6	32.4
(WY)	2000	2000	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999
MIN	18.8	18.3	19.0	19.4	19.8	20.0	19.5	19.0	17.9	18.0	18.6	17.7
(WY)	1973	1987	1987	1984	1977	1982	1970	1976	1981	1980	1972	1983

06402000 FALL RIVER AT HOT SPRINGS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1970 - 2000*	
ANNUAL TOTAL	11570		10901			
ANNUAL MEAN	31.7		29.8		22.6	
HIGHEST ANNUAL MEAN					30.6	1999
LOWEST ANNUAL MEAN					20.9	1981
HIGHEST DAILY MEAN	50	Jun 29	41	Apr 19	75	Mar 19 1978
LOWEST DAILY MEAN	22	Mar 1	25	Jun 12a	14	May 2 1982b
ANNUAL SEVEN-DAY MINIMUM	22	Mar 1	25	Jun 11	15	Sep 23 1983
INSTANTANEOUS PEAK FLOW			144	Jun 24	1170	Jul 19 1997
INSTANTANEOUS PEAK STAGE			3.23	Jun 24	4.62	Jul 17 1988
ANNUAL RUNOFF (AC-FT)	22950		21620		16370	
10 PERCENT EXCEEDS	39		32		26	
50 PERCENT EXCEEDS	32		30		22	
90 PERCENT EXCEEDS	24		27		19	

* Regulated period only (1970-2000). See REMARKS.
a Also June 13, 15-17, 23.
b For some days in 1982, 1983, and 1985.



06402430 BEAVER CREEK NEAR PRINGLE, SD

LOCATION.--Lat 43°34'53", long 103°28'34", in NE¼ SW¼ SW¼ sec.25, T.5 S., R.5 E., Custer County, Hydrologic Unit 10120109, on right bank 2.0 mi north of Wind Cave National Park Headquarters.

DRAINAGE AREA.--45.8 mi^2.

PERIOD OF RECORD.--October 1990 to current year. Partial monthly discharge October 1990.

GAGE.--Water-stage recorder. Datum of gage is 4,180 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minor diversions for irrigation of hay meadows and domestic use may occur upstream of the gage. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	4.7	4.4	3.3	e1.8	2.8	2.6	11	5.7	2.3	1.9	1.4
2	6.5	4.7	4.4	3.4	e2.0	2.9	2.6	8.6	4.9	2.2	2.0	1.5
3	6.7	4.9	4.3	2.8	e1.9	2.9	2.6	7.8	4.5	2.1	1.9	1.4
4	6.5	4.9	3.9	2.4	e1.7	2.9	2.6	7.4	4.3	2.1	2.0	1.4
5	6.3	4.8	3.7	e2.5	e1.6	2.9	2.6	7.0	4.3	2.1	3.4	1.4
6	6.2	4.8	4.6	e2.3	e1.8	2.9	2.6	6.3	3.9	2.2	2.0	1.4
7	6.3	4.7	4.3	e2.0	e2.0	2.9	2.6	6.6	3.3	2.0	1.9	1.4
8	6.3	4.6	3.3	e1.8	e1.8	3.4	2.6	7.4	3.1	2.0	1.9	1.3
9	6.1	4.6	2.9	e1.9	e1.4	3.0	2.6	6.8	3.1	2.0	1.8	1.3
10	6.1	4.6	4.3	e1.7	e1.3	2.9	2.7	6.3	3.1	2.1	1.8	1.3
11	6.0	4.5	3.7	e1.7	e1.3	2.8	2.6	7.1	3.0	2.2	1.7	1.3
12	6.0	4.6	3.5	e1.8	e1.4	3.0	2.6	7.4	2.7	2.1	1.7	1.4
13	5.9	4.5	4.3	e1.5	e1.6	2.9	2.5	6.6	2.6	2.0	1.7	1.3
14	5.8	4.6	4.0	e2.4	e1.8	2.9	2.6	6.7	2.6	1.9	1.8	1.3
15	5.6	4.4	3.7	e2.0	e1.8	2.9	2.6	6.5	2.6	1.9	1.7	1.3
16	5.6	4.5	4.1	e1.9	e1.7	2.7	2.9	6.7	2.6	2.0	1.7	1.3
17	5.7	4.5	3.9	e1.8	e1.7	2.9	2.9	7.4	2.5	2.2	1.4	1.3
18	5.5	5.0	4.0	e1.7	e1.7	2.8	2.8	8.0	2.5	2.4	1.4	1.2
19	5.7	5.0	2.8	e1.6	e1.6	2.8	4.1	7.8	2.3	2.5	1.4	1.3
20	5.6	4.9	2.8	e1.5	e1.8	3.0	4.3	7.4	2.4	2.3	1.3	1.3
21	5.5	5.0	3.8	e1.4	e2.0	2.9	5.0	7.4	2.4	2.6	1.3	1.3
22	5.4	4.8	3.6	e1.3	e3.0	2.9	8.5	6.8	2.2	2.5	1.3	1.4
23	5.5	4.6	3.8	e1.2	2.9	2.9	18	6.2	2.2	2.2	1.3	1.5
24	5.5	3.9	3.7	e1.2	2.9	2.8	18	5.9	3.2	2.1	1.3	1.5
25	5.4	4.7	3.6	e1.2	3.0	2.7	20	6.0	2.8	1.9	1.3	1.5
26	5.3	4.6	3.5	e1.1	2.7	2.7	14	6.2	2.7	1.9	1.4	1.4
27	5.2	4.7	3.5	e1.1	2.7	2.7	10	5.9	2.8	2.0	1.5	1.4
28	5.2	4.6	3.6	e1.2	2.9	2.7	8.8	5.5	2.7	1.9	1.4	1.3
29	5.2	4.3	3.5	e1.3	2.9	2.7	8.5	5.3	2.7	1.8	1.4	1.3
30	5.2	4.4	3.4	e1.5	---	2.6	11	5.1	2.5	1.8	1.4	1.3
31	5.0	---	3.5	e1.6	---	2.6	---	5.6	---	1.8	1.4	---
TOTAL	179.2	139.4	116.4	56.1	58.7	88.4	177.8	212.7	92.2	65.1	51.4	40.7
MEAN	5.78	4.65	3.75	1.81	2.02	2.85	5.93	6.86	3.07	2.10	1.66	1.36
MAX	6.7	5.0	4.6	3.4	3.0	3.4	20	11	5.7	2.6	3.4	1.5
MIN	5.0	3.9	2.8	1.1	1.3	2.6	2.5	5.1	2.2	1.8	1.3	1.2
AC-FT	355	276	231	111	116	175	353	422	183	129	102	81

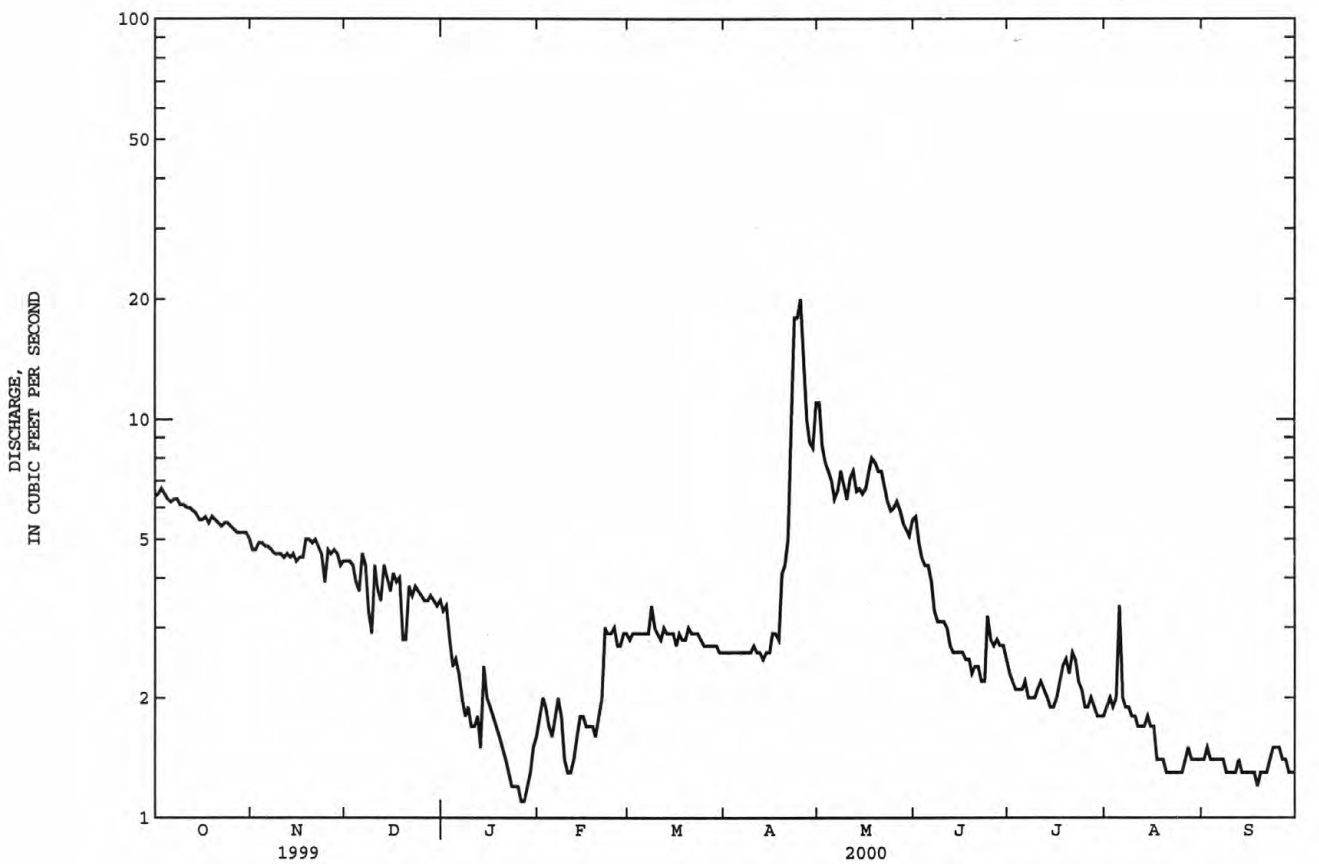
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2000, BY WATER YEAR (WY)

MEAN	2.67	2.87	2.32	1.86	1.94	3.04	3.76	6.12	9.29	5.88	3.93	3.02
MAX	5.78	6.90	5.35	4.19	3.81	4.72	8.24	16.2	35.8	16.8	12.0	7.69
(WY)	2000	1999	1999	1999	1997	1997	1999	1999	1995	1999	1999	1999
MIN	.095	.20	.22	.14	.25	.45	.39	.54	.59	.55	.23	.18
(WY)	1992	1992	1993	1992	1992	1992	1992	1992	1992	1992	1992	1992

06402430 BEAVER CREEK NEAR PRINGLE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1992 - 2000	
ANNUAL TOTAL	3167.4		1278.1			
ANNUAL MEAN	8.68		3.49		3.90	
HIGHEST ANNUAL MEAN					8.93	1999
LOWEST ANNUAL MEAN					.32	1992
HIGHEST DAILY MEAN	22	May 29	20	Apr 25	85	Jun 10 1995
LOWEST DAILY MEAN	2.8	Feb 19	1.1	Jan 26	.06	Oct 1 1991
ANNUAL SEVEN-DAY MINIMUM	2.9	Feb 19	1.2	Jan 22	.07	Oct 1 1991
INSTANTANEOUS PEAK FLOW			22	Apr 24	90	Jun 10 1995
INSTANTANEOUS PEAK STAGE			8.52	Apr 24	9.17	Jun 10 1995
ANNUAL RUNOFF (AC-FT)	6280		2540		2820	
10 PERCENT EXCEEDS	18		6.3		7.8	
50 PERCENT EXCEEDS	6.3		2.8		2.7	
90 PERCENT EXCEEDS	3.1		1.4		.29	

e Estimated.



06402500 BEAVER CREEK NEAR BUFFALO GAP, SD

LOCATION.--Lat 43°28'00", long 103°18'20", in NE¼ SE¼ sec.5, T.7 S., R.7 E., Fall River County, Hydrologic Unit 10120109, on left bank 1.5 mi south of Buffalo Gap and 4.5 mi upstream from mouth.

DRAINAGE AREA.--130 mi^2, approximately.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October, November, 1957, published in WSP 1309.

REVISED RECORDS.--WSP 956: 1941. WSP 1309: 1939-40(M), 1947(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,150 ft above sea level, from topographic map. Prior to June 20, 1939, nonrecording gage at site 0.8 mi downstream at different datum.

REMARKS.--Records good. Nearly all flow is diverted above station during irrigation season. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1927 reached a stage of 18.0 ft, former site and datum, from information by local residents.

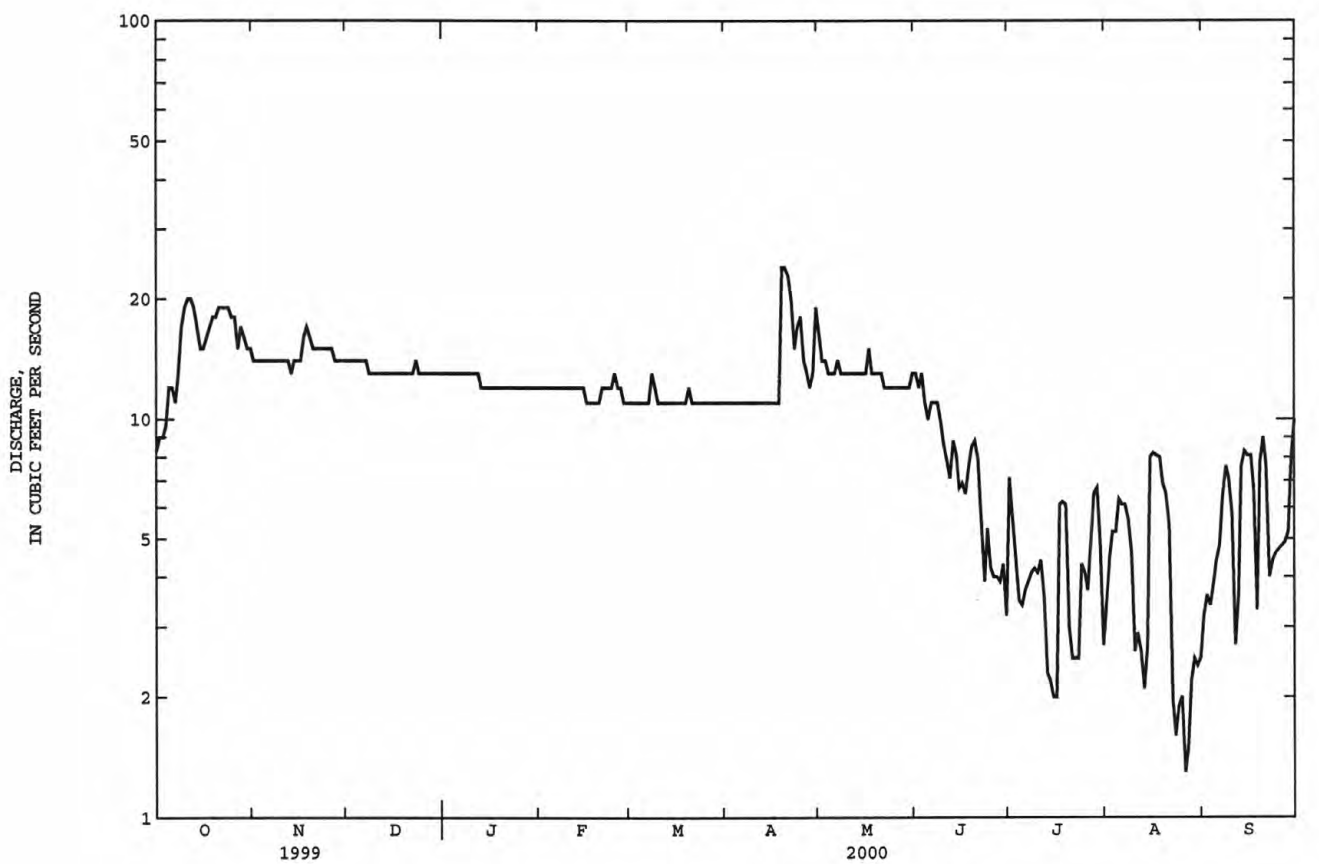
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	14	14	13	12	11	11	16	13	7.1	3.4	3.2
2	9.0	14	14	13	12	11	11	14	12	5.8	4.5	3.6
3	9.0	14	14	13	12	11	11	14	13	4.4	5.2	3.4
4	9.6	14	14	13	12	11	11	13	11	3.5	5.2	3.8
5	12	14	14	13	12	11	11	13	10	3.4	6.3	4.4
6	12	14	14	13	12	11	11	13	11	3.7	6.1	4.8
7	11	14	14	13	12	11	11	14	11	3.9	6.1	6.4
8	13	14	13	13	12	13	11	13	11	4.1	5.6	7.6
9	17	14	13	13	12	12	11	13	9.9	4.2	4.6	7.1
10	19	14	13	13	12	11	11	13	8.6	4.1	2.6	5.8
11	20	14	13	13	12	11	11	13	7.9	4.4	2.9	2.7
12	20	14	13	13	12	11	11	13	7.1	3.6	2.6	3.6
13	19	13	13	12	12	11	11	13	8.8	2.3	2.1	7.6
14	17	14	13	12	12	11	11	13	8.1	2.2	2.7	8.3
15	15	14	13	12	12	11	11	13	6.7	2.0	8.0	8.1
16	15	14	13	12	11	11	11	13	6.9	2.0	8.2	8.1
17	16	16	13	12	11	11	11	15	6.5	6.1	8.1	6.7
18	17	17	13	12	11	11	11	13	7.6	6.2	8.0	3.3
19	18	16	13	12	11	11	24	13	8.5	6.1	6.9	7.8
20	18	15	13	12	11	12	24	13	8.8	3.0	6.5	9.0
21	19	15	13	12	12	11	23	13	7.9	2.5	5.4	7.6
22	19	15	13	12	12	11	20	12	5.6	2.5	2.0	4.0
23	19	15	14	12	12	11	15	12	3.9	2.5	1.6	4.4
24	19	15	13	12	12	11	17	12	5.3	4.3	1.9	4.6
25	18	15	13	12	13	11	18	12	4.2	4.1	2.0	4.7
26	18	15	13	12	12	11	14	12	4.0	3.7	1.3	4.8
27	15	14	13	12	12	11	13	12	4.0	5.0	1.5	4.9
28	17	14	13	12	11	11	12	12	3.9	6.5	2.2	5.2
29	16	14	13	12	11	11	13	12	4.3	6.7	2.5	7.9
30	15	14	13	12	---	11	19	12	3.2	4.9	2.4	10
31	15	---	13	12	---	11	---	13	---	2.7	2.5	---
TOTAL	484.9	433	411	384	342	345	410	402	233.7	127.5	130.9	173.4
MEAN	15.6	14.4	13.3	12.4	11.8	11.1	13.7	13.0	7.79	4.11	4.22	5.78
MAX	20	17	14	13	13	13	24	16	13	7.1	8.2	10
MIN	8.3	13	13	12	11	11	11	12	3.2	2.0	1.3	2.7
AC-FT	962	859	815	762	678	684	813	797	464	253	260	344
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)												
MEAN	7.33	9.05	9.75	9.99	9.97	9.26	6.74	5.12	7.79	5.66	4.28	5.56
MAX	16.0	19.9	19.3	18.4	15.1	16.1	16.9	21.7	43.4	32.4	22.3	15.4
(WY)	1999	1999	1999	1999	1999	1978	1941	1999	1999	1999	1999	1999
MIN	.67	3.40	5.96	7.10	7.00	4.34	.79	.61	.39	.24	.25	.37
(WY)	1961	1950	1991	1985	1942	1961	1967	1960	1974	1953	1961	1960

06402500 BEAVER CREEK NEAR BUFFALO GAP, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	7383.2		3877.4			
ANNUAL MEAN	20.2		10.6		7.52	
HIGHEST ANNUAL MEAN					21.2	1999
LOWEST ANNUAL MEAN					3.78	1961
HIGHEST DAILY MEAN	101	Jun 19	24	Apr 19	313	Aug 10 1955
LOWEST DAILY MEAN	6.6	Sep 29	1.3	Aug 26	.00	Jul 29 1952a
ANNUAL SEVEN-DAY MINIMUM	8.6	Sep 28	1.8	Aug 22	.06	Jul 28 1952
INSTANTANEOUS PEAK FLOW			32	Apr 20	11700	Sep 4 1938b
INSTANTANEOUS PEAK STAGE			4.69	Apr 20	16.46	Sep 4 1938c
ANNUAL RUNOFF (AC-FT)	14640		7690		5450	
10 PERCENT EXCEEDS	32		15		12	
50 PERCENT EXCEEDS	17		12		8.0	
90 PERCENT EXCEEDS	13		3.7		.70	

a No flow at times in some years.
b From rating curve extended above 11 ft^3/s on basis of slope-area measurement.
c Site and datum then in use.



06403300 FRENCH CREEK ABOVE FAIRBURN, SD

LOCATION.--Lat 43°43'02", long 103°22'03", in SW¼ SW¼ NE¼ sec.11, T.4 S., R.6 E., Custer County, Hydrologic Unit 10120109, on right bank 500 ft upstream from concrete diversion dam, 1.0 mi southwest of landing strip in Custer State Park, 1.5 mi west of east boundary of Custer State Park, 2.6 mi southwest of abandoned Fairview School, and 3.5 mi southeast of Custer State Park Headquarters.

DRAINAGE AREA.--105 mi^2, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Stockade Reservoir, capacity, 1,820 acre-ft, 12 mi upstream. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

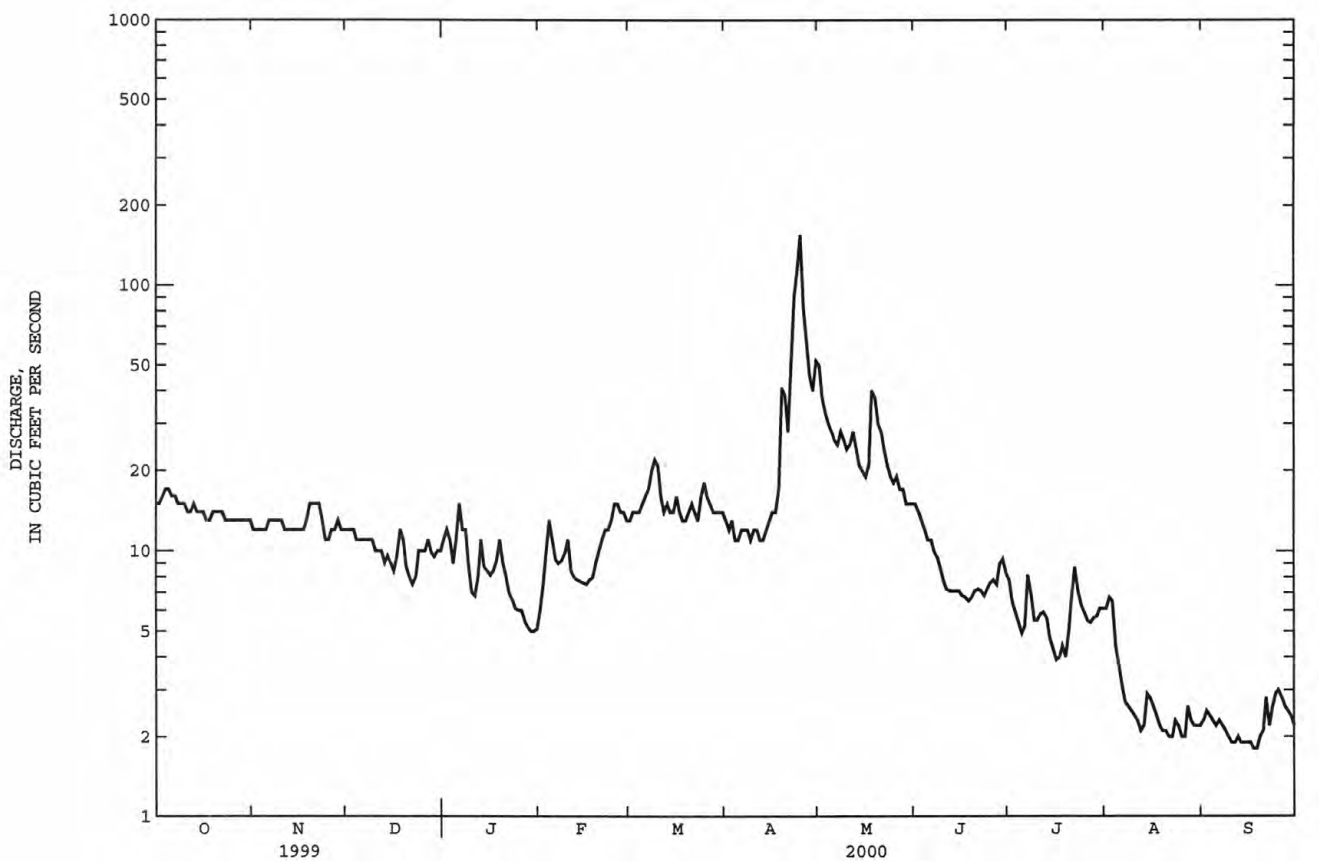
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	12	11	e6.0	13	13	50	15	7.8	6.1	2.3
2	15	12	12	12	e7.5	14	12	38	14	6.5	6.7	2.5
3	16	12	12	11	9.9	14	13	33	13	5.9	6.5	2.4
4	17	12	e11	e9.0	13	14	11	30	12	5.4	4.4	2.3
5	17	12	e11	e11	11	15	11	28	11	4.9	3.7	2.2
6	16	13	e11	15	9.3	16	12	26	11	5.2	3.1	2.3
7	16	13	e11	12	9.0	17	12	25	10	8.1	2.7	2.2
8	15	13	e11	12	9.2	20	12	28	9.5	6.9	2.6	e2.1
9	15	13	e11	8.9	9.8	22	11	26	e8.6	5.5	2.5	2.0
10	15	13	e10	e7.0	11	21	12	24	7.7	5.5	2.4	1.9
11	14	12	e10	e6.8	e8.5	16	12	25	7.2	5.8	2.3	1.9
12	14	12	e10	e8.0	e8.0	14	11	28	7.1	5.9	2.1	2.0
13	15	12	e9.0	11	e7.8	15	11	24	7.1	5.6	2.2	1.9
14	14	12	e9.6	8.7	e7.7	14	12	21	7.1	4.7	2.9	1.9
15	14	12	e9.0	8.4	e7.6	14	13	20	7.1	4.3	2.8	1.9
16	14	12	e8.4	8.1	e7.5	16	14	19	6.8	3.9	2.6	1.9
17	13	12	9.6	8.4	e7.8	e14	14	21	6.7	4.0	2.4	1.8
18	13	13	12	9.2	e8.0	13	17	40	6.5	4.4	2.2	1.8
19	14	15	11	11	e9.0	13	41	38	6.7	4.0	2.1	2.0
20	14	15	e8.7	e9.0	e10	14	39	30	7.1	e5.0	2.1	2.1
21	14	15	e8.0	e8.0	11	15	28	28	7.2	6.9	2.0	2.8
22	14	15	e7.5	e7.0	12	14	49	24	7.1	8.7	2.0	2.2
23	13	13	e8.0	e6.6	12	13	91	21	6.8	7.1	2.3	2.6
24	13	e11	10	e6.1	13	16	113	19	7.2	6.3	2.2	2.9
25	13	e11	10	e6.0	15	18	e155	18	7.6	5.9	2.0	3.0
26	13	12	10	e6.0	15	16	82	19	7.8	5.5	2.0	2.8
27	13	12	11	e5.5	14	15	60	17	7.5	5.4	2.6	2.6
28	13	13	9.9	e5.2	14	14	46	17	8.9	5.6	2.3	2.5
29	13	12	9.5	e5.0	13	14	40	15	9.3	5.7	2.2	2.4
30	13	e12	10	e5.0	---	14	52	15	8.3	6.1	2.2	2.2
31	13	---	10	e5.1	---	14	---	15	---	6.1	2.2	---
TOTAL	441	378	313.2	263.0	296.6	472	1019	782	258.9	178.6	88.4	67.4
MEAN	14.2	12.6	10.1	8.48	10.2	15.2	34.0	25.2	8.63	5.76	2.85	2.25
MAX	17	15	12	15	15	22	155	50	15	8.7	6.7	3.0
MIN	13	11	7.5	5.0	6.0	13	11	15	6.5	3.9	2.0	1.8
AC-FT	875	750	621	522	588	936	2020	1550	514	354	175	134
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)												
MEAN	7.58	7.95	4.58	3.99	4.82	11.4	13.6	29.8	32.4	14.0	10.5	5.89
MAX	24.8	46.0	24.5	15.0	17.8	24.8	45.4	147	143	46.4	42.7	17.3
(WY)	1999	1999	1999	1999	1999	1987	1999	1995	1995	1995	1997	1999
MIN	.84	1.07	.69	.39	.19	1.59	1.63	1.00	.46	.44	.53	.65
(WY)	1988	1986	1990	1989	1989	1988	1989	1989	1989	1985	1985	1987

06403300 FRENCH CREEK ABOVE FAIRBURN, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1983 - 2000	
ANNUAL TOTAL	10159.2		4558.1			
ANNUAL MEAN	27.8		12.5		12.2a	
HIGHEST ANNUAL MEAN					34.7	1995
LOWEST ANNUAL MEAN					1.01	1989
HIGHEST DAILY MEAN	251	Aug 8	155	Apr 25	536	May 8 1995
LOWEST DAILY MEAN	7.5	Dec 22	1.8	Sep 17	.02	Feb 3 1989b
ANNUAL SEVEN-DAY MINIMUM	8.9	Dec 20	1.9	Sep 12	.03	Feb 2 1989
INSTANTANEOUS PEAK FLOW			156	Apr 25	1060	May 8 1995c
INSTANTANEOUS PEAK STAGE			2.12	Apr 25	4.08	May 8 1995d
ANNUAL RUNOFF (AC-FT)	20150		9040		8870	
10 PERCENT EXCEEDS	59		20		27	
50 PERCENT EXCEEDS	18		11		5.6	
90 PERCENT EXCEEDS	12		2.4		.80	

a Median of annual mean discharges, 8.8 ft^3/s.
b Also Feb. 4, 5, 1989.
c Peak flow determined from slope-area measurement.
d From floodmarks.
e Estimated.



06403700 CHEYENNE RIVER AT REDSHIRT, SD

LOCATION.--Lat 43°40'23", long 102°53'36", in SW¼ SE¼ NW¼ sec.26, T.4 S., R.10 E., Custer County, Hydrologic Unit 10120109, 0.8 mi northeast of Redshirt, approximately 22 mi southeast of Hermosa on State Highway 40, on right stream bank.

DRAINAGE AREA.--10,220 mi^2, revised, approximately.

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

REVISED RECORDS.--WDR SD-99-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,670 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Angostura Dam, conservation capacity, 82,400 acre-ft, 45 mi upstream since October 1949. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

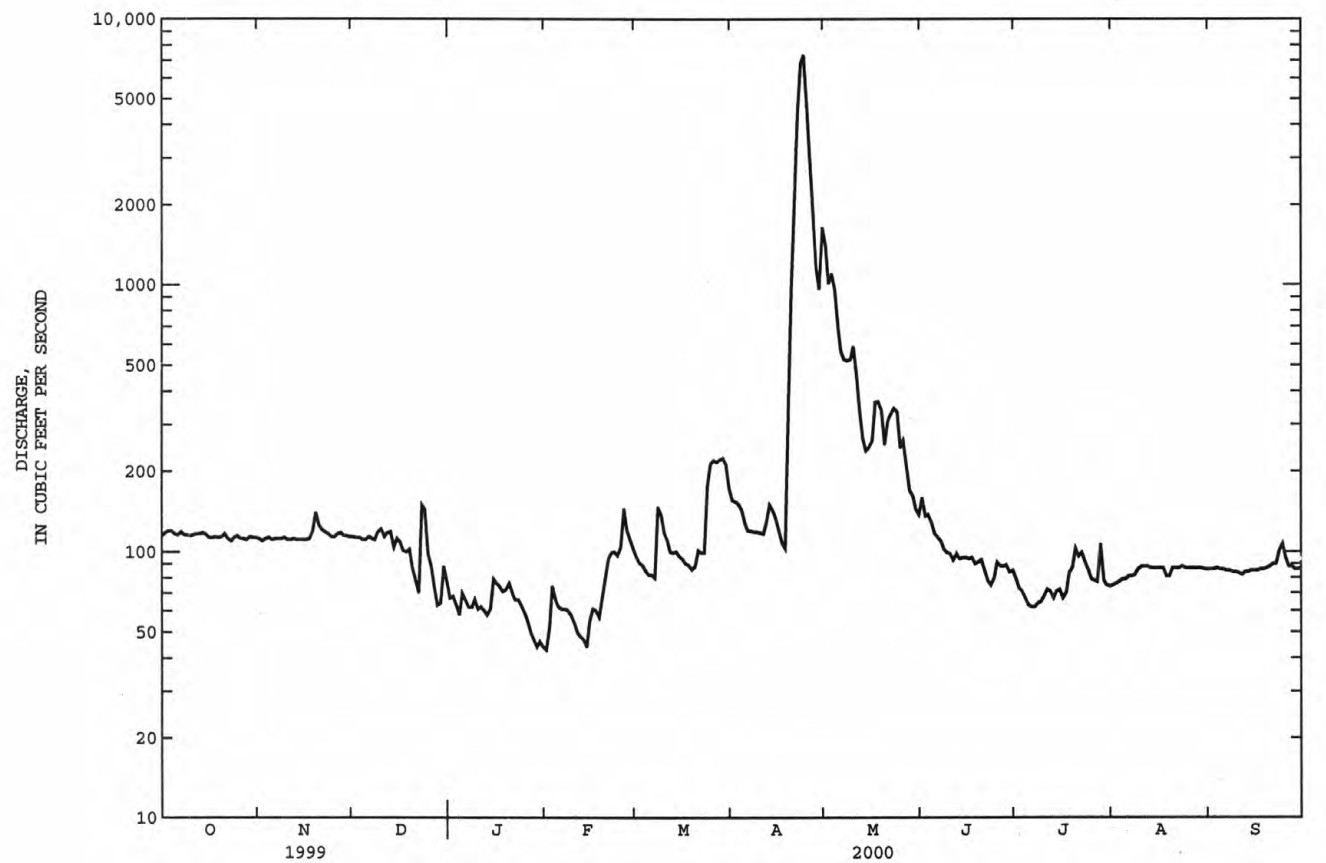
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e115	112	114	e67	e43	96	156	1400	159	79	75	86
2	e118	110	113	e68	e52	91	154	1010	136	73	76	86
3	120	112	113	e63	e74	89	151	1100	138	71	77	87
4	120	113	111	e58	e66	85	144	954	129	67	79	86
5	117	111	111	e70	e62	82	129	700	117	63	79	86
6	116	112	114	e66	e61	82	120	566	113	62	81	85
7	119	112	112	e62	e61	80	120	526	110	62	81	85
8	116	112	111	e62	e60	147	119	520	102	64	82	84
9	116	113	119	e66	e58	138	119	526	99	65	86	84
10	115	111	122	e61	e54	119	118	588	98	68	88	83
11	116	111	114	e62	e50	111	117	462	93	72	88	82
12	117	112	118	e60	e48	100	129	339	98	71	88	84
13	117	111	119	e58	e47	99	150	265	94	67	87	84
14	118	111	104	e61	e44	100	143	239	95	71	87	85
15	116	111	112	e79	e55	96	132	246	95	72	87	85
16	113	111	109	e76	e61	94	120	259	94	67	87	85
17	113	112	101	e74	e60	90	108	363	95	70	87	86
18	114	119	100	e71	e57	89	103	366	90	83	81	86
19	113	140	102	e72	e66	86	295	342	91	87	81	87
20	114	126	e87	e76	e79	88	966	252	93	103	87	88
21	117	121	e78	e70	94	101	1780	309	85	96	87	90
22	112	119	e70	e66	99	99	4360	327	78	99	87	90
23	110	117	e150	e66	100	99	6850	345	75	92	88	101
24	113	114	e144	e63	97	176	7320	336	79	86	87	107
25	115	114	e98	e59	104	214	4690	245	91	79	87	95
26	112	117	e88	e55	145	219	2510	260	88	78	87	88
27	112	118	e73	e50	121	216	1600	211	88	77	87	88
28	111	115	e63	e47	111	221	1160	170	89	107	87	86
29	114	115	e64	e44	103	224	961	162	84	78	87	86
30	113	114	e88	e46	---	213	1640	145	85	75	86	87
31	113	---	e77	e44	---	173	---	138	---	74	86	---
TOTAL	3565	3446	3199	1942	2132	3917	36464	13671	2981	2378	2620	2622
MEAN	115	115	103	62.6	73.5	126	1215	441	99.4	76.7	84.5	87.4
MAX	120	140	150	79	145	224	7320	1400	159	107	88	107
MIN	110	110	63	44	43	80	103	138	75	62	75	82
AC-FT	7070	6840	6350	3850	4230	7770	72330	27120	5910	4720	5200	5200
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)												
MEAN	196	521	125	89.2	106	178	891	437	722	169	135	109
MAX	277	926	147	116	139	230	1215	441	1344	262	185	132
(WY)	1999	1999	1999	1999	1999	1999	2000	2000	1999	1999	1999	1999
MIN	115	115	103	62.6	73.5	126	567	434	99.4	76.7	84.5	87.4
(WY)	2000	2000	2000	2000	2000	2000	1999	1999	2000	2000	2000	2000

06403700 CHEYENNE RIVER AT REDSHIRT, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1999 - 2000	
ANNUAL TOTAL	113388		78937			
ANNUAL MEAN	311		216		305	
HIGHEST ANNUAL MEAN					395	1999
LOWEST ANNUAL MEAN					216	2000
HIGHEST DAILY MEAN	4660	Jun 16	7320	Apr 24	7320	Apr 24 2000
LOWEST DAILY MEAN	63	Dec 28	43	Feb 1	43	Feb 1 2000
ANNUAL SEVEN-DAY MINIMUM	79	Dec 25	47	Jan 27	47	Jan 27 2000
INSTANTANEOUS PEAK FLOW			9070	Apr 23	9070	Apr 23 2000
INSTANTANEOUS PEAK STAGE			17.48	Apr 23	17.48	Apr 23 2000
ANNUAL RUNOFF (AC-FT)	224900		156600		221000	
10 PERCENT EXCEEDS	663		245		672	
50 PERCENT EXCEEDS	140		98		126	
90 PERCENT EXCEEDS	110		63		76	

e Estimated.



06404000 BATTLE CREEK NEAR KEYSTONE, SD

LOCATION.--Lat 43°52'21", long 103°20'10", in SW¼ SW¼ sec.18, T.2 S., R.7 E., Pennington County, Hydrologic Unit 10120109, at right downstream end county highway bridge, 0.6 mi downstream from Iron Creek, and 4.5 mi southeast of Keystone.

DRAINAGE AREA.--66 mi^2.

PERIOD OF RECORD.--July 1945 to July 1947, October 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,800 ft above sea level, from topographic map. Prior to Nov. 13, 1961, nonrecording gage at site 250 ft downstream at different datum and Nov. 13 to Dec. 5, 1961, at same site at present datum. Dec. 6, 1961, to June 9, 1972, water-stage recorder at site 210 ft downstream at present datum (destroyed by flood); June 10 to Nov. 20, 1972, nonrecording gage 180 ft downstream at present datum; Nov. 21, 1972, to Nov. 27, 1973, water-stage recorder at present site and datum; Nov. 28, 1973, to Nov. 7, 1974, nonrecording gage 180 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	5.1	6.0	e4.0	e3.6	5.6	4.5	29	21	6.2	2.5	.16
2	3.8	6.1	5.9	e4.1	e3.7	4.6	4.3	25	17	5.4	1.9	.13
3	4.3	7.7	5.1	e4.1	e3.7	4.2	4.2	23	15	5.0	1.7	.07
4	4.1	6.8	4.0	e3.9	e4.0	4.6	4.6	21	14	4.6	1.1	.07
5	3.8	6.0	4.0	e3.6	e4.2	4.9	4.2	20	14	4.4	1.2	.06
6	3.6	7.7	4.8	e3.7	e4.2	4.7	4.5	20	13	4.4	.87	.24
7	3.3	7.1	4.6	e3.8	e4.0	4.4	3.6	22	13	3.6	.86	.04
8	3.1	6.5	e4.3	e4.0	e4.0	11	3.7	21	14	3.4	.92	.03
9	3.0	6.8	e4.0	e3.8	e4.6	6.9	3.7	18	14	8.8	1.0	.02
10	3.1	6.4	e4.0	e3.9	e5.1	5.2	3.7	16	13	12	1.2	.00
11	3.0	6.0	e4.3	e3.5	e5.0	5.1	3.4	20	12	9.2	1.5	.00
12	3.4	5.9	e4.2	e3.1	e4.8	4.8	3.8	18	12	6.5	1.2	.00
13	3.1	5.7	e4.2	e3.1	e4.5	4.8	3.6	15	9.6	5.0	.67	.00
14	3.3	4.8	e3.8	2.7	e4.0	4.4	2.9	15	9.2	4.1	.43	.00
15	3.9	3.9	e3.8	3.0	e4.0	4.2	3.1	14	9.3	4.1	.42	.00
16	4.3	3.9	e3.8	3.0	e3.9	5.2	3.5	14	9.3	4.1	.37	.00
17	4.0	3.9	e3.9	3.4	e3.7	3.8	3.7	24	8.5	3.7	.25	.00
18	4.7	5.1	e4.0	e3.4	e3.7	3.9	4.0	69	8.4	3.1	.16	.00
19	5.7	5.5	e3.8	e3.3	e3.8	4.0	13	38	9.3	3.6	.11	.00
20	5.1	5.2	e3.5	e3.3	e3.8	4.2	17	31	9.1	4.3	.08	.00
21	4.8	5.2	3.5	e3.3	e3.8	4.8	28	26	7.6	6.8	.09	.00
22	4.9	4.6	3.2	e3.3	4.2	4.6	54	22	7.1	7.0	.12	.00
23	4.8	4.0	3.4	e3.3	4.9	5.0	67	21	6.3	4.4	.17	.27
24	5.3	3.8	3.6	e3.3	5.0	4.9	97	19	10	3.7	.12	.44
25	5.1	4.4	3.6	e3.3	5.5	4.9	81	22	8.6	2.9	.04	.44
26	5.4	4.8	e3.6	e3.2	6.2	5.2	47	32	6.7	2.5	.04	.29
27	6.3	5.6	e3.8	e3.3	8.4	4.6	36	44	6.4	2.3	.22	.23
28	6.1	5.4	e4.0	e3.3	5.8	4.2	30	31	7.2	2.5	.23	.24
29	5.5	5.4	e4.0	e3.4	5.6	3.8	28	26	6.4	2.5	.17	.22
30	6.2	5.9	e4.0	e3.5	---	3.7	34	23	6.7	2.4	.14	.18
31	6.0	---	e4.1	e3.6	---	4.3	---	23	---	2.3	.14	---
TOTAL	136.6	165.2	126.8	107.5	131.7	150.5	601.0	762	317.7	144.8	19.92	3.13
MEAN	4.41	5.51	4.09	3.47	4.54	4.85	20.0	24.6	10.6	4.67	.64	.10
MAX	6.3	7.7	6.0	4.1	8.4	11	97	69	21	12	2.5	.44
MIN	3.0	3.8	3.2	2.7	3.6	3.7	2.9	14	6.3	2.3	.04	.00
AC-FT	271	328	252	213	261	299	1190	1510	630	287	40	6.2

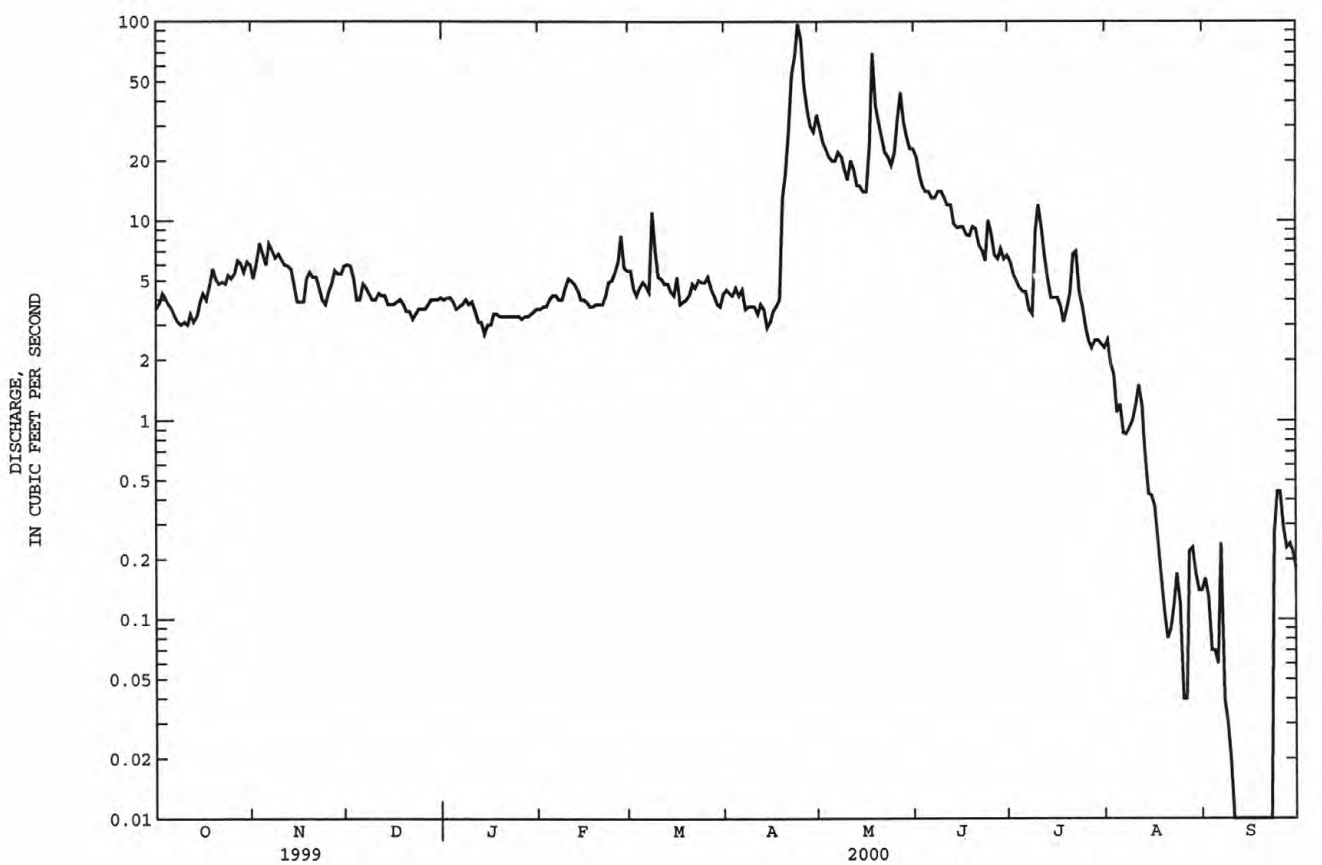
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

MEAN	3.18	3.57	2.57	1.85	2.11	3.92	9.99	30.3	39.8	12.4	5.17	2.32
MAX	22.5	36.0	25.8	12.7	9.57	12.8	38.8	153	199	46.3	20.5	7.20
(WY)	1999	1999	1999	1997	1996	1987	1971	1995	1972	1962	1999	1997
MIN	.000	.000	.000	.000	.000	.46	1.49	1.24	.22	.039	.000	.000
(WY)	1962	1989	1989	1962	1989	1962	1981	1985	1985	1989	1989	1975

06404000 BATTLE CREEK NEAR KEYSTONE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000	
ANNUAL TOTAL	7619.1		2666.85			
ANNUAL MEAN	20.9		7.29		9.77a	
HIGHEST ANNUAL MEAN					27.7	1995
LOWEST ANNUAL MEAN					.69	1988
HIGHEST DAILY MEAN	414	Jun 19	97	Apr 24	2400	Jun 10 1972
LOWEST DAILY MEAN	2.9	Jan 4	.00	Sep 10-22	.00	Oct 1 1961b
ANNUAL SEVEN-DAY MINIMUM	3.1	Oct 7	.00	Sep 10	.00	Oct 1 1961
INSTANTANEOUS PEAK FLOW			135	Apr 24	26200	Jun 9 1972c
INSTANTANEOUS PEAK STAGE			4.57	Apr 24	14.50	Jun 9 1972c
ANNUAL RUNOFF (AC-FT)	15110		5290		7080	
10 PERCENT EXCEEDS	45		18		19	
50 PERCENT EXCEEDS	7.8		4.2		2.7	
90 PERCENT EXCEEDS	3.9		.23		.30	

a Median of annual mean discharges, 7.7 ft^3/s.
b No flow at times in some years.
c From floodmarks, site then in use, from rating curve extended above 5.5 ft^3/s on basis of slope-area measurement of peak flow.
e Estimated.



06404998 GRACE COOLIDGE CREEK NEAR GAME LODGE, NEAR CUSTER, SD

LOCATION.--Lat 43°45'40", long 103°21'49", in SW¼ NE¼ sec.26, T.3 S., R.6 E., Custer County, Hydrologic Unit 10120109, on right bank 0.3 mi downstream from bridge on U.S. Highway 16A, 0.9 mi east of Game Lodge, 1.5 mi southwest of junction of State Highway 36 and U.S. Highway 16A, and 11.5 mi east of Custer.

DRAINAGE AREA.--25.2 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR SD-88-1: 1988(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,100 ft above sea level, from topographic map. From July 17, 1945, to July 31, 1947, nonrecording gage at site 1,800 ft upstream and different datum. June 1967 to June 13, 1976, at site 500 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable loss occurs to sinkholes downstream from gage. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1972, reached a stage of 10.35 ft, from floodmarks, discharge, 709 ft^3/s from slope-area measurement of peak flow. Flood of June 15, 1976, reached a stage of 10.90 ft, from floodmarks, discharge, 980 ft^3/s on basis of slope-area measurement of 10.35 ft.

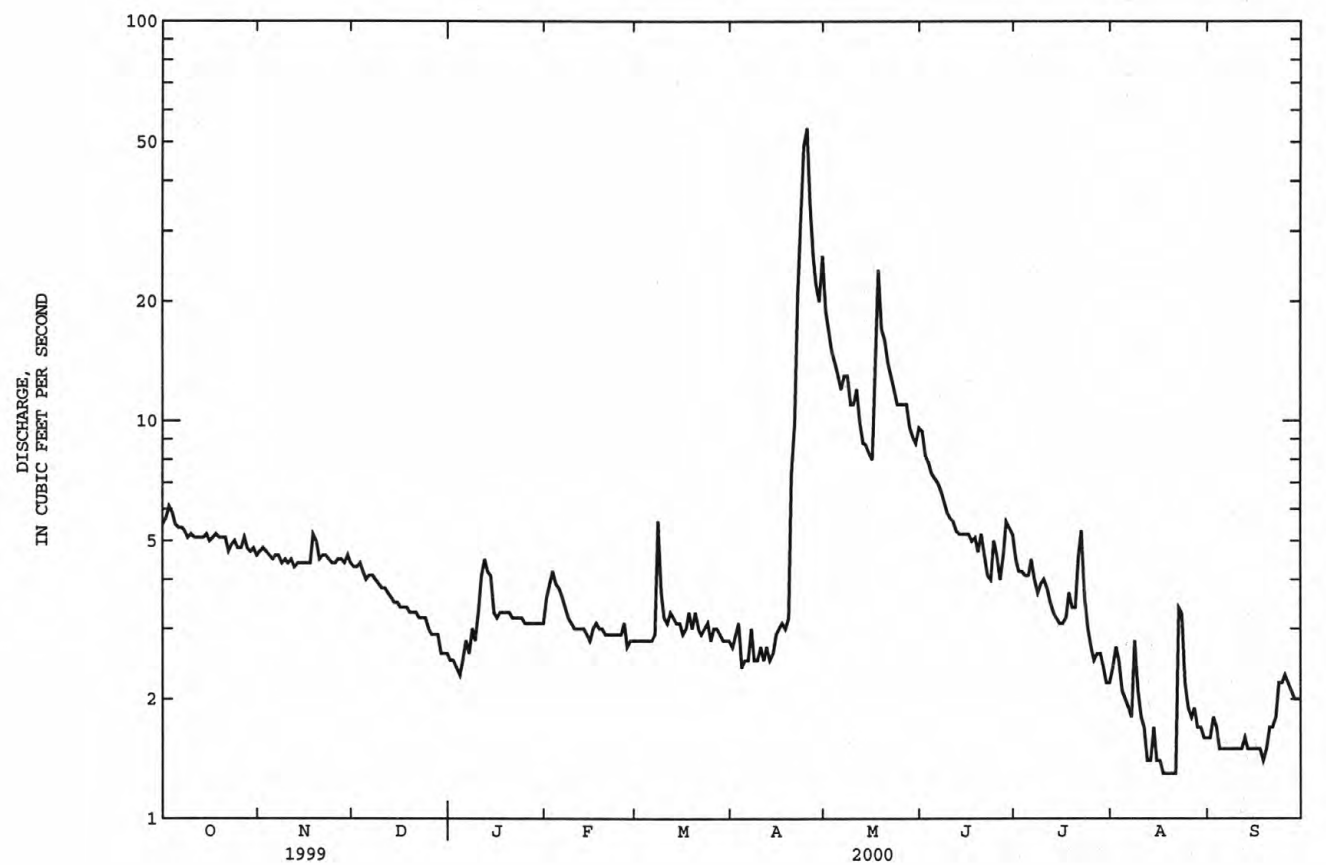
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.7	4.3	e2.5	e3.6	2.8	2.7	19	9.4	4.5	2.4	1.6
2	5.7	4.8	4.3	e2.5	3.9	2.8	2.9	17	8.2	4.2	2.7	1.8
3	6.1	4.7	4.4	e2.4	4.2	2.8	3.1	15	7.9	4.2	2.5	1.7
4	5.9	4.6	4.2	e2.3	e3.9	2.8	2.4	14	7.4	4.1	2.1	1.5
5	5.5	4.5	e4.0	e2.5	e3.8	2.8	2.5	13	7.2	4.1	2.0	1.5
6	5.4	4.6	4.1	e2.8	e3.6	2.8	2.5	12	7.0	4.5	1.9	1.5
7	5.4	4.6	4.1	e2.6	e3.4	2.9	3.0	13	6.7	4.0	1.8	1.5
8	5.3	4.4	e4.0	e3.0	3.2	5.6	2.5	13	6.3	3.7	2.8	1.5
9	5.1	4.5	e3.9	e2.8	3.1	3.7	2.5	11	5.9	3.9	2.1	1.5
10	5.2	4.4	e3.8	e3.3	e3.0	3.2	2.7	11	5.7	4.0	1.8	1.5
11	5.1	4.5	e3.8	e4.1	e3.0	3.1	2.5	12	5.6	3.8	1.7	1.5
12	5.1	4.3	e3.7	e4.5	e3.0	3.3	2.7	9.9	5.3	3.5	1.4	1.6
13	5.1	4.4	e3.6	e4.2	e3.0	3.2	2.5	8.8	5.2	3.3	1.4	1.5
14	5.1	4.4	e3.5	4.1	e2.9	3.1	2.6	8.7	5.2	3.2	1.7	1.5
15	5.2	4.4	e3.5	3.3	e2.8	3.1	2.9	8.3	5.2	3.1	1.4	1.5
16	5.0	4.4	e3.4	3.2	e3.0	2.9	3.0	8.0	5.2	3.1	1.4	1.5
17	5.1	4.4	3.4	3.3	e3.1	3.0	3.1	14	5.0	3.2	1.3	1.5
18	5.2	5.2	3.4	e3.3	e3.0	3.3	3.0	24	5.1	3.7	1.3	1.4
19	5.1	5.0	e3.3	e3.3	e3.0	3.0	e3.2	17	4.7	3.4	1.3	1.5
20	5.1	4.5	e3.3	e3.3	e2.9	3.3	7.4	16	5.2	3.4	1.3	1.7
21	5.1	4.6	e3.3	e3.2	2.9	3.0	9.9	14	4.6	4.6	1.3	1.7
22	4.7	4.6	e3.2	e3.2	2.9	2.9	21	13	4.1	5.3	3.4	1.8
23	4.9	4.5	e3.2	e3.2	2.9	3.0	31	12	4.0	3.6	3.3	2.2
24	5.0	e4.4	3.2	e3.2	2.9	3.1	49	11	5.0	3.0	2.2	2.2
25	4.8	4.4	3.0	e3.1	2.9	2.8	54	11	4.6	2.7	1.9	2.3
26	4.8	4.5	e2.9	e3.1	3.1	3.0	35	11	4.0	2.5	1.8	2.2
27	5.1	4.5	2.9	e3.1	2.7	3.0	26	11	4.6	2.6	1.9	2.1
28	4.8	4.4	2.9	e3.1	2.8	2.9	22	9.6	5.6	2.6	1.7	2.0
29	4.7	4.6	2.6	e3.1	2.8	2.8	20	9.1	5.4	2.4	1.7	2.0
30	4.8	4.4	2.6	e3.1	---	2.8	26	8.8	5.2	2.2	1.6	2.0
31	4.6	---	2.6	e3.1	---	2.8	---	9.6	---	2.2	1.6	---
TOTAL	159.5	136.2	108.4	97.8	91.3	95.6	353.6	384.8	170.5	108.6	58.7	51.3
MEAN	5.15	4.54	3.50	3.15	3.15	3.08	11.8	12.4	5.68	3.50	1.89	1.71
MAX	6.1	5.2	4.4	4.5	4.2	5.6	54	24	9.4	5.3	3.4	2.3
MIN	4.6	4.3	2.6	2.3	2.7	2.8	2.4	8.0	4.0	2.2	1.3	1.4
AC-FT	316	270	215	194	181	190	701	763	338	215	116	102
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2000, BY WATER YEAR (WY)												
MEAN	3.39	3.50	2.27	1.91	1.77	2.49	4.65	18.0	14.1	5.98	4.31	2.82
MAX	14.7	25.2	11.9	8.13	6.44	6.41	25.3	115	66.8	22.3	14.3	7.51
(WY)	1999	1999	1999	1999	1999	1999	1999	1995	1995	1979	1997	1997
MIN	.36	.41	.32	.45	.004	.61	.63	.67	.25	.097	.26	.13
(WY)	1989	1986	1986	1988	1989	1981	1981	1977	1988	1988	1985	1988

06404998 GRACE COOLIDGE CREEK NEAR GAME LODGE, NEAR CUSTER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1977 - 2000	
ANNUAL TOTAL	4100.8		1816.3			
ANNUAL MEAN	11.2		4.96		5.45	
HIGHEST ANNUAL MEAN					19.1	1995
LOWEST ANNUAL MEAN					.61	1988
HIGHEST DAILY MEAN	67	Apr 26	54	Apr 25	505	May 8 1995
LOWEST DAILY MEAN	2.6	Dec 29	1.3	Aug 17-21	.00	Jun 5 1977a
ANNUAL SEVEN-DAY MINIMUM	2.8	Dec 25	1.3	Aug 15	.00	Sep 1 1988
INSTANTANEOUS PEAK FLOW			77	Apr 24	1030	Sep 7 1989b
INSTANTANEOUS PEAK STAGE			8.18	Apr 24	12.76	Feb 9 1979c
ANNUAL RUNOFF (AC-FT)	8130		3600		3950	
10 PERCENT EXCEEDS	23		9.2		11	
50 PERCENT EXCEEDS	7.6		3.3		2.2	
90 PERCENT EXCEEDS	4.4		1.8		.55	

a No flow for some days in 1977, 1985, 1988, 1989, and part of June 14, 1979.
b Gage height, 10.84 ft, from floodmarks, from rating curve extended above 709 ft^3/s on basis of slope-area measurement of peak flow.
c Backwater from ice.
e Estimated.



06406000 BATTLE CREEK AT HERMOSA, SD

LOCATION.--Lat 43°49'41", long 103°11'44", in NE¼ SW¼ SW¼ sec.32, T.2 S., R.8 E., Custer County, Hydrologic Unit 10120109, on right bank 50 ft downstream from Chicago and North Western Transportation Company bridge, 0.8 mi south of Hermosa, and 2.9 mi downstream from Grace Coolidge Creek.

DRAINAGE AREA.--178 mi^2.

PERIOD OF RECORD.--August to December 1903 (gage heights only), July 1949 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,290 ft above sea level, from topographic map. Nonrecording gage, August to December 1903, at site 50 ft upstream, July 7, 1949, to Nov. 2, 1950, at site 0.5 mi upstream, Nov. 3, 1950, to Dec. 6, 1961, at site 170 ft downstream, all at different datum. Dec. 7, 1961, to June 10, 1972, water-stage recorder (destroyed by flood), and June 11, 1972, to Aug. 28, 1972, nonrecording gage at site 80 ft downstream at present datum.

REMARKS.--Records good. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

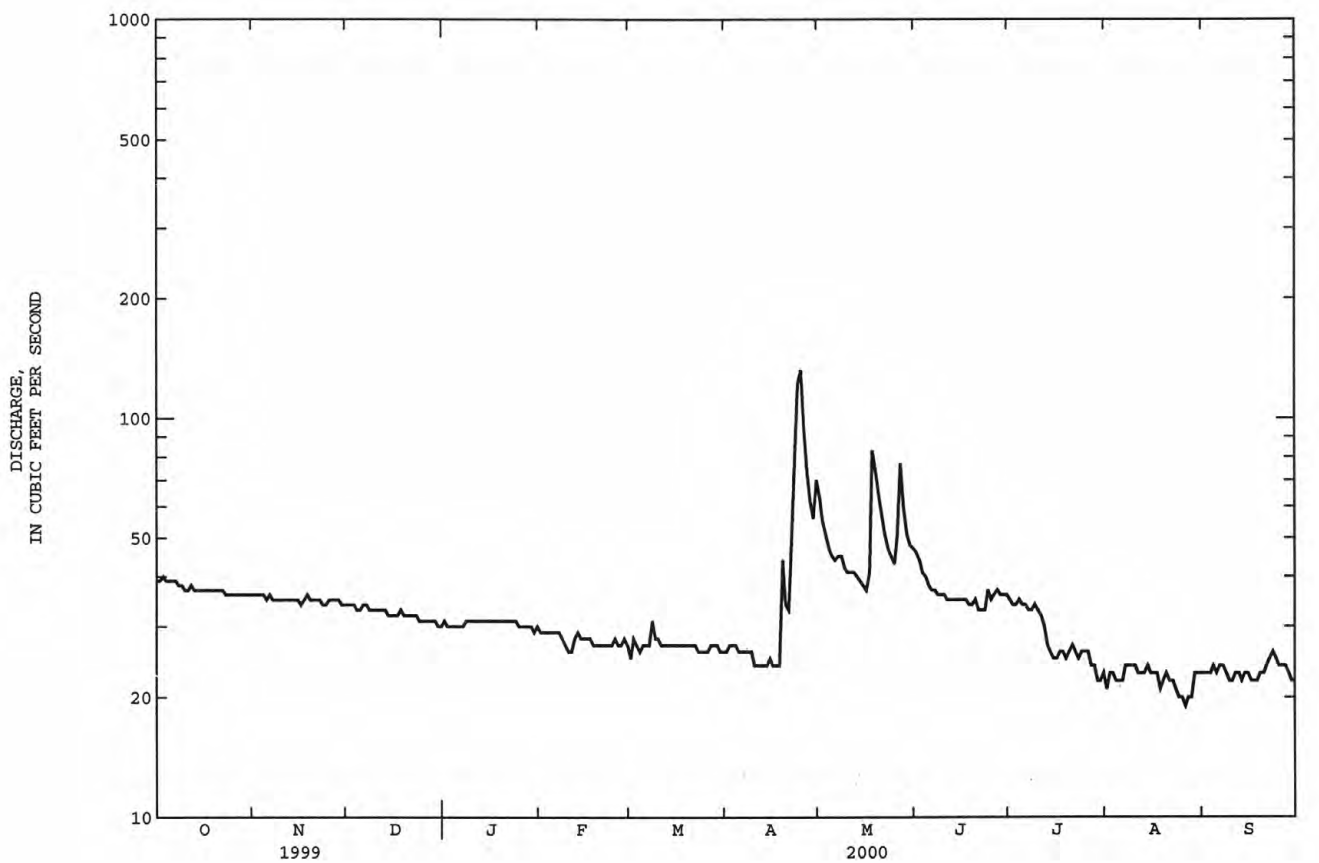
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	36	34	31	29	25	26	63	46	35	21	23
2	39	36	34	30	29	28	27	55	44	34	23	23
3	40	36	34	30	29	27	27	51	41	34	23	23
4	39	36	33	30	29	26	27	47	40	35	22	24
5	39	35	33	30	29	27	26	45	38	34	22	23
6	39	36	34	30	29	27	26	44	37	34	22	24
7	39	35	34	30	29	27	26	45	37	33	24	24
8	38	35	33	31	28	31	26	45	36	33	24	23
9	38	35	33	31	27	28	26	e42	36	34	24	22
10	37	35	33	31	26	28	24	41	36	33	24	22
11	37	35	33	31	26	27	24	41	35	32	23	23
12	38	35	33	31	28	27	24	41	35	30	23	23
13	37	35	33	31	29	27	24	40	35	27	23	22
14	37	35	32	31	28	27	24	39	35	26	24	23
15	37	35	32	31	28	27	25	38	35	25	23	23
16	37	34	32	31	28	27	24	37	35	25	23	22
17	37	35	32	31	28	27	24	41	35	26	23	22
18	37	36	33	31	27	27	24	83	34	26	21	22
19	37	35	32	31	27	27	44	74	34	25	22	23
20	37	35	e32	31	27	27	34	64	35	26	23	23
21	37	35	32	31	27	27	33	57	33	27	22	24
22	37	35	32	31	27	27	50	51	33	26	22	25
23	36	34	32	31	27	26	86	47	33	25	21	26
24	36	34	31	31	27	26	122	45	37	26	20	25
25	36	35	31	30	28	26	132	43	35	26	20	24
26	36	35	31	30	27	26	93	51	36	26	19	24
27	36	35	31	30	27	27	73	77	37	24	20	24
28	36	35	31	30	28	27	62	59	36	24	20	23
29	36	34	31	30	27	27	56	51	36	22	23	22
30	36	34	30	29	---	26	70	48	36	22	23	22
31	36	---	30	30	---	26	---	47	---	23	23	---
TOTAL	1156	1051	1001	947	805	835	1309	1552	1091	878	690	696
MEAN	37.3	35.0	32.3	30.5	27.8	26.9	43.6	50.1	36.4	28.3	22.3	23.2
MAX	40	36	34	31	29	31	132	83	46	35	24	26
MIN	36	34	30	29	26	25	24	37	33	22	19	22
AC-FT	2290	2080	1990	1880	1600	1660	2600	3080	2160	1740	1370	1380
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)												
MEAN	7.16	7.82	6.63	5.97	5.61	6.06	8.88	33.4	44.2	16.6	9.27	7.07
MAX	39.5	62.4	48.3	41.6	38.0	34.8	68.7	234	231	75.5	53.1	41.7
(WY)	1999	1999	1999	1999	1999	1999	1999	1995	1995	1962	1999	1999
MIN	.10	.10	.10	.19	.31	.41	.34	.74	.78	.23	.17	.050
(WY)	1956	1962	1962	1962	1962	1962	1962	1955	1954	1989	1961	1955

06406000 BATTLE CREEK AT HERMOSA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	20439		12011			
ANNUAL MEAN	56.0		32.8		13.2a	
HIGHEST ANNUAL MEAN					59.8	1999
LOWEST ANNUAL MEAN					.99	1955
HIGHEST DAILY MEAN	617	Jun 19	132	Apr 25	1750	Jun 10 1972
LOWEST DAILY MEAN	30	Dec 30	19	Aug 26	.00	Oct 6 1954b
ANNUAL SEVEN-DAY MINIMUM	31	Dec 25	20	Aug 22	.00	Oct 9 1954
INSTANTANEOUS PEAK FLOW			152	Apr 25	21400	Jun 10 1972c
INSTANTANEOUS PEAK STAGE			4.39	Apr 25	17.72	Jun 10 1972c
ANNUAL RUNOFF (AC-FT)	40540		23820		9580	
10 PERCENT EXCEEDS	90		41		31	
50 PERCENT EXCEEDS	41		31		4.2	
90 PERCENT EXCEEDS	34		23		1.1	

a Median of annual mean discharges, 6.8 ft^3/s.
b No flow at times in 1954-57, 1959, and 1989.
c From floodmarks, from rating curve extended above 2,800 ft^3/s on basis of contracted-opening and flow-over-railroad embankment measurement of peak flow.
e Estimated.



06406500 BATTLE CREEK BELOW HERMOSA, SD

LOCATION.--Lat 43°43'30", long 102°54'15", in NE¼ SW¼ SE¼ sec.3, T.4 S., R.10 E., Pennington County, Hydrologic Unit 10120109, at left downstream side of bridge on State Highway 40, approximately 9 mi upstream from mouth, and 18.0 mi southeast of Hermosa.

DRAINAGE AREA.--285 mi^2.

PERIOD OF RECORD.--October 1950 to September 1953, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,810 ft above sea level, from topographic map. Oct. 1, 1950, to Sept. 30, 1953, nonrecording gage at same site and different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Most of the flow is diverted, except after large storm events, for irrigation of about 1,000 acres upstream from station during irrigation season. Satellite data-collection platform at site. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1972 reached a stage of about 4 ft (present datum) higher than that of May 23, 1952, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	40	40	e28	e21	31	30	118	59	37	25	23
2	42	40	40	e27	e23	30	31	93	58	36	25	23
3	42	41	40	e25	e21	31	30	79	55	36	25	22
4	42	41	40	e23	e20	31	30	72	53	35	25	22
5	42	41	e35	e23	e20	30	30	67	50	35	25	22
6	42	40	e32	e24	e20	31	30	63	49	33	24	22
7	42	41	e30	e25	e20	31	31	62	48	31	24	22
8	41	41	e29	e25	e19	36	30	60	46	33	25	22
9	41	40	e29	e25	e18	37	30	61	45	33	26	22
10	41	40	e29	e24	e17	34	30	58	44	34	25	21
11	41	40	e30	e23	e17	33	30	57	44	33	25	20
12	41	40	e31	e21	e17	33	30	56	44	30	25	21
13	41	40	e30	e20	e17	33	30	55	43	29	25	21
14	42	40	e29	e19	e18	32	30	54	43	27	25	21
15	41	40	e28	e19	e19	32	31	52	43	26	25	21
16	41	40	e27	e20	e20	31	31	51	43	26	25	21
17	41	40	e29	e22	e18	31	31	54	43	26	25	21
18	42	42	e29	e23	e18	31	31	56	43	27	25	21
19	42	42	e30	e21	e19	31	79	89	43	27	24	21
20	42	41	e28	e22	e21	31	55	86	43	26	24	21
21	42	41	e25	e23	e23	31	76	76	41	29	22	22
22	42	41	e25	e21	e27	31	100	70	38	30	23	23
23	41	40	e28	e20	e30	31	175	64	38	29	23	24
24	41	40	e29	e19	33	30	295	60	40	27	23	25
25	42	40	e29	e18	34	30	298	57	41	28	22	24
26	41	41	e29	e17	34	30	224	57	39	27	21	24
27	41	41	e29	e16	33	30	145	61	39	27	21	23
28	41	41	e29	e16	32	30	110	89	41	26	21	23
29	41	40	e28	e17	32	30	94	72	39	25	20	23
30	41	40	e28	e18	---	31	110	64	37	24	22	22
31	41	---	e28	e19	---	30	---	60	---	24	23	---
TOTAL	1285	1215	942	663	661	974	2307	2073	1332	916	738	663
MEAN	41.5	40.5	30.4	21.4	22.8	31.4	76.9	66.9	44.4	29.5	23.8	22.1
MAX	42	42	40	28	34	37	298	118	59	37	26	25
MIN	41	40	25	16	17	30	30	51	37	24	20	20
AC-FT	2550	2410	1870	1320	1310	1930	4580	4110	2640	1820	1460	1320

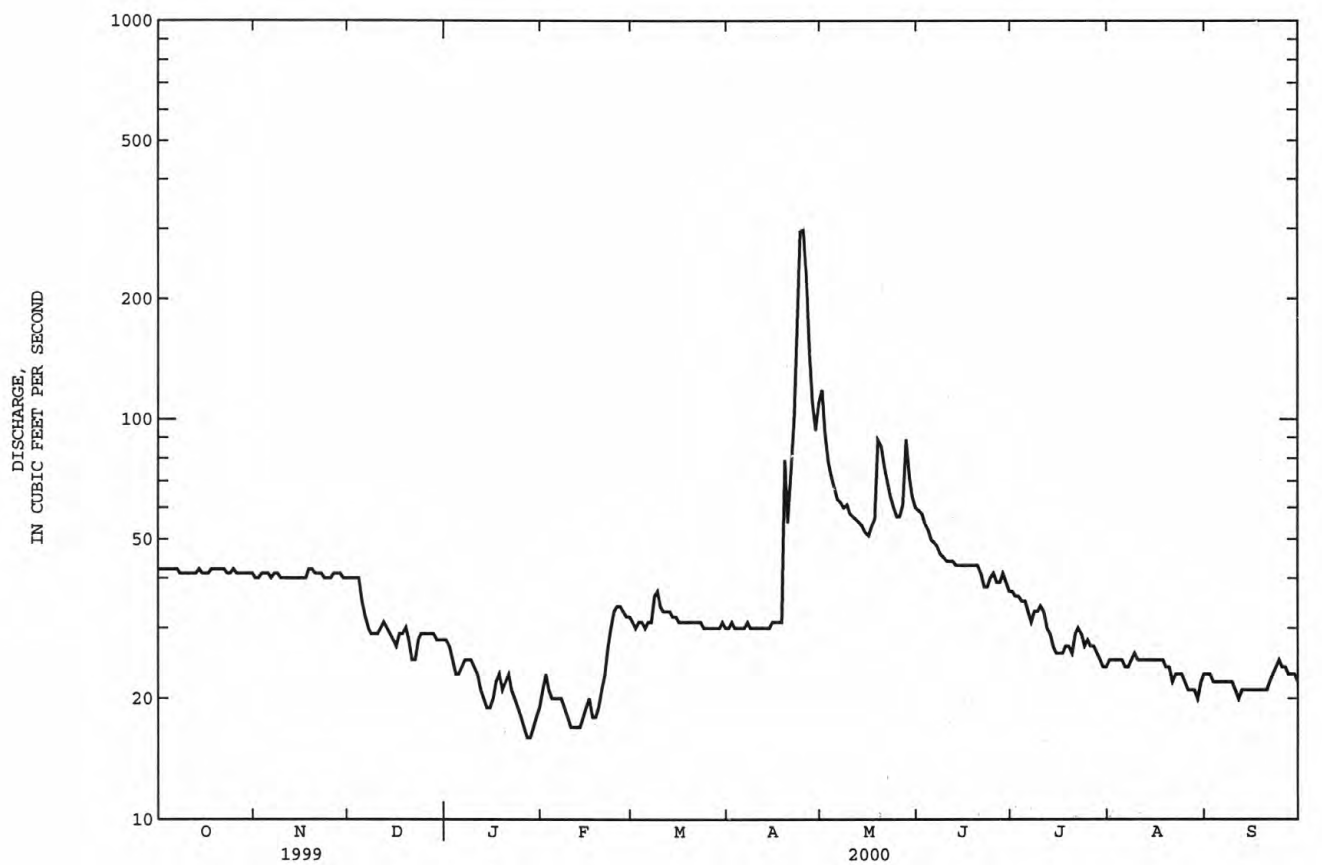
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1953, 1989 - 2000, BY WATER YEAR (WY)

MEAN	13.3	16.1	12.5	11.6	14.5	13.8	19.5	71.3	80.5	25.2	18.2	13.9
MAX	41.5	59.7	39.4	37.4	68.9	41.5	78.9	233	266	72.1	57.9	44.4
(WY)	2000	1999	1999	1997	1997	1999	1999	1995	1995	1999	1999	1999
MIN	.000	.000	.000	.000	.000	.44	.59	.71	.032	.000	.000	.000
(WY)	1953	1989	1989	1989	1989	1990	1990	1989	1989	1989	1989	1952

06406500 BATTLE CREEK BELOW HERMOSA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1951-1953, 1989-2000	
ANNUAL TOTAL	22387		13769			
ANNUAL MEAN	61.3		37.6		25.9a	
HIGHEST ANNUAL MEAN					63.3	1999
LOWEST ANNUAL MEAN					.40	1989
HIGHEST DAILY MEAN	612	Jun 20	298	Apr 25	1760	May 23 1952
LOWEST DAILY MEAN	25	Dec 21	16	Jan 27, 28	.00	Oct 1 1950b
ANNUAL SEVEN-DAY MINIMUM	28	Dec 16	17	Jan 24	.00	Oct 1 1950
INSTANTANEOUS PEAK FLOW			350	Apr 24	2060	May 23 1952c
INSTANTANEOUS PEAK STAGE			6.28	Apr 24	9.30	May 9 1995
ANNUAL RUNOFF (AC-FT)	44400		27310		18740	
10 PERCENT EXCEEDS	104		57		52	
50 PERCENT EXCEEDS	42		31		8.2	
90 PERCENT EXCEEDS	30		21		.00	

a Median of annual mean discharges, 22 ft^3/s.
b No flow for many days in most years.
c From rating curve extended above 110 ft^3/s, gage height, 8.13 ft, different datum.
e Estimated.



06406920 SPRING CREEK ABOVE SHERIDAN LAKE, NEAR KEYSTONE, SD

LOCATION.--Lat 43°57'39", long 103°29'18", in SE¼ NE¼ SW¼ sec.14, T.1 S., R.5 E., Pennington County, Hydrologic Unit 10120109, on left bank 0.25 mi upstream from Sheridan Lake and 1.5 mi northeast of the junction of State Highways 16 and 385.

DRAINAGE AREA.--127 mi^2.

REVISED RECORDS.--WDR SD-93-1: Drainage area.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,650 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated discharges, which are poor. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	14	e13	e9.0	e8.0	11	9.6	37	27	11	5.7	3.5
2	19	12	e13	e8.7	e8.8	11	10	35	24	9.9	7.1	3.7
3	20	e12	e11	e8.6	e9.2	10	9.1	33	23	9.3	7.4	3.8
4	20	e13	e11	e9.0	e9.8	11	8.6	31	22	8.8	6.4	3.3
5	18	e14	e11	e9.5	e10	12	11	30	21	8.4	5.6	3.1
6	18	14	e11	e8.3	e10	12	10	28	20	7.9	5.0	3.0
7	17	14	e10	e7.6	e10	12	10	31	19	7.3	5.9	2.8
8	17	13	e10	e7.1	e10	17	9.3	34	17	7.2	5.9	2.7
9	17	13	e10	e7.1	e9.8	12	9.9	30	16	18	5.1	2.7
10	16	13	e9.3	e7.2	e9.4	11	9.8	28	16	14	4.7	2.6
11	16	13	e9.0	e7.0	e9.4	11	9.7	40	15	13	4.2	2.5
12	16	13	e8.0	e6.8	e9.4	13	9.5	36	15	10	3.9	2.8
13	16	13	e9.0	e7.0	e9.4	11	9.9	31	15	8.1	3.7	2.7
14	16	13	e9.0	e7.4	e9.4	11	10	30	15	7.1	3.5	2.6
15	16	13	e9.0	e8.0	e9.4	13	10	29	15	6.9	3.3	2.5
16	16	12	e9.2	e8.2	e9.4	10	10	27	16	7.4	3.5	2.3
17	15	13	e9.2	e8.8	e9.4	11	15	33	14	7.9	3.6	2.2
18	17	14	e8.2	e9.0	9.3	11	13	54	14	8.4	3.6	2.1
19	17	14	e7.0	e8.8	9.3	10	20	39	13	8.3	3.4	2.1
20	16	14	e7.5	e8.6	e9.6	12	18	39	15	9.6	3.1	2.2
21	16	14	e8.3	e8.2	10	10	28	37	15	16	2.9	2.5
22	16	11	e8.9	e8.0	11	10	38	34	13	15	2.9	2.9
23	16	e11	e9.0	e7.6	12	17	45	32	11	11	3.1	4.1
24	15	e10	e9.0	e7.2	12	16	56	30	14	8.7	3.0	4.6
25	15	e11	e9.0	e7.1	12	12	68	30	16	7.7	2.8	5.0
26	15	e12	e9.1	e7.0	10	12	48	30	13	7.0	2.7	5.0
27	15	e12	e9.6	e7.0	11	11	43	31	13	6.6	3.1	4.6
28	15	e12	e9.5	e7.0	12	11	40	28	16	7.3	3.4	4.3
29	15	e13	e9.4	e7.2	12	11	39	27	13	6.2	3.5	3.9
30	15	e13	e9.5	e7.4	---	11	41	26	13	5.8	3.4	3.7
31	14	---	e9.2	e7.8	---	9.6	---	27	---	5.6	3.4	---
TOTAL	509	383	294.9	243.2	291.0	362.6	668.4	1007	489	285.4	128.8	95.8
MEAN	16.4	12.8	9.51	7.85	10.0	11.7	22.3	32.5	16.3	9.21	4.15	3.19
MAX	20	14	13	9.5	12	17	68	54	27	18	7.4	5.0
MIN	14	10	7.0	6.8	8.0	9.6	8.6	26	11	5.6	2.7	2.1
AC-FT	1010	760	585	482	577	719	1330	2000	970	566	255	190

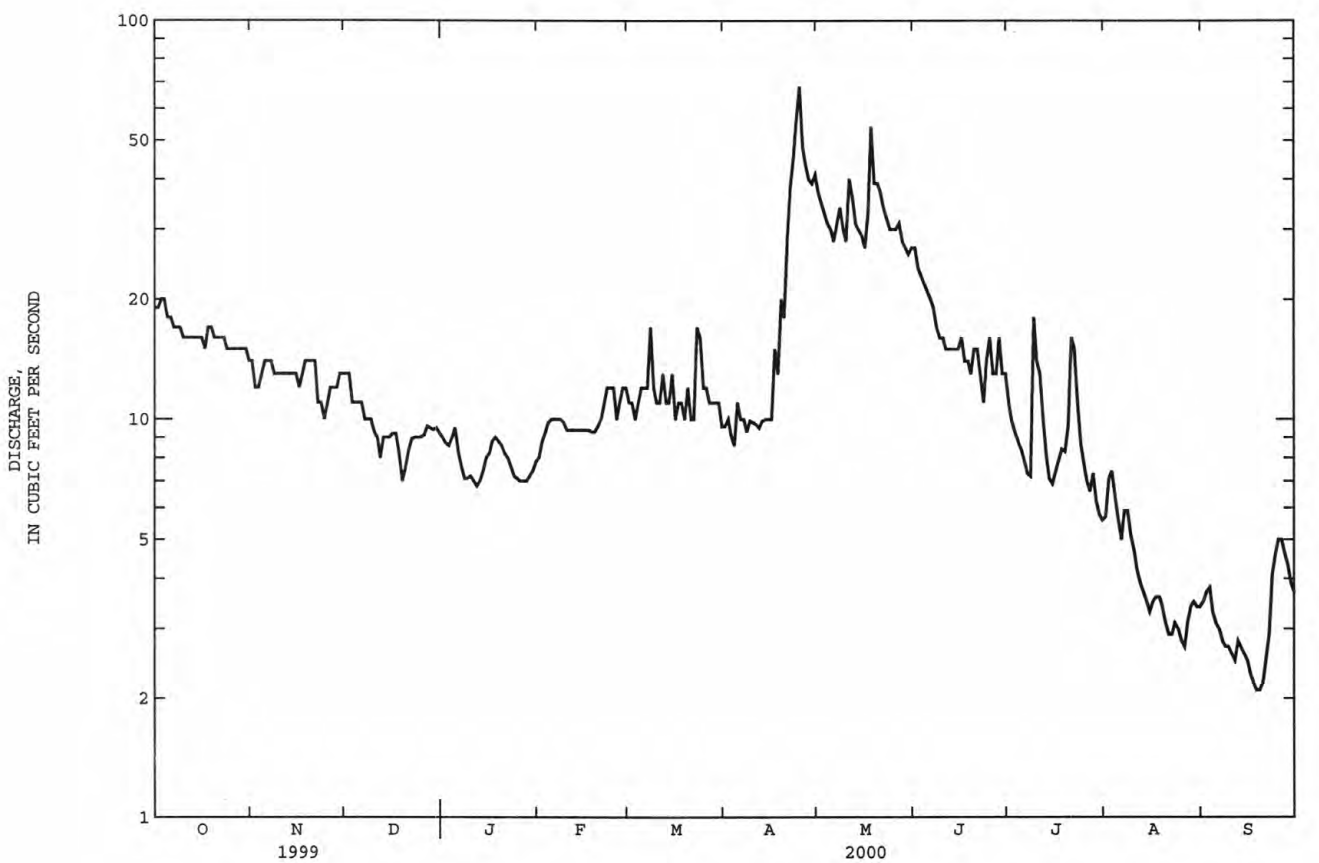
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2000, BY WATER YEAR (WY)

MEAN	13.3	13.9	10.3	7.30	7.72	13.6	24.1	70.2	95.6	35.9	21.9	13.3
MAX	35.8	51.2	34.8	21.9	19.2	21.8	64.2	144	185	63.3	50.1	26.2
(WY)	1999	1999	1999	1999	1999	1999	1999	1995	1995	1998	1997	1997
MIN	2.61	2.37	1.62	1.80	2.16	5.56	7.20	5.64	8.14	5.75	2.78	1.54
(WY)	1991	1993	1993	1993	1991	1991	1992	1992	1992	1994	1994	1994

06406920 SPRING CREEK ABOVE SHERIDAN LAKE, NEAR KEYSTONE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1991 - 2000	
ANNUAL TOTAL	15970.9		4758.1			
ANNUAL MEAN	43.8		13.0		27.3	
HIGHEST ANNUAL MEAN					50.7	1999
LOWEST ANNUAL MEAN					6.06	1992
HIGHEST DAILY MEAN	366	Jun 19	68	Apr 25	525	May 8 1995
LOWEST DAILY MEAN	7.0	Dec 19	2.1	Sep 18	1.1	Aug 28 1994
ANNUAL SEVEN-DAY MINIMUM	8.3	Dec 18	2.3	Sep 15	1.2	Sep 25 1994
INSTANTANEOUS PEAK FLOW			99	Apr 25a	809	Jun 18 1999
INSTANTANEOUS PEAK STAGE			10.34	Dec 26b	12.58	Jun 18 1999
ANNUAL RUNOFF (AC-FT)	31680		9440		19780	
10 PERCENT EXCEEDS	99		28		62	
50 PERCENT EXCEEDS	23		10		13	
90 PERCENT EXCEEDS	12		3.6		2.9	

a Gage height, 9.20 ft.
b Backwater from ice.
e Estimated.



06407500 SPRING CREEK NEAR KEYSTONE, SD
(Formerly published as 06407900 Spring Creek near Rockerville)

LOCATION.--Lat 43°58'45", long 103°20'25", in SW¼ NE¼ sec.12, T.1 S., R.6 E., Pennington County, Hydrologic Unit 10120109, on right bank 0.5 mi upstream from Deadman Creek tributary at bottom of Stratosphere Bowl.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--July 1945 to July 1947, October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,885 ft above sea level, from topographic map. Prior to October 1986, nonrecording gage 0.2 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Sheridan Lake, capacity, 12,657 acre-ft, 11.2 mi upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1972, reached a stage of about 14 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	15	14	e11	e9.5	14	13	56	38	18	6.7	1.8
2	19	14	14	e10	e10	13	13	52	36	16	6.5	2.0
3	20	14	14	e9.3	e11	13	12	48	34	15	6.9	2.5
4	20	14	13	e9.3	e12	13	12	44	32	14	7.1	1.9
5	20	15	12	e9.0	e12	13	12	42	30	13	6.9	1.6
6	20	15	e12	e8.6	e12	14	12	39	28	12	6.3	1.9
7	19	15	e12	e8.5	e12	14	12	41	27	12	5.8	1.8
8	19	15	e11	e8.5	e12	21	12	44	26	11	7.1	1.6
9	19	15	e11	e8.5	e12	20	12	43	24	14	7.9	1.5
10	18	14	e10	e8.2	e12	18	12	41	22	23	6.7	1.8
11	18	14	e10	e8.0	e12	16	12	48	20	21	6.6	1.6
12	18	14	e10	e8.0	e11	15	12	50	20	19	6.3	1.5
13	18	14	e10	e8.1	e11	15	12	44	20	16	5.0	1.4
14	17	14	e10	e8.8	e11	14	12	41	20	14	5.0	1.4
15	17	14	e10	e9.0	e10	14	13	38	20	13	4.4	1.5
16	16	14	e11	e9.3	e10	14	14	37	19	12	2.5	1.4
17	16	14	e10	e10	e9.7	13	14	43	19	12	2.8	1.4
18	16	16	e11	e9.9	e9.9	14	15	62	18	11	1.8	1.3
19	17	16	e9.1	e10	e10	14	39	65	18	11	1.5	1.4
20	17	16	e10	e9.7	e10	14	42	61	21	11	2.2	1.6
21	17	16	e10	e9.3	e10	15	37	58	20	13	2.6	1.5
22	17	15	e10	e9.0	e10	14	45	53	18	17	1.6	1.7
23	17	14	e11	e8.5	e11	14	55	50	17	16	1.5	2.4
24	17	e13	e11	e8.2	e11	15	70	47	24	14	1.5	2.2
25	17	e12	e11	e7.9	e12	15	92	45	23	13	1.7	2.1
26	16	e12	e10	e7.9	e13	15	83	47	21	11	3.3	1.7
27	16	14	e11	e8.0	e13	14	71	47	20	10	2.8	1.7
28	16	14	e11	e8.0	14	14	63	43	20	9.6	3.3	1.7
29	16	14	e11	e8.2	14	13	58	41	20	9.9	1.5	1.7
30	15	14	e11	e8.8	---	14	59	39	19	8.3	1.2	1.8
31	16	---	e11	e9.2	---	13	---	39	---	6.7	3.6	---
TOTAL	543	430	342.1	274.7	327.1	452	940	1448	694	416.5	130.6	51.4
MEAN	17.5	14.3	11.0	8.86	11.3	14.6	31.3	46.7	23.1	13.4	4.21	1.71
MAX	20	16	14	11	14	21	92	65	38	23	7.9	2.5
MIN	15	12	9.1	7.9	9.5	13	12	37	17	6.7	1.2	1.3
AC-FT	1080	853	679	545	649	897	1860	2870	1380	826	259	102

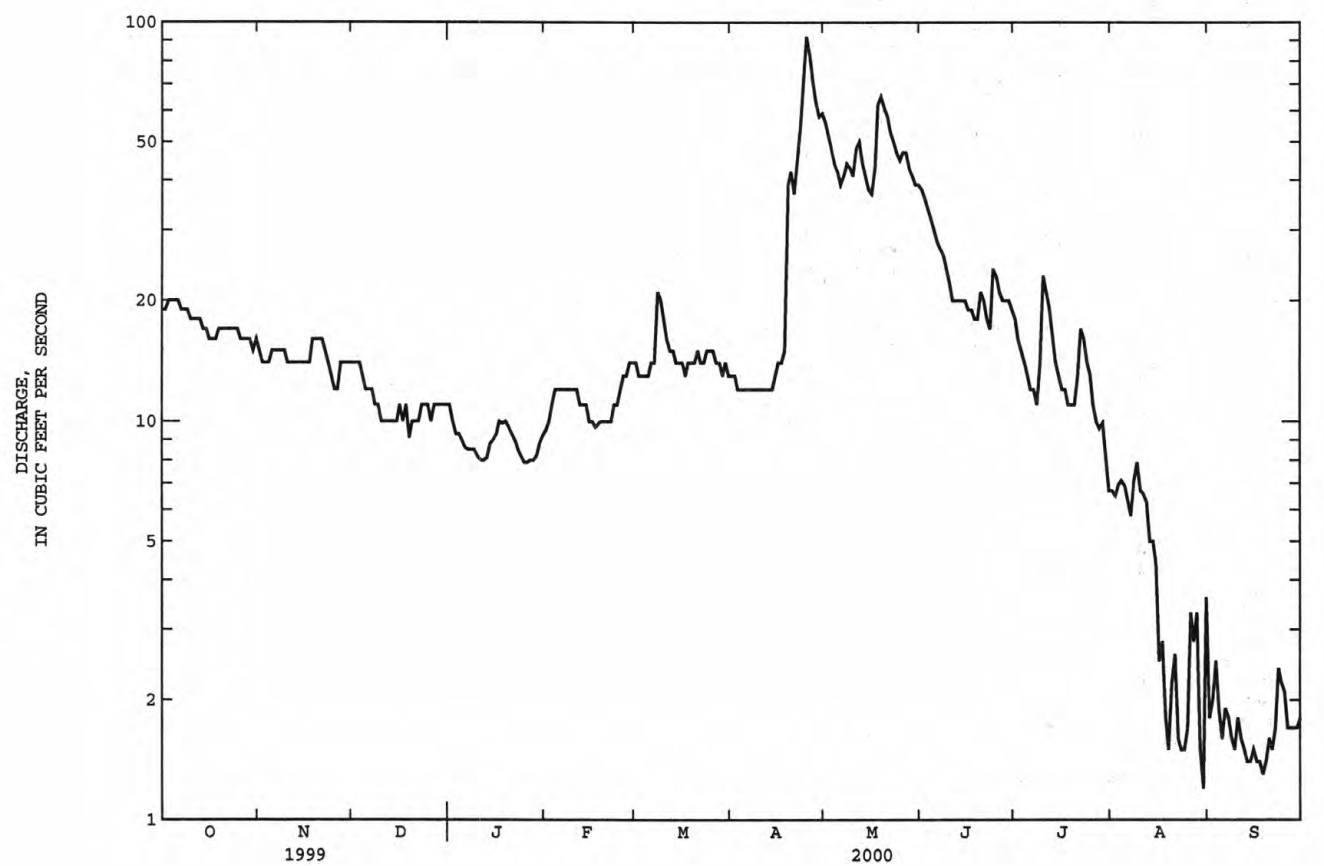
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

MEAN	12.8	12.9	9.16	7.10	7.02	14.2	24.2	71.6	97.8	37.9	20.9	11.0
MAX	42.1	63.8	43.6	29.7	22.6	25.2	76.9	211	292	95.8	67.0	32.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1995	1995	1995	1997	1997
MIN	.000	.006	.076	.10	.010	.74	3.47	5.11	1.58	.047	.001	.000
(WY)	1989	1989	1989	1989	1989	1989	1989	1989	1988	1988	1989	1988

06407500 SPRING CREEK NEAR KEYSTONE, SD--Continued
(Formerly published as 06407900 Spring Creek near Rockerville)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1987 - 2000*	
ANNUAL TOTAL	20374.1		6049.4			
ANNUAL MEAN	55.8		16.5		27.3a	
HIGHEST ANNUAL MEAN					64.7	1999
LOWEST ANNUAL MEAN					.98	1989
HIGHEST DAILY MEAN	266	Jun 19	92	Apr 25	771	May 9 1995
LOWEST DAILY MEAN	9.1	Dec 19	1.2	Aug 30	.00	Jul 27 1988b
ANNUAL SEVEN-DAY MINIMUM	10	Dec 9	1.4	Sep 13	.00	Jul 27 1988
INSTANTANEOUS PEAK FLOW			106	Apr 25	913	May 9 1995
INSTANTANEOUS PEAK STAGE			5.87	Apr 25	7.96	May 9 1995
ANNUAL RUNOFF (AC-FT)	40410		12000		19750	
10 PERCENT EXCEEDS	144		40		65	
50 PERCENT EXCEEDS	28		13		10	
90 PERCENT EXCEEDS	14		2.2		.40	

* Period using present site and datum only. See GAGE.
a Median of annual mean discharges, 22 ft^3/s.
b No flow for many days in 1988-89.
e Estimated.



06408500 SPRING CREEK NEAR HERMOSA, SD

LOCATION.--Lat 43°56'31", long 103°09'32", in SE¼ SE¼ SE¼ sec.21, T.1 S., R.8 E., Pennington County, Hydrologic Unit 10120109, at left upstream end of county highway bridge, 0.3 mi upstream from Dakota Minnesota and Eastern Railroad (revised) bridge, and 7.5 mi north of Hermosa.

DRAINAGE AREA.--199 mi^2.

PERIOD OF RECORD.--July 1949 to current year.

REVISED RECORDS.--WSP 1729: 1950.

GAGE.--Water-stage recorder. Datum of gage is 3,265.30 ft above sea level. Prior to Mar. 30, 1973, nonrecording gage and crest-stage gage 210 ft upstream, and Mar. 30 to Sept. 30, 1973, water-stage recorder at present site, both at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable loss occurs to sinkholes in reach 10 to 15 mi upstream from station. Flow slightly regulated by Sheridan Lake, capacity, 12,657 acre-ft, 24 mi upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

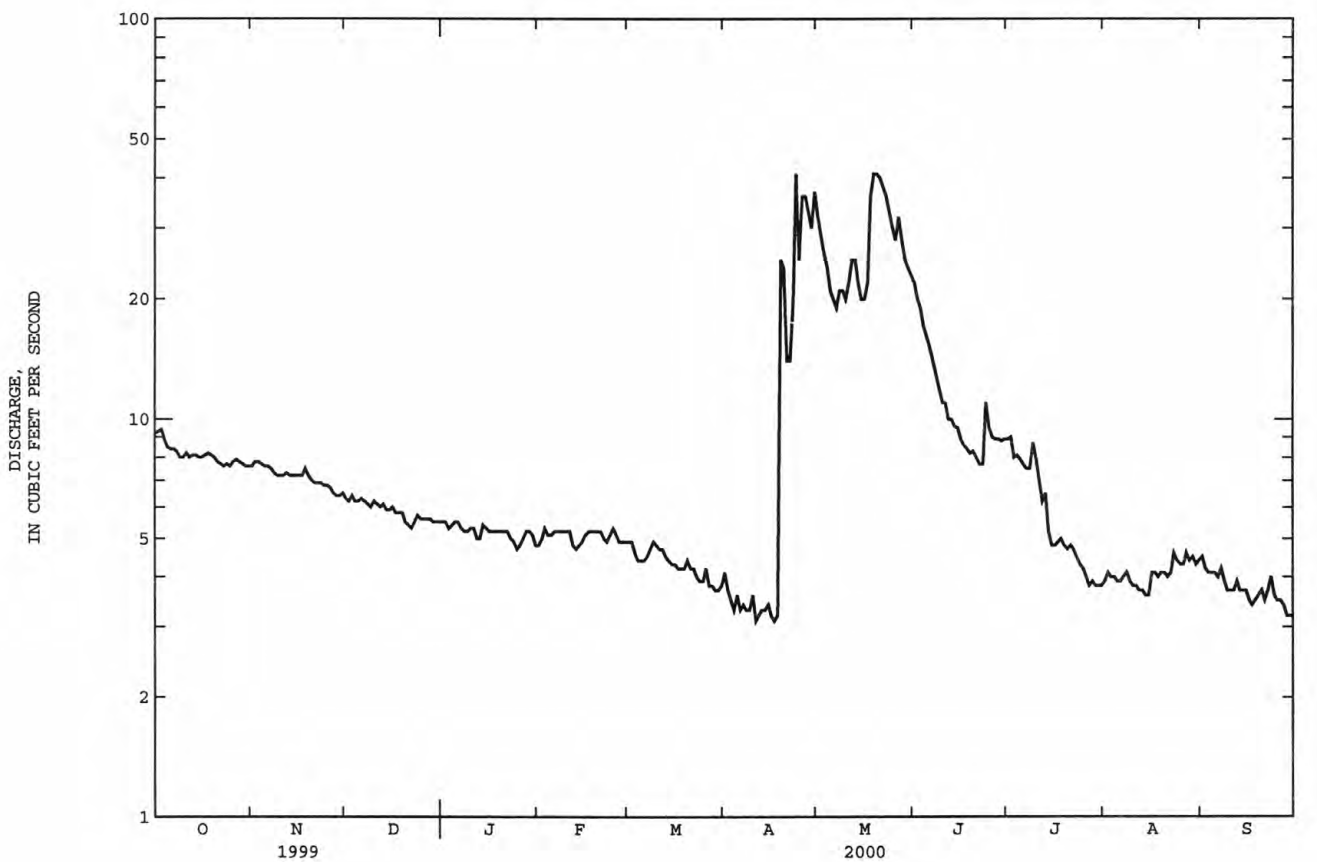
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	7.6	6.3	e5.5	e4.8	4.9	4.1	32	22	8.9	3.9	4.5
2	9.3	7.8	6.2	e5.5	e5.0	4.9	3.7	29	20	9.0	4.1	4.2
3	9.4	7.8	6.4	e5.3	e5.3	4.6	3.5	26	19	8.0	4.0	4.1
4	8.9	7.7	6.2	e5.4	e5.1	4.4	3.3	24	17	8.1	4.0	4.1
5	8.5	7.6	6.2	e5.5	e5.1	4.4	3.6	21	16	7.9	3.9	4.1
6	8.4	7.6	6.3	e5.5	e5.2	4.4	3.3	20	15	7.7	3.9	4.0
7	8.4	7.5	6.2	e5.3	e5.2	4.5	3.4	19	14	7.5	4.0	4.2
8	8.3	7.3	6.1	e5.2	e5.2	e4.7	3.3	21	13	7.5	4.1	3.9
9	8.0	7.2	6.0	e5.2	e5.2	4.9	3.3	21	12	8.7	3.9	3.7
10	8.0	7.2	6.2	e5.3	e5.2	4.8	3.6	20	11	8.0	3.8	3.7
11	8.2	7.2	6.1	e5.3	e5.2	4.7	3.1	22	11	7.0	3.8	3.7
12	8.0	7.3	6.0	e5.0	e4.8	4.7	3.2	25	10	6.2	3.7	3.9
13	8.1	7.2	6.1	e5.0	e4.7	4.5	3.3	25	10	6.5	3.7	3.7
14	8.1	7.2	5.9	e5.4	e4.8	4.4	3.3	22	9.6	5.2	3.6	3.7
15	8.0	7.2	5.9	e5.3	e4.9	4.3	3.4	20	9.5	4.8	3.6	3.7
16	8.0	7.2	6.0	e5.2	e5.1	4.3	3.2	20	8.9	4.8	4.1	3.5
17	8.1	7.2	5.8	e5.2	5.2	4.2	3.1	22	8.6	4.9	4.1	3.4
18	8.2	7.5	e5.8	e5.2	5.2	4.2	3.2	36	8.4	5.0	4.0	3.5
19	8.1	7.2	e5.8	e5.2	5.2	4.2	25	41	8.2	4.8	4.1	3.6
20	8.0	7.0	e5.5	e5.2	5.2	4.4	24	41	8.3	4.7	4.1	3.7
21	7.8	6.9	e5.4	e5.2	5.2	4.2	14	40	8.0	4.8	4.0	3.5
22	7.7	6.9	e5.3	e5.2	5.0	4.2	14	38	7.7	4.7	4.1	3.7
23	7.6	6.9	e5.5	e5.0	4.9	4.0	20	36	7.7	4.5	4.6	4.0
24	7.7	6.8	e5.7	e4.9	5.1	3.9	41	33	11	4.3	4.4	3.6
25	7.6	6.8	e5.6	e4.7	5.3	3.9	25	30	9.5	4.2	4.3	3.5
26	7.8	6.7	e5.6	e4.8	5.1	4.2	36	28	9.0	4.0	4.3	3.5
27	7.9	6.5	e5.6	e5.0	4.9	3.8	36	32	8.9	3.8	4.6	3.4
28	7.8	6.4	e5.6	e5.2	4.9	3.8	33	28	8.9	3.9	4.4	3.2
29	7.7	6.4	e5.5	e5.2	4.9	3.7	30	25	8.8	3.8	4.5	3.2
30	7.6	6.5	e5.5	e5.1	---	3.7	37	24	8.9	3.8	4.3	3.2
31	7.6	---	e5.5	e4.8	---	3.8	---	23	---	3.8	4.4	---
TOTAL	252.0	214.3	181.8	160.8	146.9	133.6	395.9	844	339.9	180.8	126.3	111.7
MEAN	8.13	7.14	5.86	5.19	5.07	4.31	13.2	27.2	11.3	5.83	4.07	3.72
MAX	9.4	7.8	6.4	5.5	5.3	4.9	41	41	22	9.0	4.6	4.5
MIN	7.6	6.4	5.3	4.7	4.7	3.7	3.1	19	7.7	3.8	3.6	3.2
AC-FT	500	425	361	319	291	265	785	1670	674	359	251	222
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)												
MEAN	1.94	2.55	1.90	1.39	1.82	1.39	2.90	19.6	43.3	13.1	4.62	1.90
MAX	24.6	48.2	28.9	10.1	20.8	7.35	54.0	166	271	73.2	53.8	17.0
(WY)	1999	1999	1999	1999	1971	1999	1999	1997	1972	1962	1997	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1956	1956	1957	1957	1957	1957	1961	1960	1956	1954	1951	1954

06408500 SPRING CREEK NEAR HERMOSA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	16055.8		3088.0			
ANNUAL MEAN	44.0		8.44		8.03a	
HIGHEST ANNUAL MEAN					50.7	1999
LOWEST ANNUAL MEAN					.000	1990
HIGHEST DAILY MEAN	439	Jun 20	41	Apr 24b	3300	Jun 10 1972
LOWEST DAILY MEAN	4.7	Mar 8	3.1	Apr 11	.00	Jan 26 1951c
ANNUAL SEVEN-DAY MINIMUM	4.8	Mar 5	3.2	Apr 11	.00	Jan 26 1951
INSTANTANEOUS PEAK FLOW			59	Apr 24	13400	Jun 10 1972d
INSTANTANEOUS PEAK STAGE			3.07	Apr 24	13.12	Jun 10 1972f
ANNUAL RUNOFF (AC-FT)	31850		6130		5820	
10 PERCENT EXCEEDS	115		20		8.9	
50 PERCENT EXCEEDS	11		5.4		.80	
90 PERCENT EXCEEDS	6.0		3.7		.00	

a Median of annual mean discharges, 1.7 ft^3/s.
b Also May 19, 20.
c No flow for many days in most years.
d From rating curve extended above 350 ft^3/s on basis of contracted-opening measurement of peak flow.
e Estimated.
f From floodmarks, site and datum then in use.



06408700 RHOADS FORK NEAR ROCHFORD, SD

LOCATION.--Lat 44°08'12", long 103°51'29", in NW¼ SE¼ NE¼ sec.15, T.2 N., R.2 E., Pennington County, Hydrologic Unit 10120110, Black Hills National Forest, on left bank 1.1 mi upstream from South Fork Rapid Creek and 8.7 mi west of Rochford.

DRAINAGE AREA.--7.95 mi^2, approximately.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,965 ft above sea level, from topographic map. Prior to Oct. 1, 1992, at site 35 ft downstream at datum 1.82 ft lower.

REMARKS.--Records good. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	9.7	9.7	10	10	10	9.7	9.3	9.5	9.4	9.4	8.6
2	9.5	9.7	9.7	10	10	10	10	9.3	9.4	9.6	9.3	8.5
3	9.6	9.7	9.7	10	10	10	10	9.3	9.4	9.4	9.2	8.4
4	9.5	9.8	9.7	10	10	10	10	9.4	9.4	9.4	9.1	8.4
5	9.5	9.8	9.7	10	10	10	10	9.4	9.4	9.4	9.2	8.5
6	9.5	9.7	9.7	10	10	10	10	9.5	9.4	9.4	9.2	8.5
7	9.5	9.7	9.7	10	10	10	10	9.6	9.4	9.4	9.2	8.5
8	9.3	9.8	9.7	10	10	10	10	9.4	9.5	9.4	9.2	8.4
9	9.2	9.9	9.7	10	10	10	10	9.4	9.7	9.8	9.2	8.6
10	9.3	9.9	9.7	10	10	10	9.9	9.6	9.6	9.6	9.4	8.6
11	9.2	9.8	9.7	10	10	9.7	9.9	10	9.6	9.5	9.5	8.6
12	9.2	9.7	9.7	10	10	9.7	9.7	9.7	9.6	9.4	9.4	8.7
13	9.3	9.7	9.7	10	10	9.7	9.7	9.5	9.7	9.4	9.4	8.6
14	9.3	9.7	9.7	10	10	9.7	9.7	9.4	9.6	9.4	9.4	8.6
15	9.4	9.6	9.7	10	10	9.7	9.7	9.4	9.8	9.4	9.4	8.6
16	9.3	9.6	9.7	10	10	9.7	9.8	9.5	9.7	9.8	9.4	8.6
17	9.3	9.7	9.7	10	10	9.7	9.7	9.7	9.5	9.6	9.2	8.6
18	9.4	9.8	9.8	10	10	9.7	9.8	9.4	9.4	9.5	9.1	8.6
19	9.4	9.7	9.8	10	10	9.7	10	9.5	9.5	9.4	9.1	8.7
20	9.4	9.7	9.7	10	10	9.9	9.8	9.6	9.7	9.7	8.9	8.7
21	9.4	9.7	9.8	10	10	9.7	9.9	9.4	9.5	9.5	8.9	8.7
22	9.4	9.6	9.8	10	10	9.7	10	9.4	9.4	9.4	8.6	8.7
23	9.4	9.5	9.9	10	10	9.9	9.8	9.4	9.4	9.3	8.5	8.7
24	9.4	9.5	9.8	10	10	9.8	10	9.4	9.7	9.5	8.5	8.7
25	9.4	9.6	9.9	10	10	9.7	9.9	9.5	9.4	9.4	8.6	8.6
26	9.4	9.7	9.9	10	10	9.8	9.7	9.6	9.3	9.4	8.6	e8.6
27	9.5	9.6	10	10	10	9.7	9.7	9.6	9.6	9.5	8.7	e8.6
28	9.4	9.7	10	10	10	9.7	9.6	9.6	9.4	9.4	8.6	e8.6
29	9.5	9.7	10	10	10	9.8	9.4	9.7	9.4	9.4	8.6	e8.6
30	9.4	9.7	10	10	---	9.8	9.3	9.6	9.3	9.4	8.7	e8.6
31	9.7	---	10	10	---	9.7	---	9.7	---	9.4	8.6	---
TOTAL	291.6	291.0	303.3	310	290	304.5	294.7	294.8	285.2	293.5	280.1	257.7
MEAN	9.41	9.70	9.78	10.0	10.0	9.82	9.82	9.51	9.51	9.47	9.04	8.59
MAX	9.7	9.9	10	10	10	10	10	10	9.8	9.8	9.5	8.7
MIN	9.2	9.5	9.7	10	10	9.7	9.3	9.3	9.3	9.3	8.5	8.4
AC-FT	578	577	602	615	575	604	585	585	566	582	556	511

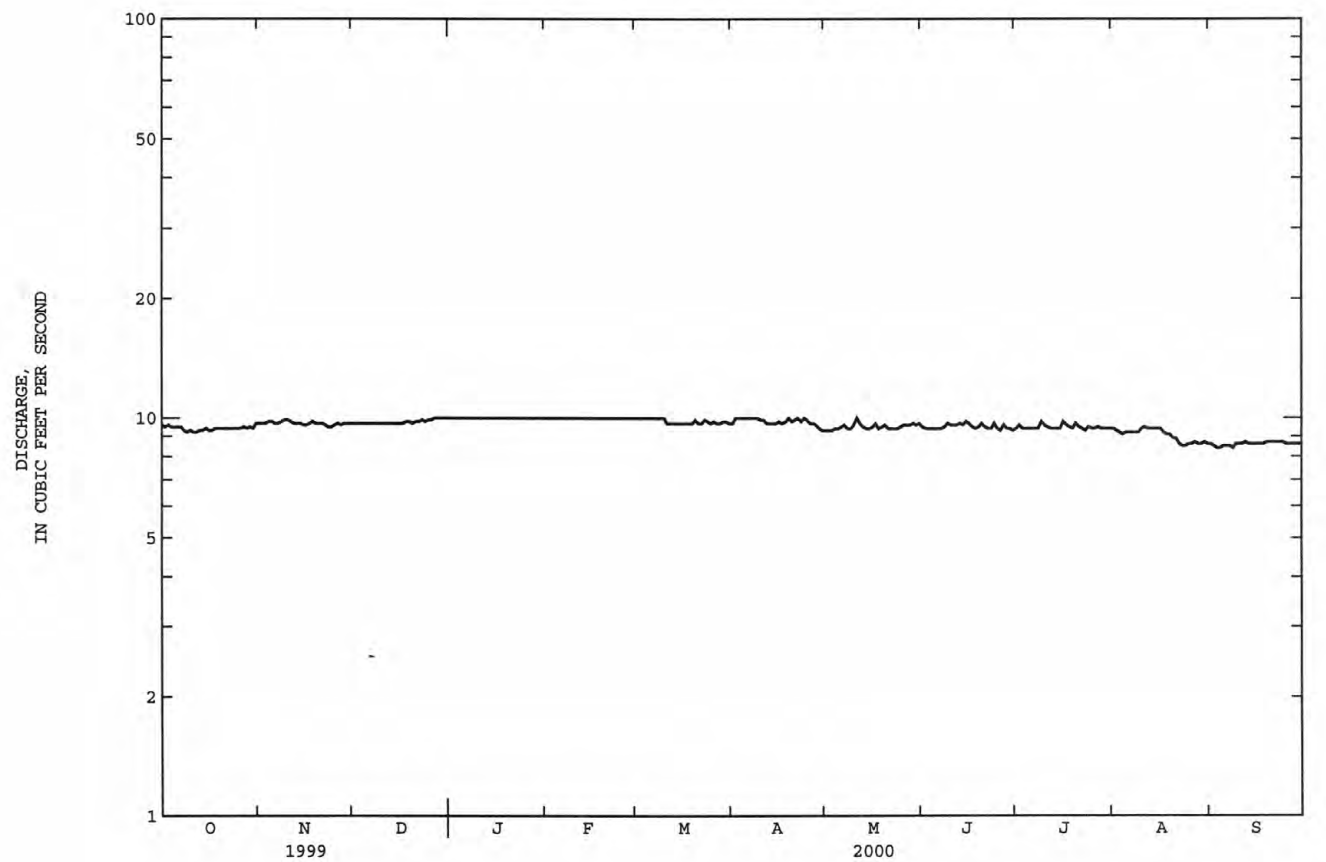
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

MEAN	5.86	5.81	5.69	5.67	5.72	5.80	5.87	6.01	6.12	6.14	6.04	6.02
MAX	9.41	9.70	9.78	10.0	10.0	9.82	9.82	9.51	9.51	9.50	9.53	9.96
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	1999	1998	1999
MIN	3.66	3.42	3.30	3.25	3.58	3.60	3.77	3.92	3.79	3.82	3.74	3.78
(WY)	1991	1991	1991	1991	1993	1993	1993	1992	1992	1992	1992	1992

06408700 RHOADS FORK NEAR ROCHFORD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1983 - 2000	
ANNUAL TOTAL	3376.5		3496.4			
ANNUAL MEAN	9.25		9.55		5.90	
HIGHEST ANNUAL MEAN					9.55	2000
LOWEST ANNUAL MEAN					3.69	1991
HIGHEST DAILY MEAN	11	Jun 10	10	Dec 27a	12	Jun 18 1998
LOWEST DAILY MEAN	8.4	Jan 4	8.4	Sep 3-4, 8	3.1	Jan 19 1991
ANNUAL SEVEN-DAY MINIMUM	8.5	Jan 29	8.5	Sep 2	3.1	Jan 18 1991
INSTANTANEOUS PEAK FLOW			12	Jul 2	14	Jun 18 1998
INSTANTANEOUS PEAK STAGE			4.00	Jul 2	4.04	Jun 18 1998
ANNUAL RUNOFF (AC-FT)	6700		6940		4270	
10 PERCENT EXCEEDS	9.9		10		9.1	
50 PERCENT EXCEEDS	9.4		9.7		5.4	
90 PERCENT EXCEEDS	8.5		8.7		3.8	

a For many other days.
e Estimated.



06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, SD
(Hydrologic bench-mark station)

LOCATION.--Lat 44°00'49", long 103°49'48", in NE¼ SW¼ SW¼ sec.25, T.1 N., R.2 E., Pennington County, Hydrologic Unit 10120110, at downstream end of highway culvert, 330 ft downstream from South Fork Castle Creek, 500 ft upstream from high-water line of Deerfield Reservoir, 2.5 mi southwest of Deerfield Dam, and 14 mi northwest of Hill City.

DRAINAGE AREA.--79.2 mi^2.

PERIOD OF RECORD.--June 1948 to current year. Prior to October 1953, published as "above Deerfield Reservoir, near Deerfield."

REVISED RECORDS.--WSP 1917: 1952(M). WDR SD-84-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,920 ft above sea level, from Highway Department bench mark. Prior to Aug. 31, 1948, nonrecording gage at site 130 ft upstream at datum 2.05 ft higher. Sept. 1, 1948, to May 17, 1983, at same location and datum. May 18, 1983, to Oct. 11, 1985, at site 300 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	25	23	22	e20	25	23	25	22	22	19	22
2	27	29	23	e20	e21	26	23	24	22	22	20	23
3	27	26	23	e18	22	26	21	24	22	22	20	19
4	27	26	24	e22	e25	27	26	23	22	22	19	19
5	27	26	e23	e22	e28	27	25	23	22	22	19	19
6	26	26	e24	e22	23	27	24	23	22	21	19	19
7	26	26	e23	e21	23	27	25	28	22	21	19	19
8	26	26	e23	e22	23	27	24	25	21	21	19	19
9	26	26	e24	e22	23	26	24	23	21	21	19	19
10	26	27	e25	e22	23	25	24	24	21	21	19	19
11	25	27	e24	e21	23	26	24	36	21	22	19	19
12	25	26	e24	e21	23	25	24	28	21	21	19	19
13	25	26	e24	e21	23	25	24	26	22	21	19	19
14	26	26	e22	e21	25	25	23	25	21	20	19	19
15	27	26	e22	23	23	25	22	25	22	20	19	19
16	27	26	22	23	23	25	24	24	22	22	20	19
17	26	26	21	23	23	25	23	26	21	21	19	18
18	27	27	21	23	23	25	23	25	21	21	19	18
19	26	26	21	22	23	25	123	24	21	21	19	19
20	26	27	e18	e21	26	25	147	26	23	22	20	20
21	26	26	e20	23	24	24	27	24	21	22	21	19
22	26	e25	e22	22	25	25	31	24	21	21	20	20
23	26	e22	e23	e20	25	26	31	24	20	20	19	20
24	26	e23	24	e18	25	25	33	23	25	20	19	21
25	26	e24	23	e16	24	24	30	24	22	20	19	20
26	26	25	e24	e21	17	24	28	24	22	20	19	20
27	26	24	23	25	27	24	26	23	25	20	19	20
28	26	24	23	23	26	24	26	22	23	20	19	19
29	26	25	23	23	26	24	26	22	23	19	19	19
30	26	24	e22	e20	---	24	26	22	22	19	20	19
31	26	---	e22	e19	---	23	---	23	---	19	20	---
TOTAL	812	768	703	662	685	781	980	762	656	646	598	583
MEAN	26.2	25.6	22.7	21.4	23.6	25.2	32.7	24.6	21.9	20.8	19.3	19.4
MAX	28	29	25	25	28	27	147	36	25	22	21	23
MIN	25	22	18	16	17	23	21	22	20	19	19	18
AC-FT	1610	1520	1390	1310	1360	1550	1940	1510	1300	1280	1190	1160

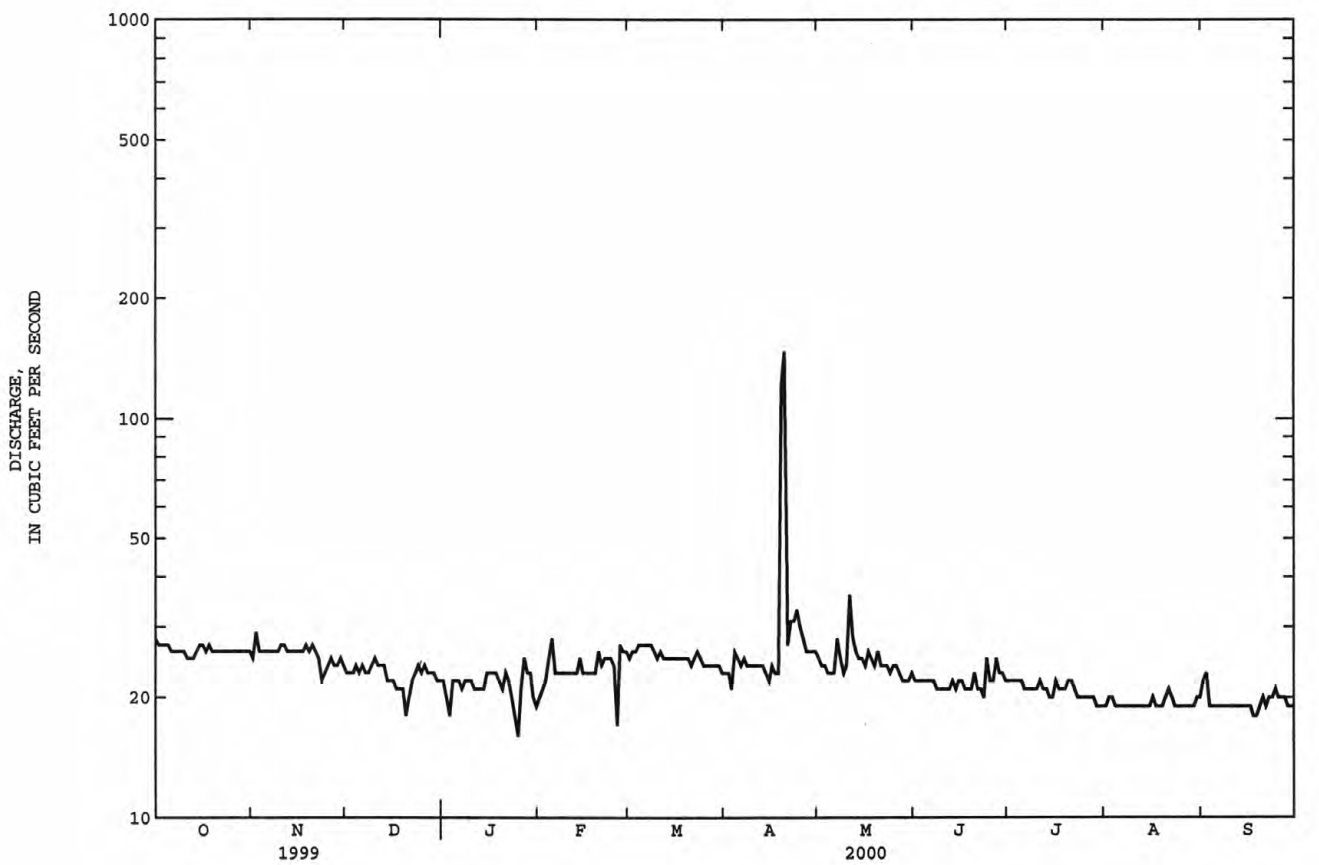
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)

MEAN	11.0	10.4	9.69	9.28	9.40	11.7	16.6	18.3	16.5	13.0	11.4	10.8
MAX	26.5	25.8	22.7	21.9	23.6	34.7	36.2	45.2	50.5	42.0	34.1	30.8
(WY)	1998	1999	2000	1999	2000	1999	1999	1997	1999	1999	1999	1999
MIN	3.93	3.85	2.74	3.98	5.06	5.81	6.83	6.56	4.69	4.05	4.63	4.36
(WY)	1961	1962	1962	1962	1962	1961	1961	1961	1961	1961	1960	1961

06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, SD--Continued
(Hydrologic bench-mark station)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	11718		8636			
ANNUAL MEAN	32.1		23.6		12.4	
HIGHEST ANNUAL MEAN					32.1	1999
LOWEST ANNUAL MEAN					5.13	1961
HIGHEST DAILY MEAN	90	Mar 25	147	Apr 20	232	May 22 1952
LOWEST DAILY MEAN	18	Dec 20	16	Jan 25	2.0	Dec 10 1961
ANNUAL SEVEN-DAY MINIMUM	21	Dec 15	19	Sep 12	2.2	Dec 15 1961
INSTANTANEOUS PEAK FLOW			291	Apr 19	1120	May 22 1952a
INSTANTANEOUS PEAK STAGE			4.38	Apr 19	5.81	May 22 1952
ANNUAL RUNOFF (AC-FT)	23240		17130		8950	
10 PERCENT EXCEEDS	45		26		21	
50 PERCENT EXCEEDS	30		23		10	
90 PERCENT EXCEEDS	22		19		6.2	

a From rating curve extended on basis of slope-area measurement.
e Estimated.



06409500 DEERFIELD RESERVOIR NEAR HILL CITY, SD

LOCATION.--Lat 44°01'41", long 103°47'09", in NE$^1/_4$ SW$^1/_4$ sec.20, T.1 N., R.3 E., at dam on Castle Creek, Hydrologic Unit 10120110, 0.4 mi upstream from Dutchman Creek and 12.5 mi northwest of Hill City.

DRAINAGE AREA.--95 mi^2, approximately.

PERIOD OF RECORD.--May 1947 to current year (monthend contents only). Some elevations obtained during period of initial filling, December 1945 to May 1947, are available in Bureau of Reclamation files. Prior to October 1953, published as "near Deerfield."

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Bureau of Reclamation). Prior to July 20, 1964, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 3, 1945; dam completed in 1947. Conservation capacity, 15,504 acre-ft between elevations 5,839.0 ft (lowest outlet) and 5,908.0 ft (crest of spillway). Dead storage below elevation 5,839.0 ft, 151 acre-ft. Surcharge capacity, 26,700 acre-ft between elevations 5,908.0 ft and 5,953.0 ft. Figures given herein represent conservation and surcharge contents above elevation 5,839.0 ft. Water is used to supplement Rapid City water supply and for irrigation in Rapid Creek basin downstream from Rapid City.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 16,006 acre-ft Feb. 25, 1985 (elevation, 5,909.05 ft); minimum observed, 429 acre-ft, Oct. 2, 1959 (elevation, 5,839.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,300 acre-ft, Apr. 24, elevation, 5,907.59 ft; minimum, 14,200 acre-ft, Sept. 9, elevation, 5,904.95 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	5,904.93	14,200	--
Oct. 31	5,905.72	14,600	+400
Nov. 30	5,906.29	14,800	+200
Dec. 31	5,906.45	14,900	+100
CAL YR 1999	--	--	-200
Jan. 31	5,906.57	14,900	0
Feb. 29	5,906.21	14,800	-100
Mar. 31	5,906.83	15,000	+200
Apr. 30	5,907.35	15,200	+200
May 31	5,907.21	15,200	0
June 30	5,907.34	15,200	0
July 31	5,906.95	15,100	-100
Aug. 31	5,906.58	14,900	-200
Sept. 30	5,906.81	15,000	+100
WTR YR 2000	--	--	+800

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06410000 CASTLE CREEK BELOW DEERFIELD DAM, SD

LOCATION.--Lat 44°01'45", long 103°46'53", in NW¼ SE¼ sec.20, T.1 N., R.3 E., Pennington County, Hydrologic Unit 10120110, on left bank 200 ft upstream from Dutchman Creek, 1,100 ft downstream from Deerfield Dam, and 12.5 mi northwest of Hill City.

DRAINAGE AREA.--96 mi^2, approximately.

PERIOD OF RECORD.--July 1946 to current year, seasonal records only beginning October 1983.

GAGE.--Water-stage recorder. Datum of gage is 5,784.52 ft above sea level (Bureau of Reclamation bench mark). Prior to Oct. 15, 1947, at site 400 ft downstream at datum 0.23 ft higher. Oct. 15, 1947, to Sept. 1, 1948, at site 550 ft downstream at datum 1.77 ft lower, and Sept. 2, 1948, to Nov. 2, 1971, at site 300 ft upstream at datum 4.0 ft higher.

REMARKS.--Records good. Flow completely regulated by Deerfield Dam, 1,100 ft upstream. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 200 ft^3/s, May 22, 1952; maximum gage height, 5.08 ft, present datum, June 5, 1991; no flow at times in 1948, 1950-60.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period March to September, 38 ft^3/s, Apr. 29, gage height, 4.09 ft; minimum daily discharge, 12 ft^3/s, Aug. 25.

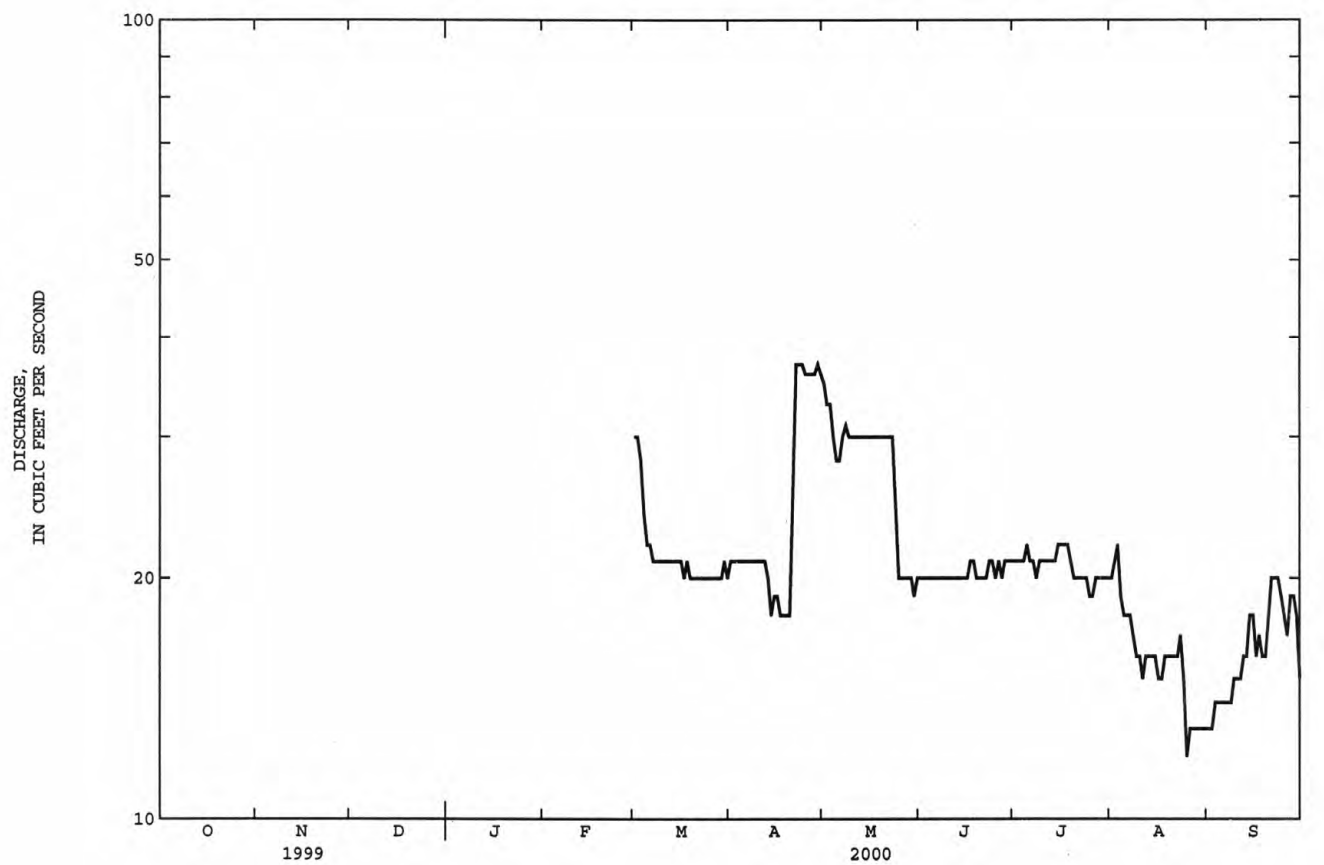
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	30	21	35	20	21	20	13
2	---	---	---	---	---	30	21	33	20	21	21	13
3	---	---	---	---	---	28	21	33	20	21	22	14
4	---	---	---	---	---	24	21	30	20	21	19	14
5	---	---	---	---	---	22	21	28	20	22	18	14
6	---	---	---	---	---	22	21	28	20	21	18	14
7	---	---	---	---	---	21	21	30	20	21	18	14
8	---	---	---	---	---	21	21	31	20	20	17	14
9	---	---	---	---	---	21	21	30	20	21	16	15
10	---	---	---	---	---	21	21	30	20	21	16	15
11	---	---	---	---	---	21	21	30	20	21	15	15
12	---	---	---	---	---	21	21	30	20	21	16	16
13	---	---	---	---	---	21	20	30	20	21	16	16
14	---	---	---	---	---	21	18	30	20	21	16	18
15	---	---	---	---	---	21	19	30	20	22	16	18
16	---	---	---	---	---	21	19	30	20	22	15	16
17	---	---	---	---	---	20	18	30	21	22	15	17
18	---	---	---	---	---	21	18	30	21	22	16	16
19	---	---	---	---	---	20	18	30	20	21	16	16
20	---	---	---	---	---	20	18	30	20	20	16	18
21	---	---	---	---	---	20	26	30	20	20	16	20
22	---	---	---	---	---	20	37	30	20	20	16	20
23	---	---	---	---	---	20	37	30	21	20	17	20
24	---	---	---	---	---	20	37	24	21	20	15	19
25	---	---	---	---	---	20	36	20	20	19	12	18
26	---	---	---	---	---	20	36	20	21	19	13	17
27	---	---	---	---	---	20	36	20	20	20	13	19
28	---	---	---	---	---	20	36	20	21	20	13	19
29	---	---	---	---	---	20	37	20	21	20	13	18
30	---	---	---	---	---	21	36	19	21	20	13	15
31	---	---	---	---	---	20	---	20	---	20	13	---
TOTAL	---	---	---	---	---	668	754	861	608	641	496	491
MEAN	---	---	---	---	---	21.5	25.1	27.8	20.3	20.7	16.0	16.4
MAX	---	---	---	---	---	30	37	35	21	22	22	20
MIN	---	---	---	---	---	20	18	19	20	19	12	13
AC-FT	---	---	---	---	---	1320	1500	1710	1210	1270	984	974
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1983, BY WATER YEAR (WY)												
MEAN	11.2	2.43	2.08	2.22	2.85	5.25	14.1	19.0	16.9	16.7	18.8	21.1
MAX	40.0	7.69	2.72	3.48	12.6	15.5	44.1	46.8	50.0	81.1	72.7	64.2
(WY)	1966	1949	1948	1978	1979	1979	1982	1978	1965	1982	1982	1959
MIN	.20	.017	.22	1.53	1.26	1.56	1.59	1.59	2.39	2.13	3.78	4.05
(WY)	1947	1960	1947	1983	1971	1960	1960	1960	1962	1962	1962	1983

06410000 CASTLE CREEK BELOW DEERFIELD DAM, SD--Continued

SUMMARY STATISTICS	WATER YEARS 1947 - 1983*	
ANNUAL MEAN	11.1	
HIGHEST ANNUAL MEAN	30.9	1982
LOWEST ANNUAL MEAN	2.62	1960
HIGHEST DAILY MEAN	200	May 22 1952
LOWEST DAILY MEAN	.00	Sep 9 1948
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 15 1959
ANNUAL RUNOFF (AC-FT)	8030	
10 PERCENT EXCEEDS	26	
50 PERCENT EXCEEDS	4.9	
90 PERCENT EXCEEDS	1.9	

* Period reflects complete water years.



06410500 RAPID CREEK ABOVE PACTOLA RESERVOIR, AT SILVER CITY, SD

LOCATION.--Lat 44°05'05", long 103°34'48", in SW¼ SE¼ sec.36, T.2 N., R.4 E., Pennington County, Hydrologic Unit 10120110, on right bank 0.8 mi west of Silver City and 3.0 mi downstream from Slate Creek.

DRAINAGE AREA.--292 mi^2.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,620.00 ft above sea level (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Deerfield Dam on Castle Creek since December 1945. Satellite data-collection platform at site. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	58	e58	e47	e61	64	60	119	111	64	52	40
2	65	57	e57	e45	e62	64	61	115	106	60	55	40
3	64	60	e56	e40	e61	65	56	114	103	64	53	39
4	64	60	e52	e50	e63	63	63	113	100	62	53	39
5	63	60	e51	e58	e67	63	70	105	98	60	52	38
6	64	60	e51	e51	e67	65	64	107	91	56	51	38
7	64	59	e50	e48	e62	64	64	124	77	54	52	38
8	63	59	e45	e47	e58	e63	62	122	74	57	52	38
9	63	59	e40	e47	e56	e62	64	107	72	62	49	37
10	62	59	e47	e48	e52	e73	63	102	70	69	47	38
11	62	59	e48	e52	e52	e70	62	156	70	65	47	37
12	63	59	e48	e53	e53	e64	61	135	68	60	50	37
13	62	59	e49	e54	e53	e61	63	124	65	58	47	37
14	63	58	e48	e54	e54	e63	62	119	67	58	45	37
15	62	58	e47	e54	e54	e63	62	114	68	58	45	37
16	62	58	e46	e54	e55	e61	61	109	69	65	46	37
17	60	58	e47	e54	e57	e62	65	119	66	65	45	37
18	63	60	e47	e54	e69	e61	65	140	64	62	45	36
19	64	60	e42	e53	e79	e61	67	120	61	59	43	37
20	62	59	e47	e54	e86	e62	81	129	64	64	43	39
21	61	59	e49	e54	e84	e60	90	116	64	72	42	38
22	61	56	e51	e53	e75	60	110	111	60	67	42	39
23	61	56	e52	e52	e71	65	126	110	59	62	43	41
24	60	e56	e52	e52	e68	65	156	110	107	58	42	40
25	60	e56	e53	e53	e63	62	182	106	83	57	40	41
26	59	e56	e53	e55	e57	63	162	109	71	57	44	39
27	60	e56	e54	e54	e64	62	146	112	74	56	48	39
28	59	e58	e55	e53	e74	63	137	103	79	57	41	38
29	59	e59	e51	e52	69	64	129	102	68	55	40	38
30	59	e59	e47	e53	---	62	124	103	65	53	40	38
31	59	---	e47	e58	---	60	---	111	---	52	40	---
TOTAL	1916	1750	1540	1606	1846	1960	2638	3586	2294	1868	1434	1147
MEAN	61.8	58.3	49.7	51.8	63.7	63.2	87.9	116	76.5	60.3	46.3	38.2
MAX	65	60	58	58	86	73	182	156	111	72	55	41
MIN	59	56	40	40	52	60	56	102	59	52	40	36
AC-FT	3800	3470	3050	3190	3660	3890	5230	7110	4550	3710	2840	2280

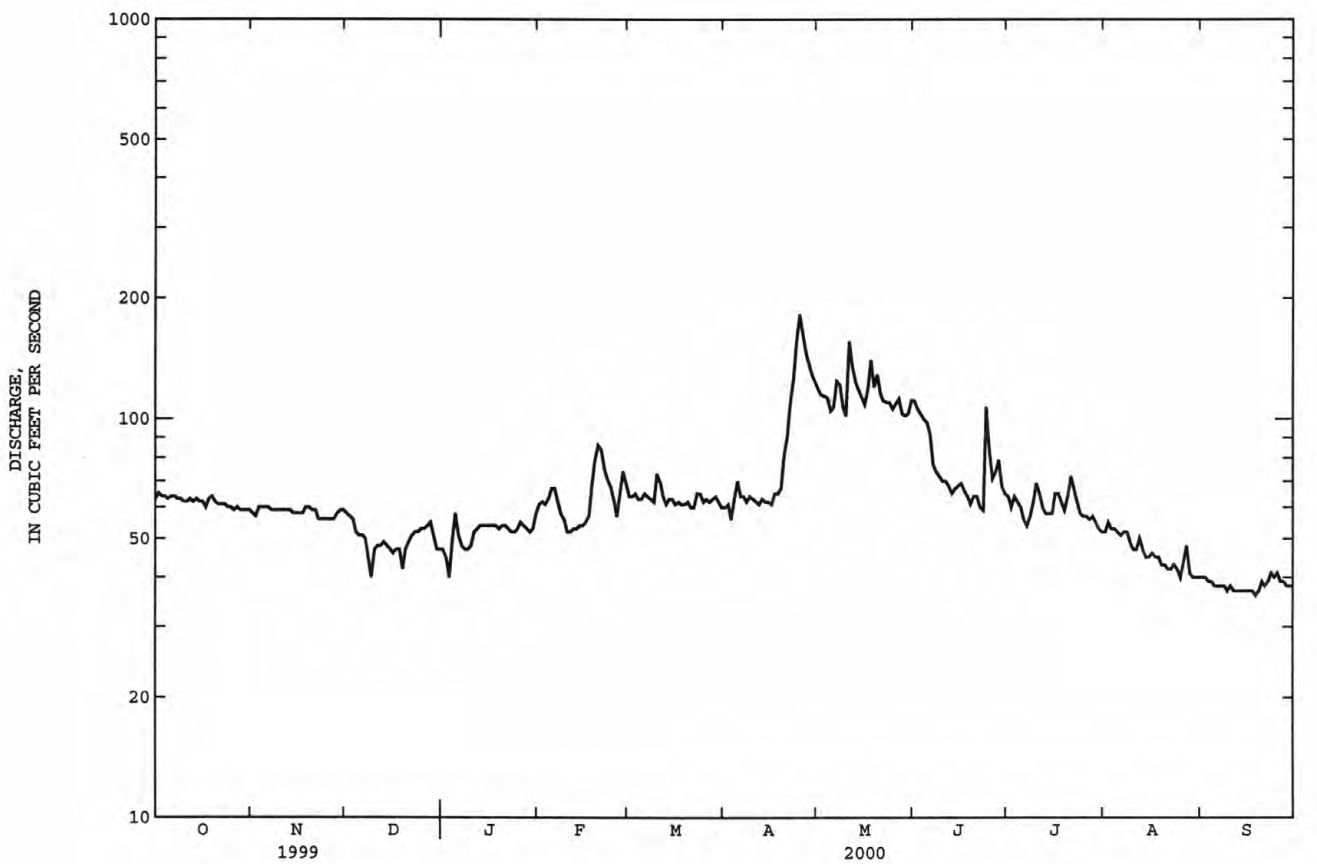
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)

MEAN	33.6	24.5	19.5	18.6	21.2	36.6	69.0	98.9	105	60.7	49.3	41.3
MAX	134	129	103	83.7	68.4	118	232	322	330	230	205	117
(WY)	1999	1999	1999	1999	1999	1996	1997	1997	1999	1998	1997	1998
MIN	10.2	10.3	7.77	8.61	8.34	12.1	16.5	14.5	14.7	15.2	11.5	10.5
(WY)	1962	1962	1962	1962	1993	1962	1961	1961	1961	1961	1961	1961

06410500 RAPID CREEK ABOVE PACTOLA RESERVOIR, AT SILVER CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000	
ANNUAL TOTAL	45803		23585			
ANNUAL MEAN	125		64.4		48.3	
HIGHEST ANNUAL MEAN					142	1999
LOWEST ANNUAL MEAN					15.1	1961
HIGHEST DAILY MEAN	547	Jun 15	182	Apr 25	1330	May 15 1965
LOWEST DAILY MEAN	40	Dec 9	36	Sep 18	2.5	Dec 2 1985
ANNUAL SEVEN-DAY MINIMUM	46	Dec 14	37	Sep 12	3.6	Nov 27 1985
INSTANTANEOUS PEAK FLOW			228	Apr 24	2060	May 15 1965a
INSTANTANEOUS PEAK STAGE			5.85	Apr 24	10.44	May 15 1965
ANNUAL RUNOFF (AC-FT)	90850		46780		34980	
10 PERCENT EXCEEDS	245		106		99	
50 PERCENT EXCEEDS	94		60		30	
90 PERCENT EXCEEDS	56		41		12	

a From rating curve extended above 1,000 ft^3/s on basis of slope-area measurement of peak flow.
e Estimated.



06411000 PACTOLA RESERVOIR NEAR SILVER CITY, SD

LOCATION.--Lat 44°04'20", long 103°29'17", in NE$^1/_4$ SW$^1/_4$ sec.2, T.1 N., R.5 E., Pennington County, Hydrologic Unit 10120110, in outlet works of dam on Rapid Creek, 3.8 mi east of Silver City.

DRAINAGE AREA.--319 mi^2.

PERIOD OF RECORD.--August 1956 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to Feb. 18, 1970, nonrecording gage at same site and datum.

REMARKS.--Reservoir formed by an earthfill dam completed August 1956. Storage began Aug. 22, 1956. Conservation capacity, 54,955 acre-ft between elevations 4,456.1 ft and 4,580.2 ft. Combined dead and inactive storage below elevation 4,456.1 ft is 1,017 acre-ft. Flood storage capacity, 43,057 acre-ft between elevations 4,580.2 ft and 4,621.5 ft (crest of spillway). Surcharge capacity, 41,892 acre-ft between elevations 4,621.5 ft and 4,651.7 ft (maximum pool elevation). Figures given herein represent contents above elevation 4,456.1 ft. Reservoir provides flood control and water for municipal and irrigation uses.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 60,970 acre-ft, May 19, 1965, elevation, 4,585.87 ft; minimum observed, 24,000 acre-ft, Sept. 30, 1990, elevation, 4,531.74 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 56,100 acre-ft, Nov. 23, elevation, 4,581.54 ft; minimum, 52,300 acre-ft, Oct. 1, elevation, 4,577.09 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,577.05	52,300	--
Oct. 31	4,579.73	54,600	+2,300
Nov. 30	4,581.44	56,000	+1,400
Dec. 31	4,579.77	54,600	-1,400
CAL YR 1999	--	--	+3,100
Jan. 31	4,579.04	54,000	-600
Feb. 29	4,579.18	54,100	+100
Mar. 31	4,579.20	54,100	0
Apr. 30	4,580.15	54,900	+800
May 31	4,579.92	54,700	-200
June 30	5,580.15	54,900	+200
July 31	4,579.94	54,700	-200
Aug. 31	4,578.59	53,600	-1,100
Sept. 30	4,577.28	52,500	-1,100
WTR YR 2000	--	--	+200

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06411500 RAPID CREEK BELOW PACTOLA DAM, SD

LOCATION.--Lat 44°04'36", long 103°28'54", in SW¼ NE¼ sec.2, T.1 N., R.5 E., Pennington County, Hydrologic Unit 10120110, on right bank 2,000 ft downstream from Pactola Dam, 3.9 mi upstream from Deer Creek, and 13.0 mi west of Rapid City.

DRAINAGE AREA.--320 mi^2, approximately.

PERIOD OF RECORD.--October 1928 to September 1932 (combined records of Creek and Dakota Power and Light Co. flume), July 1946 to current year. Prior to October 1953, published as "near Pactola." Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1931(M).

GAGE.--Water-stage recorder and concrete control since Oct. 16, 1962. Datum of gage is 4,406.00 ft above sea level (Bureau of Reclamation bench mark). Apr. 19, 1929, to June 30, 1932, nonrecording gage at site 3,500 ft upstream at different datum. July 24, 1946, to Aug. 24, 1947, nonrecording gage and Aug. 25, 1947, to Nov. 18, 1953, water-stage recorder, at site 2.0 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by dam on Castle Creek since Dec. 3, 1945, and completely regulated by Pactola Dam 2,000 ft upstream since Aug. 22, 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to Sept. 30, 1963, 2,170 ft^3/s, May 22, 1952, gage height, 6.74 ft, site and datum then in use; minimum daily discharge, 0.0 ft^3/s, Oct. 11-17, 1962. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	25	72	78	62	64	65	136	106	79	80	59
2	35	25	73	78	62	64	65	128	106	79	69	58
3	35	25	73	73	62	64	65	127	95	79	61	58
4	35	25	72	61	62	64	65	121	83	74	61	58
5	36	25	72	63	62	64	65	116	82	69	61	58
6	35	25	73	63	62	64	65	116	77	70	61	58
7	35	25	70	62	62	64	65	117	69	69	57	58
8	28	25	78	62	63	64	65	116	69	70	55	58
9	24	25	78	62	64	66	64	116	69	70	55	58
10	24	20	78	62	64	66	65	117	69	70	55	58
11	22	13	78	63	64	66	64	122	69	70	55	58
12	24	18	78	62	65	66	64	124	69	70	55	58
13	24	25	78	62	64	66	64	124	68	70	55	54
14	24	25	78	62	64	66	70	124	69	70	61	54
15	24	25	79	62	64	66	69	125	68	70	66	50
16	25	25	78	62	64	65	69	125	66	69	66	47
17	25	25	78	62	63	66	70	126	66	65	65	47
18	25	25	78	62	63	65	70	144	66	64	65	48
19	25	25	78	62	63	65	72	154	66	63	66	49
20	25	25	78	63	63	66	72	154	66	64	65	49
21	25	25	78	63	63	65	73	154	66	64	61	49
22	25	25	78	64	64	66	77	140	66	64	59	47
23	25	40	78	63	64	66	77	131	67	64	60	45
24	25	64	78	63	64	65	93	116	88	62	60	45
25	25	73	78	62	64	65	111	105	101	66	60	45
26	25	73	78	64	64	65	124	106	102	66	60	43
27	25	73	78	64	64	65	124	105	90	66	61	41
28	25	73	78	63	64	65	130	105	79	66	60	42
29	25	72	78	63	64	65	143	105	79	66	60	42
30	24	72	78	62	---	66	143	106	79	66	60	42
31	25	---	78	62	---	66	---	106	---	73	60	---
TOTAL	841	1066	2378	1979	1837	2020	2428	3811	2315	2127	1895	1536
MEAN	27.1	35.5	76.7	63.8	63.3	65.2	80.9	123	77.2	68.6	61.1	51.2
MAX	37	73	79	78	65	66	143	154	106	79	80	59
MIN	22	13	70	61	62	64	64	105	66	62	55	41
AC-FT	1670	2110	4720	3930	3640	4010	4820	7560	4590	4220	3760	3050

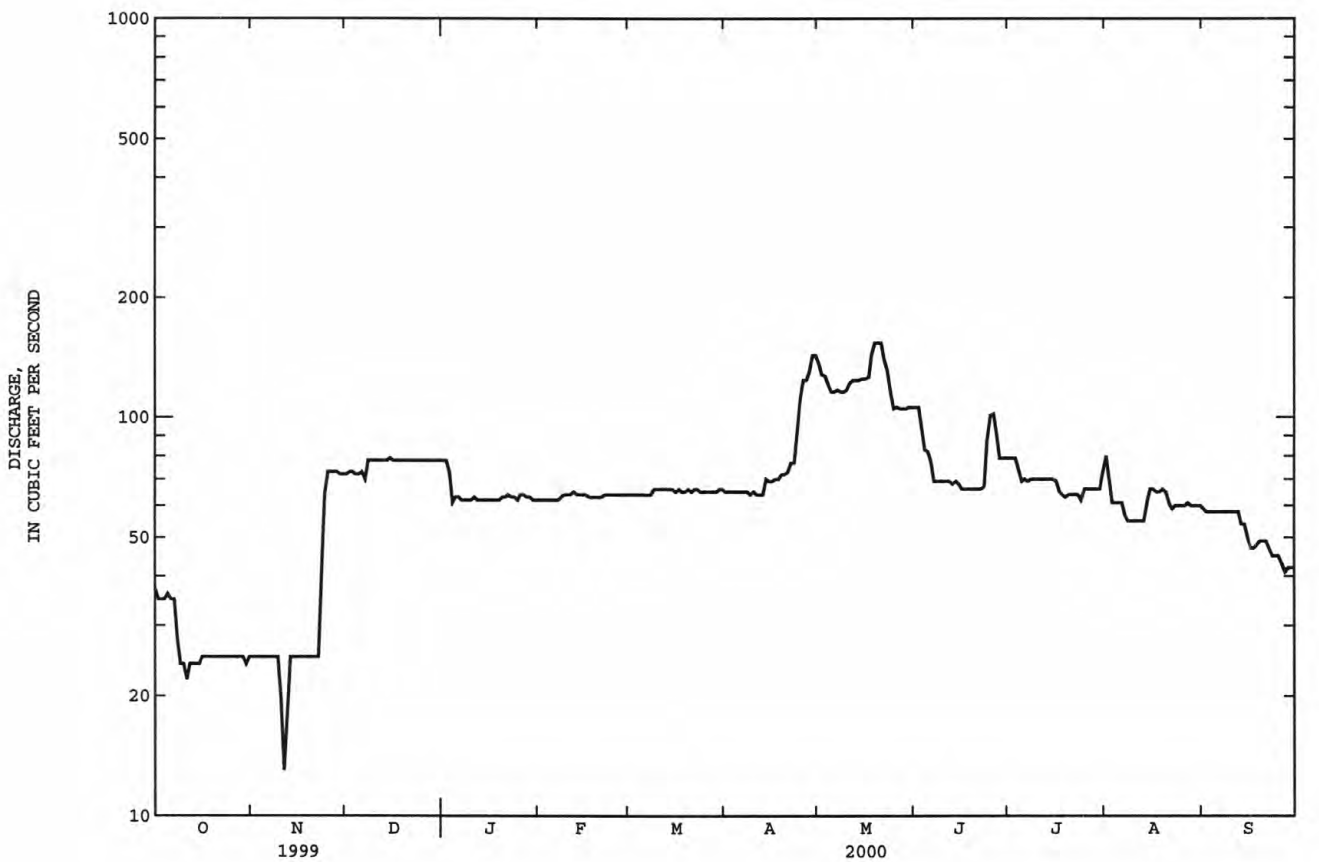
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)*

MEAN	29.4	25.3	25.0	22.8	23.1	32.6	55.5	105	120	93.4	72.3	49.0
MAX	127	150	130	71.4	73.8	125	182	324	415	227	213	120
(WY)	1999	1999	1999	1997	1997	1996	1999	1997	1965	1998	1998	1997
MIN	11.1	9.07	12.3	10.6	10.9	11.2	11.3	11.1	17.7	30.5	29.5	21.5
(WY)	1991	1982	1991	1991	1991	1991	1991	1991	1991	1992	1966	1989

06411500 RAPID CREEK BELOW PACTOLA DAM, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000*	
ANNUAL TOTAL	46364		24233			
ANNUAL MEAN	127		66.2		54.6	
HIGHEST ANNUAL MEAN					149	1999
LOWEST ANNUAL MEAN					20.7	1991
HIGHEST DAILY MEAN	424	Jun 20	154	May 19	515	May 20 1965a
LOWEST DAILY MEAN	13	Nov 11	13	Nov 11	1.4	Oct 9 1971
ANNUAL SEVEN-DAY MINIMUM	22	Nov 6	22	Nov 6	6.7	Oct 6 1971
INSTANTANEOUS PEAK FLOW			169	May 18	547	May 19 1965
INSTANTANEOUS PEAK STAGE			8.13	May 18	9.00	May 19 1965
ANNUAL RUNOFF (AC-FT)	91960		48070		39560	
10 PERCENT EXCEEDS	281		105		113	
50 PERCENT EXCEEDS	78		64		32	
90 PERCENT EXCEEDS	25		25		14	

* Regulated period only (1964-2000). See REMARKS.
a Also May 28, 29, 1965.



06412500 RAPID CREEK ABOVE CANYON LAKE, NEAR RAPID CITY, SD

LOCATION.--Lat 44°03'10", long 103°18'41", in NW¼ NW¼ NW¼ sec.17, T.1 N., R.7 E., Pennington County, Hydrologic Unit 10120110, on left bank between bridges on State Highway 44, at city limits of Rapid City, and 2.9 mi downstream from Victoria Creek.

DRAINAGE AREA.--371 mi^2.

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder and concrete broad-crested, V-notch weir. Datum of gage is 3,398.17 ft above sea level. Prior to Oct. 6, 1947, nonrecording gage, Oct. 6, 1947, to Nov. 2, 1967, and Oct. 1, 1968, to Sept. 30, 1976, water-stage recorder all at datum 9.25 ft higher. Nov. 3, 1967, to Sept. 30, 1968, nonrecording gage at site 0.1 mi downstream at datum 6.13 ft higher. Oct. 1, 1968, to Oct. 1, 1989, at datum 7.22 ft higher. Prior to Oct. 1, 1991, at site 0.1 mi upstream at datum 7.25 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Deerfield Reservoir since December 1945 and by Pactola Dam 21.0 mi upstream since August 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to Sept. 30, 1963, 2,600 ft^3/s, May 23, 1952, gage height, 10.08 ft, site and datum then in use; minimum daily discharge, no flow Jan. 6-8, 1959, Apr. 4-5, 1960. Gage located in loss zone and analysis of low-flow data would be unreliable due to differences in respective gage locations. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Satellite data-collection platform and National Weather Service telemeter at station.

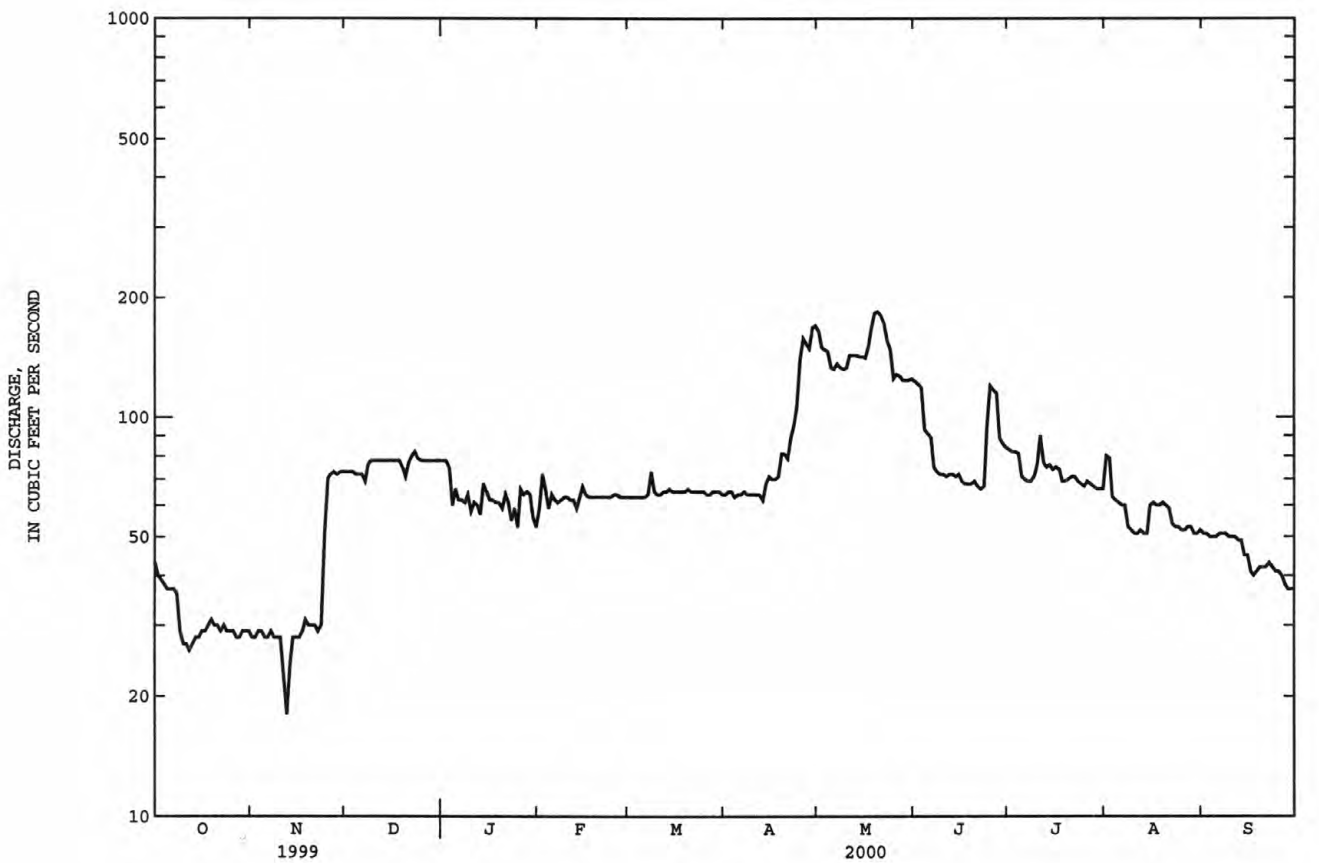
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	28	73	78	59	63	64	165	123	83	80	51
2	40	28	73	78	72	63	65	150	121	82	79	51
3	39	29	73	75	66	63	65	148	119	82	63	50
4	38	29	72	60	59	63	63	146	93	81	62	50
5	37	28	72	66	64	63	64	133	91	71	61	50
6	37	28	72	62	62	63	64	132	89	70	60	51
7	37	29	69	62	61	64	65	136	75	69	60	51
8	36	28	76	61	62	73	64	133	73	69	53	51
9	29	28	78	64	63	65	64	132	72	71	52	50
10	27	28	78	58	63	64	64	133	72	76	51	50
11	27	22	78	61	62	64	64	143	71	90	51	50
12	26	18	78	60	62	65	64	143	72	77	52	49
13	27	24	78	57	59	65	62	143	72	75	51	49
14	28	28	78	68	63	66	68	142	71	76	51	45
15	28	28	78	65	67	65	71	142	72	74	60	45
16	29	28	78	62	64	65	70	141	69	75	61	41
17	29	29	78	62	63	65	70	151	68	74	60	40
18	30	31	78	61	63	65	71	168	68	69	60	41
19	31	30	75	61	63	65	81	183	68	69	61	42
20	30	30	71	59	63	66	81	184	69	70	60	42
21	30	30	77	64	63	65	79	180	67	71	59	42
22	29	29	80	61	63	65	89	173	66	71	54	43
23	30	30	82	55	63	65	96	156	67	69	53	42
24	29	51	79	59	63	65	107	148	95	68	53	41
25	29	70	78	53	64	65	140	125	120	67	52	41
26	29	72	78	66	64	64	158	128	117	69	52	40
27	28	73	78	64	63	64	153	127	115	68	53	38
28	28	72	78	65	63	65	149	124	89	67	53	37
29	29	73	78	64	63	65	168	124	86	66	51	37
30	29	73	78	56	---	65	170	124	84	66	51	37
31	29	---	78	53	---	64	---	125	---	66	52	---
TOTAL	967	1124	2370	1940	1829	2007	2653	4482	2534	2251	1771	1347
MEAN	31.2	37.5	76.5	62.6	63.1	64.7	88.4	145	84.5	72.6	57.1	44.9
MAX	43	73	82	78	72	73	170	184	123	90	80	51
MIN	26	18	69	53	59	63	62	124	66	66	51	37
AC-FT	1920	2230	4700	3850	3630	3980	5260	8890	5030	4460	3510	2670
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)*												
MEAN	26.0	20.9	19.3	17.7	18.6	29.0	54.9	115	147	97.9	70.0	43.7
MAX	135	154	135	80.4	84.1	133	217	449	466	275	239	123
(WY)	1999	1999	1999	1997	1997	1996	1997	1997	1999	1998	1997	1997
MIN	1.38	.71	.12	.094	.094	.29	3.55	22.0	20.8	23.2	27.0	14.1
(WY)	1991	1982	1991	1991	1991	1991	1991	1986	1990	1992	1966	1989

06412500 RAPID CREEK ABOVE CANYON LAKE, NEAR RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000*	
ANNUAL TOTAL	54472		25275			
ANNUAL MEAN	149		69.1		55.1	
HIGHEST ANNUAL MEAN					173	1997
LOWEST ANNUAL MEAN					17.5	1991
HIGHEST DAILY MEAN	629	Jun 17	184	May 20	2600	Jun 10 1972
LOWEST DAILY MEAN	18	Nov 12	18	Nov 12	.00	Dec 12 1990a
ANNUAL SEVEN-DAY MINIMUM	25	Nov 8	25	Nov 8	.00	Dec 20 1990
INSTANTANEOUS PEAK FLOW			191	May 20	31200	Jun 9 1972
INSTANTANEOUS PEAK STAGE			3.14	May 20	17.77	Jun 9 1972
ANNUAL RUNOFF (AC-FT)	108000		50130		39910	
10 PERCENT EXCEEDS	316		124		120	
50 PERCENT EXCEEDS	78		64		29	
90 PERCENT EXCEEDS	30		30		6.6	

* Regulated period only (1964-2000). See REMARKS.
a No flow for many days in 1991 water year.



06412810 CLEGHORN SPRINGS AT RAPID CITY, SD

LOCATION.--Lat 44°03'32", long 103°17'49", in SE¼ NW¼ SE¼ sec.8, T.1 N, R.7 E., Pennington County, Hydrologic Unit 10120110, on left bank of the outflow of Cleghorn Springs, within Cleghorn Springs Fish Hatchery, and 0.2 mi west of Canyon Lake on State Highway 44.

DRAINAGE AREA.--Indeterminate.

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

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 3,369.1 ft above sea level.

REMARKS.--Records good. Discharges are the result of three springs routed into one. Flows may vary depending on operational activities of fish hatchery. From October 1987 to September 1992, Cleghorn Springs was published as three gaging stations: 06412600, 06412700, and 06412800. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

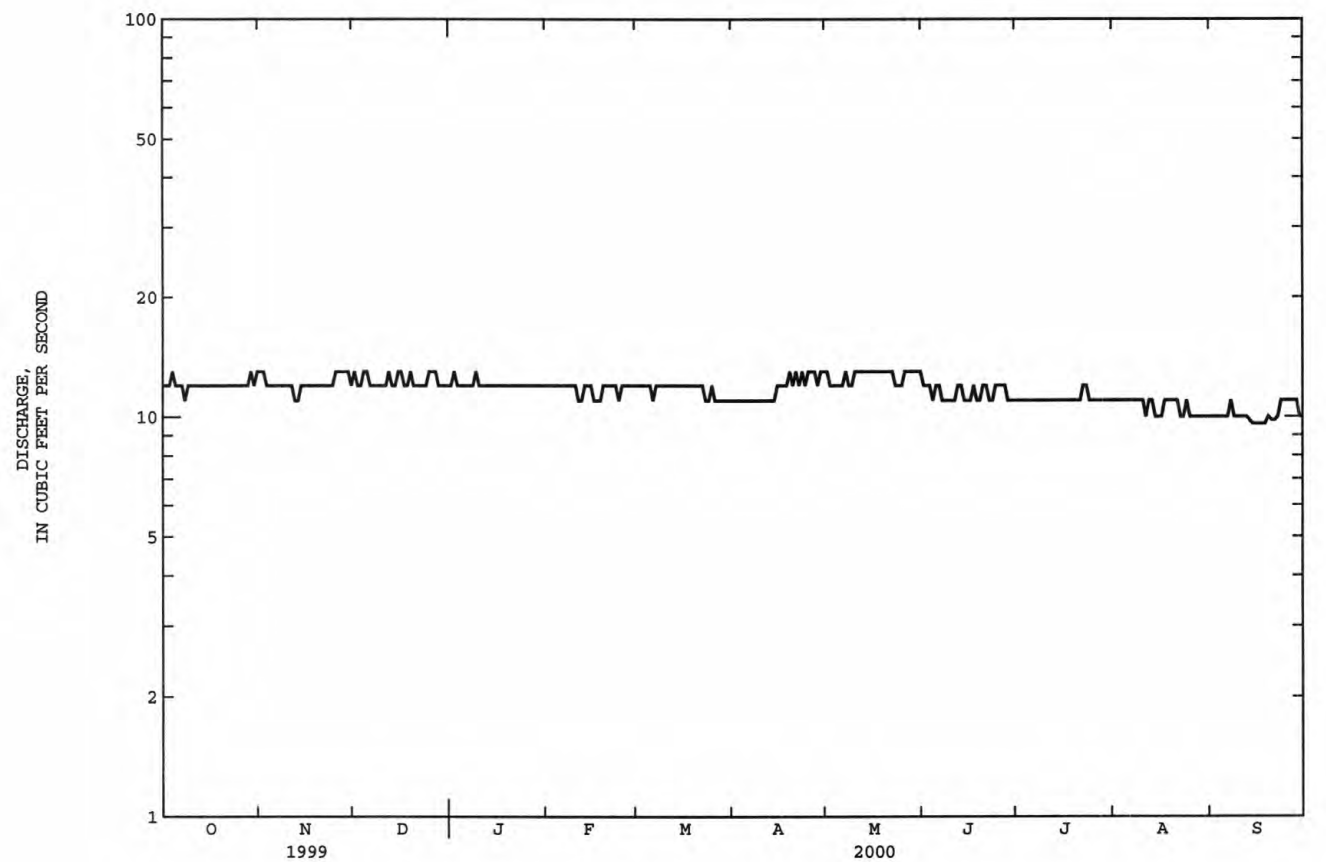
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	13	12	12	12	e11	13	12	11	11	10
2	12	13	12	13	12	12	e11	12	12	11	11	10
3	12	12	12	12	12	12	e11	12	12	11	11	10
4	13	12	13	12	12	12	e11	12	11	11	11	10
5	12	12	13	12	12	12	e11	12	12	11	11	10
6	12	12	12	12	12	11	e11	12	12	11	11	10
7	12	12	12	12	12	12	e11	13	11	11	11	11
8	11	12	12	12	12	12	e11	12	11	11	11	10
9	12	12	12	13	12	12	e11	12	11	11	11	10
10	12	12	e12	12	12	12	e11	13	11	11	11	10
11	12	12	12	12	11	12	e11	13	11	11	10	10
12	12	11	13	12	11	12	e11	13	12	11	11	10
13	12	11	12	12	12	12	11	13	12	11	11	9.8
14	12	12	12	12	12	12	11	13	11	11	10	9.6
15	12	12	13	12	12	12	12	13	11	11	10	9.6
16	12	12	13	12	11	12	12	13	11	11	10	9.6
17	12	12	12	12	11	12	12	13	12	11	11	9.6
18	12	12	12	12	11	12	12	13	11	11	11	9.6
19	12	12	13	12	12	12	13	13	11	11	11	10
20	12	12	12	12	12	12	12	13	12	11	11	9.8
21	12	12	12	12	12	12	13	13	12	11	11	9.8
22	12	12	12	12	12	12	12	13	11	12	10	10
23	12	12	12	12	12	11	13	12	11	12	10	11
24	12	12	12	12	11	11	12	12	12	11	11	11
25	12	13	13	12	12	12	13	12	12	11	10	11
26	12	13	13	12	12	11	13	13	12	11	10	11
27	12	13	13	12	12	e11	13	13	12	11	10	11
28	12	13	12	12	12	e11	12	13	11	11	10	11
29	13	13	12	12	12	e11	13	13	11	11	10	10
30	12	12	12	12	---	e11	13	13	11	11	10	10
31	13	---	12	12	---	e11	---	13	---	11	10	---
TOTAL	374	365	382	374	342	363	354	393	344	343	328	304.4
MEAN	12.1	12.2	12.3	12.1	11.8	11.7	11.8	12.7	11.5	11.1	10.6	10.1
MAX	13	13	13	13	12	12	13	13	12	12	11	11
MIN	11	11	12	12	11	11	11	12	11	11	10	9.6
AC-FT	742	724	758	742	678	720	702	780	682	680	651	604
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)												
MEAN	11.9	11.9	12.0	11.9	11.6	11.9	12.5	13.3	13.4	12.1	11.5	11.4
MAX	14.2	14.0	13.9	13.1	13.0	13.0	13.7	15.0	14.9	13.7	13.7	12.9
(WY)	1999	1999	1999	1999	1997	1997	1997	1997	1999	1998	1998	1998
MIN	10.8	9.81	9.89	10.3	10.4	10.2	11.3	11.1	10.5	10.0	9.92	9.90
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1994	1994	1994	1994

06412810 CLEGHORN SPRINGS AT RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	4689		4266.4			
ANNUAL MEAN	12.8		11.7		12.1	
HIGHEST ANNUAL MEAN					13.3	1999
LOWEST ANNUAL MEAN					11.1	1993
HIGHEST DAILY MEAN	17	Jun 18	13	Oct 4	17	Jun 2 1997
LOWEST DAILY MEAN	11	Sep 16	9.6	Sep 14-18	8.8	Sep 7 1994
ANNUAL SEVEN-DAY MINIMUM	11	Sep 21	9.7	Sep 12	9.4	Sep 3 1994
ANNUAL RUNOFF (AC-FT)	9300		8460		8790	
10 PERCENT EXCEEDS	14		13		14	
50 PERCENT EXCEEDS	13		12		12	
90 PERCENT EXCEEDS	12		11		10	

e Estimated.



06413650 LIME CREEK AT MOUTH, AT RAPID CITY, SD

LOCATION.--Lat 44°04'30", long 103°16'00", in SE¼ SW¼ NW¼ sec.3, T.1 N., R.7 E., Pennington County, Hydrologic Unit 10120110, on left bank, 1,500 ft above mouth, and 75 ft downstream from Canyon Lake Drive.

DRAINAGE AREA.--10.0 mi^2, approximately.

PERIOD OF RECORD.--April 24, 1981, to July 21, 1982 (seasonal records only), October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,286 ft above sea level, from topographic map. Prior to June 22, 1993, gage located about 1,000 ft downstream, at different datum.

REMARKS.--No estimated daily discharges. Records good. Water temperature and specific conductance measured during the water year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 25, 1982, reached a stage of 3.6 ft, present datum, from floodmarks. A discharge of 103 ft^3/s was measured July 22, 1982.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.8	3.1	2.4	2.6	2.4	2.1	5.8	4.7	3.5	2.8	2.2
2	3.7	3.7	2.9	2.4	2.9	2.3	2.2	5.7	4.6	3.4	4.1	2.2
3	3.7	3.9	2.9	2.5	2.6	2.3	2.2	5.6	4.5	3.3	2.8	2.2
4	3.7	3.9	2.9	2.6	2.6	2.3	2.1	5.5	4.4	3.2	2.8	2.3
5	3.6	3.8	2.9	2.6	2.6	2.4	2.2	5.3	4.3	3.2	2.7	2.4
6	3.8	3.8	2.9	2.6	2.4	2.3	2.1	5.3	4.1	3.1	2.6	2.2
7	3.8	3.7	2.8	2.6	2.4	2.3	2.4	6.8	4.0	3.0	2.6	2.2
8	3.8	3.8	2.7	2.6	2.4	8.3	2.2	5.3	3.8	3.1	3.0	2.2
9	3.8	3.9	2.7	2.6	2.4	2.9	2.2	5.0	3.7	3.9	2.6	2.1
10	3.8	3.9	2.7	2.6	2.4	2.8	2.2	5.4	3.6	4.5	2.5	2.2
11	3.8	3.9	2.7	2.5	2.4	2.9	2.2	7.6	4.0	4.0	2.9	2.2
12	3.8	3.9	2.7	2.4	2.4	2.7	2.2	5.1	4.9	3.1	2.5	2.2
13	3.9	3.9	2.7	2.4	2.4	2.6	2.2	4.9	4.2	3.0	2.5	2.1
14	3.9	3.9	2.7	2.5	2.4	2.6	2.2	4.8	4.3	3.0	2.3	2.1
15	3.9	3.9	2.7	2.5	2.4	2.5	2.4	4.7	4.6	2.8	2.4	2.1
16	4.0	3.9	2.7	2.5	2.4	2.5	2.3	4.7	4.2	3.5	2.4	2.0
17	4.0	3.8	2.7	2.5	2.4	2.5	2.2	12	4.0	3.3	2.4	2.0
18	3.9	4.5	2.7	2.4	2.4	2.4	3.5	6.0	3.9	3.2	2.4	2.0
19	4.0	3.4	2.7	2.4	2.4	2.5	9.1	5.5	5.3	3.0	2.3	2.3
20	3.7	3.3	2.7	2.5	2.4	2.5	6.3	5.9	4.7	3.7	2.3	2.1
21	3.7	3.3	2.7	2.5	2.4	2.3	8.8	5.2	4.1	3.7	2.3	2.1
22	3.7	3.3	2.7	2.4	2.4	2.2	7.1	5.1	3.8	3.5	2.3	2.4
23	3.7	3.2	2.9	2.4	2.3	2.2	6.4	4.9	4.1	3.1	2.3	2.7
24	3.7	3.1	2.6	2.4	2.4	2.2	11	4.9	8.0	3.5	2.2	2.4
25	3.7	3.2	2.5	2.4	2.5	2.2	6.6	4.8	3.9	3.3	2.8	2.3
26	3.7	3.3	2.4	2.5	2.6	2.2	6.1	6.8	3.7	2.9	2.4	2.2
27	3.7	3.2	2.5	2.5	2.4	2.2	5.8	5.1	4.6	2.9	2.1	2.0
28	3.7	3.1	2.5	2.6	2.4	2.2	5.7	4.8	3.8	2.9	2.0	2.0
29	3.7	3.1	2.4	2.6	2.4	2.3	8.0	4.7	3.7	2.8	2.0	2.0
30	3.7	3.1	2.4	2.6	---	2.2	7.1	4.7	3.4	2.7	2.1	2.0
31	3.7	---	2.4	2.6	---	2.2	---	4.9	---	2.7	2.3	---
TOTAL	117.0	108.5	83.5	77.6	71.1	80.4	129.1	172.8	128.9	100.8	77.7	65.4
MEAN	3.77	3.62	2.69	2.50	2.45	2.59	4.30	5.57	4.30	3.25	2.51	2.18
MAX	4.0	4.5	3.1	2.6	2.9	8.3	11	12	8.0	4.5	4.1	2.7
MIN	3.6	3.1	2.4	2.4	2.3	2.2	2.1	4.7	3.4	2.7	2.0	2.0
AC-FT	232	215	166	154	141	159	256	343	256	200	154	130

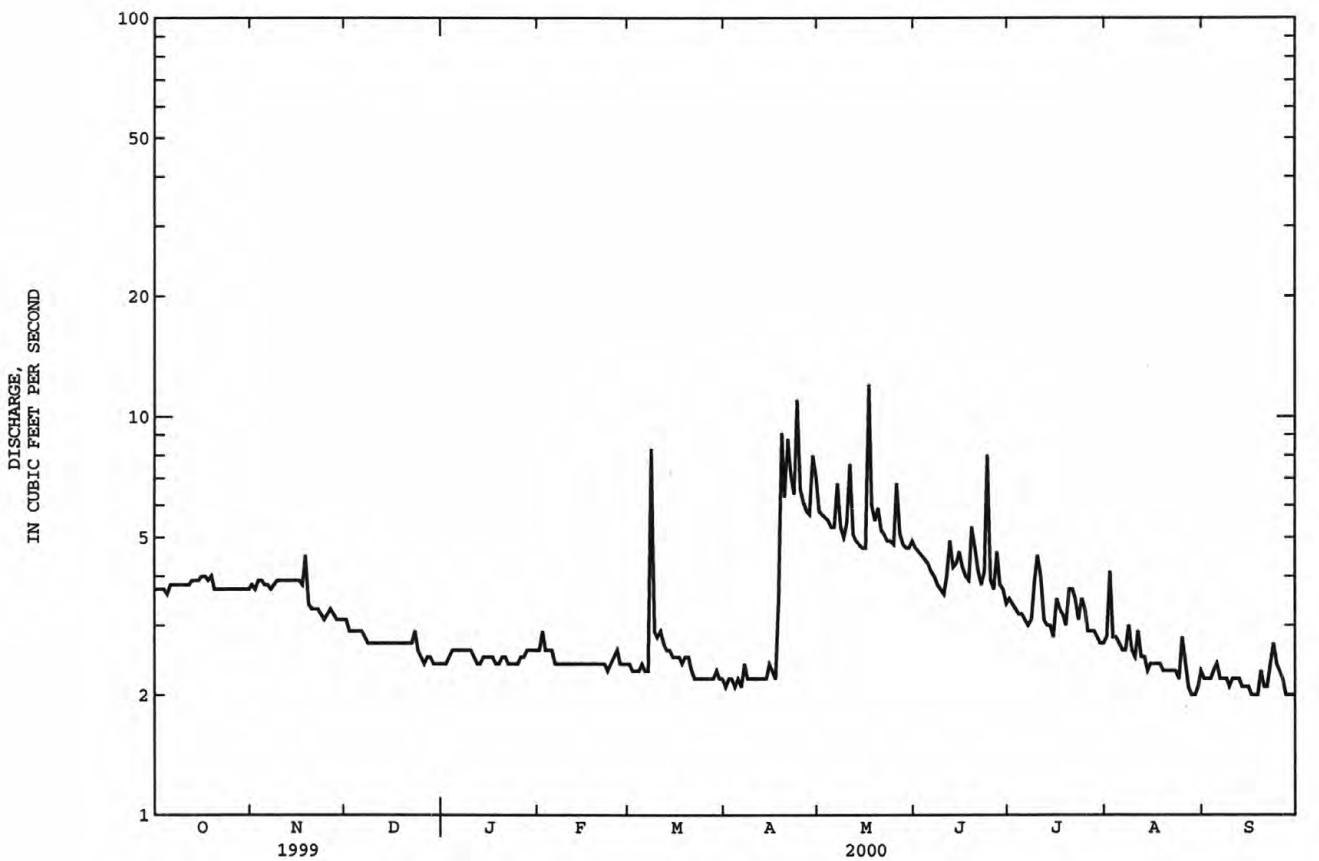
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)*

MEAN	2.09	2.09	1.88	1.78	1.81	1.97	2.46	3.64	4.06	2.93	2.44	1.91
MAX	5.38	4.95	4.38	3.90	3.77	3.81	5.37	7.16	11.4	6.57	5.34	4.02
(WY)	1999	1999	1999	1997	1997	1996	1999	1997	1999	1999	1999	1999
MIN	.19	.23	.25	.23	.25	.40	.63	.74	.71	.80	.31	.20
(WY)	1993	1993	1993	1991	1993	1991	1992	1992	1992	1989	1992	1992

06413650 LIME CREEK AT MOUTH, AT RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000*	
ANNUAL TOTAL	1789.2		1212.8			
ANNUAL MEAN	4.90		3.31		2.42	
HIGHEST ANNUAL MEAN					5.29	1999
LOWEST ANNUAL MEAN					.62	1992
HIGHEST DAILY MEAN	33	Jun 2	12	May 17	33	Jun 2 1999
LOWEST DAILY MEAN	2.4	Dec 26	2.0	Aug 28-29	.10	Jan 15 1991
ANNUAL SEVEN-DAY MINIMUM	2.4	Dec 25	2.1	Sep 12	.13	Jan 11 1991
INSTANTANEOUS PEAK FLOW			37	May 17	505	Jun 2 1999
INSTANTANEOUS PEAK STAGE			2.49	May 17	5.71	Jun 2 1999
ANNUAL RUNOFF (AC-FT)	3550		2410		1760	
10 PERCENT EXCEEDS	7.9		4.9		4.7	
50 PERCENT EXCEEDS	3.9		2.8		2.0	
90 PERCENT EXCEEDS	2.8		2.2		.48	

* Period reflects only complete years.



06414000 RAPID CREEK AT RAPID CITY, SD

LOCATION.--Lat 44°05'09", long 103°14'31", in NE¼ SE¼ SW¼ sec.35, T.2 N., R.7 E., Pennington County, Hydrologic Unit 10120110, on left bank 1,300 ft upstream from 12th Street in Rapid City and 3.6 mi downstream from Canyon Lake Dam.

DRAINAGE AREA.--410 mi^2, approximately.

PERIOD OF RECORD.--June 1903 to November 1906, July 1942 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 3,230.14 ft above sea level. Prior to Nov. 30, 1906, nonrecording gage at site 1.0 mi downstream at different datum, and June 10, 1972, to Nov. 1, 1972, nonrecording gage at site 800 ft downstream at datum 0.80 ft higher. July 1942 to June 9, 1972, water-stage recorder at site 300 ft downstream at datum 0.80 ft higher (destroyed by flood).

REMARKS.--Records good. Several small diversions upstream from station to municipal park pools and for irrigation of about 320 acres. Flow regulated by Pactola Dam 25.4 mi upstream since Aug. 22, 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to Sept. 30, 1963, 3,300 ft^3/s, July 13, 1962, gage height, 8.37 ft, datum then in use; minimum daily discharge, 2.0 ft^3/s, Apr. 20, 1962. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. National Weather Service telemeter at station. U.S. Army Corps of Engineers satellite data-collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 13, 1920, reached a stage of 14.4 ft present datum, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	57	106	112	84	90	93	197	155	110	82	66
2	70	58	105	113	103	89	94	181	151	109	98	66
3	70	57	104	111	95	90	95	177	150	107	80	66
4	69	56	105	91	86	90	93	176	129	106	76	65
5	67	55	105	99	91	90	91	167	126	94	74	64
6	65	56	104	95	90	90	92	167	123	90	74	65
7	64	56	104	94	88	91	95	177	108	88	71	68
8	63	54	105	93	87	138	94	170	103	88	68	67
9	57	54	110	96	89	102	93	167	99	93	62	65
10	55	54	111	90	89	100	93	171	97	98	61	66
11	54	49	112	89	88	98	92	188	99	119	e62	66
12	53	42	113	91	87	96	93	175	105	101	e61	67
13	54	45	113	86	88	96	90	174	103	92	e61	64
14	56	51	112	97	89	95	95	173	102	93	e63	60
15	55	51	112	96	95	95	103	173	105	91	69	59
16	55	52	113	93	91	94	103	170	102	93	71	54
17	56	53	112	92	89	94	101	223	101	95	e71	52
18	57	62	112	91	89	94	108	203	99	89	e71	52
19	57	56	111	91	89	95	153	214	103	88	e70	56
20	58	55	104	87	90	96	143	215	102	93	e70	58
21	59	55	113	95	90	95	149	207	99	94	e69	60
22	58	55	114	92	90	95	153	197	95	95	69	64
23	58	54	119	86	89	93	156	176	94	90	65	67
24	58	74	113	88	89	91	194	168	154	86	63	63
25	55	102	114	79	91	92	191	151	146	83	62	62
26	55	105	114	95	93	92	200	167	141	83	66	61
27	56	106	113	92	91	92	191	163	146	81	68	60
28	55	106	112	94	90	92	182	158	121	77	65	60
29	57	106	112	92	90	95	215	154	114	80	66	58
30	56	105	111	85	---	94	219	156	111	76	65	58
31	57	---	111	79	---	93	---	158	---	70	66	---
TOTAL	1831	1941	3419	2884	2610	2947	3864	5513	3483	2852	2139	1859
MEAN	59.1	64.7	110	93.0	90.0	95.1	129	178	116	92.0	69.0	62.0
MAX	72	106	119	113	103	138	219	223	155	119	98	68
MIN	53	42	104	79	84	89	90	151	94	70	61	52
AC-FT	3630	3850	6780	5720	5180	5850	7660	10940	6910	5660	4240	3690

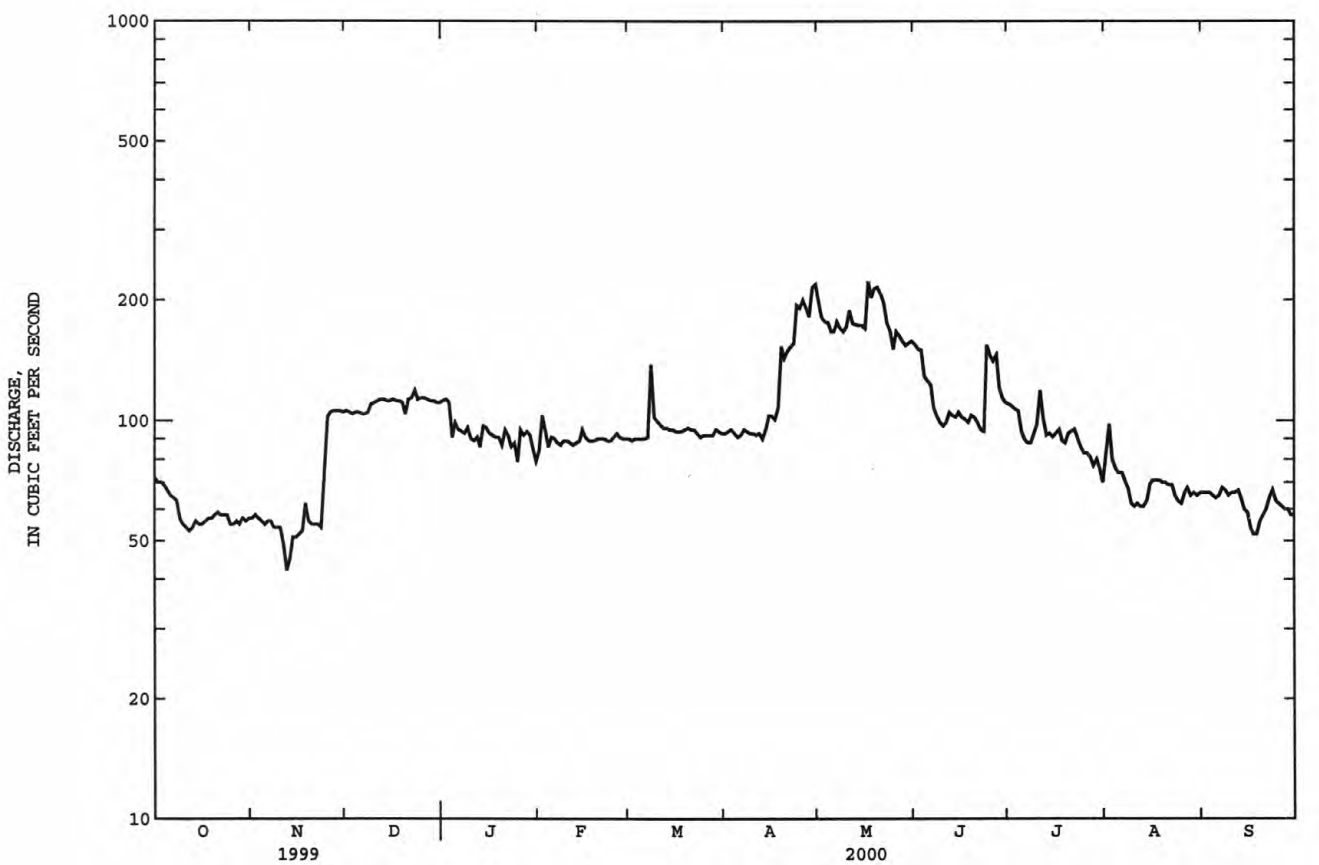
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)*

MEAN	45.4	41.3	39.3	36.7	37.5	47.6	74.1	135	167	107	81.7	59.6
MAX	170	192	167	112	111	152	232	490	505	296	263	158
(WY)	1999	1999	1999	1997	1997	1996	1999	1997	1999	1999	1998	1997
MIN	15.4	20.8	20.1	15.9	15.9	18.3	17.6	42.7	28.0	45.8	39.5	26.5
(WY)	1989	1982	1991	1978	1978	1991	1981	1986	1990	1986	1981	1989

06414000 RAPID CREEK AT RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000*	
ANNUAL TOTAL	66518		35342			
ANNUAL MEAN	182		96.6		72.8	
HIGHEST ANNUAL MEAN					207	1999
LOWEST ANNUAL MEAN					31.5	1990
HIGHEST DAILY MEAN	670	Jun 17	223	May 17	5600	Jun 10 1972
LOWEST DAILY MEAN	42	Nov 12	42	Nov 12	6.7	Apr 17 1981
ANNUAL SEVEN-DAY MINIMUM	49	Nov 11	49	Nov 11	8.6	Jan 24 1978
INSTANTANEOUS PEAK FLOW			332	May 17	50000	Jun 9 1972a
INSTANTANEOUS PEAK STAGE			4.63	May 17	19.66	Jun 9 1972b
ANNUAL RUNOFF (AC-FT)	131900		70100		52760	
10 PERCENT EXCEEDS	369		156		143	
50 PERCENT EXCEEDS	113		92		45	
90 PERCENT EXCEEDS	57		57		23	

* Regulated period only (1964-2000). See REMARKS.
a On basis of slope-area measurement of peak flow.
b From floodmarks.
e Estimated.



06418900 RAPID CREEK BELOW SEWAGE TREATMENT PLANT, NEAR RAPID CITY, SD

LOCATION.--Lat 44°01'24", long 103°05'43", in NW¼ NE¼ NE¼ sec.25, T.1 N., R.8 E., Pennington County, Hydrologic Unit 10120110, on right bank 120 ft downstream from sewage treatment plant effluent and 6.7 mi southeast of Rapid City.

DRAINAGE AREA.--452 mi^2, approximately.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Pactola Dam 40.9 mi upstream since Aug. 22, 1956. Reservoir filled from August 1956 to June 1963. Diversions for irrigation of about 7,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	69	117	130	99	110	110	233	173	139	55	52
2	81	70	116	132	120	109	111	214	161	141	130	53
3	81	72	115	127	116	110	113	205	153	143	70	50
4	84	70	114	114	102	109	111	203	138	139	62	49
5	81	69	115	119	107	109	110	190	129	133	58	51
6	77	69	116	115	109	110	109	190	125	122	56	53
7	72	67	116	111	106	109	116	217	117	117	56	54
8	72	63	114	112	106	217	116	202	110	118	53	53
9	68	e63	121	114	108	131	111	178	109	150	47	48
10	62	e63	121	110	108	126	110	174	111	136	42	50
11	64	63	121	102	105	127	108	242	112	176	40	51
12	62	59	122	110	107	125	112	191	119	142	66	55
13	62	58	124	101	103	126	111	186	136	128	42	53
14	65	64	123	114	104	123	116	184	109	127	40	54
15	66	64	124	117	117	123	129	181	119	115	41	53
16	64	61	127	110	109	123	133	180	115	112	47	53
17	67	62	125	110	108	123	129	313	116	108	50	54
18	69	81	125	109	106	123	124	301	120	105	58	50
19	71	71	123	107	109	121	279	240	119	91	57	53
20	71	65	117	99	110	124	221	246	159	102	47	53
21	67	65	127	112	111	123	278	229	123	95	51	56
22	62	65	129	109	111	122	302	224	119	105	48	67
23	58	63	137	101	109	118	265	201	114	86	46	83
24	63	71	130	102	108	116	431	184	276	83	42	71
25	62	97	127	97	111	114	308	160	186	67	41	69
26	62	107	129	111	122	113	250	182	200	60	50	62
27	61	111	130	110	113	110	232	180	212	57	50	59
28	65	113	129	112	112	107	222	164	182	58	51	59
29	68	117	131	110	112	111	224	160	160	54	50	58
30	69	116	130	100	---	110	337	163	148	53	51	55
31	69	---	130	93	---	109	---	169	---	50	52	---
TOTAL	2126	2248	3825	3420	3168	3731	5428	6286	4270	3312	1649	1681
MEAN	68.6	74.9	123	110	109	120	181	203	142	107	53.2	56.0
MAX	84	117	137	132	122	217	431	313	276	176	130	83
MIN	58	58	114	93	99	107	108	160	109	50	40	48
AC-FT	4220	4460	7590	6780	6280	7400	10770	12470	8470	6570	3270	3330

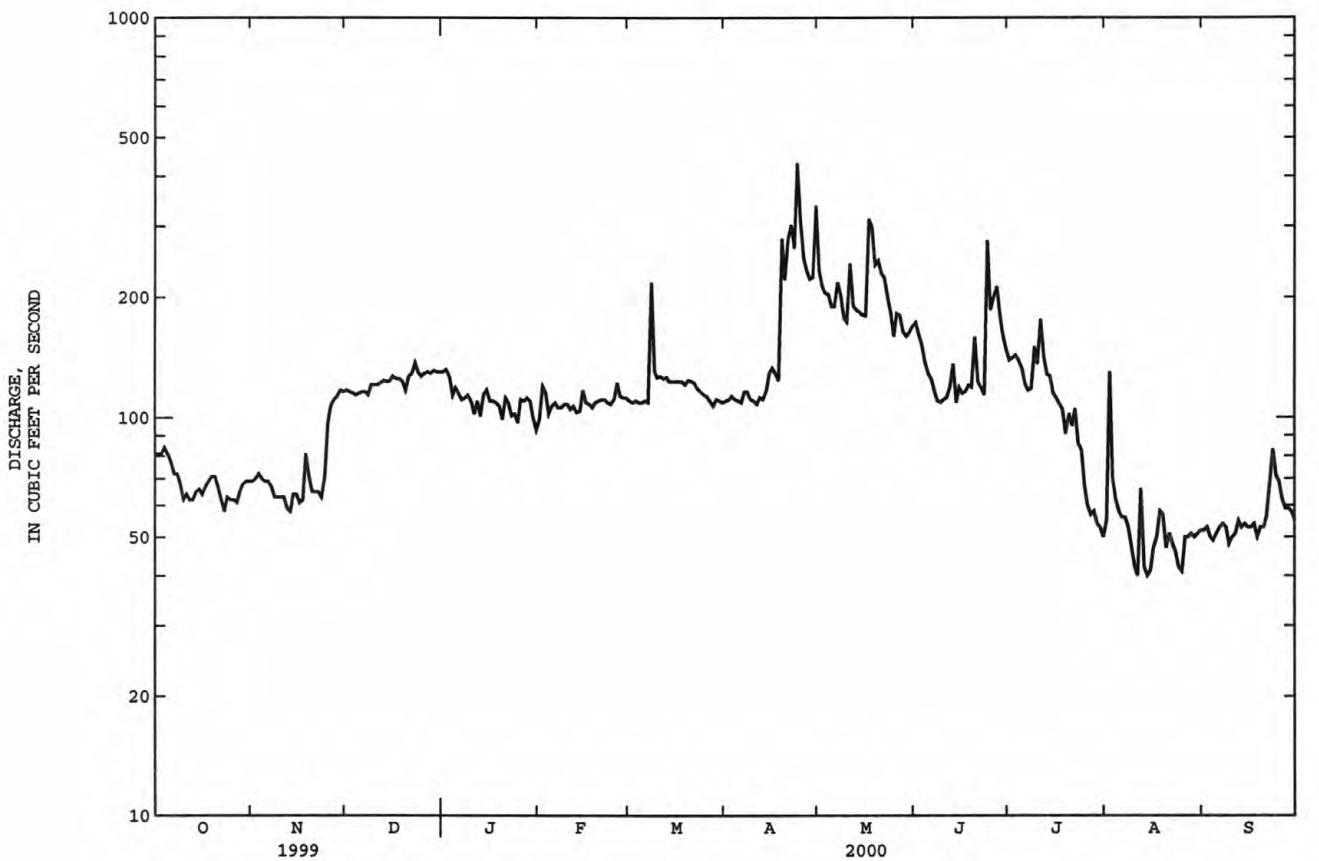
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2000, BY WATER YEAR (WY)

MEAN	61.9	64.0	63.5	61.4	63.5	77.0	109	162	186	114	92.4	64.4
MAX	216	230	196	141	158	172	285	552	523	313	339	192
(WY)	1999	1999	1999	1997	1997	1996	1999	1997	1999	1999	1997	1997
MIN	18.7	23.7	31.5	28.8	32.7	32.3	31.1	30.5	32.7	32.3	33.4	22.2
(WY)	1991	1982	1991	1991	1991	1991	1988	1989	1985	1991	1986	1990

06418900 RAPID CREEK BELOW SEWAGE TREATMENT PLANT, NEAR RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1982 - 2000	
ANNUAL TOTAL	74767		41144			
ANNUAL MEAN	205		112		93.3	
HIGHEST ANNUAL MEAN					239	1997
LOWEST ANNUAL MEAN					35.5	1989
HIGHEST DAILY MEAN	743	Jun 15	431	Apr 24	1270	Jun 3 1997
LOWEST DAILY MEAN	58	Oct 23	40	Aug 11, 14	11	Sep 26 1992
ANNUAL SEVEN-DAY MINIMUM	62	Nov 11	45	Aug 9	13	Oct 4 1990
INSTANTANEOUS PEAK FLOW			784	May 17	2260	Jun 3 1997
INSTANTANEOUS PEAK STAGE			6.05	May 17	10.05	Jun 3 1997
ANNUAL RUNOFF (AC-FT)	148300		81610		67600	
10 PERCENT EXCEEDS	420		184		201	
50 PERCENT EXCEEDS	136		110		55	
90 PERCENT EXCEEDS	69		53		27	

e Estimated.



06421500 RAPID CREEK NEAR FARMINGDALE, SD

LOCATION.--Lat 43°56'31", long 102°51'12", in SW¼ SW¼ SW¼ sec.19, T.1 S., R.11 E., Pennington County, Hydrologic Unit 10120110, on right bank at downstream side of bridge, 2 mi southeast of Farmingdale, and 4.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--602 mi^2.

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,700 ft above sea level, from topographic map. Prior to Sept. 19, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Pactola Dam 67 mi upstream since Aug. 22, 1956 (reservoir filled from August 1956 to June 1963). Maximum discharge prior to regulation, 2,640 ft^3/s, June 21, 1947, gage height, 8.40 ft; no flow at times in 1949, 1952-56, 1958-63. Diversions of irrigation of about 10,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	66	123	e115	e100	96	103	384	176	100	39	41
2	79	68	120	e118	e110	95	102	308	165	88	65	38
3	80	70	116	e118	e109	94	103	270	159	82	99	34
4	81	72	e114	e118	e110	94	105	253	156	74	62	26
5	86	72	e114	e118	e108	93	105	240	138	74	55	26
6	81	71	e115	e118	e108	94	100	221	134	57	50	28
7	77	73	e115	e114	e106	95	103	231	130	55	46	22
8	73	73	e113	e113	e100	169	114	253	121	52	42	24
9	72	70	e120	e115	e95	182	109	221	117	62	38	26
10	68	68	e125	e110	e93	119	108	209	114	97	32	28
11	63	72	e130	e108	e91	120	110	245	113	87	22	28
12	64	71	e126	e110	e90	124	107	235	117	109	23	32
13	61	66	e120	e112	e95	120	109	215	122	96	26	34
14	62	64	e104	e114	e100	120	104	210	115	87	15	30
15	64	71	e111	e117	e105	119	111	208	113	89	15	31
16	64	71	e107	e116	e99	113	127	206	116	89	16	31
17	62	70	e104	e113	e97	114	127	211	112	92	23	30
18	66	75	e104	e111	e95	115	119	381	114	96	30	26
19	68	97	e102	e110	e90	115	321	266	e114	87	39	31
20	70	81	e98	e109	88	117	249	261	e115	82	38	39
21	69	77	e115	e110	89	119	421	249	117	100	31	37
22	66	76	e121	e109	91	114	762	237	110	98	38	35
23	62	76	e122	e108	92	112	905	223	101	95	33	50
24	59	75	e124	e107	90	109	1150	203	85	83	27	69
25	64	89	e128	e105	94	105	1070	194	181	80	28	59
26	62	116	e120	e104	106	106	512	183	126	69	27	59
27	63	122	e117	e104	108	103	390	214	127	63	35	53
28	60	121	e115	e103	97	99	327	182	140	54	37	43
29	63	123	e115	e102	98	99	301	173	116	54	42	39
30	64	123	e115	e101	---	104	582	168	102	49	38	41
31	66	---	e114	e100	---	101	---	169	---	41	37	---
TOTAL	2121	2439	3587	3430	2854	3479	8956	7223	3766	2441	1148	1090
MEAN	68.4	81.3	116	111	98.4	112	299	233	126	78.7	37.0	36.3
MAX	86	123	130	118	110	182	1150	384	181	109	99	69
MIN	59	64	98	100	88	93	100	168	85	41	15	22
AC-FT	4210	4840	7110	6800	5660	6900	17760	14330	7470	4840	2280	2160

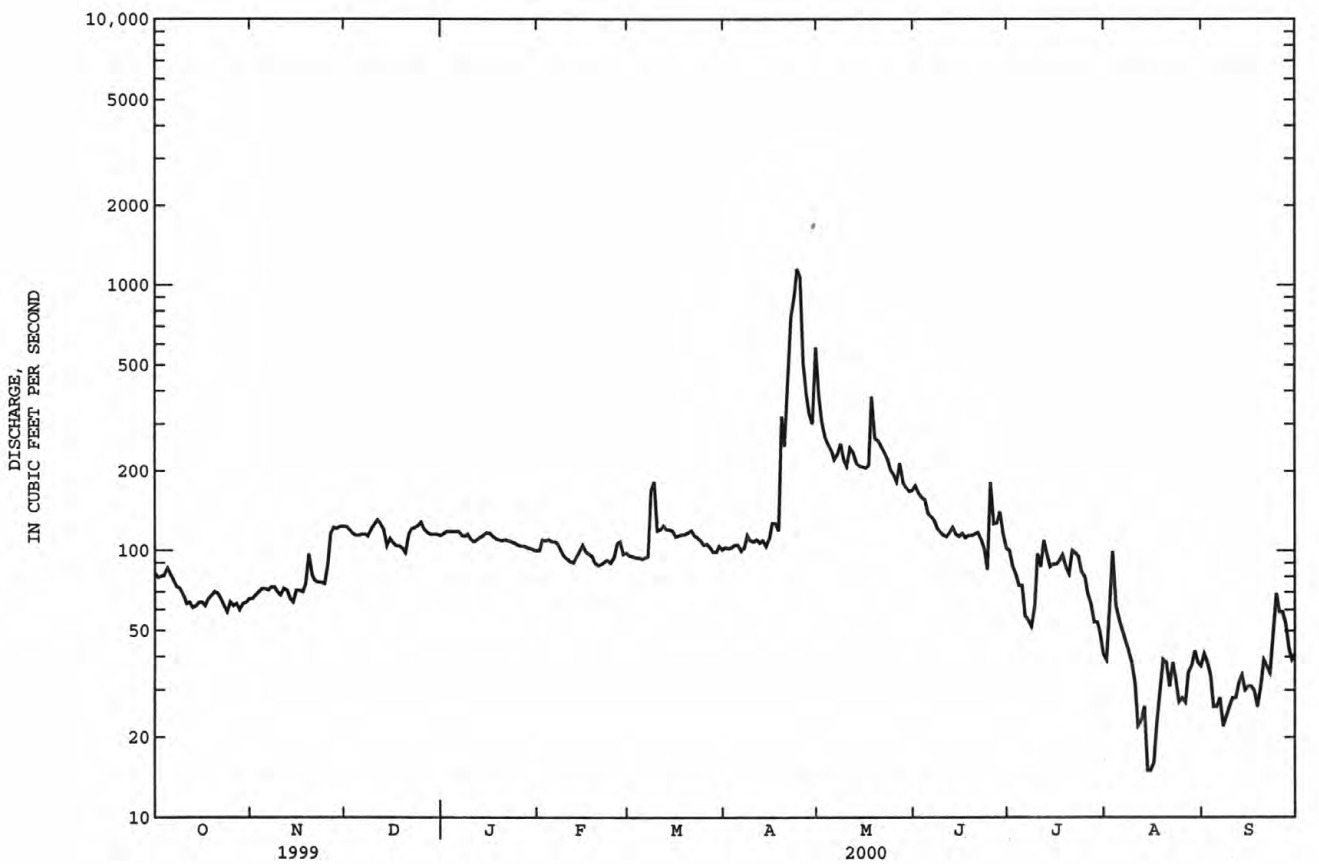
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)*

MEAN	55.9	58.6	53.9	50.6	56.6	79.5	108	155	182	83.3	57.1	47.9
MAX	246	257	215	147	180	176	343	754	607	305	340	155
(WY)	1999	1999	1999	1997	1997	1996	1999	1997	1997	1999	1997	1997
MIN	17.3	29.1	27.2	17.7	15.0	30.9	11.5	17.2	13.1	14.1	13.1	11.2
(WY)	1993	1991	1989	1988	1988	1981	1981	1979	1966	1970	1975	1969

06421500 RAPID CREEK NEAR FARMINGDALE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000*	
ANNUAL TOTAL	78106		42534			
ANNUAL MEAN	214		116		82.4	
HIGHEST ANNUAL MEAN					269	1997
LOWEST ANNUAL MEAN					24.8	1989
HIGHEST DAILY MEAN	864	May 22	1150	Apr 24	2860	Jun 10 1972
LOWEST DAILY MEAN	59	Oct 24	15	Aug 14, 15	.00	May 30 1969a
ANNUAL SEVEN-DAY MINIMUM	62	Oct 23	20	Aug 11	.00	Jun 1 1969
INSTANTANEOUS PEAK FLOW			1600	Apr 25	7320	Jun 10 1972b
INSTANTANEOUS PEAK STAGE			9.60	Apr 25	11.85	Jun 10 1972
ANNUAL RUNOFF (AC-FT)	154900		84370		59680	
10 PERCENT EXCEEDS	473		204		173	
50 PERCENT EXCEEDS	135		102		49	
90 PERCENT EXCEEDS	72		38		18	

* Regulated period only (1964-2000). See REMARKS.
a No flow at times in 1969-71.
b From floodmarks, from rating curve extended above 400 ft^3/s on basis of contracted-opening and flow-over-road measurement of peak flow.
e Estimated.



06422500 BOXELDER CREEK NEAR NEMO, SD

LOCATION.--Lat 44°08'38", long 103°27'16", in SE¼ SE¼ sec.12, T.2 N., R.5 E., Lawrence County, Hydrologic Unit 10120111, on right bank at ranch 0.2 mi upstream from county line, 0.9 mi downstream from Jim Creek, and 4.5 mi southeast of Nemo.

DRAINAGE AREA.--96 mi^2, approximately.

PERIOD OF RECORD.--July 1945 to July 1947, May 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,320.27 ft above sea level. July 1945 to July 1947 nonrecording gage at site 100 ft upstream at different datum. May 17, 1966, to June 9, 1972, water-stage recorder (destroyed by flood) and June 10, 1972, to Aug. 8, 1972, nonrecording gage, both at site 100 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Satellite data-collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1911 reached a stage of about 16 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	16	e12	e14	14	13	59	52	23	13	9.7
2	18	13	15	e11	15	14	14	54	47	22	14	10
3	19	16	14	e10	14	14	12	51	45	24	15	9.5
4	17	15	13	e9.5	e13	15	13	48	43	22	14	9.3
5	17	15	14	e9.5	e14	16	26	45	42	21	13	9.0
6	17	15	14	e10	14	16	18	45	40	20	13	8.9
7	17	15	15	e9.5	14	16	16	60	38	19	14	8.8
8	16	15	19	e10	13	17	14	62	36	18	14	8.7
9	16	14	16	e11	13	10	20	47	35	20	13	8.4
10	16	15	14	e11	12	13	16	45	34	25	12	8.4
11	16	15	14	e11	e13	15	16	108	33	24	12	8.6
12	15	15	15	12	12	13	15	77	32	19	13	8.7
13	15	14	15	e12	e12	12	15	71	31	18	12	8.5
14	15	14	14	e12	e11	12	16	68	35	17	11	8.4
15	15	14	15	13	11	13	15	65	34	17	11	8.4
16	15	14	16	12	e10	14	15	61	34	20	11	8.4
17	15	14	15	12	11	13	20	72	32	24	11	8.1
18	16	17	14	12	e9.5	12	18	103	31	20	11	8.0
19	17	16	14	13	e9.0	13	e58	72	29	18	11	8.1
20	16	16	17	e13	e9.5	15	30	77	29	19	10	8.6
21	16	16	15	12	10	12	36	69	28	24	10	9.1
22	16	13	17	13	12	12	46	64	26	27	10	9.9
23	16	14	18	15	14	18	60	61	25	20	10	11
24	15	13	16	14	15	22	94	58	41	18	9.7	11
25	15	15	15	15	e14	16	132	58	37	17	9.3	11
26	15	18	15	13	12	16	99	64	31	16	9.5	10
27	15	18	14	13	12	15	84	79	31	15	11	9.7
28	15	15	13	14	13	15	74	57	36	15	9.6	9.3
29	15	14	13	14	16	16	69	53	27	14	9.5	9.2
30	15	17	e12	e13	---	15	65	53	25	14	9.6	8.9
31	15	---	e12	e13	---	13	---	55	---	13	9.9	---
TOTAL	493	449	459	374.5	362.0	447	1139	1961	1039	603	356.1	273.6
MEAN	15.9	15.0	14.8	12.1	12.5	14.4	38.0	63.3	34.6	19.5	11.5	9.12
MAX	19	18	19	15	16	22	132	108	52	27	15	11
MIN	15	13	12	9.5	9.0	10	12	45	25	13	9.3	8.0
AC-FT	978	891	910	743	718	887	2260	3890	2060	1200	706	543

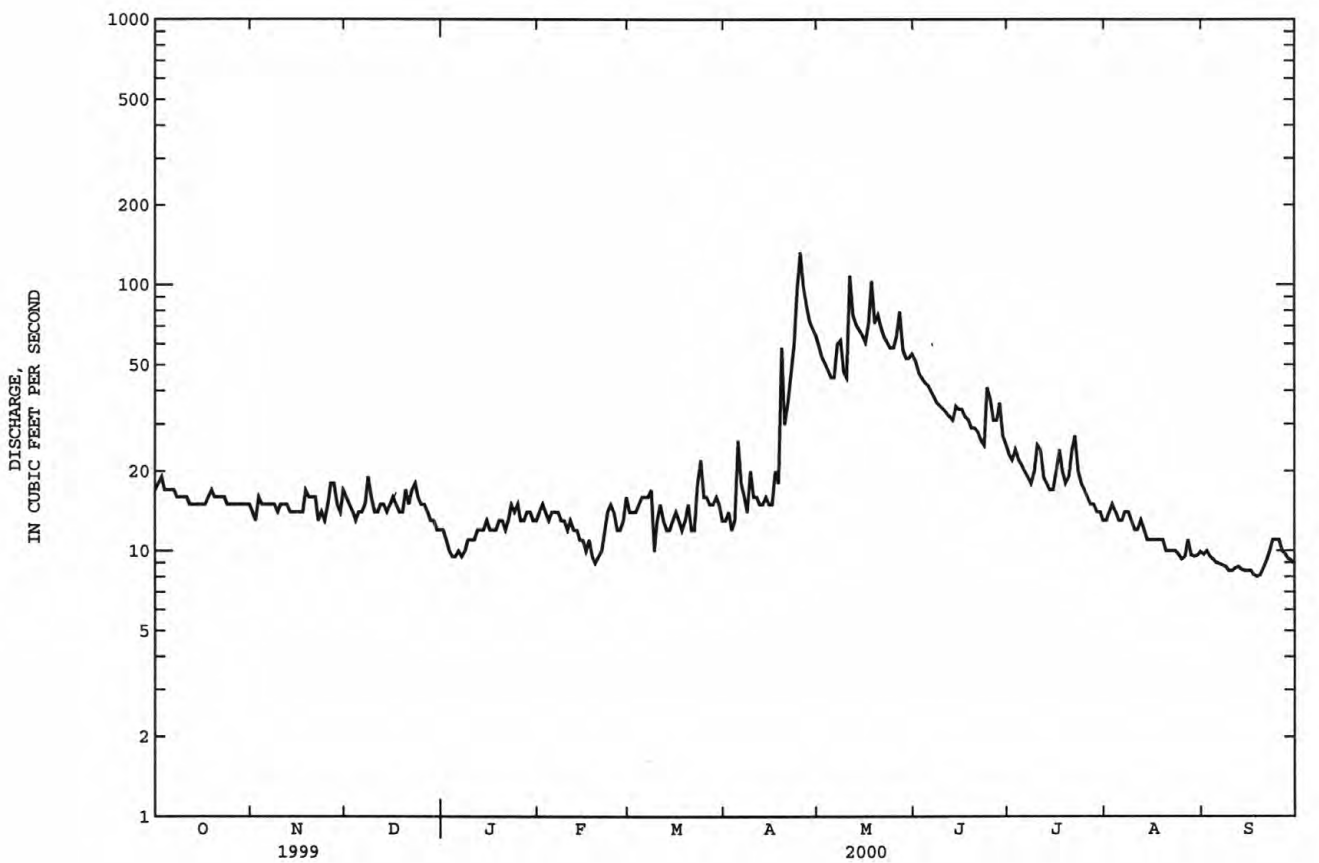
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

MEAN	10.8	9.87	7.04	5.96	6.28	12.8	31.3	53.6	63.8	22.9	14.0	9.45
MAX	71.1	64.1	37.7	26.4	18.2	44.5	149	275	489	64.6	57.0	40.0
(WY)	1999	1999	1999	1999	1997	1997	1997	1995	1972	1999	1998	1997
MIN	1.85	1.66	1.65	1.42	1.36	2.66	3.03	6.20	3.92	1.70	.76	1.17
(WY)	1989	1989	1989	1982	1989	1981	1981	1974	1988	1988	1989	1988

06422500 BOXELDER CREEK NEAR NEMO, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946, 1967 - 1999	
ANNUAL TOTAL	16641		7956.2			
ANNUAL MEAN	45.6		21.7		20.7	
HIGHEST ANNUAL MEAN					63.1	1997
LOWEST ANNUAL MEAN					3.81	1989
HIGHEST DAILY MEAN	296	Jun 15	132	Apr 25	6700	Jun 10 1972
LOWEST DAILY MEAN	11	Mar 5	8.0	Sep 18	.10	Aug 8 1989
ANNUAL SEVEN-DAY MINIMUM	13	Dec 25	8.3	Sep 13	.14	Aug 4 1989a
INSTANTANEOUS PEAK FLOW			178	Apr 25	30100	Jun 9 1972b
INSTANTANEOUS PEAK STAGE			3.27	Apr 25	20.40	Jun 9 1972c
ANNUAL RUNOFF (AC-FT)	33010		15780		14970	
10 PERCENT EXCEEDS	104		49		47a	
50 PERCENT EXCEEDS	24		15		8.6a	
90 PERCENT EXCEEDS	14		9.8		2.5a	

a Reflects water years 1967-2000 only.
b From rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow.
c Site and datum then in use (22.0 ft, present site and datum, from floodmarks).
e Estimated.



06423010 BOXELDER CREEK NEAR RAPID CITY, SD

LOCATION.--Lat 44°07'54", long 103°17'54", in NW¼ SE¼ sec.17, T.2 N., R.7 E., Pennington County, Hydrologic Unit 10120111, near center span on downstream side of bridge on State Highway 79, and 4.0 mi northwest of Rapid City.

DRAINAGE AREA.--128 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,450 ft above sea level, from topographic map.

REMARKS.--Records fair. Considerable loss to sinkholes in reach above gage. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	3.5	3.0	1.8	1.3	.97	1.1	16	29	8.4	5.9	.83
2	6.5	3.4	3.4	1.8	1.3	.99	1.2	12	26	8.4	5.5	.71
3	6.4	3.4	3.8	1.8	1.2	1.1	1.2	11	20	8.1	4.5	.71
4	6.2	3.3	4.0	1.9	1.1	1.1	1.2	8.9	15	8.0	4.0	.74
5	6.1	3.3	4.0	1.8	1.1	1.1	1.2	7.8	16	8.1	4.0	.62
6	6.0	3.2	4.0	1.7	1.1	1.1	1.2	7.0	17	8.3	3.8	.59
7	6.0	3.2	3.9	2.0	1.1	1.0	1.3	6.9	15	7.9	3.2	.60
8	5.6	3.4	3.8	2.8	1.1	1.5	1.3	17	12	7.5	2.9	.78
9	5.5	3.5	3.1	2.7	.97	1.5	1.2	14	10	6.8	2.6	.68
10	5.3	3.5	2.8	2.3	.95	1.3	1.2	9.3	8.9	6.9	2.7	.67
11	5.4	3.2	2.8	2.1	.97	1.1	1.2	30	8.8	7.1	2.8	.58
12	5.5	3.2	2.5	1.9	1.1	1.2	1.3	57	9.8	6.0	3.0	.38
13	5.3	3.2	2.3	1.9	1.2	1.1	1.4	36	8.9	6.3	3.1	.44
14	5.3	3.0	2.5	1.8	1.3	1.2	1.5	34	7.6	5.9	2.8	.43
15	6.0	2.8	2.2	1.6	1.3	1.2	1.5	32	6.3	6.1	2.2	.48
16	5.8	2.8	2.3	1.5	1.2	1.2	1.3	30	4.9	6.1	2.0	.46
17	5.6	2.6	2.4	1.5	1.1	1.2	1.3	30	5.3	6.0	1.8	.50
18	5.4	2.9	2.5	1.5	1.0	1.3	1.3	82	6.3	5.8	1.7	.53
19	4.8	2.9	2.3	1.3	1.1	1.4	4.4	54	6.2	6.6	1.8	.50
20	4.6	2.7	2.1	1.6	1.1	1.4	2.5	47	5.2	6.1	1.8	.43
21	4.7	2.7	2.1	1.5	1.1	1.4	2.5	52	6.9	6.6	1.7	.43
22	4.2	2.7	2.3	1.5	1.1	1.3	2.8	43	10	6.9	1.3	.44
23	4.1	2.5	2.1	1.5	1.1	1.4	3.4	38	11	7.7	1.0	.50
24	3.9	2.7	2.1	1.4	1.1	1.3	3.9	35	11	9.3	.64	.51
25	3.7	2.9	2.0	1.4	1.1	1.3	14	34	9.6	8.7	.43	.49
26	3.8	2.9	2.1	1.5	1.1	1.2	35	34	8.7	8.1	.22	.43
27	3.9	2.7	2.0	1.4	1.1	1.3	31	62	7.5	7.9	.19	.34
28	4.0	2.7	2.0	1.4	1.1	1.3	26	44	7.4	7.5	.27	.38
29	4.1	2.8	2.0	1.3	.95	1.3	22	34	7.5	7.0	.30	.35
30	3.8	3.1	1.9	1.2	---	1.3	20	30	8.3	6.4	.33	.14
31	3.6	---	1.9	1.2	---	1.1	---	28	---	6.0	.28	---
TOTAL	157.5	90.7	82.2	52.6	32.34	38.16	190.4	975.9	326.1	222.5	68.76	15.67
MEAN	5.08	3.02	2.65	1.70	1.12	1.23	6.35	31.5	10.9	7.18	2.22	.52
MAX	6.5	3.5	4.0	2.8	1.3	1.5	35	82	29	9.3	5.9	.83
MIN	3.6	2.5	1.9	1.2	.95	.97	1.1	6.9	4.9	5.8	.19	.14
AC-FT	312	180	163	104	64	76	378	1940	647	441	136	31

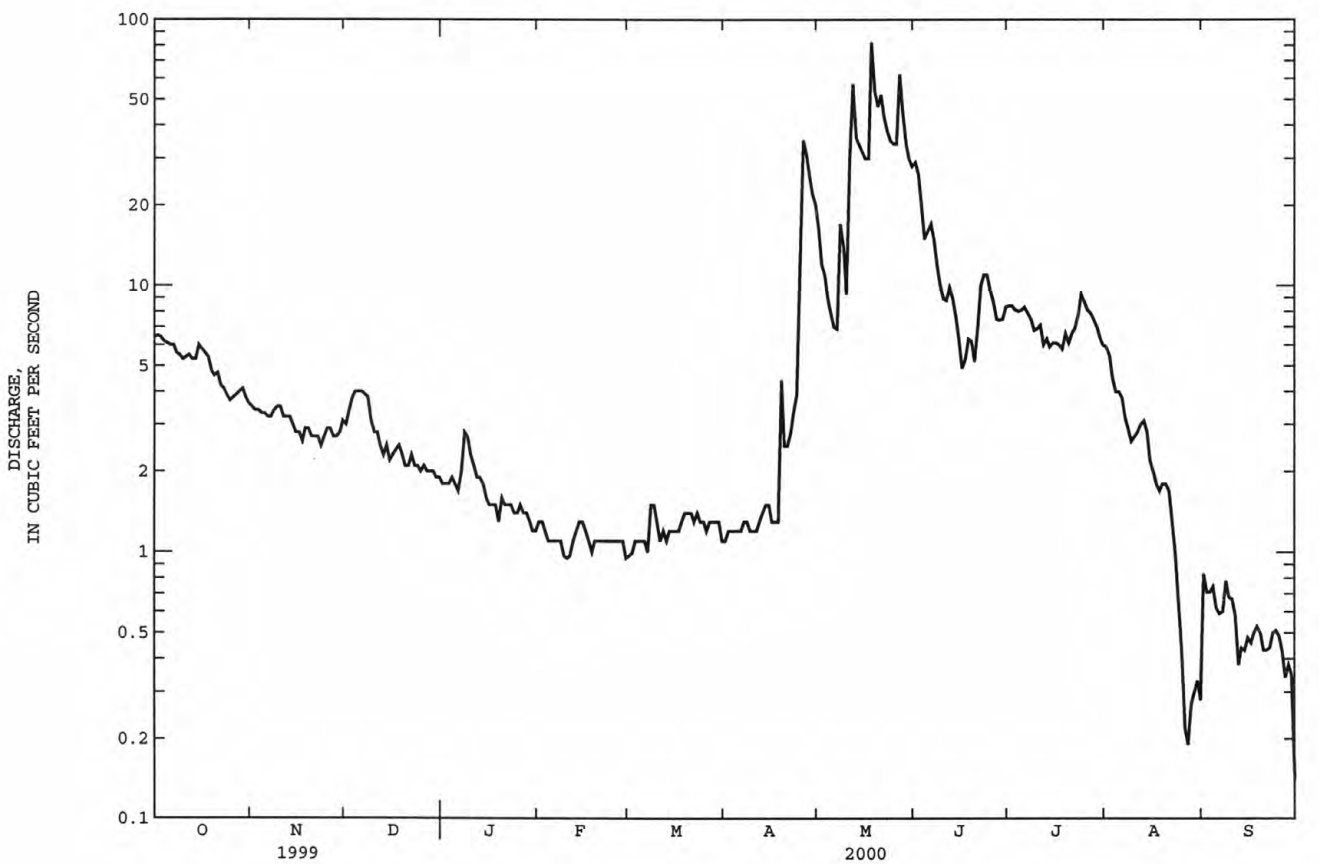
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2000, BY WATER YEAR (WY)

MEAN	2.34	2.16	1.13	.64	.41	1.60	8.73	28.3	29.7	6.40	3.80	1.68
MAX	38.7	37.8	17.9	8.96	5.24	21.7	98.7	200	143	46.3	31.6	13.8
(WY)	1999	1999	1999	1999	1999	1997	1997	1995	1997	1999	1997	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979

06423010 BOXELDER CREEK NEAR RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1979 - 2000	
ANNUAL TOTAL	10501.9		2252.83			
ANNUAL MEAN	28.8		6.16		7.25	
HIGHEST ANNUAL MEAN					42.3	1997
LOWEST ANNUAL MEAN					.000	1979a
HIGHEST DAILY MEAN	267	Jun 15	82	May 18	879	May 9 1995
LOWEST DAILY MEAN	1.9	Dec 30	.14	Sep 30	.00	Oct 1 1978b
ANNUAL SEVEN-DAY MINIMUM	2.0	Dec 25	.29	Aug 25	.00	Oct 1 1978
INSTANTANEOUS PEAK FLOW			118	May 18	1080	May 10 1995c
INSTANTANEOUS PEAK STAGE			31.35	May 18	33.46	May 31 1996
ANNUAL RUNOFF (AC-FT)	20830		4470		5250	
10 PERCENT EXCEEDS	84		14		12	
50 PERCENT EXCEEDS	8.1		2.7		.00	
90 PERCENT EXCEEDS	2.9		.77		.00	

a Also 1980, 1981, 1985-90, 1992.
b For most months in most years.
c Gage height, 33.09 ft.



06423500 CHEYENNE RIVER NEAR WASTA, SD

LOCATION.--Lat 44°04'52", long 102°24'03", in NE¼ NE¼ NW¼ sec.2, T.1 N., R.14 E., Pennington County, Hydrologic Unit 10120111, on left bank at downstream side of highway bridge, 200 ft downstream from railroad bridge, 3.0 mi east of Wasta, and 8.6 mi downstream from Boxelder Creek.

DRAINAGE AREA.--12,800 mi^2, approximately.

PERIOD OF RECORD.--July 1914 to June 1915, August 1928 to June 1932, March 1934 to current year. Monthly discharge only for some periods, published in WSP 1309. Records for Feb. 19-28, 1930, published in WSP 701, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 786: Drainage area. WSP 1279: 1930(M), 1931, 1937. See also Period of Record.

GAGE.--Water-stage recorder. Datum of gage is 2,260.78 ft above sea level. Prior to Aug. 1, 1940, nonrecording gage at site 50 ft upstream; Aug. 1, 1940, to Dec. 3, 1940, nonrecording gage and Dec. 4, 1940, to Sept. 30, 1968, water-stage recorder at present site all at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1972, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Angostura Dam 108 mi upstream since October 1949 and by upstream reservoirs in the Rapid Creek Basin. The most downstream of the reservoirs in the Rapid Creek Basin, Pactola Reservoir, was the last to fill, and reached maximum pool elevation in June 1963 (began filling in August 1956). Prior to Oct. 1, 1963, maximum discharge observed, 46,300 ft^3/s, May 6, 1932, gage height, 13.28 ft, present datum, from rating curve extended above 11,000 ft^3/s on basis of an incomplete discharge measurement, at gage height, 10.65 ft, present datum; maximum gage height observed, 14.5 ft, present datum, June 13, 1915; minimum daily discharge, 1.0 ft^3/s, July 27, 1961. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1920 reached a stage of 18 ft, present datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	258	323	e250	e120	391	393	4310	555	248	142	97
2	273	255	321	e210	e135	377	377	2600	552	232	285	107
3	274	257	321	e180	e150	353	372	2070	504	213	234	109
4	279	263	317	e160	e140	340	362	2120	479	204	202	106
5	280	265	299	e165	e138	333	355	1630	454	193	192	95
6	281	270	e280	e170	e140	325	334	1290	420	186	207	100
7	288	273	e260	e165	e140	331	328	1140	403	171	171	121
8	286	274	e240	e160	e150	1370	327	1110	387	166	152	114
9	279	274	e210	e155	e160	925	329	1020	361	182	146	114
10	274	269	e220	e150	e155	601	325	1020	339	267	141	118
11	268	262	e230	e145	e150	637	319	1040	333	252	128	125
12	261	268	e240	e140	e145	884	319	921	356	211	117	123
13	270	269	e250	e135	e140	640	326	819	343	248	109	123
14	269	262	e250	e140	e130	545	345	739	332	222	121	120
15	268	261	e250	e138	e130	543	348	701	322	211	109	121
16	265	270	e250	e136	e140	452	348	689	315	205	110	127
17	264	270	e250	e133	e150	416	351	724	319	204	110	128
18	265	306	e250	e130	e160	403	340	1060	323	204	113	126
19	266	330	e200	e128	e165	406	4370	1000	318	243	123	126
20	269	401	e170	e126	e170	436	3130	892	318	331	131	128
21	277	353	e150	e124	e200	451	6570	815	345	264	131	138
22	277	324	e175	e122	e300	479	14300	826	327	285	125	152
23	273	306	e200	e120	e500	420	15800	797	290	257	132	154
24	266	283	e250	e119	e700	409	13900	788	409	223	129	171
25	265	278	e300	e118	e800	431	14500	746	464	198	132	209
26	268	304	e400	e120	e660	449	8010	669	344	183	109	184
27	262	331	e500	e130	e540	449	4220	1110	300	171	111	177
28	250	333	e400	e128	430	436	2830	760	302	741	109	166
29	252	328	e346	e125	426	438	2040	658	317	437	105	154
30	254	327	e315	e122	---	442	6080	617	273	195	107	152
31	257	---	e285	e120	---	427	---	571	---	159	91	---
TOTAL	8357	8724	8452	4464	7464	15539	101948	35252	11104	7506	4324	3985
MEAN	270	291	273	144	257	501	3398	1137	370	242	139	133
MAX	288	401	500	250	800	1370	15800	4310	555	741	285	209
MIN	250	255	150	118	120	325	319	571	273	159	91	95
AC-FT	16580	17300	16760	8850	14800	30820	202200	69920	22020	14890	8580	7900

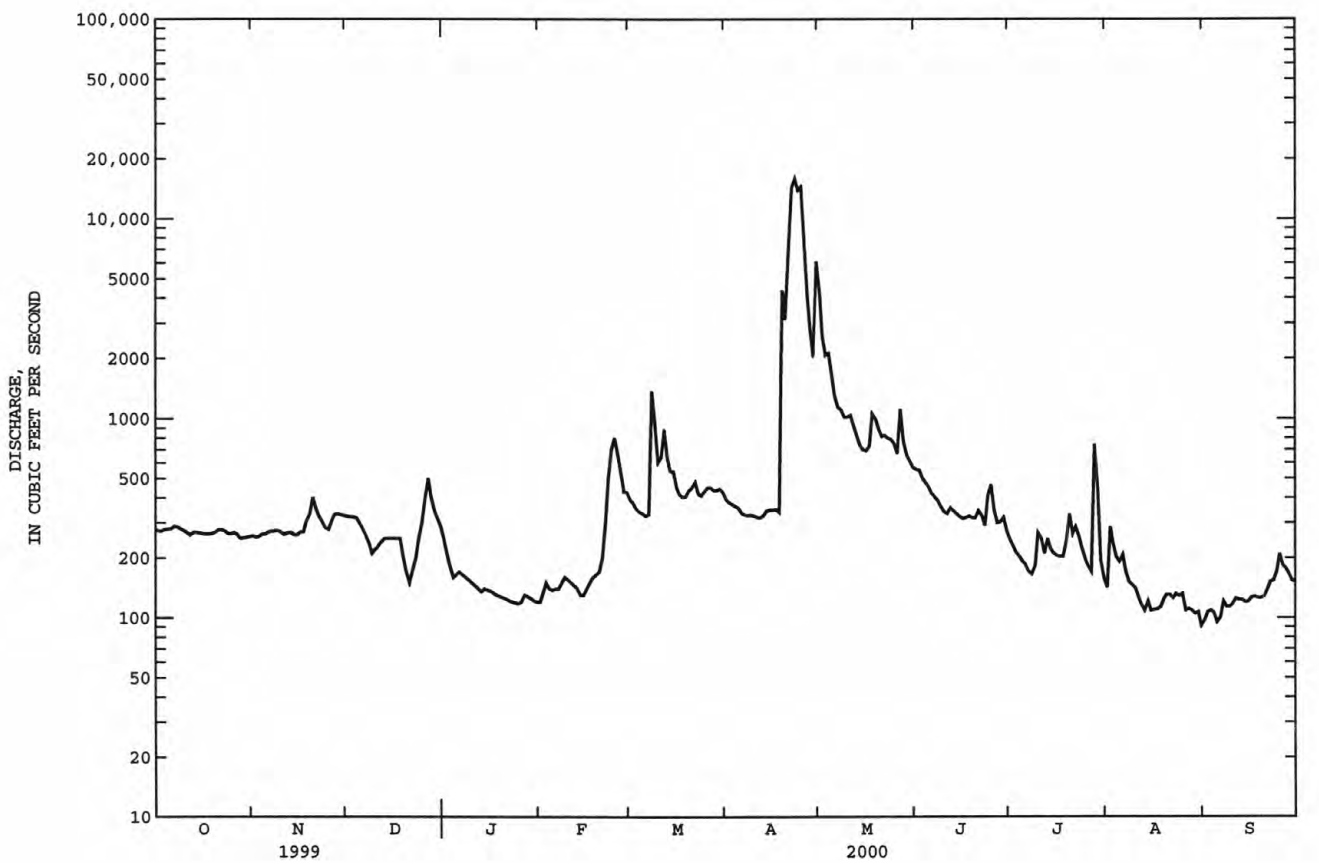
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)*

MEAN	198	187	132	125	236	424	553	849	1015	369	210	157
MAX	1023	1602	551	683	2024	1247	3398	2555	5270	1528	1280	390
(WY)	1999	1999	1999	1997	1997	1994	2000	1997	1967	1969	1997	1997
MIN	58.6	81.4	38.4	5.04	25.1	90.8	68.4	65.8	36.9	34.9	25.4	49.0
(WY)	1991	1989	1991	1991	1991	1981	1981	1989	1989	1989	1989	1975

06423500 CHEYENNE RIVER NEAR WASTA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000*	
ANNUAL TOTAL	300067		217119			
ANNUAL MEAN	822		593		371a	
HIGHEST ANNUAL MEAN					1143	1997
LOWEST ANNUAL MEAN					81.0	1989
HIGHEST DAILY MEAN	8140	Jun 16	15800	Apr 23	19200	Jun 16 1967
LOWEST DAILY MEAN	150	Dec 21	91	Aug 31	3.0	Dec 23 1990
ANNUAL SEVEN-DAY MINIMUM	199	Dec 17	101	Aug 31	4.0	Jan 21 1991
INSTANTANEOUS PEAK FLOW			18500	Apr 22	26900	May 25 1957b
INSTANTANEOUS PEAK STAGE			10.65	Apr 22	16.25	Mar 5 1982c
ANNUAL RUNOFF (AC-FT)	595200		430700		268900	
10 PERCENT EXCEEDS	1730		791		754	
50 PERCENT EXCEEDS	404		269		132	
90 PERCENT EXCEEDS	263		124		55	

* Regulated period only (1964-2000). See REMARKS.
a Median of annual mean discharges, 300 ft^3/s.
b Gage height, 12.82 ft.
c Backwater from ice.
e Estimated.



06424000 ELK CREEK NEAR ROUBAIX, SD

LOCATION.--Lat 44°17'41", long 103°35'47", in SE¼ NE¼ sec.23, T.4 N., R.4 E., Lawrence County, Hydrologic Unit 10120111, on right bank approximately 2.5 mi upstream from mouth of Meadow Creek, 3.0 mi east of Roubaix, and 9.0 mi southwest of Sturgis.

DRAINAGE AREA.--21.5 mi^2.

PERIOD OF RECORD.--July 1945 to July 1947, October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,881 ft above sea level, from topographic map. Prior to July 1947, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.6	5.6	3.8	e5.5	e7.2	6.4	30	18	8.1	5.2	3.7
2	5.7	e4.2	e4.8	e3.2	6.3	e8.5	6.2	28	16	7.8	6.0	3.4
3	5.8	e4.5	e4.7	e3.0	6.5	10	5.7	26	15	7.8	5.6	3.3
4	5.7	5.1	e4.6	e3.2	5.7	11	14	24	15	7.6	5.3	3.4
5	5.5	4.9	e4.2	e3.4	6.0	11	14	22	14	7.5	5.6	3.3
6	5.5	4.9	e4.8	e3.4	5.8	12	10	21	13	7.5	5.1	3.3
7	5.4	4.9	e5.2	e3.6	6.0	10	9.1	32	13	7.2	5.1	3.3
8	5.4	4.8	e4.8	3.9	6.1	8.0	12	24	12	7.2	5.1	3.3
9	5.3	4.8	e4.6	4.4	6.0	e6.4	11	20	12	7.5	5.0	3.1
10	5.2	4.8	e4.8	4.3	5.7	e5.4	11	21	11	9.1	4.7	3.0
11	5.2	4.8	e5.2	5.6	e5.2	e5.8	10	75	11	8.5	4.9	3.1
12	5.2	4.8	e5.2	5.9	5.5	6.3	10	36	11	6.8	5.0	3.2
13	5.2	4.7	e4.8	5.4	5.8	e6.1	11	33	11	6.4	4.6	3.0
14	5.1	4.7	e4.4	5.7	5.9	e5.8	11	31	13	6.4	4.1	2.9
15	5.2	4.7	e4.4	5.6	6.1	6.3	9.7	29	15	6.3	4.1	2.9
16	5.2	4.7	e4.6	5.5	5.7	e5.8	13	27	13	11	4.3	2.9
17	5.2	4.6	e5.0	5.4	5.8	e5.5	12	42	12	8.7	4.2	2.8
18	5.8	e4.4	5.0	5.2	e5.4	5.4	12	35	11	7.7	4.1	2.8
19	5.9	e4.2	e4.5	5.0	e5.4	5.1	13	27	10	6.7	4.0	3.3
20	5.6	e4.3	e4.2	5.4	e5.8	5.2	32	30	11	6.7	4.0	3.7
21	5.2	e4.4	e3.8	e4.8	7.3	5.9	23	26	10	7.6	3.9	3.5
22	5.0	e4.2	e4.2	5.0	8.3	6.5	31	24	9.1	8.7	4.0	4.3
23	5.0	e4.2	e4.5	e4.8	9.8	8.4	48	22	9.1	6.4	4.0	4.4
24	5.0	e4.5	e4.5	e4.2	11	8.7	72	21	14	6.1	3.8	4.5
25	4.9	e4.7	4.9	e4.4	9.3	7.5	82	20	16	5.9	3.5	4.3
26	4.8	e4.7	4.6	e5.0	e7.2	7.8	66	31	10	5.8	3.5	3.9
27	4.8	e4.7	4.4	6.1	e6.8	8.7	52	24	13	5.6	3.5	3.5
28	4.8	e5.0	4.6	5.8	e6.2	9.4	44	19	12	5.6	3.5	3.4
29	4.9	e5.5	4.4	e5.0	e5.8	9.3	39	18	9.3	5.4	3.6	3.4
30	4.8	5.5	4.1	e3.8	---	7.5	35	19	8.5	5.3	3.6	3.4
31	4.8	---	4.0	e4.5	---	6.4	---	19	---	5.2	3.9	---
TOTAL	162.6	140.8	143.4	144.3	187.9	232.9	725.1	856	368.0	220.1	136.8	102.3
MEAN	5.25	4.69	4.63	4.65	6.48	7.51	24.2	27.6	12.3	7.10	4.41	3.41
MAX	5.9	5.5	5.6	6.1	11	12	82	75	18	11	6.0	4.5
MIN	4.8	4.2	3.8	3.0	5.2	5.1	5.7	18	8.5	5.2	3.5	2.8
AC-FT	323	279	284	286	373	462	1440	1700	730	437	271	203

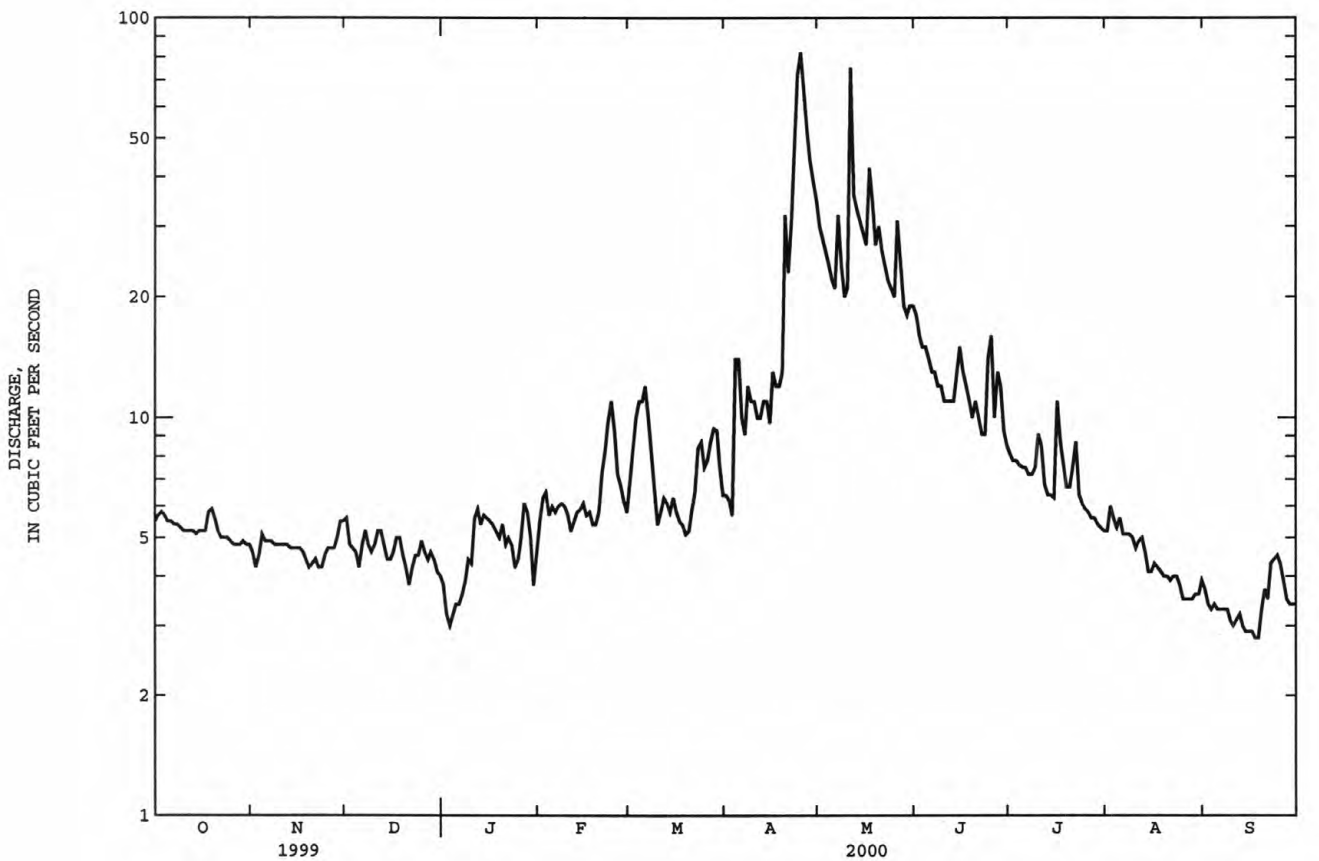
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2000, BY WATER YEAR (WY)

MEAN	8.34	6.10	4.38	4.02	4.40	12.8	31.3	39.8	28.7	10.6	8.26	4.93
MAX	37.3	21.3	11.0	7.46	7.47	28.2	78.1	113	53.9	18.7	22.5	9.86
(WY)	1999	1999	1999	1999	1999	1994	1997	1995	1995	1997	1998	1998
MIN	1.05	1.74	1.08	.96	.90	3.45	4.79	4.78	5.04	3.74	2.00	1.40
(WY)	1993	1993	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992

06424000 ELK CREEK NEAR ROUBAIX, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1992 - 2000	
ANNUAL TOTAL	5523.2		3420.2			
ANNUAL MEAN	15.1		9.34		13.7	
HIGHEST ANNUAL MEAN					22.5	1997
LOWEST ANNUAL MEAN					2.99	1992
HIGHEST DAILY MEAN	101	Jun 14	82	Apr 25	500	May 8 1995
LOWEST DAILY MEAN	3.8	Dec 21	2.8	Sep 17	.43	Feb 25 1993
ANNUAL SEVEN-DAY MINIMUM	4.3	Nov 18	2.9	Sep 12	.69	Feb 21 1993
INSTANTANEOUS PEAK FLOW			123	May 11	515	May 8 1995
INSTANTANEOUS PEAK STAGE			7.80	May 11	12.32	May 8 1995
ANNUAL RUNOFF (AC-FT)	10960		6780		9900	
10 PERCENT EXCEEDS	33		20		35	
50 PERCENT EXCEEDS	7.9		5.6		5.8	
90 PERCENT EXCEEDS	4.7		3.7		2.2	

e Estimated.



06425100 ELK CREEK NEAR RAPID CITY, SD

LOCATION.--Lat 44°14'25", long 103°09'03", in NE¼ NE¼ sec.9, T.3 N., R.8 E., Meade County, Hydrologic Unit 10120111, on section line near right upstream corner of county road bridge, 1.7 mi downstream from Morris Creek tributary, and 10 mi north of Exit 61 and I-90 northeast of Rapid City.

DRAINAGE AREA.--190 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,950 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some flow is pumped from stream for irrigation. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	e16	e18	e16	e12	e23	16	43	35	20	e16	6.4
2	18	e16	e18	e15	e16	20	16	e38	33	20	e16	6.3
3	19	e16	e18	e14	e17	18	15	e36	31	19	e17	6.3
4	19	e16	e16	e14	e17	18	16	e33	31	20	e18	6.9
5	20	e16	e15	e15	e16	18	16	e31	30	19	e20	7.1
6	19	e16	e14	e15	e16	20	15	e30	30	18	e20	6.4
7	18	e16	e13	e16	e16	18	15	31	30	17	e20	6.2
8	18	e16	e13	e16	e17	17	16	49	29	17	e18	6.5
9	18	e16	e13	e17	e17	20	15	55	28	17	e16	6.2
10	17	e16	e14	e17	e16	22	15	38	27	e18	e15	6.1
11	17	e16	e14	e16	e15	22	14	75	26	e30	e14	6.1
12	e16	e16	e15	e16	e13	26	14	182	25	e27	16	6.0
13	e16	e16	e15	e14	e11	34	15	103	25	e25	e15	6.0
14	e16	e16	e15	e16	e10	24	14	66	25	e22	e15	5.8
15	e16	e17	e16	e16	e10	23	14	51	25	e21	e14	5.7
16	e16	e17	e18	e16	e10	25	15	45	25	e30	e14	5.8
17	e16	e18	e17	e15	e10	26	15	42	24	e28	14	5.9
18	e16	e19	e17	e16	e10	25	15	62	24	e27	13	5.8
19	e16	e19	e15	e15	e10	30	26	78	24	e29	6.6	5.8
20	e16	e20	e13	e14	e11	31	50	57	25	e40	6.1	6.1
21	e16	e20	e14	e15	e11	28	86	49	24	e37	5.9	6.6
22	e16	e20	e15	e15	e12	28	217	44	23	e34	6.4	7.3
23	e16	e20	e16	e14	e14	29	290	39	25	e30	7.0	8.7
24	e16	e20	e16	e15	e15	29	248	36	30	e27	8.1	9.2
25	e16	e20	e17	e14	e16	27	508	35	30	e23	8.5	9.6
26	e16	e20	e18	e14	e17	23	185	37	26	e20	8.3	10
27	e16	e20	e18	e13	e18	21	103	52	24	e19	8.3	10
28	e16	e20	e18	e14	e20	19	64	55	24	e18	7.6	11
29	e16	e19	e17	e14	e22	19	51	40	22	e18	7.4	11
30	e16	e19	e17	e13	---	18	50	35	21	e17	7.1	8.0
31	e16	---	e16	e13	---	17	---	35	---	e17	7.2	---
TOTAL	521	532	489	463	415	718	2149	1602	801	724	385.5	214.8
MEAN	16.8	17.7	15.8	14.9	14.3	23.2	71.6	51.7	26.7	23.4	12.4	7.16
MAX	20	20	18	17	22	34	508	182	35	40	20	11
MIN	16	16	13	13	10	17	14	30	21	17	5.9	5.7
AC-FT	1030	1060	970	918	823	1420	4260	3180	1590	1440	765	426

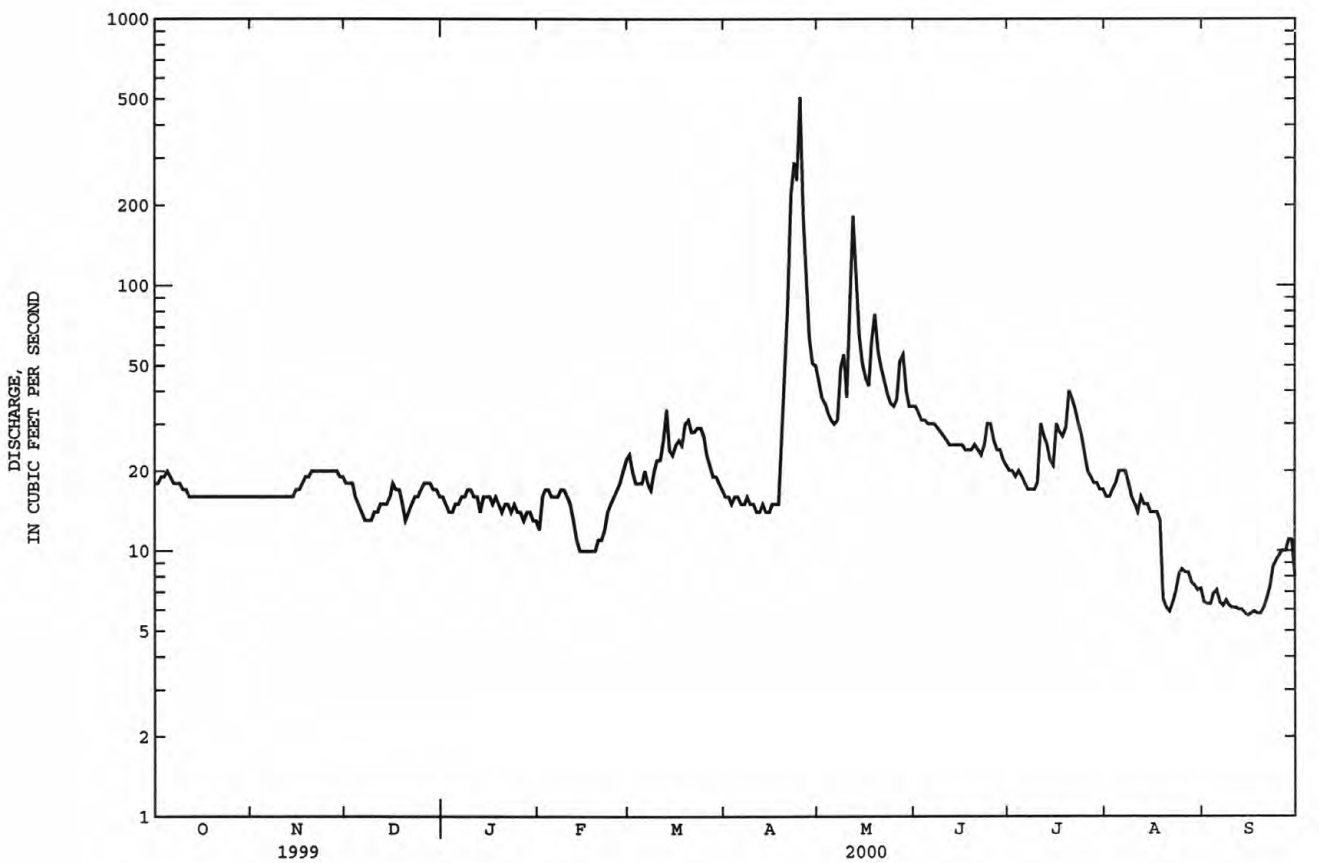
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000, BY WATER YEAR (WY)

MEAN	9.93	7.18	4.54	10.0	14.7	11.2	20.4	57.6	36.3	11.1	7.20	4.62
MAX	79.6	58.7	28.0	121	149	43.2	125	299	175	43.4	40.5	20.2
(WY)	1999	1999	1999	1997	1997	1996	1997	1995	1996	1997	1997	1999
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1988	1980	1980

06425100 ELK CREEK NEAR RAPID CITY, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1980 - 2000	
ANNUAL TOTAL	15674		9014.3			
ANNUAL MEAN	42.9		24.6		16.2	
HIGHEST ANNUAL MEAN					77.1	1997
LOWEST ANNUAL MEAN					.000	1992
HIGHEST DAILY MEAN	543	Apr 23	508	Apr 25	2360	May 9 1995
LOWEST DAILY MEAN	13	Dec 7	5.7	Sep 15	.00	Oct 1 1979a
ANNUAL SEVEN-DAY MINIMUM	14	Dec 5	5.8	Sep 13	.00	Oct 1 1979
INSTANTANEOUS PEAK FLOW			881	Apr 25	3120	May 27 1996
INSTANTANEOUS PEAK STAGE			9.91	Apr 25	12.77	May 27 1996
ANNUAL RUNOFF (AC-FT)	31090		17880		11760	
10 PERCENT EXCEEDS	96		36		30	
50 PERCENT EXCEEDS	21		17		1.4	
90 PERCENT EXCEEDS	16		8.6		.00	

a No flow for many days in most years.
e Estimated.



06425500 ELK CREEK NEAR ELM SPRINGS, SD

LOCATION.--Lat 44°14'54", long 102°30'10", in SW¼ NW¼ sec.1, T.3 N., R.13 E., Meade County, Hydrologic Unit 10120111, on left bank near downstream end of county highway bridge, 1.4 mi downstream from Hay Draw, 5.0 mi southeast of Elm Springs, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--540 mi^2, approximately.

PERIOD OF RECORD.--July 1949 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,304.49 ft above sea level. Prior to Nov. 2, 1976, nonrecording gage, and prior to Feb. 1, 1967, at site 350 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 17 ft, at former site, in May 1920, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	17	19	e17	e12	31	39	560	52	27	8.1	.79
2	17	18	20	e17	e13	31	37	344	48	26	7.3	.67
3	16	18	22	e16	e13	31	37	227	45	24	7.8	.66
4	18	18	20	e16	e12	30	36	165	43	23	7.6	.62
5	17	17	e19	e17	e12	29	34	135	40	22	6.8	.59
6	17	17	e17	e17	e12	29	33	113	37	20	7.3	.60
7	17	17	e15	e17	e12	29	35	104	34	19	7.2	.55
8	18	17	e13	e17	e13	75	37	90	33	19	6.8	.58
9	18	17	e12	e16	e13	78	34	81	32	25	6.3	.52
10	18	18	e13	e16	e12	61	32	94	30	48	5.6	.51
11	19	17	e13	e16	e12	54	32	105	29	26	4.9	.55
12	18	17	e13	e15	e12	68	31	100	27	21	4.4	.55
13	18	16	e12	e15	e11	70	29	248	27	19	3.8	.55
14	18	17	e12	e15	e11	80	26	254	27	20	3.5	.54
15	18	18	e12	e15	e12	114	27	180	26	19	3.0	.53
16	17	19	e12	e15	e12	83	26	135	26	18	2.8	.54
17	18	20	e12	e15	e12	78	24	115	24	20	2.9	.54
18	17	20	e11	e15	e12	72	22	104	24	19	2.6	.52
19	17	25	e11	e15	e12	77	1610	96	24	21	2.3	.54
20	17	24	e10	e14	e12	66	1340	107	24	28	2.0	.56
21	17	25	e10	e14	e13	73	1670	104	23	23	2.0	.55
22	18	26	e10	e14	e15	72	2000	86	22	23	1.7	.56
23	18	23	e11	e14	e17	70	1380	76	21	23	1.6	.56
24	18	26	e12	e14	e20	66	942	67	23	17	1.5	.58
25	18	26	e14	e14	e26	68	1750	62	25	15	1.2	.55
26	18	23	e15	e13	27	58	1540	61	25	13	1.1	.56
27	18	23	e17	e13	30	57	633	73	28	12	1.0	.57
28	19	24	e18	e13	27	53	404	65	32	11	.92	.59
29	17	21	e20	e13	30	49	283	66	32	9.8	.86	.58
30	17	21	e19	e12	---	45	660	65	28	9.4	.82	.60
31	17	---	e18	e12	---	42	---	57	---	8.8	.80	---
TOTAL	543	605	452	462	447	1839	14783	4139	911	629.0	116.50	17.21
MEAN	17.5	20.2	14.6	14.9	15.4	59.3	493	134	30.4	20.3	3.76	.57
MAX	19	26	22	17	30	114	2000	560	52	48	8.1	.79
MIN	15	16	10	12	11	29	22	57	21	8.8	.80	.51
AC-FT	1080	1200	897	916	887	3650	29320	8210	1810	1250	231	34

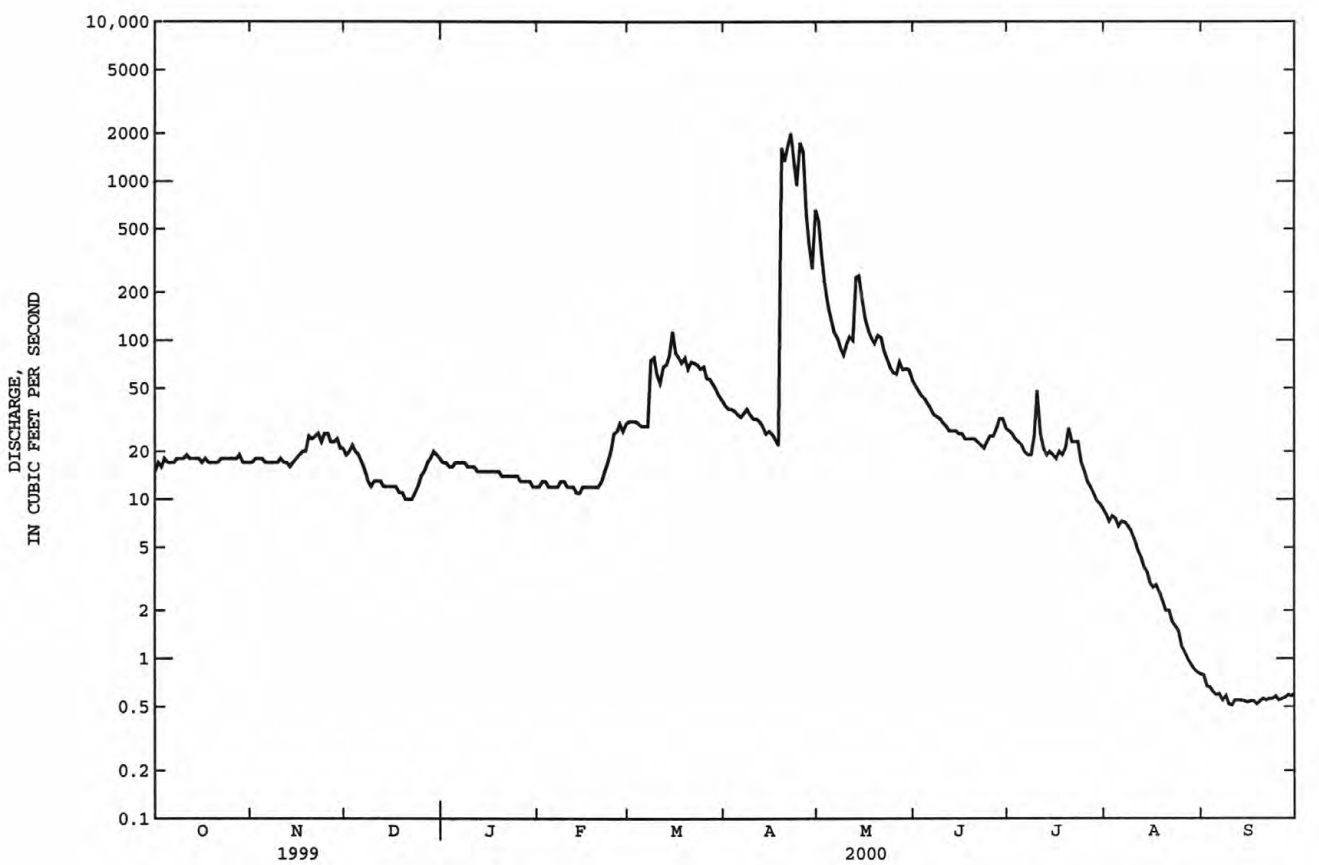
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)

MEAN	10.5	4.71	2.63	4.44	17.4	41.5	62.7	105	71.6	13.3	4.53	2.17
MAX	295	87.2	23.7	103	334	327	493	519	708	88.8	40.4	26.8
(WY)	1999	1999	1999	1997	1997	1978	2000	1995	1967	1996	1997	1951
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1950	1950	1950	1950	1950	1957	1959	1955	1955	1950	1952	1950

06425500 ELK CREEK NEAR ELM SPRINGS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	27581		24943.71			
ANNUAL MEAN	75.6		68.2		28.4	
HIGHEST ANNUAL MEAN					135	1997
LOWEST ANNUAL MEAN					.000	1961
HIGHEST DAILY MEAN	773	Jun 15	2000	Apr 22	5010	May 28 1996
LOWEST DAILY MEAN	10	Dec 20	.51	Sep 10	.00	Oct 1 1949a
ANNUAL SEVEN-DAY MINIMUM	11	Dec 17	.54	Sep 9	.00	Oct 1 1949
INSTANTANEOUS PEAK FLOW			3000	Apr 19	8540	Mar 29 1952b
INSTANTANEOUS PEAK STAGE			11.70	Apr 19	16.22	Feb 18 1997c
ANNUAL RUNOFF (AC-FT)	54710		49480		20560	
10 PERCENT EXCEEDS	162		80		40	
50 PERCENT EXCEEDS	37		18		.02	
90 PERCENT EXCEEDS	17		1.2		.00	

a No flow for long periods in most years.
b Gage height, 10.61 ft, from floodmarks, site and datum then in use, from rating curve extended above 5,100 ft^3/s.
c Floodmark from ice jam.
e Estimated.



06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY

LOCATION.--Lat 44 22'55", long 104 46'45", in $NW^1/_4$ $NW^1/_4$ 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.--2,000 mi^2, approximately.

PERIOD OF RECORD.--March 1952 to current year (monthend contents only).

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, and May 15, 1958, to Sept. 30, 1968, water-stage recorder, all at present site and datum.

REMARKS.--Reservoir is formed by a zoned earth-fill dam completed by the Bureau of Reclamation Oct. 25, 1952. Storage began Feb. 12, 1952. Inactive storage, between elevations 4,036.0 ft and 4,051.0 ft, 7,230 acre-ft. Total active conservation pool below elevation 4,099.3 ft (crest of spillway), 185,800 acre-ft. Dead storage below elevation 4,036.0 ft, 726 acre-ft. Figures given herein represent inactive and active contents above elevation 4,036.0 ft. The reservoir provides flood control and water for irrigation in Wyoming and near Belle Fourche, SD.

COOPERATION.--Records of elevation and contents provided by the Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 200,744 acre-ft, May 21, 1978, elevation, 4,100.38 ft; minimum daily contents (since appreciable storage was attained), 6,030 acre-ft, Mar. 8, 9, 1955, elevation, 4,046.35 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 175,700 acre-ft, May 21, elevation, 4,097.39 ft; minimum, 158,500 acre-ft, Sept. 30, elevation, 4,095.36 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,097.20	174,000	--
Oct. 31	4,096.94	171,800	-2,200
Nov. 30	4,096.86	171,000	-800
Dec. 31	4,096.87	171,100	+100
CAL YR 1999	--	--	-5,000
Jan. 31	4,096.92	171,600	+500
Feb. 29	4,097.06	174,200	+1,400
Mar. 31	4,097.22	174,600	+1,400
Apr. 30	4,097.27	174,600	+400
May 31	4,097.35	175,300	+700
June 30	4,097.04	172,600	-2,700
July 31	4,096.55	168,400	-4,200
Aug. 31	4,095.80	162,100	-6,300
Sept. 30	4,095.36	158,500	-3,600
WTR YR 2000	--	--	-15,300

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06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE¼ NW¼ NW¼ 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 mi^2, 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 ft^3/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. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

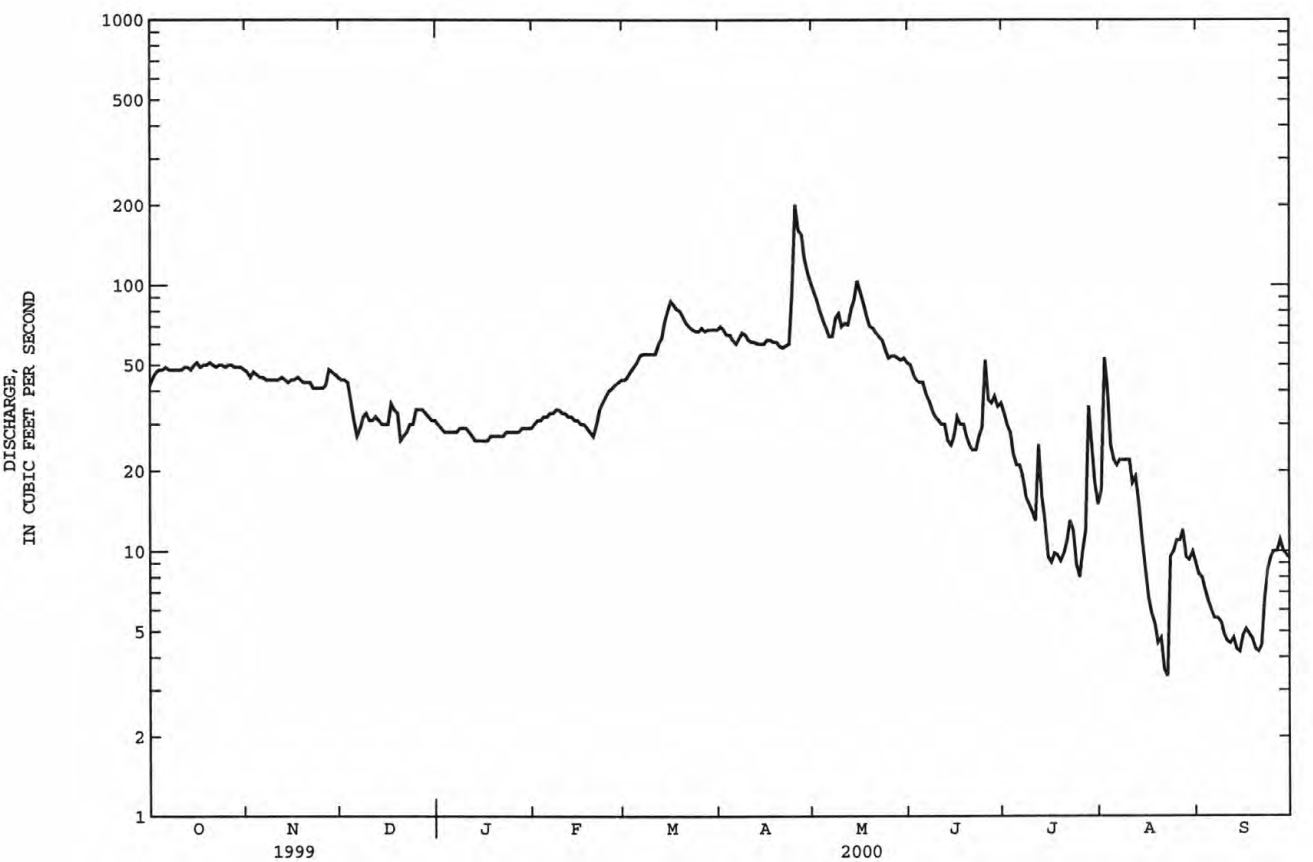
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	47	e44	e30	e30	e44	70	94	50	33	17	8.2
2	45	45	e44	e29	e31	e45	68	88	46	30	53	8.0
3	47	47	e43	e28	e31	e47	65	80	44	28	41	7.1
4	48	46	e37	e28	e32	e49	65	74	43	23	25	6.5
5	48	45	e31	e28	e32	e51	62	69	43	21	22	6.0
6	49	45	e27	e28	e33	e54	60	64	39	21	21	5.6
7	48	44	e29	e28	e33	e55	63	64	37	19	22	5.6
8	48	44	e32	e29	e34	e55	66	75	34	16	22	5.4
9	48	44	e33	e29	e34	e55	65	78	32	15	22	4.9
10	48	44	e31	e29	e33	e55	62	70	31	14	22	4.6
11	48	44	e31	e28	e33	e55	61	72	30	13	18	4.5
12	49	45	e32	e27	e32	e60	61	71	30	25	19	4.7
13	49	44	e31	e26	e32	e63	60	81	26	16	15	4.3
14	48	43	e30	e26	e31	e73	60	88	25	13	11	4.2
15	50	44	e30	e26	e31	e80	60	104	27	9.5	8.8	4.8
16	51	44	e30	e26	e30	87	62	94	32	9.1	6.7	5.1
17	49	45	e36	e26	e30	84	62	85	30	9.8	5.8	4.9
18	50	e44	e34	e27	e29	81	61	77	30	9.7	5.3	4.7
19	50	e43	e33	e27	e28	80	61	70	27	9.2	4.5	4.3
20	51	e43	e26	e27	e27	76	59	69	25	9.8	4.7	4.2
21	50	e43	e27	e27	e30	72	58	66	24	11	3.6	4.4
22	49	e41	e28	e27	e34	70	59	64	24	13	3.4	6.7
23	50	e41	e30	e28	e36	68	60	62	27	12	9.5	8.6
24	50	e41	e30	e28	e38	67	93	57	29	8.9	10	9.5
25	49	e41	e34	e28	e40	67	201	53	52	8.0	11	10
26	50	e42	e34	e28	e41	69	161	54	37	10	11	10
27	50	e48	e34	e28	e42	67	155	54	36	12	12	11
28	49	e47	e33	e29	e43	68	126	53	38	35	9.5	10
29	49	e46	e32	e29	e44	68	112	52	35	25	9.3	9.7
30	49	e45	e31	e29	---	68	102	53	36	18	9.9	9.4
31	48	---	e31	e29	---	68	---	51	---	15	9.1	---
TOTAL	1509	1325	1008	862	974	2001	2380	2186	1019	512.0	464.1	196.9
MEAN	48.7	44.2	32.5	27.8	33.6	64.5	79.3	70.5	34.0	16.5	15.0	6.56
MAX	51	48	44	30	44	87	201	104	52	35	53	11
MIN	42	41	26	26	27	44	58	51	24	8.0	3.4	4.2
AC-FT	2990	2630	2000	1710	1930	3970	4720	4340	2020	1020	921	391
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)*												
MEAN	29.3	27.7	18.0	21.4	45.3	158	165	226	186	95.0	71.9	33.4
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

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000*	
ANNUAL TOTAL	62430		14437.0			
ANNUAL MEAN	171		39.4		89.9	
HIGHEST ANNUAL MEAN					229	1978
LOWEST ANNUAL MEAN					7.69	1961
HIGHEST DAILY MEAN	1150	Jun 16	201	Apr 25	4760	May 9 1995
LOWEST DAILY MEAN	26	Dec 20	3.4	Aug 22	.00	Jul 30 1954a
ANNUAL SEVEN-DAY MINIMUM	30	Jan 2	4.6	Sep 9	.00	Jul 30 1954
INSTANTANEOUS PEAK FLOW			285	Apr 25	6320	May 10 1995b
INSTANTANEOUS PEAK STAGE			5.52	Apr 25	16.33	May 10 1995
ANNUAL RUNOFF (AC-FT)	123800		28640		65130	
10 PERCENT EXCEEDS	502		68		200	
50 PERCENT EXCEEDS	88		34		37	
90 PERCENT EXCEEDS	35		9.3		5.0	

* Regulated period only (1954-2000). See REMARKS.
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 NW¼ NW¼ SW¼ 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 mi^2.

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 good except those for estimated daily discharges, which are poor. No diversion upstream from station.

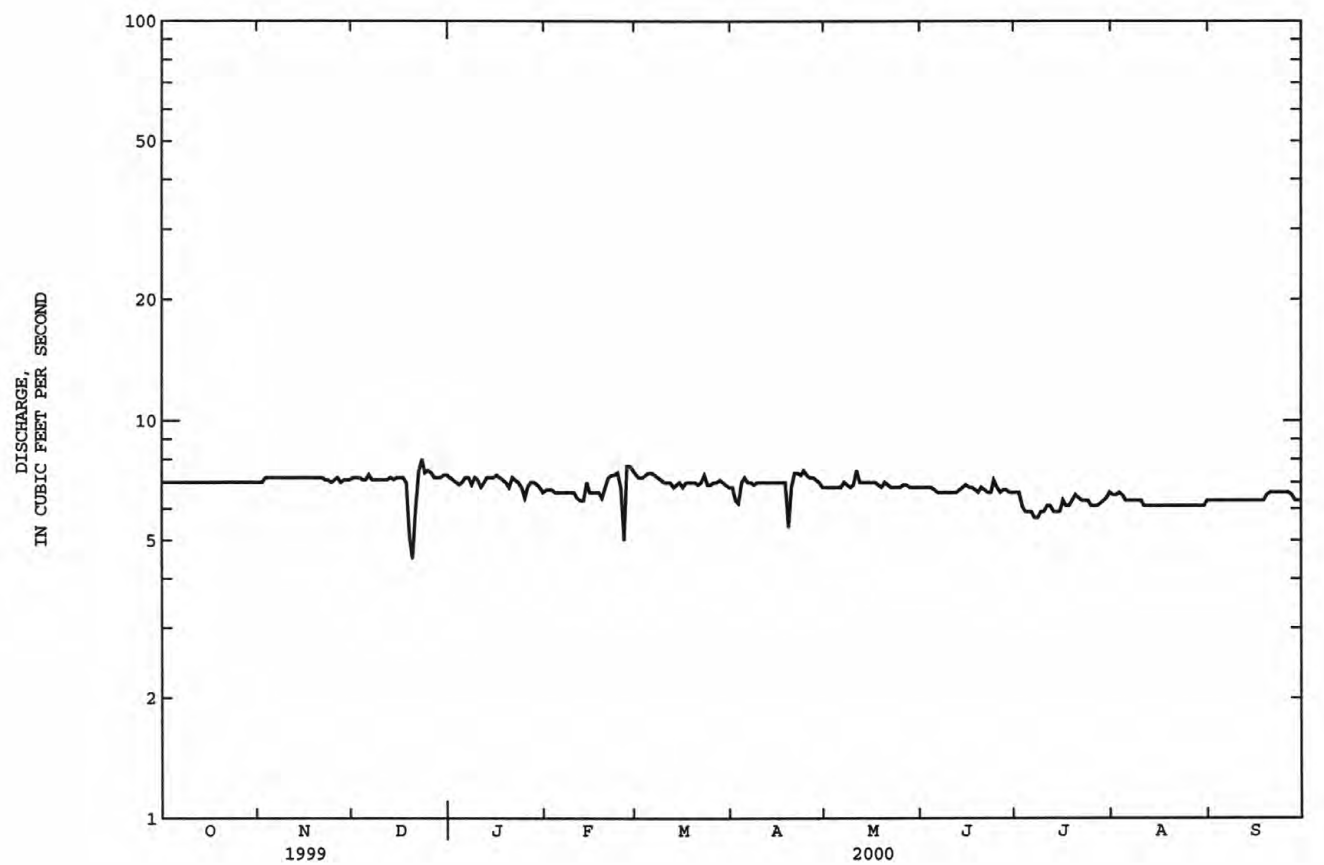
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	7.0	7.2	7.2	e6.7	e7.3	6.8	6.8	6.8	6.6	6.5	6.3
2	7.0	e7.0	7.2	e7.1	e6.7	7.2	6.3	6.8	6.8	6.6	6.5	6.3
3	7.0	7.2	7.2	e7.0	6.7	7.2	e6.2	6.8	6.8	6.1	6.6	6.3
4	7.0	7.2	e7.1	e6.9	e6.6	7.3	e7.0	6.8	6.8	5.9	6.5	6.3
5	7.0	7.2	e7.1	e7.0	6.6	7.4	7.2	6.8	6.7	5.9	6.3	6.3
6	7.0	7.2	7.3	e7.2	6.6	7.4	7.0	6.8	6.6	5.9	6.3	6.3
7	7.0	7.2	e7.1	e7.2	6.6	7.3	7.0	7.0	6.6	5.7	6.3	6.3
8	7.0	7.2	e7.1	e6.9	6.6	7.2	e6.9	6.9	6.6	5.7	6.3	6.3
9	7.0	7.2	e7.1	e7.2	6.6	e7.1	7.0	6.8	6.6	5.9	6.3	6.3
10	7.0	7.2	e7.1	e7.1	6.6	7.0	7.0	6.9	6.6	5.9	6.3	6.3
11	7.0	7.2	e7.1	e6.8	6.4	e7.0	7.0	7.5	6.6	6.1	6.1	6.3
12	7.0	7.2	e7.1	e7.0	6.3	7.0	7.0	7.0	6.6	6.1	6.1	6.3
13	7.0	7.2	7.2	e7.2	6.3	e6.8	7.0	7.0	6.7	5.9	6.1	6.3
14	7.0	7.2	e7.1	e7.2	e7.0	e6.9	7.0	7.0	6.8	5.9	6.1	6.3
15	7.0	7.2	7.2	7.2	6.6	7.0	7.0	7.0	6.9	5.9	6.1	6.3
16	7.0	7.2	7.2	7.3	6.6	e6.8	7.0	7.0	6.8	6.3	6.1	6.3
17	e7.0	7.2	7.2	7.2	6.6	7.0	7.0	7.0	6.8	6.1	6.1	6.3
18	e7.0	7.2	7.0	e7.1	6.6	7.0	7.0	6.9	6.7	6.1	6.1	6.3
19	7.0	7.2	5.1	7.0	e6.4	7.0	5.4	6.8	6.6	6.3	6.1	6.5
20	7.0	7.2	e4.5	e6.8	e6.8	7.0	e6.8	7.0	6.8	6.5	6.1	6.6
21	7.0	7.2	e6.0	7.2	7.2	e6.9	7.4	6.9	6.7	6.4	6.1	6.6
22	7.0	e7.1	e7.5	7.1	7.3	e7.0	7.4	6.8	6.6	6.3	6.1	6.6
23	7.0	e7.1	e8.0	e7.0	7.3	7.3	7.3	6.8	6.6	6.3	6.1	6.6
24	7.0	e7.0	7.4	e6.8	7.4	6.9	7.5	6.8	7.1	6.3	6.1	6.6
25	7.0	e7.1	7.5	e6.4	6.8	e6.9	7.3	6.8	6.8	6.1	6.1	6.6
26	7.0	7.2	e7.4	e6.8	e5.0	7.0	7.2	6.9	6.6	6.1	6.1	6.6
27	7.0	7.0	7.2	e7.0	e7.7	7.0	7.2	6.9	6.7	6.1	6.1	6.5
28	7.0	7.1	7.2	7.0	7.7	7.1	7.1	6.8	6.7	6.2	6.1	6.3
29	7.0	7.1	e7.2	6.9	7.5	7.0	7.0	6.8	6.6	6.3	6.1	6.3
30	7.0	7.1	e7.3	e6.8	---	6.9	6.8	6.8	6.6	6.4	6.1	6.3
31	7.0	---	e7.3	e6.6	---	6.8	---	6.8	---	6.6	6.3	---
TOTAL	217.0	214.6	218.2	217.2	195.8	218.7	208.8	213.7	201.2	190.5	192.2	191.5
MEAN	7.00	7.15	7.04	7.01	6.75	7.05	6.96	6.89	6.71	6.15	6.20	6.38
MAX	7.0	7.2	8.0	7.3	7.7	7.4	7.5	7.5	7.1	6.6	6.6	6.6
MIN	7.0	7.0	4.5	6.4	5.0	6.8	5.4	6.8	6.6	5.7	6.1	6.3
AC-FT	430	426	433	431	388	434	414	424	399	378	381	380
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)												
MEAN	4.47	4.33	4.22	4.20	4.34	4.72	5.02	4.83	4.90	4.73	4.80	4.75
MAX	7.00	7.15	7.04	7.01	6.75	8.03	7.43	7.29	7.77	7.58	7.28	7.14
(WY)	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	1999	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
(WY)	1975	1993	1993	1994	1993	1993	1993	1993	1994	1995	1995	1994

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1975 - 2000	
ANNUAL TOTAL	2630.9		2479.4		--	
ANNUAL MEAN	7.21		6.77		4.64	
HIGHEST ANNUAL MEAN	--		--		7.06	1999
LOWEST ANNUAL MEAN	--		--		2.92	1993
HIGHEST DAILY MEAN	22	Mar 26	8.0	Dec 23	22	Mar 26 1999
LOWEST DAILY MEAN	3.8	Feb 27	4.5	Dec 20	.30	Dec 20 1996
ANNUAL SEVEN-DAY MINIMUM	5.7	Feb 22	5.8	Jul 4	.75	Dec 18 1996
INSTANTANEOUS PEAK FLOW	--		8.1	Feb 28a	42	Mar 26 1999b
INSTANTANEOUS PEAK STAGE	--		3.71	Feb 20c	8.61	Jan 12 1978d
ANNUAL RUNOFF (AC-FT)	5220		4920		3360	
10 PERCENT EXCEEDS	7.8		7.2		6.6	
50 PERCENT EXCEEDS	7.2		6.9		4.5	
90 PERCENT EXCEEDS	6.4		6.1		2.9	

a Gage height, 2.38 ft, may have been higher during periods of estimated daily discharges.
b Gage height, 3.33 ft.
c Backwater from ice.
d Backwater from ice, site and datum then in use.
e Estimated.



06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY

LOCATION.--Lat 44°31'07", long 104°04'57", in SE¼ SE¼ SW¼ sec.5, T.52 N., R.60 W., Crook County, Hydrologic Unit 10120303, on right bank 1.0 mi upstream from Bear Gulch and 1.8 mi south of Beulah.

DRAINAGE AREA.--267 mi^2.

PERIOD OF RECORD.--October 1976 to September 1983, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,580 ft above sea level, from topographic map. October 1976 to September 1983, at site 500 ft downstream at different datum.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	27	25	25	25	23	22	31	31	31	27	25
2	31	27	25	25	24	23	23	31	31	31	28	25
3	30	27	25	25	24	23	22	31	31	31	28	26
4	30	27	25	24	24	23	22	31	31	31	27	26
5	30	27	25	25	25	23	23	31	31	30	27	25
6	30	26	25	24	25	23	23	32	31	30	27	25
7	30	26	26	24	24	23	23	33	32	30	26	26
8	30	26	25	24	25	26	23	33	31	30	25	26
9	30	26	25	25	25	23	23	33	31	30	24	26
10	30	25	25	25	25	23	23	34	31	30	25	26
11	30	25	25	25	25	23	23	34	31	30	26	26
12	31	25	25	25	25	23	23	32	31	29	26	26
13	30	25	25	24	25	23	23	31	33	29	26	26
14	31	25	25	24	25	23	25	31	32	29	25	26
15	30	25	25	24	25	23	25	31	33	29	25	26
16	30	26	25	24	24	23	26	32	32	30	25	26
17	30	26	25	25	24	23	26	34	31	30	26	26
18	30	27	25	24	24	23	26	33	32	30	26	26
19	30	25	25	25	24	23	28	33	32	30	26	26
20	29	26	24	24	24	23	27	34	32	30	26	26
21	29	26	25	25	24	23	27	33	32	30	25	26
22	29	25	25	25	24	23	27	33	31	30	25	28
23	29	25	24	25	25	23	29	33	31	29	25	27
24	29	25	24	25	24	23	29	33	32	29	25	26
25	29	26	24	24	25	23	29	33	33	29	25	26
26	29	26	24	25	24	23	29	35	31	29	25	26
27	29	25	24	25	24	23	29	34	32	28	25	26
28	28	25	24	25	25	23	29	33	32	28	25	26
29	28	25	25	25	24	23	30	33	32	28	25	26
30	27	25	25	25	---	22	30	33	32	28	25	26
31	27	---	25	25	---	22	---	31	---	27	25	---
TOTAL	916	772	769	764	710	714	767	1009	948	915	796	779
MEAN	29.5	25.7	24.8	24.6	24.5	23.0	25.6	32.5	31.6	29.5	25.7	26.0
MAX	31	27	26	25	25	26	30	35	33	31	28	28
MIN	27	25	24	24	24	22	22	31	31	27	24	25
AC-FT	1820	1530	1530	1520	1410	1420	1520	2000	1880	1810	1580	1550

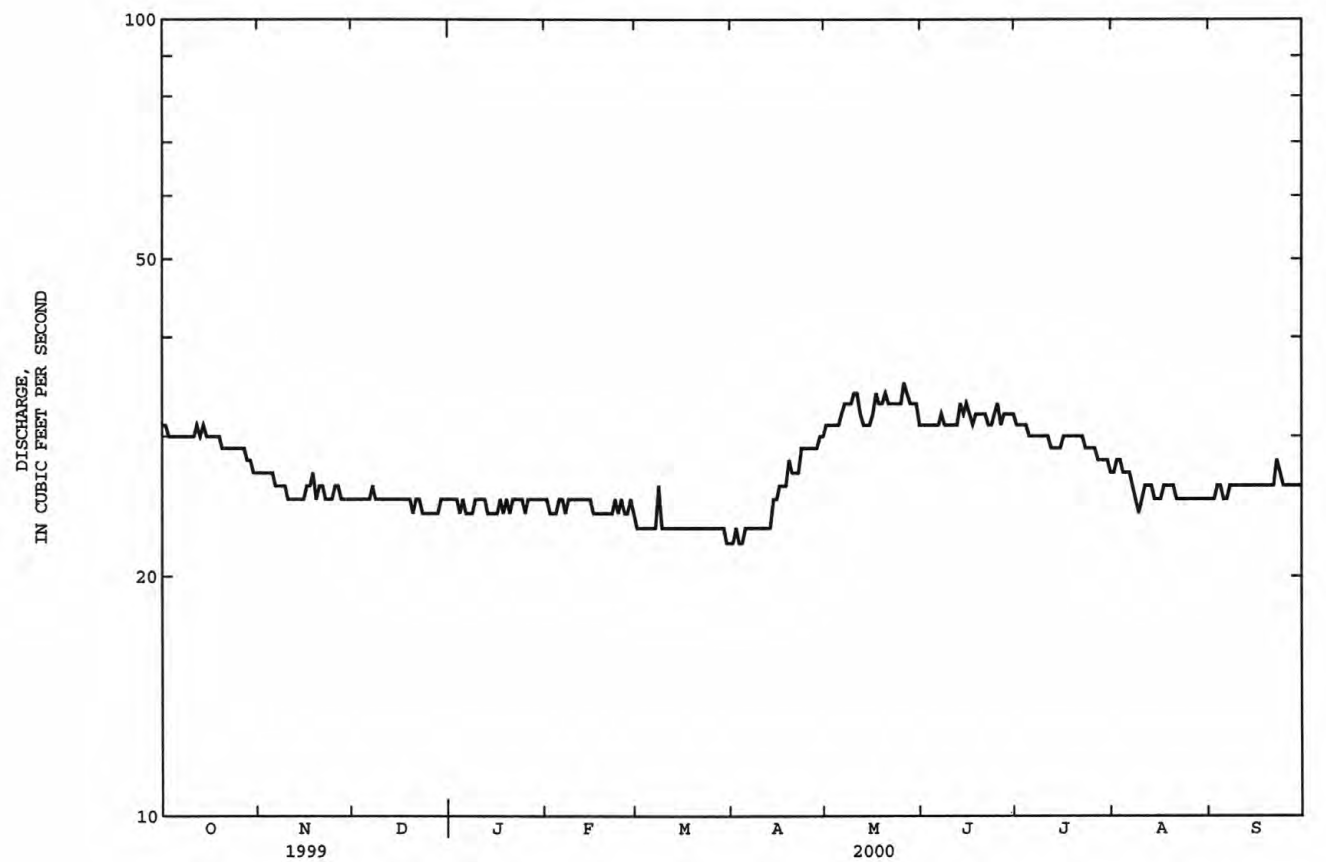
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2000, BY WATER YEAR (WY)

MEAN	21.7	21.8	21.3	20.6	19.8	20.6	22.0	31.3	27.4	25.6	23.0	21.9
MAX	29.5	28.2	27.1	26.4	25.0	29.7	30.8	64.8	40.5	39.8	34.5	30.8
(WY)	2000	1978	1999	1999	1977	1996	1978	1995	1999	1999	1999	1999
MIN	15.3	16.0	15.7	15.6	14.9	14.7	15.3	15.5	15.5	15.2	14.4	15.1
(WY)	1993	1993	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1977 - 2000	
ANNUAL TOTAL	11237		9859		--	
ANNUAL MEAN	30.8		26.9		23.3	
HIGHEST ANNUAL MEAN	--		--		30.5	1999
LOWEST ANNUAL MEAN	--		--		15.7	1992
HIGHEST DAILY MEAN	45	Jul 19	35	May 26	455	May 9 1995
LOWEST DAILY MEAN	24	Many days	22	Many days	12	Mar 10 1992
ANNUAL SEVEN-DAY MINIMUM	24	Feb 24	22	Mar 29	13	Mar 8 1992
INSTANTANEOUS PEAK FLOW	--		44	Jun 7	1230	May 8 1995
INSTANTANEOUS PEAK STAGE	--		1.87	Jun 7	3.80	May 8 1995a
ANNUAL RUNOFF (AC-FT)	22290		19560		16920	
10 PERCENT EXCEEDS	40		32		31	
50 PERCENT EXCEEDS	30		26		22	
90 PERCENT EXCEEDS	25		23		16	

a From floodmarks, present site and datum.



06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW¼ SW¼ 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.--No estimated daily discharges. Records good. Ditch diverts water from left bank of Redwater Creek, 2.0 mi upstream, for irrigation of about 700 acres. Flow maintained during irrigation season and in some years for livestock watering. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	.52	.00	.00	.00	.00	.00	.00	.00	9.2	15	3.9
2	7.3	.42	.00	.00	.00	.00	.00	.00	.00	9.2	5.7	3.8
3	7.3	.08	.00	.00	.00	.00	.00	.00	.00	9.2	.00	3.6
4	7.9	.37	.00	.00	.00	.00	.00	.00	.00	9.2	.00	3.6
5	6.3	4.0	.00	.00	.00	.00	.00	.00	.00	9.1	.00	3.3
6	6.5	3.8	.00	.00	.00	.00	.00	.00	.00	9.0	.00	3.2
7	7.8	.91	.00	.00	.00	.00	.00	.00	.00	9.0	.00	3.1
8	2.9	4.4	.00	.00	.00	.00	.00	.00	.00	9.0	2.6	3.1
9	7.6	5.0	.00	.00	.00	.00	.00	.00	.00	9.0	9.4	3.0
10	7.6	4.5	.00	.00	.00	.00	.00	.00	.00	9.5	10	3.0
11	7.4	2.5	.00	.00	.00	.00	.00	.00	.00	9.8	11	2.6
12	7.5	4.8	.00	.00	.00	.00	.00	.00	.00	9.7	12	3.4
13	1.4	2.2	.00	.00	.00	.00	.00	.00	.00	9.7	11	4.4
14	.24	3.8	.00	.00	.00	.00	.00	.00	.00	12	9.4	4.4
15	.07	4.4	.00	.00	.00	.00	.00	.00	.00	16	9.3	4.3
16	.99	5.3	.00	.00	.00	.00	.00	.00	.00	17	9.2	4.1
17	3.1	4.8	.00	.00	.00	.00	.00	.00	.00	17	9.2	4.0
18	3.1	2.9	.00	.00	.00	.00	.00	.00	.00	17	9.2	3.4
19	3.1	2.6	.00	.00	.00	.00	.00	.00	.00	17	9.1	2.9
20	3.0	2.5	.00	.00	.00	.00	.00	.00	.00	17	9.0	4.6
21	2.8	.52	.00	.00	.00	.00	.00	.00	.00	18	9.2	4.8
22	2.8	.00	.00	.00	.00	.00	.00	.00	.00	18	9.2	5.3
23	2.7	.00	.00	.00	.00	.00	.00	.00	.00	18	9.1	5.2
24	2.3	.00	.00	.00	.00	.00	.00	.00	.00	18	8.8	5.3
25	1.7	.00	.00	.00	.00	.00	.00	.00	.00	17	8.0	3.4
26	1.4	.00	.00	.00	.00	.00	.00	.00	4.7	17	7.8	.33
27	1.3	.00	.00	.00	.00	.00	.00	.00	9.5	16	7.6	7.8
28	1.1	.00	.00	.00	.00	.00	.00	.00	9.5	16	4.1	11
29	.99	.00	.00	.00	.00	.00	.00	.00	9.4	16	4.0	5.3
30	.88	.00	.00	.00	---	.00	.00	.11	9.3	16	4.0	4.6
31	.77	---	.00	.00	---	.00	---	.00	---	15	3.9	---
TOTAL	117.14	60.32	0.00	0.00	0.00	0.00	0.00	0.11	42.40	418.6	216.80	124.73
MEAN	3.78	2.01	.000	.000	.000	.000	.000	.004	1.41	13.5	6.99	4.16
MAX	7.9	5.3	.00	.00	.00	.00	.00	.11	9.5	18	15	11
MIN	.07	.00	.00	.00	.00	.00	.00	.00	.00	9.0	.00	.33
AC-FT	232	120	.00	.00	.00	.00	.00	.2	84	830	430	247

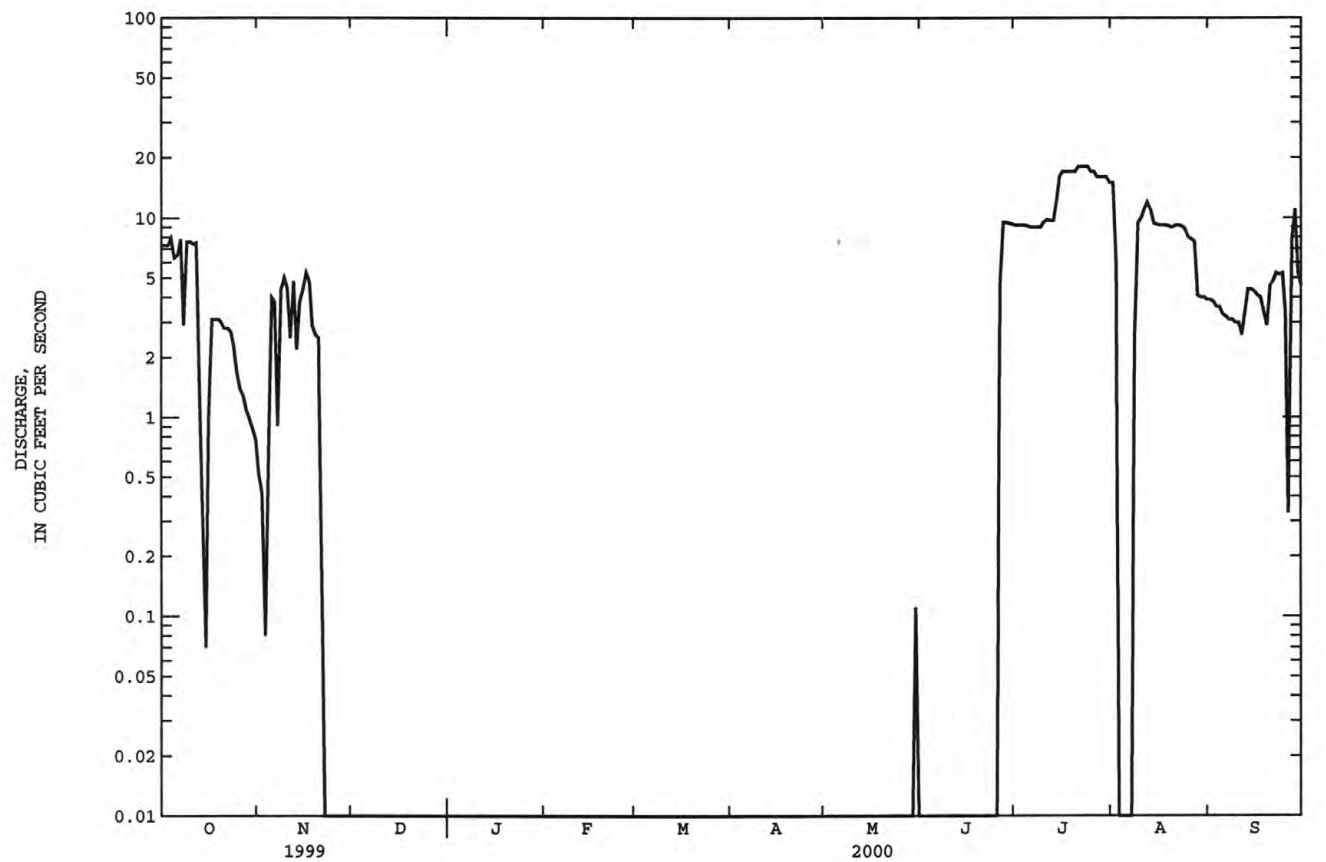
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

MEAN	5.39	.28	.000	.000	.000	.000	.011	1.22	4.60	10.2	8.17	8.43
MAX	20.6	2.01	.000	.000	.000	.000	.085	6.30	13.9	16.4	18.2	18.8
(WY)	1991	2000	1988	1988	1988	1988	1997	1992	1988	1991	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

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	829.89		980.10			
ANNUAL MEAN	2.27		2.68		3.21	
HIGHEST ANNUAL MEAN					5.32	1994
LOWEST ANNUAL MEAN					.92	1993
HIGHEST DAILY MEAN	28	Sep 9	18	Jul 21-24	46	Oct 8 1990
LOWEST DAILY MEAN	.00	Jan 1	.00	Nov 22	.00	Oct 1 1987a
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Nov 22	.00	Oct 1 1987
ANNUAL RUNOFF (AC-FT)	1650		1940		2330	
10 PERCENT EXCEEDS	7.7		9.2		12	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

a No flow for many days in each year.



06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW¼ NW¼ 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 mi^2.

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. 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. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	43	48	47	44	44	45	54	53	37	24	30
2	40	44	48	46	45	44	45	55	51	37	37	32
3	40	46	48	45	44	43	45	56	51	36	46	30
4	38	44	46	44	43	43	46	54	51	36	45	31
5	36	40	47	45	44	43	46	54	51	35	44	31
6	37	41	47	46	44	44	47	54	51	35	43	32
7	38	43	47	45	43	44	47	55	52	34	41	33
8	42	39	46	45	45	e42	46	53	51	35	38	33
9	35	39	45	46	45	e43	46	53	51	35	28	33
10	35	39	46	45	45	44	46	54	49	33	25	33
11	35	42	46	45	44	44	46	60	48	32	24	32
12	35	39	47	45	45	45	46	63	48	31	23	31
13	44	42	47	44	45	45	46	61	50	31	24	30
14	45	39	46	45	45	46	47	58	48	27	28	30
15	45	40	46	45	45	46	47	54	51	23	27	30
16	42	40	48	45	44	46	48	54	49	23	27	30
17	41	41	47	45	44	46	48	56	49	24	27	31
18	42	44	47	44	44	45	48	54	49	24	28	34
19	43	43	48	46	44	45	51	54	49	23	27	35
20	43	44	46	44	45	46	49	55	50	24	27	36
21	43	50	46	45	45	45	49	54	49	24	27	35
22	43	50	46	45	45	46	50	54	49	25	27	37
23	44	49	46	44	44	46	51	52	49	24	27	37
24	45	48	46	44	45	46	54	51	51	23	27	36
25	45	49	47	44	46	46	59	51	53	23	28	37
26	45	50	46	45	45	46	64	54	43	23	29	39
27	45	48	47	45	43	46	57	53	38	24	30	32
28	44	48	47	45	45	47	56	51	38	24	35	29
29	44	47	47	44	44	46	56	52	37	23	31	33
30	43	47	46	44	---	45	55	58	36	24	31	35
31	43	---	47	44	---	45	---	54	---	23	30	---
TOTAL	1280	1318	1447	1391	1289	1392	1486	1695	1445	875	955	987
MEAN	41.3	43.9	46.7	44.9	44.4	44.9	49.5	54.7	48.2	28.2	30.8	32.9
MAX	45	50	48	47	46	47	64	63	53	37	46	39
MIN	35	39	45	44	43	42	45	51	36	23	23	29
AC-FT	2540	2610	2870	2760	2560	2760	2950	3360	2870	1740	1890	1960

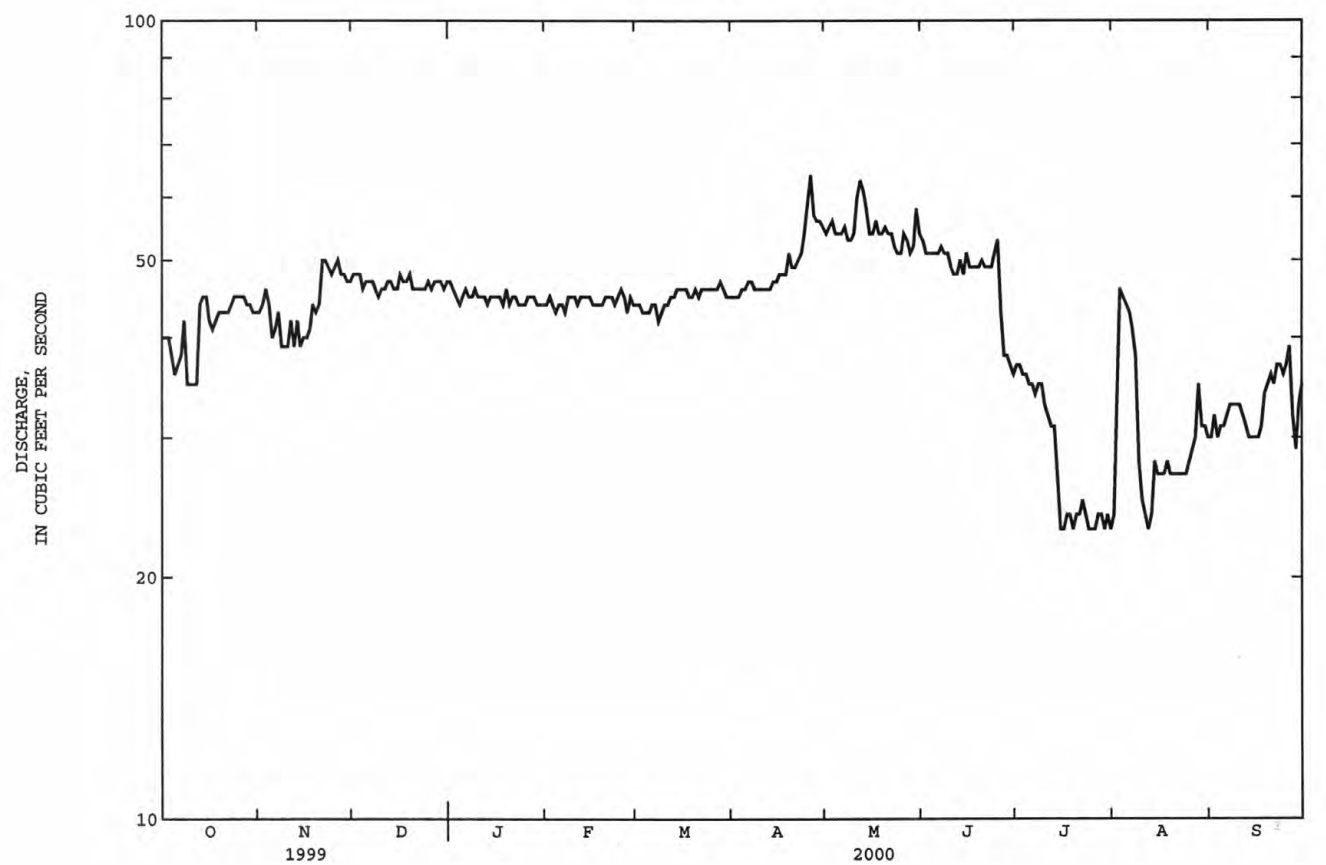
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2000, BY WATER YEAR (WY)*

MEAN	28.7	32.7	32.5	31.9	33.1	34.7	37.8	54.2	46.8	23.5	23.3	25.6
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

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1955 - 2000*	
ANNUAL TOTAL	19121		15560			
ANNUAL MEAN	52.4		42.5		33.7	
HIGHEST ANNUAL MEAN					56.0	1973
LOWEST ANNUAL MEAN					17.9	1961
HIGHEST DAILY MEAN	140	Jun 11	64	Apr 26	1330	May 9 1995
LOWEST DAILY MEAN	35	Jul 13	23	Jul 15a	1.3	May 22 1985b
ANNUAL SEVEN-DAY MINIMUM	36	Jul 11	23	Jul 23	1.9	May 21 1985
INSTANTANEOUS PEAK FLOW			69	Apr 26	2440	Aug 22 1973c
INSTANTANEOUS PEAK STAGE			3.39	Apr 26	12.19	Aug 22 1973
ANNUAL RUNOFF (AC-FT)	37930		30860		24430	
10 PERCENT EXCEEDS	68		52		48	
50 PERCENT EXCEEDS	48		45		31	
90 PERCENT EXCEEDS	42		29		16	

* Period using present site and datum only. See GAGE.
a For many days.
b No flow Aug. 13-15, 1929, during partial year.
c From rating curve extended above 1,000 ft^3/s on basis of slope-area measurement.
e Estimated.



06430532 CROW CREEK NEAR BEULAH, WY

LOCATION.--Lat 44°34'14", long 104°00'19", in NW¼ SE¼ NW¼ sec.16, T.7 N., R.1 E., Lawrence County, Hydrologic Unit 10120203, on left bank 1,500 ft upstream from confluence with Redwater River, 0.8 mi north of McNenny Fish Hatchery, and approximately 4.4 mi east of Beulah.

DRAINAGE AREA.--40.8 mi^2.

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

REVISED RECORDS.--WDR SD-97-1: 1996.

GAGE.--Water-stage recorder. Elevation of gage is 3,360 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharge. Records fair. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperatures Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	27	36	32	34	34	37	55	42	36	31	44
2	42	27	36	32	34	34	38	52	40	36	36	44
3	42	27	35	32	33	34	38	50	39	37	39	43
4	40	27	34	32	33	34	38	48	38	36	38	43
5	37	26	34	32	34	34	38	46	37	35	39	43
6	36	27	34	32	33	34	39	43	37	36	39	42
7	36	28	33	31	31	34	41	44	36	37	38	42
8	38	26	33	32	31	40	40	46	36	37	35	42
9	36	27	32	32	31	37	40	41	37	38	30	41
10	34	26	33	31	32	36	41	39	35	37	28	40
11	34	27	33	30	32	36	41	56	35	37	28	40
12	33	26	32	31	32	36	41	55	36	35	29	39
13	33	28	33	31	33	37	41	54	39	35	30	38
14	33	28	33	31	33	37	42	50	38	35	32	38
15	33	27	32	32	33	37	43	47	40	34	33	37
16	33	27	33	32	33	37	43	45	40	33	34	37
17	32	29	33	32	33	36	43	45	39	34	34	36
18	31	33	32	32	32	36	43	47	39	34	35	36
19	30	33	33	33	33	36	47	44	39	33	37	35
20	29	34	32	32	33	36	47	46	40	32	38	35
21	28	36	32	32	33	35	46	44	40	32	38	35
22	27	35	32	33	33	35	46	42	39	35	39	35
23	26	35	32	33	32	35	49	41	40	34	40	35
24	26	34	32	33	33	35	64	39	41	33	40	35
25	25	34	33	33	34	36	78	39	43	31	41	34
26	25	37	33	33	35	36	72	41	39	31	41	34
27	25	38	34	33	34	36	66	42	38	30	42	34
28	25	38	34	34	35	36	62	39	37	30	42	34
29	25	37	34	34	35	36	61	38	36	31	44	34
30	25	37	33	34	---	36	58	45	37	31	43	34
31	26	---	33	34	---	37	---	43	---	31	44	---
TOTAL	986	921	1028	1000	957	1108	1423	1406	1152	1056	1137	1139
MEAN	31.8	30.7	33.2	32.3	33.0	35.7	47.4	45.4	38.4	34.1	36.7	38.0
MAX	42	38	36	34	35	40	78	56	43	38	44	44
MIN	25	26	32	30	31	34	37	38	35	30	28	34
AC-FT	1960	1830	2040	1980	1900	2200	2820	2790	2280	2090	2260	2260

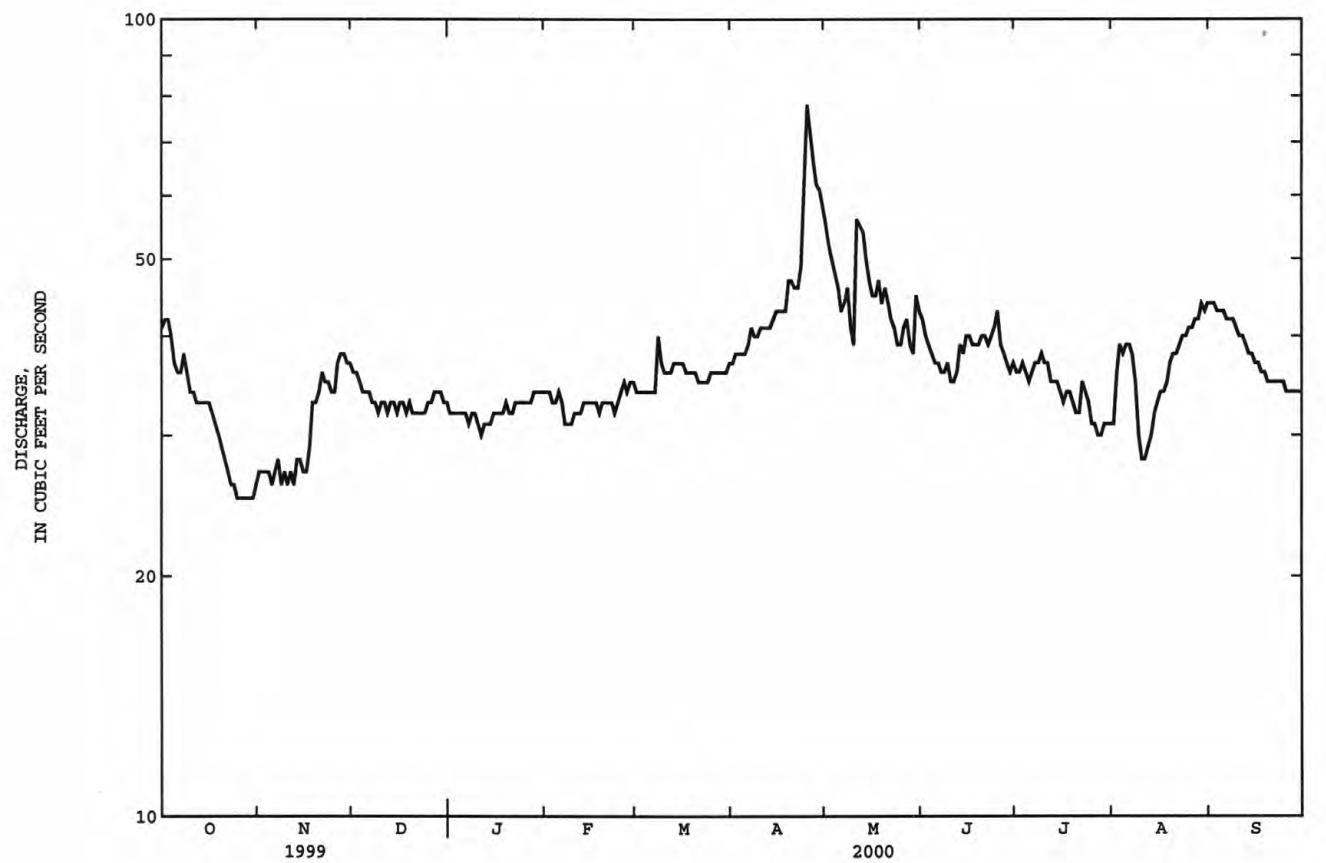
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

MEAN	39.0	38.2	37.1	36.8	36.1	38.1	47.7	58.0	44.7	36.5	36.8	38.7
MAX	50.0	46.7	48.3	44.8	41.7	42.7	60.3	118	54.9	43.3	41.8	42.8
(WY)	1999	1999	1996	1996	1996	1996	1994	1995	1993	1999	1999	1996
MIN	31.8	30.7	31.9	31.2	33.0	33.7	33.9	33.6	33.5	31.9	34.5	35.3
(WY)	2000	2000	1995	1995	2000	1995	1995	1998	1994	1998	1994	1993

06430532 CROW CREEK NEAR BEULAH, WY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	14922		13313			
ANNUAL MEAN	40.9		36.4		40.6	
HIGHEST ANNUAL MEAN					44.7	1999
LOWEST ANNUAL MEAN					36.4	2000
HIGHEST DAILY MEAN	79	Jun 11	78	Apr 25	502	May 9 1995
LOWEST DAILY MEAN	25	Oct 25	25	Oct 25-30	21	Jul 1 1998
ANNUAL SEVEN-DAY MINIMUM	25	Oct 24	25	Oct 24	22	Jun 28 1998
INSTANTANEOUS PEAK FLOW			84	Apr 25a	530	May 9 1995
INSTANTANEOUS PEAK STAGE			6.41	Oct 1b	10.17	May 9 1995
ANNUAL RUNOFF (AC-FT)	29600		26410		29450	
10 PERCENT EXCEEDS	54		43		50	
50 PERCENT EXCEEDS	40		35		37	
90 PERCENT EXCEEDS	32		30		32	

a Gage height, 5.75 ft, backwater from heavy moss.
b Backwater from heavy moss.



06430770 SPEARFISH CREEK NEAR LEAD, SD

LOCATION.--Lat 44°17'56", long 103°52'02", in NE¼ NW¼ sec.22, T.4 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 0.5 mi below confluence of East Spearfish Creek, in the vicinity of Cheyenne Crossing, approximately 5 mi southwest of Lead.

DRAINAGE AREA.--63.5 mi^2.

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

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

REMARKS.--No estimated daily discharges. Records good. Upstream diversions out of drainage basin to Whitewood Creek basin by Homestake Mining Co. average about 12 ft^3/s. Daily discharges do not include diversion by Homestake Mining Co. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 673 ft^3/s, May 14, 1965, from contracted-opening measurement of peak flow 2.0 mi downstream.

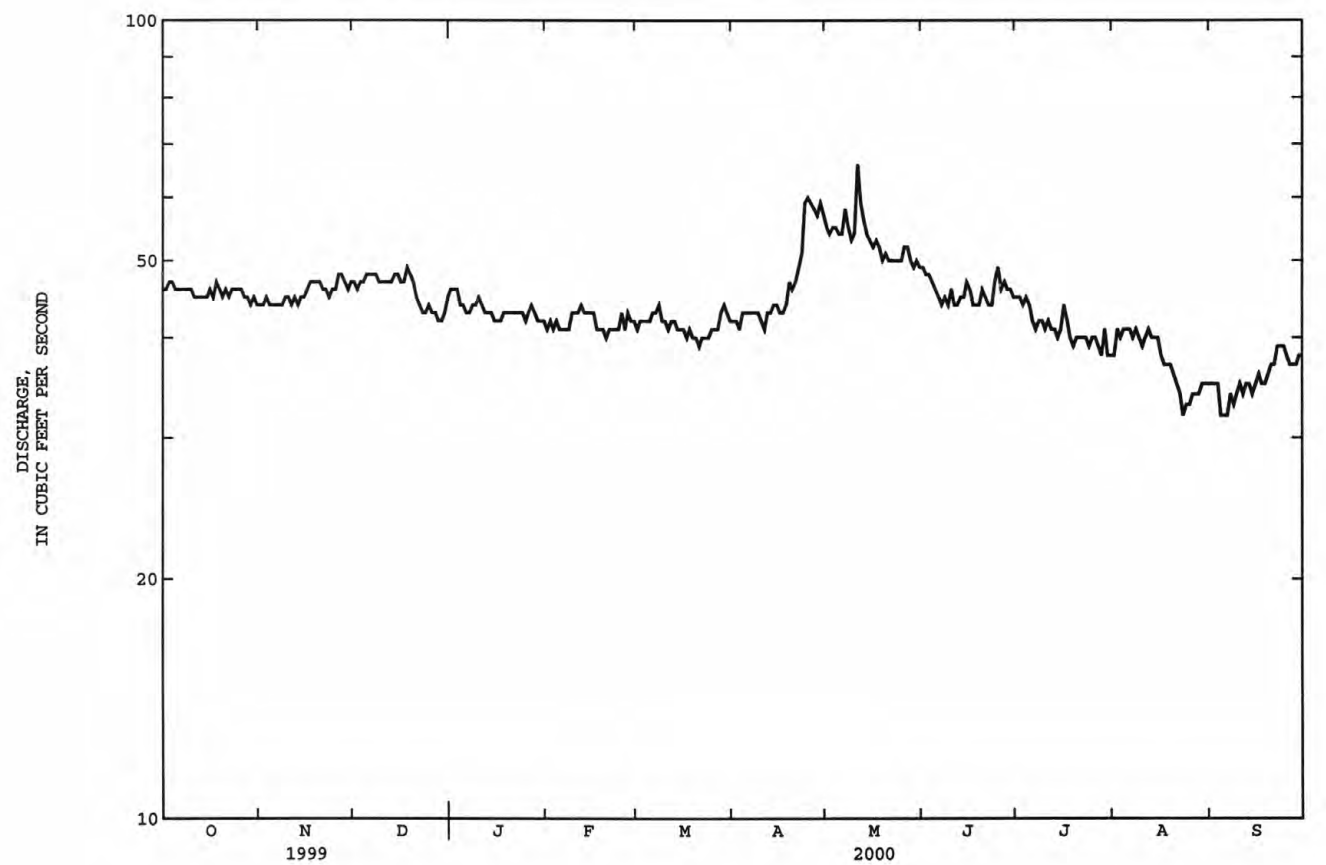
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	44	47	46	41	41	42	55	49	45	38	35
2	46	44	46	46	42	42	42	54	48	45	41	35
3	47	45	47	46	41	42	41	55	48	44	40	35
4	47	44	47	44	42	42	43	55	47	45	41	32
5	46	44	48	44	41	42	43	54	46	44	41	32
6	46	44	48	43	41	43	43	54	45	42	41	32
7	46	44	48	43	41	43	43	58	44	41	40	34
8	46	44	48	44	41	44	43	55	45	42	41	33
9	46	45	47	44	43	42	43	53	44	42	40	34
10	46	45	47	45	43	42	42	54	46	41	39	35
11	45	44	47	44	43	41	41	66	44	42	40	34
12	45	45	47	43	44	42	43	59	44	41	41	35
13	45	44	47	43	43	42	43	56	45	41	40	35
14	45	45	48	43	43	41	44	54	45	40	40	34
15	45	45	48	42	43	41	44	53	47	41	40	35
16	46	46	47	42	43	41	43	52	46	44	38	36
17	45	47	47	42	41	40	43	53	44	42	37	35
18	47	47	49	43	41	41	44	52	44	40	37	35
19	46	47	48	43	41	40	47	50	44	39	37	36
20	45	47	47	43	40	40	46	51	46	40	36	37
21	46	46	45	43	41	39	47	50	45	40	35	37
22	45	46	44	43	41	40	49	50	44	40	34	39
23	46	45	43	43	41	40	51	50	44	40	32	39
24	46	46	43	43	41	40	59	50	47	39	33	39
25	46	46	44	42	43	41	60	50	49	40	33	38
26	46	48	43	43	41	41	59	52	46	40	34	37
27	45	48	43	44	43	41	58	52	47	39	34	37
28	45	47	42	43	42	43	57	50	46	38	34	37
29	44	46	42	42	42	44	59	49	46	41	35	38
30	45	47	43	42	---	43	57	50	45	38	35	38
31	44	---	45	42	---	42	---	49	---	38	35	---
TOTAL	1414	1365	1425	1343	1213	1286	1419	1645	1370	1274	1162	1068
MEAN	45.6	45.5	46.0	43.3	41.8	41.5	47.3	53.1	45.7	41.1	37.5	35.6
MAX	47	48	49	46	44	44	60	66	49	45	41	39
MIN	44	44	42	42	40	39	41	49	44	38	32	32
AC-FT	2800	2710	2830	2660	2410	2550	2810	3260	2720	2530	2300	2120
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)												
MEAN	26.1	26.0	24.6	24.1	24.1	25.5	31.0	40.3	35.9	31.0	29.4	27.9
MAX	49.4	45.5	46.0	43.3	44.1	45.0	50.4	67.4	60.8	52.2	59.3	51.5
(WY)	1999	2000	2000	2000	1999	1999	1999	1997	1999	1998	1998	1998
MIN	13.0	13.3	11.9	12.2	11.4	12.1	15.0	16.5	16.1	12.5	10.3	11.1
(WY)	1991	1991	1991	1990	1990	1990	1989	1992	1990	1990	1990	1990

06430770 SPEARFISH CREEK NEAR LEAD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	17616		15984			
ANNUAL MEAN	48.3		43.7		28.8a	
HIGHEST ANNUAL MEAN					48.1	1999
LOWEST ANNUAL MEAN					14.2	1990
HIGHEST DAILY MEAN	71	Jun 12	66	May 11	108	May 10 1995
LOWEST DAILY MEAN	32	Jan 2	32	Aug 23b	7.5	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	37	Jan 2	33	Sep 3	9.5	Aug 24 1990
INSTANTANEOUS PEAK FLOW			75	May 11	181	Aug 20 1998
INSTANTANEOUS PEAK STAGE			7.87	May 11	8.39	Aug 20 1998
ANNUAL RUNOFF (AC-FT)	34940		31700		20900	
10 PERCENT EXCEEDS	57		50		49	
50 PERCENT EXCEEDS	47		43		24	
90 PERCENT EXCEEDS	42		37		13	

a Median of annual mean discharges, 26 ft^3/s.
b Also Sept. 4-6.



06430800 ANNIE CREEK NEAR LEAD, SD

LOCATION.--Lat 44°19'37", long 103°53'38", in NW¼ NW¼ NW¼ sec.9, T.4 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on left bank 200 ft upstream from mouth and about 6 mi southwest of Lead.

DRAINAGE AREA.--3.55 mi^2.

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

GAGE.--Water-stage recorder and V-notch weir. Elevation of gage is 5,125 ft above sea level, from topographic map.

REMARKS.--Records fair except those for May 25 to June 13 and estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	.59	e.54	.90	.72	.64	1.1	3.6	1.8	1.8	1.2	.36
2	.60	.60	e.52	.89	.72	.66	1.6	3.3	1.7	1.4	1.1	.29
3	.58	.58	e.52	.83	.72	.67	1.8	3.7	1.1	1.2	1.1	.31
4	.56	.64	e.52	.86	.72	.71	4.5	3.4	1.5	1.0	1.1	.36
5	.56	.73	e.51	.87	.75	.84	2.1	3.2	1.5	1.0	1.2	.32
6	.59	.69	e.52	.86	.75	1.0	2.2	2.9	1.1	.81	1.1	.29
7	.77	.64	e.51	.84	.74	.97	2.3	2.5	1.1	.91	1.2	.29
8	.79	.64	e.51	.83	.76	.73	2.2	1.9	1.0	1.5	1.1	.24
9	.73	.63	e.52	.82	.76	.98	2.5	1.3	.98	1.2	1.2	.28
10	.71	.57	e.57	.78	.75	.97	2.4	1.3	1.3	1.2	1.2	.27
11	.71	.55	e.64	.81	.72	.99	2.7	3.1	1.4	1.1	1.1	.37
12	.70	.57	e.68	.80	.75	e.79	2.9	2.5	1.4	.91	1.2	.37
13	.73	.57	e.68	.75	e.74	.85	2.9	2.3	1.7	.89	1.4	.35
14	.76	.54	e.68	.76	.73	.82	2.4	1.6	1.2	.88	1.0	.35
15	.75	.54	.73	.78	e.75	.57	2.2	1.3	1.5	.86	.86	.37
16	.69	.54	.76	.79	.64	.52	2.2	1.1	1.5	.82	.58	.39
17	.85	.54	.69	.77	.66	e.55	2.3	.92	1.3	.42	.53	.41
18	.79	.60	.77	.69	.65	.63	2.3	.95	1.1	.61	.57	.37
19	.76	.59	.81	.67	.64	.64	2.4	.78	.98	.63	.59	.47
20	.74	.59	.84	.80	.64	.58	2.3	.91	1.4	.59	.52	.35
21	.74	.57	.91	.81	.67	.56	2.6	.92	1.1	.47	.41	.32
22	.94	.53	.92	.80	.69	.51	3.6	.94	.95	.78	.48	.40
23	.97	.54	.91	.77	.70	.66	5.0	.75	.88	.79	.61	.36
24	.98	e.52	.89	.79	.73	.83	6.0	.44	.98	.94	1.2	.32
25	.94	e.52	.91	.71	.62	.71	7.2	.62	1.1	.98	1.5	.33
26	.90	e.52	.78	.78	.53	e.78	6.2	1.6	.92	1.0	.97	.36
27	.88	e.55	.89	.76	.59	.90	5.0	1.6	e1.0	1.0	1.1	.40
28	.80	e.55	.89	.76	.69	1.0	4.6	1.3	.89	1.3	.99	.36
29	.69	e.55	.88	.76	.66	1.1	4.6	1.5	.92	1.2	.50	.41
30	.64	e.54	.88	.72	---	e.99	3.9	1.7	1.2	1.3	.50	.38
31	.64	---	.88	.73	---	1.1	---	1.6	---	1.3	.50	---
TOTAL	23.10	17.33	22.26	24.49	20.19	24.25	96.0	55.53	36.50	30.79	28.61	10.45
MEAN	.75	.58	.72	.79	.70	.78	3.20	1.79	1.22	.99	.92	.35
MAX	.98	.73	.92	.90	.76	1.1	7.2	3.7	1.8	1.8	1.5	.47
MIN	.56	.52	.51	.67	.53	.51	1.1	.44	.88	.42	.41	.24
AC-FT	46	34	44	49	40	48	190	110	72	61	57	21

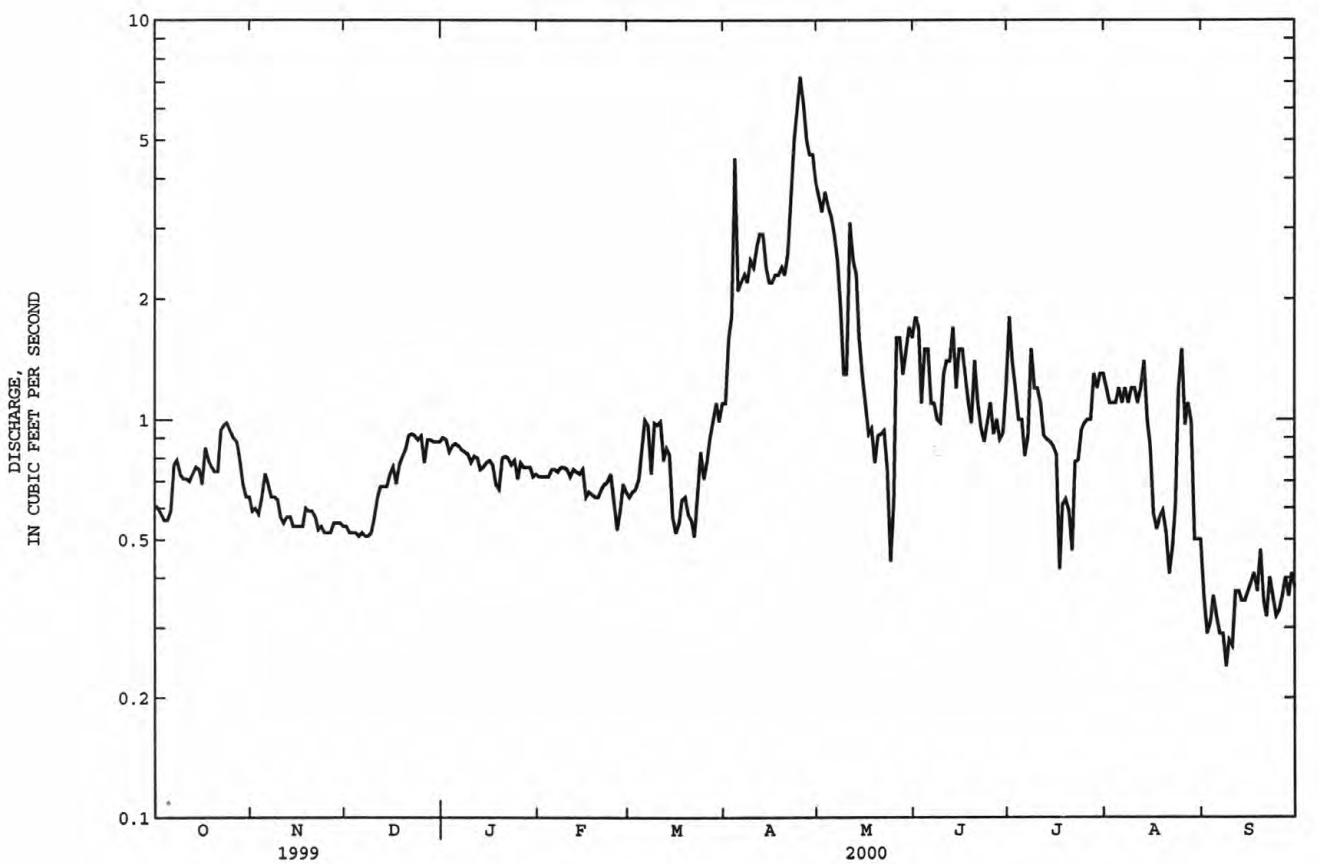
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	.80	.54	.41	.40	.41	1.14	4.14	7.30	3.07	1.14	.76	.45
MAX	4.27	2.05	1.20	.91	1.02	3.03	9.79	28.5	8.54	2.31	2.43	1.51
(WY)	1999	1999	1999	1997	1999	1999	1997	1995	1998	1995	1998	1998
MIN	.052	.10	.045	.010	.000	.082	.75	1.63	.60	.27	.10	.061
(WY)	1993	1993	1989	1993	1993	1991	1991	1992	1992	1992	1992	1992

06430800 ANNIE CREEK NEAR LEAD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	723.63		389.50			
ANNUAL MEAN	1.98		1.06		1.72a	
HIGHEST ANNUAL MEAN					4.04	1995
LOWEST ANNUAL MEAN					.38	1992
HIGHEST DAILY MEAN	12	Jun 11	7.2	Apr 25	188	May 8 1995
LOWEST DAILY MEAN	.51	Dec 5	.24	Sep 8	.00	Mar 2 1989b
ANNUAL SEVEN-DAY MINIMUM	.52	Dec 2	.29	Sep 4	.00	Jan 6 1993
INSTANTANEOUS PEAK FLOW			10	Apr 4	270	May 8 1995
INSTANTANEOUS PEAK STAGE			4.63	Apr 4	6.12	May 8 1995
ANNUAL RUNOFF (AC-FT)	1440		773		1250	
10 PERCENT EXCEEDS	4.7		2.1		4.3	
50 PERCENT EXCEEDS	1.1		.79		.62	
90 PERCENT EXCEEDS	.58		.50		.10	

a Median of annual mean discharges, 1.5 ft^3/s.
b Also Mar. 3-7, 1989, and Jan. 6 to Mar. 16, 1993.
e Estimated.



06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD

LOCATION.--Lat 44°20'58", long 103°56'08", in NE¼ NW¼ SE¼ sec.36, T.5 N., R.1 E., Lawrence County, Hydrologic Unit 10120203, on left bank 0.3 mi upstream from Savoy, 0.4 mi upstream from mouth, 0.6 mi downstream from Roughlock Falls, and 13.6 mi northwest of Lead.

DRAINAGE AREA.--25.8 mi^2.

PERIOD OF RECORD.--October 1988 to September 1998, October 1999 to September 2000.

GAGE.--Water-stage recorder. Elevation of gage is 5,020 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	28	24	23	22	21	22	24	24	22	e22
2	23	24	28	24	24	22	21	22	24	24	22	e22
3	23	24	28	23	23	22	21	23	25	24	22	e21
4	23	24	27	23	23	22	21	22	25	24	22	e21
5	23	24	27	26	23	21	21	22	25	24	23	e21
6	23	24	27	23	23	21	21	22	25	24	23	e21
7	23	24	27	23	23	21	21	22	25	23	23	e21
8	23	24	26	23	23	22	21	22	25	23	23	e21
9	23	24	27	23	23	22	21	22	25	23	23	e21
10	23	24	27	23	23	22	21	23	25	22	23	e21
11	23	24	26	23	23	22	21	24	24	22	23	e21
12	23	24	26	23	23	21	21	23	24	22	23	e21
13	23	24	26	23	22	21	21	23	24	22	23	e21
14	23	24	26	23	22	21	21	23	25	22	e23	e21
15	23	24	26	23	22	21	21	23	25	22	e23	e21
16	23	24	26	23	22	21	21	23	25	23	e23	e21
17	23	24	26	23	22	21	21	23	24	22	e23	e21
18	23	24	26	23	22	21	21	23	24	22	e23	e21
19	24	25	25	23	22	21	22	23	25	22	e23	e21
20	23	24	24	23	22	21	22	24	25	22	e23	e21
21	23	24	25	23	22	21	22	23	24	23	e22	e22
22	23	25	26	23	22	21	22	23	24	23	e22	e22
23	23	28	25	23	22	22	22	23	24	23	e22	e23
24	23	28	25	23	22	21	22	24	25	23	e22	e23
25	24	29	24	22	22	21	23	24	25	22	e22	e23
26	24	28	24	24	22	21	22	24	24	23	e22	e23
27	24	28	24	24	22	21	22	24	24	23	e22	e23
28	24	28	24	23	22	21	22	24	24	23	e22	e23
29	23	28	24	23	22	21	22	24	24	22	e22	e23
30	23	28	24	21	---	21	23	24	24	22	e22	e23
31	23	---	24	22	---	21	---	24	---	22	e22	---
TOTAL	718	754	798	716	651	660	644	715	735	705	698	650
MEAN	23.2	25.1	25.7	23.1	22.4	21.3	21.5	23.1	24.5	22.7	22.5	21.7
MAX	24	29	28	26	24	22	23	24	25	24	23	23
MIN	23	23	24	21	22	21	21	22	24	22	22	21
AC-FT	1420	1500	1580	1420	1290	1310	1280	1420	1460	1400	1380	1290

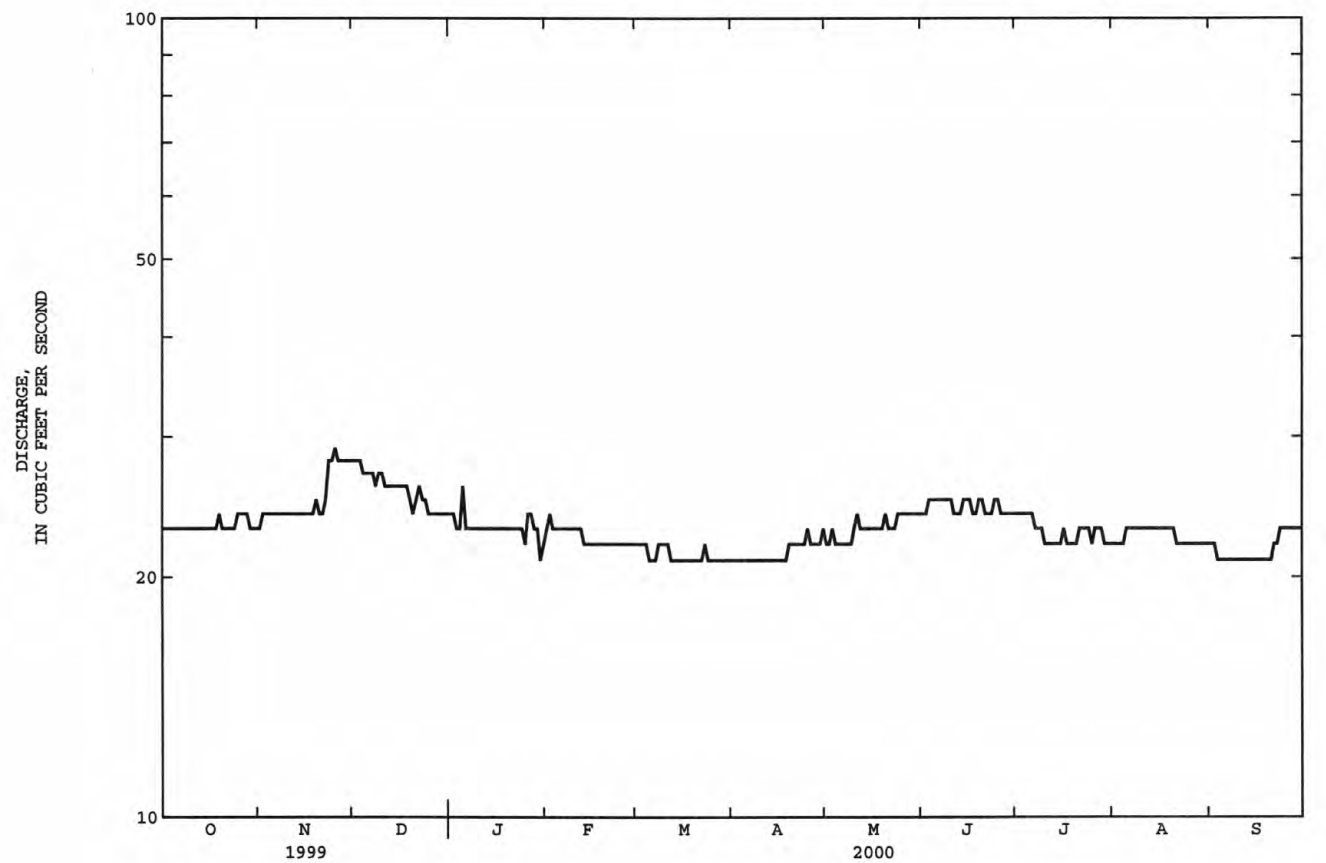
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, 2000, BY WATER YEAR (WY)

MEAN	16.6	16.4	16.0	15.3	15.4	15.7	17.0	20.4	20.5	18.3	17.6	17.0
MAX	23.2	25.1	25.7	23.1	22.4	21.6	25.1	34.6	28.7	26.1	24.4	23.8
(WY)	2000	2000	2000	2000	2000	1998	1997	1995	1997	1997	1996	1996
MIN	12.2	11.1	10.3	9.96	11.0	12.2	12.0	13.1	13.7	12.6	12.9	12.0
(WY)	1992	1993	1993	1993	1993	1991	1993	1992	1990	1992	1992	1991

06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1989 - 1998, 2000	
ANNUAL TOTAL	8444			
ANNUAL MEAN	23.1		17.2	
HIGHEST ANNUAL MEAN			23.1	2000
LOWEST ANNUAL MEAN			12.5	1993
HIGHEST DAILY MEAN	29	Nov 25	61	May 10 1995
LOWEST DAILY MEAN	21	Jan 30	9.7	Jan 2 1993
ANNUAL SEVEN-DAY MINIMUM	21	Mar 12	9.8	Dec 30 1992
ANNUAL RUNOFF (AC-FT)	16750		12450	
10 PERCENT EXCEEDS	25		24	
50 PERCENT EXCEEDS	23		15	
90 PERCENT EXCEEDS	21		12	

e Estimated



06431500 SPEARFISH CREEK AT SPEARFISH, SD

LOCATION.--Lat 44°28'57", long 103°51'40", in SE¼ NW¼ sec.15, T.6 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank in city park in Spearfish, 500 ft downstream from fish hatchery and nearest tributary, and 9.8 mi upstream from mouth.

DRAINAGE AREA.--168 mi^2.

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1116: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,640 ft above sea level, from topographic map. Prior to Dec. 5, 1946, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Regulation by fish hatchery and by hydroelectric plant 0.5 mi upstream causes diurnal fluctuation, but since storage capacity is small, daily flows are not appreciably affected. Upstream diversions out of drainage basin to Whitewood Creek basin by the Homestake Mining Co. average about 12 ft^3/s. Figures of daily discharge do not include diversion by Homestake Mining Co. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1904, reached a stage of 7.00 ft, site and datum of former gage near Spearfish, 1.0 mi upstream, drainage area, 157 mi^2; discharge about 5,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	91	91	86	86	80	90	117	109	93	66	56
2	95	90	92	84	88	78	92	114	105	88	101	57
3	94	91	93	85	89	79	90	114	98	75	100	56
4	92	90	92	78	86	85	87	115	97	77	75	54
5	91	91	91	84	88	92	91	114	97	79	83	55
6	89	90	93	79	86	96	87	115	95	79	82	55
7	89	89	92	77	86	96	91	116	93	82	81	57
8	89	89	90	76	87	101	90	117	91	84	79	57
9	89	90	89	78	86	98	94	115	95	87	77	58
10	89	90	89	79	89	97	99	114	98	90	76	58
11	89	90	90	80	90	94	100	120	95	92	76	58
12	89	89	90	81	83	94	101	125	88	89	78	59
13	88	88	89	80	92	92	107	118	89	88	77	58
14	88	89	89	80	93	93	112	114	87	85	78	58
15	88	90	88	80	88	97	111	113	92	85	70	59
16	90	89	88	81	86	96	107	112	100	87	58	59
17	90	90	89	80	87	98	106	113	99	85	52	60
18	91	93	89	81	86	98	109	113	96	87	56	62
19	90	93	89	82	61	101	120	112	95	90	58	67
20	90	93	81	80	67	104	117	110	101	92	59	72
21	90	91	90	82	89	103	119	108	101	92	59	73
22	91	90	92	83	90	85	123	109	96	95	60	77
23	90	91	89	83	89	87	125	106	94	91	61	76
24	90	89	86	83	91	92	125	100	100	87	59	76
25	91	92	86	80	90	93	133	100	106	81	57	76
26	91	95	85	79	66	95	147	102	101	79	56	77
27	90	95	85	86	69	95	143	110	102	76	56	75
28	89	93	84	86	83	97	134	106	103	75	55	75
29	91	90	84	84	81	98	135	105	100	80	56	77
30	91	90	85	83	---	96	127	107	93	75	56	76
31	92	---	84	84	---	90	---	109	---	71	58	---
TOTAL	2800	2721	2744	2524	2452	2900	3312	3463	2916	2616	2115	1933
MEAN	90.3	90.7	88.5	81.4	84.6	93.5	110	112	97.2	84.4	68.2	64.4
MAX	95	95	93	86	93	104	147	125	109	95	101	77
MIN	88	88	81	76	61	78	87	100	87	71	52	54
AC-FT	5550	5400	5440	5010	4860	5750	6570	6870	5780	5190	4200	3830

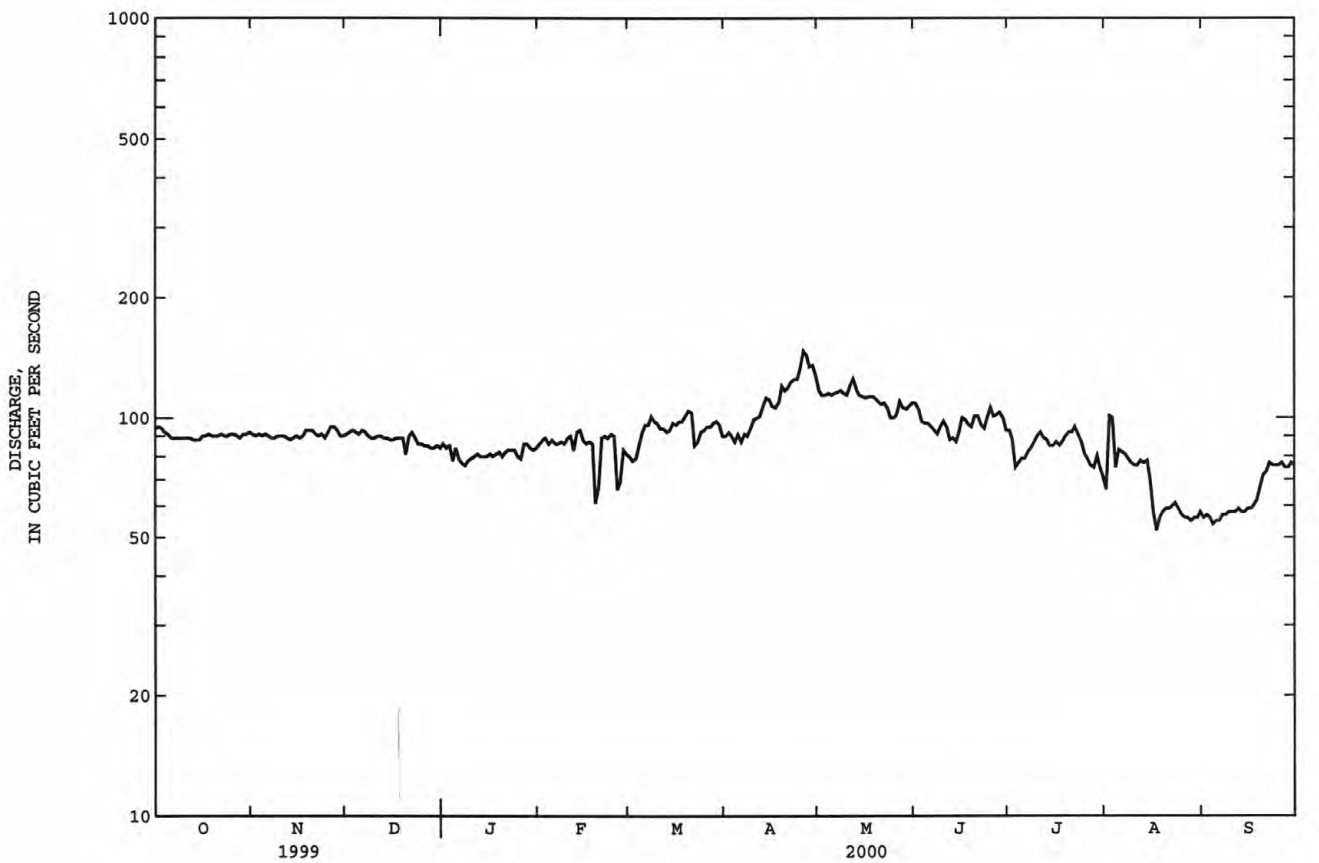
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2000, BY WATER YEAR (WY)

MEAN	47.4	47.0	44.2	43.0	43.5	46.8	65.9	102	78.4	53.6	47.6	45.6
MAX	98.5	111	99.0	93.4	89.4	99.5	139	505	185	118	107	97.1
(WY)	1999	1999	1999	1999	1999	1999	1997	1982	1976	1999	1999	1999
MIN	25.1	24.4	24.1	22.7	26.5	25.2	31.1	28.9	29.1	24.6	23.6	24.1
(WY)	1962	1962	1982	1962	1962	1962	1961	1961	1961	1961	1961	1961

06431500 SPEARFISH CREEK AT SPEARFISH, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1947 - 2000	
ANNUAL TOTAL	37446		32496			
ANNUAL MEAN	103		88.8		55.5	
HIGHEST ANNUAL MEAN					106	1999
LOWEST ANNUAL MEAN					27.1	1961
HIGHEST DAILY MEAN	176	Jun 13	147	Apr 26	1880	May 15 1965
LOWEST DAILY MEAN	76	Apr 4	52	Aug 17	9.0	Dec 2 1959a
ANNUAL SEVEN-DAY MINIMUM	84	Feb 2	56	Sep 1	18	Dec 18 1981
INSTANTANEOUS PEAK FLOW			152	Apr 26	4240	May 15 1965b
INSTANTANEOUS PEAK STAGE			6.96	Apr 26	10.54	Jun 15 1976
ANNUAL RUNOFF (AC-FT)	74270		64460		40190	
10 PERCENT EXCEEDS	120		109		88	
50 PERCENT EXCEEDS	95		89		46	
90 PERCENT EXCEEDS	89		66		32	

a No flow for part of Oct. 18, 1970.
b From rating curve extended above 520 ft^3/s on basis of slope-area measurement of peak flow, gage height, 10.53 ft.



06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD

LOCATION.--Lat 44°40'02", long 103°50'20", in NW¼ SE¼ sec.11, T.8 N., R.2 E., Butte County, Hydrologic Unit 10120203, on right bank near downstream end (revised) of bridge on old U.S. Highway 212 in Belle Fourche, 0.5 mi upstream from Hay Creek, and 0.9 mi upstream from mouth.

DRAINAGE AREA.--920 mi^2.

PERIOD OF RECORD.--November 1945 to current year. Daily discharges for October 1946 estimated; yearly discharge published in WSP 1309 does not include October. Prior to October 1960, published as Redwater Creek above Belle Fourche.

REVISED RECORDS.--WSP 1389: 1954 (maximum gage height only).

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above sea level, from topographic map. Prior to Dec. 13, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Diversions for irrigation of about 13,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

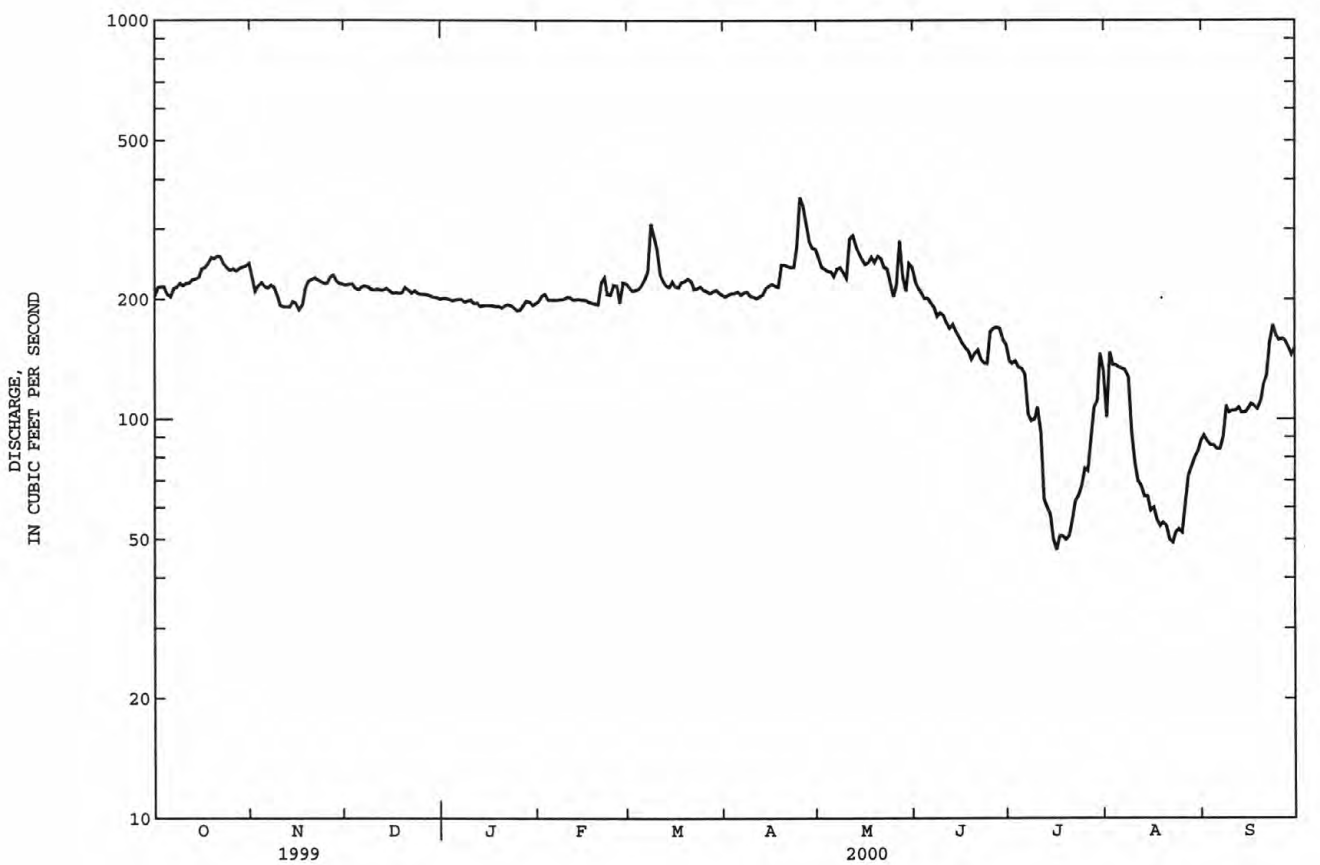
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	227	217	201	198	214	203	254	222	140	101	91
2	214	209	218	201	204	210	205	241	213	138	147	88
3	215	216	218	200	206	211	207	238	208	140	137	86
4	215	220	213	198	199	212	207	235	201	135	137	86
5	206	215	211	199	199	217	209	234	201	134	135	84
6	203	213	215	200	199	224	205	228	196	130	134	84
7	213	217	216	200	199	235	208	238	191	103	133	90
8	214	214	215	197	200	309	209	240	181	99	128	108
9	219	204	212	198	200	286	204	233	185	100	92	104
10	216	193	211	199	203	267	203	226	182	107	77	105
11	219	191	212	195	202	231	201	284	175	93	70	105
12	220	191	211	196	199	222	203	289	169	63	68	107
13	224	191	211	192	e200	216	205	272	173	60	64	104
14	225	197	213	193	e200	214	213	262	166	58	64	104
15	227	195	210	193	e199	221	216	252	161	50	59	106
16	238	188	207	193	e199	215	218	245	155	47	60	109
17	240	193	208	193	e197	214	216	247	151	51	56	108
18	246	212	207	192	e196	221	215	255	148	51	54	106
19	254	222	208	192	e195	222	244	247	141	50	55	111
20	253	224	214	190	194	225	244	256	146	51	54	123
21	256	226	211	193	220	222	242	253	149	56	50	128
22	255	223	207	194	226	212	241	241	141	62	49	156
23	245	221	210	193	206	213	241	238	138	64	52	172
24	240	219	207	190	205	215	271	220	138	68	53	162
25	236	220	206	187	217	211	360	203	166	75	52	158
26	238	227	206	188	216	210	342	217	169	74	62	159
27	235	230	205	193	196	207	309	280	170	88	72	157
28	238	222	204	198	220	209	280	227	169	107	76	151
29	241	219	202	197	219	211	269	210	158	111	80	145
30	242	218	202	193	---	208	267	246	154	146	83	151
31	246	---	200	195	---	205	---	241	---	133	88	---
TOTAL	7137	6357	6507	6043	5913	6909	7057	7552	5117	2784	2542	3548
MEAN	230	212	210	195	204	223	235	244	171	89.8	82.0	118
MAX	256	230	218	201	226	309	360	289	222	146	147	172
MIN	203	188	200	187	194	205	201	203	138	47	49	84
AC-FT	14160	12610	12910	11990	11730	13700	14000	14980	10150	5520	5040	7040
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)												
MEAN	136	146	143	137	147	160	181	245	195	63.2	48.3	89.8
MAX	313	268	229	246	278	276	359	988	834	263	178	192
(WY)	1999	1999	1999	1997	1996	1996	1997	1995	1946	1946	1998	1946
MIN	50.6	82.7	69.9	83.5	91.7	105	62.9	20.0	4.07	2.13	2.72	19.3
(WY)	1961	1961	1962	1957	1993	1961	1981	1992	1988	1960	1959	1959

06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	86780		67466			
ANNUAL MEAN	238		184		141	
HIGHEST ANNUAL MEAN					251	1999
LOWEST ANNUAL MEAN					57.1	1961
HIGHEST DAILY MEAN	815	Jun 12	360	Apr 25	5790	May 20 1982
LOWEST DAILY MEAN	116	Aug 28	47	Jul 16	.00	May 1 1981a
ANNUAL SEVEN-DAY MINIMUM	128	Aug 26	51	Jul 15	.56	Jul 30 1960
INSTANTANEOUS PEAK FLOW			401	Mar 8	16400	Jun 16 1962b
INSTANTANEOUS PEAK STAGE			3.70	Mar 8	11.69	Jun 16 1962
ANNUAL RUNOFF (AC-FT)	172100		133800		101900	
10 PERCENT EXCEEDS	310		241		221	
50 PERCENT EXCEEDS	219		203		130	
90 PERCENT EXCEEDS	165		84		22	

a No flow at times in 1960, 1968-69, 1981-82, and 1988.
b From rating curve extended above 6,000 ft^3/s on basis of slope-area measurement of peak flow.
e Estimated.



06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD

LOCATION.--Lat 44°42'05", long 103°44'00", in NW¼ SE¼ NE¼ sec.34, T.9 N., R.3 E., Butte County, Hydrologic Unit 10120202, on left bank 6.5 mi downstream from diversion dam on Belle Fourche River, and 2.5 mi northwest of Fruitdale.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,980 ft above sea level from topographic map. Prior to October 1994, another station located on Inlet Canal near Belle Fourche (station 06434500) at site 5.6 mi upstream (discharge records are not equivalent because of diversions for irrigation).

REMARKS.--Records good. Records show actual diversions to Belle Fourche Reservoir (see station 06435000), from Belle Fourche River and Crow Creek. Bureau of Reclamation satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

COOPERATION.--Records of diversion from the canal provided by the Belle Fourche Irrigation District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	243	261	1.6	e1.5	2.8	197	10	271	206	108	56
2	8.8	241	260	1.7	2.3	3.1	196	118	257	206	159	52
3	4.1	244	260	1.5	1.9	2.9	193	201	252	184	192	46
4	2.3	247	259	1.1	2.0	2.3	186	188	236	186	170	65
5	.63	244	237	1.9	1.8	2.1	188	192	231	171	137	54
6	.08	240	239	1.8	1.9	2.3	190	218	230	166	130	54
7	.04	242	228	1.7	1.8	1.7	213	234	210	122	119	59
8	.00	242	235	1.6	2.2	e1.7	217	219	211	94	102	79
9	.00	233	226	1.7	2.3	e1.5	216	219	204	81	68	80
10	.00	227	228	1.6	2.0	e2.5	216	187	199	66	40	78
11	.00	225	231	1.5	e1.8	3.8	210	298	193	53	34	77
12	.00	226	243	1.6	e1.8	4.8	210	276	190	14	19	86
13	.00	226	254	1.6	e1.3	7.5	214	178	186	34	18	83
14	.00	230	253	1.6	e1.4	20	217	125	189	24	13	93
15	.00	229	245	1.7	1.6	67	220	130	177	12	19	93
16	.00	223	246	1.8	1.4	192	222	123	180	1.6	15	98
17	.00	227	153	1.6	1.4	205	223	80	168	1.0	e10	98
18	.00	246	3.7	1.6	1.4	206	221	82	164	9.3	3.2	102
19	.00	259	e3.0	1.6	1.6	196	245	87	158	1.5	13	113
20	.00	259	e2.7	1.4	1.6	190	234	126	153	1.4	2.0	119
21	.00	271	2.3	1.6	2.0	190	190	124	149	18	.79	130
22	.00	270	2.0	1.7	2.9	193	198	138	135	32	.13	156
23	.00	266	2.5	1.8	3.0	209	203	238	149	44	16	177
24	.00	256	2.1	1.7	2.9	211	170	268	145	53	30	167
25	66	262	2.0	1.7	2.8	211	97	240	443	55	33	196
26	205	263	2.0	1.6	2.8	202	56	243	377	55	21	119
27	247	275	2.1	1.6	e2.7	200	30	307	259	70	e20	169
28	244	275	2.4	1.8	e2.7	195	19	259	250	97	e22	190
29	246	268	1.9	1.8	3.0	201	16	248	238	112	e20	149
30	244	267	1.7	e1.7	---	199	11	280	216	156	e50	151
31	245	---	1.7	e1.6	---	198	---	302	---	137	44	---
TOTAL	1688.95	7426	4090.1	50.8	59.8	3324.0	5218	5938	6420	2462.8	1628.12	3189
MEAN	54.5	248	132	1.64	2.06	107	174	192	214	79.4	52.5	106
MAX	247	275	261	1.9	3.0	211	245	307	443	206	192	196
MIN	.00	223	1.7	1.1	1.3	1.5	11	10	135	1.0	.13	46
AC-FT	3350	14730	8110	101	119	6590	10350	11780	12730	4880	3230	6330

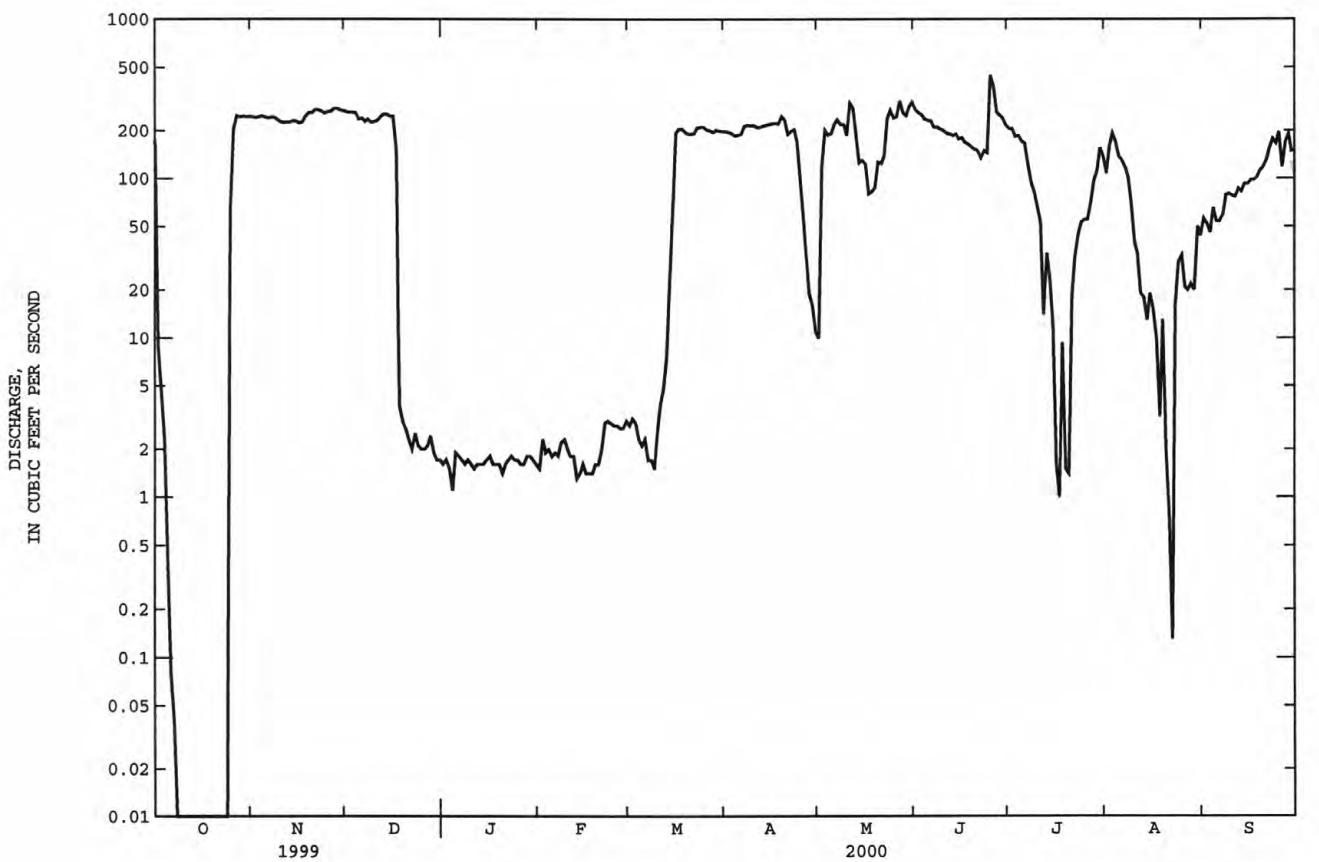
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	244	153	111	155	85.4	99.3	82.2	145	208	169	134	154
MAX	462	248	220	372	193	302	204	192	274	314	240	204
(WY)	1999	1998	1998	1997	1997	1995	1995	2000	1998	1999	1998	1999
MIN	54.5	.040	1.70	1.64	2.06	.95	4.88	79.5	130	79.4	52.5	106
(WY)	2000	1997	1999	2000	2000	1996	1997	1999	1999	2000	2000	2000

06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	47714.32		41495.57			
ANNUAL MEAN	131		113		145	
HIGHEST ANNUAL MEAN					177	1995
LOWEST ANNUAL MEAN					113	2000
HIGHEST DAILY MEAN	533	Jul 20	443	Jun 25	1300	Oct 17 1998
LOWEST DAILY MEAN	.00	Oct 8	.00	Oct 8	.00	Dec 31 1995a
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 8	.00	Oct 8	.00	Nov 16 1996
INSTANTANEOUS PEAK FLOW			769	Sep 25	1630	Oct 17 1998
INSTANTANEOUS PEAK STAGE			7.06	Sep 25	9.00	Oct 17 1998
ANNUAL RUNOFF (AC-FT)	94640		82310		105400	
10 PERCENT EXCEEDS	331		246		290	
50 PERCENT EXCEEDS	26		98		150	
90 PERCENT EXCEEDS	1.2		1.6		.80	

a No flow at times in most years.
e Estimated.



06435000 BELLE FOURCHE RESERVOIR NEAR BELLE FOURCHE, SD

LOCATION.--Lat 44°44'12", long 103°40'27", in $SW^1/_4$ $SE^1/_4$ sec.18, T.9 N., R.4 E., Butte County, Hydrologic Unit 10120202, at dam on Owl Creek, 9.8 mi northeast of Belle Fourche.

PERIOD OF RECORD.--January 1912 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is sea level, adjustment of 1912. Prior to June 6, 1967, nonrecording gage at present site and datum.

REMARKS.--Offstream reservoir formed by earthfill dam. Storage began in May 1910; dam completed in April 1911. Conservation capacity, 185,277 acre-ft (1949 survey), between elevations 2,927.0 ft (lowest outlet) and 2,975.0 ft. Dead storage below elevation 2,927.0 ft, 6,800 acre-ft. Figures given herein represent contents above elevation 2,927.0 ft. Water diverted from Belle Fourche River through Inlet Canal (see station 06434505) is stored in Belle Fourche Reservoir for irrigation.

COOPERATION.--Records of elevation and contents provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 197,400 acre-ft, Apr. 30, 1919, May 20, 1920, elevation, 2,974.9 ft; minimum observed, -3,000 acre-ft, Sept. 30, 1936, water was lowered below dead storage level of 2,927.0 ft by opening holes in crib walls.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 185,000 acre-ft, May 13, elevation, 2,974.99 ft; minimum, 82,400 acre-ft, Sept. 28, elevation, 2,959.60 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,969.44	143,000	--
Oct. 31	2,969.59	144,000	+1,000
Nov. 30	2,971.59	158,700	+14,700
Dec. 31	2,972.58	166,300	+7,600
CAL YR 1999	--	--	+6,100
Jan. 31	2,972.56	166,100	-200
Feb. 29	2,972.65	166,800	+700
Mar. 31	2,973.50	173,400	+6,600
Apr. 30	2,974.73	183,100	+9,700
May 31	2,974.80	183,700	+600
June 30	2,973.85	176,100	-7,600
July 31	2,969.36	142,400	-33,700
Aug. 31	2,962.98	101,000	-41,400
Sept. 30	2,959.71	83,000	-18,000
WTR YR 2000	--	--	-60,000

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06436000 BELLE FOURCHE RIVER NEAR FRUITDALE, SD

LOCATION.--Lat 44°41'27", long 103°44'14", in NW¼ NE¼ sec.3, T.8 N., R.3 E., Butte County, Hydrologic Unit 10120202, on left bank near downstream end of bridge on U.S. Highway 212, 2.5 mi northwest of Fruitdale, and 8.8 mi downstream from point of diversion to Belle Fourche Reservoir.

DRAINAGE AREA.--4,540 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for October 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 2,925 ft above sea level, from topographic map. Prior to Apr. 9, 1947, nonrecording gage and Apr. 10, 1947, to Oct. 14, 1948, water-stage recorder, at site 100 ft upstream at same datum. Oct. 15, 1948, to Dec. 30, 1958, water-stage recorder and Dec. 31, 1958, to Sept. 23, 1959, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated by Keyhole Dam since Oct. 25, 1952, usable capacity, 191,600 acre-ft, 180 mi upstream. Maximum discharge prior to Sept. 30, 1953, 7,460 ft^3/s, June 23, 1947, gage height, 11.03 ft; no flow at times in 1945 and 1948. At a point 8.8 mi above station, water is diverted to Belle Fourche Reservoir (see station 06435000) through Inlet Canal (see station 06434505), with other smaller diversions from the main stem and tributaries for irrigation. Total diversions for irrigation of about 60,000 acres upstream from station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

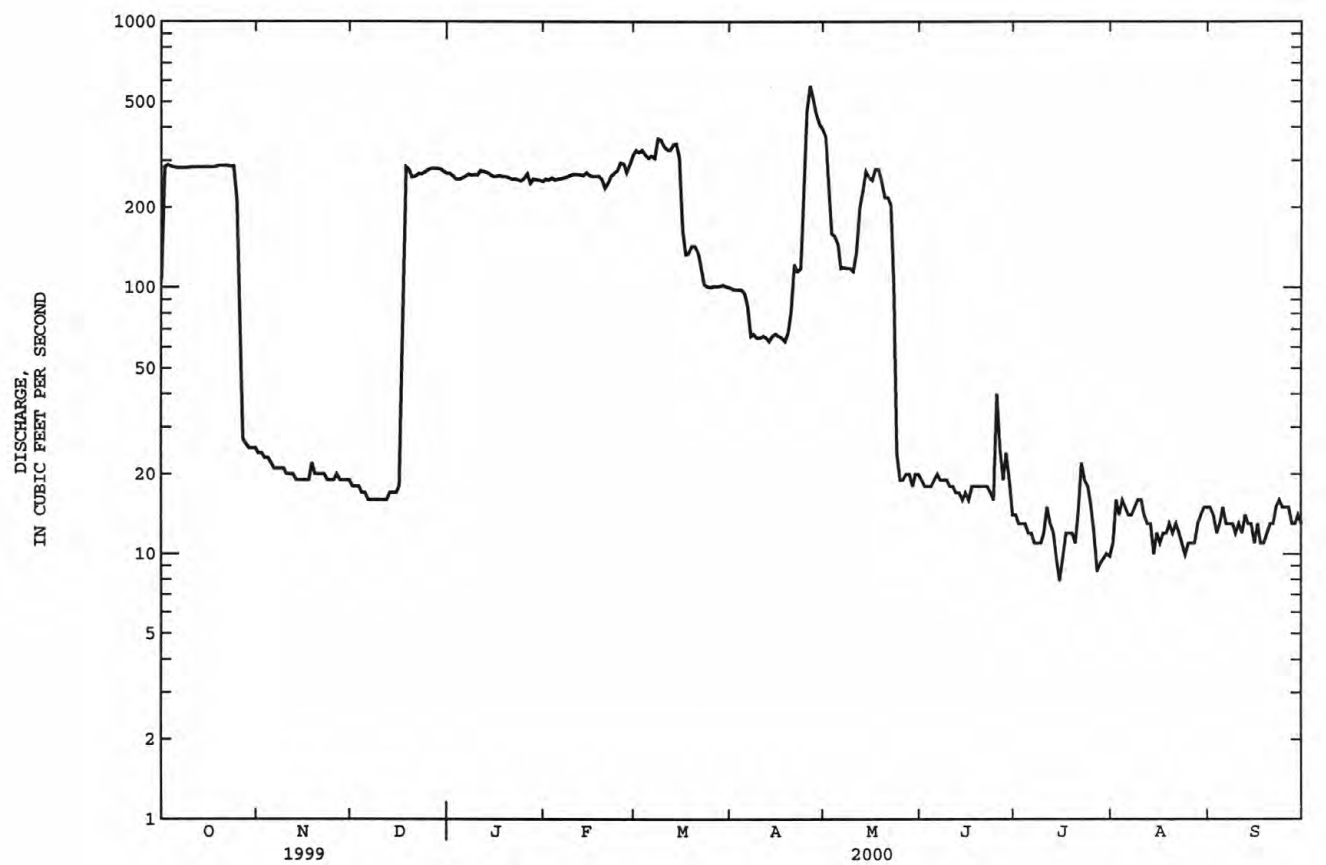
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	24	18	269	255	327	99	371	19	14	11	15
2	284	24	18	263	253	322	98	240	18	13	16	14
3	289	23	18	e255	258	328	98	159	18	13	14	12
4	285	23	17	e255	253	316	98	156	18	13	16	13
5	284	22	17	257	256	307	95	146	19	12	15	15
6	282	21	16	261	257	312	85	118	20	12	14	13
7	282	21	16	267	259	307	66	119	19	11	14	13
8	282	21	16	265	261	363	67	118	19	11	15	13
9	282	21	16	266	265	360	65	118	19	11	16	12
10	284	20	16	265	267	340	65	115	18	12	16	13
11	284	20	16	275	266	330	66	136	18	15	14	12
12	284	20	16	273	266	329	65	200	17	13	13	14
13	284	19	17	e270	264	344	63	232	17	12	13	13
14	284	19	17	e266	271	347	66	274	16	9.7	10	13
15	284	19	17	261	264	309	67	260	17	7.9	12	11
16	284	19	18	262	262	167	66	253	16	9.8	11	13
17	284	19	110	263	262	133	65	278	18	12	12	11
18	284	22	284	261	262	134	63	278	18	12	12	11
19	287	20	277	261	255	143	68	252	18	12	13	12
20	287	20	260	258	236	143	81	218	18	11	12	13
21	287	20	262	255	247	136	122	218	18	15	13	13
22	287	20	268	256	263	120	115	206	18	22	12	15
23	285	19	267	253	269	103	118	99	17	19	11	16
24	286	19	271	252	275	101	200	24	16	18	9.9	15
25	213	19	276	258	294	100	459	19	40	15	11	15
26	89	20	280	267	291	101	574	19	25	12	11	15
27	27	19	280	246	271	101	511	20	19	8.6	11	13
28	26	19	280	255	290	101	452	20	24	9.2	13	13
29	25	19	279	254	314	102	412	18	19	9.6	14	14
30	25	19	274	253	---	101	396	20	14	10	15	13
31	25	---	268	250	---	100	---	20	---	9.8	15	---
TOTAL	7081	610	4205	8072	7706	6827	4865	4724	570	384.6	404.9	398
MEAN	228	20.3	136	260	266	220	162	152	19.0	12.4	13.1	13.3
MAX	289	24	284	275	314	363	574	371	40	22	16	16
MIN	25	19	16	246	236	100	63	18	14	7.9	9.9	11
AC-FT	14050	1210	8340	16010	15280	13540	9650	9370	1130	763	803	789
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)												
MEAN	19.7	29.5	21.3	22.9	54.5	118	159	336	226	42.9	14.4	11.1
MAX	228	594	298	280	535	1125	984	2256	1149	525	88.0	54.4
(WY)	2000	1999	1999	1999	1996	1996	1997	1995	1976	1993	1993	1993
MIN	3.82	3.33	3.23	1.97	1.32	2.46	2.30	3.12	.33	.22	.30	2.24
(WY)	1961	1979	1968	1957	1955	1977	1981	1985	1961	1960	1960	1959

06436000 BELLE FOURCHE RIVER NEAR FRUITDALE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000	
ANNUAL TOTAL	108504		45847.5			
ANNUAL MEAN	297		125		87.9a	
HIGHEST ANNUAL MEAN					351	1999
LOWEST ANNUAL MEAN					3.00	1961
HIGHEST DAILY MEAN	2340	Jun 11	574	Apr 26	11100	May 10 1995
LOWEST DAILY MEAN	11	May 29	7.9	Jul 15	.00	Sep 10 1959b
ANNUAL SEVEN-DAY MINIMUM	12	May 29	10	Jul 26	.00	Jun 4 1961
INSTANTANEOUS PEAK FLOW			666	Apr 25	12700	May 20 1982
INSTANTANEOUS PEAK STAGE			4.81	Apr 25	14.32	May 20 1982
ANNUAL RUNOFF (AC-FT)	215200		90940		63690	
10 PERCENT EXCEEDS	823		284		262	
50 PERCENT EXCEEDS	270		64		6.3	
90 PERCENT EXCEEDS	19		12		3.0	

* Regulated period only (1954-2000). See REMARKS.
a Median of annual mean discharges, 63 ft^3/s.
b No flow at times in 1959-62 and 1977.
e Estimated.



06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD

LOCATION.--Lat 44°26'32", long 103°37'44", in SE¼ SE¼ NE¼ NE¼ sec.33, T.6 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on left bank 90 ft downstream from Crook Mountain Road and 1.1 mi south of Whitewood.

DRAINAGE AREA.--56.3 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 3,680 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow affected by transbasin diversions for industrial and municipal water supplies. Satellite data-collection platform at station. Additional water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1962, discharge, 8,460 ft^3/s, by contracted-opening measurement, 1.8 mi downstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	14	e12	e8.0	16	25	99	46	21	17	12
2	16	14	13	e10	e8.2	16	27	90	43	20	23	11
3	17	13	13	e8.7	e12	16	25	85	42	21	16	11
4	16	13	e12	e7.3	e11	18	29	77	40	20	15	11
5	16	13	e11	e11	e9.5	19	35	73	38	19	15	10
6	16	13	e12	e10	e9.5	22	36	66	36	18	15	10
7	15	12	e13	e9.5	e10	22	37	78	35	18	15	11
8	15	12	e11	e9.5	e11	29	35	69	34	18	15	11
9	15	12	e9.8	e9.2	e13	e20	37	59	32	18	14	11
10	14	12	e11	e9.0	e13	e20	36	59	30	29	13	11
11	15	12	e11	e8.3	e10	22	37	123	29	24	14	11
12	15	12	e12	e7.9	e9.4	18	38	99	27	19	14	11
13	14	12	e12	e7.3	e8.6	16	43	89	28	18	13	11
14	15	12	e12	e8.0	e8.8	17	45	81	31	17	13	11
15	14	12	e11	e9.0	e9.0	17	42	73	38	17	13	11
16	15	12	e11	e9.0	e9.3	21	41	67	33	27	13	11
17	16	12	e12	e8.5	e9.5	17	42	81	31	22	13	10
18	16	17	e13	e8.5	e9.5	17	45	76	28	20	13	10
19	16	17	e10	e8.5	e10	17	57	65	27	19	12	13
20	16	14	e8.0	e8.5	e11	19	57	72	30	18	12	13
21	15	15	e12	e8.3	e12	19	71	63	27	19	12	12
22	15	13	e11	e8.1	14	19	104	61	24	26	12	18
23	15	e12	e14	e8.0	15	23	132	58	23	18	12	17
24	15	e11	e15	e7.9	16	26	189	56	28	17	12	15
25	15	e14	e15	e7.2	16	24	236	52	40	16	12	14
26	15	17	e15	e7.4	9.4	25	191	69	28	16	11	13
27	14	16	e14	e8.2	e10	26	163	62	31	16	11	12
28	14	13	e13	e9.0	e14	29	138	57	26	19	11	12
29	14	12	13	e8.7	19	31	134	53	23	17	12	11
30	14	13	13	e8.0	---	29	115	52	22	16	11	11
31	13	---	e12	e7.8	---	26	---	48	---	16	12	---
TOTAL	467	395	378.8	268.3	325.7	656	2242	2212	950	599	416	356
MEAN	15.1	13.2	12.2	8.65	11.2	21.2	74.7	71.4	31.7	19.3	13.4	11.9
MAX	17	17	15	12	19	31	236	123	46	29	23	18
MIN	13	11	8.0	7.2	8.0	16	25	48	22	16	11	10
AC-FT	926	783	751	532	646	1300	4450	4390	1880	1190	825	706

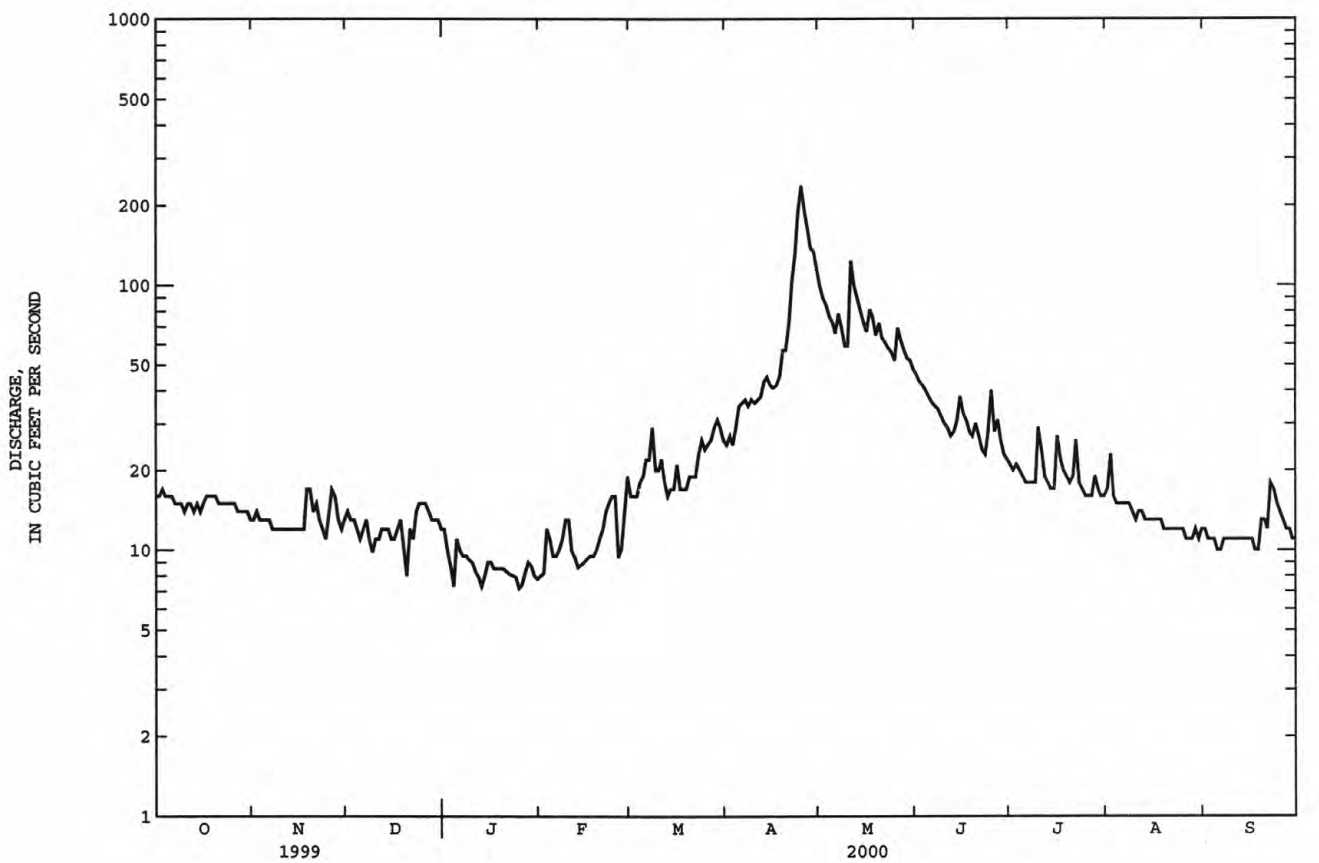
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

MEAN	21.7	19.2	13.5	12.8	15.1	26.0	60.3	90.6	50.6	24.1	18.3	14.8
MAX	89.8	52.2	23.1	18.4	28.7	49.5	140	384	101	48.7	45.3	22.7
(WY)	1999	1999	1999	1996	1996	1994	1997	1995	1984	1997	1998	1998
MIN	11.3	9.85	7.63	7.77	8.57	15.5	22.2	15.0	13.4	10.6	9.45	10.9
(WY)	1993	1986	1991	1993	1993	1992	1985	1985	1985	1985	1985	1990

06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1983 - 2000	
ANNUAL TOTAL	12860.8		9265.8			
ANNUAL MEAN	35.2		25.3		29.9	
HIGHEST ANNUAL MEAN					59.5	1995
LOWEST ANNUAL MEAN					13.8	1985
HIGHEST DAILY MEAN	192	Jun 13	236	Apr 25	2370	May 9 1995
LOWEST DAILY MEAN	8.0	Dec 20	7.2	Jan 25	5.0	Dec 1 1985a
ANNUAL SEVEN-DAY MINIMUM	11	Dec 14	7.9	Jan 21	5.5	Dec 22 1990
INSTANTANEOUS PEAK FLOW			309	Apr 25b	3800	May 8 1995c
INSTANTANEOUS PEAK STAGE			4.43	Jan 26d	9.06	May 8 1995
ANNUAL RUNOFF (AC-FT)	25510		18380		21630	
10 PERCENT EXCEEDS	82		57		61	
50 PERCENT EXCEEDS	20		15		17	
90 PERCENT EXCEEDS	13		9.5		11	

a For many days.
b Gage height, 3.11 ft.
c On basis of slope-area measurement of peak flow.
d Backwater from ice.
e Estimated.



06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD--Continued

WATER-QUALITY RECORDS

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

REMARKS.--On Sept. 13, 1999, inorganic blank water was processed at the field site through the sampling equipment used for this study and then processed and analyzed for quality-control purposes. The analytical results for this field blank is presented in a table following the water-quality results.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
DEC 1999											
29...	0920	12	1090	7.0	12.0	1.5	662	16.9	139	500	179
APR 2000											
26...	0830	203	352	7.9	11.0	6.0	665	12.6	116	160	92
JUN											
16...	0750	31	895	8.2	10.0	11.0	669	10.7	111	370	153
SEP											
13...	1000	11	1420	8.3	25.0	13.0	667	9.4	103	600	150

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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
DEC 1999											
29...	105	56.7	47.8	.9	344	11.5	14	<1	24	20.7	57
APR 2000											
26...	36.7	15.7	8.8	.3	75.7	11.6	29	<1	67	9.6	48
JUN											
16...	83.4	40.1	40.8	.9	278	10.2	23	<1	20	15.6	69
SEP											
13...	133	65.0	91.9	2	532	5.6	3	<1	39	33.6	67

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	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, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	CYANIDE DIS-SOLVED (MG/L AS CN) (00723)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
DEC 1999											
29...	<1	<.1	<1.0	11	<.8	4	<20	4	.04	410	30
APR 2000											
26...	<1	<1.0	<1.0	15	<.8	<1	13	2	<.01	4560	60
JUN											
16...	<1	<1.0	<1.0	<1	<.8	4	4	3	.01	670	20
SEP											
13...	<1	<1.0	<1.0	--	<.8	9	7	4	.01	70	E10

06436180 WHITEWOOD CREEK ABOVE WHITEWOOD, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	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, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)
DEC 1999										
29...	<1	<1	23.7	41	32	<.3	<.2	14	6	5
APR 2000										
26...	8	<1	7.0	240	18	<.3	<.2	1	13	1
JUN										
16...	<1	<1	13.3	38	14	<.3	<.2	6	4	6
SEP										
13...	<1	<1	20.8	5	2	<.3	<.2	20	3	3

DATE	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	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, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC 1999										
29...	E2	E2.3	<1	<1	377	<1	E20	6	2	6
APR 2000										
26...	1	.9	<1	<1	163	<1	34	3	1	141
JUN										
16...	2	2.1	<1	<1	359	1	23	5	2	12
SEP										
13...	2	2.2	<1	<1	524	2	9	4	2	5

BELLE FOURCHE RIVER BASIN

06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD

LOCATION.--Lat 44°32'30", long 103°34'16", in SE¼ NW¼ SE¼ NE¼ sec.25, T.7 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right bank 30 ft downstream from county highway bridge and 6.9 mi northeast of Whitewood.

DRAINAGE AREA.--77.4 mi^2, approximately.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,175 ft above sea level, from topographic map.

REMARKS.--Records good. Small diversions upstream for irrigation of 256 acres. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	18	15	9.5	19	29	127	63	21	18	9.2
2	19	17	18	12	13	18	31	113	58	21	43	8.3
3	19	17	17	10	16	18	29	106	53	21	24	8.4
4	18	17	16	8.1	12	19	31	97	51	19	21	8.5
5	17	16	11	15	11	20	39	91	49	18	21	7.7
6	17	17	16	13	13	21	37	79	45	17	20	7.5
7	16	17	17	12	13	23	38	97	42	16	19	8.5
8	16	16	15	13	14	35	35	91	39	16	19	8.0
9	16	16	11	13	15	22	38	71	37	16	17	7.5
10	15	16	15	13	15	23	37	67	34	28	15	8.4
11	16	16	16	11	12	21	38	170	32	30	15	8.1
12	16	16	15	e9.4	12	24	36	140	30	19	17	8.6
13	17	15	16	e8.0	9.7	20	42	127	31	17	15	8.0
14	16	16	15	e8.8	11	22	52	115	37	16	14	8.0
15	16	16	14	e12	13	23	49	103	43	16	14	7.8
16	17	16	18	e12	12	18	45	92	40	25	13	7.6
17	18	16	19	e11	12	22	44	109	35	27	13	7.2
18	19	20	18	e12	10	23	47	122	32	22	12	6.7
19	20	19	14	13	11	23	69	99	28	20	11	8.7
20	19	21	8.7	10	12	25	69	116	32	20	11	11
21	18	21	16	13	14	24	84	96	31	21	10	10
22	18	19	13	e12	15	24	113	90	25	34	9.8	17
23	17	18	16	11	16	26	153	85	23	22	9.8	19
24	17	14	17	9.0	16	32	209	78	29	20	8.8	15
25	18	19	16	e8.7	16	31	276	73	49	19	8.4	15
26	18	22	16	e9.0	11	31	207	110	32	19	8.6	13
27	17	23	17	e11	13	31	195	113	34	19	8.3	12
28	18	18	18	e12	20	33	184	96	33	26	8.5	11
29	18	17	18	e11	22	35	172	87	25	18	8.8	11
30	17	18	16	e9.4	---	34	149	92	23	18	8.6	11
31	17	---	15	8.4	---	30	---	74	---	18	9.6	---
TOTAL	538	526	485.7	345.8	389.2	770	2577	3126	1115	639	451.2	297.7
MEAN	17.4	17.5	15.7	11.2	13.4	24.8	85.9	101	37.2	20.6	14.6	9.92
MAX	20	23	19	15	22	35	276	170	63	34	43	19
MIN	15	14	8.7	8.0	9.5	18	29	67	23	16	8.3	6.7
AC-FT	1070	1040	963	686	772	1530	5110	6200	2210	1270	895	590

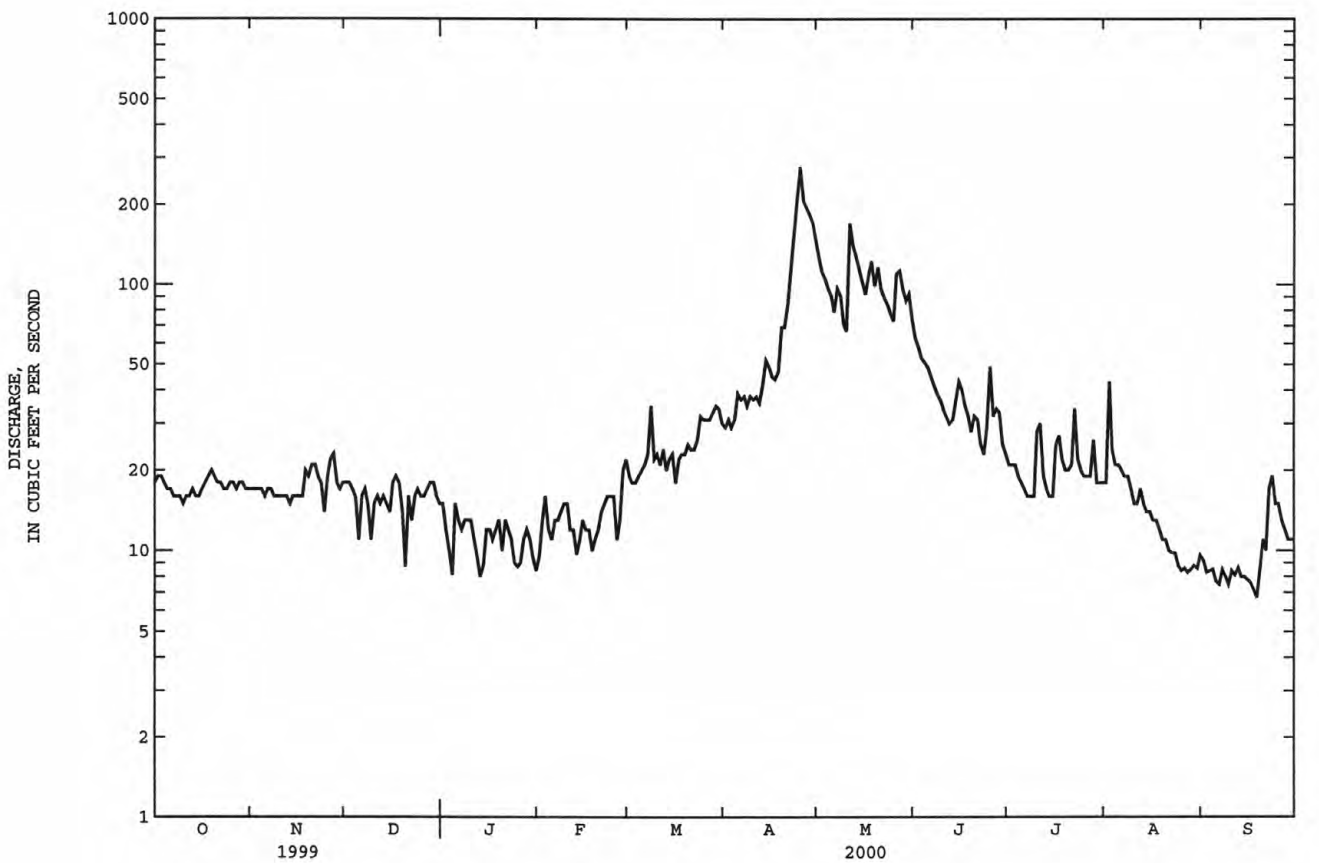
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2000, BY WATER YEAR (WY)

MEAN	24.3	20.1	14.4	14.3	16.9	27.3	64.4	106	54.5	23.1	16.5	14.1
MAX	104	56.2	27.2	23.9	26.5	53.2	165	404	122	40.5	42.0	24.5
(WY)	1999	1999	1999	1983	1996	1997	1997	1995	1999	1997	1998	1986
MIN	9.03	10.6	6.57	5.95	11.4	16.2	21.9	18.7	11.1	4.24	4.74	6.70
(WY)	1993	1993	1991	1991	1993	1991	1985	1985	1985	1985	1985	1990

06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1982 - 2000	
ANNUAL TOTAL	14855.7		11260.6			
ANNUAL MEAN	40.7		30.8		33.0a	
HIGHEST ANNUAL MEAN					62.8	1995
LOWEST ANNUAL MEAN					14.1	1985
HIGHEST DAILY MEAN	264	Jun 12	276	Apr 25	2060	May 9 1995
LOWEST DAILY MEAN	8.7	Dec 20	6.7	Sep 18	2.9	Jul 12 1985
ANNUAL SEVEN-DAY MINIMUM	14	Dec 19	7.7	Sep 12	3.3	Jul 8 1985
INSTANTANEOUS PEAK FLOW			358	Apr 25	3930	May 8 1995
INSTANTANEOUS PEAK STAGE			2.50	Apr 25	6.01	May 8 1995
ANNUAL RUNOFF (AC-FT)	29470		22340		23930	
10 PERCENT EXCEEDS	93		78		66	
50 PERCENT EXCEEDS	22		18		19	
90 PERCENT EXCEEDS	16		9.5		9.2	

a Median of annual mean discharges, 32 ft^3/s.
e Estimated.



06436198 WHITEWOOD CREEK ABOVE VALE, SD

LOCATION.--Lat 44°37'04", long 103°28'52", in SE¼ NW¼ NE¼ NW¼ sec.35, T.8 N., R.5 E., Butte County, Hydrologic Unit 10120202, on right bank at point where South Canal crosses creek, 3.2 mi above mouth, and 3.7 mi west of Vale.

DRAINAGE AREA.--102 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 2,840 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 800 acres. Additional water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurement and Field Determinations section.

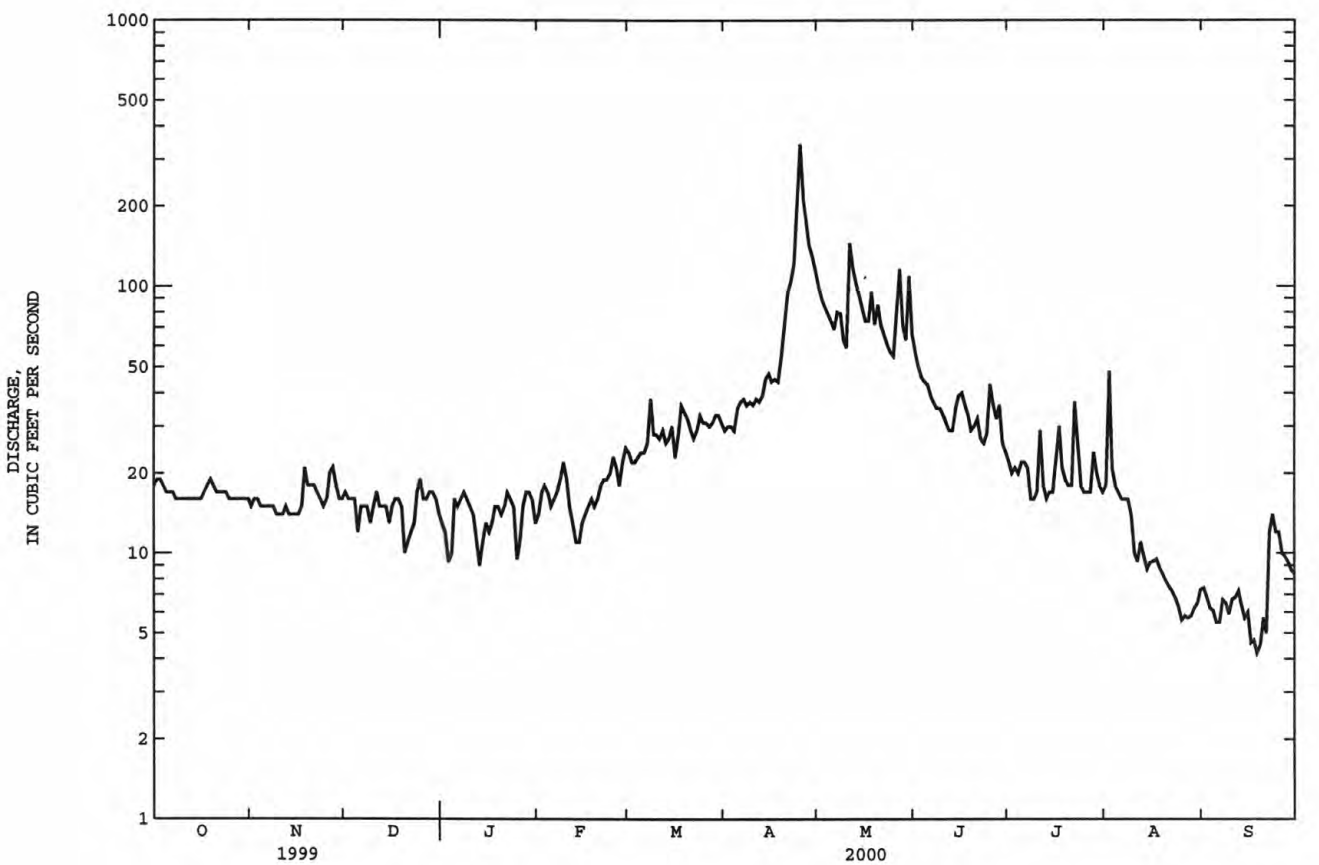
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	15	17	e13	e14	24	29	99	57	22	e18	7.4
2	19	16	16	e12	e17	22	30	90	50	20	e48	6.8
3	19	16	16	e9.3	e18	22	30	84	46	21	e21	6.2
4	18	15	16	e10	e17	23	29	79	44	20	e18	6.1
5	17	15	e12	e16	e15	24	35	74	43	22	e17	5.5
6	17	15	e15	e15	e16	24	37	69	39	22	e16	5.5
7	17	15	e15	e16	e17	26	38	80	37	21	e16	6.7
8	16	15	e15	e17	e19	38	36	79	35	16	e16	6.5
9	16	14	e13	e16	e22	28	37	63	35	16	e14	5.9
10	16	14	e15	e15	e19	28	36	59	33	17	e10	6.7
11	16	14	e17	e14	e15	27	38	145	31	29	9.3	6.8
12	16	15	e15	e11	e13	29	37	117	29	18	11	7.2
13	16	14	e15	e9.0	e11	26	39	102	29	16	9.7	6.4
14	16	14	e15	e11	e11	27	45	93	35	17	8.7	5.7
15	16	14	e13	e13	e13	30	47	83	39	e17	9.2	6.0
16	16	14	e15	e12	e14	23	44	74	40	e23	9.3	4.6
17	17	15	e16	e13	e15	28	45	74	36	e30	9.5	4.7
18	18	21	e16	e15	e16	36	44	95	33	e21	8.8	4.2
19	19	18	e15	e15	e15	34	55	72	29	e19	8.4	4.5
20	18	18	e10	e14	e16	32	71	85	30	e18	7.9	5.7
21	17	18	e11	e15	e18	29	94	71	32	e18	7.5	5.0
22	17	17	e12	e17	19	27	104	66	27	e37	7.2	12
23	17	16	e13	e16	19	29	122	61	26	e26	6.8	14
24	17	e15	e17	e15	20	33	183	57	28	e18	6.3	12
25	16	16	19	e9.5	23	31	341	55	43	e17	5.6	12
26	16	20	16	e11	21	31	213	80	36	e17	5.8	10
27	16	21	16	e15	e18	30	173	116	32	e17	5.7	9.7
28	16	18	17	e17	22	31	142	71	36	e24	5.8	9.2
29	16	16	17	e17	25	33	129	63	26	e20	6.2	8.6
30	16	16	16	e16	---	33	114	109	24	e18	6.5	8.4
31	16	---	e14	e13	---	31	---	66	---	e17	7.3	---
TOTAL	521	480	465	427.8	498	889	2417	2531	1060	634	356.5	220.0
MEAN	16.8	16.0	15.0	13.8	17.2	28.7	80.6	81.6	35.3	20.5	11.5	7.33
MAX	19	21	19	17	25	38	341	145	57	37	48	14
MIN	16	14	10	9.0	11	22	29	55	24	16	5.6	4.2
AC-FT	1030	952	922	849	988	1760	4790	5020	2100	1260	707	436
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000, BY WATER YEAR (WY)												
MEAN	23.8	18.8	14.1	14.3	20.4	30.8	66.2	100	63.8	23.1	15.3	12.8
MAX	126	55.7	27.1	44.3	60.1	59.7	173	435	163	47.5	52.1	38.9
(WY)	1999	1999	1999	1997	1997	1997	1997	1995	1999	1997	1998	1986
MIN	9.25	9.86	8.01	8.15	10.0	15.4	21.0	15.9	8.64	2.12	1.77	4.09
(WY)	1993	1986	1991	1991	1992	1992	1985	1985	1985	1985	1985	1992

06436198 WHITEWOOD CREEK ABOVE VALE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1984 - 2000	
ANNUAL TOTAL	17031		10499.3			
ANNUAL MEAN	46.7		28.7		33.7a	
HIGHEST ANNUAL MEAN					64.1	1995
LOWEST ANNUAL MEAN					11.8	1985
HIGHEST DAILY MEAN	584	Jun 12	341	Apr 25	2920	May 9 1995
LOWEST DAILY MEAN	10	Dec 20	4.2	Sep 18	.00	Jul 21 1985b
ANNUAL SEVEN-DAY MINIMUM	13	Dec 17	5.0	Sep 15	.79	Aug 15 1985
INSTANTANEOUS PEAK FLOW			527	Apr 25	4250	May 8 1995
INSTANTANEOUS PEAK STAGE			2.55	Apr 25	5.72	May 8 1995
ANNUAL RUNOFF (AC-FT)	33780		20830		24400	
10 PERCENT EXCEEDS	115		64		71	
50 PERCENT EXCEEDS	22		17		18	
90 PERCENT EXCEEDS	15		8.7		7.5	

a Median of annual mean discharges, 30 ft^3/s.
b Also July 22 and Aug. 19, 1985.
e Estimated.



WATER-QUALITY RECORDS

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

REMARKS.--On Sept. 13, 2000, the water collected at this site was split in the field into two samples: a primary sample (time 1230) and a split replicate sample (time 1231). Analytical results for both samples are included in the table below.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
DEC 1999											
29...	1215	17	1450	7.3	12.0	3.5	682	14.9	126	780	204
APR 2000											
26...	1155	212	548	8.0	14.0	10.0	689	11.0	108	240	130
JUN											
16...	1135	38	1080	8.4	12.0	14.5	692	9.4	102	490	181
SEP											
13...	1230	6.8	1500	8.2	26.5	18.5	688	9.2	110	730	151
a13...	1231	6.8	1500	8.2	26.5	18.5	688	9.2	110	710	152

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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
DEC 1999											
29...	180	80.3	54.6	.9	573	8.8	1	<1	42	29.0	29
APR 2000											
26...	56.7	23.9	19.0	.5	166	10.8	12	<1	471	27.0	29
JUN											
16...	113	50.7	42.6	.8	375	8.5	13	<1	46	35.0	43
SEP											
13...	161	79.6	69.7	1	626	1.9	2	<1	59	41.8	31
a13...	156	76.8	65.5	1	625	1.8	2	<1	67	42.5	31

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	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, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	CYANIDE DIS-SOLVED (MG/L AS CN) (00723)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
DEC 1999											
29...	<1	<.1	<1.0	<1	1.0	3	<20	4	.01	340	70
APR 2000											
26...	<1	<1.0	<1.0	6	<.8	<1	25	3	<.01	17900	20
JUN											
16...	<1	<1.0	<1.0	<1	<.8	3	3	3	<.01	550	40
SEP											
13...	<1	<1.0	<1.0	--	<.8	4	7	3	<.01	470	130
a13...	<1	<1.0	<1.0	--	<.8	4	6	3	<.01	480	140

a Field split replicate.

06436198 WHITEWOOD CREEK ABOVE VALE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	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, 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)
DEC 1999											
29...	<1	<1	33.0	128	134	<.3	<.2	6	E2	6	E2
APR 2000											
26...	14	<1	17.7	788	41	.3	<.2	2	16	1	2
JUN											
16...	<1	<1	21.8	96	67	<.3	<.2	4	3	6	2
SEP											
13...	<1	<1	31.3	88	84	<.3	<.2	6	2	2	2
a13...	<1	<1	34.5	92	76	<.3	<.2	6	2	<1	2

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, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC 1999									
29...	E1.8	<1	<1	1060	<1	<31	3	4	18
APR 2000									
26...	1.3	<1	<1	324	<1	53	2	2	688
JUN									
16...	2.6	<1	<1	674	1	8	4	3	28
SEP									
13...	2.5	<1	<1	999	1	7	2	3	2
a13...	2.5	<1	<1	997	1	9	1	3	--

a Field split replicate.

06436760 HORSE CREEK ABOVE VALE, SD

LOCATION.--Lat 44°39'08", long 103°21'59", in SE¼ NE¼ SE¼ sec.14, T.8 N., R.6 E., Butte County, Hydrologic Unit 10120202, on left bank 2.6 mi upstream from Dry Creek, 5.5 mi upstream from mouth, 3.0 mi northeast of Vale, and 4.5 mi southeast of Newell.

DRAINAGE AREA.--464 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,710 ft above sea level, from topographic map. April 1962 to September 1980, water-stage recorder, at site 2.7 mi downstream, at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station and by return flow from Belle Fourche Irrigation Project. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

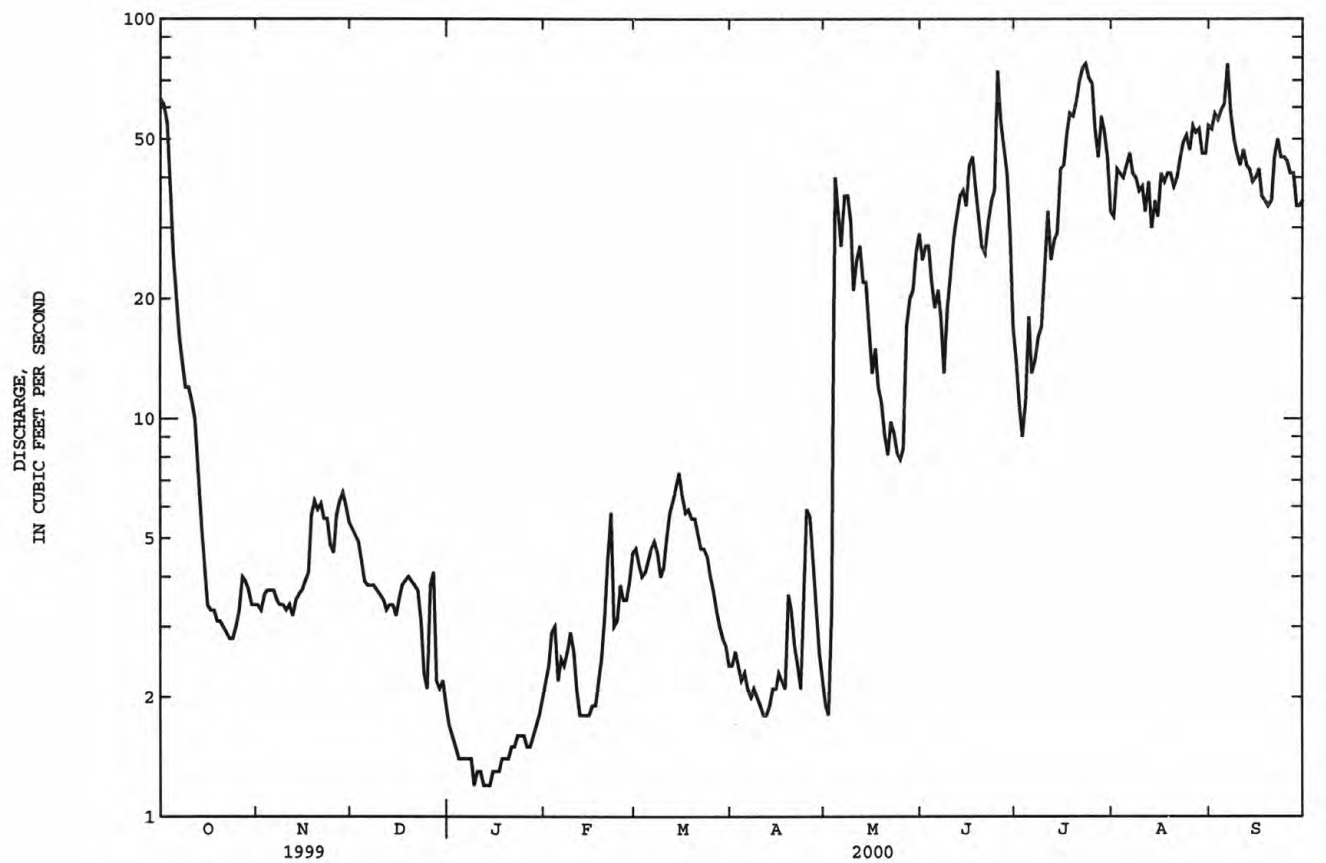
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	3.4	5.3	1.7	e2.2	4.7	2.4	1.9	25	14	32	53
2	61	3.3	5.1	1.6	e2.4	4.3	2.6	1.8	27	11	42	58
3	55	3.6	4.9	e1.5	2.9	4.0	2.4	3.3	27	9.0	41	56
4	39	3.7	4.4	e1.4	3.0	4.1	2.2	40	22	11	40	59
5	26	3.7	3.9	e1.4	2.2	4.4	2.3	33	19	18	43	61
6	20	3.7	3.8	e1.4	2.5	4.7	2.1	27	21	13	46	77
7	16	3.5	3.8	e1.4	2.4	4.9	2.0	36	18	14	41	58
8	14	3.4	3.8	e1.4	2.6	e4.6	2.1	36	13	16	40	50
9	12	3.4	e3.7	e1.2	2.9	e4.0	2.0	31	19	17	37	46
10	12	3.3	e3.6	e1.3	2.6	e4.2	1.9	21	23	24	38	43
11	11	3.4	3.5	e1.3	e2.1	e5.0	1.8	25	28	33	33	47
12	10	3.2	3.3	e1.2	e1.8	5.8	1.8	27	32	25	39	43
13	7.6	3.5	3.4	e1.2	e1.8	6.2	1.9	22	36	28	30	42
14	5.4	3.6	3.4	e1.2	e1.8	6.7	2.1	22	37	29	35	39
15	4.3	3.7	3.2	e1.3	e1.8	7.3	2.1	17	34	42	32	40
16	3.4	3.9	3.5	e1.3	e1.9	6.4	2.3	13	43	43	41	42
17	3.3	4.1	3.8	e1.3	e1.9	5.8	2.2	15	45	52	39	36
18	3.3	5.7	3.9	e1.4	e2.2	5.9	2.1	12	37	58	41	35
19	3.1	6.2	e4.0	e1.4	e2.5	5.6	3.6	11	32	57	41	34
20	3.1	5.9	e3.9	e1.4	e3.2	5.6	3.3	9.1	27	62	38	35
21	3.0	6.1	e3.8	e1.5	e4.5	5.1	2.7	8.1	26	70	40	45
22	2.9	5.6	e3.7	e1.5	e5.8	4.7	2.4	9.8	31	75	45	50
23	2.8	5.6	e3.1	e1.6	3.0	4.7	2.1	9.2	35	77	49	45
24	2.8	4.8	e2.3	e1.6	3.1	4.5	3.3	8.2	37	71	51	45
25	3.0	4.6	e2.1	e1.6	3.8	4.0	5.9	7.9	74	69	47	44
26	3.3	5.7	e3.8	e1.5	e3.5	3.7	5.7	8.4	55	53	54	41
27	4.0	6.2	e4.1	e1.5	3.5	3.3	4.3	17	47	45	52	41
28	3.9	6.5	2.2	e1.6	3.9	3.0	3.4	20	41	57	53	34
29	3.7	6.0	2.1	e1.7	4.6	2.8	2.6	21	29	52	46	34
30	3.4	5.5	2.2	e1.8	---	2.7	2.2	26	17	45	46	35
31	3.4	---	1.9	e2.0	---	2.4	---	29	---	33	54	---
TOTAL	408.7	134.8	109.5	45.2	82.4	145.1	79.8	568.7	957	1223.0	1306	1368
MEAN	13.2	4.49	3.53	1.46	2.84	4.68	2.66	18.3	31.9	39.5	42.1	45.6
MAX	63	6.5	5.3	2.0	5.8	7.3	5.9	40	74	77	54	77
MIN	2.8	3.2	1.9	1.2	1.8	2.4	1.8	1.8	13	9.0	30	34
AC-FT	811	267	217	90	163	288	158	1130	1900	2430	2590	2710
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2000, BY WATER YEAR (WY)												
MEAN	19.7	5.31	3.17	4.37	45.8	72.2	49.9	172	81.1	75.4	50.0	52.7
MAX	169	26.9	8.50	31.7	424	251	229	901	272	464	82.6	311
(WY)	1983	1999	1983	1983	1997	1986	1987	1982	1998	1993	1987	1986
MIN	1.46	1.82	1.15	.96	1.24	1.30	.75	6.48	11.3	35.8	25.7	11.3
(WY)	1992	1991	1993	1992	1992	1992	1992	1981	1991	1991	1992	1992

06436760 HORSE CREEK ABOVE VALE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1981 - 2000	
ANNUAL TOTAL	15191.7		6428.2			
ANNUAL MEAN	41.6		17.6		52.8a	
HIGHEST ANNUAL MEAN					131	1996
LOWEST ANNUAL MEAN					10.4	1992
HIGHEST DAILY MEAN	686	Jun 12	77	Jul 23	14000	May 21 1982
LOWEST DAILY MEAN	1.9	Dec 31	1.2	Jan 9, 12-14	.07	Nov 7 1985
ANNUAL SEVEN-DAY MINIMUM	2.6	Dec 25	1.2	Jan 9	.28	Dec 25 1990
INSTANTANEOUS PEAK FLOW			119	Jun 25	17700	May 21 1982
INSTANTANEOUS PEAK STAGE			3.22	Jun 25	24.80	May 21 1982
ANNUAL RUNOFF (AC-FT)	30130		12750		38240	
10 PERCENT EXCEEDS	87		46		75	
50 PERCENT EXCEEDS	16		5.6		10	
90 PERCENT EXCEEDS	3.6		1.8		1.8	

a Median of annual mean discharges, 42 ft^3/s.
e Estimated.



06437000 BELLE FOURCHE RIVER NEAR STURGIS, SD

LOCATION.--Lat 44°30'47", long 103°08'11", in SE¼ NW¼ sec.3, T.6 N., R.8 E., Meade County, Hydrologic Unit 10120202, on right bank near upstream end of bridge on State Highway 34, 0.5 mi upstream from Bear Butte Creek, and 20 mi northeast of Sturgis.

DRAINAGE AREA.--5,870 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 2,526.13 ft above sea level. Prior to Oct. 31, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 246 mi upstream since Oct. 25, 1952. At a point 75 mi upstream, water is diverted to Belle Fourche Reservoir (see station 06435000), through Inlet Canal (see station 06434505), with other small diversions from the main stem and tributaries for irrigation. Total diversion for irrigation of about 60,000 acres upstream from station. Maximum discharge prior to Sept. 30, 1953, 17,900 ft^3/s, May 24, 1946, gage height, 13.86 ft; no flow for many days in 1945 and 1950. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	78	81	e300	e330	375	153	556	297	250	261	338
2	276	71	80	e280	e340	387	154	487	259	237	260	330
3	498	71	82	e275	e340	382	148	379	250	231	272	305
4	480	70	80	e280	e335	380	146	280	228	176	256	283
5	414	68	77	e285	e335	376	146	322	209	188	257	343
6	357	67	e72	e290	e330	365	145	345	230	191	254	348
7	336	68	e77	e295	e325	366	149	338	239	197	268	289
8	327	68	e76	e295	e320	428	140	356	204	202	264	267
9	322	67	e75	e290	e320	471	127	314	196	183	262	256
10	319	65	e71	e290	e310	442	124	288	186	197	242	251
11	312	66	e76	e285	e305	413	121	428	172	234	240	254
12	312	65	e81	e280	e300	407	123	623	200	282	234	251
13	314	65	e81	e275	e300	403	127	485	245	235	257	245
14	317	67	e80	e270	e300	430	130	451	298	211	259	228
15	320	66	e80	e270	e300	451	130	485	246	219	252	212
16	320	66	e84	e275	e300	429	131	467	242	261	240	215
17	320	66	e86	e280	e300	277	128	481	253	279	257	218
18	323	79	e86	e290	e300	243	129	494	255	294	265	214
19	322	88	e105	e295	e300	264	166	485	260	344	257	199
20	326	90	e160	e300	e300	274	171	472	259	296	259	184
21	324	86	e200	e300	e310	254	197	420	231	353	260	184
22	322	87	e250	e300	e325	233	240	405	227	375	266	206
23	321	86	e280	e300	e350	212	249	439	254	388	284	309
24	321	82	e290	e300	e400	195	348	298	265	378	278	329
25	321	82	e300	e300	e440	183	919	236	366	358	266	270
26	302	82	e300	e305	e500	176	1090	209	591	341	272	245
27	191	90	e330	e305	e490	166	949	291	428	325	281	221
28	141	91	e375	e305	e475	161	769	316	355	311	284	227
29	99	89	e375	e310	e440	176	671	272	334	332	309	240
30	88	84	e350	e320	---	179	599	303	339	297	315	222
31	82	---	e305	e325	---	161	---	329	---	272	314	---
TOTAL	9266	2270	5045	9070	10020	9659	8819	12054	8118	8437	8245	7683
MEAN	299	75.7	163	293	346	312	294	389	271	272	266	256
MAX	498	91	375	325	500	471	1090	623	591	388	315	348
MIN	82	65	71	270	300	161	121	209	172	176	234	184
AC-FT	18380	4500	10010	17990	19870	19160	17490	23910	16100	16730	16350	15240

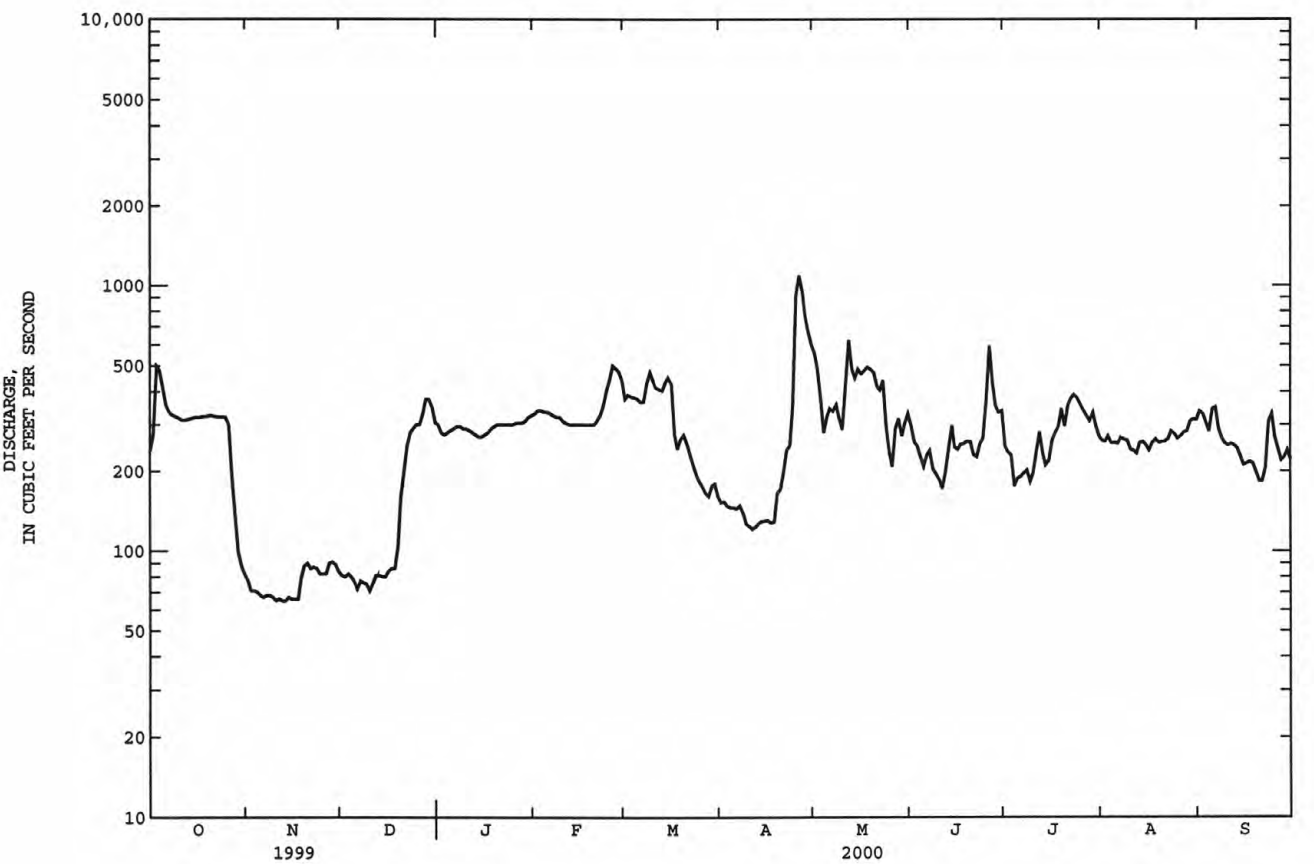
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)*

MEAN	116	82.7	54.9	46.3	141	338	346	736	627	340	284	229
MAX	607	835	379	319	1311	1731	1787	3805	2499	1473	625	723
(WY)	1999	1999	1999	1999	1996	1996	1997	1995	1976	1993	1976	1986
MIN	16.2	20.1	11.5	4.71	6.62	30.3	21.2	15.8	80.7	52.4	2.39	10.2
(WY)	1962	1960	1962	1979	1979	1961	1981	1961	1961	1960	1961	1961

06437000 BELLE FOURCHE RIVER NEAR STURGIS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000*	
ANNUAL TOTAL	206060		98686			
ANNUAL MEAN	565		270		279a	
HIGHEST ANNUAL MEAN					773	1996
LOWEST ANNUAL MEAN					27.4	1961
HIGHEST DAILY MEAN	5500	Jun 12	1090	Apr 26	29700	May 21 1982
LOWEST DAILY MEAN	65	Nov 10	65	Nov 10, 12-13	.00	Aug 9 1961
ANNUAL SEVEN-DAY MINIMUM	66	Nov 10	66	Nov 10	.56	Aug 8 1961
INSTANTANEOUS PEAK FLOW			1270	Apr 25	36400	May 21 1982
INSTANTANEOUS PEAK STAGE			5.35	Apr 25	19.10	May 21 1982
ANNUAL RUNOFF (AC-FT)	408700		195700		202100	
10 PERCENT EXCEEDS	1240		413		541	
50 PERCENT EXCEEDS	336		274		107	
90 PERCENT EXCEEDS	82		82		25	

* Regulated period only (1954-2000). See REMARKS
a Median of annual mean discharges, 260 ft^3/s.
e Estimated.



06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD

LOCATION.--Lat 44°20'08", long 103°38'06", in NE¼ SE¼ sec.4, T.4 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right bank 0.4 mi northeast of Galena, 0.5 mi downstream from Butcher Gulch, and 5.3 mi southeast of Deadwood.

DRAINAGE AREA.--16.6 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.6	e2.5	2.2	1.9	e2.0	5.9	29	18	5.0	2.5	1.8
2	3.2	e2.4	e2.3	e2.2	2.0	e2.0	5.5	26	16	4.9	3.3	1.7
3	3.2	e2.5	e2.2	2.1	2.0	e2.2	5.3	24	15	4.7	2.7	1.7
4	3.1	2.6	e2.0	2.2	1.8	e2.3	10	21	14	4.2	2.6	1.7
5	3.1	2.5	e1.8	2.2	1.9	e2.4	9.8	18	13	4.2	2.8	1.7
6	3.1	2.5	e1.9	2.1	1.9	e2.5	8.4	17	12	4.2	2.5	1.7
7	3.0	2.5	e2.2	2.1	2.0	e2.5	8.0	22	11	4.0	2.5	1.7
8	3.2	2.4	e1.9	2.1	2.0	e2.3	9.5	18	10	3.9	2.4	1.7
9	3.0	2.4	e2.1	2.1	2.0	e1.9	9.8	15	9.6	4.0	2.4	1.7
10	2.8	2.4	e2.1	2.0	2.0	e2.0	10	16	8.9	4.7	2.3	1.7
11	2.8	2.5	2.2	2.0	2.0	e2.2	9.9	43	8.5	4.6	2.3	1.7
12	2.9	2.5	2.1	2.1	2.0	e2.2	11	33	8.2	3.6	2.3	1.6
13	2.9	2.4	2.1	2.0	1.9	e2.3	13	30	8.7	3.5	2.2	1.7
14	2.9	2.4	2.2	2.0	1.9	e2.2	12	28	9.5	3.5	2.1	1.6
15	2.9	2.4	2.2	2.1	2.0	e2.2	11	25	11	3.6	2.1	1.7
16	2.9	e2.3	2.4	2.1	1.9	e2.3	12	22	9.4	8.5	2.2	1.6
17	2.8	e2.2	2.3	2.2	1.9	e2.5	12	29	8.5	5.5	2.1	1.7
18	3.2	e2.0	2.3	2.1	e1.8	e2.6	12	26	7.4	4.6	2.1	1.7
19	3.2	e1.8	2.2	2.0	1.9	e2.7	33	23	6.8	4.1	2.0	2.0
20	3.1	e1.8	2.2	1.9	1.8	2.8	18	25	7.2	4.0	2.0	2.2
21	2.9	e1.7	2.3	2.1	e1.8	3.4	18	21	6.6	4.4	1.9	2.0
22	2.8	e1.6	2.4	2.0	e1.9	5.1	27	20	5.8	5.5	2.0	2.5
23	2.8	e1.5	2.3	1.9	e2.1	5.2	46	19	5.6	3.8	2.0	2.4
24	2.8	e1.6	2.3	1.8	e2.1	5.7	79	18	8.0	3.4	1.9	2.5
25	2.7	e1.8	2.3	1.6	e1.8	5.6	66	17	9.2	3.2	1.9	2.6
26	2.7	e2.0	2.3	1.8	e1.6	5.9	64	29	6.6	3.0	1.8	2.5
27	2.8	e2.2	2.3	1.9	e1.6	6.7	54	23	8.0	2.7	1.8	2.3
28	2.7	e2.2	2.4	1.9	e1.7	7.7	46	23	7.0	2.8	1.8	2.2
29	2.7	e2.2	2.4	1.9	e1.9	7.9	41	22	5.7	2.6	1.8	2.1
30	2.7	e2.4	2.3	1.9	---	6.7	35	21	5.2	2.5	1.8	2.1
31	2.7	---	2.3	1.9	---	5.9	---	19	---	2.4	2.0	---
TOTAL	90.7	66.3	68.8	62.5	55.1	111.9	702.1	722	280.4	125.6	68.1	57.8
MEAN	2.93	2.21	2.22	2.02	1.90	3.61	23.4	23.3	9.35	4.05	2.20	1.93
MAX	3.2	2.6	2.5	2.2	2.1	7.9	79	43	18	8.5	3.3	2.6
MIN	2.7	1.5	1.8	1.6	1.6	1.9	5.3	15	5.2	2.4	1.8	1.6
AC-FT	180	132	136	124	109	222	1390	1430	556	249	135	115

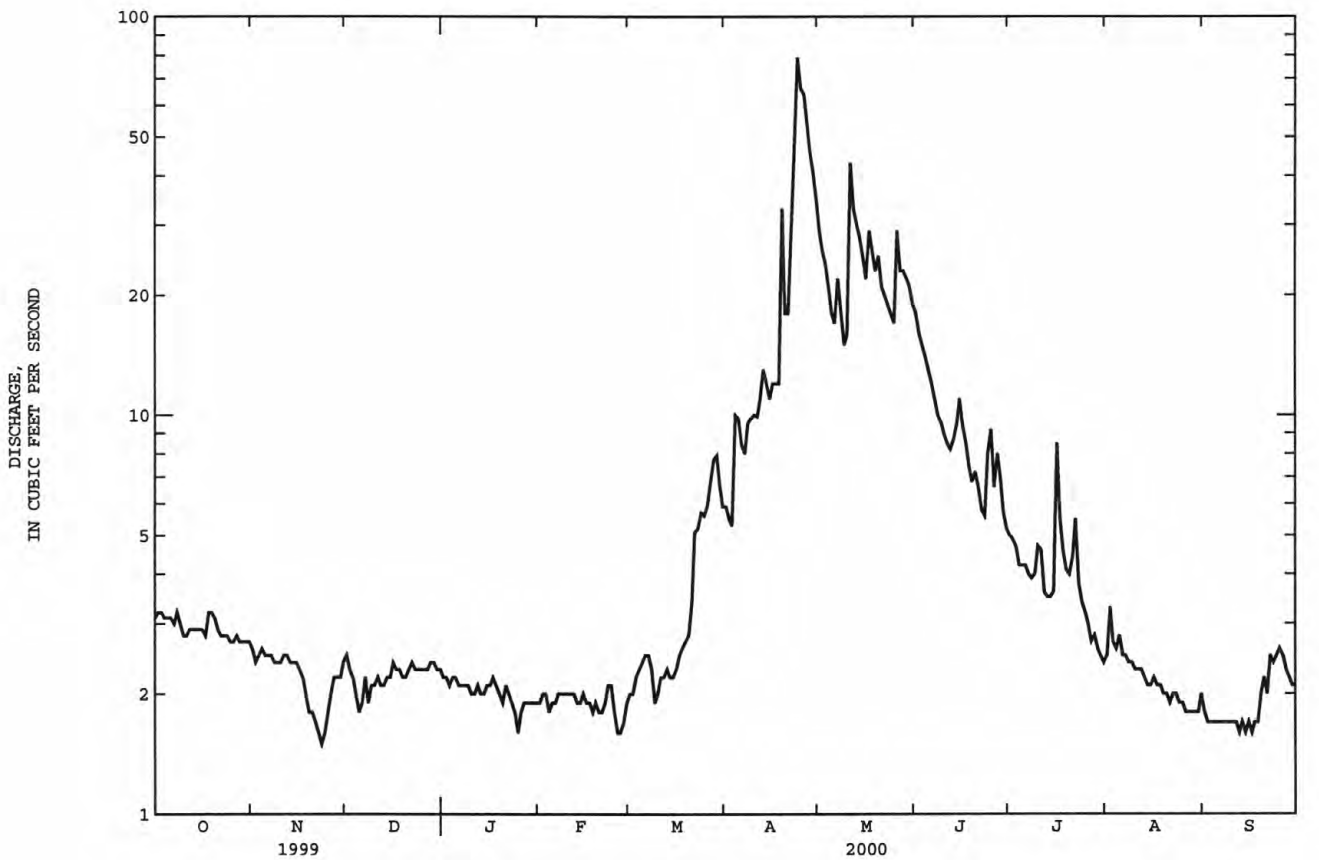
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	5.77	3.47	2.27	1.93	2.15	7.45	21.9	28.5	20.0	5.25	3.58	2.33
MAX	37.5	15.8	6.53	4.42	4.66	21.2	73.7	94.8	44.7	9.68	10.3	6.26
(WY)	1999	1999	1999	1997	1997	1997	1997	1995	1991	1997	1998	1998
MIN	.69	.82	.28	.30	.45	2.48	4.38	6.09	3.20	1.43	.66	.31
(WY)	1993	1993	1991	1991	1991	1990	1989	1992	1989	1989	1992	1990

06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	3709.2		2411.3			
ANNUAL MEAN	10.2		6.59		8.73	
HIGHEST ANNUAL MEAN					17.1	1997
LOWEST ANNUAL MEAN					2.29	1992
HIGHEST DAILY MEAN	88	Jun 12	79	Apr 24	543	May 8 1995
LOWEST DAILY MEAN	1.4	Feb 22	1.5	Nov 23	.00	Sep 1 1990
ANNUAL SEVEN-DAY MINIMUM	1.7	Nov 19	1.7	Sep 10	.05	Aug 29 1990
INSTANTANEOUS PEAK FLOW			140	Apr 24	1590	May 8 1995
INSTANTANEOUS PEAK STAGE			5.50	Apr 24	8.34	May 8 1995
ANNUAL RUNOFF (AC-FT)	7360		4780		6320	
10 PERCENT EXCEEDS	28		18		23	
50 PERCENT EXCEEDS	3.9		2.5		3.0	
90 PERCENT EXCEEDS	2.2		1.8		.80	

e Estimated.



BELLE FOURCHE RIVER BASIN

06437400 BEAR BUTTE CREEK AT STURGIS, SD

LOCATION.--Lat 44°24'44", long 103°29'10", in NW¼SW¼NW¼ sec. 11, T.5 N., R.5 E., Meade County, Hydrologic Unit 10120202, on left upstream side of walkway bridge rail, 0.2 mi west of Ft. Meade, 0.5 mi east of Sturgis along SD Highway 34.

DRAINAGE AREA.--73.6 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,320 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. Additional water samples and field parameters collected as part of the Bear Butte Creek monthly sampling program.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	4.1	3.9	2.9	3.4	3.2	3.1	5.0	6.0	6.0	14	3.3
2	5.4	4.2	3.9	3.0	4.5	3.2	3.5	4.8	6.1	6.0	19	3.1
3	5.3	4.2	3.9	3.0	3.4	3.2	3.4	4.8	6.4	5.6	5.5	3.0
4	5.2	4.1	3.9	3.1	3.4	3.2	3.1	4.8	6.2	5.5	5.1	2.9
5	5.0	4.1	3.8	3.2	3.3	3.1	3.0	4.7	6.2	5.6	5.0	2.9
6	5.0	4.0	3.8	3.2	3.3	3.1	3.0	5.0	6.2	5.7	4.7	3.0
7	5.0	4.1	3.8	3.1	3.4	3.1	3.8	10	6.2	5.7	4.5	3.1
8	5.0	4.0	3.8	2.9	3.4	7.7	3.1	4.9	6.5	5.7	4.4	3.1
9	4.8	4.0	3.8	2.9	3.4	2.7	3.0	4.7	6.9	5.9	4.4	3.1
10	4.9	3.9	3.7	3.1	3.4	2.7	2.9	7.8	6.6	7.2	4.4	3.2
11	4.9	3.7	3.7	3.2	3.4	3.0	3.1	12	6.7	6.8	4.4	3.2
12	4.9	3.7	3.7	3.2	3.3	2.9	3.1	5.7	6.6	5.6	4.2	3.3
13	5.0	3.7	3.7	3.1	3.4	2.8	3.3	5.5	7.0	5.5	4.1	3.2
14	4.8	3.8	3.7	3.2	3.4	2.8	3.5	5.5	7.4	5.5	4.1	3.2
15	4.8	3.7	3.7	3.1	3.3	2.8	3.5	5.4	9.0	5.5	3.8	3.1
16	4.8	3.7	3.9	3.2	3.3	2.8	3.5	5.9	7.3	7.4	3.9	3.1
17	4.8	3.7	3.7	3.2	3.1	2.7	3.4	10	6.9	6.1	3.8	3.1
18	4.8	5.1	3.4	3.2	3.0	2.7	3.7	7.2	6.6	5.8	3.8	3.2
19	4.8	5.1	3.4	3.1	3.0	2.7	7.2	7.2	6.6	5.7	3.7	3.6
20	4.7	4.5	3.5	3.1	2.9	2.9	6.4	7.4	6.7	5.8	3.7	3.7
21	4.5	4.1	3.6	3.2	2.9	2.8	6.5	6.6	6.6	7.1	3.6	3.3
22	4.3	3.9	3.4	3.2	2.9	2.8	5.2	6.0	6.6	5.9	3.7	6.2
23	4.2	3.9	3.6	3.2	2.9	3.1	4.9	5.5	11	5.7	3.5	4.5
24	4.2	3.9	3.6	3.3	2.9	3.2	26	5.5	8.2	5.5	3.4	3.6
25	4.2	3.9	3.2	3.4	6.3	3.1	94	5.5	11	5.5	3.3	3.4
26	4.2	4.8	3.2	3.4	12	3.1	51	7.0	6.5	5.4	3.3	3.3
27	4.2	4.3	3.2	3.5	3.2	3.2	28	7.4	9.0	5.4	3.3	3.3
28	4.4	4.2	3.0	3.7	3.5	3.2	14	5.8	6.5	5.7	3.4	3.2
29	4.2	4.1	2.9	3.7	3.3	3.2	7.0	5.9	6.2	5.1	3.3	3.2
30	4.2	4.0	2.9	3.6	---	3.1	5.2	7.4	6.1	5.1	3.4	3.1
31	4.2	---	2.9	3.5	---	3.1	---	6.1	---	5.0	3.4	---
TOTAL	145.9	122.5	110.2	99.7	106.9	97.2	314.4	197.0	211.8	180.0	148.1	100.5
MEAN	4.71	4.08	3.55	3.22	3.69	3.14	10.5	6.35	7.06	5.81	4.78	3.35
MAX	5.4	5.1	3.9	3.7	12	7.7	94	12	11	7.4	19	6.2
MIN	4.2	3.7	2.9	2.9	2.9	2.7	2.9	4.7	6.0	5.0	3.3	2.9
AC-FT	289	243	219	198	212	193	624	391	420	357	294	199

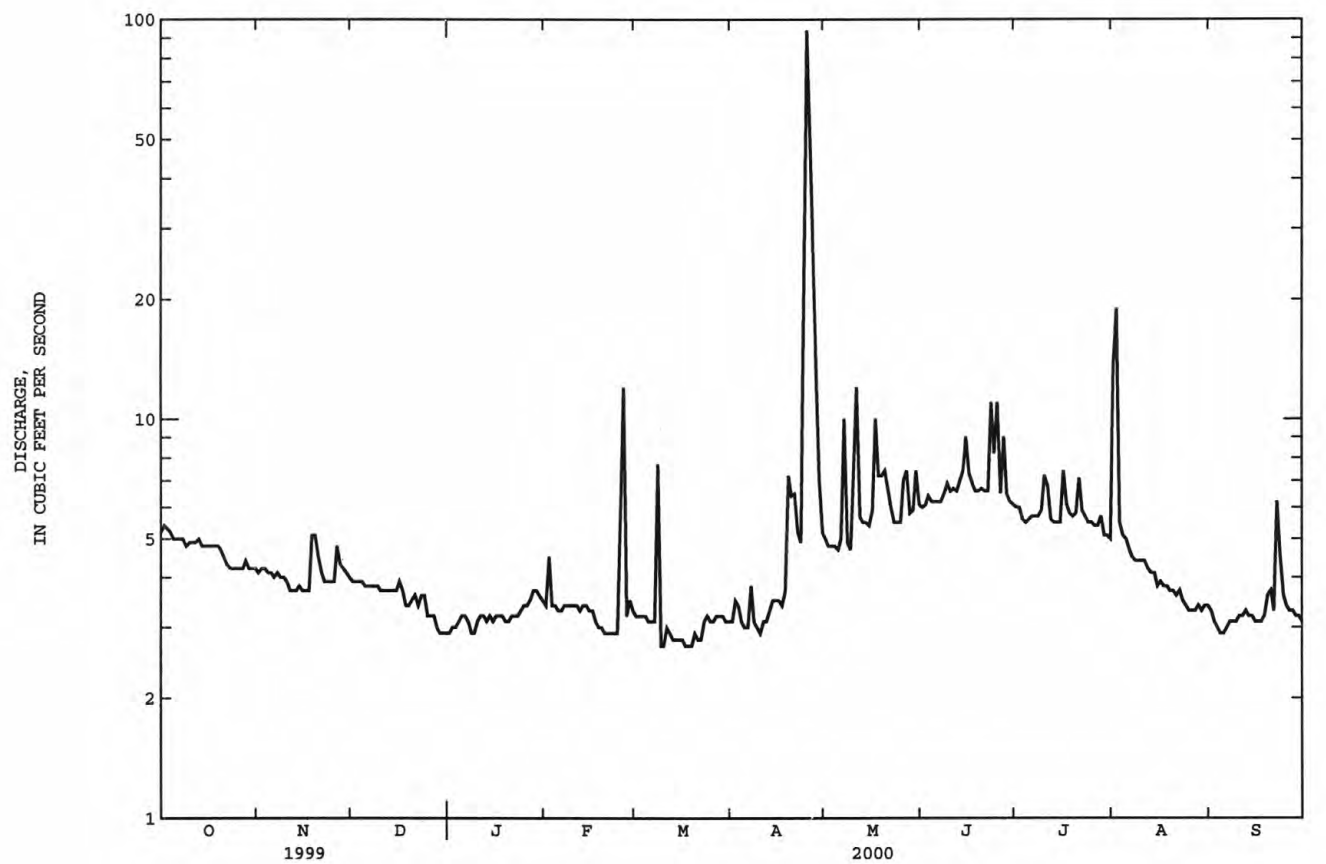
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)

MEAN	15.1	8.93	5.20	4.10	3.98	3.88	8.36	5.89	17.6	8.28	6.24	4.63
MAX	25.5	13.8	6.84	4.99	4.29	4.62	10.5	6.35	28.2	10.8	7.71	5.90
(WY)	1999	1999	1999	1999	1999	1999	2000	2000	1999	1999	1999	1999
MIN	4.71	4.08	3.55	3.22	3.69	3.14	6.24	5.43	7.06	5.81	4.78	3.35
(WY)	2000	2000	2000	2000	2000	2000	1999	1999	2000	2000	2000	2000

06437400 BEAR BUTTE CREEK AT STURGIS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1999 - 2000	
ANNUAL TOTAL	2748.5		1834.2			
ANNUAL MEAN	7.53		5.01		7.69	
HIGHEST ANNUAL MEAN					10.4	1999
LOWEST ANNUAL MEAN					5.01	2000
HIGHEST DAILY MEAN	110	Jun 13	94	Apr 25	110	Jun 13 1999
LOWEST DAILY MEAN	2.9	Dec 29	2.7	Mar 9a	2.7	Mar 9 2000
ANNUAL SEVEN-DAY MINIMUM	3.0	Dec 25	2.8	Mar 13	2.8	Mar 13 2000
INSTANTANEOUS PEAK FLOW			632	Aug 1	654	Jun 12 1999
INSTANTANEOUS PEAK STAGE			16.30	Aug 1	16.34	Jun 12 1999
ANNUAL RUNOFF (AC-FT)	5450		3640		5570	
10 PERCENT EXCEEDS	11		6.7		13	
50 PERCENT EXCEEDS	5.0		3.9		5.0	
90 PERCENT EXCEEDS	3.8		3.0		3.2	

a Also Mar. 10, 17-19.



06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD

LOCATION.--Lat 44°22'11", long 102°33'56", in NE¼ NE¼ sec.29, T.5 N., R.13 E., Meade County, Hydrologic Unit 10120202, on right bank 50 ft downstream from highway bridge, 4.3 mi northwest of Elm Springs, and 4.7 mi downstream from Hay Creek.

DRAINAGE AREA.--7,210 mi^2, approximately.

PERIOD OF RECORD.--August 1928 to June 1932, March 1934 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 786: Drainage area. WSP 926: 1929, 1931(M), 1935, 1937.

GAGE.--Water-stage recorder. Datum of gage is 2,171.60 ft above sea level. Prior to July 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 304 mi upstream since Oct. 25, 1952. At a point 133 mi above station, water is diverted to Belle Fourche Reservoir (see station 06435000), through Inlet Canal near Belle Fourche (see station 06434500), with other smaller diversions from the main stem and tributaries for irrigation. Total diversion for irrigation of about 60,000 acres upstream from station. Maximum discharge prior to Sept. 30, 1953, 35,700 ft^3/s, June 10, 1941, gage height, 14.30 ft; no flow for many days in 1936-37, 1939-40. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1927 reached a stage of 21.8 ft. Flood in spring of 1933 reached a stage of about 20 ft, from floodmarks.

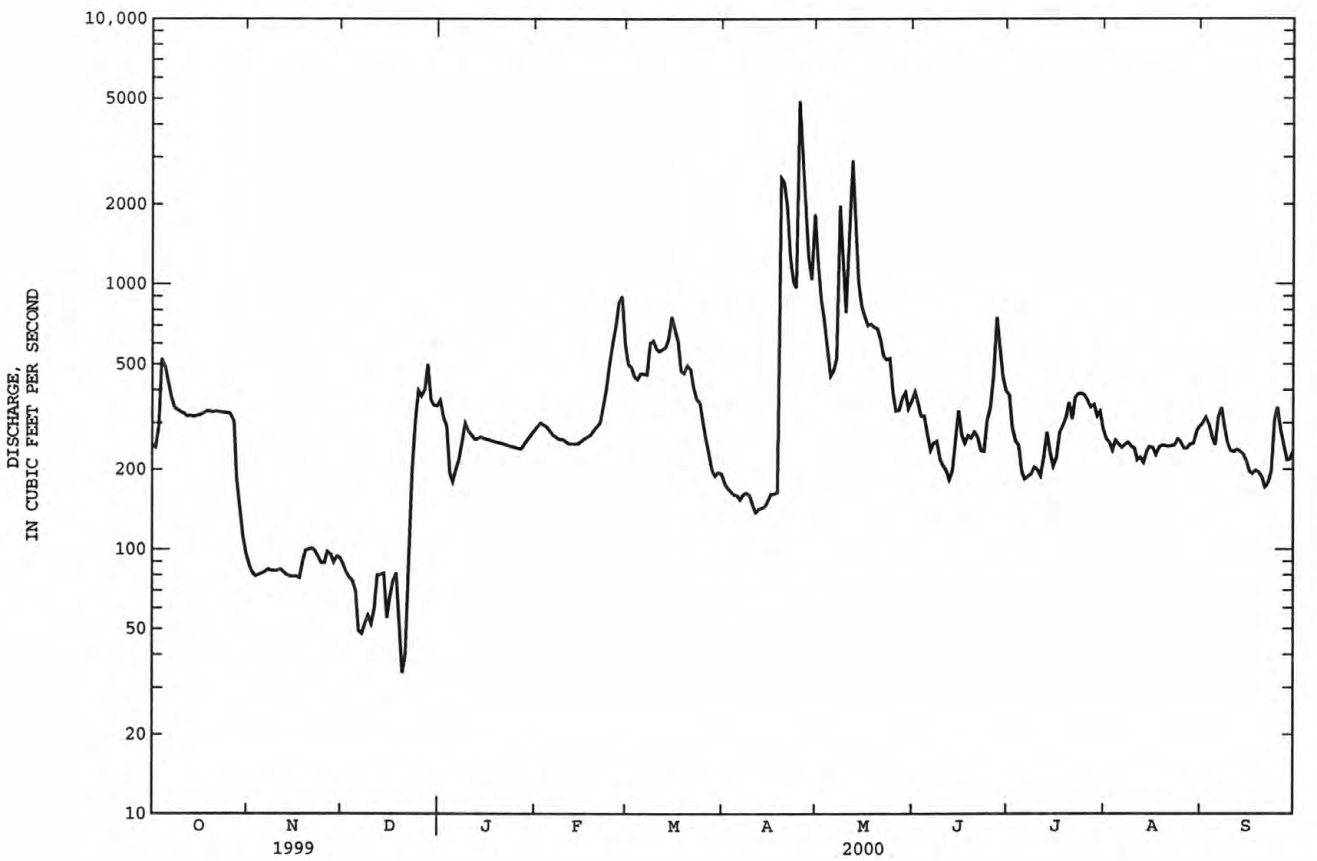
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	88	88	365	e290	e500	178	1190	392	383	261	299
2	242	82	82	316	e300	490	170	885	355	289	252	315
3	289	79	78	291	e295	450	166	732	318	257	236	296
4	525	80	76	193	e290	439	161	566	319	247	257	267
5	494	81	70	e180	e280	462	160	451	271	196	249	248
6	431	82	49	e200	e270	462	154	471	236	184	242	315
7	374	84	48	e220	e265	458	161	528	251	188	248	342
8	344	83	52	e260	e260	602	163	1980	255	192	254	287
9	337	83	56	e300	e260	615	160	1260	220	204	245	252
10	330	83	52	e280	e255	578	148	784	207	200	240	235
11	325	84	60	e270	e250	560	138	1620	199	190	217	233
12	318	82	80	e260	e250	570	142	2920	183	223	222	237
13	320	80	80	e262	e250	580	143	1640	199	277	212	234
14	317	79	81	e265	e250	620	145	1010	256	234	234	229
15	319	79	55	e262	e255	752	153	826	334	206	243	216
16	321	79	66	e260	e260	676	162	753	270	222	242	196
17	324	78	76	e258	e265	609	162	698	251	276	227	193
18	331	89	81	e256	e270	472	164	707	268	291	242	198
19	333	99	53	e254	e280	463	2520	691	263	312	247	195
20	329	100	34	e252	e290	495	2420	680	277	359	246	187
21	332	101	e40	e250	e300	479	1970	619	265	310	244	171
22	331	99	e90	e248	e350	409	1260	541	236	374	246	177
23	329	94	e200	e246	e400	369	1020	520	234	387	247	196
24	328	89	e300	e244	e500	359	970	526	305	388	260	306
25	327	89	e400	e242	e600	301	4900	390	342	382	253	343
26	324	98	e380	e240	e700	262	2710	334	454	365	240	283
27	305	96	e400	e240	e850	228	1750	336	751	344	240	249
28	185	89	e500	e250	e900	199	1260	372	586	352	249	217
29	146	94	368	e260	e600	189	1040	391	447	317	251	218
30	112	93	350	e270	---	195	1830	339	396	330	278	234
31	96	---	348	e280	---	193	---	362	---	284	290	---
TOTAL	9665	2616	4693	7974	10585	14036	26480	25122	9340	8763	7614	7368
MEAN	312	87.2	151	257	365	453	883	810	311	283	246	246
MAX	525	101	500	365	900	752	4900	2920	751	388	290	343
MIN	96	78	34	180	250	189	138	334	183	184	212	171
AC-FT	19170	5190	9310	15820	21000	27840	52520	49830	18530	17380	15100	14610
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)*												
MEAN	144	87.1	58.0	50.6	195	486	507	1067	858	367	279	229
MAX	1361	1081	479	440	2283	2457	2671	6264	2985	1791	634	768
(WY)	1999	1999	1999	1999	1997	1978	1997	1995	1976	1993	1976	1986
MIN	13.9	14.8	2.45	.016	.45	29.7	13.4	13.6	76.1	34.0	.77	2.65
(WY)	1962	1960	1962	1991	1991	1981	1981	1961	1961	1960	1961	1961

06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000*	
ANNUAL TOTAL	286723		134256			
ANNUAL MEAN	786		367		361a	
HIGHEST ANNUAL MEAN					1036	1996
LOWEST ANNUAL MEAN					28.4	1961
HIGHEST DAILY MEAN	9200	Jun 13	4900	Apr 25	35700	May 28 1996
LOWEST DAILY MEAN	34	Dec 20	34	Dec 20	.00	Jun 5 1961b
ANNUAL SEVEN-DAY MINIMUM	55	Dec 5	55	Dec 5	.00	Aug 9 1961
INSTANTANEOUS PEAK FLOW			5940	Apr 25	45100	Jun 8 1964c
INSTANTANEOUS PEAK STAGE			5.99	Apr 25	18.22	May 21 1982
ANNUAL RUNOFF (AC-FT)	568700		266300		261700	
10 PERCENT EXCEEDS	2000		616		698	
50 PERCENT EXCEEDS	417		260		113	
90 PERCENT EXCEEDS	86		87		20	

* Regulated period only (1954-2000). See REMARKS.
a Median of annual mean discharges, 360 ft^3/s.
b No flow for many days in 1961-62, 1981, and 1991.
c Gage height, 15.90 ft.
e Estimated.



06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD

LOCATION.--Lat 44°31'51", long 101°55'43", in NW¼ NW¼ NE¼ sec.34, T.7 N., R.18 E., Ziebach County, Hydrologic Unit 10120112, on SD Highway 34 and 73 bridge, 10.5 mi south of Howes.

DRAINAGE AREA.--21,640 mi^2, approximately.

PERIOD OF RECORD.--October 1950 to September 1981, October 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,868 ft above sea level, from topographic map. Prior to October 1994 at site 3 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flows regulated by: Angostura Dam, 167 mi upstream on the Cheyenne River (see station 06401000) since October 1949 significantly affect peak flows; Pactola Reservoir, 25.4 mi upstream from Rapid City (see station 06411000) since June 1963; Keyhole Reservoir (see station 06427000) near Moorcroft, WY, since Oct. 25, 1952; and Belle Fourche Reservoir near Belle Fourche (see station 06435000) since May 1910. Flow also affected by diversions for irrigation of about 70,000 acres and return flow from irrigated areas. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood late in May 1920 reached a stage of about 17.5 ft, previous datum, and flood in May 1927 reached a stage of about 14 ft, previous datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	575	412	425	e800	e380	1980	630	e11500	e1230	e859	e462	e301
2	575	406	420	e680	e390	1540	588	e6730	e1190	e830	e436	e323
3	583	397	415	e540	e390	937	559	e4830	e1110	e784	e482	e328
4	616	394	e410	e420	e380	882	550	e3880	e1010	e722	e488	e356
5	771	392	e405	e340	e380	860	528	e3640	e937	e697	e404	e306
6	740	391	e390	e380	e400	870	522	e3200	e799	e641	e404	e285
7	698	391	e370	e410	e410	875	504	e2790	e713	e581	e404	e328
8	663	390	e340	e430	e420	1110	502	e3350	e671	e544	e368	e455
9	645	388	e305	e470	e410	2710	501	e3710	e650	e544	e334	e345
10	633	384	e305	e480	e370	e1400	498	e2880	e618	e739	e285	e306
11	621	380	e310	e470	e330	e1150	479	e2870	e580	e689	e250	e290
12	611	374	e320	e420	e310	e1250	477	e5160	e590	e665	e241	e328
13	606	376	e320	e410	e300	1600	475	e4620	e595	e626	e213	320
14	609	376	e330	e400	e305	1290	477	e3430	e595	e697	e200	321
15	608	371	e330	e410	e310	1270	495	e2850	e618	e649	e213	323
16	598	364	e340	e410	e320	1370	516	e2600	e649	e634	e231	313
17	597	368	e340	e405	e330	1190	514	e2410	e618	e649	e246	296
18	601	369	e340	e405	e340	1060	523	e2360	e590	e739	e260	297
19	603	405	e330	e400	e360	949	1700	e2650	e618	e681	e241	298
20	606	432	e305	e390	e500	958	13600	e2510	e618	e626	e260	298
21	604	476	e280	e380	e600	1030	10600	e2340	e588	e730	e276	300
22	607	451	e260	e380	e900	1000	14900	e2190	e581	e641	e260	291
23	610	431	e300	e370	e1200	959	17800	e2080	e610	e657	e265	310
24	605	419	e380	e370	e1400	846	17000	e2080	e641	e641	e255	331
25	603	e400	e460	e370	e1500	811	19400	e2000	e775	e626	e246	420
26	597	390	e570	e360	e1400	772	20700	e1750	e849	e596	e270	485
27	596	407	e690	e360	1730	748	11000	e1580	e868	e544	e275	436
28	579	428	e820	e360	2050	709	7700	e1940	e1150	e611	e255	408
29	503	425	e1000	e360	2160	662	5600	e1540	e1310	e978	e275	380
30	470	426	e980	e370	---	643	6110	e1420	e1130	e748	e275	361
31	438	---	e900	e370	---	643	---	e1290	---	e551	e285	---
TOTAL	18771	12013	13690	13120	20275	34074	155448	98180	23501	20919	9359	10139
MEAN	606	400	442	423	699	1099	5182	3167	783	675	302	338
MAX	771	476	1000	800	2160	2710	20700	11500	1310	978	488	485
MIN	438	364	260	340	300	643	475	1290	580	544	200	285
AC-FT	37230	23830	27150	26020	40220	67590	308300	194700	46610	41490	18560	20110

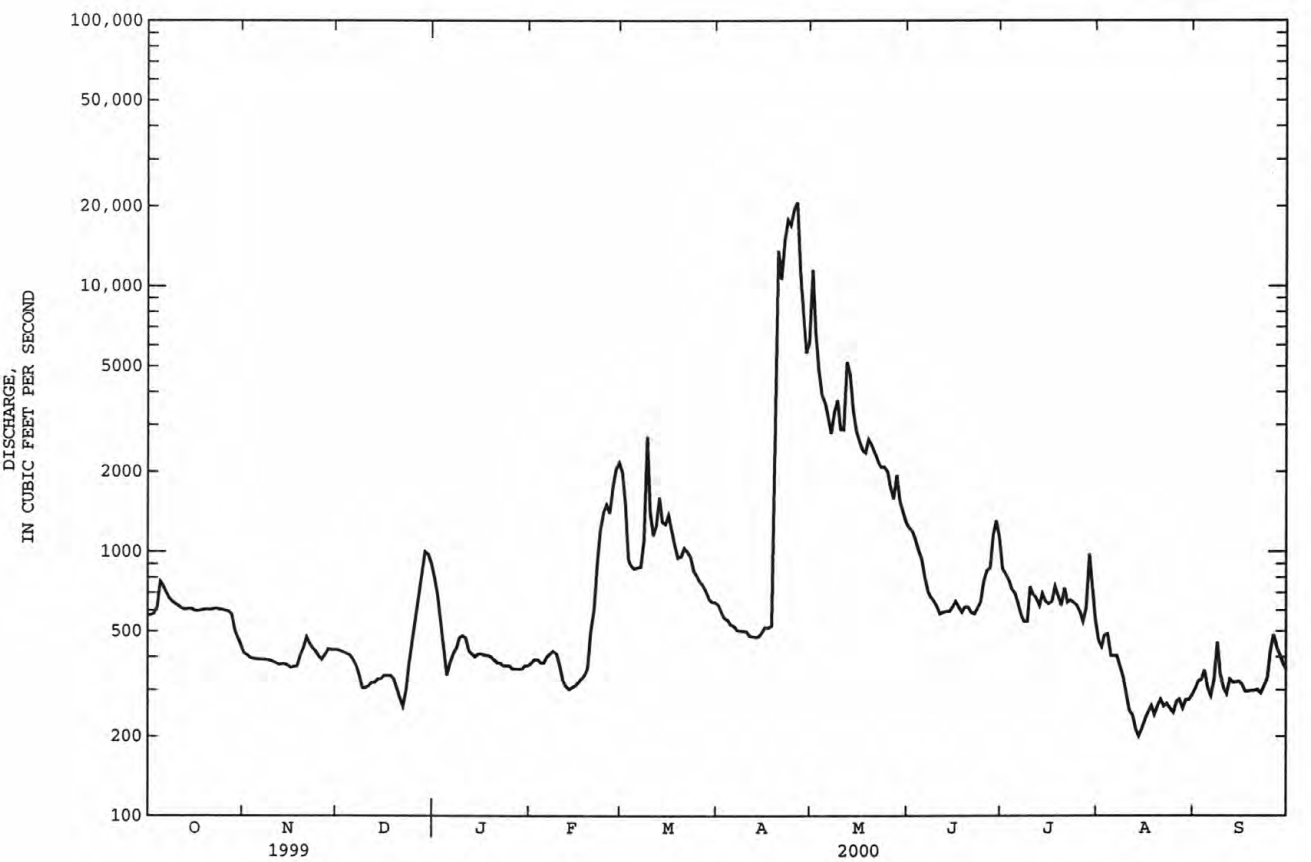
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1981, 1995 - 2000, BY WATER YEAR (WY)

MEAN	342	273	179	161	485	1010	1162	1961	2134	778	516	384
MAX	2927	3016	907	954	4980	4359	5182	8471	8981	2585	1949	1110
(WY)	1999	1999	1999	1997	1997	1978	2000	1995	1967	1962	1997	1955
MIN	39.2	93.8	28.6	10.0	42.1	124	71.3	83.3	172	61.8	48.0	16.2
(WY)	1962	1960	1962	1962	1979	1981	1961	1961	1961	1960	1961	1961

06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1951-1981, 1995-2000	
ANNUAL TOTAL	638253		429489			
ANNUAL MEAN	1749		1173		782a	
HIGHEST ANNUAL MEAN					2417	1997
LOWEST ANNUAL MEAN					97.2	1961
HIGHEST DAILY MEAN	15900	Jun 16	20700	Apr 26	61200	May 28 1996
LOWEST DAILY MEAN	260	Dec 22	200	Aug 14	.00	Dec 14 1961b
ANNUAL SEVEN-DAY MINIMUM	308	Dec 17	228	Aug 11	1.0	Jan 17 1962
INSTANTANEOUS PEAK FLOW			24700	Apr 26	69700	May 28 1996
INSTANTANEOUS PEAK STAGE			17.23	Apr 26	22.10	May 28 1996
ANNUAL RUNOFF (AC-FT)	1266000		851900		566500	
10 PERCENT EXCEEDS	3940		2080		1600	
50 PERCENT EXCEEDS	866		544		292	
90 PERCENT EXCEEDS	399		305		80	

a Median of annual mean discharges, 650 ft^3/s.
b Also Dec. 19-21, 1961.
e Estimated.



06439000 CHERRY CREEK NEAR PLAINVIEW, SD

LOCATION.--Lat 44°44'35", long 102°03'11", in SW¼ NE¼ sec.16, T.9 N., R.17 E., Meade County, Hydrologic Unit 10120113, on right upstream wingwall of bridge on State Highway 73, 0.2 mi downstream from small right-bank tributary, 6.2 mi downstream from Red Owl Creek, and 11 mi northeast of Plainview.

DRAINAGE AREA.--1,190 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for October and November 1945, published in WSP 1309.

REVISED RECORDS.--WDR SD-85-1: Location and datum.

GAGE.--Water-stage recorder. Datum of gage is 2,157.91 ft above sea level. Prior to June 8, 1948, nonrecording gage at same site and datum. Prior to Sept. 27, 1985, recording gage at site 100 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.06	4.0	e3.5	e1.6	e39	20	300	24	3.1	.53	.00
2	.00	e.06	3.3	e2.9	e1.6	e41	18	181	30	7.2	.37	.00
3	.00	e.06	3.3	e2.1	e1.6	e29	16	101	26	7.8	.23	.00
4	.00	e.06	3.6	e2.0	e1.7	e19	15	72	23	13	.00	.00
5	.00	e.06	3.5	e2.2	e1.6	e19	13	57	18	57	.00	.00
6	.00	e.06	4.9	e2.3	e1.5	e17	12	45	15	47	.00	.00
7	.00	e.06	3.6	e2.8	e1.5	e18	12	50	17	63	.00	.00
8	.00	.06	3.7	e3.1	e1.4	e19	10	244	14	31	.00	.00
9	.00	e.06	3.4	e3.7	e1.4	e21	9.0	487	11	24	.00	.00
10	.00	e.06	e3.7	e4.0	e1.3	e22	7.6	188	8.9	16	.00	.00
11	.00	e.06	e3.9	e4.3	e1.3	e23	6.8	148	11	11	.00	.00
12	e.05	e.06	e3.9	e3.8	e1.3	e25	6.7	232	9.6	6.8	.00	.00
13	e.05	e.06	e3.9	e2.9	e1.2	e26	6.0	240	9.1	4.6	.00	.00
14	e.05	e.06	e3.9	e2.3	e1.2	e27	5.7	173	8.1	3.3	.00	.00
15	e.05	e.10	e3.9	e2.1	e1.2	e28	5.9	160	7.7	2.7	.00	.00
16	e.05	e.30	e4.0	e2.2	e1.2	e30	5.9	132	7.2	2.5	.00	.00
17	e.05	e.60	e4.2	e2.2	e1.2	e31	5.4	102	6.8	2.4	.00	.00
18	e.05	e.80	e4.3	e2.2	e1.2	e34	5.4	84	6.4	2.9	.00	.00
19	e.05	e.90	e4.3	e2.1	e1.2	44	47	76	5.2	2.8	.00	.00
20	e.05	e2.0	e3.0	e2.0	e1.2	52	159	67	4.4	3.1	.00	.00
21	e.05	e2.1	e2.2	e1.9	e1.3	55	101	59	3.7	14	.00	.00
22	e.05	e2.1	e2.4	e1.8	e5.5	55	67	50	3.1	7.7	.00	.00
23	e.05	e2.3	e3.0	e1.7	e9.0	63	52	39	3.0	3.7	.00	.00
24	e.05	e2.4	e3.3	e1.6	e37	58	50	31	3.6	2.6	.00	.00
25	e.06	e2.4	e4.0	e1.6	e37	53	181	25	5.0	2.1	.00	.00
26	e.06	e2.4	e4.2	e1.6	e40	50	220	22	4.6	2.0	.00	.00
27	e.06	e2.6	e4.3	e1.6	e43	43	108	20	4.1	2.1	.00	.00
28	e.06	e2.9	e4.4	e1.6	e39	36	62	17	3.3	1.9	.00	.00
29	e.06	e3.3	e4.4	e1.6	e33	30	48	16	3.0	1.4	.00	.00
30	e.06	e3.8	e4.3	e1.6	---	26	123	22	3.8	1.1	.00	.00
31	e.06	---	e4.1	e1.6	---	22	---	20	---	.71	.00	---
TOTAL	1.07	31.84	116.9	72.9	272.2	1055	1398.4	3460	299.6	350.51	1.13	0.00
MEAN	.035	1.06	3.77	2.35	9.39	34.0	46.6	112	9.99	11.3	.036	.000
MAX	.06	3.8	4.9	4.3	43	63	220	487	30	63	.53	.00
MIN	.00	.06	2.2	1.6	1.2	17	5.4	16	3.0	.71	.00	.00
AC-FT	2.1	63	232	145	540	2090	2770	6860	594	695	2.2	.00

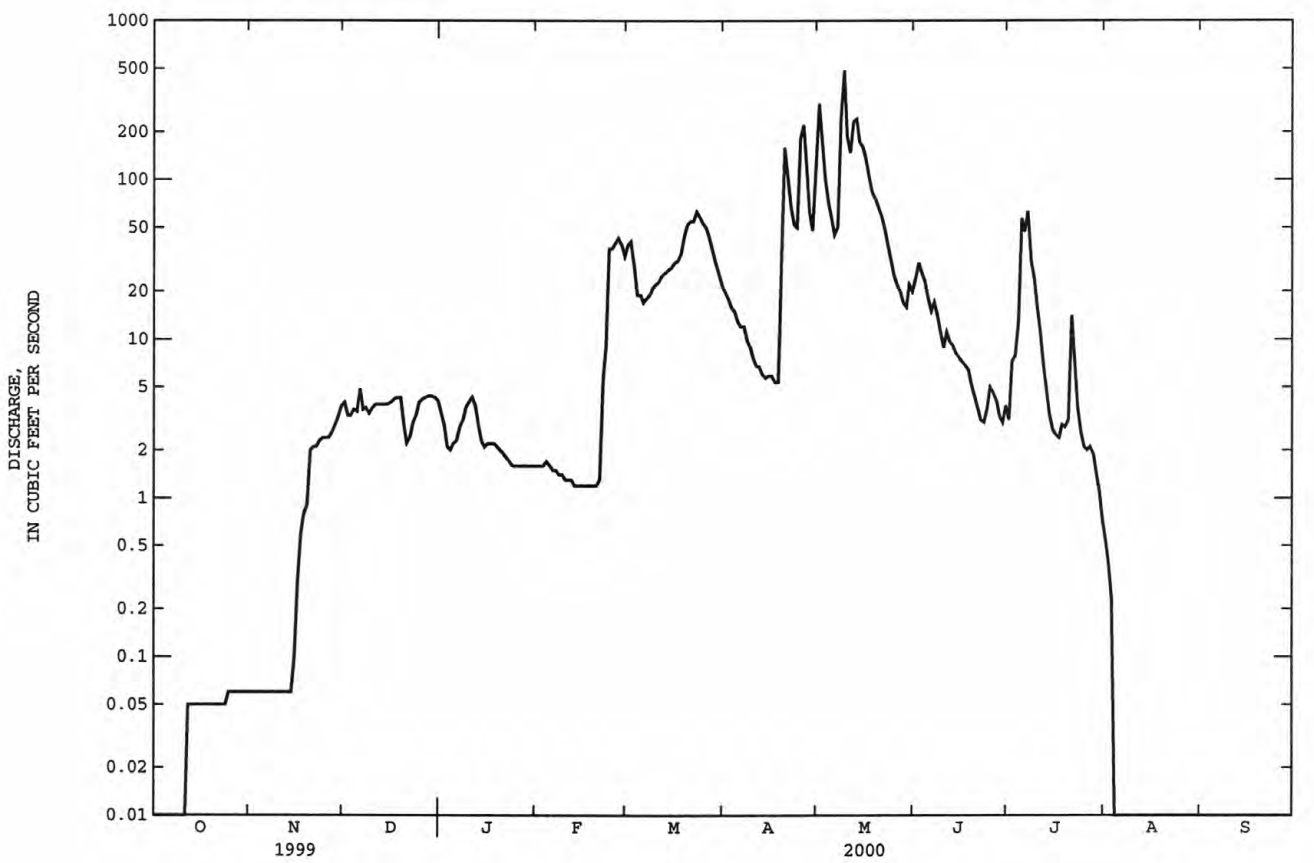
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	5.07	1.97	.97	1.21	31.0	169	149	139	116	29.0	8.51	.83
MAX	109	50.7	10.6	16.5	721	1475	2221	1215	794	685	175	16.6
(WY)	1983	1999	1999	1947	1996	1997	1952	1982	1953	1993	1953	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1946	1946	1946	1946	1946	1957	1957	1955	1955	1949	1946	1946

06439000 CHERRY CREEK NEAR PLAINVIEW, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	26497.14		7059.55			
ANNUAL MEAN	72.6		19.3		54.4a	
HIGHEST ANNUAL MEAN					269	1997
LOWEST ANNUAL MEAN					.000	1961
HIGHEST DAILY MEAN	1620	Feb 3	487	May 9	13800	Apr 2 1952
LOWEST DAILY MEAN	.00	Sep 13	.00	Oct 1	.00	Oct 1 1945b
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 13	.00	Oct 1	.00	Oct 1 1945
INSTANTANEOUS PEAK FLOW			678	May 9	17500	Apr 1 1952
INSTANTANEOUS PEAK STAGE			8.06	May 9	22.63	Apr 1 1952
ANNUAL RUNOFF (AC-FT)	52560		14000		39400	
10 PERCENT EXCEEDS	185		51		62	
50 PERCENT EXCEEDS	15		3.0		.00	
90 PERCENT EXCEEDS	.05		.00		.00	

a Median of annual mean discharges, 28 ft^3/s.
b No flow for long periods in most years.
e Estimated.



06439980 LAKE OAHE NEAR PIERRE, SD

LOCATION.--Lat 44°27'30", long 100°23'29", in NE¼ sec.1, T.111 N., R.80 W., 5th principal meridian, Hughes County, Hydrologic Unit 10130105, in Pier A of Control Tower No. 1 of powerhouse intake structure of dam on Missouri River, 6.0 mi northwest of Pierre, 7.1 mi upstream from Bad River, and at mile 1,072.3.

DRAINAGE AREA.--243,500 mi^2, approximately.

PERIOD OF RECORD.--August 1958 to current year (monthend contents only). Prior to October 1967, published as Oahe Reservoir near Pierre.

GAGE.--Water-stage recorder. Datum of gage is above sea level. Prior to Jan. 14, 1958, nonrecording gages at various locations upstream from outlet works, Jan. 14, 1959, to Sept. 30, 1962, recorder in Tower No. 1 of outlet works, all at same datum.

REVISED RECORDS.--WDR SD-88-1: September monthend elevation.

REMARKS.--Reservoir is formed by an earthfill dam; storage began in August 1958. Maximum capacity, 23,338,000 acre-ft below elevation 1,620.0 ft (top of spillway gates). Normal maximum, 22,240,000 acre-ft below 1,617.0 ft, of which about 2,390,000 acre-ft is designated for flood control. Inactive storage, 5,451,000 acre-ft below elevation 1,540.0 ft. Dead storage, 1,970 acre-ft below elevation 1,425.0 ft (invert of lowest outlet tunnel). Figures given herein represent elevations at powerhouse intake structure and total contents adjusted for wind effect.
The spillway consists of a gated chute with flat crest at elevation 1,596.5 ft, 8 gates, 50 by 23.5 ft each; design capacity, 300,000 ft^3/s. The outlet works consist of 7 turbines with a generating capacity of 85,000 kilowatts each. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 22,764,000 acre-ft, May 14, 1986, affected by wind; maximum elevation, 1,618.71 ft, June 25, 1995; minimum since initial filling, 12,071,000 acre-ft, Oct. 30, 1989, Nov. 1, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 21,081,000 acre-ft, Oct. 1; minimum contents, 16,469,000 acre-ft, Sept. 30.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,614.67	21,114,000	--
Oct. 31	1,610.92	19,850,000	-1,264,000
Nov. 30	1,607.35	18,762,000	-1,088,000
Dec. 31	1,606.87	18,629,000	-133,000
CAL YR 1999	--	--	-153,000
Jan. 31	1,605.35	18,165,000	-464,000
Feb. 29	1,606.43	18,463,000	+298,000
Mar. 31	1,607.03	18,704,000	+241,000
Apr. 30	1,607.27	18,749,000	+45,000
May 31	1,607.26	18,749,000	0
June 30	1,606.20	18,451,000	-298,000
July 31	1,604.82	17,990,000	-461,000
Aug. 31	1,602.54	17,320,000	-670,000
Sept. 30	1,599.51	16,469,000	-851,000
WTR YR 2000	--	--	-4,645,000

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06440000 MISSOURI RIVER AT PIERRE, SD
(National stream-quality accounting network station)

LOCATION.--Lat 44°22'23", long 100°22'03" in NW¼ SW¼ sec.32, T.111 N., R.79 W., Hughes County, Hydrologic Unit 10140101, on left bank downstream from Dakota Minnesota and Eastern Railroad bridge, 1.3 mi upstream from Bad River, 5.8 mi downstream from Oahe Dam, and at mile 1,066.5.

PERIOD OF RECORD.--October 1929 to September 1965, October 1988 to current year.

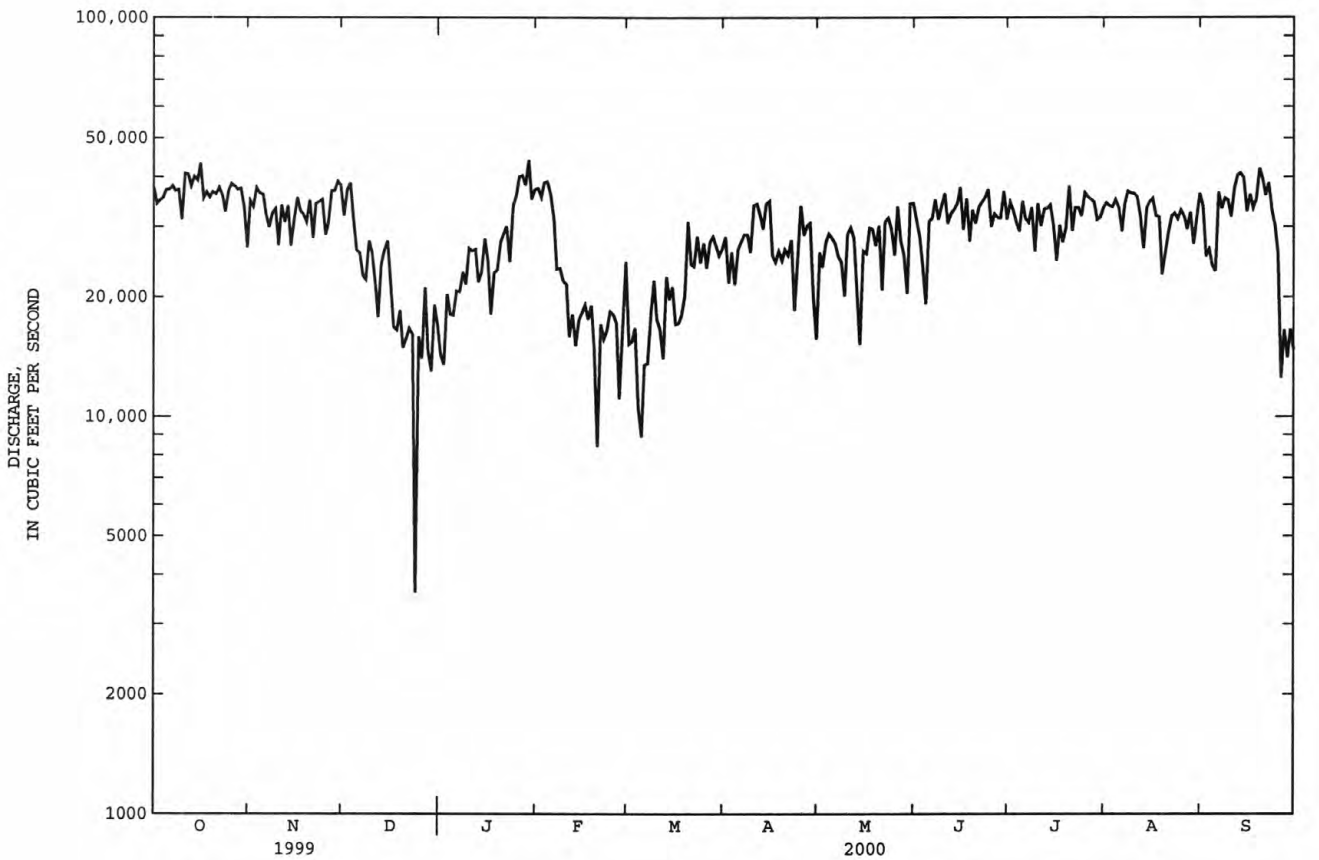
GAGE.--Water-stage recorder. Datum of gage is 1,414.26 ft above sea level. Prior to Mar. 11, 1932, chain gage at same site at datum 2.00 ft higher.

REMARKS.--Records good. Stage regulated by Big Bend Dam approximately 82 mi downstream. Flow regulated by Oahe Dam 5.5 mi upstream. Gage heights for period of October 1965 to September 1988 in files of U.S. Army Corps of Engineers. Records of daily discharge for 2000 water year provided from U.S. Army Corps of Engineers' files of Oahe Dam (06439980) power and spillway flows.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37600	34900	32000	14300	37400	15200	28300	25900	31000	34500	34400	33900
2	34300	33700	37000	13500	35600	15400	21700	23800	28200	33000	33800	25300
3	34900	37600	38600	20300	38700	16700	25900	27300	24000	30800	33600	26300
4	35400	36400	31500	18100	38900	10500	21500	28800	19200	29200	35100	24100
5	37100	36100	26200	18000	36100	8900	26300	28100	31000	34800	33500	23200
6	37200	32200	25800	20700	31400	13500	27500	27300	31500	31400	29200	36600
7	38000	29900	22600	20600	23500	13600	28700	25300	35100	30700	34200	33300
8	36900	32400	22100	23100	23600	18100	28700	24500	31300	33500	36800	35400
9	37100	33200	27600	21500	21900	22000	25900	20100	33800	26000	36400	35000
10	31300	27000	25800	26500	21500	17600	33900	28700	36300	34300	36300	31800
11	40800	34000	21800	26100	15900	16600	34200	29800	30600	30200	35600	37500
12	40600	30800	17800	26300	18100	14000	32200	28100	32300	33200	31900	40300
13	37900	33900	24200	21800	15100	22500	29700	19500	33100	33400	26500	40800
14	40000	26900	26200	23100	17500	19700	34300	15200	34300	34000	33300	39800
15	39200	31300	27600	28000	18200	21200	34800	26100	37700	30200	34600	32800
16	43300	35500	21200	24500	19100	17100	25500	25700	29600	24700	35300	36200
17	35300	32800	16800	18100	17600	17200	24500	29800	35300	30300	31900	33400
18	36600	32200	16500	23000	19000	18000	26000	29600	27600	27400	31700	35200
19	35500	30900	18500	23400	14700	20200	24700	26900	33000	29800	22800	42000
20	36700	35000	14900	27400	8400	30900	26300	30200	30600	37900	25800	39400
21	36200	28200	15700	28800	17100	24200	25500	20800	33600	29300	29200	36000
22	37600	34300	16700	30100	15700	23900	27800	30900	34500	33500	31900	38600
23	36000	34600	16100	24500	16400	28400	18500	31500	35600	33500	32400	33000
24	32700	35100	3600	33800	18400	24400	24100	29600	37200	31900	31400	30100
25	36800	28600	15900	35900	18100	27300	33900	25500	30000	36500	33000	25700
26	38500	30700	14000	40100	17200	23700	28600	33700	32300	35700	31800	12500
27	37900	36900	21100	40300	11100	27400	30200	27600	31600	35200	29600	16500
28	37100	36900	14600	38200	16900	28300	30600	25500	31600	34600	32600	14100
29	37400	39000	13000	44100	24500	26700	20200	20400	36800	31200	27200	16600
30	33600	38100	19100	35200	---	25400	15700	34300	31300	31600	32000	14800
31	26600	---	16900	37100	---	26400	---	34400	---	33400	36300	---
TOTAL	1136100	999100	661400	826400	627600	635000	815700	834900	960000	995700	1000100	920200
MEAN	36650	33300	21340	26660	21640	20480	27190	26930	32000	32120	32260	30670
MAX	43300	39000	38600	44100	38900	30900	34800	34400	37700	37900	36800	42000
MIN	26600	26900	3600	13500	8400	8900	15700	15200	19200	24700	22800	12500
AC-FT	2253000	1982000	1312000	1639000	1245000	1260000	1618000	1656000	1904000	1975000	1984000	1825000

06440000 MISSOURI RIVER AT PIERRE, SD--Continued
(National stream-quality accounting network station)

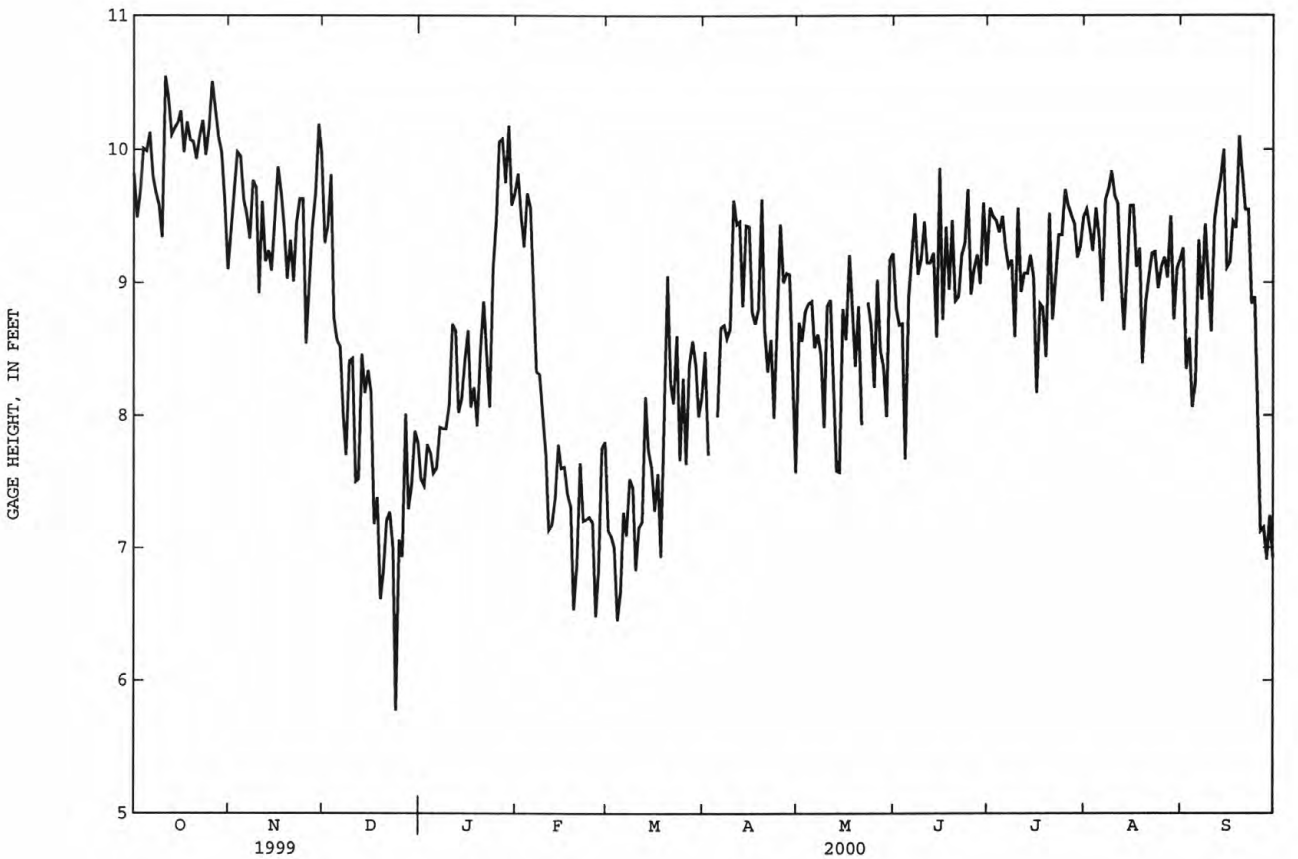


06440000 MISSOURI RIVER AT PIERRE, SD--Continued
(National stream-quality accounting network station)

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.82	9.38	9.30	7.52	9.82	7.13	8.48	8.70	8.81	9.56	9.55	9.26
2	9.49	9.71	9.43	7.47	9.49	7.09	7.70	8.56	8.68	9.50	9.40	8.35
3	9.68	9.98	9.81	7.78	9.27	7.00	---	8.78	8.69	9.47	9.24	8.58
4	10.01	9.95	8.74	7.72	9.67	6.45	---	8.84	7.67	9.38	9.56	8.06
5	9.99	9.62	8.57	7.56	9.56	6.67	7.99	8.86	8.89	9.50	9.34	8.25
6	10.13	9.52	8.52	7.60	8.84	7.27	8.66	8.51	9.23	9.27	8.86	9.32
7	9.80	9.33	8.00	7.91	8.33	7.09	8.68	8.61	9.52	9.12	9.62	8.87
8	9.68	9.77	7.70	7.90	8.31	7.52	8.58	8.46	9.06	9.17	9.70	9.44
9	9.58	9.72	8.41	7.90	7.99	7.45	8.65	7.91	9.18	8.59	9.84	9.10
10	9.34	8.92	8.43	8.08	7.70	6.83	9.62	8.82	9.46	9.56	9.65	8.63
11	10.55	9.61	7.50	8.69	7.13	7.15	9.44	8.87	9.15	8.93	9.60	9.47
12	10.40	9.16	7.52	8.64	7.17	7.19	9.46	8.31	9.15	9.07	9.02	9.65
13	10.11	9.24	8.46	8.02	7.37	8.14	8.82	7.58	9.22	9.07	8.64	9.78
14	10.16	9.09	8.17	8.12	7.78	7.74	9.43	7.57	8.59	9.21	9.18	10.00
15	10.20	9.53	8.34	8.41	7.60	7.61	9.42	8.80	9.86	9.04	9.58	9.11
16	10.29	9.87	8.17	8.64	7.61	7.28	8.78	8.57	8.72	8.17	9.58	9.15
17	9.98	9.67	7.18	8.06	7.40	7.56	8.69	9.21	9.42	8.84	9.12	9.46
18	10.21	9.42	7.38	8.21	7.31	6.93	8.80	8.75	8.95	8.81	9.26	9.41
19	10.07	9.03	6.61	7.92	6.53	7.87	9.63	8.37	9.47	8.44	8.39	10.10
20	10.06	9.32	6.81	8.47	6.87	9.05	8.65	8.82	8.86	9.52	8.85	9.82
21	9.93	9.01	7.20	8.86	7.64	8.24	8.33	7.93	8.89	8.72	9.05	9.55
22	10.10	9.45	7.27	8.53	7.20	8.09	8.57	---	9.21	9.04	9.22	9.55
23	10.22	9.63	7.00	8.06	7.21	8.60	7.98	8.85	9.30	9.36	9.23	8.84
24	9.96	9.63	5.77	9.10	7.23	7.66	8.62	8.67	9.70	9.36	8.96	8.89
25	10.16	8.54	7.06	9.47	7.19	8.28	9.44	8.21	8.91	9.70	9.12	8.15
26	10.51	8.93	6.93	10.06	6.48	7.63	9.00	9.02	9.11	9.58	9.19	7.12
27	10.29	9.42	8.01	10.08	6.82	8.38	9.07	8.49	9.21	9.51	9.04	7.15
28	10.10	9.67	7.29	9.75	7.75	8.56	9.06	8.37	8.99	9.45	9.50	6.91
29	9.98	10.19	7.47	10.18	7.80	8.38	8.49	7.99	9.60	9.19	8.72	7.24
30	9.61	9.97	7.88	9.58	---	7.99	7.57	9.17	9.13	9.27	9.11	6.92
31	9.10	---	7.79	9.67	---	8.14	---	9.22	---	9.49	9.17	---
MEAN	9.98	9.48	7.83	8.51	7.83	7.64	---	---	9.09	9.19	9.24	8.80
MAX	10.55	10.19	9.81	10.18	9.82	9.05	---	---	9.86	9.70	9.84	10.10
MIN	9.10	8.54	5.77	7.47	6.48	6.45	---	---	7.67	8.17	8.39	6.91

06440000 MISSOURI RIVER AT PIERRE, SD--Continued
(National stream-quality accounting network station)



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1953 to April 1958, April to September 1964, July 1971 to August 1986, January 1997 to current year.

REMARKS.--Water-quality samples are collected about 0.25 mi below Oahe Dam, about 5.55 mi upstream from the stage-gaging station for this site. Inflow between the location where water-quality samples are collected and the stage-gaging station generally is negligible. For all samples collected during water year 2000, field duplicate samples were collected for suspended-sediment analyses for quality-control purposes. On June 14, 2000, in addition to the primary sample (time 1400), a field duplicate sample (time 1410) for analysis of inorganic and organic constituents was collected for quality-control purposes. The analytical results for all duplicate samples are noted in the water-quality results. On Apr. 18, 2000, a duplicate sample also was collected and spiked with various known concentrations of pesticides; results of the spiked samples are available from the South Dakota District office in Rapid City, S. Dak. On Nov. 3, Jan. 26, and Mar. 7, 2000, blank water was processed at the field site through the sampling equipment used for this site and then processed and analyzed for quality-control purposes. The analytical results for the field blank samples are presented in a table following the water-quality results. Additional quality-control data for this site are available from the South Dakota District office in Rapid City, S. Dak.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)	TUR-BID-ITY (NTU) (00076)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV 1999												
03...	1240	38600	760	8.3	12.0	12.0	.6	731	7.9	77	240	87
a03...	1250	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	1200	48500	778	8.1	-7.0	3.0	.6	735	12.9	98	230	74
a26...	1210	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	1200	20200	769	8.5	8.0	2.0	.6	725	13.1	100	240	80
a07...	1210	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	1140	39600	764	8.1	15.0	4.0	.4	728	12.8	102	230	62
a18...	1150	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	1400	44200	768	8.1	24.5	15.5	.6	728	10.8	114	240	73
b14...	1410	--	--	--	--	--	.8	--	--	--	240	76
a14...	1410	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	0950	39400	797	8.2	27.0	20.0	.8	725	8.8	102	250	83
a02...	1000	--	--	--	--	--	--	--	--	--	--	--

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
NOV 1999												
03...	154	159	57.7	23.3	72.4	39	2	4.5	185	1	221	9.7
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	160	164	54.8	23.2	73.7	40	2	4.7	192	1	222	9.5
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	159	171	56.4	23.5	73.1	39	2	4.8	193	0	216	9.0
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	164	167	54.1	22.2	67.3	39	2	4.2	193	4	213	9.2
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	165	176	57.0	23.3	71.4	39	2	4.3	192	5	221	9.5
b14...	164	180	57.3	23.2	71.2	39	2	4.2	197	1	221	9.6
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	163	166	57.9	24.4	73.4	39	2	4.6	186	6	231	10.0
a02...	--	--	--	--	--	--	--	--	--	--	--	--

a Field duplicate suspended sediment sample collected for quality-control purposes.
b Field duplicate inorganic and organic constituents sampled for quality-control purposes.

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
NOV 1999												
03...	.5	5.5	488	502	52300	.008	.24	.19	<.001	.041	--	.008
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	.4	5.4	490	509	66700	.004	.16	.19	<.001	.057	--	.008
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	.5	5.2	485	509	27800	<.002	.23	.19	.001	.053	.052	E.005
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	.5	4.3	474	499	53400	.002	.24	.19	.001	.022	.021	.170
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	.6	3.3	490	505	60300	.010	.24	.22	.001	.038	.037	E.007
b14...	.6	3.3	489	504	--	.039	.26	.20	.001	.040	.039	E.007
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	.5	3.6	504	527	56100	<.002	.24	.18	.004	.038	.034	<.008
a02...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BORON, DISSOLVED (UG/L AS B) (01020)	IRON, DISSOLVED (UG/L AS FE) (01046)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTICULATE TOTAL (MG/L AS C) (00689)	ACETOCHLOR, WATER FLTRD REC (UG/L) (49260)
NOV 1999												
03...	<.006	.001	E1.7	116	<10	53.5	<2.4	554	<10	3.4	--	<.002
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	.006	<.001	E1.1	125	<10	49.1	<2.4	556	<10	--	<.2	E.003
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	<.006	.001	E1.9	123	<10	52.3	E1.2	562	<10	3.4	<.2	<.002
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	E.003	<.001	E2.0	117	<10	48.0	<2.4	511	<10	5.0	.8	<.002
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	<.006	<.001	E1.7	119	<10	49.9	<2.4	549	<10	3.7	<.2	<.002
b14...	<.006	<.001	E1.9	122	<10	50.1	<2.4	551	<10	3.6	<.2	<.002
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	<.006	.005	E1.0	131	E10	50.0	<2.4	565	<10	3.4	<.2	<.002
a02...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	ALACHLOR, WATER, DISS, REC, (UG/L) (46342)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZINPHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	BENFLURALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	ALPHA BHC DISSOLVED (UG/L) (34253)	BUTYLATE, WATER, DISS, REC (UG/L) (04028)	CARBARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBOFURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
NOV 1999												
03...	<.002	<.003	.019	E.005	<.001	<.002	<.002	<.002	<.003	<.003	E.004	E.001
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	<.002	<.003	.017	E.006	<.001	<.002	<.002	<.002	<.003	<.003	<.004	<.002
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	<.002	<.003	.016	E.005	<.001	<.002	<.002	<.002	<.003	<.003	.004	<.002
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	<.002	<.003	.013	E.006	<.001	<.002	<.002	<.002	<.003	<.003	.008	<.002
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	<.002	<.003	.011	E.005	<.001	<.002	<.002	<.002	<.003	<.003	<.004	<.002
b14...	<.002	<.003	.012	E.005	<.001	<.002	<.002	<.002	<.003	<.003	<.004	<.002
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	<.002	<.003	.014	E.005	<.001	<.002	<.002	<.002	<.003	<.003	.005	<.002
a02...	--	--	--	--	--	--	--	--	--	--	--	--

a Field duplicate suspended sediment sample collected for quality-control purposes.
b Field duplicate inorganic and organic constituents sampled for quality-control purposes.

06440000 MISSOURI RIVER AT PIERRE, SD--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	P,P' DDE DISSOLV (UG/L) (34653)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	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)	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)
NOV 1999												
03...	<.006	E.001	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005	E.003
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	<.006	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005	.005
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	E.001	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005	E.003
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	<.006	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005	.005
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	<.006	.006	<.001	<.017	.006	<.004	<.003	<.003	<.004	<.002	<.005	E.002
b14...	<.006	<.002	<.001	<.017	E.004	<.004	<.003	<.003	<.004	<.002	<.005	E.002
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	<.006	<.002	<.001	<.017	<.002	<.004	<.003	<.003	<.004	<.002	<.005	.006
a02...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	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)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)
NOV 1999												
03...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	E.003	<.003	<.007
a03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
26...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	E.004	<.003	<.007
a26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	E.004	<.003	<.007
a07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	E.008	<.003	<.007
a18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	<.018	<.003	<.007
b14...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	<.018	<.003	<.007
a14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	<.004	<.004	<.004	<.006	<.003	<.004	<.004	<.005	<.002	E.005	<.003	<.007
a02...	--	--	--	--	--	--	--	--	--	--	--	--

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)	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, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 1999											
03...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	E.001	<.002	3	95
a03...	--	--	--	--	--	--	--	--	--	3	94
JAN 2000											
26...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	E.002	<.002	1	79
a26...	--	--	--	--	--	--	--	--	--	1	81
MAR											
07...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002	1	93
a07...	--	--	--	--	--	--	--	--	--	<1	86
APR											
18...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002	1	82
a18...	--	--	--	--	--	--	--	--	--	2	94
JUN											
14...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002	4	94
b14...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002	--	--
a14...	--	--	--	--	--	--	--	--	--	4	93
AUG											
02...	<.004	<.013	<.005	<.010	<.007	<.013	<.002	<.001	<.002	--	--
a02...	--	--	--	--	--	--	--	--	--	1	96

a Field duplicate suspended sediment sample collected for quality-control purposes.
b Field duplicate inorganic and organic constituents sampled for quality-control purposes.

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(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	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)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	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)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
NOV 1999												
c03...	1248	M	<.01	<.1	<.1	<.002	--	<.005	.009	<1	<1	<1
JAN 2000												
c26...	1208	--	--	--	--	--	--	--	--	--	--	--
MAR												
c07...	1208	M	<.01	<.1	<.1	<.002	<.001	<.005	<.001	<1	<1	<1

DATE	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)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	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)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
NOV 1999												
c03...	<1	<2	<.3	<.2	<1	<1	<1	<1	<1	<1	<1	<1
JAN 2000												
c26...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
c07...	<1	3	<.3	<.2	<1	<1	<1	<1	<1	<1	<1	<1

DATE	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	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 PARTIC-ULATE TOTAL (MG/L AS C) (00689)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	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)
NOV 1999												
c03...	<.1	<.1	<1	<1	--	--	--	--	--	--	--	--
JAN 2000												
c26...	--	--	--	--	<.33	<.2	<.002	<.002	<.003	<.001	<.002	<.001
MAR												
c07...	<.1	<.1	<1	<1	--	--	--	--	--	--	--	--

DATE	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	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)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
NOV 1999												
c03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
c26...	<.002	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.006	<.002	<.001	<.017
MAR												
c07...	--	--	--	--	--	--	--	--	--	--	--	--

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)	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 SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	PARA-THION, DIS-SOLVED (UG/L) (39542)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
NOV 1999												
c03...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 2000												
c26...	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.002	<.004	<.004	<.004	<.006
MAR												
c07...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	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)	PROPA-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)
NOV 1999										
c03...	--	--	--	--	--	--	--	--	--	--
JAN 2000										
c26...	<.003	<.004	<.004	<.005	<.002	<.018	<.003	<.007	<.004	<.013
MAR										
c07...	--	--	--	--	--	--	--	--	--	--

c Field blank sample collected for quality-control purposes.

06440200 SOUTH FORK BAD RIVER NEAR COTTONWOOD, SD
(Formerly published as Buffalo Creek near Cottonwood)

LOCATION.--Lat 43°58'08", long 101°46'00", in NE¼ SW¼ SE¼ sec.7, T.1 S., R.20 E., Jackson County, Hydrologic Unit 10140102, on right bank at upstream side of bridge on old U.S. Highway 16, 1.0 mi above confluence with Cottonwood Creek, and 7.0 mi east of Cottonwood.

DRAINAGE AREA.--250 mi^2.

PERIOD OF RECORD.--October 1954 to September 1960 (discharge measurements only), October 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,242.96 ft above sea level. October 1954 to September 1960, nonrecording gage at same site at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

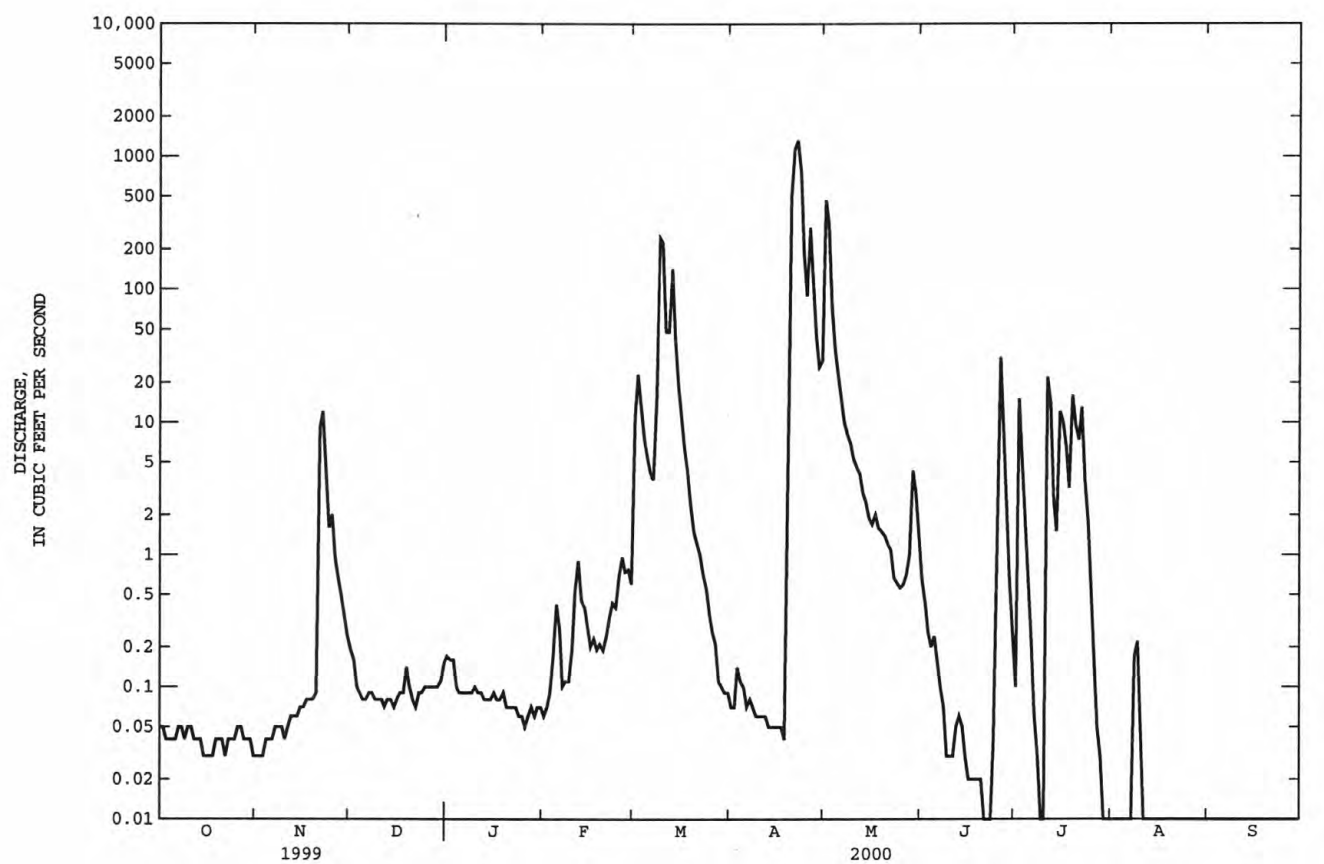
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.03	.19	.17	.06	11	.07	467	.65	.10	.00	.00
2	.05	.03	.16	.16	.07	23	.07	310	.43	15	.00	.00
3	.04	.03	.10	.16	.09	13	.14	73	.26	3.6	.00	.00
4	.04	.04	.09	.10	.17	7.5	.11	35	.20	1.2	.00	.00
5	.04	.04	.08	.09	.42	5.4	.10	22	.24	.48	.00	.00
6	.04	.04	.08	.09	.27	4.2	.07	15	.15	.22	.00	.00
7	.05	.05	.09	.09	.10	3.7	.08	10	.10	.06	.00	.00
8	.05	.05	.09	.09	.11	16	.07	8.1	.07	.03	.17	.00
9	.04	.05	.08	.09	.11	246	.06	6.9	.03	.00	.22	.00
10	.05	.04	.08	.10	.19	225	.06	5.3	.03	.00	.06	.00
11	.05	.05	.08	.09	.53	48	.06	4.6	.03	22	.00	.00
12	.04	.06	.07	.09	.90	48	.06	4.1	.05	14	.00	.00
13	.04	.06	.08	.08	.45	142	.05	2.9	.06	2.6	.00	.00
14	.04	.06	.08	.08	.40	43	.05	2.5	.05	1.5	.00	.00
15	.03	.07	.07	.08	.29	19	.05	1.9	.03	12	.00	.00
16	.03	.07	.08	.09	.20	11	.05	1.7	.02	10	.00	.00
17	.03	.08	.09	.08	.23	6.2	.05	2.0	.02	6.4	.00	.00
18	.03	.08	.09	.08	.19	4.3	.04	1.6	.02	3.2	.00	.00
19	.04	.08	.14	.09	.21	2.4	34	1.5	.02	16	.00	.00
20	.04	.09	.10	.07	.19	1.5	502	1.4	.02	9.5	.00	.00
21	.04	9.1	.08	.07	.24	1.2	e1130	1.2	.00	7.4	.00	.00
22	.03	12	.07	.07	.34	1.0	e1320	1.1	.00	13	.00	.00
23	.04	4.8	.09	.07	.43	.71	e754	.67	.00	3.7	.00	.00
24	.04	1.6	.09	.06	.40	.55	188	.61	.04	1.8	.00	.00
25	.04	2.0	.10	.06	.68	.35	89	.56	3.1	.59	.00	.00
26	.05	.96	.10	.05	.96	.26	289	.59	31	.18	.00	.00
27	.05	.66	.10	.06	.74	.21	102	.70	7.3	.05	.00	.00
28	.04	.48	.10	.07	.77	.11	45	1.0	2.1	.03	.00	.00
29	.04	.33	.10	.06	.60	.10	26	4.3	.65	.00	.00	.00
30	.04	.24	.11	.07	---	.09	29	3.0	.28	.00	.00	.00
31	.03	---	.15	.07	---	.09	---	1.4	---	.00	.00	---
TOTAL	1.26	33.27	3.01	2.68	10.34	884.87	4509.24	991.63	46.95	144.64	0.45	0.00
MEAN	.041	1.11	.097	.086	.36	28.5	150	32.0	1.57	4.67	.015	.000
MAX	.05	12	.19	.17	.96	246	1320	467	31	22	.22	.00
MIN	.03	.03	.07	.05	.06	.09	.04	.56	.00	.00	.00	.00
AC-FT	2.5	66	6.0	5.3	21	1760	8940	1970	93	287	.9	.00
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)												
MEAN	6.96	3.75	.55	1.00	50.5	30.6	29.4	91.9	74.5	16.1	12.4	3.97
MAX	39.9	29.3	3.50	4.46	555	105	150	324	347	99.5	72.6	12.3
(WY)	1999	1999	1994	1994	1997	1993	2000	1995	1991	1997	1997	1999
MIN	.000	.000	.000	.000	.000	.64	.017	1.39	.015	.21	.000	.000
(WY)	1991	1990	1991	1989	1989	1991	1990	1989	1989	1989	1989	2000

06440200 SOUTH FORK BAD RIVER NEAR COTTONWOOD, SD--Continued
(Formerly published as Buffalo Creek near Cottonwood)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	7343.22		6628.34			
ANNUAL MEAN	20.1		18.1		26.6a	
HIGHEST ANNUAL MEAN					94.5	1997
LOWEST ANNUAL MEAN					1.98	1989
HIGHEST DAILY MEAN	1380	Jun 6	1320	Apr 22	3990	May 31 1991
LOWEST DAILY MEAN	.00	Aug 19	.00	Jun 21b	.00	Oct 2 1988b
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 21	.00	Jul 29	.00	Oct 2 1988
INSTANTANEOUS PEAK FLOW			2210	Apr 21	15200	May 31 1991
INSTANTANEOUS PEAK STAGE			12.64	Apr 21	17.89	May 31 1991
ANNUAL RUNOFF (AC-FT)	14570		13150		19280	
10 PERCENT EXCEEDS	32		11		30	
50 PERCENT EXCEEDS	.80		.09		.21	
90 PERCENT EXCEEDS	.04		.00		.00	

a Median of annual mean discharges, 18 ft^3/s.
b No flow for many days in most years.
e Estimated.



06441000 BAD RIVER NEAR MIDLAND, SD

LOCATION.--Lat 44°04'01", long 101°09'36", in NE¼ NW¼ sec.7, T.1 N., R.25 E., Haakon County, Hydrologic Unit 10140102, on right bank at downstream side of bridge on State Highway 63, 0.4 mi southwest of Midland, 2.0 mi upstream from Mitchell Creek, and 3.7 mi upstream from Ash Creek.

DRAINAGE AREA.--1,460 mi^2, approximately.

PERIOD OF RECORD.--October 1945 to current year. Prior to February 1946 monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,849.14 ft above sea level. Prior to Feb. 21, 1961, nonrecording gage, and Feb. 21, 1961, to June 14, 1967, water-stage recorder at site 4.2 mi downstream at datum 15.72 ft lower. June 15 to July 26, 1967, nonrecording gage at site 30 ft upstream and July 27, 1967, to June 14, 1971, water-stage recorder at site 60 ft upstream, both at present datum.

REMARKS.--Records good. Only daily discharges above 100 ft^3/s are being published. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s, June 15, 1967, gage height, 24.44 ft, from floodmarks, 20.10 ft, from floodmarks, at former site and datum, from rating curve extended above 16,000 ft^3/s; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,240 ft^3/s, Apr. 24, gage height, 13.83 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
MEAN VALUES

Daily discharge above 100 ft^3/s are given herewith:

Mar. 9	e190	Apr. 22	1680	May 1	272
10	271	23	1960	2	703
11	351	24	2100	3	660
12	158	25	1200	4	320
13	120	26	847	5	223
14	217	27	911	6	173
15	126	28	637	7	147
Apr. 20	458	29	405	8	131
21	914	30	307	9	108

e Estimated.

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06441500 BAD RIVER NEAR FORT PIERRE, SD

LOCATION.--Lat 44°19'36", long 100°23'02", in NW¼ NW¼ sec.10, T.4 N., R.31 E., Stanley County, Hydrologic Unit 10140102, on right bank at downstream side of highway bridge, 2.1 mi south of Fort Pierre, 4.3 mi downstream from Willow Creek, and 6.0 mi upstream from mouth.

DRAINAGE AREA.--3,107 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Monthly discharge only for July 1932 to February 1934, published in WSP 1309.

REVISED RECORDS.--WSP 786: Drainage area. WSP 856: 1929(M), 1937.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,427.83 ft above sea level. Prior to July 10, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1927 reached a stage of 30.89 ft, from floodmarks, discharge, about 55,000 ft^3/s. Flood in July 1905 reached a stage about 2 ft higher than that in April 1927.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	23	e17	e11	127	34	587	37	19	3.8	.08
2	13	11	23	e17	e12	93	31	479	33	16	2.8	.08
3	15	11	20	e16	e12	71	29	520	32	24	2.6	.07
4	14	10	21	e15	e12	65	27	798	31	21	2.4	.06
5	14	10	e16	e15	e13	55	26	472	30	17	2.1	e.05
6	11	9.7	e13	e16	e13	55	24	348	27	13	1.9	e.05
7	11	10	e15	e17	e14	62	24	318	26	11	2.5	e.04
8	11	12	e18	e17	e15	378	24	628	24	10	2.0	e.05
9	9.9	12	e15	e16	e15	921	26	353	22	9.0	1.4	e.04
10	9.8	12	e15	e16	e14	474	24	255	24	8.7	1.1	e.03
11	9.9	12	e16	e14	e15	491	22	208	18	11	.96	e.03
12	11	13	e14	e12	e11	700	21	176	18	9.2	.87	e.02
13	10	21	e14	e12	e13	439	21	149	17	7.5	.81	e.02
14	9.1	18	e16	e13	e14	385	18	126	27	6.0	.71	e.02
15	8.3	15	e12	e12	e14	413	17	112	30	4.9	.55	e.02
16	7.0	14	e13	e10	e14	382	21	98	57	4.6	.49	e.02
17	7.3	13	e13	e11	e13	272	24	332	63	4.3	.56	e.03
18	7.9	14	e16	e10	e13	218	22	333	61	5.4	.56	e.02
19	8.9	14	e16	e11	e13	182	4330	145	39	5.4	.49	e.02
20	7.7	14	e12	e12	e12	163	6730	117	29	6.4	.48	e.03
21	7.7	15	e10	e11	e13	142	2560	93	25	12	.41	e.03
22	7.8	17	e11	e11	e15	121	1880	78	20	8.9	.38	e.04
23	8.5	16	13	e12	e17	106	2020	67	17	9.1	.45	e.04
24	8.7	17	13	e11	e21	100	2060	56	16	9.9	.36	e.05
25	9.2	18	14	e11	e36	86	2710	49	17	10	.25	e.06
26	9.9	18	15	e11	e125	75	2420	46	16	7.4	.22	e.05
27	10	18	16	e10	e175	63	1890	49	18	5.5	.18	e.05
28	12	22	18	e10	e190	53	1430	51	21	6.6	.11	e.06
29	13	25	19	e11	167	48	1070	47	20	5.2	.06	e.06
30	12	23	e18	e11	---	43	772	43	18	4.4	.05	e.06
31	11	---	e17	e12	---	37	---	38	---	4.3	.09	---
TOTAL	318.6	445.7	485	400	1022	6820	30307	7171	833	296.7	31.64	1.28
MEAN	10.3	14.9	15.6	12.9	35.2	220	1010	231	27.8	9.57	1.02	.043
MAX	15	25	23	17	190	921	6730	798	63	24	3.8	.08
MIN	7.0	9.7	10	10	11	37	17	38	16	4.3	.05	.02
AC-FT	632	884	962	793	2030	13530	60110	14220	1650	589	63	2.5

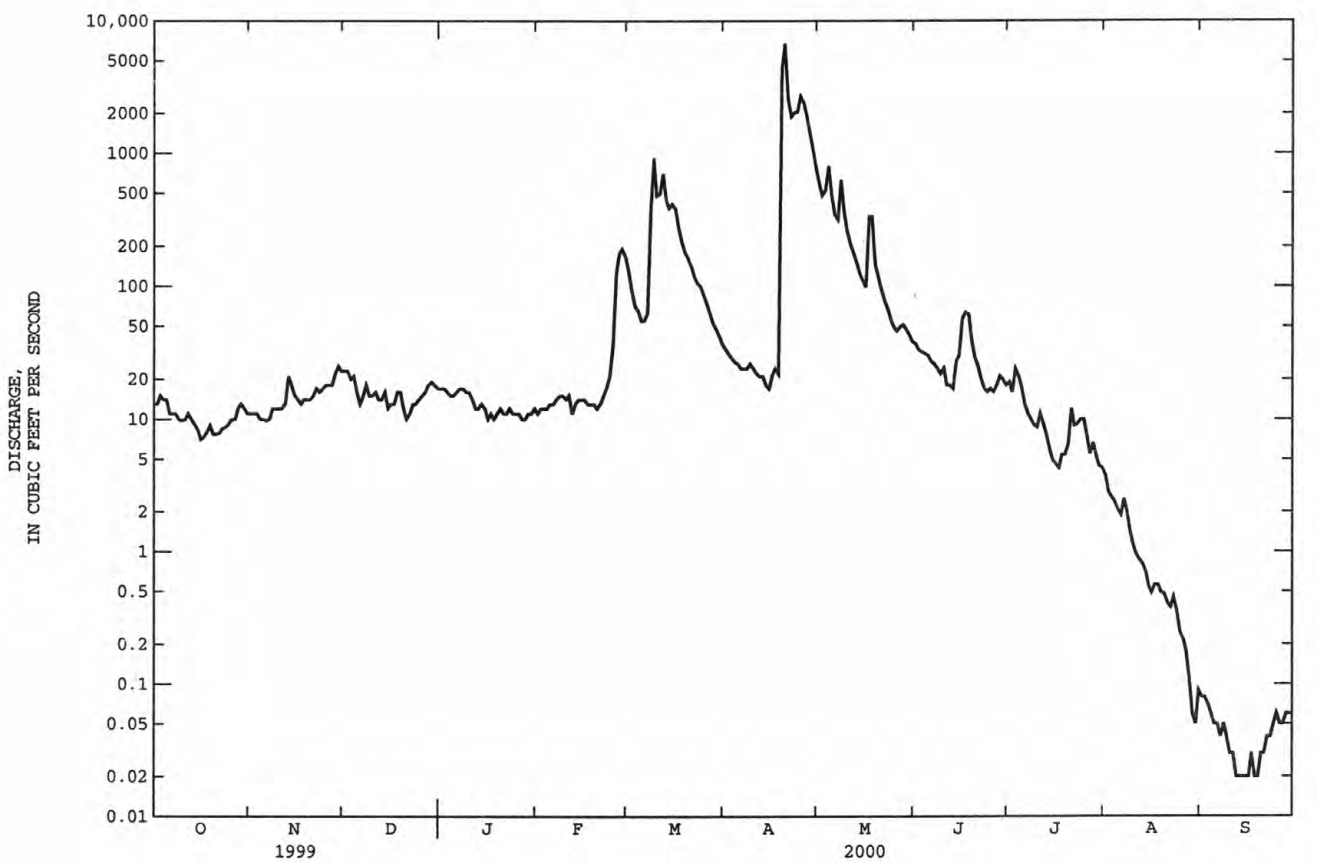
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	19.6	5.87	2.46	12.2	136	520	434	421	373	82.2	50.2	37.9
MAX	295	199	51.1	434	3436	4480	7306	6663	2567	561	706	1027
(WY)	1983	1999	1999	1997	1997	1997	1952	1942	1967	1937	1930	1999
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1929	1929	1929	1929	1936	1934	1934	1980	1930	1930	1929	1929

06441500 BAD RIVER NEAR FORT PIERRE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	93466.6		48131.92			
ANNUAL MEAN	256		132		174a	
HIGHEST ANNUAL MEAN					1203	1997
LOWEST ANNUAL MEAN					6.07	1980
HIGHEST DAILY MEAN	11900	Sep 3	6730	Apr 20	27200	May 1 1942
LOWEST DAILY MEAN	2.2	Aug 28	.02	Sep 12	.00	Oct 1 1928b
ANNUAL SEVEN-DAY MINIMUM	3.6	Aug 22	.02	Sep 12	.00	Oct 1 1928
INSTANTANEOUS PEAK FLOW			13200	Apr 19	43800	Jun 18 1967
INSTANTANEOUS PEAK STAGE			21.34	Apr 19	29.55	Jun 18 1967
ANNUAL RUNOFF (AC-FT)	185400		95470		126300	
10 PERCENT EXCEEDS	507		195		238	
50 PERCENT EXCEEDS	40		14		.87	
90 PERCENT EXCEEDS	9.9		.24		.00	

a Median of annual mean discharges, 110 ft^3/s.
b No flow for long periods in most years.
e Estimated.



06441500 BAD RIVER NEAR FORT PIERRE, SD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1945 to September 1953, October 1971 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to current year.
WATER TEMPERATURE: October 1972 to June 1983.

REVISED RECORDS.--WDR SD-81-1: 1979-80.

REMARKS.--Records fair. Observer collects samples on a daily basis during most periods of open-water flow and less often during winter ice period. Flow affected by ice Dec. 5-22 and Dec. 30 to Feb. 28. Size analyses for suspended-sediment samples collected for low flows may be affected by dissolved solids. Sediment-discharge records prior to Oct. 1, 1971, on file in the District office, U.S. Army Corps of Engineers, Omaha, NE.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 124,000 mg/L, July 17, 1981; minimum daily mean, 0 mg/L, estimated, on many days some years.
SEDIMENT LOAD: Maximum daily, 949,000 tons, May 14, 1982; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 22,300 mg/L, Mar. 9; minimum daily mean, 10 mg/L, estimated, Oct. 16 and Sept. 30.
SEDIMENT LOAD: Maximum daily, 323,000 tons, Apr. 20; minimum daily, 0.00 ton, Sept. 4-30.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	13	e27	.98	11	e58	1.7	23	e99	6.1
2	13	e23	.82	11	e55	1.7	23	e97	6.1
3	15	e19	.75	11	e51	1.5	20	e94	5.1
4	14	16	.62	10	e48	1.3	21	e92	5.3
5	14	e15	.57	10	e45	1.2	e16	e90	3.9
6	11	e15	.43	9.7	e42	1.1	e13	e88	3.1
7	11	e14	.44	10	e45	1.3	e15	e86	3.5
8	11	e14	.43	12	63	2.1	e18	e84	4.1
9	9.9	e13	.36	12	e66	2.2	e15	e82	3.3
10	9.8	e13	.34	12	e64	2.1	e15	e80	3.3
11	9.9	e12	.33	12	e62	2.1	e16	e78	3.4
12	11	e12	.34	13	e76	3.0	e14	e77	2.9
13	10	e11	.32	21	e194	11	e14	e75	2.8
14	9.1	e11	.27	18	e182	9.1	e16	e73	3.2
15	8.3	e11	.24	15	e172	7.0	e12	e72	2.3
16	7.0	e10	.19	14	e161	6.1	e13	e70	2.5
17	7.3	e11	.22	13	e152	5.3	e13	e68	2.4
18	7.9	e15	.32	14	e143	5.2	e16	e67	2.9
19	8.9	e19	.47	14	e134	5.0	e16	e65	2.8
20	7.7	e19	.39	14	e126	4.8	e12	e64	2.1
21	7.7	e17	.36	15	e119	4.9	e10	e62	1.7
22	7.8	e16	.34	17	e112	5.1	e11	e61	1.8
23	8.5	e15	.35	16	e105	4.7	13	e60	2.1
24	8.7	e19	.44	17	e99	4.6	13	e58	2.0
25	9.2	e24	.60	18	e93	4.5	14	e57	2.1
26	9.9	e31	.83	18	87	4.1	15	e56	2.2
27	10	e40	1.1	18	e77	3.7	16	e54	2.4
28	12	e51	1.6	22	e96	6.0	18	e53	2.6
29	13	e65	2.2	25	e136	9.3	19	e52	2.7
30	12	e67	2.2	23	e111	6.9	e18	e51	2.5
31	11	e62	1.9	---	---	---	e17	e49	2.3
TOTAL	318.6	---	20.75	445.7	---	128.6	485	---	95.5

e Estimated.

06441500 BAD RIVER NEAR FORT PIERRE, SD--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	e17	e48	.2.2	e11	e30	.89	127	e1300	445
2	e17	e47	2.2	e12	e30	.97	93	1100	277
3	e16	e46	2.0	e12	e30	.97	71	1170	226
4	e15	e45	1.8	e12	e30	.97	65	382	68
5	e15	44	1.8	e13	e30	1.1	55	e169	25
6	e16	e43	1.9	e13	e30	1.1	55	e119	18
7	e17	e43	2.0	e14	e30	1.1	62	e140	23
8	e17	e42	1.9	e15	e30	1.2	378	e2930	6460
9	e16	e42	1.8	e15	e30	1.2	921	22300	57000
10	e16	e41	1.8	e14	e30	1.1	474	e10200	13100
11	e14	e40	1.5	e15	e30	1.2	491	4760	6330
12	e12	e40	1.3	e11	e30	.89	700	e9140	17400
13	e12	e39	1.3	e13	e30	1.1	439	e11100	13100
14	e13	e39	1.4	e14	e30	1.1	385	11900	12400
15	e12	e38	1.2	e14	e30	1.1	413	e9560	10600
16	e10	e38	1.0	e14	e30	1.1	382	7100	7390
17	e11	e37	1.1	e13	e30	1.1	272	e4990	3690
18	e10	e36	.99	e13	e30	1.1	218	3460	2050
19	e11	e36	1.1	e13	e30	1.1	182	e2450	1210
20	e12	e35	1.1	e12	e30	.97	163	e1740	770
21	e11	e35	1.0	e13	e30	1.1	142	e1240	480
22	e11	e34	1.0	e15	e30	1.2	121	e885	290
23	e12	e34	1.1	e17	e47	2.1	106	e630	181
24	e11	e33	.99	e21	e105	6.0	100	e449	121
25	e11	e33	.98	e36	e237	23	86	e320	75
26	e11	e32	.96	e125	e535	180	75	e228	46
27	e10	e32	.87	e175	e1210	570	63	167	28
28	e10	e32	.85	e190	e1860	952	53	e141	20
29	e11	e31	.92	167	e1560	708	48	122	16
30	e11	e31	.91	---	---	---	43	e117	14
31	e12	e30	.98	---	---	---	37	114	11
TOTAL	400	---	41.95	1022	---	2464.76	6820	---	153864

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	34	e108	10	587	3550	5660	37	e108	11
2	31	e102	8.5	479	2470	3210	33	e110	9.7
3	29	e96	7.5	520	2130	3090	32	e112	9.5
4	27	e90	6.6	798	4260	8920	31	e114	9.4
5	26	e85	6.0	472	5620	7140	30	e116	9.4
6	24	e80	5.2	348	3430	3270	27	e118	8.6
7	24	e76	5.0	318	2380	2130	26	120	8.3
8	24	e72	4.7	628	13900	23900	24	e118	7.6
9	26	e67	4.7	353	6970	6960	22	e116	6.7
10	24	63	4.1	255	1280	908	24	e113	7.4
11	22	e58	3.5	208	474	268	18	e111	5.5
12	21	e53	3.0	176	e314	150	18	109	5.3
13	21	e49	2.7	149	242	98	17	e104	4.7
14	18	e44	2.1	126	e208	71	27	e235	17
15	17	e41	1.8	112	e184	56	30	161	13
16	21	e37	2.1	98	e163	43	57	e450	70
17	24	34	2.2	332	e8470	11000	63	e441	75
18	22	e32	1.9	333	17600	15600	61	e400	66
19	4330	e2400	28000	145	5570	2250	39	e362	38
20	6730	17800	323000	117	830	269	29	e327	26
21	2560	11800	81800	93	250	63	25	e296	20
22	1880	8750	44600	78	e184	39	20	e268	15
23	2020	11800	64500	67	159	29	17	e243	11
24	2060	8910	49500	56	95	15	16	e220	9.6
25	2710	9610	70900	49	e79	11	17	e199	9.0
26	2420	7740	51300	46	e73	9.0	16	e180	7.6
27	1890	6940	35500	49	e86	11	18	e163	7.8
28	1430	5500	21300	51	e101	14	21	e148	8.4
29	1070	4850	14000	47	e103	13	20	e134	7.2
30	772	4970	10400	43	e104	12	18	120	5.9
31	---	---	---	38	e106	11	---	---	---
TOTAL	30307	---	794881.6	7171	---	95220.0	833	---	509.6

e Estimated.

06441500 BAD RIVER NEAR FORT PIERRE, SD--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	19	e107	5.5	3.8	e86	.89	.08	e40	.01
2	16	e96	4.1	2.8	e84	.64	.08	e38	.01
3	24	e162	11	2.6	e81	.57	.07	e36	.01
4	21	e103	5.9	2.4	e78	.50	.06	e35	.00
5	17	63	2.9	2.1	e76	.43	e.05	e33	.00
6	13	e53	1.9	1.9	e74	.38	e.05	e31	.00
7	11	e46	1.4	2.5	e71	.49	e.04	e30	.00
8	10	e41	1.1	2.0	e69	.38	e.05	e29	.00
9	9.0	e35	.86	1.4	e67	.25	e.04	e27	.00
10	8.7	e33	.77	1.1	e65	.20	e.03	e26	.00
11	11	e86	2.6	.96	e63	.16	e.03	e25	.00
12	9.2	e106	2.6	.87	e61	.14	e.02	e24	.00
13	7.5	e111	2.2	.81	e59	.13	e.02	e23	.00
14	6.0	e118	1.9	.71	e57	.11	e.02	e22	.00
15	4.9	e124	1.7	.55	55	.08	e.02	e21	.00
16	4.6	130	1.6	.49	e54	.07	e.02	e20	.00
17	4.3	e131	1.5	.56	e53	.08	e.03	e19	.00
18	5.4	e130	1.9	.56	e53	.08	e.02	e18	.00
19	5.4	e130	1.9	.49	e52	.07	e.02	e17	.00
20	6.4	e140	2.5	.48	e51	.07	e.03	e16	.00
21	12	149	4.9	.41	e50	.05	e.03	e16	.00
22	8.9	e119	2.9	.38	e50	.05	e.04	e15	.00
23	9.1	e115	2.8	.45	e49	.06	e.04	e14	.00
24	9.9	e112	3.0	.36	e48	.05	e.05	e14	.00
25	10	e108	3.0	.25	e47	.03	e.06	e13	.00
26	7.4	e105	2.1	.22	e47	.03	e.05	e12	.00
27	5.5	e102	1.5	.18	e46	.02	e.05	e12	.00
28	6.6	e98	1.8	.11	e45	.01	e.06	e11	.00
29	5.2	e95	1.3	.06	e45	.01	e.06	e11	.00
30	4.4	e92	1.1	.05	44	.01	e.06	e10	.00
31	4.3	e89	1.0	.09	e42	.01	---	---	---
TOTAL	296.7	---	81.23	31.64	---	6.05	1.28	---	0.03
YEAR	48131.92		1047314.07						

e Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1999								
04...	1040	17	2900	10.0	8.5	--	--	98
NOV								
08...	1355	12	4010	29.0	8.5	82	2.6	98
JAN 2000								
05...	1340	14	5080	6.5	.0	--	--	100
MAR								
09...	1400	778	3330	-2.0	1.0	22600	47500	99
27...	1230	63	4200	14.0	11.5	--	--	100
APR								
20...	1605	3950	1870	15.0	6.5	17200	183000	99
MAY								
03...	0950	429	2720	22.5	18.0	--	--	99
24...	0830	58	3740	17.5	20.5	--	--	100
JUL								
05...	0935	17	4810	26.5	25.5	--	--	100
AUG								
15...	1220	.53	5400	28.5	26.0	55	.08	98

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06441590 MISSOURI RIVER AT LA FRAMBOISE ISLAND, AT PIERRE, SD

LOCATION.--Lat 44°21'07", long 100°21'31", in NW¼ SW¼ NE¼ sec.34, T.110 N., R.79 W., Hughes County, Hydrologic Unit 10140101, on left bank of La Framboise Island Recreation Area, 0.2 mi downstream from Bad River, 1.5 mi downstream from U.S. Highways 14 and 83, 7.8 mi downstream from Oahe Dam, and at mile 1,064.5.

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

REVISED RECORDS.--WDR SD-90-1: Datum.

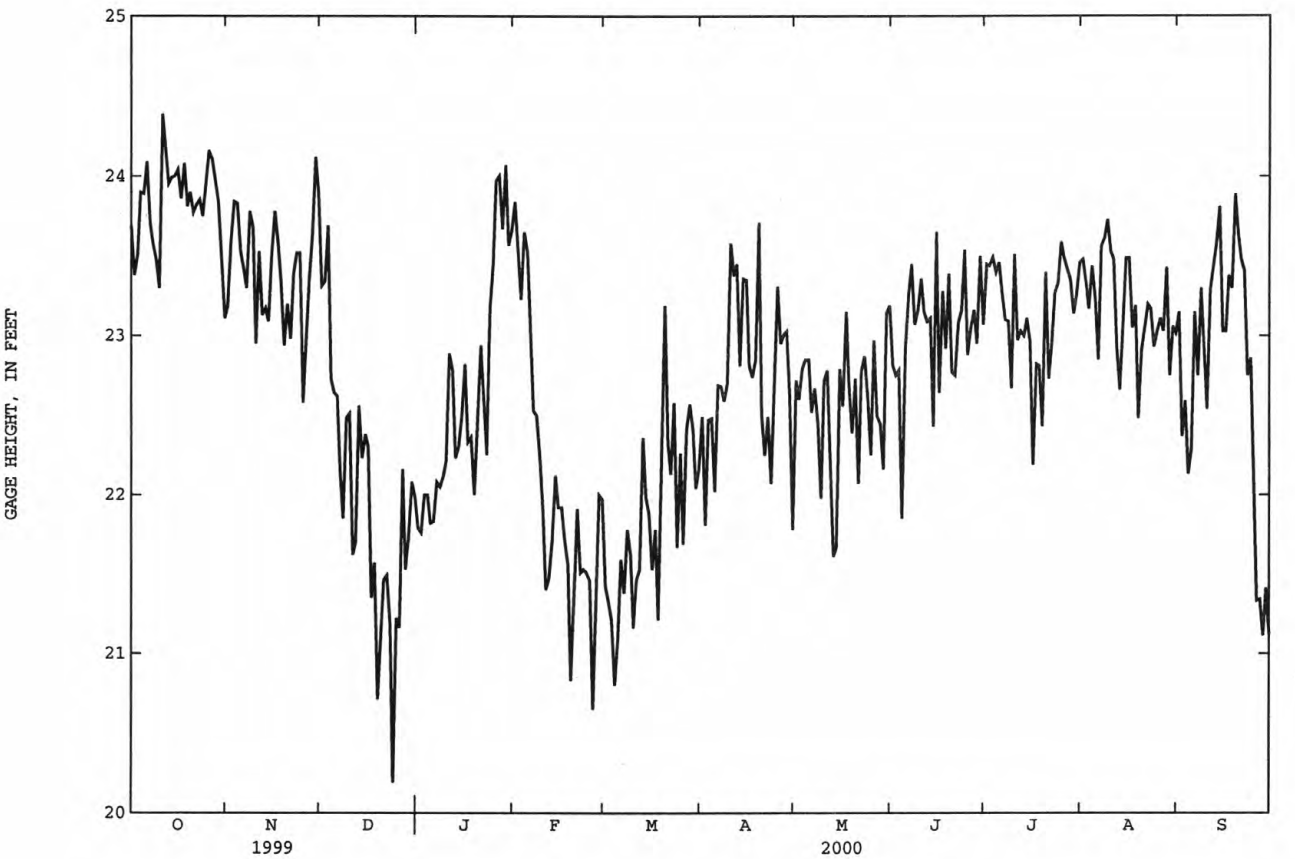
GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above sea level.

REMARKS.--Records good. Stage regulated by Big Bend Dam approximately 80 mi downstream. Flows regulated by Oahe Dam 7.8 mi upstream. Gage heights prior to October 1988 in files of U.S. Army Corps of Engineers. U.S. Army Corps of Engineers satellite data-collection platform at station.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.69	23.19	23.31	21.79	23.84	21.42	22.49	22.72	22.81	23.45	23.48	23.15
2	23.38	23.59	23.34	21.76	23.50	21.33	21.81	22.60	22.75	23.44	23.33	22.37
3	23.51	23.84	23.69	22.00	23.23	21.21	22.47	22.79	22.78	23.49	23.17	22.59
4	23.90	23.83	22.73	22.00	23.65	20.80	22.48	22.85	21.85	23.40	23.44	22.13
5	23.89	23.53	22.64	21.82	23.53	21.10	22.02	22.85	22.92	23.46	23.24	22.29
6	24.09	23.43	22.62	21.83	22.93	21.59	22.69	22.52	23.26	23.27	22.85	23.15
7	23.71	23.30	22.13	22.08	22.53	21.38	22.68	22.67	23.45	23.10	23.56	22.75
8	23.58	23.78	21.85	22.05	22.50	21.78	22.59	22.45	23.07	23.09	23.61	23.30
9	23.48	23.68	22.48	22.11	22.24	21.62	22.70	21.98	23.16	22.67	23.73	22.96
10	23.30	22.95	22.51	22.21	21.89	21.16	23.58	22.72	23.36	23.51	23.53	22.54
11	24.39	23.53	21.62	22.89	21.40	21.46	23.38	22.78	23.15	22.97	23.48	23.29
12	24.16	23.13	21.70	22.78	21.48	21.53	23.45	22.21	23.09	23.03	22.93	23.45
13	23.95	23.17	22.56	22.23	21.72	22.36	22.81	21.61	23.11	23.00	22.66	23.58
14	23.99	23.09	22.23	22.30	22.12	21.99	23.36	21.67	22.43	23.11	23.12	23.81
15	24.00	23.51	22.38	22.50	21.92	21.88	23.35	22.79	23.65	22.96	23.49	23.03
16	24.04	23.78	22.30	22.82	21.92	21.53	22.81	22.56	22.64	22.19	23.49	23.03
17	23.86	23.58	21.35	22.33	21.71	21.78	22.74	23.15	23.28	22.82	23.05	23.38
18	24.08	23.33	21.57	22.36	21.56	21.21	22.85	22.69	22.92	22.81	23.19	23.30
19	23.81	22.94	20.71	22.00	20.83	22.16	23.71	22.39	23.39	22.43	22.48	23.89
20	23.90	23.20	21.06	22.53	21.25	23.19	22.51	22.73	22.77	23.40	22.91	23.64
21	23.77	22.98	21.46	22.94	21.91	22.32	22.25	22.07	22.75	22.73	23.06	23.48
22	23.82	23.39	21.49	22.60	21.51	22.13	22.49	22.78	23.08	22.94	23.20	23.41
23	23.85	23.52	21.18	22.25	21.53	22.58	22.07	22.87	23.16	23.27	23.17	22.75
24	23.75	23.52	20.19	23.17	21.51	21.67	22.63	22.61	23.54	23.33	22.93	22.86
25	23.97	22.58	21.22	23.45	21.46	22.26	23.31	22.25	22.88	23.59	23.03	22.20
26	24.16	22.94	21.16	23.97	20.65	21.69	22.95	22.97	23.05	23.49	23.11	21.33
27	24.11	23.36	22.16	24.00	21.14	22.41	23.01	22.50	23.16	23.42	23.03	21.34
28	23.98	23.64	21.53	23.67	22.00	22.57	23.03	22.45	22.95	23.35	23.43	21.11
29	23.84	24.12	21.74	24.07	21.97	22.41	22.62	22.16	23.50	23.14	22.75	21.41
30	23.50	23.90	22.08	23.57	---	22.04	21.78	23.14	23.07	23.26	23.06	21.12
31	23.11	---	21.98	23.66	---	22.17	---	23.19	---	23.46	23.02	---
MEAN	23.82	23.41	21.97	22.64	22.05	21.83	22.75	22.57	23.03	23.15	23.18	22.75
MAX	24.39	24.12	23.69	24.07	23.84	23.19	23.71	23.19	23.65	23.59	23.73	23.89
MIN	23.11	22.58	20.19	21.76	20.65	20.80	21.78	21.61	21.85	22.19	22.48	21.11

06441590 MISSOURI RIVER AT LA FRAMBOISE ISLAND, AT PIERRE, SD--Continued



06441592 MISSOURI RIVER BELOW LA FRAMBOISE ISLAND, AT PIERRE, SD

LOCATION.--Lat 44°20'46", long 100°19'12", in SE¼ SE¼ NW¼ sec.10, T.110 N., R.79 W., Hughes County, Hydrologic Unit 10140101, on left bank at downstream end of La Framboise Island Recreation Area, 2.4 mi downstream from Bad River, 3.0 mi downstream from U.S. Highways 14 and 83, 9.3 mi downstream from Oahe Dam, and at mile 1,062.4.

PERIOD OF RECORD.--October 1998 to September 1999.

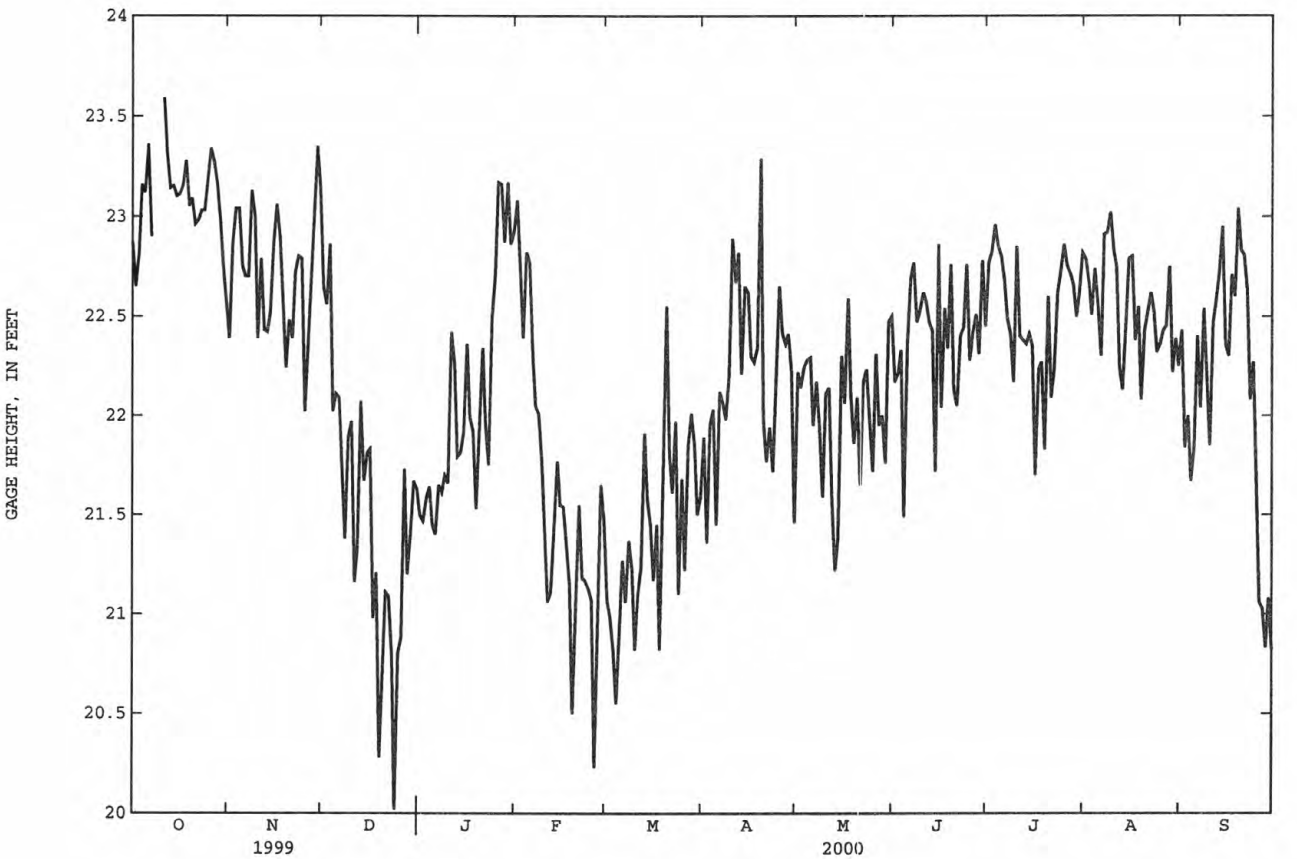
GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above sea level.

REMARKS.--Records good. Stage regulated by Big Bend Dam approximately 78 mi downstream. Flows regulated by Oahe Dam 9.9 mi upstream. Gage heights prior to October 1998 in files of U.S. Army Corps of Engineers. U.S. Army Corps of Engineers satellite data-collection platform at station.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.87	22.39	22.64	21.50	23.08	21.07	21.89	22.22	22.17	22.77	22.79	22.43
2	22.65	22.87	22.56	21.47	22.76	20.99	21.36	22.14	22.21	22.82	22.67	21.84
3	22.81	23.04	22.86	21.58	22.39	20.83	21.95	22.24	22.33	22.96	22.51	22.00
4	23.16	23.04	22.02	21.64	22.82	20.55	22.03	22.28	21.49	22.85	22.74	21.67
5	23.12	22.75	22.11	21.45	22.77	20.88	21.45	22.29	22.36	22.80	22.55	21.84
6	23.36	22.70	22.09	21.40	22.31	21.27	22.12	21.95	22.69	22.69	22.30	22.40
7	22.90	22.70	21.66	21.65	22.05	21.06	22.06	22.17	22.77	22.49	22.91	22.04
8	---	23.13	21.38	21.61	22.01	21.37	21.98	21.94	22.47	22.41	22.92	22.54
9	---	23.00	21.89	21.70	21.77	21.22	22.20	21.59	22.53	22.17	23.02	22.20
10	---	22.39	21.97	21.66	21.43	20.82	22.89	22.11	22.62	22.85	22.83	21.85
11	23.59	22.79	21.16	22.42	21.06	21.10	22.67	22.14	22.57	22.40	22.75	22.47
12	23.31	22.43	21.33	22.26	21.11	21.24	22.82	21.57	22.47	22.38	22.24	22.59
13	23.14	22.42	22.07	21.79	21.42	21.91	22.21	21.22	22.43	22.36	22.13	22.72
14	23.15	22.52	21.67	21.81	21.77	21.58	22.65	21.38	21.72	22.41	22.46	22.95
15	23.10	22.86	21.81	21.92	21.55	21.45	22.62	22.30	22.86	22.35	22.79	22.36
16	23.11	23.06	21.83	22.36	21.54	21.17	22.30	22.06	22.04	21.70	22.80	22.30
17	23.15	22.90	20.98	21.99	21.33	21.45	22.27	22.59	22.54	22.23	22.38	22.71
18	23.28	22.61	21.21	21.92	21.15	20.82	22.34	22.10	22.34	22.27	22.55	22.60
19	23.05	22.24	20.28	21.53	20.50	21.79	23.29	21.86	22.76	21.83	22.08	23.04
20	23.09	22.48	20.72	21.97	21.01	22.55	21.98	22.09	22.13	22.60	22.43	22.83
21	22.96	22.39	21.11	22.34	21.55	21.80	21.77	21.65	22.05	22.09	22.52	22.81
22	22.98	22.72	21.09	21.95	21.18	21.61	21.94	22.17	22.40	22.23	22.62	22.64
23	23.03	22.80	20.79	21.75	21.17	21.97	21.72	22.23	22.44	22.62	22.53	22.08
24	23.03	22.79	20.02	22.49	21.13	21.10	22.19	21.98	22.76	22.73	22.32	22.27
25	23.19	22.02	20.80	22.71	21.07	21.68	22.65	21.72	22.28	22.86	22.36	21.73
26	23.34	22.28	20.88	23.17	20.23	21.22	22.41	22.31	22.42	22.76	22.43	21.06
27	23.27	22.59	21.73	23.16	20.90	21.85	22.36	21.95	22.51	22.72	22.45	21.03
28	23.17	22.91	21.20	22.87	21.65	22.01	22.41	22.00	22.31	22.66	22.75	20.83
29	22.99	23.35	21.40	23.17	21.48	21.85	22.22	21.76	22.78	22.50	22.22	21.08
30	22.74	23.14	21.67	22.86	---	21.50	21.46	22.47	22.45	22.62	22.39	20.82
31	22.56	---	21.63	22.92	---	21.59	---	22.50	---	22.82	22.25	---
MEAN	---	22.71	21.50	22.10	21.59	21.40	22.21	22.03	22.40	22.51	22.54	22.12
MAX	---	23.35	22.86	23.17	23.08	22.55	23.29	22.59	22.86	22.96	23.02	23.04
MIN	---	22.02	20.02	21.40	20.23	20.55	21.36	21.22	21.49	21.70	22.08	20.82

06441592 MISSOURI RIVER BELOW LA FRAMBOISE ISLAND, AT PIERRE, SD--Continued



06441595 MISSOURI RIVER AT FARM ISLAND, NEAR PIERRE, SD

LOCATION.--Lat 44°20'03", long 100°15'54", in NW¼ SW¼ NE¼ sec.18, T.110 N., R.78 W., Hughes County, Hydrologic Unit 10140101, on left bank of Farm Island Recreation Area, 4.8 mi downstream from La Framboise gage, 4.9 mi southeast of Pierre, 5.2 mi downstream from Bad River, 12.6 mi downstream from Oahe Dam, and at mile 1,059.2.

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

REVISED RECORDS.--WDR SD-90-1: Datum.

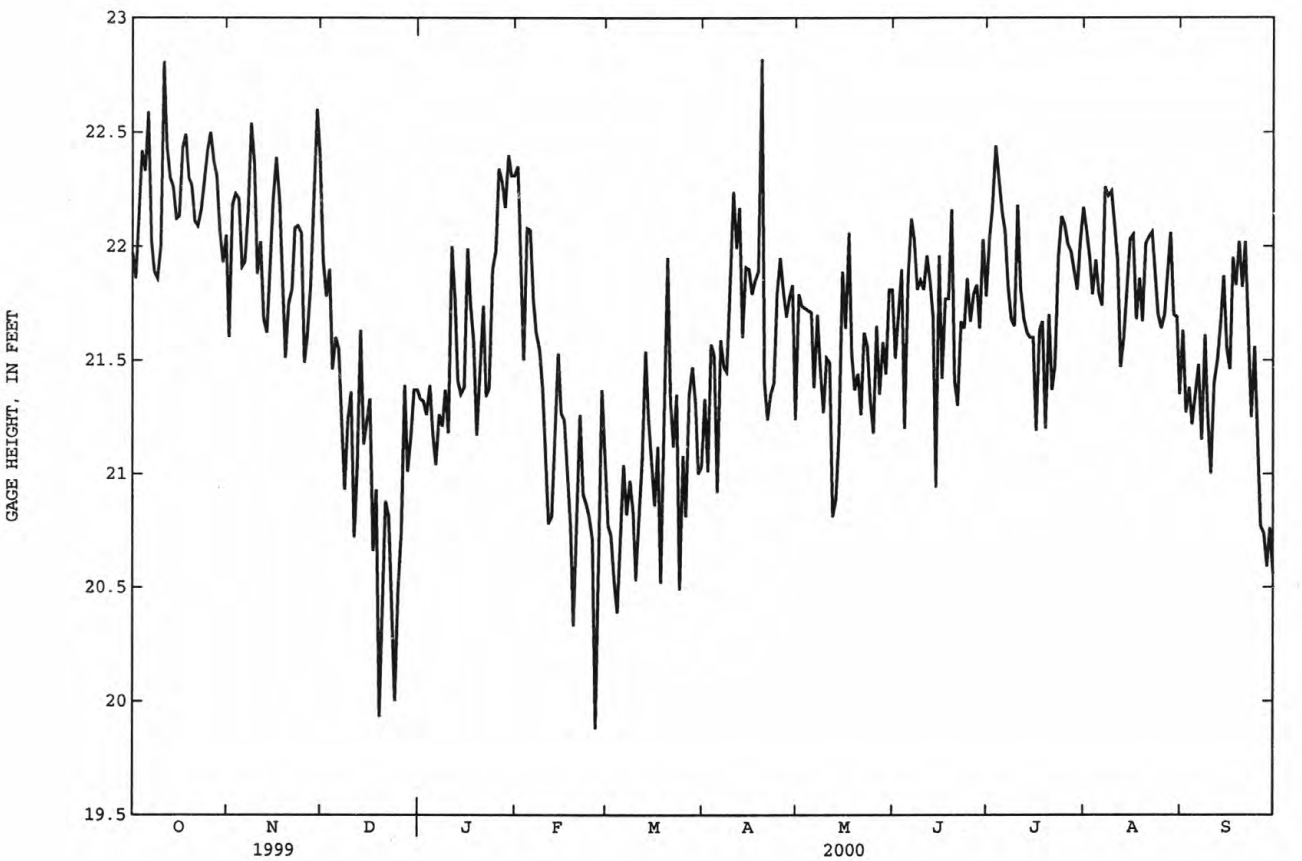
GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above sea level.

REMARKS.--Records good except those for Dec. 2 to Feb. 16, which are poor. Stage regulated by Big Bend Dam approximately 75 mi downstream. Flows regulated by Oahe Dam 12.6 mi upstream. Gage heights prior to October 1988 in files of U.S. Army Corps of Engineers. U.S. Army Corps of Engineers satellite data-collection platform at station.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.97	21.60	21.94	21.33	22.35	20.77	21.33	21.79	21.51	22.04	22.07	21.63
2	21.86	22.18	21.78	21.32	21.97	20.73	21.01	21.74	21.70	22.17	21.95	21.27
3	22.12	22.23	21.90	21.26	21.50	20.53	21.57	21.73	21.90	22.44	21.79	21.38
4	22.42	22.21	21.46	21.39	22.08	20.39	21.52	21.72	21.20	22.29	21.94	21.22
5	22.33	21.91	21.60	21.18	22.07	20.76	20.92	21.71	21.86	22.15	21.79	21.34
6	22.59	21.93	21.55	21.04	21.76	21.04	21.59	21.38	22.12	22.07	21.74	21.48
7	22.02	22.15	21.20	21.26	21.62	20.82	21.47	21.70	22.03	21.82	22.26	21.15
8	21.89	22.54	20.93	21.21	21.55	20.97	21.45	21.45	21.81	21.68	22.22	21.61
9	21.86	22.36	21.24	21.37	21.38	20.83	21.76	21.27	21.85	21.65	22.24	21.26
10	22.00	21.88	21.36	21.18	21.05	20.53	22.24	21.51	21.81	22.18	22.07	21.00
11	22.81	22.02	20.72	22.00	20.78	20.80	21.99	21.49	21.96	21.81	21.94	21.40
12	22.44	21.68	21.03	21.76	20.81	21.07	22.17	20.81	21.85	21.68	21.47	21.50
13	22.30	21.62	21.63	21.41	21.21	21.54	21.60	20.89	21.69	21.62	21.60	21.65
14	22.26	21.92	21.13	21.35	21.53	21.25	21.91	21.17	20.94	21.60	21.82	21.87
15	22.12	22.20	21.24	21.38	21.27	21.07	21.90	21.89	21.96	21.60	22.03	21.55
16	22.13	22.39	21.33	21.99	21.24	20.86	21.79	21.64	21.42	21.19	22.05	21.46
17	22.43	22.21	20.66	21.75	20.99	21.12	21.85	22.06	21.77	21.63	21.68	21.95
18	22.49	21.85	20.93	21.58	20.77	20.52	21.89	21.53	21.77	21.67	21.86	21.83
19	22.30	21.51	19.93	21.17	20.33	21.49	22.82	21.37	22.16	21.20	21.67	22.02
20	22.27	21.75	20.51	21.47	20.85	21.95	21.41	21.44	21.41	21.70	22.01	21.82
21	22.11	21.81	20.88	21.74	21.26	21.32	21.24	21.26	21.30	21.37	22.04	22.02
22	22.09	22.08	20.81	21.34	20.91	21.12	21.35	21.62	21.67	21.47	22.06	21.70
23	22.16	22.09	20.46	21.38	20.87	21.35	21.40	21.56	21.64	21.95	21.87	21.25
24	22.29	22.06	20.00	21.90	20.81	20.49	21.79	21.32	21.86	22.13	21.70	21.56
25	22.42	21.49	20.49	21.98	20.71	21.08	21.95	21.18	21.67	22.09	21.64	21.25
26	22.50	21.61	20.74	22.34	19.88	20.81	21.80	21.65	21.79	22.01	21.70	20.77
27	22.37	21.83	21.39	22.28	20.77	21.35	21.69	21.35	21.83	21.98	21.86	20.74
28	22.31	22.21	21.01	22.17	21.37	21.47	21.77	21.58	21.64	21.90	22.06	20.59
29	22.06	22.60	21.16	22.40	21.07	21.31	21.83	21.44	22.03	21.81	21.70	20.76
30	21.93	22.40	21.37	22.31	---	21.00	21.24	21.81	21.78	22.02	21.69	20.56
31	22.05	---	21.37	22.31	---	21.03	---	21.81	---	22.17	21.35	---
MEAN	22.22	22.01	21.09	21.63	21.20	21.01	21.67	21.51	21.73	21.84	21.87	21.39
MAX	22.81	22.60	21.94	22.40	22.35	21.95	22.82	22.06	22.16	22.44	22.26	22.02
MIN	21.86	21.49	19.93	21.04	19.88	20.39	20.92	20.81	20.94	21.19	21.35	20.56

06441595 MISSOURI RIVER AT FARM ISLAND, NEAR PIERRE, SD--Continued



06442700 LAKE SHARPE NEAR FORT THOMPSON, SD

LOCATION.--Lat 44°02'18", long 99°26'45", in SE¼ sec.27, T.107 N., R.72 W., Lyman County, Hydrologic Unit 10140101, at left approach wall of powerhouse at Big Bend Dam on Missouri River, 2.5 mi south of Fort Thompson, and at mile 987.4.

DRAINAGE AREA.--249,300 mi^2, approximately.

PERIOD OF RECORD.--July 1963 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is above sea level.

REMARKS.--Reservoir is formed by earthfill dam; closure made July 1963; intentional storage began November 1963. Maximum capacity, 1,874,000 acre-ft below elevation, 1,423.0 ft (top of spillway gates). Normal maximum, 1,697,000 acre-ft below elevation 1,422.0 ft. Inactive storage, 1,424,000 acre-ft below elevation 1,415.0 ft. Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of a concrete chute with flat crest at elevation 1,385.0 ft surmounted by 8 taintor gates, each 40 by 38 ft; design capacity, 390,000 ft^3/s. Normal releases are through 8 power units (completed in July 1966), with a generating capacity of 58,500 kilowatts each. Maximum release through powerplant about 100,000 ft^3/s. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,829,000 acre-ft, Apr. 22, 1971, affected by wind; maximum elevation, 1,422.1 ft, June 4, 1991; minimum since initial filling, 1,417,000 acre-ft, Oct. 24, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,763,000 acre-ft, Nov. 7; minimum contents, 1,597,000 acre-ft, Sept. 11.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,420.06	1,692,000	--
Oct. 31	1,421.22	1,751,000	+59,000
Nov. 30	1,420.33	1,716,000	-35,000
Dec. 31	1,420.92	1,733,000	+17,000
CAL YR 1999	--	--	+45,000
Jan. 31	1,420.54	1,722,000	-11,000
Feb. 29	1,420.24	1,697,000	-25,000
Mar. 31	1,420.13	1,694,000	-3,000
Apr. 30	1,421.05	1,743,000	+49,000
May 31	1,420.14	1,697,000	-46,000
June 30	1,420.22	1,697,000	0
July 31	1,420.33	1,708,000	+11,000
Aug. 31	1,419.16	1,644,000	-64,000
Sept. 30	1,420.45	1,707,000	+63,000
WTR YR 2000	--	--	+15,000

NOTE.--Lake frozen over Feb. 2 to Mar. 3.

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06442718 CAMPBELL CREEK NEAR LEE'S CORNER, SD

LOCATION.--Lat 44°04'39", long 99°22'51", in NW¼ NE¼ NW¼ sec.17, T.107 N., R.71 W., Buffalo County, Hydrologic Unit 10140101, on left bank at downstream side of bridge on State Highway 34, 2.8 mi east of Fort Thompson, and 5.4 mi upstream from high-water line of Lake Francis Case.

DRAINAGE AREA.--54.1 mi^2.

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

REVISED RECORDS.--WDR SD-91-1: 1988-90(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,440.32 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.40	.52	e.27	e.24	e.58	.22	.42	.35	.00	.00	.00
2	.24	.41	.53	e.27	e.25	e.56	.23	.36	.17	.00	.00	.00
3	.26	.45	.50	.18	e.24	e.57	.23	.34	.13	.00	.00	.00
4	.26	.51	.46	e.19	e.24	e.56	.21	.33	.14	.00	.00	.00
5	.23	.55	.39	e.26	e.24	.55	.19	.33	.11	.00	.00	.00
6	.22	.54	.38	e.38	e.25	.58	.20	.35	.09	.00	.00	.00
7	.25	.58	.41	e.35	e.25	.50	.28	.46	.07	.00	.00	.00
8	.25	.57	.39	e.33	e.28	e.48	.26	.94	.06	.00	.00	.00
9	.20	.52	.38	e.31	e.27	e.47	.26	.50	.04	.00	.00	.00
10	.18	.51	e.38	e.28	e.26	e.45	.25	.40	.04	.00	.00	.00
11	.16	.52	.38	e.27	e.25	e.42	.24	.48	.03	.00	.00	.00
12	.15	.50	.38	e.26	e.25	e.38	.23	.38	.03	.00	.00	.00
13	.13	.52	.36	e.23	e.25	e.37	.24	.30	.05	.00	.00	.00
14	.14	.51	.35	e.21	e.26	e.36	.27	.24	.03	.00	.00	.00
15	.18	.50	e.34	e.20	e.25	.34	.29	.23	.03	.00	.00	.00
16	.22	.52	e.34	e.20	e.25	e.31	.36	.22	.03	.00	.00	.00
17	.28	.55	e.33	.19	e.26	e.30	.44	.25	.02	.00	.00	.00
18	.34	.60	e.33	e.19	e.25	.28	.41	.31	.02	.00	.00	.00
19	.40	.59	e.39	e.19	e.26	.26	.50	.18	.02	.00	.00	.00
20	.38	.57	e.36	e.19	e.30	.28	.52	.19	.01	.00	.00	.00
21	.39	.59	e.35	e.19	e.40	.28	.36	.17	.01	.00	.00	.00
22	.33	.56	e.34	.20	e.60	.29	.36	.17	.00	.00	.00	.00
23	.30	.52	e.33	.23	e.80	.38	.33	.16	.00	.00	.00	.00
24	.33	.49	e.35	e.24	e1.0	.49	.31	.14	.00	.00	.00	.00
25	.38	.49	e.38	e.25	e.90	.28	.31	.13	.00	.00	.00	.00
26	.37	.59	e.37	e.26	e.80	.22	.35	.16	.00	.00	.00	.00
27	e.34	.58	e.37	e.27	e.70	.20	.39	.18	.00	.00	.00	.00
28	.28	.53	e.40	e.26	e.65	.20	.35	.15	.00	.00	.00	.00
29	.33	.50	e.36	e.26	e.60	.21	.35	.14	.01	.00	.00	.00
30	.40	.51	e.36	e.25	---	.21	.42	.17	.01	.00	.00	.00
31	.36	---	e.30	e.25	---	.22	---	.15	---	.00	.00	---
TOTAL	8.51	15.78	11.81	7.61	11.55	11.58	9.36	8.93	1.50	0.00	0.00	0.00
MEAN	.27	.53	.38	.25	.40	.37	.31	.29	.050	.000	.000	.000
MAX	.40	.60	.53	.38	1.0	.58	.52	.94	.35	.00	.00	.00
MIN	.13	.40	.30	.18	.24	.20	.19	.13	.00	.00	.00	.00
AC-FT	17	31	23	15	23	23	19	18	3.0	.00	.00	.00

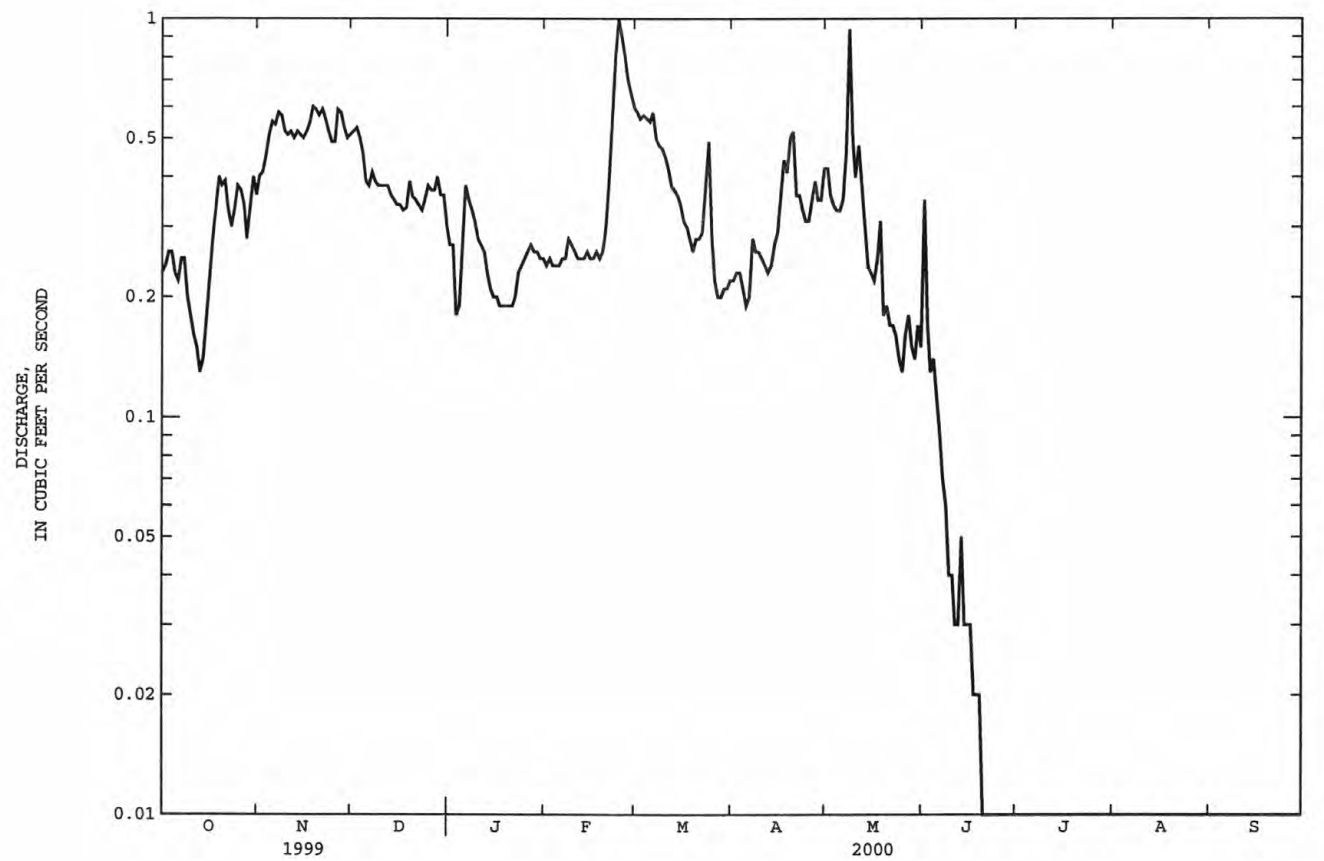
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

MEAN	3.00	1.62	.21	.16	4.14	20.6	12.3	27.9	13.7	6.16	1.22	1.54
MAX	18.7	17.1	1.46	.78	15.3	117	95.9	143	79.7	57.4	12.3	11.7
(WY)	1999	1999	1999	1992	1992	1997	1995	1999	1997	1993	1999	1999
MIN	.000	.000	.000	.000	.000	.18	.21	.11	.018	.000	.000	.000
(WY)	1988	1989	1988	1988	1989	1991	1992	1992	1989	2000	1988	1988

06442718 CAMPBELL CREEK NEAR LEE'S CORNER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	6020.45		86.63			
ANNUAL MEAN	16.5		.24		7.73a	
HIGHEST ANNUAL MEAN					24.3	1997
LOWEST ANNUAL MEAN					.24	2000
HIGHEST DAILY MEAN	1570	May 10	1.0	Feb 24	1570	May 10 1999
LOWEST DAILY MEAN	.00	Aug 11	.00	Jun 22	.00	Oct 1 1987b
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 13	.00	Jun 22	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			1.2	May 8c	3280	May 10 1999
INSTANTANEOUS PEAK STAGE			3.19	Feb 22d	15.03	May 10 1999
ANNUAL RUNOFF (AC-FT)	11940		172		5600	
10 PERCENT EXCEEDS	9.5		.51		5.8	
50 PERCENT EXCEEDS	.50		.25		.11	
90 PERCENT EXCEEDS	.02		.00		.00	

a Median of annual mean discharges, 5.5 ft^3/s.
b No flow for long periods in most years.
c Gage height, 2.50 ft.
d Backwater from ice.
e Estimated.



06442996 LAKE FRANCIS CASE (AMERICAN CREEK BAY) AT CHAMBERLAIN, SD

LOCATION.--Lat 43°48'52", long 099°19'24", in SE¼ NE¼ NW¼ sec.15, T.104 N., R.71 W., Brule County, Hydrologic Unit 10140101, on right bank of American Creek Bay and left bank of Lake Francis Case 10 ft downstream of Highway 50 bridge over American Creek Bay (revised), 0.5 mi upstream from intersection of I-90 and State Highway 50 Business Loop, 1.6 mi upstream from Lewis and Clark Memorial Bridge, and at mile 967.5.

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

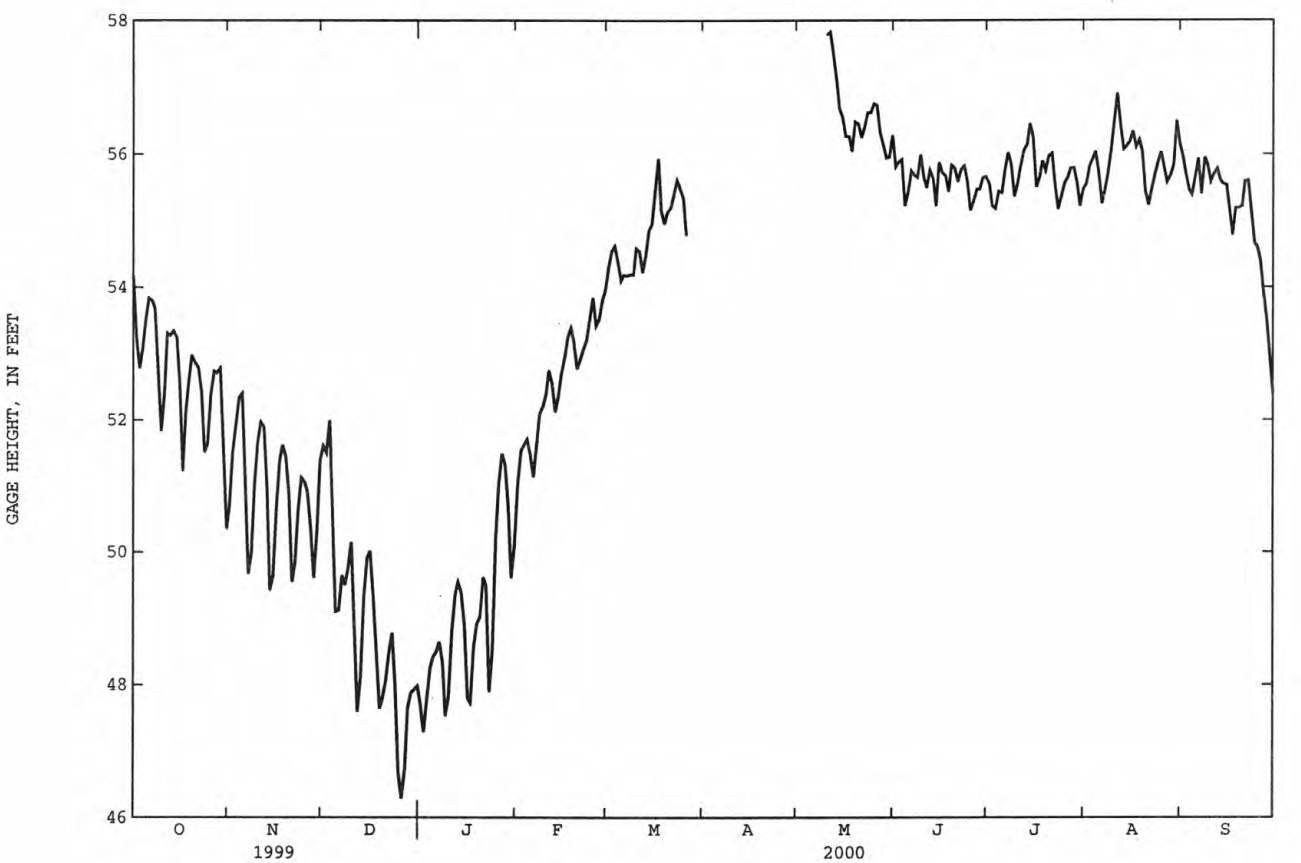
GAGE.--Water-stage recorder. Datum of gage is 1,300.00 ft above sea level. Prior to Oct. 1, 1993, at datum 0.24 ft higher.

REMARKS.--Records fair. Stage regulated by Ft. Randall Reservoir. Gage heights prior to October 1988 in files of U.S. Army Corps of Engineers.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.18	50.70	51.61	47.72	51.01	54.29	---	---	55.80	55.56	55.54	55.97
2	53.25	51.52	51.50	47.29	51.53	54.53	---	---	55.88	55.22	55.81	55.70
3	52.78	51.94	51.99	47.77	51.61	54.61	---	---	55.91	55.18	55.91	55.46
4	53.05	52.33	50.71	48.24	51.70	54.37	---	---	55.22	55.43	56.04	55.39
5	53.50	52.39	49.10	48.41	51.48	54.09	---	---	55.42	55.41	55.72	55.67
6	53.84	51.29	49.12	48.48	51.14	54.18	---	---	55.74	55.74	55.25	55.93
7	53.80	49.67	49.64	48.64	51.56	54.17	---	---	55.68	56.02	55.45	55.40
8	53.68	49.99	49.50	48.33	52.08	54.19	---	---	55.65	55.84	55.72	55.95
9	52.88	51.08	49.74	47.53	52.19	54.19	---	---	55.99	55.36	56.08	55.84
10	51.83	51.65	50.15	47.82	52.37	54.58	---	57.78	55.64	55.54	56.52	55.58
11	52.40	51.97	49.09	48.80	52.74	54.54	---	57.83	55.49	55.82	56.91	55.70
12	53.31	51.89	47.60	49.35	52.53	54.22	---	57.50	55.76	56.05	56.44	55.77
13	53.27	50.93	48.12	49.54	52.12	54.48	---	57.10	55.64	56.13	56.07	55.61
14	53.34	49.42	49.32	49.39	52.37	54.84	---	56.68	55.22	56.45	56.12	55.55
15	53.24	49.64	49.90	48.90	52.69	54.94	---	56.55	55.87	56.25	56.18	55.54
16	52.53	50.66	50.01	47.80	52.93	55.46	---	56.26	55.72	55.50	56.34	55.15
17	51.22	51.38	49.32	47.73	53.24	55.93	---	56.26	55.68	55.64	56.10	54.78
18	52.13	51.62	48.39	48.56	53.38	55.14	---	56.04	55.43	55.90	56.21	55.19
19	52.63	51.45	47.64	48.92	53.17	54.95	---	56.48	55.83	55.75	56.04	55.19
20	52.98	50.88	47.80	49.01	52.77	55.13	---	56.45	55.78	55.97	55.43	55.21
21	52.86	49.55	48.06	49.62	52.91	55.19	---	56.24	55.58	56.01	55.23	55.59
22	52.79	49.82	48.48	49.48	53.07	55.38	---	56.39	55.76	55.55	55.49	55.60
23	52.41	50.64	48.78	47.90	53.19	55.60	---	56.62	55.82	55.17	55.68	55.14
24	51.51	51.13	48.00	48.52	53.53	55.47	---	56.62	55.59	55.37	55.87	54.67
25	51.64	51.06	46.69	50.22	53.84	55.33	---	56.75	55.15	55.56	56.03	54.60
26	52.38	50.91	46.29	51.02	53.41	54.78	---	56.73	55.29	55.63	55.78	54.38
27	52.73	50.36	46.72	51.49	53.50	---	---	56.32	55.47	55.78	55.57	53.89
28	52.70	49.61	47.65	51.32	53.79	---	---	56.13	55.47	55.79	55.67	53.50
29	52.77	50.34	47.88	50.67	53.95	---	---	55.94	55.64	55.56	55.83	52.98
30	51.78	51.38	47.93	49.61	---	---	---	55.95	55.66	55.22	56.50	52.40
31	50.35	---	47.98	50.10	---	---	---	56.28	---	55.46	56.17	---
MEAN	52.70	50.91	48.86	48.97	52.61	---	---	---	55.63	55.67	55.93	55.11
MAX	54.18	52.39	51.99	51.49	53.95	---	---	---	55.99	56.45	56.91	55.97
MIN	50.35	49.42	46.29	47.29	51.01	---	---	---	55.15	55.17	55.23	52.40

06442996 LAKE FRANCIS CASE (AMERICAN CREEK BAY) AT CHAMBERLAIN, SD--Continued



06445685 WHITE RIVER NEAR NEBRASKA-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 43°00'47", long 102°50'07", in NE¼ SW¼ NE¼ sec.15, T.35 N., R.47 W., Shannon County, Hydrologic Unit 10140201, on left bank 1.0 mi north of Nebraska-South Dakota State line, and 4.3 mi south of Slim Butte.

DRAINAGE AREA.--1,440 mi^2, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,030 ft above sea level, from topographic map.

REMARKS.--Records good except those for May 28 to June 15 and July 15 to Aug. 9, which are fair, and those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	17	20	e32	245	58	1270	71	25	15	6.9
2	11	12	17	e18	e33	183	56	973	71	24	13	6.8
3	11	13	17	e16	e35	152	54	699	73	22	9.8	6.7
4	12	14	e15	e15	e35	93	54	239	69	21	8.8	11
5	13	14	e14	e14	e36	85	53	154	66	21	9.9	13
6	13	15	e14	e13	e38	73	52	128	66	20	8.5	14
7	14	15	e14	e14	e40	66	52	118	64	20	9.0	10
8	13	15	e14	e16	e50	238	50	198	61	21	8.9	9.2
9	12	15	e13	e18	e60	286	50	140	58	21	8.9	9.2
10	11	15	e13	e20	e70	213	51	133	53	19	10	7.0
11	9.7	15	e13	e20	e65	203	51	113	51	17	7.9	8.6
12	9.8	16	e14	e19	e60	197	50	100	52	18	7.3	8.3
13	11	17	e14	e19	e55	206	49	96	50	23	8.0	7.0
14	11	24	e13	e20	e50	179	42	89	51	73	7.5	5.6
15	11	27	e13	e25	e50	157	37	82	49	42	7.0	4.6
16	11	18	e13	e35	e50	137	35	77	44	33	6.8	4.7
17	12	16	e13	e30	e50	111	35	88	41	31	7.7	4.9
18	11	17	e15	e32	e52	98	36	590	40	29	15	6.4
19	11	18	e12	e36	e55	90	199	528	39	26	12	6.4
20	9.4	17	e10	e33	e58	88	699	423	38	25	13	5.9
21	9.4	17	e11	e30	e60	97	1290	303	34	26	13	5.1
22	14	18	e12	e28	e80	180	1300	175	31	25	14	5.2
23	14	18	e13	e30	e180	162	1140	134	31	23	15	6.4
24	13	e15	e15	e30	e250	132	1050	112	32	23	13	6.0
25	13	e15	e18	e30	e200	161	793	98	29	23	11	6.4
26	13	e16	e20	e30	168	134	355	91	27	22	12	7.7
27	14	e17	21	e28	132	100	198	84	26	25	11	16
28	13	19	21	e29	142	82	143	81	26	37	9.1	18
29	13	19	21	e30	203	72	118	76	27	19	7.9	16
30	13	19	22	e31	---	65	940	72	26	15	7.4	11
31	13	---	23	e32	---	61	---	71	---	15	7.3	---
TOTAL	369.3	499	475	761	2389	4346	9090	7535	1396	784	314.7	254.0
MEAN	11.9	16.6	15.3	24.5	82.4	140	303	243	46.5	25.3	10.2	8.47
MAX	14	27	23	36	250	286	1300	1270	73	73	15	18
MIN	9.4	12	10	13	32	61	35	71	26	15	6.8	4.6
AC-FT	733	990	942	1510	4740	8620	18030	14950	2770	1560	624	504

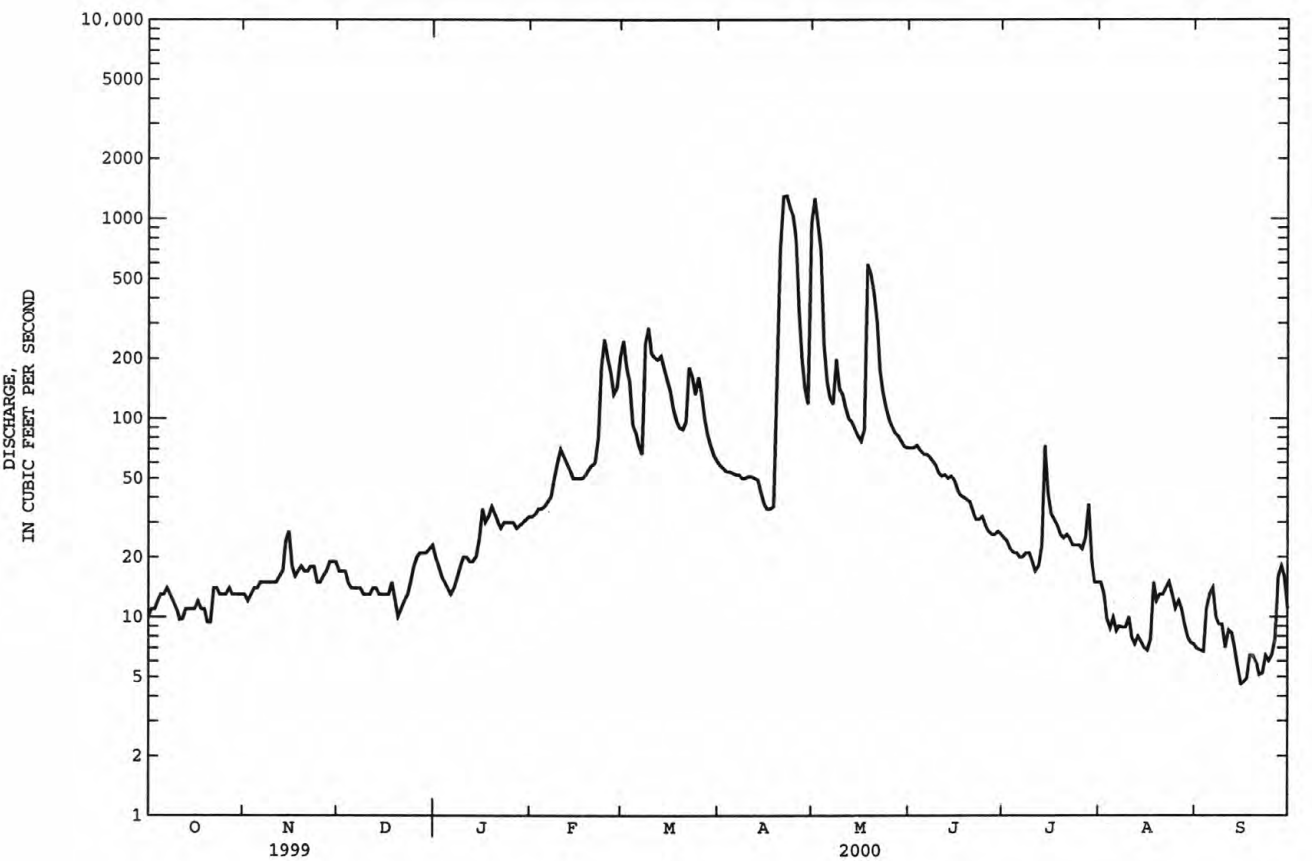
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

MEAN	12.0	15.5	18.9	29.5	63.2	78.8	80.4	121	110	29.6	14.7	12.4
MAX	29.4	45.1	54.9	96.1	186	297	303	514	360	72.0	42.9	33.8
(WY)	1994	1994	1994	1998	1997	1993	2000	1991	1997	1997	1997	1999
MIN	2.07	3.31	3.35	1.53	1.82	5.02	23.1	19.5	11.6	.98	1.61	2.08
(WY)	1991	1991	1991	1991	1991	1991	1992	1992	1989	1989	1989	1994

06445685 WHITE RIVER NEAR NEBRASKA-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988 - 2000	
ANNUAL TOTAL	16282.7		28213.0			
ANNUAL MEAN	44.6		77.1		48.7a	
HIGHEST ANNUAL MEAN					92.9	1997
LOWEST ANNUAL MEAN					14.2	1989
HIGHEST DAILY MEAN	442	Jun 6	1300	Apr 22	1910	May 12 1991
LOWEST DAILY MEAN	7.5	Sep 29	4.6	Sep 15	.00	Jul 13 1989b
ANNUAL SEVEN-DAY MINIMUM	8.8	Sep 26	5.4	Sep 15	.00	Aug 3 1989
INSTANTANEOUS PEAK FLOW			1500	Apr 22	3820	May 12 1991
INSTANTANEOUS PEAK STAGE			14.24	Apr 22	19.07	May 12 1991
ANNUAL RUNOFF (AC-FT)	32300		55960		35290	
10 PERCENT EXCEEDS	92		161		97	
50 PERCENT EXCEEDS	29		24		19	
90 PERCENT EXCEEDS	12		9.2		4.0	

a Median of annual mean discharges, 45 ft^3/s.
b No flow at times in most years.
e Estimated.



06446000 WHITE RIVER NEAR OGLALA, SD

LOCATION.--Lat 43°15'17", long 102°49'29", in SW¼ NE¼ sec.24, T.38 N., R.47 W., Shannon County, Hydrologic Unit 10140201, on right bank at downstream side of bridge, 3.0 mi downstream from Blacktail Creek, and 7.0 mi northwest of Oglala.

DRAINAGE AREA.--2,200 mi^2, approximately.

PERIOD OF RECORD.--May 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,853.54 ft above sea level. Prior to May 6, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some diversions for irrigation upstream from station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	30	e32	e36	e380	e90	2100	125	37	16	7.1
2	13	19	30	e30	e40	e450	e82	1620	121	37	15	7.1
3	15	18	29	e28	e40	e400	e77	1250	117	35	14	7.1
4	16	19	28	e27	e39	e350	e74	933	115	33	13	5.7
5	16	19	e25	e25	e38	e290	e71	405	108	32	13	5.1
6	17	20	e24	e27	e40	e250	73	280	101	30	12	5.7
7	18	20	e23	e28	e45	e200	70	247	97	29	12	11
8	19	21	e22	e24	e60	e300	66	234	92	28	15	12
9	19	22	e20	e26	e80	e400	65	299	87	29	12	10
10	20	23	e21	e30	e100	e450	63	260	82	29	11	7.7
11	19	22	e21	e34	e120	e300	64	230	76	30	14	6.4
12	17	22	e22	e32	e145	e270	63	209	71	28	11	7.0
13	17	22	24	e30	e140	e250	62	177	68	25	9.7	5.5
14	16	23	26	e33	e125	e240	61	162	68	26	7.5	5.2
15	16	24	29	e35	e115	e230	54	151	65	52	7.0	6.3
16	16	31	27	e38	e100	e220	50	140	65	68	7.8	4.9
17	15	34	30	e42	e95	e200	46	137	60	42	7.1	3.3
18	15	29	29	e42	e90	e180	45	190	59	35	6.4	2.4
19	15	28	29	e50	e96	e170	80	994	58	34	6.2	1.9
20	16	30	e27	e55	e100	e160	343	766	57	33	12	1.9
21	17	34	e25	e56	e120	e165	1200	575	54	30	12	2.0
22	16	35	e25	e70	e140	e220	2030	450	48	30	12	3.9
23	14	34	e25	e60	e200	e260	2140	300	44	30	13	3.5
24	14	e30	e25	e40	e340	e220	2010	241	43	29	13	2.8
25	19	e27	e27	e38	e400	e230	1640	207	42	28	13	2.2
26	19	e28	e29	e35	e350	e200	1150	182	44	28	12	1.8
27	18	30	e30	e34	e300	e160	530	167	40	27	11	2.5
28	18	31	e32	e32	e270	e130	317	153	38	26	11	2.0
29	18	31	e35	e31	e290	e115	245	144	37	36	11	12
30	18	30	e36	e31	---	e104	1100	136	37	29	9.0	17
31	18	---	e34	e30	---	e100	---	129	---	21	8.9	---
TOTAL	517	775	839	1125	4054	7594	13961	13468	2119	1006	347.6	173.0
MEAN	16.7	25.8	27.1	36.3	140	245	465	434	70.6	32.5	11.2	5.77
MAX	20	35	36	70	400	450	2140	2100	125	68	16	17
MIN	13	18	20	24	36	100	45	129	37	21	6.2	1.8
AC-FT	1030	1540	1660	2230	8040	15060	27690	26710	4200	2000	689	343

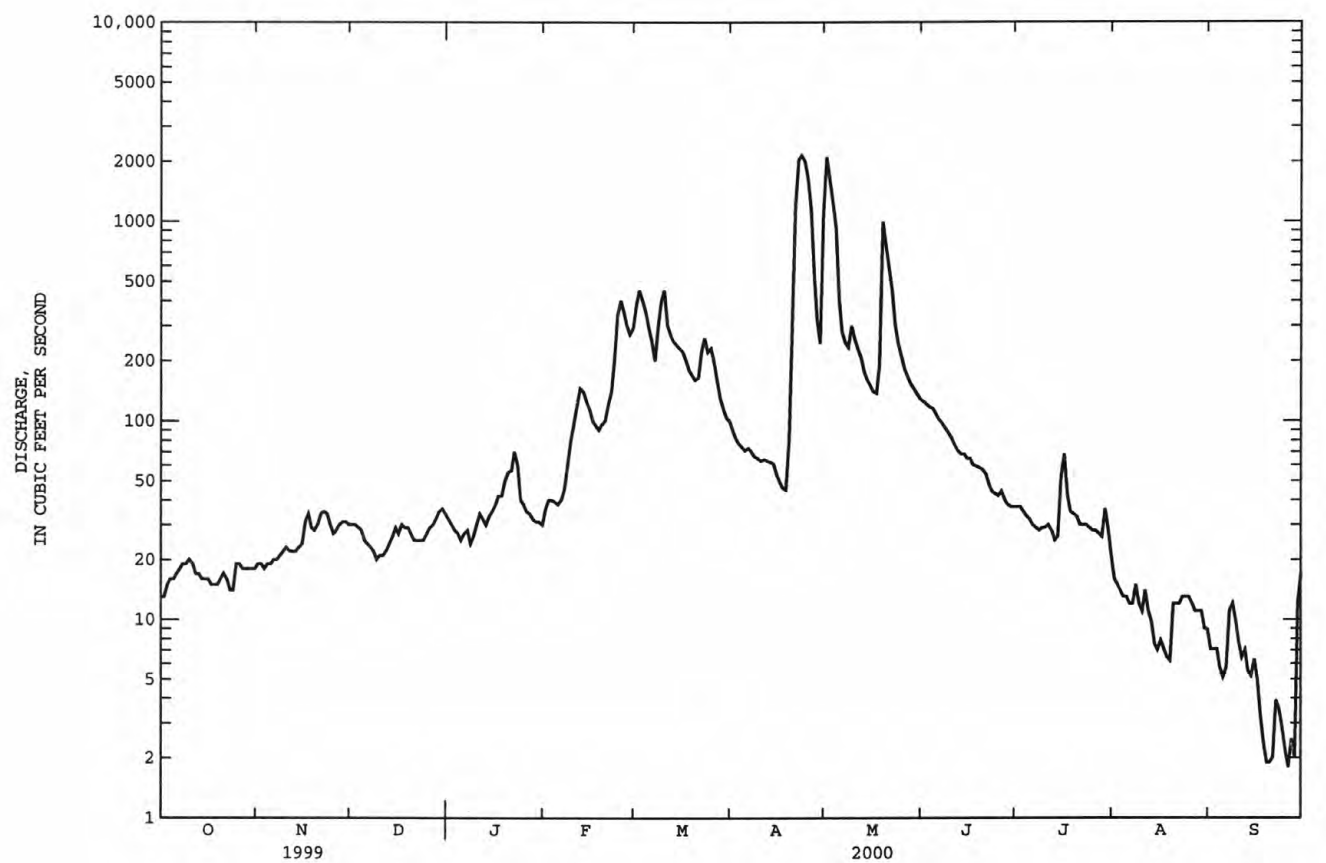
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2000, BY WATER YEAR (WY)

MEAN	16.0	18.7	16.4	17.1	42.9	111	83.3	113	157	55.6	26.8	21.1
MAX	63.1	55.8	55.7	97.0	281	807	465	583	1037	314	130	181
(WY)	1968	1987	1947	1997	1997	1949	2000	1957	1967	1969	1979	1955
MIN	.000	.76	1.83	.64	1.21	13.5	12.3	13.4	4.88	.002	1.17	.000
(WY)	1965	1977	1965	1991	1991	1991	1962	1985	1981	1985	1964	1964

06446000 WHITE RIVER NEAR OGLALA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1944 - 2000	
ANNUAL TOTAL	24946.9		45978.6			
ANNUAL MEAN	68.3		126		56.6a	
HIGHEST ANNUAL MEAN					152	1997
LOWEST ANNUAL MEAN					13.0	1985
HIGHEST DAILY MEAN	1310	Jun 15	2140	Apr 23	3870	Jun 23 1947
LOWEST DAILY MEAN	9.9	Aug 24	1.8	Sep 26	.00	Sep 25 1952b
ANNUAL SEVEN-DAY MINIMUM	11	Aug 21	2.6	Sep 20	.00	Sep 25 1952
INSTANTANEOUS PEAK FLOW			2230	Apr 23	5200	Jun 21 1947c
INSTANTANEOUS PEAK STAGE			20.32	Apr 23	23.61	Jun 16 1967
ANNUAL RUNOFF (AC-FT)	49480		91200		40970	
10 PERCENT EXCEEDS	123		273		103	
50 PERCENT EXCEEDS	39		33		22	
90 PERCENT EXCEEDS	16		11		4.1	

a Median of annual mean discharges, 50 ft^3/s.
b No flow at times in some years.
c Rating curve extended above 2,800 ft^3/s on basis of velocity-area studies, gage height, 23.50 ft.
e Estimated.



06446700 BEAR IN THE LODGE CREEK NEAR WANBLEE, SD

Location.--Lat 43°32'05", long 101°47'30", in NE¼ SW¼ SW¼ sec.12, T.41 N., R.38 W., Jackson County, Hydrologic Unit 10140202, on right bank at downstream side of bridge on State Highway 44, 0.9 mi south of Garner School, 8.2 mi southwest of Wanblee, and 25.3 mi upstream from mouth.

DRAINAGE AREA.--365 mi^2, approximately.

PERIOD OF RECORD.--June 1992 to May 1993 and May 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,500 ft above sea level, from topographic map. In 1951 and 1954-57, operated as nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

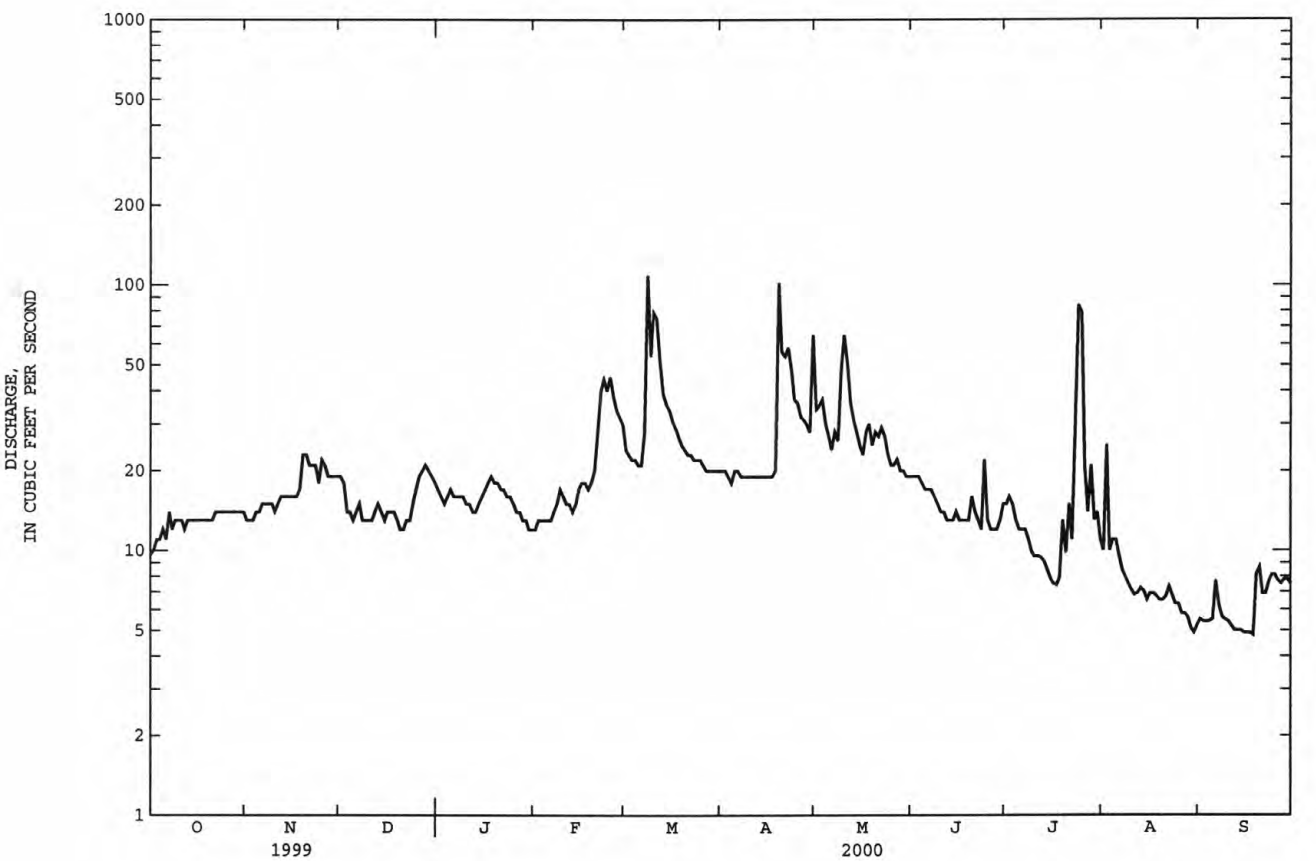
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	13	19	e17	e12	24	20	34	19	15	10	5.5
2	10	13	18	e16	e13	23	20	35	e19	16	25	5.4
3	11	13	14	e15	e13	22	19	37	19	15	10	e5.4
4	11	14	e14	e16	e13	22	18	30	18	13	11	e5.4
5	12	14	e13	e17	e13	21	20	27	17	12	11	e5.5
6	11	15	e14	e16	e13	21	20	24	17	e12	9.5	e7.7
7	14	15	e15	e16	e14	28	19	28	17	12	8.5	e6.2
8	12	15	e13	e16	e15	109	19	26	16	11	8.0	e5.6
9	13	15	e13	e16	e17	54	19	48	15	9.9	7.5	e5.5
10	13	14	e13	e15	e16	79	19	65	14	e9.5	7.1	e5.4
11	13	15	e13	e15	e15	75	19	51	14	9.5	6.8	e5.2
12	12	16	e14	e14	e15	52	19	36	e13	9.4	6.9	e5.0
13	13	16	e15	e14	e14	39	19	31	e13	9.1	7.2	e5.0
14	13	16	e14	e15	e15	36	19	28	e13	8.5	7.0	e5.0
15	13	16	e13	e16	e17	34	19	25	14	7.9	6.5	e4.9
16	13	16	e14	e17	e18	31	19	23	13	7.5	6.9	e4.9
17	13	16	e14	e18	e18	29	19	28	13	7.4	6.9	e4.9
18	13	17	e14	e19	e17	27	20	30	13	7.9	6.7	e4.8
19	13	23	e13	e18	e18	25	102	25	13	13	6.5	8.1
20	13	23	e12	e18	e20	24	56	28	e16	9.8	6.5	8.6
21	13	21	e12	e17	e29	23	54	27	14	15	6.7	6.9
22	14	e21	e13	e17	e40	23	58	29	13	11	7.3	6.9
23	14	e21	e13	e16	e44	22	48	27	12	24	6.8	7.6
24	14	18	e15	e16	e40	22	37	23	22	84	6.3	8.1
25	14	22	e17	e15	e45	22	36	21	13	79	6.3	8.1
26	14	21	e19	e14	e38	21	32	21	12	21	5.8	7.7
27	14	19	e20	e14	34	20	31	22	12	14	5.8	7.5
28	14	19	e21	e13	32	20	30	20	12	21	5.6	7.8
29	14	19	e20	e13	30	20	28	20	13	13	5.1	7.8
30	14	19	e19	e12	---	20	65	19	e15	14	4.9	7.5
31	14	---	e18	e12	---	20	---	19	---	11	5.2	---
TOTAL	398.6	515	469	483	638	1008	923	907	444	522.4	241.3	189.9
MEAN	12.9	17.2	15.1	15.6	22.0	32.5	30.8	29.3	14.8	16.9	7.78	6.33
MAX	14	23	21	19	45	109	102	65	22	84	25	8.6
MIN	9.6	13	12	12	12	20	18	19	12	7.4	4.9	4.8
AC-FT	791	1020	930	958	1270	2000	1830	1800	881	1040	479	377
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)												
MEAN	14.6	17.0	14.5	17.6	50.9	36.3	36.5	44.1	81.2	43.1	14.2	10.4
MAX	21.1	30.4	20.5	29.8	156	58.2	59.2	74.6	306	153	27.7	13.5
(WY)	1999	1999	1999	1997	1997	1997	1997	1997	1997	1997	1997	1999
MIN	8.82	9.26	11.1	6.98	22.0	14.1	30.1	25.5	14.8	16.9	6.35	6.33
(WY)	1995	1995	1996	1996	2000	1995	1998	1998	2000	2000	1996	2000

06446700 BEAR IN THE LODGE CREEK NEAR WANBLEE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	8918.9		6739.2			
ANNUAL MEAN	24.4		18.4		31.5	
HIGHEST ANNUAL MEAN					75.2	1997
LOWEST ANNUAL MEAN					18.4	2000
HIGHEST DAILY MEAN	295	Jun 5	109	Mar 8	900	Jun 3 1997
LOWEST DAILY MEAN	6.8	Aug 28	4.8	Sep 18	2.9	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	7.3	Aug 22	4.9	Sep 12	4.4	Aug 26 1996
INSTANTANEOUS PEAK FLOW			184	Apr 19	1100	Jun 3 1997
INSTANTANEOUS PEAK STAGE			3.67	Apr 19	9.11	Jun 3 1997a
ANNUAL RUNOFF (AC-FT)	17690		13370		22830	
10 PERCENT EXCEEDS	37		30		54	
50 PERCENT EXCEEDS	22		15		19	
90 PERCENT EXCEEDS	9.7		6.9		8.0	

a From floodmark.
e Estimated.



06447000 WHITE RIVER NEAR KADOKA, SD

LOCATION.--Lat 43°45'09", long 101°31'28", in SE¼ SE¼ sec.30, T.3 S., R.22 E., Black Hills meridian, Jackson County, Hydrologic Unit 10140202, on left bank 1,000 ft downstream from bridge on State Highway 73, 5.0 mi upstream from Pass Creek, 5.5 mi downstream from Cottonwood Creek, and 5.8 mi south of Kadoka.

DRAINAGE AREA.--5,000 mi^2, approximately.

PERIOD OF RECORD.--July 1942 to current year.

REVISED RECORDS.--WSP 1279: 1944(M), 1948.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,122.18 ft above sea level. Prior to June 14, 1949, nonrecording gage, and June 14, 1949, to Mar. 8, 1955, water-stage recorder at site 0.3 mi downstream at same datum. Mar. 9, 1955, to May 17, 1957, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section. National Weather Service telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 4, 1942, reached a stage of 16.24 ft, from floodmarks (discharge, about 32,000 ft^3/s, from rating curve extended above 16,000 ft^3/s). Floods of Mar. 8, 1905, and in spring of 1927 were 1 or 2 ft higher than flood of June 4, 1942, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	59	89	e80	e45	374	225	4400	255	291	109	9.5
2	45	57	88	e70	e46	309	207	2640	232	203	106	12
3	47	55	84	e65	e48	270	198	1910	223	132	334	9.2
4	48	58	81	e60	e49	249	187	1920	211	94	218	9.7
5	49	63	71	e65	e50	267	174	1470	206	82	205	10
6	49	65	56	e70	e50	288	165	1250	208	66	185	13
7	51	64	53	e68	e55	319	161	1020	200	62	282	11
8	55	65	61	e66	e60	1450	162	796	186	60	211	7.4
9	64	64	e40	e70	e65	1480	157	765	188	59	100	8.4
10	64	64	e50	e69	e60	1130	153	824	157	61	58	5.2
11	68	63	e55	e66	e57	950	149	541	150	107	38	3.5
12	61	65	e60	e63	e53	1140	146	453	158	104	28	2.9
13	58	68	e70	e60	e50	1110	147	412	142	74	23	2.7
14	56	68	e90	e65	e50	683	143	339	129	59	18	3.8
15	56	68	e100	e70	e50	551	142	308	143	86	13	3.5
16	62	69	e100	e68	e50	449	149	271	127	71	12	2.6
17	63	69	e95	e66	e52	414	153	246	136	71	15	3.1
18	64	78	e90	e63	e54	382	151	284	127	82	13	4.8
19	64	142	e80	e61	e56	346	785	431	121	139	11	4.7
20	63	322	e60	e60	e58	311	2940	625	127	138	11	4.3
21	63	272	e60	e58	e60	291	5200	315	140	181	9.5	4.7
22	63	175	e65	e55	e70	274	6880	826	204	171	7.8	4.8
23	62	123	e70	e53	e100	280	5830	689	150	192	7.3	5.5
24	62	100	e80	e51	e400	288	5150	594	497	211	7.2	6.4
25	64	88	e100	e50	275	254	5040	505	577	148	6.2	8.0
26	64	85	e120	e50	248	247	3570	391	288	160	5.4	9.5
27	63	98	e130	e50	223	309	2260	406	188	92	5.2	11
28	63	102	e125	e49	415	276	1620	386	206	472	4.5	11
29	60	95	e110	e48	516	257	1150	589	143	271	5.5	15
30	62	94	e100	e46	---	272	1930	345	136	237	5.4	15
31	64	---	e90	e45	---	252	---	280	---	165	7.0	---
TOTAL	1824	2858	2523	1880	3365	15472	45324	26231	5955	4341	2061.0	222.2
MEAN	58.8	95.3	81.4	60.6	116	499	1511	846	198	140	66.5	7.41
MAX	68	322	130	80	516	1480	6880	4400	577	472	334	15
MIN	45	55	40	45	45	247	142	246	121	59	4.5	2.6
AC-FT	3620	5670	5000	3730	6670	30690	89900	52030	11810	8610	4090	441

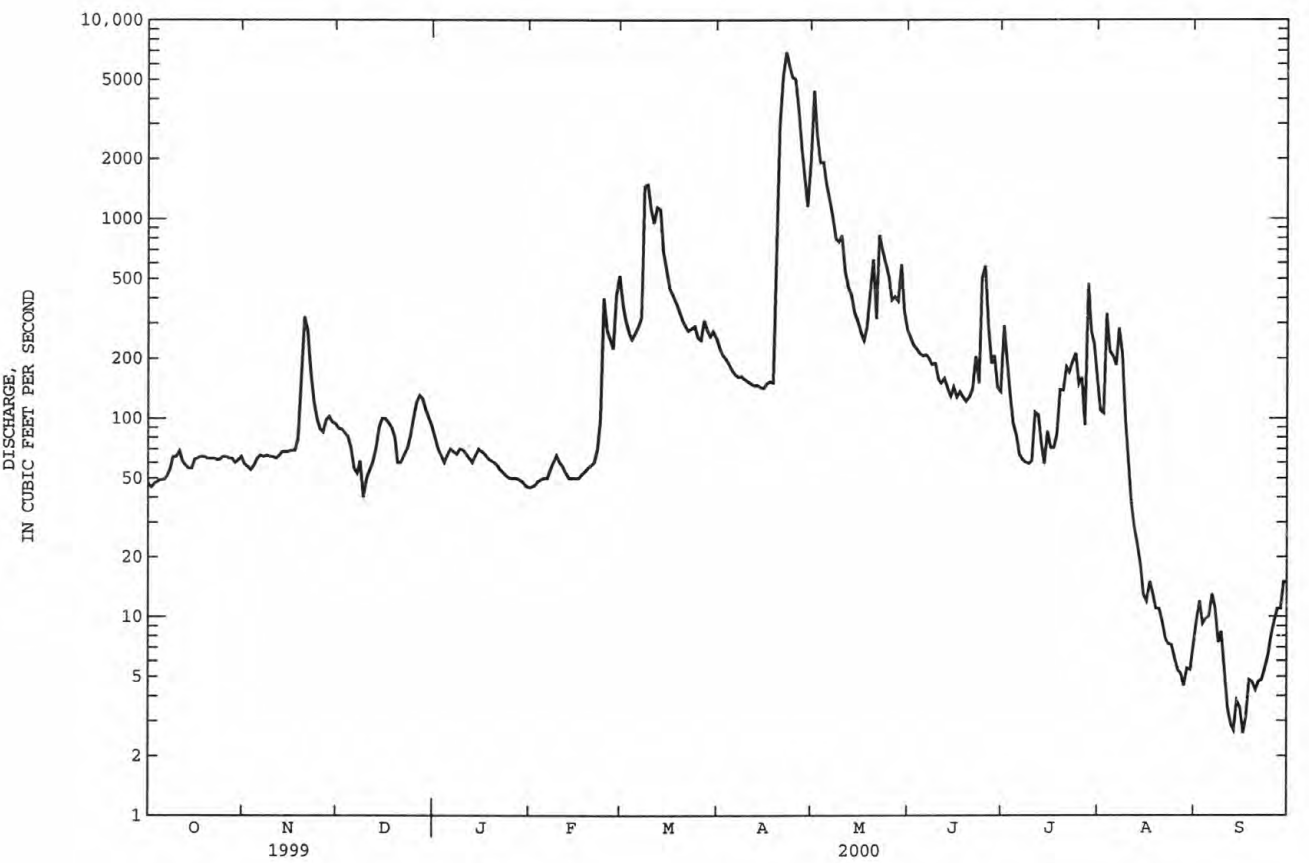
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2000, BY WATER YEAR (WY)

MEAN	110	66.0	39.6	39.5	170	553	416	614	739	294	180	118
MAX	820	425	283	380	945	2479	1555	2802	3984	986	873	1060
(WY)	1999	1999	1994	1997	1997	1944	1970	1982	1967	1969	1997	1955
MIN	.000	1.74	.000	.000	.000	33.8	22.8	23.2	7.29	23.3	2.60	.17
(WY)	1965	1977	1977	1977	1979	1981	1981	1985	1989	1980	1989	1975

06447000 WHITE RIVER NEAR KADOKA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1943 - 2000	
ANNUAL TOTAL	132156		112056.2			
ANNUAL MEAN	362		306		278	
HIGHEST ANNUAL MEAN					612	1997
LOWEST ANNUAL MEAN					90.0	1961
HIGHEST DAILY MEAN	8300	Jun 6	6880	Apr 22	16500	Jun 18 1962
LOWEST DAILY MEAN	36	Aug 28	2.6	Sep 16	.00	Oct 11 1943a
ANNUAL SEVEN-DAY MINIMUM	44	Jan 3	3.2	Sep 11	.00	Aug 3 1946
INSTANTANEOUS PEAK FLOW			9510	Apr 22	21700	Jun 7 1951b
INSTANTANEOUS PEAK STAGE			10.67	Apr 22	16.18	May 20 1982
ANNUAL RUNOFF (AC-FT)	262100		222300		201700	
10 PERCENT EXCEEDS	665		544		620	
50 PERCENT EXCEEDS	125		86		64	
90 PERCENT EXCEEDS	50		11		4.0	

a No flow for many days in most years.
b Gage height, 13.83 ft, site then in use, from rating table extended above 16,000 ft^3/s.
e Estimated.



06447230 BLACK PIPE CREEK NEAR BELVIDERE, SD

LOCATION.--Lat 43°45'28", long 101°13'40", in NW¼ NW¼ sec.27, T.44 N., R.33 W., Black Hills meridian, Jackson County, Hydrologic Unit 10140202, on left bank at downstream side of State Highway 63 bridge, 0.9 mi upstream from Porcupine Creek, 3.7 mi upstream from mouth, and 5.6 mi southeast of Belvidere.

DRAINAGE AREA.--250 mi^2, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,060 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.4	11	e8.6	e8.5	17	14	21	10	5.8	1.9	.00
2	5.1	8.6	e10	e8.0	e9.0	15	14	13	10	5.1	1.1	.00
3	4.6	8.5	e8.0	e7.4	e11	15	15	13	11	7.4	.86	.00
4	5.1	7.7	e6.5	e7.0	e10	14	15	11	11	29	.72	.00
5	6.2	7.9	e5.2	e7.7	e9.5	12	15	9.9	10	18	23	.00
6	6.4	7.9	e4.0	e8.5	e9.0	9.4	15	9.0	9.1	8.5	2.3	.00
7	6.9	8.6	e4.0	e8.7	e8.5	13	16	29	8.2	5.0	.94	.00
8	7.2	8.8	e4.1	e8.9	e8.0	347	15	29	8.0	3.9	.61	.00
9	7.2	9.3	e4.0	e9.0	e8.0	90	15	13	6.6	3.7	.44	.00
10	7.8	9.3	e4.0	e8.7	e7.2	62	15	19	6.4	3.4	.25	.00
11	8.2	9.4	e4.0	e8.4	e6.6	48	15	23	6.9	3.1	.10	.00
12	8.3	9.9	e4.5	e8.0	e6.0	50	14	15	5.8	2.8	.01	.00
13	7.8	9.7	e5.0	e8.4	e5.4	29	14	13	4.9	2.4	.01	.00
14	7.4	8.7	e4.5	e9.0	e5.0	24	14	13	11	2.6	.00	.00
15	6.7	8.5	e4.0	e8.8	e5.1	23	14	13	9.1	2.9	.00	.00
16	6.4	10	e4.3	e8.7	e5.2	21	20	12	6.0	2.2	.00	.00
17	6.5	11	e4.0	e8.5	e5.4	18	16	27	5.6	2.3	.00	.00
18	6.6	14	e5.2	e8.3	e5.5	17	17	50	4.9	2.6	.00	.00
19	6.9	17	e4.0	e8.1	e5.7	16	486	29	4.7	2.1	.00	.00
20	6.8	14	e3.0	e8.0	e5.8	15	124	31	4.5	2.8	.00	.00
21	6.9	21	e3.5	e8.0	e6.0	15	58	30	3.9	2.9	3.0	.00
22	7.5	15	e3.9	e8.0	e7.6	15	48	20	3.6	9.9	1.0	.00
23	7.4	e13	e4.5	e8.0	e10	15	37	15	3.3	1.8	.53	.00
24	7.7	e14	e5.2	e8.0	e40	15	46	13	14	1.7	.21	.00
25	7.6	15	e7.0	e8.0	e32	15	352	12	16	1.4	.02	.00
26	8.0	14	e8.0	e8.0	e25	15	63	12	5.8	1.4	.01	.00
27	8.7	13	e10	e8.5	20	14	34	12	6.6	1.1	.01	.00
28	8.2	12	e12	e9.0	19	14	23	11	9.1	9.2	.00	.00
29	7.8	12	e11	e8.8	16	14	15	11	7.0	2.3	.00	.00
30	7.3	12	e10	e8.6	---	14	56	12	5.5	1.2	.00	.00
31	7.4	---	e9.2	e8.5	---	14	---	12	---	1.5	.00	---
TOTAL	218.3	337.2	187.6	258.1	320.0	1015.4	1615	552.9	228.5	150.0	37.02	0.00
MEAN	7.04	11.2	6.05	8.33	11.0	32.8	53.8	17.8	7.62	4.84	1.19	.000
MAX	8.7	21	12	9.0	40	347	486	50	16	29	23	.00
MIN	4.6	7.4	3.0	7.0	5.0	9.4	14	9.0	3.3	1.1	.00	.00
AC-FT	433	669	372	512	635	2010	3200	1100	453	298	73	.00

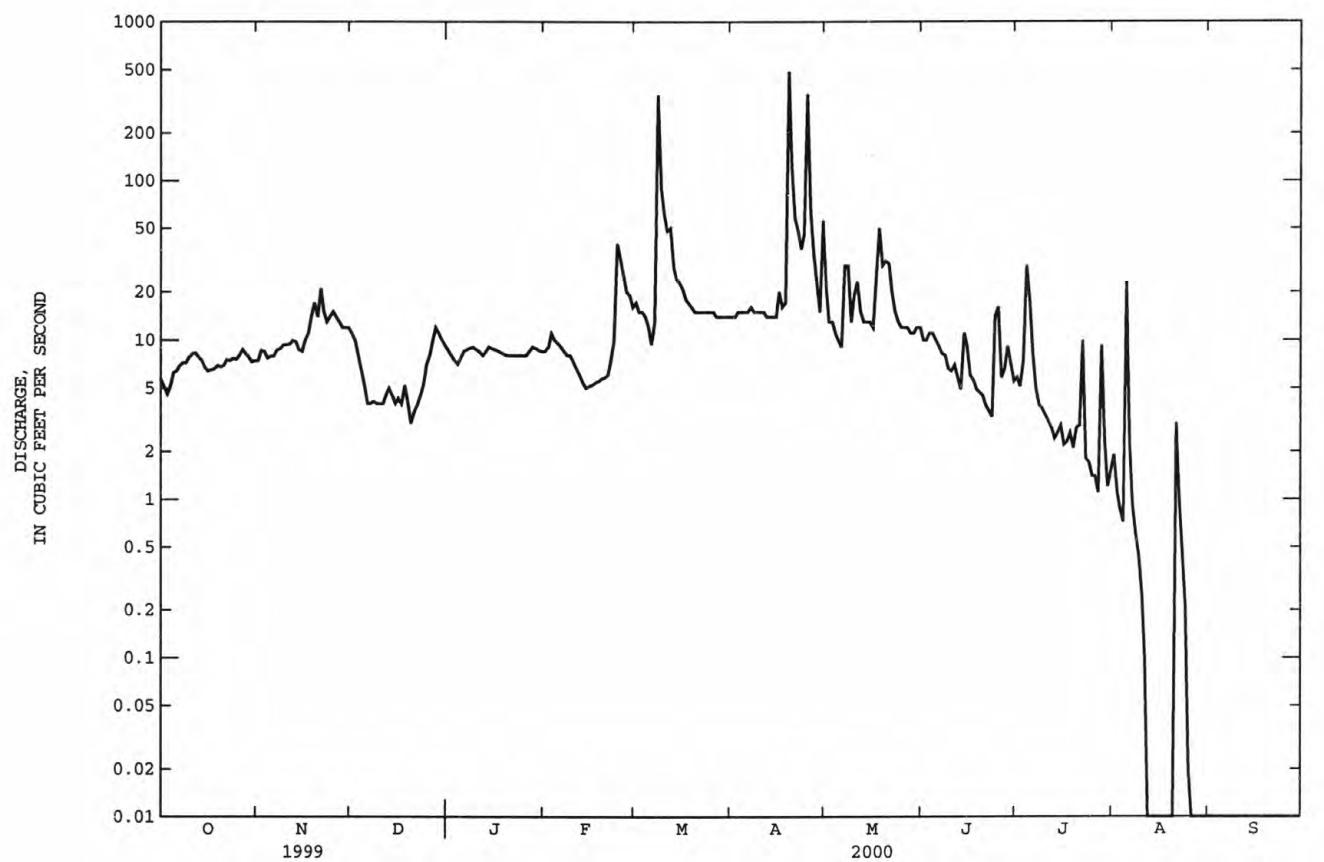
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

MEAN	16.8	9.40	8.03	24.2	55.0	50.4	63.9	87.5	104	36.6	11.5	13.1
MAX	54.1	27.9	27.2	154	218	116	166	197	346	121	29.5	52.7
(WY)	1999	1999	1998	1997	1997	1998	1995	1995	1997	1998	1997	1999
MIN	.000	1.13	.000	.085	.93	14.5	10.2	17.8	7.62	.68	1.19	.000
(WY)	1993	1994	1993	1994	1993	1993	1994	2000	2000	1995	2000	2000

06447230 BLACK PIPE CREEK NEAR BELVIDERE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	10405.9		4920.02			
ANNUAL MEAN	28.5		13.4		39.8	
HIGHEST ANNUAL MEAN					97.2	1997
LOWEST ANNUAL MEAN					13.4	2000
HIGHEST DAILY MEAN	843	May 14	486	Apr 19	3490	Jun 3 1997
LOWEST DAILY MEAN	1.1	Aug 27	.00	Aug 14a	.00	Oct 1 1992a
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 22	.00	Aug 14	.00	Oct 1 1992
INSTANTANEOUS PEAK FLOW			1000	Apr 19	3580	Jun 3 1997b
INSTANTANEOUS PEAK STAGE			6.46	Apr 19	15.70	Feb 17 1997c
ANNUAL RUNOFF (AC-FT)	20640		9760		28840	
10 PERCENT EXCEEDS	43		20		87	
50 PERCENT EXCEEDS	10		8.0		8.8	
90 PERCENT EXCEEDS	4.4		.00		.00	

a No flow at times in most years.
b Gage height, 10.93 ft.
c Backwater from ice.
e Estimated.



06447500 LITTLE WHITE RIVER NEAR MARTIN, SD

LOCATION.--Lat 43°10'00", long 101°37'47", in NW¼ SW¼ NW¼ sec.19, T.37 N., R.36 W., Bennett County, Hydrologic Unit 10140203, on right bank 110 ft downstream from highway culvert and 5.4 mi east of Martin.

DRAINAGE AREA.--310 mi^2, approximately, of which about 230 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--February 1938 to September 1940, July 1962 to current year. Prior to October 1965, published as South Fork White River near Martin.

GAGE.--Water-stage recorder. Elevation of gage is 3,045 ft above sea level, by barometer. Prior to Aug. 14, 1938, nonrecording gage at same site and datum. Prior to June 17, 1997, gage 40 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 5, 1932, reached a stage of 13.3 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	20	25	35	e14	62	36	77	32	20	10	9.1
2	14	20	25	e30	e15	70	36	84	31	18	11	9.5
3	14	20	25	e25	e15	74	35	109	30	16	11	9.6
4	15	20	e23	e20	e16	70	34	134	28	14	10	9.3
5	15	20	e22	e18	e16	57	35	90	26	14	9.9	9.0
6	15	21	e21	e19	e17	52	34	60	24	13	9.6	9.4
7	15	21	e20	e20	e17	54	32	56	22	13	9.5	9.2
8	15	21	e20	e20	e18	71	31	62	21	13	9.4	9.0
9	16	29	e20	e20	e18	129	30	65	19	12	9.3	8.7
10	16	22	e20	e20	e19	121	30	72	18	13	9.2	8.5
11	17	20	e21	e19	e19	139	29	90	17	13	9.0	8.3
12	16	19	e21	e18	e18	165	27	82	17	13	8.8	8.5
13	16	21	e21	e18	e18	119	27	59	17	13	8.5	8.8
14	16	21	e20	e19	e17	96	27	50	16	12	8.6	8.9
15	16	21	e20	e19	e18	92	26	45	17	12	8.7	9.1
16	16	21	e20	e20	e18	84	26	41	17	11	8.6	9.2
17	16	21	e20	e20	e19	76	27	38	17	11	9.2	9.4
18	16	22	e19	e20	e18	71	29	47	16	11	9.5	9.0
19	17	23	e18	e20	e17	67	37	102	16	11	9.4	9.3
20	19	24	e17	e19	e17	62	51	103	16	12	9.4	9.4
21	20	25	e16	e18	e20	58	73	105	15	23	9.2	9.7
22	20	29	e17	e18	e25	53	90	94	15	22	8.9	10
23	19	28	e18	e17	e30	50	95	65	15	13	9.0	10
24	20	e25	e19	e17	e40	48	104	50	15	12	9.2	11
25	20	e24	e20	e16	e55	45	109	45	15	12	9.1	11
26	20	27	e21	e16	e65	43	105	44	15	11	8.7	11
27	20	26	23	e16	e60	40	86	42	15	11	8.6	11
28	19	26	24	e15	51	38	79	41	16	11	8.4	11
29	19	26	30	e15	54	37	70	38	18	10	8.3	12
30	19	25	40	e15	---	36	64	36	22	10	8.4	11
31	20	---	38	e14	---	36	---	33	---	10	8.7	---
TOTAL	530	688	684	596	744	2215	1514	2059	578	410	285.1	288.9
MEAN	17.1	22.9	22.1	19.2	25.7	71.5	50.5	66.4	19.3	13.2	9.20	9.63
MAX	20	29	40	35	65	165	109	134	32	23	11	12
MIN	14	19	16	14	14	36	26	33	15	10	8.3	8.3
AC-FT	1050	1360	1360	1180	1480	4390	3000	4080	1150	813	565	573

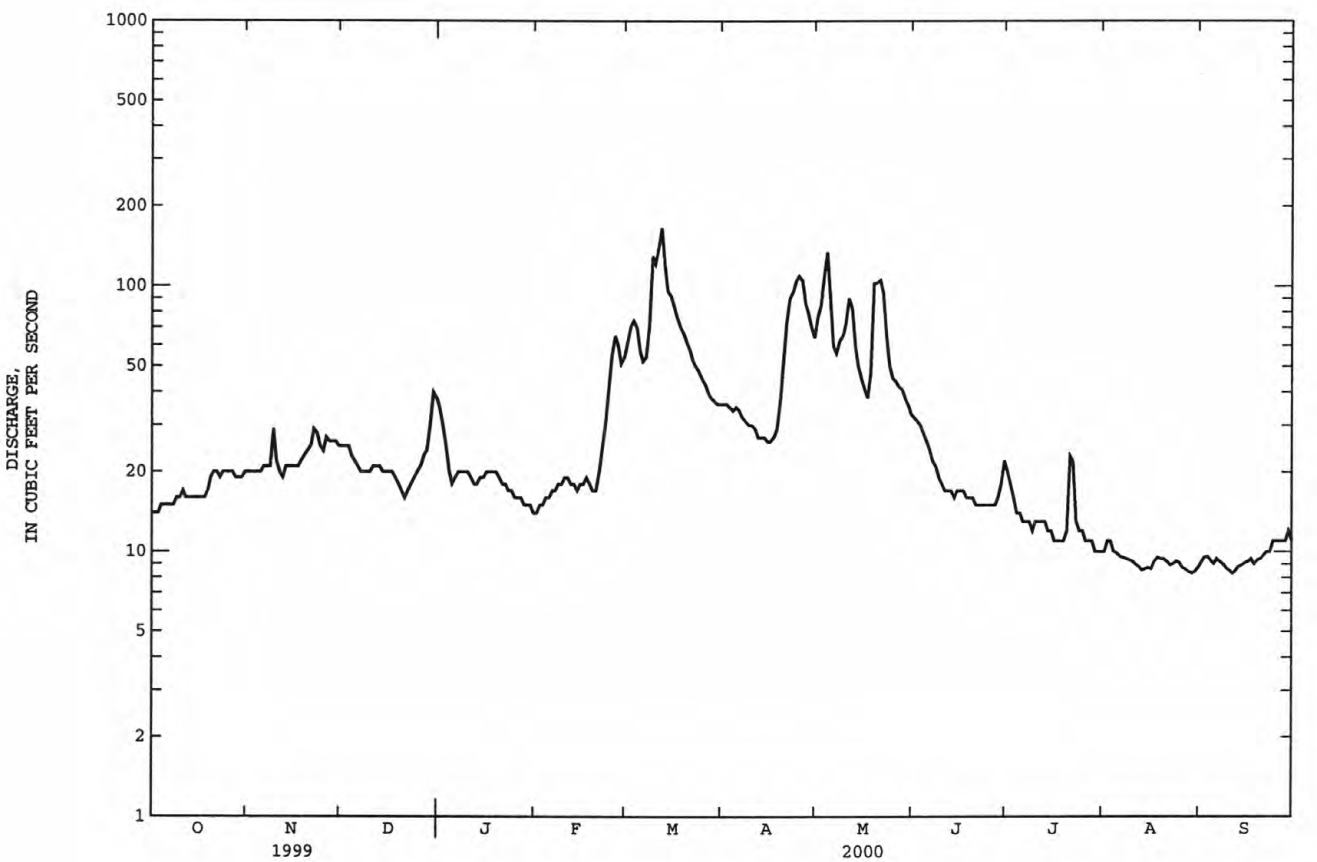
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1940, 1963 - 2000, BY WATER YEAR (WY)

MEAN	13.9	16.9	13.1	11.7	24.1	44.8	37.4	31.6	31.5	15.9	12.4	9.84
MAX	34.8	46.9	28.8	34.9	199	157	104	66.4	162	44.5	102	19.9
(WY)	1999	1999	1994	1997	1997	1966	1977	2000	1997	1969	1983	1998
MIN	7.86	9.73	5.59	4.51	6.26	11.4	13.0	12.2	5.65	2.01	1.80	4.87
(WY)	1980	1965	1986	1982	1989	1977	1981	1940	1940	1940	1940	1939

06447500 LITTLE WHITE RIVER NEAR MARTIN, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939-1940, 1963-2000	
ANNUAL TOTAL	10896.9		10592.0			
ANNUAL MEAN	29.9		28.9		21.9	
HIGHEST ANNUAL MEAN					53.7	1997
LOWEST ANNUAL MEAN					10.9	1940
HIGHEST DAILY MEAN	90	Apr 14	165	Mar 12	1110	Jun 4 1997
LOWEST DAILY MEAN	9.5	Aug 31	8.3	Aug 29	.60	Aug 14 1940a
ANNUAL SEVEN-DAY MINIMUM	10	Aug 26	8.6	Aug 25	.67	Aug 12 1940
INSTANTANEOUS PEAK FLOW			171	Mar 12	1300	Jun 4 1997
INSTANTANEOUS PEAK STAGE			4.35	Mar 12	13.48	Jun 4 1997
ANNUAL RUNOFF (AC-FT)	21610		21010		15860	
10 PERCENT EXCEEDS	51		66		40	
50 PERCENT EXCEEDS	28		20		14	
90 PERCENT EXCEEDS	13		9.4		6.5	

a Also Aug. 16, 18, 1940, and no flow part of each day Oct. 19, 20, 22, 1962 (regulation due to construction).
e Estimated.



06448000 LAKE CREEK ABOVE REFUGE, NEAR TUTHILL, SD

LOCATION.--Lat 43°05'07", long 101°36'04", in NE¼ SW¼ NE¼ sec.19, T.36 N., R.36 W., Bennett County, Hydrologic Unit 10140203, on right wingwall at upstream side of culvert, 80 ft downstream from west boundary of LaCreek game refuge and 7.5 mi southwest of Tuthill.

DRAINAGE AREA.--58 mi^2, approximately, of which about 23 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--February 1938 to September 1940, July 1962 to February 1979, Apr. 11, 1966, to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,090 ft above sea level, by barometer. Prior to Aug. 9, 1938, nonrecording gage and Aug. 9, 1938, to Sept. 30, 1940, water-stage recorder at site 110 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions for irrigation of hay meadows above station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	24	25	26	35	31	27	38	45	25	19	19
2	24	25	26	26	32	30	27	35	42	22	20	19
3	24	25	26	e24	33	29	29	33	40	22	19	19
4	24	24	25	e26	33	28	29	32	39	22	19	19
5	23	25	25	29	29	28	29	31	37	21	19	19
6	23	27	25	26	28	27	29	31	35	21	19	22
7	24	26	26	26	28	31	27	35	32	20	18	20
8	24	26	26	26	29	56	30	39	31	19	18	20
9	24	25	26	26	30	46	30	36	28	20	17	19
10	23	25	26	28	29	40	29	34	27	21	18	19
11	22	25	26	27	28	39	29	73	26	21	17	19
12	23	24	26	e25	e27	39	30	55	25	21	17	20
13	25	24	26	e26	e25	35	28	51	24	20	17	20
14	24	25	27	27	e26	34	29	48	23	19	16	20
15	24	25	29	28	28	33	31	46	23	19	18	20
16	24	24	27	28	28	32	32	45	23	19	19	20
17	24	24	28	27	30	31	31	55	23	20	19	19
18	23	26	28	27	29	29	31	100	22	20	20	19
19	24	29	e26	30	29	31	52	79	20	20	18	19
20	24	28	e25	32	30	30	50	71	20	21	18	20
21	24	27	e26	28	34	31	42	66	21	23	19	21
22	23	26	e32	28	34	30	36	62	21	23	19	21
23	24	26	28	27	33	28	34	60	20	22	19	22
24	24	25	28	26	32	28	37	58	21	21	18	22
25	24	25	28	29	33	27	44	59	21	21	18	22
26	24	25	28	27	57	27	35	57	20	21	17	21
27	24	26	27	26	39	27	33	54	23	20	18	21
28	24	26	28	27	37	26	33	51	25	20	18	21
29	25	26	28	27	34	27	33	48	30	20	18	21
30	25	26	27	27	---	30	43	48	29	20	17	21
31	24	---	26	33	---	28	---	47	---	19	19	---
TOTAL	739	764	830	845	919	988	999	1577	816	643	565	604
MEAN	23.8	25.5	26.8	27.3	31.7	31.9	33.3	50.9	27.2	20.7	18.2	20.1
MAX	25	29	32	33	57	56	52	100	45	25	20	22
MIN	22	24	25	24	25	26	27	31	20	19	16	19
AC-FT	1470	1520	1650	1680	1820	1960	1980	3130	1620	1280	1120	1200

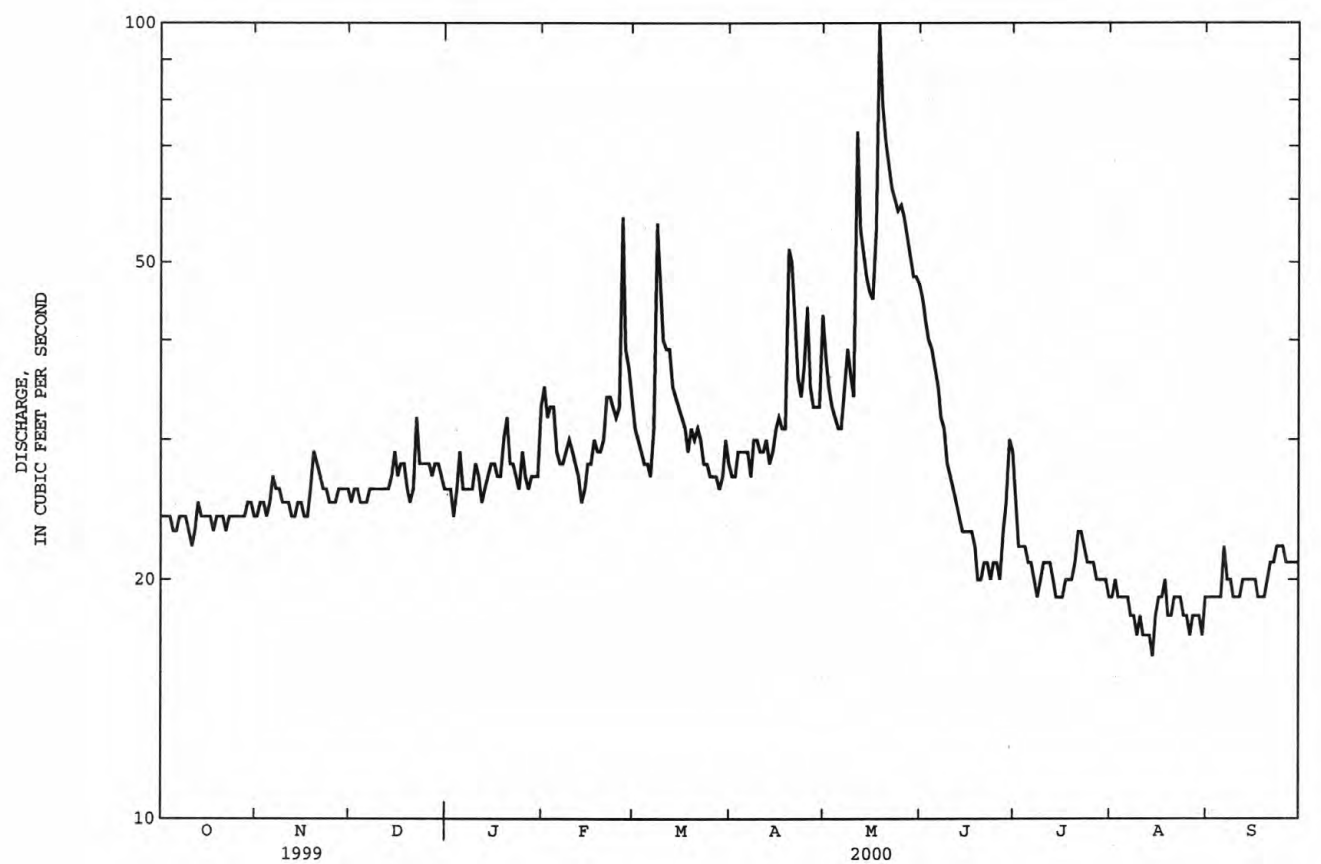
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939-1940, 1963-1979, 1997-2000, BY WATER YEAR (WY)

MEAN	19.3	20.9	20.0	19.8	23.4	28.3	27.0	24.0	21.2	16.7	15.7	16.8
MAX	28.0	28.1	26.8	28.7	34.6	38.1	37.3	50.9	44.6	28.6	23.5	24.4
(WY)	1999	1999	2000	1998	1999	1977	1977	2000	1999	1999	1997	1999
MIN	15.0	14.5	7.39	12.2	11.1	17.5	18.6	9.99	8.83	10.3	8.40	11.5
(WY)	1976	1939	1939	1979	1939	1976	1976	1939	1939	1974	1970	1970

06448000 LAKE CREEK ABOVE REFUGE, NEAR TUTHILL, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939-1940, 1963-1979, 1997-2000	
ANNUAL TOTAL	10347		10289			
ANNUAL MEAN	28.3		28.1		21.0	
HIGHEST ANNUAL MEAN					28.5	1999
LOWEST ANNUAL MEAN					13.8	1939
HIGHEST DAILY MEAN	95	Jun 15	100	May 18	115	May 27 1996
LOWEST DAILY MEAN	18	Jul 26	16	Aug 14	.10	Jun 5 1939
ANNUAL SEVEN-DAY MINIMUM	19	Aug 15	17	Aug 8	1.0	Jun 3 1939
INSTANTANEOUS PEAK FLOW			121	May 18a	154	Mar 9 1966b
INSTANTANEOUS PEAK STAGE			1.98	Feb 26c	3.75	Feb 12 1971c
ANNUAL RUNOFF (AC-FT)	20520		20410		15220	
10 PERCENT EXCEEDS	36		39		29	
50 PERCENT EXCEEDS	26		26		20	
90 PERCENT EXCEEDS	20		19		13	

a Gage height, 1.82 ft.
b Gage height, 2.83 ft.
c Backwater from ice.
e Estimated.



06449000 LAKE CREEK BELOW REFUGE, NEAR TUTHILL, SD

LOCATION (REVISED).--Lat 43°08'49", long 101°30'51", in SE¼SE¼ sec.25, T.37 N., R.36 W., Bennett County, Hydrologic Unit 10140203, on left bank 40 ft upstream from east boundary of LaCreek game refuge, 1.2 mi southwest of Tuthill, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--120 mi^2, approximately, of which about 60 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--February 1938 to September 1940, July 1962 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,055 ft above sea level, by barometer. Prior to Oct. 1, 1999, at site 400 ft downstream at same datum. Prior to Aug. 4, 1938, nonrecording gage at site 400 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	15	e7.8	7.0	13	13	76	25	54	9.5	7.8	15
2	20	10	e9.0	8.5	13	14	82	25	52	9.3	7.7	14
3	21	9.5	8.9	e10	13	29	74	25	52	9.1	6.9	13
4	21	10	8.3	e13	13	42	72	26	51	9.0	6.9	18
5	20	7.5	8.2	14	13	42	74	26	50	9.1	6.6	28
6	20	7.1	6.5	15	13	40	70	26	50	9.3	6.2	31
7	21	6.9	6.2	15	14	34	69	26	49	9.2	5.7	31
8	20	6.5	6.0	12	14	40	69	22	40	9.0	5.3	28
9	20	7.0	5.5	9.2	14	34	68	22	33	9.0	5.0	24
10	19	4.9	5.5	9.8	14	56	68	23	32	8.9	4.9	19
11	19	5.3	6.4	11	14	82	67	26	32	8.6	4.8	18
12	18	4.9	6.4	11	14	83	50	34	32	8.4	4.7	15
13	16	3.9	6.4	12	14	86	25	27	31	8.5	4.5	11
14	17	3.8	6.7	12	14	91	25	27	20	8.5	4.1	7.1
15	16	e2.7	7.5	12	14	92	25	32	10	8.3	4.1	4.2
16	17	e2.7	7.5	13	14	94	25	33	10	8.3	3.9	4.1
17	17	e2.7	7.0	13	15	100	25	32	9.9	8.4	3.7	4.0
18	18	e2.7	6.2	13	15	97	24	61	9.9	8.4	3.5	3.5
19	18	e2.7	e5.0	13	15	96	25	77	9.9	8.5	3.3	3.1
20	19	e2.7	e5.0	13	15	92	25	78	10	8.6	2.7	2.4
21	20	e2.7	5.5	14	15	91	25	77	9.7	8.7	2.3	3.0
22	19	e2.7	5.9	13	15	90	24	76	9.1	8.5	1.6	3.2
23	19	e2.7	5.8	10	15	89	24	71	9.1	8.5	1.7	4.1
24	20	e4.4	5.4	9.8	15	93	24	67	9.2	8.6	1.6	2.4
25	20	e7.8	5.6	10	15	85	24	65	9.5	8.5	1.4	1.9
26	19	e7.8	5.7	10	15	89	24	62	9.4	8.5	.49	2.5
27	19	e7.8	5.1	10	15	83	24	63	9.7	8.4	.46	6.0
28	16	e7.8	4.5	11	14	77	24	58	9.8	8.4	10	14
29	16	e7.8	5.0	12	14	77	25	56	9.8	8.4	20	16
30	14	e7.8	5.9	12	---	77	25	54	9.7	8.3	e19	16
31	14	---	6.3	13	---	77	---	53	---	7.9	e16	---
TOTAL	573	177.8	196.7	361.3	411	2185	1281	1375	732.7	268.6	176.85	362.5
MEAN	18.5	5.93	6.35	11.7	14.2	70.5	42.7	44.4	24.4	8.66	5.70	12.1
MAX	21	15	9.0	15	15	100	82	78	54	9.5	20	31
MIN	14	2.7	4.5	7.0	13	13	24	22	9.1	7.9	.46	1.9
AC-FT	1140	353	390	717	815	4330	2540	2730	1450	533	351	719

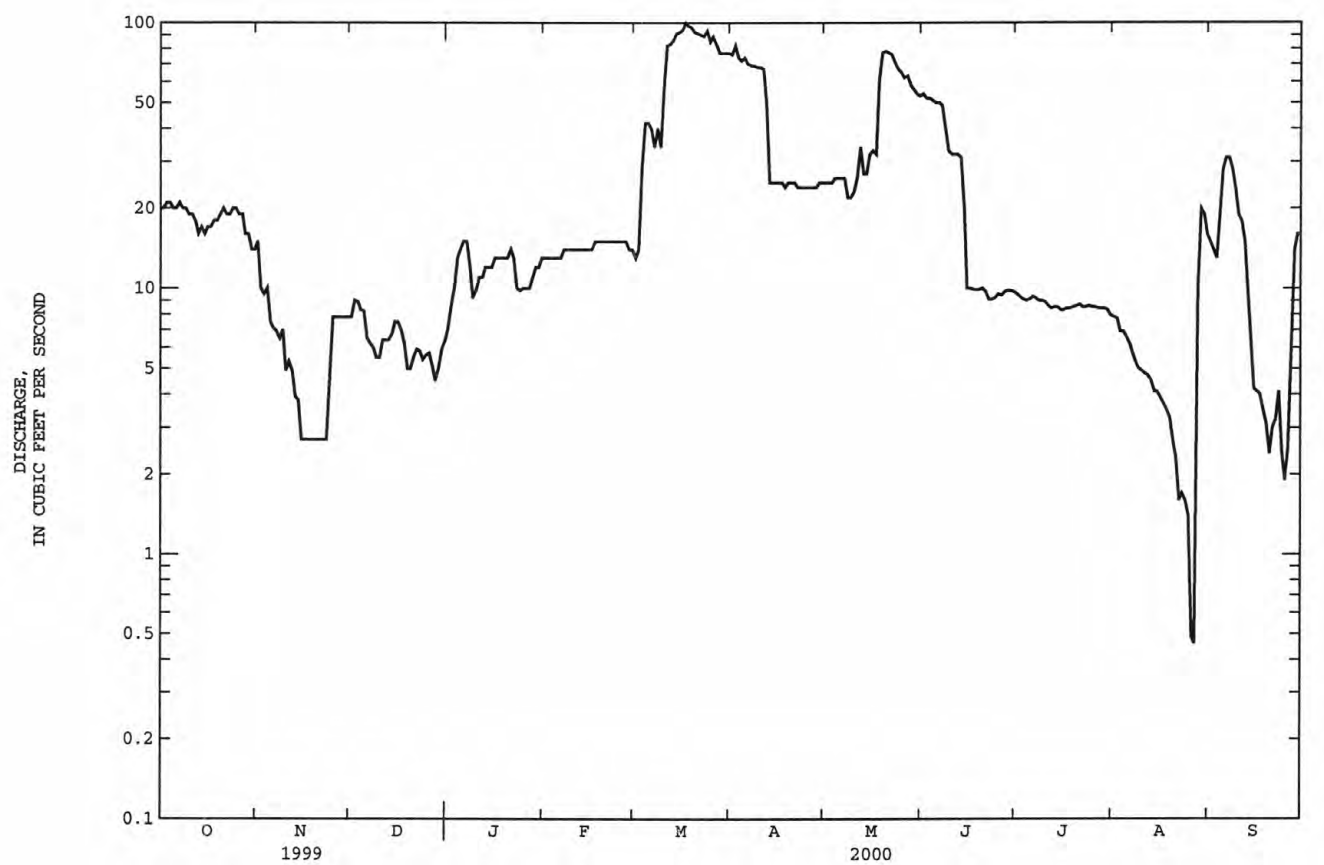
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939, 1963 - 2000, BY WATER YEAR (WY)

MEAN	6.25	10.3	15.7	18.1	21.8	32.6	35.9	31.4	29.9	16.4	11.1	8.68
MAX	23.8	43.4	48.3	49.9	49.9	109	96.1	79.3	139	63.4	42.8	35.8
(WY)	1939	1999	1999	1997	1997	1987	1977	1991	1991	1967	1994	1993
MIN	.000	.000	.000	.000	.000	.058	.090	.029	.033	.24	.084	.11
(WY)	1940	1940	1940	1940	1940	1940	1965	1939	1939	1939	1939	1939

06449000 LAKE CREEK BELOW REFUGE, NEAR TUTHILL, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939, 1963 - 2000	
ANNUAL TOTAL	8961.1		8101.45			
ANNUAL MEAN	24.6		22.1		19.8	
HIGHEST ANNUAL MEAN					41.9	1997
LOWEST ANNUAL MEAN					3.09	1940
HIGHEST DAILY MEAN	50	Mar 17	100	Mar 17	424	Mar 25 1987
LOWEST DAILY MEAN	2.7	Nov 15	.46	Aug 27	.00	Mar 25 1939a
ANNUAL SEVEN-DAY MINIMUM	2.7	Nov 15	1.4	Aug 21	.00	Mar 25 1939
INSTANTANEOUS PEAK FLOW			113	Mar 17	594	Mar 25 1987b
INSTANTANEOUS PEAK STAGE			4.45	Mar 17	6.46	Mar 12 1988c
ANNUAL RUNOFF (AC-FT)	17770		16070		14360	
10 PERCENT EXCEEDS	43		67		47	
50 PERCENT EXCEEDS	21		13		14	
90 PERCENT EXCEEDS	6.3		4.2		.54	

a No flow at times in some years.
b Gage height, 5.57 ft, from rating curve extended above 150 ft^3/s.
c Backwater from ice.
e Estimated.



06449100 LITTLE WHITE RIVER NEAR VETAL, SD

LOCATION.--Lat 43°06'03", long 101°13'49", in NE¼ NW¼ sec.17, T.36 N., R.33 W., Bennett County, Hydrologic Unit 10140203, on left bank downstream side of highway culvert, 0.3 mi downstream from small right-bank tributary, 10.8 mi southeast of Vetal, and 15.3 mi upstream from Spring Creek.

DRAINAGE AREA.--590 mi^2, approximately, of which about 415 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--August 1959 to current year. Prior to October 1965, published as South Fork White River near Vetal.

GAGE.--Water-stage recorder. Datum of gage is 2,780.69 ft above sea level. Prior to Nov. 14, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some small diversion for irrigation and some storage in several small lakes above station. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	51	51	e47	e50	110	146	138	143	46	37	43
2	51	51	51	e45	e52	114	145	132	139	44	41	42
3	51	50	53	e43	e51	120	146	131	135	50	41	40
4	51	49	53	e40	e50	128	148	131	133	49	36	38
5	51	48	53	e42	e50	145	143	133	130	49	35	39
6	52	47	52	e45	e52	150	138	149	128	47	35	45
7	53	46	51	e48	e54	146	138	163	116	46	34	44
8	54	45	50	e50	e57	164	135	185	86	44	34	42
9	54	45	e49	e50	e60	168	134	148	77	45	34	41
10	53	46	e47	e48	e59	163	133	132	66	44	33	41
11	53	46	e45	e46	e57	199	121	177	72	44	31	41
12	53	45	e46	e45	e56	217	92	158	74	41	31	40
13	53	45	48	e46	e55	231	88	159	64	40	31	39
14	53	45	50	e50	e56	246	59	154	63	40	31	37
15	52	44	49	e56	e57	230	49	142	60	44	30	36
16	51	45	48	e54	e59	209	47	137	46	56	31	32
17	51	45	52	e53	e60	201	49	138	42	41	31	31
18	53	47	49	e54	e63	197	48	172	41	38	31	37
19	53	50	e47	e56	e67	192	68	154	41	38	31	40
20	53	51	e46	e55	73	190	76	168	42	38	34	34
21	54	49	e45	e54	77	186	80	181	42	41	32	34
22	54	48	e50	e54	79	182	116	187	41	90	31	33
23	55	48	e70	e53	79	180	115	188	39	56	29	35
24	56	48	62	e53	81	175	118	187	43	45	28	35
25	57	48	55	e52	89	171	131	182	42	43	32	37
26	57	49	51	e52	93	169	130	177	40	42	39	37
27	56	50	51	e52	118	163	131	170	44	41	36	36
28	54	50	48	e51	138	162	133	164	50	73	34	36
29	54	50	47	e51	127	156	132	159	47	47	34	42
30	54	51	49	e50	---	150	143	153	49	38	43	45
31	53	---	49	e50	---	147	---	147	---	38	43	---
TOTAL	1649	1432	1567	1545	2019	5361	3332	4896	2135	1438	1053	1152
MEAN	53.2	47.7	50.5	49.8	69.6	173	111	158	71.2	46.4	34.0	38.4
MAX	57	51	70	56	138	246	148	188	143	90	43	45
MIN	50	44	45	40	50	110	47	131	39	38	28	31
AC-FT	3270	2840	3110	3060	4000	10630	6610	9710	4230	2850	2090	2280

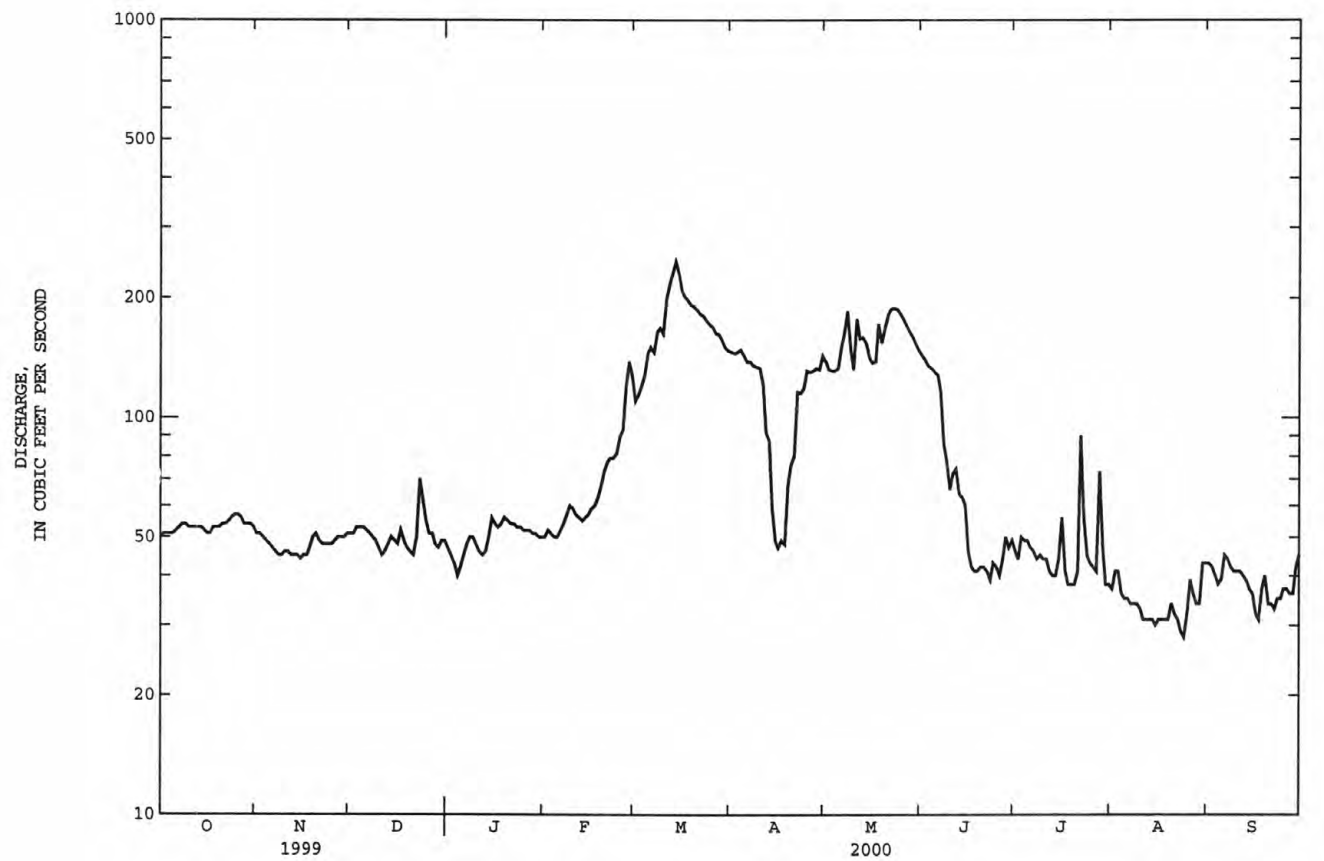
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2000, BY WATER YEAR (WY)

MEAN	35.0	42.9	42.0	39.5	57.9	98.7	101	91.8	88.3	52.4	40.6	33.5
MAX	80.4	146	115	96.7	188	205	273	185	272	156	137	89.0
(WY)	1999	1999	1999	1999	1997	1978	1977	1991	1997	1967	1983	1997
MIN	18.0	21.3	12.5	18.5	19.2	33.5	27.3	28.5	20.3	16.2	15.1	16.5
(WY)	1977	1977	1975	1981	1977	1981	1981	1992	1985	1974	1961	1975

06449100 LITTLE WHITE RIVER NEAR VETAL, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1960 - 2000	
ANNUAL TOTAL	29901		27579			
ANNUAL MEAN	81.9		75.4		60.2	
HIGHEST ANNUAL MEAN					117	1997
LOWEST ANNUAL MEAN					28.2	1981
HIGHEST DAILY MEAN	150	Apr 16	246	Mar 14	1200	May 16 1991
LOWEST DAILY MEAN	44	Aug 13	28	Aug 24	9.0	Dec 24 1974
ANNUAL SEVEN-DAY MINIMUM	45	Nov 11	31	Aug 11	9.6	Dec 19 1974
INSTANTANEOUS PEAK FLOW			258	Mar 14	3540	May 16 1991
INSTANTANEOUS PEAK STAGE			5.25	Mar 14	12.53	May 16 1991
ANNUAL RUNOFF (AC-FT)	59310		54700		43610	
10 PERCENT EXCEEDS	129		158		117	
50 PERCENT EXCEEDS	67		51		45	
90 PERCENT EXCEEDS	48		37		21	

e Estimated.



06449500 LITTLE WHITE RIVER NEAR ROSEBUD, SD

LOCATION.--Lat 43°19'32", long 100°53'00", in SW¼ NW¼ sec.28, T.39 N., R.30 W., Todd County, Hydrologic Unit 10140203, on right bank at downstream side of bridge on U.S. Highway 18, 0.3 mi downstream from Scabby Creek, 0.7 mi downstream from Soldier Creek, and 6.4 mi north of Rosebud.

DRAINAGE AREA.--1,020 mi^2, approximately, of which about 760 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--May 1943 to current year. Prior to October 1965, published as South Fork White River near Rosebud.

REVISED RECORDS.--WSP 1056: Drainage area. WSP 1309: 1946(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,294.99 ft above sea level. Prior to May 11, 1948, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Some small diversions for irrigation and some storage in several small lakes above station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	117	138	e150	e115	224	233	246	250	137	92	92
2	104	114	139	e140	e120	208	236	231	238	131	90	93
3	103	111	142	e130	e120	203	243	225	228	152	93	88
4	104	114	141	e120	e125	213	237	222	225	213	91	85
5	105	113	147	e122	e130	223	230	216	222	159	84	82
6	107	113	160	e130	e135	233	227	219	216	147	81	95
7	108	111	153	e140	e140	232	226	264	208	134	79	93
8	106	112	142	e150	e145	261	222	373	195	124	76	90
9	108	112	e151	e160	e150	271	216	279	164	121	76	89
10	104	111	e150	e155	e145	261	219	243	161	120	75	88
11	105	111	e164	e150	e140	264	217	324	158	119	72	87
12	105	113	e160	e140	e135	301	202	312	192	111	69	88
13	106	112	e153	e140	e130	321	181	273	178	104	70	88
14	107	112	e154	e150	e135	337	185	265	174	99	70	87
15	108	113	e154	e160	e140	352	159	256	173	96	70	85
16	104	113	e140	e175	e142	322	149	243	172	99	76	81
17	104	113	e155	e168	e145	304	144	250	152	104	76	81
18	107	121	e161	e165	e148	297	146	384	143	92	75	76
19	114	129	e150	e163	e150	297	216	327	138	90	75	79
20	118	126	e120	e158	e155	294	241	287	137	95	76	81
21	118	129	e89	e149	165	292	207	287	138	91	88	79
22	115	127	e115	e145	177	285	198	293	130	94	81	81
23	118	126	e140	e142	185	283	223	290	124	121	80	83
24	120	125	e183	e140	188	287	219	289	147	101	76	81
25	121	127	e179	e138	196	275	258	280	143	85	72	81
26	120	128	172	e135	216	267	241	278	136	85	72	81
27	120	133	148	e132	202	262	231	269	137	81	72	80
28	124	134	152	e130	226	258	224	259	150	117	74	80
29	121	135	154	e127	236	251	227	253	147	134	72	79
30	121	135	155	e124	---	247	250	252	141	103	70	79
31	119	---	160	e120	---	238	---	248	---	95	76	---
TOTAL	3451	3590	4621	4448	4536	8363	6407	8437	5117	3554	2399	2532
MEAN	111	120	149	143	156	270	214	272	171	115	77.4	84.4
MAX	124	135	183	175	236	352	258	384	250	213	93	95
MIN	103	111	89	120	115	203	144	216	124	81	69	76
AC-FT	6850	7120	9170	8820	9000	16590	12710	16730	10150	7050	4760	5020

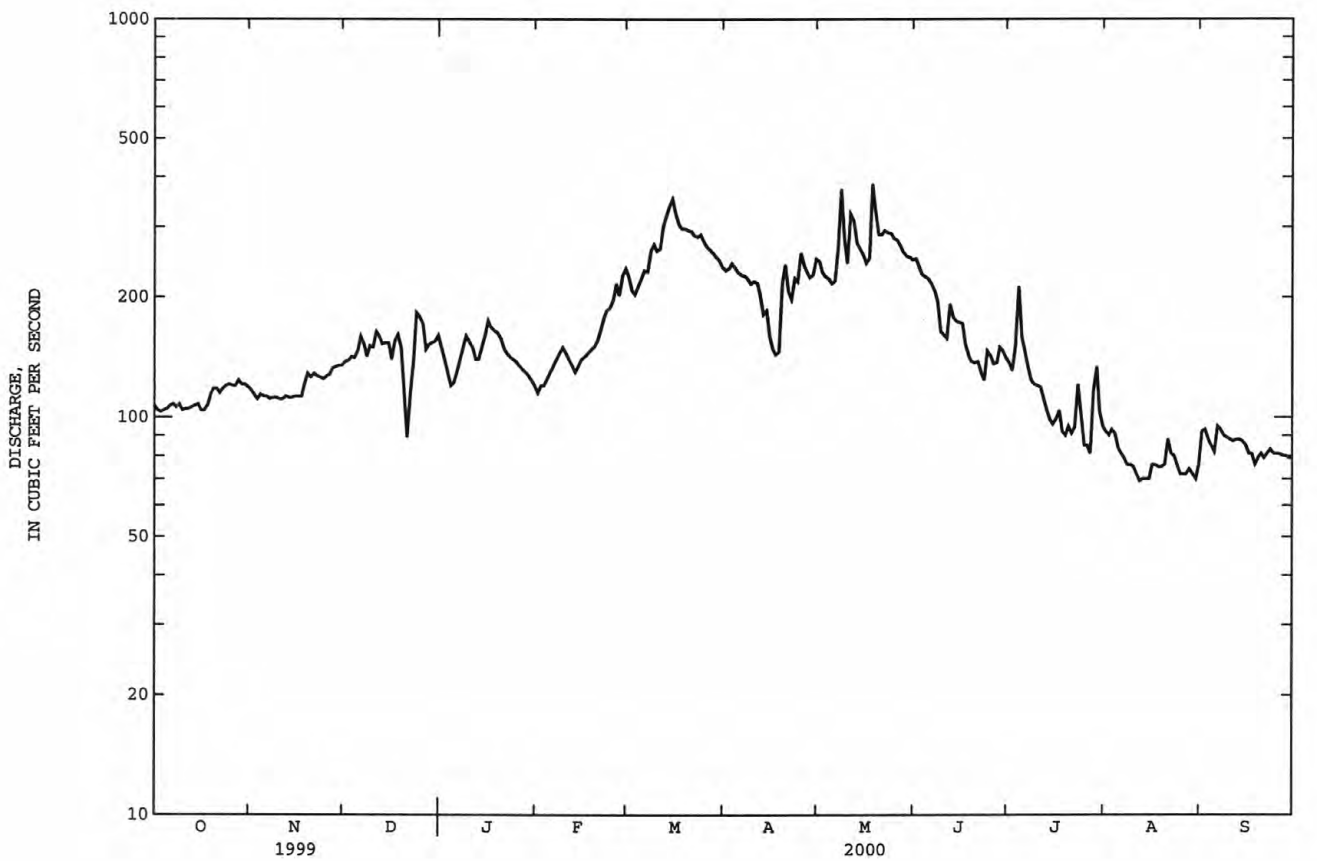
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2000, BY WATER YEAR (WY)

MEAN	82.3	91.8	86.5	83.0	116	196	186	165	156	101	80.2	74.2
MAX	146	227	190	152	348	396	401	302	511	228	164	120
(WY)	1999	1999	1999	1999	1997	1949	1977	1995	1997	1944	1983	1997
MIN	61.1	60.0	51.4	23.1	60.2	91.6	85.9	87.5	62.5	44.1	45.3	50.2
(WY)	1979	1979	1993	1962	1949	1981	1981	1992	1985	1974	1973	1975

06449500 LITTLE WHITE RIVER NEAR ROSEBUD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1944 - 2000	
ANNUAL TOTAL	58461		57455			
ANNUAL MEAN	160		157		118a	
HIGHEST ANNUAL MEAN					207	1997
LOWEST ANNUAL MEAN					78.0	1976
HIGHEST DAILY MEAN	350	Feb 1	384	May 18	1810	May 17 1944
LOWEST DAILY MEAN	89	Dec 21	69	Aug 12	10	Jan 4 1949b
ANNUAL SEVEN-DAY MINIMUM	97	Aug 23	72	Aug 9	16	Jan 18 1962
INSTANTANEOUS PEAK FLOW			467	May 8	4640	Jun 11 1967c
INSTANTANEOUS PEAK STAGE			5.84	May 8	14.09	Jun 11 1967
ANNUAL RUNOFF (AC-FT)	116000		114000		85520	
10 PERCENT EXCEEDS	227		261		204	
50 PERCENT EXCEEDS	147		140		95	
90 PERCENT EXCEEDS	105		81		58	

a Median of annual mean discharges, 120 ft^3/s.
b Also Feb. 20, 1955.
c From rating curve extended above 1,300 ft^3/s.
e Estimated.



06450500 LITTLE WHITE RIVER BELOW WHITE RIVER, SD

LOCATION.--Lat 43°36'05", long 100°44'58", in SW¼ NW¼ sec.23, T.42 N., R.29 W., Mellette County, Hydrologic Unit 10140203, on left bank at downstream side of bridge on U.S. Highway 83, 1.3 mi downstream from Pine Creek, and 2.0 mi north of town of White River.

DRAINAGE AREA.--1,570 mi^2, approximately, of which about 1,310 mi^2 probably contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1965, published as South Fork White River below White River.

REVISED RECORDS.--WDR SD-85-1: Location.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,912.78 ft above sea level. Prior to June 8, 1968, gage located at site 0.8 mi downstream at datum 4.50 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Diurnal fluctuations caused by small powerplant 2.2 mi upstream. Several small diversions for irrigation and some storage in several small lakes above station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

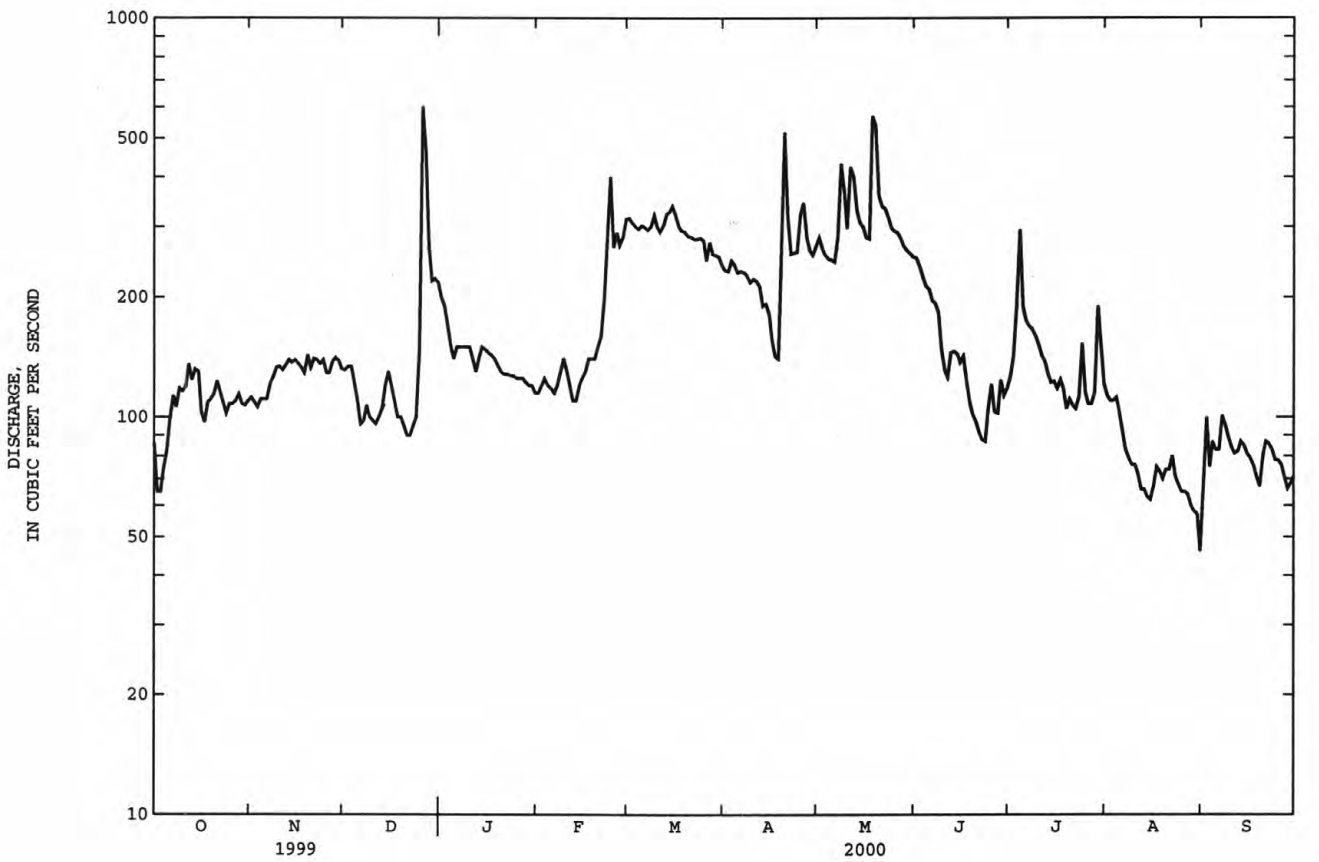
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	112	131	e200	e115	315	233	282	250	127	113	64
2	65	109	134	e190	e120	307	232	267	238	142	110	100
3	65	106	134	e170	e125	300	247	255	225	192	110	75
4	74	111	122	e150	e120	296	241	249	213	295	112	87
5	82	111	e110	e140	e118	302	230	248	209	188	102	83
6	99	111	e96	e150	e115	299	232	245	196	175	92	83
7	113	121	e98	e150	e120	295	230	283	193	169	83	101
8	106	126	e107	e150	e130	300	226	432	183	166	79	95
9	118	133	e100	e150	e140	320	218	367	147	160	76	89
10	116	134	e98	e150	e130	e300	222	297	131	152	76	84
11	119	131	e96	e140	e120	291	219	423	126	143	72	81
12	136	135	e100	e130	e110	302	213	400	145	138	66	82
13	124	139	e105	e140	e110	323	190	329	146	128	66	87
14	132	137	e120	e150	e120	326	192	308	144	122	63	85
15	130	139	e130	e148	e125	337	181	300	137	123	62	81
16	103	136	e120	e145	e130	320	156	282	142	118	67	79
17	97	133	e110	e143	e140	300	142	279	123	124	75	76
18	109	129	e100	e140	e140	293	140	568	109	118	73	71
19	111	143	e100	e135	e140	291	249	538	102	105	70	67
20	114	133	e95	e130	e150	284	517	359	98	111	74	80
21	123	140	e90	e128	e160	283	319	337	92	107	74	87
22	115	139	e90	e128	e200	279	256	333	88	105	80	86
23	108	136	e95	e127	e280	279	258	317	87	112	71	83
24	102	139	e100	e127	e400	281	259	298	105	153	68	78
25	108	129	e150	e125	266	277	322	292	121	115	65	78
26	108	129	e600	e125	290	247	344	290	103	108	65	76
27	110	138	466	e125	269	274	283	281	102	108	64	71
28	114	141	271	e122	282	256	262	268	124	115	60	66
29	108	138	219	e120	313	254	255	261	113	190	58	68
30	107	132	222	e120	---	252	268	257	118	153	57	71
31	110	---	217	e115	---	240	---	252	---	121	46	---
TOTAL	3312	3890	4726	4363	4978	9023	7336	9897	4310	4383	2349	2414
MEAN	107	130	152	141	172	291	245	319	144	141	75.8	80.5
MAX	136	143	600	200	400	337	517	568	250	295	113	101
MIN	65	106	90	115	110	240	140	245	87	105	46	64
AC-FT	6570	7720	9370	8650	9870	17900	14550	19630	8550	8690	4660	4790
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)												
MEAN	83.4	92.0	90.6	88.5	133	253	233	219	219	116	80.0	73.3
MAX	160	271	225	175	590	815	613	614	988	574	182	140
(WY)	1999	1999	1999	1999	1997	1978	1977	1983	1997	1962	1998	1997
MIN	53.3	60.5	39.1	28.5	57.5	85.9	76.9	82.5	54.7	31.3	37.1	33.0
(WY)	1977	1976	1952	1962	1962	1981	1981	1985	1985	1974	1974	1952

06450500 LITTLE WHITE RIVER BELOW WHITE RIVER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	75298		60981			
ANNUAL MEAN	206		167		140a	
HIGHEST ANNUAL MEAN					305	1997
LOWEST ANNUAL MEAN					79.0	1976
HIGHEST DAILY MEAN	1220	May 10	600	Dec 26	7880	Jun 3 1997
LOWEST DAILY MEAN	51	Sep 13	46	Aug 31	7.0	Jul 31 1952b
ANNUAL SEVEN-DAY MINIMUM	55	Sep 8	59	Aug 26	11	Aug 31 1952
INSTANTANEOUS PEAK FLOW			800	Dec 26c	13700	Jun 12 1967d
INSTANTANEOUS PEAK STAGE			6.46	Dec 24f	15.46	Jun 7 1968g
ANNUAL RUNOFF (AC-FT)	149400		121000		101400	
10 PERCENT EXCEEDS	346		297		240	
50 PERCENT EXCEEDS	174		131		96	
90 PERCENT EXCEEDS	95		78		54	

a Median of annual mean discharges, 130 ft^3/s.
b Also Aug. 31 and Sept. 1, 1952.
c Gage height, 4.18 ft, backwater from ice.
d Gage height, 10.02 ft, site and datum then in use.
e Estimated.
f Backwater from ice.
g From floodmarks; maximum gage height at site and datum then in use, 11.21 ft.



06452000 WHITE RIVER NEAR OACOMA, SD

LOCATION.--Lat 43°44'54", long 99°33'22", in SE¼ SW¼ sec.3, T.103 N., R.73 W., Lyman County, Hydrologic Unit 10140204, on left bank at downstream side of bridge on State Highway 47, 1.5 mi downstream from Wagner Draw, 1.8 mi upstream from high-water line of Lake Francis Case, and 8.8 mi southwest of Oacoma.

DRAINAGE AREA.--10,200 mi^2, approximately, of which about 9,940 mi^2 contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 786: Drainage area. WSP 1309: 1929-30(M).

GAGE.--Water-stage recorders and crest-stage gage. Datum of gage is 1,377.29 ft above sea level. See WSP 1709, 1729, or 1917 for history of changes prior to Feb. 27, 1960.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Additional water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

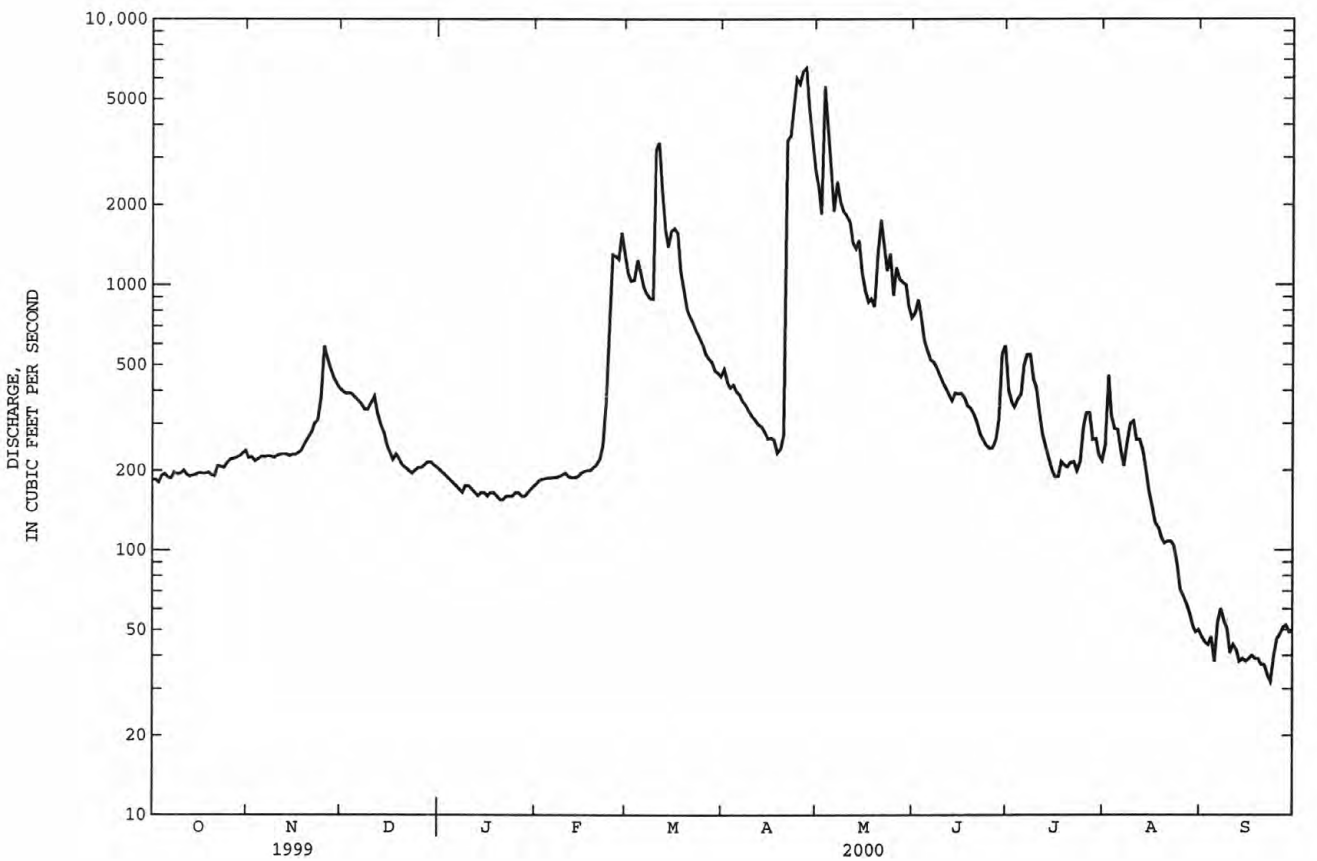
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	224	397	e200	e180	1100	481	2320	783	401	250	47
2	185	225	390	e195	e185	1030	431	1840	878	366	456	45
3	180	217	393	e190	e185	1040	411	5590	759	347	320	44
4	191	221	387	e185	e187	1240	421	3880	618	371	287	47
5	194	226	e375	e180	e187	1110	397	2600	564	386	284	38
6	188	225	e365	e175	e188	987	385	1890	520	496	236	53
7	187	227	e355	e170	e188	928	363	2440	514	546	208	60
8	197	226	e340	e165	e190	891	352	2050	490	548	254	54
9	194	223	e340	e175	e192	885	335	1880	459	440	300	51
10	195	227	e360	e175	e195	3220	319	1820	429	409	307	41
11	200	230	e380	e170	e190	3420	309	1730	409	326	262	44
12	193	231	e330	e165	e188	2240	298	1440	387	271	262	42
13	190	231	e300	e160	e188	1610	293	1370	367	245	238	38
14	192	227	e280	e165	e190	1390	279	1470	391	222	201	39
15	193	230	e250	e165	e195	1590	264	1110	389	202	168	38
16	196	230	e235	e160	e198	1630	265	947	390	189	147	39
17	195	234	e220	e165	e200	1560	260	860	376	190	127	40
18	195	240	e230	e165	e200	1130	233	888	349	216	122	39
19	197	254	e220	e160	e205	964	241	828	345	209	112	39
20	192	265	e210	e155	e210	814	271	1300	327	206	106	37
21	191	278	e205	e155	e220	759	3470	1750	302	214	108	37
22	208	301	e200	e160	e250	721	3600	1410	274	216	108	34
23	207	310	e195	e160	e350	674	4650	1130	261	199	104	32
24	204	377	e200	e160	e700	636	5970	1310	249	215	89	40
25	213	589	e205	e165	e1300	599	5700	913	242	291	71	46
26	220	531	e205	e165	1280	553	6370	1160	243	330	67	48
27	222	486	e210	e160	1250	529	6540	1050	260	329	63	51
28	224	448	e215	e160	1570	514	4640	1020	310	262	58	52
29	226	427	e215	e165	1300	475	3500	1000	551	263	52	49
30	232	408	e210	e170	---	467	2720	828	590	229	49	49
31	238	---	e205	e175	---	451	---	751	---	218	50	---
TOTAL	6223	8768	8622	5235	12061	35157	53768	50575	13026	9352	5466	1313
MEAN	201	292	278	169	416	1134	1792	1631	434	302	176	43.8
MAX	238	589	397	200	1570	3420	6540	5590	878	548	456	60
MIN	180	217	195	155	180	451	233	751	242	189	49	32
AC-FT	12340	17390	17100	10380	23920	69730	106600	100300	25840	18550	10840	2600
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)												
MEAN	198	166	90.8	80.4	335	1325	1035	1368	1330	510	317	199
MAX	1217	1445	449	592	3146	5856	4726	13630	5985	3553	1702	1074
(WY)	1999	1999	1999	1997	1997	1978	1952	1942	1967	1962	1997	1999
MIN	28.0	16.7	6.63	3.34	11.3	177	111	93.8	39.5	1.05	.75	15.1
(WY)	1938	1977	1976	1991	1950	1934	1981	1934	1989	1936	1936	1937

06452000 WHITE RIVER NEAR OACOMA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	393422		209566			
ANNUAL MEAN	1078		573		580a	
HIGHEST ANNUAL MEAN					1729	1942
LOWEST ANNUAL MEAN					151	1934
HIGHEST DAILY MEAN	33000	May 10	6540	Apr 27	44000	Mar 30 1952
LOWEST DAILY MEAN	95	Aug 28	32	Sep 23	.00	Aug 14 1971b
ANNUAL SEVEN-DAY MINIMUM	117	Aug 22	37	Sep 17	.00	Aug 14 1971
INSTANTANEOUS PEAK FLOW			8310	Apr 27	51900	Mar 30 1952c
INSTANTANEOUS PEAK STAGE			12.81	Apr 27	24.70	Mar 4 1994d
ANNUAL RUNOFF (AC-FT)	780400		415700		420300	
10 PERCENT EXCEEDS	2300		1300		1240	
50 PERCENT EXCEEDS	457		242		168	
90 PERCENT EXCEEDS	200		70		31	

a Median of annual mean discharges, 500 ft^3/s.
b No flow for some days in 1971, 1974, 1976, 1980, and 1989.
c Gage height, 15.40 ft, site and datum then in use.
d Ice jam.
e Estimated.



06452000 WHITE RIVER NEAR OACOMA, SD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1945 to September 1953, October 1968 to September 1969, October 1971 to September 1995.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1976, October 1977 to Sept. 30, 1981.
WATER TEMPERATURE: October 1974 to September 1976, October 1978 to September 1988.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1976, October 1981 to current year.

REMARKS.--Sediment-discharge records fair. Observer collects samples on a daily basis during open water periods and one per week during winter ice period. Flow affected by ice Dec. 5 to Feb. 25. Sediment-discharge records prior to Oct. 1, 1971, on file in the District office, U.S. Army Corps of Engineers, Omaha, NE.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,950 microsiemens, Aug. 8, 1980; minimum daily, 370 microsiemens, Mar. 17, 1975.
WATER TEMPERATURE: Maximum daily, 33.5°C, July 18, 1986; minimum daily, -1.0°C on many days during winter periods.
SEDIMENT CONCENTRATION: Maximum daily mean, 72,300 mg/L, Apr. 15, 1974; minimum daily mean, 15 mg/L, Feb. 15, 1982.
SEDIMENT LOAD: Maximum daily, 1,640,000 tons, May 17, 1982; 0 ton, July 17-23, 1974, Aug. 29 to Sept. 9, Sept. 13, 1976, Aug. 11-23, Aug. 26 to Sept. 5, 1989.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 40,200 mg/L, Mar. 11; minimum daily mean, 82 mg/L, Nov. 13.
SEDIMENT LOAD: Maximum daily, 417,000 tons, Apr. 24; minimum daily, 11 tons, Sept. 23.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	184	319	159	224	332	201	397	1220	1310
2	185	261	130	225	280	170	390	998	1050
3	180	e248	120	217	213	125	393	1050	1120
4	191	241	124	221	177	106	387	1050	1100
5	194	241	126	226	170	104	e375	e765	774
6	188	249	126	225	124	76	e365	509	501
7	187	249	126	227	e129	79	e355	288	276
8	197	208	110	226	143	87	e340	295	271
9	194	204	107	223	154	93	e340	421	387
10	195	e219	115	227	121	74	e360	e420	408
11	200	e237	128	230	e106	66	e380	e398	408
12	193	243	127	231	94	59	e330	e376	335
13	190	205	105	231	82	51	e300	e356	288
14	192	230	119	227	e95	59	e280	e337	255
15	193	223	116	230	110	68	e250	e319	215
16	196	195	104	230	103	64	e235	e302	192
17	195	e201	106	234	101	64	e220	e286	170
18	195	210	111	240	110	72	e230	e270	168
19	197	201	107	254	139	96	e220	e256	152
20	192	186	97	265	146	105	e210	e242	137
21	191	213	110	278	e180	135	e205	e229	127
22	208	203	114	301	217	176	e200	e217	117
23	207	195	109	310	225	189	e195	e206	108
24	204	e197	109	377	318	335	e200	e194	105
25	213	201	115	589	e702	1120	e205	e184	102
26	220	207	123	531	1520	2150	e205	e174	96
27	222	215	129	486	2350	3080	e210	e165	93
28	224	227	138	448	e2460	2970	e215	e156	91
29	226	234	142	427	2320	2680	e215	e148	86
30	232	231	144	408	1690	1860	e210	e140	79
31	238	e282	181	---	---	---	e205	e132	73
TOTAL	6223	---	3777	8768	---	16514	8622	---	10594

e Estimated.

06452000 WHITE RIVER NEAR OACOMA, SD--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	e200	e125	68	e180	e130	63	1100	2100	6210
2	e195	e118	62	e185	e133	66	1030	1490	4140
3	e190	e112	58	e185	e135	67	1040	1520	4290
4	e185	e106	53	e187	e137	69	1240	2220	7470
5	e180	e100	49	e187	e139	70	1110	e2830	8420
6	e175	e95	45	e188	e141	72	987	3580	9510
7	e170	90	41	e188	e144	73	928	4330	10900
8	e165	e89	40	e190	e146	75	891	4190	10100
9	e175	e91	43	e192	e148	77	885	e4690	11200
10	e175	e92	44	e195	e150	79	3220	23800	296000
11	e170	e94	43	e190	e153	78	3420	40200	372000
12	e165	e95	42	e188	e155	79	2240	e34600	210000
13	e160	e97	42	e188	e158	80	1610	28900	126000
14	e165	e98	44	e190	161	83	1390	22500	84200
15	e165	e100	44	e195	e167	88	1590	17800	76200
16	e160	e101	44	e198	e174	93	1630	13200	57800
17	e165	e103	46	e200	e181	98	1560	8290	35100
18	e165	e105	47	e200	e188	102	1130	7760	23700
19	e160	e106	46	e205	e196	109	964	e6720	17500
20	e155	e108	45	e210	e250	142	814	5440	12000
21	e155	e110	46	e220	e380	226	759	3690	7570
22	e160	e112	48	e250	e580	391	721	2670	5200
23	e160	e113	49	e350	e883	834	674	1870	3410
24	e160	e115	50	e700	e1340	2540	636	1530	2630
25	e165	e117	52	e1300	e2050	7190	599	1360	2200
26	e165	e119	53	1280	e2650	9110	553	e1240	1850
27	e160	e121	52	1250	e2960	10000	529	1130	1610
28	e160	e122	53	1570	3020	12800	514	1020	1410
29	e165	e124	55	1300	2300	8090	475	956	1230
30	e170	e126	58	---	---	---	467	1000	1260
31	e175	e128	61	---	---	---	451	1000	1220
TOTAL	5235	---	1523	12061	---	52844	35157	---	1412330

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	481	1120	1450	2320	6880	43100	783	1180	2490
2	431	e1120	1300	1840	4780	23800	878	2080	5180
3	411	1090	1220	5590	12200	185000	759	3020	6180
4	421	1040	1180	3880	21400	222000	618	e2830	4720
5	397	1030	1110	2600	20200	142000	564	2940	4460
6	385	846	878	1890	15000	76600	520	3830	5370
7	363	804	788	2440	e10900	72100	514	3790	5250
8	352	656	623	2050	7480	41600	490	3070	4060
9	335	e625	566	1880	3970	20200	459	1840	2280
10	319	575	495	1820	2470	12200	429	1040	1200
11	309	491	409	1730	1900	8850	409	e863	954
12	298	596	480	1440	1770	6790	387	744	778
13	293	532	422	1370	2910	10800	367	671	666
14	279	598	449	1470	e3880	15300	391	769	813
15	264	507	362	1110	4630	13800	389	702	738
16	265	e436	312	947	4120	10500	390	732	771
17	260	378	265	860	3870	8990	376	693	703
18	233	408	256	888	3350	8010	349	e644	606
19	241	678	444	828	2520	5640	345	594	553
20	271	537	395	1300	2300	8420	327	534	472
21	3470	16400	241000	1750	e3410	16200	302	499	407
22	3600	36000	349000	1410	2200	8420	274	520	384
23	4650	e31200	392000	1130	1630	5000	261	546	384
24	5970	26100	417000	1310	2830	9990	249	504	338
25	5700	19900	306000	913	2970	7330	242	e434	284
26	6370	19500	334000	1160	4070	13200	243	424	279
27	6540	14200	252000	1050	7010	19900	260	604	424
28	4640	13000	163000	1020	e4560	12500	310	637	534
29	3500	9700	91800	1000	e2680	7300	551	1080	1610
30	2720	e8340	61200	828	1600	3600	590	5100	8120
31	---	---	---	751	1300	2640	---	---	---
TOTAL	53768	---	2620404	50575	---	1041780	13026	---	61008

e Estimated.

06452000 WHITE RIVER NEAR OACOMA, SD--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	401	14200	15400	250	11000	7460	47	191	24
2	366	e13400	13200	456	14200	17600	45	178	22
3	347	11300	10600	320	13800	11800	44	e172	20
4	371	e9390	9400	287	18500	14400	47	e165	21
5	386	7930	8270	284	18100	13900	38	178	18
6	496	7120	9540	236	e14700	9340	53	266	39
7	546	5870	8650	208	11100	6250	60	386	62
8	548	5260	7780	254	10400	7610	54	430	63
9	440	e4900	5810	300	13600	11000	51	401	55
10	409	4620	5100	307	14700	12200	41	e320	35
11	326	4200	3710	262	14200	10000	44	237	29
12	271	2960	2170	262	15400	10900	42	143	16
13	245	2530	1670	238	e16000	10300	38	118	12
14	222	2820	1690	201	16500	8940	39	123	13
15	202	2230	1220	168	16900	7650	38	116	12
16	189	e1400	712	147	16800	6660	39	123	13
17	190	962	495	127	13200	4530	40	e139	15
18	216	1030	603	122	13600	4470	39	155	16
19	209	963	542	112	12000	3640	39	162	17
20	206	934	520	106	e8570	2460	37	154	15
21	214	1160	676	108	6030	1760	37	143	14
22	216	2190	1270	108	4250	1230	34	157	15
23	199	e2120	1140	104	3060	860	32	128	11
24	215	2070	1210	89	2190	535	40	e131	14
25	291	3330	2720	71	1080	207	46	139	17
26	330	8680	7860	67	619	113	48	160	21
27	329	13500	11900	63	e508	86	51	180	25
28	262	11800	8390	58	450	70	52	182	26
29	263	11600	8220	52	428	60	49	192	25
30	229	e10800	6640	49	311	41	49	183	24
31	218	10200	6000	50	255	34	---	---	---
TOTAL	9352	---	163108	5466	---	186106	1313	---	709
YEAR	209566		5570697						

e Estimated.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1999								
12...	1145	189	1150	15.5	13.0	--	--	--
NOV								
17...	1110	233	1150	7.0	5.0	--	--	94
JAN 2000								
07...	1140	167	1380	6.0	0.5	100	45	93
MAR								
23...	1155	671	1000	11.0	9.0	1800	3260	97
APR								
26...	1205	5490	613	14.5	11.5	21200	314000	92
MAY								
30...	1400	821	1280	15.5	19.0	--	--	97
JUL								
06...	1100	450	927	29.0	25.5	7350	8930	100
AUG								
23...	1100	103	747	27.0	23.5	2990	832	100
SEP								
07...	1100	66	947	20.0	19.5	407	72	99

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06452320 PLATTE CREEK NEAR PLATTE, SD

LOCATION.--Lat 43°19'38", long 98°58'13", in NW¼ NW¼ NE¼ sec.11, T.98 N., R.69 W., Charles Mix County, Hydrologic Unit 10140101, on right bank at upstream side of bridge on State Highway 1804, 0.5 mi above high-water line of Fort Randall Reservoir, and 8.0 mi southwest of Platte.

DRAINAGE AREA.--741 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,370 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Some storage in Lake Platte, capacity, 100 acre-ft, 13.6 mi upstream. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.2	5.3	5.4	e2.1	10	3.0	3.9	2.5	.88	.00	.00
2	2.5	4.0	e5.2	5.7	e2.0	8.8	3.0	4.1	2.0	.54	.00	.00
3	2.6	4.1	e5.0	5.5	e2.0	8.8	2.9	3.5	1.7	.46	.00	.00
4	2.6	2.7	e4.9	5.0	e1.9	8.2	2.8	2.5	1.6	2.5	.00	.00
5	2.4	2.7	e4.8	5.2	2.1	7.6	2.8	2.3	1.3	2.9	.00	.00
6	2.3	2.7	e4.8	5.1	2.2	7.7	2.2	2.2	1.1	3.7	.00	.00
7	2.2	2.7	e4.8	4.8	2.0	7.3	2.8	2.0	.89	1.9	.00	.00
8	2.4	2.8	e4.8	4.7	2.1	e6.9	2.6	2.9	.86	.85	.00	.00
9	2.6	2.9	e4.9	4.5	2.2	e6.5	2.1	3.6	.64	.68	.00	.00
10	2.6	3.0	4.9	e4.4	2.3	e6.0	2.0	3.4	.69	.55	.00	.00
11	2.6	3.2	5.1	4.0	2.1	5.8	2.0	4.4	.55	.38	.00	.00
12	2.7	3.1	4.9	3.7	e2.0	5.5	1.9	8.0	.47	.27	.00	.00
13	2.5	3.2	5.0	3.7	e2.1	e5.0	1.9	6.7	.41	.17	.00	.00
14	2.5	3.3	5.3	4.2	e2.3	e4.9	1.9	4.9	.46	.11	.00	.00
15	2.7	3.4	e5.0	4.4	e2.3	e4.8	2.1	3.2	.40	.09	.00	.00
16	2.6	3.3	e5.0	4.4	2.4	e4.5	2.6	2.6	.42	.09	.00	.00
17	2.8	3.6	5.0	4.2	2.6	e4.2	3.2	2.6	.34	.08	.00	.00
18	2.9	3.6	5.0	4.2	2.9	4.1	3.1	18	.30	.10	.00	.00
19	2.7	4.1	e4.8	5.0	3.4	3.9	3.2	21	.20	.12	.00	.01
20	2.6	5.4	e4.6	4.7	3.6	4.1	3.6	12	.17	.11	.00	.02
21	2.4	4.0	e4.5	4.4	3.9	3.9	4.2	9.2	.16	.09	.00	.02
22	2.2	3.7	4.5	4.1	4.4	4.1	4.4	6.9	.11	.07	.01	.02
23	2.3	4.2	4.4	3.5	5.6	4.2	3.7	5.1	.10	.06	.00	.01
24	2.7	4.9	4.8	3.2	8.7	4.9	3.7	4.3	.37	.04	.00	.00
25	2.5	4.5	4.8	3.2	9.8	5.7	4.1	3.7	.80	.02	.00	.00
26	2.2	4.9	5.0	2.8	11	5.1	4.0	2.8	1.0	.00	.00	.00
27	2.6	5.3	5.1	e2.7	13	4.3	4.6	2.2	1.1	.00	.00	.00
28	2.6	5.5	5.3	e2.5	9.2	4.8	5.0	2.7	1.6	.00	.00	.00
29	3.4	5.4	5.6	e2.3	9.2	4.2	3.9	2.8	1.7	.00	.00	.00
30	3.3	5.3	5.4	e2.2	---	3.3	3.6	2.3	1.5	.00	.00	.00
31	3.4	---	5.3	e2.1	---	3.0	---	2.4	---	.00	.00	---
TOTAL	80.7	114.7	153.8	125.8	121.4	172.1	92.9	158.2	25.44	16.76	0.01	0.08
MEAN	2.60	3.82	4.96	4.06	4.19	5.55	3.10	5.10	.85	.54	.000	.003
MAX	3.4	5.5	5.6	5.7	13	10	5.0	21	2.5	3.7	.01	.02
MIN	2.2	2.7	4.4	2.1	1.9	3.0	1.9	2.0	.10	.00	.00	.00
AC-FT	160	228	305	250	241	341	184	314	50	33	.02	.2

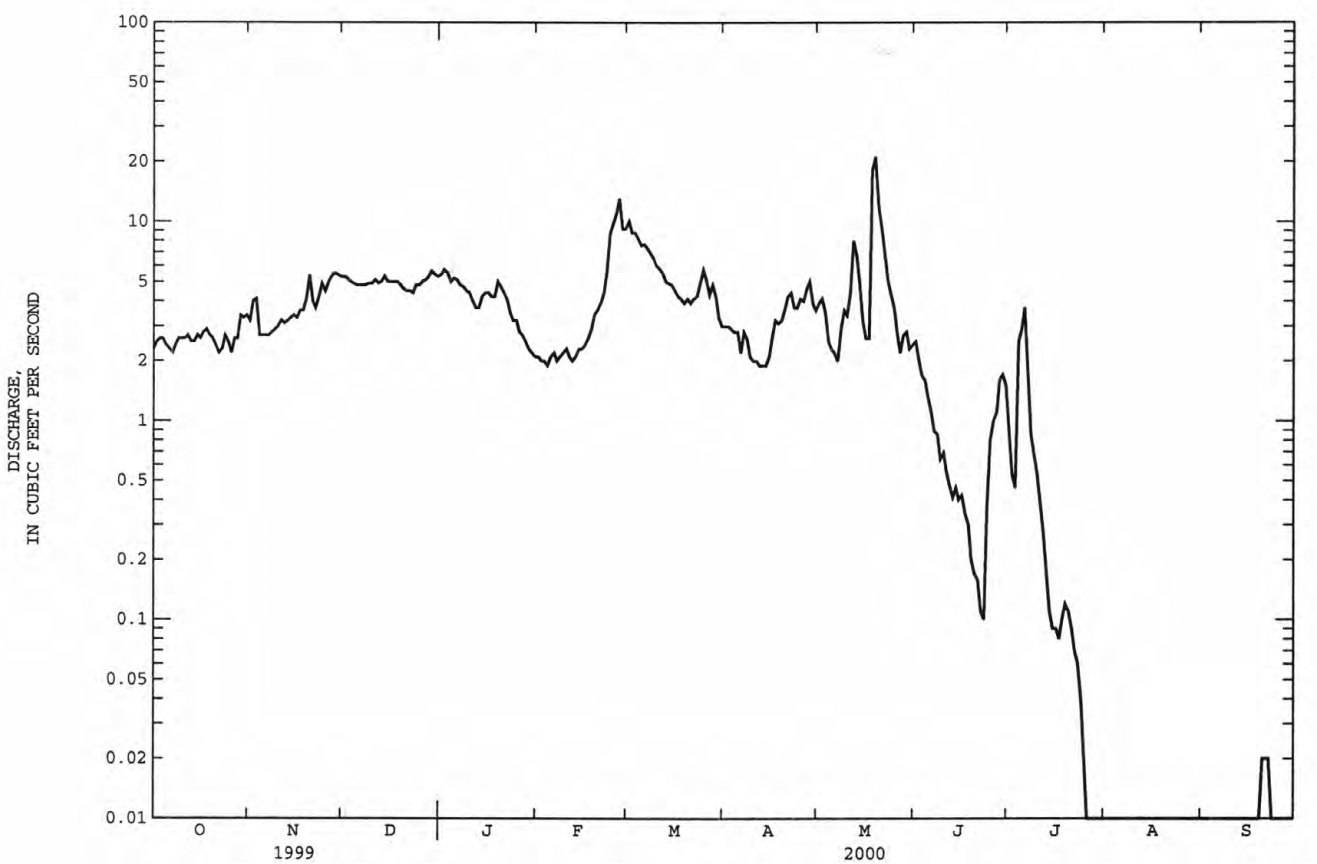
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

MEAN	11.6	13.6	5.80	2.44	29.7	40.0	63.8	160	75.3	72.1	16.2	8.66
MAX	82.1	89.2	30.4	6.99	223	290	319	796	268	449	103	34.1
(WY)	1996	1999	1999	1997	1997	1997	1999	1995	1995	1999	1998	1995
MIN	.000	.002	.003	.009	.021	.39	.26	.014	.011	.15	.000	.000
(WY)	1990	1991	1990	1992	1993	1992	1990	1992	1992	1990	1991	1989

06452320 PLATTE CREEK NEAR PLATTE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1989 - 2000	
ANNUAL TOTAL	54035.8		1061.89			
ANNUAL MEAN	148		2.90		41.8a	
HIGHEST ANNUAL MEAN					159	1999
LOWEST ANNUAL MEAN					.35	1992
HIGHEST DAILY MEAN	2200	May 8	21	May 19	2370	May 11 1995
LOWEST DAILY MEAN	2.1	Sep 30	.00	Jul 26	.00	Jul 9 1989b
ANNUAL SEVEN-DAY MINIMUM	2.4	Sep 29	.00	Jul 26	.00	Aug 21 1989
INSTANTANEOUS PEAK FLOW			39	May 18	2600	May 11 1995c
INSTANTANEOUS PEAK STAGE			2.81	May 18	12.67	May 8 1997d
ANNUAL RUNOFF (AC-FT)	107200		2110		30250	
10 PERCENT EXCEEDS	393		5.3		95	
50 PERCENT EXCEEDS	12		2.7		3.1	
90 PERCENT EXCEEDS	2.9		.00		.00	

a Median of annual mean discharges, 17 ft^3/s.
b No flow at times in most years.
c From rating curve extended above 975 ft^3/s, gage height, 11.29 ft.
d Backwater from Lake Francis Case.
e Estimated.



06452380 ANDES CREEK NEAR ARMOUR, SD

LOCATION.--Lat 43°15'23", long 98°24'08", in SW¼ NW¼ sec.3, T.97 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, at bridge 2.8 mi west of U.S. Highway 281 and 4.0 mi south of Armour.

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

REMARKS.--Generally, samples are collected when discharge exceeds about 2 ft^3/s at time of site visit. Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)
JUN 2000										
19...	1200	.08	2540	8.1	27.0	19.5	719	5.9	69	1200
AUG										
22...	1050	2.7	2020	7.7	24.0	21.7	729	6.9	83	880

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
JUN 2000										
19...	810	343	347	294	102	163	23	2	16.4	418
AUG										
22...	650	231	229	222	78.9	141	25	2	25.9	282

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
JUN 2000										
19...	0	1210	18.6	.2	27.8	2030	2230	.48	.516	3.4
AUG										
22...	0	940	24.8	.2	26.6	1600	1750	12.9	.513	2.5

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 2000									
19...	<.010	<.050	--	.722	.236	6.0	2.7	123	100
AUG									
22...	.065	1.03	.969	.827	.548	5.0	E2.0	56	77

06452380 ANDES CREEK NEAR ARMOUR, SD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 22	1050	26	7	10	15	1	47000	11

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
730	1	<10	<2	57	44	10	12

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	10	<8	<4	28000	30	16	18

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
2900	<2	24	31	<4	7	1.3	<2	220

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	10	<5	2400	<100	85	2	17	68

06452383 LAKE ANDES TRIBUTARY NO. 3 NEAR ARMOUR, SD

LOCATION.--Lat 43°15'23", long 98°25'58", in SW¼ NE¼ sec.5, T.97 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, at bridge 4.3 mi west of U.S. Highway 281 and 4.0 mi south of Armour.

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

REMARKS.--Generally, samples are collected when discharge exceeds about 2 ft^3/s at time of site visit.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)
AUG 2000										
22...	1245	.32	1980	7.8	25.5	22.0	727	7.1	86	970

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
AUG 2000										
22...	830	135	138	185	122	106	19	1	31.5	165

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
AUG 2000									
22...	0	1010	40.9	.2	18.7	1600	1730	1.50	.152

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
AUG 2000									
22...	1.9	.078	.754	.676	1.12	.992	8.4	66.0	14

06452383 LAKE ANDES TRIBUTARY NO. 3 NEAR ARMOUR, SD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 22	1245	49	11	8.2	17	1.2	53000	11

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
670	1	<10	<2	49	52	7	20

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	11	<8	<4	25000	28	18	24

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
1700	<2	23	36	9	8	8.9	<2	240

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	8	<5	2400	<100	110	2	19	99

MISSOURI-FORT RANDALL RIVER BASIN

06452386 LAKE ANDES TRIBUTARY NO. 2 NEAR LAKE ANDES, SD

LOCATION.--Lat 43°12'43", long 98°26'45", in SE¼ SE¼ SE¼ sec.18, T.97 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, at culvert 3.0 mi north and 4.6 mi east of town of Lake Andes.

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

REMARKS.--Generally samples are collected when discharge exceeds about 2 ft^3/s at time of site visit. No water-quality samples were collected this year; discharge at times of site visits was much less than 2 ft^3/s.

MISSOURI-FORT RANDALL RIVER BASIN

06452389 LAKE ANDES TRIBUTARY NO. 1 NEAR LAKE ANDES, SD

LOCATION.--Lat 43°11'25", long 98°27'57", in NE¼ NE¼ SE¼ sec.25, T.97 N., R.65 W., Charles Mix County, Hydrologic Unit 10140101, at culvert 1.0 mi north and 3.0 mi east of town of Lake Andes.

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

REMARKS.--Generally, samples are collected when discharge exceeds about 2 ft^3/s at time of site visit. No water-quality samples were collected this year; discharge at times of site visits was much less than 2 ft^3/s.

06452390 LAKE ANDES ABOVE RAVINIA, SD

LOCATION.--Lat 43°13'15", long 98°24'55", in SW¼ SW¼ NE¼ sec.16, T.97 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, about 1.5 mi south of mouth of Andes Creek and about 5.5 mi north of Ravinia.

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

REMARKS.--On Feb. 7 and Aug. 22, 2000, inorganic blank water was processed at the field site through the sampling equipment used for this study and then processed and analyzed for quality-control purposes. The analytical results for these two field blanks are presented in a table following the water-quality and bottom-sediment quality results. On June 19, 1999, a field duplicate sample was collected at this site for quality-control purposes. The analytical results for the field duplicate sample are noted in the water-quality results. Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	GAGE HEIGHT (FEET) (00065)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)
FEB 2000										
07...	1235	1.52	6.98	2270	9.1	-2.0	3.1	24.0	735	23.0
APR										
11...	1230	2.01	6.73	2130	8.7	5.0	8.3	13.2	752	11.5
JUN										
19...	1430	1.83	6.40	2330	8.9	28.0	21.0	12.1	719	10.1
a19...	1432	1.83	6.40	2330	8.9	28.0	21.0	12.1	719	10.1
AUG										
22...	1400	1.52	5.79	2410	8.6	26.0	22.4	7.20	730	7.8

DATE	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)
FEB 2000										
07...	179	910	730	183	198	161	123	153	27	2
APR										
11...	100	850	670	180	187	154	114	144	26	2
JUN										
19...	121	950	770	178	192	169	128	167	27	2
a19...	121	960	780	181	189	170	129	172	27	2
AUG										
22...	95	930	820	110	136	154	134	182	28	3

DATE	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)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB 2000									
07...	4.9	141	41	1010	56.0	.3	13.8	1630	1840
APR									
11...	35.9	197	11	983	57.2	.3	.3	1600	1750
JUN									
19...	43.0	173	22	1070	63.8	.3	14.1	1760	1900
a19...	43.0	165	27	1080	61.9	.3	14.2	1770	1920
AUG									
22...	47.2	114	10	1190	67.8	.2	27.5	1870	2040

a Field duplicate sample collected for quality-control purposes.

06452390 LAKE ANDES ABOVE RAVINIA, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)
FEB 2000								
07...	<.020	3.0	<.010	<.050	.432	.126	15.3	E1.4
APR								
11...	<.020	3.7	<.010	<.050	.303	<.010	5.7	2.4
JUN								
19...	.022	4.5	<.010	<.050	.446	.048	9.9	3.3
a19...	<.020	4.7	<.010	<.050	.443	.047	9.6	E2.1
AUG								
22...	<.020	10	<.010	<.050	.797	.010	19.0	<2.4

a Field duplicate sample collected for quality-control purposes.

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TRANSPARENCY (SECCHI DISK) (IN) (00077)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
APR 2000											
11...	1230	2.01	6.73	2130	8.7	5.0	8.3	13.2	752	11.5	100
JUN											
19...	1430	1.83	6.40	2330	8.9	28.0	21.0	12.1	719	10.1	121

DATE	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALACHLOR TOTAL RECOVER (UG/L) (77825)	AMETRYNE TOTAL (UG/L) (82184)	ATRAZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRAZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	BROMACIL WATER WHLREC (UG/L) (30234)	BUTACHLOR WATER WHLREC (UG/L) (30235)
APR 2000											
11...	850	670	180	187	<.1	<.1	.5	E.2	<.2	<.2	<.1
JUN											
19...	950	770	178	192	<.1	.2	.3	E.2	<.2	<.2	<.1

DATE	BUTYLATE WATER WHLREC (UG/L) (30236)	CARBOXIN WATER WHOLE RECOVERABLE (UG/L) (30245)	CYANAZINE TOTAL (UG/L) (81757)	CYCLOATE WATER WHOLE RECOVERABLE (UG/L) (30254)	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	DIPHENAMID WATER WHOLE RECOVERABLE (UG/L) (30255)	HEXAZINONE WATER WHOLE RECOVERABLE (UG/L) (30264)	METOLACHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRIBUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROMETONE TOTAL (UG/L) (39056)
APR 2000											
11...	<.1	<.2	<.2	<.1	.09	<.04	<.1	<.2	<.2	<.1	<.2
JUN											
19...	<.1	<.2	<.2	<.1	--	--	<.1	<.2	<.2	<.1	<.2

DATE	PROMETRYNE TOTAL (UG/L) (39057)	PROPACHLOR WATER WHOLE RECOV. (UG/L) (30295)	PROPAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMAZINE TOTAL (UG/L) (39055)	SIMETRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TERBACIL WATER WHOLE RECOV. (UG/L) (30311)	TRIFLURALIN TOTAL RECOVER (UG/L) (39030)	VERNOLATE WATER WHOLE RECOV. (UG/L) (30324)
APR 2000										
11...	<.1	<.1	<.1	<.03	<.1	<.1	<.03	<.2	<.1	<.1
JUN										
19...	<.1	<.1	<.1	--	<.1	<.1	--	<.2	<.1	<.1

06452390 LAKE ANDES ABOVE RAVINIA, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	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)
FEB 2000											
b07...	1240	E2	2	E.01	<.01	<.1	<.2	<.3	<.3	<.1	.5
AUG											
b22...	1401	5	2	<.02	<.01	<.1	<.2	<.3	<.3	<.1	<.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000									
b07...	<10	<.020	<.10	<.010	<.050	<.050	<.010	<2.0	<2.4
AUG									
b22...	<10	<.020	<.10	<.010	<.050	<.050	<.010	<2.0	<2.4

b Field blank sample collected for quality-control purposes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 22	1400	39	9.5	8.3	18	1.1	51000	7.7

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
660	1	<10	<2	51	49	8	21

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	10	<8	<4	23000	28	17	23

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
1200	<2	24	35	10	7	2.4	<2	290

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	8	<5	2300	<100	100	2	20	98

06452391 LAKE ANDES NEAR RAVINIA, SD

LOCATION.--Lat 43°11'05", long 98°26'10", in SW¼ SW¼ SE¼ sec.29, T.97 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, about 1.25 mi northeast of the Lake Andes National Wildlife Refuge office and about 3 mi north of Ravinia.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB 2000												
07...	1600	2.68	2310	9.0	2.0	4.3	33.6	735	22.4	180	890	780
APR												
11...	1420	2.74	2190	7.9	9.0	9.2	19.2	736	9.9	90	830	710
JUN												
21...	0915	2.74	2290	8.9	20.0	19.5	12.6	722	7.4	86	880	--
AUG												
23...	0900	2.44	2450	8.0	22.0	23.0	8.40	729	6.8	84	970	860

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 2000												
07...	113	124	151	125	161	27	2	54.5	98	20	1040	72.4
APR												
11...	122	121	143	114	147	26	2	46.6	149	0	1010	72.9
JUN												
21...	--	116	150	123	165	27	2	52.1	--	--	1070	77.5
AUG												
23...	105	126	167	134	176	27	2	56.1	129	0	1160	83.8

DATE	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000												
07...	.3	14.2	1690	1850	<.020	2.9	<.010	<.050	.201	<.010	11.4	E1.3
APR												
11...	.3	1.7	1610	1750	.751	3.8	<.010	<.050	.204	.018	7.9	E1.7
JUN												
21...	.3	7.0	1710	1840	<.020	4.1	<.010	<.050	.364	.016	<2.0	<2.4
AUG												
23...	.3	19.5	1860	2010	.308	6.3	<.010	<.050	.396	<.010	18.4	<2.4

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	GAGE HEIGHT (FEET) (00065)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR 2000											
11...	1420	2.74	6.72	2190	7.9	9.0	9.2	19.2	736	9.9	90
JUN											
21...	0915	2.74	3.50	2290	8.9	20.0	19.5	12.6	722	7.4	86

06452391 LAKE ANDES NEAR RAVINIA, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	AME-TRYNE TOTAL (UG/L) (82184)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)
APR 2000											
11...	830	710	122	121	<.1	<.1	.4	<.2	<.2	<.2	<.1
JUN											
21...	880	--	--	116	<.1	<.1	.3	<.2	<.2	<.2	<.1

DATE	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L) (30245)	CYAN-AZINE TOTAL (UG/L) (81757)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L) (30254)	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L) (30255)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROME-TONE TOTAL (UG/L) (39056)
APR 2000											
11...	<.1	<.2	<.2	<.1	.07	<.04	<.1	<.2	<.2	<.1	<.2
JUN											
21...	<.1	<.2	<.2	<.1	--	--	<.1	<.2	<.2	<.1	<.2

DATE	PROME-TRYNE TOTAL (UG/L) (39057)	PROPA-CHLOR WATER WHOLE RECOV. (UG/L) (30295)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TER-BACIL WATER WHOLE RECOV. (UG/L) (30311)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	VER-NOLATE WATER WHOLE RECOV. (UG/L) (30324)
APR 2000										
11...	<.1	<.1	<.1	<.03	<.1	<.1	<.03	<.2	<.1	<.1
JUN										
21...	<.1	<.1	<.1	--	<.1	<.1	--	<.2	<.1	<.1

06452391 LAKE ANDES NEAR RAVINIA, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 23	0900	78	11	5.6	16	1.5	47000	7.8

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
560	1	<10	<2	46	50	10	28

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	9	<8	<4	27000	25	22	27

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
2600	2	20	44	<4	8	2.9	<2	560

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	7	<5	2200	<100	120	2	17	120

06452403 OWENS BAY NEAR RAVINIA, SD

LOCATION.--Lat 43°09'40", long 98°26'45", in NW¼ NW¼ SW¼ sec.5, T.96 N., R.64 W., Charles Mix County, Hydrologic Unit 10140101, about 0.7 mi southeast of the Lake Andes National Wildlife Refuge office and about 1.8 mi northwest of Ravinia.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB 2000												
07...	1400	.27	1840	8.2	3.0	6.2	10.6	735	19.3	163	750	660
APR												
11...	1340	.15	3380	8.1	8.5	12.5	--	735	12.3	121	1600	1400
JUN												
19...	1655	.15	4560	8.2	30.5	26.0	3.6	719	8.9	118	2100	2000
AUG												
22...	1630	.09	8370	9.5	27.0	30.0	3.6	728	11.6	165	4500	4400

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 2000												
07...	83	98	210	53.8	91.6	21	1	17.5	101	0	719	115
APR												
11...	114	119	420	123	192	21	2	44.8	140	0	1620	267
JUN												
19...	126	182	567	177	279	21	3	63.3	154	0	2290	357
AUG												
22...	35	51	1160	381	635	24	4	22.1	4	19	4650	802

DATE	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000												
07...	1.6	7.2	1270	1390	<.020	1.1	<.010	<.050	.175	<.010	<2.0	<2.4
APR												
11...	2.4	.3	2730	2960	<.020	2.3	<.010	<.050	.272	<.010	3.0	4.6
JUN												
19...	2.5	19.4	3840	4190	7.39	13	.025	<.050	.847	.013	4.5	3.4
AUG												
22...	1.7	6.2	7670	8480	.101	8.9	<.010	<.050	.456	<.010	17.0	3.0

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	GAGE HEIGHT (FEET) (00065)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR 2000											
11...	1340	.15	6.73	3380	8.1	8.5	12.5	--	735	12.3	121
JUN											
19...	1655	.15	6.40	4560	8.2	30.5	26.0	3.60	719	8.9	118

06452403 OWENS BAY NEAR RAVINIA, SD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	AME-TRYNE TOTAL (UG/L) (82184)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)
APR 2000											
11...	1600	1400	114	119	<.1	<.1	<.1	<.2	<.2	<.2	<.1
JUN											
19...	2100	2000	126	182	<.1	<.1	E.1	<.2	<.2	<.2	<.1

DATE	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L) (30245)	CYAN-AZINE TOTAL (UG/L) (81757)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L) (30254)	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L) (30255)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROME-TONE TOTAL (UG/L) (39056)
APR 2000											
11...	<.1	<.2	<.2	<.1	<.05	<.04	<.1	<.2	<.2	<.1	<.2
JUN											
19...	<.1	<.2	<.2	<.1	--	--	<.1	<.2	<.2	<.1	<.2

DATE	PROME-TRYNE TOTAL (UG/L) (39057)	PROPA-CHLOR WATER WHOLE RECOV. (UG/L) (30295)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TER-BACIL WATER WHOLE RECOV. (UG/L) (30311)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	VER-NOLATE WATER WHOLE RECOV. (UG/L) (30324)
APR 2000										
11...	<.1	<.1	<.1	<.03	<.1	<.1	<.03	<.2	<.1	<.1
JUN										
19...	<.1	<.1	<.1	--	<.1	<.1	--	<.2	<.1	<.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 22	1630	73	9.7	8.3	16	1.9	46000	7.2

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
540	1	<10	<2	46	46	7	19

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	10	<8	<4	24000	26	16	29

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
1600	<2	21	32	7	7	1.7	<2	810

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	7	<5	2100	<100	91	2	17	92

06452406 LAKE ANDES ABOVE LAKE ANDES, SD

LOCATION.--Lat 43°09'40", long 98°29'10", in NW¼ NW¼ SW¼ sec.1, T.96 N., R.65 W., Charles Mix County, Hydrologic Unit 10140101, about 1.9 mi west southwest of the Lake Andes National Wildlife Refuge office and about 2.5 mi east of Lake Andes.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB 2000												
07...	1520	2.29	2430	8.9	2.5	2.6	29.2	735	22.0	169	970	840
APR												
11...	1515	2.81	2330	8.3	9.5	9.4	28.8	735	11.6	106	910	780
JUN												
21...	1025	2.74	2410	8.8	22.0	20.0	12.6	723	7.4	87	950	--
AUG												
23...	0945	2.44	2640	8.1	23.5	22.8	12.0	730	7.0	86	1100	930

DATE	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 2000												
07...	135	144	181	127	163	25	2	57.9	133	15	1090	86.6
APR												
11...	138	140	171	119	153	25	2	51.5	160	4	1080	91.4
JUN												
21...	--	118	173	125	166	26	2	54.0	--	--	1130	90.3
AUG												
23...	127	138	199	137	191	27	3	61.2	154	0	1260	104

DATE	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000												
07...	.5	22.1	1810	1990	.025	2.8	<.010	<.050	.123	<.010	11.6	<2.4
APR												
11...	.5	16.8	1770	1920	.450	3.5	<.010	<.050	.129	<.010	9.8	E1.7
JUN												
21...	.5	3.0	1810	1970	<.020	3.9	<.010	<.050	.339	<.010	5.3	E1.5
AUG												
23...	.5	23.8	2050	2190	<.020	4.8	<.010	<.050	.337	.013	15.5	<2.4

DATE	TIME	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	GAGE HEIGHT (FEET) (00065)	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
APR 2000											
11...	1515	2.81	6.73	2330	8.3	9.5	9.4	28.8	735	11.6	106
JUN											
21...	1025	2.74	3.50	2410	8.8	22.0	20.0	12.6	723	7.4	87

06452406 LAKE ANDES ABOVE LAKE ANDES, SD--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	AME-TRYNE TOTAL (UG/L) (82184)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)
APR 2000											
11...	910	780	138	140	<.1	<.1	.3	<.2	<.2	<.2	<.1
JUN											
21...	950	--	--	118	<.1	<.1	.2	<.2	<.2	<.2	<.1

DATE	BUTYL-ATE WATER WHLREC (UG/L) (30236)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L) (30245)	CYAN-AZINE TOTAL (UG/L) (81757)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L) (30254)	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L) (30255)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROME-TONE TOTAL (UG/L) (39056)
APR 2000											
11...	<.1	<.2	<.2	<.1	<.05	<.04	<.1	<.2	<.2	<.1	<.2
JUN											
21...	<.1	<.2	<.2	<.1	--	--	<.1	<.2	<.2	<.1	<.2

DATE	PROME-TRYNE TOTAL (UG/L) (39057)	PROPA-CHLOR WATER WHOLE RECOV. (UG/L) (30295)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TER-BACIL WATER WHOLE RECOV. (UG/L) (30311)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	VER-NOLATE WATER WHOLE RECOV. (UG/L) (30324)
APR 2000										
11...	<.1	<.1	<.1	<.03	<.1	<.1	<.03	<.2	<.1	<.1
JUN										
21...	<.1	<.1	<.1	--	<.1	<.1	--	<.2	<.1	<.1

06452406 LAKE ANDES ABOVE LAKE ANDES, SD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 23	0945	78	11	5.3	18	1.4	52000	11

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
590	1	<10	<2	47	53	11	26

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	11	<8	<4	28000	27	20	31

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
2600	3	22	43	6	9	2.2	<2	630

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	8	<5	2300	<100	120	2	21	120

06452500 LAKE FRANCIS CASE AT PICKSTOWN, SD

LOCATION.--Lat 43°04'05", long 98°33'15", in SE¼ sec.5, T.95 N., R.65 W., Charles Mix County, Hydrologic Unit 10140101, in tower 6 of outlet works at Fort Randall Dam, on Missouri River at Pickstown, 1.0 mi upstream from Randall Creek, and at mile 880.0.

DRAINAGE AREA.--263,500 mi^2, approximately.

PERIOD OF RECORD.--December 1952 to current year (monthend contents only). Prior to October 1964, published as Fort Randall Reservoir at Pickstown.

GAGE.--Water-stage recorder. Datum of gage is above sea level. Prior to Mar. 25, 1953, elevations determined from temporary nonrecording gages.

REMARKS.--Reservoir is formed by earthfill dam; storage began in December 1952; initial closure made July 1952. Maximum capacity, 5,574,000 acre-ft below elevation 1,375.0 ft (top of spillway gates). Normal maximum, 4,589,000 acre-ft below elevation 1,365.0 ft. Inactive storage, 1,184,000 acre-ft below elevation 1,310.0 ft. No dead storage; elevation of invert of lowest outlet is 1,227.0 ft. Figures given herein represent elevations at outlet works and total contents adjusted for wind effect. The spillway consists of 21 taintor gates, each 40 ft wide by 29 ft high; spillway capacity, 490,000 ft^3/s at pool elevation 1,375 ft. Crest of spillway is at elevation 1,346 ft. Normal releases are through 12 tunnels 22 ft in diameter. Installation of power units in 8 of these tunnels was completed in January 1956; maximum release through power tunnels is 46,000 ft^3/s; maximum release through 4 other tunnels is 130,000 ft^3/s at pool elevation 1,375 ft. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,102,000 acre-ft, May 6, 1997; maximum elevation, 1,372.17 ft, May 7, 1997; minimum since initial filling, 1,450,000 acre-ft, Oct. 23, 1956, affected by wind.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,735,000 acre-ft, May 11; minimum contents, 2,278,000 acre-ft, Jan. 10.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	1,351.94	3,280,000	--
Oct. 31	1,347.32	2,927,000	-353,000
Nov. 30	1,338.37	2,346,000	-581,000
Dec. 31	1,338.26	2,341,000	-5,000
CAL YR 1999	--	--	-204,000
Jan. 31	1,345.51	2,796,000	+455,000
Feb. 29	1,353.65	3,417,000	+621,000
Mar. 31	1,354.80	3,513,000	+96,000
Apr. 30	1,356.65	3,675,000	+162,000
May 31	1,355.70	3,592,000	-83,000
June 30	1,354.80	3,515,000	-77,000
July 31	1,354.56	3,495,000	-20,000
Aug. 31	1,355.65	3,582,000	+87,000
Sept.30	1,351.51	3,242,000	-340,000
WTR YR 2000	--	--	-38,000

NOTE.--Lake frozen over Jan. 20 to Feb. 29.

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06453020 MISSOURI RIVER BELOW GREENWOOD, SD

LOCATION.--Lat 42°54'19", long 98°20'58", in SE¼ NE¼ NE¼ sec.1, T.93 N., R.64 W., Charles Mix County, Hydrologic Unit 10170101, on left bank 2.0 mi downstream from Greenwood and 1.3 mi downstream from the mouth of Slaughter Creek.

PERIOD OF RECORD.--October 1989 to current year.

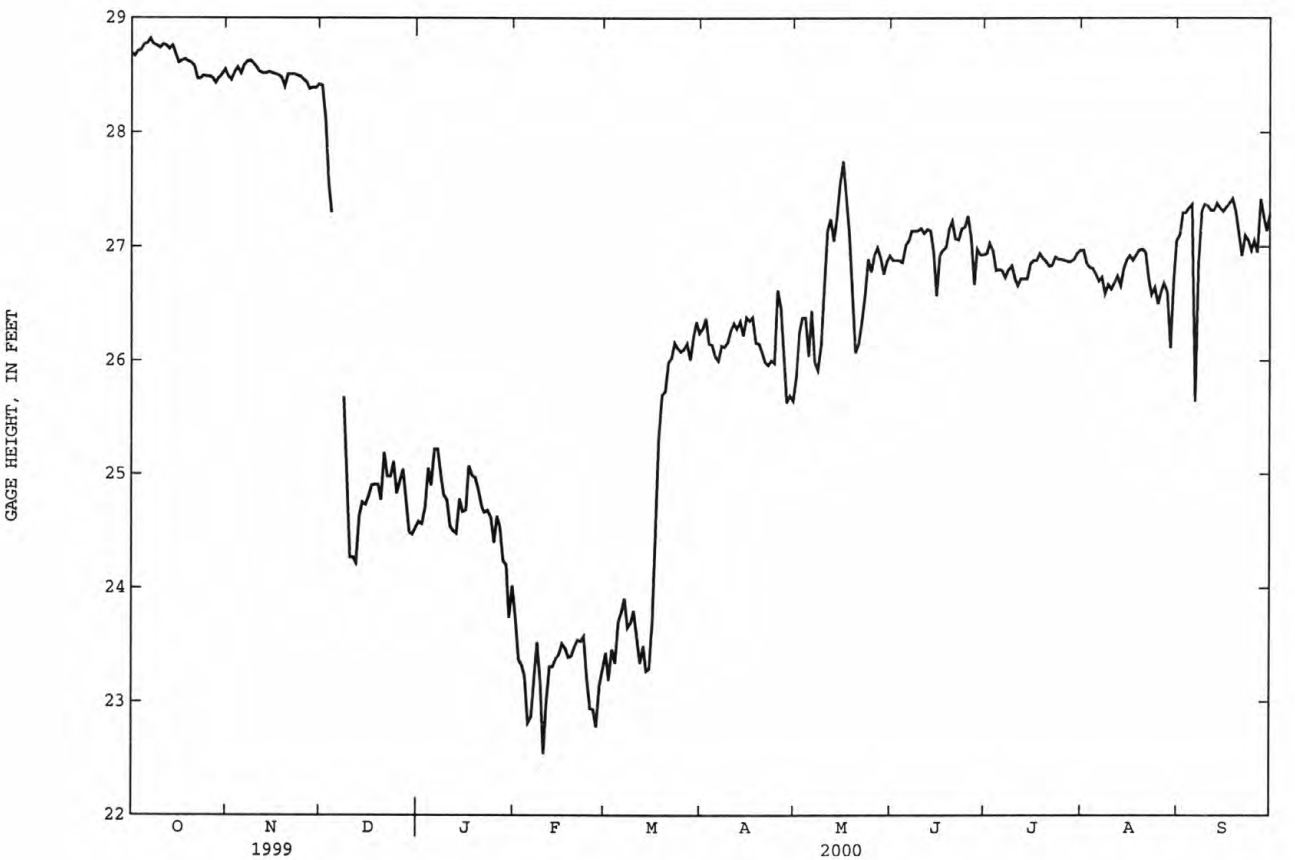
GAGE.--Water-stage recorder. Datum of gage is 1,200.00 ft above sea level.

REMARKS.--U.S. Army Corps of Engineers satellite data-collection platform at station. Stage regulated by Fort Randall Dam about 17 mi upstream.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.69	28.49	28.41	24.58	23.74	23.43	26.28	25.87	26.88	26.94	26.97	27.10
2	28.67	28.46	28.13	24.56	23.37	23.19	26.37	26.24	26.88	27.03	26.85	27.30
3	28.71	28.53	27.57	24.70	23.33	23.46	26.15	26.38	26.88	26.97	26.82	27.30
4	28.72	28.57	27.30	25.05	23.22	23.34	26.14	26.38	26.86	26.79	26.81	27.34
5	28.77	28.52	---	24.90	22.81	23.70	26.04	26.04	27.01	26.80	26.76	27.37
6	28.78	28.59	---	25.22	22.86	23.78	26.00	26.44	27.05	26.79	26.70	25.64
7	28.82	28.62	---	25.22	23.15	23.91	26.13	25.99	27.14	26.73	26.73	26.85
8	28.77	28.63	25.68	24.99	23.52	23.65	26.12	25.92	27.14	26.80	26.59	27.31
9	28.76	28.60	24.92	24.82	23.18	23.69	26.16	26.14	27.14	26.83	26.67	27.37
10	28.74	28.57	24.27	24.77	22.54	23.80	26.27	26.57	27.16	26.73	26.63	27.36
11	28.77	28.53	24.27	24.54	22.99	23.58	26.33	27.14	27.12	26.66	26.68	27.32
12	28.76	28.52	24.22	24.50	23.31	23.34	26.28	27.24	27.15	26.72	26.74	27.32
13	28.73	28.52	24.63	24.48	23.31	23.49	26.34	27.05	27.14	26.72	26.66	27.38
14	28.76	28.53	24.75	24.78	23.38	23.27	26.22	27.25	26.95	26.72	26.81	27.34
15	28.68	28.52	24.73	24.67	23.41	23.29	26.38	27.55	26.57	26.85	26.88	27.31
16	28.61	28.51	24.80	24.68	23.51	23.69	26.35	27.75	26.92	26.88	26.92	27.35
17	28.63	28.50	24.90	25.07	23.47	24.74	26.38	27.44	26.97	26.88	26.88	27.38
18	28.64	28.48	24.91	24.99	23.39	25.33	26.16	27.12	27.00	26.94	26.93	27.42
19	28.62	28.40	24.91	24.97	23.40	25.70	26.15	26.53	27.15	26.90	26.97	27.30
20	28.61	28.51	24.77	24.86	23.48	25.73	26.08	26.07	27.22	26.87	26.98	27.10
21	28.58	28.51	25.19	24.72	23.54	25.99	25.99	26.15	27.07	26.83	26.95	26.92
22	28.47	28.51	24.98	24.66	23.53	26.02	25.96	26.33	27.06	26.84	26.71	27.10
23	28.47	28.50	24.98	24.68	23.57	26.16	26.00	26.57	27.16	26.91	26.58	27.06
24	28.50	28.49	25.11	24.62	23.20	26.11	25.98	26.89	27.17	26.89	26.64	26.97
25	28.49	28.46	24.83	24.40	22.94	26.08	26.62	26.78	27.27	26.89	26.50	27.05
26	28.49	28.44	24.94	24.63	22.93	26.10	26.47	26.92	27.08	26.88	26.61	26.95
27	28.47	28.38	25.04	24.53	22.78	26.15	26.02	26.99	26.67	26.87	26.68	27.42
28	28.43	28.39	24.78	24.24	23.14	26.01	25.63	26.90	26.98	26.87	26.61	27.26
29	28.48	28.39	24.49	24.20	23.29	26.21	25.69	26.76	26.93	26.89	26.11	27.14
30	28.51	28.42	24.47	23.74	---	26.34	25.65	26.86	26.93	26.94	26.70	27.28
31	28.55	---	24.53	24.02	---	26.24	---	26.92	---	26.97	27.05	---
MEAN	28.63	28.50	---	24.67	23.25	24.69	26.14	26.68	27.02	26.85	26.75	27.18
MAX	28.82	28.63	---	25.22	23.74	26.34	26.62	27.75	27.27	27.03	27.05	27.42
MIN	28.43	28.38	---	23.74	22.54	23.19	25.63	25.87	26.57	26.66	26.11	25.64

06453020 MISSOURI RIVER BELOW GREENWOOD, SD--Continued



06453120 MISSOURI RIVER ABOVE CHOTEAU CREEK, NEAR VERDEL, NE

LOCATION.--Lat 42°50'40", long 98°11'50", in NE¼ SW¼ SE¼ sec.12, T.33 N., R.8 W., Charles Mix County, Hydrologic Unit 10170101, 2.3 mi upstream from mouth of Choteau Creek and 2.3 mi north of Verdel, NE.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

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)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
FEB 2000												
09...	1200	805	8.5	9.0	1.6	90.0	729	14.3	107	250	96	150
APR												
13...	1115	797	8.5	14.0	6.7	40.8	730	13.4	115	240	76	161
JUN												
20...	1830	834	8.4	21.5	19.0	61.2	726	8.4	95	230	--	--
AUG												
23...	1245	792	8.3	28.0	24.4	58.8	735	8.3	103	240	78	157

DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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)
FEB 2000												
09...	170	58.7	24.2	76.3	40	2	4.8	173	5	237	9.8	.5
APR												
13...	166	56.8	22.8	71.5	39	2	5.1	193	1	236	10.4	.5
JUN												
20...	165	57.1	22.2	81.4	42	2	4.6	--	--	245	10.6	.5
AUG												
23...	166	56.3	23.2	76.7	41	2	5.2	191	1	231	10.1	.5

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000											
09...	5.4	507	546	.020	.27	<.010	<.050	<.050	<.010	E1.1	E2.0
APR											
13...	5.1	504	532	<.020	.25	<.010	.056	<.050	<.010	E2.0	E2.1
JUN											
20...	4.2	525	545	.025	.29	<.010	.135	.147	<.010	<2.0	E2.2
AUG											
23...	5.0	503	522	<.020	.21	<.010	<.050	<.050	<.010	E1.7	E1.7

06453120 MISSOURI RIVER ABOVE CHOTEAU CREEK, NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 23	1245	20	7.4	11	14	0.5	39000	6.6

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
840	1	<10	<2	45	31	3	3

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	7	<8	<4	15000	25	9	13

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
430	<2	19	16	9	5	0.20	<2	230

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	5	<5	1800	<100	40	1	12	32

06453200 CHOTEAU CREEK NEAR WAGNER, SD

LOCATION.--Lat 43°05'52", long 98°17'15", on section line between sec.27 and 28, T.96 N., R.63 W., Charles Mix County, Hydrologic Unit 10170101, at bridge on section line road 1.1 mi north of State Route 46.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)
APR 2000 12...	0830	.11	4210	8.2	5.5	8.5	734	8.9	80	1900

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
APR 2000 12...	1600	329	339	380	240	423	32	4	29.5	401

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
APR 2000 12...	0	2170	179	.3	12.8	3630	3920	1.17	.075

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 2000 12...	1.9	<.010	<.050	.512	.113	6.2	4.4	167	82

06453252 CHOTEAU CREEK NEAR DANTE, SD

LOCATION.--Lat 43°01'32", long 98°10'03", on section line between sec.21 and 22, T.95 N., R.62 W., Charles Mix County, Hydrologic Unit 10170101, at bridge on section line road 0.9 mi southeast of Dante.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)
FEB 2000										
08...	0850	.41	3620	7.9	4.0	.7	729	25.1	186	1700
APR										
12...	0930	.51	3790	8.2	9.5	8.5	734	12.0	108	1700
JUN										
20...	0835	.36	2780	7.9	20.5	20.0	719	7.6	90	1300

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
FEB 2000										
08...	1400	304	325	384	180	247	24	3	20.1	371
APR										
12...	1400	280	298	353	197	363	31	4	22.4	342
JUN										
20...	1100	165	181	271	140	177	23	2	19.7	165

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
FEB 2000									
08...	0	1820	95.2	.3	15.7	2950	3340	3.69	<.020
APR									
12...	0	2020	134	.3	14.2	3270	3580	4.94	<.020
JUN									
20...	0	1450	59.1	.3	2.5	2210	2480	2.41	<.020

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
FEB 2000									
08...	1.7	<.010	.345	.172	<.010	2.9	20.4	148	--
APR									
12...	1.5	<.010	<.050	.285	.018	4.5	11.1	410	96
JUN									
20...	2.2	<.010	<.050	.604	.016	4.8	14.4	88	100

06453255 CHOTEAU CREEK NEAR AVON, SD

LOCATION.--Lat 42°55'24", long 98°06'21", in NW¼ NW¼ NW¼ sec.31, T.94 N., R.61 W., Bon Homme County, Hydrologic Unit 10170101, on left bank at downstream side of highway bridge, 6.3 mi southwest of Avon, 0.7 mi downstream from Dry Choteau Creek, and 12.7 mi upstream from mouth.

DRAINAGE AREA.--602 mi^2.

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

REVISED RECORDS.--WDR SD-86-1: 1984(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,290 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.6	3.9	e3.8	e2.7	9.6	5.6	5.4	22	2.3	.91	1.2
2	3.6	3.9	4.1	e3.7	e2.8	10	5.0	4.1	20	2.2	.83	1.5
3	5.1	4.1	4.2	e3.8	e2.7	9.6	4.4	3.4	17	2.2	.58	1.3
4	4.5	4.5	3.9	e3.9	e2.6	8.1	3.7	3.1	15	2.4	.74	2.2
5	4.8	4.1	3.0	e4.0	e2.7	5.7	3.6	3.3	14	2.3	1.0	1.9
6	4.5	3.9	3.0	e4.0	e2.8	5.2	3.4	3.6	10	2.6	.90	1.5
7	4.3	4.2	3.3	e4.1	e3.1	6.0	3.8	3.5	7.4	2.3	1.5	1.8
8	4.0	4.0	3.5	e4.2	e3.4	7.0	4.1	3.9	5.5	2.1	2.3	1.5
9	3.8	3.8	3.5	e4.1	e4.0	e7.5	3.7	4.3	4.7	1.9	1.1	1.4
10	3.4	4.2	3.7	e4.1	e4.2	e8.0	4.6	3.6	5.4	1.9	1.0	.87
11	3.4	4.0	3.6	e4.0	e4.0	e9.0	4.4	2.7	4.3	1.7	.90	.82
12	3.4	4.6	e3.5	e3.8	e3.8	10	4.0	2.5	3.6	1.7	.88	.75
13	3.9	3.9	e3.6	e3.9	e3.6	9.8	3.8	2.3	3.6	1.6	.91	.65
14	4.3	3.6	e3.5	e4.1	e3.8	9.9	3.5	2.2	3.3	1.5	.73	.57
15	4.1	3.3	e3.4	4.3	e4.0	11	4.4	2.4	2.5	1.4	.87	.81
16	4.0	3.4	e3.3	4.2	4.0	10	7.9	2.0	2.4	1.3	1.3	.84
17	4.2	4.0	3.2	4.0	4.6	10	7.7	2.4	2.2	1.3	4.4	.83
18	4.1	6.9	3.2	3.9	5.4	8.8	6.1	186	1.8	1.1	4.6	.80
19	4.4	6.0	e3.0	e3.8	5.9	7.7	5.4	157	1.9	1.0	3.9	.68
20	4.2	5.2	e2.7	e3.9	5.7	6.9	7.9	109	1.7	.95	3.0	.80
21	4.6	4.7	2.8	4.0	6.0	6.1	7.3	78	1.6	.83	2.0	.97
22	3.4	4.2	2.9	4.1	5.8	6.0	8.2	60	2.1	.91	3.1	1.2
23	3.9	4.0	3.2	4.1	10	6.8	11	50	1.9	1.0	3.6	1.3
24	3.9	3.8	3.4	3.8	15	6.7	9.1	43	3.3	.96	2.6	1.1
25	3.8	3.5	3.5	3.8	10	6.0	7.9	38	3.1	.96	2.3	.98
26	3.6	3.6	3.6	3.7	6.9	6.5	7.5	37	3.2	.88	1.8	.87
27	3.5	4.0	3.4	e3.6	6.8	8.2	7.2	35	2.6	.85	1.6	.70
28	3.2	3.9	3.6	e3.4	10	7.0	5.8	34	2.6	.91	1.7	.61
29	3.9	3.9	e3.9	e3.2	10	6.1	4.4	30	2.4	.89	1.5	.51
30	3.9	3.9	e3.8	e3.0	---	6.2	4.7	27	2.5	.96	1.3	.48
31	4.2	---	e3.9	e2.8	---	6.2	---	23	---	.85	1.1	---
TOTAL	123.3	124.7	107.1	119.1	156.3	241.6	170.1	961.7	173.6	45.75	54.95	31.44
MEAN	3.98	4.16	3.45	3.84	5.39	7.79	5.67	31.0	5.79	1.48	1.77	1.05
MAX	5.1	6.9	4.2	4.3	15	11	11	186	22	2.6	4.6	2.2
MIN	3.2	3.3	2.7	2.8	2.6	5.2	3.4	2.0	1.6	.83	.58	.48
AC-FT	245	247	212	236	310	479	337	1910	344	91	109	62

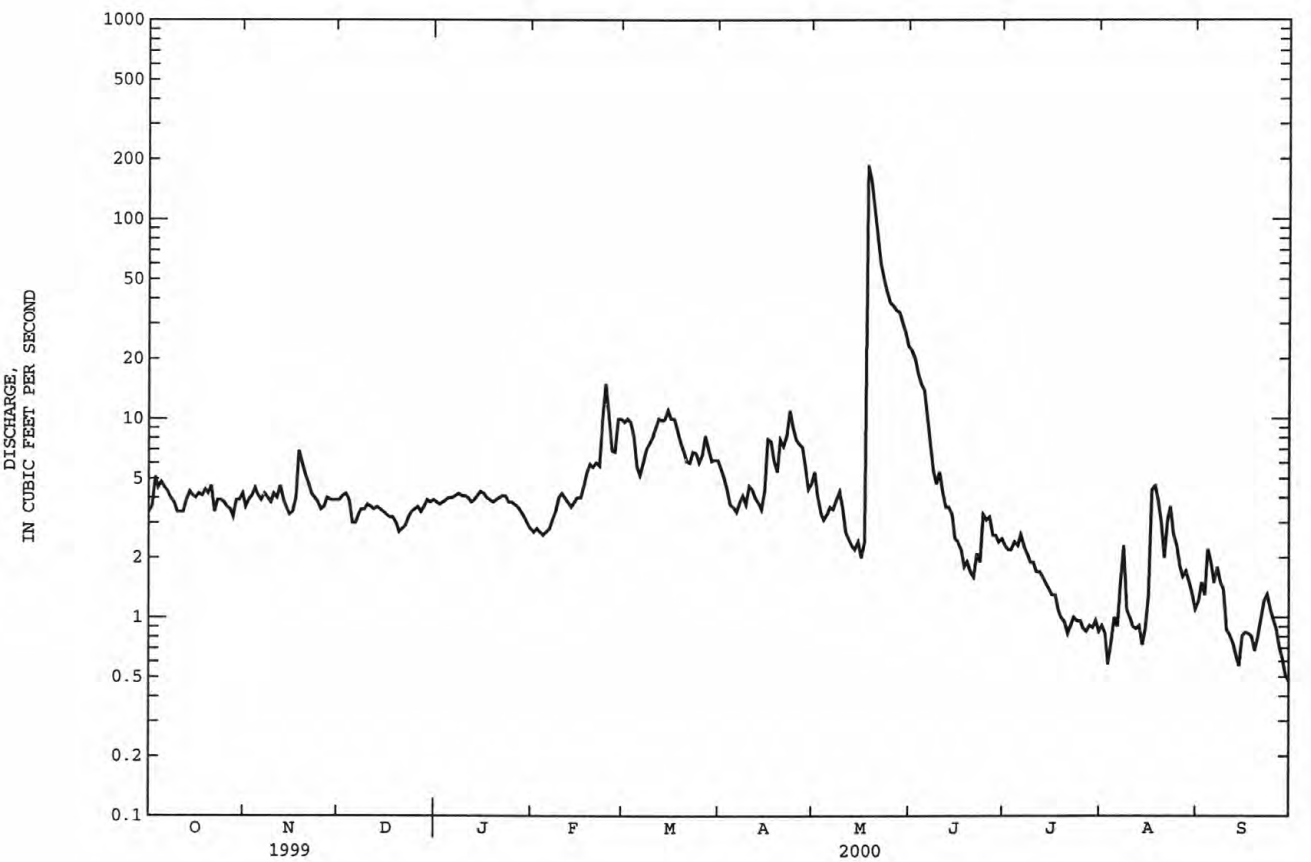
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

MEAN	7.02	8.36	5.16	2.95	24.1	154	158	138	131	77.2	12.1	12.0
MAX	42.0	81.6	34.2	8.71	125	914	653	865	910	502	89.4	98.2
(WY)	1987	1999	1999	1999	1997	1987	1986	1995	1984	1993	1993	1986
MIN	.23	.071	.22	.028	.70	.62	.42	1.17	2.01	.24	.067	.027
(WY)	1993	1993	1993	1993	1992	1991	1992	1989	1992	1991	1991	1991

06453255 CHOTEAU CREEK NEAR AVON, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1983 - 2000	
ANNUAL TOTAL	34833.5		2309.64			
ANNUAL MEAN	95.4		6.31		61.0a	
HIGHEST ANNUAL MEAN					168	1984
LOWEST ANNUAL MEAN					1.13	1992
HIGHEST DAILY MEAN	1130	Jul 8	186	May 18	5020	Mar 27 1987
LOWEST DAILY MEAN	2.7	Dec 20	.48	Sep 30	.00	Aug 23 1991b
ANNUAL SEVEN-DAY MINIMUM	3.0	Dec 17	.74	Sep 13	.00	Aug 23 1991
INSTANTANEOUS PEAK FLOW			310	May 18	7280	Jun 12 1984
INSTANTANEOUS PEAK STAGE			4.66	May 18	13.93	Jun 12 1984
ANNUAL RUNOFF (AC-FT)	69090		4580		44190	
10 PERCENT EXCEEDS	239		9.0		134	
50 PERCENT EXCEEDS	18		3.8		4.5	
90 PERCENT EXCEEDS	3.6		.96		.57	

a Median of annual mean discharges, 37 ft^3/s.
b Also Aug. 24 to Sept. 10, Sept. 15-18, 1991, and Sept. 26-30, 1992.
e Estimated.



06453300 CHOTEAU CREEK BELOW AVON, SD

LOCATION.--Lat 42°51'40", long 98°08'25", in SW¼ SW¼ NE¼ sec.23, T.93 N., R.62 W., Charles Mix County, Hydrologic Unit 10170101, at bridge over Choteau Creek, 1.4 mi upstream from mouth, and 11.0 mi south-southwest of Avon.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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)
FEB 2000										
08...	1050	5.4	2090	8.3	12.0	.0	731	13.9	100	1000
APR										
12...	1120	5.3	2240	8.3	11.0	10.0	736	13.3	123	1000
JUN										
20...	1045	3.7	2030	8.2	24.5	22.0	724	7.6	92	930
AUG										
23...	1625	4.4	1580	8.4	28.5	30.0	735	12.1	167	730

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
FEB 2000										
08...	800	238	258	262	92.6	91.5	16	1	14.3	291
APR										
12...	780	262	252	259	95.9	93.4	16	1	15.7	320
JUN										
20...	710	221	233	227	87.9	105	19	1	15.9	270
AUG										
23...	570	165	168	188	63.5	77.3	18	1	16.0	183

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
FEB 2000									
08...	0	956	29.0	.3	19.7	1610	1760	25.7	<.020
APR									
12...	0	1040	42.3	.3	16.6	1720	1910	27.2	<.020
JUN									
20...	0	922	33.7	.3	17.5	1540	1690	17.1	<.020
AUG									
23...	9	707	20.8	.2	15.6	1190	1260	14.9	<.020

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
FEB 2000									
08...	.28	<.010	.123	<.050	<.010	<2.0	8.1	52	43
APR									
12...	.60	<.010	<.050	.061	.018	3.1	6.6	58	97
JUN									
20...	.95	<.010	<.050	.151	<.010	3.3	5.0	56	100
AUG									
23...	.50	<.010	<.050	.057	<.010	2.7	2.6	57	90

06453300 CHOTEAU CREEK BELOW AVON, SD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 23	1625	46	8.4	8.5	18	1.1	54000	17

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
820	1	<10	<2	60	50	12	24

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	11	<8	<4	26000	32	17	24

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
4800	<2	25	53	<4	8	3.0	<2	290

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	7	<5	2500	<100	120	2	22	100

06453305 MISSOURI RIVER BELOW CHOTEAU CREEK, NEAR VERDEL, NE

LOCATION.--Lat 42°50'05", long 98°08'20", in NW¼ SW¼ NW¼ sec.35, T.93 N., R.62 W., Bon Homme County (revised), Hydrologic Unit 10170101, 1.7 mi upstream from mouth of Coffee Creek and 3.1 mi northeast of Verdel, NE.

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

REMARKS.--Bottom sediments analyzed by USGS Geologic Division in Denver, Colorado.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	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)	TRANS-PAR-ENCY (SECCHI DISK) (IN) (00077)	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)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
FEB 2000												
09...	1035	811	8.5	2.5	1.5	3.63	728	14.3	107	250	91	154
APR												
13...	0945	811	8.4	13.0	7.0	24.0	730	13.6	117	240	78	160
JUN												
20...	1935	830	8.4	19.0	19.0	54.0	727	7.5	85	230	--	--
AUG												
23...	1415	792	8.4	30.0	24.9	42.0	735	7.8	98	240	81	158

DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	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)
FEB 2000												
09...	170	58.8	24.1	74.7	39	2	5.0	174	7	238	10.0	.5
APR												
13...	166	57.3	23.0	71.8	39	2	5.2	193	1	239	10.7	.5
JUN												
20...	165	56.3	22.2	81.6	43	2	5.4	--	--	245	10.4	.5
AUG												
23...	166	57.5	23.5	76.2	40	2	5.1	192	1	232	10.1	.5

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
FEB 2000											
09...	5.3	509	547	<.020	.25	<.010	.050	<.050	<.010	E1.4	E1.9
APR											
13...	5.1	509	535	<.020	.26	<.010	.053	<.050	<.010	E1.3	E2.0
JUN											
20...	4.1	525	548	.024	.28	<.010	.143	E.044	<.010	E1.8	2.8
AUG											
23...	4.8	505	524	<.020	.27	<.010	<.050	<.050	<.010	E1.5	E1.2

06453305 MISSOURI RIVER BELOW CHOTEAU CREEK, NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	CALCIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	MAGNE-SIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	SODIUM, TOTAL IN BOTTOM MATERIAL (MG/G)	POTAS-SIUM , TOTAL IN BOTTOM MATERIAL (MG/G)	PHOS-PHORUS, TOTAL IN BOTTOM MATERIAL (MG/G)	ALUM-INUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G)
Aug. 23	1415	32	11	10	18	0.8	52000	11

BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BERYL-LIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	BISMUTH, TOTAL IN BOTTOM MATERIAL (UG/G)	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CERIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	CHRO-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G)	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G)
790	1	<10	<2	59	48	9	19

EURO-PIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GALLIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	GOLD, TOTAL IN BOTTOM MATERIAL (UG/G)	HOLMIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	IRON, TOTAL IN BOTTOM MATERIAL (UG/G)	LANTH-ANUM, TOTAL IN BOTTOM MATERIAL (UG/G)	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G)	LITHIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
<2	10	<8	<4	22000	31	15	23

MANGA-NESE, TOTAL IN BOTTOM MATERIAL (UG/G)	MOLYB-DENUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NEODY-MIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G)	NIOBIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SCAN-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SELE-NIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G)	STRON-TIUM, TOTAL IN BOTTOM MATERIAL (UG/G)
1000	<2	26	31	11	7	1.5	<2	260

TAN-TALUM, TOTAL IN BOTTOM MATERIAL (UG/G)	THORIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	TIN, TOTAL IN BOTTOM MATERIAL (UG/G)	TITAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	URAN-IUM, TOTAL IN BOTTOM MATERIAL (UG/G)	VANA-DIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTER-BIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	YTTRIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G)
<40	8	<5	2400	<100	87	2	19	77

06464100 KEYA PAHA RIVER NEAR KEYAPAHA, SD

LOCATION.--Lat 43°07'45", long 100°06'24", in NW¼ SW¼ SW¼ sec.17, T.96 N., R.78 W., Tripp County, Hydrologic Unit 10150006, on left bank at downstream side of highway bridge, 2.0 mi northeast of Keyapaha, and 2.0 mi upstream from Sand Creek.

DRAINAGE AREA.--466 mi^2, approximately.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,230 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1952 reached a stage of about 14 ft, at present datum, from information by local residents.

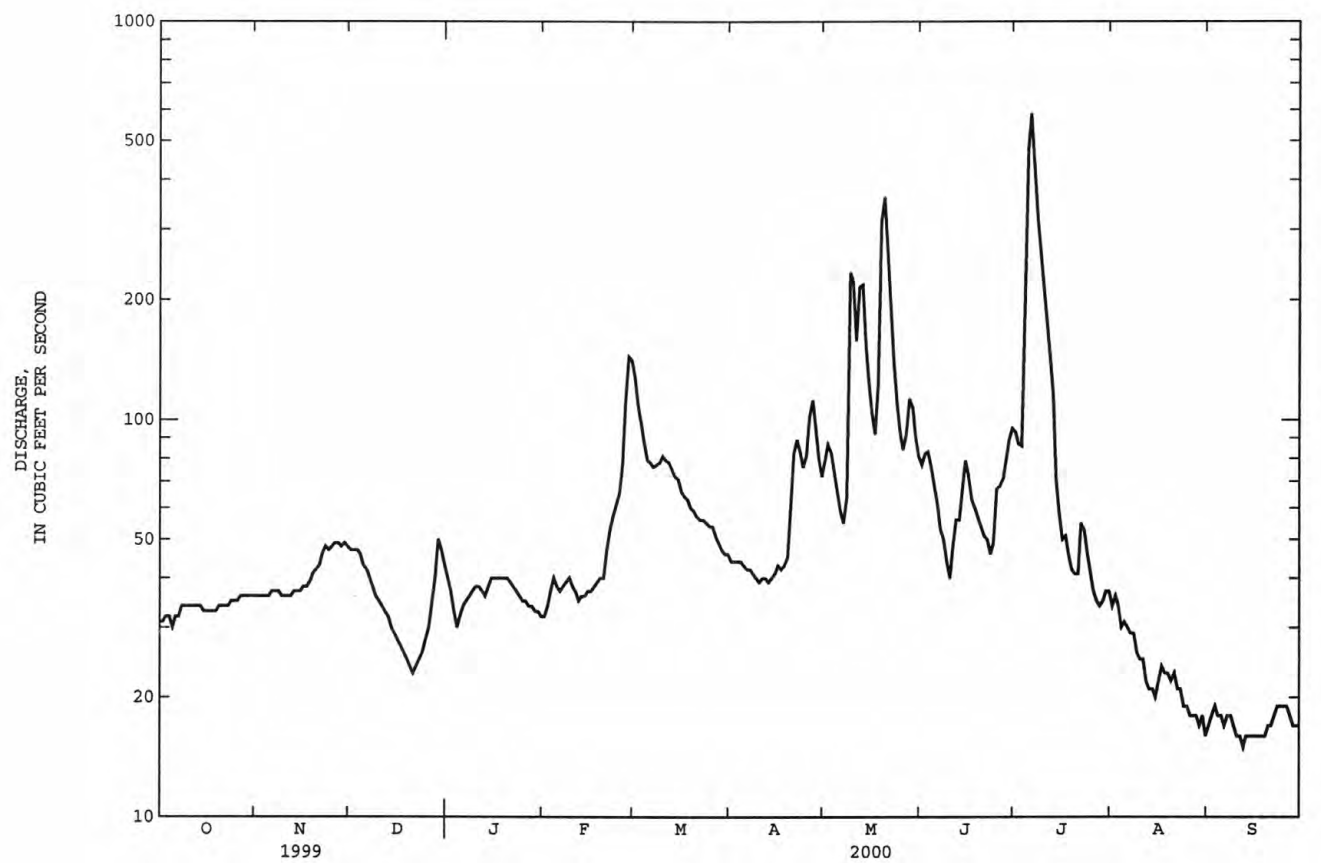
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	36	47	e40	e32	127	44	79	77	93	34	17
2	31	36	47	e37	e34	109	44	87	82	87	36	18
3	32	36	47	e33	e37	98	44	83	83	86	34	19
4	32	36	46	e30	e40	87	44	73	76	229	30	18
5	30	36	43	e32	e38	79	43	65	68	477	31	18
6	32	37	e42	e34	e37	78	42	59	61	586	30	17
7	32	37	e40	e35	e38	76	42	55	53	449	29	18
8	34	37	e38	e36	e39	77	41	64	50	321	29	18
9	e34	36	e36	e37	e40	78	40	234	44	249	26	17
10	e34	36	e35	e38	e38	81	39	222	40	204	25	16
11	e34	36	e34	e38	e37	79	40	158	48	169	25	16
12	e34	36	e33	e37	e35	78	40	215	56	144	22	15
13	e34	37	e32	e36	e36	75	39	218	56	115	21	16
14	e34	37	e30	e38	e36	72	40	157	67	71	21	16
15	33	37	e29	e40	e37	71	41	124	79	58	20	16
16	33	38	e28	e40	e37	66	43	104	72	50	22	16
17	33	38	e27	e40	e38	64	42	92	63	51	24	16
18	33	39	e26	e40	e39	63	43	123	60	46	23	16
19	33	41	e25	e40	e40	60	45	314	57	42	23	16
20	34	42	e24	e40	e40	59	59	362	54	41	22	17
21	34	43	e23	e39	e47	57	82	251	51	41	23	17
22	34	46	e24	e38	53	56	89	185	50	55	21	18
23	34	48	e25	e37	57	56	83	138	46	53	21	19
24	35	47	e26	e36	61	55	76	110	49	46	19	19
25	35	48	e28	e35	65	54	81	93	67	41	19	19
26	35	49	e30	e35	78	54	102	84	68	37	18	19
27	36	49	e35	e34	111	51	112	92	71	35	18	18
28	36	48	e40	e34	144	49	96	113	79	34	18	17
29	36	49	e50	e33	141	47	80	108	89	35	17	17
30	36	48	e47	e33	---	46	72	91	95	37	18	17
31	36	---	e43	e32	---	46	---	81	---	37	16	---
TOTAL	1044	1219	1080	1127	1505	2148	1728	4234	1911	4019	735	516
MEAN	33.7	40.6	34.8	36.4	51.9	69.3	57.6	137	63.7	130	23.7	17.2
MAX	36	49	50	40	144	127	112	362	95	586	36	19
MIN	30	36	23	30	32	46	39	55	40	34	16	15
AC-FT	2070	2420	2140	2240	2990	4260	3430	8400	3790	7970	1460	1020
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2000, BY WATER YEAR (WY)												
MEAN	25.0	29.6	23.7	21.5	60.1	82.7	76.5	91.6	64.8	38.3	23.9	19.8
MAX	54.8	81.3	45.7	67.0	247	158	155	257	148	130	87.1	44.0
(WY)	1996	1999	1999	1997	1997	1988	1987	1995	1995	2000	1998	1999
MIN	10.6	11.9	5.54	3.51	10.7	29.5	24.3	17.5	11.3	16.8	10.1	9.78
(WY)	1990	1986	1986	1991	1989	1995	1990	1992	1985	1985	1989	1990

06464100 KEYA PAHA RIVER NEAR KEYAPAHA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1982 - 2000	
ANNUAL TOTAL	23478		21266			
ANNUAL MEAN	64.3		58.1		46.3a	
HIGHEST ANNUAL MEAN					81.0	1997
LOWEST ANNUAL MEAN					18.5	1989
HIGHEST DAILY MEAN	912	May 11	586	Jul 6	928	Feb 20 1997
LOWEST DAILY MEAN	18	Aug 27	15	Sep 12	2.4	Jan 6 1991
ANNUAL SEVEN-DAY MINIMUM	19	Aug 21	16	Sep 10	2.5	Jan 1 1991
INSTANTANEOUS PEAK FLOW			632	Jul 6	1200	May 11 1999b
INSTANTANEOUS PEAK STAGE			7.76	Jul 6	11.29	Feb 18 1997c
ANNUAL RUNOFF (AC-FT)	46570		42180		33570	
10 PERCENT EXCEEDS	127		95		92	
50 PERCENT EXCEEDS	44		40		28	
90 PERCENT EXCEEDS	26		19		12	

a Median of annual mean discharges, 46 ft^3/s.
b Gage height, 9.48 ft.
c Backwater from ice.
e Estimated.



06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'44", long 99°46'49", in NW¼ SW¼ SE¼ sec.24, T.95 N., R.76 W., Tripp County, Hydrologic Unit 10150006, on right bank at downstream side of bridge on U.S. Highway 183, 1.0 mi north of Wewela, 4.5 mi upstream from Holt Creek, and 11.5 mi downstream from Lost Creek.

DRAINAGE AREA.--1,070 mi^2, approximately.

PERIOD OF RECORD.--November 1937 to September 1940, October 1947 to current year. Monthly discharge only for October 1947, published in WSP 1309.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,049.78 ft above sea level. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum. Prior to Aug. 23, 1984, recording gage on left bank 13 ft downstream from bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	67	88	e110	e60	211	86	147	174	96	47	25
2	73	66	87	e100	e65	195	86	156	165	95	45	26
3	76	68	86	e88	e70	180	85	161	156	91	44	26
4	78	69	86	e80	e66	165	84	149	148	144	43	26
5	68	70	80	e85	e61	153	85	135	134	302	46	26
6	65	70	e70	e90	e60	145	80	122	122	540	46	25
7	67	71	e65	e89	e60	141	80	114	112	545	45	25
8	66	71	e70	e87	e62	142	81	150	101	453	43	25
9	65	71	e66	e85	e64	137	79	166	91	363	40	25
10	64	71	e63	e83	e60	134	81	320	98	282	39	24
11	65	71	e60	e80	e58	134	81	285	86	226	41	24
12	64	71	e57	e80	e56	135	79	248	107	182	38	24
13	63	71	e54	e80	e55	130	80	289	131	150	31	24
14	64	70	e53	e84	e54	128	80	274	132	125	32	24
15	64	70	e52	e87	e53	131	82	220	131	108	29	24
16	63	70	e51	e90	e52	124	86	187	123	97	29	24
17	63	71	e50	e88	e51	118	88	164	117	88	30	24
18	63	72	e50	e86	e50	115	91	212	109	79	30	23
19	60	74	e47	e84	e50	112	93	318	103	75	32	23
20	61	76	e44	e82	e55	109	103	463	105	73	35	24
21	63	77	e41	e80	e60	108	122	433	99	71	40	25
22	69	77	e40	e78	e95	107	147	362	90	70	35	29
23	64	80	e42	e75	e130	108	154	297	84	72	33	33
24	64	81	e47	e72	119	111	142	238	80	74	31	38
25	64	83	e50	e70	130	107	160	195	79	72	28	40
26	64	86	e58	e68	145	105	182	173	80	62	26	35
27	65	87	e70	e67	164	100	196	171	80	58	26	36
28	64	86	e100	e65	192	95	188	192	86	55	24	34
29	66	87	e150	e63	218	93	164	212	89	55	23	32
30	71	87	e140	e61	---	90	148	193	96	52	23	31
31	76	---	e125	e60	---	87	---	177	---	49	24	---
TOTAL	2052	2241	2142	2497	2415	3950	3293	6923	3308	4804	1078	824
MEAN	66.2	74.7	69.1	80.5	83.3	127	110	223	110	155	34.8	27.5
MAX	78	87	150	110	218	211	196	463	174	545	47	40
MIN	60	66	40	60	50	87	79	114	79	49	23	23
AC-FT	4070	4450	4250	4950	4790	7830	6530	13730	6560	9530	2140	1630

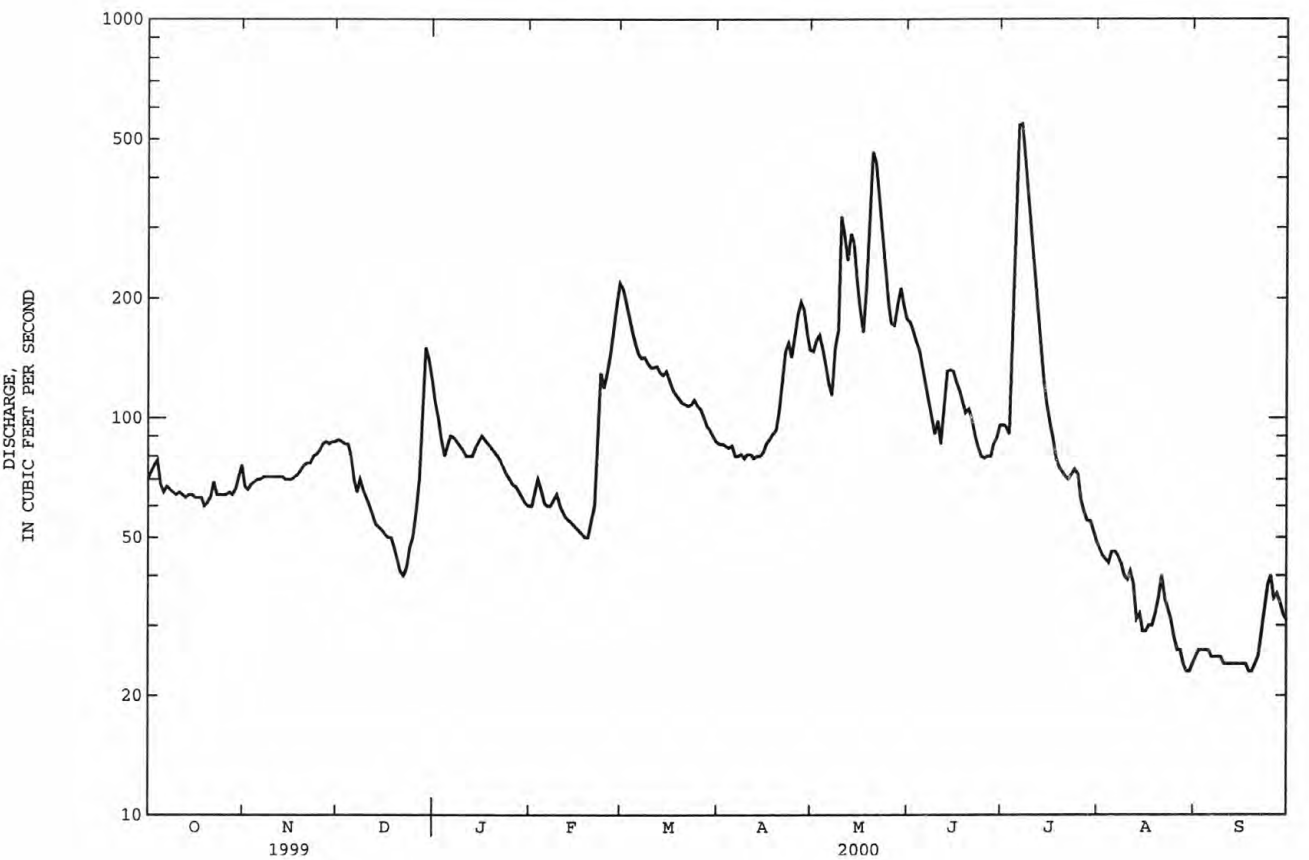
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1940, 1948 - 2000, BY WATER YEAR (WY)

MEAN	41.0	47.0	37.4	32.8	76.6	177	163	146	108	65.7	37.2	31.3
MAX	141	204	108	135	546	598	605	754	512	607	178	89.2
(WY)	1996	1999	1999	1997	1997	1960	1952	1995	1962	1962	1998	1999
MIN	8.49	12.0	8.74	1.61	5.07	33.5	31.3	27.4	12.2	3.55	.80	3.71
(WY)	1977	1977	1956	1949	1979	1975	1976	1981	1976	1940	1976	1976

06464500 KEYA PAHA RIVER AT WEWELA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939-1940, 1948-2000	
ANNUAL TOTAL	52913		35527			
ANNUAL MEAN	145		97.1		80.3a	
HIGHEST ANNUAL MEAN					188	1997
LOWEST ANNUAL MEAN					19.5	1976
HIGHEST DAILY MEAN	1150	May 12	545	Jul 7	4930	Mar 30 1952
LOWEST DAILY MEAN	28	Aug 28	23	Aug 29b	.00	Jan 10 1949c
ANNUAL SEVEN-DAY MINIMUM	31	Aug 23	24	Sep 13	.00	Jan 10 1949
INSTANTANEOUS PEAK FLOW			591	Jul 6	5430	Mar 31 1952d
INSTANTANEOUS PEAK STAGE			3.77	Jul 6	13.50	Mar 25 1950f
ANNUAL RUNOFF (AC-FT)	105000		70470		58180	
10 PERCENT EXCEEDS	275		173		165	
50 PERCENT EXCEEDS	96		79		42	
90 PERCENT EXCEEDS	51		32		15	

a Median of annual mean discharges, 69 ft^3/s.
b Also Aug. 30, Sept. 18, 19.
c Also Jan. 11 to Feb. 15, 1949, and Aug. 19 to Sept. 14, 1976.
d Gage height, 13.08 ft.
e Estimated.
f Backwater from ice.



06466700 LEWIS AND CLARK LAKE AT SPRINGFIELD, SD

LOCATION.--Lat 42°51'21", long 97°53'06", in SW¼ NE¼ SW¼ sec.24, T.93 N., R.60 W., Bon Homme County, Hydrologic Unit 10170101, on left bank at east edge of Springfield at mile 832.20.

PERIOD OF RECORD.--August 1967 to current year.

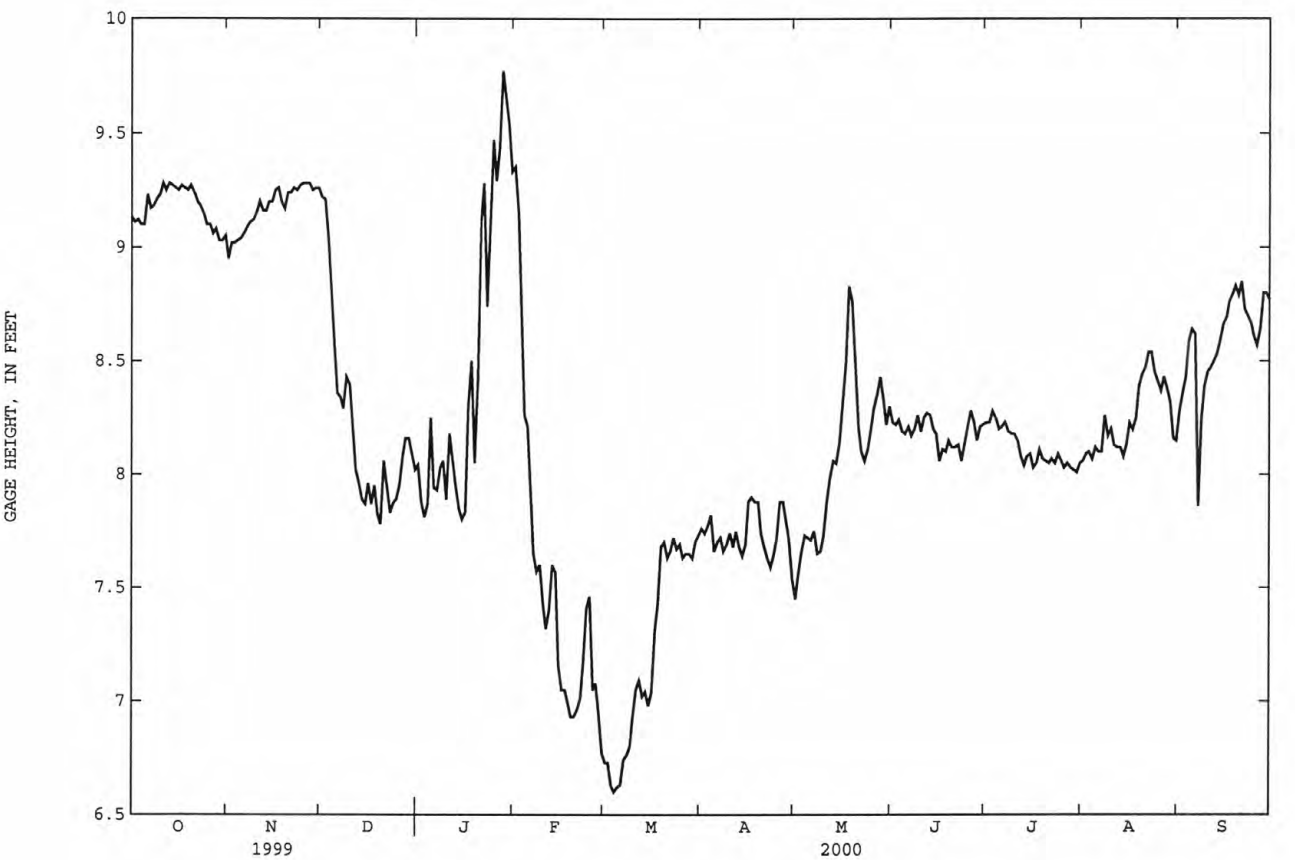
GAGE.--Water-stage recorder. Datum of gage is 1,200.00 ft above sea level.

REMARKS.--Records fair. Stage regulated by Gavins Point Dam 21.2 mi downstream. U.S. Army Corps of Engineers satellite data-collection platform at station. Prior to Oct. 1, 1980, gage heights in files of U.S. Army Corps of Engineers.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.13	8.95	9.22	8.04	9.35	6.73	7.76	7.45	8.23	8.23	8.06	8.28
2	9.11	9.02	9.21	7.88	9.15	6.73	7.74	7.56	8.22	8.23	8.09	8.36
3	9.12	9.02	9.04	7.81	8.68	6.63	7.77	7.66	8.24	8.28	8.10	8.43
4	9.10	9.03	8.78	7.87	8.26	6.60	7.82	7.73	8.19	8.25	8.07	8.59
5	9.10	9.04	8.56	8.25	8.21	6.62	7.66	7.72	8.18	8.20	8.12	8.64
6	9.23	9.06	8.36	7.94	7.93	6.63	7.70	7.71	8.21	8.21	8.10	8.62
7	9.17	9.09	8.34	7.93	7.65	6.74	7.72	7.75	8.17	8.23	8.10	7.86
8	9.18	9.11	8.29	8.03	7.57	6.76	7.66	7.65	8.20	8.19	8.26	8.25
9	9.21	9.12	8.43	8.06	7.60	6.80	7.69	7.66	8.26	8.18	8.17	8.39
10	9.23	9.15	8.40	7.89	7.43	6.93	7.74	7.73	8.19	8.18	8.20	8.45
11	9.28	9.20	8.22	8.18	7.32	7.05	7.68	7.88	8.25	8.15	8.13	8.47
12	9.25	9.16	8.02	8.06	7.40	7.09	7.75	7.99	8.27	8.08	8.12	8.50
13	9.28	9.16	7.96	7.95	7.60	7.02	7.68	8.06	8.26	8.04	8.12	8.53
14	9.27	9.20	7.89	7.85	7.57	7.04	7.64	8.05	8.20	8.08	8.08	8.59
15	9.26	9.20	7.87	7.80	7.16	6.98	7.69	8.14	8.18	8.09	8.13	8.66
16	9.25	9.25	7.96	7.83	7.05	7.04	7.88	8.31	8.06	8.03	8.23	8.69
17	9.27	9.26	7.87	8.30	7.05	7.31	7.90	8.50	8.11	8.05	8.20	8.76
18	9.26	9.20	7.95	8.50	6.99	7.43	7.88	8.83	8.10	8.11	8.25	8.79
19	9.25	9.17	7.82	8.05	6.93	7.68	7.88	8.76	8.15	8.07	8.39	8.83
20	9.27	9.24	7.78	8.42	6.93	7.70	7.74	8.46	8.12	8.06	8.44	8.79
21	9.24	9.24	8.06	9.11	6.96	7.63	7.68	8.21	8.12	8.05	8.47	8.85
22	9.20	9.26	7.95	9.28	7.01	7.66	7.63	8.10	8.13	8.07	8.54	8.73
23	9.18	9.25	7.83	8.74	7.17	7.72	7.59	8.06	8.06	8.05	8.54	8.70
24	9.15	9.27	7.87	9.10	7.41	7.67	7.64	8.11	8.13	8.09	8.45	8.67
25	9.10	9.28	7.89	9.47	7.46	7.69	7.72	8.20	8.21	8.06	8.41	8.61
26	9.10	9.28	7.95	9.29	7.05	7.63	7.88	8.29	8.28	8.03	8.37	8.57
27	9.06	9.28	8.08	9.44	7.08	7.65	7.88	8.35	8.23	8.05	8.43	8.64
28	9.08	9.25	8.16	9.77	6.94	7.65	7.80	8.43	8.15	8.03	8.38	8.80
29	9.03	9.26	8.16	9.65	6.77	7.63	7.71	8.33	8.21	8.02	8.32	8.80
30	9.03	9.26	8.09	9.54	---	7.70	7.54	8.22	8.22	8.01	8.16	8.77
31	9.05	---	8.02	9.33	---	7.73	---	8.30	---	8.05	8.15	---
MEAN	9.18	9.18	8.19	8.50	7.51	7.22	7.74	8.07	8.18	8.11	8.24	8.59
MAX	9.28	9.28	9.22	9.77	9.35	7.73	7.90	8.83	8.28	8.28	8.54	8.85
MIN	9.03	8.95	7.78	7.80	6.77	6.60	7.54	7.45	8.06	8.01	8.06	7.86

06466700 LEWIS AND CLARK LAKE AT SPRINGFIELD, SD--Continued



06467000 LEWIS AND CLARK LAKE NEAR YANKTON, SD

LOCATION.--Lat 42°50'56", long 97°28'54", in SW¼ sec.7, T.33 N., R.1 W., Cedar County, NE, Hydrologic Unit 10170101, in powerhouse of Gavins Point Dam on Missouri River, 3.75 mi southwest of Yankton, 13.6 mi upstream from James River, 32.5 mi downstream from Niobrara River, and at mile 811.0.

DRAINAGE AREA.--279,500 mi^2, approximately.

PERIOD OF RECORD.--July 1955 to current year (monthend contents only). Prior to October 1955, published as Gavins Point Reservoir near Yankton.

GAGE.--Water-stage recorder. Datum of gage is above sea level. Prior to Dec. 9, 1955, recorder at temporary location on wall of intake structure unit 3.

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 504,000 acre-ft below elevation 1,210.0 ft (top of spillway gates). Normal maximum, 442,600 acre-ft below elevation 1,208.0 ft. Inactive storage, 157,000 acre-ft below elevation 1,195.0 ft. Dead storage, 23,000 acre-ft below elevation 1,180.0 ft (crest of spillway). From capacity table put into use Nov. 1, 1986; maximum capacity, 491,700 acre-ft. Normal maximum, 432,000 acre-ft. Inactive storage, 149,400 acre-ft. Dead storage, 17,700 acre-ft. Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of 14 taintor gates, each 40 ft wide by 30 ft high; spillway capacity, 280,000 ft^3/s at pool elevation 1,210.0 ft. Crest of spillway is at elevation 1,180.0 ft. Normal releases are through 3 power units, installation completed in January 1957; maximum release through power units is 35,000 ft^3/s at pool elevation, 1,210.0 ft. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 565,000 acre-ft, Apr. 1, 1960, affected by wind; maximum elevation, 1,210.6 ft, Mar. 29, 1960; minimum since initial filling, 61,950 acre-ft, Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 403,000 acre-ft, Dec. 9; minimum contents, 339,000 acre-ft, May 14.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	1,206.89	381,000	--
Oct. 31	1,206.85	380,000	-1,000
Nov. 30	1,207.23	390,000	+10,000
Dec. 31	1,207.25	389,000	-1,000
CAL YR 1999	--	--	+14,000
Jan. 31	1,207.10	386,000	-3,000
Feb. 29	1,206.14	361,000	-25,000
Mar. 31	1,206.08	360,000	-1,000
Apr. 30	1,205.82	353,000	-7,000
May 31	1,206.22	363,000	+10,000
June 30	1,206.21	362,000	-1,000
July 31	1,205.82	353,000	-9,000
Aug. 31	1,206.17	363,000	+10,000
Sept.30	1,207.00	384,000	+21,000
WTR YR 2000	--	--	+3,000

NOTE.--Lake frozen over Dec. 22 to Feb. 26.

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06467500 MISSOURI RIVER AT YANKTON, SD

LOCATION.--Lat 42°51'58", long 97°23'37", in SW¼ SW¼ sec.18, T.93 N., R.55 W., Yankton County, Hydrologic Unit 10170101, on left bank 10 ft upstream (revised) of Meridian Highway Bridge on U.S. Highway 81, 5.2 mi downstream from Gavins Point Dam, 6.0 mi upstream from James River, and at mile 805.8.

DRAINAGE AREA.--279,500 mi^2, approximately.

PERIOD OF RECORD.--October 1, 1995, to current year, daily gage-height records. October 1930 to September 1995, daily discharge determined. Monthly discharge only for some periods, published in WSP 1309. Gage-height records collected at same site March 1873 to November 1886, March 1905 to May 1908 (fragmentary), August 1921 to September 1950 (except winter months prior to 1932), are contained in reports of the National Weather Service.

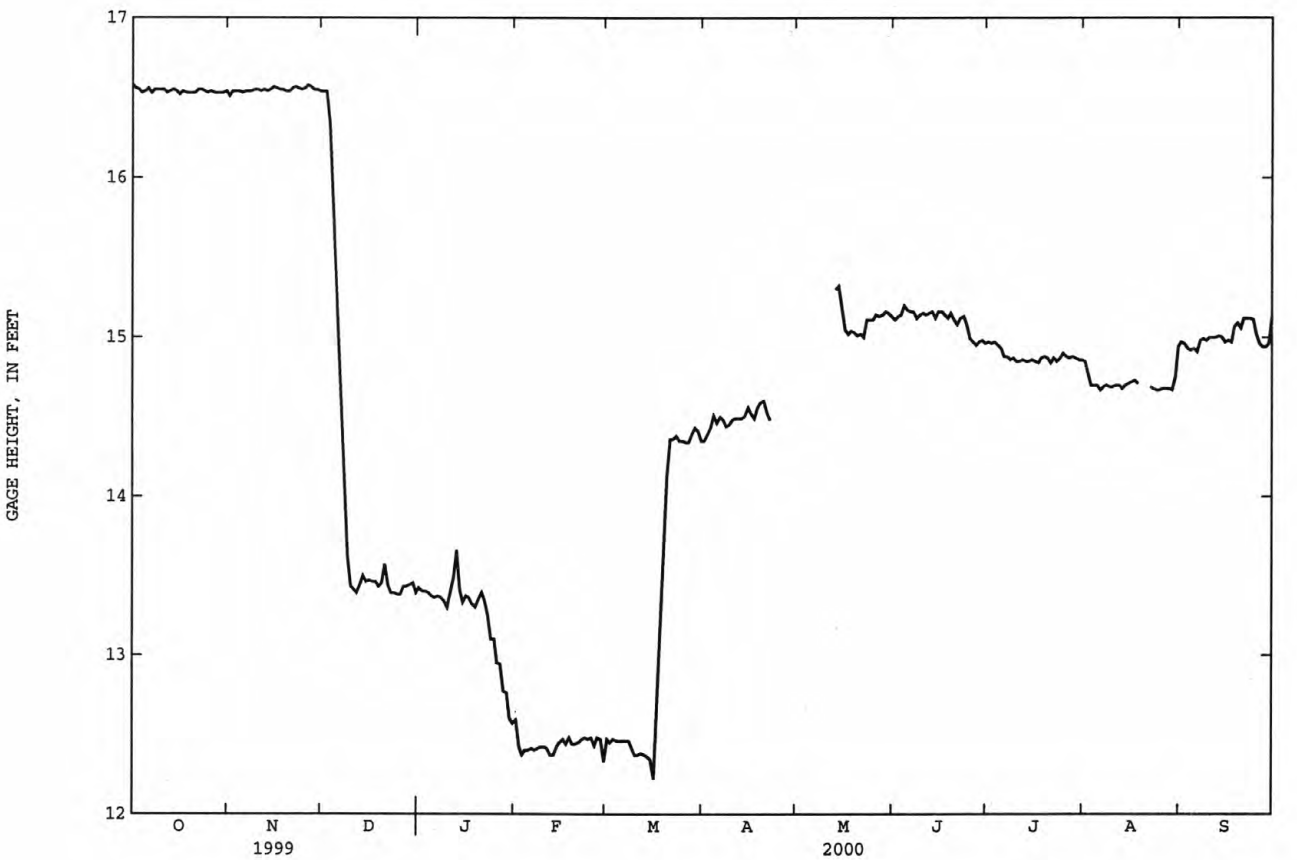
GAGE.--Water-stage recorder. Datum of gage is 1,139.68 ft above sea level. Prior to Sept. 20, 1932, nonrecording gage, and Sept. 20, 1932, to Mar. 9, 1967, water-stage recorder at present site and at datum 20.0 ft higher.

REMARKS.--Records good except those for Nov. 17 to Jan. 5, Feb. 25 to Apr. 22, and May 13-23, which are fair. Flow on Missouri River main stem completely regulated by a series of 6 dams with the most downstream being Gavins Point Dam (5.2 mi upstream from gage). Many diversions for irrigation and water supply above station. U.S. Army Corps of Engineers satellite data-collection platform at station.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.58	16.51	16.54	13.42	12.59	12.47	14.35	---	15.11	14.97	14.85	14.97
2	16.56	16.54	16.54	13.40	12.42	12.45	14.39	---	15.13	14.96	14.77	14.96
3	16.55	16.54	16.34	13.40	12.37	12.47	14.43	---	15.14	14.97	14.70	14.93
4	16.53	16.54	16.00	13.39	12.40	12.46	14.51	---	15.20	14.95	14.70	14.92
5	16.54	16.53	15.59	13.37	12.40	12.46	14.46	---	15.17	14.93	14.70	14.93
6	16.56	16.54	14.98	13.36	12.41	12.46	14.50	---	15.16	14.88	14.67	14.91
7	16.53	16.54	14.53	13.37	12.40	12.46	14.48	---	15.16	14.88	14.69	14.98
8	16.55	16.54	14.11	13.36	12.41	12.46	14.44	---	15.12	14.86	14.70	14.99
9	16.55	16.55	13.61	13.34	12.42	12.41	14.45	---	15.14	14.87	14.69	14.98
10	16.55	16.55	13.43	13.30	12.42	12.37	14.48	---	15.15	14.85	14.69	15.00
11	16.55	16.54	13.41	13.39	12.41	12.37	14.49	---	15.14	14.85	14.70	15.00
12	16.53	16.55	13.39	13.49	12.37	12.38	14.49	---	15.15	14.86	14.70	15.00
13	16.54	16.54	13.44	13.66	12.37	12.37	14.49	15.30	15.16	14.85	14.68	15.01
14	16.55	16.55	13.50	13.41	12.42	12.36	14.51	15.32	15.12	14.85	14.70	15.00
15	16.54	16.57	13.46	13.33	12.45	12.34	14.56	15.19	15.16	14.86	14.71	14.97
16	16.52	16.56	13.47	13.37	12.47	12.22	14.52	15.05	15.16	14.85	14.72	14.98
17	16.54	16.55	13.46	13.36	12.44	12.73	14.49	15.02	15.14	14.84	14.73	14.97
18	16.53	16.55	13.46	13.32	12.48	13.23	14.56	15.04	15.12	14.87	14.71	15.07
19	16.53	16.54	13.43	13.30	12.44	13.65	14.59	15.03	15.15	14.88	---	15.09
20	16.53	16.54	13.45	13.35	12.44	14.12	14.60	15.01	15.11	14.87	---	15.06
21	16.53	16.56	13.57	13.39	12.45	14.36	14.53	15.02	15.08	14.84	---	15.12
22	16.55	16.57	13.44	13.34	12.47	14.36	14.48	15.00	15.12	14.87	14.69	15.12
23	16.55	16.56	13.39	13.25	12.48	14.38	---	15.11	15.13	14.85	14.68	15.12
24	16.54	16.55	13.39	13.10	12.47	14.35	---	15.11	15.08	14.87	14.67	15.11
25	16.53	16.56	13.38	13.10	12.48	14.35	---	15.11	14.99	14.90	14.67	15.02
26	16.54	16.58	13.38	12.95	12.43	14.34	---	15.14	14.97	14.88	14.68	14.96
27	16.53	16.57	13.43	12.94	12.48	14.34	---	15.13	14.95	14.87	14.68	14.94
28	16.53	16.55	13.43	12.77	12.47	14.39	---	15.14	14.97	14.88	14.68	14.94
29	16.53	16.55	13.44	12.76	12.33	14.43	---	15.16	14.98	14.87	14.67	14.96
30	16.53	16.54	13.45	12.60	---	14.41	---	15.15	14.96	14.86	14.75	15.13
31	16.54	---	13.39	12.57	---	14.35	---	15.13	---	14.86	14.94	---
MEAN	16.54	16.55	13.99	13.24	12.43	13.24	---	---	15.10	14.88	---	15.00
MAX	16.58	16.58	16.54	13.66	12.59	14.43	---	---	15.20	14.97	---	15.13
MIN	16.52	16.51	13.38	12.57	12.33	12.22	---	---	14.95	14.84	---	14.91

06467500 MISSOURI RIVER AT YANKTON, SD--Continued



06470875 JAMES RIVER AT DAKOTA LAKE DAM NEAR LUDDEN, ND

LOCATION.--Lat 45°56'52", long 98°10'29", in SE¼ NE¼ NE¼ sec.34, T.129 N., R.60 W., Dickey County, Hydrologic Unit 10160003, on left bank, 10 ft upstream from dam, 4.5 mi southwest of Ludden and 0.8 mi upstream from North Dakota-South Dakota State line.

DRAINAGE AREA.--5,480 mi^2, of which about 3,300 mi^2 are probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 1,280.00 ft above sea level.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by upstream reservoirs, Jamestown Reservoir (station 06469000), Pipestem Lake, capacity 147,000 acre-ft, and Lake LaMoure.

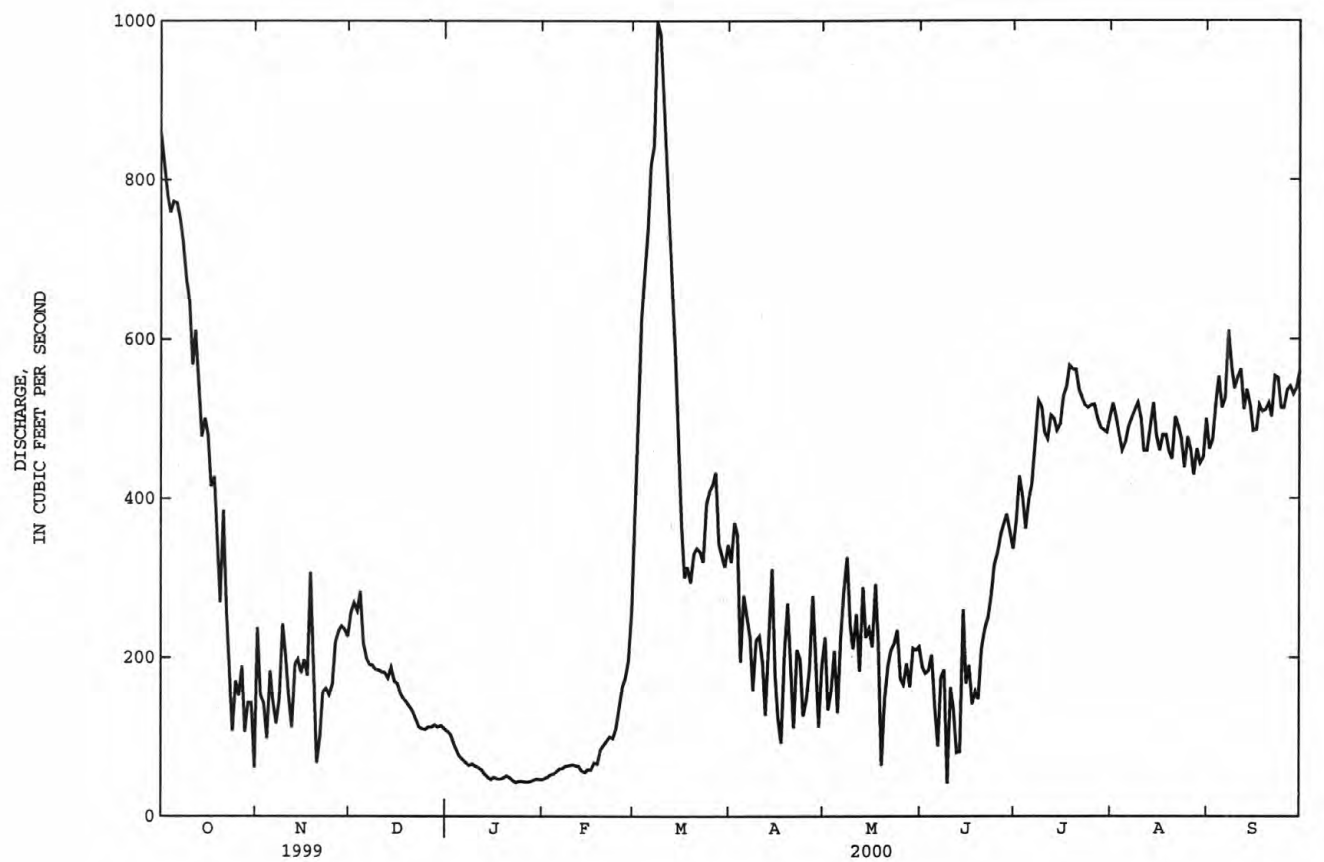
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	858	237	257	107	47	388	320	225	188	374	519	462
2	816	153	269	103	49	520	369	134	180	428	e500	474
3	780	143	259	e92	52	625	354	158	183	403	e480	521
4	759	98	283	e83	e53	683	194	208	203	362	e460	553
5	773	183	218	75	e56	739	278	130	138	399	e470	514
6	771	145	199	e71	60	818	253	223	88	418	e490	526
7	750	117	191	e67	e60	843	225	284	175	471	e500	611
8	722	148	190	64	63	e998	158	326	184	523	e510	565
9	676	242	185	66	64	e983	221	240	41	515	e520	538
10	648	206	184	63	e65	e895	226	211	162	483	e500	552
11	568	152	181	e61	e64	e798	193	254	135	475	e460	562
12	611	112	181	e58	e63	e715	127	183	80	504	e460	512
13	544	191	174	e53	e57	e633	211	288	81	500	e490	537
14	478	197	187	e49	e55	e577	311	225	260	485	e520	518
15	501	180	e170	e46	e59	e492	178	236	167	493	e480	485
16	481	197	e167	e49	e58	e368	124	213	190	528	e460	486
17	415	177	155	47	e67	e300	92	292	141	540	e480	518
18	427	307	148	e47	e66	e314	205	217	157	567	e480	509
19	348	166	143	e48	e83	e294	268	64	147	562	e460	511
20	269	67	e138	e51	e89	330	188	148	212	562	450	519
21	385	99	e132	e48	e94	337	111	189	236	536	502	503
22	259	156	e122	e45	e100	333	209	208	250	527	490	554
23	182	161	112	e42	98	320	197	217	279	517	475	551
24	107	153	110	e44	110	393	126	234	316	514	439	514
25	170	166	109	e44	137	409	146	173	331	517	477	514
26	152	218	113	e43	162	416	185	166	354	518	460	536
27	189	232	112	e43	173	432	277	192	368	500	430	541
28	106	239	115	e44	195	343	197	163	380	489	462	531
29	143	235	112	e46	257	328	112	211	359	486	444	538
30	143	226	114	e47	---	314	189	209	337	483	451	560
31	61	---	110	e46	---	342	---	213	---	502	500	---
TOTAL	14092	5303	5140	1792	2556	16280	6244	6434	6322	15181	14819	15815
MEAN	455	177	166	57.8	88.1	525	208	208	211	490	478	527
MAX	858	307	283	107	257	998	369	326	380	567	520	611
MIN	61	67	109	42	47	294	92	64	41	362	430	462
AC-FT	27950	10520	10200	3550	5070	32290	12380	12760	12540	30110	29390	31370
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2000, BY WATER YEAR (WY)												
MEAN	190	124	58.1	27.2	29.6	363	836	595	430	375	308	264
MAX	867	512	190	77.1	88.1	853	4617	2316	1447	1181	1143	1003
(WY)	1994	1994	1999	1995	2000	1995	1997	1997	1997	1995	1993	1999
MIN	1.86	.20	.28	.056	.62	26.0	33.4	9.92	2.12	.015	.000	.011
(WY)	1989	1991	1991	1991	1989	1990	1990	1990	1988	1988	1988	1990

06470875 JAMES RIVER AT DAKOTA LAKE DAM NEAR LUDDEN, ND--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1982 - 2000	
ANNUAL TOTAL	275908		109978			
ANNUAL MEAN	756		300		301	
HIGHEST ANNUAL MEAN					969	1997
LOWEST ANNUAL MEAN					10.3	1990
HIGHEST DAILY MEAN	2720	May 20	998	Mar 8	7500	Apr 6 1997
LOWEST DAILY MEAN	40	Feb 22	41	Jun 9	.00	Oct 8 1981
ANNUAL SEVEN-DAY MINIMUM	41	Feb 18	44	Jan 22	.00	Jul 10 1985
INSTANTANEOUS PEAK FLOW			1300	Mar 8	7500	Apr 6 1997
INSTANTANEOUS PEAK STAGE			11.70	Mar 8	17.86	Apr 6 1997
INSTANTANEOUS LOW FLOW					.00	Oct 2 1981
ANNUAL RUNOFF (AC-FT)	547300		218100		218000	
10 PERCENT EXCEEDS	1400		542		961	
50 PERCENT EXCEEDS	910		229		85	
90 PERCENT EXCEEDS	45		63		.17	

e Estimated.



06471000 JAMES RIVER AT COLUMBIA, SD

LOCATION.--Lat 45°36'13", long 98°18'36", in NW¼ NW¼ sec.33, T.125 N., R.62 W., Brown County, Hydrologic Unit 10160003, on left bank 20 ft downstream from highway bridge, 0.6 mi south of Columbia, 0.9 mi downstream from Chicago and North Western Railway Co. bridge, 0.3 mi upstream from Elm River, and 12.7 mi downstream from Columbia Road Dam.

DRAINAGE AREA.--5,857 mi^2, of which about 3,376 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,272.91 ft above sea level. From Oct. 1, 1945, to Oct. 4, 1957, nonrecording gage. From Oct. 5, 1957, to Sept. 30, 1980, water-stage recorder. Both gages described above at site 3.3 mi upstream from present site and at different datum.

REMARKS.--Records fair except those for Mar. 24 to Apr. 12, July 18 to Aug. 2, Aug. 19-25, and estimated daily discharges, which are poor. Flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, which reached maximum pool elevation in May 1974. Maximum discharge prior to Sept. 30, 1974, 5,420 ft^3/s, May 24, 25, 1950, gage height, 16.89 ft, from graph based on gage readings; maximum daily reverse flow, 1,860 ft^3/s, Apr. 8, 1952, backwater from Elm River. U.S. Army Corps of Engineers gage-height telemeter and satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	519	141	e94	e34	e84	503	207	242	121	440	451
2	996	476	108	e94	e32	e84	501	206	238	210	440	460
3	987	434	88	e80	e30	e96	511	196	233	273	441	463
4	980	392	83	e52	e30	e130	483	180	241	294	441	469
5	978	370	78	e70	e30	e165	483	168	240	311	444	470
6	971	352	81	e105	e32	e190	442	157	224	323	452	459
7	974	336	90	e110	e34	e215	420	144	208	325	448	459
8	970	327	82	e105	e36	e240	412	165	203	330	445	460
9	958	320	82	e100	e36	278	414	163	191	336	441	453
10	953	305	85	e96	e36	320	414	178	165	342	434	445
11	930	286	83	e80	e34	e360	405	203	160	349	421	451
12	929	271	85	e70	e34	e395	369	216	159	375	403	464
13	923	259	87	e70	e36	422	351	211	151	382	397	469
14	906	251	81	e74	e36	468	344	207	144	395	397	476
15	902	239	64	e70	e38	510	290	201	154	407	394	483
16	887	190	e76	e66	e40	584	338	201	158	414	398	482
17	862	160	e84	e74	e40	632	307	215	150	411	406	478
18	846	155	e90	e74	e42	688	266	229	132	418	410	477
19	825	188	e90	e70	e42	703	259	228	114	436	420	479
20	795	180	e90	e66	e44	715	284	223	108	443	409	480
21	779	168	e92	e64	e40	726	276	225	83	450	404	483
22	756	166	e92	e64	e32	717	263	225	88	458	402	493
23	733	165	e92	e64	e24	719	255	225	101	456	406	511
24	703	160	e94	e60	e16	726	245	225	111	448	410	519
25	677	149	e94	e54	e30	702	223	223	126	441	408	516
26	650	151	e96	e50	e200	691	204	221	140	439	410	510
27	638	153	e96	e50	e145	682	201	225	141	442	414	506
28	613	151	e96	e48	e110	637	202	229	138	448	412	507
29	583	148	e98	e44	e100	583	195	225	136	449	413	506
30	559	145	e98	e40	---	524	199	235	130	449	417	505
31	525	---	e96	e38	---	520	---	238	---	445	434	---
TOTAL	25788	7566	2792	2196	1413	14506	10059	6394	4809	11820	13011	14384
MEAN	832	252	90.1	70.8	48.7	468	335	206	160	381	420	479
MAX	1000	519	141	110	200	726	511	238	242	458	452	519
MIN	525	145	64	38	16	84	195	144	83	121	394	445
AC-FT	51150	15010	5540	4360	2800	28770	19950	12680	9540	23440	25810	28530

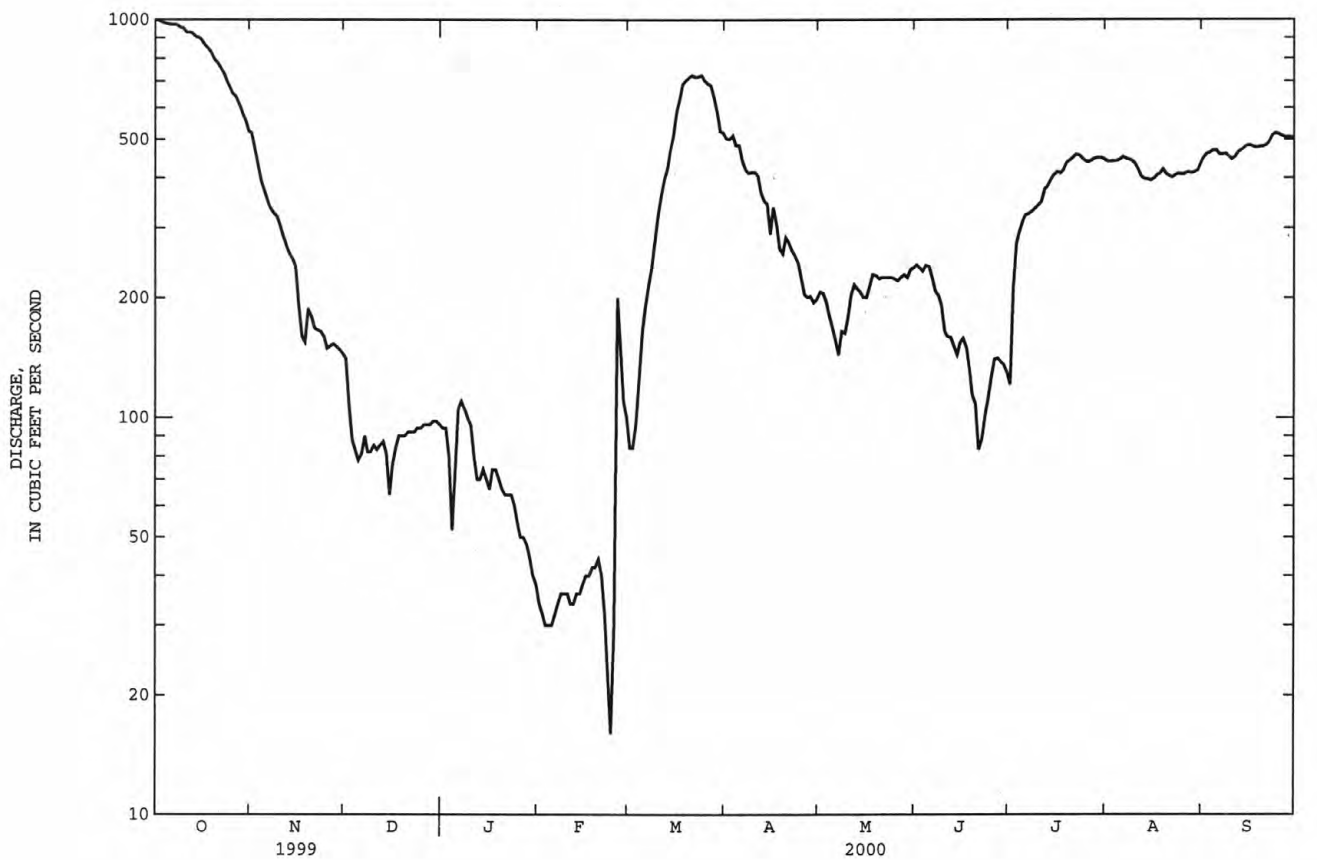
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)*

MEAN	184	154	72.1	21.2	20.9	71.1	569	573	374	340	268	213
MAX	949	930	478	77.0	103	468	2856	2661	1610	1211	1085	1084
(WY)	1994	1994	1994	1994	1998	2000	1997	1997	1997	1997	1995	1993
MIN	.000	.000	.000	.000	.000	-215	.014	.000	.000	.000	.000	.000
(WY)	1977	1977	1977	1977	1977	1997	1977	1977	1977	1977	1977	1976

06471000 JAMES RIVER AT COLUMBIA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1975 - 2000*	
ANNUAL TOTAL	242470		114738			
ANNUAL MEAN	664		313		239	
HIGHEST ANNUAL MEAN					856	1997
LOWEST ANNUAL MEAN					.063	1977
HIGHEST DAILY MEAN	1900	May 31	1000	Oct 1	4100	Apr 30 1997
LOWEST DAILY MEAN	20	Mar 6	16	Feb 24	-2400	Mar 30 1997a
ANNUAL SEVEN-DAY MINIMUM	40	Jan 17	32	Feb 1	-1410	Mar 27 1997a
INSTANTANEOUS PEAK FLOW			1000	Oct 1b	4130	Apr 30 1997c
INSTANTANEOUS PEAK STAGE			14.05	Oct 1b	19.08	Apr 19 1997a
ANNUAL RUNOFF (AC-FT)	480900		227600		173100	
10 PERCENT EXCEEDS	1230		642		850	
50 PERCENT EXCEEDS	745		242		45	
90 PERCENT EXCEEDS	65		64		.00	

* Regulated period only (1975-2000). See REMARKS.
a Backwater from Elm River.
b Stage falling, peak occurred Sept. 25, 1999; maximum peak discharge, 730 ft^3/s, Mar. 20, gage height, 10.97 ft.
c Gage height, 18.63 ft, backwater.
e Estimated.



06471065 ELM RIVER NEAR FREDERICK, SD

LOCATION.--Lat 45°50'15", long 98°42'06", in NW¼ NW¼ NW¼ sec.8, T.127 N., R.65 W., Brown County, Hydrologic Unit 10160004, on right bank at downstream side of bridge on Brown County Road 5, 1.7 mi downstream of Elm Lake Dam on Elm River and 8.8 mi west of Frederick.

DRAINAGE AREA.--To be determined.

PERIOD OF RECORD.--October 1999 to September 2000 (seasonal mean daily gage height and yearly instantaneous peak discharge).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,455 ft above sea level, from topographic map.

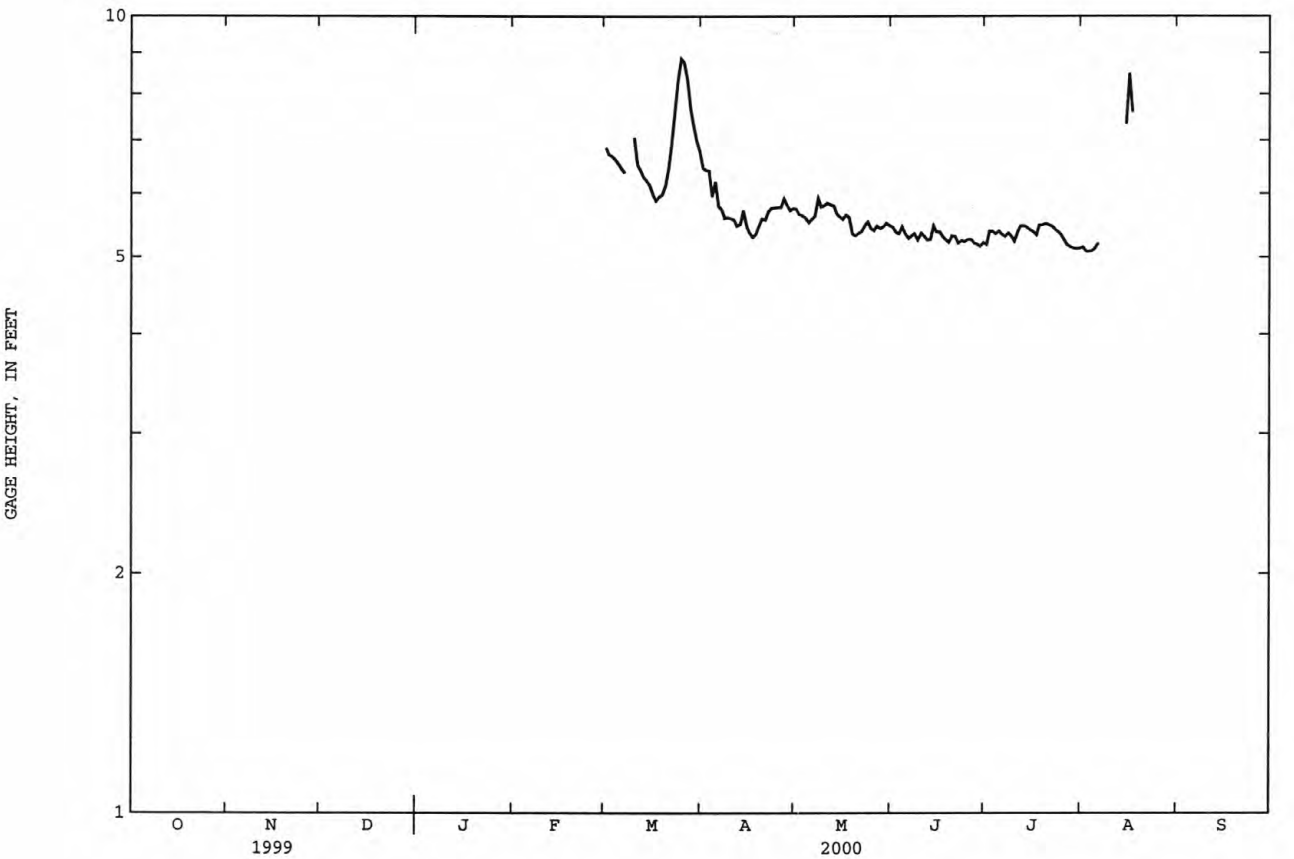
REMARKS.--Records good. Satellite data-collection platform and telemeter and seasonal National Weather Service rain gage at site. Flow regulated to some extent for Aberdeen municipal water supply by rolled earth dam forming Elm Lake 1.7 mi upstream with a storage capacity of 15,200 acre-ft. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period March to September, 160 ft^3/s, Mar. 26, gage height, 9.09 ft.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	6.85	6.46	5.74	5.44	5.18	5.14	---
2	---	---	---	---	---	6.71	6.42	5.65	5.36	5.38	5.08	---
3	---	---	---	---	---	6.68	6.41	5.63	5.34	5.38	5.08	---
4	---	---	---	---	---	6.61	5.95	5.59	5.45	5.34	5.09	---
5	---	---	---	---	---	6.53	6.21	5.52	5.34	5.38	5.13	---
6	---	---	---	---	---	6.45	5.78	5.57	5.27	5.33	5.20	---
7	---	---	---	---	---	6.37	5.73	5.62	5.31	5.30	---	---
8	---	---	---	---	---	---	5.59	5.92	5.34	5.35	---	---
9	---	---	---	---	---	---	5.60	5.77	5.25	5.30	---	---
10	---	---	---	---	---	7.05	5.58	5.79	5.35	5.23	---	---
11	---	---	---	---	---	6.53	5.56	5.84	5.31	5.36	---	---
12	---	---	---	---	---	6.42	5.46	5.81	5.25	5.46	---	---
13	---	---	---	---	---	6.29	5.49	5.79	5.26	5.46	---	---
14	---	---	---	---	---	6.23	5.72	5.66	5.47	5.44	---	---
15	---	---	---	---	---	6.15	5.46	5.61	5.37	5.40	7.33	---
16	---	---	---	---	---	5.99	5.36	5.57	5.37	5.37	8.48	---
17	---	---	---	---	---	5.88	5.29	5.64	5.29	5.32	7.59	---
18	---	---	---	---	---	5.94	5.34	5.60	5.25	5.48	---	---
19	---	---	---	---	---	5.98	5.47	5.34	5.21	5.48	---	---
20	---	---	---	---	---	6.14	5.58	5.31	5.31	5.50	---	---
21	---	---	---	---	---	6.46	5.56	5.35	5.30	5.48	---	---
22	---	---	---	---	---	6.92	5.70	5.37	5.20	5.46	---	---
23	---	---	---	---	---	7.62	5.76	5.46	5.24	5.41	---	---
24	---	---	---	---	---	8.32	5.76	5.53	5.22	5.37	---	---
25	---	---	---	---	---	8.85	5.77	5.42	5.26	5.32	---	---
26	---	---	---	---	---	8.76	5.77	5.39	5.26	5.25	---	---
27	---	---	---	---	---	8.34	5.92	5.46	5.20	5.17	---	---
28	---	---	---	---	---	7.67	5.81	5.42	5.19	5.14	---	---
29	---	---	---	---	---	7.28	5.71	5.45	5.15	5.12	---	---
30	---	---	---	---	---	6.98	5.75	5.51	5.21	5.12	---	---
31	---	---	---	---	---	6.78	---	5.47	---	5.12	---	---
MEAN	---	---	---	---	---	---	5.73	5.57	5.29	5.34	---	---
MAX	---	---	---	---	---	---	6.46	5.92	5.47	5.50	---	---
MIN	---	---	---	---	---	---	5.29	5.31	5.15	5.12	---	---

06471065 ELM RIVER NEAR FREDERICK, SD--Continued



06471200 MAPLE RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 45°56'20", long 98°27'08", in SW¼ SE¼ sec.33, T.129 N., R.62 W., Dickey County, ND, Hydrologic Unit 10160004, on left bank 0.4 mi upstream from State line, 7.8 mi northeast of Frederick, SD, and 15.7 mi upstream from mouth.

DRAINAGE AREA.--716 mi^2, of which about 332 mi^2 is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 1,365 ft above sea level, from topographic map. Prior to June 14, 1962, nonrecording gage at site 0.4 mi downstream at datum 0.94 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	9.9	7.4	4.8	1.9	38	85	30	11	2.8	8.1	.37
2	21	10	7.4	4.7	2.2	141	75	27	10	20	5.9	.34
3	20	10	7.2	4.6	2.6	207	66	28	10	12	5.7	.36
4	19	9.5	e7.1	4.1	2.4	178	55	28	12	8.4	4.9	.36
5	18	9.8	7.0	4.0	2.3	128	54	28	11	7.9	5.3	.36
6	17	9.0	6.8	3.8	2.4	94	49	32	10	5.4	4.9	.38
7	16	8.1	6.6	3.5	2.5	69	46	32	9.8	5.0	4.0	.41
8	15	7.9	6.6	3.5	2.6	67	40	36	8.3	4.6	3.4	.32
9	15	8.3	6.5	3.4	2.8	30	39	31	7.0	4.5	2.5	.29
10	15	7.6	6.4	3.4	2.7	42	36	29	6.9	21	1.8	.23
11	14	7.3	6.5	3.3	2.4	49	34	28	5.7	43	1.5	.22
12	13	6.8	6.4	3.5	2.2	40	31	25	4.8	66	1.5	.14
13	12	6.5	6.3	3.2	2.2	36	e30	26	3.7	92	.80	.12
14	12	6.0	6.5	3.0	2.0	33	e30	25	4.4	87	1.1	.11
15	11	6.6	6.1	3.0	2.2	30	e29	27	4.5	70	1.1	.07
16	11	6.7	5.8	3.1	2.0	28	28	27	5.1	54	.96	.06
17	11	6.6	5.2	2.9	2.0	27	26	30	4.8	44	1.2	.06
18	12	13	5.2	2.8	2.1	29	26	26	4.4	47	.89	.05
19	13	13	e5.0	2.9	2.3	33	28	22	4.0	47	.82	.05
20	13	11	e4.7	2.7	2.1	39	28	21	4.6	44	1.1	.04
21	13	10	e4.4	2.7	2.0	46	28	20	4.3	39	1.5	.03
22	13	9.5	e4.1	2.7	2.0	59	29	20	4.2	35	1.3	.10
23	13	9.2	e3.9	2.7	2.3	97	27	17	5.0	31	1.1	.09
24	12	8.8	3.9	2.4	3.7	160	27	16	4.7	28	.67	.06
25	12	8.5	4.0	2.3	6.0	226	29	13	5.0	24	.60	.06
26	11	8.5	4.1	2.2	9.5	233	33	12	4.3	21	.45	.05
27	12	8.2	4.2	2.0	9.3	220	36	12	4.0	17	.38	.04
28	11	7.7	4.4	2.0	12	179	33	12	3.9	15	.41	.03
29	13	7.0	4.6	2.1	16	145	30	11	3.3	12	.31	.03
30	12	6.9	4.8	2.0	---	120	31	11	3.0	11	.28	.02
31	9.8	---	4.8	2.0	---	103	---	10	---	9.6	.67	---
TOTAL	432.8	257.9	173.9	95.3	108.7	2926	1138	712	183.7	928.2	65.14	4.85
MEAN	14.0	8.60	5.61	3.07	3.75	94.4	37.9	23.0	6.12	29.9	2.10	.16
MAX	23	13	7.4	4.8	16	233	85	36	12	92	8.1	.41
MIN	9.8	6.0	3.9	2.0	1.9	27	26	10	3.0	2.8	.28	.02
AC-FT	858	512	345	189	216	5800	2260	1410	364	1840	129	9.6

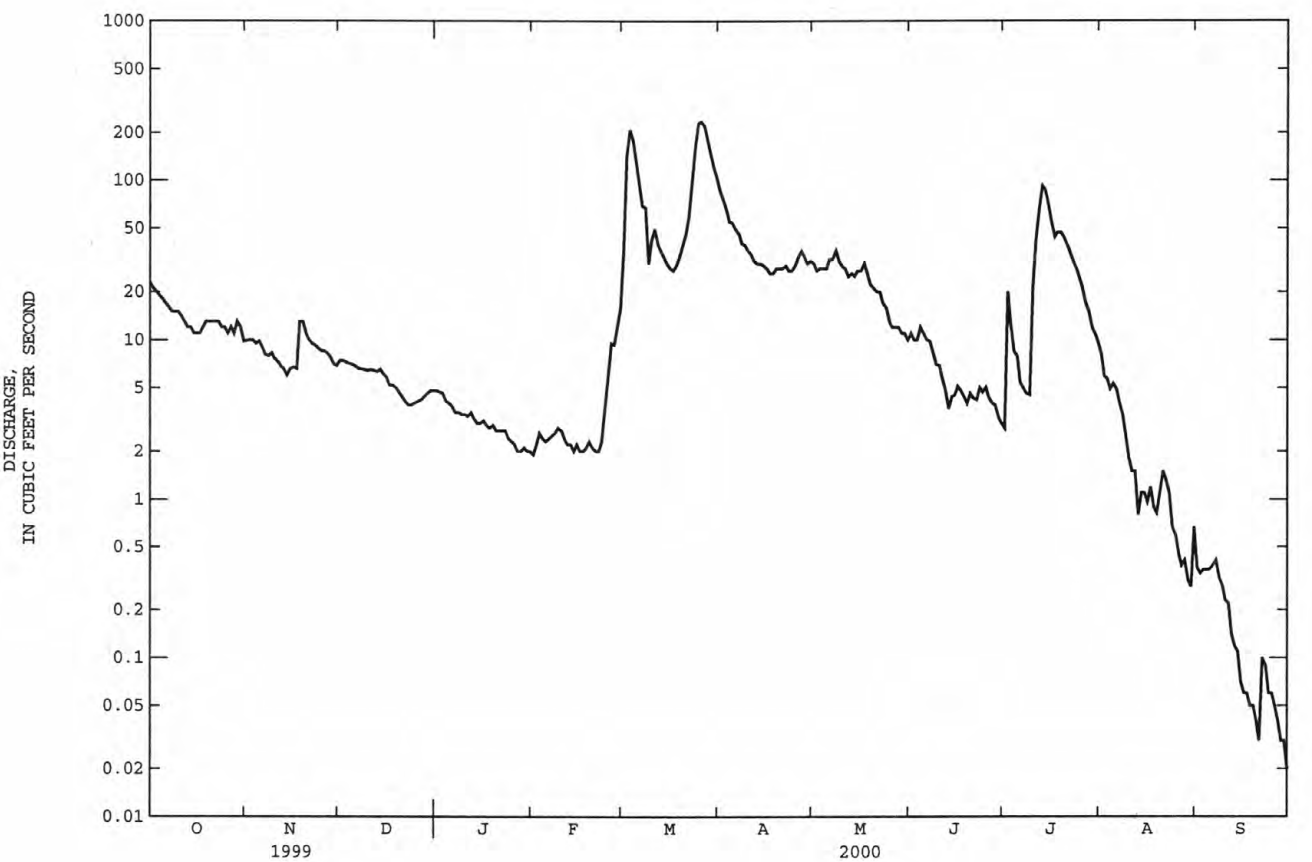
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2000, BY WATER YEAR (WY)

MEAN	3.22	2.11	2.10	.36	1.00	89.6	112	40.3	17.9	31.3	6.59	3.81
MAX	68.8	50.1	68.1	6.61	12.0	419	840	418	131	446	142	91.1
(WY)	1999	1999	1999	1999	1998	1966	1997	1999	1964	1962	1966	1999
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1957	1957	1957	1957	1957	1957	1959	1959	1959	1959	1959	1958

06471200 MAPLE RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1957 - 2000	
ANNUAL TOTAL	30809.8		7026.49			
ANNUAL MEAN	84.4		19.2		25.9a	
HIGHEST ANNUAL MEAN					116	1997
LOWEST ANNUAL MEAN					.000	1959b
HIGHEST DAILY MEAN	2150	May 14	233	Mar 26	5500	Apr 11 1969
LOWEST DAILY MEAN	3.3	Feb 7	.02	Sep 30	.00	Oct 1 1956c
ANNUAL SEVEN-DAY MINIMUM	3.5	Feb 2	.04	Sep 24	.00	Oct 1 1956
INSTANTANEOUS PEAK FLOW			238	Mar 26	5930	Apr 11 1969d
INSTANTANEOUS PEAK STAGE			5.99	Mar 26	16.19	Mar 29 1997f
ANNUAL RUNOFF (AC-FT)	61110		13940		18780	
10 PERCENT EXCEEDS	191		42		36	
50 PERCENT EXCEEDS	23		7.5		.06	
90 PERCENT EXCEEDS	5.3		.65		.00	

a Median of annual mean discharges, 16 ft^3/s.
b Also 1988 and 1990.
c No flow for long periods in most years.
d Gage height, 16.05 ft, backwater from ice.
e Estimated.
f Backwater from ice.



06471500 ELM RIVER AT WESTPORT, SD

LOCATION.--Lat 45°39'22", long 98°29'48", in SW¼ NW¼ sec.12, T.125 N., R.64 W., Brown County, Hydrologic Unit 10160004, on upstream (revised) side of highway bridge, 0.5 mi north of Westport, 0.7 mi upstream from Chicago and North Western Railway Co. bridge, 9.3 mi downstream from Willow Creek, and 30.4 mi upstream from mouth.

DRAINAGE AREA.--1,493 mi^2, of which about 444 mi^2 is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,309.3 ft above sea level. Prior to Aug. 6, 1951, and Apr. 8 to Sept. 9, 1952, nonrecording gage 12 ft upstream at same datum. Aug. 6, 1951, to Apr. 7, 1952, water-stage recorder at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Flow regulated for Aberdeen municipal water supply by dam forming Elm Lake and other small reservoirs upstream, combined capacity, about 16,000 acre-ft. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	23	14	9.6	5.3	29	236	88	27	8.1	15	2.8
2	53	20	14	10	5.9	33	210	79	25	22	12	2.9
3	51	19	14	9.2	6.5	91	180	70	25	16	12	3.1
4	49	17	14	9.2	6.5	e185	163	61	29	22	11	2.9
5	46	18	14	8.2	6.5	e195	152	57	28	22	12	2.7
6	41	19	13	8.2	6.3	e175	124	56	24	21	13	2.5
7	39	19	13	8.1	6.2	e145	119	57	23	23	9.8	2.7
8	37	18	13	7.8	6.3	e135	107	75	22	21	9.0	2.5
9	35	17	13	7.8	6.7	e125	93	84	20	17	7.7	2.4
10	33	16	13	7.6	6.9	116	86	90	18	14	6.5	2.2
11	32	16	13	7.5	6.1	108	81	92	15	16	5.9	2.1
12	30	14	13	6.4	6.2	137	76	90	14	35	5.3	1.9
13	28	15	13	6.1	6.0	125	72	78	14	65	4.5	1.7
14	27	15	13	5.9	5.4	111	67	70	16	89	4.3	2.0
15	26	15	12	6.1	5.7	103	63	66	16	101	3.8	3.3
16	25	13	12	6.3	5.4	99	55	64	17	93	3.6	3.5
17	24	12	11	6.1	5.4	97	64	63	15	77	14	2.9
18	23	13	e11	5.9	5.5	89	57	59	16	77	105	2.4
19	23	13	e10	5.9	6.0	90	62	55	15	77	94	2.0
20	24	16	e10	5.8	5.8	106	91	55	15	72	41	1.7
21	26	17	9.7	5.6	5.8	123	93	56	12	75	20	1.5
22	42	18	10	5.4	6.1	156	93	48	9.0	69	9.9	1.7
23	42	17	9.6	4.9	6.5	214	91	43	10	61	6.9	2.3
24	36	17	10	5.1	9.0	285	91	40	9.8	54	5.6	3.1
25	32	16	11	5.0	12	367	88	35	17	48	4.8	3.1
26	30	16	10	5.0	19	443	84	32	17	45	4.2	2.7
27	27	15	9.9	4.7	23	447	82	32	14	39	3.8	2.5
28	24	14	10	4.8	24	418	83	31	13	33	3.6	2.3
29	24	14	10	5.3	26	368	87	30	9.6	27	3.0	6.1
30	23	14	10	5.5	---	313	89	31	8.7	22	2.6	11
31	23	---	10	5.5	---	270	---	31	---	18	3.2	---
TOTAL	1036	486	363.2	204.5	252.0	5698	3039	1818	514.1	1379.1	457.0	86.5
MEAN	33.4	16.2	11.7	6.60	8.69	184	101	58.6	17.1	44.5	14.7	2.88
MAX	61	23	14	10	26	447	236	92	29	101	105	11
MIN	23	12	9.6	4.7	5.3	29	55	30	8.7	8.1	2.6	1.5
AC-FT	2050	964	720	406	500	11300	6030	3610	1020	2740	906	172

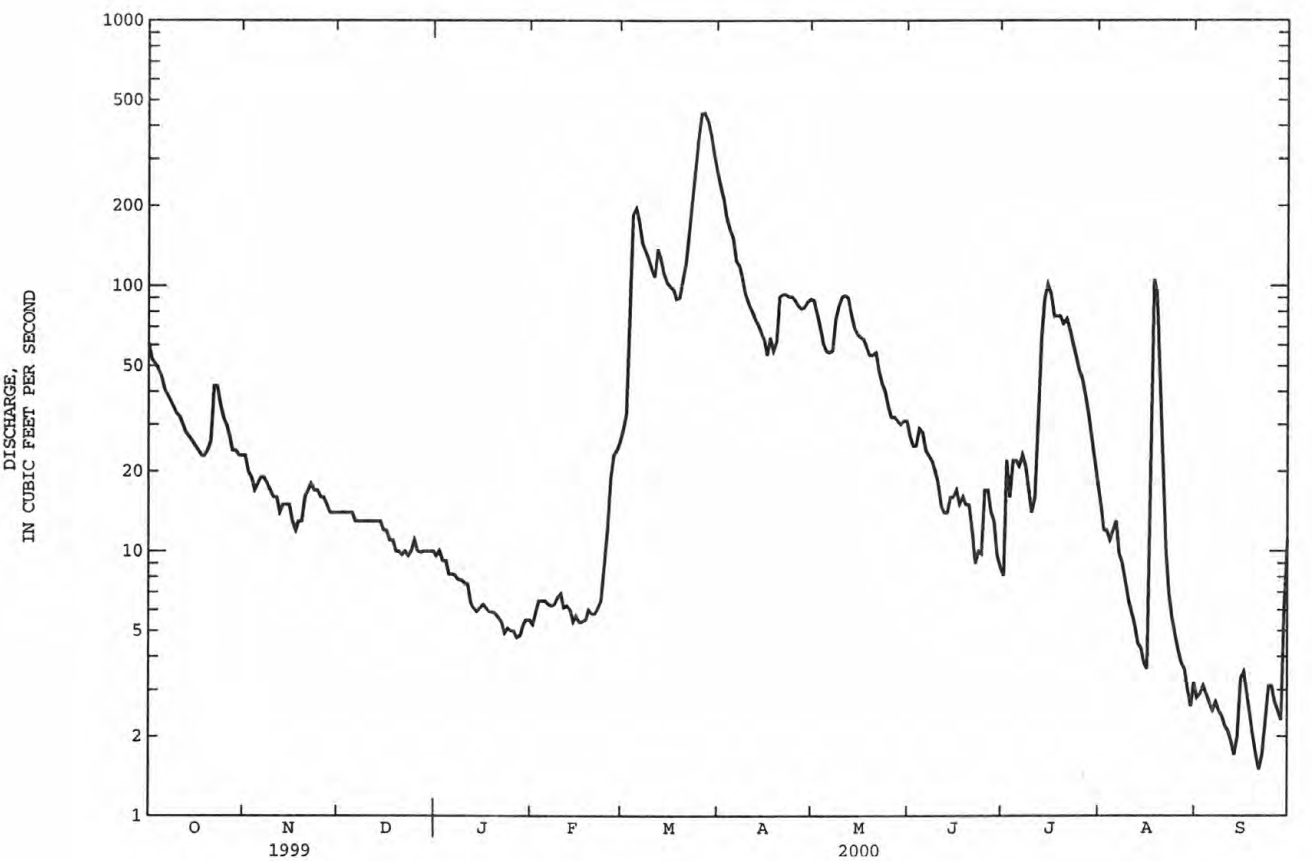
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	9.39	7.79	6.33	3.50	7.42	179	256	87.0	51.9	54.6	15.1	9.73
MAX	138	142	137	19.9	113	1205	2399	777	584	606	197	173
(WY)	1999	1999	1999	1946	1996	1997	1969	1995	1964	1962	1993	1999
MIN	.79	.74	.20	.20	.000	1.03	.99	.63	.61	2.81	.53	.34
(WY)	1979	1946	1946	1950	1949	1952	1957	1959	1946	1949	1946	1946

06471500 ELM RIVER AT WESTPORT, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	65371.2		15333.4			
ANNUAL MEAN	179		41.9		57.4a	
HIGHEST ANNUAL MEAN					277	1997
LOWEST ANNUAL MEAN					4.17	1957
HIGHEST DAILY MEAN	3560	May 14	447	Mar 27	11900	Apr 10 1969
LOWEST DAILY MEAN	9.6	Dec 23	1.5	Sep 21	.00	Jan 27 1946b
ANNUAL SEVEN-DAY MINIMUM	10	Dec 21	2.1	Sep 17	.00	Jan 27 1946
INSTANTANEOUS PEAK FLOW			456	Mar 26	12600	Apr 10 1969
INSTANTANEOUS PEAK STAGE			6.91	Mar 26	22.11	Apr 10 1969
ANNUAL RUNOFF (AC-FT)	129700		30410		41580	
10 PERCENT EXCEEDS	428		95		76	
50 PERCENT EXCEEDS	54		17		5.2	
90 PERCENT EXCEEDS	13		4.3		1.2	

a Median of annual mean discharges, 36 ft^3/s.
b No flow for many days in most years prior to 1960.
e Estimated.



06471510 ELM RIVER NEAR ORDWAY, SD

LOCATION.--Lat 45°33'45", long 98°24'45", in NE¼ SE¼ SE¼ sec.9, T.124 N., R.63 W., Brown County, Hydrologic Unit 10160004, on left bank at upstream side of bridge on Brown County Road 14, 1.1 mi south of Ordway and 1.9 mi upstream of Aberdeen Municipal water treatment plant dam.

DRAINAGE AREA.--To be determined.

PERIOD OF RECORD.--October 1999 to September 2000 (seasonal mean daily gage height and yearly instantaneous peak discharge). Prior to October 1999 (March to April 1997), at downstream side of bridge, discharge measurements only.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,300 ft above sea level, from topographic map.

REMARKS.--Records good except those for Mar. 23-30, which are fair. Satellite data-collection platform and telemeter at station. Some regulation at low flow for Aberdeen municipal water supply by dam forming Elm Lake and other small reservoirs upstream, combined capacity, about 16,500 acre-ft. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

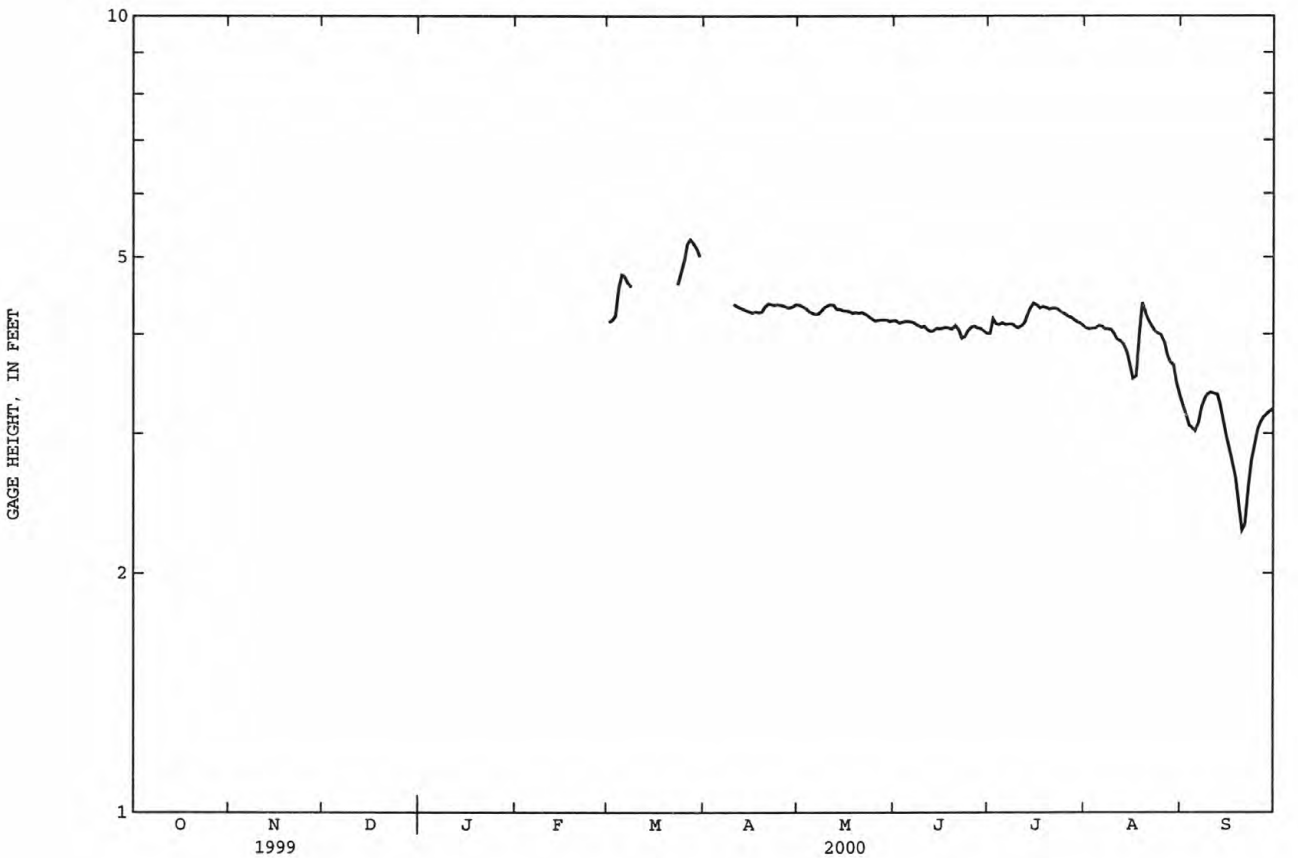
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, observed, 8,680 ft^3/s, Mar. 31, 1997, gage height, 15.10 ft; maximum gage height, observed, 15.55 ft, Mar. 29, 1997, backwater from ice.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period March to September, 502 ft^3/s, Mar. 27, gage height, 5.30 ft.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	4.14	---	4.35	4.16	4.01	4.07	3.26
2	---	---	---	---	---	4.16	---	4.33	4.13	4.18	4.06	3.17
3	---	---	---	---	---	4.21	---	4.31	4.14	4.12	4.07	3.07
4	---	---	---	---	---	4.56	---	4.27	4.15	4.11	4.07	3.05
5	---	---	---	---	---	4.75	---	4.25	4.15	4.13	4.10	3.02
6	---	---	---	---	---	4.73	---	4.24	4.14	4.11	4.09	3.09
7	---	---	---	---	---	4.64	---	4.24	4.13	4.12	4.06	3.24
8	---	---	---	---	---	4.59	---	4.28	4.10	4.12	4.06	3.32
9	---	---	---	---	---	---	---	4.32	4.08	4.09	4.05	3.36
10	---	---	---	---	---	---	4.36	4.34	4.09	4.07	4.00	3.38
11	---	---	---	---	---	---	4.33	4.36	4.05	4.09	3.94	3.37
12	---	---	---	---	---	---	4.32	4.35	4.03	4.13	3.92	3.36
13	---	---	---	---	---	---	4.30	4.30	4.04	4.23	3.88	3.26
14	---	---	---	---	---	---	4.28	4.30	4.07	4.31	3.80	3.11
15	---	---	---	---	---	---	4.27	4.28	4.06	4.37	3.67	2.96
16	---	---	---	---	---	---	4.25	4.28	4.07	4.35	3.52	2.85
17	---	---	---	---	---	---	4.27	4.27	4.08	4.31	3.54	2.74
18	---	---	---	---	---	---	4.26	4.25	4.07	4.33	4.02	2.63
19	---	---	---	---	---	---	4.27	4.26	4.06	4.32	4.38	2.45
20	---	---	---	---	---	---	4.33	4.25	4.10	4.30	4.26	2.26
21	---	---	---	---	---	---	4.37	4.26	4.05	4.31	4.16	2.30
22	---	---	---	---	---	---	4.36	4.24	3.95	4.31	4.09	2.55
23	---	---	---	---	---	4.62	4.35	4.22	3.97	4.29	4.04	2.77
24	---	---	---	---	---	4.78	4.36	4.19	4.04	4.26	4.01	2.91
25	---	---	---	---	---	4.95	4.35	4.16	4.08	4.24	3.99	3.03
26	---	---	---	---	---	5.18	4.34	4.16	4.09	4.21	3.91	3.10
27	---	---	---	---	---	5.26	4.32	4.17	4.07	4.20	3.77	3.15
28	---	---	---	---	---	5.20	4.32	4.17	4.07	4.17	3.69	3.18
29	---	---	---	---	---	5.12	4.33	4.17	4.04	4.14	3.66	3.20
30	---	---	---	---	---	5.01	4.36	4.15	4.01	4.13	3.47	3.22
31	---	---	---	---	---	---	---	4.16	---	4.10	3.36	---
MEAN	---	---	---	---	---	---	---	4.25	4.08	4.20	3.93	3.01
MAX	---	---	---	---	---	---	---	4.36	4.16	4.37	4.38	3.38
MIN	---	---	---	---	---	---	---	4.15	3.95	4.01	3.36	2.26

06471510 ELM RIVER NEAR ORDWAY, SD--Continued



06471770 MOCCASIN CREEK AT ABERDEEN, SD

LOCATION.--Lat 45°28'13", long 98°27'13", in SW¼ NW¼ NW¼ sec.17, T.123 N., R.63 W., Brown County, Hydrologic Unit 10160003, on left bank at upstream side of bridge on Roosevelt Street, 1.6 mi east of Brown County Courthouse, and 3.4 mi upstream from Foot Creek.

DRAINAGE AREA.--To be determined.

PERIOD OF RECORD.--October 1999 to September 2000 (seasonal mean daily gage height and yearly instantaneous peak discharge). Prior to October 1999 (March and April 1997), miscellaneous discharge measurements 1.0 mi downstream at U.S. Highway 12 bridge.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,295 ft above sea level, from topographic map.

REMARKS.--Records good. Satellite data-collection platform and telemeter at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

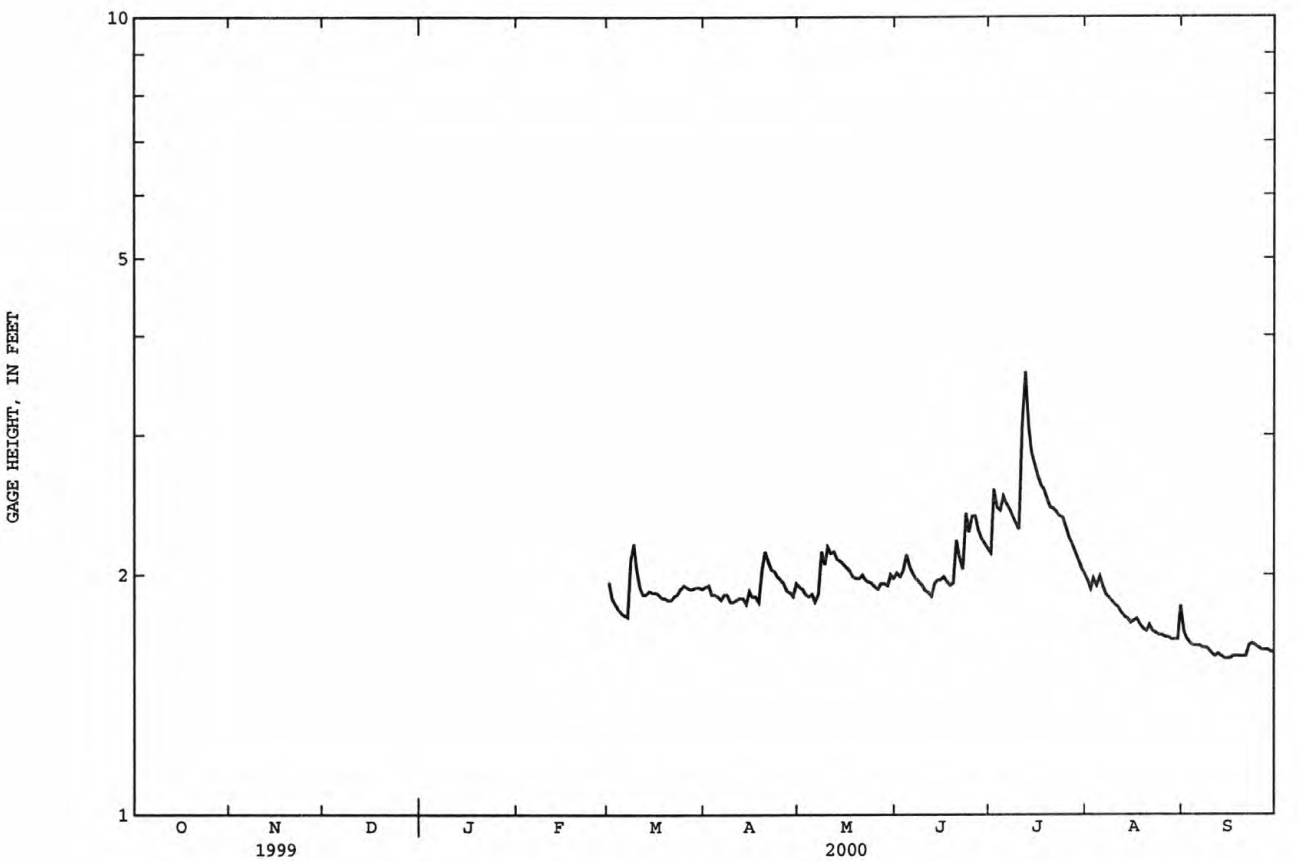
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 389 ft^3/s, Apr. 5, 1997, gage height, 6.90 ft; maximum gage height, observed, 7.27 ft (ice jam), Apr. 1, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period March to September, 60 ft^3/s, July 11, gage height, 4.58 ft.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1.96	1.93	1.93	2.01	2.13	1.97	1.70
2	---	---	---	---	---	1.87	1.94	1.92	1.99	2.56	1.92	1.66
3	---	---	---	---	---	1.84	1.89	1.89	2.02	2.43	1.98	1.64
4	---	---	---	---	---	1.81	1.89	1.88	2.12	2.41	1.94	1.63
5	---	---	---	---	---	1.79	1.88	1.89	2.05	2.51	1.99	1.63
6	---	---	---	---	---	1.78	1.86	1.85	2.01	2.46	1.93	1.63
7	---	---	---	---	---	1.77	1.89	1.89	1.98	2.42	1.89	1.62
8	---	---	---	---	---	2.09	1.89	2.14	1.96	2.37	1.87	1.62
9	---	---	---	---	---	2.19	1.85	2.06	1.94	2.32	1.85	1.61
10	---	---	---	---	---	2.03	1.85	2.17	1.91	2.28	1.83	1.59
11	---	---	---	---	---	1.93	1.86	2.13	1.90	3.09	1.82	1.58
12	---	---	---	---	---	1.89	1.87	2.14	1.88	3.60	1.79	1.59
13	---	---	---	---	---	1.89	1.87	2.09	1.95	3.07	1.77	1.58
14	---	---	---	---	---	1.91	1.84	2.08	1.97	2.85	1.76	1.57
15	---	---	---	---	---	1.90	1.91	2.06	1.97	2.75	1.74	1.57
16	---	---	---	---	---	1.90	1.88	2.04	1.99	2.66	1.75	1.57
17	---	---	---	---	---	1.89	1.88	2.02	1.96	2.59	1.76	1.58
18	---	---	---	---	---	1.87	1.85	1.99	1.94	2.56	1.73	1.58
19	---	---	---	---	---	1.87	2.03	1.98	1.95	2.49	1.71	1.58
20	---	---	---	---	---	1.86	2.14	1.98	2.21	2.43	1.70	1.58
21	---	---	---	---	---	1.86	2.08	2.00	2.10	2.42	1.73	1.58
22	---	---	---	---	---	1.88	2.03	1.97	2.03	2.40	1.70	1.63
23	---	---	---	---	---	1.89	2.02	1.96	2.39	2.37	1.69	1.64
24	---	---	---	---	---	1.92	1.99	1.95	2.26	2.36	1.68	1.63
25	---	---	---	---	---	1.94	1.97	1.93	2.37	2.29	1.68	1.62
26	---	---	---	---	---	1.93	1.95	1.92	2.37	2.23	1.67	1.61
27	---	---	---	---	---	1.92	1.91	1.95	2.27	2.19	1.67	1.61
28	---	---	---	---	---	1.92	1.90	1.95	2.22	2.14	1.66	1.61
29	---	---	---	---	---	1.93	1.88	1.94	2.19	2.09	1.66	1.60
30	---	---	---	---	---	1.93	1.95	2.00	2.16	2.04	1.66	1.60
31	---	---	---	---	---	1.92	---	1.98	---	2.01	1.83	---
MEAN	---	---	---	---	---	1.91	1.92	1.99	2.07	2.47	1.78	1.61
MAX	---	---	---	---	---	2.19	2.14	2.17	2.39	3.60	1.99	1.70
MIN	---	---	---	---	---	1.77	1.84	1.85	1.88	2.01	1.66	1.57

06471770 MOCCASIN CREEK AT ABERDEEN, SD--Continued



06471800 FOOT CREEK NEAR ABERDEEN, SD

LOCATION.--Lat 45°31'08", long 98°34'37", in SW¼ SW¼ SW¼ sec.29, T.124 N., R.64 W., Brown County, Hydrologic Unit 10160003, on left bank at downstream side of bridge on county road, 1.9 mi downstream of Richmond Lake Dam, 5.9 mi northwest of Aberdeen, and 16.3 mi upstream from mouth.

DRAINAGE AREA.--To be determined.

PERIOD OF RECORD.--October 1999 to September 2000. Prior to October 1999 (March and April 1997), miscellaneous discharge measurements only made 0.6 mi downstream.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,325 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Richmond Lake is formed by a rolled earth dam with a concrete spillway. The reservoir has no control structure and a total storage of 11,500 acre-ft. Satellite data-collection platform and telemeter at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed, 1,670 ft^3/s, Mar. 29, 1997, different site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	.63	.74	e.48	e.44	.58	.57	.95	.45	.41	.27	.76
2	23	.56	.72	e.48	e.54	.51	.64	.79	.43	1.8	.25	.77
3	12	.60	.71	e.44	e.54	.52	.60	.73	.47	.82	.35	.82
4	16	.62	1.0	e.40	e.46	.59	.50	.67	.62	.57	.40	.74
5	30	.69	.88	e.38	e.44	.58	.56	.61	.51	.50	.45	.69
6	31	.64	.74	e.40	e.54	.63	.41	.58	.37	.46	.41	.68
7	23	.66	.71	e.40	e.52	.68	.52	.64	.29	.45	.35	.84
8	12	.70	.78	e.42	e.50	1.9	.54	1.4	.32	.48	.33	.72
9	12	.67	.73	e.42	e.46	2.1	.50	.95	.35	.44	.34	.64
10	13	e.65	.69	e.42	e.44	.59	.53	.93	.48	.39	.29	.60
11	13	e.64	.70	e.40	e.40	.49	.53	.86	.43	.68	.25	.62
12	13	e.63	.71	e.36	e.42	.50	.50	.75	.35	e1.0	.24	.61
13	13	e.63	.69	e.38	e.38	.49	.53	.59	.44	e.90	.20	.57
14	13	e.63	.70	e.40	e.42	.51	.55	.53	.50	e.85	.20	.53
15	13	.63	.66	e.42	e.44	.49	.50	.52	.50	e.80	.19	.56
16	13	.62	.59	e.40	e.44	.43	.61	.53	.49	e.75	.24	.58
17	13	.59	e.58	e.38	e.46	.43	.62	.54	.46	e.71	.35	.59
18	13	.61	e.60	e.40	e.44	.44	.64	.45	.46	e.68	.34	.56
19	13	.53	e.57	e.40	e.42	.42	.86	.44	.44	.65	.33	.57
20	13	.60	e.52	e.38	e.46	.46	1.1	.44	.48	.49	.39	.56
21	13	.66	e.48	e.38	e.54	.44	.68	.50	.41	.43	.51	.60
22	13	.71	e.48	e.38	e.66	.45	.60	.52	.34	.54	.49	.66
23	13	.74	e.50	e.38	e.86	.51	.65	.50	.59	.49	.45	.65
24	13	.79	e.52	e.40	e1.2	.63	.63	.47	.55	e.45	.40	.61
25	13	1.1	e.52	e.38	e1.5	.52	.63	.39	.73	e.45	.38	.58
26	13	.88	e.51	e.36	1.2	.51	.64	.44	.71	.37	.36	.58
27	7.2	.83	e.50	e.38	.59	.49	.76	.59	.51	.32	.35	.56
28	.91	.79	e.51	e.40	.72	.49	.68	.60	.48	.27	.37	.57
29	.74	.71	e.51	e.38	.99	.54	.66	.46	.45	.27	.46	.52
30	.68	.72	e.50	e.38	---	.59	.88	.46	.42	.27	.60	.50
31	.66	---	e.48	e.40	---	.55	---	.51	---	.26	.78	---
TOTAL	423.19	20.46	19.53	12.38	17.42	19.06	18.62	19.34	14.03	17.95	11.32	18.84
MEAN	13.7	.68	.63	.40	.60	.61	.62	.62	.47	.58	.37	.63
MAX	33	1.1	1.0	.48	1.5	2.1	1.1	1.4	.73	1.8	.78	.84
MIN	.66	.53	.48	.36	.38	.42	.41	.39	.29	.26	.19	.50
AC-FT	839	41	39	25	35	38	37	38	28	36	22	37

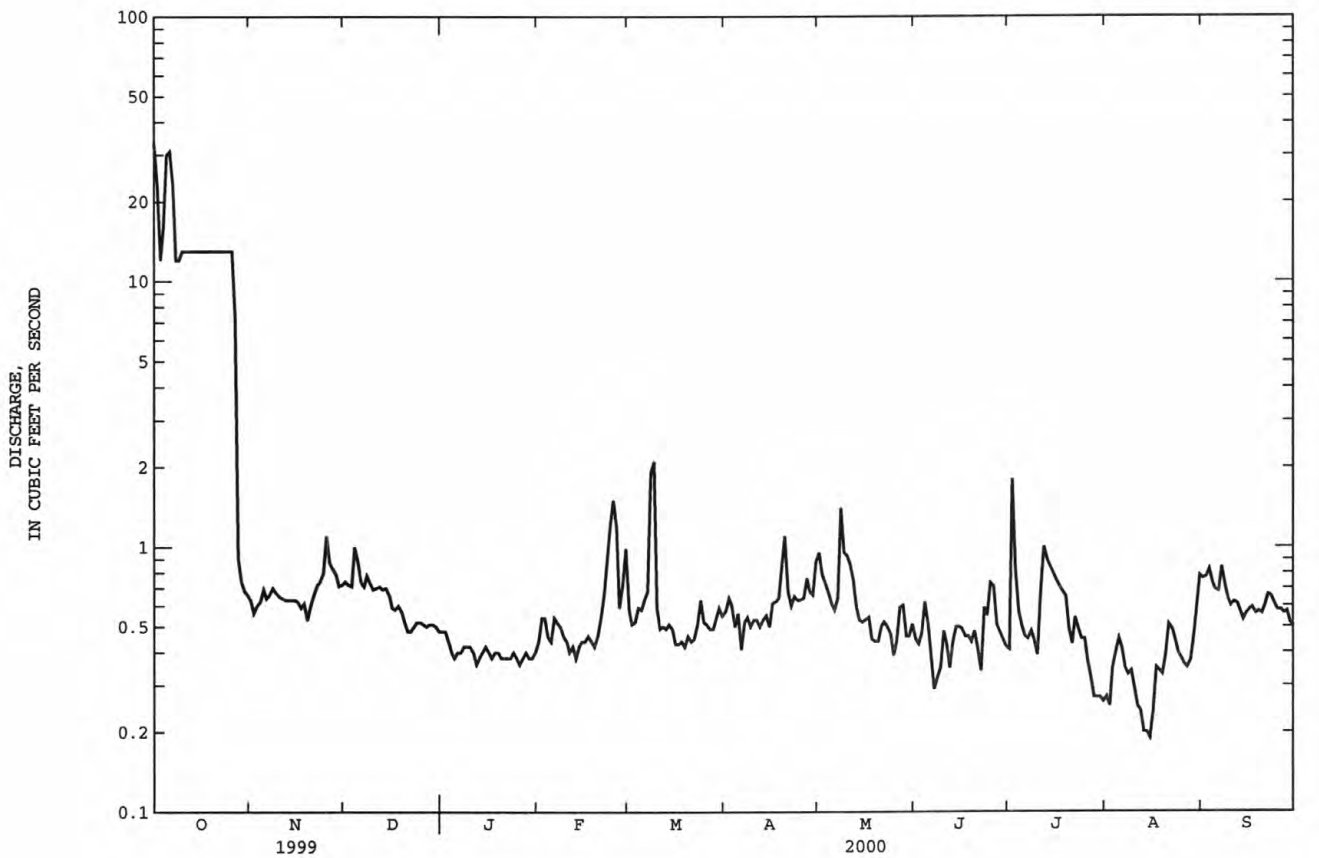
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

MEAN	13.7	.68	.63	.40	.60	.61	.62	.62	.47	.58	.37	.63
MAX	13.7	.68	.63	.40	.60	.61	.62	.62	.47	.58	.37	.63
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	13.7	.68	.63	.40	.60	.61	.62	.62	.47	.58	.37	.63
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06471800 FOOT CREEK NEAR ABERDEEN, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	612.14	
ANNUAL MEAN	1.67	
HIGHEST DAILY MEAN	33	Oct 1
LOWEST DAILY MEAN	.19	Aug 15
ANNUAL SEVEN-DAY MINIMUM	.23	Aug 10
INSTANTANEOUS PEAK FLOW	36	Oct 1
INSTANTANEOUS PEAK STAGE	5.89	Oct 1
ANNUAL RUNOFF (AC-FT)	1210	
10 PERCENT EXCEEDS	1.0	
50 PERCENT EXCEEDS	.54	
90 PERCENT EXCEEDS	.38	

e Estimated.



06472000 JAMES RIVER NEAR STRATFORD, SD

LOCATION.--Lat 45°14'30", long 98°23'28", in NE¼ NE¼ NE¼ sec.3, T.120 N., R.63 W., Spink County, Hydrologic Unit 10160003, on right bank 10 ft downstream from bridge, 6.7 mi southwest of Stratford and 9.0 mi upstream from Mud Creek.

DRAINAGE AREA.--8,865 mi^2, of which 4,005 mi^2 is probably noncontributing.

PERIOD OF RECORD.--March 1950 to September 1972, October 1976 to September 1977, daily discharges, October 1996 to September 1997, and October 1999 to September 2000 (daily discharges estimated Oct. 1 to Nov. 9, 1999).

REVISED RECORDS.--WDR SD-00-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,254.29 ft above mean sea level. Prior to May 17, 1950, nonrecording gage at site 20.9 mi upstream at different datum. May 17, 1950, to Aug. 5, 1951, nonrecording gage at site 60 ft upstream at present datum, and crest-stage partial record from October 1996 to September 1997, at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity 147,000 acre-ft, since 1973. Occasional backwater from Mud Creek. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1200	e1040	426	e135	e94	e145	709	476	345	270	526	465
2	e1200	e1030	409	e135	e92	e180	717	467	341	278	526	464
3	e1190	e1020	392	e135	e92	e200	730	452	339	288	531	463
4	e1190	e1010	371	e135	e90	e210	741	440	343	301	533	462
5	e1190	e1000	347	e130	e88	e220	741	428	347	326	544	459
6	e1180	e990	314	e125	e88	e230	742	410	342	349	547	451
7	e1180	e975	287	e120	e86	e270	751	405	333	367	545	446
8	e1180	e965	e270	e115	e86	e300	749	411	333	380	542	446
9	e1170	e950	e250	e115	e86	e320	742	420	324	391	540	442
10	e1170	933	e230	e120	e84	e305	732	414	307	397	537	438
11	e1170	908	e205	e120	e84	e353	719	411	298	425	533	439
12	e1160	884	e195	e120	e82	e397	702	403	285	480	527	440
13	e1160	866	e185	e115	e78	e401	683	392	271	494	524	437
14	e1150	848	e175	e115	e76	e410	674	395	259	500	519	437
15	e1150	829	e160	e115	e74	e425	656	392	257	504	513	436
16	e1140	809	e145	e115	e72	e455	636	387	257	505	510	434
17	e1140	788	e130	e115	e72	e480	621	386	256	506	507	434
18	e1130	766	e125	e110	e72	e510	605	389	254	513	503	434
19	e1130	742	e125	e110	e72	539	607	382	253	519	499	433
20	e1120	718	e125	e110	e74	560	614	369	268	520	493	433
21	e1110	690	e130	e110	e74	582	599	369	265	523	493	435
22	e1110	665	e130	e105	e76	602	584	371	259	528	494	439
23	e1100	636	e130	e105	e76	617	572	367	259	529	494	445
24	e1100	608	e125	e105	e78	628	557	360	266	532	493	449
25	e1090	578	e125	e100	e80	640	538	354	264	534	490	450
26	e1080	552	e130	e100	e86	653	520	348	262	534	488	451
27	e1080	527	e130	e100	e90	664	508	347	263	535	485	452
28	e1070	501	e130	e100	e96	675	501	346	269	532	478	454
29	e1060	476	e135	e98	e115	683	486	341	274	530	474	455
30	e1050	450	e135	e96	---	690	476	344	274	528	470	458
31	e1050	---	e135	e96	---	697	---	347	---	527	466	---
TOTAL	35200	23754	6301	3525	2413	14041	19212	12123	8667	14145	15824	13381
MEAN	1135	792	203	114	83.2	453	640	391	289	456	510	446
MAX	1200	1040	426	135	115	697	751	476	347	535	547	465
MIN	1050	450	125	96	72	145	476	341	253	270	466	433
AC-FT	69820	47120	12500	6990	4790	27850	38110	24050	17190	28060	31390	26540

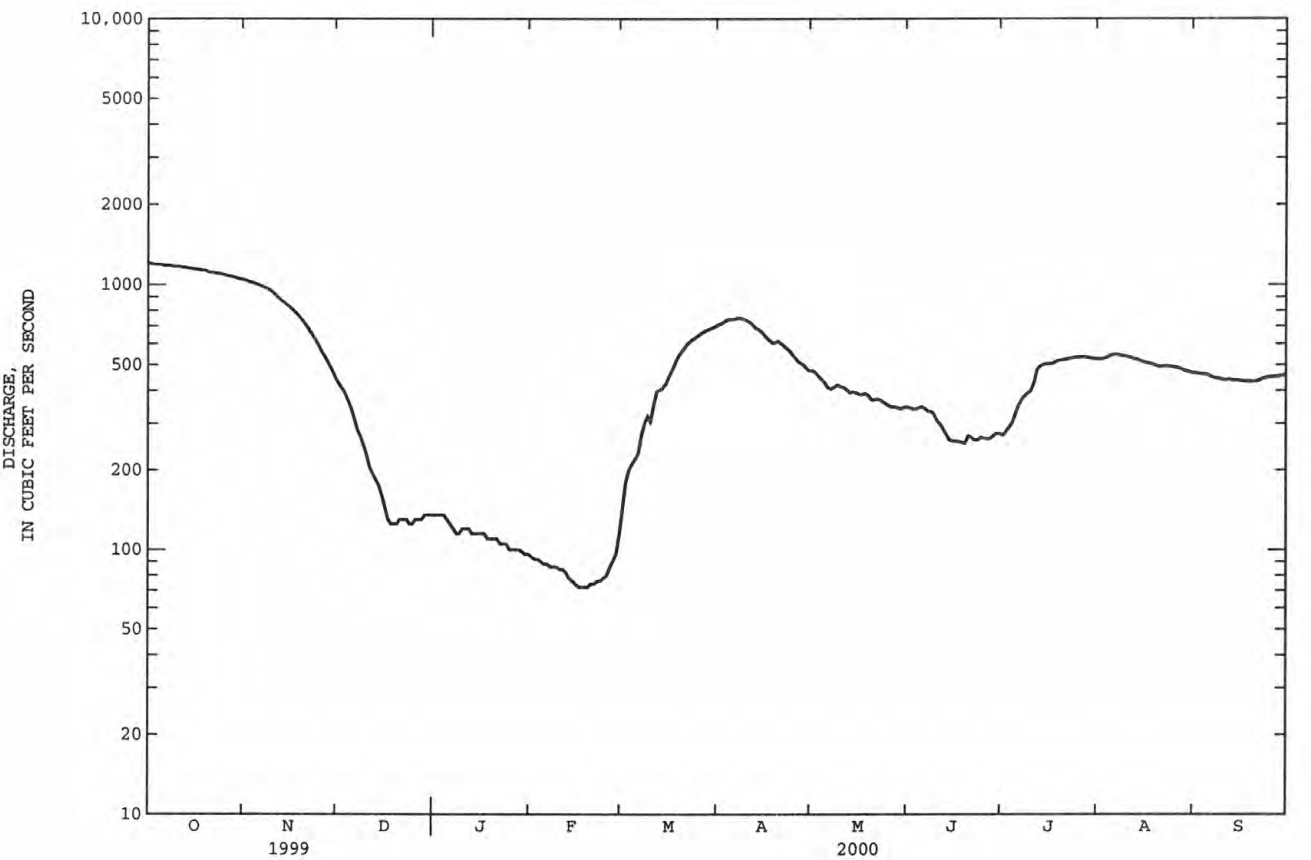
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1972, 1977, 2000, BY WATER YEAR (WY)

MEAN	63.9	51.5	31.2	11.7	7.04	57.0	418	402	216	201	130	60.7
MAX	1135	792	203	114	83.2	453	2036	1925	829	693	814	593
(WY)	2000	2000	2000	2000	2000	2000	1969	1969	1969	1969	1962	1962
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1953	1952	1952	1951	1956	1959	1959	1959	1959	1959	1958

06472000 JAMES RIVER NEAR STRATFORD, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1951-1972, 1977, 2000	
ANNUAL TOTAL	168586			
ANNUAL MEAN	461		138a	
HIGHEST ANNUAL MEAN			521	1969
LOWEST ANNUAL MEAN			.000	1959
HIGHEST DAILY MEAN	1200	Oct 1	4940	Apr 20 1952
LOWEST DAILY MEAN	72	Feb 16-19	.00	Nov 28 1950b
ANNUAL SEVEN-DAY MINIMUM	73	Feb 15	.00	Nov 28 1950
INSTANTANEOUS PEAK FLOW	1200	Oct 1c	8400	Apr 6 1997e
INSTANTANEOUS PEAK STAGE	16.13	Oct 25d	19.48	Apr 6 1997f
ANNUAL RUNOFF (AC-FT)	334400		99950	
10 PERCENT EXCEEDS	993		445	
50 PERCENT EXCEEDS	438		12	
90 PERCENT EXCEEDS	105		.00	

a Median of annual mean discharges, 90 ft^3/s.
b No flow for many days in most years.
c Discharge estimated, stage falling, peak occurred September 1999; maximum peak discharge, 753 ft^3/s, Apr. 7, gage height, 14.11 ft.
d Maximum observed gage height, 16.13 ft, recording gage installed Nov. 9.
e Estimated.
f From floodmark



06473000 JAMES RIVER AT ASHTON, SD

LOCATION.--Lat 44°59'54", long 98°28'50", in NW¼ NW¼ NE¼ sec.36, T.118 N., R.64 W., Spink County, Hydrologic Unit 10160006, on right bank near downstream side of highway bridge, 0.9 mi east of Ashton, 6.1 mi upstream from Snake Creek, and 14.2 mi upstream from Turtle Creek.

DRAINAGE AREA.--9,742 mi^2, of which 4,069 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WSP 1209: 1947. WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,244.4 ft above sea level. Prior to Nov. 26, 1957, nonrecording gage at present site and Nov. 26, 1957, to Oct. 7, 1974, water-stage recorder at site 900 ft upstream, all at present datum.

REMARKS.--Records fair except those for Aug. 9-17 and estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. Occasional backwater and reverse flow caused by Snake Creek during most years. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	1210	674	e160	e105	e130	702	570	376	273	508	470
2	1340	1200	643	e160	e105	e160	715	556	372	270	506	468
3	1340	1200	613	e160	e100	e195	727	541	370	268	509	468
4	1340	1190	586	e160	e98	e220	741	527	371	272	513	465
5	1330	1180	558	e155	e96	e240	753	515	369	284	662	463
6	1330	1170	528	e155	e94	e260	764	499	370	299	706	458
7	1330	1170	498	e150	e94	e285	778	486	366	317	666	450
8	1330	1160	466	e145	e94	309	784	479	360	334	637	445
9	1320	1150	432	e140	e94	336	789	470	356	347	614	441
10	1320	1140	e400	e135	e92	362	790	471	348	359	601	436
11	1310	1120	e370	e135	e92	368	788	471	338	374	590	432
12	1310	1110	e350	e140	e90	382	783	465	326	406	573	432
13	1310	1100	e325	e140	e88	416	775	459	322	441	563	432
14	1300	1080	e305	e135	e86	442	760	453	308	461	551	433
15	1300	1070	e280	e135	e82	458	741	448	295	475	540	435
16	1290	1050	e260	e135	e80	467	737	447	285	489	534	434
17	1290	1030	e240	e130	e78	479	722	441	279	500	535	432
18	1280	1020	e230	e130	e76	481	710	434	277	510	530	431
19	1280	997	e225	e130	e76	487	709	430	278	513	522	430
20	1270	979	e220	e130	e76	502	708	426	281	510	515	428
21	1270	961	e215	e125	e76	521	700	420	282	506	509	428
22	1260	941	e210	e125	e78	546	693	410	283	504	504	431
23	1260	919	e200	e125	e80	573	682	405	279	503	503	434
24	1260	895	e190	e125	e84	594	670	400	274	504	501	438
25	1250	867	e175	e120	e90	608	659	394	285	510	499	441
26	1250	838	e170	e120	e92	622	643	389	286	514	496	443
27	1240	806	e160	e115	e94	639	624	385	277	516	493	442
28	1230	771	e160	e115	e98	656	604	383	274	517	489	445
29	1230	736	e160	e110	e105	673	586	380	274	517	482	446
30	1230	705	e160	e110	---	685	579	382	274	514	477	447
31	1220	---	e160	e110	---	693	---	380	---	511	475	---
TOTAL	39970	30765	10163	4160	2593	13789	21416	13916	9435	13318	16803	13278
MEAN	1289	1026	328	134	89.4	445	714	449	314	430	542	443
MAX	1350	1210	674	160	105	693	790	570	376	517	706	470
MIN	1220	705	160	110	76	130	579	380	274	268	475	428
AC-FT	79280	61020	20160	8250	5140	27350	42480	27600	18710	26420	33330	26340

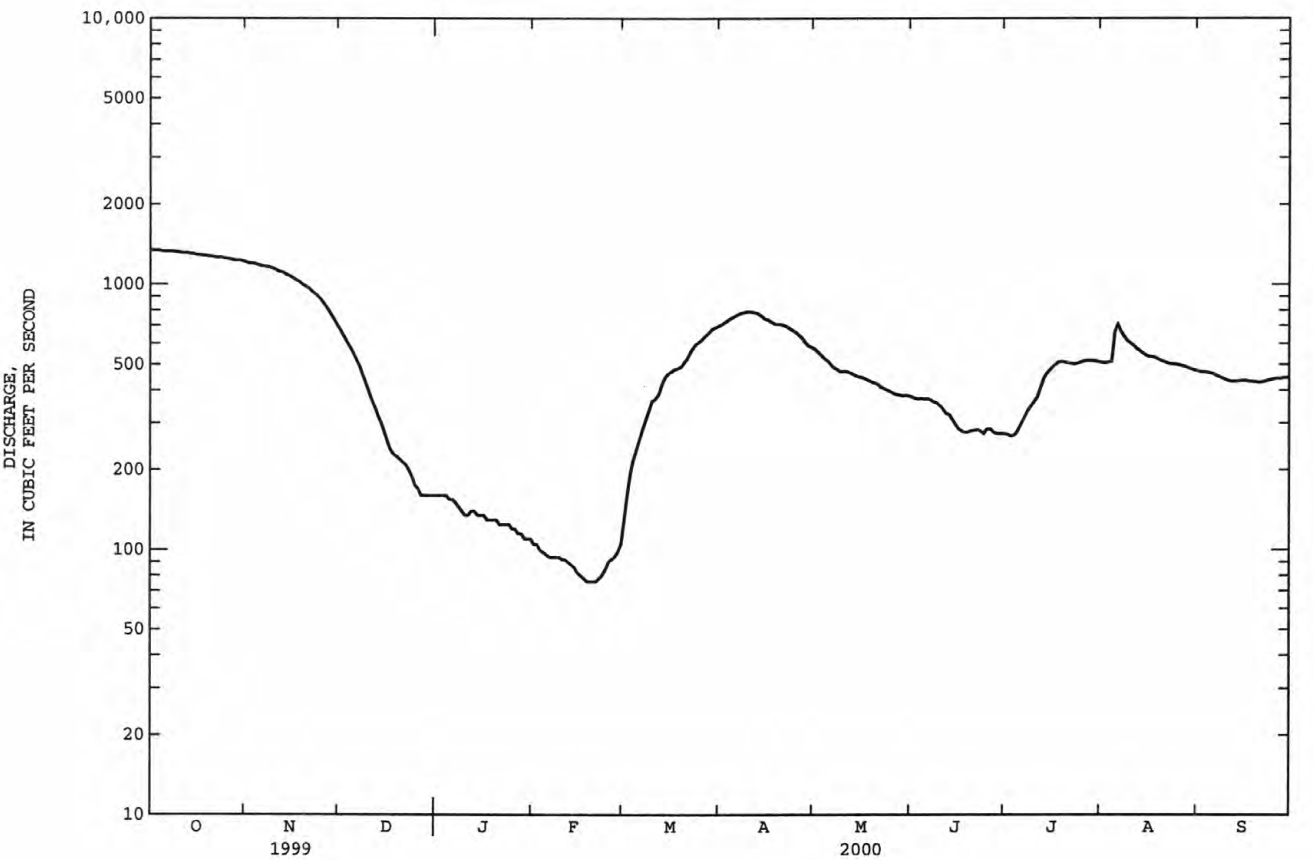
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	123	120	72.6	26.2	17.2	113	634	713	471	344	268	166
MAX	1289	1026	735	303	190	879	7153	4133	2440	1746	1422	1331
(WY)	2000	2000	1994	1999	1999	1995	1997	1997	1950	1997	1997	1999
MIN	.000	.000	.000	.000	.000	-338	.000	.000	.000	.000	.000	.000
(WY)	1950	1950	1946	1950	1948	1997	1959	1959	1959	1959	1959	1958

06473000 JAMES RIVER AT ASHTON, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	380057		189606			
ANNUAL MEAN	1041		518		256a	
HIGHEST ANNUAL MEAN					1530	1997
LOWEST ANNUAL MEAN					.000	1959
HIGHEST DAILY MEAN	2290	Jun 12	1350	Oct 1	9100	Apr 23 1997
LOWEST DAILY MEAN	160	Dec 27	76	Feb 18	-8400	Mar 31 1997b
ANNUAL SEVEN-DAY MINIMUM	164	Dec 25	77	Feb 16	-1960	Mar 26 1997b
INSTANTANEOUS PEAK FLOW			1350	Oct 2c	9150	Apr 23 1997d
INSTANTANEOUS PEAK STAGE			12.63	Oct 2c	26.64	Apr 6 1997f
ANNUAL RUNOFF (AC-FT)	753800		376100		185800	
10 PERCENT EXCEEDS	1880		1170		802	
50 PERCENT EXCEEDS	1180		458		32	
90 PERCENT EXCEEDS	205		124		.00	

a Median of annual mean discharges, 140 ft^3/s.
b Backwater from Snake Creek.
c Stage falling, peak occurred Sept. 18, 1999; maximum peak discharge, 794 ft^3/s, Apr. 10, gage height, 9.43 ft.
d Gage height, 25.03 ft, backwater.
e Estimated.
f Backwater from Snake Creek, from floodmark.



06475000 JAMES RIVER NEAR REDFIELD, SD

LOCATION.--Lat 44°54'38", long 98°28'18", in NW¼ NW¼ NW¼ sec.31, T.117 N., R.63 W., Spink County, Hydrologic Unit 10160006, on left bank near downstream side of county highway bridge, 2.8 mi northeast of Redfield, and 0.7 mi downstream from Turtle Creek.

DRAINAGE AREA.--13,911 mi^2, of which about 4,118 mi^2 are probably noncontributing.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,239.50 ft above sea level. From March 1950 to July 25, 1951, nonrecording gage. Daily discharge from July 26, 1951, to Sept. 30, 1981, water-stage recorder. Both gages described above at site 4.5 mi downstream from present site and at different datum. Daily discharge from Oct. 1, 1981, to Oct. 8, 1986, water-stage recorder at site 0.6 mi downstream at same datum. Daily discharge from Oct. 8, 1986, to Sept. 30, 1990, and crest-stage partial record from Oct. 1, 1990, to Sept. 30, 1997, at same site and datum as current.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. Flow below 100 ft^3/s for water years 1964-79 may be unreliable because of wind effect. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

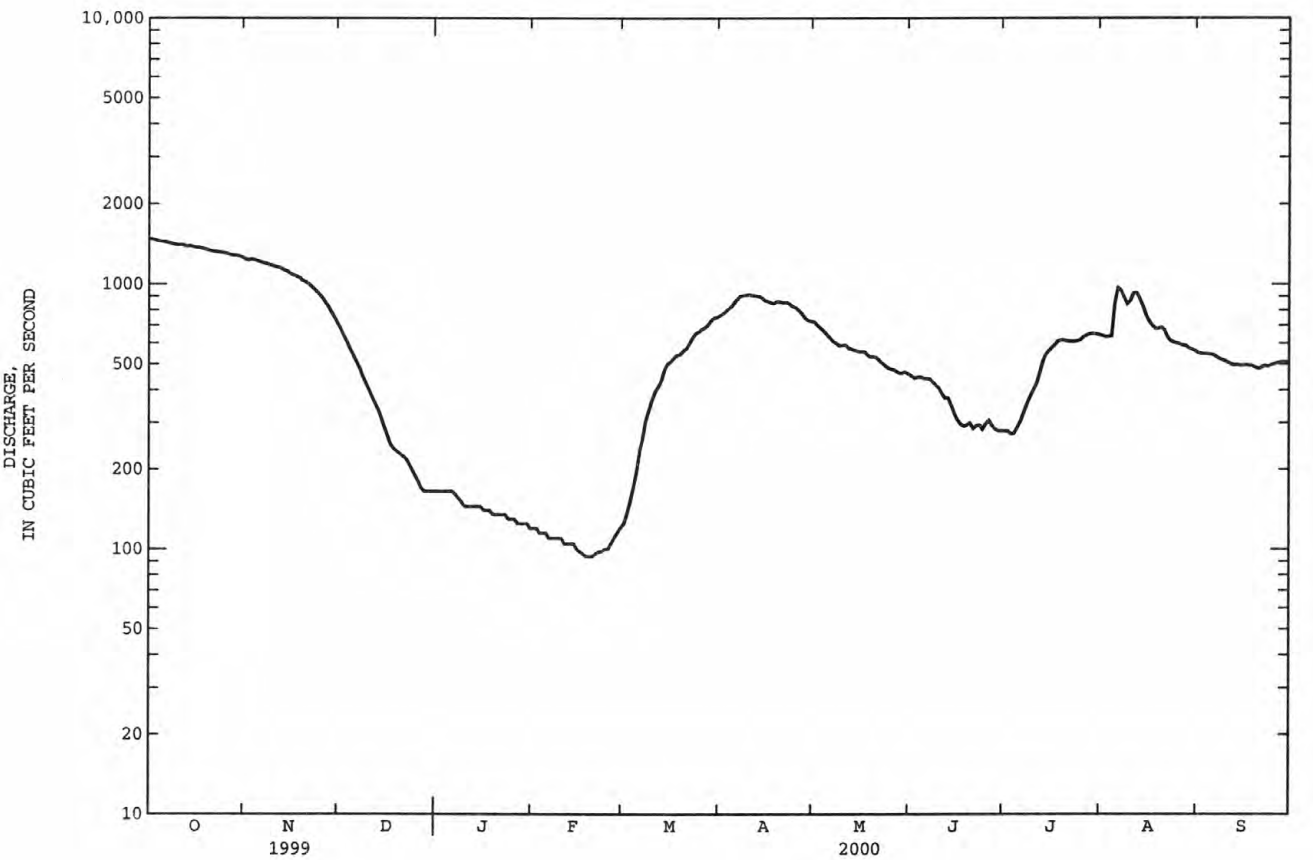
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	1240	688	e165	e120	e125	764	720	453	279	640	549
2	1470	1230	647	e165	e120	e135	781	700	443	280	634	547
3	1460	1240	612	e165	e115	e150	799	684	445	272	635	546
4	1450	1230	578	e165	e115	e170	817	667	448	274	638	545
5	1440	1220	548	e165	e115	e195	842	647	442	289	849	543
6	1440	1210	517	e165	e110	e230	875	628	440	303	967	540
7	1430	1200	488	e160	e110	e260	901	608	440	328	949	529
8	1420	1190	458	e155	e110	e305	905	600	427	352	894	521
9	1410	1180	e430	e150	e110	334	910	585	416	376	843	516
10	1400	1170	e405	e145	e110	363	913	588	406	395	866	508
11	1400	1160	e380	e145	e105	392	906	589	387	419	924	502
12	1400	1150	e360	e145	e105	409	907	573	371	460	927	494
13	1380	1130	e340	e145	e105	433	900	568	374	509	884	498
14	1390	1120	e315	e145	e105	474	892	563	348	542	827	494
15	1380	1100	e290	e145	e100	499	868	557	326	561	768	493
16	1370	1080	e270	e140	e98	509	862	557	308	577	727	495
17	1370	1070	e250	e140	e96	527	850	557	296	593	701	494
18	1360	1060	e240	e140	e94	540	846	544	291	611	679	493
19	1350	1030	e235	e135	e94	544	864	532	294	616	679	486
20	1340	1020	e230	e135	e94	560	857	533	299	615	687	480
21	1330	1000	e225	e135	e96	572	852	527	286	611	671	483
22	1320	976	e220	e135	e98	597	855	514	293	609	629	494
23	1320	951	e210	e135	e98	626	841	503	294	608	611	490
24	1310	923	e200	e130	e100	652	825	490	283	611	603	493
25	1310	896	e190	e130	e100	663	817	480	297	617	600	499
26	1300	865	e180	e130	e105	678	796	478	306	633	593	504
27	1290	830	e170	e125	e110	688	772	474	292	641	589	507
28	1280	792	e165	e125	e115	707	747	463	283	649	584	509
29	1280	755	e165	e125	e120	732	731	462	279	652	572	510
30	1270	723	e165	e125	---	748	727	466	280	650	565	510
31	1260	---	e165	e120	---	753	---	460	---	646	558	---
TOTAL	42410	31741	10336	4430	3073	14570	25222	17317	10547	15578	22293	15272
MEAN	1368	1058	333	143	106	470	841	559	352	503	719	509
MAX	1480	1240	688	165	120	753	913	720	453	652	967	549
MIN	1260	723	165	120	94	125	727	460	279	272	558	480
AC-FT	84120	62960	20500	8790	6100	28900	50030	34350	20920	30900	44220	30290
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2000, BY WATER YEAR (WY)												
MEAN	105	114	71.0	28.4	21.4	214	734	662	396	295	227	122
MAX	1368	1353	971	411	272	1151	4812	2977	2311	1736	1481	1606
(WY)	2000	1999	1999	1999	1999	1986	1969	1969	1999	1999	1999	1999
MIN	.000	.000	.000	.000	.000	.000	1.36	.46	.077	.000	.000	.000
(WY)	1955	1956	1956	1956	1956	1975	1959	1959	1977	1959	1959	1958

06475000 JAMES RIVER NEAR REDFIELD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1951 - 2000	
ANNUAL TOTAL	463130		212789			
ANNUAL MEAN	1269		581		250a	
HIGHEST ANNUAL MEAN					1294	1999
LOWEST ANNUAL MEAN					.45	1959
HIGHEST DAILY MEAN	3640	May 16	1480	Oct 1	7280	Apr 13 1969
LOWEST DAILY MEAN	165	Dec 28	94	Feb 18	.00	Nov 8 1950b
ANNUAL SEVEN-DAY MINIMUM	171	Dec 25	96	Feb 16	.00	Jan 25 1951
INSTANTANEOUS PEAK FLOW			1480	Oct 1c	17000	Apr 3 1997d
INSTANTANEOUS PEAK STAGE			10.69	Oct 1c	31.10	Apr 6 1997f
ANNUAL RUNOFF (AC-FT)	918600		422100		181100	
10 PERCENT EXCEEDS	2330		1210		800	
50 PERCENT EXCEEDS	1320		536		33	
90 PERCENT EXCEEDS	275		130		.00	

a Median of annual mean discharges, 140 ft^3/s.
b No flow for many days.
c Stage falling, peak occurred Sept. 10, 1999; maximum peak discharge, 975 ft^3/s, Aug. 6, gage height, 8.18 ft.
d Gage height, 29.92 ft.
e Estimated.
f Backwater from ice, from floodmark.



06476000 JAMES RIVER AT HURON, SD

LOCATION.--Lat 44°21'49", long 98°11'56", in SW¼ SE¼ NE¼ sec.6, T.110 N., R.61 W., Beadle County, Hydrologic Unit 10160006, on right bank 15 ft upstream from city dam at Huron, 135 ft downstream from Dakota Minnesota and Eastern Railroad bridge, and 165 ft upstream from bridge on 3rd Street SE.

DRAINAGE AREA.--15,869 mi^2, of which 4,148 mi^2 is probably noncontributing.

PERIOD OF RECORD.--August 1928 to September 1932, August 1943 to current year. Monthly discharge only for some periods from August 1928 to September 1932, published in WSP 1309. Gage-height records collected at site about 100 ft downstream for period of open water each year July 1902 to June 1914 and for period March to June 1915-23 are in reports of the National Weather Service.

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder, wire-weight gage, and concrete dam. Datum of gage is 1,223.44 ft above sea level. Aug. 29, 1928, to Mar. 15, 1929, nonrecording gage at site 100 ft downstream at about same datum. Mar. 16, 1929, to June 30, 1932, nonrecording gage 165 ft downstream at present datum. Aug. 3, 1943, to Oct. 17, 1951, nonrecording gage at site 15 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since May 1974. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood between Apr. 11 and 13, 1881, reached a stage of 19.8 ft, from U.S. Weather Bureau publication. Flood of Mar. 22, 1922, reached a stage of 16.5 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	1470	900	193	115	147	737	734	506	221	616	509
2	1610	1340	875	201	115	137	780	640	461	253	588	489
3	1590	1330	816	199	115	149	856	600	416	254	551	508
4	1580	1330	794	197	113	178	718	623	486	235	546	484
5	1590	1360	701	191	112	205	891	510	434	266	746	418
6	1500	1330	665	189	108	214	802	607	370	253	917	428
7	1580	1330	640	184	108	299	839	624	410	233	987	578
8	1580	1320	629	179	108	400	836	667	428	261	1030	461
9	1530	1340	550	172	108	380	873	522	337	340	992	453
10	1540	1320	492	169	103	252	855	498	420	453	882	486
11	1450	1270	424	161	104	280	909	571	403	398	839	502
12	1530	1290	397	156	104	336	761	577	346	420	914	431
13	1480	1300	385	149	106	361	910	565	351	429	909	455
14	1350	1270	e350	145	104	379	952	477	434	432	856	469
15	1490	1250	e300	150	103	470	873	462	350	455	837	428
16	1490	1230	e300	e148	103	414	845	523	345	524	733	429
17	1450	1180	284	e147	99	334	800	596	301	533	725	445
18	1510	1090	243	145	96	518	847	591	283	542	649	445
19	1600	1190	e250	143	93	491	819	458	227	584	576	496
20	1470	1080	e245	139	90	476	929	473	283	614	575	483
21	1490	1160	e240	137	90	585	805	512	329	585	695	402
22	1470	1150	e235	134	88	546	834	502	264	574	653	414
23	1420	1130	e230	131	92	521	844	477	257	566	631	503
24	1390	1080	222	128	99	670	780	499	277	555	557	450
25	1440	1040	222	127	110	682	782	418	289	612	568	443
26	1410	1050	217	122	129	728	798	410	290	610	596	454
27	1430	1010	207	119	124	724	845	454	272	584	524	453
28	1390	977	201	122	123	622	739	432	273	593	558	452
29	1380	923	197	121	149	637	619	437	252	595	543	463
30	1410	857	195	118	---	728	719	528	238	600	481	478
31	1360	---	193	116	---	774	---	468	---	591	576	---
TOTAL	46140	35997	12599	4732	3111	13637	24597	16455	10332	14165	21850	13909
MEAN	1488	1200	406	153	107	440	820	531	344	457	705	464
MAX	1630	1470	900	201	149	774	952	734	506	614	1030	578
MIN	1350	857	193	116	88	137	619	410	227	221	481	402
AC-FT	91520	71400	24990	9390	6170	27050	48790	32640	20490	28100	43340	27590

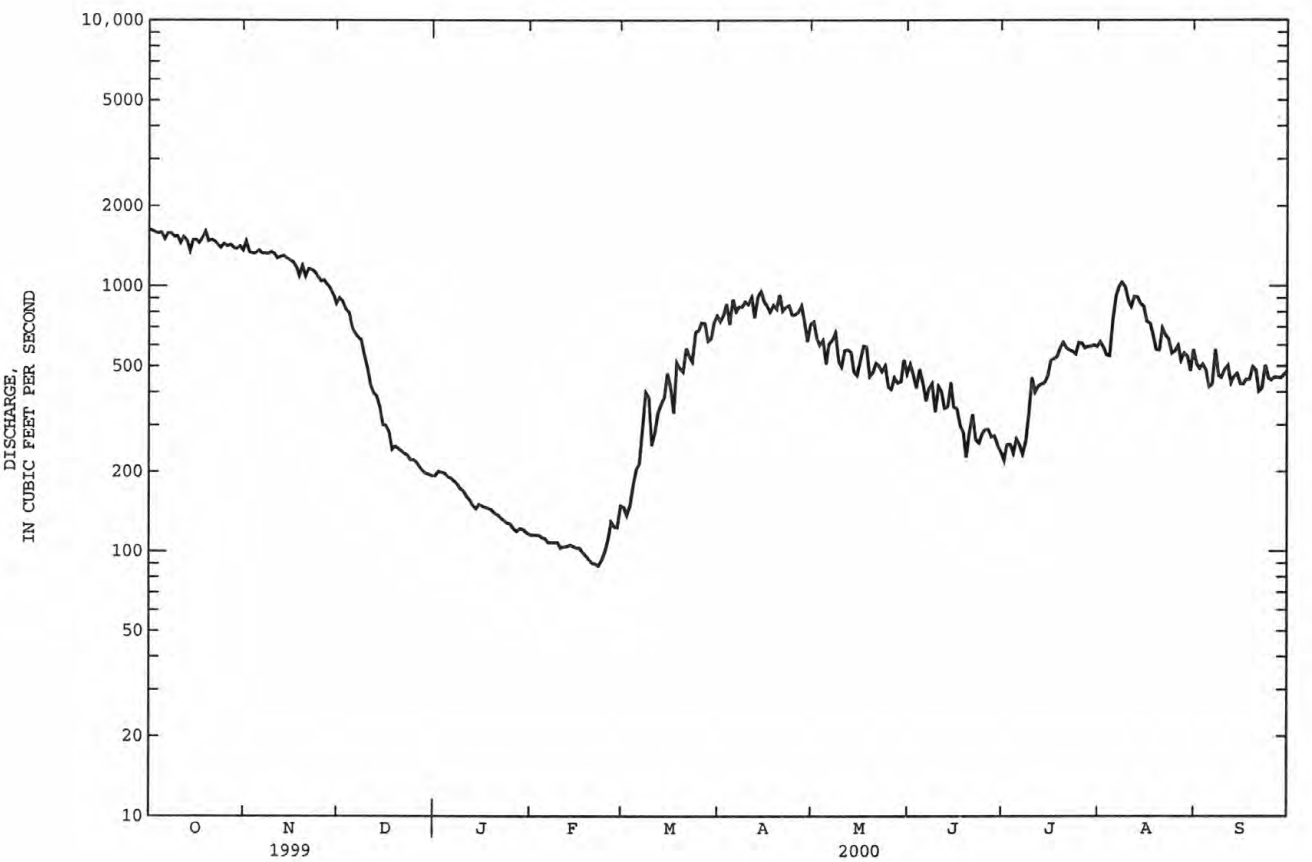
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2000, BY WATER YEAR (WY)

MEAN	144	137	90.2	42.9	43.2	482	1253	1021	656	434	339	198
MAX	1488	1565	1150	447	328	3421	16590	7185	3883	2328	2221	1782
(WY)	2000	1999	1999	1999	1996	1994	1997	1997	1995	1997	1997	1999
MIN	.000	.000	.000	.000	.000	3.29	1.37	.000	.000	.000	.000	.000
(WY)	1946	1946	1946	1946	1956	1965	1959	1959	1959	1959	1959	1949

06476000 JAMES RIVER AT HURON, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929-1932, 1944-2000	
ANNUAL TOTAL	515308		217524			
ANNUAL MEAN	1412		594		387a	
HIGHEST ANNUAL MEAN					2915	1997
LOWEST ANNUAL MEAN					.51	1959
HIGHEST DAILY MEAN	4050	May 19	1630	Oct 1	22800	Apr 6 1997
LOWEST DAILY MEAN	193	Dec 31	88	Feb 22	.00	Oct 12 1944b
ANNUAL SEVEN-DAY MINIMUM	205	Dec 25	93	Feb 17	.00	Sep 29 1945c
INSTANTANEOUS PEAK FLOW			1660	Oct 1d	23400	Apr 6 1997
INSTANTANEOUS PEAK STAGE			10.52	Oct 1d	21.28	Apr 6 1997f
ANNUAL RUNOFF (AC-FT)	1022000		431500		280,400	
10 PERCENT EXCEEDS	2690		1330		1120c	
50 PERCENT EXCEEDS	1400		498		56c	
90 PERCENT EXCEEDS	300		130		.00c	

a Median of annual mean discharges, 200 ft^3/s.
b No flow for long periods in most years.
c For period 1944-2000 water years only.
d Stage falling, peak occurred Sept. 18, 1999; maximum peak discharge, 1,180 ft^3/s, Apr. 5, gage height, 10.19 ft.
e Estimated.
f Backwater from floodmark.



06477000 JAMES RIVER NEAR FORESTBURG, SD

LOCATION.--Lat 43°58'26", long 98°04'14", in SW¼ SW¼ NW¼ sec.20, T.106 N., R.60 W., Sanborn County, Hydrologic Unit 10160011, on right bank 5.0 ft downstream from highway bridge, 3.8 mi southeast of Forestburg, 5.4 mi downstream from Chicago and North Western Railway Co. bridge, and 6.1 mi downstream from Sand Creek.

DRAINAGE AREA.--17,590 mi^2, of which about 4,148 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,208.34 ft above sea level (Bureau of Reclamation bench mark). Prior to Sept. 5, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in March 1920 and March 1922 reached a stage of about 18 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	1360	833	e205	e165	e145	762	742	551	260	546	491
2	1680	1380	828	e205	e160	e150	764	749	541	247	553	486
3	1670	1350	820	e205	e160	e160	782	708	522	248	545	465
4	1650	1320	781	e205	e160	e175	811	675	493	259	522	470
5	1640	1310	745	e210	e155	e190	776	663	500	255	559	457
6	1640	1310	694	e215	e155	e215	813	616	485	261	647	426
7	1610	1300	653	e210	e155	e245	847	639	442	260	768	417
8	1620	1290	634	e210	e150	e275	831	735	429	248	850	468
9	1620	1290	608	e205	e150	e305	842	716	446	257	900	461
10	1600	1280	e580	e205	e145	e335	855	643	426	338	896	432
11	1580	1270	e545	e200	e140	e365	860	613	428	450	837	443
12	1560	1240	e515	e200	e140	e400	871	619	454	434	786	443
13	1550	1230	e485	e195	e135	434	840	622	427	411	804	431
14	1530	1220	e450	e190	e135	465	858	618	407	409	816	417
15	1460	1210	e415	e185	e135	490	901	561	434	414	790	422
16	1470	1180	e380	e185	e130	530	888	540	436	419	767	412
17	1490	1160	e355	e185	e135	535	855	582	402	451	710	401
18	1480	1110	e330	e185	e130	514	836	706	370	490	669	409
19	1500	1050	e315	e190	e130	551	886	692	339	509	622	415
20	1540	1060	e300	e180	e125	596	879	604	309	533	567	433
21	1520	1030	e290	e180	e125	588	887	565	289	553	552	444
22	1500	1050	e290	e180	e130	632	860	617	313	551	611	418
23	1480	1050	e290	e180	e130	639	846	646	317	542	618	402
24	1450	1040	e280	e175	e130	634	846	631	291	540	586	439
25	1430	1010	e275	e175	e130	672	817	614	292	545	545	439
26	1430	982	e260	e170	e130	721	807	574	308	558	528	430
27	1420	971	e255	e170	e135	733	829	535	309	566	539	431
28	1420	948	e245	e170	e135	738	834	535	298	550	509	437
29	1400	917	e235	e170	e140	703	793	527	287	543	500	439
30	1380	877	e230	e165	---	690	731	520	278	545	505	443
31	1380	---	e215	e165	---	728	---	549	---	547	477	---
TOTAL	47380	34795	14131	5870	4075	14553	25007	19356	11823	13193	20124	13121
MEAN	1528	1160	456	189	141	469	834	624	394	426	649	437
MAX	1680	1380	833	215	165	738	901	749	551	566	900	491
MIN	1380	877	215	165	125	145	731	520	278	247	477	401
AC-FT	93980	69020	28030	11640	8080	28870	49600	38390	23450	26170	39920	26030

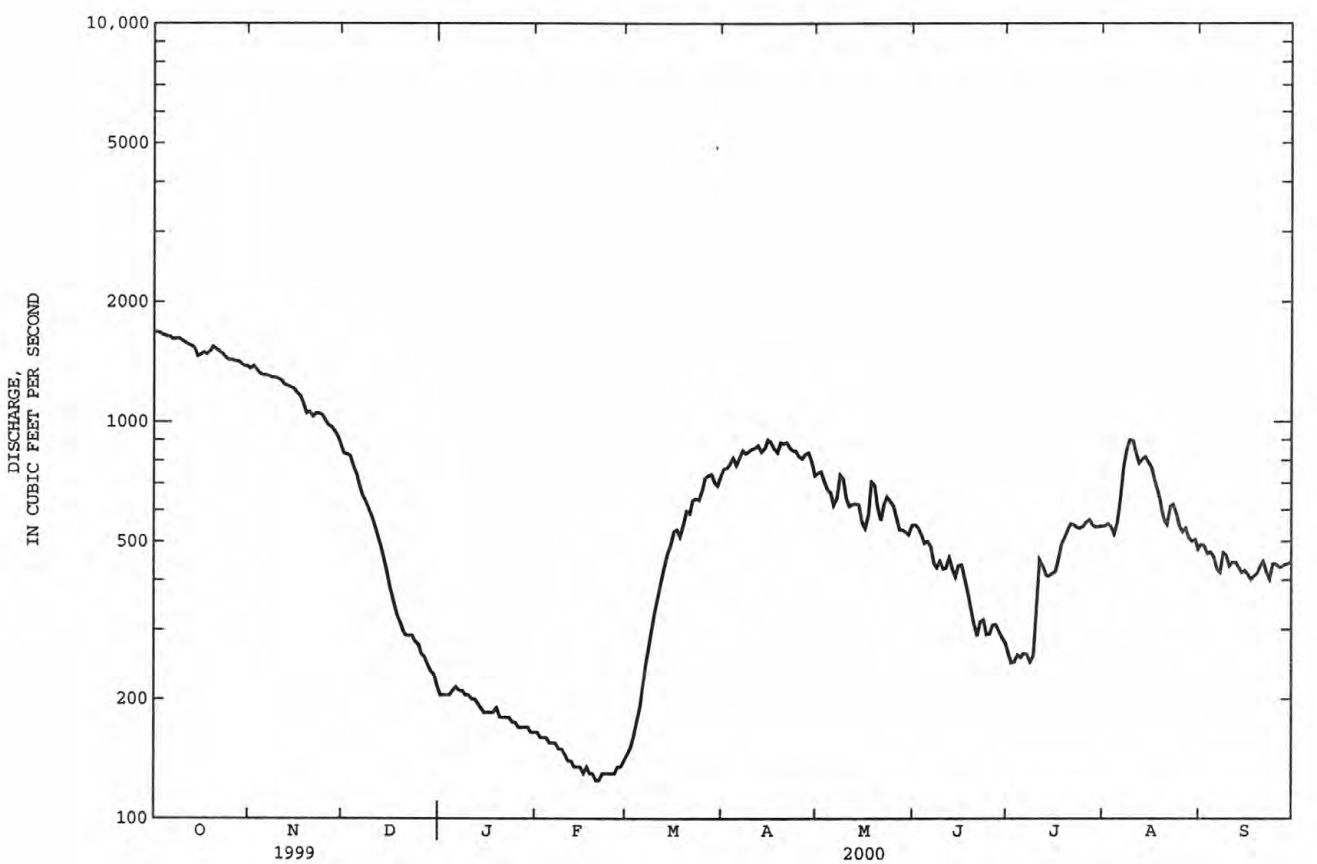
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2000, BY WATER YEAR (WY)

MEAN	175	170	116	56.7	61.4	603	1558	1211	797	496	386	235
MAX	1528	1759	1384	528	550	3735	17560	9047	5395	2196	2599	1792
(WY)	2000	1999	1999	1999	1996	1994	1997	1995	1995	1993	1993	1999
MIN	.000	.000	.000	.000	.000	9.75	2.39	5.61	.39	.002	.004	.000
(WY)	1977	1977	1977	1977	1977	1990	1990	1959	1981	1981	1976	1976

06477000 JAMES RIVER NEAR FORESTBURG, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1951 - 2000	
ANNUAL TOTAL	545891		223428			
ANNUAL MEAN	1496		610		490a	
HIGHEST ANNUAL MEAN					3054	1997
LOWEST ANNUAL MEAN					4.75	1959
HIGHEST DAILY MEAN	5010	May 22	1680	Oct 1	25100	Apr 6 1997
LOWEST DAILY MEAN	215	Dec 31	125	Feb 20	.00	Jul 10 1959b
ANNUAL SEVEN-DAY MINIMUM	245	Dec 25	129	Feb 18	.00	Aug 9 1959
INSTANTANEOUS PEAK FLOW			1680	Oct 1c	25600	Apr 6 1997
INSTANTANEOUS PEAK STAGE			9.78	Oct 1c	20.61	Apr 6 1997
ANNUAL RUNOFF (AC-FT)	1083000		443200		354800	
10 PERCENT EXCEEDS	2710		1310		1340	
50 PERCENT EXCEEDS	1450		534		75	
90 PERCENT EXCEEDS	420		170		2.4	

a Median of annual mean discharges, 240 ft^3/s.
b No flow at times in some years.
c Stage falling, peak occurred Sept. 19, 1999; maximum peak discharge, 911 ft^3/s, Apr. 19, gage height, 7.32 ft.
e Estimated.



06477500 FIRESTEEL CREEK NEAR MOUNT VERNON, SD

LOCATION.--Lat 43°46'30", long 98°14'33", in SW¼ SW¼ sec.26, T.104 N., R.62 W., Davison County, Hydrologic Unit 10160011, on left bank 50 ft west of county road (revised), 4.5 mi north of Mount Vernon, 5.2 mi downstream from West Firesteel Creek, and 12 mi northwest of Mitchell.

DRAINAGE AREA.--521 mi^2.

PERIOD OF RECORD.--September 1955 to current year.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,297.22 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.3	1.2	1.1	.64	2.3	.68	2.6	.97	.18	.07	.04
2	1.6	1.3	1.3	1.1	.87	1.7	.69	2.1	.90	.15	.10	.06
3	1.6	1.2	1.3	e1.1	.86	1.3	.58	1.6	.80	.12	.10	.08
4	1.7	1.2	1.2	e1.0	.81	1.3	.59	1.4	1.2	.12	.10	.06
5	1.7	1.2	1.2	.92	.79	.94	.57	1.2	1.2	.12	13	.05
6	1.6	1.3	1.2	1.1	.83	.97	.53	1.1	8.0	.11	.78	.04
7	1.6	1.2	1.2	1.0	.87	1.5	.77	1.1	4.7	.07	.42	.04
8	1.8	1.2	1.2	1.0	.90	2.1	.77	1.7	2.7	.06	.48	.03
9	1.7	1.2	1.2	e1.0	.95	2.5	.67	2.3	1.6	.06	.33	.01
10	1.5	1.3	1.1	e1.0	.96	2.1	.65	1.8	1.3	.04	.31	.00
11	1.5	1.3	1.1	e1.0	.89	1.9	.67	2.6	1.1	.05	.25	.00
12	1.4	1.2	1.1	e1.0	.86	1.7	.66	2.7	.94	.08	.19	.00
13	1.4	1.2	1.0	1.0	.84	1.4	.57	2.2	.82	.07	.17	.01
14	1.3	1.2	e1.0	1.0	.81	1.3	.56	1.9	.81	.08	.15	.01
15	1.3	1.2	e1.0	e1.0	.86	1.3	.71	1.5	.69	.06	.13	.01
16	1.3	1.1	1.0	e.96	.80	1.2	.98	1.3	.61	.06	.14	.02
17	1.3	1.2	1.0	e.94	.83	.99	1.1	1.3	.57	.06	.15	.01
18	1.3	1.2	1.0	.92	.86	.78	1.1	2.0	.51	.07	.13	.01
19	1.3	1.2	e1.0	1.5	.87	.88	1.2	2.4	.43	.14	.15	.03
20	1.3	1.2	e1.0	1.2	.89	.74	2.3	3.9	.51	.18	.12	.05
21	1.3	1.2	1.0	1.1	1.0	.82	3.0	4.7	.42	.17	.14	.05
22	1.3	1.2	.91	1.1	1.1	.81	2.7	3.2	.36	.16	.18	.07
23	1.2	1.2	.85	1.0	1.5	.83	1.9	2.2	.31	.14	.16	.07
24	1.2	1.3	.92	.90	2.7	.89	1.6	1.7	.34	.14	.08	.08
25	1.2	1.3	1.1	.84	3.3	.95	1.3	1.3	.35	.60	.06	.07
26	1.2	1.2	1.1	.82	5.5	.86	1.2	1.2	.37	.32	.05	.06
27	1.2	1.2	1.0	.74	4.0	.72	1.8	1.2	.33	.20	.04	.07
28	1.2	1.1	1.1	.66	3.1	.74	1.9	1.1	.43	.11	.06	.04
29	1.3	1.1	1.1	.59	2.9	.62	1.9	1.0	.34	.09	.05	.04
30	1.3	1.2	1.1	.59	---	.65	2.5	.87	.27	.08	.05	.06
31	1.4	---	1.1	.59	---	.66	---	.90	---	.07	.02	---
TOTAL	43.5	36.4	33.58	29.77	42.09	37.45	36.15	58.07	33.88	3.96	18.16	1.17
MEAN	1.40	1.21	1.08	.96	1.45	1.21	1.21	1.87	1.13	.13	.59	.039
MAX	1.8	1.3	1.3	1.5	5.5	2.5	3.0	4.7	8.0	.60	13	.08
MIN	1.2	1.1	.85	.59	.64	.62	.53	.87	.27	.04	.02	.00
AC-FT	86	72	67	59	83	74	72	115	67	7.9	36	2.3

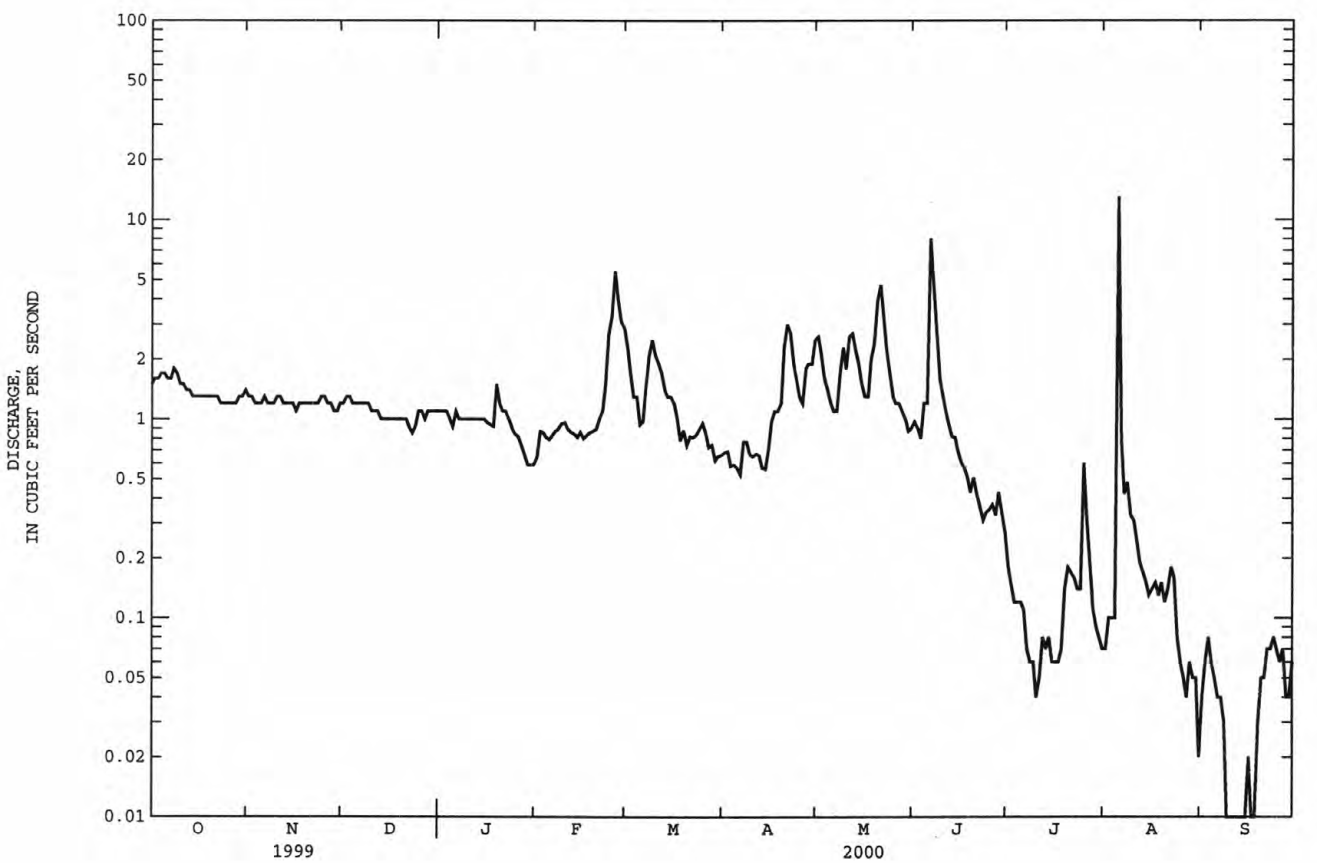
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2000, BY WATER YEAR (WY)

MEAN	1.88	3.84	1.13	1.11	9.45	91.0	85.0	86.4	74.5	26.7	7.78	1.10
MAX	39.2	119	22.7	23.3	175	759	623	1135	1097	623	124	13.8
(WY)	1983	1999	1999	1973	1996	1997	1969	1995	1962	1993	1992	1992
MIN	.000	.000	.000	.000	.000	.000	.049	.004	.001	.000	.000	.000
(WY)	1959	1960	1956	1956	1956	1965	1980	1980	1968	1959	1958	1958

06477500 FIRESTEEL CREEK NEAR MOUNT VERNON, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1956 - 2000		
ANNUAL TOTAL	29207.48		374.18				
ANNUAL MEAN	80.0		1.02		32.6a		
HIGHEST ANNUAL MEAN					203		1962
LOWEST ANNUAL MEAN					.033		1980
HIGHEST DAILY MEAN	1950	May 7	13	Aug 5	5820	Apr 4	1969
LOWEST DAILY MEAN	.85	Dec 23	.00	Sep 10	.00	Oct 1	1955b
ANNUAL SEVEN-DAY MINIMUM	.95	Dec 18	.01	Sep 9	.00	Oct 8	1955
INSTANTANEOUS PEAK FLOW			70	Aug 5	6610	Apr 4	1969c
INSTANTANEOUS PEAK STAGE			3.81	Aug 5	17.12	Apr 3	1969d
ANNUAL RUNOFF (AC-FT)	57930		742		23590		
10 PERCENT EXCEEDS	132		1.8		30		
50 PERCENT EXCEEDS	9.3		1.0		.21		
90 PERCENT EXCEEDS	1.2		.06		.00		

a Median of annual mean discharges, 11 ft^3/s.
b No flow for many days in most years.
c Gage height, 15.34 ft.
d Backwater from ice.
e Estimated.



06478500 JAMES RIVER NEAR SCOTLAND, SD

LOCATION.--Lat 43°11'09", long 97°38'07", in SW¼ SW¼ sec.30, T.97 N., R.57 W., Hutchinson County, Hydrologic Unit 10160011, on right bank 5.0 ft downstream from highway bridge, 0.3 mi upstream from Dawson Creek, and 5.2 mi northeast of Scotland.

DRAINAGE AREA.--20,653 mi^2, of which 4,148 mi^2 is probably noncontributing.

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

REVISED RECORDS.--WSP 786: Drainage area. WSP 956: 1937-38. WSP 1279: 1932, 1948. WDR SD-84-1: Drainage area. WDR SD-86-1: Drainage area. WDR SD-88-1: Datum.

GAGE.--Water-stage recorder, crest-stage gage, and rock and earth control. Datum of gage is 1,168.02 ft above sea level. Prior to Nov. 28, 1972, at site 0.25 mi downstream at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Low flow regulated by dams forming Arrowwood and Jim Lakes, combined capacity, 16,530 acre-ft, and by dam forming Jamestown Reservoir, capacity, 229,470 acre-ft, since May 1953, and by dam forming Pipestem Reservoir, capacity, 147,000 acre-ft, since 1973. Occasional backwater caused by Dawson Creek; reverse flow occurred for part of May 15, 1961, from information by local residents. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1820	1470	1080	e279	e195	328	730	891	674	418	628	582
2	1800	1470	1060	e278	195	307	705	864	668	398	617	577
3	1770	1470	1020	e277	211	300	736	822	671	383	607	565
4	1740	1470	984	e276	215	300	748	808	696	373	600	553
5	1730	1470	952	e278	214	297	758	796	709	373	707	544
6	1710	1470	920	e269	204	295	796	771	678	381	824	522
7	1700	1460	888	e264	197	299	802	761	636	358	1060	526
8	1690	1450	856	e260	199	327	821	772	622	341	1120	530
9	1680	1440	803	e257	202	380	829	771	589	331	1010	502
10	1670	1440	769	e253	209	413	829	773	558	342	976	482
11	1660	1440	728	e248	e190	430	839	812	560	355	943	504
12	1640	1430	653	e243	e180	460	845	837	563	360	913	510
13	1630	1430	664	e238	e185	512	847	797	551	383	920	494
14	1620	1430	587	e234	e190	517	871	751	541	456	883	489
15	1610	1410	e580	e231	202	487	894	719	557	495	844	490
16	1600	1390	e530	e228	191	482	931	712	553	502	839	472
17	1580	1370	e480	e226	191	478	960	707	537	522	840	461
18	1550	1350	e450	e224	191	491	980	784	533	521	833	454
19	1530	1340	e410	e221	186	530	968	964	529	519	812	456
20	1530	1330	e390	e217	188	547	945	1010	515	536	780	458
21	1520	1280	e380	e214	204	563	939	960	501	575	751	451
22	1530	1240	e369	e212	225	579	930	895	469	599	723	454
23	1540	1210	e354	e209	258	614	927	818	436	620	695	482
24	1550	1200	e338	e206	305	646	919	763	427	626	669	496
25	1540	1200	e326	e202	323	675	896	756	473	645	667	487
26	1540	1200	e316	e200	348	689	888	755	477	654	674	471
27	1530	1200	e305	e195	359	696	895	761	460	653	671	469
28	1510	1160	e298	e194	342	702	904	759	443	647	640	477
29	1500	1110	e293	e190	326	719	895	732	431	649	621	475
30	1490	1090	e288	e185	---	742	887	700	430	649	605	470
31	1490	---	e283	e190	---	748	---	690	---	641	587	---
TOTAL	50000	40420	18354	7198	6625	15553	25914	24711	16487	15305	24059	14903
MEAN	1613	1347	592	232	228	502	864	797	550	494	776	497
MAX	1820	1470	1080	279	359	748	980	1010	709	654	1120	582
MIN	1490	1090	283	185	180	295	705	690	427	331	587	451
AC-FT	99180	80170	36410	14280	13140	30850	51400	49010	32700	30360	47720	29560

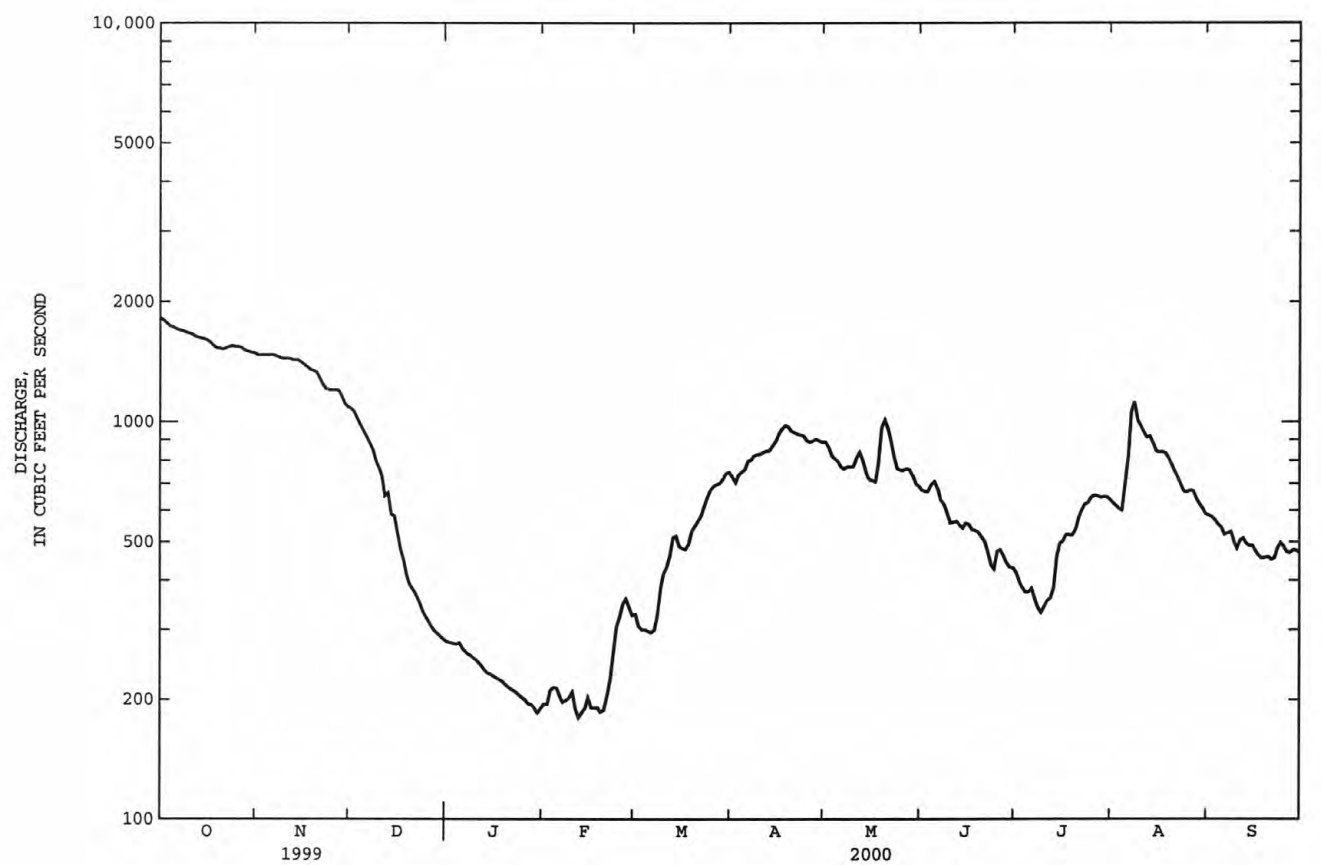
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	169	165	122	65.9	117	807	1832	1358	1140	689	391	236
MAX	1613	2050	1885	716	800	4118	20950	13180	7585	8582	4154	2048
(WY)	2000	1999	1999	1999	1994	1994	1997	1995	1984	1993	1993	1999
MIN	.000	.000	2.72	1.52	2.14	16.8	18.5	8.52	5.14	.79	.000	.27
(WY)	1940	1940	1940	1940	1940	1940	1934	1934	1981	1936	1934	1941

06478500 JAMES RIVER NEAR SCOTLAND, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	679539		259529			
ANNUAL MEAN	1862		709		592a	
HIGHEST ANNUAL MEAN					3996	1997
LOWEST ANNUAL MEAN					13.8	1934
HIGHEST DAILY MEAN	5160	May 28	1820	Oct 1	27800	Apr 9 1997
LOWEST DAILY MEAN	283	Dec 31	180	Feb 12	.00	Jul 28 1934b
ANNUAL SEVEN-DAY MINIMUM	301	Dec 25	190	Feb 11	.00	Jul 28 1934
INSTANTANEOUS PEAK FLOW			1840	Oct 1c	29400	Jun 23 1984
INSTANTANEOUS PEAK STAGE			9.27	Oct 1c	20.45	Jun 23 1984
ANNUAL RUNOFF (AC-FT)	1348000		514800		428700	
10 PERCENT EXCEEDS	3720		1470		1550	
50 PERCENT EXCEEDS	1520		624		90	
90 PERCENT EXCEEDS	550		226		8.6	

a Median of annual mean discharges, 290 ft^3/s.
b No flow for many days in some years.
c Stage falling, peak occurred Sept. 23, 1999; maximum peak discharge, 1,150 ft^3/s, Aug. 8, gage height, 7.07 ft.
e Estimated.



06478515 MISSOURI RIVER NEAR GAYVILLE, SD

LOCATION.--Lat 42°51'01", long 97°13'12", in SW¼ NW¼ sec.27, T.93 N., R.54 W., Yankton County, Hydrologic Unit 10170101, 3.8 mi southwest of Gayville, 4.1 mi downstream from James River, and at mile 796.0.

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

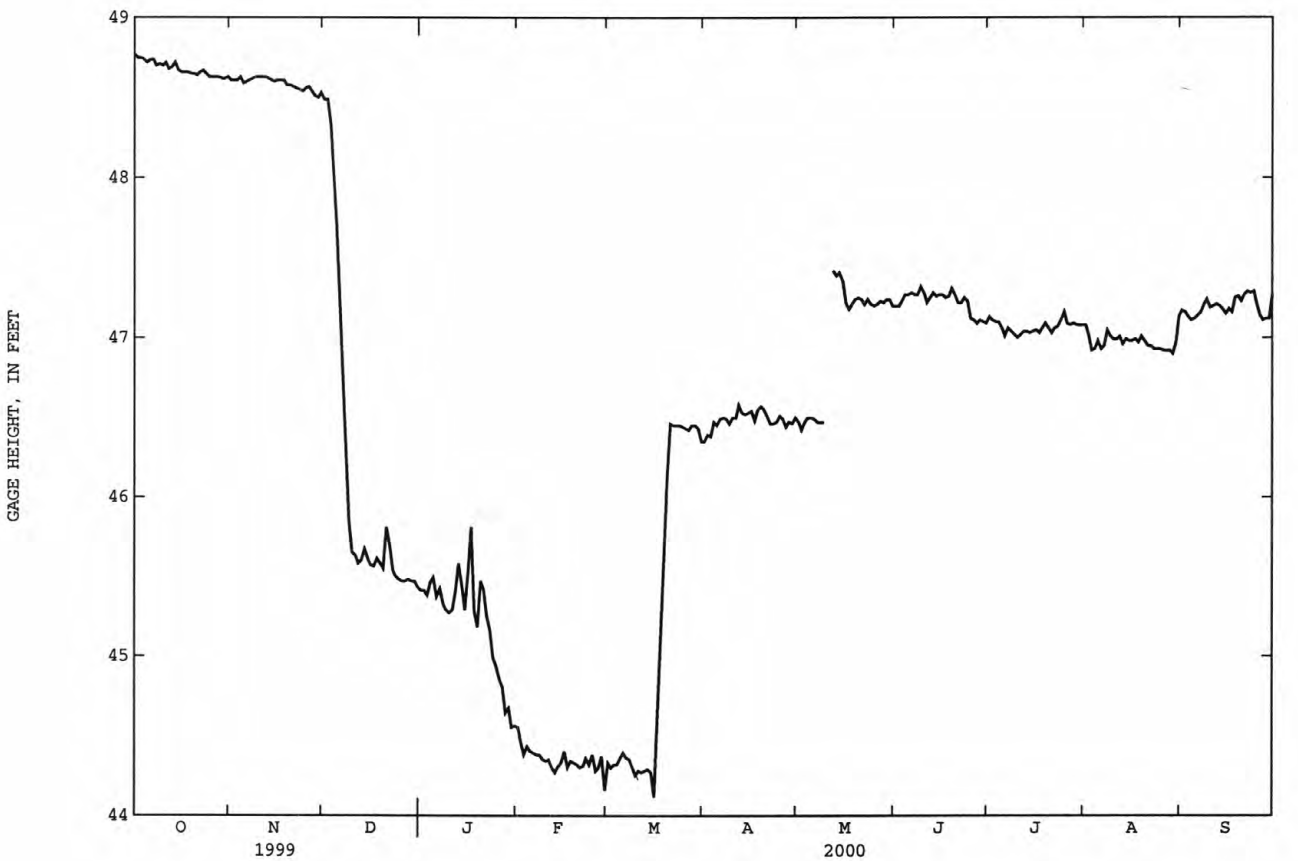
GAGE.--Water-stage recorder. Datum of gage is 1,100.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for Jan. 5 to Feb. 25, which are fair. Stage regulated by Gavins Point Dam 15.0 mi upstream. U.S. Army Corps of Engineers data-collection platform at station. Gage heights for period of October 1969 to September 1980 in files of U.S. Army Corps of Engineers.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.77	48.61	48.49	45.41	44.55	44.33	46.35	46.47	47.20	47.13	47.08	47.17
2	48.75	48.61	48.49	45.41	44.45	44.30	46.39	46.42	47.20	47.11	47.01	47.16
3	48.75	48.61	48.33	45.38	44.38	44.32	46.38	46.47	47.23	47.10	46.92	47.13
4	48.74	48.63	48.05	45.46	44.43	44.32	46.47	46.50	47.27	47.10	46.93	47.11
5	48.72	48.59	47.70	45.49	44.40	44.36	46.45	46.50	47.27	47.06	46.98	47.12
6	48.74	48.60	47.17	45.37	44.39	44.39	46.49	46.49	47.28	47.01	46.93	47.14
7	48.74	48.61	46.70	45.42	44.38	44.36	46.50	46.47	47.27	47.06	46.95	47.16
8	48.70	48.62	46.29	45.33	44.38	44.35	46.49	46.47	47.27	47.04	47.05	47.21
9	48.71	48.63	45.85	45.29	44.35	44.30	46.46	46.47	47.32	47.02	47.01	47.24
10	48.70	48.63	45.65	45.27	44.34	44.25	46.50	---	47.28	47.00	46.99	47.19
11	48.72	48.63	45.63	45.29	44.35	44.28	46.50	---	47.22	47.02	46.99	47.20
12	48.68	48.63	45.58	45.41	44.30	44.27	46.58	47.42	47.25	47.04	47.01	47.21
13	48.69	48.62	45.60	45.58	44.27	44.28	46.53	47.39	47.28	47.04	46.96	47.20
14	48.72	48.61	45.67	45.45	44.31	44.29	46.52	47.41	47.26	47.03	46.99	47.18
15	48.67	48.60	45.61	45.29	44.33	44.27	46.53	47.36	47.27	47.04	46.98	47.15
16	48.66	48.61	45.57	45.53	44.40	44.12	46.54	47.22	47.27	47.05	46.98	47.18
17	48.66	48.61	45.56	45.81	44.30	44.61	46.48	47.18	47.25	47.03	46.99	47.16
18	48.66	48.61	45.61	45.28	44.34	45.16	46.55	47.21	47.26	47.06	46.97	47.25
19	48.65	48.58	45.58	45.18	44.33	45.61	46.57	47.24	47.31	47.09	47.01	47.26
20	48.65	48.58	45.55	45.47	44.32	46.12	46.55	47.25	47.27	47.06	46.98	47.23
21	48.64	48.57	45.81	45.41	44.30	46.46	46.51	47.24	47.22	47.03	46.95	47.27
22	48.66	48.56	45.70	45.25	44.31	46.45	46.46	47.21	47.22	47.06	46.95	47.29
23	48.67	48.55	45.54	45.16	44.36	46.45	46.46	47.24	47.25	47.07	46.93	47.28
24	48.65	48.54	45.50	44.99	44.32	46.45	46.47	47.21	47.23	47.11	46.93	47.29
25	48.63	48.56	45.48	44.93	44.38	46.44	46.51	47.20	47.12	47.16	46.93	47.21
26	48.63	48.57	45.47	44.86	44.28	46.43	46.49	47.21	47.11	47.09	46.92	47.14
27	48.63	48.54	45.47	44.81	44.30	46.42	46.44	47.23	47.09	47.08	46.92	47.11
28	48.63	48.51	45.48	44.64	44.37	46.45	46.47	47.22	47.11	47.09	46.92	47.12
29	48.62	48.50	45.47	44.67	44.16	46.45	46.46	47.24	47.10	47.08	46.90	47.12
30	48.62	48.53	45.47	44.55	---	46.43	46.50	47.24	47.09	47.08	46.97	47.27
31	48.63	---	45.43	44.56	---	46.35	---	47.20	---	47.08	47.13	---
MEAN	48.68	48.59	46.11	45.22	44.35	45.20	46.49	---	47.23	47.07	46.97	47.19
MAX	48.77	48.63	48.49	45.81	44.55	46.46	46.58	---	47.32	47.16	47.13	47.29
MIN	48.62	48.50	45.43	44.55	44.16	44.12	46.35	---	47.09	47.00	46.90	47.11

06478515 MISSOURI RIVER NEAR GAYVILLE, SD--Continued



06478535 EAST FORK VERMILLION RIVER NEAR RAMONA, SD

LOCATION.--Lat 44°06'35", long 97°23'13", in NE¼ NW¼ NW¼ sec.1, T.107 N., R.55 W., Miner County, Hydrologic Unit 10170102, near right downstream side of county highway bridge, 8.3 mi west of Ramona, and 1.9 mi downstream from Lake Thompson outlet.

DRAINAGE AREA.--508 mi^2.

PERIOD OF RECORD.--Nov. 5, 1986, to Sept. 30, 1989, October 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,678.46 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	37	9.5	e16	e.50	18	21	12	35	10	4.6	.00
2	53	37	11	e17	e.50	18	19	10	32	7.4	3.9	.00
3	51	36	15	e15	e.50	19	27	7.4	27	8.3	2.8	.00
4	47	31	20	e12	e.50	19	26	6.7	32	7.1	2.0	.00
5	48	31	25	e17	e.50	18	27	4.2	30	8.7	2.1	.00
6	38	27	29	e19	e.50	14	20	4.0	22	8.0	2.6	.00
7	33	25	25	e21	e.50	15	23	5.8	16	5.0	2.2	.00
8	41	22	17	e23	e.50	19	25	12	15	4.1	2.1	.00
9	38	22	18	e25	e.70	e30	22	14	7.4	5.4	2.3	.00
10	42	27	26	e23	e.70	e32	19	13	10	9.2	2.0	.00
11	36	21	13	e19	e.60	e32	20	16	11	12	1.3	.00
12	36	21	26	e17	e.50	e30	12	22	12	12	1.0	.00
13	43	22	21	e16	e.50	e32	13	23	14	12	.99	.00
14	33	25	11	e16	e.50	e32	13	21	23	11	.61	.00
15	42	24	e9.0	e17	e.60	e33	21	15	22	9.3	.65	.00
16	48	22	e9.0	e16	e.60	32	24	14	27	9.1	.60	.00
17	45	18	e9.0	e15	e.60	21	22	18	25	9.7	.70	.00
18	42	18	e10	e14	e.60	18	17	42	22	9.6	.67	.00
19	44	29	e13	e13	e.60	15	18	35	12	10	.52	.00
20	38	23	e10	e10	e.60	14	29	26	15	9.7	.36	.00
21	40	21	e10	e8.0	e12	15	21	23	17	9.0	.36	.00
22	48	24	e9.5	e6.0	e18	16	17	23	14	7.8	.50	.00
23	46	29	e9.0	e4.0	e19	14	15	24	18	6.2	.43	.00
24	36	24	e9.0	e3.0	e25	17	12	28	21	4.4	.40	.00
25	34	20	e9.0	e2.0	e30	18	8.9	26	24	4.2	.27	.00
26	35	21	e9.5	e1.7	e40	23	8.9	25	26	4.8	.23	.00
27	36	22	e11	e1.0	e35	29	13	28	23	4.9	.23	.00
28	38	21	e13	e.80	e30	30	15	27	22	5.1	.16	.00
29	34	18	e15	e.60	21	27	11	22	18	5.7	.04	.00
30	38	8.8	e16	e.70	---	24	12	27	16	5.7	.10	.00
31	33	---	e16	e.60	---	24	---	30	---	5.5	.01	---
TOTAL	1268	726.8	453.5	369.40	241.10	698	551.8	604.1	608.4	240.9	36.73	0.00
MEAN	40.9	24.2	14.6	11.9	8.31	22.5	18.4	19.5	20.3	7.77	1.18	.000
MAX	53	37	29	25	40	33	29	42	35	12	4.6	.00
MIN	33	8.8	9.0	.60	.50	14	8.9	4.0	7.4	4.1	.01	.00
AC-FT	2520	1440	900	733	478	1380	1090	1200	1210	478	73	.00

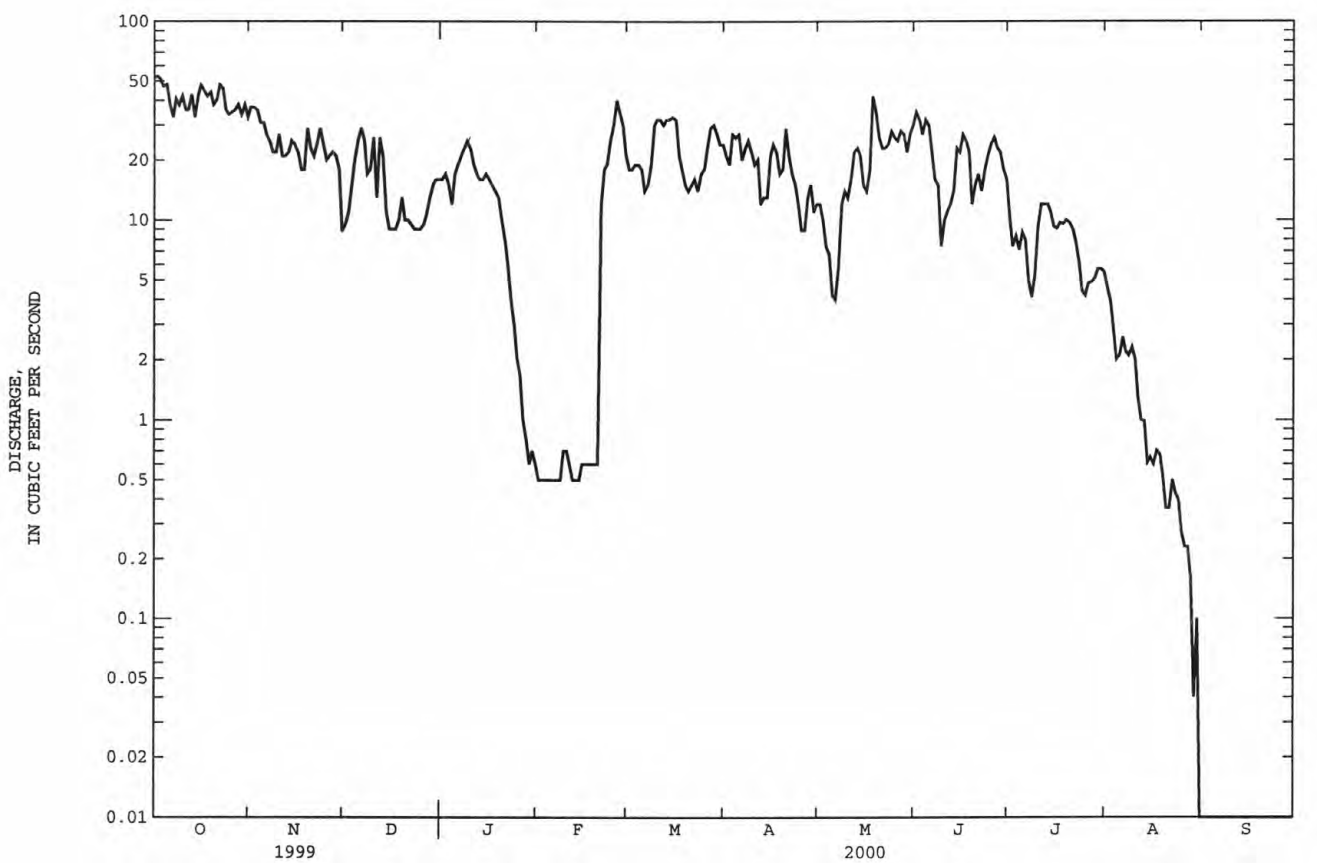
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1989, 1996 - 2000, BY WATER YEAR (WY)

MEAN	50.7	48.9	41.9	25.9	24.1	52.6	121	139	74.8	59.2	50.0	30.4
MAX	191	214	190	130	119	194	468	615	229	168	129	78.6
(WY)	1996	1996	1996	1996	1996	1996	1997	1997	1997	1996	1997	1997
MIN	.000	.003	.000	.000	.000	.16	.021	.000	.045	.004	.000	.000
(WY)	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989	1988	1989

06478535 EAST FORK VERMILLION RIVER NEAR RAMONA, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1988-1989, 1996-2000	
ANNUAL TOTAL	14394.87		5798.73			
ANNUAL MEAN	39.4		15.8		60.1	
HIGHEST ANNUAL MEAN					165	1996
LOWEST ANNUAL MEAN					.020	1989
HIGHEST DAILY MEAN	142	Apr 16	53	Oct 2	1030	May 1 1997
LOWEST DAILY MEAN	.07	Jan 10	.00	Sep 1	.00	Feb 14 1988a
ANNUAL SEVEN-DAY MINIMUM	.07	Jan 7	.00	Sep 1	.00	Feb 14 1988
INSTANTANEOUS PEAK FLOW			60	Feb 28b	1600	Apr 30 1997
INSTANTANEOUS PEAK STAGE			4.89	Jan 2c	8.50	Apr 30 1997
ANNUAL RUNOFF (AC-FT)	28550		11500		43510	
10 PERCENT EXCEEDS	81		33		180	
50 PERCENT EXCEEDS	36		15		22	
90 PERCENT EXCEEDS	.45		.26		.00	

a No flow for many days in 1988, 1989, and 2000.
b Gage height, 4.40 ft, backwater from ice.
c Backwater from ice.
e Estimated.



06478540 LITTLE VERMILLION RIVER NEAR SALEM, SD
(Hydrologic bench-mark station)

LOCATION.--Lat 43°47'39", long 97°22'02", in SW¼ sec.19, T.104 N., R.54 W., McCook County, Hydrologic Unit 10170102, on right bank near downstream end of culvert on county road, 2.0 mi upstream from small left-bank tributary, and 5.2 mi northeast of Salem.

DRAINAGE AREA.--78.6 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR SD-84-1, WDR SD-89-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete dam. Elevation of gage is 1,510 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

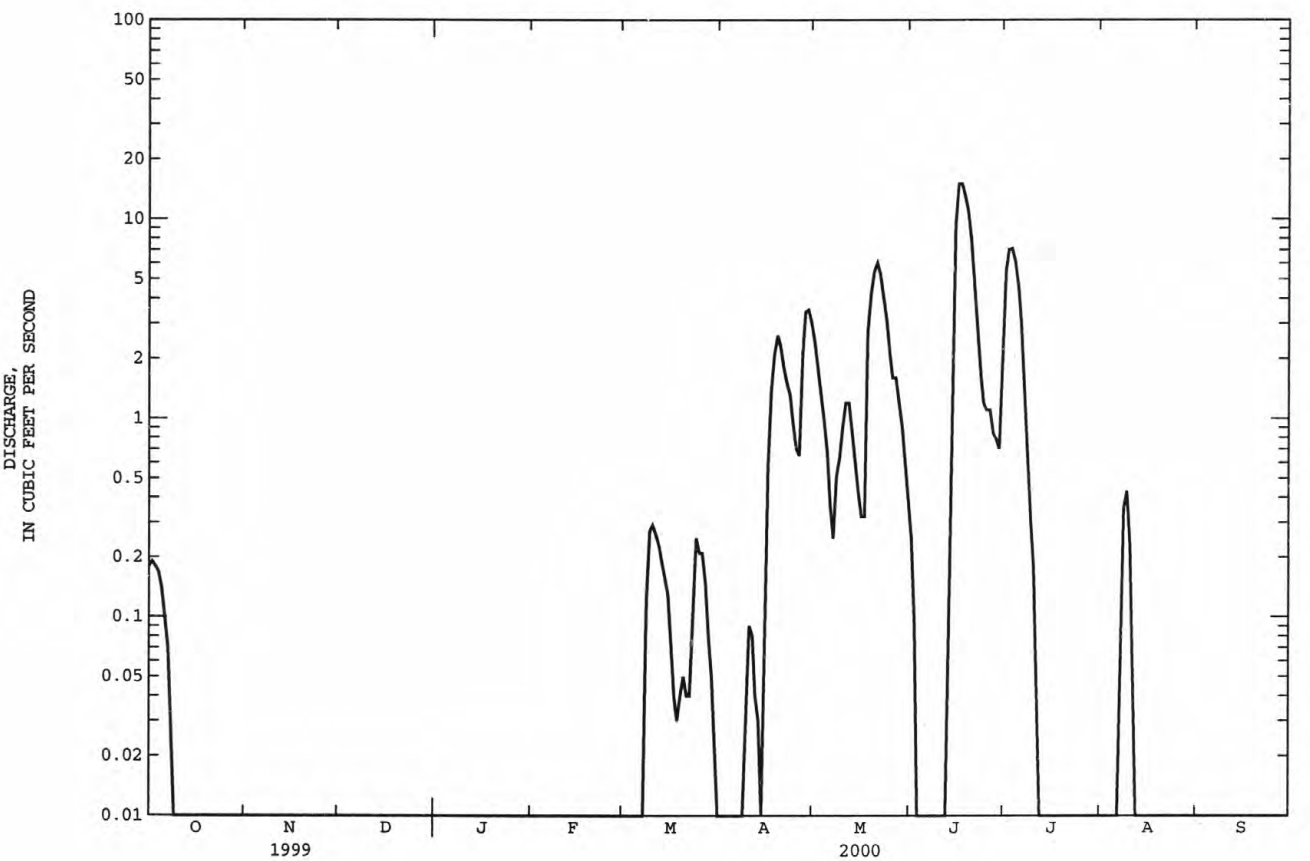
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.00	.00	.00	.00	e.00	e.00	2.4	.25	5.5	.00	.00
2	.19	.00	.00	.00	.00	e.00	e.00	1.8	.09	7.0	.00	.00
3	.18	.00	.00	.00	.00	e.00	e.00	1.3	e.01	7.1	.00	.00
4	.17	.00	.00	.00	.00	e.00	e.00	.97	e.00	6.1	.00	.00
5	.14	.00	.00	.00	.00	e.00	e.00	.67	e.00	4.6	.00	.00
6	.10	.00	.00	.00	.00	e.00	e.00	.37	e.00	3.0	.00	.00
7	.07	.00	.00	.00	.00	e.00	e.00	.25	e.00	1.6	.03	.00
8	.03	.00	.00	.00	.00	.12	e.00	.51	e.00	.76	.35	.00
9	.00	.00	.00	.00	.00	.27	.03	.64	e.00	.31	.43	.00
10	.00	.00	.00	.00	.00	.29	.09	.90	e.00	.18	.23	.00
11	.00	.00	.00	.00	.00	.26	.08	1.2	e.00	.03	.05	.00
12	.00	.00	.00	.00	.00	.23	.04	1.2	e.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.19	.03	.83	e.09	.00	.00	.00
14	.00	.00	.00	.00	.00	.16	.01	.62	2.2	.00	.00	.00
15	.00	.00	.00	.00	.00	.13	.04	.43	9.5	.00	.00	.00
16	.00	.00	.00	.00	.00	.07	.57	.32	15	.00	.00	.00
17	.00	.00	.00	.00	.00	.04	1.4	.32	15	.00	.00	.00
18	.00	.00	.00	.00	.00	.03	2.1	2.7	13	.00	.00	.00
19	.00	.00	.00	.00	.00	.04	2.6	4.2	11	.00	.00	.00
20	.00	.00	.00	.00	.00	.05	2.3	5.4	7.9	.00	.00	.00
21	.00	.00	.00	.00	.00	.04	1.8	6.0	5.1	.00	.00	.00
22	.00	.00	.00	.00	.00	.04	1.5	5.3	3.0	.00	.00	.00
23	.00	.00	.00	.00	.00	.12	1.3	4.1	1.7	.00	.00	.00
24	.00	.00	.00	.00	.00	.25	.95	3.1	1.2	.00	.00	.00
25	.00	.00	.00	.00	e.00	.21	.71	2.1	1.1	.00	.00	.00
26	.00	.00	.00	.00	e.00	.21	.65	1.6	1.1	.00	.00	.00
27	.00	.00	.00	.00	e.00	.15	2.1	1.6	.84	.00	.00	.00
28	.00	.00	.00	.00	e.00	.08	3.4	1.2	.79	.00	.00	.00
29	.00	.00	.00	.00	e.00	.05	3.5	.90	.70	.00	.00	.00
30	.00	.00	.00	.00	---	.02	3.0	.61	2.2	.00	.00	.00
31	.00	---	.00	.00	---	e.00	---	.40	---	.00	.00	---
TOTAL	1.06	0.00	0.00	0.00	0.00	3.05	28.20	53.94	91.77	36.18	1.09	0.00
MEAN	.034	.000	.000	.000	.000	.098	.94	1.74	3.06	1.17	.035	.000
MAX	.19	.00	.00	.00	.00	.29	3.5	6.0	15	7.1	.43	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00
AC-FT	2.1	.00	.00	.00	.00	6.0	56	107	182	72	2.2	.00
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)												
MEAN	2.30	1.59	.43	.053	2.47	21.8	20.5	10.2	16.1	15.3	3.14	2.76
MAX	40.0	17.1	4.08	.91	40.7	158	173	95.7	186	430	50.3	63.0
(WY)	1996	1996	1983	1983	1983	1997	1997	1995	1993	1993	1992	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1967	1967	1967	1967	1968	1968	1967	1967	1968	1968	1967	1967

06478540 LITTLE VERMILLION RIVER NEAR SALEM, SD--Continued
(Hydrologic bench-mark station)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000		
ANNUAL TOTAL	2071.30		215.29				
ANNUAL MEAN	5.67		.59		8.08a		
HIGHEST ANNUAL MEAN					73.4		1993
LOWEST ANNUAL MEAN					.000		1968b
HIGHEST DAILY MEAN	117	Apr 11	15	Jun 16	2500	Jul 4	1993
LOWEST DAILY MEAN	.00	Jan 11	.00	Oct 9	.00	Oct 1	1966c
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 11	.00	Oct 9	.00	Oct 1	1966
INSTANTANEOUS PEAK FLOW			15	Jun 16	3300	Jul 4	1993e
INSTANTANEOUS PEAK STAGE			4.75	Jun 16	11.95	Jul 4	1993d
ANNUAL RUNOFF (AC-FT)	4110		427		5860		
10 PERCENT EXCEEDS	12		1.6		10		
50 PERCENT EXCEEDS	1.2		.00		.00		
90 PERCENT EXCEEDS	.00		.00		.00		

a Median of annual mean discharges, 3.2 ft^3/s.
b Also 1975 and 1981 water years.
c No flow for many days in each year.
d From floodmark.
e Estimated.



06478600 EAST FORK VERMILLION RIVER NEAR PARKER, SD

LOCATION.--Lat 43°26'43", long 97°06'34", in NW¼ NW¼ NE¼ sec.33, T.100 N., R.53 W., Turner County, Hydrologic Unit 10170102, on left bank at downstream end of county highway bridge, 4.1 mi upstream from the confluence with West Fork Vermillion River, 14.5 mi west of Tea, and 3.5 mi north-northeast of Parker.

DRAINAGE AREA.--973 mi^2.
PERIOD OF RECORD.--October 1995 to current year.

REVISED RECORDS.--WDR SD-97-1: 1996 (daily discharges, June 2-5, 21), 1996 (M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,320 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

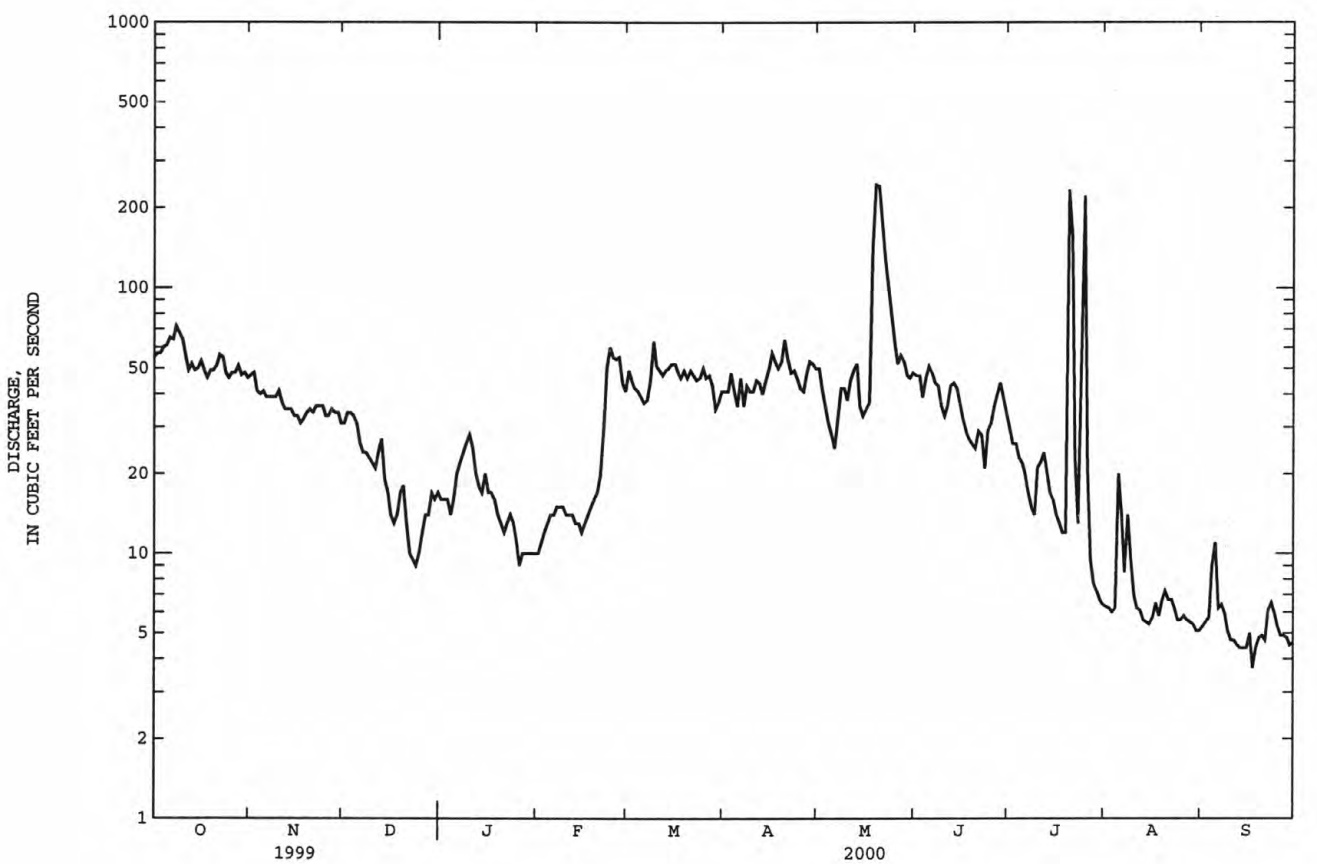
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	47	31	e16	e10	49	41	50	47	29	6.3	5.3
2	57	48	34	e16	e11	45	41	42	47	26	6.2	5.5
3	57	41	34	e16	e12	42	48	36	39	26	6.0	5.7
4	60	40	33	e14	e13	41	41	31	46	23	6.2	9.0
5	61	41	31	e16	e14	39	36	28	51	22	20	11
6	65	39	e26	e20	e14	37	46	25	48	20	14	6.2
7	64	39	e24	e22	e15	38	36	32	44	17	8.5	6.4
8	72	39	e24	e24	e15	45	43	42	43	15	14	5.9
9	68	39	e23	e26	e15	63	41	42	36	14	9.4	5.1
10	64	41	e22	e28	e14	51	41	38	33	21	6.9	4.7
11	55	37	e21	e25	e14	49	45	45	36	22	6.2	4.7
12	49	35	e24	e20	e14	47	44	49	43	24	6.1	4.5
13	52	35	e27	e18	e13	49	40	52	44	20	5.6	4.4
14	49	35	e19	e17	e13	50	45	36	42	17	5.5	4.4
15	50	33	e17	e20	e12	52	50	33	37	16	5.4	4.4
16	53	33	e14	e17	e13	52	57	35	32	14	5.7	5.0
17	49	31	e13	e17	e14	48	53	37	29	13	6.5	3.7
18	46	32	e14	e16	e15	46	50	140	27	12	5.8	4.4
19	49	e34	e17	e14	e16	49	53	244	26	12	6.6	4.8
20	49	e35	e18	e13	e17	46	64	241	25	233	7.2	4.9
21	51	34	e13	e12	e20	49	54	174	29	157	6.7	4.7
22	56	36	e10	e13	e30	47	48	129	28	23	6.7	6.1
23	55	36	e9.5	e14	e50	45	49	100	21	13	6.2	6.5
24	48	36	e9.0	e13	e60	46	46	80	29	37	5.6	5.9
25	46	33	e10	e11	e55	50	42	62	31	222	5.6	5.3
26	48	33	e12	e9.0	54	46	41	52	36	21	5.8	4.9
27	48	35	e14	e10	55	47	48	56	40	9.5	5.6	4.9
28	51	34	e14	e10	44	43	53	53	44	7.7	5.5	4.8
29	47	34	e17	e10	41	35	52	47	38	7.2	5.4	4.5
30	48	31	e16	e10	---	37	50	46	33	6.7	5.1	4.6
31	46	---	e17	e10	---	41	---	48	---	6.4	5.1	---
TOTAL	1668	1096	607.5	497.0	683	1424	1398	2125	1104	1106.5	221.4	162.2
MEAN	53.8	36.5	19.6	16.0	23.6	45.9	46.6	68.5	36.8	35.7	7.14	5.41
MAX	72	48	34	28	60	63	64	244	51	233	20	11
MIN	46	31	9.0	9.0	10	35	36	25	21	6.4	5.1	3.7
AC-FT	3310	2170	1200	986	1350	2820	2770	4210	2190	2190	439	322
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2000, BY WATER YEAR (WY)												
MEAN	128	135	68.4	42.4	72.6	255	418	310	198	112	81.4	66.4
MAX	332	280	151	128	215	732	1070	832	467	180	156	101
(WY)	1996	1996	1996	1996	1996	1997	1997	1997	1996	1996	1996	1999
MIN	53.8	36.5	19.6	11.7	8.93	45.9	46.6	68.5	36.8	35.7	7.14	5.41
(WY)	2000	2000	2000	1997	1997	2000	2000	2000	2000	2000	2000	2000

06478600 EAST FORK VERMILLION RIVER NEAR PARKER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1996 - 2000	
ANNUAL TOTAL	39676.5		12092.6			
ANNUAL MEAN	109		33.0		157	
HIGHEST ANNUAL MEAN					298	1997
LOWEST ANNUAL MEAN					33.0	2000
HIGHEST DAILY MEAN	995	Apr 11	244	May 19	3960	Mar 29 1997
LOWEST DAILY MEAN	9.0	Dec 24	3.7	Sep 17	3.7	Sep 17 2000
ANNUAL SEVEN-DAY MINIMUM	11	Dec 21	4.4	Sep 12	4.4	Sep 12 2000
INSTANTANEOUS PEAK FLOW			310	Jul 20	4210	Mar 29 1997a
INSTANTANEOUS PEAK STAGE			5.68	Jul 20	12.75	Mar 22 1997b
ANNUAL RUNOFF (AC-FT)	78700		23990		114000	
10 PERCENT EXCEEDS	265		53		321	
50 PERCENT EXCEEDS	61		32		75	
90 PERCENT EXCEEDS	25		5.9		15	

a Gage height, 12.73 ft.
b Backwater from ice.
e Estimated.



06478690 WEST FORK VERMILLION RIVER NEAR PARKER, SD

LOCATION.--Lat 43°24'55", long 97°12'18", in NE¼ NE¼ sec.10, T.99 N., R.54 W., Turner County, Hydrologic Unit 10170102, on right bank 10 ft downstream from bridge, 3.7 mi northwest of Parker, and 13.9 mi upstream from confluence with East Fork Vermillion River.

DRAINAGE AREA.--377 mi^2.

PERIOD OF RECORD.--August 1961 to current year.

REVISED RECORDS.--WDR SD-89-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,340 ft above sea level, from topographic map. Prior to Oct. 11, 1973, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.1	1.1	e.68	e.80	3.9	3.1	4.6	9.1	9.4	.29	.16
2	1.5	.89	1.1	e.65	e.80	3.5	3.4	3.6	7.8	7.1	.24	.18
3	1.4	.89	1.1	e.60	e1.0	3.4	3.2	3.1	8.5	6.2	.19	.05
4	1.4	1.0	1.1	e.50	e1.0	3.2	2.8	2.7	10	5.4	.16	.08
5	1.5	1.2	e.90	e.70	e.90	3.1	3.1	2.3	15	5.4	2.9	.02
6	1.4	1.2	e.90	e.85	e1.0	3.2	2.8	2.1	13	4.6	13	.01
7	1.3	1.2	e.95	e1.0	e1.0	3.3	2.9	2.1	11	3.9	12	.02
8	1.4	1.2	e1.0	e1.0	e1.0	3.9	2.5	2.9	8.3	3.2	11	.01
9	1.4	1.2	e.90	e1.0	e1.1	3.9	2.6	3.2	6.5	2.7	9.8	.01
10	1.3	1.1	e.90	e1.3	e1.1	3.7	2.4	3.9	5.8	2.3	7.1	.01
11	1.2	1.1	e1.0	e1.4	e1.0	3.7	2.8	5.4	5.9	3.3	4.2	.02
12	1.1	1.1	1.1	e1.3	e.90	3.7	2.8	5.9	5.9	7.6	3.1	.02
13	1.1	1.1	1.1	e1.3	e.90	3.6	2.8	5.0	5.6	4.5	2.2	.01
14	1.1	1.1	1.0	e1.4	e.80	3.8	3.0	4.6	5.7	4.0	1.7	.01
15	1.2	1.1	e.90	e1.5	e.90	3.7	3.2	4.5	5.8	3.9	1.4	.02
16	1.1	1.1	e.80	e1.5	e.85	3.6	4.9	4.4	6.4	3.1	1.2	.01
17	1.1	1.0	e.80	e1.4	e.80	3.5	5.2	4.5	6.2	2.8	.93	.01
18	1.4	1.0	e.80	e1.5	e.85	3.5	5.0	124	4.9	5.6	.76	.01
19	2.1	1.0	e.80	e1.4	e.90	3.3	5.1	383	4.2	4.0	.93	.01
20	2.1	.93	e.70	e1.3	e1.0	3.3	5.2	189	3.8	2.9	1.0	.05
21	2.0	1.0	e.60	e1.1	e1.3	3.1	5.2	83	3.2	2.2	.90	.12
22	1.8	.97	e.50	e.90	1.5	3.1	4.7	47	2.8	1.9	.81	.13
23	1.9	1.0	e.50	e.90	3.1	3.3	3.7	31	2.6	1.5	.66	.10
24	1.8	.98	e.50	e.77	5.8	3.5	3.4	21	57	1.3	.52	.10
25	1.7	1.1	e.55	e.77	5.4	3.3	2.9	17	95	1.2	.44	.12
26	1.1	1.1	e.60	e.70	4.6	3.0	2.9	15	43	1.0	.39	.13
27	.98	1.0	e.65	e.80	3.8	3.1	2.7	14	23	.88	.28	.02
28	.97	1.0	e.75	e.70	4.2	3.1	2.8	13	16	.75	.25	.00
29	1.0	1.0	e.80	e.70	4.3	3.1	2.7	12	13	.68	.22	.00
30	.95	1.0	e.75	e.70	---	3.3	3.9	12	11	e.55	.13	.00
31	1.0	---	e.70	e.80	---	3.2	---	11	---	e.42	.10	---
TOTAL	42.70	31.66	25.85	31.12	52.60	105.9	103.7	1036.8	416.0	104.28	78.80	1.44
MEAN	1.38	1.06	.83	1.00	1.81	3.42	3.46	33.4	13.9	3.36	2.54	.048
MAX	2.1	1.2	1.1	1.5	5.8	3.9	5.2	383	95	9.4	13	.18
MIN	.95	.89	.50	.50	.80	3.0	2.4	2.1	2.6	.42	.10	.00
AC-FT	85	63	51	62	104	210	206	2060	825	207	156	2.9

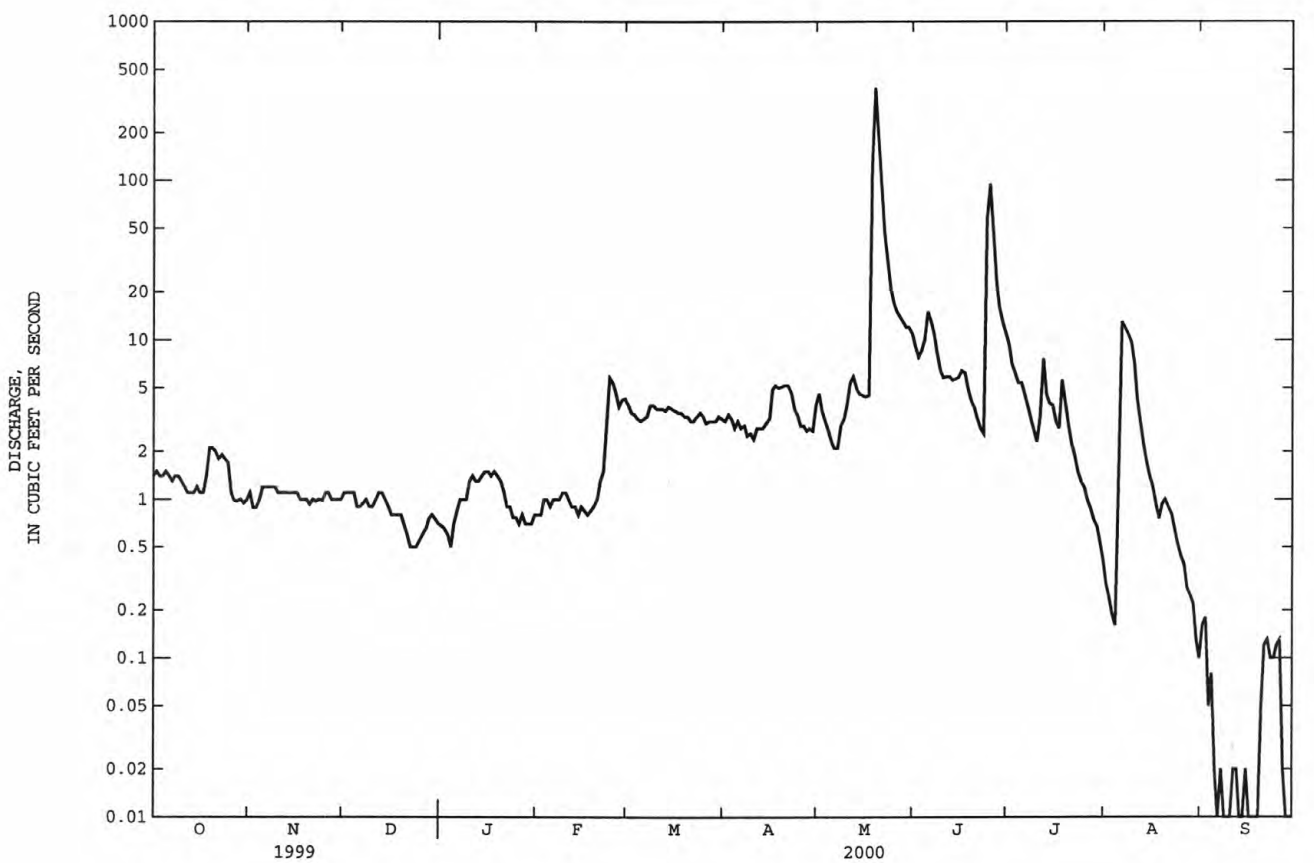
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2000, BY WATER YEAR (WY)

MEAN	7.05	10.2	2.97	1.06	18.0	132	121	59.6	84.6	49.3	9.25	11.9
MAX	106	156	33.4	9.05	267	795	698	550	1345	1081	144	324
(WY)	1996	1999	1999	1983	1983	1997	1984	1995	1984	1993	1993	1986
MIN	.000	.000	.000	.000	.000	.021	.000	.001	.008	.000	.000	.000
(WY)	1975	1982	1965	1965	1975	1981	1990	1990	1981	1989	1989	1989

06478690 WEST FORK VERMILLION RIVER NEAR PARKER, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1962 - 2000		
ANNUAL TOTAL	19027.65		2030.85				
ANNUAL MEAN	52.1		5.55		42.2a		
HIGHEST ANNUAL MEAN					249		1993
LOWEST ANNUAL MEAN					.019		1981
HIGHEST DAILY MEAN	1010	Apr 11	383	May 19	4110	May 8	1993
LOWEST DAILY MEAN	.50	Dec 22	.00	Sep 28	.00	Oct 6	1961b
ANNUAL SEVEN-DAY MINIMUM	.56	Dec 21	.01	Sep 13	.00	Nov 4	1961
INSTANTANEOUS PEAK FLOW			434	May 19	6300	May 8	1993
INSTANTANEOUS PEAK STAGE			4.36	May 19	13.14	May 8	1993
ANNUAL RUNOFF (AC-FT)	37740		4030		30590		
10 PERCENT EXCEEDS	137		7.1		64		
50 PERCENT EXCEEDS	7.0		1.4		1.0		
90 PERCENT EXCEEDS	1.0		.25		.00		

a Median of annual mean discharges, 18 ft^3/s.
b No flow for many days in most years.
e Estimated.



06479010 VERMILLION RIVER NEAR VERMILLION, SD

LOCATION.--Lat 42°49'02", long 96°55'26", in SE¼ SE¼ NE¼ (revised) sec.1, T.92 N., R.52 W., Clay County, Hydrologic Unit 10170102, on left bank 30 ft downstream from bridge, 2.7 mi north of Vermillion, 2.9 mi upstream from Clay Creek, and 10.8 mi upstream from mouth.

DRAINAGE AREA.--2,302 mi^2, of which 494 mi^2 usually is noncontributing (area was contributing during 1986-88, 1993-2000).

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

REVISED RECORDS.--WDR SD-89-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,125 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Flow affected by East Vermillion Lake Reservoir, capacity, 550 acres, located about 54 mi upstream. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

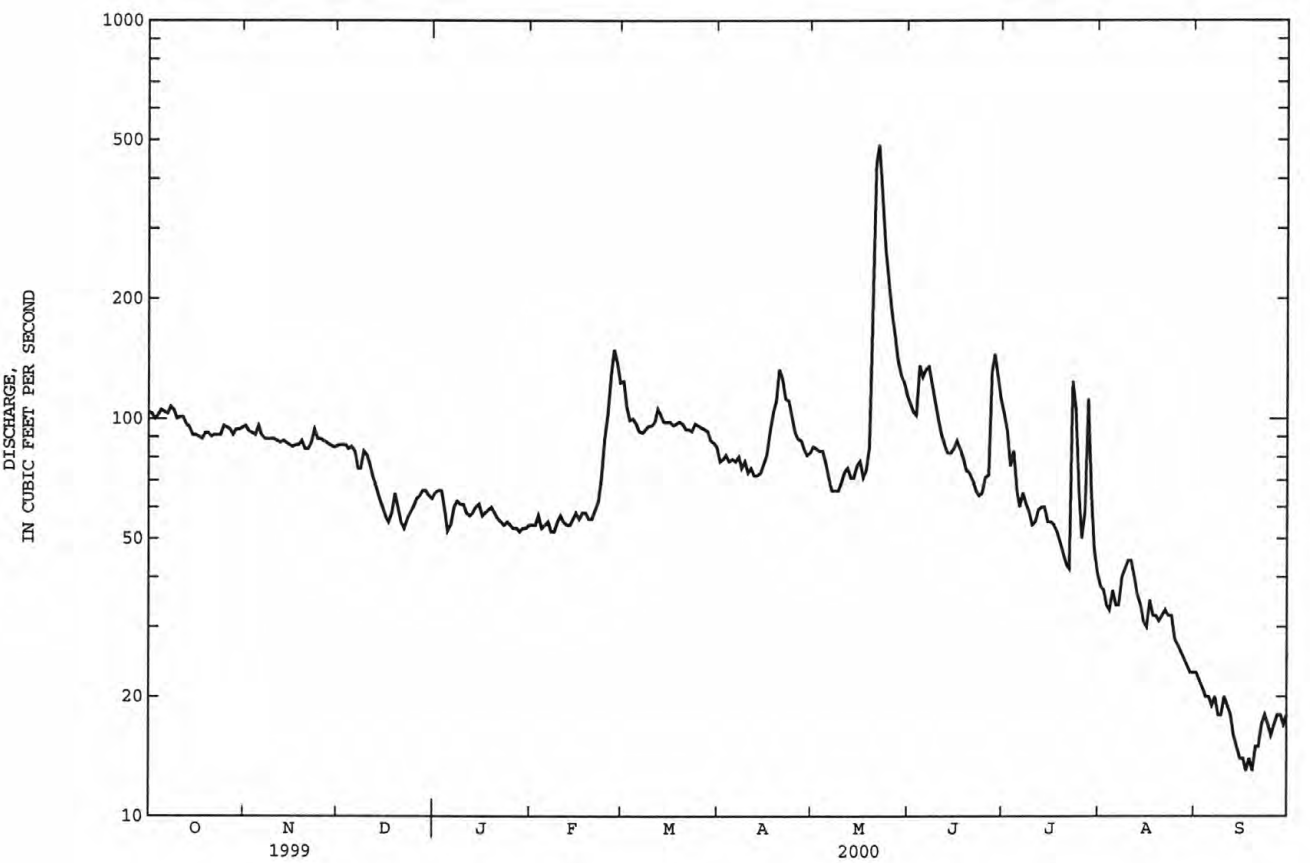
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	96	86	e65	e54	124	78	85	109	102	38	23
2	103	93	86	e66	e54	107	79	84	104	93	37	22
3	100	92	86	66	e57	99	81	83	102	76	34	21
4	102	91	84	e59	e53	100	78	83	136	83	33	20
5	105	96	85	e52	e54	97	79	77	127	66	37	20
6	104	91	83	e54	e55	93	78	71	133	60	34	19
7	103	89	75	e60	e52	92	80	66	135	65	34	20
8	107	89	75	62	e52	94	75	66	122	61	40	18
9	105	89	83	61	55	96	78	66	110	58	42	18
10	100	89	81	e61	57	96	73	69	99	54	44	20
11	101	88	76	e58	e55	98	75	73	91	55	44	19
12	101	87	71	e57	e54	106	72	75	86	59	40	18
13	97	88	67	e58	e54	102	72	71	82	60	36	16
14	95	87	e63	e60	e56	98	73	71	82	60	34	15
15	91	86	e60	e61	e58	98	77	76	84	55	31	14
16	91	85	e57	e57	e56	98	81	78	88	55	30	14
17	90	86	e55	e58	e58	96	92	71	84	54	35	13
18	89	86	e58	e59	58	97	103	74	79	e52	32	14
19	92	88	e65	e60	e56	98	111	85	74	49	32	13
20	92	84	e60	e58	56	97	133	205	73	46	31	15
21	90	84	e55	e56	59	94	126	438	70	43	32	15
22	91	87	e53	e55	62	94	112	485	66	42	33	17
23	91	94	e56	e54	71	93	111	347	64	124	32	18
24	91	89	e58	e55	89	97	102	267	65	106	32	17
25	96	89	e60	e54	103	96	93	218	71	66	28	16
26	95	88	63	e53	129	95	89	187	72	50	27	17
27	94	87	64	e53	149	94	88	164	131	58	26	18
28	91	86	66	e52	138	93	84	140	145	112	25	18
29	94	85	66	e53	123	88	81	129	126	64	24	17
30	94	85	e64	e53	---	87	82	124	111	47	23	18
31	95	---	e63	e54	---	85	---	115	---	41	23	---
TOTAL	2994	2654	2124	1784	2027	3002	2636	4243	2921	2016	1023	523
MEAN	96.6	88.5	68.5	57.5	69.9	96.8	87.9	137	97.4	65.0	33.0	17.4
MAX	107	96	86	66	149	124	133	485	145	124	44	23
MIN	89	84	53	52	52	85	72	66	64	41	23	13
AC-FT	5940	5260	4210	3540	4020	5950	5230	8420	5790	4000	2030	1040
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000, BY WATER YEAR (WY)												
MEAN	169	166	100	56.9	110	561	1143	748	900	638	205	166
MAX	643	681	288	204	454	1693	4405	2432	6062	5920	1434	754
(WY)	1987	1999	1996	1996	1994	1997	1984	1995	1984	1993	1993	1986
MIN	5.54	7.99	7.37	6.71	9.00	15.3	13.1	21.8	15.4	14.2	13.2	5.22
(WY)	1990	1990	1991	1991	1989	1991	1990	1991	1989	1989	1990	1991

06479010 VERMILLION RIVER NEAR VERMILLION, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1984 - 2000	
ANNUAL TOTAL	157772		27947			
ANNUAL MEAN	432		76.4		414a	
HIGHEST ANNUAL MEAN					1416	1993
LOWEST ANNUAL MEAN					27.9	1991
HIGHEST DAILY MEAN	2720	Jul 3	485	May 22	20200	Jun 23 1984
LOWEST DAILY MEAN	53	Dec 22	13	Sep 17, 19	3.6	Oct 10 1991b
ANNUAL SEVEN-DAY MINIMUM	57	Dec 17	14	Sep 14	4.5	Oct 6 1991
INSTANTANEOUS PEAK FLOW			525	May 22	21400	Jun 23 1984
INSTANTANEOUS PEAK STAGE			7.82	May 22	31.77	Jun 23 1984
ANNUAL RUNOFF (AC-FT)	312900		55430		299900	
10 PERCENT EXCEEDS	1130		107		992	
50 PERCENT EXCEEDS	190		75		110	
90 PERCENT EXCEEDS	85		28		12	

a Median of annual mean discharges, 290 ft^3/s.
b Also Oct. 18, 1991.
e Estimated.



06479136 PICKEREL LAKE OUTFLOW NEAR GRENVILLE, SD

LOCATION.--Lat 45°30'14", long 97°16'59", in NW¼ SE¼ SW¼ sec.22, T.124 W., R.53 W., Day County, Hydrologic Unit 10160010, on left bank 100 ft upstream from concrete spillway structure, in Pickerel Lake State Park-West Area, and 5.8 mi east-northeast of Grenville.

DRAINAGE AREA.--To be determined (included in Waubay Lakes Chain Closed Basin).

PERIOD OF RECORD.--November 1998 to September 2000. Miscellaneous discharge measurements only prior to October 1999.

GAGE.--Outside staff and concrete spillway structure. Elevation of gage is 1,845 ft above sea level, from topographic map.

REMARKS.--Records estimated and are fair. Data collected as a follow on to the FEMA Risk Assessment Study in order to further document lake interaction in the Waubay Lake Chain. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	1.5	2.5	3.2	4.0	19	6.0	15	4.8	1.5	2.3	1.2
2	4.3	1.5	2.5	3.2	4.0	20	6.0	16	4.7	1.4	2.1	.90
3	4.0	1.5	2.5	3.2	4.0	20	6.0	16	4.7	1.6	2.1	.60
4	3.7	1.5	2.5	3.2	4.0	19	6.0	16	4.6	1.8	2.1	.30
5	3.3	1.5	2.5	3.2	4.0	18	6.0	15	4.5	2.0	2.1	.15
6	3.1	1.5	2.5	3.2	4.0	17	6.0	15	4.4	2.5	2.1	.09
7	3.1	1.5	2.5	3.2	4.0	15	6.0	14	4.0	2.5	2.1	.05
8	3.2	1.5	2.5	3.2	4.0	14	6.0	13	3.9	3.0	2.1	.03
9	3.3	1.5	2.8	3.5	4.0	13	6.0	12	3.7	3.0	2.1	.02
10	3.3	1.5	2.8	3.5	4.0	13	6.0	11	3.6	3.0	2.0	.01
11	3.3	1.5	2.8	3.5	4.0	12	5.5	10	3.4	6.0	2.0	.00
12	3.3	1.5	2.8	3.5	4.0	12	5.5	9.0	3.2	11	2.0	.00
13	3.3	2.0	2.8	3.5	4.0	12	5.5	8.5	3.0	15	2.0	.00
14	3.3	2.0	2.8	3.5	4.0	11	5.5	8.0	2.9	17	2.0	.00
15	3.3	2.0	2.8	3.5	4.0	11	5.0	7.5	2.7	19	2.0	.00
16	3.3	2.0	2.8	4.0	4.0	11	5.0	7.5	2.7	20	2.0	.00
17	3.3	2.0	2.8	4.0	4.0	10	5.0	7.0	2.8	13	2.0	.00
18	3.3	2.0	2.8	4.0	4.0	10	5.0	7.0	2.8	10	1.9	.00
19	3.3	2.0	2.8	4.0	4.0	9.0	5.0	7.0	2.9	8.5	1.9	.00
20	3.3	2.0	2.8	4.0	4.0	9.0	5.5	7.0	2.8	7.5	1.8	.00
21	3.3	2.0	2.5	4.0	4.0	8.5	6.3	6.8	2.7	7.0	1.8	.00
22	3.0	2.0	2.5	4.0	5.0	8.5	7.0	6.5	2.5	6.5	1.7	.00
23	3.0	2.0	2.5	4.0	6.0	8.0	8.0	6.2	2.3	6.0	1.7	.00
24	3.0	2.4	2.5	4.0	7.0	8.0	9.0	6.0	2.2	5.5	1.6	.00
25	3.0	2.4	3.0	4.0	8.0	7.5	10	6.0	2.1	5.0	1.6	.00
26	2.5	2.4	3.0	4.1	9.0	7.0	11	5.8	2.1	4.8	1.5	.00
27	2.5	2.4	3.0	4.0	11	7.0	12	5.5	2.0	4.3	1.5	.00
28	2.5	2.4	3.0	4.0	16	6.8	13	5.3	1.9	4.0	1.4	.00
29	2.0	2.4	3.2	4.0	18	6.5	14	5.0	1.8	3.5	1.4	.00
30	2.0	2.4	3.2	4.0	---	6.0	15	4.9	1.7	3.0	1.3	.00
31	2.0	---	3.2	4.0	---	6.0	---	4.8	---	2.5	1.3	---
TOTAL	97.6	56.8	85.2	114.2	164.0	354.8	217.8	284.3	93.4	201.4	57.5	3.35
MEAN	3.15	1.89	2.75	3.68	5.66	11.4	7.26	9.17	3.11	6.50	1.85	.11
MAX	4.5	2.4	3.2	4.1	18	20	15	16	4.8	20	2.3	1.2
MIN	2.0	1.5	2.5	3.2	4.0	6.0	5.0	4.8	1.7	1.4	1.3	.00
AC-FT	194	113	169	227	325	704	432	564	185	399	114	6.6

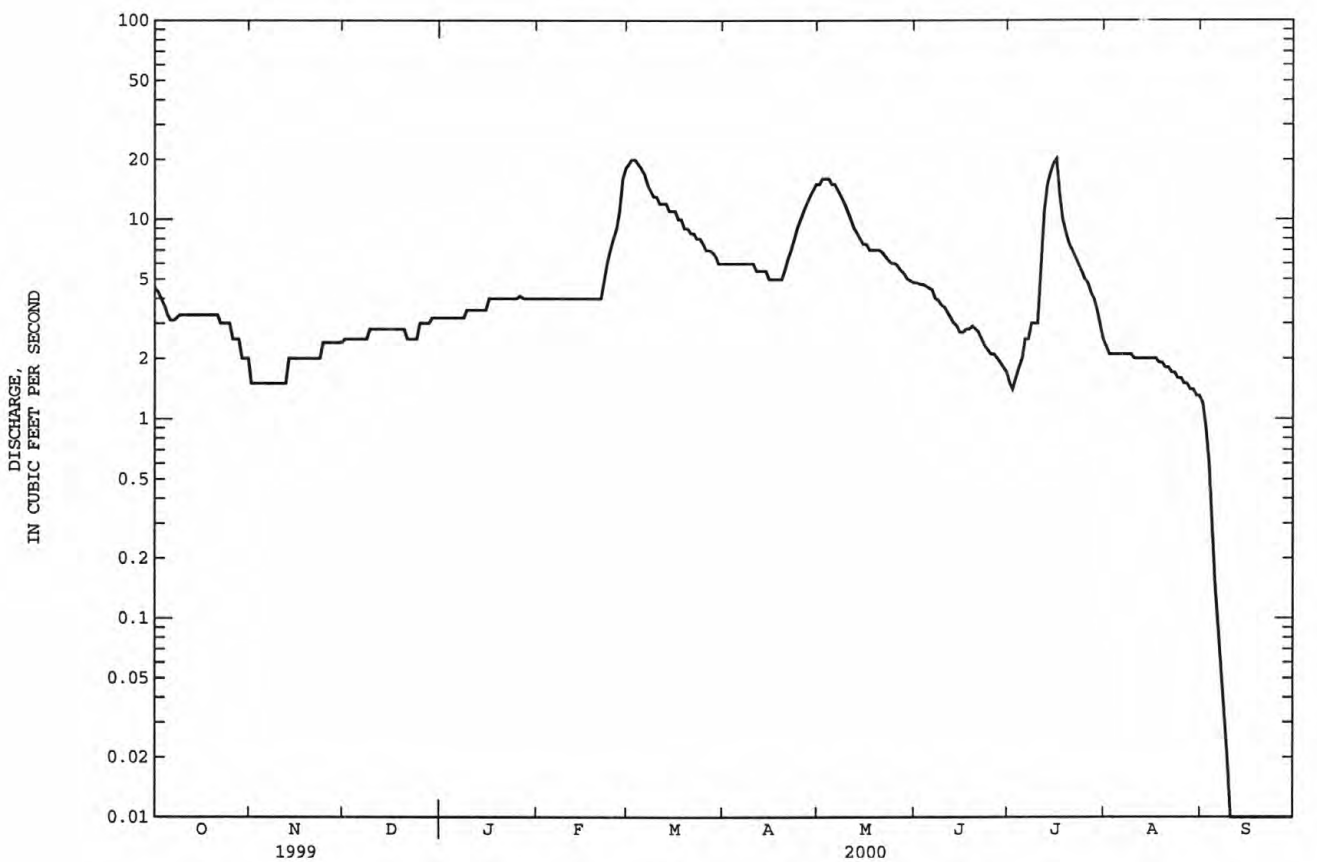
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

MEAN	3.15	1.89	2.75	3.68	5.66	11.4	7.26	9.17	3.11	6.50	1.85	.11
MAX	3.15	1.89	2.75	3.68	5.66	11.4	7.26	9.17	3.11	6.50	1.85	.11
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	3.15	1.89	2.75	3.68	5.66	11.4	7.26	9.17	3.11	6.50	1.85	.11
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06479136 PICKEREL LAKE OUTFLOW NEAR GRENVILLE, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	1730.35	
ANNUAL MEAN	4.73	
HIGHEST DAILY MEAN	20	Mar 2a
LOWEST DAILY MEAN	.00	Sep 11
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 11
ANNUAL RUNOFF (AC-FT)	3430	
10 PERCENT EXCEEDS	11	
50 PERCENT EXCEEDS	3.3	
90 PERCENT EXCEEDS	1.5	

a Instantaneous peak not published due to estimated record.



06479142 CAMPBELL SLOUGH OUTFLOW NEAR WAUBAY, SD

LOCATION.--Lat 45°23'57", long 97°16'52", in NW¼ NE¼ NW¼ sec.34, T.123 N., R.53 W., Day County, Hydrologic Unit 10160010, near right bank 15 ft upstream from concrete spillway structure, 6.5 mi southeast of Grenville, and 5.5 mi north of Waubay.

DRAINAGE AREA.--To be determined (included in Waubay Lakes Chain Closed Basin).

PERIOD OF RECORD.--November 1998 to September 2000. Miscellaneous discharge measurements only prior to October 1999.

GAGE.--Outside staff and concrete spillway structure. Elevation of gage is 1,854 ft above sea level, from topographic map.

REMARKS.--Records estimated and are fair. Enemy Swim Lake is connected to Campbell Slough via a large box culvert, and the Campbell Slough concrete spillway is considered the outflow for Enemy Swim Lake. Data collected as a follow on to the FEMA Risk Assessment Study in order to further document lake interaction in the Waubay Lake Chain. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.03	.02	.00	.00	.60	5.0	9.0	4.1	.38	.00	.00
2	.70	.03	.02	.00	.00	.90	5.0	9.5	4.0	.36	.00	.00
3	.80	.02	.02	.00	.00	1.5	5.0	9.8	3.9	.35	.00	.00
4	.90	.02	.02	.00	.00	1.8	5.0	10	3.7	.38	.00	.00
5	1.0	.02	.02	.00	.00	2.2	5.0	9.9	3.6	.40	.00	.00
6	1.1	.02	.02	.00	.00	2.6	5.0	9.8	3.5	.43	.00	.00
7	1.3	.02	.02	.00	.00	3.0	5.0	9.5	3.1	.48	.00	.00
8	1.5	.02	.02	.00	.00	3.5	5.0	9.2	2.9	.50	.00	.00
9	1.7	.02	.02	.00	.00	4.0	5.0	9.0	2.7	.55	.00	.00
10	1.9	.02	.02	.00	.00	4.5	4.9	8.8	2.5	.60	.00	.00
11	2.1	.02	.02	.00	.00	5.0	4.9	8.6	2.3	.80	.00	.00
12	2.3	.02	.02	.00	.00	5.5	4.9	8.3	2.2	1.8	.00	.00
13	2.5	.02	.02	.00	.00	6.0	4.9	8.1	2.0	2.2	.00	.00
14	2.4	.02	.02	.00	.00	6.0	4.9	7.8	1.9	2.8	.00	.00
15	2.3	.02	.02	.00	.00	6.5	4.8	7.4	1.8	2.9	.00	.00
16	2.1	.02	.01	.00	.00	6.5	4.8	7.0	1.6	3.0	.00	.00
17	1.9	.02	.01	.00	.00	7.0	4.8	6.8	1.3	3.5	.00	.00
18	1.7	.02	.01	.00	.00	7.0	4.8	6.4	1.2	3.5	.00	.00
19	1.5	.02	.01	.00	.00	7.0	4.8	6.1	1.1	3.4	.00	.00
20	1.2	.02	.01	.00	.00	7.0	4.8	5.9	.90	3.0	.00	.00
21	.90	.02	.00	.00	.00	6.5	4.8	5.7	.80	2.0	.00	.00
22	.75	.02	.00	.00	.00	6.5	4.9	5.5	.70	1.0	.00	.00
23	.60	.02	.00	.00	.00	6.0	5.0	5.3	.60	.70	.00	.00
24	.45	.02	.00	.00	.00	6.0	5.3	5.0	.50	.40	.00	.00
25	.35	.02	.00	.00	.00	6.0	5.8	4.9	.45	.25	.00	.00
26	.25	.02	.00	.00	.03	6.0	6.1	4.8	.43	.15	.00	.00
27	.18	.02	.00	.00	.10	5.8	6.5	4.7	.42	.08	.00	.00
28	.13	.02	.00	.00	.20	5.6	7.1	4.6	.40	.06	.00	.00
29	.08	.02	.00	.00	.40	5.3	7.6	4.5	.40	.04	.00	.00
30	.06	.02	.00	.00	---	5.2	8.2	4.4	.39	.02	.00	.00
31	.04	---	.00	.00	---	5.0	---	4.3	---	.01	.00	---
TOTAL	35.24	0.62	0.35	0.00	0.73	152.00	159.6	220.6	55.39	36.04	0.00	0.00
MEAN	1.14	.021	.011	.000	.025	4.90	5.32	7.12	1.85	1.16	.000	.000
MAX	2.5	.03	.02	.00	.40	7.0	8.2	10	4.1	3.5	.00	.00
MIN	.04	.02	.00	.00	.00	.60	4.8	4.3	.39	.01	.00	.00
AC-FT	70	1.2	.7	.00	1.4	301	317	438	110	71	.00	.00

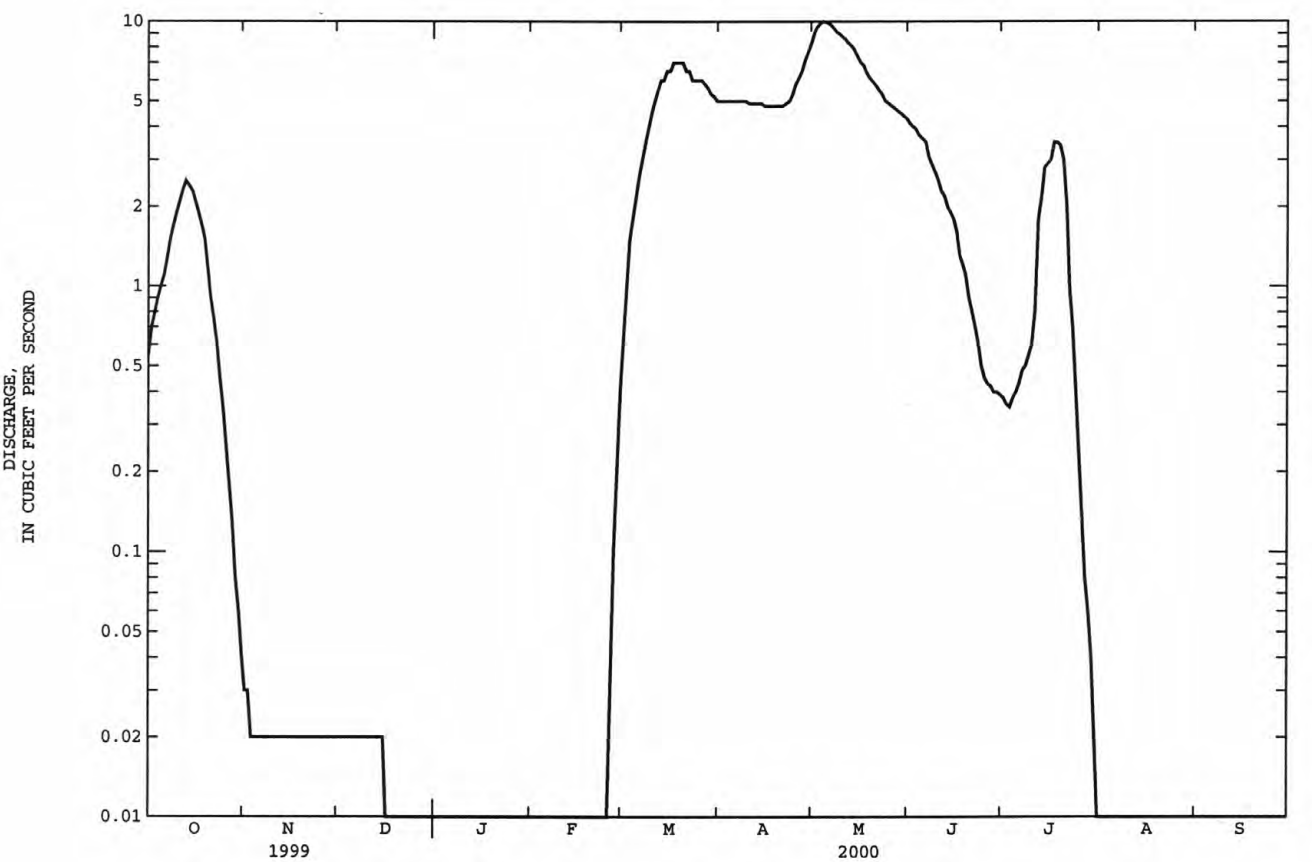
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

MEAN	1.14	.021	.011	.000	.025	4.90	5.32	7.12	1.85	1.16	.000	.000
MAX	1.14	.021	.011	.000	.025	4.90	5.32	7.12	1.85	1.16	.000	.000
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	1.14	.021	.011	.000	.025	4.90	5.32	7.12	1.85	1.16	.000	.000
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06479142 CAMPBELL SLOUGH OUTFLOW NEAR WAUBAY, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	660.57	
ANNUAL MEAN	1.80	
HIGHEST DAILY MEAN	10	May 4a
LOWEST DAILY MEAN	.00	Dec 21
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 21
ANNUAL RUNOFF (AC-FT)	1310	
10 PERCENT EXCEEDS	6.0	
50 PERCENT EXCEEDS	.05	
90 PERCENT EXCEEDS	.00	

a Instantaneous peak not published due to estimated record.



06479159 BLUE DOG LAKE INFLOW (OWENS CREEK) NEAR WAUBAY, SD

LOCATION.--Lat 45°20'48", long 97°15'07", in NE¼ NW¼ SE¼ sec.14, T.122 N., R.53 W., Day County, Hydrologic Unit 10160010, on left bank at downstream side of township bridge, 2.1 mi upstream from Blue Dog Lake, 1.3 mi west of Day-Roberts County line, and 2.8 mi northeast of Waubay.

DRAINAGE AREA.--To be determined (included in Waubay Lakes Chain Closed Basin).

PERIOD OF RECORD.--July 1999 to September 2000. Miscellaneous discharge measurements only prior to October 1999.

GAGE.--Water-stage recorder. Elevation of gage is 1,820 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	9.5	e8.3	6.2	4.4	13	8.6	23	8.7	5.0	4.9	3.5
2	7.5	8.7	e8.1	6.0	4.5	11	8.4	15	8.5	10	4.5	3.6
3	7.6	8.4	e7.9	5.7	4.6	11	8.8	13	9.0	9.0	4.7	4.0
4	7.7	8.2	e7.5	5.8	4.5	13	8.0	12	19	6.9	5.0	4.0
5	8.1	8.5	e7.3	5.7	4.3	13	7.8	11	14	9.9	6.2	3.7
6	8.0	8.2	e7.5	5.6	4.5	14	9.2	11	9.1	9.9	5.9	3.6
7	8.2	9.0	e7.5	5.4	4.6	15	8.0	11	7.4	6.9	5.1	4.1
8	9.4	9.3	e7.7	5.5	4.7	e14	8.2	13	7.0	6.6	4.9	3.6
9	8.6	9.1	e7.5	5.4	4.7	e13	8.2	12	6.2	6.6	5.0	2.8
10	8.0	9.3	e7.3	5.5	4.4	10	7.8	15	5.5	6.3	4.6	2.8
11	8.3	9.7	e7.4	5.3	4.8	9.1	8.1	18	5.7	7.9	4.6	2.7
12	8.1	10	e7.3	4.9	4.6	8.8	9.0	15	5.3	17	4.2	2.8
13	8.4	9.8	e7.2	4.9	4.6	8.3	8.8	13	7.2	9.9	4.3	2.7
14	8.9	9.8	7.2	5.0	4.6	9.2	9.6	11	9.0	6.9	4.3	2.5
15	9.9	10	6.7	5.2	4.7	9.9	e9.0	9.6	9.8	6.3	4.1	2.7
16	9.5	10	6.4	4.7	4.5	8.5	8.1	9.3	14	43	4.3	2.7
17	9.5	10	6.2	4.5	4.5	8.1	9.3	9.6	9.1	47	5.0	2.8
18	10	11	6.2	4.4	4.6	8.7	14	9.6	8.0	19	4.9	2.6
19	11	11	6.0	4.4	4.6	9.5	17	8.6	7.3	13	4.6	2.7
20	11	10	5.3	4.3	4.7	9.8	e28	8.5	5.9	9.8	4.4	3.0
21	11	11	4.7	4.2	4.9	10	24	8.9	5.7	7.9	4.8	3.3
22	11	10	4.7	4.2	5.6	9.7	20	9.8	5.8	7.4	4.4	4.0
23	10	10	5.2	4.2	6.7	11	16	15	6.0	6.6	4.2	5.2
24	11	10	5.3	4.2	10	14	15	11	5.9	6.2	3.9	4.2
25	12	10	5.7	4.1	14	13	13	9.4	6.5	6.0	3.8	4.0
26	12	10	5.4	4.1	17	11	13	9.0	8.0	5.6	3.7	3.9
27	11	9.4	5.5	4.0	14	9.8	18	10	6.4	5.4	3.4	4.1
28	9.9	8.8	6.0	4.1	14	8.6	19	11	5.8	5.4	3.2	4.1
29	9.5	7.7	6.2	4.1	14	8.5	15	10	5.4	5.2	3.4	4.1
30	10	e8.5	6.1	4.3	---	8.7	16	10	5.2	5.3	3.2	4.2
31	10	---	6.3	4.4	---	8.8	---	10	---	5.3	3.3	---
TOTAL	292.6	284.9	203.6	150.3	191.6	330.0	372.9	362.3	236.4	323.2	136.8	104.0
MEAN	9.44	9.50	6.57	4.85	6.61	10.6	12.4	11.7	7.88	10.4	4.41	3.47
MAX	12	11	8.3	6.2	17	15	28	23	19	47	6.2	5.2
MIN	7.5	7.7	4.7	4.0	4.3	8.1	7.8	8.5	5.2	5.0	3.2	2.5
AC-FT	580	565	404	298	380	655	740	719	469	641	271	206

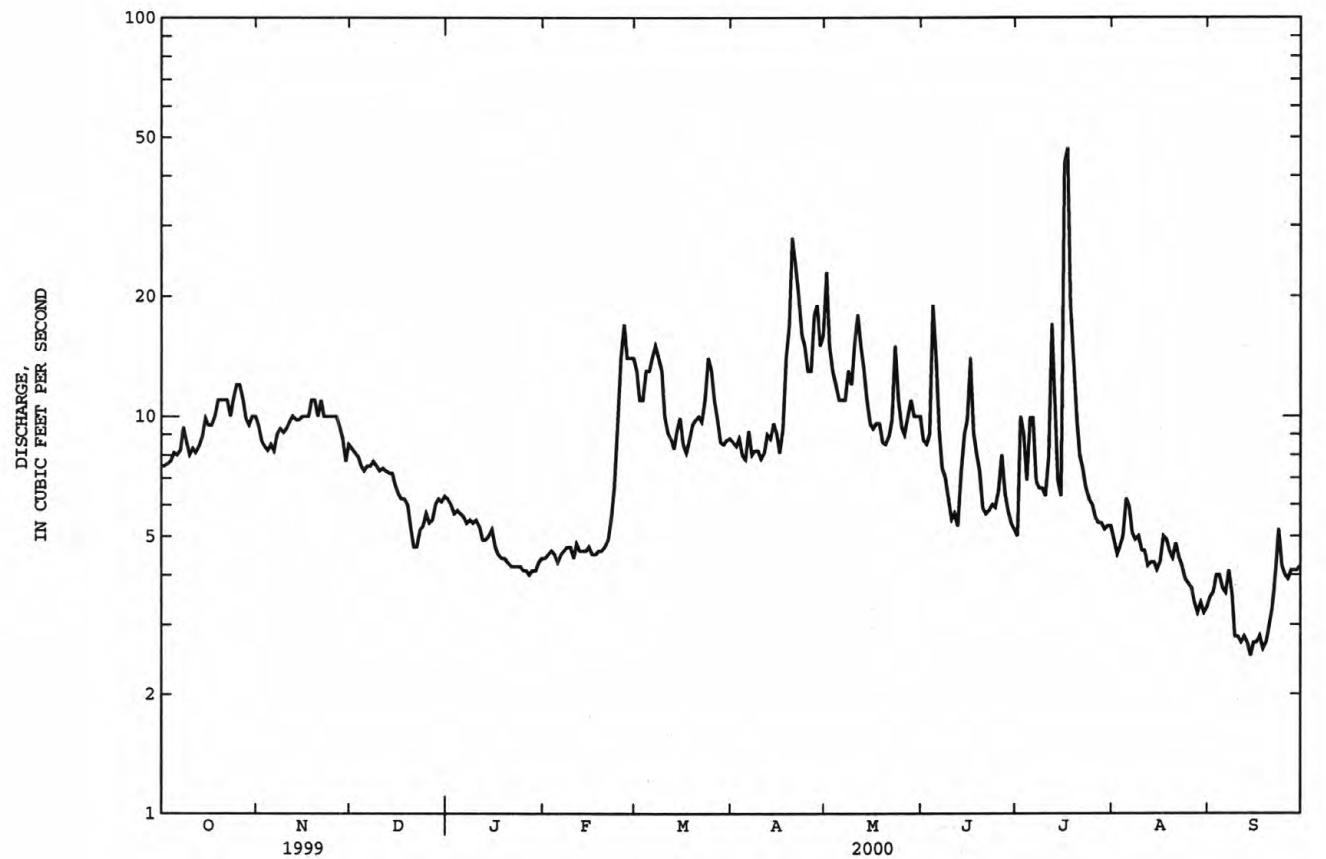
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

MEAN	9.44	9.50	6.57	4.85	6.61	10.6	12.4	11.7	7.88	10.4	4.41	3.47
MAX	9.44	9.50	6.57	4.85	6.61	10.6	12.4	11.7	7.88	10.4	4.41	3.47
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	9.44	9.50	6.57	4.85	6.61	10.6	12.4	11.7	7.88	10.4	4.41	3.47
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06479159 BLUE DOG LAKE INFLOW (OWENS CREEK) NEAR WAUBAY, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	2988.6	
ANNUAL MEAN	8.17	
HIGHEST DAILY MEAN	47	Jul 17
LOWEST DAILY MEAN	2.5	Sep 14
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 13
INSTANTANEOUS PEAK FLOW	54	Jul 16a
INSTANTANEOUS PEAK STAGE	4.10	Mar 9b
ANNUAL RUNOFF (AC-FT)	5930	
10 PERCENT EXCEEDS	13	
50 PERCENT EXCEEDS	7.7	
90 PERCENT EXCEEDS	4.1	

a Gage height, 3.65 ft.
b Backwater from beaver dam and ice.
e Estimated.



06479167 LITTLE RUSH LAKE OUTFLOW NEAR WAUBAY, SD

LOCATION.--Lat 45°19'18", long 97°19'37", in NE¼ SE¼ NE¼ sec.5, T.121 N., R.54 W., Day County, Hydrologic Unit 10160010, 1,200 ft below lake outflow at Burlington Northern Railroad grade and 1.2 mi west-southwest of Waubay.

DRAINAGE AREA.--To be determined (included in Waubay Lakes Chain Closed Basin).

PERIOD OF RECORD.--July 1999 to current year. Miscellaneous discharge measurements only prior to October 1999.

GAGE.--Outside staff. Elevation of gage is 1,798 ft above sea level, from topographic map.

REMARKS.--Records estimated and are fair. Data collected as a follow on to the FEMA Risk Assessment Study in order to further document lake interaction in the Waubay Lake Chain. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	41	41	41	41	41	40	45	38	33	24	26
2	45	41	41	41	41	41	40	45	38	33	23	27
3	46	40	41	41	41	41	40	45	38	33	22	28
4	46	40	41	41	41	41	40	45	38	33	22	28
5	47	40	41	41	41	41	40	44	37	33	22	29
6	47	40	41	41	41	41	40	44	37	32	21	29
7	47	40	41	41	41	41	40	44	37	32	21	30
8	48	40	41	41	41	41	40	44	37	32	21	31
9	48	40	41	41	41	41	40	43	36	32	21	32
10	48	40	41	41	41	41	40	43	36	32	21	33
11	49	40	41	41	41	41	40	43	36	32	20	32
12	49	40	41	41	41	41	40	43	35	32	20	32
13	49	40	41	41	40	41	41	42	35	32	20	32
14	50	40	41	41	40	41	41	42	34	31	20	31
15	50	40	41	41	40	41	41	41	34	31	20	31
16	50	40	41	41	40	41	41	41	34	31	20	31
17	50	40	41	41	40	40	41	41	34	30	20	31
18	50	40	41	42	40	40	42	40	34	30	20	31
19	50	40	41	42	40	40	42	40	34	29	20	31
20	50	40	41	42	40	40	43	40	34	29	20	31
21	49	40	41	42	40	40	43	40	34	29	20	31
22	48	40	41	42	40	40	43	40	33	28	21	31
23	48	41	41	42	40	40	44	40	33	28	22	30
24	47	41	41	42	40	40	44	39	33	28	22	30
25	46	41	41	42	40	40	44	39	33	27	23	30
26	45	41	41	42	40	40	45	39	33	27	23	30
27	44	41	41	42	40	40	45	39	33	26	23	30
28	43	42	41	42	41	40	45	39	33	26	24	30
29	43	42	41	42	41	40	45	39	33	25	24	30
30	42	42	41	42	---	40	45	38	33	25	25	30
31	42	---	41	42	---	40	---	38	---	24	25	---
TOTAL	1461	1213	1271	1285	1174	1256	1255	1285	1047	925	670	908
MEAN	47.1	40.4	41.0	41.5	40.5	40.5	41.8	41.5	34.9	29.8	21.6	30.3
MAX	50	42	41	42	41	41	45	45	38	33	25	33
MIN	42	40	41	41	40	40	40	38	33	24	20	26
AC-FT	2900	2410	2520	2550	2330	2490	2490	2550	2080	1830	1330	1800

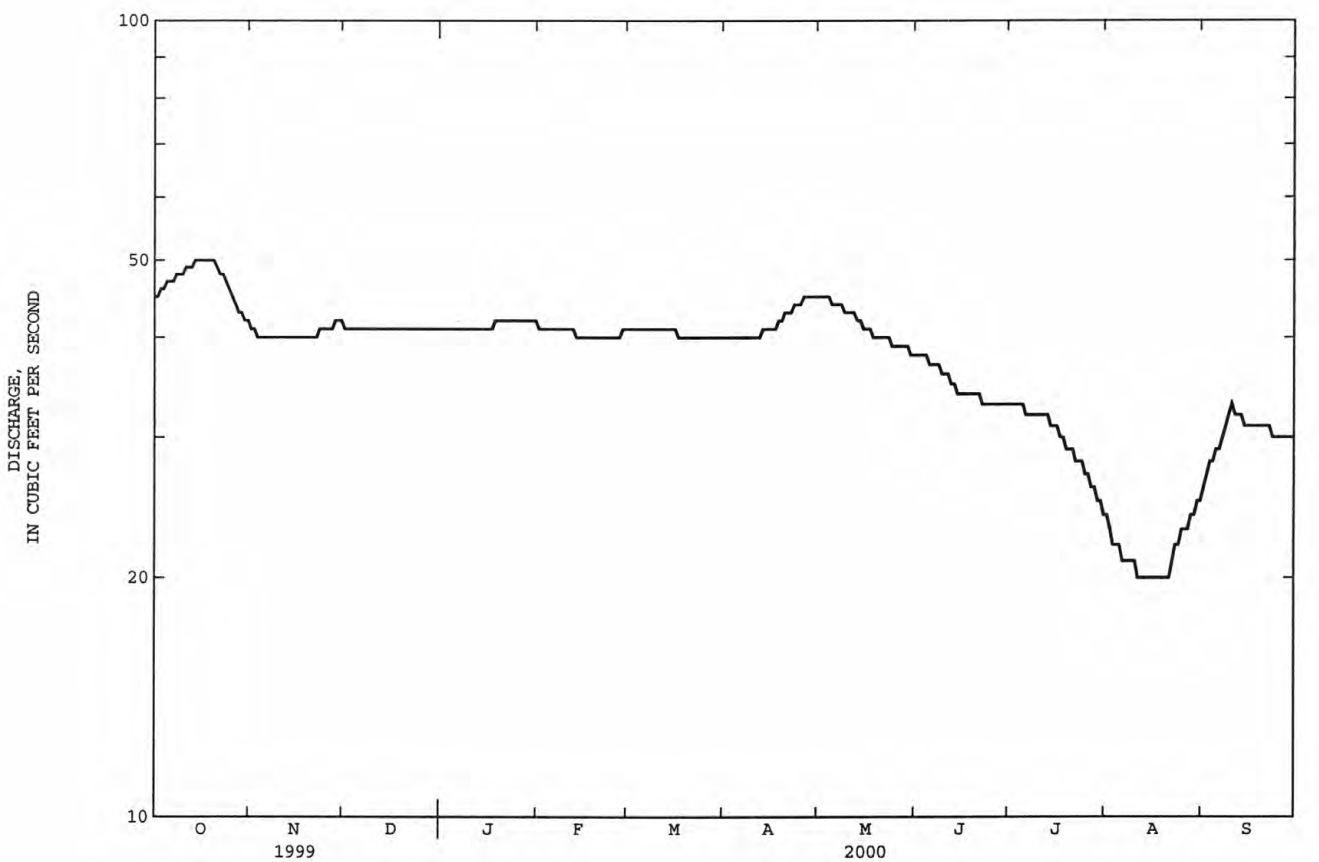
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2000, BY WATER YEAR (WY)

MEAN	47.1	40.4	41.0	41.5	40.5	40.5	41.8	41.5	34.9	29.8	21.6	30.3
MAX	47.1	40.4	41.0	41.5	40.5	40.5	41.8	41.5	34.9	29.8	21.6	30.3
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MIN	47.1	40.4	41.0	41.5	40.5	40.5	41.8	41.5	34.9	29.8	21.6	30.3
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06479167 LITTLE RUSH LAKE OUTFLOW NEAR WAUBAY, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR	
ANNUAL TOTAL	13750	
ANNUAL MEAN	37.6	
HIGHEST DAILY MEAN	50	Oct 14a
LOWEST DAILY MEAN	20	Aug 11
ANNUAL SEVEN-DAY MINIMUM	20	Aug 11
ANNUAL RUNOFF (AC-FT)	27270	
10 PERCENT EXCEEDS	44	
50 PERCENT EXCEEDS	40	
90 PERCENT EXCEEDS	26	

a Instantaneous peak not published due to estimated record.



06479215 BIG SIOUX RIVER NEAR FLORENCE, SD

LOCATION.--Lat 45°10'51", long 97°11'09", in NE¼ NE¼ NE¼ sec.17, T.120 N., R.52 W., Grant County, Hydrologic Unit 10170202, on right bank near downstream side of county highway bridge, 11.0 mi northeast of Florence, and 2.2 mi upstream from Indian Creek.

DRAINAGE AREA.--638 mi^2, of which 570 mi^2 usually is noncontributing.

PERIOD OF RECORD.--June 6, 1984, to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,780.57 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.80	1.3	e.38	e.16	e4.0	1.6	9.8	.95	.46	.24	.24
2	.51	.80	1.4	e.30	e.16	e5.0	1.4	10	.92	.89	.21	.37
3	.55	.84	1.5	e.28	e.16	e7.5	1.6	8.4	.99	.63	.20	.40
4	.57	.80	1.5	e.26	e.16	e8.0	e1.7	6.4	1.2	.55	.21	.42
5	.58	.81	1.4	e.30	e.16	e7.5	e1.7	4.6	1.0	.73	.39	.40
6	.56	.83	1.3	e.28	e.16	e7.0	1.6	3.7	1.1	.59	.33	.57
7	.63	.82	1.1	e.30	e.15	e7.0	1.6	3.4	1.2	.50	.24	.56
8	.68	.83	1.2	e.30	e.15	e7.0	1.7	3.3	1.0	.40	.23	.39
9	.64	.86	1.1	e.28	e.14	e6.0	1.8	2.9	.80	.37	.23	.38
10	.66	.89	1.0	e.28	e.10	e6.0	1.8	3.2	.70	.40	.19	.41
11	.65	.90	1.1	e.20	e.07	e5.5	1.8	3.9	.64	.56	.18	.45
12	.55	.91	1.0	e.15	e.08	e5.0	2.0	4.2	.59	.70	.18	.43
13	.51	.94	1.0	e.16	e.08	e4.5	2.1	4.7	.81	.60	.19	.38
14	.49	.96	1.1	e.18	e.09	e4.0	2.8	3.4	.84	.45	.17	.39
15	.55	1.0	e.90	e.20	e.09	e3.5	4.9	3.0	.85	.34	.18	.41
16	.56	.99	e.70	e.20	e.09	e3.5	2.8	2.6	.84	2.4	.20	.41
17	.55	.98	e.70	e.19	e.09	e3.5	1.9	2.5	.80	1.8	.27	.37
18	.61	1.0	e.60	e.18	e.09	e3.0	4.3	2.3	.71	3.1	.24	.37
19	.62	1.1	e.50	e.18	e.09	e2.5	9.3	2.1	.67	2.3	.22	.35
20	.61	1.1	e.35	e.18	e.10	e2.2	17	1.8	.68	1.3	.23	.36
21	.65	1.0	e.20	e.17	e.15	1.8	14	1.4	.59	.84	.23	.34
22	.64	1.0	e.15	e.17	e.20	1.9	17	1.4	.59	.67	.22	.53
23	.64	1.1	e.15	e.17	e.50	2.0	19	1.6	.79	.53	.21	.59
24	.66	1.1	e.20	e.17	e.75	2.3	15	1.3	.72	.44	.18	.46
25	.65	1.1	e.23	e.18	e2.0	3.6	11	1.2	.87	.53	.18	.41
26	.66	1.1	e.25	e.17	e8.0	2.7	8.7	1.2	.85	.40	.21	.41
27	.71	1.2	e.28	e.17	e9.0	2.0	8.4	1.2	.74	.32	.22	.38
28	.74	1.2	e.30	e.18	e6.0	1.7	8.6	1.1	.65	.27	.24	.33
29	.80	1.2	e.35	e.18	e4.0	e1.7	8.1	1.0	.59	.25	.22	.33
30	.83	1.3	e.40	e.18	---	1.5	7.8	1.1	.53	.22	.24	.34
31	.83	---	e.40	e.18	---	2.2	---	1.0	---	.25	.25	---
TOTAL	19.41	29.46	23.66	6.70	32.97	125.6	183.0	99.7	24.21	23.79	6.93	12.18
MEAN	.63	.98	.76	.22	1.14	4.05	6.10	3.22	.81	.77	.22	.41
MAX	.83	1.3	1.5	.38	9.0	8.0	19	10	1.2	3.1	.39	.59
MIN	.49	.80	.15	.15	.07	1.5	1.4	1.0	.53	.22	.17	.24
AC-FT	38	58	47	13	65	249	363	198	48	47	14	24

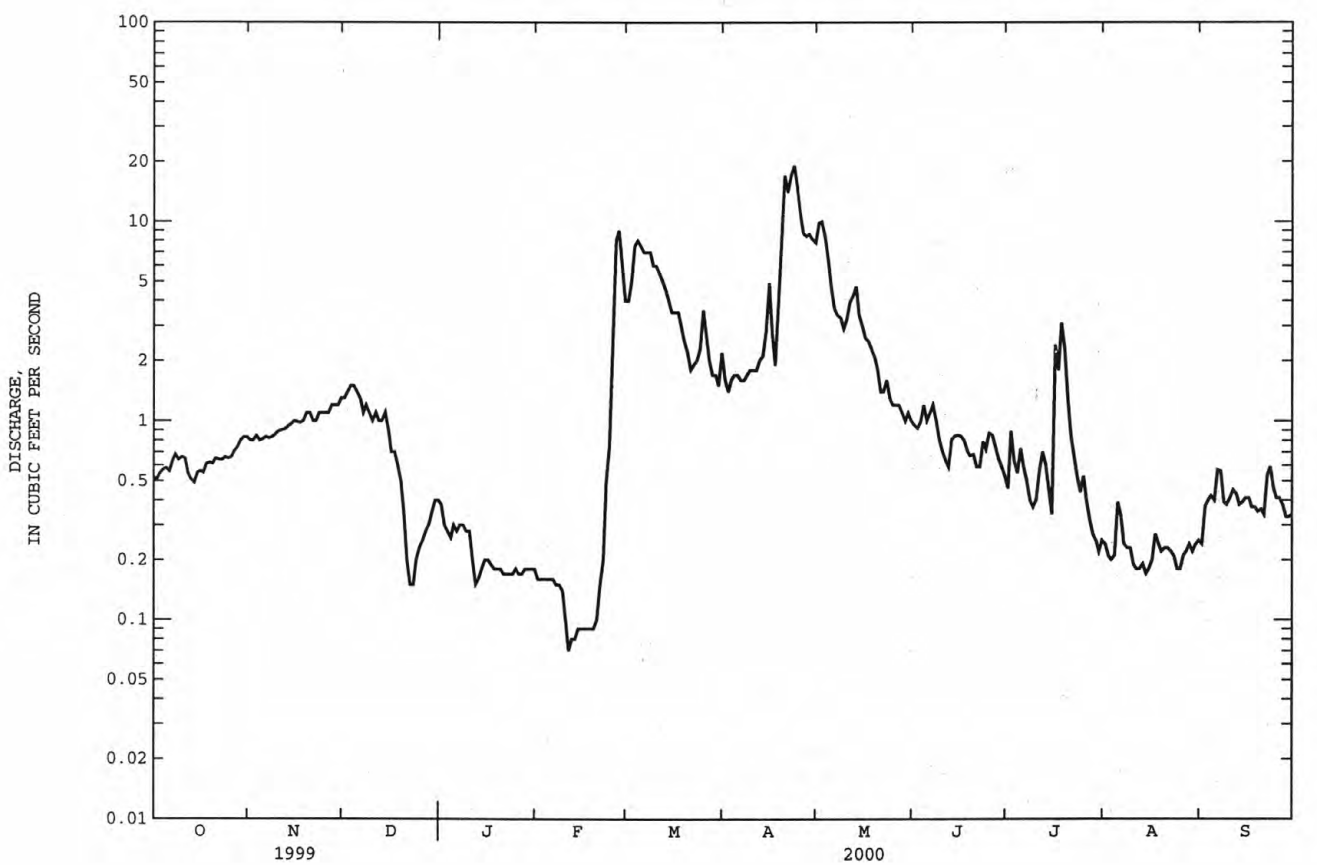
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)

MEAN	7.67	5.24	2.56	.98	4.77	45.2	52.4	23.4	14.3	24.7	8.04	4.84
MAX	56.0	25.5	8.19	3.05	45.8	111	297	70.5	61.1	169	50.8	20.6
(WY)	1996	1996	1996	1996	1998	1986	1997	1995	1986	1993	1995	1986
MIN	.010	.056	.025	.000	.000	.54	1.08	1.73	.28	.020	.067	.032
(WY)	1989	1989	1990	1990	1990	1991	1990	1988	1988	1988	1988	1988

06479215 BIG SIOUX RIVER NEAR FLORENCE, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1985 - 2000	
ANNUAL TOTAL	3325.89		587.61			
ANNUAL MEAN	9.11		1.61		16.2a	
HIGHEST ANNUAL MEAN					39.6	1995
LOWEST ANNUAL MEAN					.62	1988
HIGHEST DAILY MEAN	80	Feb 27	19	Apr 23	1600	Apr 5 1997
LOWEST DAILY MEAN	.15	Dec 22	.07	Feb 11	.00	Aug 9 1985b
ANNUAL SEVEN-DAY MINIMUM	.21	Dec 21	.08	Feb 11	.00	Dec 16 1989
INSTANTANEOUS PEAK FLOW			20	Apr 22	2000	Apr 4 1997c
INSTANTANEOUS PEAK STAGE			3.29	Apr 22	9.52	Apr 2 1997d
ANNUAL RUNOFF (AC-FT)	6600		1170		11760	
10 PERCENT EXCEEDS	33		4.1		37	
50 PERCENT EXCEEDS	1.4		.67		2.1	
90 PERCENT EXCEEDS	.40		.18		.07	

a Median of annual mean discharges, 11 ft^3/s.
b No flow Aug. 9-11, 1985, Dec. 16 to Mar. 5, 1990, and Feb. 16-25, 1991.
c Gage height, 9.32 ft.
d Backwater from ice.
e Estimated.



06479430 STILL LAKE OUTFLOW NEAR FLORENCE, SD

LOCATION.--Lat 45°02'15", long 97°12'25", in SW¼ SW¼ SW¼ sec.9, T.119 N., R.53 W., Codington County, Hydrologic Unit 10170202, on right downstream wingwall of county highway bridge, 2.0 mi upstream from Big Sioux River, 0.1 mi upstream from reservation boundary, and 6.1 mi east-southeast of Florence.

DRAINAGE AREA.--224 mi^2.

PERIOD OF RECORD.--May 1996 to current year (seasonal discharge records only).

GAGE.--Water-stage recorder. Datum of gage is 1,735.67 ft above sea level.

REMARKS.--Records good. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period April to September, maximum daily discharge, 408 ft^3/s, Apr. 19, 1997; maximum gage height, 7.43 ft, Apr. 7, 1997, backwater from ice; minimum daily discharge, 0.0 ft^3/s, many days, 1999 and 2000 water years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 0.33 ft^3/s, June 25, gage height, 3.19 ft; minimum daily discharge, 0.0 ft^3/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

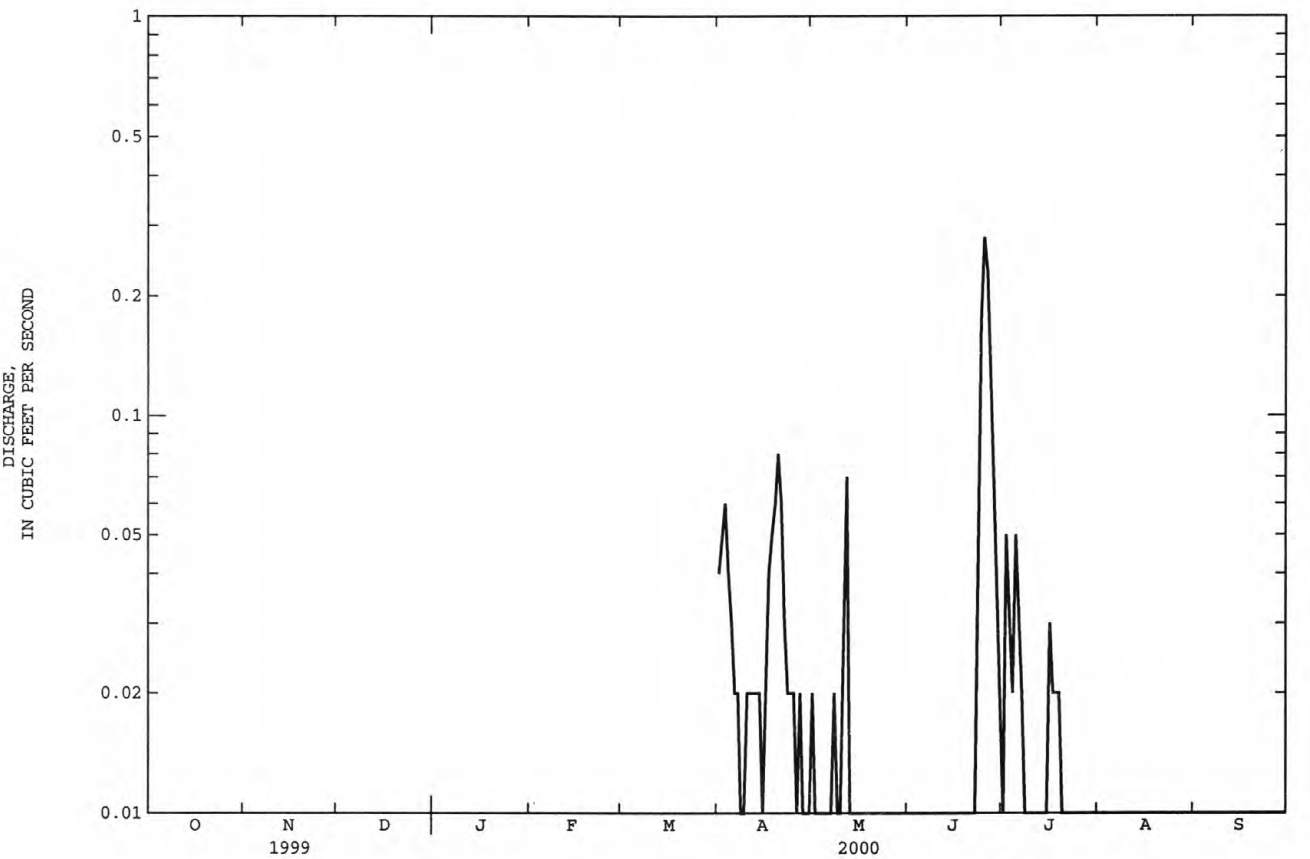
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.04	.02	.00	.01	.00	e.00
2	---	---	---	---	---	---	.05	.01	.00	.05	.00	e.00
3	---	---	---	---	---	---	.06	.01	.00	.03	.00	e.00
4	---	---	---	---	---	---	.04	.00	.00	.02	.00	e.00
5	---	---	---	---	---	---	.03	.00	.00	.05	.00	e.00
6	---	---	---	---	---	---	.02	.00	.00	.03	.00	e.00
7	---	---	---	---	---	---	.02	.00	.00	.02	.00	e.00
8	---	---	---	---	---	---	.01	.02	.00	.01	.00	e.00
9	---	---	---	---	---	---	.01	.01	.00	.00	.00	e.00
10	---	---	---	---	---	---	.02	.01	.00	.00	.00	e.00
11	---	---	---	---	---	---	.02	.02	.00	.00	.00	e.00
12	---	---	---	---	---	---	.02	.07	.00	.00	.00	e.00
13	---	---	---	---	---	---	.02	.00	.00	.00	.00	e.00
14	---	---	---	---	---	---	.02	.00	.00	.00	.00	e.00
15	---	---	---	---	---	---	.01	.00	.00	.00	e.00	e.00
16	---	---	---	---	---	---	.02	.00	.00	.03	e.00	e.00
17	---	---	---	---	---	---	.04	.00	.00	.02	e.00	e.00
18	---	---	---	---	---	---	.05	.00	.00	.02	e.00	e.00
19	---	---	---	---	---	---	.06	.00	.00	.02	e.00	e.00
20	---	---	---	---	---	---	.08	.00	.00	.01	e.00	e.00
21	---	---	---	---	---	---	.06	.00	.00	.01	e.00	e.00
22	---	---	---	---	---	---	.03	.00	.00	.01	e.00	e.00
23	---	---	---	---	---	---	.02	.00	.06	.00	e.00	e.00
24	---	---	---	---	---	---	.02	.00	.17	.00	e.00	e.00
25	---	---	---	---	---	---	.02	.00	.28	.00	e.00	e.00
26	---	---	---	---	---	---	.01	.00	.23	.00	e.00	e.00
27	---	---	---	---	---	---	.02	.00	.14	.00	e.00	e.00
28	---	---	---	---	---	---	.01	.00	.09	.00	e.00	e.00
29	---	---	---	---	---	---	.01	.00	.05	.00	e.00	e.00
30	---	---	---	---	---	---	.01	.00	.02	.00	e.00	e.00
31	---	---	---	---	---	---	---	.00	---	.00	e.00	---
TOTAL	---	---	---	---	---	---	0.85	0.17	1.04	0.34	0.00	0.00
MEAN	---	---	---	---	---	---	.028	.005	.035	.011	.000	.000
MAX	---	---	---	---	---	---	.08	.07	.28	.05	.00	.00
MIN	---	---	---	---	---	---	.01	.00	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	1.7	.3	2.1	.7	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2000, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	80.9	47.5	26.7	13.0	6.55	2.26
MAX	---	---	---	---	---	---	301	158	50.2	27.4	17.1	4.35
(WY)	---	---	---	---	---	---	1997	1997	1997	1996	1996	1997
MIN	---	---	---	---	---	---	.028	.005	.035	.011	.000	.000
(WY)	---	---	---	---	---	---	2000	2000	2000	2000	2000	2000

e Estimated.

06479430 STILL LAKE OUTFLOW NEAR FLORENCE, SD--Continued



06479438 BIG SIOUX RIVER NEAR WATERTOWN, SD

LOCATION.--Lat 45°00'22", long 97°09'53", in NE¼ NE¼ NE¼ sec.16, T.118 NR., R.52 WR., Codington County, Hydrologic Unit 10170202, on left bank at downstream side of county highway bridge, 4.9 mi downstream from Mahoney Creek, 6.5 mi upstream from inlet-outlet to Lake Kampeska, and 7.5 mi northwest of Watertown.

DRAINAGE AREA.--1,007 mi^2, of which 779 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR SD-78-1: 1973-74(M), 1976-77(M). WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,725.81 ft above sea level (South Dakota Department of Transportation bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.1	5.7	e2.1	e.55	e15	9.3	21	7.5	2.0	.78	.26
2	3.6	4.4	6.1	e1.9	e.80	e14	9.9	21	7.0	2.6	.81	.25
3	3.5	4.1	6.6	e1.6	e.70	e14	10	20	6.5	2.4	.71	.27
4	3.7	3.9	5.9	e1.0	e.70	e14	9.0	19	7.2	2.3	.63	.23
5	3.7	4.2	5.3	e.90	e.90	16	8.7	17	7.2	3.4	.89	.22
6	3.8	4.5	5.5	e.85	e.90	16	10	14	6.9	3.1	1.1	.26
7	3.7	4.2	5.6	e.85	e1.5	13	9.1	14	6.4	3.0	.99	.27
8	4.2	4.3	5.8	e.85	e1.2	15	9.0	16	5.5	2.9	.84	.23
9	3.9	4.5	5.2	e.85	e1.0	e10	9.1	14	4.8	1.5	.72	.22
10	3.8	4.6	4.9	e.85	e.90	e10	9.3	13	4.1	1.8	.64	.20
11	3.7	4.6	5.3	e.70	e.80	e10	9.7	14	3.4	1.6	.55	.19
12	3.5	4.7	4.9	e.50	e1.0	e8.0	10	14	2.7	2.0	.54	.18
13	3.7	4.8	4.9	e.60	e1.0	e8.5	10	14	2.8	1.9	.52	.16
14	3.7	4.8	5.3	e.60	e1.0	e9.0	11	13	3.3	2.0	.43	.14
15	3.7	4.9	e4.0	e.60	e1.0	e8.5	9.4	13	3.7	1.6	.40	.13
16	3.8	4.9	e3.0	e.60	e1.0	e8.5	13	12	4.0	4.6	.40	.13
17	3.8	4.9	e3.0	e.60	e1.0	8.8	14	11	3.2	3.7	.43	.13
18	3.7	5.1	e2.5	e.58	e1.0	10	14	11	2.8	4.4	.39	.14
19	3.9	5.3	e2.5	e.55	e1.1	10	16	9.4	2.5	4.2	.33	.16
20	4.0	5.4	e1.8	e.55	e1.6	9.1	23	9.0	2.6	3.6	.39	.15
21	4.0	5.3	e1.5	e.55	e2.2	8.6	28	8.6	2.2	3.5	.39	.17
22	4.3	5.5	e1.5	e.55	e3.5	8.6	30	8.2	2.4	3.0	.31	.30
23	4.3	5.5	e1.6	e.55	e6.0	8.6	30	8.6	4.4	2.3	.33	.26
24	3.8	5.9	e1.6	e.50	e12	9.3	29	8.2	4.0	2.0	.28	.21
25	3.9	5.5	e1.7	e.50	e11	11	26	7.9	3.8	1.9	.27	.19
26	4.0	5.4	e1.8	e.48	e11	11	23	7.5	4.2	2.3	.25	.17
27	3.9	5.6	e1.8	e.43	e10	12	22	7.5	3.9	3.0	.24	.17
28	3.9	5.4	e2.0	e.48	e9.0	10	21	7.2	3.3	2.5	.25	.17
29	4.0	5.2	e2.1	e.55	e12	9.4	20	6.7	2.7	2.0	.27	.16
30	4.1	5.6	e2.3	e.55	---	9.6	20	7.2	2.3	1.4	.23	.17
31	4.2	---	e2.5	e.55	---	9.7	---	7.2	---	1.2	.24	---
TOTAL	119.5	147.1	114.2	23.32	96.35	335.2	472.5	374.2	127.3	79.7	15.55	5.89
MEAN	3.85	4.90	3.68	.75	3.32	10.8	15.8	12.1	4.24	2.57	.50	.20
MAX	4.3	5.9	6.6	2.1	12	16	30	21	7.5	4.6	1.1	.30
MIN	3.5	3.9	1.5	.43	.55	8.0	8.7	6.7	2.2	1.2	.23	.13
AC-FT	237	292	227	46	191	665	937	742	252	158	31	12

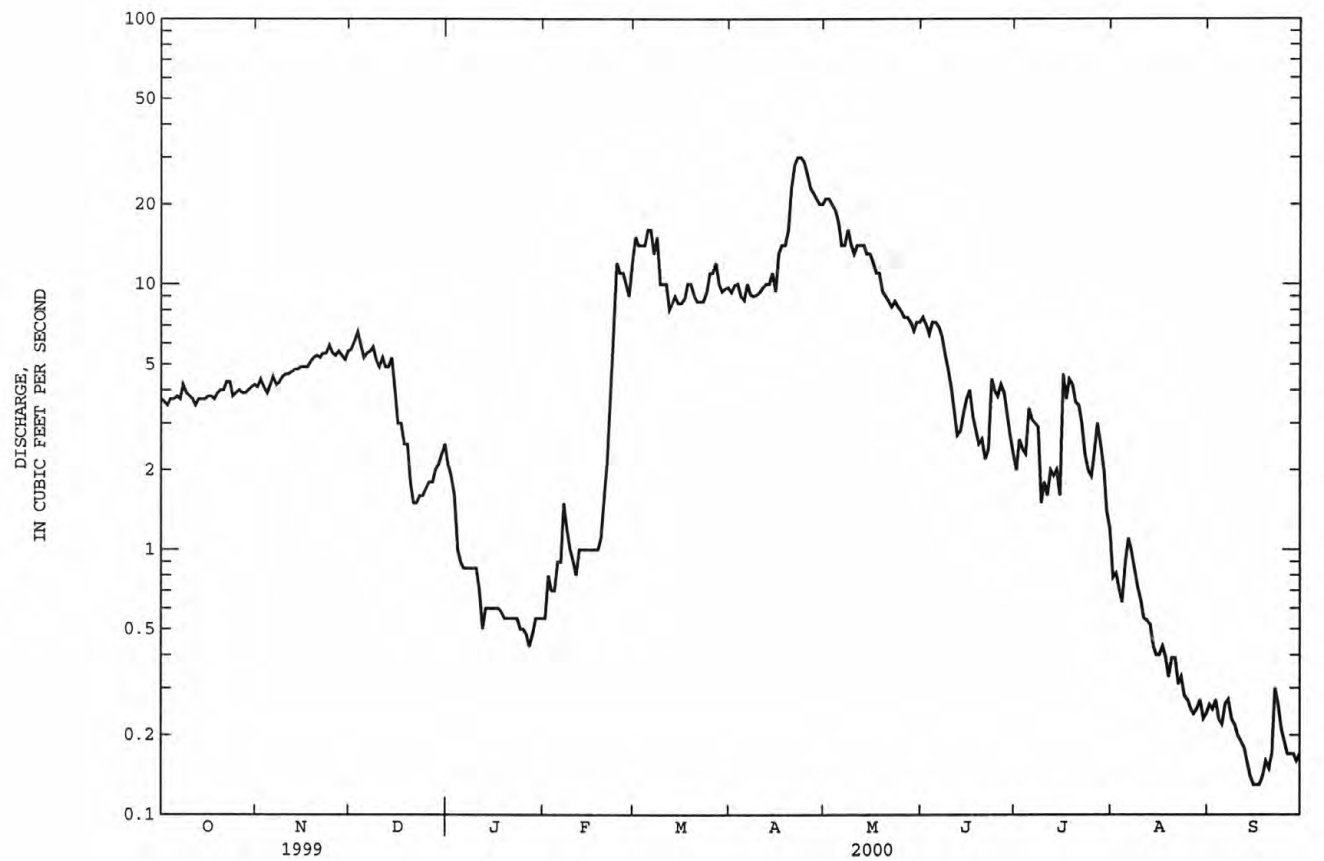
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2000, BY WATER YEAR (WY)

MEAN	18.6	15.4	7.47	3.29	10.4	109	154	65.3	50.8	50.1	21.8	13.1
MAX	221	155	55.7	26.5	120	321	1415	290	184	467	190	125
(WY)	1996	1996	1996	1996	1998	1986	1997	1995	1995	1993	1995	1995
MIN	.034	.10	.005	.000	.000	.26	2.95	.57	.035	.051	.035	.028
(WY)	1989	1989	1977	1977	1977	1975	1990	1981	1976	1976	1976	1982

06479438 BIG SIOUX RIVER NEAR WATERTOWN, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1973 - 2000	
ANNUAL TOTAL	11664.5		1910.81			
ANNUAL MEAN	32.0		5.22		43.3a	
HIGHEST ANNUAL MEAN					155	1997
LOWEST ANNUAL MEAN					2.22	1981
HIGHEST DAILY MEAN	290	Feb 28	30	Apr 22	6400	Apr 5 1997
LOWEST DAILY MEAN	1.5	Dec 21	.13	Sep 15	.00	Feb 1 1974b
ANNUAL SEVEN-DAY MINIMUM	1.6	Dec 20	.14	Sep 14	.00	Feb 1 1974
INSTANTANEOUS PEAK FLOW			31	Apr 22c	7820	Apr 5 1997
INSTANTANEOUS PEAK STAGE			4.28	Mar 1d	12.09	Apr 5 1997
ANNUAL RUNOFF (AC-FT)	23140		3790		31400	
10 PERCENT EXCEEDS	93		13		89	
50 PERCENT EXCEEDS	12		3.7		6.0	
90 PERCENT EXCEEDS	3.5		.28		.06	

a Median of annual mean discharges, 25 ft^3/s.
b No flow at times in 1988-91.
c Gage height, 4.25 ft.
d Backwater from ice.
e Estimated.



06479450 LAKE KAMPESKA (INLET/OUTLET) NEAR WATERTOWN, SD

LOCATION.--Lat 44°56'56", long 97°10'30", in NE¼ SW¼ NE¼ sec.15, T.117 N., R.53 W., Codington County, Hydrologic Unit 10170202, on left bank 50 ft upstream from State Highway 20 bridge, 8.8 mi upstream from Willow Creek, and 4.6 mi northwest of Watertown.

DRAINAGE AREA.--28.8 mi^2. Does not include upstream drainage area of the Big Sioux River, which can contribute inflow to the lake.

PERIOD OF RECORD.--October 1993 to current year. Daily discharge discontinued.

REVISED RECORDS.--WDR-94-1: Datum (1,700.00 ft 1994 water year only).

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 1,697.89 ft above sea level.

REMARKS.--Published stage records good. Water-discharge records poor. Daily mean discharges, which are positive, are flows going into the lake, and negative discharges are flows going out of the lake. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	78	51	e2.0	e.00	e8.0	62	45	51	53	17	-6.0
2	15	75	20	e2.0	e.00	e8.0	37	49	36	-21	33	5.3
3	24	53	19	e1.0	e.00	e8.0	38	59	38	54	16	15
4	21	30	e10	e1.0	e.00	e10	44	35	21	57	12	27
5	12	34	e10	e1.0	e.00	e10	72	3.7	38	66	51	17
6	17	39	e10	e1.0	e.00	e10	43	40	68	72	32	28
7	17	36	e10	e.00	e.00	e10	46	15	46	27	47	38
8	66	33	e10	e.00	e.00	e11	37	43	71	29	31	23
9	18	41	e9.0	e.00	e.00	e13	33	45	3.9	-10	100	6.4
10	23	31	e9.0	e.00	e.00	e13	36	71	71	41	17	21
11	47	35	e9.0	e.00	e.00	e14	40	23	65	49	50	18
12	14	19	e9.0	e.00	e.00	e14	31	19	45	34	24	11
13	23	29	e7.0	e.00	e.00	e14	52	49	45	21	37	11
14	41	25	e5.0	e.00	e.00	e15	51	36	19	86	32	5.7
15	21	31	e5.0	e.00	e.00	e17	35	38	27	56	13	11
16	29	19	e5.0	e.00	e.00	e17	-4.2	29	43	44	24	26
17	25	43	e4.0	e.00	e.00	e17	59	56	61	18	15	10
18	29	-27	e4.0	e.00	e.00	e20	35	15	71	12	15	21
19	19	39	e4.0	e.00	e.00	e23	56	18	21	14	26	17
20	27	39	e4.0	e.00	e.00	e27	16	62	74	16	37	31
21	44	44	e3.0	e.00	e.00	e30	74	93	39	31	22	-2.0
22	35	25	e3.0	e.00	e.00	31	90	32	39	77	15	20
23	13	22	e3.0	e.00	e.00	56	63	26	55	38	40	.21
24	24	31	e3.0	e.00	e1.0	45	84	30	59	55	15	4.3
25	44	39	e3.0	e.00	e3.0	74	38	50	48	56	41	33
26	26	50	e3.0	e.00	e5.0	52	76	31	50	8.7	11	37
27	33	42	e2.0	e.00	e5.0	57	46	20	35	44	35	24
28	48	43	e2.0	e.00	e7.0	43	42	63	36	62	25	1.3
29	28	28	e2.0	e.00	e7.0	34	30	62	42	53	1.8	29
30	31	24	e2.0	e.00	---	66	58	57	14	52	10	60
31	19	---	e2.0	e.00	---	54	---	31	---	22	28	---
TOTAL	838.1	1050	242.0	8.00	28.00	821.0	1419.8	1245.7	1331.9	1216.7	872.8	543.21
MEAN	27.0	35.0	7.81	.26	.97	26.5	47.3	40.2	44.4	39.2	28.2	18.1
MAX	66	78	51	2.0	7.0	74	90	93	74	86	100	60
MIN	5.1	-27	2.0	.00	.00	8.0	-4.2	3.7	3.9	-21	1.8	-6.0
AC-FT	1660	2080	480	16	56	1630	2820	2470	2640	2410	1730	1080

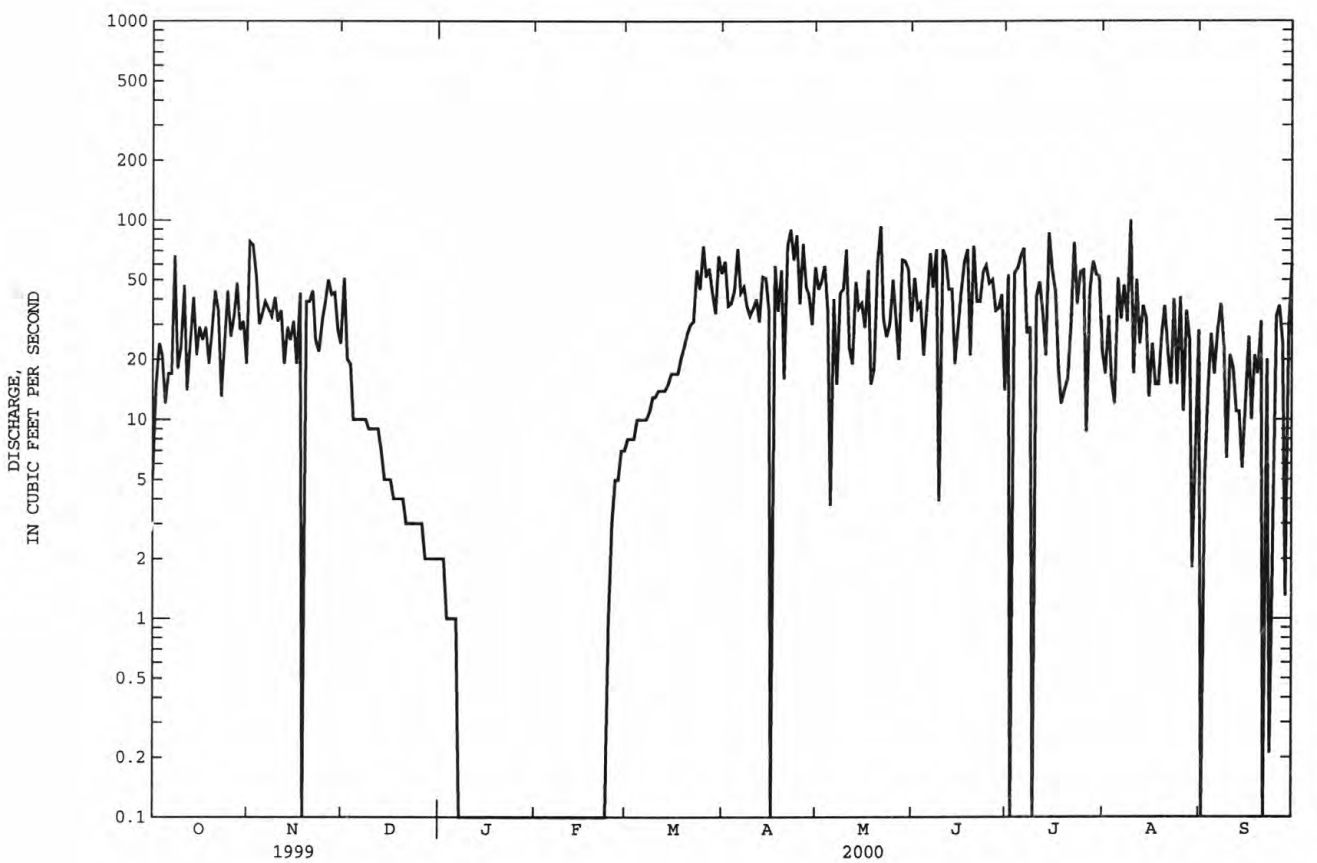
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2000, BY WATER YEAR (WY)

MEAN	34.7	22.7	6.61	.15	12.3	99.8	19.6	-11.5	-4.11	16.3	21.2	7.33
MAX	115	35.0	10.5	.77	79.1	281	298	41.1	44.4	48.7	75.4	62.1
(WY)	1999	2000	1999	1997	1998	1996	1997	1998	2000	1997	1995	1997
MIN	-24.0	-18.5	.000	.000	.000	11.8	-92.1	-85.7	-83.5	-34.1	-50.7	-48.2
(WY)	1996	1996	1994	1994	1994	1997	1995	1997	1996	1994	1994	1995

06479450 LAKE KAMPESKA (INLET/OUTLET) NEAR WATERTOWN, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1994 - 2000	
ANNUAL TOTAL	7854.27		9617.21			
ANNUAL MEAN	21.5		26.3		18.9	
HIGHEST ANNUAL MEAN					39.4	1997
LOWEST ANNUAL MEAN					-.51	1995
HIGHEST DAILY MEAN	105	Apr 13	100	Aug 9	4130	Apr 5 1997
LOWEST DAILY MEAN	-113	Apr 22	-27	Nov 18	-1410	Apr 10 1997
ANNUAL SEVEN-DAY MINIMUM	-41	May 24	.00	Jan 7	-961	Apr 8 1997
INSTANTANEOUS PEAK FLOW			100	Aug 9a	5890	Apr 6 1997
INSTANTANEOUS PEAK STAGE			19.19	May 12	25.78	Apr 6 1997
ANNUAL RUNOFF (AC-FT)	15580		19080		13680	
10 PERCENT EXCEEDS	50		57		69	
50 PERCENT EXCEEDS	20		24		5.8	
90 PERCENT EXCEEDS	.00		.00		-96	

a Maximum daily mean.
e Estimated.

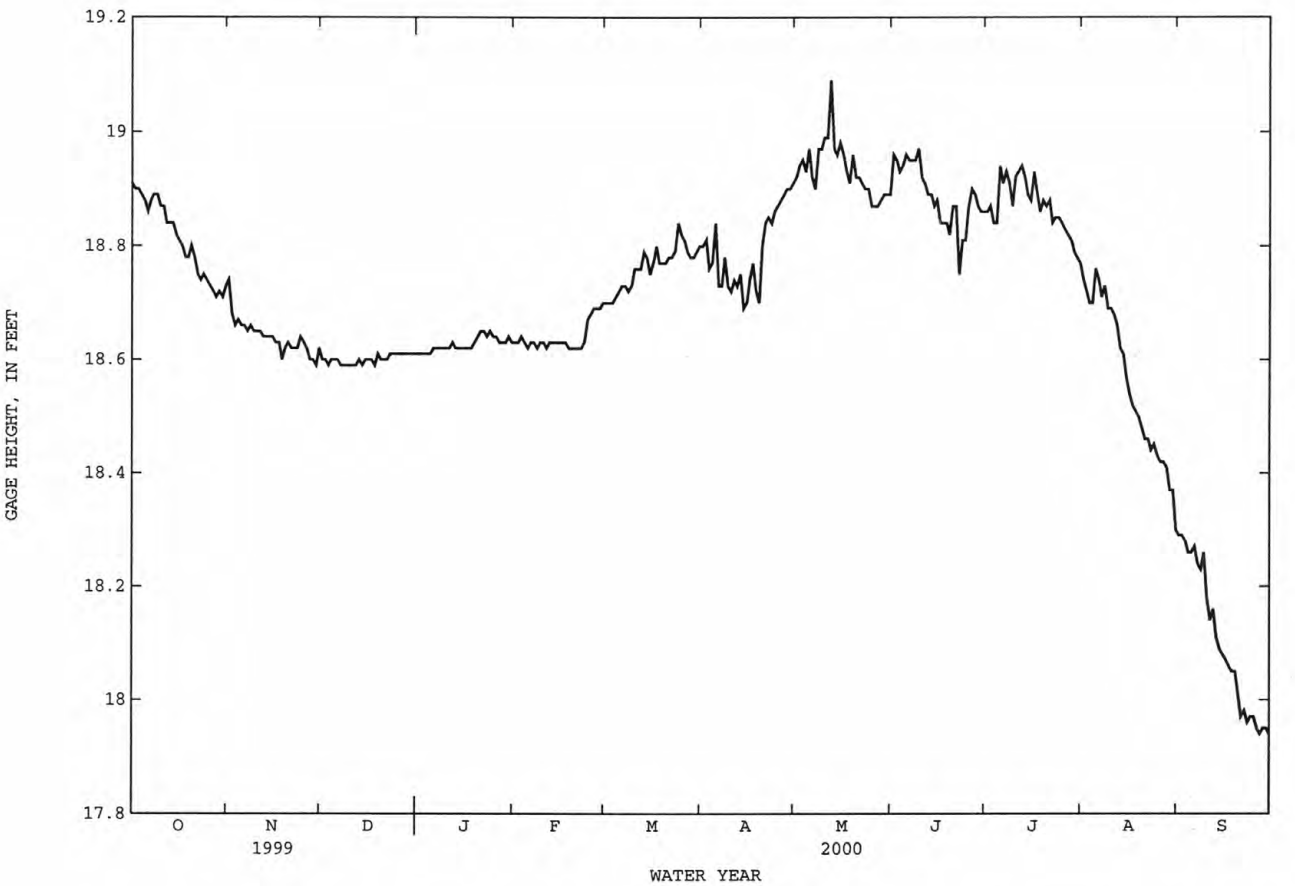


06479450 LAKE KAMPESKA (INLET/OUTLET) NEAR WATERTOWN, SD--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.91	18.74	18.60	18.61	18.63	18.70	18.80	18.92	18.96	18.86	18.74	18.29
2	18.90	18.68	18.60	18.61	18.63	18.70	18.81	18.94	18.95	18.87	18.72	18.29
3	18.90	18.66	18.59	18.61	18.64	18.70	18.76	18.95	18.93	18.84	18.70	18.28
4	18.89	18.67	18.60	18.61	18.63	18.71	18.77	18.93	18.94	18.84	18.70	18.26
5	18.88	18.66	18.60	18.61	18.62	18.72	18.84	18.97	18.96	18.94	18.76	18.26
6	18.86	18.66	18.60	18.62	18.63	18.73	18.73	18.92	18.95	18.91	18.74	18.27
7	18.88	18.65	18.59	18.62	18.63	18.73	18.73	18.90	18.95	18.93	18.71	18.24
8	18.89	18.66	18.59	18.62	18.62	18.72	18.78	18.97	18.95	18.91	18.73	18.23
9	18.89	18.65	18.59	18.62	18.63	18.73	18.73	18.97	18.97	18.87	18.69	18.26
10	18.87	18.65	18.59	18.62	18.63	18.76	18.72	18.99	18.92	18.92	18.69	18.18
11	18.87	18.65	18.59	18.62	18.62	18.76	18.74	18.99	18.91	18.93	18.68	18.14
12	18.84	18.64	18.59	18.63	18.63	18.76	18.73	19.09	18.89	18.94	18.66	18.16
13	18.84	18.64	18.60	18.62	18.63	18.79	18.75	18.97	18.89	18.92	18.62	18.11
14	18.84	18.64	18.59	18.62	18.63	18.78	18.69	18.96	18.87	18.89	18.61	18.09
15	18.82	18.64	18.60	18.62	18.63	18.75	18.70	18.98	18.88	18.88	18.57	18.08
16	18.81	18.63	18.60	18.62	18.63	18.77	18.74	18.96	18.84	18.93	18.54	18.07
17	18.80	18.63	18.60	18.62	18.63	18.80	18.77	18.93	18.84	18.89	18.52	18.06
18	18.78	18.60	18.59	18.62	18.62	18.77	18.72	18.91	18.84	18.86	18.51	18.05
19	18.78	18.62	18.61	18.63	18.62	18.77	18.70	18.96	18.82	18.88	18.50	18.05
20	18.80	18.63	18.60	18.64	18.62	18.77	18.80	18.92	18.87	18.87	18.48	18.01
21	18.78	18.62	18.60	18.65	18.62	18.78	18.84	18.92	18.87	18.88	18.46	17.97
22	18.75	18.62	18.60	18.65	18.62	18.78	18.85	18.91	18.75	18.84	18.46	17.98
23	18.74	18.62	18.61	18.64	18.63	18.79	18.84	18.90	18.81	18.85	18.44	17.96
24	18.75	18.64	18.61	18.65	18.67	18.84	18.86	18.90	18.81	18.85	18.45	17.97
25	18.74	18.63	18.61	18.64	18.68	18.82	18.87	18.87	18.87	18.84	18.43	17.97
26	18.73	18.62	18.61	18.64	18.69	18.81	18.88	18.87	18.90	18.83	18.42	17.95
27	18.72	18.60	18.61	18.63	18.69	18.79	18.89	18.87	18.89	18.82	18.42	17.94
28	18.71	18.60	18.61	18.63	18.69	18.78	18.90	18.88	18.87	18.81	18.41	17.95
29	18.72	18.59	18.61	18.63	18.70	18.78	18.90	18.89	18.86	18.79	18.37	17.95
30	18.71	18.62	18.61	18.64	---	18.79	18.91	18.89	18.86	18.78	18.37	17.94
31	18.73	---	18.61	18.63	---	18.80	---	18.89	---	18.77	18.30	---
MEAN	18.81	18.64	18.60	18.63	18.64	18.76	18.79	18.93	18.89	18.87	18.56	18.10
MAX	18.91	18.74	18.61	18.65	18.70	18.84	18.91	19.09	18.97	18.94	18.76	18.29
MIN	18.71	18.59	18.59	18.61	18.62	18.70	18.69	18.87	18.75	18.77	18.30	17.94

06479450 LAKE KAMPESKA (INLET/OUTLET) NEAR WATERTOWN, SD--Continued



06479500 BIG SIOUX RIVER AT WATERTOWN, SD

LOCATION.--Lat 44°56'33", long 97°08'45", in SW¼ SW¼ NW¼ sec.13, T.117 N., R.53 W., Codington County, on right bank near downstream end of highway bridge over 453 Avenue, 1.7 mi downstream from inlet-outlet to Lake Kampeska, 7.1 mi upstream from Willow Creek, and 3.5 mi northwest of Watertown.

DRAINAGE AREA.--1,129 mi^2, of which 779 mi^2 is usually noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--October 1945 to September 1972 daily streamflow. October 1996 to September 1997 as crest-stage gage. October 1999 to September 30, 2000.

REVISED RECORDS.--WDR SD-00-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,710.44 ft above sea level. Prior to Oct. 15, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water is stored naturally offstream in Lake Kampeska (capacity, 35,500 acre-ft) during periods when river is rising and then naturally released, in part, when river is falling. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.7	e3.5	e1.5	e.60	e8.5	5.7	6.8	5.9	1.9	.61	.20
2	4.3	3.6	e3.5	e1.5	e.60	e8.0	6.1	6.7	5.6	2.6	.41	.21
3	4.5	3.3	e3.3	e1.0	e.70	e8.0	5.1	6.8	5.3	4.5	.35	.25
4	4.7	3.6	e3.0	e.90	e.70	e8.0	4.9	5.8	6.3	4.7	.37	.22
5	4.6	3.5	e2.8	e.90	e.80	e8.5	5.2	5.7	7.0	9.5	1.0	.20
6	4.6	3.5	e2.8	e.90	e.80	e10	4.2	5.6	5.8	8.8	1.5	.17
7	4.7	3.6	e2.9	e.90	e.90	e9.0	5.1	5.5	5.1	6.8	1.4	.26
8	4.8	3.7	e2.9	e.90	e.90	e9.5	5.4	7.2	3.7	5.3	1.7	.32
9	4.7	3.7	e2.8	e.90	e.90	e9.4	5.1	7.2	2.9	4.7	1.3	.25
10	4.1	3.6	e2.7	e.80	e.80	e7.5	5.3	6.8	2.9	7.7	.99	.21
11	4.1	3.6	e2.6	e.80	e.70	e6.8	5.5	7.4	2.4	7.5	.71	.26
12	4.3	3.7	e2.9	e.70	e.70	e6.5	5.3	8.5	1.8	7.5	.66	.28
13	4.3	3.6	e2.9	e.70	e.70	e7.0	5.7	5.9	2.1	5.7	.52	.21
14	4.4	3.5	e3.0	e.70	e.70	7.5	5.4	5.6	2.8	1.1	.48	.21
15	4.3	3.7	e5.0	e.60	e.70	6.6	5.5	5.6	2.5	.76	.44	.22
16	3.8	3.7	e2.0	e.60	e.70	5.7	6.1	5.5	2.4	2.6	.43	.21
17	3.6	3.6	e1.5	e.60	e.70	6.5	6.0	5.2	2.3	2.9	.76	.20
18	4.0	3.5	e1.5	e.50	e.70	7.1	6.2	5.3	2.1	2.5	.87	.20
19	4.0	3.6	e1.5	e.50	e.80	6.3	7.0	5.5	1.7	2.3	.60	.20
20	4.1	3.5	e1.0	e.50	e.90	6.4	7.6	5.1	1.5	1.9	.71	.22
21	4.0	e3.5	e1.0	e.45	e1.5	6.4	7.1	4.8	1.1	1.6	.94	.23
22	3.5	e3.5	e1.0	e.45	e2.5	6.5	6.8	4.4	.73	1.6	.59	.46
23	3.5	e3.5	e1.3	e.45	e4.0	6.9	6.7	4.0	1.3	1.4	.58	.35
24	3.6	e3.6	e1.5	e.45	e7.0	7.9	6.8	3.8	1.6	1.2	.42	.37
25	3.6	e3.2	e1.5	e.45	e20	6.9	6.6	3.1	3.0	1.3	.39	.59
26	3.7	e3.2	e1.5	e.45	e15	6.4	6.3	3.3	3.3	1.8	.36	.55
27	3.7	e3.1	e1.7	e.50	e11	6.0	6.5	3.7	2.7	1.2	.28	.48
28	3.4	e3.1	e1.7	e.55	e10	5.4	6.3	3.9	2.2	1.0	.22	.44
29	3.6	e3.1	e2.0	e.55	e9.0	6.0	6.2	3.8	2.0	.85	.20	.41
30	3.6	e3.3	e1.8	e.55	---	5.7	6.4	4.1	2.5	.85	.19	.42
31	3.6	---	e1.6	e.60	---	5.7	---	4.1	---	.68	.18	---
TOTAL	125.7	104.9	70.7	21.85	95.00	222.6	178.1	166.7	92.53	104.74	20.16	8.80
MEAN	4.05	3.50	2.28	.70	3.28	7.18	5.94	5.38	3.08	3.38	.65	.29
MAX	4.8	3.7	5.0	1.5	20	10	7.6	8.5	7.0	9.5	1.7	.59
MIN	3.4	3.1	1.0	.45	.60	5.4	4.2	3.1	.73	.68	.18	.17
AC-FT	249	208	140	43	188	442	353	331	184	208	40	17

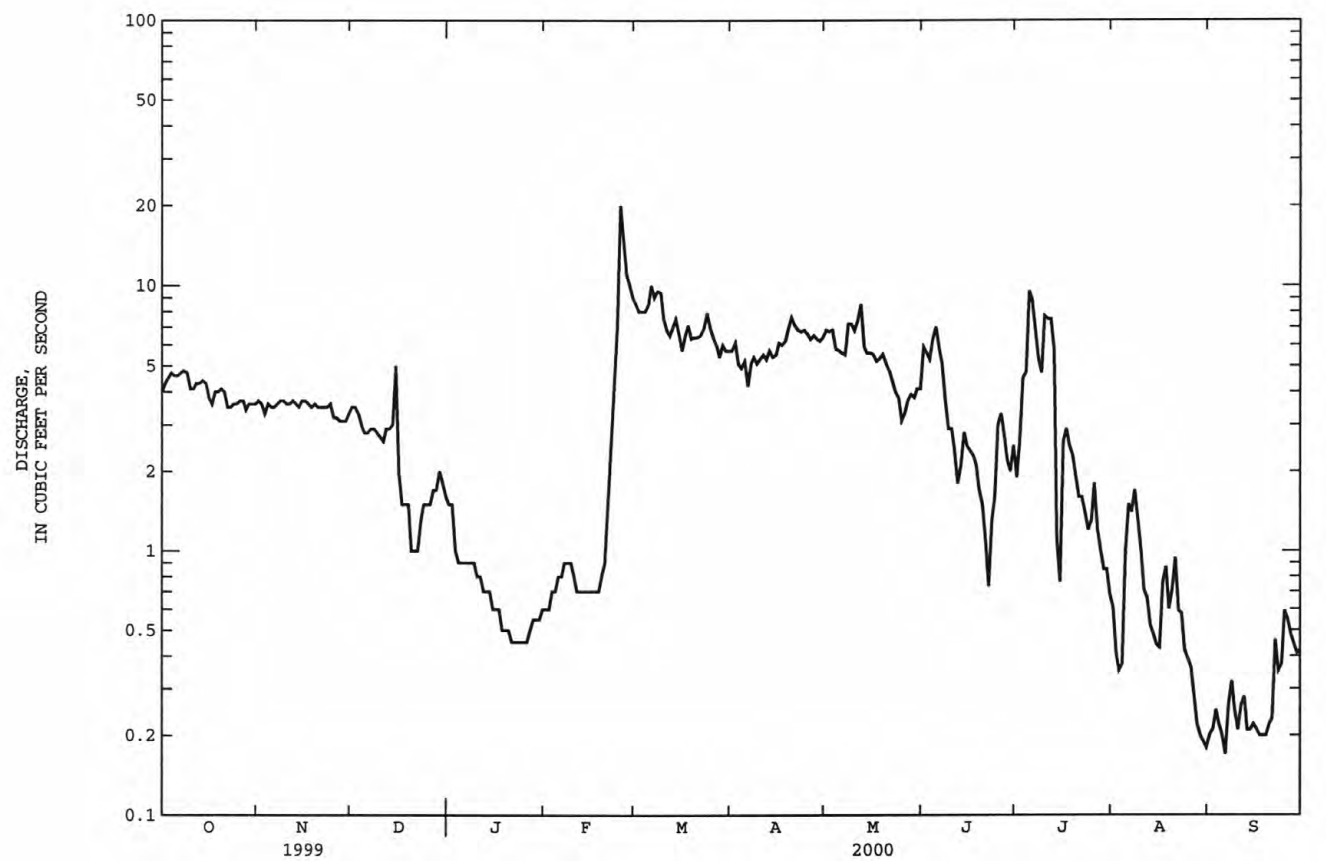
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1972, 2000, BY WATER YEAR (WY)

MEAN	3.69	4.12	2.49	.87	1.40	42.5	133	79.8	60.3	35.6	19.3	4.17
MAX	33.6	42.6	18.6	6.99	9.86	215	742	367	418	332	159	40.9
(WY)	1947	1947	1947	1972	1954	1946	1952	1962	1962	1962	1953	1972
MIN	.000	.000	.000	.000	.000	.000	.54	.79	.46	.039	.000	.000
(WY)	1960	1960	1956	1946	1946	1965	1959	1959	1959	1959	1959	1959

06479500 BIG SIOUX RIVER AT WATERTOWN, SD--Continued

SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1946 - 1972, 2000	
ANNUAL TOTAL	1211.78			
ANNUAL MEAN	3.31		32.3	
HIGHEST ANNUAL MEAN			115	1962
LOWEST ANNUAL MEAN			.20	1959
HIGHEST DAILY MEAN	20	Feb 25	1750	Apr 10 1952
LOWEST DAILY MEAN	.17	Sep 6	.00	Dec 9 1945a
ANNUAL SEVEN-DAY MINIMUM	.20	Aug 31	.00	Dec 9 1945
INSTANTANEOUS PEAK FLOW	20	Feb 25b	5800	Apr 6 1997
INSTANTANEOUS PEAK STAGE	4.00	Mar 1c	12.49	Apr 6 1997d
ANNUAL RUNOFF (AC-FT)	2400		23370	
10 PERCENT EXCEEDS	6.8		87	
50 PERCENT EXCEEDS	3.1		1.9	
90 PERCENT EXCEEDS	.43		.00	

a No flow at times in most years.
b Discharge is an estimated maximum daily average.
c Backwater from ice.
d From floodmark.



06479515 WILLOW CREEK NEAR WATERTOWN, SD

Location.--Lat 44°55'08", long 97°02'43", in NE¼ NE¼ NE¼ sec.27, T.117 N., R.52 W., Codington County, Hydrologic Unit 10170202, on right downstream bank at bridge, about 6.7 river miles upstream from mouth, 3.1 mi east from intersection of U.S. Highways 81 and 212 and then 2.0 mi north.

DRAINAGE AREA.--To be determined.

PERIOD OF RECORD.--September 1971 to September 1986 daily streamflow. October 1996 to September 1997 crest-stage partial record. October 1999 to September 30, 2000 (seasonal mean daily gage height and yearly instantaneous peak discharge).

GAGE.--Water-stage recorder. Elevation of gage is 1,740 ft above sea level, from topographic map. Prior to October 1999, 2 mi downstream at datum 1,721.24 ft above sea level.

REMARKS.--Records good. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,650 ft^3/s, Apr. 5, 1997, gage height, 10.93 ft, from floodmark; maximum gage height, 11.21 ft, backwater from ice, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge for period March to September, discharge to be determined, gage height, June 24, gage height, 6.99 ft.

REVISIONS.--Revised maximum discharges for water years 1972, 1977-80, 1983-86, and revised daily discharges, in cubic feet per second, for high-water periods in 1984 and 1986 water years, are given below, at site and datum then in use. These figures supersede those published in the reports for 1972 to 1986.

1972 revised peak discharges and maximum (*):

DATE	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)	DATE	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Mar. 21	854	6.01	May 23	930	6.18
Apr. 12	607	5.45	May 29	*952	6.23
May 1	607	5.45			

1977 revised peak maximum discharge:

June 16	658	5.57			

1978 revised peak discharges and maximum (*):

Mar. 31	*1,340	7.02	Aug. 27	957	6.24

1979 revised peak discharges and maximum (*):

Apr. 16	580	5.39	June 16	553	5.33

1980 revised peak maximum discharge:

June 5	607	5.45			

1983 revised peak maximum discharge:

Apr. 1	505	5.23			

1984 revised peak discharges and maximum (*):

June 6	1,040	6.42	June 8	930	6.18
June 15	*1,590	7.50			

1985 revised peak maximum discharge:

Mar. 19	e1,100	6.76			

1986 revised peak discharges and maximum (*):

Mar. 30	e*2,300	8.96	Apr. 14	1,340	7.16
Apr. 3	742	5.89	Apr. 18	634	5.64
Apr. 5	742	5.89	May 9	872	6.18

Daily discharges:

June 15, 1984	653	Mar. 29, 1986	e1,400
Mar. 27, 1986	e800	Mar. 30, 1986	e1,000
Mar. 28, 1986	e1,000	Mar. 31, 1986	692

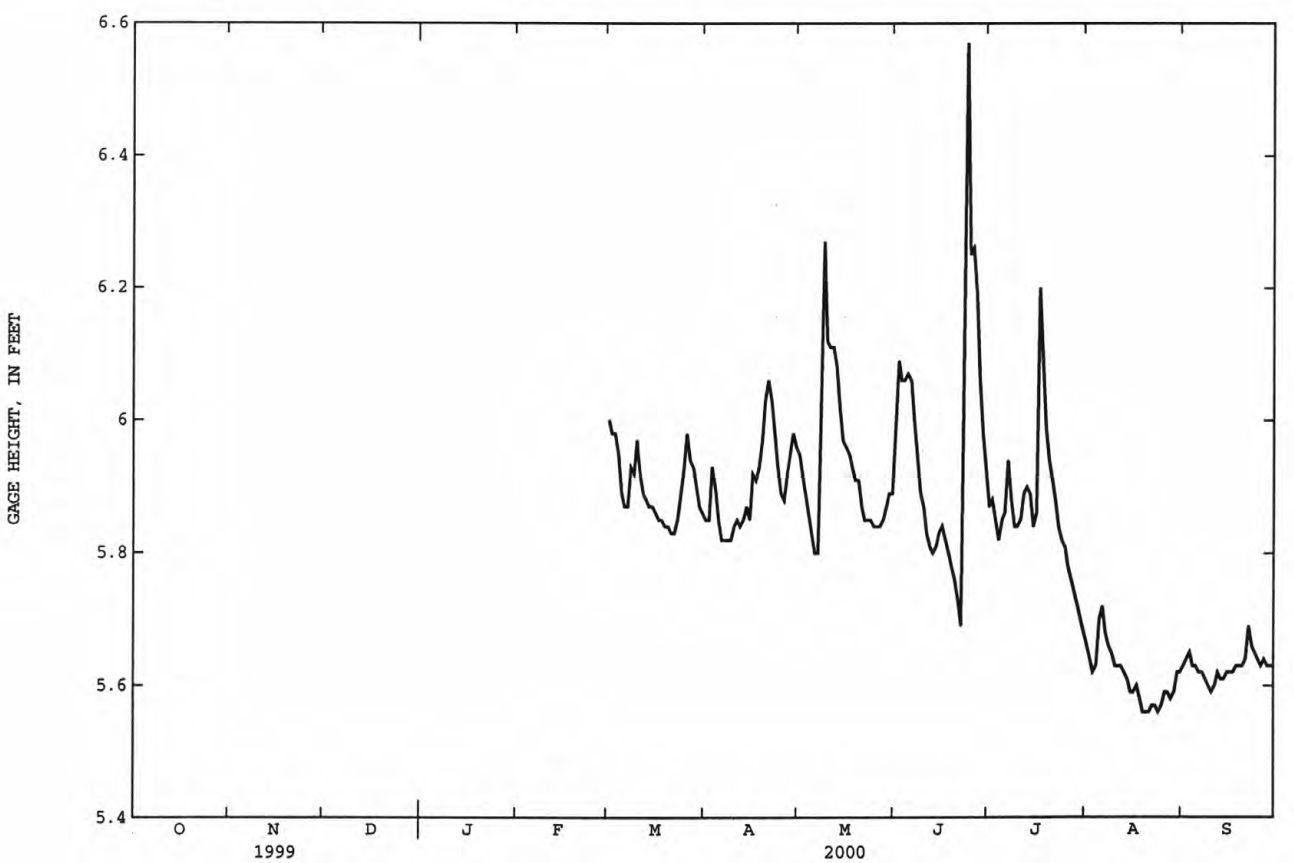
e Backwater from ice, estimated.

MONTH	TOTAL	MEAN	MAX	MIN	AC-FT
June 1984	4972.6	166	757	5.7	9860
March 1986	5664.60	183	1400	.90	11240
Wtr Year 1984	14957.14	40.9	1300	.00	29670
Wtr Year 1986	24782	67.9	1400	.90	49160

06479515 WILLOW CREEK NEAR WATERTOWN, SD--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	6.00	5.85	5.95	5.98	5.87	5.66	5.63
2	---	---	---	---	---	5.98	5.85	5.92	6.09	5.88	5.64	5.64
3	---	---	---	---	---	5.98	5.93	5.89	6.06	5.85	5.62	5.65
4	---	---	---	---	---	5.95	5.90	5.86	6.06	5.82	5.63	5.63
5	---	---	---	---	---	5.89	5.85	5.83	6.07	5.85	5.70	5.63
6	---	---	---	---	---	5.87	5.82	5.80	6.06	5.86	5.72	5.62
7	---	---	---	---	---	5.87	5.82	5.80	6.00	5.94	5.68	5.62
8	---	---	---	---	---	5.93	5.82	6.03	5.95	5.88	5.66	5.61
9	---	---	---	---	---	5.92	5.82	6.27	5.89	5.84	5.65	5.60
10	---	---	---	---	---	5.97	5.84	6.12	5.87	5.84	5.63	5.59
11	---	---	---	---	---	5.92	5.85	6.11	5.83	5.85	5.63	5.60
12	---	---	---	---	---	5.89	5.84	6.11	5.81	5.89	5.63	5.62
13	---	---	---	---	---	5.88	5.85	6.08	5.80	5.90	5.62	5.61
14	---	---	---	---	---	5.87	5.87	6.02	5.81	5.89	5.61	5.61
15	---	---	---	---	---	5.87	5.85	5.97	5.83	5.84	5.59	5.62
16	---	---	---	---	---	5.86	5.92	5.96	5.84	5.86	5.59	5.62
17	---	---	---	---	---	5.85	5.91	5.95	5.82	6.20	5.60	5.62
18	---	---	---	---	---	5.85	5.93	5.93	5.80	6.08	5.58	5.63
19	---	---	---	---	---	5.84	5.97	5.91	5.78	5.99	5.56	5.63
20	---	---	---	---	---	5.84	6.03	5.91	5.76	5.94	5.56	5.63
21	---	---	---	---	---	5.83	6.06	5.87	5.73	5.91	5.56	5.64
22	---	---	---	---	---	5.83	6.03	5.85	5.69	5.88	5.57	5.69
23	---	---	---	---	---	5.85	5.98	5.85	6.08	5.84	5.57	5.66
24	---	---	---	---	---	5.89	5.93	5.85	6.57	5.82	5.56	5.65
25	---	---	---	---	---	5.93	5.89	5.84	6.25	5.81	5.57	5.64
26	---	---	---	---	---	5.98	5.88	5.84	6.26	5.78	5.59	5.63
27	---	---	---	---	---	5.94	5.92	5.84	6.19	5.76	5.59	5.64
28	---	---	---	---	---	5.93	5.95	5.85	6.06	5.74	5.58	5.63
29	---	---	---	---	---	5.90	5.98	5.87	5.98	5.72	5.59	5.63
30	---	---	---	---	---	5.87	5.96	5.89	5.93	5.70	5.62	5.63
31	---	---	---	---	---	5.86	---	5.89	---	5.68	5.62	---
MEAN	---	---	---	---	---	5.90	5.90	5.93	5.96	5.86	5.61	5.63
MAX	---	---	---	---	---	6.00	6.06	6.27	6.57	6.20	5.72	5.69
MIN	---	---	---	---	---	5.83	5.82	5.80	5.69	5.68	5.56	5.59



06479520 BIG SIOUX RIVER BELOW WATERTOWN, SD

LOCATION.--Lat 44°50'32", long 97°02'57", in NE¼ NE¼ NE¼ sec.22, T.116 N., R.52 W., Codington County, Hydrologic Unit 10170202, on left bank near the downstream end of bridge on township gravel road, 3.0 river miles downstream from mouth of Willow Creek, 3.3 river miles upstream from the Codington-Hamlin County line, and 4.1 mi southeast of Watertown.

DRAINAGE AREA.--1,902 mi^2, of which 1,391 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,694.29 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	8.7	e7.5	e4.5	24	17	21	e25	e15	7.7	4.7
2	10	8.8	8.6	e6.0	e4.8	23	19	19	e30	e20	7.2	5.0
3	9.7	8.6	8.7	e5.5	e5.2	22	16	20	e25	e21	7.1	4.9
4	9.7	8.6	8.4	e5.0	e5.5	22	15	18	e30	e15	6.9	4.5
5	9.6	8.6	e8.5	e5.2	e6.0	21	18	19	e28	e25	17	4.7
6	9.2	8.5	e8.5	e5.5	e6.2	22	15	19	e25	e30	12	6.3
7	10	8.7	e8.5	e6.0	e6.3	23	12	15	e25	e15	8.1	7.7
8	9.7	8.8	8.6	e6.8	e6.3	e15	14	34	e20	e15	8.0	3.5
9	9.7	8.7	9.2	e6.8	e6.2	e8.5	14	30	e15	e15	7.1	2.9
10	9.9	8.4	e9.5	e6.0	e6.5	e8.0	11	30	e15	e20	6.6	2.7
11	9.1	8.4	8.4	e5.2	e7.0	e9.0	13	32	e15	e18	6.5	2.8
12	9.0	8.6	9.2	e5.0	e7.0	e10	12	31	e10	e15	6.8	2.7
13	8.4	8.8	e9.5	e4.8	e6.8	e13	11	28	e10	13	5.8	2.7
14	9.3	8.2	8.5	e4.5	e6.5	e14	9.8	21	e10	13	6.1	3.0
15	9.2	8.5	e8.3	e4.2	e6.5	e13	11	19	e11	12	6.2	2.9
16	8.8	8.3	e5.0	e4.2	e6.5	e15	11	21	e12	36	6.0	3.1
17	8.4	8.7	e6.0	e4.1	e6.5	e16	15	18	e11	19	6.4	2.9
18	9.4	8.3	e7.0	e4.3	e7.0	e16	14	15	e10	26	5.7	3.1
19	9.7	8.5	e8.0	e4.0	e7.5	e16	14	16	e10	19	5.6	3.1
20	9.5	8.4	e7.0	e4.0	e8.5	e16	14	17	e9.0	16	5.8	3.1
21	9.8	8.8	e6.0	e4.0	e10	e17	20	17	e10	14	5.8	4.7
22	9.2	8.8	e5.0	e4.0	e12	e18	20	17	e10	13	5.6	11
23	8.8	8.7	e6.0	e4.0	e17	19	17	18	e20	11	5.7	7.1
24	8.1	8.5	e7.0	e4.0	e21	25	19	15	e35	12	5.5	5.7
25	8.3	9.0	e8.0	e4.0	e29	26	18	13	e50	12	5.8	5.8
26	8.4	8.5	e9.0	e4.0	e39	22	19	e13	e60	10	6.0	5.5
27	8.9	8.7	e9.5	e4.3	e51	23	24	e13	e35	9.0	5.3	5.2
28	8.2	8.5	e10	e4.3	e80	17	18	e15	e25	8.5	5.7	4.9
29	9.2	9.3	e10	e4.3	46	18	18	e15	e20	8.2	5.0	4.8
30	9.1	8.7	e10	e4.3	---	18	20	e18	e15	7.6	5.1	4.8
31	8.8	---	e10	e4.4	---	19	---	e20	---	7.7	5.0	---
TOTAL	285.1	259.9	254.6	150.2	432.3	548.5	468.8	617	626.0	491.0	209.1	135.8
MEAN	9.20	8.66	8.21	4.85	14.9	17.7	15.6	19.9	20.9	15.8	6.75	4.53
MAX	10	10	10	7.5	80	26	24	34	60	36	17	11
MIN	8.1	8.2	5.0	4.0	4.5	8.0	9.8	13	9.0	7.6	5.0	2.7
AC-FT	565	516	505	298	857	1090	930	1220	1240	974	415	269

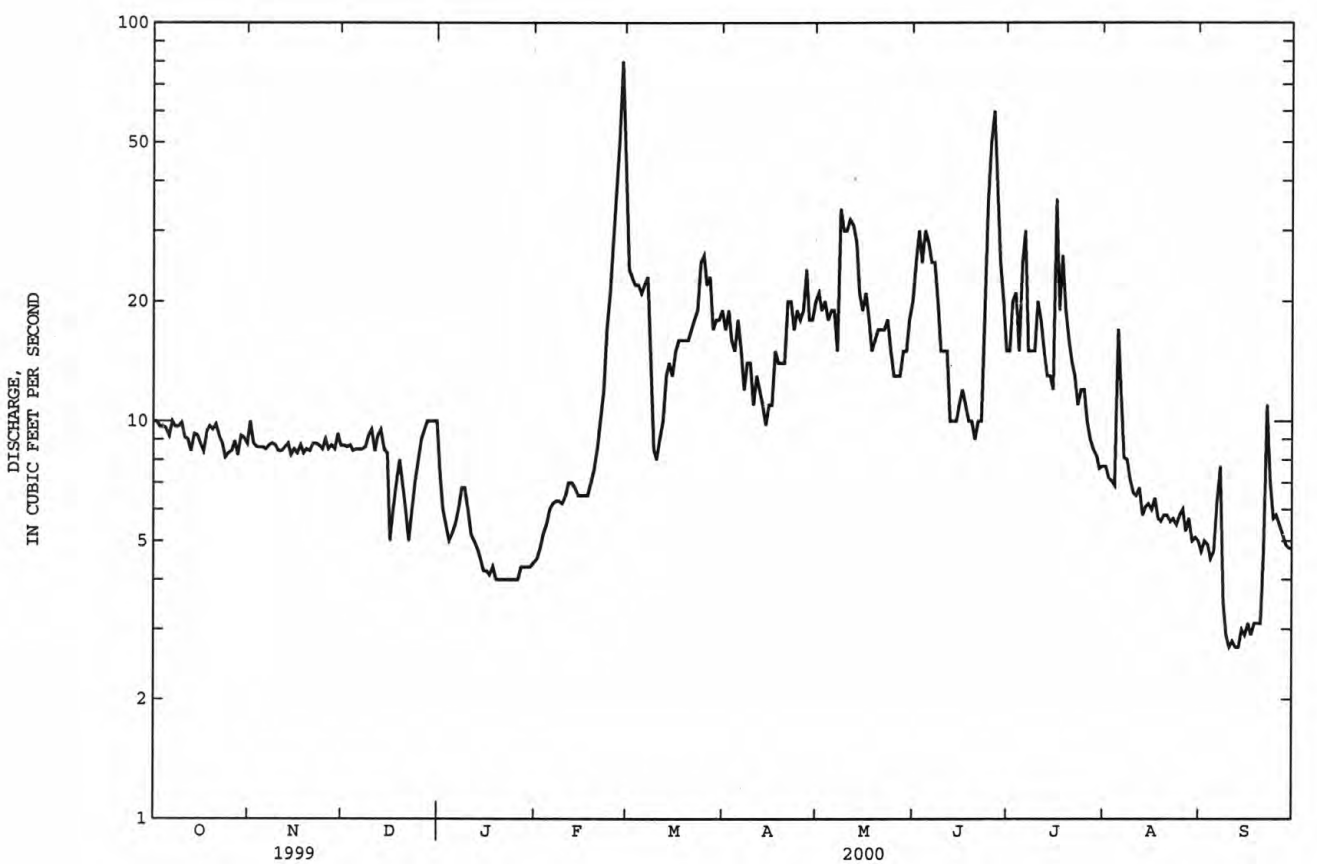
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	98.8	109	69.4	40.0	89.5	188	682	424	227	116	74.0	54.5
MAX	366	356	183	88.7	210	385	2309	814	469	321	234	237
(WY)	1996	1996	1996	1996	1998	1996	1997	1997	1995	1995	1995	1995
MIN	9.20	8.66	8.21	4.85	14.9	17.7	15.6	19.9	20.9	15.8	6.75	4.53
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

06479520 BIG SIOUX RIVER BELOW WATERTOWN, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	25875.7		4478.3			
ANNUAL MEAN	70.9		12.2		181	
HIGHEST ANNUAL MEAN					311	1997
LOWEST ANNUAL MEAN					12.2	2000
HIGHEST DAILY MEAN	290	Jun 10	80	Feb 28	4350	Apr 11 1997
LOWEST DAILY MEAN	5.0	Dec 16	2.7	Sep 10	2.7	Sep 10 2000
ANNUAL SEVEN-DAY MINIMUM	6.3	Dec 16	2.8	Sep 9	2.8	Sep 9 2000
INSTANTANEOUS PEAK FLOW			100	Jun 26a	6700	Apr 11 1997b
INSTANTANEOUS PEAK STAGE			5.65	Feb 25c	13.13	Apr 2 1997c
ANNUAL RUNOFF (AC-FT)	51320		8880		130900	
10 PERCENT EXCEEDS	166		22		450	
50 PERCENT EXCEEDS	53		9.2		65	
90 PERCENT EXCEEDS	8.6		4.8		9.6	

a Estimated, based on downstream station 06479525, gage height undetermined.
b Gage height, 12.99 ft.
c Backwater from ice.
e Estimated.



06479525 BIG SIOUX RIVER NEAR CASTLEWOOD, SD

LOCATION.--Lat 44°43'54", long 97°02'39", in SW¼ SW¼ sec.26, T.115 N., R.52 W., Hamlin County, Hydrologic Unit 10170202, on right bank at upstream side of bridge on State Highway 22, 3.2 mi east of intersection of U.S. Highway 81 and State Highway 22, and 1.0 mi northwest of Castlewood.

DRAINAGE AREA.--1,997 mi^2, of which 1,427 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,667.52 ft above sea level (South Dakota Department of Transportation bench mark).

REMARKS.--Records good except those for Oct. 1-5, 9-19, Nov. 12-16, 18-19, and Nov. 24 to Dec. 3, which are fair and those for estimated daily discharges, which are poor. National Weather Service gage-height telemeter at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	13	12	e12	e5.4	e45	22	28	29	16	9.5	7.3
2	16	14	12	e10	e5.5	e33	21	24	34	25	9.9	7.6
3	14	13	11	e9.0	e5.8	e32	22	24	26	26	9.4	8.0
4	13	13	e10	e7.0	e6.0	e28	17	25	34	17	8.9	7.4
5	13	13	e10	e7.5	e6.5	26	19	21	32	30	14	7.0
6	14	12	e10	e8.0	e7.5	24	22	e20	27	33	21	7.2
7	14	13	e10	e8.5	e8.0	26	17	e17	25	17	15	9.0
8	14	13	e12	e9.0	e8.2	e25	16	e40	23	15	11	9.9
9	14	13	e11	e9.5	e8.7	e20	19	e35	18	16	11	6.5
10	14	13	e10	e9.0	e9.0	e17	16	e35	18	25	9.9	5.4
11	14	13	e10	e8.0	e8.8	e20	15	e38	17	21	7.8	5.4
12	14	14	e10	e7.0	e8.0	e20	16	e38	13	46	8.2	5.2
13	13	14	e11	e7.5	e7.5	e20	15	e33	13	29	8.4	5.3
14	13	14	e13	e8.0	e7.3	e23	14	e27	13	20	8.5	5.2
15	14	14	e12	e8.0	e7.0	e20	13	e25	14	18	8.6	5.2
16	14	19	e7.0	e7.5	e7.5	e19	14	e28	15	37	9.1	5.5
17	14	18	e9.5	e8.0	e8.0	e23	17	e24	13	39	9.3	5.6
18	14	18	e11	e8.0	e8.5	e22	19	e20	12	37	8.9	5.7
19	14	17	e11	e7.5	e9.5	e21	18	e20	12	37	8.3	5.6
20	14	17	e9.5	e7.0	e11	21	19	e25	11	27	8.4	5.7
21	13	17	e8.0	e6.7	e13	21	21	e25	12	21	8.5	5.6
22	13	18	e7.0	e6.4	e16	22	26	e25	12	19	8.4	8.4
23	13	17	e8.0	e6.0	e18	22	24	e25	27	16	7.1	15
24	13	14	e9.0	e5.7	e20	24	22	e20	45	16	8.0	9.0
25	13	14	e9.5	e5.5	e30	29	23	16	59	17	6.9	7.9
26	13	13	e10	e5.0	e40	27	23	15	72	15	6.7	7.6
27	13	13	e11	e5.0	e60	27	29	15	40	13	6.6	7.2
28	13	13	e12	e4.9	e80	25	26	16	33	12	5.9	6.9
29	13	13	e13	e5.0	e60	21	23	16	24	12	5.7	6.7
30	14	13	e14	e5.0	---	21	24	19	17	11	5.8	6.6
31	14	---	e14	e5.2	---	20	---	25	---	10	7.1	---
TOTAL	423	433	327.5	226.4	490.7	744	592	764	740	693	281.8	210.6
MEAN	13.6	14.4	10.6	7.30	16.9	24.0	19.7	24.6	24.7	22.4	9.09	7.02
MAX	16	19	14	12	80	45	29	40	72	46	21	15
MIN	13	12	7.0	4.9	5.4	17	13	15	11	10	5.7	5.2
AC-FT	839	859	650	449	973	1480	1170	1520	1470	1370	559	418

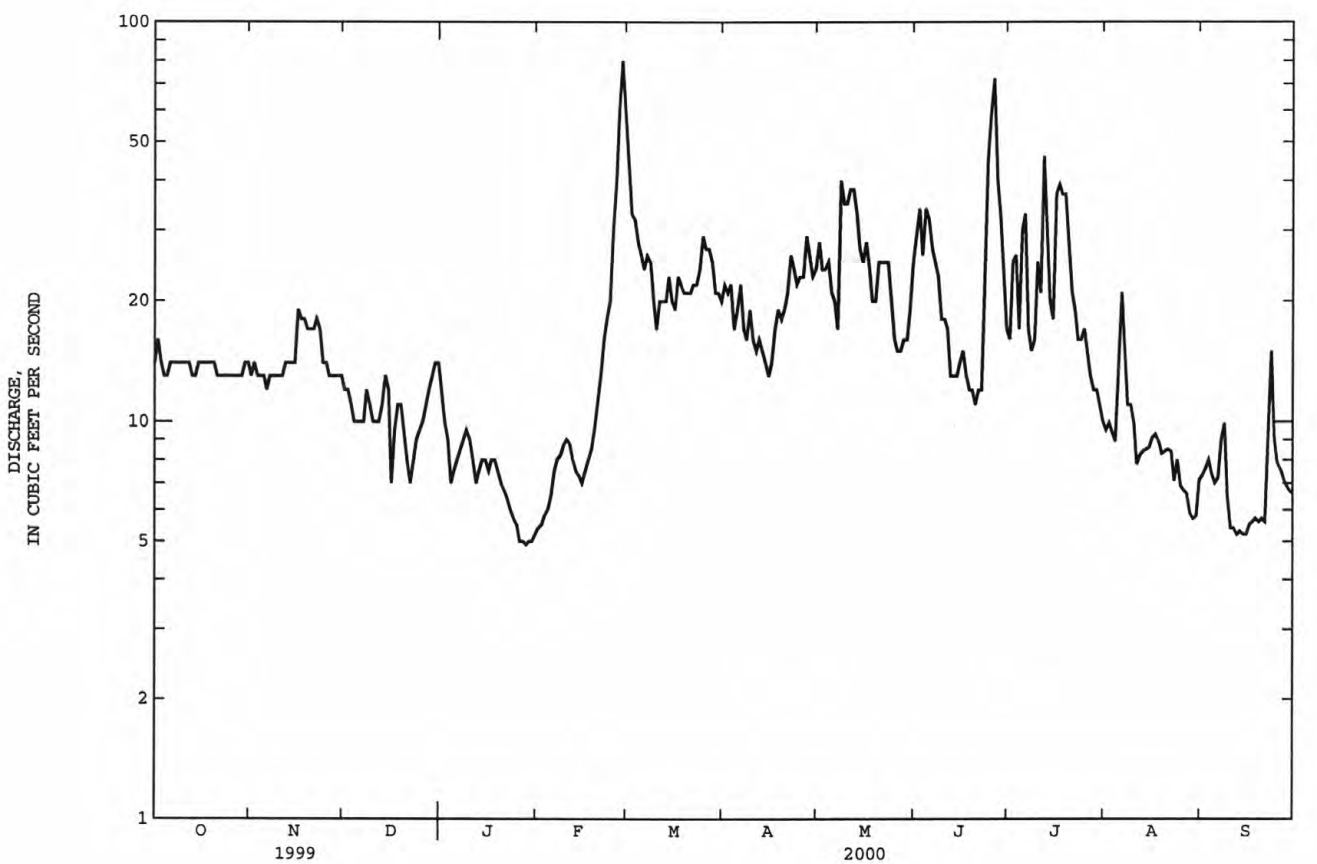
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2000, BY WATER YEAR (WY)

MEAN	48.7	48.0	30.7	17.4	35.2	152	365	200	139	95.4	69.2	47.3
MAX	424	414	210	96.9	204	562	2544	834	508	419	375	217
(WY)	1996	1996	1996	1996	1998	1994	1997	1995	1995	1993	1993	1995
MIN	1.06	.71	.039	.000	.000	1.54	7.60	3.28	3.11	3.17	2.33	2.94
(WY)	1977	1977	1977	1977	1977	1990	1990	1977	1988	1988	1983	1990

06479525 BIG SIOUX RIVER NEAR CASTLEWOOD, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1977 - 2000	
ANNUAL TOTAL	30019.5		5926.0			
ANNUAL MEAN	82.2		16.2		104a	
HIGHEST ANNUAL MEAN					333	1997
LOWEST ANNUAL MEAN					8.15	1990
HIGHEST DAILY MEAN	380	Jun 10	80	Feb 28	4090	Apr 11 1997
LOWEST DAILY MEAN	7.0	Dec 16	4.9	Jan 28	.00	Dec 30 1976b
ANNUAL SEVEN-DAY MINIMUM	8.7	Dec 20	5.1	Jan 26	.00	Dec 30 1976
INSTANTANEOUS PEAK FLOW			111	Jun 26c	4300	Apr 11 1997d
INSTANTANEOUS PEAK STAGE			5.88	Feb 25f	13.19	Apr 7 1997f
ANNUAL RUNOFF (AC-FT)	59540		11750		75330	
10 PERCENT EXCEEDS	183		27		270	
50 PERCENT EXCEEDS	65		14		25	
90 PERCENT EXCEEDS	13		6.8		1.8	

a Median of annual mean discharges, 74 ft^3/s.
b No flow for many days in some years.
c Gage height, 5.34 ft.
d Gage height, 12.87 ft, backwater from ice.
e Estimated.
f Backwater from ice.



06480000 BIG SIOUX RIVER NEAR BROOKINGS, SD

LOCATION.--Lat 44°10'48", long 96°44'55", in NW¼ NW¼ sec.8, T.108 N., R.49 W., Moody County, Hydrologic Unit 10170203, on right bank 3 ft downstream from highway bridge, 2.2 mi downstream from Medary Creek, and 9.5 mi southeast of Brookings.

DRAINAGE AREA.--3,898 mi^2, of which 1,479 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--August 1953 to current year.

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,551.91 ft above sea level. Prior to May 30, 1959, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. National Weather Service gage-height telemeter at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

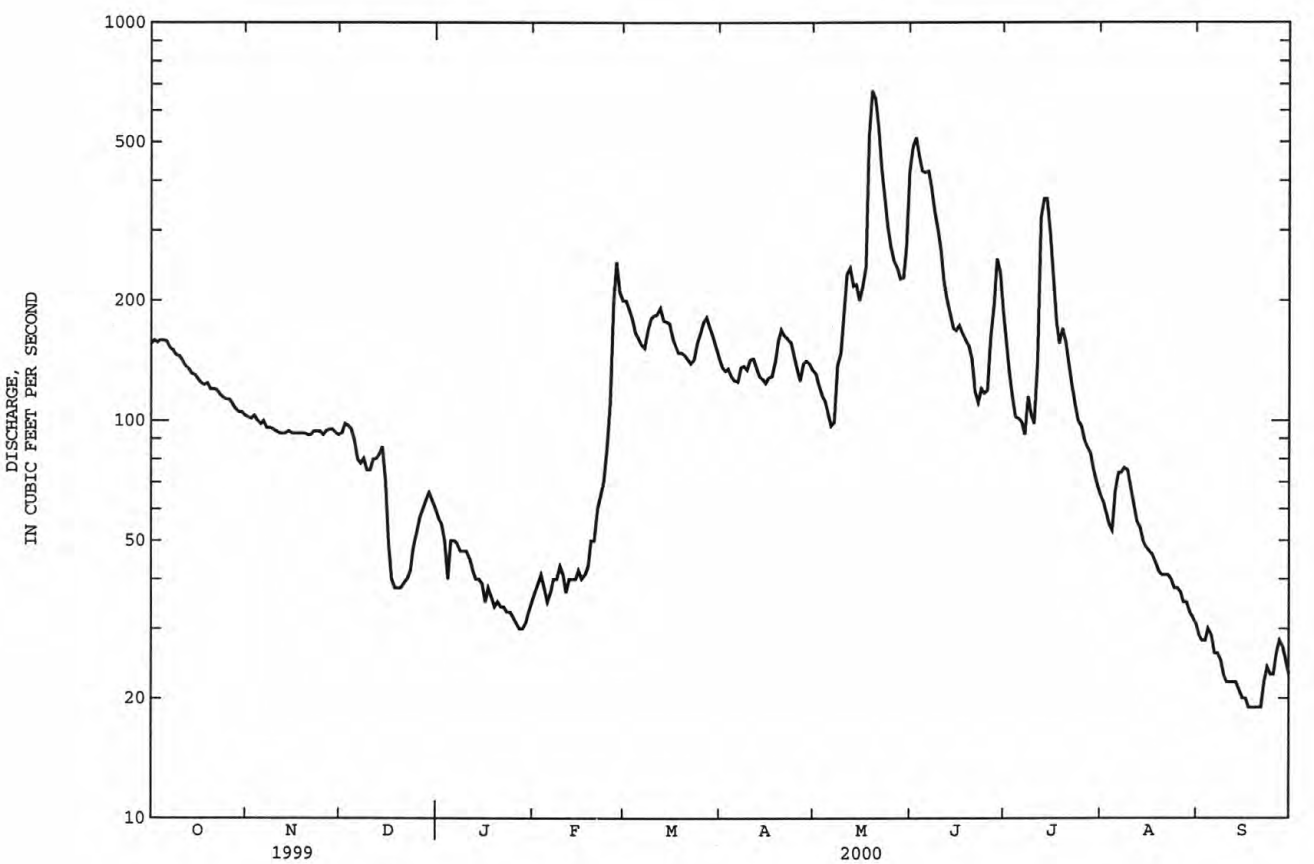
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	102	93	e57	e37	e200	136	131	486	155	63	29
2	159	101	98	e55	e39	e190	133	123	512	132	59	28
3	157	103	97	e50	e41	180	135	116	463	114	55	28
4	159	100	95	e40	e38	166	129	112	423	102	53	30
5	159	98	89	e50	e35	161	126	104	419	101	67	29
6	158	100	e80	e50	e37	155	125	97	422	99	74	26
7	152	96	e78	e49	e40	152	136	99	384	92	74	26
8	150	96	e80	e47	e40	168	137	138	334	115	76	25
9	146	95	e75	e47	e43	180	134	147	301	103	75	23
10	145	94	e75	e47	e41	183	142	179	266	98	68	22
11	141	93	e80	e45	e37	184	143	233	223	140	62	22
12	137	93	e80	e42	e40	191	136	241	200	322	56	22
13	135	93	e82	e40	e40	178	129	217	184	360	54	22
14	131	94	86	e40	e40	177	127	219	170	360	50	21
15	130	93	e70	e39	e42	175	124	200	168	297	48	20
16	127	93	e50	e35	e40	161	128	217	173	222	47	20
17	124	93	e40	e38	e41	154	129	244	165	176	46	19
18	123	93	e38	e36	e43	148	140	512	159	156	44	19
19	124	93	e38	e34	e50	148	159	672	154	170	42	19
20	120	92	e38	e35	e50	146	169	641	142	157	41	19
21	120	92	e39	e34	e60	142	163	541	118	139	41	19
22	119	94	e40	e34	e65	139	160	432	111	123	41	22
23	116	94	e42	e33	e70	142	157	363	120	110	40	24
24	114	94	e48	e33	e85	157	146	306	117	100	38	23
25	113	92	e52	e32	e110	166	135	271	119	97	38	23
26	113	94	e57	e31	e200	176	126	252	163	90	37	26
27	110	95	e60	e30	e250	181	139	242	196	86	35	28
28	107	95	e63	e30	e210	171	141	227	254	83	35	27
29	105	93	e66	e31	e200	162	139	228	235	75	33	25
30	105	92	e63	e33	---	153	134	273	187	70	32	23
31	103	---	e60	e35	---	144	---	424	---	66	31	---
TOTAL	4058	2850	2052	1232	2064	5130	4157	8201	7368	4510	1555	709
MEAN	131	95.0	66.2	39.7	71.2	165	139	265	246	145	50.2	23.6
MAX	159	103	98	57	250	200	169	672	512	360	76	30
MIN	103	92	38	30	35	139	124	97	111	66	31	19
AC-FT	8050	5650	4070	2440	4090	10180	8250	16270	14610	8950	3080	1410
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)												
MEAN	147	121	72.5	38.6	72.4	514	911	526	583	342	201	157
MAX	1424	1007	563	284	606	2037	5717	2804	3432	3269	1553	1693
(WY)	1996	1996	1996	1996	1998	1985	1997	1986	1984	1993	1993	1986
MIN	.039	.094	.088	.000	.000	1.45	27.3	21.4	13.5	.94	.015	.011
(WY)	1977	1977	1977	1977	1956	1975	1959	1959	1976	1976	1976	1976

06480000 BIG SIOUX RIVER NEAR BROOKINGS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1954 - 2000	
ANNUAL TOTAL	142737		43886			
ANNUAL MEAN	391		120		308a	
HIGHEST ANNUAL MEAN					1174	1993
LOWEST ANNUAL MEAN					15.5	1959
HIGHEST DAILY MEAN	1840	Apr 11	672	May 19	31200	Apr 9 1969
LOWEST DAILY MEAN	38	Dec 18	19	Sep 17	.00	Jan 18 1956b
ANNUAL SEVEN-DAY MINIMUM	39	Dec 17	19	Sep 15	.00	Jan 18 1956
INSTANTANEOUS PEAK FLOW			683	May 19	33900	Apr 9 1969
INSTANTANEOUS PEAK STAGE			4.86	May 19	14.77	Apr 9 1969
ANNUAL RUNOFF (AC-FT)	283100		87050		222800	
10 PERCENT EXCEEDS	887		220		802	
50 PERCENT EXCEEDS	230		99		68	
90 PERCENT EXCEEDS	93		32		4.7	

a Median of annual mean discharges, 170 ft^3/s.
b No flow at times in 1956, 1976, 1977, and 1982.
e Estimated.



06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, SD

LOCATION.--Lat 43°47'25", long 96°44'42", in NW¼ NW¼ sec.29, T.104 N., R.49 W., Minnehaha County, Hydrologic Unit 10170203, on left bank at downstream side of highway bridge, 0.2 mi downstream from confluence of divided channels, and 3.0 mi southwest of Dell Rapids.

DRAINAGE AREA.--4,483 mi^2, of which 1,479 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--May 1948 to current year.

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,455.99 ft above sea level. Prior to Nov. 11, 1949, nonrecording gage and Nov. 11, 1949, to Sept. 30, 1951, water-stage recorder, at present site at datum 0.04 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

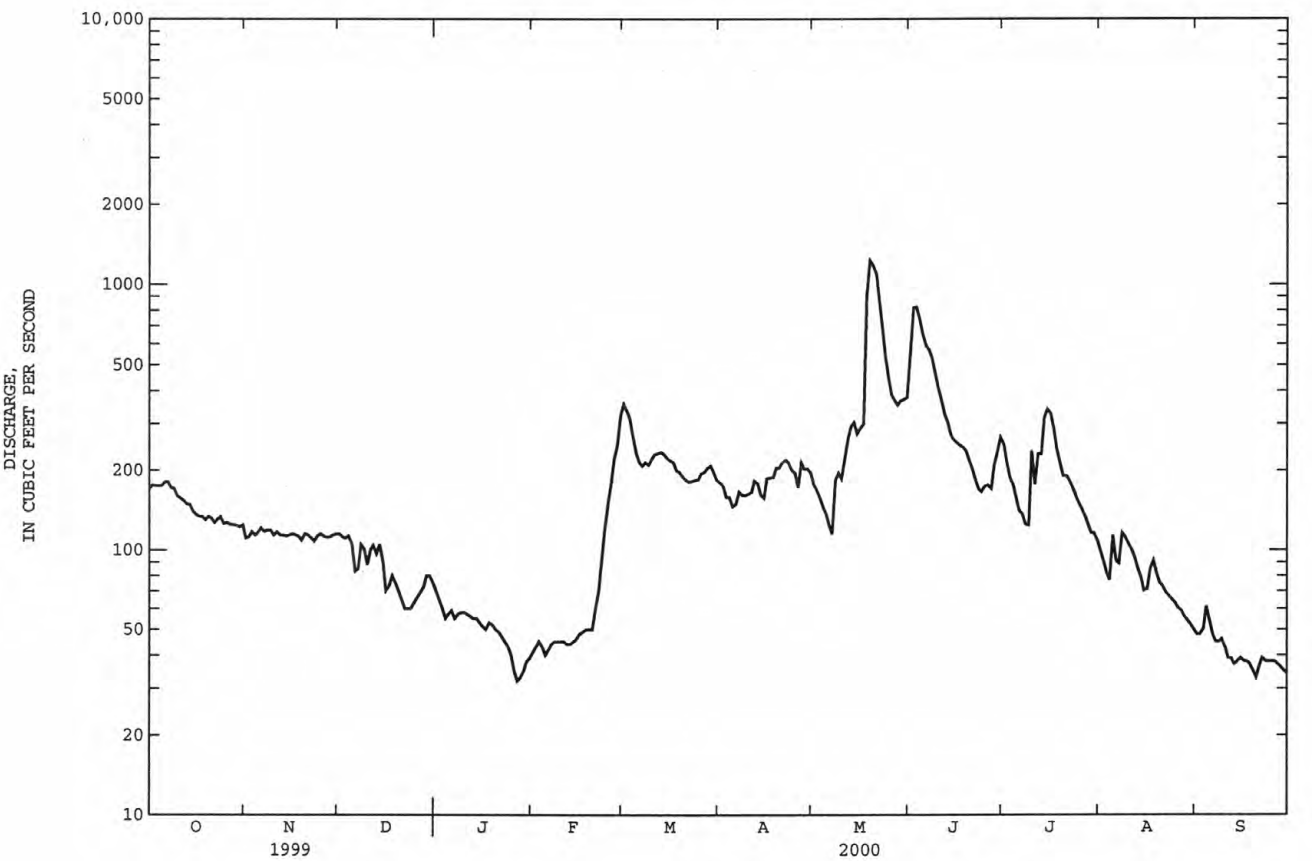
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	111	115	e70	e41	356	180	178	539	252	99	48
2	176	112	112	e65	e43	337	174	170	818	216	90	48
3	175	117	111	e60	e45	312	159	159	821	189	82	50
4	175	114	113	e55	e43	267	159	147	740	177	77	61
5	175	117	106	e57	e40	232	146	138	650	157	114	54
6	181	121	83	e59	e42	216	149	125	591	141	91	48
7	181	117	85	e55	e44	208	166	115	572	137	89	45
8	172	119	105	e57	e45	215	162	183	530	125	116	45
9	171	119	101	e58	e45	210	161	196	466	124	112	46
10	160	114	88	e58	e45	220	163	187	406	237	106	43
11	157	117	100	e57	e45	230	165	223	372	177	101	39
12	154	114	104	e56	e44	232	183	263	328	231	94	39
13	149	114	97	e55	e44	235	179	294	305	231	85	37
14	149	113	e105	e55	e45	231	162	303	273	315	79	38
15	140	114	e90	e53	e46	223	158	275	261	340	70	39
16	136	115	e70	e51	e48	218	187	288	254	328	71	38
17	134	114	e73	e50	e49	214	188	299	249	286	85	38
18	134	113	e80	e53	e50	200	189	897	244	241	91	37
19	130	109	e75	e52	e50	197	205	1230	237	213	82	35
20	134	115	e70	e50	e50	190	205	1180	218	191	75	33
21	132	114	e65	e49	e60	184	214	1100	202	191	73	36
22	127	111	e60	e47	e70	181	219	879	183	184	69	39
23	131	108	e60	e45	e90	182	213	682	170	173	67	38
24	134	113	e60	e43	e120	184	201	536	166	161	65	38
25	126	115	e63	e40	e150	185	196	445	174	151	63	38
26	127	113	e66	e35	e180	195	173	387	176	144	60	38
27	125	112	e69	e32	e220	197	215	368	171	135	59	37
28	125	112	e72	e33	e250	204	203	352	209	125	56	36
29	124	114	e80	e35	323	208	203	366	235	116	54	35
30	122	115	e80	e38	---	197	197	369	267	116	52	34
31	124	---	e75	e39	---	184	---	377	---	109	50	---
TOTAL	4551	3426	2633	1562	2367	6844	5474	12711	10827	5913	2477	1230
MEAN	147	114	84.9	50.4	81.6	221	182	410	361	191	79.9	41.0
MAX	181	121	115	70	323	356	219	1230	821	340	116	61
MIN	122	108	60	32	40	181	146	115	166	109	50	33
AC-FT	9030	6800	5220	3100	4690	13580	10860	25210	21480	11730	4910	2440
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)												
MEAN	183	161	101	50.1	97.6	712	1406	703	735	479	268	208
MAX	1736	1365	665	294	586	2813	8439	3699	5392	5362	1914	2541
(WY)	1996	1996	1996	1996	1998	1985	1997	1986	1984	1993	1993	1986
MIN	1.60	3.43	2.30	.71	1.30	10.6	45.3	42.6	19.4	2.77	.17	.000
(WY)	1977	1977	1977	1977	1977	1975	1959	1981	1976	1976	1976	1976

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	194345		60015			
ANNUAL MEAN	532		164		426a	
HIGHEST ANNUAL MEAN					1654	1993
LOWEST ANNUAL MEAN					23.1	1959
HIGHEST DAILY MEAN	2590	Apr 11	1230	May 19	35000	Apr 10 1969
LOWEST DAILY MEAN	60	Dec 22	32	Jan 27	.00	Aug 25 1976b
ANNUAL SEVEN-DAY MINIMUM	63	Dec 21	36	Jan 25	.00	Aug 25 1976
INSTANTANEOUS PEAK FLOW			1340	May 18	41300	Apr 9 1969
INSTANTANEOUS PEAK STAGE			7.01	May 18	16.47	Apr 9 1969
ANNUAL RUNOFF (AC-FT)	385500		119000		308300	
10 PERCENT EXCEEDS	1280		296		1050	
50 PERCENT EXCEEDS	339		124		100	
90 PERCENT EXCEEDS	113		44		11	

a Median of annual mean discharges, 260 ft^3/s.
b Also Aug. 26 to Oct. 17, 1976.
e Estimated.



06481500 SKUNK CREEK AT SIOUX FALLS, SD

LOCATION.--Lat 43°32'01", long 96°47'26", in NW¼ NW¼ SW¼ sec.24, T.101 N., R.50 W., Minnehaha County, Hydrologic Unit 10170203, on left bank 5 ft downstream from bridge on Marion Road, 1.3 mi upstream from mouth, 1.8 mi downstream from small right-bank tributary, and 4.0 mi southwest of Sioux Falls.

DRAINAGE AREA.--622 mi^2, of which 8.51 mi^2 is probably noncontributing.

PERIOD OF RECORD.--May 1948 to current year. May 1948 to September 1971 (published as "near Sioux Falls").

REVISED RECORDS.--WDR SD-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,405.10 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Oct. 24, 1949, nonrecording gage, and Oct. 24, 1949, to Apr. 28, 1972, water-stage recorder, both at site 1.9 mi upstream at datum 10.19 ft higher, and from Apr. 28, 1972, to May 18, 1987, near right end of bridge at same site and datum.

REMARKS.--Records good except those for Aug. 24 to Sept. 30, which are fair, and those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	19	15	5.4	34	22	60	114	30	10	8.5
2	13	12	17	15	5.7	28	22	56	96	26	11	8.7
3	14	11	21	e13	5.9	27	23	50	89	23	10	8.8
4	12	17	18	e11	5.9	25	21	44	92	24	12	25
5	13	16	14	e9.5	5.8	25	20	38	113	17	48	10
6	15	12	15	e10	6.3	24	19	34	123	16	59	9.5
7	14	13	16	8.8	6.4	24	26	34	102	13	85	12
8	14	13	23	9.8	6.4	29	25	43	83	11	66	9.2
9	12	15	20	9.8	6.5	34	27	98	68	20	48	7.7
10	13	13	e12	9.3	6.7	37	28	99	61	26	46	7.7
11	13	13	e15	e8.0	6.0	39	31	88	53	48	38	7.6
12	13	13	e12	e7.5	6.2	37	33	89	48	111	32	7.1
13	12	14	e13	7.4	6.0	33	32	92	54	101	27	6.0
14	11	14	e15	7.5	5.7	32	34	86	47	70	21	5.7
15	12	15	e10	8.0	5.9	35	35	73	44	54	17	5.2
16	12	15	e11	7.5	5.8	32	47	69	47	42	16	5.0
17	12	15	e14	7.0	6.0	29	50	89	45	32	17	4.6
18	19	16	e13	e7.0	6.0	29	62	554	40	29	14	5.0
19	16	15	e14	e6.7	6.6	29	73	681	36	25	16	6.8
20	15	15	e10	e6.4	7.0	28	68	595	32	23	12	7.8
21	13	16	e8.0	e6.2	8.8	27	59	428	28	19	11	8.2
22	12	19	e7.0	e6.0	12	26	57	333	24	17	11	11
23	17	21	e7.0	e5.8	32	30	57	298	23	14	10	8.7
24	14	18	e8.0	e5.6	33	33	46	255	51	13	10	8.5
25	13	17	e9.0	e5.2	53	33	40	193	41	12	11	8.2
26	13	16	e10	e4.5	82	34	37	147	43	11	11	7.6
27	13	18	12	e4.0	125	34	43	133	35	11	9.2	7.1
28	12	18	12	e4.0	51	30	55	129	42	10	8.8	6.5
29	12	18	15	e4.5	47	29	79	127	36	9.6	8.4	5.6
30	13	17	15	e5.0	---	27	70	125	35	9.4	8.8	5.5
31	13	---	14	e5.2	---	24	---	133	---	9.3	9.0	---
TOTAL	411	457	419.0	240.2	566.0	937	1241	5273	1745	876.3	713.2	244.8
MEAN	13.3	15.2	13.5	7.75	19.5	30.2	41.4	170	58.2	28.3	23.0	8.16
MAX	19	21	23	15	125	39	79	681	123	111	85	25
MIN	11	11	7.0	4.0	5.4	24	19	34	23	9.3	8.4	4.6
AC-FT	815	906	831	476	1120	1860	2460	10460	3460	1740	1410	486

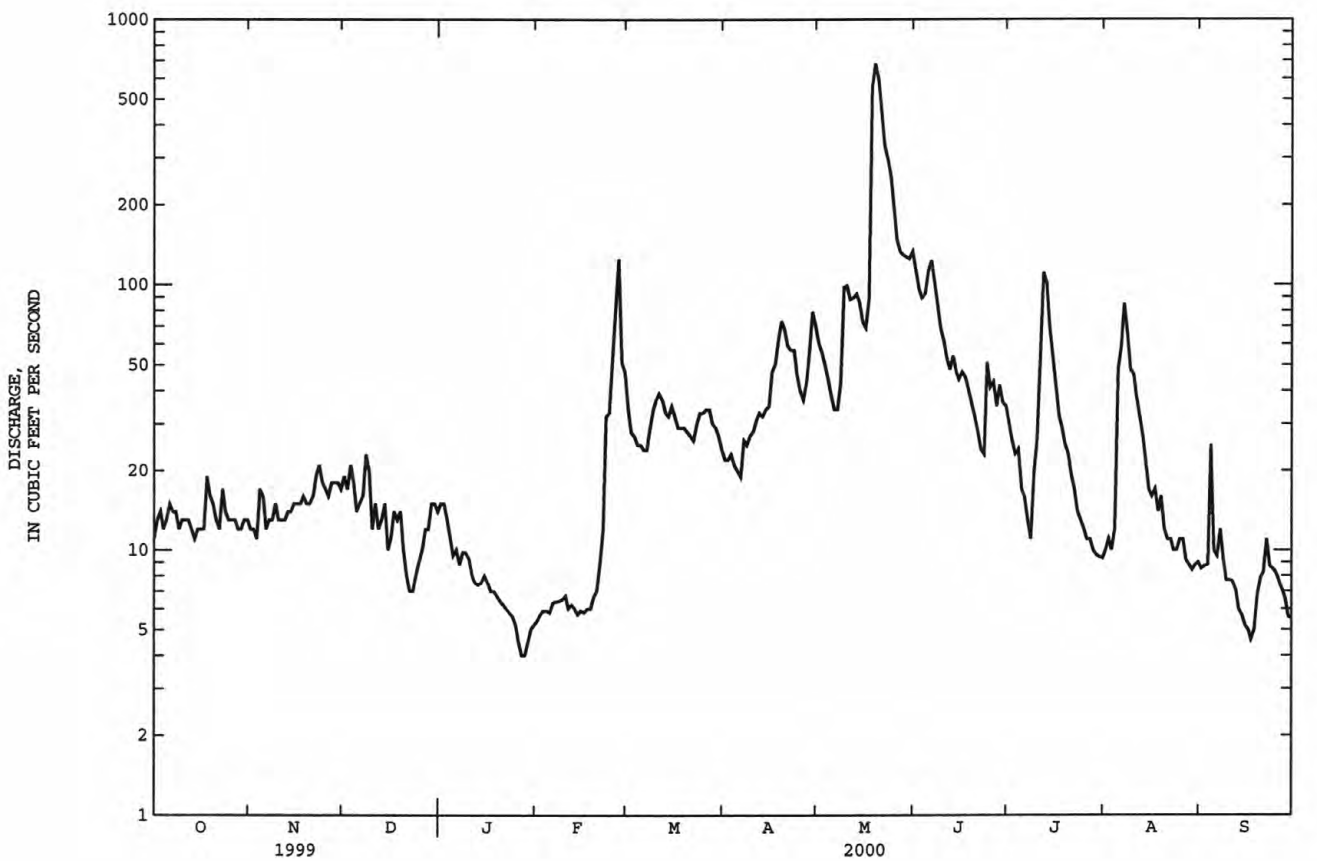
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)

MEAN	32.5	33.1	17.3	8.29	35.7	201	269	148	148	118	45.6	38.7
MAX	405	358	177	76.0	321	869	1530	967	1903	2915	655	798
(WY)	1987	1999	1999	1999	1983	1983	1984	1995	1984	1993	1993	1986
MIN	.14	.29	.10	.048	.037	1.20	1.35	.82	.50	.16	.11	.070
(WY)	1959	1965	1965	1977	1977	1968	1959	1981	1977	1977	1976	1958

06481500 SKUNK CREEK AT SIOUX FALLS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	65745.0		13123.5			
ANNUAL MEAN	180		35.9		91.4a	
HIGHEST ANNUAL MEAN					625	1993
LOWEST ANNUAL MEAN					1.55	1981
HIGHEST DAILY MEAN	1400	Apr 11	681	May 19	11500	Jun 17 1957
LOWEST DAILY MEAN	7.0	Dec 22	4.0	Jan 27	.00	Jan 26 1951b
ANNUAL SEVEN-DAY MINIMUM	8.4	Dec 20	4.6	Jan 25	.00	Jan 26 1951
INSTANTANEOUS PEAK FLOW			749	May 18	29400	Jun 17 1957c
INSTANTANEOUS PEAK STAGE			2.84	May 18	17.78	Jun 17 1957
ANNUAL RUNOFF (AC-FT)	130400		26030		66200	
10 PERCENT EXCEEDS	520		73		200	
50 PERCENT EXCEEDS	80		16		9.7	
90 PERCENT EXCEEDS	13		6.5		.60	

a Median of annual mean discharges, 40 ft^3/s.
b No flow at times in some years.
c Site and datum then in use, from rating curve extended above 8,100 ft^3/s on basis of slope-area measurement of peak flow.
e Estimated.



06482020 BIG SIOUX RIVER AT NORTH CLIFF AVENUE, AT SIOUX FALLS, SD

LOCATION.--Lat 43°34'01", long 96°42'39", in SW¼ NW¼ sec.10, T.101 N., R.49 W., Minnehaha County, Hydrologic Unit 10170203, on right bank 20 ft downstream from bridge on North Cliff Avenue and 4.1 mi upstream from Slip Up Creek.

DRAINAGE AREA.--5,216 mi^2, of which 1,487 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--March 1962 to September 1971 (gage heights and discharge measurements only in files of U.S. Army Corps of Engineers). October 1971 to current year.

REVISED RECORDS.--WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,294.18 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Dec. 15, 1971, nonrecording gage 20 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow is regulated by a flood-control diversion channel, which starts 16.1 river miles upstream from gage, just north of Foss Air Field, and rejoins the river 0.4 mi upstream from gage since July 1961. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 10, 1969, reached a stage of 27.45 ft, discharge, 40,700 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	141	127	93	46	316	206	253	598	285	88	49
2	209	130	129	95	48	346	198	229	788	272	81	49
3	205	131	130	95	51	336	193	212	877	223	71	51
4	208	134	127	78	50	299	161	194	899	263	76	219
5	204	134	122	89	52	266	174	165	811	193	410	92
6	202	130	103	88	55	237	165	156	766	164	229	60
7	200	128	109	82	53	232	229	150	731	166	222	61
8	201	126	144	80	51	248	198	316	690	160	341	50
9	192	130	127	81	55	252	193	247	616	198	161	45
10	189	126	85	81	53	238	191	284	552	264	139	41
11	180	123	113	74	52	247	196	331	502	275	125	39
12	180	123	100	75	57	257	194	301	418	371	113	32
13	172	124	105	70	54	252	207	319	423	321	104	33
14	167	123	129	72	55	248	205	340	355	305	90	31
15	171	123	110	73	53	247	214	328	309	380	79	27
16	164	121	69	71	51	240	295	389	299	373	76	27
17	158	123	101	74	56	231	250	402	281	329	84	27
18	161	122	101	74	56	230	242	1320	271	294	86	25
19	163	126	104	71	55	221	300	1670	252	269	102	26
20	160	123	87	64	56	217	273	1580	246	218	101	29
21	159	127	81	e55	64	215	265	1420	234	198	84	28
22	154	126	79	e55	71	214	271	1180	216	191	69	62
23	151	128	79	e50	142	227	267	985	186	176	71	42
24	151	124	80	e46	149	240	246	841	548	161	72	32
25	153	123	78	e46	151	218	228	713	330	157	76	32
26	152	127	79	e40	201	226	217	649	252	140	75	33
27	157	125	81	e40	188	236	275	633	216	128	66	33
28	152	127	84	e40	249	232	257	574	248	117	61	31
29	153	126	87	e41	314	234	267	566	247	108	58	29
30	147	123	89	e42	---	230	267	571	271	104	56	27
31	134	---	90	e44	---	219	---	577	---	96	49	---
TOTAL	5351	3797	3129	2079	2588	7651	6844	17895	13432	6899	3515	1362
MEAN	173	127	101	67.1	89.2	247	228	577	448	223	113	45.4
MAX	209	141	144	95	314	346	300	1670	899	380	410	219
MIN	134	121	69	40	46	214	161	150	186	96	49	25
AC-FT	10610	7530	6210	4120	5130	15180	13580	35490	26640	13680	6970	2700

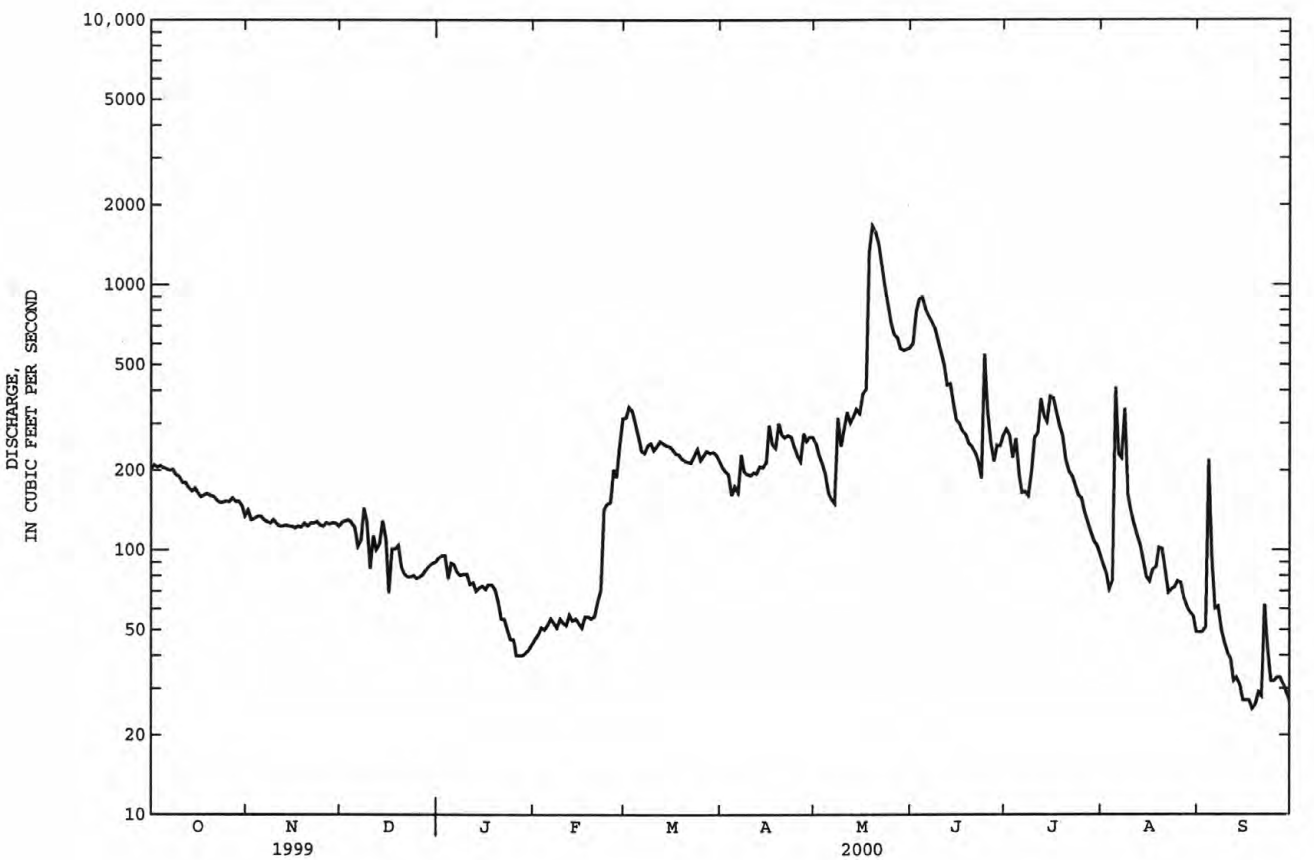
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2000, BY WATER YEAR (WY)

MEAN	342	318	205	106	194	1169	1931	1211	1191	890	457	393
MAX	1869	1528	793	437	798	3479	9974	4516	6880	8612	2528	3468
(WY)	1996	1996	1999	1996	1983	1985	1997	1986	1984	1993	1993	1986
MIN	15.9	17.4	15.0	6.26	10.2	31.7	40.8	54.4	31.6	19.4	20.3	16.7
(WY)	1989	1977	1990	1982	1989	1975	1990	1977	1976	1976	1976	1976

06482020 BIG SIOUX RIVER AT NORTH CLIFF AVENUE, AT SIOUX FALLS, SD--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1972 - 2000	
ANNUAL TOTAL	268650		74542			
ANNUAL MEAN	736		204		702a	
HIGHEST ANNUAL MEAN					2312	1993
LOWEST ANNUAL MEAN					50.4	1981
HIGHEST DAILY MEAN	4220	Apr 11	1670	May 19	20700	Jun 22 1984
LOWEST DAILY MEAN	69	Dec 16	25	Sep 18	.81	Feb 13 1982
ANNUAL SEVEN-DAY MINIMUM	80	Dec 21	27	Sep 15	1.3	Feb 8 1982
INSTANTANEOUS PEAK FLOW			1740	May 19	21600	Jun 22 1984
INSTANTANEOUS PEAK STAGE			9.57	May 19	25.40	Jun 22 1984
ANNUAL RUNOFF (AC-FT)	532900		147900		508200	
10 PERCENT EXCEEDS	1800		342		1850	
50 PERCENT EXCEEDS	444		152		214	
90 PERCENT EXCEEDS	125		50		25	

a Median of annual mean discharges, 559 ft^3/s.
e Estimated.



06483500 ROCK RIVER NEAR ROCK VALLEY, IA

LOCATION.--Lat 43°12'52", long 96°17'39", in SW¼ SW¼ sec.16, T.97 N., R.46 W., Sioux County, Hydrologic Unit 10170204, on left bank 15 ft upstream from bridge on county highway K30, 0.3 mi north of Rock Valley, and at mile 19.1.

DRAINAGE AREA.--1,592 mi^2.

PERIOD OF RECORD.--June 1948 to current year.

REVISED RECORDS.--WSP 1439: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,222.54 ft above sea level. Prior to Aug. 13, 1952, nonrecording gage with supplementary water-stage recorder operating above 6.2 ft gage height. June 4, 1949 to Aug. 12, 1952 and Aug. 13, 1952 to May 4, 1976, water-stage recorder, at site 3.2 mi downstream at datum 10.73 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers rain gage and satellite data collection platform at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1897 reached a stage of 17.0 ft, former site and datum, discharge not determined, from information by State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	75	80	e65	e28	214	85	200	493	233	99	66
2	76	74	80	e65	e30	184	83	177	444	215	91	65
3	80	76	80	e60	e32	161	82	163	407	197	84	64
4	84	75	79	e46	e34	148	79	151	405	190	78	61
5	84	73	82	e50	e31	138	79	143	505	209	88	59
6	86	73	e80	e50	e34	128	76	143	630	224	212	55
7	89	76	73	e48	e34	121	83	147	548	197	444	52
8	86	77	85	e48	e34	121	91	139	463	174	391	50
9	84	75	84	e50	e38	120	90	124	398	164	335	47
10	75	75	e70	e50	e40	121	93	249	354	316	277	46
11	72	74	e65	e48	e38	120	99	e220	320	314	231	45
12	71	77	e75	e46	e42	122	100	e180	293	366	184	43
13	70	76	e70	e40	e44	119	109	e190	300	428	154	42
14	70	75	e75	e44	e42	117	116	e170	318	421	132	40
15	71	75	e80	e46	e46	114	111	e120	324	355	115	39
16	71	75	e50	e40	e46	107	122	e140	327	296	107	38
17	71	74	e60	e42	e48	105	130	208	310	254	109	36
18	71	75	e60	e44	e48	108	125	790	290	222	99	35
19	75	75	e65	e40	e44	111	138	1550	268	207	96	35
20	76	76	e60	e36	e46	108	192	2670	250	194	97	35
21	76	80	e50	e34	e55	105	212	1530	232	172	93	35
22	74	80	e40	e36	e65	103	214	1070	213	155	93	43
23	75	82	e40	e32	e95	104	192	841	197	142	89	47
24	74	81	e44	e30	e120	109	173	678	231	132	84	47
25	72	78	e46	e31	e170	106	154	571	332	127	80	45
26	72	82	e48	e29	e230	104	141	498	459	146	77	42
27	73	82	e50	e28	e260	101	148	486	377	124	73	40
28	73	81	e55	e29	283	97	172	475	323	132	71	39
29	74	78	e60	e29	256	96	180	535	283	128	70	36
30	75	77	e65	e28	---	92	201	560	257	118	68	34
31	76	---	e65	e27	---	88	---	535	---	107	66	---
TOTAL	2346	2302	2016	1291	2313	3692	3870	15653	10551	6659	4287	1361
MEAN	75.7	76.7	65.0	41.6	79.8	119	129	505	352	215	138	45.4
MAX	89	82	85	65	283	214	214	2670	630	428	444	66
MIN	70	73	40	27	28	88	76	120	197	107	66	34
AC-FT	4650	4570	4000	2560	4590	7320	7680	31050	20930	13210	8500	2700
CFSM	.05	.05	.04	.03	.05	.07	.08	.32	.22	.13	.09	.03
IN.	.05	.05	.05	.03	.05	.09	.09	.37	.25	.16	.10	.03

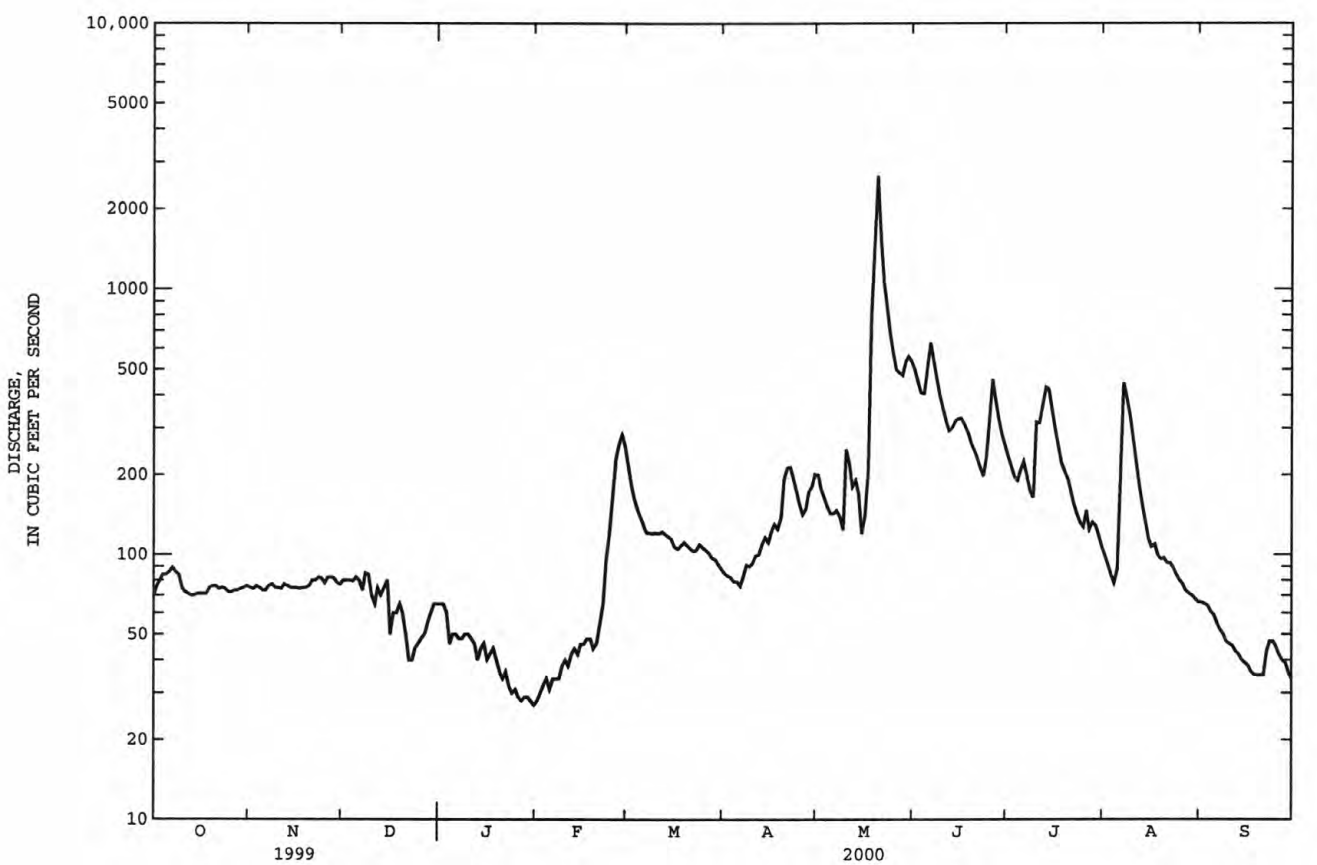
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2000, BY WATER YEAR (WY)

MEAN	237	264	145	81.4	225	1024	1273	693	941	602	269	236
MAX	1232	2039	676	434	1059	4646	6507	3728	6495	9088	2251	2135
(WY)	1993	1980	1983	1996	1966	1997	1969	1993	1993	1993	1993	1986
MIN	2.39	9.70	3.22	.037	.30	35.1	35.9	44.4	46.3	21.9	6.79	3.26
(WY)	1959	1959	1959	1977	1959	1959	1959	1968	1964	1976	1976	1955

06483500 ROCK RIVER NEAR ROCK VALLEY, IA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1949 - 2000	
ANNUAL TOTAL	214415		56341			
ANNUAL MEAN	587		154		499	
HIGHEST ANNUAL MEAN					2656	1993
LOWEST ANNUAL MEAN					31.0	1968
HIGHEST DAILY MEAN	4430	Apr 10	2670	May 20	35400	Apr 7 1969
LOWEST DAILY MEAN	40	Dec 22	27	Jan 31	.00	Feb 20 1959a
ANNUAL SEVEN-DAY MINIMUM	45	Dec 21	28	Jan 26	.00	Feb 27 1959
INSTANTANEOUS PEAK FLOW			2900	May 20	40400	Apr 7 1969
INSTANTANEOUS PEAK STAGE			8.31	May 20	17.32	Apr 7 1969
ANNUAL RUNOFF (AC-FT)	425300		111800		361800	
ANNUAL RUNOFF (CFSM)	.37		.097		.31	
ANNUAL RUNOFF (INCHES)	5.01		1.32		4.26	
10 PERCENT EXCEEDS	1310		323		1140	
50 PERCENT EXCEEDS	340		84		134	
90 PERCENT EXCEEDS	72		40		16	

a Many days during winter periods in 1959 and 1977.
e Estimated.



06485500 BIG SIOUX RIVER AT AKRON, IA

LOCATION.--Lat 42°50'14", long 96°33'41", in SW¼ SE¼ SW¼ sec.30, T.93 N., R.48 W., Plymouth County, Hydrologic Unit 10170203, on left bank 15 ft downstream from Iowa Highway 403 bridge, 0.5 mi northwest of Akron, and 2.9 mi upstream from Union Creek.

DRAINAGE AREA.--8,424 mi^2, of which 1,487 mi^2 usually is noncontributing (213 mi^2 of the noncontributing area contributed runoff in the 1994-2000 water years).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M), 1931-33(M), 1936(M), 1938(M), 1940(M). WSP 1389: Drainage area. WDR SD-84-1: Drainage area. WDR SD-94-1 only: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,118.90 ft above sea level. Prior to Dec. 3, 1934, nonrecording gage at bridge 0.5 mi downstream at same datum. From Dec. 3, 1934, to Oct. 31, 1985, water-stage recorder at site 0.6 mi downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537	456	414	e319	e300	682	521	677	1880	966	452	256
2	535	441	415	e308	e305	696	508	675	1800	918	432	254
3	555	441	414	e295	e310	686	497	645	1720	903	417	246
4	550	441	414	e290	e315	675	478	600	1900	863	394	235
5	548	437	413	e285	e312	676	478	548	2060	829	390	226
6	550	432	406	e286	e315	651	458	511	2200	810	388	220
7	558	434	397	e295	e320	610	444	485	2190	836	725	303
8	571	435	401	e300	e320	587	451	462	2040	772	1430	268
9	571	433	403	e297	e330	578	476	454	1850	697	1160	232
10	e545	428	397	e292	e335	561	509	942	1710	676	1110	217
11	e520	423	402	e285	e330	571	488	1310	1570	743	910	211
12	514	425	398	e290	e330	577	488	1320	1430	1030	719	194
13	520	421	356	e296	e325	578	496	1280	1570	1250	612	190
14	525	412	e335	e310	e320	587	505	1480	2250	1410	538	186
15	537	397	e322	e308	e330	597	514	1350	1480	1520	481	179
16	511	412	e310	e301	e330	575	542	1240	1410	1280	434	177
17	493	406	e306	e296	e330	565	576	1190	1280	1130	447	174
18	492	416	e298	e300	e325	563	620	2240	1200	1050	413	173
19	484	417	e297	e295	e325	564	654	2210	1130	961	379	170
20	483	412	e295	e290	e325	565	664	4220	1070	887	363	173
21	489	418	e297	e285	e350	561	735	5110	997	834	364	174
22	488	416	e299	e282	e400	550	750	4210	928	747	375	184
23	475	429	e303	e282	e500	546	722	3660	875	682	377	191
24	470	428	e308	e282	e600	560	684	3130	878	627	349	194
25	469	424	e316	e284	667	550	655	2650	1040	595	325	210
26	463	424	e322	e284	724	569	619	2310	1410	573	314	219
27	460	417	e330	e284	846	548	590	2080	1540	556	300	202
28	458	414	e331	e287	793	531	577	1950	1370	531	297	190
29	456	412	e330	e291	730	532	596	1900	1150	505	289	187
30	459	413	e327	e293	---	532	659	1870	1030	490	280	182
31	454	---	e323	e296	---	527	---	1870	---	481	272	---
TOTAL	15740	12714	10879	9088	12042	18150	16954	54579	44958	26152	15736	6217
MEAN	508	424	351	293	415	585	565	1761	1499	844	508	207
MAX	571	456	415	319	846	696	750	5110	2250	1520	1430	303
MIN	454	397	295	282	300	527	444	454	875	481	272	170
AC-FT	31220	25220	21580	18030	23890	36000	33630	108300	89170	51870	31210	12330

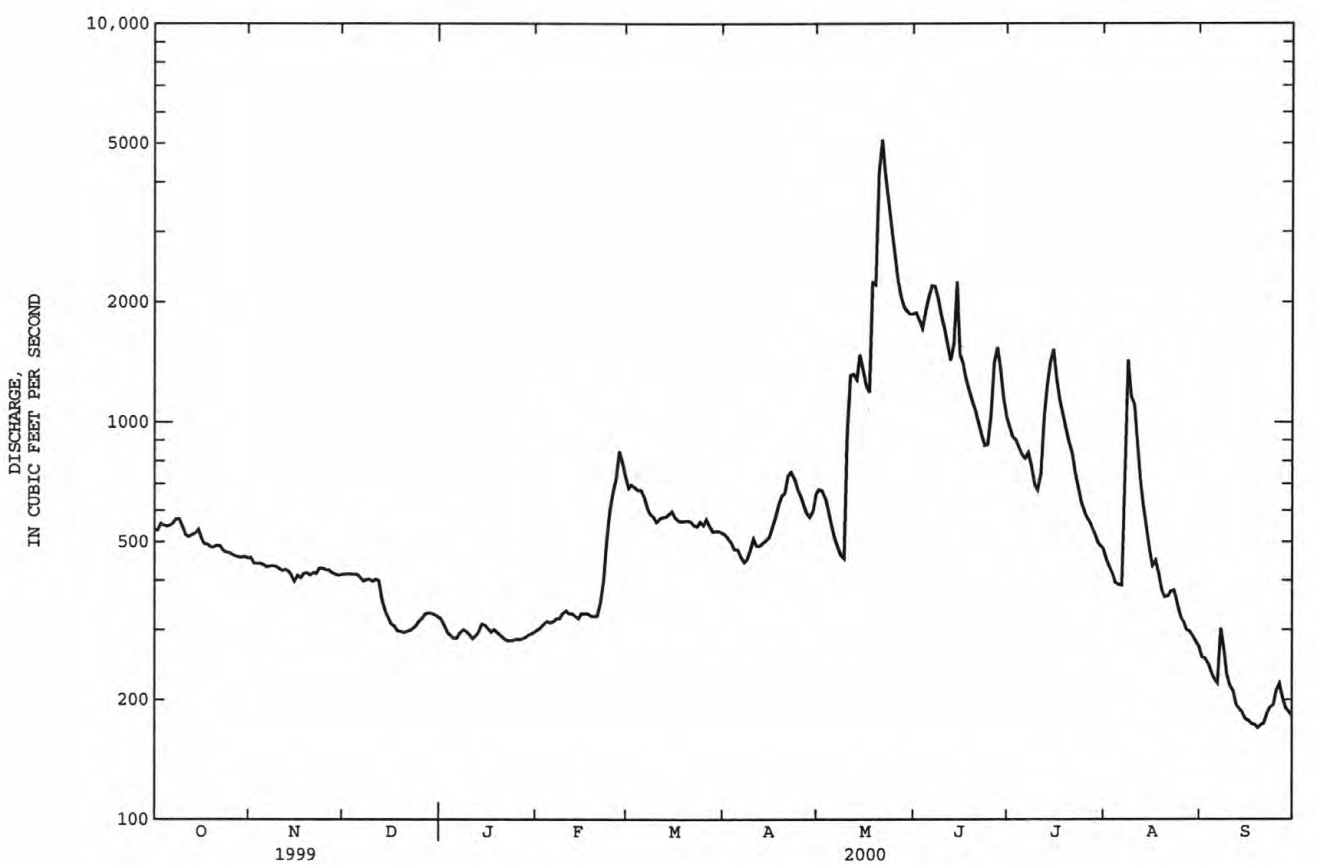
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	535	527	353	211	517	2394	3256	1792	2148	1481	759	673
MAX	4039	3022	1987	920	2399	8866	20690	9499	15820	21740	6200	7313
(WY)	1987	1980	1999	1996	1966	1983	1969	1993	1984	1993	1993	1986
MIN	32.9	47.9	32.1	6.68	12.1	124	139	73.3	100	50.7	45.2	36.4
(WY)	1959	1959	1977	1977	1936	1931	1931	1934	1933	1931	1976	1976

06485500 BIG SIOUX RIVER AT AKRON, IA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	705799		243209			
ANNUAL MEAN	1934		665		1221a	
HIGHEST ANNUAL MEAN					6271	1993
LOWEST ANNUAL MEAN					120	1931
HIGHEST DAILY MEAN	10300	Apr 13	5110	May 21	77500	Apr 9 1969
LOWEST DAILY MEAN	295	Dec 20	170	Sep 19	4.0	Jan 17 1977
ANNUAL SEVEN-DAY MINIMUM	299	Dec 17	174	Sep 15	4.4	Jan 15 1977
INSTANTANEOUS PEAK FLOW			5280	May 21	80800	Apr 9 1969b
INSTANTANEOUS PEAK STAGE			13.85	May 21	23.05	May 10 1993c
ANNUAL RUNOFF (AC-FT)	1400000		482400		884600	
10 PERCENT EXCEEDS	4150		1380		2900	
50 PERCENT EXCEEDS	1160		480		396	
90 PERCENT EXCEEDS	414		284		70	

a Median of annual mean discharges, 810 ft^3/s.
b Gage height, 22.99 ft.
c From floodmark; discharge, 66,700 ft^3/s.
e Estimated.



MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA

LOCATION.--Lat. 42°29'09", long 96°24'49", in NW¼ SE¼ sec.16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001, on right bank on upstream side of bridge on U.S. Highway 20 and 77 at South Sioux City, Nebraska, 1.9 mi downstream from Big Sioux River, and at mile 732.2.

DRAINAGE.--314,600 mi^2, approximately. The 3,959 mi^2 in Great Divide basin are not included.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to current year in reports of the U.S. Geological Survey. Prior to October 1928 and October 1931 to September 1938, monthly discharges only, published in WSP 1310. January 1879 to December 1890, monthly discharges only, in House Document 238, 73rd Congress, 2d session, Missouri River. Gage height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 716: 1929-30. WSP 876: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft above sea level. Sept. 2, 1878 to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan. 1, 1906 to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at site 227 ft downstream at datum 19.98 ft higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers rain gage and satellite data collection platform at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft^3/s Apr. 14, 1952, gage height, 24.28 ft, datum then in use; minimum, 2,500 ft^3/s Dec. 29, 1941; minimum gage height, 7.02 ft Jan. 19, 1996.

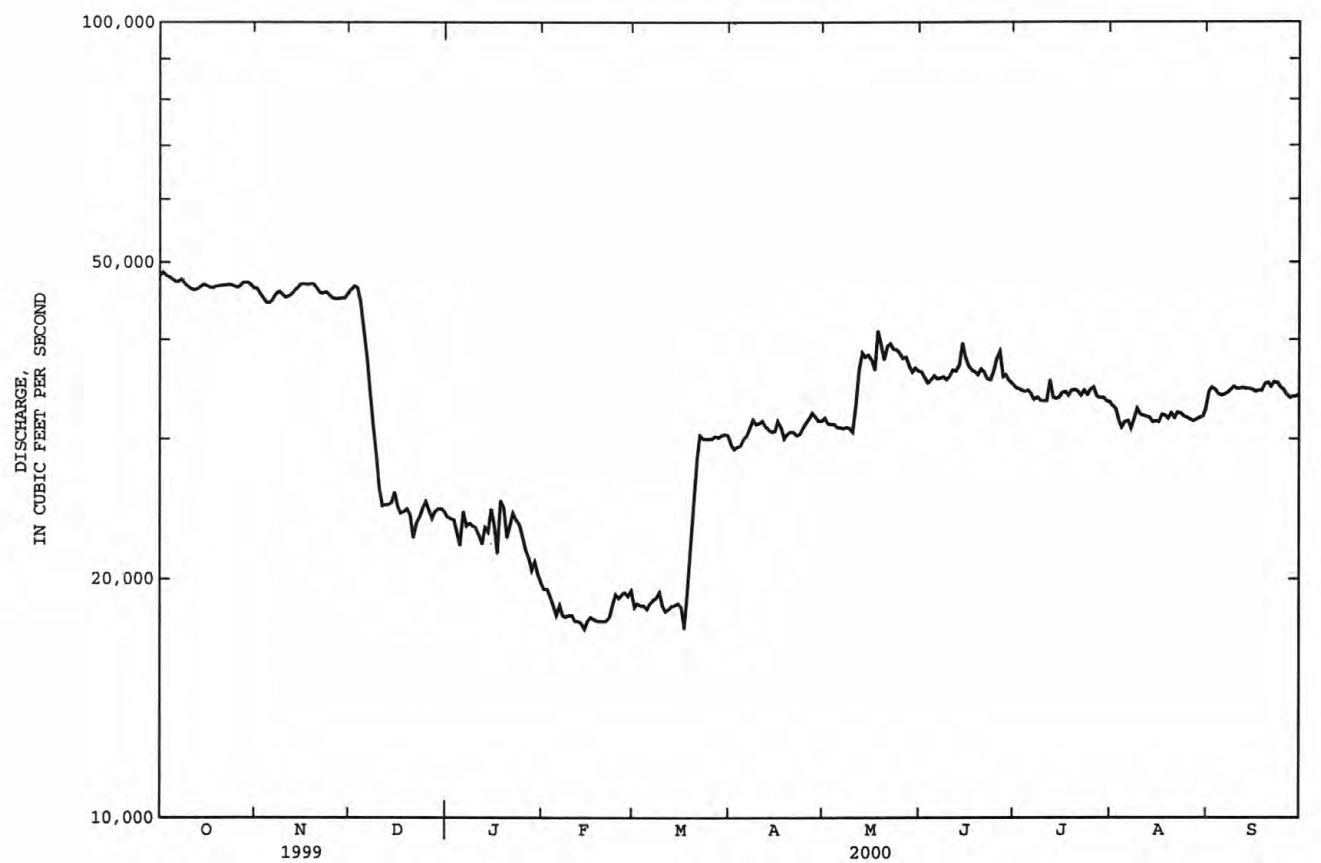
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48100	46400	46200	23900	e19400	18400	29500	31900	36400	34800	33000	34400
2	48600	45700	46700	23800	e19400	18600	29100	31400	35800	34700	32700	34800
3	48100	45100	46400	23700	e19000	18500	29300	31300	35300	34500	31700	34600
4	47900	44500	44600	22800	e18500	18500	29400	31300	35600	34400	31000	34200
5	47600	44500	41400	22000	e18000	18300	30000	31000	36000	34500	31500	34000
6	47300	44900	38100	24300	18500	18600	30300	31000	35700	34200	31600	34100
7	47300	45600	34500	23300	18000	18800	31000	30900	35800	33600	30900	34300
8	47600	46000	31400	23500	17900	18900	31700	31000	35900	33800	31800	34600
9	47000	45600	28800	23300	18000	19200	31300	30900	35600	33500	32800	34900
10	46600	45200	26000	23200	18000	18500	31400	30600	36000	33500	32200	34700
11	46300	45300	24700	22700	17700	18200	31600	33100	36600	33500	32100	34700
12	46100	45600	24800	22100	17700	18300	31100	36700	36500	35600	32000	34800
13	46300	46100	24800	23200	17600	18500	30800	38500	37100	33800	31900	34700
14	46600	46500	24900	22900	17300	18500	30600	38000	39600	33700	31500	34700
15	46900	47000	25700	24500	17700	18600	30700	38200	38000	33800	31600	34600
16	46700	47000	24700	23300	17900	18400	31600	37700	37000	34300	31500	34400
17	46500	46900	24200	21500	17800	17300	31000	36600	36600	34400	32200	34500
18	46400	47000	24300	25100	17700	19100	30000	41000	36400	34000	32100	34500
19	46700	47000	24500	24600	17700	22200	30400	39400	36100	34500	31800	35200
20	46700	46400	24100	22500	17700	25000	30600	37700	36700	34600	32300	35300
21	46800	45800	22500	23400	17700	28200	30600	39200	36400	34400	31900	34900
22	46800	45700	23500	e24200	17900	30300	30300	39500	35700	34000	32400	35400
23	46900	45900	23900	e23700	18500	30000	30400	38900	35600	34500	32300	35300
24	46800	45500	e24500	e23400	19100	30000	30900	38800	36400	34100	32000	34800
25	46600	45100	e25000	e22600	18900	30000	31400	38400	37800	34600	31900	34600
26	46500	45000	e24400	e21800	19100	30000	31800	37900	38600	34800	31700	34100
27	46900	45000	e23800	e21300	19200	30200	32300	38000	35900	33900	31600	33800
28	47200	45100	24300	e20500	19000	30100	32000	37000	36100	33800	31700	33900
29	47200	45100	24500	e21000	19300	30300	31600	36400	35500	33800	31900	33900
30	46900	45600	24500	e20300	---	30400	31600	36800	35200	33500	32000	34100
31	46400	---	24300	e19800	---	30300	---	36500	---	33400	32700	---
TOTAL	1456300	1372100	896000	708200	530200	710200	924300	1105600	1091900	1058500	990300	1036800
MEAN	46980	45740	28900	22850	18280	22910	30810	35660	36400	34150	31950	34560
MAX	48600	47000	46700	25100	19400	30400	32300	41000	39600	35600	33000	35400
MIN	46100	44500	22500	19800	17300	17300	29100	30600	35200	33400	30900	33800
AC-FT	2889000	2722000	1777000	1405000	1052000	1409000	1833000	2193000	2166000	2100000	1964000	2056000
CFSM	.15	.15	.09	.07	.06	.07	.10	.11	.12	.11	.10	.11
IN.	.17	.16	.11	.08	.06	.08	.11	.13	.13	.13	.12	.12
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2000, BY WATER YEAR (WY)												
MEAN	36340	31400	19060	16180	17360	23420	33340	34040	35850	36440	36790	36990
MAX	69300	71600	39880	27720	31120	47020	88040	78720	66400	65550	65360	66400
(WY)	1998	1998	1998	1987	1997	1997	1997	1997	1997	1997	1997	1997
MIN	14350	6951	8271	7316	6293	9135	17450	23820	23270	26890	24270	25790
(WY)	1962	1962	1962	1964	1963	1957	1957	1962	1960	1958	1993	1962

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1953 - 2000a	
ANNUAL TOTAL	14231000		11880400			
ANNUAL MEAN	38990		32460		29810	
HIGHEST ANNUAL MEAN					55890	1997
LOWEST ANNUAL MEAN					19770	1957
HIGHEST DAILY MEAN	54500	Jul 22	48600	Oct 2	105000	Jun 25 1953
LOWEST DAILY MEAN	22500	Dec 21	17300	Feb 14	3000	Dec 11 1961
ANNUAL SEVEN-DAY MINIMUM	23900	Dec 17	17700	Feb 11	5430	Feb 22 1963
INSTANTANEOUS PEAK FLOW			48900	Oct 2	101000	Apr 3 1960
INSTANTANEOUS PEAK STAGE			18.82	Oct 2	30.65	Feb 19 1971
ANNUAL RUNOFF (AC-FT)	28230000		23560000		21600000	
ANNUAL RUNOFF (CFSM)	.12		.10		.095	
ANNUAL RUNOFF (INCHES)	1.68		1.40		1.29	
10 PERCENT EXCEEDS	48100		46400		46700	
50 PERCENT EXCEEDS	41900		32700		30300	
90 PERCENT EXCEEDS	25600		18900		11700	

a Post regulation.
e Estimated.



As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge and gage height for each water year are given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. Stations that are noted with "METWARN" are part of a flood-warning system for Rapid City and surrounding area and are equipped with real-time satellite data-collection platforms. METWARN stations are operated from April 1 to September 30.

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				RED RIVER OF THE NORTH BASIN						
05051650	La Belle Creek near Veblen, SD	Lat 45°53'33", long 97°21'40", in SW¼ SW¼ SE¼ sec.1, T.128 N., R.54 W., Marshall County, Hydrologic Unit 09020105, on downstream left wingwall on county bridge, 3.0 mi west of Veblen on State Highway 25, 2.0 mi north, and 0.5 mi west. Elevation of gage is 1,330 ft above sea level, from topographic map.	8.74	1988-99‡, 2000	3- 5-00	5.05	85	4- 1-97 5-18-96	12.57 7.34	[a] 664
				GRAND-MOREAU RIVER BASIN						
06357620	Willow Creek near Keldron, SD	Lat 45°50'00", long 101°52'02", in SE¼ SE¼ SW¼ sec.27, T.22 N., R.18 E., Corson County, Hydrologic Unit 10130303, on left downstream bank at bridge, 0.1 mi west of Corson County Road 33, 0.8 mi upstream of West Branch Willow Creek confluence, and 8.0 mi south-southwest of Keldron. Elevation of gage is 2,355 ft above sea level, from topographic map.	30.0	1999-2000	4-24-00	5.16	[b]	7- 7-98	[c]13.5	[b]
				MISSOURI-OAHE RIVER BASIN						
06361045	Unnamed tributary Swift Bird Bay, Lake Oahe, near LaPlant, SD	Lat 45°08'38", long 100°23'35", in SW¼ NW¼ SE¼ sec.25, T.14 N., R.30 E., Dewey County, Hydrologic Unit 10130105, on left bank at downstream side of county road, 12.6 mi southeast of LaPlant, 25.6 mi southeast of Whitehorse, and 42.4 mi northeast of Eagle Butte. Elevation of gage is 1,660 ft above sea level, from topographic map.	[b]	1999-2000	4-20-00	8.39	[d]293	5- 5-99 (revised)	9.09	405

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN						
06394300	Redbird Canyon near Newcastle, WY	Lat 43°46'34", long 104°01'37", in SE¼ SE¼ NW¼ sec.20, T.3 N., R.1 E., Custer County, Hydrologic Unit 10120107, 4.1 mi south of Fanny Peak, 9.6 mi east of Newcastle, and 21.0 mi west of Custer. Elevation of gage is 3,580 ft above sea level, from topographic map.	62.1	1999-2000	2000	--	[e]0.00	4- 5-99	[f]28.57	[d]28
06394450	Pass Creek near Dewey, SD	Lat 43°33'05", long 103°56'15", in NE¼ NE¼ NE¼ sec.12, T.6 S., R.1 E., Custer County, Hydrologic Unit 10120107, in centerline of Pass Creek 7.0 mi east of Dewey on County Road 769 and 140 ft south of road. Elevation of gage is 3,870 ft above sea level, from topographic map.	35.9 (revised)	1999-2000	7- 5-00	[f]16.26	811	([g])	[f]18.05	1,430
06402470	Beaver Creek above Buffalo Gap, SD	Lat 43°31'20", long 103°21'23", in SW¼ SE¼ SW¼ sec.13, T.6 S., R.6 E., Custer County, Hydrologic Unit 10120109, on right side of flume approximately 1.0 mi downstream from commercial fish hatchery and approximately 4.0 mi northeast of Buffalo Gap.	111	1991-97‡, 1999-2000	10- 8-99	11.42	17	6-19-99	13.50	120
06402995	French Creek above Stockade Lake, near Custer, SD	Lat 43°46'10", long 103°32'10", in SE¼ NW¼ SW¼ sec.21, T.3 S., R.5 E., Custer County, Hydrologic Unit 10120109, on right bank 0.3 mi above Stockade Lake, 0.4 mi below mouth of Willow Creek, and 2.5 mi east of Custer on Highway 16A. Elevation of gage is 5,190 ft above sea level, from topographic map.	68.7	1991-97‡, 1998-2000	4-25-00	6.42	187	8- 7-99	8.87	1,070

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
		CHEYENNE RIVER BASIN--Continued								
06403810	Battle Creek above Keystone, SD	Lat 43°54'17", long 103°27'48", in SE¼ SW¼ NE¼ sec.1, T.2 S., R.5 E., Pennington County, Hydrologic Unit 10120109, on right bank 15 ft downstream from concrete culvert along Pennington County Highway 323 about 3.0 mi west of Keystone. Elevation of gage is 4,600 ft above sea level, from topographic map. METWARN station.	6.8	1998-2000	5-17-00	5.22	15	6-18-99	8.48	[d]1,140
06403850	Grizzly Bear Creek near Keystone, SD	Lat 43°52'41", long 103°26'14", in NW¼ SW¼ NW¼ sec.17, T.2 S., R.6 E., Pennington County, Hydrologic Unit 10120109, on downstream right wingwall of Highway 16A bridge, and 1.2 mi southwest of Keystone. Elevation of gage is 4,510 ft above sea level, from topographic map. METWARN station.	4.52	1998-2000	4-24-00	3.74	51	6-18-98	5.12	423
06404800	Grace Coolidge Creek near Hayward, SD	Lat 43°48'07", long 103°26'03", in NE¼ NW¼ SW¼ sec.8, T.3 S., R.6 E., Custer County, Hydrologic Unit 10120109, in Custer State Park, at right downstream side of bridge, near intersection of State Highway 87 and CSP 753, approximately 1.0 mi upstream from Center Lake, and 7.0 mi southwest of Hayward. Elevation of gage is 4,780 ft above sea level, from topographic map.	7.48	1989-98‡, 1999-2000	4-25-00	5.03	25	5- 8-95	7.57	337

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN--Continued						
06405800	Bear Gulch near Hayward, SD	Lat 43°47'31", long 103°20'49", in NW¼ SW¼ NE¼ sec.13, T.3 S., R.6 E., Custer County, Hydrologic Unit 10120109, in Custer State Park, on right bank 3.5 mi upstream from mouth, 2.1 mi north on Alt. 16 from intersection of Alt. 16 and Highway 36, and 5.5 mi south of Hayward. Elevation of gage is 4,110 ft above sea level, from topographic map.	4.23	1989-98‡, 1999-2000	4-25-00	6.10	26	9- 7-89	[f]10.68	[d]1,250
06406700	Spring Creek at Oreville, near Hill City, SD	Lat 43°51'58", long 103°37'24", in SE¼ NW¼ NE¼ sec.22, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on left bank 75 ft downstream from Tenderfoot Creek, near U.S. Highway 16/ Alt 85, and about 5.5 mi southwest of Hill City. METWARN station.	42.3	1998-2000	4-24-00	5.27	63	6-18-98	8.23	4[illegible]
06406740	Sunday Gulch below Johnson Canyon, near Hill City, SD	Lat 43°52'10", long 103°34'55", in SW¼ SE¼ SE¼ sec.13, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on left bank along State Highway 87/89 about 0.5 mi downstream from Johnson Canyon and 4.0 mi south of Hill City. Elevation of gage is 5,410 ft above sea level, from topographic map. METWARN station.	4.85	1998-2000	4-19-00	4.77	24	6-18-98	5.89	91
06406760	Reno Gulch near Hill City, SD	Lat 43°54'35", long 103°36'43", in SW¼ NE¼ NW¼ sec.2, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on right bank 0.8 mi upstream from Spring Creek, and about 2.0 mi southwest of Hill City. Elevation of gage is 5,350 ft above sea level, from topographic map. METWARN station.	3.96	1998-2000	4-24-00	4.35	11	6-18-98	5.84	99

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN--Continued						
06411900	Rapid Creek above Johnson Siding, below Pactola Dam, SD	Lat 44°04'56", long 103°26'32" (revised), in NE¼ NW¼ NW¼ sec.6, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left downstream wingwall about 2.0 mi east of Pactola Dam. Elevation of gage is 4,305 ft above sea level, from topographic map. METWARN station.	332	1998-2000	5-18-00	([h])	170	6-24-98	4.62	638
06412000	Rapid Creek at Big Bend, near Rapid City, SD	Lat 44°03'18", long 103°25'00", in NW¼ SE¼ SE¼ sec.8, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on right upstream wingwall of bridge about 3.0 mi from Pactola Dam, and 9.0 mi west of Rapid City. Elevation of gage is 4,110 ft above sea level, from topographic map. METWARN station.	338	1998-2000	5-18-00	([h])	[i]175	6-17-99	6.50	555
06412200	Rapid Creek above Victoria Creek, near Rapid City, SD	Lat 44°02'48", long 103°21'06", in SW¼ NW¼ sec.13, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank 0.5 mi above Victoria Creek, and 3.0 mi west of Canyon Lake. Elevation of gage is 3,570 ft above sea level, from topographic map. METWARN station.	355	1989-97‡, 1998-2000	5-20-00	6.06	180	6- 2-97	8.38	1,180
06412220	Victoria Creek above Victoria Dam, near Rapid City, SD	Lat 44°01'47", long 103°26'06", in NE¼ SE¼ sec.19, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank about 3.5 mi upstream of Victoria Dam and 7.0 mi southwest of Rapid City. Elevation of gage is 4,630 ft above sea level, from topographic map. METWARN station.	2.25	1998-2000	4-19-00	4.12	5.2	6-15-99	4.45	14

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN--Continued						
06412250	Victoria Creek below Victoria Dam, near Rapid City, SD	Lat 44°01'05", long 103°23'07", in SW¼ SE¼ NW¼ sec.27, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, along right bank upstream of culverts 1,000 ft downstream from Victoria Dam, and about 3.5 mi southwest of Rapid City on National Forest Service Road 159. Elevation of gage is 4,160 ft above sea level, from topographic map. METWARN station.	4.56	1998-2000	4-24-00	4.24	5.9	6-15-99	6.20	73
06412580	Wild Irishman Gulch near Rapid City, SD	Lat 44°04'52", long 103°21'54", in NW¼ NE¼ NW¼ sec.2, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank about 3.0 mi west of Rapid City on Pennington County Highway 246 (Schroeder Road). Elevation of gage is 4,055 ft above sea level, from topographic map. METWARN station.	3.22	1998-2000	2000	--	[e]0.00	1998-2000	--	[e]0.00
06413620	South Canyon near Rapid City, SD	Lat 44°05'34", long 103°19'37", in NE¼ SW¼ NW¼ sec.31, T.2 N., R.7 E., Pennington County, Hydrologic Unit 10120110, along left bank downstream of concrete culvert at the intersection of CR 234 (Nemo Road) and Echo Drive in the northwest side of Rapid City. Elevation of gage is 3,710 ft above sea level, from topographic map. METWARN station.	2.90	1998-2000	2000	--	[e]0.00	6- 2-99	4.10	[i]<10
06416000	Rapid Creek below Hawthorn Ditch, at Rapid City	Lat 44°04'03", long 103°10'50", in NW¼ NW¼ NE¼ sec.8, T.1 N., R.8 E., Pennington County, Hydrologic Unit 10120110, 1.5 mi downstream from diversion to Hawthorn Ditch and 1.0 mi upstream from diversion to Murphy Ditch. Datum of gage is 3,124.18 ft above sea level. METWARN station.	418	1947-54, 1982‡, 2000	8- 2-00	13.27	616	5-23-52	[j]9.19	2,130

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN--Continued						
06421800	Lindsey Draw near Farmingdale, SD	Lat 43°54'27", long 102°51'31", in NE¼ SE¼ NE¼ sec.1, T.2 S., R.10 E., Pennington County, Hydrologic Unit 10120110, on left downstream side of County Road C459, 2.0 mi southwest of the confluence of Lindsey Draw and Rapid Creek, and 4.2 mi south-southeast of Farmingdale. Elevation of gage is 2,755 ft above sea level, from topographic map.	12.8	1998-2000	4-30-00	335	[b]	6-17-98	7.90	[b]
				BELLE FOURCHE RIVER BASIN						
06430898	Squaw Creek near Spearfish, SD	Lat 44°24'04", long 103°53'35", in NE¼ NE¼ sec.17, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 200 ft upstream from mouth and 8.0 mi south of Spearfish. Elevation of gage is 4,480 ft above sea level, from topographic map.	6.95	1989-98‡, 1999-2000	5-26-00	[k]4.64	25	5- 8-95	9.47	860
06430900	Spearfish Creek above Spearfish, SD	Lat 44°24'06", long 103°53'40", in NW¼ NE¼ NE¼ sec.17, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on left bank immediately below confluence of Squaw Creek and 8.0 mi south of Spearfish. Elevation of gage is 4,440 ft above sea level, from topographic map.	139	1989-97‡, 1998-2000	4-26-00	[h]	[i]145	5- 8-95	7.42	2,890
06432020	Spearfish Creek below Spearfish, SD	Lat 44°34'48", long 103°53'37", in SW¼ NE¼ SE¼ sec.8, T.7 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 2.3 mi above mouth and 5.0 mi north of Spearfish. Elevation of gage is 3,280 ft above sea level from topographic map.	204	1989-98‡, 1999-2000	11- 1-99	5.00	94	5- 9-95	7.37	1,590

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
BELLE FOURCHE RIVER BASIN--Continued										
06436156	Whitetail Creek at Lead, SD	Lat 44°20'36", long 103°45'57", in NE¼ NE¼ NW¼ sec.4, T.4 N., R.3 E., Lawrence County, Hydrologic Unit 10120202, on right bank 0.5 mi upstream from confluence of Whitewood Creek and 0.2 mi upstream from Kirk Power Plant. Elevation of gage is 5,080 ft above sea level, from topographic map.	6.15	1989-98‡, 1999-2000	4-19-00 1- 2-00	[f]1.90 [f]1.94	62 ([a])	5- 8-95	6.67	507
06437200	Bear Butte Creek near Galena, SD	Lat 44°23'48", long 103°34'36", in SE¼ SE¼ NW¼ sec.13, T.5 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right downstream bridge wingwall along U.S. Highway Alt. 14 about 4.5 mi west of Sturgis. Elevation of gage is 3,770 ft above sea level, from topographic map. METWARN station.	51.8	1998-2000	4-25-00 5-26-00	4.87 5.24	199 ([1])	6-18-98	5.72	541
06437500	Bear Butte Creek near Sturgis, SD	Lat 44°28'53", long 103°16'31", in NW¼ SE¼ sec.16, T.6 N., R.7 E., Meade County, Hydrologic Unit 10120202, on left bank 0.8 mi downstream from Spring Creek, 12.5 mi northeast of Sturgis, and 13.4 mi upstream from mouth. Datum of gage is 2,779.91 ft above sea level.	192	1946-62, 1962-72‡, 1990-2000	4-25-00	6.43	261	6-16-62	[f]12.45	12,700
06437650	Elm Creek near Fairpoint, SD	Lat 44°46'59", long 103°03'43", in NE¼ SE¼ sec.31, T.10 N., R.9 E., Butte County, Hydrologic Unit 10120202, at bridge on old Highway 212 (Killdeer Road) and 19.5 mi east of Newell. Elevation of gage is 2,820 ft above sea level, from topographic map.	8.8	1999-2000	6-25-00	5.75	143	6- 6-99	7.10	680

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				CHEYENNE RIVER BASIN						
06438800	Elm Creek near Red Owl, SD	Lat 44°45'04", long 102°26'55", in NW¼ SW¼ SW¼ sec.8, T.9 N., R.14 E., Meade County, Hydrologic Unit 10120113, on Fox Ridge Road, 6.2 mi northeast of Red Owl and 1.2 mi southwest of the confluence of Elm Creek and Sulphur Creek. Elevation of gage is 2,455 ft above sea level, from topographic map.	15.0	1999-2000	7- 7-00	5.16	[b]	7- 7-00	5.16	[b]
				MISSOURI-OAHE RIVER BASIN						
06439770	Unnamed tributary Stone Lake near Lebanon, SD	Lat 44°55'35", long 99°44'48", in NE¼ NE¼ NW¼ sec.27, T.117 N., R.74 W., Potter County, Hydrologic Unit 10130106, on right bank at downstream side of county road, 5.6 mi upstream from Stone Lake, 10.3 mi south-southeast of Lebanon, 11.7 mi southeast of Gettysburg, and 22.2 mi northeast of Onida. Elevation of gage is 1,875 ft above sea level, from topographic map.	[b]	1999-2000	[g]2000	[m]	[i]<5.0	9- 3-99	7.01	[b]
06439960	Chantier Creek near Hayes, SD	Lat 44°31'20", long 100°42'13", in NE¼ NE¼ SW¼ sec.35, T.7 N., R.28 E., Stanley County, Hydrologic Unit 10130105, at bridge on State Highway 1806, 1.7 mi upstream from mouth, 18.0 mi northeast of Hayes, and 23.0 mi northwest of Pierre. Elevation of gage is 1,670 ft above sea level, from topographic map.	21.5	1990-2000	4-19-00	14.71	[i]4,200	6- 7-93	[f]14.81	[n]8,000

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				MISSOURI-FORT RANDALL RIVER BASIN						
06440300	Unnamed tributary Cottonwood Creek near Quinn, SD	Lat 43°57'39", long 102°08'17", in NW¼ SW¼ NW¼ sec.18, T.1 S., R.17 E., Pennington County, Hydrologic Unit 10140102, on left downstream wingwall of bridge, located 0.5 mi west of Quinn on Highway 14, and 1.8 mi south on county road T152. Elevation of gage is 2,600 ft above sea level, from topographic map.	9.56	1999-2000	4-21-00	11.96	171	4-21-00	11.96	171
06440850	Medicine Creek near Phillip, SD	Lat 44°03'17", long 101°29'12", in SE¼ sec.8, T.1 N., R.22 E., Haakon County, Hydrologic Unit 10140102, at bridge on county highway, 1.3 mi upstream from mouth, and 9.0 mi east of Philip. Prior to October 1998, datum 2.00 ft lower. Elevation of gage is 2,040 ft above sea level, from topographic map.	56.5	1989-2000	4-20-00	8.15	210	6- 6-99	11.27	450
06441100	Plum Creek near Hayes, SD	Lat 44°20'41", long 101°07'40", in SW¼ sec.32, T.5 N., R.25 E., Stanley County, Hydrologic Unit 10140102, at bridge on U.S. Highway 14 and State Highway 63, 7.0 mi southwest of Hayes. Elevation of gage is 2,034 ft above sea level, from topographic map.	24.5	1989-2000	4-25-00	4.46	249	5- 9-95	6.74	936
06441110	Plum Creek below Hayes, SD	Lat 44°12'38", long 100°43'34", in NW¼ NW¼ NW¼ sec.23, T.3 N., R.28 E., Stanley County, Hydrologic Unit 10140102, on left bank at downstream side of county bridge, 0.3 mi upstream from mouth, 3.0 mi southwest of Wendte, 18.5 mi southeast of Hayes, and 21.2 mi southwest of Ft. Pierre. Elevation of gage is 1,612 ft above sea level, from topographic map.	252	1989-95‡, 1998-2000	4-19-00	19.92	5,950	5-30-91	[f]23.74	[d]13,500

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				WHITE RIVER BASIN						
06445980	White Clay Creek near Oglala, SD	Lat 43°08'46", long 102°40'58", in NW¼ SE¼ SE¼ sec.30, T.37 N., R.45 W., Shannon County, Hydrologic Unit 10140201, on left bank at downstream side of bridge on U.S. Highway 18, 4.3 mi southeast of Oglala, 5.5 mi upstream from Oglala Dam, and 11 mi northwest of Pine Ridge. Datum of gage is 3,001.54 ft above sea level.	340	1966-81‡, 1988-99‡, 2000	4-22-00	9.63	113	3-11-66 6-16-67	15.02 14.74	([a]) 659
06446100	Wounded Knee Creek at Wounded Knee, SD	Lat 43°08'38", long 102°21'28", in NE¼ NW¼ sec.36, T.37 N., R.43 W., Shannon County, Hydrologic Unit 10140201, on left bank at upstream end of culvert on Tribal Road 27 in Wounded Knee, and above the confluence of Spring Creek. Elevation of gage is 3,200 ft above sea level, from topographic map.	82.5	1993-97‡, 1998-2000	4-22-00	5.99	54	6- 3-97	[f]9.13	321
06447050	Unnamed tributary Buzzard Creek near Long Valley, SD	Lat 43°27'42", long 101°25'59", in SW¼ SW¼ SW¼ sec.2, T.40 N., R.35 W., Jackson County, Hydrologic Unit 10140202, on left bank, 22 ft northwest from downstream end of culvert on county road, 3.1 mi east of Long Valley, and 11.5 mi west of Norris. Elevation of gage is 2,575 ft above sea level, from topographic map.	9.26	1999-2000	4-19-00	4.88	([b])	4-19-00	4.88	([b])
06451600	Unnamed tributary White Thunder Creek near Wood, SD	Lat 43°37'23", long 100°30'33", in NW¼ NW¼ NW¼ sec.14, T.42 N., R.27 W., Mellette County, Hydrologic Unit 10140204, on right bank 300 ft downstream from road culvert on county road, 9.9 mi north of Wood, and 2.5 mi upstream from confluence with White Thunder Creek. Datum of gage is 1,958.75 ft above sea level.	13.0	1998-2000	5- 2-00	6.98	14	7-30-98	[f]9.44	([b])

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				WHITE RIVER BASIN--Continued						
06451650	Williams Creek near Vivian, SD	Lat 43°43'33", long 100°17'50", in SW¼ SW¼ NW¼ sec.16, T.103 N., R.79 W., Lyman County, Hydrologic Unit 10140204, on right bank at downstream side of Highway 53 bridge, approximately 2.0 mi upstream of confluence with White River, 13.2 mi south of the Interstate 90 and Highway 53 intersection. Elevation of gage is 1,700 ft above sea level, from topographic map.	48.8	1999-2000	4-25-00	4.10	4.7	9- 4-99	[f]9.64	[b]
				MISSOURI-FORT RANDALL RIVER BASIN						
06452275	Snake Creek near Bijou Hills, SD	Lat 43°29'58", long 99°07'13", in NW¼ NW¼ NW¼ sec.10, T.100 N., R.70 W., Charles Mix County, Hydrologic Unit 10140101, at downstream side of State Highway 50, 3.3 mi upstream from Academy Lake, 3.5 mi northwest of Academy, and 16.5 mi northwest of Platte. Elevation of gage is 1,690 ft above sea level, from topographic map.	[b]	1999-2000	5-18-99	4.71	21	5- 5-99	8.31	830
06452290	East Fork Platte Creek near Aurora Center, SD	Lat 43°33'36", long 98°36'58", in SE¼ NE¼ SE¼ sec.9, T.101 N., R.65 W., Aurora County, Hydrologic Unit 10140101, on left bank at downstream end of culvert on county road, 1.2 mi west and 2.2 mi north of Aurora Center, and 0.6 mi upstream of Laffey Lake. Elevation of gage is 1,605 ft above sea level, from topographic map.	[b]	1999-2000	[g]	[m]	<17	7- 4-99	6.06	323
				NIOBRARA RIVER BASIN						
06463900	Antelope Creek near Mission, SD	Lat 43°16'26", long 100°40'56", in SE¼ SW¼ sec.7, T.38 N., R.28 W., Todd County, Hydrologic Unit 10150006, at culvert on county road, 2.0 mi southwest of Mission. Elevation of gage is 2,595 ft above sea level, from topographic map.	71.3	1999-2000	7- 4-00	5.45	59	2-18-97 7- 3-98	7.40 6.96	[a] 88

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
		NIOBRARA RIVER BASIN—Continued								
06464120	Sand Creek near Olsonville, SD	Lat 43°01'03", long 100°24'46", in SW¼ SW¼ sec.8, T.35 N., R.26 W., Todd County, Hydrologic Unit 10150006, on left bank 40 ft downstream of county road culvert, approximately 23.5 mi upstream from confluence with Keya Paha River, 2.5 mi southeast of Littleburg, and 12.2 mi southeast of Olsonville. Elevation of gage is 2,575 ft above sea level, from topographic map.	11.0	1999-2000	7- 4-00	7.96	188	7- 4-00	7.96	188
		MISSOURI-LEWIS AND CLARK RIVER BASIN								
06466715	Snatch Creek near Tabor, SD	Lat 42°54'30", long 97°46'33", in SW¼ SE¼ SE¼ (revised) sec.35 (revised), T.94 N. (revised), R.59 W., Bon Homme County, Hydrologic Unit 10170101, at right upstream wingwall of highway bridge, 5.0 mi southwest of Tabor and 2.0 mi upstream from mouth. Elevation of gage is 1,330 ft above sea level, from topographic map.	44	1993-2000	[g]2000	([m])	<44	5-30-95	10.58	1,660
		JAMES RIVER BASIN								
06472050	Antelope Creek near Langford, SD	Lat 45°34'22", long 97°50'10", in NE¼ NE¼ NE¼ sec.7, T.124 N., R.58 W., Day County, Hydrologic Unit 10160005, on right downstream wingwall of box culvert, 2.0 mi south of Langford or 5.0 mi north of Pierpont. Elevation of gage is 1,390 ft above sea level, from topographic map.	24.5	1999-2000	7- 5-00	5.93	([b])	7- 5-00	5.93	([b])
06473020	Howard tributary near Leola, SD	Lat 45°37'48", long 98°55'52", in SW¼ SW¼ NW¼ sec.21, T.125 N., R.67 W., McPherson County, Hydrologic Unit 10160008, on left bank 20 ft downstream from State Highway 45, 6.3 mi south of Leola, and 4.8 mi upstream of Compton Lake. Elevation of gage is 1,520 ft above sea level, from topographic map.	45.2	1999-2000	7-11-00	2.37	42	5-10-99	3.57	290

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				JAMES RIVER BASIN--Continued						
06473300	Preachers Run tributary at Ipswich, SD	Lat 45°27'08", long 99°01'45", in NE¼ SW¼ sec.22, T.123 N., R.68 W., Edmunds County, Hydrologic Unit 10160008, on right bank 15 ft downstream from double-corrugated culvert on county highway, 0.3 mi north of U.S. Highway 12 at Ipswich. Elevation of gage is 1,530 ft above sea level, from topographic map.	7.88	1971-80, 1999-2000	7-11-00	2.48	5.1	3-24-78	°7.42	50
06474000	Turtle Creek near Tulare, SD	Lat 44°44'06", long 98°35'09", in SE¼ SE¼ sec.25, T.115 N., R.65 W., Spink County, Hydrologic Unit 10160009, on right bank 200 ft upstream from highway bridge, 3.9 mi west of Tulare, and 8.9 mi downstream from Wolf Creek. Elevation of gage is 1,300 ft above sea level, by barometer.	1,124	1954-56, 1966-81‡, 1985-89‡, 1990-2000	6- 5-00	5.25	46	3-26-97 3-28-97	19.32 18.80	(a) 13,500
06475600	Turton tributary south near Turton, SD	Lat 45°03'07", long 97°59'38", in NE¼ NE¼ NW¼ sec.12, T.118 N., R.60 W., Spink County, Hydrologic Unit 10160006, on right downstream wingwall of highway bridge, 10.0 mi north of southwest corner of Raymond, then 2.5 mi west. Elevation of gage is 1,400 ft above sea level, from topographic map.	19.7	1999-2000	4-16-00	3.77	(b)	3-16-99	4.98	(b)
06475850	Foster Creek tributary near Carpenter, SD	Lat 44°37'56", long 98°03'42", in NW¼ NE¼ NE¼ sec.5, T.113 N., R.60 W., Beadle County, Hydrologic Unit 10160006, on left downstream concrete culvert apron (revised), 7.7 mi east from junction of State Highways 37 and 28. Elevation of gage is 1,325 ft above sea level, from topographic map.	4.93	1971-80, 1999-2000	7-11-00	3.87	41	5-13-72 3-12-77	5.21 5.41	89 (a)

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				JAMES RIVER BASIN--Continued						
06477150	Rock Creek near Fulton, SD	Lat 43°45'30", long 97°54'32", in NE¼ NE¼ sec.4, T.103 N., R.59 W., Hanson County, Hydrologic Unit 10160011, on right downstream wingwall of highway bridge, 4.8 mi northwest of Fulton, and 9.3 mi upstream from mouth. Elevation of gage is 1,240 ft above sea level, from topographic map. Prior to August 1989 at site 0.16 mi upstream from present location and different datum. From August 1989 to August 1995 at site 0.16 mi upstream from present location and same datum.	240	1967-72‡, 1973-79, 1989-2000	5-18-00	3.10	2.5	3-29-97	13.74	3,120
06478052	Enemy Creek near Mitchell, SD	Lat 43°38'33", long 97°59'09", in NW¼ NW¼ sec.13, T.102 N., R.60 W., Davison County, Hydrologic Unit 10160011, at right downstream wingwall of highway bridge, 7.3 mi upstream from mouth, and 4.5 mi southeast of Mitchell. Elevation of gage is 1,280 ft above sea level, from topographic map.	163	1976-87‡, 1989-2000	5-18-00	5.96	23	6-22-84	15.15	4,280
06478390	Wolf Creek near Clayton, SD	Lat 43°22'18", long 97°36'12", in NW¼ NE¼ sec.29, T.99 N., R.57 W., Hutchinson County, Hydrologic Unit 10160011, at left downstream pier on highway bridge, 4.1 mi upstream from mouth, and 5.6 mi southeast of Clayton. Elevation of gage is 1,210 ft above sea level, from topographic map.	396	1976-88‡, 1989-2000	5-18-00	5.77	238	6-21-84	18.01	6,520
06478513	James River near Yankton, SD	Lat 42°59'45", long 97°22'10", in NE¼ NW¼ sec.5, T.94 N., R.55 W., Yankton County, Hydrologic Unit 10160011, at highway bridge 3.9 mi upstream from Beaver Creek, 17.2 mi upstream from mouth, and 9.0 mi northeast of Yankton. Datum of gage is 1,153.38 ft above sea level.	20,942 4,148 NC	1981-95‡, 1996-2000	8- 9-00	[P]6.48	[P]1,220	6-23-84 4- 9-97	24.34 22.94	26,400 28,800

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				MISSOURI-LEWIS AND CLARK RIVER BASIN						
06479000	Vermillion River near Wakonda, SD	Lat 42°59'27", long 96°57'49", in SW¼ NW¼ sec.2, T.94 N.,R.52 W., Clay County, Hydrologic Unit 10170102, at right downstream wingwall of State Highway 19, 4.3 mi downstream from Frog Creek, 7.4 mi southeast of Wakonda, and 29.6 mi upstream from mouth. Datum of gage is 1,150.9 ft above sea level (levels by Corps of Engineers).	2,170 494 NC	1946-83‡, 1984-2000	5- 1-00	5.35	201	6-23-84	[f]17.62	17,000
				WAUBAY LAKES CHAIN CLOSED BASIN						
06479158	Unnamed tributary Blue Dog Lake near Ortley, SD	Lat 45°21'02", long 97°08'39", in NE¼ SE¼ NE¼ sec.15, T.122 N.,R.52 W., Roberts County, Hydrologic Unit 10160010, on right downstream bridge wingwall, about 6.5 mi upstream from Blue Dog Lake or 2.5 mi east of Ortley and then 1.5 mi north. Elevation of gage is 1,890 ft above sea level, from topographic map.	11.8	1999-2000	10- 5-00	[k]3.86	[i]<1.0	2-27-99	4.74	[b]
				BIG SIOUX RIVER BASIN						
06479490	Mud Creek near Rauville, SD	Lat 45°00'29", long 97°06'21", in NE¼ SE¼ SE¼ sec.19, T.118 N., R.52 W., Codington County, Hydrologic Unit 10170202, at left downstream end of bridge, 7.6 mi upstream of Big Sioux River, and 2.2 mi north of Rauville. Prior to Oct. 1, 1999, at site 0.2 mi downstream at same datum. Elevation of gage is 1,765 ft above sea level, from topographic map.	28.9	1998-2000	3- 8-00	5.99	1.7	3-26-98	[f]4.96	113

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
				BIG SIOUX RIVER BASIN—Continued						
06479498	South Branch tributary Mud Creek near Rauville, SD	Lat 44°57'12", long 97°06'23", in SE¼ NE¼ SE¼ sec.7, T.117 N., R.52 W., Codington County, Hydrologic Unit 10170202, on right bank 40 ft north of right edge of wingwall, 4.3 mi north from junction of U.S. Highways 81 and 212 or by driving south 1.9 mi on U.S. Highway 81 from the town of Rauville. Elevation of gage is 1,740 ft above sea level, from topographic map.	[b]	2000	4-21-00	0.65	[i]<1.0	4-21-00	0.65	[i]<1.0
06479512	Big Sioux River at Broadway, at Watertown, SD	Lat 44°53'22", long 97°07'07", in NE¼ NE¼ NW¼ sec.6, T.116 N., R.52 W., Codington County, Hydrologic Unit 10170202, on right downstream bank at bridge on Broadway Street, 0.1 mi south of the intersection with U.S. Highway 212, 0.3 mi downstream from the confluence of Big Sioux River and Pelican Lake outflow (low flow), and 1.7 mi upstream from Willow Creek. Datum of gage is 1,701.41 ft above sea level.	[b]	1997,2000	6-25-00	6.43	[b]	4- 6-97 4-12-97	[q]13.67 [r]	[r] [s]2,760
06479640	Hidewood Creek near Estelline, SD	Lat 44°36'42", long 96°54'17", in SW¼ NW¼ sec.12, T.113 N., R.51 W., Hamlin County, Hydrologic Unit 10170202, at left upstream wingwall, 2.7 mi north of Estelline, 2.8 mi southeast of Dempster, and 4.7 mi upstream from mouth. Elevation of gage is 1,665 ft above sea level, by barometer.	164	1969-85‡, 1990-2000	7- 9-00	4.10	180	6-16-92	[f]13.10	[t]17,300

Annual maximum discharge at crest-stage partial-record stations

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Water year 2000 maximum			Period of Record Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
BIG SIOUX RIVER BASIN—Continued										
06479980	Medary Creek near Brookings, SD	Lat 44°13'27", long 96°46'02", in NE¼ NE¼ NE¼ sec.25, T.109 N., R.50 W., Brookings County, Hydrologic Unit 10170202, on right downstream wingwall of county bridge, 5.1 mi downstream from Deer Creek, 4.2 mi upstream from mouth, and 6.1 mi southeast of Brookings. Prior to October 1995, 400 ft downstream at same datum. Datum of gage is 1,570.20 ft above sea level.	200	1981-90‡, 1991-2000	7-12-00	[p]4.95	165	7- 4-93 3-28-97	11.78 [a]13.02	3,710 3,500
06480650	Flandreau Creek above Flandreau, SD	Lat 44°03'45", long 96°29'15", in SE¼ NE¼ NE¼ sec.20, T.107 N., R.47 W., Moody County, Hydrologic Unit 10170203, on right bank at county highway bridge 5.9 mi upstream from mouth, and 5.2 mi east of Flandreau. Elevation of gage is 1,555 ft above sea level, from topographic map.	100	1982-91‡, 1992-2000	5-31-00	6.32	322	6-20-84 3-28-97	11.02 [a]11.40	2,650 1,800
06482848	Beaver Creek at Canton, SD	Lat 43°17'12", long 96°35'46", in SW¼ SW¼ SE¼ sec.23, T.98 N., R.49 W., Lincoln County, Hydrologic Unit 10170203, on left bank about 1,000 ft downstream from county highway bridge, 1.0 mi southwest of Canton, and 2.2 mi upstream from mouth. Elevation of gage is 1,225 ft above sea level, from topographic map.	124	1983-89‡, 1990-2000	2-24-00	2.13	58	6- 7-93 6-20-83	[f]12.93 14.61	[i]3,680 ([u])

‡ Operated as a continuous-record gaging station.
a Backwater from ice.
b To be determined.
c From local observer.
d Discharge determined by indirect measurement of peak flow.
e No evidence of flow during the year.
f From floodmark.
g Date unknown.
h Gage height unknown.
i Estimated.
j At different datum.
k Backwater from debris.
l Backwater from construction.
m Gage height below minimum recordable elevation.
n Discharge determined by slope-area indirect measurement; peak resulted from stock dam failure.
o Site then in use, backwater from ice.
p Observed.
q Observed, backwater from ice.
r Backwater.
s Measured.
t Discharge determined by indirect measurement of peak flow, 1.1 mi upstream of gage.
u Backwater from Big Sioux River.

DAILY PRECIPITATION STATIONS

CHEYENNE RIVER BASIN

435827104032500 PRECIP AT LITTLE BEAR RUN NEAR NEWCASTLE, WY

LOCATION.--Lat 43°58'27", long 104°03'25", in NW¼ SW¼ SW¼ sec.10, T.46 N., R.61 W., Weston County, Hydrologic Unit 10120107, 1.2 mi northwest of Moon, 3.2 mi south-southeast of Four Corners, and 4.2 mi northeast of Newcastle.

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

INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 6,250 ft above sea level, from topographic map.

AVERAGE ANNUAL PRECIPITATION.--9 years, 23.96 in.

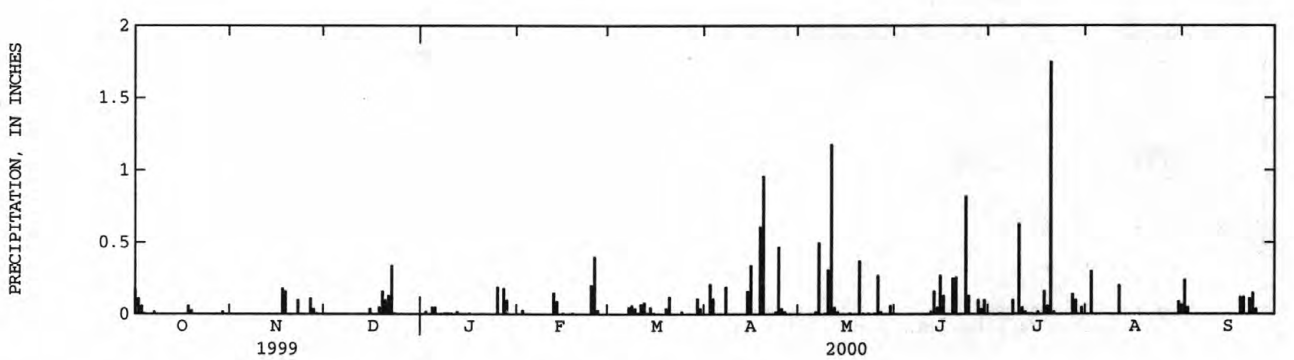
REMARKS.--Records fair except those for estimated periods, which are poor.

PRECIPITATION INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.24
2	.11	.00	.00	.02	.03	.00	.21	.00	.00	.00	e.30	e.05
3	.06	.00	.00	.00	.00	.00	.11	.00	.00	.00	e.00	e.00
4	.01	.00	.00	.05	.00	.00	.00	.00	.00	.01	e.00	e.00
5	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	e.00	e.00
6	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	e.00	e.00
7	.02	.00	.00	.00	.00	.05	.19	.50	.00	.00	e.00	e.00
8	.00	.00	.00	.01	.00	.06	.00	.00	.00	.10	e.00	e.00
9	.00	.00	.00	.01	.00	.04	.00	.01	.00	.01	e.00	e.00
10	.00	.00	.00	.01	.00	.01	.00	.31	.00	.63	e.00	e.00
11	.00	.00	.00	.00	.00	.07	.00	1.18	.00	.05	e.20	e.00
12	.00	.00	.00	.02	.15	.08	.00	.05	.02	.02	e.00	e.00
13	.00	.00	.00	.00	.09	.01	.00	.02	.16	.01	e.00	e.00
14	.00	.00	.00	.00	.00	.05	.16	.00	.05	.01	e.00	e.00
15	.00	.00	.04	.00	.01	.01	.34	.00	.27	.00	e.00	e.00
16	.00	.00	.00	.01	.00	.00	.00	.00	.13	.02	e.00	e.00
17	.00	.18	.00	.00	.00	.00	.00	.01	.00	.00	e.00	e.00
18	.06	.16	.05	.00	.01	.00	.61	.00	.00	.16	e.00	e.00
19	.03	.00	.16	.00	.00	.04	.96	.00	.25	.06	e.00	e.12
20	.00	.00	.10	.00	.00	.12	.00	.37	.26	1.75	e.00	e.12
21	.00	.00	.13	.00	.00	.00	.00	.01	.00	.02	e.00	e.00
22	.00	.10	.34	.00	.00	.00	.00	.00	.00	.00	e.00	e.11
23	.00	.00	.01	.00	.00	.00	.02	.01	.82	.00	e.00	e.15
24	.00	.00	.00	.00	.20	.02	.47	.00	.13	.00	e.00	e.04
25	.00	.00	.00	.19	.40	.00	.04	.01	.00	.00	e.00	e.00
26	.00	.11	.00	.00	.03	.00	.02	.27	.00	.00	e.00	e.00
27	.00	.04	.00	.18	.00	.00	.00	.02	.10	.14	e.00	e.00
28	.00	.01	.00	.10	.00	.00	.00	.00	.04	e.10	e.00	e.00
29	.02	.00	.00	.00	.00	.11	.00	.00	.10	e.00	e.00	e.00
30	.00	.00	.00	.00	---	.04	.00	.06	.01	e.05	e.09	e.00
31	.00	---	.00	.00	---	.00	---	.01	---	e.00	e.07	---
TOTAL	0.48	0.60	0.83	0.65	0.92	0.71	3.13	2.86	2.34	3.14	0.66	0.83

CAL YR 1999 TOTAL 25.23
WTR YR 2000 TOTAL 17.15

e Estimated.



DAILY PRECIPITATION STATIONS

CHEYENNE RIVER BASIN

434002103214500 PRECIP AT RACETRACK BUTTE NEAR FAIRBURN, SD

LOCATION.--Lat 43°40'02", long 103°21'45", in SW¼ SE¼ SE¼ sec.26, T.4 S., R.6 E., Custer County, Hydrologic Unit 10120109, 100 ft east of Wildlife Loop Road CSP #1, 0.8 mi southeast of Racetrack Butte, and 7.0 mi west of Fairburn.

PERIOD OF RECORD.--October 1983 to current year. Published as Custer State Park from October 1983 to September 1987, and as Precip at Custer State Park at Racetrack Butte, near Fairburn, SD, from October 1987 to September 1989.

INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 3,970 ft above sea level, from topographic map.

AVERAGE ANNUAL PRECIPITATION.--17 years, 18.94 in.

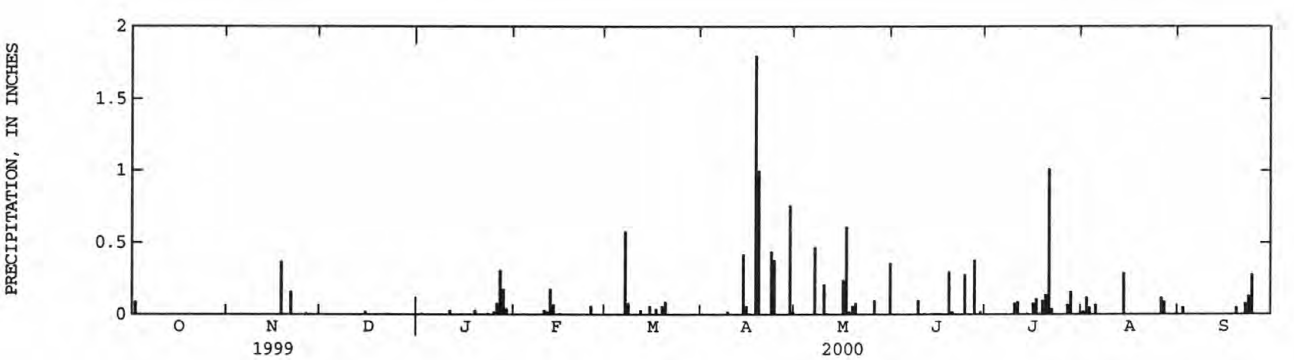
REMARKS.--Records poor.

PRECIPITATION INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.02	.00
2	.09	.00	.00	.01	.00	.00	.00	e.00	.00	.00	.12	.05
3	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.05	.00
4	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.07	.00
6	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.58	.00	e.47	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.08	.00	e.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.02	e.00	.10	.00	.00	.00
10	.00	.00	.00	.00	.03	.00	.00	.21	.00	.08	.00	.00
11	.00	.00	.00	.03	.02	.00	.00	.01	.01	.09	.00	.00
12	.00	.00	.00	.00	.18	.03	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.07	.00	.00	.00	.01	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.42	.00	.01	.01	.29	.00
15	.00	.00	.02	.00	.01	.06	.06	.00	.01	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.01	.24	.01	.08	.00	.00
17	.00	.00	.00	.00	.00	.04	.00	.61	.00	.11	.00	.00
18	.00	.37	.00	.00	.00	.00	1.80	.02	.00	.01	.00	.00
19	.00	.00	.00	.03	.00	.06	1.00	.06	.30	.10	.00	.05
20	.00	.00	.00	.00	.00	.09	.00	.08	.02	.14	.00	.00
21	.00	.16	.00	.00	.00	.00	.00	.00	.00	1.01	.00	.00
22	.00	.00	.01	.00	.00	.00	.00	.00	.00	.04	.00	.08
23	.00	.00	.00	.01	.00	.00	.44	.00	.00	.00	.00	.13
24	.00	.00	.00	.00	.00	.00	.38	.00	.28	.00	.00	.28
25	.00	.00	.00	.02	.06	.00	.00	.00	.00	.00	.00	.00
26	.00	.01	.00	.08	.00	.00	.00	.10	.00	.00	.12	.00
27	.00	.00	.00	.31	.00	.00	e.00	.00	.38	.07	.09	.00
28	.00	.00	.00	.18	.00	.00	e.00	.00	.00	.16	.00	.00
29	.00	.00	.00	.04	.00	.00	e.76	.00	.02	.00	.00	.00
30	.00	.00	.00	.00	---	.00	e.02	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.36	---	.02	.01	---
TOTAL	0.09	0.54	0.03	0.71	0.37	0.94	4.91	2.16	1.15	1.92	0.77	0.59

CAL YR 1999 TOTAL 22.48
WTR YR 2000 TOTAL 14.18

e Estimated.



MISCELLANEOUS WATER QUALITY DATA

00430061 HURON WELL FIELD
(National Trends Network Acid Precipitation Station)

LOCATION.--Lat 44°21'18", long 98°17'38", 3.0 mi west of the City of Huron at the City of Huron Municipal Well Field.

PRECIPITATION RECORDS

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

INSTRUMENTATION.--The sample collector is a straight-sided polyethylene bucket that is triggered into opening and closing by a precipitation switch, and a shielded weighing-type precipitation recorder. Installation and equipment conforms to guidelines set by National Atmospheric Deposition Program.

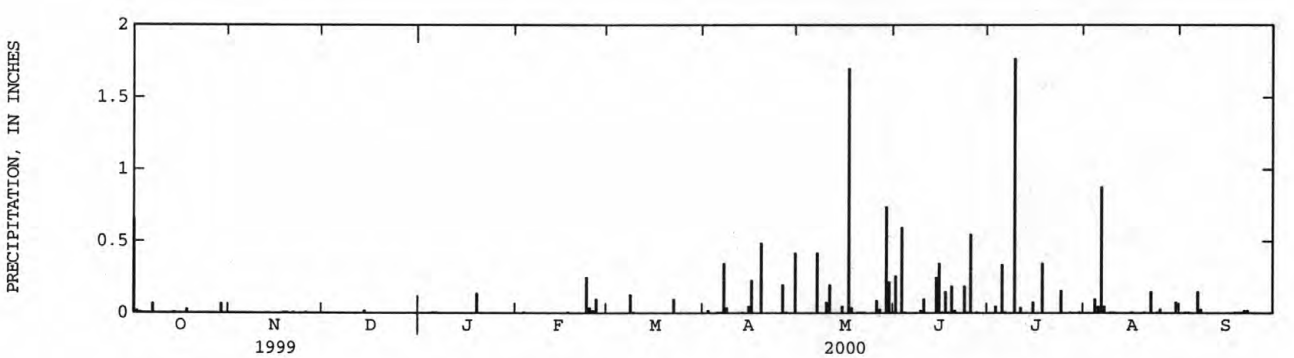
REMARKS.--Records good. Field measurements are taken as part of the National Atmospheric Deposition Program and National Trends Network (NADP/NTN).

PRECIPITATION INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.00	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00
2	.02	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	<.01
3	<.01	.00	.00	.00	<.01	.00	.00	.00	.60	.05	.00	<.01
4	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.10	.00
5	.00	.00	.00	<.01	.00	.00	<.01	.00	.00	.34	.05	.00
6	.00	.00	.00	<.01	.00	.00	<.01	.00	.00	<.01	.88	.15
7	.07	.00	.00	.00	.00	.00	.35	.42	.00	.00	.05	.03
8	.00	.00	.00	.00	.00	.13	.04	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	<.01	.00	.00	.02	1.77	<.01	.00
10	.00	.00	.00	.00	.00	.00	.00	.08	.10	.00	<.01	.00
11	.00	.00	.00	.00	.00	.00	.00	.20	.00	.04	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	<.01	.00	.00	.00	.00	.00
14	<.01	.00	.02	.00	.00	.00	.00	.00	.25	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.05	.05	.35	.08	.00	.00
16	.00	.00	.00	.00	.00	.00	.23	.00	<.01	.00	<.01	.00
17	.00	.00	.00	.00	.01	.00	.00	1.70	.15	.00	.00	.00
18	.03	<.01	.00	.00	.00	.00	.00	.04	<.01	.35	.00	<.01
19	.00	.01	.00	.14	.00	.00	.49	.00	.19	.00	.00	<.01
20	.00	.00	.00	.00	.00	.00	.00	<.01	.02	.00	<.01	<.01
21	.00	.01	.00	.00	.00	.00	.00	<.01	.00	.00	.00	.02
22	.00	.00	.00	.00	.00	.10	.00	<.01	.00	.00	.15	.02
23	.00	.00	.00	.00	.25	.00	.00	.00	.19	.00	.00	.00
24	.00	.00	.00	.00	.04	.00	.00	.00	<.01	.16	<.01	.00
25	.00	<.01	.00	.00	.02	.00	.00	.00	.55	.00	.03	.00
26	.00	.00	.00	.00	.10	.00	.20	.09	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.01	.03	.01	<.01	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.07	.00	.00	.00	.00	.00	.00	.74	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.42	.22	.00	<.01	.08	.00
31	.00	---	.00	.00	---	.00	---	<.01	---	.00	.00	---
TOTAL	0.87	0.04	0.02	0.16	0.43	0.24	1.84	3.61	2.73	2.82	1.39	0.27

CAL YR 1999 TOTAL 16.31
WTR YR 2000 TOTAL 14.42

< Actual value is known to be less than the value shown



00430061 HURON WELL FIELD--Continued
(National Trends Network Acid Precipitation Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1983 to current year (weekly composite).

REMARKS.--Field measurements are taken and samples collected on a weekly basis as part of the National Atmospheric Deposition Program (NADP) and National Trends Network. Precipitation water-quality laboratory analyses are performed by the Central Analytical Laboratory (CAL), Illinois State Water Survey, Champaign, Illinois. The records of precipitation and precipitation water-quality presented below are from the National Atmospheric Deposition Program (NRSP-3)/National Trends Network (2000), NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820. These records were retrieved from the Internet on Mar. 10, 2001, at http://nadp.sws.uiuc.edu/nadpdata; the data were not reviewed for accuracy or consistency by the South Dakota District of the USGS. Data collected after Aug. 29, 2000, were not available at the time of preparation of this report.

WATER-QUALITY DATA

DATE	TOTAL PRECIP-ITATION FOR DEFINED PERIOD (IN) (00193)	VOLUME ATM DEP WET (L) (83177)	PH FIELD ATM DEP WET T (UNITS) (83106)	PH LAB ATM DEP WET T (UNITS) (83107)	SPEC. CONDUC-TANCE FIELD ATM DEP WET TOT (US/CM) (83154)	SPEC. CONDUC-TANCE LAB ATM DEP WET TOT (US/CM) (83156)	CALCIUM ATM DEP WET DIS (MG/L) (82932)
OCT 1999 05-12	.07	.113	--	--	--	--	--
OCT 12-19	.03	.035	--	6.47	--	10.9	.71
OCT 19-26	.0	.0	--	--	--	--	--
OCT 26-NOV 02	.07	.113	5.38	6.41	17.5	17.2	.96
NOV 02-09	<.01	.009	--	--	--	--	--
NOV 09-16	.0	.0	--	--	--	--	--
NOV 16-23	.02	.053	--	--	--	--	--
NOV 23-30	<.01	.002	--	--	--	--	--
NOV 30-DEC 07	<.01	.001	--	--	--	--	--
DEC 07-14	<.01	.006	--	--	--	--	--
DEC 14-21	.02	.003	--	--	--	--	--
DEC 21-28	.0	.0	--	--	--	--	--
DEC 28 1999-JAN 04 2000	.0	.0	--	--	--	--	--
JAN 04-11	<.01	.001	--	--	--	--	--
JAN 11-18	<.01	.001	--	--	--	--	--
JAN 18-25	.14	.226	5.49	5.74	4.5	4.1	.08
JAN 25-FEB 01	<.01	.001	--	--	--	--	--
FEB 01-08	.0	.0	--	--	--	--	--
FEB 08-15	.0	.0	--	--	--	--	--
FEB 15-22	.01	.013	--	6.13	--	--	--
FEB 22-29	.41	.711	6.65	6.6	12.	11.2	.25
FEB 29-MAR 07	.0	.0	--	--	--	--	--
MAR 07-14	.13	.219	5.73	6.39	9.9	9.5	.65
MAR 14-21	.0	.0	--	--	--	--	--
MAR 21-28	.1	.172	6.62	6.64	17.9	18.7	1.47
MAR 28-APR 04	.02	.032	--	6.81	--	--	.15
APR 04-11	.39	.234	6.12	6.59	23.2	8.9	.33
APR 11-18	.28	.271	6.05	6.46	10.7	10.	.55
APR 18-25	.49	.848	6.81	6.91	25.9	23.2	1.18
APR 25-MAY 02	.63	1.095	6.6	6.75	18.1	18.7	.93
MAY 02-09	.42	.73	6.39	6.6	12.	11.5	.36
MAY 09-16	.35	.635	6.39	6.73	20.1	21.1	.68
MAY 16-23	1.74	3.04	5.79	5.9	8.7	7.9	.27
MAY 23-30	1.08	1.778	5.86	6.36	15.7	14.4	.32
MAY 30-JUN 06	.87	1.435	6.16	6.71	13.3	14.5	.72

00430061 HURON WELL FIELD--Continued
(National Trends Network Acid Precipitation Station)

WATER-QUALITY DATA

DATE	MAG-NESIUM ATM DEP WET DIS (MG/L) (83002)	POTAS-SIUM ATM DEP WET DIS (MG/L) (83120)	SODIUM ATM DEP WET DIS (MG/L) (83138)	CHLO-RIDE ATM DEP WET DIS (MG/L) (82944)	SULFATE ATM DEP WET DIS AS SO4 (MG/L) (83160)	NI-TROGEN AMMON. ATM DEP WET DIS AS NH4 (MG/L) (83047)	NI-TROGEN NITRATE ATM DEP WET DIS AS NO3 (MG/L) (83071)
OCT 1999 05-12	--	--	--	--	--	--	--
OCT 12-19	.083	.053	.039	.1	1.16	.57	2.2
OCT 19-26	--	--	--	--	--	--	--
OCT 26-NOV 02	.123	.074	.09	.09	1.91	1.04	2.99
NOV 02-09	--	--	--	--	--	--	--
NOV 09-16	--	--	--	--	--	--	--
NOV 16-23	--	--	--	--	--	--	--
NOV 23-30	--	--	--	--	--	--	--
NOV 30-DEC 07	--	--	--	--	--	--	--
DEC 07-14	--	--	--	--	--	--	--
DEC 14-21	--	--	--	--	--	--	--
DEC 21-28	--	--	--	--	--	--	--
DEC 28 1999-JAN 04 2000	--	--	--	--	--	--	--
JAN 04-11	--	--	--	--	--	--	--
JAN 11-18	--	--	--	--	--	--	--
JAN 18-25	.015	.007	.01	<.03	.26	.32	.79
JAN 25-FEB 01	--	--	--	--	--	--	--
FEB 01-08	--	--	--	--	--	--	--
FEB 08-15	--	--	--	--	--	--	--
FEB 15-22	--	--	--	--	--	--	--
FEB 22-29	.022	.019	.047	.06	.88	1.16	1.47
FEB 29-MAR 07	--	--	--	--	--	--	--
MAR 07-14	.089	.044	.131	.16	.95	.44	1.04
MAR 14-21	--	--	--	--	--	--	--
MAR 21-28	.107	.061	.107	.12	2.31	1.01	2.41
MAR 28-APR 04	.033	.016	.026	<.1	.76	.97	.62
APR 04-11	.06	.024	.063	.03	.72	.77	.81
APR 11-18	.057	.037	.071	.07	1.15	.69	1.38
APR 18-25	.088	.081	.14	.12	2.25	1.81	3.09
APR 25-MAY 02	.06	.035	.05	.1	1.74	1.6	2.75
MAY 02-09	.064	.034	.05	.07	.78	1.08	1.67
MAY 09-16	.069	.068	.066	.09	1.52	2.06	3.19
MAY 16-23	.027	.02	.026	.04	1.01	.61	1.26
MAY 23-30	.03	.038	.04	.08	1.03	1.56	2.69
MAY 30-JUN 06	.072	.063	.039	.06	.97	1.24	2.27

00430061 HURON WELL FIELD--Continued
(National Trends Network Acid Precipitation Station)

WATER-QUALITY DATA

DATE	TOTAL PRECIP-ITATION FOR DEFINED PERIOD (IN) (00193)	VOLUME ATM DEP WET (L) (83177)	PH FIELD ATM DEP WET T (UNITS) (83106)	PH LAB ATM DEP WET T (UNITS) (83107)	SPEC. CONDUC-TANCE FIELD ATM DEP WET TOT (US/CM) (83154)	SPEC. CONDUC-TANCE LAB ATM DEP WET TOT (US/CM) (83156)	CALCIUM ATM DEP WET DIS (MG/L) (82932)
JUN 2000 06-13	.12	.166	5.78	6.32	13.3	14.3	.5
JUN 13-20	.94	1.624	6.5	6.78	14.9	17.1	.38
JUN 13-20	.94	1.624	6.5	6.78	14.9	17.1	.38
JUN 20-27	.76	1.255	6.27	6.57	8.4	9.9	.25
JUN 27-JUL 04	.06	.102	5.9	6.45	13.	13.3	.53
JUL 04-11	2.11	3.51	5.78	6.32	5.7	6.4	.18
JUL 11-18	.47	.79	6.06	6.37	10.7	11.8	.34
JUL 18-25	.16	.292	5.88	6.48	16.1	16.5	.55
JUL 25-AUG 01	.0	.0	--	--	--	--	--
AUG 01-08	1.08	1.923	6.02	6.15	13.2	14.3	.44
AUG 08-15	.0	.0	--	--	--	--	--
AUG 15-22	<.01	.016	--	--	--	--	--
AUG 22-29	.18	.333	--	--	--	--	--

DATE	MAG-NESIUM ATM DEP WET DIS (MG/L) (83002)	POTAS-SIUM ATM DEP WET DIS (MG/L) (83120)	SODIUM ATM DEP WET DIS (MG/L) (83138)	CHLO-RIDE ATM DEP WET DIS (MG/L) (82944)	SULFATE ATM DEP WET DIS AS SO4 (MG/L) (83160)	NI-TROGEN AMMON. ATM DEP WET DIS AS NH4 (MG/L) (83047)	NI-TROGEN NITRATE ATM DEP WET DIS AS NO3 (MG/L) (83071)
JUN 2000 06-13	.053	.074	.05	.11	1.52	1.23	2.27
JUN 13-20	.054	.33	.176	.2	.73	1.12	1.17
JUN 13-20	.054	.33	.176	.2	.73	1.12	1.17
JUN 20-27	.019	.022	.009	.03	.46	.9	1.36
JUN 27-JUL 04	.087	.038	.034	.1	.7	1.07	2.6
JUL 04-11	.027	.015	.032	.04	.53	.53	.86
JUL 11-18	.064	.068	.021	.06	1.05	1.16	1.79
JUL 18-25	.061	.098	.043	.14	1.24	1.67	3.06
JUL 25-AUG 01	--	--	--	--	--	--	--
AUG 01-08	.036	.056	.025	.08	1.62	1.14	2.52
AUG 08-15	--	--	--	--	--	--	--
AUG 15-22	--	--	--	--	--	--	--
AUG 22-29	--	--	--	--	--	--	--

MISCELLANEOUS WATER QUALITY DATA

The following water-quality data are for a sewage lagoon and a reservoir at EROS Data Center, and private wells downgradient of EROS Data Center near Garretson, South Dakota. Water samples are routinely collected one time per year as part of a monitoring program with the EROS Data Center.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

STATION NAME	STATION NUMBER	DATE	TIME	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)
LAGOON #1	434415096371501	05-10-00	1040	1440	6.2	16.0	18.5	722
EROS LAKE	434405096365501	05-10-00	0900	815	6.6	11.0	16.9	721
103N48W 5CACA2	434508096372701	05-09-00	1515	873	6.3	20.0	9.2	726
103N48W 9CCDA	434400096362201	05-09-00	1245	1350	6.2	19.0	9.7	729
103N48W17ACCC2	434332096371501	05-09-00	1055	878	5.8	17.5	9.5	725

STATION NAME	DATE	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	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)	NITRO-GEN NITRATE DIS-SOLVED (MG/L AS N) (00618)
LAGOON #1	05-10-00	7.8	88	80	240	950	20.2	4.98	13.3	8.33
EROS LAKE	05-10-00	7.4	81	--	31	536	.037	<.010	<.050	--
103N48W 5CACA2	05-09-00	--	--	--	<10	663	<.020	<.010	.109	--
103N48W 9CCDA	05-09-00	7.8	72	--	<10	872	<.020	<.010	35.4	--
103N48W17ACCC2	05-09-00	.4	4	--	<10	601	.171	<.010	<.050	--

STATION NAME	DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CYANIDE TOTAL (MG/L AS CN) (00720)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
LAGOON #1	05-10-00	2.47	561	512	5.0	.15	6680	34	<1	195
EROS LAKE	05-10-00	.021	27	329	E.7	<.01	70	<1	<1	2
103N48W 5CACA2	05-09-00	<.010	5	200	<.8	<.01	1160	<1	<1	52
103N48W 9CCDA	05-09-00	.013	5	76	.9	<.01	<20	<1	<1	30
103N48W17ACCC2	05-09-00	.012	5	291	<.8	<.01	220	<1	<1	8

The following discharge measurements were made at current streamflow and crest-stage partial-record stations. Sites are listed in downstream order.

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
05051650 LA BELLE CR NEAR VEBLEN, SD (LAT 45 53 33N LONG 097 21 40W)					
OCT 1999					
05...	1200	.83	7.0	6.0	1090
05289985 BIG COULEE CR NEAR PEEVER, SD (LAT 45 29 14N LONG 096 57 26W)					
OCT 1999					
05...	1400	.69	8.5	8.0	1390
NOV					
08...	1235	.79	7.0	20.0	1440
DEC					
13...	1505	.74	0.5	9.0	1450
JAN 2000					
25...	1205	.32	0.0	-3.0	1470
MAR					
07...	0955	3.7	4.0	17.0	1240
APR					
19...	1600	4.2	5.0	5.0	1280
MAY					
23...	1320	1.1	16.0	25.0	1340
JUL					
11...	1220	.18	24.0	24.0	1420
AUG					
14...	1355	.02	25.0	32.0	1510
05292704 NORTH FORK YELLOW BANK RIVER NEAR ODESSA, MN (LAT 45 11 21N LONG 096 24 54W)					
OCT 1999					
06...	0820	2.6	6.0	7.0	1060
NOV					
08...	1415	4.0	8.0	21.0	1080
DEC					
13...	1645	5.0	0.0	8.0	1190
JAN 2000					
25...	1440	4.1	0.0	-3.0	1260
MAR					
07...	0805	23	5.0	5.0	820
APR					
20...	0900	14	5.0	6.0	977
MAY					
24...	0935	10	17.0	17.0	1100
JUL					
12...	0755	5.6	21.0	20.0	903
AUG					
15...	0800	.62	22.0	18.0	1020
05299700 COBB CREEK NEAR GARY, SD (LAT 44 44 22N LONG 096 27 26W)					
OCT 1999					
05...	1410	4.9	12.0	10.0	820
NOV					
09...	1235	4.0	10.0	22.5	801
DEC					
14...	1135	4.4	1.0	4.5	852
JAN 2000					
27...	1300	2.6	1.0	-4.0	860
MAR					
10...	1350	4.5	1.5	6.0	750
APR					
17...	1430	6.1	6.0	7.5	854
JUN					
01...	1400	8.0	17.5	16.0	821
JUL					
12...	1305	10	25.0	27.5	760
AUG					
15...	1255	2.1	25.0	23.0	841

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06334500 LITTLE MISSOURI R AT CAMP CROOK, SD (LAT 45 32 49N LONG 103 58 23W)					
OCT 1999					
12...	0900	7.9	9.5	8.0	2020
NOV					
22...	0820	16	2.0	2.0	2150
JAN 2000					
10...	0910	9.3	0.0	-1.0	2810
FEB					
22...	0935	12	0.0	1.0	2660
APR					
04...	0848	13	7.0	8.0	1840
MAY					
08...	0830	13	14.0	9.0	1990
JUN					
21...	1030	5.3	16.0	20.0	1660
AUG					
02...	0850	1.4	22.0	33.5	822
06354882 OAK CR NEAR WAKPALA, SD (LAT 45 42 43N LONG 100 33 32W)					
OCT 1999					
07...	0810	2.0	10.5	7.5	1470
NOV					
10...	0845	3.0	4.5	5.0	1670
JAN 2000					
04...	1525	1.5	0.0	-9.0	1720
MAR					
17...	0715	37	0.0	-0.5	1300
APR					
18...	0745	5.3	8.5	9.0	1890
MAY					
23...	0755	2.5	18.0	16.0	2360
JUL					
13...	0725	.95	24.5	24.0	981
06355500 NORTH FORK GRAND R NEAR WHITE BUTTE, SD (LAT 45 48 08N LONG 102 21 43W)					
OCT 1999					
12...	1245	12	12.0	13.0	2890
NOV					
22...	1215	13	2.0	5.5	2870
JAN 2000					
10...	1340	12	0.0	-1.0	3590
FEB					
22...	1445	14	0.0	18.0	3010
APR					
05...	1350	16	10.0	13.0	3080
MAY					
08...	1315	9.7	13.0	18.0	3240
JUN					
22...	1030	13	20.0	30.5	3610
AUG					
02...	1340	1.1	27.5	32.0	3830
06356500 SOUTH FORK GRAND R NEAR CASH, SD (LAT 45 38 56N LONG 102 38 27W)					
FEB 2000					
22...	1243	20	0.0	21.0	2240
APR					
05...	1140	26	8.0	9.5	2320
MAY					
08...	1115	54	11.0	16.0	2300
JUN					
21...	1600	23	21.0	30.0	2420
AUG					
02...	1120	11	25.0	30.0	1630

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06357620 WILLOW CREEK NEAR KELDRON, SD (LAT 45 50 00N LONG 101 52 02W)					
MAY 2000					
08...	1525	4.5	17.0	17.0	3750
06357800 GRAND R AT LITTLE EAGLE, SD (LAT 45 39 28N LONG 100 49 04W)					
OCT 1999					
06...	1320	124	12.0	17.5	1880
NOV					
09...	1355	102	8.5	16.5	1920
JAN 2000					
04...	1320	49	0.0	-8.5	2130
MAR					
16...	1525	652	4.5	5.5	1130
APR					
17...	1445	90	12.5	16.0	2010
MAY					
23...	1320	113	23.5	25.5	1840
JUL					
12...	1435	55	31.5	37.0	1900
AUG					
21...	1340	39	25.0	28.0	2410
06359500 MOREAU R NEAR FAITH, SD (LAT 45 11 52N LONG 102 09 22W)					
OCT 1999					
14...	0800	15	7.5	5.0	2300
NOV					
22...	1500	20	2.0	4.0	2320
JAN 2000					
11...	1610	15	0.0	-6.0	3310
FEB					
23...	1600	33	0.0	18.0	2170
APR					
06...	0845	23	6.0	-1.0	3300
MAY					
09...	0745	245	12.0	14.0	1350
JUN					
16...	1155	27	16.5	14.5	2800
AUG					
04...	1320	8.1	28.5	32.5	2390
06360500 MOREAU R NEAR WHITEHORSE, SD (LAT 45 15 21N LONG 100 50 33W)					
OCT 1999					
06...	1025	20	9.0	12.5	2560
NOV					
09...	1025	19	6.5	14.5	2680
JAN 2000					
04...	1000	14	0.0	-13.0	1300
MAR					
16...	1115	343	3.0	5.5	1600
APR					
17...	1050	41	6.0	4.0	2940
MAY					
22...	1335	141	23.0	27.0	2240
JUL					
12...	0920	9.5	25.5	27.0	3330
AUG					
21...	0935	.31	21.0	19.5	3540
21...	1110	.32	25.5	25.5	3540
06394450 PASS CREEK NEAR DEWEY, SD (LAT 43 33 05N LONG 103 56 15W)					
MAR 2000					
15...	0930	.15	2.0	4.0	2310

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06395000 CHEYENNE R AT EDGEMONT, SD (LAT 43 18 20N LONG 103 49 14W)					
OCT 1999					
04...	1100	29	8.0	16.0	5250
NOV					
29...	1030	36	2.0	1.0	4590
JAN 2000					
18...	1125	34	0.0	3.0	4490
MAR					
15...	1205	65	5.0	0.0	3790
APR					
26...	1013	231	12.0	20.0	2440
JUN					
13...	1000	15	17.5	21.0	4640
JUL					
24...	1030	10	24.5	25.0	4060
AUG					
14...	0935	4.6	21.0	25.0	5680
SEP					
12...	0810	1.0	10.5	10.0	4370
06400000 HAT CR NEAR EDGEMONT, SD (LAT 43 14 24N LONG 103 35 16W)					
OCT 1999					
04...	1322	1.2	10.5	30.0	3120
NOV					
29...	1250	4.6	2.5	10.0	2960
JAN 2000					
18...	1315	4.1	0.0	9.0	2920
MAR					
16...	1225	82	3.0	12.0	2420
APR					
21...	1225	1020	5.5	9.0	2000
22...	1400	2940	10.5	22.0	1500
MAY					
03...	1050	274	16.0	26.0	2220
08...	1205	87	15.5	22.0	3290
JUN					
13...	1200	14	27.0	24.0	3910
JUL					
24...	1307	3.2	26.0	36.0	3140
AUG					
14...	1045	.53	24.0	30.0	4370
06400875 HORSEHEAD CR AT OELRICHS, SD (LAT 43 11 17N LONG 103 13 34W)					
OCT 1999					
06...	1400	.03	13.5	16.0	3280
DEC					
02...	0835	.30	3.0	3.0	3670
JAN 2000					
19...	0950	.32	1.5	-3.0	3980
MAR					
16...	1000	7.7	4.0	5.0	1910
APR					
21...	1725	767	4.0	10.0	1000
22...	1010	1640	8.5	20.0	880
MAY					
08...	0910	30	16.0	20.0	1220
19...	1010	206	13.0	23.0	1130
19...	1245	179	13.0	26.0	1120
19...	1450	165	13.0	25.0	1120
22...	0925	38	17.0	22.0	1230
JUN					
14...	0815	.68	17.0	16.0	2520
JUL					
26...	0754	.18	21.0	20.0	3230

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06401500 CHEYENNE R BELOW ANGOSTURA DAM, SD (LAT 43 20 42N LONG 103 26 12W)					
OCT 1999					
07...	1120	9.6	14.0	15.0	2700
DEC					
02...	1015	9.6	6.0	8.0	2820
JAN 2000					
19...	0830	4.0	1.5	-3.0	2770
MAR					
16...	0800	2.9	3.5	0.0	2880
28...	1235	148	9.5	13.0	2980
APR					
26...	1530	1100	11.5	23.0	2930
JUN					
14...	1050	12	16.0	25.0	2600
JUL					
26...	1000	8.0	21.0	26.0	2650
SEP					
12...	1255	5.6	21.0	30.0	2470
06402000 FALL RIVER AT HOT SPRINGS, SD (LAT 43 25 50N LONG 103 28 33W)					
OCT 1999					
07...	1420	33	24.0	17.0	1320
DEC					
02...	1245	31	23.0	10.0	1330
JAN 2000					
13...	1040	29	21.0	0.0	1290
MAR					
16...	1430	30	23.5	10.0	1260
APR					
12...	1100	38	21.0	14.0	1200
JUN					
14...	1240	28	25.5	20.0	1270
JUL					
27...	0755	31	24.5	19.0	1260
SEP					
13...	0750	28	24.0	15.0	1290
06402430 BEAVER CREEK NEAR PRINGLE, SD (LAT 43 34 53N LONG 103 28 34W)					
OCT 1999					
14...	1150	6.0	10.0	18.0	530
DEC					
01...	0840	4.5	2.0	-3.0	530
JAN 2000					
13...	0840	1.5	0.0	-10.0	571
MAR					
20...	0900	2.9	1.5	0.0	402
APR					
22...	1700	9.0	13.0	21.5	480
JUN					
15...	0824	2.6	15.0	19.0	515
JUL					
19...	0913	2.5	16.0	24.0	497
SEP					
14...	0845	1.2	12.0	14.0	510
06402470 BEAVER CREEK ABOVE BUFFALO GAP, SD (LAT 43 31 20N LONG 103 21 23W)					
OCT 1999					
08...	1110	17	16.5	18.0	2260

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06402500 BEAVER CR NEAR BUFFALO GAP, SD (LAT 43 28 00N LONG 103 18 20W)					
OCT 1999					
08...	0840	12	11.5	9.0	2410
DEC					
01...	1100	13	9.0	12.0	2450
JAN 2000					
13...	1305	12	3.5	3.0	2450
MAR					
20...	1215	12	7.0	1.0	2440
APR					
27...	1130	13	12.5	17.0	2540
JUN					
15...	1114	6.3	17.0	17.0	2490
JUL					
19...	1148	6.6	19.5	25.0	2430
SEP					
13...	1020	8.7	15.0	24.0	2480
06402995 FRENCH CREEK ABOVE STOCKADE LAKE, NEAR CUSTER, SD (LAT 43 46 10N LONG 103 32 10W)					
OCT 1999					
01...	1030	9.1	5.5	3.0	413
06403300 FRENCH CR ABOVE FAIRBURN, SD (LAT 43 43 02N LONG 103 22 03W)					
OCT 1999					
12...	1315	14	11.0	20.0	310
NOV					
30...	0905	12	1.0	6.0	323
JAN 2000					
10...	1000	6.3	0.0	0.0	329
MAR					
17...	0915	14	2.0	3.0	315
APR					
25...	1124	150	10.0	20.0	321
MAY					
09...	0927	26	11.0	15.0	295
JUN					
09...	0832	8.6	19.0	27.0	307
JUL					
20...	0852	5.3	17.0	14.0	302
SEP					
08...	0925	2.1	15.0	23.0	300
06403700 CHEYENNE RIVER AT REDSHIRT, SD (LAT 43 40 23N LONG 102 53 36W)					
OCT 1999					
13...	1155	120	11.5	16.0	2500
DEC					
06...	1303	120	1.0	18.0	2520
JAN 2000					
20...	1005	77	0.0	-10.0	2450
MAR					
21...	1505	105	7.5	12.0	2460
APR					
24...	1137	7890	11.0	22.0	2580
JUN					
08...	0815	105	22.0	20.0	2510
JUL					
06...	0900	62	23.5	24.0	2540
SEP					
07...	0825	86	17.0	12.0	2660
06403810 BATTLE CR ABOVE KEYSTONE, SD (LAT 43 54 17N LONG 103 27 48W)					
JUN 2000					
20...	0940	.28	11.0	12.5	481

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06403850 GRIZZLY BEAR CREEK NEAR KEYSTONE, SD (LAT 43 52 41N LONG 103 26 14W)					
JUN 2000					
20...	1115	1.3	14.0	14.5	94
06404000 BATTLE CR NEAR KEYSTONE, SD (LAT 43 52 21N LONG 103 20 10W)					
OCT 1999					
15...	0845	4.2	8.0	6.0	399
DEC					
08...	1215	4.3	0.0	3.0	388
JAN 2000					
20...	1455	3.3	0.0	2.0	369
MAR					
21...	0800	4.7	0.5	0.0	342
APR					
24...	1005	97	7.0	12.0	144
JUN					
07...	0935	13	17.5	28.0	246
JUL					
18...	0840	3.0	17.5	26.0	363
AUG					
17...	1225	.40	21.5	26.0	405
SEP					
06...	0715	.01	22.0	21.0	429
07...	1315	.02	21.5	26.0	430
06404800 GRACE COOLIDGE CREEK NEAR HAYWARD, SD (LAT 43 48 07N LONG 103 26 03W)					
OCT 1999					
01...	0910	.99	5.0	-1.0	95
06404998 GRACE COOLIDGE CR NR GAME LODGE NR CUSTER, SD (LAT 43 45 40N LONG 103 21 49W)					
OCT 1999					
01...	1150	5.6	6.5	0.0	202
29...	0920	4.5	6.5	10.0	207
DEC					
03...	1120	4.4	2.0	5.0	203
JAN 2000					
12...	1155	4.6	0.0	9.0	206
MAR					
14...	1130	3.0	3.0	9.0	202
APR					
25...	1345	43	9.5	12.0	130
JUN					
08...	1150	6.4	21.0	33.0	180
JUL					
21...	1112	3.4	18.0	22.0	203
AUG					
17...	0930	1.3	18.0	19.0	223
SEP					
08...	1140	1.5	16.5	26.0	230
06405800 BEAR GULCH NEAR HAYWARD, SD (LAT 43 47 31N LONG 103 20 49W)					
OCT 1999					
01...	0735	.50	6.0	0.0	152

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06406000 BATTLE CR AT HERMOSA, SD (LAT 43 49 41N LONG 103 11 44W)					
OCT 1999					
13...	1430	37	11.5	22.0	508
DEC					
08...	1040	33	3.5	2.0	497
JAN 2000					
20...	1345	29	2.0	3.0	480
MAR					
21...	1045	28	5.5	5.0	474
APR					
24...	1140	122	10.5	12.0	306
JUN					
07...	1135	37	19.0	28.0	456
JUL					
18...	1101	26	16.5	20.0	492
AUG					
15...	1230	24	19.0	24.0	492
SEP					
07...	1215	24	16.0	25.0	496
06406500 BATTLE CR BELOW HERMOSA, SD (LAT 43 43 30N LONG 102 54 15W)					
OCT 1999					
13...	1310	41	11.5	17.0	603
DEC					
08...	0845	29	0.0	-5.0	618
JAN 2000					
20...	1210	22	0.0	4.0	610
MAR					
21...	1250	32	5.5	10.0	629
APR					
24...	1425	248	9.5	15.0	745
JUN					
07...	1320	45	23.5	29.0	634
JUL					
18...	1240	26	21.0	23.0	622
AUG					
15...	1110	24	22.0	28.0	600
SEP					
07...	1020	21	17.0	21.0	608
06406700 SPRING CR AT OREVILLE, NR HILL CITY, SD (LAT 43 51 58N LONG 103 37 24W)					
JUN 2000					
21...	0955	5.8	9.5	16.5	343
06406740 SUNDAY GULCH BL JOHNSON CANYON NR HILL CITY, SD (LAT 43 52 10N LONG 103 34 55W)					
JUN 2000					
21...	1125	.80	13.0	17.0	78
06406760 RENO GULCH NEAR HILL CITY, SD (LAT 43 54 35N LONG 103 36 43W)					
JUN 2000					
21...	1220	.23	12.0	19.5	272

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06406920 SPRING CREEK ABOVE SHERIDAN LAKE NEAR KEYSTONE, SD (LAT 43 57 39N LONG 103 29 18W)					
OCT 1999					
07...	0920	17	8.0	9.0	371
NOV					
17...	1215	13	2.5	19.0	374
JAN 2000					
05...	1240	10	0.0	2.0	418
FEB					
16...	1315	9.4	0.0	8.5	411
MAR					
30...	1210	11	4.0	5.0	352
MAY					
03...	1140	35	13.0	20.0	274
JUN					
14...	1110	15	14.0	15.0	301
JUL					
27...	1335	6.8	24.0	32.5	345
SEP					
01...	1245	3.5	19.5	28.0	456
06407500 SPRING CR NEAR KEYSTONE, SD (LAT 43 58 45N LONG 103 20 25W)					
OCT 1999					
07...	1105	19	12.0	13.0	297
NOV					
17...	1340	14	5.0	18.0	307
JAN 2000					
06...	1130	8.6	0.0	5.5	322
FEB					
17...	1035	9.7	0.5	-1.0	326
MAR					
30...	1410	13	8.0	5.0	321
APR					
25...	1205	95	9.5	20.0	296
JUN					
14...	0950	20	16.0	19.0	306
AUG					
01...	1345	6.3	24.5	31.0	303
SEP					
06...	1155	1.7	21.0	26.0	326
06408500 SPRING CR NEAR HERMOSA, SD (LAT 43 56 31N LONG 103 09 32W)					
OCT 1999					
05...	1320	8.2	11.0	17.0	635
NOV					
19...	1220	7.1	6.0	12.0	1030
JAN 2000					
06...	0920	5.5	0.0	-3.0	1080
FEB					
17...	0900	5.1	0.5	7.0	1090
MAR					
28...	1215	3.9	8.5	14.0	1120
MAY					
03...	1355	27	15.0	27.0	785
JUN					
07...	1210	14	18.0	30.0	934
JUL					
28...	1345	4.0	28.0	34.0	1040
AUG					
31...	1400	4.4	--	24.0	1040

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06408700 RHOADS FORK NEAR ROCHFORD, SD (LAT 44 08 12N LONG 103 51 29W)					
OCT 1999					
14...	1325	9.6	8.5	19.5	480
NOV					
16...	1402	9.6	6.5	16.0	479
DEC					
08...	1540	9.8	4.0	-7.0	478
APR 2000					
11...	1458	9.9	8.5	12.0	474
MAY					
16...	1522	9.1	12.0	25.0	470
JUL					
25...	1348	9.2	11.0	24.0	476
AUG					
25...	1115	8.9	9.0	27.0	470
SEP					
26...	1205	8.6	9.5	16.0	479
06409000 CASTLE CR ABOVE DEERFIELD RES NEAR HILL CITY, SD (LAT 44 00 49N LONG 103 49 48W)					
OCT 1999					
13...	1035	26	4.5	1.5	440
DEC					
10...	1045	25	0.0	-3.5	498
FEB 2000					
17...	1020	23	1.0	0.0	482
APR					
24...	1225	29	4.5	6.5	484
MAY					
23...	1320	26	12.0	24.0	477
JUL					
05...	1320	21	14.5	21.0	464
AUG					
22...	0850	20	10.0	21.0	467
06410000 CASTLE CR BELOW DEERFIELD DAM, SD (LAT 44 01 45N LONG 103 46 53W)					
OCT 1999					
14...	1055	23	10.0	21.0	380
MAR 2000					
15...	1110	22	3.5	9.5	452
APR					
24...	1035	37	4.5	11.0	435
MAY					
23...	1150	30	7.5	24.0	436
JUL					
05...	1120	21	9.5	26.5	435
AUG					
22...	1015	16	11.0	24.0	439
06410500 RAPID CR ABOVE PACTOLA RES AT SILVER CITY, SD (LAT 44 05 05N LONG 103 34 48W)					
NOV 1999					
17...	0920	59	0.5	3.0	423
JAN 2000					
05...	0920	59	0.0	-2.0	432
FEB					
16...	0833	55	0.0	-8.0	438
MAR					
30...	0845	61	2.0	-0.5	416
APR					
18...	0910	61	5.0	10.5	410
26...	1415	145	8.0	16.5	343
JUL					
19...	1215	60	16.5	26.0	396
SEP					
01...	0900	41	12.0	13.0	409

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06411500 RAPID CR BELOW PACTOLA DAM, SD (LAT 44 04 36N LONG 103 28 54W)					
OCT 1999					
06...	1020	36	13.0	20.0	330
15...	1120	25	12.0	13.0	351
NOV					
17...	1100	26	9.0	13.0	356
JAN 2000					
05...	1055	62	3.0	3.0	354
FEB					
16...	1105	64	3.5	7.0	379
MAR					
30...	1035	64	4.0	2.0	373
APR					
18...	1145	74	6.0	15.0	361
JUL					
27...	1000	64	8.0	28.0	371
SEP					
01...	1055	57	9.5	22.0	372
06411900 RAPID CR ABV JOHNSON SIDING BLW PACTOLA DAM, SD (LAT 44 04 55N LONG 103 27 32W)					
NOV 1999					
02...	1315	23	7.5	14.0	354
MAR 2000					
21...	1045	63	3.0	2.5	380
JUN					
26...	0930	118	7.0	22.0	369
06412000 RAPID CR AT BIG BEND NR RAPID CITY, SD (LAT 44 03 43N LONG 103 25 05W)					
NOV 1999					
03...	1305	25	6.0	17.5	364
MAR 2000					
21...	1305	64	4.0	5.0	380
JUN					
26...	1120	109	9.0	19.0	372
06412200 RAPID CREEK AB VICTORIA CR NR RAPID CITY, SD (LAT 44 02 48N LONG 103 21 06W)					
NOV 1999					
03...	1420	28	5.0	17.5	364
06412220 VICTORIA CR ABOVE VICTORIA DAM NR RAPID CITY, SD (LAT 44 01 47N LONG 103 26 06W)					
JUN 2000					
21...	1345	.42	17.0	25.0	249
06412250 VICTORIA CR BELOW VICTORIA DAM NR RAPID CITY, SD (LAT 44 01 05N LONG 103 23 07W)					
JUN 2000					
21...	1440	1.0	19.0	24.0	231

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06412500 RAPID CR ABOVE CANYON LAKE NEAR RAPID CITY, SD (LAT 44 03 04N LONG 103 18 47W)					
OCT 1999					
12...	1105	27	10.5	19.5	370
DEC					
02...	1330	74	5.0	9.0	360
JAN 2000					
11...	1315	62	1.0	-4.0	360
FEB					
17...	1215	64	2.0	4.5	374
APR					
06...	1525	64	8.0	12.0	370
MAY					
10...	1145	133	10.0	21.0	363
JUL					
14...	0920	79	16.0	31.0	364
AUG					
21...	1430	61	17.0	30.0	370
06413650 LIME CREEK AT MOUTH AT RAPID CITY, SD (LAT 44 04 30N LONG 103 16 00W)					
OCT 1999					
05...	1555	3.6	12.0	21.0	1060
DEC					
01...	1527	3.1	9.0	11.0	981
APR 2000					
12...	1500	2.2	13.0	21.0	872
AUG					
11...	1104	2.5	17.0	34.0	978
SEP					
26...	0950	2.4	10.0	10.0	950
06414000 RAPID CR AT RAPID CITY, SD (LAT 44 05 09N LONG 103 14 31W)					
OCT 1999					
04...	1400	68	11.0	21.0	581
20...	1355	55	12.0	19.0	628
NOV					
16...	1100	53	7.5	10.0	622
JAN 2000					
04...	1230	76	2.0	-0.5	522
FEB					
15...	1055	94	2.0	1.0	490
MAR					
28...	1045	92	8.0	13.0	496
MAY					
02...	1220	182	13.0	28.0	491
JUN					
12...	1250	100	19.0	26.0	495
JUL					
28...	1130	74	21.0	28.0	479
SEP					
06...	1020	68	18.5	20.0	476

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06416000 RAPID CR BELOW HAWTHORN DITCH AT RAPID CITY, SD (LAT 44 04 02N LONG 103 10 49W)					
OCT 1999					
05...	1200	61	10.0	21.0	--
21...	1145	50	10.0	21.0	713
NOV					
16...	1235	54	7.5	10.0	682
JAN 2000					
03...	1410	101	0.0	4.0	512
FEB					
15...	1220	92	3.0	3.0	527
MAR					
27...	1405	89	10.0	16.0	516
MAY					
16...	1340	166	14.5	22.0	503
JUL					
17...	2000	88	17.5	22.5	526
AUG					
23...	1330	56	19.5	31.5	532
06418900 RAPID CR BL SEWAGE TREATMENT PL NR RAPID CITY, SD (LAT 44 01 24N LONG 103 05 43W)					
OCT 1999					
04...	0850	83	8.0	34.0	851
20...	0835	71	8.0	2.0	939
NOV					
15...	0820	61	7.0	6.5	888
JAN 2000					
03...	0830	119	1.5	-9.0	628
FEB					
14...	0907	84	2.0	-1.0	757
MAR					
27...	0815	104	7.0	7.0	678
MAY					
01...	0840	246	9.5	13.0	797
JUN					
12...	0815	111	17.0	20.0	823
JUL					
18...	1030	105	18.0	18.0	798
AUG					
31...	0830	50	17.0	15.5	894
06421500 RAPID CR NEAR FARMINGDALE, SD (LAT 43 56 31N LONG 102 51 12W)					
OCT 1999					
04...	1105	82	7.5	16.0	918
20...	1020	72	6.5	6.0	1020
NOV					
15...	0955	73	7.0	11.0	997
JAN 2000					
03...	1020	116	0.0	-7.0	738
FEB					
14...	1100	82	0.0	-3.0	767
MAR					
27...	0955	110	7.0	13.0	786
APR					
21...	1520	501	7.5	23.0	790
24...	1515	1050	11.0	12.0	790
27...	1135	393	12.0	17.0	959
JUN					
07...	1440	131	23.0	39.0	831
JUL					
18...	1200	95	21.0	19.5	849
AUG					
01...	0845	34	24.0	26.0	1020
16...	0915	13	21.5	18.5	1050

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06421800 LINDSEY DRAW NEAR FARMINGDALE, SD (LAT 43 54 27N LONG 102 51 31W)					
APR 2000					
21...	1440	121	0.5	22.5	470
06422500 BOXELDER CR NEAR NEMO, SD (LAT 44 08 38N LONG 103 27 16W)					
OCT 1999					
06...	1300	17	9.0	24.5	346
DEC					
01...	1340	14	2.5	7.5	334
JAN 2000					
11...	0925	9.8	0.0	-4.0	368
MAR					
16...	1320	10	3.5	12.0	339
MAY					
08...	1300	58	11.0	14.5	220
JUL					
03...	1405	24	19.5	27.5	296
AUG					
17...	1400	11	--	29.0	--
06423010 BOXELDER CR NEAR RAPID CITY, SD (LAT 44 07 54N LONG 103 17 54W)					
OCT 1999					
06...	1435	6.2	13.5	22.5	357
DEC					
02...	1110	2.7	8.5	7.0	368
JAN 2000					
11...	1150	2.0	5.0	-4.0	364
MAR					
17...	1245	1.1	3.0	8.0	352
MAY					
10...	0940	9.3	12.0	18.5	323
JUL					
14...	1110	6.1	18.5	34.5	350
AUG					
21...	1145	1.8	17.5	23.0	378
06423500 CHEYENNE RIVER NEAR WASTA, SD (LAT 44 04 52N LONG 102 24 03W)					
OCT 1999					
01...	1015	280	8.5	2.0	1740
NOV					
09...	1210	270	10.5	22.0	1850
DEC					
09...	1005	214	0.0	1.0	1700
JAN 2000					
14...	1410	137	0.0	11.0	1730
MAR					
14...	1020	547	4.5	9.0	2000
APR					
22...	1300	16500	--	--	--
MAY					
30...	1130	636	17.0	15.0	1750
JUL					
12...	0930	206	23.5	28.0	1820
AUG					
29...	1410	120	24.5	31.0	2140

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06424000 ELK CR NEAR ROUBAIX, SD (LAT 44 17 41N LONG 103 35 47W)					
OCT 1999					
06...	1110	5.5	7.0	25.0	366
DEC					
01...	1150	7.2	1.0	7.0	361
JAN 2000					
10...	1335	3.7	0.0	-4.5	385
MAR					
16...	1140	5.6	0.0	4.0	348
APR					
21...	1140	17	4.0	19.5	245
MAY					
22...	1345	24	15.0	18.0	243
JUL					
03...	1210	7.8	18.0	24.5	325
AUG					
17...	0845	4.4	12.0	14.0	362
06425100 ELK CR NR RAPID CITY, SD (LAT 44 14 25N LONG 103 09 03W)					
OCT 1999					
12...	1505	16	10.5	24.0	1090
13...	1555	16	10.5	25.0	--
DEC					
13...	1000	15	0.5	-3.0	1180
FEB 2000					
02...	1120	16	0.5	12.0	1360
MAR					
13...	1430	33	1.5	9.0	1230
APR					
17...	1405	15	10.5	24.0	1340
25...	1540	418	11.0	20.0	753
JUN					
02...	1005	34	13.5	20.0	1070
JUL					
10...	1145	18	22.5	29.0	1070
AUG					
28...	1020	7.6	20.0	18.5	1030
SEP					
11...	1300	6.1	16.0	21.0	1040
06425500 ELK CR NEAR ELM SPRINGS, SD (LAT 44 14 54N LONG 102 30 10W)					
OCT 1999					
01...	0855	15	8.0	1.5	1550
NOV					
10...	1215	17	8.0	16.0	1680
DEC					
09...	1155	12	0.0	3.0	2020
JAN 2000					
14...	1205	15	0.0	3.0	1860
MAR					
13...	1215	64	6.0	9.0	2220
APR					
22...	0945	2580	6.5	19.0	893
MAY					
30...	1310	66	18.0	17.0	1540
JUL					
11...	1315	24	27.5	28.5	1910
AUG					
29...	1215	.88	22.5	26.0	2950

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06428500 BELLE FOURCHE R AT WY-SD STATE LINE (LAT 44 44 59N LONG 104 02 49W)					
OCT 1999					
05...	0925	49	7.0	3.5	1880
NOV					
15...	0925	44	3.5	4.5	1970
DEC					
21...	0945	28	0.0	-1.5	--
FEB 2000					
01...	1015	30	0.0	-4.5	2120
MAR					
16...	0940	84	0.0	3.5	1820
APR					
27...	1000	159	10.5	11.5	1560
JUN					
09...	1100	33	23.5	27.0	1860
JUL					
21...	1010	10	20.5	22.0	2200
AUG					
29...	1500	9.3	24.0	32.0	2450
06429997 MURRAY DITCH AB HEADGATE AT WY-SD STATE LINE (LAT 44 34 35N LONG 104 03 20W)					
OCT 1999					
04...	1125	8.6	8.5	13.0	1430
NOV					
19...	1205	2.5	4.5	2.0	1400
JUL 2000					
20...	1205	18	16.0	21.0	1340
AUG					
22...	1110	9.3	16.0	28.0	1400
06430500 REDWATER CR AT WY-SD STATE LINE (LAT 44 34 26N LONG 104 02 54W)					
OCT 1999					
04...	1230	37	9.5	20.5	1460
NOV					
19...	1310	43	6.5	5.5	1520
DEC					
27...	1125	47	5.0	8.0	1540
JAN 2000					
28...	1155	45	5.0	-0.5	1500
MAR					
16...	1250	46	6.5	4.0	1540
APR					
28...	0940	56	10.5	11.5	1380
JUN					
13...	1045	51	15.5	18.5	1360
JUL					
20...	1045	24	16.0	16.0	1430
AUG					
22...	1225	27	17.0	32.0	1460

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06430532 CROW CREEK NEAR BEULAH, WY (LAT 44 34 14N LONG 104 00 19W)					
OCT 1999					
04...	0950	41	9.0	8.0	1290
22...	0940	27	9.0	3.0	1310
NOV					
19...	1035	33	7.5	1.0	1330
DEC					
27...	0935	34	7.5	2.5	1320
JAN 2000					
28...	0950	35	7.0	-3.5	1270
MAR					
17...	0900	36	8.0	5.5	1390
APR					
28...	0805	63	8.0	8.0	990
JUN					
13...	0905	40	12.5	16.0	1260
JUL					
20...	0900	33	13.0	17.0	1280
AUG					
11...	1000	28	14.5	33.5	1280
22...	1010	39	13.0	25.0	1320
SEP					
19...	1110	35	12.0	12.0	1280
21...	1105	36	12.0	10.0	1280
06430770 SPEARFISH CREEK NEAR LEAD, SD (LAT 44 17 56N LONG 103 52 02W)					
OCT 1999					
04...	1030	46	5.0	12.0	464
NOV					
22...	1035	46	3.0	-2.0	463
JAN 2000					
04...	1245	45	2.0	-0.5	459
FEB					
01...	1210	44	1.0	-1.0	455
APR					
04...	1020	43	3.0	17.5	460
MAY					
25...	1010	51	7.5	20.0	459
JUN					
30...	1320	44	11.5	26.0	445
AUG					
16...	1140	43	11.0	19.0	461
06430800 ANNIE CREEK NEAR LEAD, SD (LAT 44 19 37N LONG 103 53 38W)					
JUN 2000					
30...	1420	1.0	15.0	28.5	477
06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD (LAT 44 20 58N LONG 103 56 08W)					
OCT 1999					
04...	1315	23	8.0	20.5	486
NOV					
22...	1315	25	5.5	3.5	489
JAN 2000					
05...	1030	24	6.0	-3.5	488
FEB					
02...	1120	24	6.0	11.0	486
APR					
04...	1220	21	8.0	18.0	485
MAY					
25...	1310	24	10.5	20.5	374
JUL					
12...	1235	22	11.0	31.5	479
AUG					
15...	1335	23	11.5	26.0	481

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06430898 SQUAW CREEK NEAR SPEARFISH, SD (LAT 44 24 04N LONG 103 53 35W)					
JUL 2000					
18...	0910	1.3	15.0	17.5	336
06430900 SPEARFISH CREEK ABOVE SPEARFISH, SD (LAT 44 24 06N LONG 103 53 40W)					
JUL 2000					
18...	1040	90	11.5	21.5	446
06431500 SPEARFISH CR AT SPEARFISH, SD (LAT 44 28 57N LONG 103 51 40W)					
OCT 1999					
05...	0925	93	6.0	8.0	457
NOV					
23...	1115	90	2.5	2.0	456
JAN 2000					
05...	1340	80	3.5	1.5	451
FEB					
02...	1330	90	3.5	6.5	448
APR					
06...	1105	94	4.0	7.0	445
MAY					
26...	1055	106	8.5	12.5	426
JUL					
18...	1230	84	11.5	23.0	443
AUG					
15...	1120	69	12.0	22.0	432
06432020 SPEARFISH CREEK BELOW SPEARFISH, SD (LAT 44 34 48N LONG 103 53 37W)					
SEP 2000					
08...	1320	55	14.0	33.5	654
06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD (LAT 44 40 02N LONG 103 50 20W)					
OCT 1999					
05...	1115	210	8.5	15.5	1040
NOV					
04...	1300	219	6.5	21.0	1080
DEC					
21...	1140	206	0.5	0.0	--
FEB 2000					
01...	1225	200	0.0	1.0	1100
MAR					
15...	1320	217	4.5	-1.5	1150
APR					
27...	1210	309	10.0	14.5	951
JUN					
08...	1420	187	22.0	33.5	1020
JUL					
21...	1250	56	20.0	25.0	1100
AUG					
30...	1450	82	19.0	31.0	1480
06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD (LAT 44 42 05N LONG 103 44 00W)					
OCT 1999					
07...	0820	.10	--	--	--
NOV					
04...	1130	249	5.5	20.5	1280
MAR 2000					
17...	1230	205	5.0	12.0	1450
MAY					
08...	0925	208	10.5	9.5	1160
AUG					
29...	1045	.80	18.5	22.5	1250

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06436000 BELLE FOURCHE R NEAR FRUITDALE, SD (LAT 44 41 27N LONG 103 44 14W)					
OCT 1999					
05...	1240	281	8.0	18.5	1250
NOV					
15...	1120	18	6.0	14.5	1610
DEC					
21...	1305	258	0.0	-3.5	--
FEB 2000					
02...	0955	257	1.5	9.0	1260
MAR					
15...	1055	354	4.0	-3.5	1500
17...	1050	132	4.0	9.5	1490
APR					
03...	1240	96	5.5	2.5	1340
MAY					
08...	1100	119	12.0	10.5	1200
JUN					
08...	1200	19	24.0	30.0	1500
JUL					
18...	1325	12	22.5	24.0	1760
AUG					
29...	1300	14	22.0	32.0	1760
06436156 WHITETAIL CREEK AT LEAD, SD (LAT 44 20 36N LONG 103 45 57W)					
JUN 2000					
30...	1110	4.4	13.5	29.0	587
06436180 WHITEWOOD CR ABOVE WHITEWOOD, SD (LAT 44 26 32N LONG 103 37 44W)					
OCT 1999					
01...	1355	16	5.5	0.5	1120
NOV					
12...	0955	12	5.0	20.0	1150
FEB 2000					
10...	1330	13	1.0	-3.5	1020
MAR					
22...	1110	16	2.5	14.5	982
APR					
21...	1320	61	9.0	24.0	598
MAY					
16...	0930	72	9.0	17.5	557
JUN					
12...	1000	27	14.0	19.5	923
JUL					
17...	1140	21	18.0	20.0	919
AUG					
30...	1005	11	18.5	26.0	1390
SEP					
14...	1010	11	12.5	16.0	1420
06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD (LAT 44 32 30N LONG 103 34 16W)					
OCT 1999					
06...	1010	18	7.5	5.5	1250
NOV					
12...	1120	16	8.0	21.0	1290
DEC					
28...	1005	18	3.5	11.5	1240
FEB 2000					
03...	1125	18	2.0	0.0	1230
MAR					
22...	1240	23	9.5	17.5	1190
APR					
26...	1020	208	7.5	10.0	457
JUN					
12...	1140	30	18.0	28.0	1060
JUL					
17...	1320	23	21.0	24.5	1000
AUG					
30...	1110	8.8	18.0	27.0	1350

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06436198 WHITEWOOD CR ABOVE VALE, SD (LAT 44 37 04N LONG 103 28 52W)					
OCT 1999					
06...	1150	17	9.0	9.0	1420
NOV					
12...	1240	15	8.5	19.5	1480
FEB 2000					
02...	1410	17	0.0	10.0	1480
MAR					
22...	1405	27	11.0	12.5	1370
JUN					
12...	1305	30	22.0	28.0	1170
JUL					
14...	1315	17	27.0	32.0	1250
AUG					
30...	1230	7.4	21.0	31.0	1480
06436760 HORSE CR ABOVE VALE, SD (LAT 44 39 08N LONG 103 21 59W)					
OCT 1999					
01...	1150	66	8.5	1.5	2160
NOV					
12...	1420	3.2	6.5	24.0	4520
DEC					
23...	1240	3.5	0.0	7.0	5640
FEB 2000					
02...	1230	2.2	0.0	10.0	5740
MAR					
14...	1215	6.7	5.5	19.0	4290
APR					
21...	1130	2.8	9.5	18.0	5140
JUN					
07...	1540	17	26.5	29.0	2150
JUL					
14...	1155	29	24.5	30.0	1980
AUG					
23...	1050	49	21.0	27.0	2010
06437000 BELLE FOURCHE R NEAR STURGIS, SD (LAT 44 30 47N LONG 103 08 11W)					
OCT 1999					
01...	0955	233	8.5	0.5	1940
NOV					
05...	0840	68	3.0	0.5	2270
DEC					
23...	1010	274	0.0	6.0	1720
FEB 2000					
03...	0905	328	0.0	2.5	1460
MAR					
14...	0940	417	4.0	5.0	1770
APR					
21...	0930	176	7.5	--	1730
JUN					
07...	1220	235	22.5	26.0	1850
JUL					
14...	1000	197	24.5	25.0	1890
AUG					
14...	1015	249	21.5	27.0	1870
SEP					
08...	1010	257	17.5	23.5	1870

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD (LAT 44 20 08N LONG 103 38 06W)					
OCT 1999					
06...	0930	2.8	4.0	10.5	1400
DEC					
01...	0950	2.5	0.0	0.5	1620
JAN 2000					
10...	1210	2.0	0.0	-4.0	1650
MAR					
16...	1000	2.3	0.0	4.0	1430
APR					
21...	1010	16	2.0	13.0	365
24...	1500	94	4.0	14.5	201
MAY					
22...	1215	20	12.5	18.0	366
JUL					
03...	1015	5.3	16.5	21.0	1040
AUG					
16...	1345	2.2	17.0	24.0	1730
17...	1020	2.3	12.0	16.0	1780
06437200 BEAR BUTTE CR NEAR GALENA, SD (LAT 44 23 48N LONG 103 34 36W)					
APR 2000					
25...	0958	118	4.5	12.0	224
06437400 BEAR BUTTE CREEK AT STURGIS, SD (LAT 44 24 44N LONG 103 29 10W)					
OCT 1999					
26...	0910	4.2	9.5	6.0	1220
NOV					
16...	0850	3.8	8.5	3.0	1200
DEC					
07...	0900	3.9	6.5	-0.5	1210
JAN 2000					
18...	0905	3.5	4.0	-6.0	1200
FEB					
22...	0845	2.9	5.5	4.5	1200
MAR					
28...	0900	3.2	6.0	4.0	1190
APR					
04...	0855	3.0	5.0	0.0	1190
MAY					
09...	0900	4.6	8.5	10.0	1120
18...	0900	7.7	8.0	4.0	885
JUN					
15...	0910	25	14.0	12.5	441
JUL					
20...	1410	5.4	17.5	21.0	1230
AUG					
23...	1305	3.5	20.5	30.0	1270
06437500 BEAR BUTTE CR NEAR STURGIS, SD (LAT 44 28 53N LONG 103 16 31W)					
OCT 1999					
26...	1220	10	8.0	19.5	2240
NOV					
16...	1155	10	5.0	8.5	2180
DEC					
07...	1205	12	0.0	6.0	2220
JAN 2000					
18...	1255	9.4	0.0	3.0	2400
FEB					
22...	1200	9.4	2.0	17.0	2210
APR					
04...	1200	14	5.5	15.0	2200
MAY					
09...	1215	36	13.5	18.0	2020
18...	1230	33	12.0	12.0	2010
SEP					
08...	1130	.75	18.0	34.0	2410

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD (LAT 44 22 11N LONG 102 33 56W)					
OCT 1999					
01...	1055	247	9.0	2.0	1960
NOV					
10...	1035	81	6.5	11.0	2380
DEC					
09...	1330	96	0.0	8.0	2920
JAN 2000					
14...	1035	265	0.0	-1.0	1460
MAR					
13...	1030	563	4.5	5.0	2220
APR					
25...	1208	5530	12.0	20.5	1320
MAY					
30...	1500	333	19.0	22.0	1990
JUL					
11...	1120	192	24.5	27.5	1920
AUG					
29...	1040	253	19.5	26.0	1940
06438500 CHEYENNE R NEAR PLAINVIEW, SD (LAT 44 31 54N LONG 101 55 47W)					
OCT 1999					
13...	0930	602	12.0	6.0	1800
NOV					
23...	1040	432	1.0	3.0	2130
JAN 2000					
11...	1205	469	0.0	-5.0	1880
MAR					
03...	1000	949	3.0	8.0	2000
APR					
06...	1340	551	8.0	7.0	2260
21...	1225	10400	17.0	21.0	1690
24...	1130	16300	16.0	12.0	1510
26...	1120	21700	15.5	13.0	1700
MAY					
09...	1500	3540	15.0	22.0	2140
JUN					
09...	1300	708	27.0	32.0	2130
AUG					
04...	1010	476	25.0	32.5	1940
06438800 ELM CREEK NEAR RED OWL, SD (LAT 44 45 04N LONG 102 26 55W)					
JUL 2000					
07...	--	80	--	--	--
06439000 CHERRY CR NEAR PLAINVIEW, SD (LAT 44 44 35N LONG 102 03 11W)					
NOV 1999					
23...	0805	2.3	0.5	-2.0	4890
JAN 2000					
11...	0915	4.3	0.0	-11.0	4170
FEB					
23...	0825	6.4	0.0	-5.0	3570
APR					
06...	1125	13	7.0	5.0	9200
MAY					
09...	1100	616	15.0	20.0	2030
JUN					
08...	1210	13	26.0	27.0	4000

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06439960 CHANTIER CREEK NEAR HAYES, SD (LAT 44 31 20N LONG 100 42 13W)					
APR 2000					
20...	1035	66	4.5	8.5	2140
06440200 SOUTH FORK BAD R NEAR COTTONWOOD, SD (LAT 43 53 08N LONG 101 46 00W)					
NOV 1999					
09...	1020	.05	8.0	17.0	4270
DEC					
08...	1445	.09	3.5	3.5	2130
FEB 2000					
01...	1730	.06	0.5	0.0	4320
MAR					
14...	1235	40	4.0	15.0	368
APR					
21...	1450	760	7.0	21.0	3560
MAY					
02...	1025	266	14.5	21.5	373
JUN					
05...	1020	.25	17.0	16.5	3030
JUL					
19...	1515	27	22.5	29.0	655
06440300 UNNAMED TRIB COTTONWOOD CREEK NEAR QUINN, SD (LAT 43 57 39N LONG 102 08 17W					
APR 2000					
21...	1130	46	5.0	15.0	2540
06440850 MEDICINE CREEK NEAR PHILLIP, SD (LAT 44 03 17N LONG 101 29 12W)					
APR 2000					
21...	1715	14	11.0	22.0	4740
06441000 BAD R NEAR MIDLAND, SD (LAT 44 04 01N LONG 101 09 36W)					
MAR 2000					
13...	1240	115	3.0	11.5	2260
APR					
25...	1220	1130	13.5	12.0	1200
MAY					
02...	1330	763	16.5	26.5	1690
18...	1140	38	15.0	16.0	2930
06441100 PLUM CREEK NEAR HAYES, SD (LAT 44 20 41N LONG 101 07 40W)					
APR 2000					
20...	1055	65	3.5	6.0	3190
25...	1610	236	13.5	17.0	2080
06441110 PLUM CREEK BELOW HAYES, SD (LAT 44 12 38N LONG 100 43 34W)					
MAR 2000					
14...	1105	28	4.0	12.0	4500
APR					
20...	1400	715	5.0	13.0	2210
MAY					
18...	1505	26	17.5	15.5	3370

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06441500 BAD R NEAR FORT PIERRE, SD (LAT 44 19 36N LONG 100 23 02W)					
OCT 1999					
04...	1040	17.0	8.5	10.0	2900
NOV					
08...	1355	12.0	8.5	29.0	4010
JAN 2000					
05...	1340	14.0	0.0	6.5	5080
MAR					
09...	1400	778	1.0	-2.0	3330
27...	1230	63.0	11.5	14.0	4200
APR					
20...	1605	3950	6.5	15.0	1870
MAY					
03...	0950	429	18.0	22.5	2720
24...	0830	58.0	20.5	17.5	3740
JUL					
05...	0935	17.0	25.5	26.5	4810
AUG					
15...	1220	.53	26.0	28.5	5400
30...	0800	.08	19.5	19.0	5480
06442718 CAMPBELL C NR LEE'S CORNER, SD (LAT 44 04 39N LONG 099 22 51W)					
OCT 1999					
12...	1500	.16	15.0	18.0	3040
NOV					
18...	1435	.63	5.0	4.0	3250
JAN 2000					
06...	1500	.36	1.0	4.0	3270
FEB					
22...	1110	.47	1.0	8.0	2350
MAR					
27...	1122	.21	9.0	17.0	3780
MAY					
09...	1027	.49	12.0	13.0	3780
06445685 WHITE R NR NE-SD STATE LINE (LAT 43 00 47N LONG 102 50 07W)					
OCT 1999					
05...	0910	13	7.0	7.0	940
NOV					
16...	1230	17	3.0	18.5	1060
DEC					
28...	1330	21	0.5	15.5	862
JAN 2000					
31...	1350	32	0.5	12.0	718
MAR					
24...	1345	131	9.0	11.5	1110
APR					
27...	1425	192	14.5	16.0	1040
JUN					
16...	1350	42	17.5	18.5	486
JUL					
25...	1122	24	22.5	28.0	731
SEP					
11...	1122	8.5	16.0	17.0	960
06445980 WHITE CLAY CR NEAR OGLALA, SD (LAT 43 08 46N LONG 102 40 58W)					
OCT 1999					
06...	1225	10	9.5	32.0	544

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06446000 WHITE R NEAR OGLALA, SD (LAT 43 15 17N LONG 102 49 29W)					
OCT 1999					
05...	1315	16	8.5	22.0	908
NOV					
16...	1415	34	3.0	18.5	942
DEC					
28...	1500	32	0.0	15.5	968
JAN 2000					
31...	1200	31	0.0	10.0	--
MAR					
24...	1200	224	8.0	--	1430
APR					
27...	1150	461	13.5	25.0	966
28...	1150	320	13.5	22.0	1070
MAY					
01...	1800	2060	14.5	--	940
JUN					
16...	1545	65	18.0	23.0	978
JUL					
25...	1402	28	24.0	30.0	962
SEP					
11...	0915	6.1	16.0	16.0	1380
06446100 WOUNDED KNEE CREEK AT WOUNDED KNEE, SD (LAT 43 08 38N LONG 102 21 28W)					
OCT 1999					
06...	0920	4.6	8.5	12.0	406
APR 2000					
25...	1040	27	13.0	20.0	533
06446700 BEAR IN THE LODGE CR NEAR WANBLEE, SD (LAT 43 32 05N LONG 101 47 30W)					
OCT 1999					
18...	1105	13	7.0	11.0	602
NOV					
15...	1105	16	4.5	22.0	594
DEC					
27...	1145	24	0.0	7.0	591
FEB 2000					
01...	1410	12	0.0	2.0	591
MAR					
15...	1115	36	5.5	-2.0	680
APR					
21...	1100	53	7.5	16.0	538
JUN					
13...	1205	13	21.5	30.0	587
JUL					
17...	1115	7.1	20.5	28.0	555
25...	1035	95	21.0	32.0	251
AUG					
30...	1105	5.2	21.0	32.0	548

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06447000 WHITE R NEAR KADOKA, SD (LAT 43 45 09N LONG 101 31 28W)					
OCT 1999					
04...	1130	47	9.0	25.0	770
NOV					
09...	0830	66	6.5	12.0	819
DEC					
08...	1325	59	0.0	4.5	792
JAN 2000					
05...	1215	68	0.0	8.5	849
MAR					
15...	0840	573	4.5	-2.0	864
APR					
21...	1830	6830	6.5	28.0	339
JUN					
13...	1410	132	21.0	27.0	982
JUL					
12...	1210	107	26.0	30.0	642
AUG					
30...	0900	5.7	21.0	23.5	1250
06447050 UNNAMED TRIB BUZZARD CREEK NR LONG VALLEY, SD (LAT 43 27 42N LONG 101 25 59W)					
APR 2000					
19...	1200	46	--	--	--
21...	1210	.18	8.5	18.0	228
06447230 BLACKPIPE CR NR BELVIDERE, SD (LAT 43 45 28N LONG 101 13 40W)					
OCT 1999					
04...	1400	5.7	17.0	27.0	868
NOV					
08...	1530	8.0	14.0	30.0	800
DEC					
08...	1115	4.0	0.0	3.5	852
FEB 2000					
01...	1625	8.6	0.0	7.0	819
MAR					
14...	1520	24	11.5	17.0	773
MAY					
18...	1530	48	18.0	23.0	593
JUN					
05...	1250	10	24.5	20.0	800
JUL					
19...	1145	2.4	18.0	17.0	872
06447500 LITTLE WHITE R NEAR MARTIN, SD (LAT 43 10 00N LONG 101 37 47W)					
OCT 1999					
19...	0945	17	5.5	4.0	276
NOV					
16...	0950	20	4.0	13.5	290
DEC					
28...	0925	23	0.0	12.5	340
FEB 2000					
01...	1200	14	0.5	1.0	367
MAR					
23...	1545	48	9.5	14.5	640
APR					
21...	1330	72	10.0	22.0	385
21...	1545	77	11.0	23.5	385
25...	1245	108	15.0	13.5	812
JUN					
15...	1650	17	19.0	18.0	463
JUL					
17...	1525	11	22.5	28.0	331
AUG					
30...	1625	7.8	26.0	34.0	259

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06448000 LAKE CR ABOVE REFUGE NEAR TUTHILL, SD (LAT 43 05 07N LONG 101 36 04W)					
OCT 1999					
19...	0835	24	6.0	-1.0	116
NOV					
16...	0850	25	5.5	6.0	110
DEC					
28...	0820	27	2.0	4.5	112
JAN 2000					
31...	1630	32	1.5	8.0	117
MAR					
23...	1410	29	11.0	19.0	117
APR					
21...	1440	41	16.0	30.0	157
MAY					
11...	1150	78	13.5	13.0	149
18...	1155	99	10.0	13.0	156
JUN					
15...	1545	22	18.0	18.0	113
JUL					
17...	1420	19	21.5	29.0	103
AUG					
30...	1500	17	26.0	28.0	104
06449000 LAKE CR BELOW REFUGE NEAR TUTHILL, SD (LAT 43 08 46N LONG 101 30 38W)					
OCT 1999					
18...	1515	19	11.0	13.0	398
NOV					
15...	1530	2.7	12.5	22.0	443
DEC					
01...	1205	7.8	5.5	15.0	365
27...	1615	5.5	3.0	5.0	424
FEB 2000					
01...	1100	12	2.0	3.0	330
MAR					
23...	1240	89	7.0	13.0	272
MAY					
18...	1300	74	13.0	15.0	329
JUN					
15...	1445	10	18.5	18.0	403
JUL					
17...	1315	7.8	22.5	31.5	462
AUG					
30...	1340	19	24.0	29.5	542
06449100 LITTLE WHITE R NEAR VETAL, SD (LAT 43 06 03N LONG 101 13 49W)					
OCT 1999					
18...	1340	53	11.5	14.0	352
NOV					
15...	1320	44	9.0	25.0	334
DEC					
27...	1410	48	3.0	7.0	337
FEB 2000					
01...	0930	54	0.0	-3.0	346
MAR					
23...	1110	178	8.0	12.0	452
APR					
25...	1430	131	13.5	20.0	411
JUN					
16...	0850	46	13.5	16.0	401
JUL					
18...	0800	39	19.5	26.0	392
AUG					
31...	0945	44	17.0	13.5	415

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06449500 LITTLE WHITE R NEAR ROSEBUD, SD (LAT 43 19 32N LONG 100 53 00W)					
OCT 1999					
07...	1250	106	14.0	14.0	266
NOV					
09...	1450	109	10.0	20.0	301
DEC					
15...	1528	149	0.0	-2.0	300
JAN 2000					
24...	1435	144	0.0	3.0	300
MAR					
07...	1450	232	11.0	20.0	320
APR					
24...	1355	210	15.0	18.0	380
MAY					
31...	1215	247	15.0	15.0	412
JUL					
18...	1130	94	22.5	25.0	322
AUG					
31...	1440	76	19.0	19.5	309
06450500 LITTLE WHITE R BELOW WHITE RIVER, SD (LAT 43 36 05N LONG 100 44 58W)					
OCT 1999					
07...	1015	112	14.0	12.0	370
NOV					
08...	1500	125	14.0	28.0	361
DEC					
15...	1125	133	0.0	3.0	349
JAN 2000					
26...	1120	126	0.0	-5.0	438
MAR					
09...	0955	330	3.0	-5.0	680
APR					
26...	1130	382	13.0	22.0	530
MAY					
31...	0945	257	15.0	13.0	482
JUL					
19...	0950	99	19.0	16.0	369
SEP					
01...	1105	67	20.5	21.5	343
06451600 UNNAMED TRIB WHITE THUNDER CREEK NEAR WOOD, SD (LAT 43 37 23N LONG 100 30 33W)					
APR 2000					
26...	0900	.33	10.0	17.0	4820
06451650 WILLIAMS CREEK NEAR VIVIAN, SD (LAT 43 43 33N LONG 100 17 50W)					
MAR 2000					
06...	1020	.40	10.0	18.0	605
APR					
26...	0720	3.9	12.0	9.0	3390
06452275 SNAKE CREEK NEAR BIJOU HILLS, SD (LAT 43 29 58N LONG 099 07 13W)					
MAY 2000					
18...	1150	3.0	12.5	13.0	2500

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06452320 PLATTE CREEK NEAR PLATTE, SD (LAT 43 19 38N LONG 098 58 13W)					
OCT 1999					
12...	1250	2.8	15.0	18.0	--
NOV					
15...	1325	3.5	8.0	14.0	2640
JAN 2000					
03...	1330	5.0	0.0	-6.5	2600
FEB					
22...	1415	4.4	2.0	9.0	2290
MAR					
27...	1430	4.3	14.0	17.0	2540
MAY					
09...	1400	4.5	20.0	23.0	2540
JUN					
27...	1440	1.0	22.0	19.5	2760
06453255 CHOTEAU CR NR AVON, SD (LAT 42 55 24N LONG 098 06 21W)					
OCT 1999					
13...	0950	3.5	11.0	8.5	1820
NOV					
16...	0955	3.4	6.0	5.0	2000
JAN 2000					
04...	1110	3.9	0.0	-7.0	--
FEB					
23...	1030	7.9	5.0	8.0	1520
MAR					
28...	1050	7.0	7.5	3.0	2820
MAY					
10...	1010	4.0	17.5	22.0	2350
18...	1550	250	16.0	16.0	2230
JUN					
28...	1050	2.6	20.0	18.0	1980
AUG					
08...	1700	1.5	29.0	30.0	1990
SEP					
12...	0940	.83	16.0	11.0	1780
06463900 ANTELOPE CR NEAR MISSION, SD (LAT 43 16 26N LONG 100 40 56W)					
MAR 2000					
08...	0725	10	9.0	11.0	440
MAY					
03...	1140	8.2	18.0	24.0	370
11...	1425	21	14.5	15.0	397
18...	1355	19	14.0	22.0	435

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06464100 KEYA PAHA R NEAR KEYAPAHA, SD (LAT 43 07 45N LONG 100 06 24W)					
OCT 1999					
08...	0830	34	9.0	10.0	453
NOV					
09...	1045	37	9.0	19.0	437
DEC					
16...	0850	28	0.0	-3.0	525
JAN 2000					
25...	1010	36	0.0	13.0	528
MAR					
07...	0940	76	8.0	9.0	510
APR					
25...	1030	79	12.0	10.0	537
JUN					
01...	0825	76	14.0	13.0	498
JUL					
18...	1415	42	24.0	21.0	480
AUG					
31...	1750	14	18.5	18.5	442
06464120 SAND CREEK NEAR OLSONVILLE, SD (LAT 43 01 03N LONG 100 24 46W)					
MAR 2000					
07...	0740	.75	5.0	5.0	4160
APR					
25...	0805	2.9	9.0	7.0	675
MAY					
18...	1530	44	16.0	16.0	593
19...	0715	17	9.0	10.0	468
JUN					
02...	0700	.66	10.0	5.0	539
06464500 KEYA PAHA R AT WEWELA, SD (LAT 43 01 44N LONG 099 46 49W)					
OCT 1999					
08...	1025	66	11.5	16.0	437
NOV					
09...	0740	73	7.0	16.0	437
DEC					
16...	1316	50	0.0	5.0	514
JAN 2000					
25...	1335	73	0.0	-2.0	502
MAR					
06...	1445	145	13.0	14.0	500
APR					
25...	1245	160	13.0	12.0	508
JUN					
01...	1320	175	19.0	19.0	484
JUL					
18...	1615	78	24.5	24.0	464
AUG					
31...	1910	24	20.0	19.5	442

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06471000 JAMES R AT COLUMBIA, SD (LAT 45 36 13N LONG 098 18 36W)					
OCT 1999					
06...	1430	965	9.0	17.5	890
NOV					
10...	0905	308	7.0	9.0	--
16...	1635	179	6.0	9.5	1060
DEC					
07...	1425	90	0.5	6.5	1160
JAN 2000					
06...	1430	102	0.0	-4.5	1510
FEB					
09...	1340	37	0.0	2.0	1820
MAR					
15...	1450	488	0.0	-4.0	897
30...	1440	508	10.0	17.5	860
APR					
04...	1310	486	5.0	9.0	905
13...	1650	347	9.5	18.5	1100
MAY					
03...	1820	194	20.5	28.0	1310
18...	1400	231	11.5	14.5	1360
JUN					
21...	1435	84	18.0	23.0	1430
JUL					
12...	1550	377	27.5	29.5	1210
18...	1320	418	18.0	12.5	1200
25...	1325	440	25.5	26.5	1130
AUG					
09...	1445	441	25.5	28.0	1130
SEP					
08...	0920	462	18.0	16.0	1030
06471065 ELM RIVER NEAR FREDERICK, SD (LAT 45 50 15N LONG 098 42 06W)					
OCT 1999					
05...	1220	4.2	7.5	7.5	1310
MAR 2000					
24...	1140	117	4.5	8.5	1370
APR					
26...	1235	18	11.5	19.5	1400
06471200 MAPLE R AT ND-SD STATE LINE (LAT 45 56 20N LONG 098 27 08W)					
OCT 1999					
05...	1350	18	8.0	11.0	1570
NOV					
17...	0910	6.6	3.5	0.0	1660
JAN 2000					
05...	1215	3.7	0.0	-2.0	2180
FEB					
10...	0850	2.7	0.0	-11.0	2530
MAR					
16...	1240	28	0.5	1.0	1430
30...	1215	119	8.5	19.0	1780
APR					
26...	1445	32	16.0	23.5	1920
JUN					
21...	1105	4.7	18.0	20.0	2290
JUL					
12...	1310	68	25.5	28.5	1970
AUG					
09...	1115	2.7	24.5	23.5	1480
SEP					
07...	1430	.42	21.5	21.5	1570

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06471500 ELM R AT WESTPORT, SD (LAT 45 39 22N LONG 098 29 48W)					
OCT 1999					
06...	1605	39	11.0	18.0	1450
NOV					
16...	0805	13	4.0	-3.5	1730
JAN 2000					
05...	1350	8.4	1.0	3.5	2140
FEB					
10...	1145	7.1	0.0	-10.0	2360
MAR					
16...	0915	99	1.0	-4.5	1470
APR					
26...	1610	80	16.5	19.5	1880
JUN					
20...	1645	15	22.0	21.5	1980
AUG					
09...	0840	8.0	21.5	18.5	1680
SEP					
07...	1240	2.8	20.5	22.0	1700
06471510 ELM RIVER NEAR ORDWAY, SD (LAT 45 33 45N LONG 098 24 45W)					
OCT 1999					
06...	1200	35	8.5	14.0	1410
MAR 2000					
23...	1720	183	7.5	10.0	1530
APR					
27...	1130	77	14.5	13.0	1850
06471770 MOCCASIN CREEK AT ABERDEEN, SD (LAT 45 28 13N LONG 098 27 13W)					
OCT 1999					
06...	0855	2.2	6.5	4.0	2490
NOV					
15...	1605	.30	10.0	12.5	3140
JAN 2000					
06...	1645	.18	0.0	-6.0	4030
FEB					
09...	1610	.14	1.5	-3.5	4250
MAR					
23...	1450	2.1	8.5	11.5	3160
APR					
26...	1755	2.9	17.0	15.0	3180
JUN					
20...	1155	2.0	20.5	20.0	3010
JUL					
11...	1850	59	21.0	22.5	820
13...	1100	24	24.5	28.5	1530
AUG					
09...	1640	.69	28.5	28.5	2670
SEP					
07...	1620	.05	18.5	22.0	2430

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06471800 FOOT CREEK NEAR ABERDEEN, SD (LAT 45 31 08N LONG 098 34 37W)					
OCT 1999					
05...	1555	28	12.5	11.5	1190
NOV					
10...	1140	.65	8.5	10.0	1160
JAN 2000					
05...	1545	.37	0.5	1.5	2150
FEB					
10...	1430	.45	0.0	-9.0	1710
MAR					
23...	1345	.52	9.5	12.5	1810
APR					
27...	0835	.77	12.0	10.0	1930
MAY					
18...	1525	.43	18.0	16.5	2000
JUN					
20...	1430	.49	22.0	23.5	1780
JUL					
12...	0925	1.0	24.0	24.0	1590
AUG					
08...	1645	.32	28.0	27.0	1720
SEP					
07...	1120	.87	19.5	23.5	1710
06472000 JAMES R NEAR STRATFORD, SD (LAT 45 14 30N LONG 098 23 28W)					
NOV 1999					
09...	1215	960	9.0	15.0	1160
DEC					
07...	1115	284	0.0	-5.0	1350
JAN 2000					
06...	1040	126	0.0	-3.5	1630
FEB					
08...	1650	87	0.0	11.5	1060
MAR					
15...	1140	423	2.5	-3.5	1400
APR					
04...	1045	732	6.0	6.5	1170
27...	1450	507	15.5	15.0	1460
MAY					
18...	1135	388	14.5	13.0	1610
JUN					
23...	1000	256	20.5	20.5	1530
JUL					
13...	1330	485	27.0	29.0	1360
AUG					
10...	0945	540	25.0	24.5	1250
SEP					
08...	1205	446	21.0	24.5	1120
06473000 JAMES R AT ASHTON, SD (LAT 44 59 54N LONG 098 28 50W)					
OCT 1999					
07...	0915	1380	10.0	13.5	1010
NOV					
09...	1525	1210	9.0	14.0	1030
JAN 2000					
07...	1315	151	0.0	1.0	1780
FEB					
11...	1010	92	0.0	-20.0	2000
MAR					
23...	1045	569	6.5	11.5	1130
APR					
13...	1310	780	9.0	20.0	1290
MAY					
03...	1500	527	17.5	27.5	1680
JUN					
23...	1240	278	22.5	23.0	1580
AUG					
10...	1235	599	25.5	28.5	1290
SEP					
14...	1410	448	18.5	21.5	1090

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06473020 HOWARD TRIB NEAR LEOLA, SD (LAT 45 37 48N LONG 098 55 52W)					
MAR 2000					
24...	1325	7.5	8.5	12.0	1820
JUL					
11...	1515	9.4	21.0	25.5	547
06475000 JAMES R NEAR REDFIELD, SD (LAT 44 54 33N LONG 098 28 18W)					
OCT 1999					
07...	1220	1430	10.5	15.5	1050
NOV					
18...	0930	1060	5.0	4.5	1230
JAN 2000					
10...	1640	145	0.0	-2.5	1920
FEB					
11...	1235	108	0.0	-15.0	2060
MAR					
22...	1650	600	7.0	15.5	1260
MAY					
03...	1230	686	17.0	24.5	1740
JUN					
22...	1325	298	22.0	28.0	1680
AUG					
10...	1550	886	27.0	31.0	1310
SEP					
14...	1155	499	18.5	19.5	1110
06476000 JAMES R AT HURON, SD (LAT 44 21 49N LONG 098 11 56W)					
OCT 1999					
06...	1450	1410	15.0	22.0	1050
NOV					
08...	1455	1300	--	27.5	1150
DEC					
13...	1440	382	1.5	11.5	1430
FEB 2000					
03...	1540	120	1.0	3.0	2050
MAR					
16...	1510	414	4.0	10.0	1530
APR					
28...	1130	738	14.0	10.0	1490
JUN					
02...	1150	459	19.0	22.0	1790
JUL					
13...	1120	457	--	31.0	1550
AUG					
16...	0845	742	24.0	17.0	1240
06477000 JAMES R NEAR FORESTBURG, SD (LAT 43 58 26N LONG 098 04 14W)					
OCT 1999					
07...	1710	1620	13.0	15.5	1060
NOV					
18...	1410	1110	6.5	11.0	1220
JAN 2000					
10...	1205	205	0.5	4.5	1910
FEB					
17...	1215	133	0.0	0.0	1950
MAR					
22...	1050	622	7.0	12.5	1500
APR					
20...	1240	876	9.5	9.0	1290
JUN					
19...	1450	334	23.5	29.0	1740
AUG					
11...	0920	834	26.0	25.0	1410
SEP					
15...	1150	420	18.5	19.5	1280

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06477500 FIRESTEEL CR NEAR MOUNT VERNON, SD (LAT 43 46 30N LONG 098 14 33W)					
OCT 1999					
08...	0850	1.7	12.5	9.0	1740
NOV					
18...	0940	1.1	4.5	4.5	1960
JAN 2000					
06...	1135	.97	1.0	5.0	1950
FEB					
17...	1425	.87	0.5	0.5	1990
MAR					
30...	1530	.58	12.0	14.0	1900
MAY					
15...	1325	1.5	17.5	21.5	2680
JUL					
06...	1220	.10	31.0	31.0	1190
AUG					
11...	0848	.25	25.5	26.0	1820
SEP					
14...	1220	.02	22.5	23.0	2120
06478390 WOLF CR NEAR CLAYTON, SD (LAT 43 22 18N LONG 097 36 12W)					
MAY 2000					
19...	0930	193	12.0	12.0	--
06478500 JAMES R NEAR SCOTLAND, SD (LAT 43 11 09N LONG 097 38 07W)					
OCT 1999					
14...	1055	1620	14.0	22.0	1380
NOV					
16...	1700	1330	7.5	7.0	1400
JAN 2000					
04...	1615	302	0.0	-5.0	1400
FEB					
24...	1020	306	2.0	8.0	1530
MAR					
30...	1055	735	11.5	12.0	1670
MAY					
12...	1040	845	18.0	18.5	1660
JUN					
30...	1350	439	24.0	28.0	1810
AUG					
10...	1800	987	--	30.5	1130
SEP					
12...	1445	515	22.0	27.5	1470
06478513 JAMES RIVER NR YANKTON, SD (LAT 42 59 45N LONG 097 22 10W)					
MAY 2000					
11...	1540	1010	17.0	20.0	1420
06478535 EAST FORK VERMILLION RIVER NEAR RAMONA, SD (LAT 44 06 35N LONG 097 23 13W)					
OCT 1999					
05...	0955	48	8.0	9.0	1360
NOV					
08...	0930	23	5.5	12.5	1240
DEC					
13...	1400	24	0.5	6.5	1380
JAN 2000					
26...	1050	1.7	0.0	-8.0	2200
MAR					
15...	1700	33	5.0	0.0	1140
APR					
28...	1745	15	20.0	13.5	1350
MAY					
31...	0930	31	16.0	16.0	1290
JUL					
11...	0900	12	23.0	23.0	1340
AUG					
22...	0930	.49	18.0	18.0	1660

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06478540 LITTLE VERMILLION R NEAR SALEM, SD (LAT 43 47 39N LONG 097 22 02W)					
OCT 1999					
05...	1130	.15	9.0	13.0	1730
MAR 2000					
15...	1505	.13	6.0	3.0	1510
APR					
27...	0855	1.9	10.0	9.0	1830
MAY					
31...	1050	.44	17.5	19.0	2060
JUL					
11...	1020	.04	23.0	24.0	1220
06478600 EAST FORK VERMILLION RIVER NEAR PARKER, SD (LAT 43 26 43N LONG 097 06 34W)					
OCT 1999					
06...	1115	58	10.0	8.0	1360
NOV					
09...	1000	40	8.0	17.0	1460
DEC					
14...	0855	19	0.0	-1.0	1530
JAN 2000					
25...	1010	11	0.0	-10.0	1840
MAR					
15...	0845	50	5.0	-1.0	1520
APR					
27...	1535	52	15.0	15.0	1520
JUN					
01...	0850	48	17.0	16.0	1650
JUL					
12...	0845	22	23.0	22.0	1490
AUG					
23...	0935	6.1	22.5	22.5	1760
06478690 WEST FORK VERMILLION R NEAR PARKER, SD (LAT 43 24 55N LONG 097 12 18W)					
OCT 1999					
06...	1255	1.4	12.0	17.0	1670
NOV					
09...	1120	1.1	8.0	16.0	2210
DEC					
14...	1025	1.0	0.5	3.0	2050
JAN 2000					
25...	1150	.77	0.0	-9.0	2760
MAR					
15...	1150	3.6	6.0	0.0	1560
APR					
27...	1330	2.8	15.0	16.0	2070
JUN					
01...	1045	9.9	17.0	14.0	1770
JUL					
12...	1025	7.8	25.0	23.0	1120
AUG					
23...	1050	.68	23.0	25.0	1300
06479000 VERMILLION R NEAR WAKONDA, SD (LAT 42 59 27N LONG 096 57 49W)					
JUN 2000					
30...	1005	92	22.0	20.0	1190

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06479010 VERMILLION RIVER NR VERMILLION, SD (LAT 42 49 02N LONG 096 55 26W)					
OCT 1999					
14...	1425	93	13.0	20.5	1560
NOV					
17...	1045	86	5.5	5.5	1570
JAN 2000					
05...	1110	53	0.0	-5.0	1700
FEB					
24...	1550	91	6.0	9.0	1180
MAR					
29...	1335	84	11.0	14.0	1640
MAY					
11...	1255	74	21.0	26.5	1590
JUN					
29...	1430	122	24.0	27.0	1750
AUG					
10...	1250	45	25.0	30.0	1740
SEP					
13...	1530	17	30.0	22.0	1560
06479136 PICKEREL LAKE OUTFLOW NEAR GRENVILLE, SD (LAT 45 30 14N LONG 097 16 59W)					
OCT 1999					
06...	1125	3.1	8.0	8.0	458
19...	1310	3.3	9.5	4.0	459
NOV					
05...	1335	1.4	6.0	9.0	509
29...	1410	2.3	1.0	2.5	494
DEC					
14...	1245	2.8	.5	-3.0	490
JAN 2000					
06...	1400	3.2	.5	-5.5	493
26...	1320	4.1	.5	-5.0	502
FEB					
23...	--	5.6	2.0	5.0	502
MAR					
07...	1655	15	6.0	13.5	426
29...	1640	6.5	7.0	11.0	459
APR					
21...	1110	6.3	6.0	11.0	473
MAY					
11...	1450	10	15.0	12.0	474
23...	1450	6.2	16.5	22.5	477
JUN					
15...	1230	2.7	18.0	19.0	507
JUL					
12...	1240	12	23.0	30.0	471
AUG					
02...	1310	2.1	24.0	26.0	457
14...	1815	2.0	24.5	28.0	465
06479142 CAMPBELL SLOUGH OUTFLOW NEAR WAUBAY, SD (LAT 45 23 57N LONG 097 16 52W)					
OCT 1999					
06...	1020	1.1	7.5	7.0	406
19...	1420	1.5	7.0	4.0	410
NOV					
05...	1240	.02	5.0	7.0	434
29...	1255	.02	1.0	1.0	471
DEC					
14...	1150	.02	0.5	-3.0	455
MAR 2000					
07...	1545	3.0	7.0	12.5	460
29...	1530	5.3	6.0	12.0	418
APR					
21...	0930	4.8	6.0	11.0	437
MAY					
11...	1320	8.6	15.5	13.0	443
23...	1545	5.3	17.0	25.0	447
JUN					
15...	1120	1.8	19.0	16.0	460
JUL					
12...	1140	1.5	22.0	27.0	445

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06479159 BLUE DOG LAKE INFLOW (OWENS CR) NR WAUBAY, SD (LAT 45 20 48N LONG 097 15 07W)					
OCT 1999					
05...	1610	8.3	10.0	10.5	549
19...	1555	11	5.5	4.5	546
NOV					
05...	1150	8.2	4.5	4.0	568
29...	1215	7.7	1.0	1.0	595
DEC					
14...	0945	7.2	.5	-1.0	575
JAN 2000					
06...	1150	5.6	.5	-5.5	576
26...	0940	3.9	.0	-10.0	599
FEB					
23...	--	6.3	1.0	6.0	497
MAR					
07...	1450	14	8.0	19.0	452
29...	1250	8.4	6.0	10.0	531
APR					
20...	1555	22	8.0	13.0	485
MAY					
11...	1220	19	14.5	12.0	565
23...	1815	15	21.0	24.0	485
JUN					
15...	1350	8.2	18.0	18.0	567
JUL					
11...	1445	6.3	24.0	22.0	565
AUG					
02...	1130	4.4	24.0	26.0	532
14...	1530	3.8	25.0	32.0	517
SEP					
12...	1125	2.6	13.0	18.0	525
06479167 LITTLE RUSH LAKE OUTFLOW NR WAUBAY, SD (LAT 45 19 18N LONG 097 19 37W)					
OCT 1999					
05...	1725	47	10.0	10.0	560
19...	1125	50	6.5	5.0	599
NOV					
05...	1020	40	4.0	2.0	637
29...	1100	42	1.0	1.5	669
DEC					
14...	1105	41	.5	-2.0	689
JAN 2000					
06...	1010	41	.5	-5.5	788
26...	1130	42	.5	-10.0	832
FEB					
23...	--	40	4.0	5.0	869
MAR					
07...	1350	41	8.0	19.0	850
29...	1415	40	6.0	12.0	835
APR					
20...	1430	43	7.0	9.0	861
MAY					
11...	1100	43	16.0	14.5	867
23...	1700	40	19.5	24.0	865
JUN					
15...	1005	34	18.0	15.0	920
JUL					
12...	1040	32	20.0	23.0	895
AUG					
02...	1010	24	24.0	24.0	867
14...	1650	20	24.5	30.0	886
SEP					
12...	0920	32	15.5	13.0	1040

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06479215 BIG SIOUX RIVER NR FLORENCE, SD (LAT 45 10 51N LONG 097 11 09W)					
OCT 1999					
06...	1315	.45	10.0	13.5	672
NOV					
08...	1545	.78	8.0	20.0	647
DEC					
14...	1430	1.1	0.5	-3.0	751
JAN 2000					
26...	1515	.17	0.5	-10.0	765
MAR					
08...	0845	6.8	5.0	6.5	487
APR					
21...	1420	14	10.5	16.5	706
MAY					
24...	1200	1.3	16.5	21.0	630
JUL					
12...	1420	.63	24.0	30.0	557
AUG					
15...	1030	.22	23.0	22.0	662
06479430 STILL LAKE OUTFLOW NEAR FLORENCE, SD (LAT 45 02 15N LONG 097 12 25W)					
APR 2000					
24...	1415	.02	16.0	18.0	1270
06479438 BIG SIOUX R NEAR WATERTOWN, SD (LAT 45 00 22N LONG 097 09 53W)					
OCT 1999					
06...	1455	3.5	10.5	14.0	595
NOV					
09...	1145	4.3	9.0	12.0	619
DEC					
14...	1615	5.3	0.5	-4.0	711
JAN 2000					
27...	1205	.43	0.0	-12.0	813
MAR					
08...	1320	16	7.0	--	474
APR					
24...	1540	30	17.0	19.5	688
MAY					
24...	1510	7.8	18.0	24.0	662
JUL					
12...	1730	2.1	25.0	32.0	614
AUG					
15...	1415	.41	24.0	24.0	625
06479450 LAKE KAMPESKA (INLET/OUTLET) NEAR WATERTOWN, SD (LAT 44 56 56N LONG 097 10 30W)					
OCT 1999					
07...	0915	48	11.0	15.0	609
DEC					
15...	0900	4.6	0.5	-2.0	661
MAR 2000					
22...	0955	32	5.0	8.0	612
APR					
18...	1225	17	9.5	6.5	654
MAY					
25...	0815	6.5	16.0	14.0	675
JUL					
13...	1020	3.1	26.0	24.0	540
AUG					
16...	1130	87	21.0	15.0	605
06479490 MUD CREEK NEAR RAUVILLE, SD (LAT 45 00 29N LONG 097 06 21W)					
MAR 2000					
08...	1450	1.5	7.0	1.0	740

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06479498 SOUTH BRANCH TRIB TO MUD CR NR RAUVILLE, SD (LAT 44 57 12N LONG 097 06 23W)					
APR 2000					
18...	1600	.31	10.5	16.5	1270
06479500 BIG SIOUX R AT WATERTOWN, SD (LAT 44 56 33N LONG 097 08 45W)					
OCT 1999					
06...	1710	4.5	10.5	14.0	664
NOV					
09...	0955	3.8	8.0	9.0	679
DEC					
15...	1055	4.6	0.0	-5.0	746
JAN 2000					
27...	1430	.48	0.0	-10.0	837
MAR					
09...	1610	9.4	0.5	-7.0	748
APR					
25...	0825	6.8	9.5	10.5	778
MAY					
25...	0945	3.2	13.5	14.0	703
JUL					
13...	1130	5.7	25.0	27.0	631
AUG					
15...	1550	.44	23.0	22.0	666
06479512 BIG SIOUX R AT BROADWAY AT WATERTOWN, SD (LAT 44 53 22N LONG 097 07 07W)					
MAR 2000					
09...	1405	12	1.5	0.5	526
06479515 WILLOW CR NEAR WATERTOWN, SD (LAT 44 55 08N LONG 097 02 43W)					
APR 2000					
18...	0930	3.7	5.5	6.5	1020
06479520 BIG SIOUX RIVER BELOW WATERTOWN, SD (LAT 44 50 32N LONG 097 02 57W)					
OCT 1999					
07...	1100	9.8	11.0	15.0	1020
NOV					
09...	1410	7.8	10.5	18.0	1090
DEC					
15...	1305	8.3	0.0	-8.0	1200
JAN 2000					
27...	1000	4.3	0.0	-12.0	1330
MAR					
09...	0920	8.5	0.5	-8.0	745
APR					
17...	1735	14	6.0	6.0	862
MAY					
25...	1130	12	17.5	24.0	1020
JUL					
13...	1500	13	26.0	30.0	820
AUG					
16...	0900	5.9	17.0	16.5	1060

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06479525 BIG SIOUX R NEAR CASTLEWOOD, SD (LAT 44 43 54N LONG 097 02 39W)					
OCT 1999					
05...	1055	14	9.5	11.0	967
NOV					
09...	1040	13	8.5	12.5	1010
DEC					
14...	0955	14	1.0	1.5	1100
JAN 2000					
27...	1030	5.0	1.0	-8.0	1300
MAR					
10...	1115	17	1.5	5.0	751
APR					
17...	1135	17	5.0	3.5	920
MAY					
25...	1320	17	19.5	20.0	933
JUL					
12...	0940	40	--	25.0	704
AUG					
15...	1000	8.7	21.0	21.0	1050
06479640 HIDEWOOD CR NEAR ESTELLINE, SD (LAT 44 36 42N LONG 096 54 17W)					
JUL 2000					
12...	1105	92	23.5	27.0	558
06480000 BIG SIOUX RIVER NEAR BROOKINGS, SD (LAT 44 10 48N LONG 096 44 55W)					
OCT 1999					
06...	0935	160	10.0	8.0	1010
NOV					
09...	1540	94	11.5	19.0	1180
DEC					
14...	1415	84	0.5	0.0	1110
JAN 2000					
27...	1615	30	1.0	-6.0	1300
MAR					
14...	1250	175	5.0	10.0	1060
APR					
25...	1400	135	18.0	15.0	934
JUN					
01...	1130	490	16.5	16.0	826
JUL					
12...	1635	354	28.5	28.5	645
AUG					
15...	1540	48	25.0	24.5	881
06480650 FLANDREAU CR ABOVE FLANDREAU, SD (LAT 44 03 45N LONG 096 29 14W)					
MAY 2000					
31...	1350	285	17.0	22.0	361
06481000 BIG SIOUX R NEAR DELL RAPIDS, SD (LAT 43 47 25N LONG 096 44 42W)					
OCT 1999					
05...	1555	181	12.0	18.0	950
NOV					
08...	1215	122	8.5	19.0	890
DEC					
13...	1640	105	0.5	5.0	1050
JAN 2000					
24...	1340	43	0.0	-3.0	1280
MAR					
14...	1640	226	6.0	13.0	873
APR					
26...	0945	177	15.0	18.0	869
MAY					
31...	1610	382	19.0	19.0	1060
JUL					
11...	1400	164	29.0	29.0	778
AUG					
22...	1415	68	23.0	23.0	822

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06481500 SKUNK CR AT SIOUX FALLS, SD (LAT 43 32 01N LONG 096 47 26W)					
OCT 1999					
06...	1735	14	14.0	18.0	1220
NOV					
08...	1610	12	10.0	22.0	1140
DEC					
14...	1300	11	0.5	1.0	1360
JAN 2000					
24...	1545	5.7	0.0	-3.5	1400
MAR					
15...	1705	34	6.5	0.0	1260
APR					
28...	0920	50	11.0	14.0	1240
JUN					
01...	1510	113	19.0	19.0	1330
JUL					
12...	1615	144	28.0	28.0	654
AUG					
23...	1445	10	25.0	27.0	910
06482020 BIG SIOUX R AT NORTH CLIFF AVE AT SIOUX FALLS, SD (LAT 43 34 01N LONG 096 42 39W)					
OCT 1999					
06...	0910	200	10.0	6.0	1020
NOV					
08...	1425	124	12.5	23.0	1030
DEC					
14...	1510	132	2.0	1.0	1230
JAN 2000					
25...	1535	46	0.5	-7.0	1660
MAR					
16...	0915	242	3.0	-4.0	1120
APR					
26...	1215	212	18.0	19.0	1130
JUN					
01...	1705	613	19.0	24.0	1210
JUL					
11...	1550	214	29.0	32.0	871
AUG					
22...	1620	69	24.0	23.0	1120
06485500 BIG SIOUX R AT AKRON, IA (LAT 42 50 14N LONG 096 33 41W)					
OCT 1999					
14...	1640	526	14.0	22.0	1030
NOV					
17...	1330	411	7.5	8.0	982
JAN 2000					
05...	1500	287	0.0	0.0	--
FEB					
25...	1145	629	2.0	11.0	--
MAR					
29...	1100	534	9.0	8.5	893
MAY					
11...	1000	1310	20.0	24.0	768
19...	1300	2050	15.0	13.5	710
JUN					
29...	1110	1170	23.0	26.0	770
AUG					
10...	1620	1120	29.0	34.0	775
SEP					
13...	1305	188	30.0	22.0	867

MISCELLANEOUS DISCHARGE MEASUREMENTS

The following miscellaneous discharge measurements were made in the state. Sites are listed in downstream order.

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
434422103503300 HELL CANYON CR AT JEWEL CAVE ABV HWY16, NR CUSTER, SD (LAT 43 44 22N LONG 103 50 33W)					
OCT 1999					
14...	1400	2.1	--	18.5	--
NOV					
23...	1000	1.8	--	-1.0	--
DEC					
16...	1400	1.5	--	4.5	--
JAN 2000					
12...	--	1.6	--	1.5	--
FEB					
04...	--	1.1	--	-.5	--
MAR					
16...	--	.66	--	5.5	--
APR					
05...	1300	.73	--	21.0	--
MAY					
16...	--	.46	--	13.0	--
JUN					
05...	--	.46	--	26.5	--
Discharge measurements made by National Park Service personnel					
432012103331100 CASCADE SPRINGS ABV ALABAUGH CYN, NR HOT SPRINGS, SD (LAT 43 20 12N LONG 103 33 11W)					
JAN 2000					
18...	1350	--	20.0	18.0	2700
MAR					
16...	1320	--	20.5	24.0	2690
JUN					
13...	1300	--	20.5	29.0	2680
JUL					
24...	1345	--	21.0	28.0	2660
06412900 RAPID CREEK BLW CLEGHORN SPGS AT RAPID CITY, SD (LAT 44 03 33N LONG 103 17 49W)					
OCT 1999					
06...	1240	54	11.0	12.0	357
NOV					
16...	0835	40	7.5	5.0	373
16...	1345	40	7.5	12.5	371
APR 2000					
18...	1345	88	10.0	13.0	369
MAY					
24...	0750	164	10.5	14.5	370
24...	1410	162	10.0	14.0	366
JUN					
13...	1210	92	17.5	22.0	368

MISCELLANEOUS DISCHARGE MEASUREMENTS

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06413200 RAPID CREEK BELOW PARK DRIVE AT RAPID CITY, SD (LAT 44 03 33N LONG 103 17 02W)					
OCT 1999					
05...	0905	57	9.0	16.0	359
21...	1010	42	8.5	17.0	375
27...	0850	--	9.5	15.5	336
NOV					
16...	0930	42	7.0	3.0	385
17...	0920	--	7.0	14.0	371
DEC					
14...	1050	--	3.0	4.5	364
JAN 2000					
04...	1045	63	-1.0	1.5	368
05...	0901	--	2.5	4.5	368
14...	0820	--	3.0	3.0	376
FEB					
01...	0928	--	2.0	--	375
15...	0930	83	2.0	.0	381
29...	0843	--	5.5	7.5	369
MAR					
28...	0915	80	7.0	4.5	383
APR					
25...	1435	--	9.0	22.0	337
MAY					
03...	0925	166	11.5	18.0	370
09...	0915	--	9.5	14.0	366
24...	0920	160	12.0	20.0	372
24...	1515	160	11.5	14.5	372
JUN					
13...	1330	88	17.0	19.0	366
JUL					
19...	0900	83	14.5	14.0	370
SEP					
05...	1135	60	18.5	28.5	369
06413570 RAPID C AB JACKSON BLVD AT RAPID CITY, SD (LAT 44 03 55N LONG 103 16 21W)					
OCT 1999					
05...	0750	56	8.0	1.0	397
21...	0845	45	8.0	15.5	401
NOV					
16...	0800	43	6.0	-1.0	396
JAN 2000					
04...	0930	68	1.5	-6.0	375
FEB					
15...	0810	90	2.0	-4.0	385
MAR					
28...	0800	75	7.0	4.0	385
MAY					
03...	0749	--	12.0	14.0	373
JUN					
14...	0800	96	14.0	13.0	373
JUL					
28...	0850	71	19.5	--	367
SEP					
05...	0745	61	17.0	21.0	396

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
06420000 RAPID CR AT CAPUTA SD (LAT 43 59 20N LONG 102 59 40W)					
OCT 1999					
05...	1050	78	9.5	15.0	859
06...	1420	--	13.0	34.0	856
20...	1240	61	8.0	21.0	926
27...	1415	--	10.0	12.0	917
NOV					
15...	1355	63	9.0	17.0	950
17...	1315	--	7.5	--	878
DEC					
14...	1430	--	2.5	2.0	707
JAN 2000					
03...	1305	130	.0	-5.0	707
05...	1315	--	1.0	6.0	690
FEB					
01...	1400	--	.5	.0	836
14...	1345	139	.5	.0	710
14...	1445	116	.5	.0	--
29...	1205	--	7.0	11.0	779
MAR					
27...	1300	102	10.0	15.0	739
28...	1245	--	10.0	18.0	712
APR					
21...	1230	--	6.5	10.0	800
25...	1220	--	9.5	17.0	844
MAY					
01...	1030	287	12.0	21.0	956
09...	1320	--	14.0	24.0	755
JUN					
12...	0937	121	20.0	22.0	783
JUL					
18...	1440	86	21.0	22.0	825
AUG					
31...	1000	46	17.5	17.0	980
06422000 RAPID CR AT CRESTON, SD (LAT 43 55 00N LONG 102 42 00W)					
OCT 1999					
04...	1225	83	8.0	19.0	931
07...	1420	--	12.5	21.0	888
20...	1130	68	6.5	16.0	1080
28...	1015	--	6.0	13.0	1040
NOV					
15...	1230	64	6.0	8.0	1020
18...	1310	--	3.5	1.0	1110
DEC					
14...	1600	--	.5	4.0	--
JAN 2000					
03...	1135	108	.0	-5.0	715
05...	1500	--	.5	3.5	758
FEB					
01...	1600	--	.5	3.0	933
14...	1225	92	.0	1.5	809
29...	1405	--	7.5	12.0	1180
MAR					
27...	1130	104	9.0	16.0	847
28...	1440	--	11.5	17.0	787
APR					
21...	0915	--	6.5	9.0	1000
25...	0845	--	8.5	14.0	718
MAY					
01...	1400	445	13.0	22.0	921
09...	1445	--	15.5	22.0	885
JUN					
12...	1110	105	26.0	27.0	932
JUL					
18...	1330	79	22.0	21.0	865
AUG					
31...	1205	38	20.0	19.0	982
441823103324100 ELK CREEK BELOW TRIB FROM NORTH, NEAR TILFORD, SD (LAT 44 18 23N LONG 103 32 41W)					
OCT 1999					
21...	1236	.89	8.0	19.5	414

WATER QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
441701103282700 ELK CREEK BELOW MADISON OUTCROP, NEAR TILFORD, SD (LAT 44 17 01N LONG 103 28 27W)					
OCT 1999					
21...	1400	7.0	9.0	18.5	401
06432172 FALSE BOTTOM CREEK NR CENTRAL CITY, SD (LAT 44 23 28N LONG 103 47 58W)					
OCT 1999					
05...	1245	.54	5.5	23.0	333
NOV					
23...	1255	.71	.0	1.5	339
JAN 2000					
10...	1010	.44	.0	-3.5	333
FEB					
16...	1230	.48	.0	4.0	332
APR					
06...	1330	2.1	4.5	10.0	201
JUL					
18...	1345	.70	18.5	25.5	1340
AUG					
09...	1120	--	15.0	31.0	344
16...	1002	.59	16.0	19.0	352
442811103205000 BEAR BUTTE CR BELOW STURGIS, SD (LAT 44 28 11N LONG 103 20 50W)					
OCT 1999					
26...	1050	5.6	8.0	15.0	1530
NOV					
16...	1025	5.7	5.5	6.0	1510
DEC					
07...	1050	5.5	1.0	4.0	1560
JAN 2000					
18...	1105	4.6	.0	.0	1660
FEB					
22...	1030	4.5	1.5	12.0	1610
APR					
04...	1035	6.3	4.5	10.0	1620
MAY					
09...	1030	16	11.0	15.5	1460
18...	1100	19	10.0	9.0	1440
443048103091400 BEAR BUTTE CR NR MOUTH, NR VALE, SD (LAT 44 30 48N LONG 103 09 14W)					
OCT 1999					
26...	1345	12	9.0	23.0	2350
NOV					
16...	1325	11	5.5	12.0	2300
DEC					
07...	1340	16	.5	6.0	2400
JAN 2000					
18...	1425	11	.0	7.5	2540
FEB					
22...	1330	13	.5	20.0	2280
MAR					
29...	1000	20	7.5	7.0	2240
APR					
04...	1330	13	8.0	20.0	2300
MAY					
09...	1345	53	14.5	18.5	2120
18...	1400	37	14.5	14.0	2220
06439295 CHERRY CR AT CHERRY CREEK, SD (LAT 44 36 13N LONG 101 30 33W)					
OCT 1999					
13...	1415	--	13.0	16.0	4580

The ground-water observation well network in South Dakota is used to monitor quantitative and at times qualitative changes in the glacial and bedrock aquifers. Federal, state, and local agencies monitor approximately 2,000 wells throughout the state. These wells are a sample of the South Dakota observation well network. All measurements are in feet above or below land-surface datum.

AURORA COUNTY

435039098263403.

LOCATION.--Lat 43°50'39", long 98°26'34", in SW¼ SW¼ SW¼ NW¼ sec.6, T.104 N., R.63 W., Hydrologic Unit 10160011, 8.5 mi north-northeast of Plankinton. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER. --Niobrara.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in., depth 134 ft, perforated 114 to 134 ft.

INSTRUMENTATION.--Water-level recorder collects hourly values.

DATUM.--Elevation of land-surface datum is 1,418 ft above sea level. Measuring point: Top of casing 2.0 ft above land-surface datum.

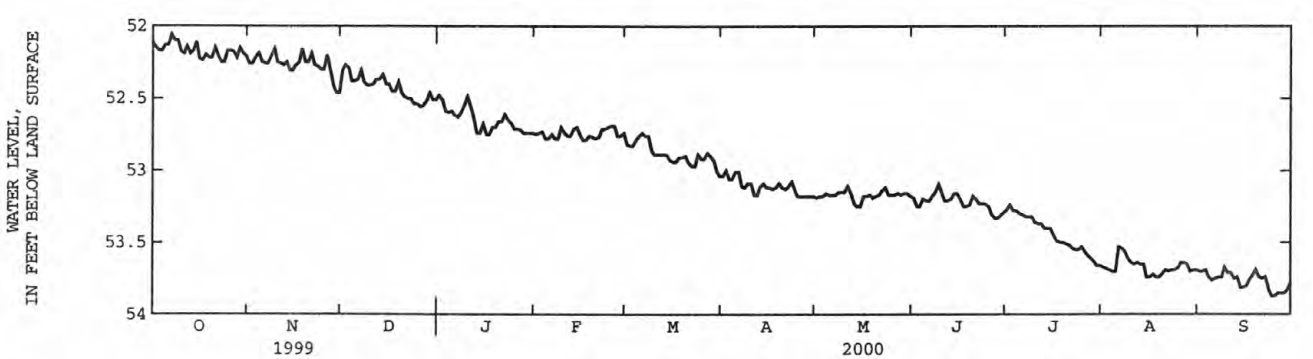
REMARKS.--Water levels affected by pumping of nearby well.

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

EXTREMES.--Jan. 1, 1981, to current year: Maximum water level, 76.59 ft below land-surface datum, Sept. 8, 1990; minimum water level, 51.21 ft below land-surface datum, Apr. 17, 18, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.12	52.26	52.31	52.48	52.75	52.82	53.04	53.19	53.19	53.27	53.67	53.70
2	52.15	52.26	52.27	52.51	52.74	52.83	53.00	53.18	53.25	53.24	53.68	53.70
3	52.17	52.22	52.29	52.59	52.73	52.83	53.06	53.18	53.25	53.28	53.69	53.69
4	52.17	52.19	52.38	52.60	52.78	52.79	53.06	53.16	53.20	53.28	53.70	53.74
5	52.13	52.25	52.38	52.59	52.78	52.76	53.01	53.17	53.21	53.30	53.70	53.76
6	52.13	52.26	52.37	52.62	52.75	52.74	53.01	53.17	53.21	53.31	53.53	53.75
7	52.06	52.26	52.31	52.63	52.78	52.76	53.11	53.17	53.18	53.32	53.54	53.74
8	52.10	52.21	52.39	52.60	52.78	52.76	53.12	53.15	53.15	53.32	53.56	53.74
9	52.10	52.16	52.41	52.55	52.70	52.86	53.09	53.15	53.10	53.32	53.61	53.67
10	52.18	52.25	52.41	52.49	52.74	52.89	53.09	53.15	53.16	53.36	53.64	53.71
11	52.19	52.26	52.40	52.56	52.76	52.89	53.17	53.11	53.21	53.37	53.65	53.71
12	52.14	52.27	52.37	52.64	52.76	52.89	53.17	53.16	53.21	53.37	53.64	53.75
13	52.19	52.25	52.37	52.74	52.71	52.89	53.11	53.23	53.20	53.40	53.65	53.74
14	52.17	52.31	52.34	52.74	52.70	52.89	53.09	53.25	53.16	53.40	53.65	53.81
15	52.11	52.31	52.40	52.68	52.75	52.93	53.12	53.25	53.16	53.40	53.74	53.81
16	52.23	52.27	52.40	52.75	52.79	52.94	53.12	53.18	53.20	53.45	53.74	53.80
17	52.24	52.25	52.45	52.75	52.79	52.94	53.13	53.18	53.25	53.49	53.72	53.76
18	52.20	52.16	52.45	52.70	52.76	52.91	53.12	53.17	53.25	53.50	53.74	53.73
19	52.22	52.25	52.39	52.70	52.77	52.91	53.09	53.19	53.24	53.50	53.74	53.69
20	52.22	52.25	52.46	52.66	52.78	52.90	53.12	53.18	53.18	53.51	53.72	53.74
21	52.15	52.19	52.49	52.66	52.77	52.95	53.13	53.17	53.20	53.52	53.69	53.75
22	52.21	52.27	52.50	52.61	52.71	52.97	53.11	53.14	53.23	53.54	53.70	53.74
23	52.25	52.28	52.50	52.65	52.71	52.97	53.08	53.12	53.23	53.55	53.69	53.82
24	52.25	52.30	52.54	52.67	52.70	52.89	53.13	53.17	53.23	53.55	53.69	53.87
25	52.17	52.30	52.54	52.71	52.69	52.92	53.18	53.17	53.25	53.53	53.68	53.87
26	52.17	52.20	52.56	52.71	52.69	52.92	53.18	53.17	53.31	53.56	53.64	53.85
27	52.18	52.31	52.55	52.72	52.76	52.88	53.18	53.16	53.33	53.59	53.64	53.85
28	52.22	52.41	52.52	52.74	52.76	52.90	53.18	53.17	53.33	53.61	53.65	53.85
29	52.15	52.46	52.46	52.74	52.74	52.93	53.18	53.16	53.31	53.63	53.70	53.83
30	52.19	52.46	52.51	52.74	---	53.00	53.18	53.16	53.29	53.66	53.69	53.78
31	52.21	---	52.51	52.74	---	53.04	---	53.18	---	53.66	53.69	---
MAX	52.25	52.46	52.56	52.75	52.79	53.04	53.18	53.25	53.33	53.66	53.74	53.87



442112098174001.

LOCATION.--Lat 44°21'12", long 98°17'40", in SW ¼ SW ¼ SW ¼ NW ¼ sec.9, T.110 N., R.62 W., Hydrologic Unit 10160006, at southwest corner of city well field, 3.5 mi west of Huron. Owner: City of Huron.

AQUIFER.--Glacial Outwash.

WELL CHARACTERISTICS.--Drilled artesian unused public supply well, diameter 12 in., depth 74 ft, perforated 38 to 74 ft.

INSTRUMENTATION.--Water-level recorder collects hourly values.

DATUM.--Elevation of land-surface datum is 1,306.93 ft above sea level. Measuring point: Top of platform 2.40 ft above land-surface datum. On Aug. 28, 1997, the measuring point was changed to 2.20 ft.

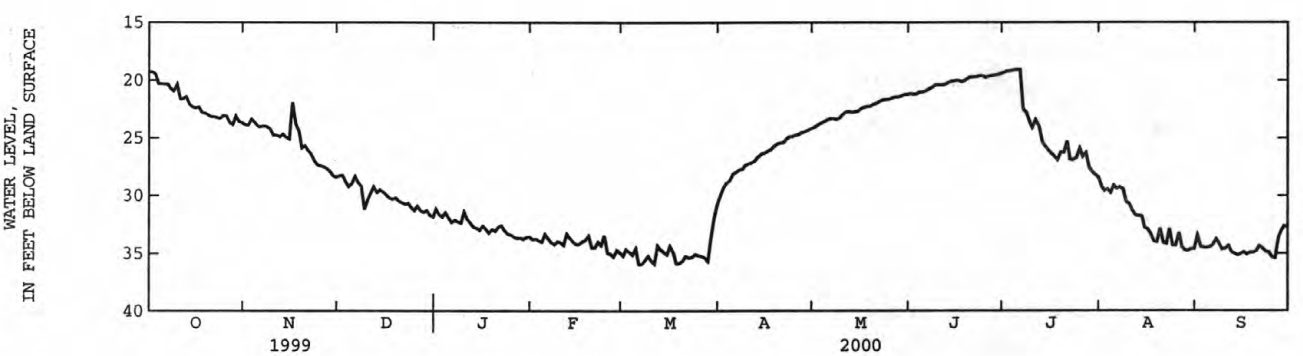
REMARKS.--Water levels affected by pumping of nearby city wells.

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

EXTREMES.--Jan. 1, 1981, to current year: Maximum water level, 53.40 ft below land-surface datum, Nov. 6, 1989; minimum water level, 12.54 ft below land-surface datum, Sept. 26, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.28	23.86	28.26	31.14	33.80	35.23	29.96	24.07	21.14	19.30	29.17	33.47
2	19.28	23.87	28.21	31.64	33.75	34.64	29.25	23.91	21.23	19.19	29.57	34.42
3	19.47	23.37	28.82	31.86	33.89	34.87	28.90	23.74	21.16	19.18	29.43	34.51
4	20.31	23.66	29.21	31.46	34.03	35.14	28.67	23.60	21.00	19.13	29.76	34.51
5	20.31	23.98	28.93	31.92	33.35	34.59	28.13	23.46	21.00	19.08	29.13	34.48
6	20.34	23.99	28.32	32.32	33.73	35.93	27.95	23.33	20.89	19.08	29.37	34.27
7	20.32	23.93	28.88	32.10	34.05	35.93	27.72	23.29	20.71	22.47	29.26	33.78
8	20.76	24.05	29.19	32.29	34.24	35.60	27.71	23.38	20.58	22.79	29.44	34.20
9	20.94	24.23	31.20	32.38	33.97	35.23	27.35	23.27	20.39	23.56	30.54	34.65
10	20.40	24.74	30.39	31.37	34.10	35.66	27.22	22.99	20.38	24.10	30.72	34.60
11	21.65	24.74	29.77	32.04	34.28	35.90	27.11	22.75	20.40	23.40	31.28	34.35
12	21.62	24.87	29.20	32.38	33.32	34.33	26.98	22.71	20.37	23.92	31.68	34.93
13	21.44	24.69	29.70	32.71	33.69	34.70	26.60	22.75	20.19	25.25	31.75	35.05
14	22.10	24.92	29.47	32.80	34.04	34.87	26.35	22.74	20.08	25.68	31.80	35.19
15	22.30	25.09	29.67	33.01	34.20	35.10	26.29	22.69	20.04	26.03	32.79	35.05
16	22.41	21.93	29.93	32.63	34.20	34.36	26.16	22.46	20.01	26.32	32.91	34.90
17	22.31	23.76	30.18	32.89	34.00	34.92	26.01	22.35	20.15	26.62	33.35	35.09
18	22.79	24.29	30.31	33.26	33.84	35.89	25.73	22.25	20.09	26.92	33.99	34.93
19	22.84	25.85	30.19	32.93	33.50	35.89	25.52	22.25	19.90	26.21	34.02	34.96
20	22.98	25.66	30.45	33.09	34.52	35.69	25.40	22.10	19.72	26.22	32.87	34.83
21	23.14	26.07	30.60	32.71	34.52	35.27	25.37	21.97	19.72	25.26	34.10	34.40
22	23.14	26.38	30.75	32.57	34.04	35.39	25.09	21.83	19.70	26.83	34.17	34.58
23	23.25	26.96	30.67	33.04	34.30	35.33	24.88	21.69	19.62	26.88	32.85	34.88
24	23.28	27.35	31.01	33.31	33.46	35.07	24.84	21.65	19.60	26.70	34.32	34.93
25	23.04	27.40	31.29	33.40	34.95	35.20	24.75	21.64	19.77	25.92	34.32	35.32
26	23.10	27.47	30.92	33.56	35.04	35.24	24.69	21.53	19.64	26.61	33.23	35.39
27	23.66	27.65	31.33	33.71	35.32	35.38	24.50	21.44	19.61	26.29	34.49	33.70
28	23.83	27.90	31.48	33.65	34.73	35.72	24.47	21.44	19.55	27.52	34.77	33.02
29	23.07	28.29	31.31	33.80	34.94	33.56	24.33	21.34	19.49	27.92	34.79	32.63
30	23.58	28.40	31.72	33.62	---	32.00	24.19	21.23	19.40	28.15	34.62	32.69
31	23.69	---	31.87	33.55	---	30.74	---	21.23	---	28.39	34.62	---
MAX	23.83	28.40	31.87	33.80	35.32	35.93	29.96	24.07	21.23	28.39	34.79	35.39



450905097072202.

LOCATION.--Lat 45°09'05", long 97°07'22", in NW ¼ NW ¼ NW ¼ NW ¼ sec.25, T.120 N., R.52 W., Hydrologic Unit 10170201, 10 mi north-northeast of Florence. Owner: U.S. Geological Survey.

AQUIFER.--Prairie Coteau.

WELL CHARACTERISTICS.--Drilled observation well, diameter 40 ft of 4 in., 40 ft of 3 in., 80 ft of 2 in., and 15 ft sand point, depth 172 ft.

INSTRUMENTATION.--Water-level recorder collects hourly values.

DATUM.--Elevation of land-surface datum is 1,828 ft above sea level. Measuring point: Top of casing 3.6 ft above land-surface datum.

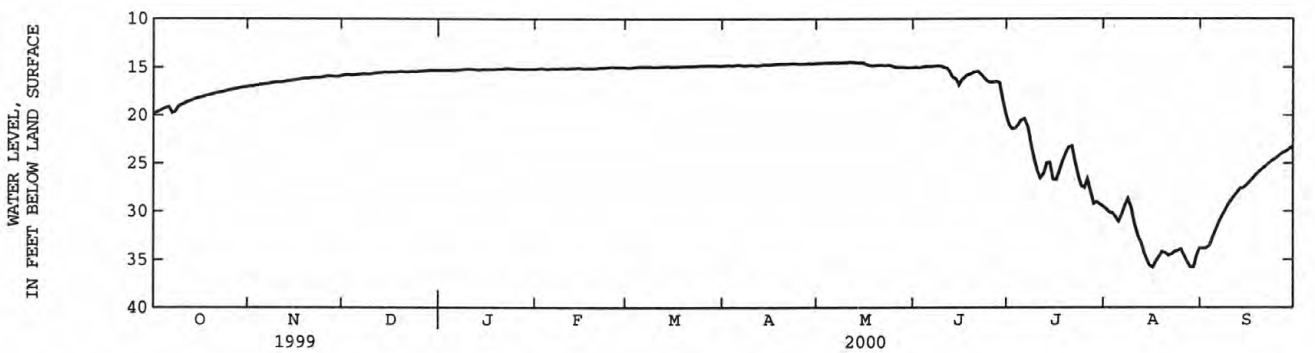
REMARKS.--Water levels affected by pumping of nearby well.

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

EXTREMES.--Feb. 21, 1986, to current year: Maximum water level, 52.98 ft below land-surface datum, July 29, 1988; minimum water level, 9.91 ft below land-surface datum, Nov. 11, 1996.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.84	16.97	15.82	15.30	15.18	15.04	14.83	14.57	15.01	21.01	29.72	33.84
2	19.71	16.95	15.80	15.30	15.13	15.04	14.77	14.57	15.04	21.42	30.08	33.85
3	19.57	16.88	15.81	15.31	15.16	15.02	14.83	14.54	15.01	21.36	30.15	33.57
4	19.41	16.81	15.81	15.30	15.20	14.98	14.81	14.55	14.93	20.95	30.55	32.79
5	19.24	16.80	15.80	15.28	15.16	14.95	14.76	14.55	14.91	20.49	31.04	31.99
6	19.14	16.76	15.75	15.28	15.15	14.95	14.79	14.52	14.90	20.34	30.27	31.23
7	19.72	16.72	15.68	15.28	15.19	14.98	14.83	14.53	14.87	21.17	29.42	30.55
8	19.64	16.63	15.71	15.22	15.14	14.96	14.81	14.50	14.84	23.01	28.67	29.96
9	19.12	16.56	15.71	15.19	15.11	14.99	14.78	14.50	14.86	24.59	29.60	29.36
10	18.91	16.56	15.68	15.18	15.14	14.99	14.78	14.48	15.05	25.70	31.27	28.89
11	18.79	16.54	15.63	15.22	15.15	14.98	14.82	14.45	15.08	26.55	32.34	28.42
12	18.60	16.51	15.60	15.23	15.11	14.96	14.81	14.48	15.47	26.08	33.05	28.01
13	18.50	16.41	15.58	15.29	15.10	14.94	14.73	14.51	16.09	24.93	34.13	27.62
14	18.36	16.42	15.53	15.25	15.08	14.92	14.73	14.53	16.27	24.88	34.99	27.54
15	18.22	16.37	15.54	15.23	15.13	14.97	14.74	14.52	16.85	26.67	35.61	27.28
16	18.17	16.31	15.52	15.25	15.14	14.96	14.73	14.72	16.29	26.70	35.80	26.90
17	18.11	16.25	15.53	15.20	15.12	14.94	14.69	14.77	15.98	25.71	35.17	26.57
18	17.97	16.15	15.52	15.21	15.10	14.90	14.66	14.84	15.79	24.79	34.72	26.21
19	17.90	16.16	15.44	15.18	15.10	14.90	14.64	14.83	15.67	24.01	34.20	25.88
20	17.82	16.15	15.47	15.18	15.10	14.89	14.66	14.79	15.52	23.31	34.34	25.60
21	17.69	16.07	15.47	15.18	15.06	14.91	14.66	14.79	15.46	23.17	34.58	25.36
22	17.63	16.08	15.47	15.13	15.04	14.89	14.61	14.80	15.74	24.75	34.44	25.05
23	17.61	16.07	15.46	15.16	15.04	14.87	14.62	14.78	16.17	26.21	34.18	24.78
24	17.52	16.04	15.47	15.16	15.01	14.81	14.63	14.82	16.45	27.33	34.08	24.58
25	17.38	16.00	15.42	15.19	14.98	14.84	14.66	14.97	16.57	27.53	33.91	24.35
26	17.35	15.92	15.42	15.17	15.00	14.80	14.63	15.02	16.57	26.66	34.62	24.09
27	17.26	15.96	15.39	15.18	15.03	14.80	14.63	15.00	16.49	27.99	35.22	23.90
28	17.23	15.97	15.33	15.20	15.03	14.81	14.62	15.00	16.67	29.23	35.77	23.71
29	17.11	15.97	15.30	15.19	15.01	14.82	14.63	15.05	18.45	29.01	35.77	23.48
30	17.09	15.92	15.34	15.17	---	14.84	14.60	15.05	19.97	29.21	34.54	23.26
31	17.07	---	15.33	15.17	---	14.85	---	15.04	---	29.44	33.83	---
MAX	19.84	16.97	15.82	15.31	15.20	15.04	14.83	15.05	19.97	29.44	35.80	33.85



431619096460202.

LOCATION.--Lat 43°16'19", long 96°46'02", in NE ¼ NE ¼ NE ¼ NE ¼ sec.32, T.98 N., R.50 W., Hydrologic Unit 10170102, 4 mi south of Worthing. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.--Dakota Sandstone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in, depth 383 ft, screened 363 to 383 ft.

INSTRUMENTATION.--Water-level recorder collects hourly values.

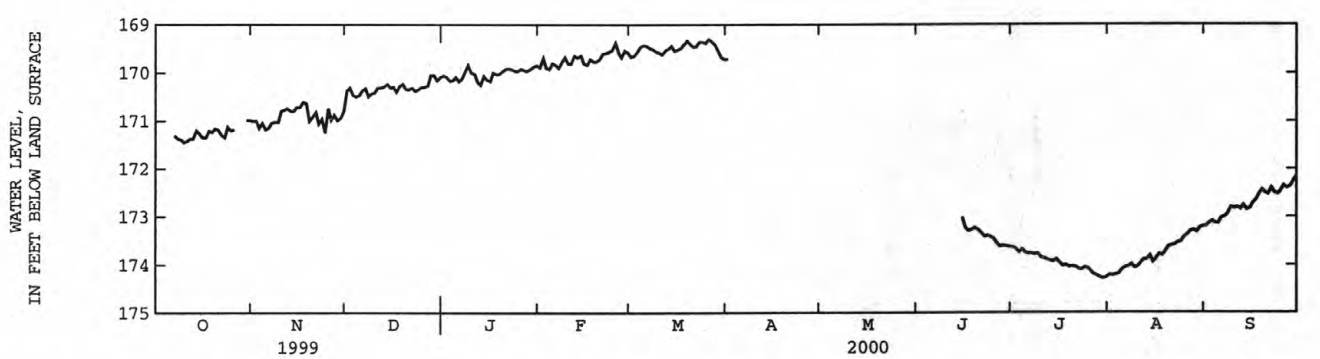
DATUM.--Elevation of land-surface datum is 1,320 ft above sea level. Measuring point: Top of recorder platform 3.0 ft above land-surface datum.

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

EXTREMES.--Jan. 1, 1981, to current year: Maximum water level, 176.94 ft below land-surface datum, Oct. 27, 1996; minimum water level, 151.81 ft below land-surface datum, Feb. 21-23, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	171.00	170.37	170.06	169.89	169.67	169.71	---	---	173.63	174.21	173.19
2	---	170.99	170.31	170.09	169.70	169.65	---	---	---	173.66	174.22	173.13
3	---	171.15	170.47	170.17	169.90	169.57	---	---	---	173.74	174.20	173.09
4	---	171.05	170.50	170.16	169.93	169.46	---	---	---	173.68	174.19	173.13
5	---	171.18	170.47	170.09	169.81	169.43	---	---	---	173.74	174.10	173.13
6	---	171.15	170.37	170.18	169.84	169.44	---	---	---	173.76	174.05	173.02
7	171.30	171.04	170.33	170.12	169.90	169.49	---	---	---	173.76	174.04	173.00
8	171.37	171.02	170.49	169.97	169.78	169.51	---	---	---	173.78	173.99	172.92
9	171.38	171.02	170.43	169.84	169.68	169.56	---	---	---	173.77	174.06	172.80
10	171.45	170.79	170.41	170.00	169.81	169.58	---	---	---	173.84	174.04	172.82
11	171.42	170.77	170.31	170.02	169.81	169.62	---	---	---	173.86	173.97	172.80
12	171.37	170.74	170.31	170.20	169.65	169.54	---	---	---	173.89	173.89	172.84
13	171.37	170.79	170.29	170.25	169.69	169.50	---	---	---	173.91	173.89	172.76
14	171.20	170.80	170.24	170.07	169.65	169.44	---	---	---	173.93	173.81	172.85
15	171.27	170.71	170.32	170.15	169.81	169.55	---	---	173.02	173.89	173.94	172.83
16	171.35	170.71	170.30	170.18	169.84	169.52	---	---	173.23	173.96	173.87	172.71
17	171.35	170.61	170.40	170.00	169.72	169.49	---	---	173.30	174.03	173.78	172.65
18	171.21	170.63	170.28	170.03	169.77	169.41	---	---	173.27	174.00	173.80	172.53
19	171.23	171.00	170.24	170.02	169.77	169.33	---	---	173.23	174.04	173.72	172.44
20	171.16	170.92	170.34	169.97	169.72	169.41	---	---	173.27	174.03	173.62	172.51
21	171.19	170.83	170.35	169.92	169.61	169.46	---	---	173.34	174.04	173.59	172.53
22	171.29	171.06	170.32	169.91	169.59	169.45	---	---	173.41	174.08	173.58	172.40
23	171.34	170.97	170.38	169.93	169.57	169.35	---	---	173.39	174.10	173.53	172.50
24	171.13	171.24	170.35	169.96	169.53	169.36	---	---	173.42	174.05	173.51	172.53
25	171.20	170.74	170.30	169.96	169.38	169.38	---	---	173.46	174.07	173.42	172.46
26	171.18	170.98	170.30	169.92	169.59	169.30	---	---	173.56	174.14	173.36	172.35
27	---	170.88	170.27	169.95	169.68	169.35	---	---	173.62	174.20	173.30	172.40
28	---	170.99	170.05	169.96	169.54	169.43	---	---	173.60	174.23	173.28	172.37
29	---	170.94	170.05	169.92	169.58	169.56	---	---	173.61	174.27	173.32	172.26
30	170.98	170.80	170.16	169.87	---	169.68	---	---	173.62	174.28	173.23	172.16
31	170.98	---	170.09	169.85	---	169.72	---	---	---	174.26	173.20	---
MAX	---	171.24	170.50	170.25	169.93	169.72	---	---	---	174.28	174.22	173.19



454745097450401.

LOCATION.--Lat 45°47'45", long 97°45'04", in SE¼ NE¼ SE¼ sec.23, T.127 N., R.58 W., Hydrologic Unit 09020105, within city limits of Britton. Owner: City of Britton.

AQUIFER.--Dakota Sandstone.

WELL CHARACTERISTICS.--Drilled artesian unused public supply well, diameter 8 in, depth 1,060 ft.

INSTRUMENTATION.--Water-level recorder collects hourly values.

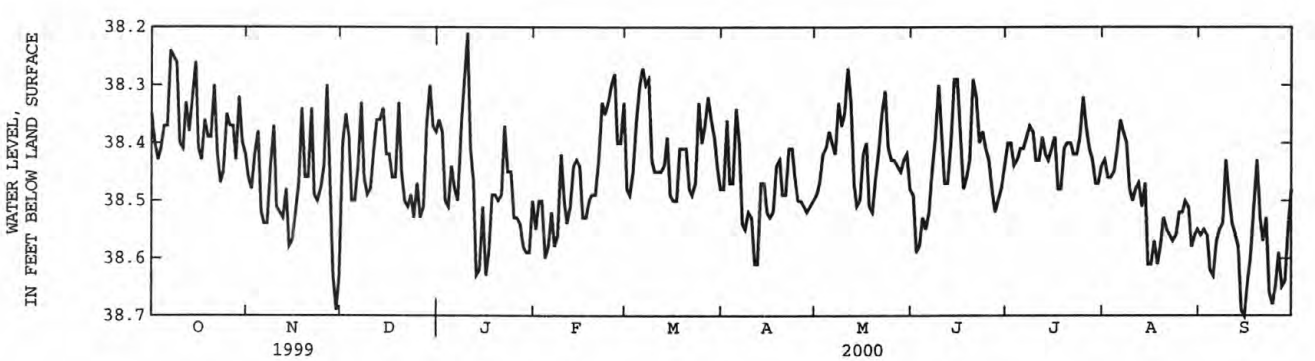
DATUM.--Elevation of land-surface datum is 1,360 ft above sea level. Measuring point: Top of recorder platform 1.95 ft above land-surface datum.

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

EXTREMES.--Jan. 1, 1981, to current year: Maximum water level, 44.98 ft below land-surface datum, Aug. 4, 1982; minimum water level, 37.93 ft below land-surface datum, June 26, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.35	38.46	38.40	38.36	38.55	38.48	38.48	38.49	38.49	38.40	38.43	38.56
2	38.40	38.48	38.35	38.38	38.50	38.49	38.36	38.47	38.59	38.40	38.46	38.55
3	38.43	38.42	38.39	38.50	38.50	38.45	38.47	38.42	38.58	38.44	38.46	38.56
4	38.41	38.38	38.50	38.51	38.60	38.36	38.47	38.41	38.53	38.43	38.45	38.62
5	38.37	38.52	38.50	38.44	38.58	38.30	38.34	38.38	38.55	38.41	38.41	38.63
6	38.37	38.54	38.44	38.48	38.52	38.27	38.40	38.40	38.52	38.41	38.36	38.57
7	38.24	38.54	38.33	38.50	38.58	38.30	38.54	38.42	38.45	38.39	38.38	38.55
8	38.25	38.44	38.46	38.37	38.56	38.29	38.55	38.33	38.39	38.37	38.40	38.54
9	38.26	38.37	38.49	38.29	38.42	38.43	38.52	38.37	38.30	38.38	38.48	38.43
10	38.40	38.51	38.48	38.21	38.50	38.45	38.53	38.35	38.39	38.43	38.50	38.49
11	38.41	38.52	38.41	38.41	38.54	38.45	38.61	38.27	38.47	38.43	38.48	38.54
12	38.33	38.53	38.36	38.47	38.51	38.45	38.61	38.33	38.47	38.39	38.47	38.56
13	38.38	38.48	38.36	38.63	38.44	38.44	38.47	38.47	38.40	38.42	38.51	38.58
14	38.32	38.58	38.34	38.62	38.43	38.39	38.47	38.51	38.29	38.43	38.47	38.69
15	38.26	38.57	38.42	38.51	38.44	38.49	38.52	38.50	38.29	38.41	38.61	38.70
16	38.41	38.52	38.42	38.63	38.53	38.50	38.53	38.42	38.39	38.39	38.61	38.64
17	38.43	38.47	38.46	38.59	38.53	38.50	38.52	38.40	38.48	38.48	38.57	38.60
18	38.36	38.34	38.46	38.49	38.50	38.41	38.44	38.51	38.46	38.48	38.61	38.51
19	38.39	38.46	38.33	38.49	38.49	38.41	38.43	38.52	38.43	38.41	38.58	38.43
20	38.39	38.46	38.45	38.50	38.49	38.41	38.49	38.46	38.29	38.40	38.53	38.53
21	38.30	38.34	38.50	38.49	38.43	38.48	38.49	38.41	38.32	38.40	38.55	38.57
22	38.42	38.49	38.51	38.37	38.33	38.49	38.41	38.35	38.40	38.42	38.56	38.53
23	38.47	38.50	38.49	38.45	38.35	38.47	38.41	38.31	38.38	38.42	38.57	38.66
24	38.45	38.48	38.53	38.45	38.33	38.33	38.46	38.41	38.41	38.39	38.56	38.68
25	38.35	38.44	38.47	38.53	38.30	38.40	38.50	38.43	38.43	38.32	38.52	38.65
26	38.37	38.30	38.53	38.53	38.28	38.37	38.50	38.43	38.48	38.37	38.52	38.59
27	38.37	38.48	38.51	38.54	38.40	38.32	38.51	38.44	38.52	38.41	38.50	38.65
28	38.43	38.63	38.37	38.58	38.40	38.36	38.52	38.45	38.50	38.43	38.51	38.64
29	38.32	38.69	38.30	38.59	38.33	38.39	38.51	38.43	38.48	38.47	38.58	38.55
30	38.40	38.63	38.37	38.59	---	38.44	38.50	38.42	38.44	38.47	38.56	38.48
31	38.42	---	38.38	38.50	---	38.48	---	38.48	---	38.44	38.55	---
MAX	38.47	38.69	38.53	38.63	38.60	38.50	38.61	38.52	38.59	38.48	38.61	38.70



430027102311801.

LOCATION.--Lat 43°00'27", long 102°31'18", in SW¼ NW¼ SE¼ sec.17, T.35 N., R.44 W., Hydrologic Unit 10140201, 2.5 mi southeast of Pine Ridge. Owner: Oglala Sioux Tribe.

AQUIFER.--Arikaree.

WELL CHARACTERISTICS.--Drilled artesian production well, diameter 16 in, depth 180 ft, slotted from 60 to 180 ft. Inside is a 12-in steel liner from -2.00 to 60 ft with a 12-in diameter wire-wrapped screen from 60 to 140 ft. Annular space is filled with Luther Mattox Type C well gravel.

INSTRUMENTATION.--Digital water-level recorder collects hourly values.

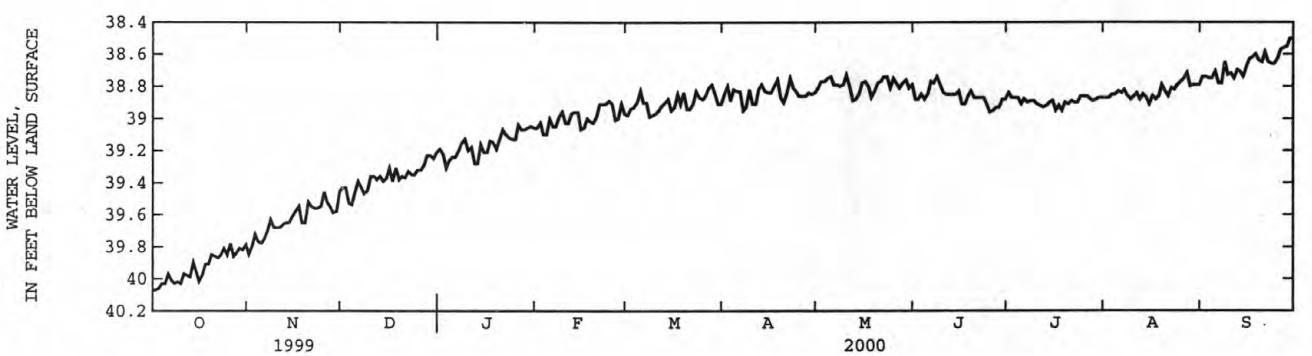
DATUM.--Elevation of land-surface datum is 3,296 ft above sea level. Measuring point: Top of steel casing 2.00 ft above land-surface datum.

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

EXTREMES.--June 9, 1989, to current year: Maximum water level, 43.13 ft below land-surface datum, Dec. 23, 1992; minimum water level, 38.45 ft below land-surface datum, Sept. 30, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.07	39.85	39.43	39.19	39.06	38.98	38.85	38.81	38.88	38.84	38.87	38.74
2	40.07	39.80	39.43	39.22	39.03	38.94	38.80	38.77	38.88	38.87	38.87	38.74
3	40.06	39.72	39.53	39.31	39.10	38.93	38.89	38.77	38.85	38.87	38.85	38.75
4	40.03	39.77	39.54	39.26	39.10	38.90	38.82	38.75	38.88	38.87	38.85	38.75
5	40.03	39.78	39.46	39.24	39.00	38.83	38.83	38.74	38.85	38.91	38.83	38.71
6	39.97	39.75	39.39	39.24	39.05	38.90	38.83	38.79	38.77	38.88	38.84	38.78
7	40.01	39.70	39.43	39.20	39.05	38.90	38.95	38.79	38.78	38.90	38.82	38.78
8	40.03	39.63	39.47	39.15	38.99	38.99	38.93	38.80	38.74	38.89	38.86	38.65
9	40.02	39.68	39.45	39.13	38.96	38.98	38.82	38.79	38.79	38.89	38.88	38.73
10	40.03	39.68	39.36	39.20	39.03	38.97	38.91	38.73	38.84	38.91	38.86	38.72
11	39.97	39.68	39.36	39.18	39.03	38.95	38.91	38.80	38.85	38.92	38.84	38.75
12	39.98	39.66	39.38	39.28	38.97	38.92	38.82	38.89	38.85	38.93	38.88	38.70
13	39.99	39.65	39.36	39.28	38.96	38.90	38.79	38.88	38.85	38.92	38.85	38.71
14	39.90	39.65	39.39	39.16	38.96	38.88	38.83	38.85	38.85	38.90	38.87	38.74
15	39.96	39.61	39.37	39.21	39.07	38.95	38.84	38.78	38.83	38.89	38.91	38.68
16	40.02	39.58	39.31	39.21	39.06	38.93	38.84	38.77	38.91	38.95	38.86	38.63
17	39.98	39.55	39.39	39.14	39.00	38.85	38.80	38.80	38.91	38.92	38.88	38.62
18	39.91	39.65	39.31	39.15	39.02	38.91	38.76	38.87	38.86	38.95	38.86	38.60
19	39.91	39.65	39.38	39.19	39.03	38.84	38.87	38.83	38.83	38.90	38.79	38.64
20	39.85	39.52	39.36	39.13	38.99	38.94	38.90	38.78	38.87	38.91	38.83	38.65
21	39.86	39.55	39.37	39.07	38.91	38.94	38.84	38.77	38.87	38.89	38.86	38.59
22	39.87	39.56	39.33	39.10	38.91	38.91	38.75	38.74	38.87	38.90	38.81	38.65
23	39.85	39.56	39.35	39.12	38.91	38.83	38.81	38.74	38.87	38.90	38.82	38.66
24	39.81	39.55	39.35	39.13	38.89	38.87	38.83	38.81	38.91	38.86	38.79	38.66
25	39.85	39.46	39.32	39.13	38.91	38.88	38.86	38.75	38.96	38.86	38.77	38.63
26	39.78	39.52	39.32	39.04	39.01	38.86	38.86	38.78	38.95	38.86	38.75	38.57
27	39.86	39.55	39.29	39.07	39.00	38.81	38.86	38.81	38.93	38.88	38.72	38.56
28	39.84	39.59	39.23	39.07	38.91	38.79	38.84	38.78	38.93	38.89	38.80	38.55
29	39.81	39.58	39.23	39.06	38.97	38.85	38.85	38.76	38.88	38.88	38.79	38.50
30	39.82	39.46	39.25	39.05	---	38.91	38.84	38.81	38.88	38.87	38.79	38.50
31	39.79	---	39.21	39.06	---	38.91	---	38.79	---	38.87	38.79	---
MAX	40.07	39.85	39.54	39.31	39.10	38.99	38.95	38.89	38.96	38.95	38.91	38.78



430027102311806.

LOCATION.--Lat 43°00'27", long 102°31'18", in SW¼ NW¼ SE¼ sec.17, T.35 N., R.44 W., Hydrologic Unit 10140201, 2.5 mi southeast of Pine Ridge. Owner: Oglala Sioux Tribe.

AQUIFER.--Arikaree.

WELL CHARACTERISTICS.--Drilled artesian production well, diameter 12 in., depth 835 ft, 12-in steel casing from 0 to 505 ft. Alternating 8-in screen and casing from 505 to 835 ft.

INSTRUMENTATION.--Digital water-level recorder collects hourly values.

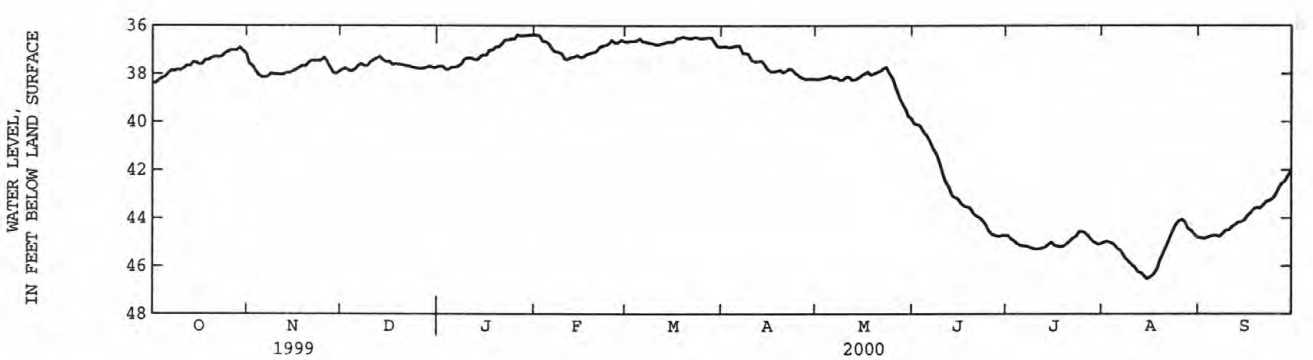
DATUM.--Elevation of land-surface datum is 3,296 ft above sea level. Measuring point: Top of steel casing 2.09 ft above land-surface datum.

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

EXTREMES.--June 9, 1989, to current year: Maximum water level, 46.53 ft below land-surface datum, Aug. 15, 2000; minimum water level, 34.18 ft below land-surface datum, Feb. 25, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.38	37.57	37.81	37.69	36.39	36.67	36.87	38.23	40.09	44.73	45.01	44.81
2	38.37	37.66	37.78	37.69	36.43	36.65	36.88	38.21	40.12	44.87	44.97	44.85
3	38.27	37.87	37.87	37.82	36.65	36.65	36.91	38.19	40.19	44.96	45.02	44.81
4	38.19	38.05	37.89	37.82	36.66	36.64	36.87	38.15	40.43	45.07	45.07	44.77
5	38.12	38.13	37.82	37.73	36.77	36.55	36.83	38.09	40.58	45.14	45.22	44.73
6	37.97	38.13	37.66	37.73	36.99	36.66	36.84	38.17	40.82	45.15	45.33	44.72
7	37.86	38.11	37.59	37.70	37.09	36.67	37.14	38.16	41.10	45.17	45.47	44.77
8	37.90	37.98	37.66	37.60	37.11	36.73	37.14	38.25	41.31	45.22	45.69	44.64
9	37.83	38.02	37.66	37.41	37.17	36.74	37.21	38.25	41.69	45.26	45.83	44.51
10	37.85	38.02	37.50	37.35	37.40	36.80	37.45	38.15	42.13	45.29	45.96	44.50
11	37.78	38.03	37.42	37.35	37.41	36.79	37.51	38.14	42.48	45.27	46.05	44.37
12	37.65	38.03	37.36	37.41	37.33	36.75	37.49	38.25	42.67	45.26	46.24	44.28
13	37.68	37.95	37.29	37.43	37.31	36.73	37.46	38.24	43.04	45.21	46.29	44.17
14	37.52	37.96	37.44	37.31	37.25	36.68	37.63	38.19	43.15	45.11	46.43	44.17
15	37.53	37.91	37.50	37.23	37.32	36.68	37.83	38.08	43.19	45.01	46.53	44.10
16	37.61	37.83	37.48	37.22	37.31	36.66	37.91	38.02	43.39	45.14	46.46	43.90
17	37.60	37.76	37.63	37.03	37.21	36.53	37.91	37.94	43.49	45.17	46.35	43.78
18	37.43	37.66	37.58	37.01	37.16	36.51	37.89	38.05	43.53	45.20	46.14	43.61
19	37.43	37.68	37.61	36.89	37.12	36.46	37.86	38.02	43.60	45.17	45.77	43.56
20	37.35	37.55	37.61	36.88	37.09	36.50	37.95	37.95	43.81	45.06	45.46	43.57
21	37.29	37.45	37.66	36.74	36.93	36.53	37.90	37.89	43.92	44.94	45.17	43.45
22	37.30	37.45	37.66	36.59	36.85	36.53	37.80	37.79	44.00	44.83	44.84	43.30
23	37.29	37.45	37.73	36.59	36.82	36.47	37.86	37.74	44.14	44.77	44.56	43.26
24	37.18	37.45	37.74	36.55	36.77	36.52	37.99	37.99	44.30	44.57	44.30	43.19
25	37.11	37.33	37.77	36.56	36.61	36.54	38.08	38.20	44.57	44.56	44.12	43.03
26	37.03	37.48	37.78	36.40	36.72	36.52	38.17	38.56	44.68	44.63	44.07	42.74
27	37.01	37.74	37.77	36.43	36.72	36.50	38.23	38.91	44.73	44.77	44.15	42.55
28	37.02	37.96	37.73	36.42	36.61	36.50	38.22	39.19	44.76	44.92	44.45	42.45
29	36.91	37.99	37.70	36.41	36.66	36.69	38.21	39.45	44.73	45.02	44.53	42.22
30	37.04	37.91	37.76	36.40	---	36.86	38.22	39.77	44.73	45.09	44.69	42.05
31	37.16	---	37.73	36.38	---	36.89	---	39.87	---	45.08	44.80	---
MAX	38.38	38.13	37.89	37.82	37.41	36.89	38.23	39.87	44.76	45.29	46.53	44.85



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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
	Length	
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
	Area	
acre	4.047x103	square meter
	4.047x10-1	square hectometer
	4.047x10-3	square kilometer
square mile (mi2)	2.590x100	square kilometer
	Volume	
gallon (gal)	3.785x100	liter
	3.785x100	cubic decimeter
	3.785x10-3	cubic meter
million gallons (Mgal)	3.785x103	cubic meter
	3.785x10-3	cubic hectometer
cubic foot (ft3)	2.832x101	cubic decimeter
	2.832x10-2	cubic meter
cubic-foot-per-second day [(ft3/s) d]	2.447x103	cubic meter
	2.447x10-3	cubic hectometer
acre-foot (acre-ft)	1.233x103	cubic meter
	1.233x10-3	cubic hectometer
	1.233x10-6	cubic kilometer
	Flow	
cubic foot per second (ft3/s)	2.832x101	liter per second
	2.832x101	cubic decimeter per
second		
	2.832x10-2	cubic meter per second
gallon per minute (gal/min)	6.309x10-2	liter per second
	6.309x10-2	cubic decimeter per
second		
	6.309x10-5	cubic meter per second
million gallons per day (Mgal/d)	4.381x101	cubic decimeter per
second		
	4.381x10-2	cubic meter per second
	Mass	
ton (short)	9.072x10-1	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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