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Water Resources Data North Dakota Water Year 2005

Volume 1. Surface Water

Water-Data Report ND-05-1

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

Calendar for Water Year 2005

2004

October

S	M	T	W	T	F	S
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2005

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August

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Water Resources Data
North Dakota
Water Year 2005

Volume 1. Surface Water

By S.M. Robinson, R.F. Lundgren, B.A. Sether, S.W. Norbeck, and J.M. Lambrecht

Water-Data Report ND-05-1

Prepared in cooperation with the State of North Dakota
and with other agencies

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

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PREFACE

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

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

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

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2005 water year for North Dakota consists of records of discharge, stage, and water quality for streams; contents, stage, and water quality for lakes and reservoirs; and water levels and water quality for ground-water wells. Volume 1 contains records of water discharge for 107 streamflow-gaging stations; stage only for 22 river-stage stations; contents and/or stage for 13 lake or reservoir stations; annual maximum discharge for 31 crest-stage stations; and water-quality for 93 streamflow-gaging stations, 6 river-stage stations, 15 lake or reservoir stations, and about 50 miscellaneous sample sites on lakes and wetlands. Data are included for 8 water-quality monitor sites on streams and 2 precipitation-chemistry stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in North Dakota.

14. SUBJECT TERMS
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CONTENTS

CONTENTS--Continued

ILLUSTRATIONS

TABLES

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

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

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

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PRECIPITATION SITES, FOR WHICH CHEMICAL-QUALITY DATA ARE PUBLISHED IN THIS VOLUME

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in North Dakota have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

[(d), discharge; (e), elevation (stage only); 1, not published (records only available from computer and/or manual files); --, no data].

Station name	Station number	Drainage area (mi^2)	Period of record
RED RIVER OF THE NORTH BASIN			
Bois de Sioux River near Fairmount, ND (d)	05050500	1,540	1919-44
Wild Rice River near Cayuga, ND (d)	05051700	955	1956-79
Wild Rice River near Mantador, ND (d)	05052000	1,357	1944-50
Richland County Drain No. 65 near Great Bend, ND (d)	05052100	38	1981-85
Sheyenne River near Harvey, ND (d)	05055000	534	1946-56
North Fork Sheyenne River near Wellsburg, ND (d)	05055100	693	1958-67
Big Coulee near Maddock, ND (d)	05055200	146	1957-67
Sheyenne River at Sheyenne, ND (d)	05055500	1,790	1929-33, 1940-51
Big Coulee near Fort Totten, ND (d)	05055520	23.2	1966-75
Webster Coulee at Webster, ND (d)	05056225	670	1980-82 (e), 1983-87 (e1), 1994
Calio Coulee near Starkweather, ND (d)	05056247	130	1986-88, 1994
Little Coulee at Leeds, ND (d)	05056300	280	1955-67
Little Coulee near Brinsmade, ND (d)	05056390	350	1976-97
Big Coulee near Churchs Ferry, ND (d)	05056400	1,620	1950-97
Comstock Coulee near Minnewaukan, ND (d)	05056403	58	1986-88 (1), 1994
Channel A near Penn, ND (d)	05056410	930	1984-99
Sheyenne River near Kathryn, ND (d)	05058600	8,000	1995-96, 2002
Ditch 10 above Iron Springs Creek near McLeod, ND (d)	05058850	Not determined	2001-2004
Cass County Drain 52 near Amenia, ND (d)	05060510	13.5	1981-85
Rush River near Prosper, ND (d)	05060550	170	1981-85
Lower Branch Rush River near Prosper, ND (d)	05060570	35.8	1981-85
Elm River near Kelso, ND (d)	05062200	199	1956-63, 1981-86
Beaver Creek near Finley, ND (d)	05064900	160	1965-2003
Beaver Creek near Hatton, ND (d)	05065000	162	1954-57

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
RED RIVER OF THE NORTH BASIN--Continued			
Goose River near Portland, ND (d)	05065500	517	1940-75, 1981-86
South Branch Goose River near Portland, ND (d)	05066000	362	1940-42
Turtle River at Manvel, ND (d)	05083000	613	1946-70, 1980-82 (e)
Middle Branch Forest River near Whitman, ND (d)	05083600	47.7	1961-90
Forest River near Minto, ND (d)	05084500	578	1932-44
South Branch Park River near Park River, ND (d)	05088000	214	1940-50
Homme Reservoir near Park River, ND (e)	05088500	226	1949-94, 2001-2002 (1)
South Branch Park River below Homme Dam, ND (d)	05089000	226	1950-94
Middle Branch Park River near Union, ND (d)	05089100	15.3	1966-86
Cart Creek at Mountain, ND (d)	05089500	16.9	1954-84
Pembina County Drain No. 20 near Glasston, ND (d)	05092200	80	1972-86
Hidden Island Coulee near Hansboro, ND (d)	05098700	38	1961-95
Cypress Creek near Sarles, ND (d)	05098800	71	1961-88
Cypress Creek above International Boundary near Sarles, ND (d)	05098820	83	1988-95
Herzog Creek near Concrete, ND (d)	05100500	18.9	1954-77
Tongue River at Cavalier, ND (d)	05101500	167	1939-51
Tongue River near Pembina, ND (d)	05102000	460	1940-42
Long Creek near Crosby, ND (d)	05113500	2,080	1943-65
West Branch Short Creek near Columbus, ND (d)	05113700	167	1978-81
Des Lacs River near Kenmare, ND (d)	05116150	687	1988-93
Wintering River near Bergen, ND (d)	05120200	176	1957-78
Souris River near Towner, ND (d)	05121500	13,100	1933-41
Willow Creek at Dunseith, ND (d)	05122500	142	1953-70
Lake Metigoshe near Bottineau, ND (e)	05123000	59	1931-32, 1953-87, 1992-96
Oak Creek at Lake Metigoshe Outlet near Bottineau, ND (d)	05123100	59	1954-81
Stone Creek near Kramer, ND (d)	05123500	168	1986-93, 1999-2000
Egg Creek near Granville, ND (d)	05123600	289	1957-81
Cut Bank Creek at North Lake Outlet near Granville, ND (d)	05123700	534	1957-80

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
RED RIVER OF THE NORTH BASIN--Continued			
Cut Bank Creek near Upham, ND (d)	05123750	722	1975-80, 1986-91, 1999-2000
Boundary Creek near Landa, ND (d)	05123900	230	1957-81 1985-94 1999-2000
MISSOURI RIVER BASIN			
Charbonneau Creek near Charbonneau, ND (d)	06329597	149	1967-81
Missouri River Stage Gage No. 7 near Trenton, ND (e)	06329660	164,000	1959-2003
Missouri River Stage Gage No. 8 near Trenton, ND (e)	06329680	164,000	1959-79 (e)
Blacktail Creek near Bonetrail, ND (d)	06330500	30	1956-60
Little Muddy Creek near Williston, ND (d)	06331500	1,010	1904-09, 1932-33, 1946-54
Stony Creek near Williston, ND (d)	06331570	146	1978-81
Missouri River Stage Gage No. 10 near Williston, ND (e)	06331600	165,000	1959-75 (e)
Missouri River Stage Gage No. 11 near Williston, ND (e)	06331650	165,000	1959-80 (e)
Tobacco Garden Creek near Watford City, ND (d)	06331680	135	1977-82
Beaver Creek near Ray, ND (d)	06331850	102	1977-82
White Earth River at White Earth, ND (d)	06332000	780	1954-82
Missouri River at Sanish, ND (d)	06332500	166,000	1928-32
Shell Creek near Parshall, ND (d)	06332520	465	1965-81
Little Beaver Creek near Marmarth, ND (d)	06335000	587	1938-79
Hay Creek No. 2 near Wibaux, MT (d)	06336510	11.4	1978-82
Hay Creek near Wibaux, MT (d)	06336515	11.4	1978-82
Little Beaver Creek near Wibaux, MT (d)	06336545	96.2	1978 (1), 1979-81
Deep Creek near Amidon, ND (d)	06335750	250	1978-83
Missouri River near Elbowwoods, ND (d)	06337500	179,800	1940-53
Missouri River below Garrison Dam, ND (d)	06339000	181,400	1948-69, 1970-76 (e)
Stray Creek near Manning, ND (d)	06339180	30.3	1979-81
Knife River at Marshall, ND (d)	06339300	722	1971-81
Elm Creek near Golden Valley, ND (d)	06339490	82	1967-81
Coyote Creek near Zap, ND (d)	06339550	65.2	1978-83
Brush Creek near Beulah, ND (d)	06339560	23.9	1975-91

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
MISSOURI RIVER BASIN--Continued			
Spring Creek below Lake Ilo at Dunn Center, ND (d)	06339800	116	1978-81
Spring Creek near Halliday, ND (d)	06339900	260	1978-81
West Branch Otter Creek near Beulah, ND (d)	06340200	26.5	1965-82
Antelope Creek above Hazen, ND (d)	06340520	47.2	1977-86
West Branch Antelope Creek No. 5 near Zap, ND (d)	06340524	4.37	1978-82
West Branch Antelope Creek No. 4 near Zap, ND (d)	06340528	8.46	1977-86
West Branch Antelope Creek No. 2 near Beulah, ND (d)	06340536	28.3	1977-80
West Branch Antelope Creek near Hazen, ND (d)	06340540	37.7	1978-83
Coal Creek near Stanton, ND (d)	06340580	15.8	1978-81
Alderin Creek near Fort Clark, ND (d)	06340780	21.9	1978-83
Missouri River Tributary No. 2 near Hensler, ND (d)	06340890	9.80	1979-81
Coal Lake Coulee near Hensler, ND (d)	06340905	70.5	1978-89
Buffalo Creek near Washburn, ND (d)	06340930	57.3	1979-83
Turtle Creek near Turtle Lake, ND (d)	06341400	310	1957-76
Turtle Creek above Washburn, ND (d)	06341410	350	1987-2003
Painted Woods Creek near Wilton, ND (d)	06341800	427	1958-81, 1983-2003
Square Butte Creek near Hannover, ND (d)	06342040	16.9	1978-81
Square Butte Creek Tributary No. 2 near Center, ND (d)	06342100	13	1965-76
Square Butte Creek above Nelson Lake near Center, ND (d)	06342200	75.8	1977-82
Hagel Creek near Center, ND (d)	06342230	45.6	1977-82
Norwegian Creek near Belfield, ND (d)	06342850	39.8	1979-81
South Branch Heart River near South Heart, ND (d)	06342900	132	1979-83
North Creek near South Heart, ND (d)	06342970	40.8	1979-81
Heart River near South Heart, ND (d)	06343000*	311	1946-70, 1978-84
Heart River below Dickinson Dam near Dickinson, ND (d)	06344000	404	1952-72
Heart River at Dickinson, ND (d)	06344300	440	1984 (1), 1985-96
Heart River at Lehigh, ND (d)	06344500	443	1943-52
Green River Tributary near New Hradec, ND (d)	06344610	22.4	1979-81
Green River near Gladstone, ND (d)	06345000	356	1946-75
Heart River below Heart Butte Dam near Glen Ullin, ND (d)	06346500	1,710	1943-72
Wilson Creek near Glen Ullin, ND (d)	06347100	41.4	1965-70

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi^2)	Period of record
MISSOURI RIVER BASIN--Continued			
Heart River near Lark, ND (d)	06348000	2,750	1946-95
Missouri River below Mandan, ND (e)	06349070	189,800	1966-94
Long Lake Creek above Long Lake near Moffit, ND (d)	06349215	280	1989-2004
Long Lake Creek below Long Lake near Moffit, ND (d)	06349275	700	1989-93
Cannonball River at New England, ND (d)	06349900	285	1979-81
Coal Bank Creek near Havelock, ND (d)	06349930	70	1975-83
Cannonball River below Bentley, ND (d)	06351000	1,140	1943-81
Cannonball River near Heil, ND (d)	06351500	1,340	1951-53
White Butte Fork Cedar Creek near Scranton, ND (d)	06351680	42.9	1965-67 (1), 1968-95
Cedar Creek near North Lemmon, ND (d)	06352300	901	1959-63
Cannonball River near New Leipzig, ND (d)	---	1,180	1943-50
Timber Creek near Bentley, ND (d)	06352400	100	1978-81
Cedar Creek near Pretty Rock, ND (d)	06352500	1,340	1943-76
Cannonball River near Timmer, ND (d)	06353500	3,670	1903-09, 1911-18, 1922, 1924, 1928-35
Beaver Creek at Linton, ND (d)	06354500	717	1949-89
Porcupine Ceek near Fort Yates, ND (d)	06354815	220	1991-99
North Fork Grand River at Haley, ND (d)	06355000	509	1908-17, 1945-95
Buffalo Creek Tributary near Gascoyne, ND (d)	06355310	15.7	1975-87
James River near Manfred, ND (d)	06467600	253	1958-94
Big Slough at Hamberg, ND (d)	06467900	60	1957-68, 1970-75
James River at New Rockford, ND (d)	06468000	714	1950-69
Juanita Lake Tributary near Grace City, ND (d)	06468190	94	1986-89
Kelly Creek below Niccum Reservoir near Bordulac, ND (d)	06468300	188	1986-89
James River near Pingree, ND (d)	06468500	1,670	1953-68
Pipestem Creek near Buchanan, ND (d)	06469500	758	1950-74
Pilot Drain at Oakes, ND (d)	06470833	5.10	1972-82
James River near Hecla, SD (e)	06470980	5,520	1982-85 (1), 1986-91

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water quality stations prior to the current water year. Daily records of temperature, specific conductance or sediment were collected and published for the periods shown for each station.

[--, no data]

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Wild Rice River near Cayuga, ND	05051700	955	temperature	1958
Wild Rice River near Abercrombie, ND	05053000	2,080	temperature specific conductance	1967-81 1968-81
Red River of the North below Fargo, ND	05054020	6,820	temperature specific conductance	1973-82 1973-82
Sheyenne River above Harvey, ND	05054500	424	temperature	1954
Sheyenne River near Warwick, ND	05056000	2,070	temperature specific conductance	1951-53, 1955-62, 1964-80 1952-60, 1964-80
Big Coulee near Churchs Ferry, ND	05056400	2,510	temperature specific conductance	1983-89 1983-89
Channel A near Penn, ND	05056410	---	temperature specific conductance	1983-89, 1991 1983-89
Sheyenne River at Lisbon, ND	05058700	8,190	temperature specific conductance sediment	1956-81 1964-80 1976-79
Sheyenne River near Kindred, ND	05059000	8,800	temperature specific conductance sediment	1971-81 1976-81 1976-80
Red River of the North at Grand Forks, ND	05082500	30,100	temperature	1957-73
Red River of the North at Oslo, MN	05083500	31,200	temperature specific conductance	1974-78 1974-78
Red River of the North at Drayton, ND	05092000	34,800	temperature	1957-61, 1965-75
Pembina River at Walhalla, ND	05099600	3,350	temperature specific conductance sediment	1962-81 1965-81 1962-76
Red River of the North at Emerson, Manitoba	05102500	40,200	temperature specific conductance	1978-96 1978-96
Souris River near Sherwood, ND	05114000	8,940	temperature specific conductance sediment pH dissolved oxygen	1983-2003 1983-2003 1975-81 1992-2003 1993-2003
Souris River near Foxholm, ND	05116000	9,470	temperature specific conductance	1973-81 1973-81
Souris River near Verendrye, ND	05120000	11,300	temperature specific conductance	1973-83 1973-83
Deep River below Cut Bank Creek near Upham, ND	05123760	1,722	temperature specific conductance sediment	1974-81, 1989 1974-81 1989
Turtle River at Turtle River State Park near Arvilla, ND	05082625	311	temperature specific conductance	1993-97 1993-97
Souris River near Westhope, ND	05124000	16,900	temperature specific conductance sediment pH dissolved oxygen	1974-81, 1992-2003 1974-81, 1992-2003 1956-59, 1989 1992-2003 1993-2003

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Missouri River near Williston, ND	06330000	164,500	temperature specific conductance	1952-65 1952-60, 1965
Bear Den Creek near Mandaree, ND	06332515	74	temperature specific conductance	1969-71, 1989-91 1969-71
Little Missouri River at Marmarth, ND	06335500	4,640	temperature sediment	1952-54 1952-54
Little Missouri River at Medora, ND	06336000	6,190	temperature sediment	1947-49 1946-51
Little Missouri River near Watford City, ND	06337000	8,310	temperature specific conductance sediment	1972-81 1972-81 1947-48, 1972-76
Missouri River Below Garrison Dam, ND	06339000	181,400	temperature	1952-71
Knife River near Golden Valley, ND	06339500	1,230	temperature sediment	1964-65 1946-49, 1964-65
Knife River at Hazen, ND	06340500	2,240	temperature specific conductance	1975-82 1975-82
Missouri River near Hensler, ND	06340900	183,000	temperature	1967-77
Missouri River at Bismarck, ND	06342500	186,400	temperature specific conductance sediment	1967-75 1972-75 1972-81
Heart River near Richardton, ND	06345500	1,240	sediment	1946-52
Heart River near Mandan, ND	06349000	3,310	temperature specific conductance sediment	1972-76, 1978-82 1972-76, 1978-82 1972-76
Missouri River near Schmidt, ND	06349700	191,700	temperature	1967-75
Cannonball River at Regent, ND	06350000	580	temperature specific conductance sediment	1965-66 1965-66 1965-66
Cedar Creek near Pretty Rock, ND	06352500	1,340	sediment	1946-49
Cannonball River at Breien, ND	06354000	4,100	temperature specific conductance sediment	1972-82, 1991 1972-82 1972-76
North Fork Grand River at Haley, ND	06355000	509	temperature	1951-52
James River at LaMoure, ND	06470500	4,390	temperature specific conductance	1953-75, 1977-96 1976-96
James River at Oakes, ND	06470800	5,320	temperature specific conductance	1983-99 1983-99
James River at Dakota Lake Dam near Ludden, ND	06470875	5,480	temperature specific conductance	1983-99 1983-99
Pilot Drain at Oakes, ND	06470833	5.10	temperature specific conductance	1972-80, 1982 1972-80, 1982
James River at North Dakota-South Dakota State line	06470878	6,650	temperature specific conductance	1974-88 1974-88

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INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with many other agencies, obtains a large amount of data pertaining to the water resources of North 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 U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data - North Dakota."

This report includes records of discharge, stage, and water quality for streams and contents, stage, and water quality for lakes and reservoirs. Specifically, it contains records of water discharge for 107 streamflow-gaging stations; stage only for 22 river-stage stations; contents and/or stage for 13 lake or reservoir stations; annual maximum discharge for 31 crest-stage stations; and water quality for 93 streamflow-gaging stations, 6 river-stage stations, 15 lake or reservoir stations, and about 50 miscellaneous sample sites on lakes and wetlands. Locations of these stations are shown in figures 1 and 2 except for the miscellaneous water-quality sites. Data are included for 8 water-quality monitor sites on streams and for 2 precipitation-chemistry stations. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in North Dakota.

This series of annual reports for North 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. For the 1975-95 water years, 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. Beginning with the 1996 water year, ground-water levels and ground-water quality data have been published in a separate volume for North Dakota.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for North 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 5 and 6." For the 1961-70 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941-70 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935-74 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 U.S. Geological Survey, Information Services, Box 25286, Denver, CO 80225-0286.

Publications similar to this report are published annually by the U.S. 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 ND-04-1." 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. Beginning with the 2001 water year, an electronic version of the water-data reports may be accessed from *http://water.usgs.gov/pubs/wdr/#ND/*.

Additional information, including current prices, for ordering specific reports may be obtained from the USGS Water Science Center Director at the address given on the back of the title page or by telephoning (701) 250-7406.

COOPERATION

The U.S. Geological Survey and agencies of the State of North Dakota have had cooperative agreements for the collection of streamflow records since 1903, ground-water levels since 1937, and water-quality records since 1946. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are: North Dakota State Water Commission, Dale Frink, State Engineer; North Dakota Department of Health, Terry L. Dwelle, M.D., State Health Officer; Devils Lake Basin Joint Water Resource Board, Mike Connor, Director; Lower Heart River Water Resources District, Bill Robinson, Chairman; Morton County Water Resources District, A. C. Mork, Chairman; Red River Joint Water Resource Board, Donald Elston, Chairman; Red River Watershed Management Board, Ronald Osowski, Chairman; Southeast Cass Water Resources District, Thomas L. Fischer, Chairman; City of Minot, Curt Zimbleman, Mayor; North Dakota Department of Transportation, D. A. Sprynczynatyk, P.E., Director; Cass County Joint Water Resource District, Thomas L. Fischer, Chairman; Nelson County Water Resource District, Ben Varnson, Chairman; Three Affiliated Tribes, Tex G. Hall, Tribal Chairman; Spirit Lake Sioux Nation, Phillip G. Longie, Tribal Chairman; Burleigh County Water Resource District, Ken Royce, Chairman; City of Bismarck, John Warford, Mayor; and City of Grand Forks, Michael Brown, Mayor.

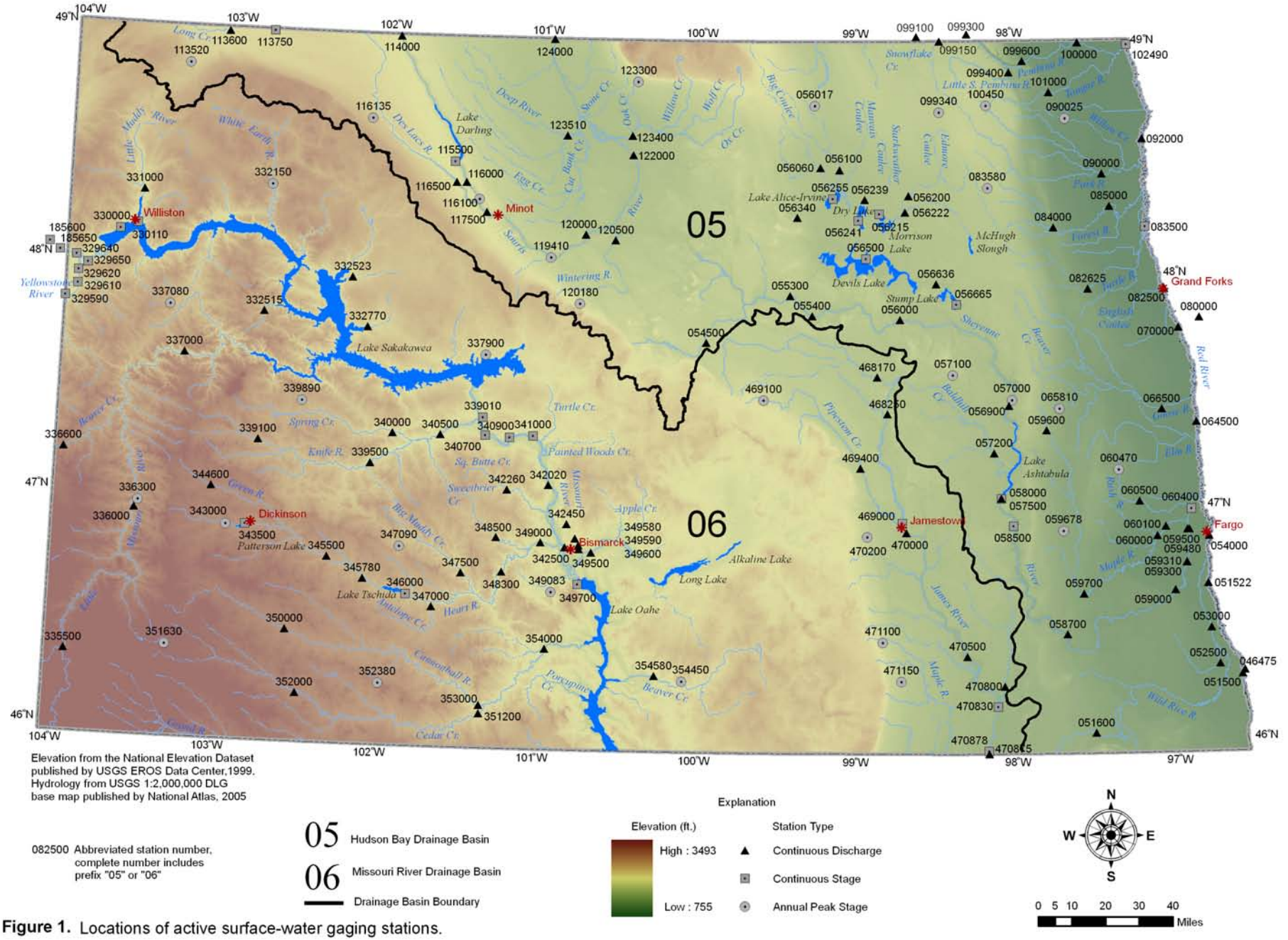

Figure 1. Locations of active surface-water gaging stations.

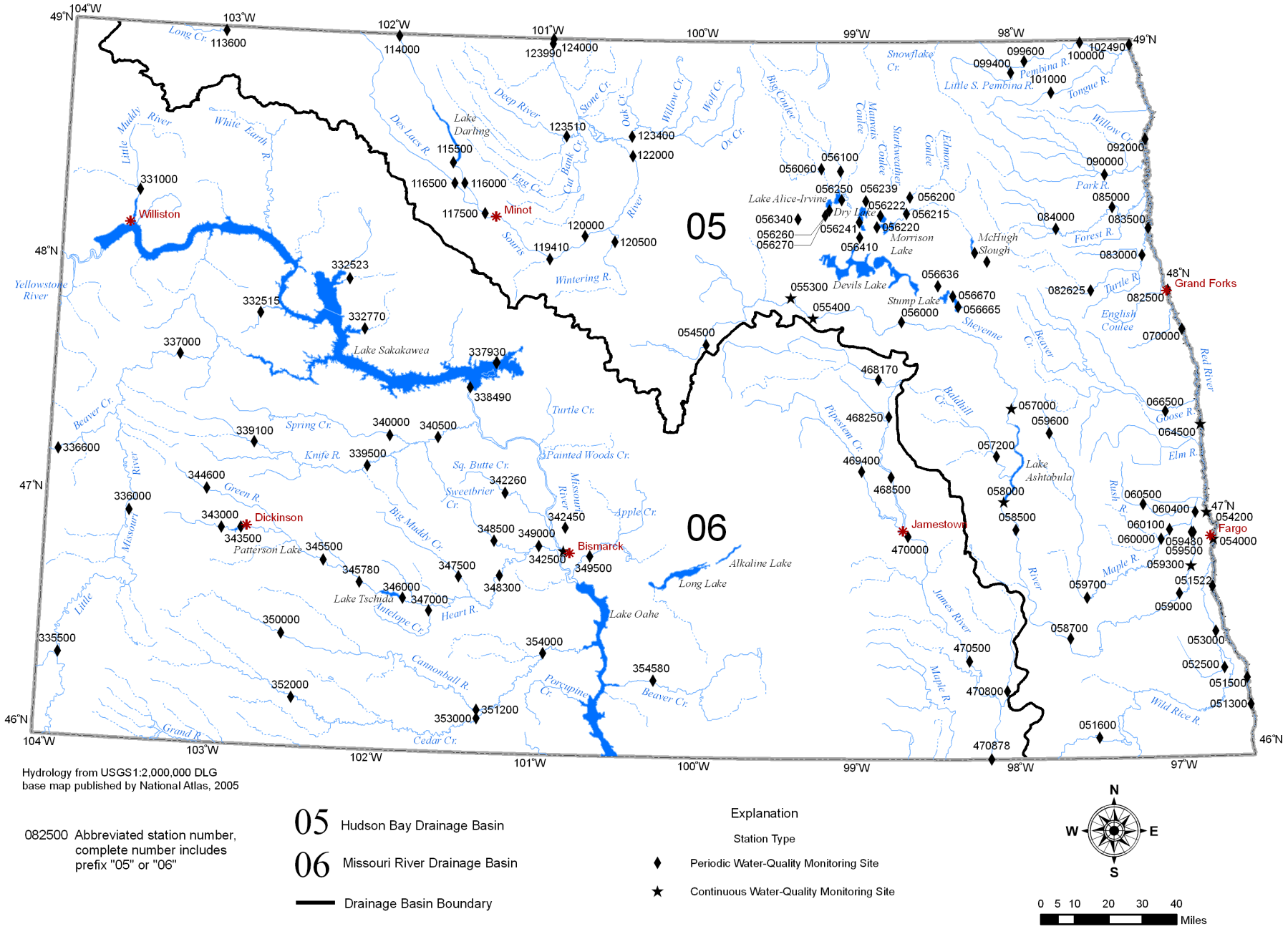

Figure 2. Locations of active surface-water-quality stations.

Assistance with funds or services was given by the U.S. Army Corps of Engineers, the Bureau of Reclamation, the International Joint Commission of the U.S. State Department, the U.S. Fish and Wildlife Service, and the National Park Service.

Certain stations are maintained under agreement with Canada and the records are obtained and compiled in a manner equally acceptable to both countries. Most of these are designated as "international gaging stations."

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Climate

In North Dakota, normal annual precipitation ranges from about 13 inches in the west-central part of the State to about 22 inches in the southeastern part of the State (U.S. Department of Commerce, 2002, Monthly station normals of temperature, precipitation, and heating and cooling degree days, 1971-2000, North Dakota: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Service, National Climatic Data Center, Asheville, North Carolina, Climatography of the United States, No. 81). Three-fourths of this precipitation occurs during April through September. The greatest normal monthly precipitation for the entire State occurs during June. Normal, as used in reference to meteorological data in this report, is a mean value for the reference period 1971 through 2000. Meteorological data were obtained from publications of the National Climatic Data Center (U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center, 2004, 2005, Climatological data, North Dakota: Asheville, North Carolina, v. 113, no. 10-12, and v. 114 no. 1-9).

North Dakota is divided into nine climatological divisions (fig. 3). Total precipitation during water year 2005 was above normal for all nine climatological divisions. A comparison of monthly precipitation for water year 2005 to normal monthly precipitation for 1971-2000 for the nine climatological divisions in North Dakota is shown in figure 3. Data shown in figure 3 are means of monthly precipitation for reporting stations within each climatological division.

Statewide monthly precipitation was 117 percent of normal for water year 2005 and ranged from 27 percent of normal in November to 226 percent of normal in June. Monthly precipitation was less than normal in November, February, March, April, July, and September.

October precipitation was above normal for all nine climatological divisions. Total precipitation ranged from 1.09 inch (101 percent) in the west-central division to 2.84 inch (215 percent) in the southeast division.

During November, statewide precipitation was 27 percent of normal. Total precipitation ranged from 0.08 inch (18 percent) in the south-central division to 0.23 inch (39 percent) in the southeast division.

During December and January, the statewide precipitation total was slightly above normal. Precipitation was 103 percent of normal during December and 121 percent of normal during January. During December, five of the nine climatological divisions (west-central, central, southwest, south-central and southeast divisions) had below normal precipitation. During January, all climatological divisions except the southwest (46 percent) and south-central (59 percent) divisions had above normal precipitation. During February, statewide precipitation was 28 percent of normal, and all nine climatological divisions had less-than-normal precipitation.

During March, the dry weather continued and six of the nine climatological divisions had below normal precipitation. Total precipitation ranged from 0.13 inch (12 percent) in the southeast division to 0.88 inch (117 percent) in the northwest division.

During April, statewide precipitation was 42 percent of normal, and all nine climatological divisions had less-than-normal precipitation. Total precipitation was 0.18 inch (14 percent) in the northwest division, 0.80 inch (71 percent) in the northeast division, and 0.80 inch (49 percent) in the south-central division.

During May, statewide precipitation was 150 percent of normal. All nine climatological divisions had greater-than-normal precipitation. Total precipitation was 2.74 inches (129 percent) in the northwest division, 4.18 inches (190 percent) in the west-central division, and 4.18 inches (178 percent) in the southwest division.

During June, when statewide precipitation usually is greatest, all nine climatological divisions reported greater-than-normal precipitation. Total precipitation was 5.84 inches (193 percent) in the south-central division and 8.53 inches (269 percent) in the north-central division.

Statewide precipitation during July was less than normal for eight of the nine climatological divisions. Total precipitation ranged from 1.83 inches (86 percent) in the southwest division to 3.62 inches (124 percent) in the north-central division.

Statewide precipitation during August was less than normal for four of the nine climatological divisions. Total precipitation ranged from 1.24 inches (72 percent) in the

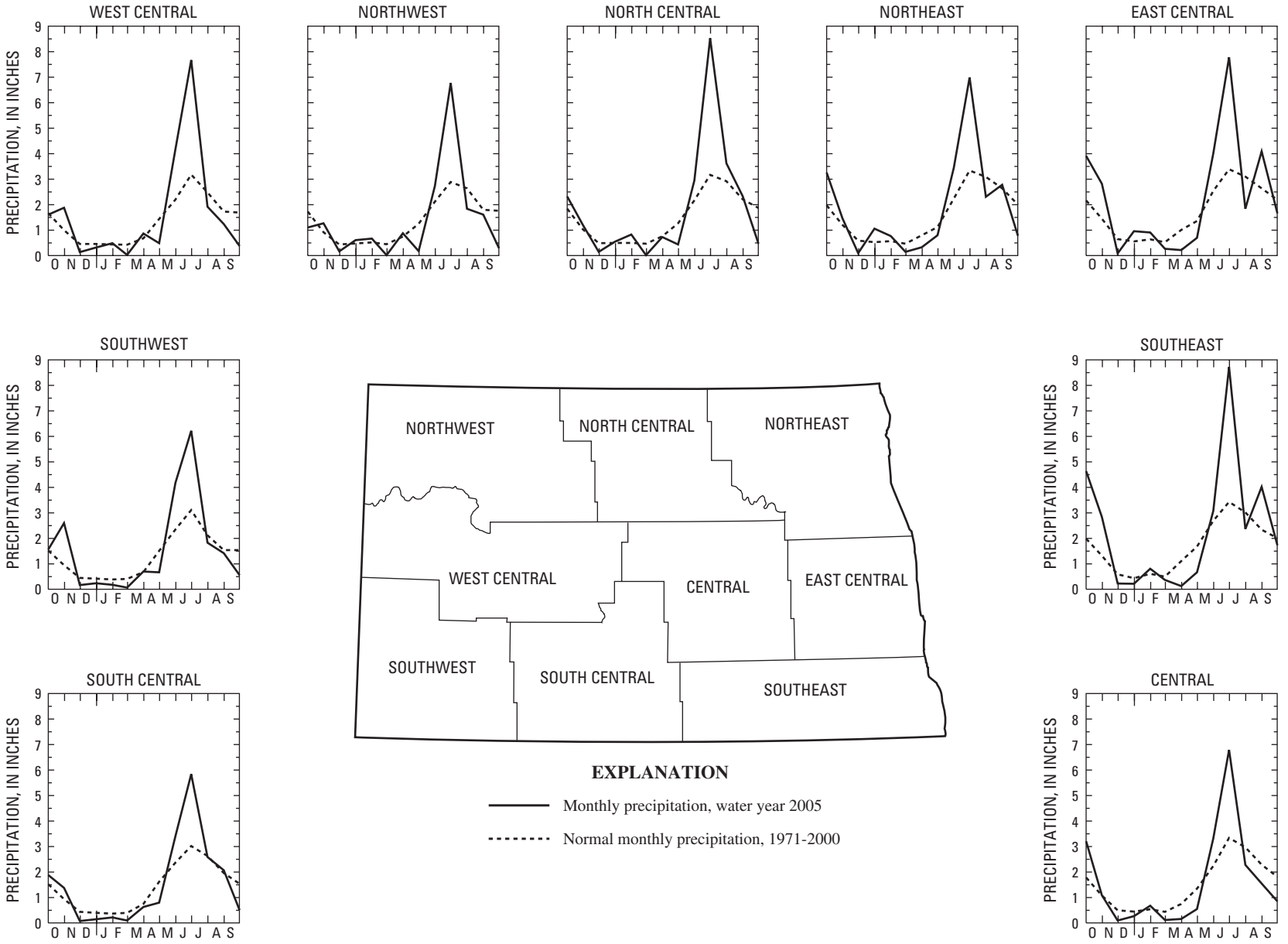

Figure 3. Comparison, by climatological division, of monthly precipitation, water year 2005, to normal monthly precipitation, 1971-2000.

west-central division to 4.09 inches (155 percent) in the east-central division.

Statewide monthly mean precipitation during September was less than normal for all nine climatological divisions. Total precipitation ranged from 0.29 inch (16 percent) in the northwest division to 1.73 inches (86 percent) in the southeast division. Total yearly precipitation was greater than normal in all nine climatological divisions and ranged from 106 percent of normal in the northwest division to 128 percent of normal in the southeast division.

Temperatures during October departed (-0.5°F) from normal statewide except for the central division, which had normal temperatures, and the southeast division, which had slightly above normal temperatures (1.0°F). During November through April, statewide monthly mean temperatures were well below normal for January (-2.4°F); well above normal for November (6.0°F), December (6.8°F), February (4.5°F), and April (5.2°F); and slightly above normal for March (1.5°F). The warmer temperatures did not result in an earlier than normal spring breakup. The influence of temperatures on streamflow in North Dakota is diminished substantially after the snowpack has melted. Temperatures have little effect on streamflow from May through September.

Streamflow

The largest mean monthly discharge of North Dakota rivers generally is coincident with snowmelt runoff. Because above-freezing temperatures normally occur earlier in the southwestern part of the State than in the northeastern part of the State, snowmelt runoff usually begins first on the Missouri River tributaries in southwestern North Dakota and progresses from southwest to northeast across the State. Hydrographs of mean monthly discharge (fig. 4) for the period of record for selected streams within each of the climatological divisions verify this pattern. For example, the largest mean monthly discharges for the period of record for Bear Den Creek near Mandaree, which is in the west-central division, and for Cedar Creek near Haynes, which is in the southwest division, occur in March, whereas the largest mean monthly discharges for the remaining streamflow-gaging stations occur in April.

Although many inferences about hydrologic conditions in the State can be made from precipitation (fig. 3) and streamflow (fig. 4) data, sound hydrologic judgment should be used. Variability of rainfall intensity and distribution should be considered when making conclusions about hydrologic response to rainfall, especially for small basins. Problems also may occur because different reporting periods are used in figures 3 and 4. Normal monthly precipitation is computed using data for a 30-year period (1971-2000), but mean monthly discharge is computed using data for the period of record at each streamflow-gaging station--60 years (1946-2005) in the case of Apple Creek near Menoken.

According to the National Weather Service "Weekly Palmer Drought Index Report" (written commun., 2005), western North Dakota experienced normal conditions at the beginning of the water year while the eastern half of North Dakota was very moist.

Below normal to near normal precipitation combined with normal and above normal temperatures caused a below normal snowpack to develop by the end of February. Spring flooding, because of snowmelt, was minimal throughout the State and moderate for reaches along the International Border where snowpack was the greatest. Warm, dry conditions through April resulted in the southwest, west-central, and south-central climatological divisions to be classified as in mild drought. The remainder of the State was classified as moist to very moist.

During May, temperatures were cool and precipitation was above normal throughout the State. By the end of the month, the State was drought free with the eastern third of the State classified as moist, and the remainder of the State classified as normal.

During June, persistent heavy rains occurred that caused widespread flooding throughout many parts of the State. Significant precipitation in early July caused additional flooding, particularly in the north-central climatological division. The entire State was classified as very moist by the end of July.

The State started to dry out in August as precipitation continued to favor the northeast and east-central portions of the State. The eastern third of the State was classified as moist, and the remainder of the State was classified as normal.

Below normal precipitation in September caused the eastern two-thirds of the State to be classified as normal or moist. The remainder of the State was classified as mild drought.

Most summer peaks exceeded the snowmelt peaks. Snowmelt peaks that exceeded summer peaks are shown in figure 4 in the hydrographs for Park River at Grafton and Bear Den Creek near Mandaree.

The Devils Lake Basin is a 3,810-square-mile closed basin adjacent to the headwaters of the Sheyenne River. Geologic evidence indicates that, in the past, water flowed from the Devils Lake Basin into the Sheyenne River. However, since 1867 when water levels of Devils Lake first were recorded, Devils Lake has not flowed into the Sheyenne River Basin and the level of the lake has varied greatly in response to wet and dry periods. A graph showing the Devils

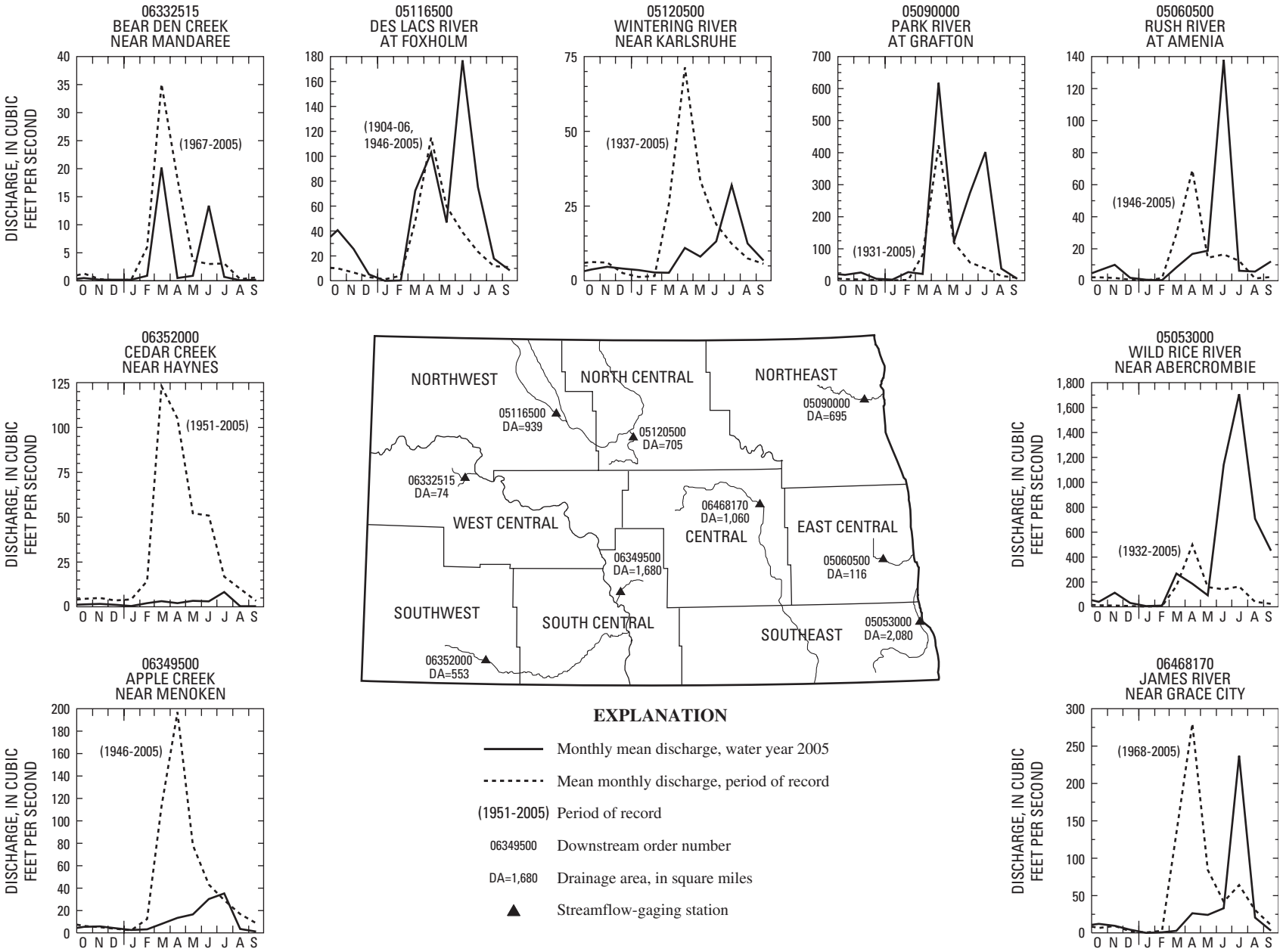

Figure 4. Comparison of monthly mean discharge during water year 2005 to mean monthly discharge for the period of record.

Lake water levels for the period of record may be accessed from http://nd.water.usgs.gov/devilslake/dvlakepor.html. From 1867 to 1940, the water level generally declined from a maximum of 1,438.4 feet above sea level in 1867 to a minimum of 1,400.9 feet above sea level in 1940. After 1940, the water level generally increased except during 1956-68 and 1987-93. The decline from 1987 to 1993 occurred as a result of a drought in the basin. From 1993 to 1999, the water level increased each year as a result of greater-than-normal precipitation and runoff in the basin. During 2000, for the first time since 1993, the maximum water level did not exceed the maximum from the previous year. From 2001 to 2003, lake levels fluctuated but remained fairly constant. During 2004, lake levels once again began to rise. During 2005, the daily maximum of 1,448.9 feet occurred on August 3, 2005. High lake levels persisted during the year, but did not surpass the previous record of 1,449.1 feet set on June 17, 2004.

As Devils Lake rises, the surface area increases and requires greater volumes of inflow for each incremental increase in elevation. For example, at an elevation of 1,422.4 feet (the lake level at the end of the 1987-92 drought), the surface area of the lake is about 44,000 acres, whereas at an elevation of 1,449 feet, the surface area of the lake is about 138,000 acres. Elevation-area-volume tables for Devils Lake and Stump Lake may be accessed from http://nd.water.usgs.gov/devilslake/elevation-area-volume.pdf.

During water year 2001, Devils Lake flowed over the divide into Stump Lake for the first time since records have been kept. The elevation of the divide is 1,446.5 feet (James Landenberger, North Dakota State Water Commission, oral commun., 2002). Flow from Devils Lake to Stump Lake occurred throughout the entire 2005 water year. The maximum daily discharge of 549 cubic feet per second occurred on September 1, 2005, with the total flow volume about 123,000 acre-feet for the year. The maximum daily elevation for Stump Lake during water year 2005 was 33.67 feet, an increase of about 10.7 feet from the peak for water year 2004. A graph showing the Stump Lake water levels for the period of record may be accessed from http://nd.water.usgs.gov/devilslake/stumplake/index.html. By the end of water year 2005, Stump Lake was about 14.5 feet lower than Devils Lake.

Chemical Quality of Streamflow

Chemical quality of streamflow at any particular site is dependent upon many factors, including source of streamflow, composition of soil over which water flows, location, and time of year; therefore, the quality of streamflow varies considerably across the State. Chemical quality of streamflow also is dependent upon the volume of streamflow. During periods of low flow, most of the flow is derived from ground-water inflow, which is mineralized, and the resulting streamflow has large dissolved-solids concentrations. During periods of high flow, most of the flow is derived from snowmelt or precipitation runoff, which is less mineralized, and the resulting streamflow has low dissolved-solids concentrations.

Five stations were selected to show the water-quality variability in rivers throughout the State. Specific conductance, an indicator of dissolved solids in water, is used to show the variability among these stations and among months at a given station. The mean, maximum, and minimum specific conductance for the period of record and the specific conductances measured during the 2004 water year for each station are shown in table 1.

Specific conductance is used as an indicator of the suitability of water for irrigation and other uses. The U.S. Salinity Laboratory (U.S. Salinity Laboratory Staff, 1954, Diagnosis and improvement of saline and alkali soils: U.S. Department of Agriculture Handbook 60, 160 p.) has developed an index using specific conductance as an indicator of salinity hazard for irrigation water. The salinity hazard and corresponding specific conductance are as follow:

Salinity hazard	Specific conductance (microsiemens per centimeter at 25 degrees Celsius)
Low	Less than 250
Medium	250 to 750
High	750 to 2,250
Very high	2,250 to 5,000

In the United States, the Red River of the North drains all of eastern North Dakota, much of northwestern Minnesota, and a small part of northeastern South Dakota. Of the five stations listed in table 1, the Red River of the North at Grand Forks (05082500) has the smallest mean monthly specific-conductance values for each month. The smaller mean values are caused partly by more precipitation occurring in the Red River of the North Basin, especially in Minnesota, than in other parts of North Dakota. The salinity hazard of stream water during the irrigation season (April through October) was medium or high in the months when specific-conductance measurements were made.

The Souris River upstream of Sherwood drains about 9,000 square miles of southeastern Saskatchewan, Canada, and a small part of northwestern North Dakota. Generally, the Souris River near Sherwood (05114000) has larger specific-conductance values than the Red River of the North and the James River but smaller specific-conductance values than the Little Missouri River and the Cannonball River. The salinity hazard of stream water during the irrigation season

Table 1. Statistical summary of specific-conductance values for the period of record and listing of measured specific-conductance values for water year 2005

[Specific-conductance values are in microsiemens per centimeter at 25 degrees Celsius; --, no data]

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year 2005	Period of record
05082500 Red River of the North at Grand Forks (period of record, water years 1949, 1956-2005)														
Mean	523	623	643	608	591	515	463	586	566	511	532	518	733	541
Maximum	700	925	985	1,040	900	910	757	943	949	908	864	792	878	1,040
Minimum	399	440	468	275	400	247	200	325	348	280	266	340	512	200
Number of values	73	46	51	56	52	81	184	103	85	88	69	57	6	945
Measured values for water year 2005	--	--	--	--	--	--	512	667 878	650	825	864	--	--	--
05114000 Souris River near Sherwood (period of record, water years 1970, 1972-2005)														
Mean	1,236	1,375	1,631	1,763	1,795	1,163	816	933	1,056	1,083	1,127	1,142	1,290	1,185
Maximum	2,240	2,460	2,230	2,770	2,920	3,500	2,510	2,460	1,530	1,650	2,060	1,960	2,240	3,500
Minimum	710	925	1,250	1,280	540	200	277	345	310	540	128	720	800	128
Number of values	39	39	14	29	33	55	78	37	43	39	45	30	7	481
Measured values for water year 2005	--	1,300	--	--	2,240	--	1,080	1,030	--	1,110	1,470	800	--	--
06337000 Little Missouri River near Watford City (period of record, water years 1972-2005)														
Mean	2,026	2,523	2,603	2,611	1,397	993	1,545	1,594	1,550	1,737	1,477	1,924	1,061	1,673
Maximum	3,100	4,000	5,000	3,640	3,020	2,000	2,700	3,100	2,780	3,000	2,550	2,570	1,510	5,000
Minimum	720	814	1,720	1,290	640	400	515	780	750	695	680	900	612	400
Number of values	86	54	22	17	8	103	70	68	71	42	123	17	2	681
Measured values for water year 2005	--	--	--	--	--	612	--	--	--	--	1,510	--	--	--
06354000 Cannonball River at Breien (period of record, water years 1946-50, 1971-2005)														
Mean	1,655	2,008	2,546	2,412	1,836	852	1,278	1,969	1,939	1,494	1,423	1,585	1,378	1,671
Maximum	2,400	3,140	3,290	3,800	4,860	3,100	2,260	2,930	3,020	3,000	2,800	2,300	1,770	4,680
Minimum	650	1,240	284	680	190	190	300	481	288	440	500	730	985	190
Number of values	30	40	23	36	34	61	65	48	72	33	52	49	2	543
Measured values for water year 2005	--	--	--	--	--	--	1,770	--	--	985	--	--	--	--
06470500 James River at LaMoure (period of record, water years 1957-2005)														
Mean	853	987	1,193	1,488	1,320	657	574	812	799	799	769	882	814	859
Maximum	1,210	1,330	1,550	2,580	1,780	1,570	987	1,210	1,250	1,280	1,260	1,220	844	2,580
Minimum	480	540	890	340	700	185	160	500	170	170	485	480	784	160
Number of values	38	27	12	32	21	45	64	37	31	28	55	28	2	418
Measured values for water year 2005	--	--	--	--	--	--	784	--	--	--	844	--	--	--

(April through October) was high in the months when specific-conductance measurements were made.

The Little Missouri River drains parts of southwestern North Dakota, northwestern South Dakota, northeastern Wyoming, and southeastern Montana. The Cannonball River drains parts of southwestern North Dakota and northwestern South Dakota. Of the five stations listed in table 1, the Little Missouri River near Watford City (06337000) and the Cannonball River at Breien (06354000) have the largest mean specific-conductance values for the period of record. The salinity hazard of stream water during the irrigation season (April through October) was medium to high in the months when specific-conductance measurements were made at each of these stations.

The James River drains east-central North Dakota. Flow in the James River Basin is regulated by the Jamestown and Pipestem Reservoirs, which are used primarily for flood control. High flows from snowmelt and rainfall are stored in the reservoirs and released throughout the summer. Specific-conductance values for the James River at LaMoure (06470500) generally are smallest from March through October during high flow or when the stored runoff water is released. The salinity hazard of stream water during the irrigation season (April through October) was high in the months when measurements were made.

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 06342500, which appears just to the left of the station name, includes a 2-digit part number "06" plus the 6-digit (or 8-digit) downstream order number "342500." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 5). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken. During water year 2003, the true latitude and longitude listed in the LOCATION paragraph was changed slightly at some locations. The change was made based on new information and does not signify a change in the gage location unless otherwise noted.

In addition to the well number that is based on the latitude and longitude for each well, another well number may be provided which in many states is based on the Public Land Survey System, a set of rectangular surveys that is used to identify land parcels. This well number is familiar to the water users of North Dakota and shows the location of the well by quadrant, township, range section, and position within the section (see fig. 6). The capital letter at the beginning of the location number indicates the quadrant in which the well is located. Four quadrants are formed by the intersection of the base line and the principal meridian—A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. The first numeral indicates the township, the second the range, and the third the section in which the well is located. Lowercase letters following the section number locate the well within the section. The first letter denotes the quarter section, the second the quarter-quarter section, and the third the quarter-quarter-quarter section. The letters are assigned within the section in a counter-clockwise direction beginning with (a) in the northeast quarter of the section. Letters are assigned within each quarter section and quarter-quarter section in the same manner. Where two or more wells are located within the smallest subdivision, consecutive numbers beginning with 1 are added to the letters in the order in which the wells are inventoried. For example, site 138-077-22AAD is in the $SE^1/_4NE^1/_4NE^1/_4$ sec.22, T.138 N., R.077 W. Consecutive

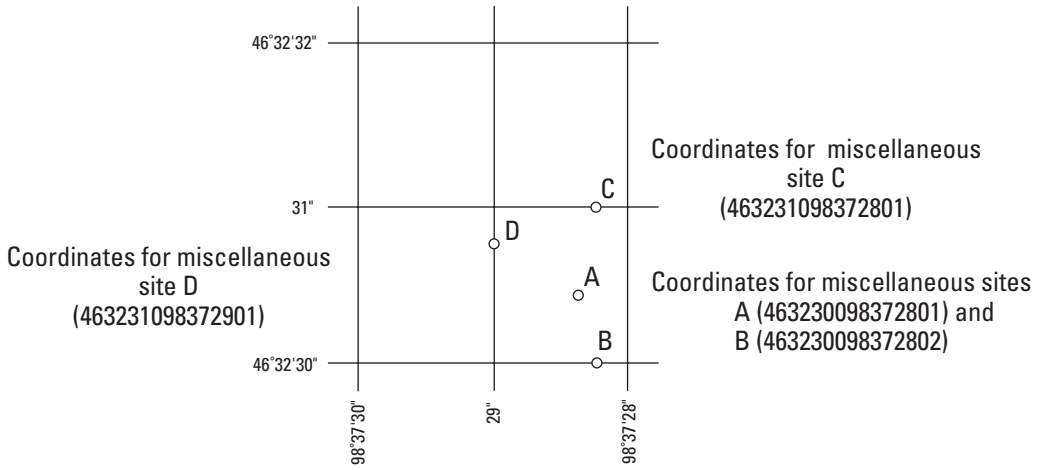

Figure 5. System for numbering miscellaneous sites (latitude and longitude).

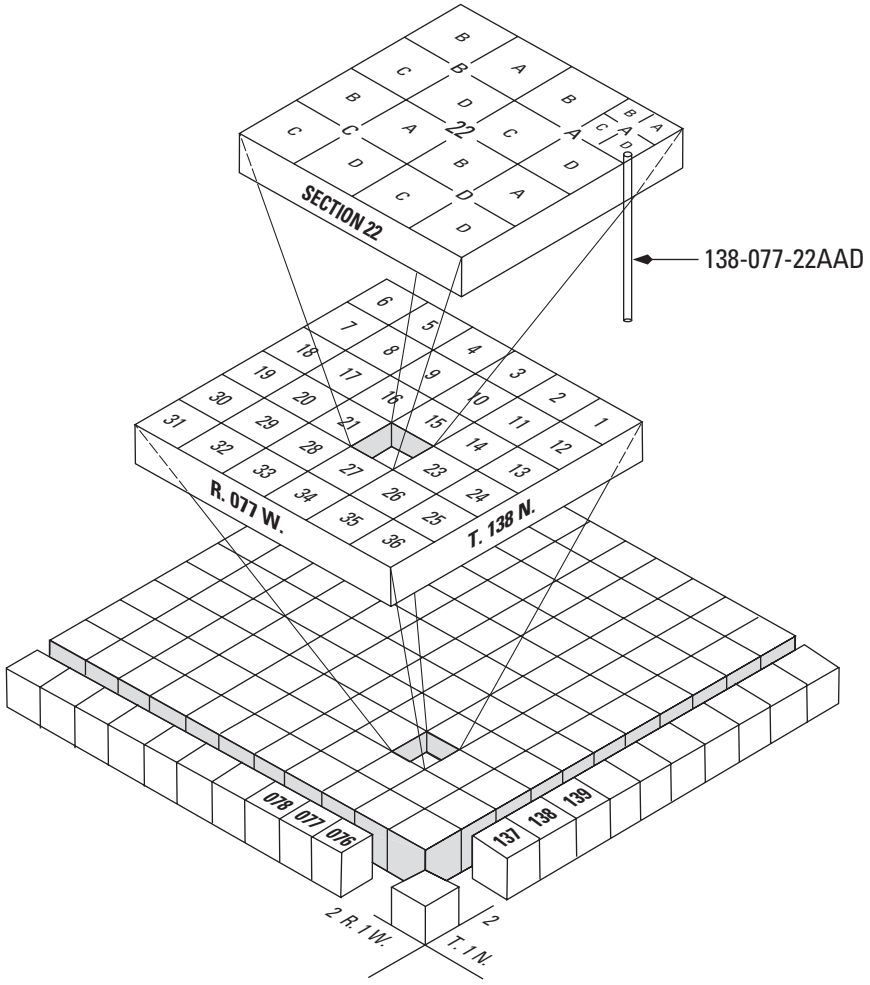

Figure 6. System for numbering miscellaneous sites (township and range).

terminal numbers are added if more than one site is recorded within a 10-acre tract.

SPECIAL NETWORKS AND PROGRAMS

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

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River Basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of five stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from *http://water.usgs.gov/nasqan/*.

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

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

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

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

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

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 1) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from *http://water.usgs.gov/pubs/twri/*. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

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

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage at some distance from the base gage.

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

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

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

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

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

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of four parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of

monthly mean flow data for a designated period, by water year; and (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station Manuscript

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

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for 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 term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

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

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

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

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

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

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

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

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

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of

approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is expressed in cubic feet per second per square mile (line headed CFSM); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

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

Summary Statistics

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

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

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

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

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

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

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

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

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

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

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

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

> Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.
>
> Cubic feet per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.
>
> Inches (INCHES) indicate the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

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

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

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

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

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

Accuracy of Field Data and Computed Results

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

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

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

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

adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Data Records Available

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

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

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

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

Data Presentation

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

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

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

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

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

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

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

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

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

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

Water Analysis

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

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary 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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

Rating the accuracy of continuous water-quality records

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2359 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

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

Classification of Records

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

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 2.

Accuracy of the Records

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

Arrangement of Records

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

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9,

Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS Water Science Center (see address that is shown on the back of title page in this report).

Water Temperature

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

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

Sediment

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

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

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

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

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

Water-Quality-Control Data

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

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

Accordingly, concentrations are reported as less than LRL for samples in which the analyte either was not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

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

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

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

Spike Samples

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

ACCESS TO USGS WATER DATA

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

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

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. A complete list of specialized technical terms used in all annual data reports may be accessed from *http://water.usgs.gov/ADR_Defs_2005.pdf*. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid

to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

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

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

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

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

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

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

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

Fecal streptococcal bacteria are bacteria found in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Non-ideal colony count (K) is a remark code used in reporting bacteria densities when plate counts fall outside of an ideal range. The lower limit of 20 colonies is set as the number below which statistically valid results become increasingly questionable. The upper limit, which differs according to type of bacteria, represents numbers above which interference from colony crowding, deposition of extraneous material, and other factors appear to result in increasingly questionable results.

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.

Bottom material: See "Bed material."

Cells/volume refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.

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.

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

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

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.

Crest-stage gage is a device for obtaining the elevation of the flood crest of a stream.

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

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. Discharge for parameter code 00060 is one day.

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 (parameter code 00061) 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.

Formazin nephelometric unit (FNU) is the measurement for reporting turbidity in the near Infa-Red (780-900 nanometers) or Monochrome light source. 90-degree detection angle, one detector. ISO 7027 compliant.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national

geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

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

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

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

Hydrologic 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.

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

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.

Normal as related to meteorological data published by the National Weather Service are computed as the average value of a meteorological element over a time period. Effective January 1, 1993, the average period is 1971 to 2000.

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).

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

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

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

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

Classification	Size (mm)			Method of analysis
Clay	0.00024	-	0.004	Sedimentation
Silt	0.004	-	0.062	Sedimentation
Sand	0.062	-	2.0	Sedimentation/sieve
Gravel	2.0	-	64.0	Sieve

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

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

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

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

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

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 $7Q_{10}$.

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 or "mean sea level" was formerly used in this series of reports to refer to the National Geodetic Vertical Datum of 1929 (NGVD of 1929).

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

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

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

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

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point

approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

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

Suspended-sediment discharge (tons/day) is the quantity of sediment moving in suspension, reported as dry weight, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (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 U.S. Geological Survey 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, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

Suspended, total is the total amount of a given constituent in the part of a representative suspended-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on

determinations of (1) dissolved and (2) total concentrations of the constituent.

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water 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 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, 2004, is called the "2004 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.

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

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05046475 OTTER TAIL RIVER DIVERSION AT BRECKENRIDGE, MN

LOCATION.--Lat 46°16'57", long 96°34'56", in NE¼NW¼NE¼, sec.4, T.132 N., R.47 W., Wilken County, Hydrologic Unit 09020103, on State Highway 210 on the north side of Breckenridge, MN.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2005 to September 2005.

GAGE.--Water-stage recorder. Datum of gage is 939.24 ft above National Geodetic Vertical Datum of 1929 (levels by Wilkin County Highway Department).

REMARKS.--Records poor. The records are for the flood flows that are diverted around Breckenridge. Some flow may have ocurred prior to gage startup on June 1.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 900 ft^3/s, gage height, unknown, June 14; maximum gage height observed, 11.51 ft, June 15; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e0.00	e500	25	0.00
2	---	---	---	---	---	---	---	---	e0.00	e470	23	0.00
3	---	---	---	---	---	---	---	---	e0.00	e350	53	0.00
4	---	---	---	---	---	---	---	---	e5.0	e225	116	0.00
5	---	---	---	---	---	---	---	---	e10	e150	86	0.00
6	---	---	---	---	---	---	---	---	e100	e120	49	0.00
7	---	---	---	---	---	---	---	---	e350	e57	34	0.00
8	---	---	---	---	---	---	---	---	e659	e30	24	0.00
9	---	---	---	---	---	---	---	---	e772	e20	21	e1.3
10	---	---	---	---	---	---	---	---	e657	e10	25	1.8
11	---	---	---	---	---	---	---	---	e660	e5.0	12	1.5
12	---	---	---	---	---	---	---	---	e670	e0.00	e4.5	e0.44
13	---	---	---	---	---	---	---	---	e750	e0.00	1.4	0.00
14	---	---	---	---	---	---	---	---	e890	e0.00	0.00	0.00
15	---	---	---	---	---	---	---	---	e850	e0.00	0.00	0.00
16	---	---	---	---	---	---	---	---	e620	e0.00	0.00	0.00
17	---	---	---	---	---	---	---	---	e450	e0.00	0.00	0.00
18	---	---	---	---	---	---	---	---	e340	e0.00	e0.10	0.00
19	---	---	---	---	---	---	---	---	e270	e0.00	e16	0.00
20	---	---	---	---	---	---	---	---	e210	e0.00	26	0.00
21	---	---	---	---	---	---	---	---	e275	e0.00	8.9	0.00
22	---	---	---	---	---	---	---	---	e240	e0.00	e0.96	0.00
23	---	---	---	---	---	---	---	---	e190	e0.00	0.00	0.00
24	---	---	---	---	---	---	---	---	e150	e0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	e120	e0.00	e0.43	0.00
26	---	---	---	---	---	---	---	---	e80	e0.00	0.20	0.00
27	---	---	---	---	---	---	---	---	e50	59	0.00	0.00
28	---	---	---	---	---	---	---	---	e40	61	0.00	0.00
29	---	---	---	---	---	---	---	---	e100	41	0.00	0.00
30	---	---	---	---	---	---	---	---	e400	31	0.00	0.00
31	---	---	---	---	---	---	---	---	---	27	0.00	---
TOTAL	---	---	---	---	---	---	---	---	9,908.00	2,156.00	526.49	5.04
MEAN	---	---	---	---	---	---	---	---	330	69.5	17.0	0.17
MAX	---	---	---	---	---	---	---	---	890	500	116	1.8
MIN	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	19,650	4,280	1,040	10

e Estimated

05051300 BOIS DE SIOUX RIVER NEAR DORAN, MN

LOCATION.--Lat 46°09'08", long 96°34'44", in SW¼SE¼SE¼ sec.16, T.131 N., R.47 W., Wilken County, Hydrologic Unit 09020104, at bridge crossing 9 mi upstream from confluence with Otter Tail River, 3 mi downstream from Rabbit River, and 4.3 mi southwest of Doran, MN.

DRAINAGE AREA.--1,880 mi^2, approximately.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1993-95, 1997-99, 2005.

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

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR													
14...	1315	742	7.5	72	7.9	6.7	1,040	846	16.6	12.5	103	58.6	12.3
MAY													
24...	1215	736	6.9	77	8.4	8.3	1,610	1,660	20.0	18.5	148	107	11.5

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

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
14...	.8	38.8	14	217	26.6	.22	20.3	403	780	23	1.6	1.8	<.010
MAY													
24...	.9	57.2	13	261	23.7	.26	10.8	661	1,170	265	1.2	1.1	.056

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
14...	.010	1.24	1.23	--	1.8	.217	.274	2.9	3.0	M	<10	<10	<50
MAY													
24...	.083	.120	.110	1.2	1.0	.076	.255	1.3	1.2	10	10	<10	<50

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
14...	<1	5.0	62.1	<1	80	<1	<1	2.1	40	<1	50	7.90	2
MAY													
24...	<1	5.0	65.4	<1	160	<1	2	1.1	30	<1	12.0	7.22	2

05051300 BOIS DE SIOUX RIVER NEAR DORAN, MN—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
14...	<1	<1.0	2.2
MAY			
24...	<1	<1.0	5.4

Remark codes used in this table:
< -- Less than.
M-- Presence verified but not quantified.

05051500 RED RIVER OF THE NORTH AT WAHPETON, ND

LOCATION.--Lat 46°15'58", long 96°35'54", in NE$^1/_4$ sec.8, T.132 N., R.47 W., Richland County, Hydrologic Unit 09020104, on left bank in Wahpeton, 800 ft downstream from confluence of Bois de Sioux and Otter Tail Rivers, and at mile 548.6.

DRAINAGE AREA.--4,010 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to October 1942, March 1943 to current year. Gage-height records collected in this vicinity since 1917 are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder and concrete and wooden dam. Datum of gage is 942.97 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1943, National Weather Service nonrecording gage 800 ft upstream, converted to present datum. Aug. 6, 1943, to Oct. 27, 1950, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by; Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes and ponds and several powerplants. Since June 2005, Otter Tail River flows are partially diverted around Breckenridge at stages above approximately 11.4 ft. The diverted flows are measured at streamflow station Otter Tail River Diversion at Breckenridge, MN (station 05046475). Figures of discharge given here include flow through the diversion.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 17.0 ft, discharge, 10,500 ft^3/s, occurred in the spring of 1897.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,510	2,670	e1,020	e710	e615	e600	1,590	1,350	1,270	5,710	1,840	856
2	1,540	2,240	e980	e700	e625	e645	1,240	1,320	1,280	5,380	1,820	855
3	1,760	1,890	e980	e690	e635	e725	1,090	1,280	1,490	4,940	2,390	865
4	1,810	1,820	e990	e680	e635	e770	1,060	1,240	1,980	4,020	3,120	816
5	1,710	1,770	e970	e665	e635	e795	1,010	1,210	2,390	2,800	2,810	784
6	1,630	1,730	e960	e655	e630	e880	962	1,190	2,550	2,550	2,340	805
7	1,580	1,700	e975	e650	e620	e950	949	1,170	3,520	2,730	2,020	814
8	1,550	1,670	e980	e650	e620	e985	940	1,190	5,330	2,700	1,820	859
9	1,550	1,620	e985	e650	e625	e1,040	948	1,200	5,970	2,630	1,750	944
10	1,550	1,510	e990	e645	e635	e1,070	971	1,250	5,750	2,570	1,840	972
11	1,540	1,460	e990	e630	e645	e1,060	1,020	1,280	5,510	2,520	1,510	962
12	1,530	1,450	e935	e630	e650	e1,060	1,210	1,250	5,660	2,390	1,270	889
13	1,530	1,430	e740	e620	e650	e1,070	2,010	1,240	5,680	2,360	1,120	625
14	1,570	1,410	e600	e600	e650	e1,100	2,340	1,260	6,040	2,330	1,000	784
15	1,540	1,400	e500	e585	e650	e1,120	1,940	1,260	6,210	2,240	966	989
16	1,450	1,360	e540	e580	e650	e1,120	1,550	1,250	5,580	2,150	943	993
17	1,370	1,310	e640	e580	e645	e1,130	1,410	1,240	4,640	2,090	883	973
18	1,330	1,330	e680	e575	e640	e1,160	1,320	1,220	3,610	2,060	874	927
19	1,260	1,370	e610	e555	e640	e1,220	1,250	1,220	2,810	2,050	1,270	912
20	1,250	1,370	e555	e545	e640	e1,250	1,260	1,210	2,840	1,980	1,630	894
21	1,270	1,360	e545	e540	e640	1,270	1,280	1,200	3,720	1,910	1,380	875
22	1,240	1,360	e525	e540	e640	1,270	1,290	1,200	3,550	1,900	1,100	867
23	1,380	1,340	e520	e550	e620	1,350	1,250	1,180	3,010	1,920	1,030	890
24	2,230	1,340	e530	e560	e605	1,530	1,280	1,120	2,810	1,940	1,020	902
25	2,800	1,330	e600	e560	e605	1,700	1,290	1,110	2,720	2,010	1,030	848
26	2,520	1,320	e670	e565	e605	1,900	1,280	1,170	2,630	2,210	1,030	767
27	2,030	1,320	e710	e570	e610	2,160	1,320	1,340	2,560	2,450	989	501
28	1,700	1,290	e730	e570	e605	2,270	1,380	1,400	2,480	2,440	915	439
29	1,900	e1,230	e730	e580	---	2,320	1,380	1,340	2,890	2,190	880	393
30	2,570	e1,120	e725	e590	---	2,420	1,370	1,280	4,910	1,990	874	378
31	2,880	---	e720	e600	---	2,110	---	1,260	---	1,900	869	---
TOTAL	53,080	45,520	23,625	18,820	17,665	40,050	39,190	38,430	111,390	81,060	44,333	24,378
MEAN	1,712	1,517	762	607	631	1,292	1,306	1,240	3,713	2,615	1,430	813
MAX	2,880	2,670	1,020	710	650	2,420	2,340	1,400	6,210	5,710	3,120	993
MIN	1,240	1,120	500	540	605	600	940	1,110	1,270	1,900	869	378
AC-FT	105,300	90,290	46,860	37,330	35,040	79,440	77,730	76,230	220,900	160,800	87,930	48,350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	366	344	311	294	316	716	1,439	1,140	1,138	876	468	373
MAX	1,712	1,517	967	678	868	2,629	8,717	3,344	3,713	2,787	2,496	2,148
(WY)	(2005)	(2005)	(1999)	(1986)	(1998)	(1995)	(1997)	(1997)	(2005)	(1993)	(1993)	(1993)
MIN	5.72	7.40	6.60	8.81	18.0	84.3	138	22.5	90.0	65.6	53.5	2.18
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1976)

05051500 RED RIVER OF THE NORTH AT WAHPETON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	284,489		537,541			
ANNUAL MEAN	777		1,473		646	
HIGHEST ANNUAL MEAN					1,600	1997
LOWEST ANNUAL MEAN					54.0	1977
HIGHEST DAILY MEAN	3,140	Sep 25	[a]6,210	Jun 15	12,700	Apr 15, 1997
LOWEST DAILY MEAN	92	Jan 30	378	Sep 30	1.7	Aug 28, 1976
ANNUAL SEVEN-DAY MINIMUM	92	Jan 30	550	Jan 19	1.7	Aug 28, 1976
MAXIMUM PEAK FLOW			[b]5,410	Jun 15	12,800	Apr 15, 1997
MAXIMUM PEAK STAGE			13.10	Jun 15	[c]19.42	Apr 6, 1997
ANNUAL RUNOFF (AC-FT)	564,300		1,066,000		468,300	
10 PERCENT EXCEEDS	1,580		2,570		1,480	
50 PERCENT EXCEEDS	552		1,240		400	
90 PERCENT EXCEEDS	144		608		110	

a Combined daily flows from Red River of the North and Otter Tail River Diversion Channel
b Red River of the North only
c From floodmark, backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.26	9.20	6.25	6.63	6.23	6.06	7.41	6.95	6.76	12.52	7.84	5.79
2	7.33	8.54	6.16	6.63	6.21	6.42	6.71	6.88	6.79	12.43	7.80	5.79
3	7.74	7.96	6.15	6.59	6.20	6.61	6.37	6.79	7.21	11.98	8.68	5.82
4	7.82	7.84	6.27	6.61	6.18	6.66	6.29	6.69	8.10	10.80	9.66	5.69
5	7.63	7.75	6.20	6.41	6.19	6.71	6.18	6.65	8.76	9.16	9.28	5.61
6	7.50	7.68	6.18	6.34	6.20	6.98	6.06	6.60	8.87	8.84	8.63	5.66
7	7.40	7.62	6.27	6.64	6.13	7.44	6.03	6.55	9.89	9.20	8.14	5.69
8	7.34	7.57	6.29	6.51	6.15	7.65	6.00	6.60	12.10	9.20	7.81	5.80
9	7.33	7.48	6.29	6.25	6.19	7.82	6.02	6.61	12.86	9.12	7.69	6.01
10	7.35	7.26	6.35	6.18	6.21	7.95	6.08	6.73	12.74	9.05	7.83	6.08
11	7.32	7.17	6.24	6.14	6.28	7.93	6.21	6.79	12.44	8.96	7.25	6.06
12	7.30	7.13	6.26	6.17	6.35	7.56	6.62	6.73	12.61	8.78	6.77	5.88
13	7.31	7.10	6.20	6.26	6.38	7.67	8.15	6.72	12.55	8.74	6.43	5.20
14	7.38	7.07	6.10	6.21	6.47	7.77	8.71	6.76	12.80	8.68	6.16	5.61
15	7.31	7.05	6.15	6.23	6.48	7.56	8.04	6.75	13.05	8.55	6.07	6.12
16	7.14	6.96	6.50	6.17	6.42	7.47	7.34	6.73	12.57	8.40	6.01	6.13
17	6.97	6.85	6.45	6.16	6.44	7.49	7.06	6.71	11.64	8.30	5.86	6.09
18	6.91	6.89	5.85	6.21	6.36	7.71	6.87	6.66	10.31	8.25	5.84	5.97
19	6.75	6.97	5.35	6.19	6.37	7.78	6.73	6.67	9.04	8.23	6.71	5.93
20	6.72	6.98	5.09	6.04	6.42	7.34	6.75	6.65	9.14	8.11	7.44	5.89
21	6.77	6.97	5.48	6.03	6.34	6.77	6.79	6.61	10.29	8.00	6.97	5.84
22	6.70	6.96	5.69	6.10	6.42	6.76	6.81	6.62	10.10	7.99	6.38	5.82
23	7.00	6.93	6.05	6.16	6.21	6.93	6.73	6.58	9.41	8.01	6.22	5.88
24	8.52	6.92	6.27	6.25	6.18	7.30	6.80	6.45	9.19	8.04	6.20	5.91
25	9.38	6.89	6.26	6.25	6.14	7.62	6.82	6.41	9.10	8.17	6.22	5.77
26	8.98	6.88	6.25	6.32	6.09	7.99	6.80	6.56	9.03	8.50	6.23	5.57
27	8.19	6.87	6.20	6.28	6.25	8.42	6.88	6.92	8.97	8.77	6.13	4.84
28	7.61	6.82	6.30	6.27	6.13	8.60	6.99	7.04	8.86	8.76	5.94	4.66
29	7.98	6.74	6.56	6.26	---	8.68	7.01	6.92	9.36	8.39	5.85	4.51
30	9.06	6.55	6.70	6.25	---	8.83	6.99	6.80	11.64	8.08	5.84	4.46
31	9.50	---	6.71	6.25	---	8.33	---	6.76	---	7.92	5.83	---
MEAN	7.60	7.25	6.16	6.29	6.27	7.51	6.81	6.71	10.21	8.97	6.96	5.67
MAX	9.50	9.20	6.71	6.64	6.48	8.83	8.71	7.04	13.05	12.52	9.66	6.13
MIN	6.70	6.55	5.09	6.03	6.09	6.06	6.00	6.41	6.76	7.92	5.83	4.46

05051500 RED RIVER OF THE NORTH AT WAHPETON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
14...	1535	2,270	8.0	6.7	832	650	19.0	12.0	78.7	45.7	9.00	.6	27.5
JUL													
26...	1615	2,250	8.2	8.1	837	866	22.0	22.5	77.3	50.0	7.10	.5	24.3

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
14...	13	208	21.6	.19	16.9	244	554	3,490	<50	<1	4.0	58.3	<1
JUL													
26...	11	199	12.4	.17	14.0	249	541	3,360	<50	<1	6.0	64.2	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
14...	<50	<1	<1	1.3	50	<1	30	4.39	2	<1	<1.0	1.1
JUL												
26...	100	<1	<1	1.1	70	<1	10	4.71	3	<1	<1.0	3.9

Remark codes used in this table:
< -- Less than.

05051522 RED RIVER OF THE NORTH AT HICKSON, ND

LOCATION.--Lat 46°39'35", long 96°47'44", in SW$^1/_4$ sec.19, T.137 N., R.48 W., Clay County, MN, Hydrologic Unit 09020104, on right bank 60 ft downstream from bridge on township road and 1 mi southeast of Hickson.

DRAINAGE AREA.--4,300 mi^2, approximately.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 877.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes and ponds and several powerplants.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,920	3,030	e1,270	e745	e725	e650	3,090	1,400	1,370	4,330	1,960	987
2	1,730	3,060	e1,190	e730	e735	e635	2,580	1,380	1,350	5,060	1,880	931
3	1,660	2,850	e1,180	e725	e740	e635	1,720	1,350	1,360	5,480	1,830	939
4	1,810	2,450	e1,160	e720	e740	e655	1,260	1,310	1,610	5,650	2,030	996
5	1,910	2,160	e1,150	e705	e740	e695	1,150	1,260	2,110	5,150	2,690	982
6	1,870	2,050	e1,140	e695	e720	e770	1,100	1,220	2,520	4,280	3,010	923
7	1,800	1,970	e1,140	e690	e670	e945	1,030	1,200	2,740	3,690	2,850	924
8	1,740	1,920	e1,140	e685	e645	e995	994	1,190	3,280	3,500	2,490	949
9	1,680	1,880	e1,140	e680	e645	e1,030	974	1,190	4,290	3,530	2,220	948
10	1,660	1,840	e1,150	e675	e660	e1,110	966	1,230	4,980	3,390	2,040	1,000
11	1,670	1,730	e1,130	e670	e670	e1,110	1,000	1,410	5,400	3,260	2,030	1,040
12	1,670	1,620	e950	e670	e680	e1,110	1,050	1,490	5,740	3,160	1,880	1,040
13	1,650	1,570	e690	e670	e680	e1,100	1,240	1,420	5,940	3,040	1,490	1,000
14	1,630	1,540	e470	e665	e680	e1,100	1,940	1,370	e6,300	2,930	1,250	807
15	e1,670	1,520	e435	e650	e680	e1,100	2,420	1,380	e6,720	2,830	1,090	744
16	1,670	1,520	e470	e640	e680	e1,100	2,330	1,400	7,050	2,700	1,010	971
17	1,590	1,510	e560	e635	e680	e1,100	1,930	1,380	6,920	2,530	991	1,040
18	1,490	1,450	e730	e635	e675	e1,110	1,620	1,360	6,360	2,340	973	1,040
19	1,450	1,440	e680	e635	e675	e1,120	1,450	1,320	5,620	2,200	974	1,000
20	1,390	1,470	e615	e635	e675	e1,130	1,340	1,300	4,750	2,120	1,310	968
21	1,340	1,480	e540	e635	e675	e1,150	1,310	1,300	3,820	2,070	2,000	938
22	1,360	1,470	e505	e615	e675	e1,250	1,320	1,260	3,630	2,020	2,070	912
23	1,380	1,460	e510	e610	e670	e1,420	1,330	1,240	3,850	1,990	1,670	894
24	1,470	1,440	e525	e615	e670	e1,640	1,300	1,220	3,920	1,980	1,220	903
25	2,070	1,430	e570	e620	e670	e1,900	1,300	1,180	3,760	1,990	1,160	939
26	2,640	1,420	e620	e635	e670	e2,150	1,320	1,150	3,480	2,010	1,700	907
27	2,830	1,410	e680	e640	e660	e2,610	1,310	1,230	3,340	2,070	2,660	858
28	2,610	1,400	e730	e640	e655	e2,940	1,340	1,390	3,210	2,200	2,690	676
29	2,180	1,370	e760	e655	---	e3,370	1,390	1,510	3,130	2,310	2,010	526
30	2,240	e1,330	e760	e670	---	e3,590	1,410	1,500	3,380	2,200	1,350	473
31	2,750	---	e760	e700	---	e3,620	---	1,430	---	2,050	1,080	---
TOTAL	56,530	52,790	25,350	20,590	19,140	44,840	44,514	40,970	121,930	94,060	55,608	27,255
MEAN	1,824	1,760	818	664	684	1,446	1,484	1,322	4,064	3,034	1,794	908
MAX	2,830	3,060	1,270	745	740	3,620	3,090	1,510	7,050	5,650	3,010	1,040
MIN	1,340	1,330	435	610	645	635	966	1,150	1,350	1,980	973	473
AC-FT	112,100	104,700	50,280	40,840	37,960	88,940	88,290	81,260	241,800	186,600	110,300	54,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2005, BY WATER YEAR (WY)

MEAN	463	411	363	339	398	995	2,089	1,337	1,256	1,077	609	496
MAX	1,824	1,760	932	747	1,058	2,687	9,864	3,925	4,064	3,034	2,674	2,135
(WY)	(2005)	(2005)	(1999)	(1986)	(1998)	(1995)	(1997)	(1997)	(2005)	(2005)	(1993)	(1993)
MIN	2.02	0.00	0.00	4.95	14.0	75.9	165	22.0	86.4	73.4	35.6	12.6
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1976)

05051522 RED RIVER OF THE NORTH AT HICKSON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975 - 2005	
ANNUAL TOTAL	313,763		603,577			
ANNUAL MEAN	857		1,654		820	
HIGHEST ANNUAL MEAN					1,772	2001
LOWEST ANNUAL MEAN					53.1	1977
HIGHEST DAILY MEAN	3,130	Sep 27	7,050	Jun 16	13,100	Apr 15, 1997
LOWEST DAILY MEAN	96	Jan 30	435	Dec 15	0.00	Oct 26, 1976
ANNUAL SEVEN-DAY MINIMUM	96	Jan 30	555	Dec 20	0.00	Oct 26, 1976
MAXIMUM PEAK FLOW			[a]7,090	Jun 16	13,300	Apr 14, 1997
MAXIMUM PEAK STAGE			28.48	Jun 17	37.60	Apr 16, 1997
ANNUAL RUNOFF (AC-FT)	622,300		1,197,000		593,900	
10 PERCENT EXCEEDS	1,800		3,180		1,880	
50 PERCENT EXCEEDS	606		1,320		480	
90 PERCENT EXCEEDS	145		660		105	

a Gage height, 28.29 ft
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.03	16.08	12.47	11.57	11.05	11.08	18.45	12.16	12.11	19.57	13.64	11.37
2	12.59	16.18	12.67	11.56	11.05	10.99	15.07	12.12	12.07	22.20	13.41	11.25
3	12.45	15.52	12.23	11.53	11.05	11.06	12.75	12.07	12.08	23.71	13.30	11.27
4	12.75	14.38	12.63	11.51	11.05	11.37	11.91	12.00	12.52	24.29	13.76	11.39
5	12.99	13.63	12.23	11.42	11.05	11.52	11.69	11.91	13.59	24.13	15.21	11.36
6	12.90	13.34	12.21	e11.35	11.06	11.69	11.59	11.84	14.62	22.91	15.87	11.24
7	12.73	13.15	12.24	11.12	11.02	12.08	11.45	11.80	15.19	20.66	15.46	11.24
8	12.60	13.01	12.23	11.12	10.98	12.52	11.39	11.77	16.61	18.98	14.54	11.29
9	12.50	12.92	12.30	11.25	10.94	e13.10	11.34	11.79	19.42	18.12	13.86	11.29
10	12.45	12.81	12.15	11.07	10.98	e13.32	11.33	11.85	21.87	17.62	13.42	11.40
11	12.47	12.59	12.12	10.97	11.05	13.50	11.40	12.18	23.43	17.26	13.40	11.48
12	12.47	12.39	11.97	10.97	11.09	13.52	11.49	12.31	24.49	17.00	13.04	11.49
13	12.43	12.30	11.16	10.96	11.16	13.36	11.87	12.20	25.07	16.70	12.32	11.41
14	12.41	12.25	10.65	e10.99	11.22	13.00	13.21	12.10	e26.06	16.41	11.89	11.00
15	e12.49	12.22	10.29	11.03	11.26	13.26	14.36	12.12	e27.18	16.17	11.58	10.86
16	12.48	12.21	10.39	e11.04	11.25	13.24	14.14	12.15	28.16	15.84	11.43	11.34
17	12.34	12.19	10.89	e11.04	11.21	12.97	13.18	12.12	28.43	15.42	11.38	11.48
18	12.15	12.08	11.20	11.01	11.20	12.81	12.53	12.08	27.92	14.96	11.34	11.49
19	12.07	12.06	11.22	11.01	11.23	12.78	12.24	12.02	26.70	14.60	11.34	11.41
20	11.97	12.13	10.67	11.00	11.23	12.81	12.05	11.99	24.63	14.39	11.98	11.33
21	11.88	12.14	10.45	10.92	11.27	12.86	11.99	11.98	21.88	14.17	13.32	11.27
22	11.90	12.12	10.40	10.88	11.26	12.99	12.01	11.90	20.34	13.88	13.51	11.22
23	11.95	12.09	10.58	10.91	11.22	13.23	12.02	11.87	19.92	13.73	12.63	11.18
24	12.11	12.06	10.81	10.98	11.23	13.74	11.98	11.84	19.13	13.69	11.83	11.20
25	13.40	12.04	11.08	11.05	11.09	14.46	11.97	11.75	17.96	13.72	11.72	11.27
26	14.90	12.02	11.19	11.06	11.03	15.27	12.00	11.70	17.13	13.83	12.73	11.21
27	15.47	12.01	11.20	11.02	11.03	16.17	12.00	11.86	16.76	14.18	14.98	11.10
28	14.82	11.98	11.19	11.06	11.03	17.27	12.04	12.13	16.42	14.62	15.05	10.71
29	13.67	11.93	11.21	11.08	---	18.64	12.14	12.35	16.21	14.87	13.38	10.38
30	13.83	11.94	11.34	11.07	---	20.12	12.18	12.33	16.86	14.60	12.07	10.27
31	15.23	---	11.49	11.05	---	20.73	---	12.20	---	14.06	11.56	---
MEAN	12.88	12.79	11.45	11.12	11.12	13.72	12.46	12.02	19.83	16.98	13.06	11.21
MAX	15.47	16.18	12.67	11.57	11.27	20.73	18.45	12.35	28.43	24.29	15.87	11.49
MIN	11.88	11.93	10.29	10.88	10.94	10.99	11.33	11.70	12.07	13.69	11.34	10.27

e Estimated

05051522 RED RIVER OF THE NORTH AT HICKSON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
15...	1050	2,420	8.0	6.8	957	988	17.0	12.5	91.5	55.2	9.60	.7	32.7
JUL													
20...	0915	2,120	8.2	8.1	800	824	26.0	25.8	72.1	46.3	9.60	.6	24.4

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
15...	13	219	23.5	.20	17.3	308	654	4,370	<50	<1	4.1	74.6	<1
JUL													
20...	12	219	16.0	.18	15.5	204	506	2,970	<50	<1	5.8	70.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
15...	60	<1	<1	1.7	40	<1	<10	5.60	1	<1	<1.0	1.3
JUL												
20...	100	<1	<1	1.9	30	<1	<10	5.54	2	<1	<1.0	4.0

Remark codes used in this table:
< -- Less than.

05051600 WILD RICE RIVER NEAR RUTLAND, ND

LOCATION.--Lat 46°01'20", long 97°30'40", in SE¼SE¼ sec.36, T.130 N., R.55 W., Sargent County, Hydrologic Unit 09020105, on right bank 1,000 ft upstream from bridge on county highway, 2 mi south of Rutland, and 10 mi upstream from Lake Tewaukon.

DRAINAGE AREA.--546 mi^2, of which about 250 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year (seasonal records only since 1982).

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,197.73 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1960, nonrecording gage at same site and datum.

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

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 1,670 ft^3/s, June 30, gage height, 9.92 ft; minimum daily discharge, 2.0 ft^3/s, Mar. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e2.0	e26	8.4	23	1,510	108	79
2	---	---	---	---	---	e7.0	e28	8.0	22	1,390	100	63
3	---	---	---	---	---	e14	28	7.6	20	1,190	99	79
4	---	---	---	---	---	e26	24	7.9	24	858	109	229
5	---	---	---	---	---	e32	20	7.5	32	697	117	413
6	---	---	---	---	---	e40	18	6.6	26	587	105	371
7	---	---	---	---	---	e38	17	8.7	25	493	93	305
8	---	---	---	---	---	e36	17	7.8	36	442	85	246
9	---	---	---	---	---	e40	17	11	37	437	83	192
10	---	---	---	---	---	e38	13	12	42	431	79	127
11	---	---	---	---	---	e37	17	9.6	59	387	90	101
12	---	---	---	---	---	e36	17	11	90	310	93	91
13	---	---	---	---	---	e34	17	20	161	271	87	87
14	---	---	---	---	---	e32	19	28	290	220	84	86
15	---	---	---	---	---	e30	20	29	424	181	74	81
16	---	---	---	---	---	e28	25	32	467	160	67	73
17	---	---	---	---	---	e26	26	37	431	145	66	68
18	---	---	---	---	---	e25	26	38	364	132	137	61
19	---	---	---	---	---	e26	22	36	296	127	228	64
20	---	---	---	---	---	e28	20	34	231	121	225	60
21	---	---	---	---	---	e31	19	35	184	119	243	55
22	---	---	---	---	---	e33	18	30	152	118	234	54
23	---	---	---	---	---	e36	17	28	123	122	166	51
24	---	---	---	---	---	e39	16	29	94	124	113	47
25	---	---	---	---	---	e34	14	29	69	134	105	43
26	---	---	---	---	---	e31	12	27	60	187	137	42
27	---	---	---	---	---	e29	11	23	56	284	239	39
28	---	---	---	---	---	e27	10	21	52	248	220	39
29	---	---	---	---	---	e26	9.7	21	217	178	165	38
30	---	---	---	---	---	e25	9.0	23	1,380	143	114	37
31	---	---	---	---	---	e24	---	23	---	124	93	---
TOTAL	---	---	---	---	---	910.0	552.7	649.1	5,487	11,870	3,958	3,321
MEAN	---	---	---	---	---	29.4	18.4	20.9	183	383	128	111
MAX	---	---	---	---	---	40	28	38	1,380	1,510	243	413
MIN	---	---	---	---	---	2.0	9.0	6.6	20	118	66	37
AC-FT	---	---	---	---	---	1,800	1,100	1,290	10,880	23,540	7,850	6,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	0.54	0.36	0.14	0.00	0.07	24.7	68.8	38.1	27.7	34.3	10.4	9.10
MAX	4.81	5.87	2.90	0.10	1.00	138	756	419	263	383	128	146
(WY)	(1963)	(1963)	(1963)	(1963)	(1976)	(1966)	(1997)	(1998)	(1998)	(2005)	(2005)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1960)	(1960)	(1960)	(1960)	(1960)	(1965)	(1977)	(1977)	(1973)	(1961)	(1960)	(1960)

05051600 WILD RICE RIVER NEAR RUTLAND, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1960 - 2005	
ANNUAL MEAN	[a]8.36	
HIGHEST ANNUAL MEAN	[a]44.8	1969
LOWEST ANNUAL MEAN	[a]0.00	1977
HIGHEST DAILY MEAN	2,540	Apr 4, 1997
LOWEST DAILY MEAN	0.00	Oct 1, 1959
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1959
MAXIMUM PEAK FLOW	2,700	Apr 3, 1997
MAXIMUM PEAK STAGE	10.11	Apr 3, 1997
ANNUAL RUNOFF (AC-FT)	[a]6,050	
10 PERCENT EXCEEDS	18	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1960-82)
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.56	2.06	2.40	9.80	3.63	3.29
2	---	---	---	---	---	---	2.58	2.05	2.39	9.49	3.55	3.10
3	---	---	---	---	---	---	2.52	2.04	2.34	8.69	3.54	3.29
4	---	---	---	---	---	---	2.43	2.05	2.43	7.42	3.64	4.61
5	---	---	---	---	---	---	2.34	2.04	2.60	6.83	3.73	5.71
6	---	---	---	---	---	---	2.29	2.01	2.48	6.42	3.60	5.50
7	---	---	---	---	---	---	2.26	2.07	2.45	6.05	3.46	5.14
8	---	---	---	---	---	---	2.27	2.04	2.67	5.84	3.37	4.77
9	---	---	---	---	---	4.50	2.26	2.12	2.70	5.82	3.34	4.39
10	---	---	---	---	---	4.39	2.17	2.15	2.79	5.79	3.30	3.83
11	---	---	---	---	---	4.24	2.26	2.09	3.10	5.58	3.42	3.56
12	---	---	---	---	---	3.99	2.27	2.14	3.57	5.17	3.47	3.44
13	---	---	---	---	---	3.58	2.26	2.33	4.31	4.93	3.39	3.40
14	---	---	---	---	---	3.45	2.31	2.51	5.32	4.59	3.35	3.38
15	---	---	---	---	---	3.32	2.34	2.54	6.06	4.31	3.23	3.33
16	---	---	---	---	---	3.20	2.45	2.60	6.24	4.13	3.15	3.23
17	---	---	---	---	---	3.09	2.47	2.70	6.11	4.00	3.13	3.16
18	---	---	---	---	---	3.02	2.47	2.72	5.78	3.88	3.92	3.07
19	---	---	---	---	---	---	2.37	2.67	5.36	3.83	4.65	3.10
20	---	---	---	---	---	---	2.33	2.64	4.91	3.77	4.63	3.05
21	---	---	---	---	---	---	2.31	2.65	4.54	3.75	4.75	2.99
22	---	---	---	---	---	---	2.29	2.55	4.25	3.74	4.69	2.97
23	---	---	---	---	---	---	2.26	2.51	3.96	3.78	4.17	2.93
24	---	---	---	---	---	3.15	2.23	2.53	3.62	3.80	3.68	2.86
25	---	---	---	---	---	3.08	2.20	2.53	3.27	3.90	3.60	2.80
26	---	---	---	---	---	2.91	2.16	2.49	3.13	4.33	3.91	2.77
27	---	---	---	---	---	2.85	2.14	2.40	3.07	5.01	4.72	2.73
28	---	---	---	---	---	2.80	2.11	2.36	2.99	4.78	4.60	2.72
29	---	---	---	---	---	e2.62	2.10	2.35	4.60	4.27	4.17	2.71
30	---	---	---	---	---	2.48	2.08	2.40	9.04	3.98	3.69	2.68
31	---	---	---	---	---	2.49	---	2.40	---	3.80	3.46	---
MEAN	---	---	---	---	---	---	2.30	2.35	3.95	5.21	3.77	3.48
MAX	---	---	---	---	---	---	2.58	2.72	9.04	9.80	4.75	5.71
MIN	---	---	---	---	---	---	2.08	2.01	2.34	3.74	3.13	2.68

e Estimated

05051600 WILD RICE RIVER NEAR RUTLAND, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1997 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1040	16	8.6	7.9	2,810	2,830	--	8.1	147	191	25.8	4	275
AUG													
11...	1105	89	8.3	8.2	1,270	1,280	17.5	21.5	79.7	70.4	18.4	2	80.3

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	33	300	101	.18	12.0	1,260	2,180	94.7	<50	<1	3.8	44.2	<1
AUG													
11...	25	309	29.1	.15	28.6	367	833	206	<50	<1	7.3	53.3	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	170	<1	1	4.9	110	<1	640	9.61	3	<1	<1.0	5.6
AUG												
11...	180	<1	4	2.6	60	<1	210	5.26	4	<1	<1.0	3.8

Remark codes used in this table:
< -- Less than.

05052500 ANTELOPE CREEK AT DWIGHT, ND

LOCATION.--Lat 46°18'41", long 96°44'03", in NW$^1/_4$ sec.28, T.133 N., R.48 W., Richland County, Hydrologic Unit 09020105, at bridge on County Road 10, about 0.4 mi north and 0.1 mi east of Dwight.

DRAINAGE AREA.--294 mi^2, approximately of which 16 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1944-1949 (monthly discharge only, published in WSP 1308); 1950-1973, 1975, and 1995-2002, annual peak discharge only; March 2003 to current year (seasonal records only).

GAGE.--Water-stage recorder. Datum of gage is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1994, nonrecording gage at site 0.3 mi downstream at datum 26.08 ft higher.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft^3/s, Apr. 10, 1969, gage height, 43.90 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 16.0 ft occurred in April 1943, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft^3/s, July 1, gage height, 32.86 ft; no flow for Mar. 1-3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e88	3.4	10	1,170	17	15
2	---	---	---	---	---	e0.00	e50	2.9	11	1,120	13	9.2
3	---	---	---	---	---	e0.00	35	2.4	13	804	14	6.7
4	---	---	---	---	---	e2.0	28	1.8	13	532	82	32
5	---	---	---	---	---	e7.8	22	1.8	18	370	172	129
6	---	---	---	---	---	e81	17	1.4	22	283	120	124
7	---	---	---	---	---	e172	13	1.2	84	231	66	81
8	---	---	---	---	---	e165	12	1.9	361	213	41	60
9	---	---	---	---	---	e171	10	3.2	378	202	40	44
10	---	---	---	---	---	e155	7.6	5.9	157	192	68	33
11	---	---	---	---	---	e93	8.9	6.5	60	174	77	26
12	---	---	---	---	---	e69	13	5.6	51	146	57	20
13	---	---	---	---	---	e52	17	5.6	87	145	40	18
14	---	---	---	---	---	e52	18	6.2	487	162	27	13
15	---	---	---	---	---	e52	19	8.0	903	131	20	9.9
16	---	---	---	---	---	e49	17	8.5	776	96	16	7.7
17	---	---	---	---	---	e49	14	8.1	511	67	11	7.1
18	---	---	---	---	---	e48	12	9.1	296	44	15	6.3
19	---	---	---	---	---	e48	9.1	13	175	31	84	6.4
20	---	---	---	---	---	e49	8.3	55	156	23	273	6.2
21	---	---	---	---	---	e55	7.6	38	233	17	285	5.9
22	---	---	---	---	---	e72	6.8	20	232	13	153	5.2
23	---	---	---	---	---	e80	7.0	13	118	10	75	5.1
24	---	---	---	---	---	e110	5.8	8.5	64	7.5	42	5.9
25	---	---	---	---	---	e126	4.8	9.2	37	6.6	29	6.7
26	---	---	---	---	---	e140	4.7	12	24	8.6	78	7.5
27	---	---	---	---	---	e152	4.3	11	57	12	82	9.8
28	---	---	---	---	---	e166	3.3	9.6	100	18	63	10
29	---	---	---	---	---	e174	3.5	8.8	180	17	46	10
30	---	---	---	---	---	e174	4.4	8.7	854	14	31	12
31	---	---	---	---	---	e150	---	8.8	---	17	22	---
TOTAL	---	---	---	---	---	2,713.80	471.1	299.1	6,468	6,276.7	2,159	732.6
MEAN	---	---	---	---	---	87.5	15.7	9.65	216	202	69.6	24.4
MAX	---	---	---	---	---	174	88	55	903	1,170	285	129
MIN	---	---	---	---	---	0.00	3.3	1.2	10	6.6	11	5.1
AC-FT	---	---	---	---	---	5,380	934	593	12,830	12,450	4,280	1,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	40.2	5.88	43.4	160	82.3	24.0	17.4
MAX	---	---	---	---	---	87.5	15.7	107	216	202	69.6	27.7
(WY)	---	---	---	---	---	(2005)	(2005)	(2004)	(2005)	(2005)	(2005)	(2004)
MIN	---	---	---	---	---	1.47	0.81	9.65	116	16.2	0.72	0.00
(WY)	---	---	---	---	---	(2003)	(2004)	(2005)	(2004)	(2004)	(2003)	(2003)

SUMMARY STATISTICS	WATER YEARS 2003 - 2005	
HIGHEST DAILY MEAN	1,870	May 31, 2004
LOWEST DAILY MEAN	0.00	Mar 1, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 1, 2003
MAXIMUM PEAK FLOW	9,000	Apr 10, 1969
MAXIMUM PEAK STAGE	[a]43.90	Apr 10, 1969

a Present datum; gage height, 17.82, site and datum then in use
e Estimated

05052500 ANTELOPE CREEK AT DWIGHT, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2002 to current year (seasonal records only).

REMARKS.--Gaps in record are result of ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	23.93	21.73	22.04	32.71	22.25	22.17
2	---	---	---	---	---	21.62	23.23	21.71	22.07	32.43	22.11	21.94
3	---	---	---	---	---	21.59	22.79	21.69	22.16	30.57	22.13	21.84
4	---	---	---	---	---	21.60	22.62	21.65	22.16	28.94	23.71	22.58
5	---	---	---	---	---	22.15	22.45	21.65	22.31	27.77	24.99	24.44
6	---	---	---	---	---	24.14	22.30	21.63	22.44	27.04	24.32	24.36
7	---	---	---	---	---	---	22.16	21.62	23.67	26.54	23.46	23.72
8	---	---	---	---	---	---	22.10	21.66	27.09	26.35	22.92	23.34
9	---	---	---	---	---	27.08	22.04	21.73	27.82	26.24	22.91	23.00
10	---	---	---	---	---	26.30	21.93	21.85	25.68	26.13	23.49	22.74
11	---	---	---	---	---	e25.54	21.98	21.88	24.26	25.93	23.65	22.53
12	---	---	---	---	---	e25.18	22.16	21.84	24.08	25.59	23.29	22.37
13	---	---	---	---	---	e24.74	22.28	21.84	24.74	25.23	22.91	22.26
14	---	---	---	---	---	24.38	22.33	21.86	28.47	24.89	22.58	22.09
15	---	---	---	---	---	e24.06	22.35	21.95	31.10	24.47	22.36	21.98
16	---	---	---	---	---	23.87	22.28	21.97	30.41	23.97	22.20	21.88
17	---	---	---	---	---	23.69	22.18	21.95	28.79	23.47	22.04	21.86
18	---	---	---	---	---	23.56	22.11	21.99	27.14	23.00	22.16	21.82
19	---	---	---	---	---	23.52	21.99	22.14	25.93	22.69	23.72	21.82
20	---	---	---	---	---	23.54	21.96	23.17	25.69	22.45	26.01	21.81
21	---	---	---	---	---	23.79	21.93	22.86	26.56	22.25	26.13	21.80
22	---	---	---	---	---	23.96	21.89	22.39	26.54	22.10	24.74	21.77
23	---	---	---	---	---	24.57	21.90	22.13	25.21	21.99	23.61	21.76
24	---	---	---	---	---	25.55	21.85	21.97	24.33	21.88	22.96	21.80
25	---	---	---	---	---	25.66	21.80	22.00	23.76	21.83	22.62	21.84
26	---	---	---	---	---	25.94	21.80	22.09	23.41	21.92	23.66	21.87
27	---	---	---	---	---	25.96	21.77	22.06	24.15	22.07	23.75	21.97
28	---	---	---	---	---	26.14	21.73	22.02	24.95	22.29	23.40	21.98
29	---	---	---	---	---	26.33	21.74	21.98	25.84	22.23	23.05	21.99
30	---	---	---	---	---	26.05	21.78	21.98	30.86	22.14	22.69	22.04
31	---	---	---	---	---	25.04	---	21.98	---	22.24	22.40	---
MEAN	---	---	---	---	---	---	22.18	21.97	25.46	24.82	23.30	22.31
MAX	---	---	---	---	---	---	23.93	23.17	31.10	32.71	26.13	24.44
MIN	---	---	---	---	---	---	21.73	21.62	22.04	21.83	22.04	21.76

e Estimated

05052500 ANTELOPE CREEK AT DWIGHT, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1510	13	8.4	7.2	737	730	18.5	13.9	62.9	31.1	9.80	1	42.2
AUG													
10...	1640	75	7.9	7.8	611	620	20.5	25.0	47.9	26.7	10.1	.7	25.4

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	24	186	24.3	.17	9.14	168	452	16.5	<50	<1	3.1	58.0	<1
AUG													
10...	18	154	13.2	.17	14.8	147	365	76.9	<50	<1	7.0	67.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	80	<1	<1	3.2	50	<1	440	7.10	<1	<1	<1.0	2.7
AUG												
10...	80	<1	3	2.0	40	<1	200	5.69	2	<1	<1.0	2.0

Remark codes used in this table:
< -- Less than.

05053000 WILD RICE RIVER NEAR ABERCROMBIE, ND

LOCATION.--Lat 46°28'05", long 96°47'00", in NE¼NE¼ sec.36, T.135 N., R.49 W., Richland County, Hydrologic Unit 09020105, on right bank 420 ft upstream from bridge on county highway, 0.75 mi upstream from rubble masonry dam which serves as control, 3.2 mi northwest of Abercrombie, and 7 mi downstream from Antelope Creek.

DRAINAGE AREA.--2,080 mi^2, of which about 590 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1932 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1388: 1939, 1941(M). WSP 1728: Drainage area.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 907.94 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 7, 1939, nonrecording gage at site 420 ft downstream at datum 5.0 ft lower. Dec. 7, 1939, to Nov. 24, 1952, nonrecording gage at site 0.75 mi downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some regulation by Fish and Wildlife Service reservoirs, of which Lake Tewaukon is the largest. Some small diversions for irrigation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in spring of 1897 reached a stage of 27.5 ft, present site and datum, from floodmarks pointed out by local residents.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	147	59	e8.2	e5.0	e15	e655	70	98	2,440	518	602
2	60	176	56	e7.9	e5.0	e15	e555	67	96	2,680	477	582
3	53	188	51	e7.8	e5.0	e18	483	62	95	2,790	455	565
4	48	187	53	e7.7	e5.6	e18	349	58	92	2,790	801	632
5	44	175	52	e7.6	e6.3	e20	281	59	111	2,700	1,170	635
6	40	163	e51	e7.5	e6.6	e100	188	57	169	2,580	1,150	671
7	36	167	e49	e7.5	e6.0	e356	151	53	326	2,460	881	630
8	32	182	e47	e7.4	e5.6	e346	137	52	1,100	2,370	692	590
9	27	177	e44	e7.4	e5.6	e349	129	54	1,460	2,360	653	552
10	24	161	e43	e7.3	e6.6	e371	125	115	1,240	2,380	725	504
11	26	141	e43	e7.2	e8.9	e321	129	67	871	2,400	818	459
12	31	126	e40	e7.2	e9.5	e260	140	61	762	2,390	781	431
13	30	118	e37	e7.2	e9.5	e280	161	83	637	2,330	649	418
14	27	110	e35	e7.2	e9.8	e220	180	92	1,030	2,220	536	430
15	27	102	e33	e7.5	e9.8	e135	186	89	1,620	2,050	459	456
16	25	96	e33	e7.5	e10	e107	176	92	1,880	1,850	408	476
17	24	91	e31	e7.4	e10	e88	160	101	1,890	1,650	371	482
18	25	88	e29	e6.8	e11	e66	147	107	1,760	1,460	357	509
19	e25	87	e26	e6.6	e11	e50	140	138	1,580	1,270	520	554
20	e25	86	e24	e6.4	e11	e40	132	130	1,430	1,130	1,030	533
21	e23	84	e22	e6.5	e12	e40	127	162	1,440	1,030	1,350	480
22	21	80	e20	e6.7	e14	e60	124	130	1,500	935	1,310	391
23	25	79	e18	e6.4	e16	e140	111	115	1,530	844	905	289
24	33	e50	e16	e6.2	e17	e220	103	102	1,520	762	581	233
25	44	e62	e14	e5.9	e19	e300	98	97	1,530	713	478	213
26	47	e67	e12	e5.6	e22	e500	90	103	1,560	692	825	213
27	44	e66	e11	e5.3	e20	e660	85	115	1,620	767	737	227
28	45	e53	e10	e5.0	e18	e760	81	115	1,630	835	590	255
29	44	e53	e9.0	e5.0	---	e870	76	125	1,620	784	558	267
30	79	60	e8.8	e5.0	---	e840	73	113	2,030	669	575	255
31	156	---	e8.5	e5.0	---	e740	---	105	---	574	597	---
TOTAL	1,262	3,422	985.3	209.9	295.8	8,305	5,572	2,889	34,227	52,905	21,957	13,534
MEAN	40.7	114	31.8	6.77	10.6	268	186	93.2	1,141	1,707	708	451
MAX	156	188	59	8.2	22	870	655	162	2,030	2,790	1,350	671
MIN	21	50	8.5	5.0	5.0	15	73	52	92	574	357	213
AC-FT	2,500	6,790	1,950	416	587	16,470	11,050	5,730	67,890	104,900	43,550	26,840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2005, BY WATER YEAR (WY)

MEAN	13.0	11.0	7.09	2.82	6.39	168	499	159	141	164	41.0	24.9
MAX	146	114	188	72.8	210	1,195	5,510	1,246	1,141	1,787	708	451
(WY)	(1999)	(2005)	(1999)	(1999)	(1998)	(1995)	(1997)	(1998)	(2005)	(1962)	(2005)	(2005)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	2.81	0.11	0.08	0.00	0.00	0.00
(WY)	(1933)	(1933)	(1933)	(1933)	(1934)	(1937)	(1991)	(1934)	(1988)	(1933)	(1932)	(1932)

05053000 WILD RICE RIVER NEAR ABERCROMBIE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1932 - 2005	
ANNUAL TOTAL	44,421.8		145,564.0			
ANNUAL MEAN	121		399		104	
HIGHEST ANNUAL MEAN					560	1997
LOWEST ANNUAL MEAN					0.48	1934
HIGHEST DAILY MEAN	2,560	Jun 2	2,790	Jul 3	9,450	Apr 16, 1997
LOWEST DAILY MEAN	1.7	Aug 28	5.0	Jan 28	0.00	Jul 26, 1932
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 25	5.0	Jan 28	0.00	Jul 26, 1932
MAXIMUM PEAK FLOW			2,810	Jul 3	[a]9,540	Apr 11, 1969
MAXIMUM PEAK STAGE			15.03	Jul 3	[b]26.59	Apr 6, 1997
ANNUAL RUNOFF (AC-FT)	88,110		288,700		75,150	
10 PERCENT EXCEEDS	210		1,330		200	
50 PERCENT EXCEEDS	38		111		3.6	
90 PERCENT EXCEEDS	2.6		7.6		0.00	

a Gage height, 24.58 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.24	1.69	1.13	0.60	0.45	0.83	3.79	1.22	1.41	13.21	3.26	3.54
2	1.15	1.84	1.11	0.60	0.45	0.83	3.41	1.20	1.40	14.38	3.12	3.47
3	1.09	1.90	1.07	0.60	0.45	0.85	3.14	1.16	1.39	14.96	3.04	3.42
4	1.04	1.90	1.09	0.61	0.46	0.81	2.65	1.13	1.37	14.93	4.42	3.65
5	1.00	1.83	1.08	0.59	0.47	0.80	2.36	1.13	1.48	14.52	6.29	3.65
6	0.97	1.77	1.08	0.57	0.48	1.55	1.90	1.12	1.80	13.92	6.19	3.79
7	0.92	1.79	1.06	0.57	0.51	4.00	1.71	1.09	2.46	13.29	4.73	3.64
8	0.88	1.87	1.04	0.56	0.55	3.59	1.63	1.08	5.95	12.87	3.87	3.50
9	0.82	1.85	1.03	0.54	0.59	3.75	1.59	1.10	7.91	12.78	3.72	3.37
10	0.78	1.76	1.02	0.52	0.61	3.21	1.56	1.51	6.71	12.90	4.01	3.21
11	0.81	1.65	1.01	0.51	0.60	2.62	1.58	1.20	4.69	13.01	4.42	3.06
12	0.87	1.57	1.03	0.51	0.58	2.62	1.65	1.15	4.16	12.96	4.25	2.96
13	0.86	1.53	0.98	0.50	0.59	2.75	1.76	1.32	3.67	12.66	3.71	2.91
14	0.82	1.48	0.94	0.52	0.63	2.47	1.86	1.38	5.55	12.08	3.32	2.96
15	0.81	1.44	0.97	0.54	0.62	2.12	1.89	1.36	8.84	11.23	3.06	3.05
16	0.79	1.40	0.95	0.54	0.64	1.82	1.84	1.38	10.29	10.17	2.87	3.12
17	0.77	1.37	0.94	0.54	0.71	1.58	1.75	1.43	10.36	9.04	2.73	3.14
18	0.78	1.35	0.94	0.53	0.78	1.44	1.68	1.47	9.63	7.91	2.68	3.23
19	0.82	1.34	0.88	0.52	0.80	1.35	1.64	1.64	8.61	6.89	3.27	3.38
20	0.93	1.34	0.85	0.50	0.86	1.30	1.60	1.59	7.74	6.11	5.52	3.31
21	0.86	1.33	0.87	0.50	0.88	1.30	1.58	1.76	7.80	5.49	7.32	3.13
22	0.73	1.30	0.96	0.52	0.90	1.43	1.56	1.59	8.15	5.00	7.07	2.81
23	0.79	1.29	0.85	0.51	0.92	1.85	1.49	1.51	8.32	4.53	4.88	2.39
24	0.89	1.07	0.77	0.49	0.97	2.34	1.44	1.43	8.29	4.16	3.48	2.14
25	1.00	1.17	0.72	0.48	0.98	2.64	1.41	1.41	8.33	3.95	3.12	2.03
26	1.03	1.22	0.68	0.46	1.03	3.40	1.36	1.44	8.51	3.87	4.45	2.03
27	1.01	1.21	0.66	0.44	1.06	4.06	1.33	1.51	8.83	4.19	4.06	2.11
28	1.02	1.09	0.64	0.45	0.94	4.56	1.30	1.51	8.91	4.49	3.50	2.24
29	1.01	1.10	0.62	0.45	---	5.12	1.27	1.56	8.86	4.26	3.39	2.30
30	1.26	1.15	0.61	0.44	---	5.03	1.24	1.50	11.13	3.79	3.45	2.24
31	1.73	---	0.61	0.45	---	4.50	---	1.46	---	3.45	3.53	---
MEAN	0.95	1.49	0.91	0.52	0.70	2.47	1.83	1.37	6.42	9.26	4.09	2.99
MAX	1.73	1.90	1.13	0.61	1.06	5.12	3.79	1.76	11.13	14.96	7.32	3.79
MIN	0.73	1.07	0.61	0.44	0.45	0.80	1.24	1.08	1.37	3.45	2.68	2.03

05053000 WILD RICE RIVER NEAR ABERCROMBIE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
13...	0925	160	10.7	8.4	7.3	1,390	1,080	8.0	11.0	109	73.2	12.7	2
MAY													
11...	1430	60	8.4	8.1	6.5	1,020	1,020	13.5	14.5	66.9	44.7	8.30	2
AUG													
10...	1100	711	--	8.2	8.1	1,100	1,110	26.0	25.5	80.1	55.3	14.2	1

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
13...	98.3	26	256	45.3	.24	10.8	490	985	429	101	.60	.53	<.010
MAY													
11...	65.5	28	173	26.5	.27	9.30	338	662	108	92	.85	.78	.172
AUG													
10...	59.7	22	265	22.1	.19	22.2	319	712	1,410	--	--	--	--

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
13...	<.010	.178	.160	--	--	.091	.180	.78	.69	40	50	<10	<50
MAY													
11...	.210	1.39	1.42	.68	.57	.237	.328	2.2	2.2	--	20	<10	<50
AUG													
10...	--	--	--	--	--	--	--	--	--	--	--	--	<50

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
13...	<1	5.2	60.1	<1	160	<1	<1	2.5	10	<1	80	9.16	2
MAY													
11...	<1	4.8	49.1	<1	100	<1	1	1.8	<10	<1	120	5.16	<1
AUG													
10...	<1	11.3	65.6	<1	160	<1	4	3.7	60	<1	<10	7.01	3

05053000 WILD RICE RIVER NEAR ABERCROMBIE, ND—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
13...	<1	<1.0	2.1
MAY			
11...	<1	<1.0	2.0
AUG			
10...	<1	<1.0	3.5

Remark codes used in this table:
< -- Less than.

05054000 RED RIVER OF THE NORTH AT FARGO, ND

LOCATION.--Lat 46°51'40", long 96°47'00", in NW$^1/_4$NE$^1/_4$ sec.18, T.139 N., R.48 W., Cass County, Hydrologic Unit 09020104, at waterplant on 4th Street South in Fargo, 25 mi upstream from mouth of Sheyenne River, and at mile 453.

DRAINAGE AREA.--6,800 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1901 to current year. Published as "at Moorhead, MN.", 1901. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1902-4, 1906-7, 1910-14, 1916, 1918, 1924. WSP 1388: 1905-6, 1917-20(M), 1935(M), 1938-39(M), 1943.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 861.8 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to Sept. 30, 1962, water-stage recorder at present site at datum 5.6 ft higher. See WSP 1728 or 1913 for history of changes prior to Oct. 1, 1960.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by; Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes and ponds and several powerplants. Figures of daily discharge do not include diversions to cities of Fargo and Moorhead, MN, from the Sheyenne River.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 7, 1897, reached a stage of 39.1 ft present datum, discharge, 25,000 ft^3/s at site 1.5 mi downstream.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,990	3,680	e1,340	e850	e740	e705	e3,990	1,440	1,490	5,280	2,650	1,670
2	1,790	3,400	e1,280	e845	e760	e705	e3,720	1,430	1,430	6,360	2,470	1,550
3	1,670	3,130	e1,240	e835	e770	e715	2,620	1,400	1,440	7,170	2,370	1,520
4	1,680	2,840	e1,220	e820	e770	e745	1,960	1,360	1,700	7,670	2,380	1,610
5	1,800	2,480	e1,210	e800	e765	e840	1,650	1,300	2,460	7,930	2,910	1,980
6	1,830	2,210	e1,200	e785	e750	e1,000	1,470	1,250	2,670	7,940	3,440	2,110
7	1,780	2,110	e1,200	e770	e710	e1,090	1,290	1,230	2,830	7,590	3,510	1,820
8	1,720	2,030	e1,200	e760	e670	e1,140	1,160	1,240	3,330	6,940	3,220	1,700
9	1,680	1,990	e1,200	e750	e670	e1,180	1,090	1,250	4,100	6,300	2,900	1,610
10	1,670	1,960	e1,210	e740	e680	e1,230	1,060	1,240	5,220	5,830	2,690	1,570
11	1,690	1,890	e1,220	e740	e705	e1,290	1,110	1,320	6,180	5,500	2,690	1,570
12	1,690	1,790	e1,220	e740	e720	e1,300	1,140	1,530	7,300	5,310	2,680	1,540
13	1,680	1,720	e990	e730	e730	e1,290	1,220	1,540	7,800	5,190	2,380	1,480
14	1,660	1,690	e650	e720	e735	e1,250	1,650	1,490	8,360	5,050	2,020	1,330
15	1,680	1,670	e490	e720	e735	e1,240	2,330	1,430	8,980	4,870	1,710	1,130
16	1,690	1,650	e455	e710	e720	e1,250	2,560	1,440	9,390	4,670	1,500	1,240
17	1,660	1,650	e510	e710	e720	e1,250	2,270	1,460	9,670	4,340	1,490	1,440
18	1,600	1,610	e630	e720	e710	e1,250	1,890	1,460	9,730	3,930	1,730	1,480
19	1,550	1,570	e770	e720	e705	e1,270	1,670	1,430	9,250	3,570	1,490	1,470
20	1,510	1,580	e670	e720	e705	e1,290	1,520	1,430	8,460	3,340	1,800	1,470
21	1,440	1,600	e600	e710	e705	e1,320	1,430	1,470	7,400	3,170	2,740	1,470
22	1,430	1,600	e550	e680	e710	e1,400	1,410	1,460	6,670	3,020	3,190	1,370
23	1,490	1,590	e545	e670	e710	e1,540	1,420	1,430	6,180	2,900	3,050	1,260
24	1,470	1,570	e580	e670	e715	e1,700	1,400	1,370	5,910	2,810	2,450	1,170
25	1,700	1,560	e640	e675	e710	e1,860	1,370	1,330	5,650	2,770	2,320	1,130
26	2,180	1,540	e700	e680	e710	e2,120	1,380	1,260	5,060	2,740	3,290	1,090
27	2,560	1,530	e780	e680	e710	e2,600	1,380	1,250	4,590	2,790	3,880	1,060
28	2,550	1,530	e820	e685	e710	e2,960	1,360	1,370	4,380	2,940	3,800	945
29	2,230	1,520	e835	e700	---	e3,300	1,400	1,550	4,440	3,090	3,080	774
30	3,170	e1,400	e860	e715	---	e3,600	1,430	1,610	4,600	3,060	2,370	678
31	3,770	---	e850	e730	---	e3,810	---	1,560	---	2,870	1,890	---
TOTAL	58,010	58,090	27,665	22,780	20,150	48,240	51,350	43,330	166,670	146,940	80,090	42,237
MEAN	1,871	1,936	892	735	720	1,556	1,712	1,398	5,556	4,740	2,584	1,408
MAX	3,770	3,680	1,340	850	770	3,810	3,990	1,610	9,730	7,940	3,880	2,110
MIN	1,430	1,400	455	670	670	705	1,060	1,230	1,430	2,740	1,490	678
AC-FT	115,100	115,200	54,870	45,180	39,970	95,680	101,900	85,950	330,600	291,500	158,900	83,780
+	1,270	1,140	1,230	1,270	1,140	1,250	1,160	1,300	1,280	1,610	1,010	840
*	116,370	116,340	56,100	46,450	41,110	96,930	103,060	87,250	331,880	293,110	159,910	84,620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2005, BY WATER YEAR (WY)

MEAN	348	311	259	234	245	794	1,985	1,165	1,154	984	470	363
MAX	1,871	1,936	1,261	740	1,353	4,722	17,920	5,365	5,556	5,692	3,293	2,280
(WY)	(2005)	(2005)	(1999)	(1986)	(1998)	(1995)	(1997)	(1997)	(2005)	(1962)	(1993)	(1993)
MIN	0.00	0.00	0.00	0.00	0.18	26.8	102	8.12	2.87	0.00	0.00	0.00
(WY)	(1935)	(1937)	(1938)	(1933)	(1933)	(1937)	(1934)	(1934)	(1936)	(1934)	(1932)	(1934)

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1901 - 2005	
ANNUAL TOTAL	376,444		765,552			
ANNUAL MEAN	1,029	*(1,053)	2,097	*(2,116)	694	
HIGHEST ANNUAL MEAN					2,619	1997
LOWEST ANNUAL MEAN					17.5	1934
HIGHEST DAILY MEAN	5,380	Jun 3	9,730	Jun 18	27,800	Apr 17, 1997
LOWEST DAILY MEAN	90	Jan 26	455	Dec 16	0.00	Jul 25, 1932
ANNUAL SEVEN-DAY MINIMUM	90	Jan 26	589	Dec 15	0.00	Jul 25, 1932
MAXIMUM PEAK FLOW			9,810	Jun 18	28,000	Apr 17, 1997
MAXIMUM PEAK STAGE			28.18	Jun 18	39.72	Apr 18, 1997
ANNUAL RUNOFF (AC-FT)	746,700	*(762,700)	1,518,000	*(1,533,000)	502,900	
10 PERCENT EXCEEDS	2,080		4,400		1,560	
50 PERCENT EXCEEDS	724		1,490		340	
90 PERCENT EXCEEDS	130		710		44	

\+ Diversions in acre-feet to cities of Fargo and Moorhead
* Adjusted for diversions to cities of Fargo and Moorhead
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.37	17.98	15.65	15.28	14.87	14.93	18.61	15.75	15.79	20.22	16.72	15.96
2	16.13	17.62	15.50	15.33	14.86	14.92	18.36	15.72	15.74	22.03	16.59	15.84
3	15.97	17.34	15.44	15.28	14.86	14.91	16.72	15.70	15.74	23.44	16.52	15.82
4	15.99	17.05	15.44	15.26	14.86	15.04	16.20	15.66	15.96	24.32	16.53	15.90
5	16.14	16.79	15.61	15.25	14.86	15.20	15.93	15.61	16.59	24.78	16.97	16.21
6	16.18	16.62	15.44	15.22	14.85	15.37	15.77	15.56	16.74	24.80	17.53	16.32
7	16.12	16.50	15.47	15.16	14.86	15.54	15.60	15.53	16.88	24.17	17.63	16.08
8	16.05	16.42	15.49	15.07	14.86	15.68	15.46	15.55	17.41	23.03	17.28	15.98
9	15.99	16.37	15.53	15.10	14.86	15.96	15.39	15.55	18.47	21.93	16.95	15.90
10	15.98	16.34	15.53	15.07	14.88	16.04	15.35	15.54	20.14	21.13	16.76	15.86
11	16.01	16.25	15.48	14.96	14.91	16.04	15.41	15.63	21.72	20.58	16.75	15.86
12	16.00	16.13	15.49	14.94	14.92	16.01	15.44	15.83	23.67	20.26	16.74	15.83
13	15.99	16.05	15.55	14.93	14.97	15.95	15.52	15.83	24.55	20.07	16.53	15.78
14	15.97	16.01	14.90	14.93	15.01	15.86	15.93	15.79	25.55	19.85	16.25	15.63
15	15.99	15.98	14.67	14.91	14.98	15.82	16.49	15.73	26.67	19.60	15.99	15.43
16	16.01	15.96	14.52	14.91	15.00	15.84	16.66	15.74	27.43	19.29	15.80	15.55
17	15.97	15.95	14.63	14.93	15.00	15.77	16.45	15.76	27.94	18.81	15.79	15.74
18	15.89	15.90	14.93	14.93	14.99	15.68	16.14	15.77	28.15	18.22	15.99	15.78
19	15.83	15.85	15.12	14.93	15.01	15.63	15.95	15.73	27.96	17.71	15.79	15.78
20	15.77	15.86	15.00	14.94	15.01	15.62	15.82	15.73	27.32	17.41	16.06	15.77
21	15.68	15.89	14.73	14.90	15.02	15.63	15.73	15.77	26.05	17.22	16.82	15.77
22	15.67	15.89	14.61	14.85	15.03	15.69	15.71	15.76	24.34	17.07	17.24	15.67
23	15.75	15.88	14.62	14.82	15.03	15.82	15.72	15.73	22.90	16.95	17.10	15.57
24	15.72	15.85	14.76	14.84	15.05	16.03	15.70	15.68	21.87	16.86	16.58	15.47
25	16.01	15.83	14.94	14.88	14.97	16.21	15.67	15.64	20.92	16.82	16.48	15.43
26	16.57	15.82	e15.07	14.89	14.93	16.51	15.68	15.56	19.88	16.79	17.38	15.39
27	16.84	15.80	e15.11	14.87	14.93	16.88	15.68	15.56	19.17	16.83	18.15	15.35
28	16.84	15.79	15.10	14.88	14.91	17.23	15.67	15.67	18.87	16.99	18.04	15.22
29	16.62	15.79	15.08	14.88	---	17.71	15.70	15.84	18.96	17.14	17.14	15.01
30	17.39	15.91	15.12	14.88	---	18.08	15.74	15.90	19.19	17.11	16.52	14.89
31	18.10	---	15.20	14.87	---	18.41	---	15.85	---	16.92	16.14	---
MEAN	16.18	16.25	15.15	15.00	14.94	16.00	16.01	15.70	21.42	19.62	16.73	15.69
MAX	18.10	17.98	15.65	15.33	15.05	18.41	18.61	15.90	28.15	24.80	18.15	16.32
MIN	15.67	15.79	14.52	14.82	14.85	14.91	15.35	15.53	15.74	16.79	15.79	14.89

e Estimated

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: September 1998 to current year.
SPECIFIC CONDUCTANCE: September 1998 to current year.
PH: October 2003 to current year.
DISSOLVED OXYGEN: October 2003 to current year.
TURBIDITY: October 2003 to current year.

INSTRUMENTATION.--Multiparameter water-quality monitor.

REMARKS.--Records good. Quality assurance sample also collected at this location. Instruments used to measure turbidity conform to ISO 7027 standards and values are reported in Formazin Nephlometric Units (FNU).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 30.1°C, Aug. 6-7, 2001; minimum recorded, -0.4°C on many days during winter months.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,330 microsiemens, July 19, 2001; minimum recorded, 245 microsiemens, Sept. 7, 2004.
PH: Maximum recorded, 8.8 units on many days during Nov. 2003 and Aug. 2004; minimum recorded, 5.8 units, Jan. 9, 2005. pH from Jan. 7 to Apr. 2 appear to be result of organic acids and location of monitor in river. Values for this period may not be representative of overall conditions.
DISSOLVED OXYGEN: Maximum recorded, 20.6 milligrams per liter, Nov. 28-29, 2003; minimum recorded, 3.3 milligrams per liter, July 17, 2005.
TURBIDITY: Maximum operating range of sensor, 1,100 FNU, may have been exceeded on May 31, 2004, and June 1-2, 2004; minimum recorded, 1.5 FNU, Feb. 12-13, 2004.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 27.7°C, July 17; minimum recorded, 0.0°C on many days during winter months.
SPECIFIC CONDUCTANCE: Maximum recorded, 996 microsiemens, Apr. 16; minimum recorded, 434 microsiemens, Aug 27.
PH: Maximum recorded, 8.6 units, Apr. 30 and May 1-7; minimum recorded, 5.8 units, Jan. 9. pH from Jan. 7 to Apr. 2 appear to be result of organic acids and location of monitor in river. Values for this period may not be representative of overall conditions.
DISSOLVED OXYGEN: Maximum recorded, 15.7 milligrams per liter, Dec. 2, 3, 5 and Feb. 22, 24; minimum recorded, 3.3 milligrams per liter, July 17.
TURBIDITY: Maximum recorded, 620 FNU, Apr. 16; minimum recorded, 4.4 FNU, Jan. 14.

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

Date	Time	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
03...	0910	84	734	11.5	89	7.3	7.9	641	621	-.1	3.1	54.3	32.0
MAY													
10...	1200	33	735	10.0	105	8.0	7.4	769	763	--	15.7	63.5	42.7
JUN													
06...	1320	230	734	7.3	82	8.0	8.1	703	720	23.5	19.0	57.5	37.3
13...	1355	180	728	5.3	62	7.5	7.9	474	462	17.0	20.4	40.2	20.1
15...	1150	130	--	5.4	--	7.5	7.3	479	477	21.5	19.3	42.3	22.0
29...	1340	95	729	5.2	64	7.8	8.0	844	850	--	23.3	71.6	45.8
AUG													
02...	1505	120	733	6.3	81	8.0	8.3	956	967	32.1	25.9	82.4	52.6
23...	1220	170	738	8.1	94	7.8	8.1	662	672	20.5	21.2	53.0	33.5
SEP													
15...	1145	65	737	7.6	87	8.0	8.2	811	813	--	20.1	61.4	43.9
27...	1125	54	733	8.3	87	8.2	8.3	793	790	17.0	15.5	57.1	40.6

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
APR													
03...	7.10	.6	22.5	15	162	12.7	.12	11.8	140	370	147	.57	.35
MAY													
10...	5.80	.6	26.3	14	215	16.0	.15	6.84	190	476	46	.54	.62
JUN													
06...	5.70	.6	23.0	14	209	13.6	.18	12.6	165	439	453	.57	1.1
13...	5.90	.5	14.1	14	127	6.9	.15	16.5	95.5	267	280	.78	.54
15...	7.10	.5	14.8	14	135	7.1	.14	19.8	95.9	276	225	.77	.66
29...	9.80	.9	38.1	18	200	16.6	.16	25.8	237	543	267	.88	.74
AUG													
02...	7.70	.7	35.2	15	238	16.5	.18	16.3	271	610	110	1.2	.92
23...	8.70	.7	25.1	16	164	11.3	.16	18.9	181	414	278	.87	.68
SEP													
15...	10.0	.9	36.9	19	239	19.6	.16	18.8	178	497	74	.75	.69
27...	9.70	.7	29.3	16	235	21.1	.17	17.6	167	468	111	.88	.83

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

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

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)
APR													
03...	.080	.099	.381	.400	.49	.25	.95	.75	.134	.274	--q	--q	--q
MAY													
10...	.011	.012	<.020	.020	.53	.60	.56	.64	.070	.122	<10	<10	<10
JUN													
06...	.058	.059	2.16	2.14	.51	1.1	2.7	3.3	.177	.574	350	380	--
13...	.141	.138	1.17	1.24	.64	.40	1.9	1.8	.211	.390	130	150	140
15...	.103	.101	.891	.940	.67	.56	1.7	1.6	.270	.418	210	370	770
29...	.077	.088	.404	.400	.80	.65	1.3	1.1	.246	.425	400	400	650
AUG													
02...	.025	.037	.129	.140	1.2	.88	1.3	1.1	.210	.364	30	40	40
23...	.045	.063	.302	.280	.82	.62	1.2	.96	.200	.401	--	--	150
SEP													
15...	.047	.051	.270	.250	.70	.64	1.0	.94	.172	.233	--	<10	70
27...	.033	.039	.225	.220	.84	.79	1.1	1.1	.127	.215	<10	<10	20

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

Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)
APR													
03...	<50	<1	3.0	45.7	<1	<50	<1	2	1.8	40	<1	90	5.05
MAY													
10...	<50	<1	2.6	56.9	<1	60	<1	7	<1	20	<1	<10	3.45
JUN													
06...	<50	<1	3.7	59.0	<1	<50	<1	1	2.1	20	<1	<10	6.24
13...	53	<1	3.8	47.6	<1	<50	<1	<1	1.6	60	<1	40	6.25
15...	95	<1	4.5	51.0	<1	60	<1	1	2.3	80	<1	40	6.38
29...	<50	<1	6.7	73.3	<1	60	<1	4	1.7	20	<1	10	5.75
AUG													
02...	<50	<1	8.1	72.6	<1	120	<1	<1	2.7	40	<1	<10	6.48
23...	<50	<1	5.7	55.2	<1	90	<1	4	3.2	30	<1	<10	5.32
SEP													
15...	<50	<1	7.6	64.2	<1	80	<1	2	2.0	<10	<1	<10	4.28
27...	<50	<1	5.5	61.8	<1	<50	<1	2	1.9	<10	<1	<10	4.39

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

Date	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)
APR						
03...	<1	<1	<1.0	4.0	99	140
MAY						
10...	<1	<1	<1.0	1.0	97	57
JUN						
06...	1.7	<1	<1.0	1.7	99	440
13...	1.3	<1	<1.0	2.3	100	318
15...	1.4	<1	<1.0	1.4	92	251
29...	1.5	<1	<1.0	1.2	99	297
AUG						
02...	4.5	<1	<1.0	<1	99	243
23...	<1	<1	<1.0	2.1	98	361
SEP						
15...	7.0	<1	<1.0	1.1	99	103
27...	2.6	<1	<1.0	<1	99	118

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
q -- Sample discarded: holding time exceeded

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.0	14.9	15.6	7.9	7.4	7.7	0.1	0.0	0.0	---	---	---
2	14.9	14.2	14.5	8.0	7.7	7.9	0.1	0.0	0.0	---	---	---
3	14.3	13.7	13.9	7.7	7.1	7.4	0.1	0.0	0.0	---	---	---
4	13.7	12.6	13.0	7.1	6.5	6.8	0.1	0.0	0.0	---	---	---
5	12.6	11.9	12.2	6.5	6.2	6.3	0.1	0.0	0.0	---	---	---
6	12.2	11.7	12.0	6.4	6.0	6.2	0.0	0.0	0.0	---	---	---
7	12.5	11.9	12.2	6.1	5.8	6.0	0.1	0.0	0.0	0.0	0.0	0.0
8	13.0	12.2	12.6	5.8	5.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0
9	13.4	12.6	13.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
10	13.6	13.0	13.3	5.7	5.2	5.5	0.0	0.0	0.0	0.0	0.0	0.0
11	13.8	13.4	13.6	5.2	4.4	4.8	0.1	0.0	0.0	0.0	0.0	0.0
12	13.9	13.3	13.7	4.4	3.9	4.1	0.1	0.0	0.0	---	---	---
13	13.8	12.8	13.2	3.9	3.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0
14	12.8	11.9	12.2	3.3	2.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0
15	11.9	10.8	11.4	2.8	2.4	2.6	0.2	0.0	0.1	0.0	0.0	0.0
16	10.8	9.2	10	2.8	2.4	2.6	0.1	0.0	0.0	0.0	0.0	0.0
17	9.2	8.1	8.6	2.9	2.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0
18	8.1	7.5	7.7	2.9	2.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0
19	7.6	7.3	7.4	---	---	---	---	---	---	0.0	0.0	0.0
20	7.3	6.9	7.0	---	---	---	---	---	---	0.0	0.0	0.0
21	7.6	7.0	7.2	---	---	---	---	---	---	0.0	0.0	0.0
22	8.4	7.6	8.0	---	---	---	---	---	---	0.0	0.0	0.0
23	8.8	8.4	8.6	2.5	1.9	2.2	---	---	---	0.0	0.0	0.0
24	9.0	8.6	8.8	1.9	1.3	1.6	---	---	---	0.0	0.0	0.0
25	9.0	8.6	8.8	1.3	1.0	1.1	---	---	---	0.0	0.0	0.0
26	9.2	8.9	9.0	1.0	0.8	0.9	---	---	---	0.0	0.0	0.0
27	8.9	8.7	8.8	0.8	0.4	0.6	---	---	---	0.0	0.0	0.0
28	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
29	9.5	8.9	9.2	---	---	---	---	---	---	0.0	0.0	0.0
30	9.5	8.1	8.8	0.1	0.0	0.0	---	---	---	0.0	0.0	0.0
31	8.1	7.3	7.5	---	---	---	---	---	---	0.0	0.0	0.0
MONTH	16.0	6.9	10.7	8.0	0.0	4.0	0.2	0.0	0.0	0.0	0.0	0.0
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	8.1	7.7	7.9
2	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.7	8.2	7.2	7.7
3	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	9.0	7.7	8.3
4	0.0	0.0	0.0	0.0	0.0	0.0	5.9	4.3	5.0	9.8	8.3	9.0
5	0.0	0.0	0.0	0.1	0.0	0.0	7.0	5.8	6.4	10.6	9.4	10
6	0.0	0.0	0.0	0.1	0.0	0.0	8.6	7.0	7.8	11.9	10.4	11.1
7	0.0	0.0	0.0	0.1	0.0	0.0	10.0	8.3	9.1	13.1	11.9	12.5
8	0.0	0.0	0.0	0.1	0.0	0.0	11.1	9.6	10.3	14.9	13.1	14.1
9	0.0	0.0	0.0	0.0	0.0	0.0	12.0	10.3	11.1	15.4	14.8	15.1
10	0.0	0.0	0.0	0.0	0.0	0.0	12.8	11.5	12.1	15.8	15.1	15.3
11	0.0	0.0	0.0	0.0	0.0	0.0	13.1	12.3	12.7	15.4	14.8	15.0
12	0.0	0.0	0.0	0.0	0.0	0.0	13.0	12.4	12.6	14.8	13.3	14.0
13	0.0	0.0	0.0	0.0	0.0	0.0	13.5	12.1	12.8	13.3	12.2	12.7
14	0.0	0.0	0.0	0.0	0.0	0.0	13.8	12.6	13.1	12.2	10.8	11.3
15	0.0	0.0	0.0	0.0	0.0	0.0	13.2	12.7	13.0	10.8	10.3	10.6
16	0.0	0.0	0.0	0.0	0.0	0.0	13.2	12.5	12.9	11.5	10.4	10.9
17	0.0	0.0	0.0	0.0	0.0	0.0	13.6	12.9	13.2	12.5	10.9	11.7
18	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	13.9	12.5	13.1
19	0.0	0.0	0.0	0.0	0.0	0.0	15.3	14.5	14.9	15.5	13.8	14.5
20	0.0	0.0	0.0	0.0	0.0	0.0	15.4	14.3	14.9	17.0	15.5	16.2
21	0.0	0.0	0.0	0.0	0.0	0.0	15.8	14.9	15.4	18.1	17.0	17.5
22	0.0	0.0	0.0	0.1	0.0	0.0	15.6	14.5	14.9	18.4	17.7	18.0
23	0.0	0.0	0.0	0.1	0.0	0.0	14.5	13.8	14.1	19.0	17.9	18.5
24	0.0	0.0	0.0	0.1	0.0	0.0	14.0	13.2	13.6	18.8	18.4	18.6
25	0.0	0.0	0.0	0.1	0.0	0.0	13.6	12.2	12.9	18.4	17.7	18.2
26	0.0	0.0	0.0	0.1	0.0	0.0	12.2	11.0	11.6	17.7	16.8	17.4
27	0.0	0.0	0.0	0.0	0.0	0.0	11.0	10.2	10.6	16.8	15.6	16.4
28	0.0	0.0	0.0	0.1	0.0	0.0	10.2	9.7	10.0	15.6	14.9	15.4
29	---	---	---	0.5	0.0	0.1	9.7	8.9	9.3	15.5	14.5	15.0
30	---	---	---	0.1	0.0	0.0	8.9	8.1	8.5	16.2	14.9	15.5
31	---	---	---	0.4	0.0	0.1	---	---	---	16.7	15.6	16.2
MONTH	0.0	0.0	0.0	0.5	0.0	0.0	15.8	0.0	10.9	19.0	7.2	13.8

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.4	16.4	16.8	21.9	21.2	21.6	25.3	24.1	24.7	21.5	20.7	21.1
2	17.9	17.2	17.5	21.6	20.4	21.0	---	---	---	21.0	20.2	20.6
3	18.4	17.9	18.1	21.4	20.8	21.1	26.7	25.6	26.1	20.6	19.9	20.3
4	18.6	18.3	18.5	21.5	21.0	21.2	26.3	25.5	25.9	21.0	19.9	20.5
5	18.5	18.2	18.4	21.9	21.2	21.5	25.9	25.2	25.5	21.5	20.3	21.0
6	19.4	18.0	18.7	22.6	21.7	22.1	25.4	24.6	25.0	21.5	20.7	21.1
7	20.1	18.9	19.5	23.2	22.3	22.7	24.9	24.3	24.6	21.4	20.7	21.1
8	20.5	19.7	20.1	23.6	22.8	23.2	25.4	24.8	25.1	21.8	20.9	21.3
9	21.2	20.3	20.7	24.8	23.4	24.1	25.8	25.1	25.4	21.7	21.2	21.4
10	20.7	20.4	20.6	26.0	24.7	25.3	25.4	24.9	25.2	22.1	21.2	21.6
11	---	---	---	26.1	25.7	25.9	24.9	24.1	24.4	22.2	21.6	21.9
12	20.3	19.6	20.0	26.7	25.9	26.3	24.2	23.4	23.9	22.1	21.4	21.7
13	20.2	19.7	20.0	27.2	26.4	26.8	23.4	22.6	22.9	21.4	20.6	21.0
14	19.7	19.3	19.4	27.4	26.7	27.0	22.6	21.9	22.3	20.6	19.9	20.3
15	19.4	18.8	19.1	27.5	26.8	27.1	22.5	21.6	22.1	---	---	---
16	20.0	19.1	19.5	27.5	26.7	27.1	22.7	21.6	22.2	20.3	19.7	20.1
17	20.2	19.5	19.8	27.7	26.8	27.3	22.6	21.8	22.3	20.1	19.7	19.9
18	20.7	19.8	20.2	26.8	25.5	26.3	22.7	21.7	22.2	19.9	19.2	19.6
19	21.9	20.7	21.2	25.8	25.1	25.4	23.2	22.1	22.7	20.0	19.2	19.6
20	23.0	21.9	22.4	25.5	24.9	25.3	23.4	22.5	22.9	20.1	19.1	19.6
21	23.9	22.9	23.3	25.0	24.5	24.8	22.8	22.3	22.6	19.8	19.2	19.5
22	25.0	23.7	24.3	25.3	24.5	24.9	22.3	21.3	21.7	19.2	18.5	18.9
23	25.9	24.8	25.3	25.4	25.0	25.2	---	---	---	18.8	18.1	18.4
24	25.6	25.2	25.4	26.0	25.0	25.4	21.2	20.6	20.9	18.3	17.8	18.0
25	25.6	25.0	25.3	25.5	24.5	25.1	20.8	19.8	20.5	17.8	16.8	17.2
26	25.3	25.1	25.2	24.5	23.6	24.1	20.3	19.6	19.9	16.8	16.1	16.4
27	25.1	24.3	24.8	23.7	22.7	23.4	20.6	19.3	20.0	---	---	---
28	24.3	23.8	24.0	23.2	22.4	22.8	20.7	20.3	20.5	15.9	14.8	15.3
29	---	---	---	22.7	22.1	22.4	21.5	20.3	20.9	14.8	14.3	14.5
30	22.9	21.7	22.4	23.4	22.3	22.8	22.0	20.8	21.4	14.6	13.9	14.3
31	---	---	---	24.3	23.2	23.7	21.8	21.2	21.5	---	---	---
MONTH	25.9	16.4	21.1	27.7	20.4	24.3	26.7	19.3	22.9	22.2	13.9	19.5

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	771	753	764	744	578	656	894	874	882	---	---	---
2	753	747	749	746	699	716	924	894	904	---	---	---
3	778	751	765	832	734	791	900	885	890	---	---	---
4	788	778	780	865	832	845	890	859	875	---	---	---
5	802	782	794	935	865	900	882	761	833	---	---	---
6	863	802	841	963	935	951	761	738	752	---	---	---
7	830	787	800	968	963	965	775	728	749	767	725	742
8	807	787	798	964	952	954	786	775	781	763	737	753
9	812	799	807	---	---	---	818	786	806	767	680	737
10	846	811	828	941	933	937	---	---	---	718	680	708
11	862	792	821	954	934	944	873	783	830	696	615	666
12	844	798	825	961	954	958	884	861	873	---	---	---
13	864	840	847	963	954	959	868	843	860	642	614	622
14	885	864	872	954	933	940	850	831	837	718	642	685
15	902	880	889	937	930	934	881	850	867	697	635	652
16	902	887	894	947	935	941	917	881	900	649	635	645
17	888	879	884	936	916	923	934	888	915	649	633	644
18	879	873	876	916	912	914	---	---	---	633	615	625
19	878	868	873	---	---	---	---	---	---	630	609	618
20	884	867	876	---	---	---	---	---	---	632	625	629
21	885	861	872	---	---	---	---	---	---	639	623	632
22	868	858	864	---	---	---	---	---	---	641	630	634
23	862	814	838	901	890	896	---	---	---	637	633	635
24	814	784	796	901	895	898	---	---	---	634	628	630
25	787	770	782	896	882	886	---	---	---	688	631	651
26	779	748	766	886	881	884	---	---	---	712	653	670
27	878	723	799	881	876	879	---	---	---	653	632	644
28	---	---	---	880	869	876	---	---	---	632	617	626
29	755	705	745	882	869	876	---	---	---	617	610	613
30	705	652	671	886	876	882	---	---	---	611	607	609
31	707	573	641	---	---	---	---	---	---	---	---	---
MONTH	902	573	812	968	578	892	934	728	847	767	607	655

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	644	604	617	847	759	802	595	570	580	776	746	764
2	658	630	642	799	760	777	622	589	613	790	776	785
3	677	643	655	804	764	782	---	---	---	792	788	790
4	663	634	642	---	---	---	649	635	640	788	780	783
5	647	620	629	801	755	785	675	649	661	783	767	777
6	651	617	634	831	722	783	675	666	671	768	759	764
7	617	595	604	722	630	667	666	653	660	786	760	771
8	598	591	595	738	664	706	663	644	648	801	781	786
9	598	587	593	712	646	677	645	637	640	783	752	773
10	597	589	593	703	674	690	648	642	645	---	---	---
11	599	587	593	721	699	708	665	644	651	---	---	---
12	608	586	598	728	704	715	661	646	652	785	743	768
13	628	590	607	709	677	684	671	654	665	790	743	763
14	625	590	604	737	684	710	668	645	657	793	715	752
15	654	592	609	772	737	751	823	641	690	772	736	752
16	703	652	672	919	772	860	996	823	950	742	729	733
17	762	703	744	906	781	837	940	903	918	791	742	771
18	870	748	785	781	759	766	---	---	---	800	750	778
19	896	825	872	772	741	753	881	833	858	835	800	824
20	825	792	802	741	730	734	833	798	809	843	833	840
21	831	797	807	734	719	727	816	804	810	873	820	837
22	833	768	789	742	720	731	808	773	793	863	828	837
23	810	766	782	759	736	749	773	755	763	891	849	875
24	808	738	763	760	752	757	769	759	764	852	809	830
25	786	748	760	---	---	---	769	755	761	831	812	822
26	797	762	770	749	711	729	---	---	---	824	814	819
27	811	744	773	711	659	685	748	742	744	---	---	---
28	794	749	773	659	606	631	759	747	750	796	776	783
29	---	---	---	606	564	578	760	747	754	820	767	782
30	---	---	---	569	559	563	747	737	741	931	820	880
31	---	---	---	572	565	569	---	---	---	942	922	931
MONTH	896	586	690	919	559	721	996	570	722	942	715	799
		JUNE			JULY			AUGUST			SEPTEMBER	
1	936	917	931	876	794	830	954	940	945	814	766	791
2	917	866	892	794	595	679	---	---	---	845	814	829
3	866	842	848	595	506	546	989	978	980	854	836	843
4	853	738	826	506	496	499	980	971	977	851	831	837
5	834	709	749	543	505	520	986	971	978	857	700	784
6	856	684	750	611	543	580	984	695	875	770	680	726
7	857	765	788	653	611	631	750	693	721	805	732	760
8	835	757	783	728	653	689	825	750	784	817	785	808
9	823	714	787	789	728	765	896	825	866	788	773	777
10	714	481	584	789	781	783	932	896	915	793	776	786
11	486	462	478	841	789	815	932	900	920	803	790	798
12	475	451	457	856	841	851	929	914	922	818	793	802
13	472	460	469	855	850	852	915	857	882	815	794	808
14	493	472	482	856	850	853	880	860	874	817	807	810
15	492	478	484	869	856	862	896	875	883	---	---	---
16	551	483	516	881	869	875	914	896	904	856	823	843
17	566	551	561	885	879	883	919	854	885	904	836	862
18	554	522	532	893	885	889	877	737	803	974	872	932
19	569	526	543	909	893	902	874	838	857	872	856	860
20	623	569	598	914	909	912	887	852	875	858	852	855
21	661	623	644	917	911	914	875	810	839	873	858	864
22	698	661	681	934	916	924	810	670	712	895	847	869
23	711	678	703	944	932	937	---	---	---	858	843	851
24	691	662	679	949	937	944	723	676	702	844	835	841
25	733	686	702	944	929	937	763	591	712	835	810	824
26	861	733	798	944	941	943	724	483	650	810	794	801
27	910	861	892	943	914	939	622	434	510	---	---	---
28	910	898	905	933	914	924	642	495	552	796	787	791
29	---	---	---	954	915	935	594	508	542	816	796	806
30	899	876	889	961	911	940	710	594	654	890	816	844
31	---	---	---	941	915	927	766	710	742	---	---	---
MONTH	936	451	688	961	496	822	989	434	809	974	680	822

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.0	7.9	8.0	7.6	7.5	7.6	7.3	7.3	7.3	---	---	---
2	8.0	8.0	8.0	7.6	7.6	7.6	7.3	7.3	7.3	---	---	---
3	8.1	8.0	8.0	7.6	7.6	7.6	7.3	7.3	7.3	---	---	---
4	8.1	8.1	8.1	7.6	7.6	7.6	7.3	7.3	7.3	---	---	---
5	8.2	8.1	8.1	7.6	7.6	7.6	7.4	7.3	7.3	---	---	---
6	8.2	7.9	8.1	7.6	7.6	7.6	7.3	7.3	7.3	---	---	---
7	8.0	7.8	7.9	7.6	7.6	7.6	7.3	7.2	7.3	6.5	5.9	6.4
8	8.0	8.0	8.0	7.7	7.6	7.6	7.3	7.2	7.3	6.3	6.0	6.0
9	8.2	8.0	8.1	---	---	---	7.3	7.3	7.3	6.4	5.8	6.2
10	8.2	8.1	8.1	7.7	7.7	7.7	---	---	---	6.3	6.1	6.2
11	8.3	8.2	8.2	7.7	7.6	7.6	7.3	7.1	7.1	6.4	6.2	6.2
12	8.4	8.2	8.2	7.6	7.6	7.6	7.2	7.1	7.1	---	---	---
13	8.3	8.3	8.3	7.6	7.6	7.6	7.2	7.1	7.1	6.4	6.3	6.3
14	8.3	8.2	8.3	7.6	7.5	7.6	7.2	7.1	7.2	6.4	6.4	6.4
15	8.3	8.1	8.2	7.5	7.5	7.5	7.2	7.0	7.1	6.5	6.4	6.5
16	8.1	8.0	8.1	7.6	7.5	7.5	7.3	7.0	7.2	6.5	6.3	6.3
17	8.0	8.0	8.0	7.6	7.6	7.6	7.2	7.0	7.1	6.4	6.3	6.3
18	8.0	7.9	7.9	7.6	7.6	7.6	---	---	---	6.4	6.3	6.3
19	7.9	7.8	7.8	---	---	---	---	---	---	6.4	6.3	6.3
20	7.8	7.7	7.8	---	---	---	---	---	---	6.3	6.2	6.3
21	7.8	7.8	7.8	---	---	---	---	---	---	6.3	6.2	6.2
22	8.0	7.8	7.9	---	---	---	---	---	---	6.2	6.2	6.2
23	7.9	7.8	7.9	7.5	7.4	7.5	---	---	---	6.2	6.1	6.1
24	7.9	7.8	7.9	7.4	7.4	7.4	---	---	---	6.1	6.1	6.1
25	7.9	7.9	7.9	7.4	7.4	7.4	---	---	---	6.1	6.0	6.1
26	7.9	7.6	7.8	7.4	7.4	7.4	---	---	---	6.1	6.1	6.1
27	7.6	7.2	7.4	7.4	7.4	7.4	---	---	---	6.2	6.0	6.1
28	---	---	---	7.4	7.3	7.4	---	---	---	6.1	6.0	6.1
29	7.6	7.4	7.5	7.4	7.3	7.3	---	---	---	6.2	6.1	6.1
30	7.6	7.6	7.6	7.3	7.3	7.3	---	---	---	6.4	6.2	6.3
31	7.6	7.5	7.5	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	6.8	6.6	6.7	6.6	6.6	6.6	6.6	6.5	6.6	8.6	8.5	8.6
2	7.0	6.6	6.7	6.6	6.6	6.6	7.1	6.6	6.9	8.6	8.5	8.6
3	7.2	7.0	7.0	6.8	6.6	6.6	---	---	---	8.6	8.6	8.6
4	7.0	6.9	6.9	6.7	6.5	6.7	7.6	7.4	7.5	8.6	8.6	8.6
5	6.9	6.8	6.8	6.6	6.6	6.6	7.8	7.6	7.7	8.6	8.6	8.6
6	6.8	6.7	6.8	6.7	6.6	6.6	8.0	7.8	7.9	8.6	8.6	8.6
7	6.9	6.7	6.9	6.6	6.6	6.6	8.1	7.9	8.0	8.6	8.5	8.6
8	6.9	6.8	6.9	6.6	6.6	6.6	8.2	8.0	8.1	8.5	8.4	8.5
9	6.9	6.8	6.8	6.6	6.6	6.6	8.3	8.0	8.2	8.5	8.4	8.4
10	7.0	6.8	6.9	6.6	6.5	6.5	8.3	8.1	8.2	---	---	---
11	7.0	6.8	6.8	6.5	6.5	6.5	8.2	8.1	8.2	---	---	---
12	6.8	6.8	6.8	6.5	6.5	6.5	8.2	8.1	8.1	---	---	---
13	6.8	6.8	6.8	6.5	6.5	6.5	8.1	8.0	8.0	---	---	---
14	6.8	6.8	6.8	6.5	6.5	6.5	8.2	8.0	8.1	---	---	---
15	7.1	6.8	7.1	6.5	6.5	6.5	8.1	7.9	8.0	---	---	---
16	7.1	7.0	7.1	6.5	6.5	6.5	7.9	7.8	7.9	---	---	---
17	7.1	6.9	6.9	6.5	6.5	6.5	8.0	7.8	7.8	---	---	---
18	6.9	6.8	6.8	6.5	6.5	6.5	---	---	---	---	---	---
19	6.8	6.8	6.8	6.5	6.4	6.4	8.0	7.9	7.9	---	---	---
20	6.8	6.8	6.8	6.4	6.4	6.4	8.0	7.9	8.0	---	---	---
21	6.8	6.7	6.7	6.4	6.4	6.4	8.1	8.0	8.0	---	---	---
22	6.7	6.7	6.7	6.6	6.4	6.4	8.2	8.1	8.1	---	---	---
23	7.1	6.7	7.0	6.5	6.5	6.5	8.1	8.1	8.1	---	---	---
24	7.2	7.1	7.2	6.6	6.5	6.5	8.3	8.1	8.1	---	---	---
25	7.1	6.9	7.0	---	---	---	8.2	8.2	8.2	---	---	---
26	6.9	6.8	6.8	6.6	6.5	6.5	8.4	8.2	8.2	---	---	---
27	6.8	6.6	6.7	6.5	6.5	6.5	8.5	8.4	8.4	---	---	---
28	6.6	6.6	6.6	6.5	6.4	6.5	8.5	8.5	8.5	8.3	8.2	8.3
29	---	---	---	6.5	6.4	6.4	8.5	8.5	8.5	8.2	8.2	8.2
30	---	---	---	6.5	6.4	6.4	8.6	8.5	8.5	8.2	8.2	8.2
31	---	---	---	6.5	6.5	6.5	---	---	---	8.2	8.2	8.2
MAX	7.2	7.1	7.2	---	---	---	---	---	---	---	---	---
MIN	6.6	6.6	6.6	---	---	---	---	---	---	---	---	---

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	8.2	8.2	7.8	7.8	7.8	8.1	8.1	8.1	8.0	7.9	7.9
2	8.2	8.2	8.2	7.8	7.7	7.8	---	---	---	8.0	7.9	8.0
3	8.2	8.2	8.2	7.7	7.7	7.7	8.0	8.0	8.0	8.1	8.0	8.0
4	8.2	8.2	8.2	7.7	7.7	7.7	8.0	8.0	8.0	8.1	8.0	8.1
5	8.2	8.1	8.1	7.7	7.7	7.7	8.1	8.0	8.0	8.1	8.0	8.1
6	8.1	8.0	8.0	7.7	7.7	7.7	8.0	7.8	7.9	8.0	7.9	8.0
7	8.0	8.0	8.0	7.7	7.7	7.7	7.9	7.8	7.8	8.0	7.9	7.9
8	8.0	7.9	7.9	7.8	7.7	7.7	7.9	7.9	7.9	8.1	8.0	8.0
9	7.9	7.7	7.9	7.8	7.8	7.8	8.0	7.9	8.0	8.0	8.0	8.0
10	7.7	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0	8.0	8.0	8.0
11	7.6	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0	8.0	8.0	8.0
12	7.6	7.6	7.6	7.8	7.8	7.8	8.0	7.9	8.0	8.0	8.0	8.0
13	7.6	7.6	7.6	7.8	7.8	7.8	7.9	7.9	7.9	8.1	8.0	8.0
14	7.6	7.6	7.6	7.8	7.8	7.8	7.9	7.9	7.9	8.1	8.0	8.0
15	7.6	7.6	7.6	7.8	7.8	7.8	7.9	7.9	7.9	---	---	---
16	7.6	7.6	7.6	7.9	7.8	7.9	8.0	7.9	7.9	8.0	8.0	8.0
17	7.6	7.6	7.6	7.9	7.9	7.9	8.0	7.9	8.0	8.1	8.0	8.1
18	7.6	7.6	7.6	7.9	7.9	7.9	8.0	7.9	8.0	8.1	8.1	8.1
19	7.6	7.6	7.6	7.9	7.9	7.9	8.0	7.9	8.0	8.2	8.1	8.1
20	7.6	7.6	7.6	8.0	7.9	7.9	8.0	7.9	8.0	8.2	8.1	8.1
21	7.6	7.6	7.6	8.0	8.0	8.0	8.0	7.9	7.9	8.2	8.1	8.2
22	7.6	7.6	7.6	8.0	8.0	8.0	7.9	7.8	7.8	8.2	8.1	8.2
23	7.6	7.6	7.6	8.0	8.0	8.0	---	---	---	8.2	8.1	8.1
24	7.7	7.6	7.7	8.0	8.0	8.0	7.9	7.8	7.9	8.1	8.0	8.1
25	7.7	7.7	7.7	8.0	8.0	8.0	7.9	7.9	7.9	8.3	8.0	8.1
26	7.7	7.7	7.7	8.0	8.0	8.0	7.9	7.8	7.9	8.3	8.2	8.2
27	7.8	7.7	7.7	8.1	8.0	8.1	7.9	7.8	7.8	---	---	---
28	7.8	7.8	7.8	8.1	8.1	8.1	7.9	7.7	7.8	8.3	8.3	8.3
29	---	---	---	8.1	8.1	8.1	7.7	7.7	7.7	8.3	8.3	8.3
30	7.8	7.8	7.8	8.1	8.1	8.1	7.8	7.7	7.8	8.3	8.2	8.3
31	---	---	---	8.1	8.1	8.1	7.9	7.8	7.8	---	---	---
MAX	---	---	---	8.1	8.1	8.1	---	---	---	---	---	---
MIN	---	---	---	7.7	7.7	7.7	---	---	---	---	---	---

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	7.9	8.1	10.0	9.8	9.9	15.6	15.4	15.5	---	---	---
2	8.7	8.3	8.5	9.9	9.6	9.7	15.7	15.5	15.6	---	---	---
3	9.0	8.6	8.9	10.4	9.9	10.1	15.7	15.6	15.6	---	---	---
4	9.5	9.0	9.3	10.9	10.4	10.6	15.6	15.5	15.6	---	---	---
5	9.8	9.4	9.6	11.2	10.9	11.1	15.7	15.5	15.6	---	---	---
6	---	---	---	11.5	11.2	11.4	15.6	15.3	15.5	---	---	---
7	9.4	9.1	9.3	11.8	11.5	11.6	15.5	15.3	15.4	14.8	14.6	14.7
8	9.6	9.4	9.5	12.0	11.8	11.9	15.4	15.1	15.3	14.9	14.6	14.8
9	9.7	9.4	9.5	---	---	---	15.3	15.2	15.2	14.9	14.7	14.8
10	9.8	9.4	9.6	12.1	11.9	12.0	---	---	---	14.9	14.6	14.7
11	9.9	9.5	9.7	12.5	12.1	12.3	14.6	14.3	14.4	14.9	14.6	14.7
12	10.2	9.5	9.8	12.8	12.5	12.7	14.4	14.2	14.3	---	---	---
13	10.2	9.7	10	13.2	12.8	13.0	14.4	14.3	14.4	13.5	13.1	13.3
14	10.0	9.7	9.8	13.6	13.2	13.4	14.6	14.4	14.5	13.1	12.9	13.0
15	10.2	9.7	9.9	14.0	13.6	13.9	14.7	14.4	14.5	13.0	12.5	12.9
16	10.7	10.1	10.4	14.0	13.9	13.9	14.7	14.2	14.6	13.0	12.8	12.9
17	11.3	10.6	10.9	14.1	13.9	14.0	---	---	---	12.9	12.8	12.8
18	11.8	11.3	11.6	14.0	13.9	13.9	---	---	---	13.0	12.7	12.8
19	12.2	11.7	11.9	---	---	---	---	---	---	14.4	12.7	13.3
20	12.6	12.0	12.3	---	---	---	---	---	---	14.1	13.9	14.0
21	12.5	12.1	12.4	---	---	---	---	---	---	13.9	13.7	13.8
22	12.1	11.6	11.9	---	---	---	---	---	---	13.8	13.6	13.7
23	11.6	11.3	11.4	14.1	13.9	14.0	---	---	---	---	---	---
24	11.4	11.2	11.3	14.4	14.1	14.2	---	---	---	---	---	---
25	11.6	11.2	11.4	14.6	14.3	14.5	---	---	---	---	---	---
26	11.5	10.7	11.2	14.7	14.5	14.6	---	---	---	---	---	---
27	10.7	7.8	9.1	14.9	14.7	14.8	---	---	---	---	---	---
28	---	---	---	15.1	14.9	15.0	---	---	---	---	---	---
29	9.0	7.8	8.3	15.4	15.1	15.2	---	---	---	---	---	---
30	9.8	9.0	9.6	---	---	---	---	---	---	---	---	---
31	10.0	9.7	9.9	---	---	---	---	---	---	---	---	---
MONTH	12.6	7.8	10.2	15.4	9.6	12.8	15.7	14.2	15.1	14.9	12.5	13.7

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.0	14.7	14.8	15.5	15.3	15.4	12.0	11.5	11.7	12.4	11.9	12.1
2	15.1	14.8	14.9	15.4	15.2	15.3	12.6	11.8	12.1	12.4	11.9	12.2
3	15.0	14.7	14.9	15.3	15.1	15.2	---	---	---	12.6	11.9	12.2
4	14.9	14.6	14.8	---	---	---	12.8	12.4	12.6	12.5	12.0	12.3
5	15.0	14.4	14.8	14.5	14.2	14.3	13.5	12.7	13.0	12.3	11.8	12.1
6	14.9	14.7	14.8	14.6	14.3	14.4	14.0	12.8	13.4	12.4	11.6	11.9
7	15.0	14.8	14.9	14.5	14.1	14.2	14.1	12.9	13.5	11.8	10.7	11.2
8	15.0	14.8	14.9	14.3	13.6	14.0	14.5	13.1	13.8	10.7	9.8	10.1
9	15.0	14.8	14.9	13.7	12.9	13.5	14.5	13.3	13.8	10.0	9.3	9.5
10	15.0	14.8	14.9	12.9	11.8	12.3	13.9	12.8	13.4	9.4	9.0	9.2
11	15.0	14.8	14.9	11.8	10.7	11.1	13.4	12.3	12.8	10.0	8.8	9.4
12	15.1	14.7	14.9	10.7	10.1	10.5	12.5	12.0	12.2	10.2	9.6	10
13	15.4	15.1	15.2	10.2	9.9	10	12.4	11.7	12.0	10.4	9.7	10.1
14	15.3	15.1	15.2	9.9	9.3	9.6	12.9	11.6	12.4	---	---	---
15	15.2	14.8	15.0	9.6	9.3	9.5	---	---	---	---	---	---
16	14.9	14.7	14.8	10.7	9.6	9.9	---	---	---	---	---	---
17	14.7	14.4	14.5	11.2	10.7	11.0	---	---	---	---	---	---
18	15.1	14.5	14.9	11.2	10.8	11.0	---	---	---	---	---	---
19	15.0	14.9	15.0	10.8	10.6	10.7	---	---	---	---	---	---
20	15.1	14.8	15.0	10.8	10.6	10.7	---	---	---	---	---	---
21	15.3	15.1	15.2	11.3	10.8	11.1	---	---	---	---	---	---
22	15.7	15.3	15.6	12.0	11.3	11.7	---	---	---	---	---	---
23	15.6	15.4	15.5	12.3	12.0	12.2	---	---	---	---	---	---
24	15.7	15.4	15.6	12.8	12.2	12.5	---	---	---	---	---	---
25	15.6	15.4	15.5	12.9	12.7	12.9	---	---	---	---	---	---
26	15.5	15.2	15.4	12.9	11.9	12.5	---	---	---	---	---	---
27	15.6	15.3	15.5	11.9	11.5	11.7	11.2	10.5	10.8	---	---	---
28	15.6	15.4	15.5	11.5	10.9	11.3	11.6	10.7	11.1	9.2	8.7	8.9
29	---	---	---	10.9	10.0	10.4	12.0	11.1	11.5	9.6	9.1	9.3
30	---	---	---	10.8	10.0	10.3	12.2	11.5	11.9	9.7	9.3	9.5
31	---	---	---	11.5	10.8	11.2	---	---	---	9.7	9.3	9.5
MONTH	15.7	14.4	15.1	15.5	9.3	12.0	14.5	10.5	12.5	12.6	8.7	10.6
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.4	9.0	9.1	5.3	5.2	5.3	---	---	---	8.8	8.1	8.5
2	9.0	8.5	8.8	5.4	4.9	5.2	---	---	---	9.1	8.6	8.9
3	8.5	7.9	8.2	4.9	4.8	4.9	6.3	5.8	6.0	9.4	8.9	9.1
4	8.2	7.7	7.9	5.0	4.8	4.9	6.4	6.0	6.2	9.5	9.0	9.2
5	7.8	7.4	7.6	4.9	4.8	4.9	6.7	6.3	6.5	9.1	8.5	8.8
6	7.5	7.2	7.4	4.9	4.7	4.8	6.4	5.8	5.9	8.5	7.9	8.2
7	7.4	7.0	7.2	4.8	4.7	4.8	6.5	5.9	6.2	8.2	7.7	8.0
8	7.3	6.7	7.0	4.7	4.5	4.6	6.6	6.4	6.5	8.4	8.0	8.2
9	6.7	5.2	6.1	4.6	3.9	4.5	6.6	6.2	6.4	8.2	7.9	8.1
10	5.2	4.6	4.8	4.4	4.2	4.3	6.4	6.2	6.3	8.2	7.8	8.0
11	5.1	4.5	4.8	4.2	3.9	4.0	6.4	6.0	6.2	7.9	7.6	7.8
12	5.1	5.0	5.1	4.0	3.8	3.9	6.8	6.4	6.6	7.8	7.5	7.6
13	5.1	4.8	5.0	3.8	3.7	3.8	7.0	6.6	6.8	7.9	7.4	7.7
14	5.2	5.0	5.1	3.8	3.6	3.7	7.6	6.8	7.2	8.1	7.7	7.9
15	5.3	5.2	5.2	3.7	3.5	3.6	8.0	7.2	7.6	---	---	---
16	5.2	4.9	5.0	3.6	3.4	3.5	8.5	7.5	8.0	7.9	7.6	7.8
17	5.0	4.8	4.9	3.6	3.3	3.4	8.6	8.0	8.4	8.0	7.8	7.9
18	4.9	4.6	4.8	3.6	3.4	3.5	8.9	8.0	8.4	8.6	7.8	8.2
19	4.7	4.3	4.5	3.6	3.4	3.5	8.5	7.7	8.1	8.6	8.2	8.4
20	4.3	4.0	4.2	---	---	---	8.4	7.8	8.1	8.4	8.2	8.3
21	4.1	3.7	3.9	---	---	---	8.0	7.7	7.9	8.3	8.1	8.2
22	3.9	3.6	3.8	---	---	---	7.9	7.4	7.7	8.7	8.2	8.4
23	4.0	3.7	3.8	---	---	---	---	---	---	8.9	8.5	8.7
24	4.1	3.8	3.9	---	---	---	8.6	8.1	8.4	9.5	8.6	8.9
25	4.2	4.0	4.1	---	---	---	9.4	8.6	8.9	9.5	8.6	9.0
26	4.2	3.7	4.1	---	---	---	9.0	7.9	8.6	9.5	8.6	9.0
27	4.5	4.1	4.3	---	---	---	7.9	7.3	7.5	---	---	---
28	4.8	4.5	4.7	---	---	---	7.8	6.8	7.2	8.9	8.4	8.6
29	---	---	---	---	---	---	7.4	6.8	7.1	9.0	8.6	8.8
30	5.3	4.9	5.1	---	---	---	7.9	7.4	7.7	9.0	8.7	8.9
31	---	---	---	---	---	---	8.4	7.7	8.1	---	---	---
MONTH	9.4	3.6	5.5	5.4	3.3	4.3	9.4	5.8	7.3	9.5	7.4	8.4

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

TURBIDITY, WATER, MONOCHROME NR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/ -2.5 DEGREES, FNU
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	14	12	13	---	---	---
2	74	57	64	---	---	---	13	13	13	---	---	---
3	63	52	56	---	---	---	13	12	13	---	---	---
4	67	45	51	---	---	---	13	12	12	---	---	---
5	54	45	48	---	---	---	13	12	12	---	---	---
6	---	---	---	---	---	---	12	12	12	---	---	---
7	---	---	---	---	---	---	12	11	12	7.5	7.2	7.3
8	---	---	---	---	---	---	12	11	11	7.3	6.9	7.1
9	---	---	---	---	---	---	12	11	11	7.0	6.7	6.8
10	---	---	---	36	31	33	---	---	---	6.9	6.5	6.7
11	---	---	---	33	28	31	11	10	11	6.6	6.5	6.6
12	---	---	---	32	28	30	12	11	12	---	---	---
13	---	---	---	30	27	28	12	11	12	6.7	4.6	6.3
14	39	32	34	29	26	28	12	11	12	4.7	4.4	4.5
15	55	34	40	28	24	26	12	11	11	5.0	4.5	4.7
16	47	39	42	26	21	24	12	11	12	5.3	4.9	5.0
17	50	44	45	22	20	21	12	9.8	11	5.6	5.2	5.4
18	76	45	49	22	20	21	11	9.6	10	5.9	5.5	5.7
19	58	45	49	---	---	---	32	10	14	8.1	5.6	6.1
20	62	48	50	---	---	---	21	18	19	5.9	5.5	5.7
21	77	50	54	---	---	---	20	17	19	6.0	5.7	5.8
22	66	52	54	---	---	---	19	18	18	6.2	5.8	6.0
23	59	52	56	29	25	27	25	18	22	6.5	6.0	6.3
24	59	43	53	29	25	27	29	17	22	6.7	6.2	6.4
25	50	43	46	27	24	26	18	17	18	7.5	6.5	6.8
26	110	47	75	25	23	24	---	---	---	7.7	7.2	7.4
27	170	110	150	25	23	24	---	---	---	8.1	7.2	7.7
28	---	---	---	24	23	23	---	---	---	9.0	7.9	8.4
29	130	91	110	24	18	22	---	---	---	9.4	8.6	9.0
30	350	110	200	20	13	16	---	---	---	9.8	9.0	9.5
31	410	330	370	---	---	---	---	---	---	---	---	---
MONTH	410	32	81	36	13	25	32	9.6	14	9.8	4.4	6.6
		FEBRUARY			MARCH			APRIL			MAY	
1	11	9.5	9.9	---	---	---	130	83	97	26	17	22
2	12	9.7	11	---	---	---	---	---	---	25	17	21
3	12	9.8	11	---	---	---	---	---	---	20	16	19
4	12	9.9	10	---	---	---	---	---	---	20	14	17
5	12	9.9	11	13	8.6	10	---	---	---	28	14	16
6	12	10	11	15	10	12	---	---	---	16	13	15
7	11	10	10	19	12	15	---	---	---	21	14	17
8	11	11	11	20	16	18	---	---	---	21	15	17
9	11	11	11	34	20	26	---	---	---	24	17	20
10	12	11	11	37	30	33	---	---	---	26	18	21
11	12	11	12	30	26	28	---	---	---	24	19	22
12	13	12	12	26	22	24	---	---	---	26	22	24
13	27	12	14	22	19	20	---	---	---	42	26	34
14	---	---	---	20	18	19	---	---	---	46	27	37
15	---	---	---	18	16	17	340	69	160	32	23	27
16	---	---	---	17	16	16	620	340	540	27	21	23
17	---	---	---	17	15	16	---	---	---	27	22	24
18	---	---	---	17	13	14	---	---	---	29	22	25
19	---	---	---	14	13	13	---	---	---	30	22	26
20	---	---	---	13	12	13	---	---	---	28	24	26
21	---	---	---	13	12	12	---	---	---	33	24	28
22	---	---	---	13	12	13	---	---	---	39	29	33
23	---	---	---	14	12	13	---	---	---	52	36	42
24	---	---	---	18	13	13	---	---	---	---	---	---
25	---	---	---	18	14	15	45	29	36	---	---	---
26	---	---	---	24	16	20	38	28	33	---	---	---
27	---	---	---	33	24	29	33	24	29	---	---	---
28	---	---	---	42	32	37	31	21	25	54	42	49
29	---	---	---	57	41	49	27	18	22	57	40	49
30	---	---	---	64	53	59	23	17	21	62	45	54
31	---	---	---	110	61	76	---	---	---	59	45	54
MONTH	27	9.5	11	110	8.6	23	620	17	110	62	13	28

05054000 RED RIVER OF THE NORTH AT FARGO, ND—Continued

TURBIDITY, WATER, MONOCHROME NR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/ -2.5 DEGREES, FNU—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	61	49	55	110	93	99	100	76	92	70	51	62
2	58	37	49	140	100	120	---	---	---	67	46	57
3	56	26	39	120	100	110	100	78	89	74	54	62
4	82	34	46	100	83	93	96	75	86	72	54	64
5	220	51	140	83	66	74	170	93	120	100	65	84
6	240	150	210	68	56	61	240	150	210	100	65	87
7	260	200	220	61	51	54	240	140	180	84	53	68
8	380	200	270	58	52	55	150	89	120	69	49	59
9	490	320	400	65	57	62	130	84	97	67	51	60
10	530	460	500	72	65	69	120	72	88	65	51	59
11	490	310	400	78	69	75	120	77	98	67	55	60
12	330	260	300	86	71	77	110	80	90	64	48	58
13	260	180	210	83	73	78	120	73	91	62	47	55
14	180	160	170	82	75	79	140	68	83	59	44	52
15	170	140	150	85	75	81	76	47	60	---	---	---
16	140	120	130	86	75	80	58	38	46	57	37	48
17	140	120	130	99	78	87	74	36	45	64	48	55
18	120	98	110	100	85	94	80	44	59	62	48	53
19	100	75	90	120	88	110	59	41	49	57	45	51
20	83	60	68	130	110	120	87	47	66	62	51	55
21	---	---	---	120	99	110	160	83	120	62	49	55
22	---	---	---	110	93	100	210	150	180	58	46	52
23	---	---	---	100	88	95	---	---	---	56	43	50
24	---	---	---	110	77	90	120	76	98	51	38	44
25	---	---	---	100	68	90	130	58	77	45	36	40
26	---	---	---	94	68	86	390	110	220	50	37	43
27	---	---	---	100	80	94	350	160	250	---	---	---
28	---	---	---	120	93	100	330	130	240	51	34	42
29	---	---	---	120	100	110	270	120	180	39	33	35
30	97	78	88	120	90	110	130	74	98	35	29	32
31	---	---	---	110	87	100	81	53	68	---	---	---
MONTH	530	26	180	140	51	89	390	36	110	100	29	55

05054200 RED RIVER OF THE NORTH NEAR HARWOOD, ND

LOCATION.--Lat 46°58'37", long 96°49'14", in NE¼NE¼NE¼ sec.2, T.140 N., R.49 W., Cass County, Hydrologic Unit 09020104, at center bridge pier on County Highway 22 and 3 mi east of Harwood.

DRAINAGE AREA.-- Not determined.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1997-99, May 2005 to September 2005.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 2005 to September 2005.
SPECIFIC CONDUCTANCE: May 2005 to September 2005.

INSTRUMENTATION.--Water-quality monitor since May 2005.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 27.7°C, July 16-17, 2005; minimum recorded, 10.3°C, May 15, 2005.
SPECIFIC CONDUCTANCE: Maximum recorded, 986 microsiemens, Aug. 6, 2005; minimum recorded, 417 microsiemens, June 12, 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 27.7°C, July 16-17; minimum recorded, 10.3°C, May 15.
SPECIFIC CONDUCTANCE: Maximum recorded, 986 microsiemens, Aug. 6; minimum recorded, 417 microsiemens, June 12.

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

Date	Time	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
AUG													
09...	1025	--	737	--	--	7.9	8.1	812	832	29.5	25.1	66.8	42.1
23...	1020	180	744	6.2	72	8.1	7.9	700	698	22.3	21.2	53.9	35.7
SEP													
07...	1020	98	743	7.0	81	8.0	8.1	789	775	20.7	21.0	56.6	40.1
23...	1030	--	740	8.2	89	8.2	8.2	872	869	18.6	17.7	67.0	47.2

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)
AUG													
09...	8.20	.7	29.3	15	189	13.8	.20	15.7	237	513	<50	<1	6.9
23...	8.40	.7	27.5	17	158	13.2	.17	17.4	192	430	<50	<1	6.2
SEP													
07...	9.70	1	40.0	21	192	20.4	.17	17.6	189	475	<50	<1	6.4
23...	10.1	.8	37.3	18	231	19.7	.18	19.5	217	541	<50	<1	3.3

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

Date	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)
AUG													
09...	65.8	<1	90	<1	2	2.0	60	<1	<10	4.94	1	1	<1.0
23...	54.7	<1	90	<1	2	2.9	40	<1	<10	5.62	4	<1	<1.0
SEP													
07...	52.1	<1	90	<1	1	2.4	<10	<1	<10	4.47	3	<1	<1.0
23...	61.4	<1	100	<1	2	2.3	<10	<1	<10	4.67	<1	<1	<1.0

05054200 RED RIVER OF THE NORTH NEAR HARWOOD, ND—Continued

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

Date	Zinc, water, fltrd, ug/L (01090)
AUG	
09...	<1
23...	1.0
SEP	
07...	1.1
23...	1.4

Remark codes used in this table:
< -- Less than.

05054200 RED RIVER OF THE NORTH NEAR HARWOOD, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	14.7	13.4	14.0
13	---	---	---	---	---	---	---	---	---	13.4	12.8	13.0
14	---	---	---	---	---	---	---	---	---	12.8	11.1	11.8
15	---	---	---	---	---	---	---	---	---	11.7	10.3	10.9
16	---	---	---	---	---	---	---	---	---	12.4	10.4	11.4
17	---	---	---	---	---	---	---	---	---	12.9	11.6	12.2
18	---	---	---	---	---	---	---	---	---	14.6	12.6	13.4
19	---	---	---	---	---	---	---	---	---	15.3	13.7	14.4
20	---	---	---	---	---	---	---	---	---	17.1	14.9	15.9
21	---	---	---	---	---	---	---	---	---	18.0	16.5	17.2
22	---	---	---	---	---	---	---	---	---	18.5	17.0	17.7
23	---	---	---	---	---	---	---	---	---	19.2	17.6	18.3
24	---	---	---	---	---	---	---	---	---	19.1	18.2	18.5
25	---	---	---	---	---	---	---	---	---	18.3	17.6	17.9
26	---	---	---	---	---	---	---	---	---	17.6	17.1	17.3
27	---	---	---	---	---	---	---	---	---	17.1	16.2	16.6
28	---	---	---	---	---	---	---	---	---	16.2	15.6	15.9
29	---	---	---	---	---	---	---	---	---	16.2	15.3	15.7
30	---	---	---	---	---	---	---	---	---	16.7	15.4	16.0
31	---	---	---	---	---	---	---	---	---	17.2	15.9	16.6
MONTH	---	---	---	---	---	---	---	---	---	19.2	10.3	15.2
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.6	16.6	17.0	22.3	21.5	21.9	25.3	24.0	24.6	21.6	20.6	21.1
2	18.2	17.1	17.5	22.1	21.5	21.8	26.0	25.0	25.4	21.2	20.2	20.7
3	18.5	17.7	18.1	21.8	21.3	21.6	26.4	25.8	26.1	21.0	20.2	20.6
4	18.9	18.3	18.6	21.8	21.2	21.4	26.0	25.4	25.7	21.6	20.0	20.7
5	18.8	18.5	18.6	21.8	21.1	21.4	26.0	25.1	25.6	21.9	21.1	21.4
6	19.5	18.3	18.8	22.5	21.6	22.0	25.9	25.0	25.5	21.6	20.9	21.3
7	20.3	19.1	19.6	23.3	22.4	22.7	25.6	24.6	25.1	21.5	20.9	21.2
8	20.5	19.6	20.1	23.7	23.1	23.4	25.7	24.7	25.2	21.9	20.9	21.3
9	21.2	20.1	20.5	24.9	23.6	24.0	25.8	24.9	25.4	21.7	21.3	21.5
10	21.3	20.6	20.9	26.0	24.7	25.2	25.8	25.0	25.2	22.5	21.3	21.8
11	20.8	20.1	20.4	26.3	25.5	25.9	25.1	24.2	24.6	22.3	21.7	22.0
12	20.6	19.7	20.0	26.8	25.8	26.3	24.2	23.8	24.0	22.1	21.5	21.8
13	20.6	20.0	20.3	27.4	26.2	26.7	24.0	22.9	23.3	21.5	20.7	21.0
14	20.0	19.6	19.7	27.6	26.6	27.1	22.9	22.1	22.5	20.9	20.0	20.5
15	19.7	19.3	19.5	27.6	26.7	27.2	22.9	21.9	22.4	20.7	19.8	20.3
16	20.0	19.4	19.6	27.7	26.5	27.1	23.1	21.9	22.5	20.7	19.6	20.2
17	20.5	19.9	20.1	27.7	26.9	27.3	22.9	21.6	22.2	20.6	19.4	20.0
18	20.8	20.1	20.4	27.5	26.0	26.5	22.3	21.6	22.0	20.0	19.3	19.6
19	21.6	20.8	21.1	26.0	25.0	25.5	22.8	22.0	22.3	20.0	19.0	19.4
20	22.5	21.6	22.0	26.0	25.3	25.7	23.2	22.1	22.6	20.1	19.1	19.6
21	23.5	22.5	22.9	25.8	24.7	25.2	23.0	22.4	22.6	19.8	19.2	19.5
22	24.5	23.5	23.8	25.5	24.5	25.0	22.6	21.8	22.1	19.2	18.4	18.8
23	25.8	24.5	25.1	25.5	24.9	25.2	21.9	21.1	21.4	18.8	17.8	18.3
24	25.8	25.2	25.4	26.0	25.1	25.5	21.5	20.7	21.1	18.3	17.7	17.9
25	25.3	24.8	25.1	26.1	24.5	25.3	21.3	20.6	20.9	17.7	16.8	17.1
26	25.3	24.9	25.1	24.5	23.9	24.1	20.7	20.0	20.3	17.0	15.9	16.6
27	25.4	24.8	25.1	24.0	23.3	23.7	20.7	19.7	20.1	16.9	15.9	16.5
28	25.1	24.0	24.4	23.7	22.9	23.3	21.2	20.3	20.7	16.6	15.1	15.6
29	24.3	23.1	23.6	23.3	22.4	22.9	21.4	20.3	20.8	15.2	14.2	14.7
30	23.1	22.2	22.5	23.8	22.4	23.0	21.8	21.0	21.4	15.8	14.6	15.2
31	---	---	---	24.5	23.2	23.8	22.0	21.5	21.7	---	---	---
MONTH	25.8	16.6	21.2	27.7	21.1	24.4	26.4	19.7	23.1	22.5	14.2	19.5

05054200 RED RIVER OF THE NORTH NEAR HARWOOD, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	747	731	738
13	---	---	---	---	---	---	---	---	---	776	746	766
14	---	---	---	---	---	---	---	---	---	783	732	753
15	---	---	---	---	---	---	---	---	---	777	719	753
16	---	---	---	---	---	---	---	---	---	767	737	749
17	---	---	---	---	---	---	---	---	---	791	733	746
18	---	---	---	---	---	---	---	---	---	822	748	769
19	---	---	---	---	---	---	---	---	---	815	751	787
20	---	---	---	---	---	---	---	---	---	831	815	827
21	---	---	---	---	---	---	---	---	---	856	820	835
22	---	---	---	---	---	---	---	---	---	872	824	835
23	---	---	---	---	---	---	---	---	---	881	830	847
24	---	---	---	---	---	---	---	---	---	893	846	873
25	---	---	---	---	---	---	---	---	---	857	820	829
26	---	---	---	---	---	---	---	---	---	851	814	832
27	---	---	---	---	---	---	---	---	---	834	821	827
28	---	---	---	---	---	---	---	---	---	828	792	810
29	---	---	---	---	---	---	---	---	---	792	773	781
30	---	---	---	---	---	---	---	---	---	845	773	800
31	---	---	---	---	---	---	---	---	---	940	845	907
MONTH	---	---	---	---	---	---	---	---	---	940	719	803
	JUNE			JULY			AUGUST			SEPTEMBER		
1	941	917	929	883	817	860	934	910	924	818	769	792
2	936	908	924	817	657	765	959	934	941	862	818	839
3	908	854	883	657	539	592	983	959	971	911	860	875
4	854	778	843	539	481	502	982	973	978	880	865	871
5	811	647	728	498	481	487	981	959	974	871	780	834
6	784	698	730	553	498	520	986	946	975	782	647	709
7	855	695	781	606	553	583	946	693	759	783	705	755
8	808	707	754	666	606	631	780	721	748	846	765	806
9	816	753	778	745	666	704	862	780	822	849	813	831
10	811	583	717	770	745	766	921	862	896	---	---	---
11	583	436	490	796	768	775	943	919	935	---	---	---
12	455	417	440	838	796	820	942	910	931	---	---	---
13	453	440	444	841	837	839	942	903	928	---	---	---
14	461	453	457	840	834	837	903	868	881	---	---	---
15	477	461	471	848	840	842	896	891	894	---	---	---
16	478	470	473	867	848	856	923	896	908	888	860	868
17	537	478	508	872	864	867	925	761	854	895	843	857
18	547	534	543	875	869	871	862	618	739	971	851	892
19	534	511	517	890	875	880	835	739	801	976	848	916
20	554	513	530	900	890	894	895	804	857	860	845	852
21	609	554	583	903	897	900	906	856	888	858	842	846
22	650	609	630	908	897	902	860	692	811	877	849	860
23	692	650	673	932	908	916	696	675	686	891	835	858
24	695	657	680	941	930	935	727	669	687	858	832	843
25	682	659	675	942	923	930	801	617	723	846	823	836
26	769	682	715	930	912	921	714	554	621	836	811	824
27	877	769	834	927	923	926	720	452	565	823	795	809
28	893	877	888	927	897	911	641	498	584	825	800	813
29	888	832	876	916	896	903	564	509	528	836	819	825
30	884	833	864	947	907	934	665	552	605	862	836	848
31	---	---	---	946	895	909	769	665	721	---	---	---
MONTH	941	417	679	947	481	806	986	452	811	976	647	836

05054500 SHEYENNE RIVER ABOVE HARVEY, ND

LOCATION.--Lat 47°42'10", long 99°56'55", in SW¼SE¼ sec.24, T.149 N., R.73 W., Wells County, Hydrologic Unit 09020202, on right bank just downstream from county road and 4.5 mi south of Harvey.

DRAINAGE AREA.--424 mi^2, of which about 270 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.- October 1955 to current year.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,547.30 ft above National Geodetic Vertical Datum of 1929.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	7.1	7.2	e10	e11	e17	12	5.7	5.7	66	31	1.1
2	4.7	6.9	7.0	e10	e10	e20	11	5.5	6.1	70	30	0.99
3	4.5	6.8	7.2	e10	e10	e23	10	5.4	6.0	69	28	0.96
4	4.1	6.5	7.0	e10	e9.8	e28	9.9	5.1	9.3	64	26	1.0
5	4.1	6.5	e8.2	e11	e9.5	e39	9.4	5.0	8.9	60	25	1.2
6	3.8	6.6	e8.3	e11	e9.3	e44	8.5	4.8	11	59	24	0.97
7	3.0	7.6	8.4	e11	e9.5	e42	7.7	5.3	15	60	22	1.3
8	1.6	7.9	8.4	e11	e9.7	e41	7.4	14	39	62	21	0.67
9	1.0	7.7	8.5	e11	e10	e38	7.1	24	50	64	19	0.82
10	1.5	7.1	8.5	e11	e10	e35	7.1	24	62	66	17	0.98
11	1.6	7.0	8.9	e11	e11	e33	7.5	20	55	71	21	0.89
12	1.7	6.8	8.5	e11	e10	e30	8.8	18	38	75	18	0.83
13	1.9	6.7	11	e11	e9.5	e29	9.1	19	27	81	15	1.0
14	2.0	6.8	e14	e11	e9.2	e27	8.7	18	26	87	14	1.3
15	2.2	6.8	13	e11	e9.1	e26	8.5	16	23	91	14	1.2
16	2.1	6.8	13	e11	e9.0	e25	8.0	14	21	90	13	1.2
17	2.3	6.9	e12	e11	e9.0	e25	7.5	13	19	87	12	2.3
18	2.5	6.7	e12	e12	e9.0	e25	7.3	12	16	82	11	0.84
19	3.7	7.1	11	e12	e9.0	e26	7.1	11	14	76	10	1.2
20	3.3	7.2	e11	e12	e9.0	e28	7.0	9.7	13	71	9.5	1.3
21	3.0	7.9	e11	e11	e9.0	e30	7.3	11	13	66	8.3	1.1
22	3.0	e8.2	e11	e11	e9.0	41	7.0	11	13	62	7.0	1.2
23	3.8	e7.4	e11	e11	e9.0	51	6.6	10	13	e56	5.6	1.1
24	3.9	6.5	e11	e11	e9.0	63	6.6	9.6	12	e52	4.0	1.2
25	8.4	6.1	e11	e11	e9.0	60	6.1	8.7	12	e49	2.8	1.1
26	8.5	6.1	e11	e11	e9.7	63	5.3	8.0	13	48	2.0	1.1
27	7.8	6.2	e11	e11	e11	68	5.5	7.2	19	44	1.7	1.2
28	7.4	6.5	e11	e11	e14	61	5.6	6.6	23	41	1.6	1.4
29	7.4	6.9	e11	e11	---	37	5.7	6.5	42	39	1.5	1.3
30	7.2	7.1	e11	e11	---	19	5.7	6.1	63	36	1.2	1.4
31	7.2	---	e10	e11	---	13	---	5.8	---	33	1.2	---
TOTAL	124.5	208.4	313.1	340	272.3	1,107	231.0	340.0	688.0	1,977	417.4	34.15
MEAN	4.02	6.95	10.1	11.0	9.72	35.7	7.70	11.0	22.9	63.8	13.5	1.14
MAX	8.5	8.2	14	12	14	68	12	24	63	91	31	2.3
MIN	1.0	6.1	7.0	10	9.0	13	5.3	4.8	5.7	33	1.2	0.67
AC-FT	247	413	621	674	540	2,200	458	674	1,360	3,920	828	68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	3.63	3.92	2.24	1.34	3.08	34.7	42.5	20.9	12.5	10.9	4.73	3.04
MAX	34.5	39.0	21.2	11.6	26.8	207	324	117	77.3	67.4	59.4	48.4
(WY)	(1995)	(1995)	(1995)	(2004)	(1983)	(2001)	(1997)	(1995)	(2000)	(2000)	(1999)	(1999)
MIN	0.43	0.26	0.03	0.00	0.00	0.00	2.13	1.59	0.30	0.07	0.00	0.06
(WY)	(1991)	(1977)	(1996)	(1959)	(1956)	(1969)	(1991)	(1977)	(1961)	(1961)	(1959)	(1976)

05054500 SHEYENNE RIVER ABOVE HARVEY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005	
ANNUAL TOTAL	4,670.50		6,052.85			
ANNUAL MEAN	12.8		16.6		12.0	
HIGHEST ANNUAL MEAN					44.3	2001
LOWEST ANNUAL MEAN					0.76	1961
HIGHEST DAILY MEAN	98	Mar 28	91	Jul 15	900	Mar 24, 2001
LOWEST DAILY MEAN	0.00	Jan 30	0.67	Sep 8	0.00	Jan 21, 1956
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 30	0.92	Sep 6	0.00	Jan 21, 1956
MAXIMUM PEAK FLOW			92	Jul 15	[a]1,000	Apr 20, 1979
MAXIMUM PEAK STAGE			7.88	Jul 15	[b]10.76	Apr 6, 1997
ANNUAL RUNOFF (AC-FT)	9,260		12,010		8,680	
10 PERCENT EXCEEDS	30		46		29	
50 PERCENT EXCEEDS	8.2		10		2.0	
90 PERCENT EXCEEDS	0.00		1.6		0.01	

a Gage height, 9.45 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.52	4.53	4.53	---	7.03	5.51	4.90	4.38	4.40	7.19	5.88	4.19
2	4.45	4.51	4.52	---	7.20	5.52	4.84	4.36	4.43	7.33	5.85	4.15
3	4.42	4.50	4.54	---	7.12	5.98	4.79	4.35	4.41	7.33	5.77	4.15
4	4.39	4.47	4.51	---	7.11	6.79	4.76	4.33	4.67	7.12	5.69	4.16
5	4.39	4.47	4.66	---	6.98	7.25	4.71	4.31	4.62	6.99	5.62	4.18
6	4.36	4.48	4.69	---	6.92	7.53	4.64	4.29	4.80	6.96	5.58	4.15
7	4.29	4.57	4.63	---	7.01	7.43	4.56	4.30	5.07	6.98	5.50	4.17
8	4.13	4.59	4.64	---	6.94	7.39	4.53	4.80	6.27	7.06	5.41	4.07
9	4.04	4.58	4.64	---	6.72	7.70	4.51	5.31	6.74	7.14	5.34	4.11
10	4.13	4.53	4.64	---	6.47	7.59	4.51	5.30	7.20	7.22	5.25	4.14
11	4.15	4.51	4.68	---	6.48	7.36	4.55	5.11	6.91	7.40	5.49	4.12
12	4.15	4.50	4.64	---	6.67	7.14	4.66	4.99	6.23	7.50	5.31	4.10
13	4.17	4.49	4.83	---	6.99	7.03	4.69	5.04	5.71	7.67	5.18	4.14
14	4.19	4.50	---	---	7.04	6.93	4.65	5.04	5.61	7.78	5.11	4.19
15	4.21	4.49	5.01	---	6.76	6.78	4.64	4.94	5.46	7.87	5.09	4.17
16	4.20	4.50	4.99	---	6.47	6.64	4.59	4.80	5.32	7.84	5.05	4.16
17	4.22	4.50	---	---	6.38	6.59	4.54	4.71	5.15	7.80	5.00	4.28
18	4.24	4.49	---	---	6.16	6.45	4.53	4.68	4.94	7.69	4.95	4.09
19	4.36	4.52	4.88	---	5.94	6.43	4.50	4.60	4.86	7.55	4.92	4.15
20	4.31	4.54	4.93	---	---	6.47	4.50	4.54	4.77	7.39	4.86	4.17
21	4.29	4.60	---	---	---	6.46	4.52	4.66	4.73	7.23	4.78	4.14
22	4.29	---	---	---	---	6.46	4.49	4.64	4.71	7.10	4.69	4.15
23	4.36	---	---	---	---	6.83	4.46	4.62	4.69	---	4.58	4.13
24	4.37	4.47	---	---	---	7.29	4.46	4.60	4.63	---	4.46	4.15
25	4.67	4.44	---	---	---	7.17	4.41	4.54	4.57	---	4.38	4.13
26	4.64	4.44	---	6.62	---	7.27	4.35	4.50	4.61	6.57	4.32	4.12
27	4.59	4.44	---	6.57	---	7.42	4.36	4.45	5.03	6.43	4.28	4.15
28	4.55	4.47	---	6.63	---	7.19	4.37	4.42	5.25	6.32	4.27	4.16
29	4.56	4.51	---	6.73	---	6.28	4.38	4.43	6.22	6.21	4.25	4.14
30	4.54	4.53	---	6.83	---	5.37	4.38	4.41	7.11	6.11	4.21	4.17
31	4.54	---	---	6.90	---	5.00	---	4.40	---	5.99	4.20	---
MEAN	4.35	---	---	---	---	6.75	4.56	4.64	5.30	---	5.01	4.15
MAX	4.67	---	---	---	---	7.70	4.90	5.31	7.20	---	5.88	4.28
MIN	4.04	---	---	---	---	5.00	4.35	4.29	4.40	---	4.20	4.07

05054500 SHEYENNE RIVER ABOVE HARVEY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
30...	1055	20	8.6	7.5	897	803	3.0	1.0	59.6	38.9	10.7	2	70.4
AUG													
26...	1115	--	8.0	8.4	1,530	1,560	17.5	18.5	48.8	49.5	9.80	5	226

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
30...	32	215	13.2	.10	10.3	238	562	30.3	<50	<1	1.8	31.4	<1
AUG													
26...	59	502	17.5	.29	27.4	332	986	--	<50	<1	12.5	78.7	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
30...	70	<1	<1	1.7	40	<1	160	4.04	<1	<1	<1.0	1.8
AUG												
26...	660	<1	<1	3.7	70	<1	60	2.54	28	<1	<1.0	3.5

Remark codes used in this table:
< -- Less than.

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE STATE OUTLET NEAR FLORA, ND

LOCATION.--Lat 47°54'28", long 99°24'57", in SW$^1/_2$ sec.7, T.151 N., R.68 W., Benson County, Hydrologic Unit 09020202, on left bank 3.5 mi southeast of Flora.

DRAINAGE AREA.--1,662 mi^2, approximately, of which about 1,070 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

GAGE.--Water-stage recorder. Datum of gage is 1,385 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 906 ft^3/s, July 3, gage height, 18.96 ft; minimum daily discharge, 4.2 ft^3/s, Sept. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e18	e26	e15	e12	e13	e13	e180	34	35	801	90	16
2	e17	e26	e15	e12	e12	e15	e165	e34	33	872	e90	13
3	e16	26	e15	e12	e11	e20	e150	e33	27	895	e92	12
4	e15	27	e15	e12	e11	e25	140	e30	64	825	e84	12
5	e15	27	e15	e12	e11	e32	129	28	71	754	e94	11
6	e14	26	e15	e12	e11	e40	118	27	70	684	e117	9.8
7	e14	25	e15	e12	e11	e50	111	27	76	601	e107	8.4
8	e14	24	e15	e11	e11	e70	104	34	106	517	e92	8.0
9	e14	23	e15	e11	e11	e90	97	e50	144	440	e75	8.2
10	e15	22	e15	e11	e11	e85	87	99	179	375	e67	7.6
11	e15	21	e15	e11	e10	e77	85	e106	190	321	e68	6.5
12	e15	19	e14	e11	e9.8	e70	96	89	181	290	e71	6.1
13	e14	20	e14	e11	e9.6	e62	94	78	176	277	61	5.9
14	e14	20	e14	e11	e9.4	e57	86	79	197	272	57	5.9
15	e15	19	e14	e12	e9.2	e54	78	80	210	265	54	5.6
16	e16	19	e14	e12	e9.0	e50	75	71	190	263	44	5.4
17	e17	19	e14	e12	e9.0	e48	76	63	163	260	38	5.4
18	e18	18	e14	e12	e9.0	e46	57	61	135	248	35	5.7
19	e19	17	e13	e12	e9.0	e52	57	e53	115	235	31	5.5
20	e20	16	e13	e12	e9.0	e60	58	e48	103	221	28	5.1
21	e21	e16	e13	e12	e9.0	e70	51	e64	88	203	25	4.9
22	e22	e16	e13	e12	e9.0	e80	e47	e77	71	187	23	4.8
23	e23	e16	e13	e11	e9.0	e90	42	e87	63	173	22	4.5
24	e24	e16	e13	e11	e9.0	e105	42	e83	65	163	44	4.3
25	e26	e16	e13	e11	e9.0	e115	39	e61	72	153	139	e4.7
26	e28	e16	e13	e12	e9.0	e135	40	e51	87	e142	93	4.4
27	e30	e16	e12	e12	e9.0	e150	40	46	260	e132	48	4.2
28	e29	e15	e12	e13	e11	e170	36	42	577	e123	33	4.3
29	e28	e15	e12	e14	---	e200	35	39	637	114	27	4.3
30	e27	e15	e12	e13	---	e240	34	37	698	107	23	4.6
31	e26	---	e12	e13	---	e200	---	33	---	99	20	---
TOTAL	599	597	427	367	280.0	2,571	2,449	1,744	5,083	11,012	1,892	208.1
MEAN	19.3	19.9	13.8	11.8	10.0	82.9	81.6	56.3	169	355	61.0	6.94
MAX	30	27	15	14	13	240	180	106	698	895	139	16
MIN	14	15	12	11	9.0	13	34	27	27	99	20	4.2
AC-FT	1,190	1,180	847	728	555	5,100	4,860	3,460	10,080	21,840	3,750	413

e Estimated

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE STATE OUTLET NEAR FLORA, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	11.16	---	11.20	13.07	13.92	11.33	11.41	18.57	12.01	11.09
2	---	---	11.19	11.31	11.21	13.09	13.89	e11.33	11.38	18.86	e12.01	11.03
3	---	11.26	11.19	11.33	11.23	12.58	13.25	e11.32	11.28	18.93	e12.03	11.03
4	---	11.27	11.17	11.34	11.28	12.60	12.91	e11.27	11.76	18.69	e11.96	11.01
5	---	11.28	11.25	11.37	11.31	12.73	12.77	11.24	11.83	18.27	e12.08	10.99
6	---	11.26	11.25	11.40	---	---	12.62	11.23	11.83	17.80	e12.38	10.97
7	---	11.24	11.24	11.40	---	---	12.47	11.22	11.89	17.22	e12.23	10.93
8	---	11.21	11.25	11.37	---	14.39	12.29	11.33	12.23	16.60	e12.04	10.92
9	---	11.20	11.28	11.32	---	14.28	12.14	e11.54	12.77	16.00	e11.88	10.93
10	---	11.18	11.29	11.29	---	13.57	11.99	12.13	13.24	15.44	e11.79	10.91
11	---	11.16	11.29	11.28	---	12.97	11.96	e12.21	13.38	14.95	e11.80	10.88
12	---	11.12	11.30	11.28	---	12.61	12.07	12.01	13.27	14.60	e11.83	10.86
13	---	11.15	11.28	---	---	12.58	12.05	11.89	13.21	14.45	11.73	10.86
14	---	11.14	11.30	---	---	12.91	11.97	11.91	13.48	14.39	11.69	10.86
15	---	11.13	11.30	11.25	---	---	11.89	11.91	13.63	14.31	11.65	10.85
16	---	11.13	11.28	11.27	---	13.98	11.85	11.81	13.39	14.28	11.54	10.84
17	---	11.12	11.29	11.29	---	13.46	11.87	11.72	13.03	14.25	11.46	10.84
18	---	11.10	11.29	11.30	---	13.15	11.75	11.69	12.64	14.10	11.41	10.85
19	11.16	11.08	11.27	11.38	---	13.03	11.64	e11.59	12.35	13.95	11.35	10.84
20	11.15	11.06	11.27	---	---	12.70	11.65	e11.52	12.18	13.78	11.30	10.83
21	---	11.08	---	---	---	12.49	11.56	e11.72	12.00	13.54	11.24	10.82
22	---	11.08	11.29	---	---	12.41	e11.51	e11.88	11.84	13.35	11.22	10.82
23	---	11.13	---	---	---	12.80	11.50	e11.99	11.75	13.17	11.19	10.81
24	---	11.14	11.29	---	13.01	13.09	11.45	e11.95	11.77	13.03	11.48	10.80
25	11.30	11.11	11.25	11.37	12.93	12.95	11.41	e11.73	11.85	12.88	12.70	e10.81
26	---	11.13	11.22	11.27	13.01	13.22	11.43	e11.62	11.99	e12.74	12.07	10.80
27	---	11.14	11.21	11.21	12.65	13.41	11.42	11.56	14.14	e12.60	11.58	10.79
28	---	11.15	11.23	11.20	12.85	13.71	11.37	11.51	17.04	e12.46	11.38	10.79
29	---	11.16	11.30	11.20	---	14.04	11.35	11.47	17.48	12.34	11.28	10.79
30	---	11.15	11.30	11.20	---	14.36	11.33	11.44	17.90	12.23	11.21	10.81
31	---	---	11.30	11.20	---	14.28	---	11.38	---	12.11	11.15	---
MEAN	---	---	---	---	---	---	12.04	11.63	12.93	14.84	11.70	10.88
MAX	---	---	---	---	---	---	13.92	12.21	17.90	18.93	12.70	11.09
MIN	---	---	---	---	---	---	11.33	11.22	11.28	12.11	11.15	10.79

e Estimated

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE OUTLET NEAR FLORA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2004 to September 2005.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 2004 to September 2005.
SPECIFIC CONDUCTANCE: October 2004 to September 2005.

INSTRUMENTATION.--Water-quality monitor since October 2004

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 28.7°C, June 23; minimum recorded, -0.2°C, on many days in November, January, February, and March.
SPECIFIC CONDUCTANCE: Maximum recorded, 2,540 microsiemens, Jan. 6-7; minimum recorded, 724 microsiemens, Apr. 1.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
JUL													
20...	1845	212	--	--	--	--	8.3	8.2	1,270	1,300	21.5	26.0	47.4
28...	1250	--	--	726	--	--	8.2	8.2	1,460	1,470	25.2	19.6	53.2
AUG													
02...	1120	--	--	--	--	--	8.2	8.4	1,540	1,580	30.6	25.6	55.1
08...	1035	--	--	720	--	--	8.3	8.5	1,390	1,400	29.6	24.3	48.1
22...	1020	--	45	725	7.6	84	8.2	8.5	1,540	1,540	18.3	17.7	58.2
SEP													
06...	1055	--	31	727	7.1	78	8.2	8.5	1,700	1,690	17.1	17.4	69.2
22...	1055	--	32	727	8.2	80	8.4	8.4	1,850	1,820	21.6	11.6	81.9

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
JUL													
20...	51.0	11.8	4	171	52	469	12.2	.20	28.7	234	811	480	--
28...	59.3	12.1	4	200	52	511	14.6	.22	27.1	300	948	--	--
AUG													
02...	59.1	11.5	5	203	53	521	16.2	.25	23.2	331	990	--	--
08...	52.3	13.9	4	188	54	466	14.8	.21	22.4	301	900	--	--
22...	61.2	13.6	4	200	51	514	18.7	.25	17.6	342	1,000	--	50
SEP													
06...	65.9	14.0	5	227	52	514	21.2	.23	15.9	415	1,120	--	25
22...	72.8	13.0	5	237	50	507	25.3	.26	18.0	510	1,250	--	17

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
JUL													
20...	--	--	--	--	--	--	--	<50	<1	7.8	59.8	<1	380
28...	--	--	--	--	--	--	--	<50	<1	8.0	66.0	<1	460
AUG													
02...	--	--	--	--	--	--	--	<50	<1	9.3	71.8	<1	490
08...	--	--	--	--	--	--	--	<50	<1	10.0	67.1	<1	360
22...	1.7	.101	.080	1.6	1.8	.259	.331	<50	<1	8.7	74.8	<1	460
SEP													
06...	1.6	.115	.040	1.5	1.6	.231	.275	<50	<1	8.8	78.7	<1	440
22...	1.5	.112	.060	1.4	1.6	.179	.227	<50	<1	20.7	89.3	<1	420

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE OUTLET NEAR FLORA, ND—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
JUL											
20...	<1	<1	4.9	70	<1	80	4.17	4.7	<1	<1.0	43.7
28...	<1	<1	4.8	70	<1	70	4.36	5.0	<1	<1.0	3.0
AUG											
02...	<1	1	3.5	40	<1	70	4.73	8.3	<1	<1.0	2.1
08...	<1	5	1.9	60	<1	50	3.6	5	<1	<1.0	<1
22...	<1	7	4.2	50	<1	90	4.27	5.9	<1	<1.0	1.5
SEP											
06...	<1	4	2.5	<10	<1	140	3.98	5.6	<1	<1.0	<1
22...	<1	5	2.6	20	<1	180	4.91	62.5	<1	<1.0	1.1

Remark codes used in this table:
< -- Less than.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	5.3	3.7	4.6	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
2	---	---	---	4.4	1.4	3.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
3	---	---	---	6.4	2.3	4.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
4	---	---	---	5.6	2.7	4.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1
5	---	---	---	5.2	2.6	3.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
6	---	---	---	6.4	3.6	4.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
7	---	---	---	5.3	3.6	4.4	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
8	---	---	---	4.0	2.7	3.4	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
9	---	---	---	4.5	1.3	2.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
10	---	---	---	4.1	1.3	2.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
11	---	---	---	1.3	-0.1	0.5	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
12	---	---	---	1.3	-0.1	0.5	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
13	---	---	---	1.6	-0.1	0.6	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
14	---	---	---	1.9	-0.2	0.9	0.1	-0.1	-0.1	-0.1	-0.1	-0.1
15	---	---	---	2.8	-0.1	1.3	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
16	---	---	---	3.3	0.4	1.9	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
17	---	---	---	3.4	0.8	2.2	0.1	-0.1	-0.1	-0.1	-0.1	-0.1
18	---	---	---	2.4	0.1	1.3	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
19	---	---	---	1.2	-0.1	0.5	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
20	---	---	---	1.1	-0.1	0.6	0.1	-0.1	-0.1	-0.1	-0.1	-0.1
21	8.0	5.5	6.8	0.4	-0.1	0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
22	7.6	6.3	6.8	0.7	-0.1	0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
23	6.5	5.4	6.0	0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
24	5.8	4.9	5.3	0.2	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
25	6.6	3.0	4.8	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
26	6.9	5.5	6.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
27	7.5	5.2	6.3	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
28	9.2	7.4	8.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1
29	9.5	7.3	9.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
30	7.3	4.5	5.3	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
31	5.2	3.3	4.3	---	---	---	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
MONTH	9.5	3.0	6.3	6.4	-0.2	1.6	0.1	-0.1	-0.1	-0.1	-0.2	-0.1

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE OUTLET NEAR FLORA, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0.4	-0.2	0.0	5.4	3.2	4.3
2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	2.5	-0.2	1.0	9.8	2.6	5.8
3	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2	5.3	0.8	2.6	12.6	4.6	8.3
4	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	7.9	3.8	5.4	15.3	6.9	10.9
5	-0.1	-0.2	-0.1	0.0	-0.2	-0.1	9.7	5.6	7.5	17.7	10.5	13.9
6	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	11.1	6.7	8.9	17.4	11.5	14.6
7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	12.6	7.8	10.1	16.2	12.3	14.4
8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	13.0	8.9	11.0	19.8	14.0	16.5
9	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	14.8	10.0	12.1	16.1	12.7	13.6
10	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	14.0	9.5	11.7	15.6	11.7	13.3
11	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	12.5	9.0	10.4	12.2	8.5	10.2
12	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	9.0	8.6	8.8	9.8	7.3	8.1
13	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	---	---	---	---	---	---
14	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	---	---	---	---	---	---
15	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	14.3	9.8	11.9	---	---	---
16	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	15.1	9.5	12.1	---	---	---
17	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	16.5	11.1	13.6	17.4	13.3	15.4
18	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	18.9	13.7	16.0	21.2	14.8	18.2
19	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	16.4	11.9	13.5	---	---	---
20	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	14.1	9.3	11.8	---	---	---
21	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	15.9	9.8	12.6	---	---	---
22	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	12.6	8.2	10.6	---	---	---
23	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	14.1	7.9	10.9	---	---	---
24	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	13.4	9.0	11.2	---	---	---
25	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	11.5	8.4	9.9	---	---	---
26	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	9.0	6.6	7.8	---	---	---
27	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	7.9	6.1	7.0	13.5	11.6	12.3
28	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	7.8	4.4	6.0	12.2	10.2	11.2
29	---	---	---	0.2	-0.2	-0.1	6.4	4.4	5.5	15.2	10.9	12.6
30	---	---	---	0.0	-0.2	-0.1	5.6	3.8	4.7	18.0	13.3	15.4
31	---	---	---	0.2	-0.2	0.0	---	---	---	19.3	15.5	17.4
MONTH	-0.1	-0.2	-0.1	0.2	-0.2	-0.1	18.9	-0.2	9.1	21.2	2.6	12.4
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.6	16.0	17.6	20.5	17.8	19.0	23.3	20.8	22.0	18.5	13.5	16.1
2	21.5	16.1	18.6	22.4	20.1	21.1	---	---	---	20.5	14.1	17.2
3	25.5	18.0	21.2	22.5	22.1	22.3	---	---	---	21.6	16.4	18.9
4	22.4	19.0	20.5	22.2	21.5	21.9	24.1	20.9	22.6	23.3	18.3	20.7
5	21.5	19.6	20.5	22.7	21.2	21.9	24.2	20.0	22.1	22.5	20.0	21.3
6	24.1	18.4	20.9	23.6	22.1	22.8	---	---	---	21.2	17.2	19.3
7	22.0	18.4	19.5	24.7	23.1	23.8	---	---	---	20.1	15.6	18.0
8	19.3	15.8	17.5	26.0	24.3	25.0	---	---	---	---	---	---
9	19.3	16.4	17.8	27.5	25.4	26.3	26.1	22.6	24.2	---	---	---
10	21.9	17.9	19.7	28.3	26.6	27.4	24.1	21.2	22.4	23.3	20.4	21.9
11	20.9	19.1	19.9	27.6	26.3	26.9	22.5	20.1	21.2	23.1	18.7	20.9
12	22.5	17.9	20.0	26.4	24.0	25.4	21.8	18.6	20.2	21.7	17.2	18.7
13	21.6	18.9	20.0	25.9	24.2	25.1	20.7	17.6	19.3	18.4	15.4	16.8
14	20.1	17.8	18.8	25.4	23.2	24.0	21.2	17.0	19.0	16.7	14.1	15.6
15	20.4	18.6	19.3	24.0	21.7	22.8	23.3	17.7	20.3	18.8	13.4	16.1
16	22.9	18.4	20.5	23.7	22.2	23.0	23.8	19.3	21.4	20.2	15.6	17.8
17	24.8	20.6	22.5	23.6	22.4	23.0	22.1	18.7	20.3	18.0	14.7	15.7
18	25.7	21.5	23.7	22.4	20.5	21.1	21.5	20.0	20.6	14.9	13.6	14.3
19	28.5	23.8	26.0	22.7	19.8	21.0	23.3	19.0	20.9	18.6	13.8	15.9
20	28.6	24.6	26.4	23.8	21.6	22.6	22.7	18.2	20.5	19.2	14.2	16.7
21	28.2	24.4	26.3	23.2	20.5	21.3	22.8	17.5	20.1	17.8	15.2	16.3
22	27.9	24.6	26.3	20.8	20.0	20.4	22.8	17.5	20.1	16.3	11.8	14.1
23	28.7	25.6	27.2	21.3	20.4	20.7	23.7	17.9	20.7	14.7	13.0	13.6
24	26.3	23.0	24.7	22.2	20.7	21.3	21.9	18.6	19.9	14.3	11.8	13.2
25	24.4	21.0	22.6	22.2	20.8	21.5	21.3	18.8	20.0	14.0	11.3	12.6
26	23.5	20.2	22.1	---	---	---	21.6	18.0	19.8	15.7	10.8	13.1
27	22.5	20.1	20.9	---	---	---	22.3	18.0	20.0	16.4	12.4	14.2
28	21.2	19.8	20.4	---	---	---	23.4	18.0	20.6	14.2	11.1	12.6
29	20.8	19.9	20.3	19.0	17.1	18.0	24.7	18.9	21.6	13.3	9.5	11.4
30	20.1	18.3	18.8	21.5	18.2	19.4	24.5	19.5	21.9	16.9	11.3	13.8
31	---	---	---	22.8	20.7	21.5	22.7	16.6	19.1	---	---	---
MONTH	28.7	15.8	21.4	28.3	17.1	22.5	26.1	16.6	20.8	23.3	9.5	16.3

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE OUTLET NEAR FLORA, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1,530	1,520	1,530	1,910	1,850	1,890	2,490	2,480	2,480
2	---	---	---	1,560	1,520	1,530	1,930	1,910	1,910	2,500	2,490	2,490
3	---	---	---	1,540	1,510	1,520	1,940	1,930	1,930	2,490	2,470	2,480
4	---	---	---	1,540	1,510	1,520	1,940	1,930	1,930	2,470	2,450	2,460
5	---	---	---	1,530	1,510	1,520	1,960	1,930	1,940	2,500	2,440	2,460
6	---	---	---	1,530	1,510	1,520	1,990	1,960	1,980	2,540	2,500	2,530
7	---	---	---	1,530	1,510	1,520	2,000	1,990	2,000	2,540	2,530	2,540
8	---	---	---	1,530	1,520	1,520	2,010	2,000	2,010	2,530	2,510	2,520
9	---	---	---	1,550	1,520	1,530	2,010	2,000	2,010	2,510	2,490	2,500
10	---	---	---	1,540	1,520	1,530	2,010	2,000	2,000	2,490	2,470	2,480
11	---	---	---	1,560	1,540	1,550	2,000	1,960	1,980	2,470	2,450	2,460
12	---	---	---	1,560	1,550	1,560	1,960	1,920	1,940	2,450	2,430	2,440
13	---	---	---	1,570	1,550	1,560	1,920	1,910	1,920	2,440	2,400	2,420
14	---	---	---	1,580	1,550	1,560	1,930	1,920	1,920	2,400	2,370	2,390
15	---	---	---	1,580	1,550	1,560	1,920	1,920	1,920	2,370	2,340	2,360
16	---	---	---	1,590	1,550	1,560	1,920	1,910	1,910	2,340	2,330	2,340
17	---	---	---	1,570	1,550	1,560	1,930	1,910	1,920	2,330	2,330	2,330
18	---	---	---	1,590	1,560	1,580	1,930	1,920	1,920	2,370	2,330	2,340
19	---	---	---	1,600	1,580	1,590	1,960	1,920	1,940	2,340	2,340	2,340
20	---	---	---	1,600	1,580	1,590	1,980	1,960	1,970	2,340	2,340	2,340
21	1,540	1,530	1,530	1,610	1,590	1,610	2,090	1,970	2,020	2,360	2,340	2,340
22	1,550	1,530	1,540	1,620	1,600	1,610	2,160	2,090	2,140	2,350	2,340	2,340
23	1,550	1,550	1,550	1,620	1,610	1,610	2,270	2,160	2,210	2,360	2,340	2,350
24	1,560	1,550	1,550	1,670	1,620	1,650	2,360	2,270	2,320	2,360	2,330	2,340
25	1,570	1,530	1,550	1,700	1,670	1,680	2,380	2,360	2,380	2,330	2,300	2,320
26	1,550	1,530	1,540	1,710	1,700	1,700	2,390	2,380	2,380	2,300	2,270	2,280
27	1,540	1,530	1,540	1,720	1,700	1,710	2,390	2,380	2,390	2,270	2,260	2,270
28	1,530	1,520	1,520	1,740	1,720	1,730	2,400	2,390	2,390	2,260	2,250	2,260
29	1,520	1,510	1,520	1,820	1,740	1,800	2,440	2,390	2,410	2,250	2,240	2,240
30	1,530	1,520	1,530	1,850	1,820	1,840	2,480	2,440	2,470	2,240	2,220	2,230
31	1,550	1,520	1,530	---	---	---	2,480	2,480	2,480	2,220	2,210	2,220
MONTH	1,570	1,510	1,540	1,850	1,510	1,600	2,480	1,850	2,080	2,540	2,210	2,380
		FEBRUARY			MARCH			APRIL			MAY	
1	2,210	2,200	2,210	2,020	2,000	2,020	732	724	728	1,620	1,570	1,590
2	2,220	2,180	2,190	2,030	2,020	2,020	766	729	742	1,590	1,540	1,570
3	2,180	2,150	2,160	2,030	2,020	2,020	809	766	780	1,570	1,490	1,540
4	2,150	2,120	2,140	2,020	2,010	2,020	852	809	833	1,550	1,500	1,530
5	2,120	2,090	2,100	2,020	1,930	1,990	882	851	868	1,540	1,510	1,530
6	2,090	2,060	2,080	1,930	1,660	1,800	907	882	899	1,520	1,500	1,500
7	2,070	2,060	2,060	1,660	1,380	1,510	953	906	929	1,570	1,500	1,530
8	2,080	2,060	2,060	1,380	1,190	1,270	1,010	953	983	1,590	1,500	1,530
9	2,120	2,080	2,100	1,190	1,040	1,120	1,030	1,010	1,020	1,680	1,430	1,580
10	2,130	2,120	2,120	1,040	921	979	1,040	1,030	1,040	1,650	1,490	1,550
11	2,150	2,120	2,140	921	871	889	1,100	1,040	1,060	1,550	1,500	1,530
12	2,180	2,150	2,170	884	867	871	1,150	1,100	1,130	1,640	1,550	1,600
13	2,180	2,180	2,180	944	884	908	---	---	---	---	---	---
14	2,180	2,160	2,170	1,040	944	986	---	---	---	---	---	---
15	2,160	2,140	2,150	1,170	1,040	1,110	1,300	1,220	1,260	---	---	---
16	2,140	2,120	2,130	1,200	1,170	1,190	1,340	1,290	1,320	---	---	---
17	2,120	2,100	2,110	1,220	1,200	1,210	1,380	1,340	1,370	1,520	1,490	1,510
18	2,110	2,090	2,100	1,230	1,220	1,230	1,420	1,380	1,400	1,520	1,510	1,510
19	2,090	2,080	2,090	1,260	1,230	1,250	1,440	1,410	1,430	---	---	---
20	2,090	2,090	2,090	1,280	1,260	1,270	1,480	1,440	1,460	---	---	---
21	2,100	2,090	2,090	1,320	1,280	1,300	1,500	1,480	1,490	---	---	---
22	2,100	2,090	2,100	1,350	1,320	1,330	1,510	1,500	1,510	---	---	---
23	2,100	2,080	2,090	1,350	1,340	1,350	1,530	1,510	1,520	---	---	---
24	2,080	2,050	2,070	1,340	1,270	1,310	1,540	1,520	1,530	---	---	---
25	2,050	2,020	2,040	1,270	1,190	1,220	1,560	1,540	1,540	---	---	---
26	2,020	2,000	2,010	1,190	1,120	1,150	1,580	1,560	1,570	---	---	---
27	2,000	2,000	2,000	1,120	989	1,070	1,580	1,560	1,570	1,600	1,580	1,580
28	2,010	2,000	2,000	989	828	886	1,590	1,570	1,580	1,580	1,580	1,580
29	---	---	---	828	780	807	1,590	1,580	1,580	1,580	1,570	1,570
30	---	---	---	780	735	751	1,600	1,580	1,590	1,580	1,570	1,570
31	---	---	---	743	725	738	---	---	---	1,580	1,560	1,570
MONTH	2,220	2,000	2,110	2,030	725	1,280	1,600	724	1,240	1,680	1,430	1,550

05055300 SHEYENNE RIVER ABOVE DEVILS LAKE OUTLET NEAR FLORA, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1,570	1,560	1,560	870	816	848	1,570	1,480	1,530	1,470	1,420	1,440
2	1,580	1,550	1,560	871	821	847	---	---	---	1,520	1,470	1,500
3	1,580	1,520	1,550	834	830	832	---	---	---	1,550	1,520	1,530
4	1,660	1,540	1,580	838	834	836	1,560	1,520	1,540	1,570	1,550	1,560
5	1,560	1,440	1,540	844	837	840	1,560	1,530	1,550	1,590	1,560	1,580
6	1,440	1,410	1,420	850	843	847	---	---	---	1,590	1,570	1,580
7	1,430	1,410	1,420	862	849	855	---	---	---	1,600	1,590	1,590
8	1,490	1,410	1,460	890	862	873	---	---	---	---	---	---
9	1,480	1,450	1,460	984	889	921	1,450	1,420	1,440	---	---	---
10	1,450	1,440	1,440	1,090	982	1,030	---	---	---	1,730	1,720	1,720
11	1,460	1,440	1,440	1,130	1,090	1,110	---	---	---	1,760	1,730	1,740
12	1,450	1,440	1,450	1,160	1,120	1,130	1,460	1,420	1,440	1,760	1,720	1,740
13	1,480	1,450	1,460	1,200	1,160	1,170	1,430	1,410	1,420	1,750	1,710	1,730
14	1,470	1,440	1,460	1,200	1,190	1,200	1,430	1,410	1,420	1,770	1,740	1,750
15	1,450	1,440	1,440	1,210	1,190	1,200	1,430	1,410	1,430	1,760	1,750	1,760
16	1,470	1,450	1,460	1,230	1,200	1,220	1,470	1,430	1,450	1,770	1,750	1,760
17	1,480	1,460	1,470	1,230	1,230	1,230	1,500	1,470	1,480	1,790	1,760	1,770
18	1,470	1,240	1,310	1,230	1,220	1,230	1,500	1,480	1,490	1,790	1,760	1,770
19	1,240	1,210	1,220	1,240	1,230	1,230	1,510	1,500	1,500	1,770	1,750	1,760
20	1,210	1,210	1,210	1,240	1,240	1,240	1,510	1,500	1,500	1,780	1,760	1,770
21	1,220	1,210	1,210	---	---	---	1,510	1,500	1,500	1,790	1,770	1,780
22	1,220	1,210	1,210	---	---	---	1,510	1,500	1,510	1,810	1,770	1,780
23	1,230	1,220	1,220	---	---	---	1,520	1,510	1,520	1,810	1,770	1,780
24	1,230	1,220	1,220	---	---	---	1,540	1,480	1,510	1,800	1,760	1,770
25	1,240	1,220	1,230	---	---	---	1,500	898	1,020	1,780	1,750	1,770
26	1,400	1,230	1,310	---	---	---	1,160	939	1,020	1,780	1,750	1,760
27	1,530	1,030	1,360	---	---	---	1,340	1,160	1,260	1,780	1,740	1,760
28	1,040	825	890	---	---	---	1,440	1,340	1,410	1,770	1,700	1,740
29	825	818	820	1,550	1,480	1,520	1,440	1,420	1,430	1,770	1,750	1,760
30	825	809	816	1,560	1,480	1,520	1,450	1,410	1,430	1,760	1,720	1,740
31	---	---	---	1,530	1,480	1,500	1,420	1,400	1,410	---	---	---
MONTH	1,660	809	1,340	1,560	816	1,100	1,570	898	1,430	1,810	1,420	1,700

05055400 SHEYENNE RIVER BELOW DEVILS LAKE STATE OUTLET NEAR BREMEN, ND

LOCATION.--Lat 47°49'17", long 99°16'34", in SW$^1/_4$ sec.8, T.150 N., R.67 W., Eddy County, Hydrologic Unit 09020202, on left bank 10.5 mi northeast of Bremen.

DRAINAGE AREA.--1,716 mi^2, approximately, of which about 1,094 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 2005.

GAGE.--Water-stage recorder. Datum of gage is 1,380 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 977 ft^3/s, July 3, gage height, 24.45 ft; minimum daily discharge, 4.3 ft^3/s, Sept. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e282	53	65	e893	104	29
2	---	---	---	---	---	---	253	e53	66	945	105	28
3	---	---	---	---	---	---	e242	e53	e60	969	109	29
4	---	---	---	---	---	---	209	e53	e58	958	100	28
5	---	---	---	---	---	---	176	51	85	904	93	25
6	---	---	---	---	---	---	161	52	90	e824	104	21
7	---	---	---	---	---	---	148	54	99	732	113	18
8	---	---	---	---	---	---	136	60	119	636	103	18
9	---	---	---	---	---	---	128	66	141	544	89	17
10	---	---	---	---	---	---	112	79	176	469	78	18
11	---	---	---	---	---	---	104	e121	203	405	81	17
12	---	---	---	---	---	---	106	127	209	349	77	13
13	---	---	---	---	---	---	108	116	e203	314	73	10
14	---	---	---	---	---	---	104	105	229	302	e67	e9.2
15	---	---	---	---	---	---	102	e103	238	e294	67	9.9
16	---	---	---	---	---	---	92	107	238	285	68	10
17	---	---	---	---	---	---	91	104	211	284	67	11
18	---	---	---	---	---	---	96	100	181	273	59	9.3
19	---	---	---	---	---	---	89	e90	153	261	53	8.6
20	---	---	---	---	---	---	78	82	128	251	47	8.6
21	---	---	---	---	---	---	77	e83	114	e234	43	8.9
22	---	---	---	---	---	---	75	e73	100	218	40	8.0
23	---	---	---	---	---	---	e67	90	90	202	e37	7.0
24	---	---	---	---	---	---	66	100	83	187	e38	e8.9
25	---	---	---	---	---	---	65	96	85	175	77	e7.4
26	---	---	---	---	---	---	61	e80	100	163	127	6.2
27	---	---	---	---	---	---	58	69	143	152	96	5.9
28	---	---	---	---	---	---	56	68	391	142	68	e5.4
29	---	---	---	---	---	---	55	69	e674	132	55	e4.3
30	---	---	---	---	---	---	54	65	e832	123	51	e4.5
31	---	---	---	---	---	---	---	62	---	114	40	---
TOTAL	---	---	---	---	---	---	3,451	2,484	5,564	12,734	2,329	404.1
MEAN	---	---	---	---	---	---	115	80.1	185	411	75.1	13.5
MAX	---	---	---	---	---	---	282	127	832	969	127	29
MIN	---	---	---	---	---	---	54	51	58	114	37	4.3
AC-FT	---	---	---	---	---	---	6,850	4,930	11,040	25,260	4,620	802

e Estimated

05055400 SHEYENNE RIVER BELOW DEVILS LAKE STATE OUTLET NEAR BREMEN, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April to September 2005.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e20.78	18.62	18.78	e24.09	19.25	18.25
2	---	---	---	---	---	---	20.57	e18.61	18.79	24.32	19.27	18.24
3	---	---	---	---	---	---	e20.49	e18.61	e18.71	24.42	19.31	18.25
4	---	---	---	---	---	---	20.23	e18.61	e18.68	24.37	19.21	18.25
5	---	---	---	---	---	---	19.95	18.58	19.04	24.13	19.14	18.21
6	---	---	---	---	---	---	19.81	18.59	19.10	e23.78	19.29	18.15
7	---	---	---	---	---	---	19.69	18.63	19.20	23.35	19.45	18.10
8	---	---	---	---	---	---	19.58	18.73	19.41	22.87	19.34	18.09
9	---	---	---	---	---	---	19.50	19.01	19.63	22.38	19.18	18.07
10	---	---	---	---	---	---	19.34	19.11	19.95	21.95	19.05	18.09
11	---	---	---	---	---	---	19.25	e19.47	20.17	21.58	19.09	18.07
12	---	---	---	---	---	---	19.28	19.50	20.23	21.23	19.04	17.99
13	---	---	---	---	---	---	19.30	19.39	e20.17	21.00	19.00	17.94
14	---	---	---	---	---	---	19.26	19.27	20.39	20.92	e18.92	e17.91
15	---	---	---	---	---	---	19.23	e19.24	20.46	e20.87	18.90	17.93
16	---	---	---	---	---	---	19.12	19.29	20.46	20.81	18.92	17.93
17	---	---	---	---	---	---	19.10	19.26	20.24	20.80	18.91	17.96
18	---	---	---	---	---	---	19.17	19.22	19.99	20.72	18.80	17.91
19	---	---	---	---	---	---	19.08	e19.10	19.74	20.63	18.71	17.89
20	---	---	---	---	---	---	18.96	19.00	19.51	20.56	18.61	17.89
21	---	---	---	---	---	---	18.94	e19.01	19.36	e20.43	18.56	17.90
22	---	---	---	---	---	---	18.91	e18.90	19.22	20.30	18.51	17.88
23	---	---	---	---	---	---	e18.82	19.10	19.10	20.16	e18.48	17.85
24	---	---	---	---	---	---	18.80	19.21	19.01	20.04	e18.49	e17.90
25	---	---	---	---	---	---	18.79	19.17	19.04	19.94	18.96	e17.86
26	---	---	---	---	---	---	18.72	e18.97	19.21	19.83	19.50	17.82
27	---	---	---	---	---	---	18.69	18.84	19.63	19.73	19.17	17.81
28	---	---	---	---	---	---	18.65	18.83	21.46	19.64	18.82	e17.79
29	---	---	---	---	---	---	18.63	18.83	e23.05	19.54	18.65	e17.74
30	---	---	---	---	---	---	18.63	18.79	e23.81	19.46	18.58	e17.75
31	---	---	---	---	---	---	---	18.75	---	19.36	18.42	---
MEAN	---	---	---	---	---	---	19.31	18.98	19.85	21.39	18.95	17.98
MAX	---	---	---	---	---	---	20.78	19.50	23.81	24.42	19.50	18.25
MIN	---	---	---	---	---	---	18.63	18.58	18.68	19.36	18.42	17.74

e Estimated

05055400 SHEYENNE RIVER BELOW DEVILS LAKE OUTLET NEAR BREMEN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2005 to September 2005.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2004 to September 2005.
SPECIFIC CONDUCTANCE: April 2004 to September 2005.

INSTRUMENTATION.--Water-quality monitor since April 2005.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 30.0°C, Aug. 2; minimum recorded, 1.4°C, May 2.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,880 microsiemens, May 9; minimum recorded, 919 microsiemens, Apr. 9.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
JUL													
20...	1505	241	--	--	--	--	8.2	8.2	1,260	1,290	27.0	26.5	47.2
28...	0940	--	--	730	--	--	8.2	8.3	1,430	1,440	21.5	19.0	53.6
AUG													
03...	1040	--	--	--	--	--	8.4	8.4	1,540	1,570	29.2	25.8	56.4
08...	1145	--	--	730	--	--	8.3	8.4	1,450	1,470	29.6	25.0	51.6
22...	1210	--	85	733	7.9	90	8.3	8.5	1,570	1,570	27.1	19.7	59.6
SEP													
06...	1200	--	58	728	9.0	100	8.3	8.6	1,540	1,530	22.4	18.0	66.4
22...	1200	--	59	727	7.9	73	8.5	8.5	1,830	1,810	20.2	9.4	73.5

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
JUL													
20...	49.8	11.8	4	168	52	473	12.3	.18	29.7	228	803	541	--
28...	57.5	11.9	4	195	52	509	14.2	.22	27.4	288	928	--	--
AUG													
03...	58.7	11.5	4	202	52	523	16.8	.23	25.7	333	994	--	--
08...	55.5	14.9	4	192	52	463	15.9	.21	22.6	335	944	--	--
22...	63.6	14.4	4	203	51	503	19.2	.25	20.5	368	1,030	--	98
SEP													
06...	61.5	14.4	4	198	50	451	19.2	.20	18.7	378	1,010	--	61
22...	70.4	13.6	5	239	51	513	25.5	.25	16.2	482	1,210	--	46

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
JUL													
20...	--	--	--	--	--	--	--	<50	<1	8.6	59.1	<1	400
28...	--	--	--	--	--	--	--	<50	<1	9.6	66.1	<1	450
AUG													
03...	--	--	--	--	--	--	--	<50	<1	9.9	73.6	<1	480
08...	--	--	--	--	--	--	--	<50	<1	10.9	71.4	<1	370
22...	1.6	.084	.140	1.5	1.8	.308	.402	<50	<1	10.3	76.7	<1	470
SEP													
06...	1.4	.086	.070	1.3	1.5	.272	.337	<50	<1	9.9	74.9	<1	370
22...	1.4	.060	.030	1.4	1.5	.209	.268	<50	<1	22.5	81.0	<1	440

05055400 SHEYENNE RIVER BELOW DEVILS LAKE OUTLET NEAR BREMEN, ND—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
JUL											
20...	<1	1	5.2	50	<1	80	4.57	5.4	<1	<1.0	44.1
28...	<1	9	5.1	40	<1	80	4.65	5.4	<1	<1.0	2.5
AUG											
03...	<1	1	3.9	30	<1	80	4.97	7.5	<1	<1.0	1.7
08...	<1.0	6	2.7	60	<1	20	4.2	3.2	<1	<1.0	<1
22...	<1	6	4.8	80	<1	80	4.70	9.1	<1	<1.0	1.1
SEP											
06...	<1	3	2.8	20	<1	60	4.17	7.3	<1	<1.0	<1
22...	<1	5	3.1	30	<1	60	5.01	62.4	<1	<1.0	1.2

Remark codes used in this table:
< -- Less than.

05055400 SHEYENNE RIVER BELOW DEVILS LAKE OUTLET NEAR BREMEN, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	4.6	2.0	3.3
2	---	---	---	---	---	---	---	---	---	9.4	1.4	4.9
3	---	---	---	---	---	---	---	---	---	12.4	3.8	7.7
4	---	---	---	---	---	---	---	---	---	15.7	7.0	10.9
5	---	---	---	---	---	---	---	---	---	17.2	10.4	13.6
6	---	---	---	---	---	---	---	---	---	16.9	11.4	14.1
7	---	---	---	---	---	---	---	---	---	15.6	11.2	13.4
8	---	---	---	---	---	---	---	---	---	20.0	13.4	16.1
9	---	---	---	---	---	---	14.1	9.5	11.5	15.5	12.2	13.4
10	---	---	---	---	---	---	13.8	9.3	11.5	16.2	11.0	13.1
11	---	---	---	---	---	---	12.3	9.2	10.3	12.2	7.9	9.9
12	---	---	---	---	---	---	9.2	8.5	8.8	9.7	7.2	8.0
13	---	---	---	---	---	---	12.2	8.4	9.9	10.4	6.9	8.2
14	---	---	---	---	---	---	13.2	8.5	10.8	9.1	5.7	7.6
15	---	---	---	---	---	---	13.7	9.3	11.5	13.4	6.3	9.5
16	---	---	---	---	---	---	15.2	9.3	12.0	15.4	9.6	12.3
17	---	---	---	---	---	---	16.1	11.0	13.4	16.7	12.4	14.5
18	---	---	---	---	---	---	18.7	13.2	15.5	20.4	14.5	17.0
19	---	---	---	---	---	---	16.4	12.0	14.0	23.4	17.4	19.9
20	---	---	---	---	---	---	13.9	9.8	11.9	25.6	19.1	22.0
21	---	---	---	---	---	---	16.1	10.4	12.9	23.2	16.1	20.4
22	---	---	---	---	---	---	12.7	8.3	10.6	19.1	12.5	15.9
23	---	---	---	---	---	---	14.1	7.5	10.6	18.6	15.9	17.2
24	---	---	---	---	---	---	13.6	9.1	11.3	20.2	16.5	18.3
25	---	---	---	---	---	---	11.3	7.4	9.6	19.3	16.0	17.5
26	---	---	---	---	---	---	8.9	5.8	7.3	16.0	12.1	14.1
27	---	---	---	---	---	---	7.3	5.0	6.4	12.1	10.5	11.2
28	---	---	---	---	---	---	7.1	3.1	4.8	12.0	9.7	10.8
29	---	---	---	---	---	---	5.6	3.0	4.4	15.6	10.7	12.5
30	---	---	---	---	---	---	4.9	2.7	3.9	18.5	13.3	15.6
31	---	---	---	---	---	---	---	---	---	18.9	15.3	17.0
MONTH	---	---	---	---	---	---	18.7	2.7	10.1	25.6	1.4	13.2
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.2	15.3	17.3	20.2	18.0	19.0	28.9	24.4	26.6	17.7	11.8	14.9
2	21.6	15.7	18.5	22.6	19.5	20.8	30.0	24.8	27.1	21.7	13.1	16.9
3	24.8	18.2	21.0	22.5	21.6	22.1	27.1	23.1	25.4	22.5	15.5	18.6
4	23.4	20.2	21.4	22.3	21.5	21.9	23.6	20.5	22.2	24.9	17.2	20.5
5	22.3	20.0	20.9	23.1	21.1	22.0	24.8	19.8	22.3	22.7	19.5	21.2
6	24.3	18.5	21.2	24.0	21.7	22.8	26.7	20.9	23.6	21.2	16.3	18.8
7	22.1	18.1	19.2	25.4	22.8	24.0	27.3	22.6	25.0	21.5	14.7	17.5
8	18.7	15.9	17.3	26.9	24.2	25.4	26.2	23.6	25.0	24.9	16.4	19.8
9	19.5	15.7	17.5	28.4	25.6	26.9	26.2	22.6	24.2	25.0	19.1	21.6
10	21.8	18.0	19.7	29.6	26.7	28.0	24.4	21.4	22.8	24.1	19.1	21.2
11	20.9	18.8	19.5	28.6	26.7	27.5	22.9	20.1	21.3	21.5	17.5	19.3
12	22.2	17.5	19.7	29.3	25.7	27.4	21.3	18.1	19.8	20.7	16.4	17.9
13	21.4	19.0	19.8	28.7	26.2	27.5	20.3	17.3	19.0	18.2	13.9	16.0
14	19.9	17.9	18.8	27.6	25.0	25.9	21.3	16.3	18.8	17.6	12.7	14.8
15	20.4	18.3	19.1	27.0	23.3	25.1	23.3	17.8	20.4	19.8	12.1	15.2
16	22.7	18.3	20.3	26.2	23.6	25.0	23.8	19.7	21.6	22.5	14.8	17.9
17	24.0	20.2	22.0	25.6	23.1	24.5	22.0	18.9	20.1	18.5	14.2	15.3
18	25.1	20.8	23.0	23.1	20.3	21.4	21.8	19.7	20.5	15.5	13.3	14.2
19	27.9	23.4	25.4	24.6	20.0	22.1	23.0	18.8	20.7	20.5	13.0	15.7
20	28.4	24.2	26.1	25.3	22.2	23.6	22.2	18.1	20.2	16.9	13.0	14.6
21	27.5	24.1	26.0	24.3	22.2	23.3	23.8	17.5	20.3	16.9	13.7	15.2
22	27.4	24.2	25.9	25.1	21.9	23.4	23.2	17.5	20.2	18.0	9.8	13.0
23	29.9	25.3	27.1	25.8	22.8	24.1	24.3	17.2	20.5	15.1	11.2	13.1
24	26.4	22.5	24.3	27.3	23.3	25.3	21.4	18.0	19.4	15.8	11.0	13.2
25	24.2	20.7	22.5	26.4	22.2	23.9	22.0	18.8	20.4	14.2	10.0	11.7
26	24.6	20.0	22.3	23.4	20.3	21.8	21.0	17.9	19.7	17.3	9.1	12.4
27	23.6	20.7	21.7	22.2	19.8	20.5	21.4	17.8	19.7	17.4	10.4	13.4
28	21.6	20.2	20.9	22.9	18.5	20.4	23.1	18.0	20.3	14.1	8.2	11.2
29	20.7	19.9	20.3	23.2	19.4	21.3	25.0	18.8	21.7	13.9	6.4	10.2
30	20.1	18.3	18.9	27.2	20.9	23.7	24.5	19.5	21.9	18.6	9.6	13.7
31	---	---	---	28.8	24.0	26.2	22.0	15.4	18.3	---	---	---
MONTH	29.9	15.3	21.3	29.6	18.0	23.8	30.0	15.4	21.6	25.0	6.4	16.0

05055400 SHEYENNE RIVER BELOW DEVILS LAKE OUTLET NEAR BREMEN, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1,630	1,600	1,610
2	---	---	---	---	---	---	---	---	---	1,630	1,580	1,600
3	---	---	---	---	---	---	---	---	---	1,610	1,570	1,590
4	---	---	---	---	---	---	---	---	---	1,580	1,560	1,570
5	---	---	---	---	---	---	---	---	---	1,570	1,560	1,560
6	---	---	---	---	---	---	---	---	---	1,560	1,550	1,560
7	---	---	---	---	---	---	---	---	---	1,560	1,550	1,560
8	---	---	---	---	---	---	---	---	---	1,630	1,500	1,560
9	---	---	---	---	---	---	971	919	950	1,880	1,520	1,660
10	---	---	---	---	---	---	1,020	971	1,010	1,710	1,550	1,620
11	---	---	---	---	---	---	1,090	1,020	1,050	1,670	1,550	1,620
12	---	---	---	---	---	---	1,110	1,070	1,090	1,640	1,520	1,560
13	---	---	---	---	---	---	1,140	1,090	1,110	1,550	1,520	1,530
14	---	---	---	---	---	---	1,190	1,140	1,170	1,600	1,550	1,570
15	---	---	---	---	---	---	1,190	1,170	1,180	1,620	1,600	1,610
16	---	---	---	---	---	---	1,250	1,190	1,210	1,620	1,600	1,610
17	---	---	---	---	---	---	1,330	1,250	1,290	1,620	1,590	1,600
18	---	---	---	---	---	---	1,360	1,330	1,350	1,720	1,620	1,670
19	---	---	---	---	---	---	1,420	1,360	1,380	1,730	1,710	1,720
20	---	---	---	---	---	---	1,440	1,420	1,430	1,720	1,700	1,710
21	---	---	---	---	---	---	1,510	1,440	1,470	1,700	1,660	1,680
22	---	---	---	---	---	---	1,510	1,480	1,490	1,660	1,650	1,650
23	---	---	---	---	---	---	1,520	1,500	1,510	1,650	1,640	1,640
24	---	---	---	---	---	---	1,550	1,520	1,540	1,640	1,630	1,630
25	---	---	---	---	---	---	1,570	1,550	1,560	1,630	1,610	1,620
26	---	---	---	---	---	---	1,590	1,570	1,580	1,650	1,600	1,620
27	---	---	---	---	---	---	1,610	1,560	1,590	1,670	1,650	1,660
28	---	---	---	---	---	---	1,630	1,600	1,610	1,670	1,660	1,660
29	---	---	---	---	---	---	1,630	1,610	1,620	1,660	1,640	1,660
30	---	---	---	---	---	---	1,630	1,600	1,620	1,650	1,640	1,640
31	---	---	---	---	---	---	---	---	---	1,650	1,640	1,640
MONTH	---	---	---	---	---	---	1,630	919	1,360	1,880	1,500	1,620
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1,680	1,650	1,660	1,450	1,370	1,410	1,570	1,540	1,560	1,480	1,400	1,440
2	1,710	1,680	1,690	1,370	1,300	1,340	1,590	1,570	1,580	1,520	1,480	1,500
3	1,760	1,700	1,740	1,300	1,250	1,280	1,590	1,580	1,580	1,530	1,520	1,520
4	1,740	1,700	1,720	1,250	1,210	1,230	1,580	1,570	1,580	1,560	1,530	1,540
5	1,770	1,740	1,750	1,210	1,180	1,190	1,590	1,570	1,580	1,570	1,550	1,560
6	1,790	1,760	1,770	1,180	1,150	1,160	1,600	1,580	1,590	1,580	1,560	1,570
7	1,780	1,770	1,780	1,150	1,140	1,140	1,590	1,520	1,560	1,590	1,570	1,580
8	1,780	1,760	1,770	1,140	1,000	1,030	1,520	1,420	1,460	1,610	1,570	1,600
9	1,760	1,760	1,760	1,100	1,040	1,070	1,440	1,400	1,420	1,630	1,610	1,620
10	1,760	1,760	1,760	1,130	1,100	1,110	1,440	1,420	1,440	1,650	1,620	1,640
11	1,760	1,740	1,750	1,160	1,130	1,140	1,450	1,440	1,440	1,680	1,650	1,660
12	1,740	1,730	1,730	1,170	1,150	1,160	1,460	1,450	1,450	1,690	1,680	1,680
13	1,730	1,700	1,710	1,190	1,160	1,180	1,470	1,450	1,460	1,700	1,690	1,690
14	1,700	1,680	1,690	1,200	1,180	1,190	1,480	1,460	1,470	1,710	1,700	1,710
15	1,680	1,670	1,670	1,220	1,190	1,210	1,480	1,420	1,460	1,720	1,710	1,710
16	1,670	1,660	1,660	1,220	1,220	1,220	1,470	1,460	1,470	1,720	1,710	1,710
17	1,660	1,650	1,660	1,220	1,220	1,220	1,520	1,460	1,470	1,730	1,720	1,720
18	1,660	1,650	1,650	1,230	1,220	1,220	1,540	1,520	1,530	1,720	1,720	1,720
19	1,660	1,650	1,660	1,240	1,230	1,230	1,530	1,520	1,520	1,720	1,700	1,710
20	1,660	1,650	1,660	1,260	1,240	1,240	1,580	1,530	1,550	1,710	1,700	1,710
21	1,660	1,650	1,650	1,270	1,250	1,260	1,580	1,560	1,570	1,720	1,700	1,720
22	1,660	1,650	1,660	1,310	1,260	1,280	1,580	1,560	1,570	1,740	1,710	1,730
23	1,670	1,650	1,660	1,360	1,310	1,330	1,590	1,570	1,580	1,750	1,730	1,740
24	1,660	1,650	1,650	1,410	1,360	1,380	1,580	1,580	1,580	1,760	1,740	1,750
25	1,650	1,640	1,650	1,430	1,410	1,420	1,580	1,550	1,570	1,750	1,740	1,740
26	1,660	1,640	1,650	1,440	1,420	1,430	1,570	1,100	1,450	1,750	1,730	1,740
27	1,660	1,650	1,650	1,450	1,440	1,440	1,100	1,020	1,040	1,760	1,740	1,750
28	1,650	1,640	1,650	1,470	1,450	1,460	1,100	1,040	1,050	1,780	1,760	1,770
29	1,640	1,540	1,590	1,480	1,460	1,470	1,210	1,100	1,160	1,800	1,770	1,780
30	1,540	1,450	1,490	1,510	1,480	1,490	1,290	1,210	1,250	1,790	1,770	1,780
31	---	---	---	1,540	1,510	1,530	1,400	1,290	1,340	---	---	---
MONTH	1,790	1,450	1,680	1,540	1,000	1,270	1,600	1,020	1,460	1,800	1,400	1,670

05056000 SHEYENNE RIVER NEAR WARWICK, ND

LOCATION.--Lat 47°48'20", long 98°42'57", on south quarter of line between secs.15 and 16, T.150 N., R.63 W., Eddy County, Hydrologic Unit 09020203, on left bank on downstream side of county highway bridge and 3.3 mi south of Warwick.

DRAINAGE AREA.--2,070 mi^2, approximately, of which about 1,310 mi^2 is probably noncontributing, including 227 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1952(M). WSP 1728: Drainage area.

GAGE.--Water-stage recorder and rubble masonry control. Datum of gage is 1,376.34 ft above National Geodetic Vertical Datum of 1929 (GPS survey by North Dakota State Water Commission).

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	71	e37	e13	e13	e10	346	51	91	742	116	53
2	97	66	e39	e13	e14	e10	381	52	86	906	106	64
3	86	63	e38	e13	e14	e10	363	52	86	943	107	41
4	69	59	e37	e13	e13	e10	378	49	85	950	134	26
5	63	58	e36	e13	e12	e15	321	47	77	956	127	23
6	60	56	e36	e13	e12	e35	272	47	73	945	107	26
7	57	53	e36	e13	e11	e50	235	47	86	903	96	31
8	56	51	e36	e13	e11	e75	210	49	123	836	102	31
9	55	51	e36	e13	e11	e115	184	132	189	744	112	26
10	54	48	e37	e13	e11	e120	161	253	218	643	108	25
11	48	52	e38	e13	e11	e115	162	244	215	550	113	22
12	48	50	e37	e13	e11	e110	169	186	267	476	121	21
13	48	46	e33	e12	e11	e105	173	178	308	411	124	23
14	52	45	e31	e12	e10	e102	159	185	328	352	104	22
15	52	46	e31	e12	e10	e100	140	167	353	312	94	26
16	55	47	e31	e12	e10	e90	132	135	373	298	89	22
17	52	48	e28	e12	e10	e80	118	116	356	281	81	20
18	45	48	e27	e12	e10	e70	101	111	323	271	78	18
19	50	50	e25	e11	e10	e65	96	114	276	269	82	16
20	56	48	e23	e11	e10	e60	96	122	236	251	79	17
21	73	e46	e21	e11	e10	e58	89	124	196	242	71	18
22	64	e42	e19	e11	e10	e55	84	156	154	229	65	18
23	64	e40	e17	e11	e10	e50	70	206	129	212	57	16
24	67	e39	e16	e12	e10	e55	72	132	114	200	55	17
25	74	e38	e15	e12	e10	60	64	123	102	193	53	18
26	75	e38	e14	e12	e10	78	60	128	96	176	53	18
27	71	e37	e14	e12	e10	111	55	126	114	165	73	18
28	66	e37	e14	e12	e10	162	58	120	156	152	118	17
29	68	e37	e14	e12	---	238	60	e113	203	141	108	19
30	74	e37	e14	e12	---	301	54	e106	420	130	77	19
31	70	---	e13	e13	---	338	---	e99	---	121	58	---
TOTAL	1,967	1,447	843	380	305	2,853	4,863	3,770	5,833	14,000	2,868	731
MEAN	63.5	48.2	27.2	12.3	10.9	92.0	162	122	194	452	92.5	24.4
MAX	98	71	39	13	14	338	381	253	420	956	134	64
MIN	45	37	13	11	10	10	54	47	73	121	53	16
AC-FT	3,900	2,870	1,670	754	605	5,660	9,650	7,480	11,570	27,770	5,690	1,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	18.2	19.2	11.1	7.22	11.9	135	344	123	80.4	66.5	33.8	18.3
MAX	136	233	93.4	55.2	154	793	1,794	854	519	452	423	154
(WY)	(2001)	(2001)	(2001)	(2001)	(1981)	(1983)	(1997)	(1950)	(2004)	(2005)	(1993)	(2000)
MIN	1.16	1.28	0.76	0.47	0.75	1.46	15.8	10.4	1.75	0.36	0.09	0.71
(WY)	(1953)	(1961)	(1961)	(1990)	(1990)	(1964)	(1977)	(1990)	(1961)	(1989)	(1961)	(1961)

05056000 SHEYENNE RIVER NEAR WARWICK, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1950 - 2005	
ANNUAL TOTAL	58,702		39,860			
ANNUAL MEAN	160		109		72.5	
HIGHEST ANNUAL MEAN					226	2001
LOWEST ANNUAL MEAN					5.31	1977
HIGHEST DAILY MEAN	3,290	Apr 1	956	Jul 5	4,370	Apr 14, 1969
LOWEST DAILY MEAN	10	Jan 29	10	Feb 14	0.00	Aug 7, 1961
ANNUAL SEVEN-DAY MINIMUM	10	Jan 29	10	Feb 14	0.00	Aug 7, 1961
MAXIMUM PEAK FLOW			958	Jul 5	[a]4,660	Apr 14, 1969
MAXIMUM PEAK STAGE			4.68	Jul 5	8.08	Apr 21, 1997
ANNUAL RUNOFF (AC-FT)	116,400		79,060		52,490	
10 PERCENT EXCEEDS	390		259		148	
50 PERCENT EXCEEDS	60		58		13	
90 PERCENT EXCEEDS	11		12		1.7	

a Gage height, 7.51 ft
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.76	2.68	2.51	2.32	2.31	2.31	3.38	2.56	2.66	4.24	2.76	2.53
2	2.76	2.66	2.50	2.31	2.32	2.31	3.46	2.56	2.65	4.54	2.73	2.57
3	2.72	2.65	2.49	2.31	2.32	2.31	3.42	2.55	2.65	4.62	2.73	2.48
4	2.65	2.63	2.50	2.32	2.33	2.31	3.45	2.54	2.64	4.65	2.84	2.41
5	2.63	2.62	2.49	2.32	2.33	2.35	3.32	2.53	2.61	4.68	2.81	2.39
6	2.61	2.61	2.48	2.33	2.33	2.52	3.19	2.52	2.59	4.66	2.73	2.41
7	2.60	2.60	2.50	2.32	2.33	2.56	3.10	2.51	2.65	4.59	2.69	2.43
8	2.59	2.59	2.50	2.32	2.33	2.69	3.03	2.53	2.79	4.48	2.71	2.44
9	2.59	2.59	2.50	2.32	2.32	2.80	2.96	2.82	2.97	4.31	2.75	2.41
10	2.58	2.57	2.49	2.32	2.30	2.83	2.91	3.14	3.05	4.12	2.73	2.40
11	2.55	2.59	2.49	2.32	2.30	2.82	2.91	3.12	3.04	3.94	2.75	2.39
12	2.56	2.58	2.48	2.32	2.30	2.82	2.92	2.97	3.18	3.78	2.78	2.39
13	2.56	2.56	2.49	2.33	2.31	2.84	2.94	2.95	3.29	3.63	2.79	2.40
14	2.58	2.55	2.45	2.35	2.31	2.84	2.90	2.96	3.34	3.48	2.72	2.39
15	2.58	2.56	2.45	2.35	2.32	2.79	2.85	2.92	3.39	3.38	2.68	2.41
16	2.60	2.56	2.45	2.34	2.32	2.70	2.83	2.83	3.44	3.34	2.65	2.39
17	2.58	2.57	2.43	2.34	2.32	2.63	2.79	2.77	3.40	3.30	2.62	2.38
18	2.55	2.57	2.43	2.31	2.31	2.58	2.74	2.76	3.32	3.27	2.60	2.36
19	2.57	2.58	2.41	2.28	2.31	2.56	2.72	2.77	3.21	3.27	2.62	2.35
20	2.60	2.57	2.39	2.28	2.31	2.54	2.72	2.79	3.10	3.21	2.61	2.36
21	2.68	2.55	2.38	2.28	2.30	2.52	2.70	2.79	2.99	3.19	2.57	2.36
22	2.64	2.60	2.37	2.29	2.30	2.51	2.69	2.89	2.88	3.15	2.54	2.37
23	2.64	2.48	2.36	2.28	2.30	2.53	2.64	3.02	2.81	3.10	2.50	2.35
24	2.65	2.52	2.34	2.28	2.30	2.56	2.65	2.82	2.76	3.06	2.49	2.36
25	2.69	2.54	2.33	2.28	2.31	2.61	2.62	2.79	2.71	3.04	2.48	2.36
26	2.69	2.51	2.32	2.29	2.31	2.67	2.61	2.81	2.69	2.98	2.48	2.36
27	2.68	2.51	2.32	2.29	2.31	2.77	2.59	2.80	2.76	2.94	2.58	2.36
28	2.66	2.53	2.32	2.29	2.31	2.91	2.60	2.77	2.90	2.90	2.76	2.36
29	2.67	2.51	2.32	2.30	---	3.10	2.60	---	3.03	2.86	2.72	2.37
30	2.70	2.52	2.32	2.30	---	3.27	2.57	---	3.58	2.82	2.62	2.37
31	2.68	---	2.31	2.31	---	3.36	---	---	---	2.78	2.55	---
MEAN	2.63	2.57	2.42	2.31	2.31	2.67	2.89	---	2.97	3.62	2.66	2.40
MAX	2.76	2.68	2.51	2.35	2.33	3.36	3.46	---	3.58	4.68	2.84	2.57
MIN	2.55	2.48	2.31	2.28	2.30	2.31	2.57	---	2.59	2.78	2.48	2.35

05056000 SHEYENNE RIVER NEAR WARWICK, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1953, 1958 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1600	272	8.3	7.0	606	617	16.0	7.5	33.6	21.8	8.20	2	62.9
JUN													
15...	1325	--	--	8.1	1,180	--	--	--	70.6	63.4	10.3	4	170
JUL													
06...	1250	930	7.9	7.9	927	953	24.5	21.5	46.2	37.4	9.90	3	103
AUG													
29...	1020	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)
APR													
06...	42	204	9.3	.12	14.2	104	364	277	--	--	--	--	--
JUN													
15...	45	404@c	17.1	.3	26.4	315d	918	--	951	2.0	.07	.26	.29
JUL													
06...	44	269	9.0	.12	32.5	216	585	1,550	--	--	--	--	--
AUG													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
APR													
06...	--	--	--	--	--	--	--	<50	<1	2.7	25.0	<1	100
JUN													
15...	.022	1.9	.23	.41	2.3	--	--	--	--	--	--	--	--
JUL													
06...	--	--	--	--	--	--	--	<50	<1	5.2	62.8	<1	200
AUG													
29...	--	--	--	--	--	2.7d	<.1d	--	--	--	--	--	--

05056000 SHEYENNE RIVER NEAR WARWICK, ND—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR											
06...	<1	1	1.9	70	<1	130	3.14	<1	<1	<1.0	2.4
JUN											
15...	--	--	--	30	--	77.5	--	--	--	--	--
JUL											
06...	<1	1	4.8	60	<1	90	5.52	2	<1	<1.0	7.5
AUG											
29...	--	--	--	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

05056060 MAUVAIS COULEE TRIBUTARY NO. 3 NEAR CANDO, ND

LOCATION.--Lat 48°27'27", long 99°13'26", in NE¼NW¼ sec.6, T.157 N., R.66 W., Towner County, Hydrologic Unit 09020201, at bridge 2.1 mi southwest of Cando.

DRAINAGE AREA.--60.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1955-73 (annual maximum discharges only), 1986-88 (discharge measurements only), March 1989 to current year (seasonal records only).

GAGE.--Water-stage recorder. Datum of gage is 1,460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1986 gage was at different datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft^3/s, Apr. 14, 1969, gage height, 9.35 ft, datum then in use.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, about 502 ft^3/s, July 12, gage height, 8.18 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e2.8	1.4	0.92	19	16	0.84
2	---	---	---	---	---	e0.00	e24	1.3	3.7	26	14	0.71
3	---	---	---	---	---	e0.00	74	1.2	4.0	33	13	0.75
4	---	---	---	---	---	e0.00	99	0.99	3.4	37	11	0.64
5	---	---	---	---	---	e0.00	102	0.86	2.9	47	9.3	0.61
6	---	---	---	---	---	e0.00	92	0.80	2.4	80	7.8	0.59
7	---	---	---	---	---	e0.00	74	0.72	2.6	102	6.3	0.50
8	---	---	---	---	---	e0.00	62	0.76	3.8	169	4.9	0.47
9	---	---	---	---	---	e0.00	53	0.87	4.5	152	4.1	0.43
10	---	---	---	---	---	e0.00	44	0.95	4.1	106	3.7	0.37
11	---	---	---	---	---	e0.00	37	1.0	3.4	139	3.6	0.31
12	---	---	---	---	---	e0.00	33	0.95	3.6	420	3.4	0.27
13	---	---	---	---	---	e0.00	29	0.99	5.5	420	3.1	0.30
14	---	---	---	---	---	e0.00	25	0.94	7.1	278	2.8	0.28
15	---	---	---	---	---	e0.00	19	0.89	7.2	198	2.5	0.26
16	---	---	---	---	---	e0.00	15	0.88	5.9	154	2.4	0.24
17	---	---	---	---	---	e0.00	12	1.2	4.9	126	2.5	0.25
18	---	---	---	---	---	e0.00	11	1.4	3.8	104	2.6	0.24
19	---	---	---	---	---	e0.00	9.0	1.2	3.3	93	2.4	0.23
20	---	---	---	---	---	e0.00	7.7	1.0	2.9	82	2.2	0.22
21	---	---	---	---	---	e0.00	6.7	1.1	2.3	73	2.1	0.22
22	---	---	---	---	---	e0.00	5.7	1.1	1.6	66	2.0	0.21
23	---	---	---	---	---	e0.00	4.8	1.2	1.3	59	1.8	0.20
24	---	---	---	---	---	e0.00	4.1	1.0	0.87	54	2.3	0.19
25	---	---	---	---	---	e0.00	3.5	0.92	0.64	48	2.7	0.16
26	---	---	---	---	---	e0.01	3.0	0.88	0.74	41	2.2	0.15
27	---	---	---	---	---	e0.02	2.6	0.78	3.1	35	1.9	0.14
28	---	---	---	---	---	e0.03	2.2	0.68	5.8	30	1.8	0.13
29	---	---	---	---	---	e0.07	1.9	0.67	5.3	26	1.6	0.12
30	---	---	---	---	---	e0.18	1.6	0.66	12	21	1.5	0.12
31	---	---	---	---	---	e0.50	---	0.65	---	18	1.3	---
TOTAL	---	---	---	---	---	0.81	860.6	29.94	113.57	3,256	138.8	10.15
MEAN	---	---	---	---	---	0.03	28.7	0.97	3.79	105	4.48	0.34
MAX	---	---	---	---	---	0.50	102	1.4	12	420	16	0.84
MIN	---	---	---	---	---	0.00	1.6	0.65	0.64	18	1.3	0.12
AC-FT	---	---	---	---	---	1.6	1,710	59	225	6,460	275	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	18.9	78.6	13.9	10.5	16.4	7.84	1.17
MAX	---	---	---	---	---	141	252	94.5	105	105	59.7	13.9
(WY)	---	---	---	---	---	(1992)	(1999)	(1999)	(2004)	(2005)	(1996)	(1993)
MIN	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	---	---	---	---	---	(1989)	(1990)	(1988)	(1988)	(1988)	(1988)	(1988)

SUMMARY STATISTICS	WATER YEARS 1986 - 2005	
HIGHEST DAILY MEAN	780	Apr 11, 1999
LOWEST DAILY MEAN	0.00	Mar 1, 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 1, 1986
MAXIMUM PEAK FLOW	2,300	Apr 14, 1969
MAXIMUM PEAK STAGE	[a]9.35	Apr 14, 1969

a Datum then in use
e Estimated

05056060 MAUVAIS COULEE TRIBUTARY NO. 3 NEAR CANDO, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1999 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3.26	2.34	2.21	4.26	3.69	2.18
2	---	---	---	---	---	---	3.98	2.31	2.66	4.65	3.56	2.15
3	---	---	---	---	---	---	5.82	2.27	2.70	4.96	3.49	2.16
4	---	---	---	---	---	---	6.32	2.24	2.64	5.15	3.33	2.13
5	---	---	---	---	---	---	6.38	2.20	2.57	5.57	3.18	2.13
6	---	---	---	---	---	---	6.20	2.17	2.50	6.58	3.06	2.12
7	---	---	---	---	---	---	5.84	2.15	2.54	7.06	2.94	2.09
8	---	---	---	---	---	---	5.50	2.17	2.68	7.47	2.84	2.08
9	---	---	---	---	---	---	5.21	2.20	2.76	7.38	2.76	2.07
10	---	---	---	---	---	2.08	4.90	2.23	2.71	7.08	2.70	2.04
11	---	---	---	---	---	2.11	4.65	2.25	2.63	7.29	2.68	2.02
12	---	---	---	---	---	---	4.48	2.23	2.65	8.06	2.66	2.00
13	---	---	---	---	---	---	4.29	2.23	2.86	8.07	2.60	2.02
14	---	---	---	---	---	2.04	4.08	2.22	2.99	7.83	2.56	2.00
15	---	---	---	---	---	2.02	3.79	2.20	3.00	7.60	2.52	1.99
16	---	---	---	---	---	1.95	3.54	2.20	2.91	7.39	2.49	1.98
17	---	---	---	---	---	1.91	3.38	2.28	2.80	7.21	2.51	1.99
18	---	---	---	---	---	1.87	3.26	2.34	2.68	6.98	2.53	1.98
19	---	---	---	---	---	1.85	3.13	2.30	2.63	6.72	2.50	1.98
20	---	---	---	---	---	1.86	3.04	2.24	2.57	6.45	2.46	1.97
21	---	---	---	---	---	1.89	2.97	2.26	2.49	6.19	2.43	1.97
22	---	---	---	---	---	1.99	2.89	2.26	2.37	5.93	2.41	1.97
23	---	---	---	---	---	2.12	2.79	2.28	2.31	5.70	2.38	1.95
24	---	---	---	---	---	2.21	2.71	2.25	2.20	5.49	2.46	1.95
25	---	---	---	---	---	2.21	2.64	2.22	2.14	5.25	2.54	1.93
26	---	---	---	---	---	2.36	2.58	2.20	2.16	4.99	2.45	1.92
27	---	---	---	---	---	2.94	2.53	2.17	2.73	4.72	2.40	1.91
28	---	---	---	---	---	3.20	2.49	2.14	3.16	4.50	2.36	1.90
29	---	---	---	---	---	3.20	2.44	2.14	3.14	4.27	2.32	1.89
30	---	---	---	---	---	2.95	2.38	2.14	3.70	4.03	2.30	1.89
31	---	---	---	---	---	---	---	2.14	---	3.84	2.27	---
MEAN	---	---	---	---	---	---	3.92	2.22	2.67	6.09	2.69	2.01
MAX	---	---	---	---	---	---	6.38	2.34	3.70	8.07	3.69	2.18
MIN	---	---	---	---	---	---	2.38	2.14	2.14	3.84	2.27	1.89

05056060 MAUVAIS COULEE TRIBUTARY NO. 3 NEAR CANDO, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1986 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1245	104	7.6	6.5	569	586	10.0	7.0	43.4	25.8	15.8	.6	21.6
JUL													
07...	1105	103	7.6	7.7	967	991	22.0	22.0	78.4	51.7	11.9	1	52.9

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	17	120	12.8	.13	17.9	137	330	97.3	<50	<1	4.4	26.6	<1
JUL													
07...	21	243	18.5	.14	48.6	254	615	184	<50	<1	6.0	70.5	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	<50	<1	<1	2.6	50	<1	40	4.14	2	<1	<1.0	3.6
JUL												
07...	80	<1	1	1.5	70	<1	40	5.43	3	<1	<1.0	4.7

Remark codes used in this table:
< -- Less than.

05056100 MAUVAIS COULEE NEAR CANDO, ND

LOCATION.--Lat 48°26'53", long 99°06'08", in SE¼NE¼SE¼ sec.1, T.157 N., R.66 W., Towner County, Hydrologic Unit 09020201, on left bank 0.3 mi upstream from highway bridge, about 4 mi upstream from west fork of Mauvais Coulee, and 5.5 mi southeast of Cando.

DRAINAGE AREA.--387 mi^2, of which about 10 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1956 to current year (seasonal records only since 1982-93 and 1995 to current year).

GAGE.--Water-stage recorder. Elevation of gage is 1,445 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 2, 1957, nonrecording gage at present site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1954, reached a stage of 9.83 ft, and flood of Apr. 20, 1956, reached a stage of 10.71 ft, from floodmarks set by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 743 ft^3/s, July 15, gage height, 8.39 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e3.5	68	88	82	86	13
2	---	---	---	---	---	e0.00	e25	64	86	98	80	13
3	---	---	---	---	---	e0.00	e90	61	70	120	74	14
4	---	---	---	---	---	e0.00	e180	59	63	145	65	14
5	---	---	---	---	---	e0.00	265	56	56	170	64	13
6	---	---	---	---	---	e0.00	344	53	53	195	57	12
7	---	---	---	---	---	e0.00	421	52	52	221	52	12
8	---	---	---	---	---	e0.00	484	48	56	296	44	12
9	---	---	---	---	---	e0.00	519	47	56	339	36	13
10	---	---	---	---	---	e0.00	506	46	54	373	37	15
11	---	---	---	---	---	e0.00	462	44	51	431	38	11
12	---	---	---	---	---	e0.00	414	47	51	494	36	11
13	---	---	---	---	---	e0.00	367	48	48	580	29	10
14	---	---	---	---	---	e0.00	326	44	49	680	34	10
15	---	---	---	---	---	e0.00	278	42	51	737	27	9.9
16	---	---	---	---	---	e0.00	233	40	51	706	25	8.8
17	---	---	---	---	---	e0.00	205	40	52	623	24	7.8
18	---	---	---	---	---	e0.00	176	43	63	519	24	8.5
19	---	---	---	---	---	e0.00	145	40	50	455	23	9.0
20	---	---	---	---	---	e0.00	134	37	45	411	19	8.8
21	---	---	---	---	---	e0.00	124	43	43	393	16	7.7
22	---	---	---	---	---	e0.00	110	41	45	362	23	7.8
23	---	---	---	---	---	e0.00	106	41	36	321	31	8.8
24	---	---	---	---	---	e0.00	101	40	30	267	39	7.1
25	---	---	---	---	---	e0.00	95	47	27	205	34	7.8
26	---	---	---	---	---	e0.01	88	73	34	163	27	8.0
27	---	---	---	---	---	e0.02	83	86	44	139	21	7.5
28	---	---	---	---	---	e0.03	79	96	45	121	18	6.5
29	---	---	---	---	---	e0.05	75	98	53	113	16	8.5
30	---	---	---	---	---	e0.15	72	93	60	104	18	7.2
31	---	---	---	---	---	e0.50	---	89	---	91	27	---
TOTAL	---	---	---	---	---	0.76	6,510.5	1,726	1,562	9,954	1,144	302.7
MEAN	---	---	---	---	---	0.02	217	55.7	52.1	321	36.9	10.1
MAX	---	---	---	---	---	0.50	519	98	88	737	86	15
MIN	---	---	---	---	---	0.00	3.5	37	27	82	16	6.5
AC-FT	---	---	---	---	---	1.5	12,910	3,420	3,100	19,740	2,270	600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	2.41	1.18	0.28	0.02	0.18	21.4	201	58.3	18.9	22.6	14.7	4.72
MAX	27.1	10.4	3.86	0.34	5.01	198	946	527	272	321	274	62.3
(WY)	(1966)	(1981)	(1981)	(1981)	(1981)	(1992)	(1997)	(1999)	(2004)	(2005)	(1993)	(1965)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1959)	(1960)	(1957)	(1957)	(1957)	(1958)	(1991)	(1961)	(1961)	(1959)	(1959)	(1959)

05056100 MAUVAIS COULEE NEAR CANDO, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1956 - 2005	
ANNUAL MEAN	[a]19.7	
HIGHEST ANNUAL MEAN	[a]71.7	1974
LOWEST ANNUAL MEAN	[a]0.00	1961
HIGHEST DAILY MEAN	2,980	Apr 21, 1997
LOWEST DAILY MEAN	0.00	Aug 21, 1956
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 21, 1956
MAXIMUM PEAK FLOW	3,000	Apr 21, 1997
MAXIMUM PEAK STAGE	11.68	Apr 21, 1997
ANNUAL RUNOFF (AC-FT)	[a]14,260	
10 PERCENT EXCEEDS	25	
50 PERCENT EXCEEDS	0.06	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1957-82)
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	3.05	3.91	3.92	4.18	4.11	4.56	3.68
2	---	---	---	---	---	3.04	4.43	3.87	4.16	4.28	4.51	3.69
3	---	---	---	---	---	3.04	5.05	3.84	3.98	4.51	4.45	3.75
4	---	---	---	---	---	3.04	5.27	3.82	3.90	4.74	4.36	3.75
5	---	---	---	---	---	3.04	5.59	3.79	3.82	5.02	4.35	3.68
6	---	---	---	---	---	3.05	6.04	3.76	3.78	5.29	4.28	3.61
7	---	---	---	---	---	3.05	6.42	3.74	3.77	5.57	4.24	3.62
8	---	---	---	---	---	3.04	6.71	3.69	3.82	6.25	4.15	3.64
9	---	---	---	---	---	3.05	6.86	3.68	3.83	6.61	4.07	3.70
10	---	---	---	---	---	3.05	6.81	3.68	3.80	6.88	4.08	3.75
11	---	---	---	---	---	3.04	6.61	3.66	3.77	7.29	4.09	3.59
12	---	---	---	---	---	3.04	6.39	3.69	3.77	7.69	4.06	3.56
13	---	---	---	---	---	3.04	6.16	3.70	3.73	7.97	4.00	3.52
14	---	---	---	---	---	3.05	5.94	3.65	3.73	8.24	4.05	3.51
15	---	---	---	---	---	3.05	5.67	3.64	3.76	8.38	3.97	3.49
16	---	---	---	---	---	3.05	5.39	3.62	3.77	8.30	3.94	3.40
17	---	---	---	---	---	3.04	5.20	3.62	3.78	8.09	3.93	3.31
18	---	---	---	---	---	3.03	4.99	3.66	3.90	7.79	3.92	3.38
19	---	---	---	---	---	3.03	4.73	3.62	3.75	7.46	3.91	3.42
20	---	---	---	---	---	3.03	4.63	3.58	3.69	7.13	3.86	3.40
21	---	---	---	---	---	3.03	4.53	3.66	3.67	6.83	3.82	3.30
22	---	---	---	---	---	3.04	4.38	3.63	3.69	6.51	3.91	3.32
23	---	---	---	---	---	3.06	4.34	3.62	3.58	6.18	4.01	3.41
24	---	---	---	---	---	3.05	4.28	3.63	3.51	5.83	4.10	3.25
25	---	---	---	---	---	3.05	4.21	3.72	3.45	5.46	4.05	3.32
26	---	---	---	---	---	3.07	4.13	4.01	3.56	5.19	3.97	3.34
27	---	---	---	---	---	3.09	4.07	4.16	3.67	5.02	3.89	3.28
28	---	---	---	---	---	3.09	4.03	4.27	3.69	4.88	3.85	3.19
29	---	---	---	---	---	3.20	4.00	4.29	3.78	4.82	3.83	3.37
30	---	---	---	---	---	3.69	3.96	4.24	3.87	4.73	3.85	3.26
31	---	---	---	---	---	3.73	---	4.19	---	4.61	3.96	---
MEAN	---	---	---	---	---	3.10	5.16	3.80	3.77	6.18	4.07	3.48
MAX	---	---	---	---	---	3.73	6.86	4.29	4.18	8.38	4.56	3.75
MIN	---	---	---	---	---	3.03	3.91	3.58	3.45	4.11	3.82	3.19

05056100 MAUVAIS COULEE NEAR CANDO, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	0920	284	7.8	6.7	685	686	5.0	4.5	52.5	32.1	14.3	.8	31.2
JUL													
07...	0820	217	7.7	7.9	1,070	1,100	19.0	21.5	80.5	55.2	10.2	2	73.2

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	19	144	14.5	.13	16.2	177	410	326	115	<1	3.6	30.4	<1
JUL													
07...	26	251	17.5	.15	32.8	306	696	426	<50	<1	5.4	51.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	<50	<1	<1	2.1	260	<1	370	5.69	1	<1	<1.0	4.0
JUL												
07...	120	<1	2	3.7	80	<1	80	6.22	2	<1	<1.0	8.5

Remark codes used in this table:
< -- Less than.

05056200 EDMORE COULEE NEAR EDMORE, ND

LOCATION.--Lat 48°20'12", long 98°39'36", in NW¼NW¼ sec.17, T.156 N., R.62 W., Ramsey County, Hydrologic Unit 09020201, on right bank 50 ft upstream from bridge on county highway, 11 mi southwest of Edmore, and about 13 mi upstream from Sweetwater Lake.

DRAINAGE AREA.--382 mi^2, of which about 100 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to June 1956, July 1957 to current year (seasonal records only since 1982-93, 1995 to current year).

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929. June 26, 1957, to Sept. 30, 1985, water-stage recorder at same site at a datum of 1,479.79 ft above National Geodetic Vertical Datum of 1929. Prior to June 26, 1957, nonrecording gage at same site and datum.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 509 ft^3/s, July 9, gage height, 86.82 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e30	21	11	213	54	15
2	---	---	---	---	---	e0.00	115	18	11	216	47	13
3	---	---	---	---	---	e0.00	183	17	10	224	42	15
4	---	---	---	---	---	e0.00	225	15	9.5	238	36	14
5	---	---	---	---	---	e0.00	239	12	14	278	31	14
6	---	---	---	---	---	e0.00	261	10	12	336	27	13
7	---	---	---	---	---	e0.00	281	9.3	10	389	23	12
8	---	---	---	---	---	e0.00	286	9.3	14	474	21	12
9	---	---	---	---	---	e0.00	295	9.6	30	506	19	12
10	---	---	---	---	---	e0.00	293	9.8	18	498	17	12
11	---	---	---	---	---	e0.00	283	9.4	13	488	18	11
12	---	---	---	---	---	e0.00	268	8.8	26	468	18	10
13	---	---	---	---	---	e0.00	246	8.6	26	444	17	11
14	---	---	---	---	---	e0.00	238	8.4	45	424	15	10
15	---	---	---	---	---	e0.00	233	8.7	59	405	14	10
16	---	---	---	---	---	e0.00	220	9.5	50	381	13	9.4
17	---	---	---	---	---	e0.00	202	9.4	41	357	13	9.5
18	---	---	---	---	---	e0.00	184	11	38	333	12	9.3
19	---	---	---	---	---	e0.00	168	11	41	310	12	8.8
20	---	---	---	---	---	e0.00	153	11	48	291	11	8.1
21	---	---	---	---	---	e0.00	140	12	56	269	11	8.1
22	---	---	---	---	---	e0.00	123	13	66	248	12	8.3
23	---	---	---	---	---	e0.00	105	13	77	234	13	7.7
24	---	---	---	---	---	e0.00	89	14	85	221	13	8.0
25	---	---	---	---	---	e0.00	73	13	90	206	14	7.3
26	---	---	---	---	---	e0.00	60	12	95	180	13	7.1
27	---	---	---	---	---	e0.02	48	11	165	148	13	7.0
28	---	---	---	---	---	e0.05	39	12	206	122	12	6.6
29	---	---	---	---	---	e1.0	31	12	204	99	12	6.2
30	---	---	---	---	---	e3.0	25	12	209	81	11	6.3
31	---	---	---	---	---	e10	---	11	---	66	14	---
TOTAL	---	---	---	---	---	14.07	5,136	361.8	1,779.5	9,147	598	301.7
MEAN	---	---	---	---	---	0.45	171	11.7	59.3	295	19.3	10.1
MAX	---	---	---	---	---	10	295	21	209	506	54	15
MIN	---	---	---	---	---	0.00	25	8.4	9.5	66	11	6.2
AC-FT	---	---	---	---	---	28	10,190	718	3,530	18,140	1,190	598

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	0.97	0.32	0.05	0.00	0.44	25.4	129	35.7	17.3	25.8	14.9	2.39
MAX	9.79	5.73	0.98	0.00	11.6	232	529	309	188	306	437	45.4
(WY)	(1986)	(1981)	(1981)	(1958)	(1981)	(1995)	(1997)	(1997)	(2002)	(1993)	(1993)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1959)	(1959)	(1958)	(1958)	(1959)	(1960)	(1991)	(1958)	(1958)	(1958)	(1958)	(1958)

05056200 EDMORE COULEE NEAR EDMORE, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1957 - 2005	
ANNUAL MEAN	[a]14.2	
HIGHEST ANNUAL MEAN	[a]47.7	1974
LOWEST ANNUAL MEAN	[a]0.03	1958
HIGHEST DAILY MEAN	1,770	Apr 24, 1997
LOWEST DAILY MEAN	0.00	Jul 1, 1957
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 1, 1957
MAXIMUM PEAK FLOW	1,830	Apr 24, 1997
MAXIMUM PEAK STAGE	87.95	Apr 24, 1997
ANNUAL RUNOFF (AC-FT)	[a]10,280	
10 PERCENT EXCEEDS	18	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1953-82, 1994)
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2001 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	82.36	81.29	80.84	84.31	82.07	81.09
2	---	---	---	---	---	---	83.32	81.19	80.81	84.38	81.89	81.01
3	---	---	---	---	---	---	83.90	81.17	80.78	84.52	81.77	81.09
4	---	---	---	---	---	---	84.34	81.09	80.75	84.80	81.66	81.09
5	---	---	---	---	---	---	84.74	80.98	80.93	85.25	81.54	81.07
6	---	---	---	---	---	---	85.01	80.89	80.85	85.75	81.44	81.06
7	---	---	---	---	---	---	85.13	80.84	80.79	86.16	81.35	81.02
8	---	---	---	---	---	---	85.15	80.84	80.93	86.68	81.27	81.02
9	---	---	---	---	---	---	85.19	80.86	81.43	86.81	81.21	81.02
10	---	---	---	---	---	---	85.19	80.87	81.09	86.78	81.15	81.03
11	---	---	---	---	---	---	85.13	80.85	80.92	86.75	81.18	81.00
12	---	---	---	---	---	---	85.05	80.82	81.34	86.67	81.20	80.97
13	---	---	---	---	---	---	84.91	80.80	81.33	86.55	81.14	80.99
14	---	---	---	---	---	---	84.72	80.79	81.76	86.41	81.09	80.96
15	---	---	---	---	---	---	84.50	80.81	82.08	86.28	81.04	80.97
16	---	---	---	---	---	---	84.26	80.83	81.86	86.10	81.01	80.94
17	---	---	---	---	---	---	84.04	80.81	81.66	85.92	80.98	80.95
18	---	---	---	---	---	---	83.86	80.86	81.60	85.73	80.97	80.95
19	---	---	---	---	---	---	83.70	80.86	81.67	85.54	80.94	80.93
20	---	---	---	---	---	---	83.55	80.83	81.81	85.37	80.93	80.89
21	---	---	---	---	---	---	83.40	80.90	81.99	85.17	80.92	80.90
22	---	---	---	---	---	---	83.19	80.92	82.22	84.95	80.94	80.91
23	---	---	---	---	---	79.74	82.95	80.90	82.43	84.73	80.98	80.89
24	---	---	---	---	---	79.85	82.71	80.96	82.58	84.47	81.01	80.91
25	---	---	---	---	---	79.94	82.46	80.90	82.65	84.16	81.03	80.87
26	---	---	---	---	---	80.13	82.20	80.86	82.74	83.83	81.01	80.86
27	---	---	---	---	---	80.57	81.95	80.84	83.64	83.49	80.98	80.86
28	---	---	---	---	---	80.82	81.73	80.85	84.17	83.17	80.95	80.85
29	---	---	---	---	---	81.78	81.56	80.89	84.12	82.86	80.94	80.82
30	---	---	---	---	---	83.25	81.41	80.86	84.22	82.58	80.93	80.83
31	---	---	---	---	---	82.45	---	80.85	---	82.31	81.04	---
MEAN	---	---	---	---	---	---	83.72	80.90	81.87	85.11	81.18	80.96
MAX	---	---	---	---	---	---	85.19	81.29	84.22	86.81	82.07	81.09
MIN	---	---	---	---	---	---	81.41	80.79	80.75	82.31	80.92	80.82

05056200 EDMORE COULEE NEAR EDMORE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1055	244	7.6	6.5	728	743	12.0	9.0	47.0	21.9	13.6	2	61.6
JUL													
08...	0815	455	7.8	7.7	684	709	18.0	22.5	46.1	22.4	9.70	2	63.6

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	37	158	22.5	.16	20.3	201	465	318	<50	<1	4.3	30.1	<1
JUL													
08...	38	176	14.9	.11	34.8	154	419	555	<50	<1	3.8	45.5	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	<50	<1	<1	3.1	30	<1	10	3.61	1	<1	<1.0	6.5
JUL												
08...	70	<1	<1	1.9	30	<1	10	3.97	2	<1	<1.0	3.2

Remark codes used in this table:
< -- Less than.

05056215 EDMORE COULEE TRIBUTARY NEAR WEBSTER, ND

LOCATION.--Lat 48°15'59", long 98°40'50", in NW¼NW¼ sec.7, T.155 N., R.62 W., Ramsey County, Hydrologic Unit 09020201, on upstream side of bridge on county road, 9 mi east and 1.1 mi south of Webster.

DRAINAGE AREA.--148 mi^2, approximately, of which about 44 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1986 to current year (seasonal records only). Discharge record available for 1986 water year in files of the Science Center office.

GAGE.--Water-stage recorder. Datum of gage is 1,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1986 nonrecording gage at present site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in spring of 1959 reached a stage of about 75.00 ft, from conversation with local residents.

EXTREMES FOR CURRENT YEAR.--Maximum observed discharge, 256 ft^3/s, July 10, maximum observed gage height, 71.68 ft (from floodmark); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e12	10	4.2	32	e82	18
2	---	---	---	---	---	e0.00	e10	9.9	4.4	32	e77	16
3	---	---	---	---	---	e0.00	e50	9.7	4.4	39	e73	14
4	---	---	---	---	---	e0.00	71	9.7	4.6	41	e68	13
5	---	---	---	---	---	e0.00	57	9.7	4.7	55	e59	12
6	---	---	---	---	---	e0.00	65	e9.5	4.7	e79	e48	12
7	---	---	---	---	---	e0.00	75	e8.0	4.8	e99	e40	11
8	---	---	---	---	---	e0.00	82	e7.8	4.8	e160	e33	9.7
9	---	---	---	---	---	e0.00	86	e7.5	5.0	e221	e30	8.6
10	---	---	---	---	---	e0.00	87	e7.2	5.2	e252	28	7.7
11	---	---	---	---	---	e0.00	88	e6.9	5.5	e241	28	7.3
12	---	---	---	---	---	e0.00	89	e6.5	10	e244	29	6.8
13	---	---	---	---	---	e0.00	88	e6.1	7.9	247	28	6.2
14	---	---	---	---	---	e0.00	82	e5.8	14	247	27	5.8
15	---	---	---	---	---	e0.00	76	e5.6	15	245	26	5.6
16	---	---	---	---	---	e0.00	67	e5.3	14	237	25	5.0
17	---	---	---	---	---	e0.00	58	e6.0	11	227	24	4.8
18	---	---	---	---	---	e0.00	51	e5.5	9.7	211	23	4.9
19	---	---	---	---	---	e0.00	40	e5.0	e3.0	195	23	4.6
20	---	---	---	---	---	e0.00	33	e4.7	e2.5	180	23	4.3
21	---	---	---	---	---	e0.00	28	e6.0	e2.0	166	22	3.9
22	---	---	---	---	---	e0.00	21	e5.0	e1.8	153	21	3.6
23	---	---	---	---	---	e0.00	17	e4.5	2.7	139	20	3.1
24	---	---	---	---	---	e0.00	15	e4.0	3.1	128	20	2.9
25	---	---	---	---	---	e0.00	12	e3.7	2.7	116	20	2.8
26	---	---	---	---	---	e0.00	11	3.6	2.9	105	20	2.9
27	---	---	---	---	---	e0.50	11	3.7	41	96	20	2.7
28	---	---	---	---	---	e2.0	10	3.8	15	90	19	2.4
29	---	---	---	---	---	e7.0	10	3.9	14	e88	18	2.1
30	---	---	---	---	---	e10	10	4.0	41	e89	17	e2.0
31	---	---	---	---	---	e11	---	4.1	---	e89	18	---
TOTAL	---	---	---	---	---	30.50	1,412	192.7	265.6	4,543	1,009	205.7
MEAN	---	---	---	---	---	0.98	47.1	6.22	8.85	147	32.5	6.86
MAX	---	---	---	---	---	11	89	10	41	252	82	18
MIN	---	---	---	---	---	0.00	10	3.6	1.8	32	17	2.0
AC-FT	---	---	---	---	---	60	2,800	382	527	9,010	2,000	408

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	27.0	154	45.2	17.8	33.3	50.2	9.65
MAX	---	---	---	---	---	233	532	303	99.1	226	858	134
(WY)	---	---	---	---	---	(1995)	(2004)	(1997)	(2002)	(1993)	(1993)	(1993)
MIN	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	---	---	---	---	---	(1989)	(1990)	(1990)	(1988)	(1988)	(1988)	(1987)

SUMMARY STATISTICS WATER YEARS 1986 - 2005

HIGHEST DAILY MEAN	1,390	Apr 25, 1997
LOWEST DAILY MEAN	0.00	Mar 1, 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 1, 1986
MAXIMUM PEAK FLOW	[a]1,390	Apr 25, 1997
MAXIMUM PEAK STAGE	75.06	Aug 2, 1993

a Gage height, 74.41 ft
e Estimated

05056215 EDMORE COULEE TRIBUTARY NEAR WEBSTER, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 2000 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	68.49	67.23	66.77	67.52	e68.49	67.17
2	---	---	---	---	---	---	68.29	67.23	66.78	67.51	e68.35	67.15
3	---	---	---	---	---	---	68.27	67.22	66.78	67.69	e68.25	67.11
4	---	---	---	---	---	---	68.21	67.22	66.79	67.73	e68.14	67.09
5	---	---	---	---	---	---	68.28	67.22	66.80	68.05	e67.97	67.08
6	---	---	---	---	---	---	68.49	e67.22	66.80	e68.65	e67.78	67.07
7	---	---	---	---	---	---	68.69	---	66.80	e69.18	e67.64	67.05
8	---	---	---	---	---	---	68.87	---	66.80	e70.25	e67.50	67.04
9	---	---	---	---	---	---	68.95	---	66.81	e71.20	e67.44	67.02
10	---	---	---	---	---	---	68.98	---	66.82	e71.63	67.40	67.00
11	---	---	---	---	---	---	69.01	---	66.83	e71.48	67.40	67.00
12	---	---	---	---	---	---	69.02	---	67.00	e71.53	67.41	66.99
13	---	---	---	---	---	---	69.01	---	66.93	71.56	67.38	66.99
14	---	---	---	---	---	---	68.87	---	67.11	71.57	67.35	66.97
15	---	---	---	---	---	---	68.73	---	67.15	71.55	67.33	66.96
16	---	---	---	---	---	---	68.52	---	67.12	71.43	67.31	66.93
17	---	---	---	---	---	---	68.35	---	67.04	71.29	67.29	66.92
18	---	---	---	---	---	---	68.22	---	67.02	71.04	67.29	66.92
19	---	---	---	---	---	---	68.00	---	---	70.79	67.29	66.91
20	---	---	---	---	---	---	67.86	---	---	70.54	67.27	66.89
21	---	---	---	---	---	---	67.73	---	---	70.31	67.25	66.87
22	---	---	---	---	---	---	67.55	---	---	70.08	67.22	66.85
23	---	---	---	---	---	---	67.47	---	66.80	69.84	67.20	66.82
24	---	---	---	---	---	---	67.39	---	66.82	69.63	67.19	66.81
25	---	---	---	---	---	---	67.29	e66.74	66.80	69.38	67.19	66.80
26	---	---	---	---	---	---	67.26	66.74	66.81	69.12	67.19	66.81
27	---	---	---	---	---	---	67.26	66.74	67.66	68.89	67.19	66.80
28	---	---	---	---	---	---	67.24	66.75	67.15	68.75	67.17	66.77
29	---	---	---	---	---	e68.82	67.24	66.75	67.12	e68.67	67.15	66.75
30	---	---	---	---	---	68.69	67.24	66.76	67.74	e68.70	67.13	e66.74
31	---	---	---	---	---	68.55	---	66.77	---	e68.67	67.15	---
MEAN	---	---	---	---	---	---	68.16	---	---	69.81	67.46	66.94
MAX	---	---	---	---	---	---	69.02	---	---	71.63	68.49	67.17
MIN	---	---	---	---	---	---	67.24	---	---	67.51	67.13	66.74

e Estimated

05056215 EDMORE COULEE TRIBUTARY NEAR WEBSTER, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1986 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1300	89	8.0	6.7	939	953	13.5	9.5	59.9	32.0	15.5	2	84.2
JUL													
07...	1520	101	7.7	7.8	872	889	24.5	24.0	55.2	28.0	10.8	2	89.5

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	38	181	38.0	.13	18.5	292	632	156	<50	<1	4.6	33.7	<1
JUL													
07...	42	260	22.8	.12	35.5	221	586	169	<50	<1	4.8	41.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	<50	<1	<1	2.2	60	<1	100	3.99	2	<1	<1.0	2.3
JUL												
07...	80	<1	2	2.7	60	<1	100	4.83	3	<1	<1.0	5.6

Remark codes used in this table:
< -- Less than.

05056220 SWEETWATER LAKE AT SWEETWATER, ND

LOCATION.--Lat 48°12'37", long 98°52'15", in NE¼SW¼SW¼ sec.27, T.155 N., R.64 W., Ramsey County, Hydrologic Unit 09020201, at southwest arm of lake 6 mi north of Devils Lake.

DRAINAGE AREA.--670 mi^2 of which about 290 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1962-87, 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
FEB													
23...	1435	1.2	.70	8.0	2,280	800	162	96.0	28.7	4	240	38	479
MAY													
23...	1740	2.0	.50	8.4	1,130	340	69.7	39.2	16.4	2	97.5	37	232
SEP													
07...	1135	2.4	.00	8.8	1,090	330	66.0	39.9	15.5	3	110	41	282

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
FEB													
23...	69.2	.28	33.7	777	1,660	3.2	.07	<.06	<.008	3.1	.03	.18	--
MAY													
23...	33.2	.16	16.0	324	720	1.9	<.04	<.06	<.008	--	.03	.25	4.4d
SEP													
07...	30.4	.16	26.1	266	699	2.1	<.04	E.04n	<.008	--	.60	.74	E15.5d

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

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
FEB													
23...	--	<50	<1	7.9	132	<1	<50	<1	1	5.6	40	<1	220
MAY													
23...	<.1d	<50	<1	3.4	51.1	<1	70	<1	1	3.2	10	<1	<10
SEP													
07...	<.1d	<50	<1	11.4	55.7	<1	60	<1	3	2.5	<10	<1	<10

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
FEB					
23...	8.62	2	<1	<1.0	5.3
MAY					
23...	4.72	1	<1	<1.0	<1
SEP					
07...	3.76	4	<1	<1.0	1.2

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

05056220 SWEETWATER LAKE AT SWEETWATER, ND—Continued

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
FEB													
23...	1430	1.5	1,458.53	.66	.80	10.8	90	<5.0	729	11.7	87	7.9	2,360
23...	1431	--	--	--	1.4	--	--	--	--	9.3	--	7.9	2,330
23...	1432	--	--	--	1.5	--	--	--	--	8.3	--	7.9	2,340
MAY													
23...	1730	2.3	1,459.54	--	.60	9.60	200	<5.0	718	8.9	98	7.3	1,160
23...	1731	--	--	--	1.5	--	--	--	--	8.6	--	7.4	1,160
23...	1732	--	--	--	2.0	--	--	--	--	8.4	--	7.6	1,170
23...	1733	--	--	--	2.3	--	--	--	--	7.5	--	7.7	1,170
SEP													
07...	1127	2.5	1,459.60	--	.00	10.0	--	<5.0	727	9.5	107	8.6	1,060
07...	1128	--	--	--	1.0	--	--	--	--	9.4	--	8.4	1,050
07...	1129	--	--	--	1.5	--	--	--	--	7.5	--	8.6	1,060
07...	1130	--	--	--	2.0	--	--	--	--	7.6	--	8.5	1,060
07...	1131	--	--	--	2.5	--	--	--	--	7.4	--	8.6	1,060

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
FEB		
23...	-3.0	1.0
23...	--	1.8
23...	--	1.8
MAY		
23...	21.5	16.9
23...	--	16.2
23...	--	16.9
23...	--	16.7
SEP		
07...	26.5	18.9
07...	--	18.9
07...	--	17.6
07...	--	17.5
07...	--	17.4

Remark codes used in this table:
< -- Less than.

05056222 MORRISON LAKE NEAR WEBSTER, ND

LOCATION.--Lat 48°15'35", long 98°50'48", in NW$^1/_4$ sec.11, T.155 N., R.64 W., Ramsey County, Hydrologic Unit 09020201, on northwest shoreline of Morrison Lake and 2 mi southeast of Webster.

DRAINAGE AREA.--501 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage frequently affected by wind. Gage height for Jan. 26 from once daily observation of gage height.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 62.60 ft, Apr. 27-28, 1997; minimum recorded, 53.35 ft, Sept. 17, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 60.98 ft, July 19-20; minimum recorded, 58.29 ft, Nov. 22.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.10	58.59	58.42	58.53	---	58.57	58.52	---	59.41	60.14	60.54	59.47
2	59.14	58.62	58.43	58.57	58.56	---	58.55	59.23	59.49	60.23	60.51	59.58
3	59.07	58.59	58.42	58.58	58.56	58.55	58.60	59.27	59.51	60.25	60.51	59.54
4	59.10	58.54	58.42	58.59	58.56	58.54	58.66	59.25	59.50	60.26	60.43	59.57
5	59.10	58.55	58.41	58.60	58.56	---	58.72	59.24	59.46	60.30	60.39	59.60
6	59.09	58.52	---	58.62	---	58.55	58.79	59.25	59.48	60.28	60.34	59.57
7	59.05	58.51	58.40	---	---	58.54	58.86	59.27	59.46	60.25	60.27	59.60
8	58.94	58.56	58.40	---	---	58.54	58.92	59.29	59.51	60.44	60.22	59.59
9	58.91	58.54	58.40	---	---	58.54	58.98	59.23	59.55	60.47	60.16	59.57
10	58.93	58.45	58.40	---	---	58.55	59.02	59.23	59.57	60.55	60.11	59.38
11	58.88	58.49	58.39	---	58.57	58.54	59.08	59.22	59.60	60.63	60.10	59.40
12	58.85	58.50	58.39	---	58.56	58.54	59.15	59.29	59.67	60.70	60.04	59.38
13	58.77	58.51	58.37	---	58.56	58.55	59.17	59.28	59.67	60.75	59.99	59.35
14	58.81	58.52	58.40	---	58.57	58.55	59.23	59.19	59.71	60.81	59.96	59.37
15	58.67	58.50	58.43	---	---	58.56	59.32	59.30	59.76	60.89	59.92	59.37
16	58.71	58.47	58.43	---	---	58.57	59.23	59.33	59.78	60.90	59.88	59.33
17	58.75	58.46	58.42	---	---	58.59	59.30	59.38	59.74	60.92	59.82	59.30
18	58.79	58.46	58.42	---	---	58.57	59.30	59.37	59.69	60.90	59.81	59.33
19	58.79	58.48	58.43	---	---	58.57	59.16	---	59.79	60.95	59.77	59.34
20	58.73	58.40	58.38	---	---	58.58	59.15	---	59.79	60.97	59.72	59.33
21	58.75	58.44	58.38	---	---	58.59	59.07	59.39	59.77	60.96	59.70	59.30
22	58.70	58.42	58.39	---	---	58.58	58.92	---	59.75	60.95	59.66	59.30
23	58.66	58.39	58.40	---	58.54	58.57	59.07	---	59.76	60.93	59.59	59.26
24	58.68	58.43	58.41	---	---	58.55	59.09	59.53	59.71	60.90	59.56	59.28
25	58.70	58.43	58.41	---	58.55	58.53	59.07	59.50	59.71	60.85	59.60	59.29
26	58.70	58.43	58.42	58.60	58.57	58.52	59.07	59.43	59.77	60.80	59.56	59.29
27	58.73	58.43	58.44	---	58.58	58.51	---	59.43	59.91	60.78	59.55	59.25
28	58.68	58.43	58.44	---	58.58	58.51	59.15	59.48	59.95	60.74	59.57	59.22
29	58.60	58.43	58.45	---	---	58.49	59.19	59.49	60.01	60.67	59.57	59.23
30	58.50	58.43	58.47	---	---	58.48	59.22	59.51	60.01	60.64	59.57	59.22
31	58.63	---	58.50	---	---	58.49	---	59.50	---	60.58	59.54	---
MEAN	58.82	58.48	---	---	---	---	---	---	59.68	60.66	59.93	59.39
MAX	59.14	58.62	---	---	---	---	---	---	60.01	60.97	60.54	59.60
MIN	58.50	58.39	---	---	---	---	---	---	59.41	60.14	59.54	59.22

05056222 MORRISON LAKE NEAR WEBSTER, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
FEB													
23...	1520	1.3	.80	8.0	1,740	580	118	70.1	25.0	3	169	37	348
MAY													
23...	1840	2.5	1.0	8.4	1,130	350	71.7	41.2	16.5	2	100	37	229
SEP													
07...	0920	3.0	.00	8.5	1,070	320	67.5	37.1	15.4	2	100	39	261

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
FEB													
23...	52.2	.24	7.18	559	1,200	2.6	.42	--	.10	<.008	2.2	.05	.11
MAY													
23...	32.4	.14	5.03	329	729	1.8	.12	.05	.06	.013	1.7	<.02	.15
SEP													
07...	28.1	.16	33.5	277	683	2.1	E.02n	--	E.05n	<.008	--	.38	.59

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

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
FEB													
23...	2.7	--	--	<50	<1	4.2	116	<1	<50	<1	1	4.2	50
MAY													
23...	1.9	6.7d	<.1d	<50	<1	2.3	57.8	<1	60	<1	2	2.4	20
SEP													
07...	--	E26.7d	<.1d	<50	<1	12.8	73.1	<1	<50	<1	<1	3.0	<10

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

Date	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
FEB							
23...	<1	590	7.34	<1	<1	<1.0	5.8
MAY							
23...	<1	<10	4.98	1	<1	<1.0	3.4
SEP							
07...	<1	<10	5.37	13	<1	<1.0	2.6

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

05056222 MORRISON LAKE NEAR WEBSTER, ND—Continued

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
FEB													
23...	1500	1.9	1,458.53	.73	.80	39.6	90	<5.0	729	6.0	44	7.5	1,780
23...	1501	--	--	--	1.3	--	--	--	--	5.8	--	7.6	1,790
23...	1502	--	--	--	1.9	--	--	--	--	5.0	--	7.5	1,740
MAY													
23...	1830	2.7	1,459.54	--	.70	10.8	180	<5.0	718	9.6	106	7.8	1,180
23...	1831	--	--	--	1.1	--	--	--	--	9.3	--	7.9	1,180
23...	1832	--	--	--	1.8	--	--	--	--	9.2	--	7.9	1,180
23...	1833	--	--	--	2.5	--	--	--	--	8.8	--	7.9	1,180
23...	1834	--	--	--	2.7	--	--	--	--	7.8	--	7.9	1,190
SEP													
07...	0910	3.0	1,459.60	--	.00	5.00	120	<5.0	728	8.1	88	8.3	1,050
07...	0911	--	--	--	1.0	--	--	--	--	8.0	--	8.3	1,050
07...	0912	--	--	--	1.5	--	--	--	--	8.0	--	8.3	1,050
07...	0913	--	--	--	2.0	--	--	--	--	7.9	--	8.2	1,050
07...	0914	--	--	--	2.5	--	--	--	--	7.8	--	8.3	1,050
07...	0915	--	--	--	3.0	--	--	--	--	7.8	--	8.3	1,050

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
FEB		
23...	-1.0	.9
23...	--	2.2
23...	--	2.7
MAY		
23...	22.5	16.9
23...	--	16.9
23...	--	16.8
23...	--	16.7
23...	--	16.4
SEP		
07...	19.0	17.4
07...	--	17.4
07...	--	17.4
07...	--	17.4
07...	--	17.4
07...	--	17.4

Remark codes used in this table:
< -- Less than.

05056239 STARKWEATHER COULEE NEAR WEBSTER, ND

LOCATION.--Lat 48°19'14", long 98°56'25", in NW¼SW¼NW¼ sec.19, T.156 N., R.64 W., Ramsey County, Hydrologic Unit 09020201, on right bank 100 ft upstream from bridge on township road and 3.8 mi northwest of Webster.

DRAINAGE AREA.--About 310 mi^2, of which about 100 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year (seasonal records only since 1987).

GAGE.--Water-stage recorder. Datum of gage is 1,448 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 23, 1986, nonrecording gage 100 ft downstream at same datum.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 522 ft^3/s, July 8, gage height, 6.65 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	297	15	1.6	337	44	0.41
2	---	---	---	---	---	e0.00	294	12	1.5	348	42	0.19
3	---	---	---	---	---	e0.00	249	8.9	0.75	349	39	0.02
4	---	---	---	---	---	e0.00	242	7.0	1.0	343	39	0.00
5	---	---	---	---	---	e0.00	241	4.5	0.61	341	34	0.00
6	---	---	---	---	---	e0.00	223	2.8	0.07	340	29	0.00
7	---	---	---	---	---	e0.00	219	2.2	1.2	342	25	0.00
8	---	---	---	---	---	e0.00	228	6.7	1.8	446	21	0.00
9	---	---	---	---	---	e0.00	230	12	3.6	425	17	0.00
10	---	---	---	---	---	e0.00	227	11	2.7	423	14	0.00
11	---	---	---	---	---	e0.00	229	10	3.4	413	15	0.00
12	---	---	---	---	---	e0.00	231	8.7	12	395	14	0.00
13	---	---	---	---	---	e0.00	229	6.8	36	364	11	0.00
14	---	---	---	---	---	e0.00	219	5.8	102	333	9.7	0.00
15	---	---	---	---	---	e0.00	191	4.9	126	304	7.0	0.00
16	---	---	---	---	---	e0.00	158	3.1	118	266	5.1	0.00
17	---	---	---	---	---	e0.00	124	1.8	106	238	3.8	0.00
18	---	---	---	---	---	e0.00	91	1.6	92	208	3.0	0.00
19	---	---	---	---	---	e0.00	73	1.6	87	182	2.3	0.00
20	---	---	---	---	---	e0.00	61	1.3	99	149	1.4	0.00
21	---	---	---	---	---	e0.00	52	2.6	101	123	0.54	0.00
22	---	---	---	---	---	e0.00	46	3.3	96	104	0.42	0.00
23	---	---	---	---	---	e0.00	45	4.7	90	93	1.0	0.00
24	---	---	---	---	---	e0.00	41	3.7	83	87	2.9	0.00
25	---	---	---	---	---	e0.00	36	6.1	76	78	5.2	0.00
26	---	---	---	---	---	e0.00	32	6.1	77	72	16	0.00
27	---	---	---	---	---	e0.50	28	4.6	287	65	13	0.00
28	---	---	---	---	---	e7.5	26	3.5	254	61	9.5	0.00
29	---	---	---	---	---	e25	22	2.6	294	58	5.7	0.00
30	---	---	---	---	---	e90	18	1.7	335	51	2.5	0.00
31	---	---	---	---	---	e125	---	1.5	---	46	1.5	---
TOTAL	---	---	---	---	---	248.00	4,402	168.1	2,489.23	7,384	434.56	0.62
MEAN	---	---	---	---	---	8.00	147	5.42	83.0	238	14.0	0.02
MAX	---	---	---	---	---	125	297	15	335	446	44	0.41
MIN	---	---	---	---	---	0.00	18	1.3	0.07	46	0.42	0.00
AC-FT	---	---	---	---	---	492	8,730	333	4,940	14,650	862	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

MEAN	1.30	0.12	0.01	0.00	0.69	23.6	134	31.1	21.3	29.7	15.1	2.60
MAX	5.53	1.09	0.09	0.00	6.61	180	490	284	162	238	138	22.0
(WY)	(1983)	(1981)	(1983)	(1980)	(1981)	(1992)	(2004)	(1997)	(2002)	(2005)	(1993)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00
(WY)	(1980)	(1980)	(1980)	(1980)	(1980)	(1980)	(2000)	(1980)	(1980)	(1980)	(1980)	(1981)

05056239 STARKWEATHER COULEE NEAR WEBSTER, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1980 - 2005	
ANNUAL MEAN	[a]12.1	
HIGHEST ANNUAL MEAN	[a]24.5	1987
LOWEST ANNUAL MEAN	[a]0.88	1980
HIGHEST DAILY MEAN	903	Apr 9, 2004
LOWEST DAILY MEAN	0.00	Oct 1, 1979
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1979
MAXIMUM PEAK FLOW	[b]908	Apr 9, 2004
MAXIMUM PEAK STAGE	[c]10.05	Apr 6, 1989
ANNUAL RUNOFF (AC-FT)	[a]8,790	
10 PERCENT EXCEEDS	27	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1980-87, 1994)
b Gage height, 7.68 ft
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 2000 to current year (seasonal records only).

REMARKS.--Gaps in record are result of ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.98	1.65	1.18	5.37	2.21	1.09
2	---	---	---	---	---	---	4.94	1.57	1.18	5.47	2.18	1.05
3	---	---	---	---	---	---	4.49	1.49	1.13	5.48	2.12	0.99
4	---	---	---	---	---	---	4.41	1.44	1.15	5.44	2.12	0.96
5	---	---	---	---	---	---	4.40	1.35	1.11	5.42	2.02	0.94
6	---	---	---	---	---	e1.65	4.22	1.29	1.02	5.41	1.92	0.92
7	---	---	---	---	---	1.75	4.19	1.26	1.16	5.43	1.82	0.89
8	---	---	---	---	---	e1.65	4.27	1.39	1.20	6.26	1.72	0.88
9	---	---	---	---	---	1.57	4.29	1.52	1.27	6.16	1.64	0.86
10	---	---	---	---	---	1.54	4.26	1.49	1.24	6.15	1.57	0.88
11	---	---	---	---	---	1.52	4.27	1.48	1.26	6.08	1.59	0.83
12	---	---	---	---	---	1.50	4.30	1.43	1.48	5.94	1.57	0.81
13	---	---	---	---	---	1.46	4.28	1.38	1.99	5.71	1.48	0.81
14	---	---	---	---	---	1.40	4.22	1.35	3.02	5.48	1.45	0.78
15	---	---	---	---	---	e1.39	3.99	1.32	3.34	5.25	1.38	0.79
16	---	---	---	---	---	---	3.70	1.25	3.24	4.92	1.31	0.78
17	---	---	---	---	---	---	3.35	1.20	3.08	4.68	1.27	0.78
18	---	---	---	---	---	---	2.94	1.19	2.90	4.39	1.24	0.78
19	---	---	---	---	---	---	2.69	1.19	2.82	4.13	1.21	0.78
20	---	---	---	---	---	---	2.50	1.17	2.99	3.76	1.16	0.78
21	---	---	---	---	---	---	2.35	1.23	3.02	3.46	1.11	0.77
22	---	---	---	---	---	---	2.25	1.26	2.95	3.20	1.09	0.77
23	---	---	---	---	---	1.51	2.23	1.31	2.87	3.05	1.13	0.75
24	---	---	---	---	---	e1.52	2.17	1.28	2.77	2.96	1.23	0.76
25	---	---	---	---	---	e1.57	2.09	1.36	2.67	2.83	1.32	0.76
26	---	---	---	---	---	1.66	2.02	1.36	2.67	2.72	1.62	0.76
27	---	---	---	---	---	1.85	1.94	1.31	4.92	2.62	1.55	0.76
28	---	---	---	---	---	2.16	1.89	1.27	4.64	2.54	1.44	0.74
29	---	---	---	---	---	2.79	1.80	1.23	4.98	2.48	1.33	0.74
30	---	---	---	---	---	3.94	1.71	1.19	5.35	2.37	1.22	0.75
31	---	---	---	---	---	e4.23	---	1.19	---	2.26	1.16	---
MEAN	---	---	---	---	---	---	3.37	1.34	2.49	4.43	1.52	0.83
MAX	---	---	---	---	---	---	4.98	1.65	5.35	6.26	2.21	1.09
MIN	---	---	---	---	---	---	1.71	1.17	1.02	2.26	1.09	0.74

e Estimated

05056239 STARKWEATHER COULEE NEAR WEBSTER, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1980 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1545	236	8.1	6.6	596	604	19.0	10.5	49.9	21.3	16.2	.6	20.0
JUL													
08...	1040	437	7.7	7.6	498	506	21.0	21.5	42.6	20.1	11.2	.8	23.9

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	16	149	16.3	.20	21.5	132	347	234	<50	<1	6.7	36.6	<1
JUL													
08...	20	135	12.3	.10	20.8	95.6	289	363	<50	<1	4.3	45.7	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	<50	<1	<1	3.2	40	<1	<10	4.73	2	<1	<1.0	5.7
JUL												
08...	60	<1	<1	2.5	30	<1	<10	4.55	2	<1	<1.0	4.0

Remark codes used in this table:
< -- Less than.

05056241 DRY LAKE NEAR PENN, ND

LOCATION.--Lat 48°13'52", long 98°58'59", in NW¼NW¼SW¼ sec.23, T.155 N., R.65 W., Ramsey County, Hydrologic Unit 09020201, on west shoreline of Dry Lake and 6 mi east of Penn.

DRAINAGE AREA.--920 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1983 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage is affected by wind at times. Gage height for Dec. 8 from once daily observation of gage height.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 52.02 ft, May 2, 1997; minimum recorded, 41.80 ft, Sept. 14 and Oct. 1-20, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 50.09 ft, July 17; minimum recorded, 47.90 ft, Dec. 25.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	48.26	47.95	47.99	48.00	---	48.14	48.15	48.14	49.10	49.60	48.67
2	---	48.22	47.95	48.02	48.00	---	48.18	48.11	48.24	49.20	49.59	48.59
3	---	48.31	47.95	48.02	48.00	---	48.21	48.12	48.30	49.27	49.75	48.57
4	48.34	48.26	47.95	---	48.00	48.01	48.23	48.16	48.25	49.32	49.65	48.59
5	48.39	48.25	---	---	47.99	47.99	48.24	48.20	48.23	49.31	49.55	48.60
6	48.40	48.25	---	48.01	---	47.99	48.26	48.15	48.18	49.31	49.52	48.56
7	48.43	48.20	48.02	48.01	---	47.98	48.27	48.18	48.20	49.33	49.45	48.52
8	48.44	48.19	48.04	48.01	---	47.98	48.27	48.25	48.20	49.57	49.42	48.52
9	48.40	48.24	---	48.01	---	47.98	48.17	48.20	48.25	49.64	49.35	48.53
10	48.45	48.22	48.04	48.01	---	48.00	48.18	48.18	48.26	49.73	49.26	48.53
11	48.46	48.15	48.05	48.01	48.01	47.99	48.27	48.10	48.31	49.82	49.27	48.56
12	48.42	48.16	48.04	48.02	48.00	47.99	48.35	48.07	48.33	49.86	49.24	48.49
13	48.39	48.08	48.02	48.01	47.99	48.00	48.43	48.19	48.33	49.88	49.19	48.46
14	48.39	48.07	48.02	47.99	47.98	---	48.41	48.17	48.42	49.93	49.11	48.43
15	48.42	48.09	48.02	47.99	47.97	---	48.71	48.11	48.41	49.98	49.10	48.43
16	48.28	48.09	48.00	47.99	---	---	48.70	48.15	48.44	49.98	49.05	48.42
17	48.29	48.05	48.00	47.99	---	---	48.63	48.17	48.44	50.01	49.02	48.38
18	48.30	48.02	---	---	---	48.01	48.73	48.27	48.46	49.99	48.98	48.33
19	48.37	48.02	---	47.99	---	48.01	48.72	48.28	48.61	49.94	48.95	48.35
20	48.40	48.01	---	47.99	---	48.01	48.56	48.25	48.56	49.96	48.91	48.36
21	48.40	47.98	---	48.01	---	48.02	48.55	48.23	48.51	49.93	48.87	48.36
22	48.42	48.03	---	48.01	---	48.03	48.45	48.31	48.48	49.92	48.82	48.30
23	48.36	47.99	47.93	48.01	47.99	48.04	48.32	48.24	48.52	49.90	48.81	48.29
24	48.36	47.98	47.92	48.02	47.99	48.04	48.34	48.25	48.47	49.90	48.87	48.32
25	48.36	47.97	47.91	48.01	47.99	48.04	48.34	48.27	48.42	49.89	48.92	48.25
26	48.38	47.97	47.93	47.99	47.99	48.05	48.19	48.20	48.45	49.82	48.85	48.26
27	48.35	47.96	47.95	47.99	---	48.06	48.14	48.14	48.79	49.78	48.79	48.28
28	48.39	47.95	47.94	48.00	47.99	48.06	48.16	48.14	48.83	49.77	48.74	48.21
29	48.40	47.95	47.94	47.99	---	48.08	48.19	48.16	48.92	49.71	48.70	48.16
30	48.25	47.96	47.95	47.99	---	48.11	48.20	48.14	49.11	49.68	48.68	48.19
31	48.22	---	47.97	48.00	---	48.13	---	48.16	---	49.67	48.65	---
MEAN	---	48.10	---	---	---	---	48.35	48.18	48.44	49.71	49.12	48.42
MAX	---	48.31	---	---	---	---	48.73	48.31	49.11	50.01	49.75	48.67
MIN	---	47.95	---	---	---	---	48.14	48.07	48.14	49.10	48.65	48.16

05056241 DRY LAKE NEAR PENN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
12...	1730	2.0	1.0	8.2	980	320	65.6	37.6	18.5	2	77.1	33	216
FEB													
22...	1525	1.2	.70	7.8	1,610	560	116	64.9	29.7	3	145	34	373
MAY													
24...	1500	1.5	.50	8.3	1,060	320	65.4	39.1	19.4	2	89.4	36	222
SEP													
06...	1310	2.0	.50	8.5	1,010	330	70.9	36.9	17.3	2	82.3	34	233

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
OCT													
12...	30.4	.20	26.2	258	619	2.8	.28	.73	.77	.043	2.5	.19	.36
FEB													
22...	49.8	.28	35.5	457	1,090	2.7	.16	--	1.67	E.004n	2.5	.34	.40
MAY													
24...	34.8	.15	11.3	286	668	1.7	.12	.59	.60	.012	1.6	.18	.29
SEP													
06...	26.5	.16	26.0	265	639	1.6	<.04	--	<.06	<.008	--	.23	.42

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

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
12...	3.6	40.8d	<.1d	--	--	9.5	--	--	--	--	--	--	20
FEB													
22...	4.3	--	--	<50	<1	13.9	101	<1	<50	<1	<1	4.9	50
MAY													
24...	2.3	1.5d	<.1d	<50	<1	4.9	53.6	<1	70	<1	1	2.7	20
SEP													
06...	--	E6.0d	<.1d	<50	<1	11.2	63.8	<1	100	<1	3	2.6	<10

05056241 DRY LAKE NEAR PENN, ND—Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT											
12...	<1	50	10	<.20	3	--	7	--	270	--	--
FEB											
22...	<1	--	30	--	--	8.75	2	<1	--	<1.0	4.0
MAY											
24...	<1	--	10	--	--	4.69	<1	<1	--	<1.0	1.5
SEP											
06...	<1	--	<10	--	--	4.45	5	<1	--	<1.0	2.5

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
12...	1725	2.0	1,448.40	--	.00	6.00	65	8.0	722	9.8	98	8.2	979
12...	1726	--	--	--	1.0	--	--	--	--	9.8	--	8.2	981
12...	1727	--	--	--	2.0	--	--	--	--	9.7	--	8.2	981
FEB													
22...	1520	1.5	1,449.03	.64	.80	14.1	200	<5.0	728	8.6	63	7.3	1,660
22...	1521	--	--	--	1.5	--	--	--	--	8.1	--	7.3	1,640
MAY													
24...	1445	1.8	--	--	.70	16.0	180	5.0	718	8.4	95	7.9	1,100
24...	1446	--	--	--	1.0	--	--	--	--	8.2	--	8.0	1,100
24...	1447	--	--	--	1.5	--	--	--	--	8.0	--	8.0	1,090
24...	1448	--	--	--	1.8	--	--	--	--	7.9	--	8.0	1,100
SEP													
06...	1305	2.2	1,448.54	--	.00	13.0	60	11	727	8.7	97	8.1	998
06...	1306	--	--	--	1.0	--	--	--	--	8.6	--	8.2	998
06...	1307	--	--	--	2.0	--	--	--	--	8.6	--	8.2	999
06...	1308	--	--	--	2.2	--	--	--	--	8.5	--	8.2	999

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
12...	14.0	12.4
12...	--	12.4
12...	--	12.4
FEB		
22...	<-5.0	.7
22...	--	1.2
MAY		
24...	21.5	18.4
24...	--	18.4
24...	--	18.4
24...	--	18.4
SEP		
06...	20.0	18.3
06...	--	18.3
06...	--	18.3
06...	--	18.3

Remark codes used in this table:
< -- Less than.

05056250 LAKE ALICE NEAR CHURCHS FERRY, ND

LOCATION.--Lat 48°19'33", long 99°07'16", in SE¼NE¼NE¼ sec.11, T.156 N., R.66 W., Ramsey County, Hydrologic Unit 09020201, at northwest corner of lake 7.5 mi northwest of Churchs Ferry.

DRAINAGE AREA.--2,100 mi^2, approximately, of which about 500 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1962-64, 1966-87, 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
12...	1505	2.0	1.0	8.5	1,130	430	80.9	54.6	17.8	2	76.1	27	292
FEB													
22...	1220	1.3	.80	8.0	1,540	600	115	76.9	23.6	2	112	28	404
MAY													
23...	1440	1.5	.50	8.4	1,120	420	79.8	52.8	17.4	2	74.2	27	280
AUG													
16...	1300	2.5	1.0	8.9	1,010	390	77.7	48.4	14.6	1	61.8	24	300

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
OCT													
12...	33.0	.19	21.2	297	736	2.5	.06	--	.23	<.008	2.5	.11	.25
FEB													
22...	44.3	.23	28.1	418	1,030	2.5	.10	.22	.37	.148	2.4	.23	.33
MAY													
23...	30.0	.15	20.4	289	712	1.9	.11	.41	.44	.025	1.8	.14	.26
AUG													
16...	25.6	.16	24.5	249	659	2.9	<.04	--	<.06	<.008	--	.53	.70

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

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
12...	2.7	18.0d	<.1d	--	--	6.3	--	--	--	--	--	--	10
FEB													
22...	2.9	--	--	<50	<1	7.7	81.1	<1	<50	<1	1	3.3	30
MAY													
23...	2.4	.5d	<.1d	<50	<1	3.6	54.2	<1	70	<1	1	3.0	20
AUG													
16...	--	E40.3d	<.1d	<50	<1	9.3	56.3	<1	100	<1	7	3.5	60

05056250 LAKE ALICE NEAR CHURCHS FERRY, ND—Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT											
12...	<1	70	<10	<.20	2	--	7	--	330	--	--
FEB											
22...	<1	--	360	--	--	6.58	<1	<1	--	<1.0	4.5
MAY											
23...	<1	--	<10	--	--	4.64	<1	<1	--	<1.0	6.0
AUG											
16...	<1	--	190	--	--	4.28	4	<1	--	<1.0	3.6

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
12...	1447	2.6	1,448.66	--	.00	14.4	60	<5.0	719	10.1	99	8.3	1,130
12...	1448	--	--	--	1.0	--	--	--	--	10.1	--	8.2	1,130
12...	1449	--	--	--	2.0	--	--	--	--	9.9	--	8.2	1,130
12...	1500	--	--	--	2.6	--	--	--	--	9.9	--	8.2	1,130
FEB													
22...	1215	2.5	1,448.19	.70	.80	9.60	180	<5.0	730	9.3	69	7.0	1,590
22...	1216	--	--	--	1.6	--	--	--	--	9.2	--	7.1	1,580
22...	1217	--	--	--	2.5	--	--	--	--	6.5	--	7.1	1,540
MAY													
23...	1430	2.0	1,448.38	--	.00	10.8	205	<5.0	717	7.9	86	7.1	1,160
23...	1431	--	--	--	.50	--	--	--	--	7.8	--	7.1	1,160
23...	1432	--	--	--	1.0	--	--	--	--	7.7	--	7.2	1,160
23...	1433	--	--	--	1.5	--	--	--	--	7.6	--	7.4	1,160
23...	1434	--	--	--	2.0	--	--	--	--	7.5	--	7.6	1,160
AUG													
16...	1255	3.1	1,449.10	--	.00	28.0	95	6.0	725	9.3	107	9.0	1,010
16...	1256	--	--	--	1.6	--	--	--	--	8.8	--	8.9	1,010
16...	1257	--	--	--	2.0	--	--	--	--	9.1	--	8.9	1,010
16...	1258	--	--	--	3.1	--	--	--	--	9.1	--	8.9	1,010

05056250 LAKE ALICE NEAR CHURCHS FERRY, ND—Continued

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
12...	15.0	11.6
12...	--	11.5
12...	--	11.5
12...	--	11.5
FEB		
22...	-3.0	1.3
22...	--	2.1
22...	--	4.0
MAY		
23...	22.0	16.4
23...	--	16.3
23...	--	16.2
23...	--	16.2
23...	--	16.2
AUG		
16...	24.0	19.4
16...	--	19.1
16...	--	18.9
16...	--	18.7

Remark codes used in this table:
< -- Less than.

05056255 LAKE ALICE-IRVINE CHANNEL NEAR CHURCHS FERRY, ND

LOCATION.--Lat 48°19'25", long 99°08'43", in NW¼NE¼ sec.21, T.156 N., R.66 W., Ramsey County, Hydrologic Unit 09020201, on downstream side of control structure between Lake Alice and Lake Irvine, 5 mi northwest of Churchs Ferry.

DRAINAGE AREA.--999 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1985 to September 1987 (seasonal records only) and April 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Elevation at gage frequently affected by wind.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 49.50 ft, June 15, 2004; minimum recorded, 39.51 ft, Oct. 7, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 49.49 ft, July 16; minimum recorded, 48.17 ft, many days.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.63	48.58	48.36	---	48.20	48.18	48.28	---	48.38	48.89	49.25	48.82
2	48.64	48.59	48.38	---	48.20	48.18	48.30	---	48.42	48.97	49.26	48.83
3	48.63	48.59	48.38	---	48.20	48.19	48.31	---	48.41	48.99	49.31	48.85
4	48.62	48.55	48.38	---	48.20	48.19	48.33	---	48.39	49.00	49.25	48.86
5	48.64	48.56	48.38	---	48.19	48.19	48.36	---	48.35	49.02	49.24	48.84
6	48.65	48.54	48.39	48.19	48.19	48.20	48.39	---	48.33	49.07	49.24	48.78
7	48.68	48.53	48.39	48.19	48.18	48.19	48.42	---	48.35	49.13	49.22	48.77
8	48.64	48.52	48.38	48.18	48.18	48.19	48.46	---	48.46	49.23	49.20	48.77
9	48.66	48.54	48.38	48.18	48.19	48.19	48.50	---	48.52	49.29	49.16	48.79
10	48.70	48.51	48.37	48.18	48.20	48.20	48.54	---	48.55	49.32	49.14	48.81
11	48.67	48.50	48.38	48.19	48.20	48.19	48.55	---	48.58	---	49.18	48.76
12	48.66	48.51	48.37	48.19	48.19	48.19	48.58	---	48.61	49.35	49.16	48.72
13	48.60	48.51	48.36	48.19	48.19	48.19	48.58	---	48.59	49.36	49.16	48.68
14	48.60	48.55	48.36	48.19	48.19	48.19	48.63	---	48.66	49.40	49.12	48.67
15	48.52	48.55	48.35	48.18	48.19	48.19	48.63	---	48.67	49.43	49.11	48.66
16	48.51	48.53	48.34	48.17	48.19	48.19	48.62	---	48.69	49.47	49.09	48.64
17	48.52	48.51	48.34	48.18	48.18	48.19	48.63	---	48.72	49.45	49.09	48.59
18	48.55	48.50	48.31	48.19	48.18	48.18	48.63	---	48.77	49.42	49.07	48.56
19	48.63	48.51	48.32	48.18	48.18	48.18	48.53	---	48.69	49.46	49.04	48.57
20	48.63	48.44	48.32	48.18	48.18	48.18	48.49	---	48.63	49.45	49.00	48.56
21	48.65	48.45	48.31	48.20	48.18	48.18	48.47	---	48.61	49.44	48.99	48.54
22	48.64	48.46	48.30	48.20	48.19	48.19	48.39	---	48.62	49.43	48.99	48.51
23	48.61	48.42	48.31	48.21	---	48.21	48.39	48.38	48.59	49.42	49.02	48.53
24	48.62	48.41	48.31	48.21	48.19	48.20	48.41	48.38	48.53	49.41	49.11	48.50
25	48.65	48.41	48.29	48.22	48.18	48.20	48.37	48.36	48.52	49.37	49.12	48.48
26	48.67	48.41	48.29	48.20	48.18	48.21	48.32	48.30	48.59	49.33	49.06	48.47
27	48.69	48.40	48.29	48.21	48.19	48.22	---	48.25	48.76	49.31	49.02	48.46
28	48.70	48.39	48.29	48.21	48.18	48.23	---	48.26	48.76	49.30	48.99	48.40
29	48.65	48.39	48.29	48.20	---	48.24	---	48.27	48.83	49.30	48.97	48.41
30	48.57	48.37	---	48.21	---	48.26	---	48.27	48.85	49.28	48.96	48.40
31	48.59	---	---	48.20	---	48.27	---	48.31	---	49.26	48.88	---
MEAN	48.63	48.49	---	---	---	48.20	---	---	48.58	---	49.11	48.64
MAX	48.70	48.59	---	---	---	48.27	---	---	48.85	---	49.31	48.86
MIN	48.51	48.37	---	---	---	48.18	---	---	48.33	---	48.88	48.40

05056260 LAKE IRVINE NEAR CHURCHS FERRY, ND

LOCATION.--Lat 48°16'57", long 99°10'25", in SE¼SW¼SW¼ sec.32, T.156 N., R.66 W., Ramsey County, Hydrologic Unit 09020201, at south end of lake 1¼ mi northwest of Churchs Ferry.

DRAINAGE AREA.--2,120 mi^2, approximately, of which about 500 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-87, 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
12...	1555	2.5	1.0	8.5	1,100	410	73.7	53.8	18.4	2	77.4	28	269
FEB													
22...	1305	1.3	.80	8.1	1,450	560	105	73.1	23.9	2	109	28	367
MAY													
23...	1530	3.0	1.0	8.4	1,140	420	79.0	53.5	17.5	2	76.2	27	285
AUG													
16...	1355	2.5	1.0	9.0	1,090	410	79.5	51.4	16.4	2	70.8	26	301

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
OCT													
12...	33.8	.19	19.3	298	718	2.1	<.04	--	.22	<.008	--	.09	.20
FEB													
22...	42.5	.23	26.0	399	975	2.2	.05	.28	.41	.133	2.2	.11	.19
MAY													
23...	31.3	.17	21.2	296	726	1.7	.11	--	.34	E.007n	1.6	.13	.25
AUG													
16...	31.2	.17	22.8	290	721	1.9	<.04	--	<.06	<.008	--	.31	.40

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

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
12...	2.3	13.5d	<.1d	--	--	5.6	--	--	--	--	--	--	10
FEB													
22...	2.7	--	--	<50	<1	6.8	73.7	<1	50	<1	1	3.4	30
MAY													
23...	2.0	1.8d	<.1d	<50	<1	4.6	51.9	<1	80	<1	2	5.0	20
AUG													
16...	--	E7.0d	<.1d	<50	<1	13.1	54.6	<1	110	<1	7	5.0	60

05056260 LAKE IRVINE NEAR CHURCHS FERRY, ND—Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT											
12...	<1	70	<10	<.20	3	--	6	--	320	--	--
FEB											
22...	<1	--	<10	--	--	6.28	<1	<1	--	<1.0	4.3
MAY											
23...	<1	--	<10	--	--	4.78	<1	<1	--	<1.0	3.0
AUG											
16...	<1	--	<10	--	--	4.34	8	<1	--	<1.0	4.0

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
12...	1550	3.0	1,448.66	--	.00	15.0	65	10	721	10.7	104	8.3	1,100
12...	1551	--	--	--	1.0	--	--	--	--	10.8	--	8.3	1,100
12...	1552	--	--	--	2.0	--	--	--	--	10.8	--	8.3	1,100
12...	1553	--	--	--	3.0	--	--	--	--	10.7	--	8.3	1,110
FEB													
22...	1300	3.0	1,448.19	.73	.80	21.6	210	<5.0	730	11.1	82	7.6	1,490
22...	1301	--	--	--	1.5	--	--	--	--	11.0	--	7.6	1,480
22...	1302	--	--	--	2.2	--	--	--	--	10.9	--	7.6	1,480
22...	1303	--	--	--	3.0	--	--	--	--	6.9	--	7.4	1,500
MAY													
23...	1520	3.6	1,448.38	--	.80	12.0	185	9.0	718	8.6	94	7.9	1,190
23...	1521	--	--	--	1.5	--	--	--	--	8.6	--	8.0	1,190
23...	1522	--	--	--	2.0	--	--	--	--	8.5	--	7.9	1,190
23...	1523	--	--	--	2.5	--	--	--	--	8.5	--	8.0	1,190
23...	1524	--	--	--	3.0	--	--	--	--	8.4	--	8.0	1,190
23...	1525	--	--	--	3.6	--	--	--	--	8.0	--	8.0	1,190
AUG													
16...	1348	3.2	1,449.10	--	.00	38.0	95	5.0	725	10.5	120	8.8	1,100
16...	1349	--	--	--	1.0	--	--	--	--	10.1	--	8.8	1,100
16...	1350	--	--	--	2.0	--	--	--	--	9.6	--	8.8	1,100
16...	1351	--	--	--	3.0	--	--	--	--	8.6	--	8.7	1,100
16...	1352	--	--	--	3.2	--	--	--	--	8.1	--	8.7	1,100

05056260 LAKE IRVINE NEAR CHURCHS FERRY, ND—Continued

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
12...	13.0	11.5
12...	--	11.5
12...	--	11.5
12...	--	11.4
FEB		
22...	-5.0	.9
22...	--	1.6
22...	--	2.9
22...	--	2.9
MAY		
23...	20.0	16.5
23...	--	16.4
23...	--	16.4
23...	--	16.4
23...	--	16.3
23...	--	16.1
AUG		
16...	25.0	19.5
16...	--	19.1
16...	--	19.1
16...	--	19.0
16...	--	18.9

Remark codes used in this table:
< -- Less than.

05056270 BIG COULEE BELOW CHURCHS FERRY, ND

LOCATION.--Lat 48°15'33", long 99°12'00", in NE¼SE¼ sec.12, T. 155 N., R.67 W., Benson County, Hydrologic Unit 09020201, on downstream side of bridge 1 mi south of Churchs Ferry.

DRAINAGE AREA.--1,260 mi^2, approximately, of which about 140 mi^2 is probably noncontributing, drainage area reduced from approximately 2,510 mi^2 with the completion of Channel A in March 1979.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1998 to current year. Seasonal records only 1998-99. Miscellaneous discharge measurements only since Oct. 1, 1999, because of backwater conditions from Devils Lake.

Miscellaneous discharge measurements for Big Coulee below Churchs Ferry

Date	Discharge (ft^3/s)
October 6, 2004	[1,2]-236
April 19, 2005	[1]1,100
April 28, 2005	[1]135
May 25, 2005	579
July 11, 2005	639
August 30, 2005	216

[1]Wind aided
[2]Reverse flow

05056270 BIG COULEE BELOW CHURCHS FERRY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958, 1961-99, 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
19...	0950	1,100	8.1	7.7	1,080	1,110	10.5	11.5	77.3	52.7	16.5	2	76.1
28...	1155	131	8.6	8.0	1,170	1,180	4.0	6.0	81.9	55.5	17.2	2	78.2

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
19...	28	278	33.4	.18	18.7	318	743	2,260	<50	<1	4.3	50.7	<1
28...	27	291	33.6	.16	20.6	312	755	274	<50	<1	4.8	56.5	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
19...	60	<1	<1	1.6	30	<1	<10	4.47	1	<1	<1.0	1.1
28...	60	<1	<1	2.2	40	<1	<10	4.90	<1	<1	<1.0	1.7

Remark codes used in this table:
< -- Less than.

05056340 LITTLE COULEE NEAR LEEDS, ND

LOCATION.--Lat 48°14'36", long 99°22'21", in NE¼NE¼SE¼ sec.15, T.155 N., R.68 W., Benson County, Hydrologic Unit 09020201, at bridge 3.5 miles southeast of Leeds.

DRAINAGE AREA.--320 mi^2, of which about 150 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. This station was moved upstream from 05056390 Little Coulee near Brinsmade due to rising water from Devils Lake. Records may not be equivalent to prior locations due to change in drainage area. Datum of gage is 1,480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 90 ft^3/s, July 3, gage height, 65.19 ft, from floodmark; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e13	6.2	2.0	e45	28	24
2	---	---	---	---	---	e0.00	16	5.2	1.3	e56	28	9.5
3	---	---	---	---	---	e0.00	16	e5.2	2.4	e80	35	6.3
4	---	---	---	---	---	e0.00	15	e6.4	2.2	e70	33	7.6
5	---	---	---	---	---	e0.00	14	9.3	e3.1	e61	28	11
6	---	---	---	---	---	e0.00	13	8.1	e2.3	58	27	e13
7	---	---	---	---	---	e0.00	13	5.6	1.2	e56	24	e7.9
8	---	---	---	---	---	e0.00	13	9.1	3.2	60	26	5.4
9	---	---	---	---	---	e0.00	11	9.5	e4.3	57	25	3.6
10	---	---	---	---	---	e0.00	e12	8.6	e4.0	59	23	2.2
11	---	---	---	---	---	e0.00	14	7.4	4.3	65	29	3.2
12	---	---	---	---	---	e0.00	13	6.1	4.9	64	e35	3.0
13	---	---	---	---	---	e0.00	12	8.7	e5.7	62	e30	3.8
14	---	---	---	---	---	e0.00	8.1	9.8	e7.2	61	e28	2.3
15	---	---	---	---	---	e0.00	12	7.2	e5.4	61	e26	1.9
16	---	---	---	---	---	e0.00	10	5.8	e5.7	57	e23	1.6
17	---	---	---	---	---	e0.00	6.5	4.2	5.7	58	21	e2.3
18	---	---	---	---	---	e0.00	9.1	6.1	4.9	56	25	e1.8
19	---	---	---	---	---	e0.00	7.8	8.0	9.4	49	25	e1.5
20	---	---	---	---	---	e0.00	e5.2	8.5	e10	46	25	1.4
21	---	---	---	---	---	e0.00	5.6	11	8.9	43	22	1.6
22	---	---	---	---	---	e0.00	e7.1	13	e7.3	41	19	1.0
23	---	---	---	---	---	e0.00	4.1	e6.2	e7.8	40	15	0.40
24	---	---	---	---	---	e0.00	4.2	e5.9	6.1	41	19	0.85
25	---	---	---	---	---	e0.00	6.4	5.9	e3.1	38	29	0.50
26	---	---	---	---	---	e0.10	5.7	6.9	e3.0	36	29	0.34
27	---	---	---	---	---	e0.50	5.4	5.7	e25	34	28	0.53
28	---	---	---	---	---	e1.0	5.7	3.3	e27	33	24	0.74
29	---	---	---	---	---	e2.0	5.7	3.3	e31	30	20	0.20
30	---	---	---	---	---	e8.0	5.3	e2.7	e43	30	14	0.14
31	---	---	---	---	---	e12	---	e1.9	---	30	23	---
TOTAL	---	---	---	---	---	23.60	288.9	210.8	251.4	1,577	786	119.60
MEAN	---	---	---	---	---	0.76	9.63	6.80	8.38	50.9	25.4	3.99
MAX	---	---	---	---	---	12	16	13	43	80	35	24
MIN	---	---	---	---	---	0.00	4.1	1.9	1.2	30	14	0.14
AC-FT	---	---	---	---	---	47	573	418	499	3,130	1,560	237

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	4.93	76.0	50.5	31.2	17.9	5.86	3.18
MAX	---	---	---	---	---	24.8	217	207	110	50.9	25.4	8.38
(WY)	---	---	---	---	---	(1998)	(1999)	(1999)	(1999)	(2005)	(2005)	(2002)
MIN	---	---	---	---	---	0.00	0.00	0.04	0.04	0.08	0.00	0.00
(WY)	---	---	---	---	---	(2001)	(2002)	(2000)	(2000)	(2003)	(2003)	(1998)

SUMMARY STATISTICS WATER YEARS 1998 - 2005

HIGHEST DAILY MEAN	267	Apr 23, 1999
LOWEST DAILY MEAN	0.00	Jul 31, 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 6, 1998
MAXIMUM PEAK FLOW	269	Apr 23, 1999
MAXIMUM PEAK STAGE	66.41	Apr 13, 1999

e Estimated

05056340 LITTLE COULEE NEAR LEEDS, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--June 1999 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	63.89	63.50	63.25	---	64.12	63.90
2	---	---	---	---	---	---	63.87	63.45	63.16	---	64.10	63.46
3	---	---	---	---	---	---	63.89	e63.45	63.34	---	64.25	63.29
4	---	---	---	---	---	---	63.87	e63.53	63.32	---	64.20	63.35
5	---	---	---	---	---	---	63.87	63.67	e63.42	---	64.08	63.52
6	---	---	---	---	---	---	63.85	63.62	e63.33	64.84	64.04	e63.60
7	---	---	---	---	---	---	63.85	63.49	63.18	e64.81	63.98	e63.38
8	---	---	---	---	---	---	63.83	63.67	63.44	64.85	64.00	63.23
9	---	---	---	---	---	---	63.76	63.70	e63.54	64.81	63.98	63.10
10	---	---	---	---	---	---	e63.79	63.66	e63.52	64.82	63.93	62.95
11	---	---	---	---	---	---	63.84	63.61	63.55	64.90	64.04	63.06
12	---	---	---	---	---	---	63.84	63.55	63.59	64.88	---	63.05
13	---	---	---	---	---	---	63.79	63.68	e63.65	64.84	---	63.11
14	---	---	---	---	---	---	63.59	63.73	e63.74	64.82	---	62.96
15	---	---	---	---	---	---	63.78	63.62	e63.64	64.82	---	62.92
16	---	---	---	---	---	---	63.72	63.55	e63.66	64.75	---	62.87
17	---	---	---	---	---	---	63.52	63.43	63.66	64.75	63.83	e62.97
18	---	---	---	---	---	---	63.65	63.56	63.61	64.73	63.94	e62.90
19	---	---	---	---	---	---	63.59	63.68	63.85	64.61	63.93	e62.86
20	---	---	---	---	---	---	e63.45	63.70	---	64.56	63.94	62.84
21	---	---	---	---	---	---	63.46	63.81	63.84	64.50	63.85	62.87
22	---	---	---	---	---	---	e63.55	63.86	e63.77	64.46	63.78	62.76
23	---	---	---	---	---	---	63.35	e63.61	e63.80	64.43	63.64	62.58
24	---	---	---	---	---	---	63.36	e63.60	63.71	64.43	63.75	62.72
25	---	---	---	---	---	---	63.50	63.60	---	64.38	64.01	62.62
26	---	---	---	---	---	---	63.46	63.65	---	64.33	64.02	62.56
27	---	---	---	---	---	---	63.43	63.60	---	64.28	63.99	62.59
28	---	---	---	---	---	---	63.46	63.41	---	64.25	63.91	62.69
29	---	---	---	---	---	---	63.46	63.42	---	64.17	63.81	62.47
30	---	---	---	---	---	---	63.44	e63.36	---	64.17	63.62	62.43
31	---	---	---	---	---	---	---	e63.25	---	64.17	63.85	---
MEAN	---	---	---	---	---	---	63.66	63.58	---	---	---	62.99
MAX	---	---	---	---	---	---	63.89	63.86	---	---	---	63.90
MIN	---	---	---	---	---	---	63.35	63.25	---	---	---	62.43

e Estimated

05056340 LITTLE COULEE NEAR LEEDS, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1515	13	8.6	6.8	656	643	12.5	8.0	40.0	26.9	10.4	2	55.5
JUL													
06...	0750	58	8.6	8.5	1,160	1,180	15.5	19.0	76.9	52.8	21.9	2	95.7

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	35	158	15.9	.09	5.30	152	398	14.3	<50	<1	1.5	29.9	<1
JUL													
06...	32	301	28.4	.15	20.8	291	748	120	<50	<1	7.4	69.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	50	<1	<1	1.2	20	<1	<10	3.08	<1	<1	<1.0	2.0
JUL												
06...	130	<1	1	3.8	20	<1	30	5.53	3	<1	<1.0	4.7

Remark codes used in this table:
< -- Less than.

05056410 CHANNEL A NEAR PENN, ND

LOCATION.--Lat 48°10'00", long 98°58'47", in SE$^1/_4$SW$^1/_4$SW$^1/_4$ sec.11, T.154 N., R.65 W., Ramsey County, Hydrologic Unit 09020201, on right bank 200 ft upstream from U.S. Highway 2, 9 mi northwest of Devils Lake, and 7 mi southeast of Penn.

DRAINAGE AREA.--930 mi^2, approximately, of which about 140 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Seasonal records only 1999. Miscellaneous discharge measurements only since Oct. 1, 1999, because of backwater conditions from Devils Lake.

Miscellaneous discharge measurements for Channel A near Penn

Date	Discharge (ft^3/s)
October 4, 2004	[1,2]-163
April 14, 2005	353
April 28, 2005	104
May 26, 2005	263
July 11, 2005	760
August 29, 2005	39.4

[1]Wind aided
[2]Reverse flow

05056410 CHANNEL A NEAR PENN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1984-99, 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
14...	0820	353	8.9	7.4	964	976	5.0	8.5	66.8	37.0	16.1	2	77.0
28...	0855	104	8.7	7.7	1,190	1,170	.5	6.0	65.1	42.7	20.2	3	107

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
14...	33	222	30.3	.18	14.9	293	655	637	<50	<1	5.8	51.7	<1
28...	39	241	46.3	.16	10.3	339	767	218	<50	<1	5.6	51.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
14...	<50	<1	<1	2.0	<10	<1	<10	4.78	1	<1	<1.0	1.4
28...	70	<1	<1	2.4	40	<1	<10	4.77	<1	<1	<1.0	7.1

Remark codes used in this table:
< -- Less than.

05056500 DEVILS LAKE NEAR DEVILS LAKE, ND

LOCATION.--Lat 48°05'58", long 98°54'10", in NE$^1/_4$ sec.5, T.153 N., R.64 W., Ramsey County, Hydrologic Unit 09020201, on northeast bank of Creel Bay, and 2.0 mi southwest of city of Devils Lake. Creel Bay, which is 0.5 mi wide, is an arm of Devils Lake and extends 2 mi to the north of the lake.

DRAINAGE AREA.--3,130 mi^2, approximately, of which about 1,000 mi^2 is probably noncontributing.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--1867, 1879, 1883, 1887, 1890, 1896 (one gage height for each year), 1901-63 (fragmentary), 1964 to current year.

REVISED RECORDS.--WSP 1913: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929. June 23, 1950, to June 6, 1963, nonrecording gage at site 2 mi south at same datum. June 1963 to Mar. 28, 2005, recording gage at site 2 mi south at same datum. See WSP 1913 for history of changes prior to June 23, 1950. Prior to October 1979 only monthend elevations were published.

REMARKS.--Elevation at gage frequently affected by wind. Gage relocated to northeast Creel Bay on Mar. 28, 2005, because of high lake levels.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,449.18 ft, June 17, 2004, affected by wind, present datum; minimum observed, 1,400.87 ft, Oct. 24, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--The lake level was at an elevation of about 1,441 ft around 1830 and lower thereafter. Reference is Geological Survey monograph, volume XXV, the Glacial History of Lake Agassiz by Warren Upham.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,449.17 ft, Aug. 2, affected by wind; minimum, 1,447.84 ft, Dec. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.34	48.08	47.93	47.91	47.95	47.92	48.00	48.13	48.08	48.58	48.87	48.54
2	48.30	48.08	47.93	47.93	47.94	47.92	48.00	48.12	48.09	48.62	48.90	48.48
3	48.30	48.10	47.94	47.93	47.94	47.92	48.00	48.10	48.07	48.68	48.94	48.46
4	48.27	48.12	47.92	47.92	47.94	47.92	48.01	48.08	48.08	48.66	48.93	48.47
5	48.24	48.09	47.91	47.92	47.95	47.93	48.02	48.07	48.11	48.66	48.89	48.47
6	48.24	48.09	47.94	47.93	47.94	47.93	48.04	48.05	48.08	48.66	48.88	48.49
7	48.25	48.08	47.93	47.93	47.94	47.93	48.04	48.02	48.05	48.66	48.86	48.44
8	48.23	48.05	47.93	47.93	47.94	47.93	48.05	48.05	48.19	48.68	48.86	48.43
9	48.20	48.06	47.93	47.93	47.94	47.93	48.06	48.15	48.20	48.73	48.86	48.41
10	48.20	48.06	47.93	47.93	47.94	47.93	48.06	48.15	48.17	48.76	48.85	48.40
11	48.20	48.05	47.93	47.93	47.94	47.93	48.09	48.11	48.19	48.79	48.87	48.41
12	48.21	48.03	47.91	47.94	47.94	47.93	48.15	48.10	48.22	48.78	48.90	48.40
13	48.21	48.02	47.89	47.92	47.94	47.93	48.16	48.14	48.22	48.80	48.86	48.39
14	48.22	48.00	47.89	47.91	47.94	47.93	48.16	48.13	48.31	48.80	48.85	48.34
15	48.22	47.99	47.89	47.92	47.93	47.93	48.19	48.10	48.31	48.86	48.80	48.34
16	48.17	47.99	47.90	47.92	47.93	47.93	48.18	48.06	48.30	48.85	48.77	48.30
17	48.13	48.00	47.91	47.92	47.93	47.93	48.18	48.03	48.29	48.89	48.75	48.31
18	48.09	47.99	47.90	47.92	47.94	47.94	48.17	48.07	48.27	48.87	48.78	48.30
19	48.18	47.99	47.89	47.91	47.93	47.93	48.17	48.09	48.29	48.84	48.77	48.29
20	48.12	48.01	47.89	47.92	47.94	47.93	48.21	48.10	48.29	48.84	48.77	48.28
21	48.14	47.98	47.89	47.95	47.93	47.93	48.20	48.16	48.28	48.83	48.71	48.26
22	48.14	48.00	47.88	47.95	47.94	47.93	48.20	48.12	48.29	48.86	48.69	48.24
23	48.18	47.96	47.88	47.95	47.94	47.94	48.21	48.09	48.32	48.88	48.65	48.20
24	48.18	47.95	47.88	47.95	47.93	47.95	48.20	48.11	48.32	48.89	48.63	48.21
25	48.16	47.94	47.88	47.95	47.93	47.94	48.19	48.17	48.23	48.88	48.66	48.20
26	48.10	47.95	47.88	47.95	47.93	47.94	48.19	48.19	48.30	48.88	48.66	48.18
27	48.08	47.96	47.88	47.95	47.93	47.95	48.22	48.16	48.41	48.87	48.65	48.16
28	48.07	47.95	47.88	47.95	47.93	47.95	48.17	48.11	48.43	48.87	48.62	48.15
29	48.08	47.96	47.88	47.95	---	47.96	48.16	48.12	48.49	48.84	48.61	48.12
30	48.10	47.93	47.89	47.95	---	47.98	48.13	48.11	48.64	48.86	48.57	48.10
31	48.08	---	47.90	47.95	---	47.99	---	48.09	---	48.88	48.54	---
MEAN	48.18	48.02	47.90	47.93	47.94	47.94	48.13	48.11	48.25	48.79	48.77	48.33
MAX	48.34	48.12	47.94	47.95	47.95	47.99	48.22	48.19	48.64	48.89	48.94	48.54
MIN	48.07	47.93	47.88	47.91	47.93	47.92	48.00	48.02	48.05	48.58	48.54	48.10

05056636 DEVILS LAKE OUTLET TO STUMP LAKE NEAR LAKOTA, ND

LOCATION.--Lat 47°57'29", long 98°29'00", in NE¼SE¼NE¼ sec.29, T.152 N., R.61 W., Nelson County, Hydrologic Unit 09020201, on right bank, 3 mi upstream of Stump Lake.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

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

GAGE.--Water stage recorder. Datum of gage is 1,400.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1999, at datum 37.73 ft higher.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	182	e85	e45	e19	e21	e150	240	200	367	335	549
2	112	183	e88	e42	e19	e22	156	228	188	346	341	453
3	105	182	e89	e41	e18	e22	146	217	198	402	370	333
4	99	184	e89	e39	e18	e21	143	204	204	416	424	283
5	97	190	e88	e38	e18	e21	149	198	220	378	414	297
6	93	186	e88	e38	e18	e20	161	186	226	324	361	338
7	93	184	e88	e38	e18	e20	166	166	181	286	312	337
8	95	166	e88	e38	e18	e20	156	169	197	341	304	309
9	89	148	e92	e38	e18	e19	155	198	246	320	318	285
10	85	155	e100	e38	e19	e18	163	209	241	312	325	266
11	86	170	e115	e38	e21	e18	176	171	243	346	366	284
12	85	169	e114	e38	e20	e18	194	152	273	384	415	302
13	81	161	e113	e35	e19	e18	193	178	245	379	418	330
14	80	160	e112	e28	e19	e18	184	216	277	366	403	322
15	82	156	e106	e26	e19	e18	210	213	278	399	368	298
16	78	154	e109	e24	e19	e18	217	184	262	368	309	267
17	73	154	e108	e23	e19	e18	203	155	243	382	253	245
18	67	160	e106	e23	e19	e18	196	166	221	492	268	264
19	68	157	e105	e22	e19	e20	173	174	229	439	317	281
20	73	e140	e104	e22	e19	e22	179	192	240	389	361	285
21	70	e130	e97	e21	e19	e25	207	231	223	355	339	275
22	71	e120	e90	e21	e19	e30	193	472	210	353	288	274
23	73	e110	e85	e20	e19	e30	203	292	218	347	247	254
24	72	e102	e78	e20	e19	e28	220	248	249	376	217	238
25	73	e95	e72	e20	e19	e29	217	242	216	375	225	247
26	67	e85	e65	e20	e19	e30	220	272	195	383	272	263
27	72	e83	e62	e20	e19	e32	236	310	233	388	310	265
28	98	e84	e61	e20	e20	e45	251	281	242	378	304	263
29	130	e84	e60	e19	---	e65	249	247	233	320	275	264
30	158	e85	e57	e19	---	e80	241	232	348	293	236	252
31	182	---	e50	e18	---	e110	---	221	---	322	345	---
TOTAL	2,816	4,319	2,764	892	529	894	5,707	6,864	6,979	11,326	10,040	8,923
MEAN	90.8	144	89.2	28.8	18.9	28.8	190	221	233	365	324	297
MAX	182	190	115	45	21	110	251	472	348	492	424	549
MIN	67	83	50	18	18	18	143	152	181	286	217	238
AC-FT	5,590	8,570	5,480	1,770	1,050	1,770	11,320	13,610	13,840	22,470	19,910	17,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	22.9	33.9	19.4	5.84	3.75	7.36	50.2	69.9	101	122	108	89.4
MAX	90.8	144	89.2	28.8	18.9	28.8	190	221	233	365	324	297
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
MIN	0.28	0.00	0.00	0.00	0.00	0.00	6.21	9.00	18.9	21.2	17.6	4.54
(WY)	(2001)	(2004)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2002)	(2003)	(2003)	(2003)

05056636 DEVILS LAKE OUTLET TO STUMP LAKE NEAR LAKOTA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2000 - 2005	
ANNUAL TOTAL	32,826.00		62,053			
ANNUAL MEAN	89.7		170		53.0	
HIGHEST ANNUAL MEAN					170	2005
LOWEST ANNUAL MEAN					9.76	2001
HIGHEST DAILY MEAN	250	Jun 12	549	Sep 1	549	Sep 1, 2005
LOWEST DAILY MEAN	0.00	Jan 1	18	Jan 31	0.00	Oct 1, 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	18	Feb 3	0.00	Oct 1, 1999
MAXIMUM PEAK FLOW			[a]711	May 22	[a]711	May 22, 2005
MAXIMUM PEAK STAGE			[b]41.92	Mar 23	[b]41.92	Mar 23, 2005
ANNUAL RUNOFF (AC-FT)	65,110		123,100		38,410	
10 PERCENT EXCEEDS	182		346		191	
50 PERCENT EXCEEDS	90		166		18	
90 PERCENT EXCEEDS	0.00		19		0.00	

a Gage height, 41.38 ft; wind aided
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.---Gaps in record are result of ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.94	40.23	40.72	40.78	40.72	41.22	40.48	40.64	40.37	40.92	40.87	41.09
2	39.96	40.23	---	40.82	40.76	41.25	40.23	40.60	40.32	40.89	40.88	40.89
3	39.92	40.23	---	40.83	40.80	41.26	40.17	40.55	40.36	40.98	40.93	40.61
4	39.88	40.25	---	40.84	40.88	41.26	40.16	40.49	40.38	41.01	41.02	40.47
5	39.86	40.28	40.67	---	40.98	41.27	40.19	40.46	40.46	40.94	41.00	40.51
6	39.83	40.26	40.73	---	---	41.28	40.26	40.40	40.49	40.84	40.91	40.63
7	39.83	40.24	40.87	---	---	---	40.29	40.29	40.29	40.76	40.82	40.63
8	39.85	40.17	40.78	40.99	---	---	40.23	40.30	40.36	40.88	40.81	40.55
9	39.80	40.10	40.69	40.94	---	41.49	40.23	40.46	40.57	40.84	40.83	40.47
10	39.78	40.13	40.67	40.83	---	41.40	40.27	40.51	40.56	40.82	40.85	40.40
11	39.78	40.18	40.65	---	41.01	---	40.34	40.31	40.56	40.89	40.92	40.47
12	39.77	40.18	40.63	---	41.00	---	40.43	40.21	40.67	40.95	41.00	40.53
13	39.74	40.15	---	---	---	---	40.43	40.36	40.57	40.95	41.01	40.60
14	39.73	40.15	40.61	---	---	41.79	40.39	40.54	40.68	40.92	40.98	40.59
15	39.75	40.13	40.60	---	---	41.81	40.51	40.53	40.68	40.98	40.93	40.51
16	39.72	40.12	40.60	---	41.24	41.79	40.55	40.38	40.63	40.92	40.81	40.41
17	39.67	40.12	40.62	---	41.21	41.77	40.48	40.22	40.57	40.95	40.67	40.34
18	39.62	40.15	40.60	40.81	41.15	41.77	40.45	40.29	40.46	41.12	40.71	40.39
19	39.63	40.14	---	40.63	41.15	41.81	40.32	40.33	40.51	41.04	40.83	40.46
20	39.67	40.21	40.61	40.55	41.16	41.83	40.36	40.42	40.55	40.96	40.91	40.47
21	39.65	40.24	---	40.52	41.15	41.85	40.50	40.55	40.55	40.90	40.87	40.44
22	39.66	40.24	---	40.46	41.15	41.89	40.43	41.07	40.52	40.90	40.77	40.43
23	39.68	40.39	40.62	---	41.15	41.90	40.48	40.72	40.55	40.89	40.66	40.37
24	39.67	40.58	40.67	---	41.16	41.86	40.56	40.59	40.66	40.94	40.55	40.32
25	39.67	40.76	40.68	---	41.17	41.86	40.55	40.56	40.54	40.94	40.58	40.34
26	39.62	40.30	40.65	---	41.19	41.80	40.56	40.66	40.44	40.95	40.72	40.39
27	39.67	40.40	40.61	40.48	41.21	41.71	40.62	40.77	40.61	40.96	40.81	40.40
28	39.86	40.53	40.61	---	41.22	41.65	40.67	40.69	40.64	40.94	40.81	40.39
29	40.04	40.62	40.63	---	---	41.41	40.66	40.58	40.61	40.84	40.73	40.40
30	40.15	40.74	40.68	---	---	41.16	40.64	40.52	40.88	40.78	40.61	40.36
31	40.23	---	40.73	---	---	40.86	---	40.47	---	40.84	40.78	---
MEAN	39.79	40.28	---	---	---	---	40.41	40.50	40.53	40.92	40.83	40.50
MAX	40.23	40.76	---	---	---	---	40.67	41.07	40.88	41.12	41.02	41.09
MIN	39.62	40.10	---	---	---	---	40.16	40.21	40.29	40.76	40.55	40.32

05056636 DEVILS LAKE OUTLET TO STUMP LAKE NEAR LAKOTA, ND—Continued

WATER QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	0820	162	8.8	8.4	3,880	3,980	4.0	3.5	60.3	139	73.4	10	629
JUL													
05...	1110	372	9.0	8.7	4,570	4,680	16.0	20.5	78.0	169	90.6	11	772

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	62	356	283	.12	8.01	1,420	2,820	1,240	<50	<1	18.5	35.2	<1
JUL													
05...	62	450	333	.20	2.11	1,650	3,360	3,380	<50	<5	23.2	53.3	<5

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	430	<1	2	8.1	70	<1	30	4.16	9	<1	<1.0	4.9
JUL												
05...	620	<1	<1	20.8	60	<1	<10	8.76	21	<5	<5.0	55.5

Remark codes used in this table:
< -- Less than.

05056665 EASTERN STUMP LAKE NEAR LAKOTA, ND

LOCATION.--Lat 47°52'07", long 98°21'27", in SW¼SE¼NE¼ sec.29, T.151 N., R.60 W., Nelson County, Hydrologic Unit 09020201, on north shore in southwest corner of Nelson County Old Settlers Park.

DRAINAGE AREA.--Not determined.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,400 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Gage heights are frequently affected by wind.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 33.67 ft, Sept. 30, 2005; minimum daily, 7.70 ft, June 11, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 33.67 ft, Sept. 30; minimum daily, 22.96 ft, Oct. 2, 4, and 5.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.02	23.36	24.10	24.76	25.04	25.21	25.54	26.69	28.53	30.11	31.58	32.81
2	22.96	23.38	24.12	24.79	25.05	25.22	25.56	26.71	28.58	30.15	31.64	32.80
3	22.99	23.41	24.14	24.80	25.05	25.22	25.58	26.73	28.63	30.23	31.74	32.83
4	22.96	23.45	24.17	24.81	25.06	25.23	25.60	26.77	28.67	30.27	31.78	32.86
5	22.96	23.47	24.18	24.82	25.07	25.23	25.63	26.82	28.74	30.30	31.78	32.91
6	22.98	23.50	24.22	24.83	25.07	25.24	25.66	26.85	28.77	30.33	31.81	32.96
7	23.00	23.52	24.25	24.85	25.08	25.25	25.69	26.86	28.80	30.37	31.85	32.97
8	23.04	23.53	24.27	24.85	25.08	25.25	25.73	26.96	28.93	30.50	31.90	33.00
9	23.01	23.56	24.30	24.87	25.08	25.26	25.76	27.16	29.00	30.55	31.94	33.04
10	23.02	23.61	24.33	24.87	25.09	25.28	25.80	27.22	29.02	30.60	31.97	33.10
11	23.04	23.61	24.35	24.89	25.09	25.28	25.87	27.24	29.10	30.68	32.07	33.15
12	23.06	23.63	24.43	24.90	25.10	25.29	25.95	27.25	29.18	30.72	32.15	33.18
13	23.07	23.65	24.40	24.91	25.10	25.29	26.00	27.32	29.23	30.75	32.17	33.23
14	23.07	23.68	24.42	24.92	25.12	25.30	26.03	27.40	29.33	30.80	32.19	33.24
15	23.13	23.70	24.44	24.92	25.12	25.31	26.09	27.39	29.36	30.86	32.22	33.29
16	23.08	23.73	24.46	24.93	25.13	25.32	26.11	27.42	29.40	30.88	32.26	33.31
17	23.07	23.76	24.49	24.93	25.13	25.33	26.14	27.48	29.44	30.96	32.29	33.35
18	23.06	23.79	24.51	24.95	25.14	25.33	26.20	27.74	29.46	30.99	32.34	33.37
19	23.11	23.82	24.52	24.95	25.14	25.34	26.25	27.83	29.53	30.99	32.38	33.40
20	23.12	23.86	24.55	24.96	25.16	25.35	26.28	27.88	29.57	31.06	32.42	33.43
21	23.12	23.87	24.58	24.99	25.16	25.35	26.31	28.00	29.60	31.09	32.43	33.46
22	23.15	23.91	24.58	25.00	25.17	25.36	26.36	28.13	29.63	31.17	32.46	33.48
23	23.20	23.93	24.60	25.00	25.18	25.36	26.36	28.13	29.71	31.21	32.48	33.49
24	23.21	23.93	24.61	25.01	25.18	25.38	26.40	28.19	29.75	31.27	32.51	33.54
25	23.22	23.94	24.63	25.02	25.19	25.38	26.47	28.25	29.75	31.32	32.56	33.56
26	23.22	23.98	24.64	25.02	25.20	25.39	26.50	28.30	29.81	31.36	32.61	33.58
27	23.23	24.01	24.66	25.02	25.20	25.41	26.52	28.34	29.92	31.39	32.64	33.62
28	23.25	24.03	24.67	25.03	25.21	25.43	26.55	28.37	29.94	31.43	32.67	33.64
29	23.30	24.05	24.68	25.03	---	25.46	26.59	28.43	29.98	31.45	32.70	33.64
30	23.34	24.07	24.71	25.04	---	25.49	26.64	28.47	30.10	31.49	32.73	33.67
31	23.32	---	24.74	25.04	---	25.52	---	28.50	---	31.55	32.80	---
MEAN	23.11	23.72	24.44	24.93	25.12	25.32	26.07	27.58	29.32	30.87	32.23	33.26
MAX	23.34	24.07	24.74	25.04	25.21	25.52	26.64	28.50	30.10	31.55	32.80	33.67
MIN	22.96	23.36	24.10	24.76	25.04	25.21	25.54	26.69	28.53	30.11	31.58	32.80

05056665 EASTERN STUMP LAKE NEAR LAKOTA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--1958-79, 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
18...	1415	9.0	1.0	8.4	8,740	1,800	132	347	101	17	1,620	65	414
FEB													
23...	1240	13.0	.80	8.3	8,770	1,700	131	336	108	18	1,680	66	432
MAY													
24...	1305	14.0	3.0	8.6	8,150	2,000	159	388	130	14	1,490	60	426
SEP													
07...	1530	15.0	1.0	8.5	7,730	1,500	114	287	103	16	1,420	66	428

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
OCT													
18...	674	.18	14.7	3,970	7,090	2.4	.17	.35	.38	.028	2.2	.26	.32
FEB													
23...	659	.22	16.3	4,040	7,210	2.4	.19	--	.51	E.004n	2.2	.27	.32
MAY													
24...	603	.19	5.30	3,640	6,670	2.2	.04	--	<.06	<.008	2.1	.14	.25
SEP													
07...	572	.21	14.9	3,430	6,180	2.5	.24	--	E.05n	.028	2.3	.29	.36

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

Date	Total nitro-gen, water, unfltrd mg/L (00600)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
18...	2.8	2.3d	<.1d	--	--	26.5	--	--	--	--	--	--	40
FEB													
23...	2.9	--	--	<50	<5	27.4	41.0	<5	910	<5	<1	40.4	110
MAY													
24...	--	4.4d	<.1d	<50	<1	17.2	31.3	<1	10,000	<1	1	15.9	300
SEP													
07...	--	E1.5d	<.1d	<50	<1	36.1	55.5	<1	810	<1	<1	19.4	180

05056665 EASTERN STUMP LAKE NEAR LAKOTA, ND—Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT											
18...	15.0	620	<10	<.20	9	--	41	--	720	--	--
FEB											
23...	<1	--	60	--	--	8.30	12	<5	--	<5.0	15.4
MAY											
24...	8.42	--	<10	--	--	4.89	12	<1	--	<1.0	6.8
SEP											
07...	<1	--	<10	--	--	6.68	49	<1	--	<1.0	4.6

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
18...	1400	10	--	--	.00	42.0	155	17	--	--e	--	8.5	8,920
18...	1401	--	--	--	1.0	--	--	--	--	--e	--	8.5	8,930
18...	1402	--	--	--	2.0	--	--	--	--	--e	--	8.5	8,930
18...	1403	--	--	--	3.0	--	--	--	--	--e	--	8.5	8,940
18...	1404	--	--	--	4.0	--	--	--	--	--e	--	8.5	8,940
18...	1405	--	--	--	5.0	--	--	--	--	--e	--	8.5	8,940
18...	1406	--	--	--	6.0	--	--	--	--	--e	--	8.5	8,940
18...	1407	--	--	--	7.0	--	--	--	--	--e	--	8.5	8,940
18...	1408	--	--	--	8.0	--	--	--	--	--e	--	8.5	8,940
18...	1409	--	--	--	9.0	--	--	--	--	--e	--	8.5	8,950
18...	1410	--	--	--	10.0	--	--	--	--	--e	--	8.5	8,970
FEB													
23...	1230	14	1,425.22	.76	.80	49.2	135	6.5	729	11.1	82	8.2	9,110
23...	1231	--	--	--	2.0	--	--	--	--	10.8	--	8.2	9,110
23...	1232	--	--	--	3.5	--	--	--	--	10.6	--	8.2	9,100
23...	1233	--	--	--	5.0	--	--	--	--	10.5	--	8.2	9,100
23...	1234	--	--	--	6.5	--	--	--	--	10.4	--	8.2	9,100
23...	1235	--	--	--	8.0	--	--	--	--	10.4	--	8.2	9,110
23...	1236	--	--	--	9.5	--	--	--	--	10.3	--	8.2	9,110
23...	1237	--	--	--	11.0	--	--	--	--	10.3	--	8.2	9,110
23...	1238	--	--	--	12.5	--	--	--	--	10.3	--	8.2	9,100
23...	1239	--	--	--	13.9	--	--	--	--	2.3	--	8.1	9,010
MAY													
24...	1245	15	1,428.12	--	1.0	51.0	160	<5.0	722	9.9	99	8.1	8,420
24...	1246	--	--	--	2.0	--	--	--	--	9.7	--	8.2	8,430
24...	1247	--	--	--	3.0	--	--	--	--	9.6	--	8.2	8,440
24...	1248	--	--	--	4.0	--	--	--	--	9.4	--	8.2	8,450
24...	1249	--	--	--	5.0	--	--	--	--	9.6	--	8.2	8,450
24...	1250	--	--	--	6.0	--	--	--	--	9.3	--	8.2	8,490
24...	1251	--	--	--	7.0	--	--	--	--	9.3	--	8.2	8,520
24...	1252	--	--	--	8.0	--	--	--	--	9.3	--	8.2	8,530
24...	1253	--	--	--	9.0	--	--	--	--	9.3	--	8.2	8,520
24...	1254	--	--	--	10.0	--	--	--	--	9.3	--	8.2	8,560
24...	1255	--	--	--	11.0	--	--	--	--	9.2	--	8.2	8,560
24...	1256	--	--	--	12.0	--	--	--	--	9.0	--	8.2	8,570
24...	1257	--	--	--	13.0	--	--	--	--	8.7	--	8.2	8,590
24...	1258	--	--	--	14.0	--	--	--	--	8.3	--	8.2	8,580
24...	1259	--	--	--	15.0	--	--	--	--	7.9	--	8.2	8,570
24...	1300	--	--	--	15.3	--	--	--	--	7.7	--	8.2	8,540
SEP													
07...	1520	17	1,432.99	--	.00	60.0	90	2.8	727	7.4	89	8.3	7,490
07...	1521	--	--	--	2.0	--	--	--	--	7.0	--	8.3	7,520
07...	1522	--	--	--	4.0	--	--	--	--	6.7	--	8.3	7,530
07...	1523	--	--	--	6.0	--	--	--	--	6.5	--	8.2	7,530
07...	1524	--	--	--	8.0	--	--	--	--	6.5	--	8.2	7,530
07...	1525	--	--	--	10.0	--	--	--	--	6.4	--	8.2	7,510
07...	1526	--	--	--	12.0	--	--	--	--	6.4	--	8.2	7,540
07...	1527	--	--	--	14.0	--	--	--	--	6.4	--	8.2	7,510
07...	1528	--	--	--	16.0	--	--	--	--	6.3	--	8.2	7,540

05056665 EASTERN STUMP LAKE NEAR LAKOTA, ND—Continued

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
18...	4.0	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
18...	--	10.3
FEB		
23...	-2.0	.0
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	-.2
23...	--	1.7
MAY		
24...	15.5	11.6
24...	--	11.6
24...	--	11.4
24...	--	11.4
24...	--	11.3
24...	--	11.1
24...	--	10.9
24...	--	9.7
24...	--	10.8
24...	--	10.8
24...	--	10.7
24...	--	10.4
24...	--	10.2
24...	--	10.1
24...	--	10.2
24...	--	10.2
SEP		
07...	28.0	20.6
07...	--	19.7
07...	--	19.2
07...	--	19.1
07...	--	19.1
07...	--	19.1
07...	--	19.1
07...	--	19.1
07...	--	19.1

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

05056670 WESTERN STUMP LAKE NEAR LAKOTA, ND

LOCATION.--Lat 47°54'48", long 98°23'26", in SE¼NE¼NW¼ sec.7, T.151 N., R.60 W., Nelson County, Hydrologic Unit 09020201, at southeast arm of lake.

DRAINAGE AREA.--Not determined.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-79, 1993 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
18...	1335	9.0	1.0	8.4	8,630	1,700	127	335	99.5	17	1,570	65	433
FEB													
23...	1125	8.0	.80	8.3	8,820	1,700	131	337	112	18	1,680	66	477
MAY													
24...	1155	10.0	2.0	8.6	7,980	1,800	144	351	118	15	1,470	62	460
SEP													
07...	1445	11.0	1.0	8.6	7,600	1,400	111	278	101	16	1,370	66	425

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)
OCT													
18...	657	.20	15.2	3,840	6,890	2.5	.16	.34	.37	.030	2.3	2.8	.24
FEB													
23...	670	.18	16.6	4,040	7,260	2.5	.18	--	.50	<.008	2.3	3.0	.29
MAY													
24...	576	--	4.60	3,470	6,410	2.2	E.04n	--	<.06	<.008	--	--	.14
SEP													
07...	567	.20	14.9	3,390	6,070	3.0	.10	--	E.04n	.019	2.9	--	.26

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

Date	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)
OCT													
18...	.31	E1.4d	<.1d	--	--	31.3	--	--	--	--	--	--	30
FEB													
23...	.34	--	--	<50	<5	28.0	43.4	<5	930	<5	<1	36.7	110
MAY													
24...	.24	4.2d	<.1d	<50	<1	19.4	36.1	<1	11,000	<1	3	13.8	60
SEP													
07...	.39	E30.0d	<.1d	<50	<1	27.6	51.1	<1	820	<1	5	8.2	240

05056670 WESTERN STUMP LAKE NEAR LAKOTA, ND—Continued

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

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT											
18...	6.49	600	<10	<.20	5	--	60	--	700	--	--
FEB											
23...	<1	--	10	--	--	7.17	10	<5	--	<5.0	12.3
MAY											
24...	<1	--	<10	--	--	5.36	15	<1	--	<1.0	8.2
SEP											
07...	<1	--	<10	--	--	4.34	34	<1	--	<1.0	4.3

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

05056670 WESTERN STUMP LAKE NEAR LAKOTA, ND—Continued

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

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
18...	1320	9.5	--	--	.00	49.0	210	10	720	--e	--	8.6	8,800
18...	1321	--	--	--	1.0	--	--	--	--	--e	--	8.6	8,810
18...	1322	--	--	--	2.0	--	--	--	--	--e	--	8.6	8,800
18...	1323	--	--	--	3.0	--	--	--	--	--e	--	8.6	8,810
18...	1324	--	--	--	4.0	--	--	--	--	--e	--	8.6	8,810
18...	1325	--	--	--	5.0	--	--	--	--	--e	--	8.5	8,810
18...	1326	--	--	--	6.0	--	--	--	--	--e	--	8.5	8,820
18...	1327	--	--	--	7.0	--	--	--	--	--e	--	8.5	8,810
18...	1328	--	--	--	8.0	--	--	--	--	--e	--	8.5	8,810
18...	1329	--	--	--	9.0	--	--	--	--	--e	--	8.5	8,800
18...	1330	--	--	--	9.5	--	--	--	--	--e	--	8.5	8,740
FEB													
23...	1115	9.3	1,425.22	.70	.80	52.8	100	7.0	729	9.7	72	8.2	9,110
23...	1116	--	--	--	1.8	--	--	--	--	9.5	--	8.2	9,130
23...	1117	--	--	--	2.8	--	--	--	--	9.5	--	8.2	9,110
23...	1118	--	--	--	3.8	--	--	--	--	9.4	--	8.2	9,120
23...	1119	--	--	--	4.8	--	--	--	--	9.3	--	8.2	9,120
23...	1120	--	--	--	5.0	--	--	--	--	9.3	--	8.2	9,120
23...	1121	--	--	--	6.8	--	--	--	--	9.7	--	8.2	9,100
23...	1122	--	--	--	7.9	--	--	--	--	9.4	--	8.2	9,050
23...	1123	--	--	--	8.9	--	--	--	--	8.9	--	8.2	9,090
23...	1124	--	--	--	.30	--	--	--	--	8.5	--	8.2	9,070
MAY													
24...	1130	11	1,428.12	--	.70	52.0	170	5.0	720	10.2	108	8.2	8,070
24...	1131	--	--	--	1.3	--	--	--	--	9.5	--	8.3	8,070
24...	1132	--	--	--	2.0	--	--	--	--	9.5	--	8.3	8,080
24...	1133	--	--	--	2.5	--	--	--	--	9.5	--	8.3	8,090
24...	1134	--	--	--	3.0	--	--	--	--	9.4	--	8.3	8,090
24...	1135	--	--	--	3.5	--	--	--	--	9.5	--	8.3	8,100
24...	1136	--	--	--	4.0	--	--	--	--	9.4	--	8.3	8,100
24...	1137	--	--	--	4.5	--	--	--	--	9.0	--	8.3	8,280
24...	1138	--	--	--	5.0	--	--	--	--	9.0	--	8.3	8,340
24...	1139	--	--	--	5.5	--	--	--	--	9.2	--	8.3	8,350
24...	1140	--	--	--	6.0	--	--	--	--	9.2	--	8.3	8,380
24...	1141	--	--	--	6.5	--	--	--	--	9.1	--	8.3	8,430
24...	1142	--	--	--	7.0	--	--	--	--	9.1	--	8.3	8,450
24...	1143	--	--	--	7.5	--	--	--	--	9.0	--	8.3	8,460
24...	1144	--	--	--	8.0	--	--	--	--	9.1	--	8.3	8,470
24...	1145	--	--	--	8.5	--	--	--	--	9.1	--	8.3	8,450
24...	1146	--	--	--	9.5	--	--	--	--	8.9	--	8.3	8,510
24...	1147	--	--	--	10.5	--	--	--	--	8.7	--	8.3	8,490
24...	1148	--	--	--	10.7	--	--	--	--	8.5	--	8.3	8,510
SEP													
07...	1430	12	--	--	.00	28.0	--	<5.0	728	13.6	162	8.5	7,310
07...	1431	--	--	--	1.0	--	--	--	--	13.0	--	8.4	7,310
07...	1432	--	--	--	2.0	--	--	--	--	8.1	--	8.3	7,330
07...	1433	--	--	--	3.0	--	--	--	--	7.9	--	8.3	7,350
07...	1434	--	--	--	4.0	--	--	--	--	7.7	--	8.3	7,370
07...	1435	--	--	--	5.0	--	--	--	--	7.7	--	8.3	7,380
07...	1436	--	--	--	6.0	--	--	--	--	7.6	--	8.3	7,380
07...	1437	--	--	--	7.0	--	--	--	--	7.5	--	8.3	7,390
07...	1438	--	--	--	8.0	--	--	--	--	7.2	--	8.3	7,410
07...	1439	--	--	--	9.0	--	--	--	--	7.2	--	8.3	7,420
07...	1440	--	--	--	10.0	--	--	--	--	6.6	--	8.3	7,450
07...	1441	--	--	--	11.0	--	--	--	--	6.5	--	8.3	7,470
07...	1442	--	--	--	12.0	--	--	--	--	6.4	--	8.3	7,470

05056670 WESTERN STUMP LAKE NEAR LAKOTA, ND—Continued

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

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
18...	4.0	9.0
18...	--	8.9
18...	--	9.0
18...	--	8.9
18...	--	8.9
18...	--	8.9
18...	--	8.9
18...	--	9.0
18...	--	8.9
18...	--	8.9
18...	--	9.0
FEB		
23...	-4.0	-.1
23...	--	-.1
23...	--	-.1
23...	--	-.1
23...	--	-.1
23...	--	-.1
23...	--	.1
23...	--	1.1
23...	--	1.3
23...	--	1.6
MAY		
24...	15.0	14.1
24...	--	14.1
24...	--	14.1
24...	--	14.1
24...	--	14.1
24...	--	14.6
24...	--	14.0
24...	--	12.9
24...	--	12.0
24...	--	11.8
24...	--	11.7
24...	--	11.6
24...	--	11.4
24...	--	11.3
24...	--	11.2
24...	--	11.2
24...	--	11.0
24...	--	11.0
24...	--	10.9
SEP		
07...	28.5	20.4
07...	--	20.3
07...	--	19.3
07...	--	19.2
07...	--	19.2
07...	--	19.2
07...	--	19.2
07...	--	19.1
07...	--	19.2
07...	--	19.2
07...	--	19.2
07...	--	19.2
07...	--	19.2

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND

LOCATION.--Lat 47°25'58", long 98°01'38", in NW¼NW¼SW¼ sec.26, T.146 N., R.58 W., Griggs County, Hydrologic Unit 09020203, on right bank at Ueland Dam 0.7 mi downstream from State Highway 200 and 5 mi east of Cooperstown.

DRAINAGE AREA.--6,470 mi^2, approximately, of which about 5,200 mi^2 is probably noncontributing, includes 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1728: Drainage area. WRD ND-80-1: Gage datum.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 1,271.76 ft above National Geodetic Vertical Datum of 1929 (Coast and Geodetic Survey benchmark). Aug. 3, 1950, to Oct. 22, 1985, gage located on right bank 300 ft downstream of present site and datum. Prior to Aug. 3, 1950, nonrecording gage at site 150 ft downstream of present site at same datum.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	195	e76	e43	e38	e40	543	228	351	395	251	109
2	228	188	e80	e43	e38	e44	576	223	325	380	236	126
3	219	178	e80	e43	e38	e52	585	218	398	416	224	128
4	211	172	e78	e43	e38	e42	634	210	663	481	211	86
5	197	167	e75	e43	e38	e40	713	202	458	557	205	76
6	187	168	e75	e43	e38	e60	726	195	365	630	192	70
7	179	163	e75	e43	e38	e95	679	186	345	698	184	64
8	166	157	e75	e43	e39	e118	617	187	618	764	187	57
9	155	152	e75	e43	e45	e122	564	323	660	816	185	50
10	144	150	e77	e43	e50	e130	513	365	568	849	178	50
11	139	143	e78	e42	e48	e135	465	418	530	888	172	56
12	131	135	e75	e39	e44	e137	462	461	589	927	166	55
13	123	117	e73	e36	e42	e138	485	500	589	958	175	52
14	119	110	e72	e34	e40	e139	492	537	674	982	196	49
15	119	123	e72	e33	e39	e140	490	551	731	1,080	207	47
16	118	139	e72	e32	e38	e145	477	519	746	1,070	195	46
17	117	146	e72	e32	e37	e150	449	485	753	969	183	44
18	116	134	e73	e34	e37	e155	421	534	743	841	172	43
19	116	113	e76	e38	e36	157	398	668	723	671	167	41
20	117	116	e88	e40	e36	160	380	684	695	551	150	40
21	121	97	e70	e40	e36	162	379	655	661	481	139	39
22	126	e86	e58	e41	e36	155	352	581	617	430	132	37
23	130	e75	e50	e44	e36	153	326	558	561	403	128	35
24	137	e75	e47	e43	e36	165	309	586	499	386	124	35
25	158	e75	e45	e41	e36	171	297	579	445	378	122	35
26	178	e75	e43	e40	e36	187	282	543	400	371	117	35
27	179	e77	e43	e39	e37	227	266	512	370	358	109	34
28	182	e78	e43	e39	e38	301	258	470	338	336	104	33
29	206	e77	e43	e38	---	409	248	428	352	317	100	29
30	221	e76	e43	e38	---	488	237	400	424	294	95	28
31	208	---	e43	e38	---	506	---	377	---	272	93	---
TOTAL	4,991	3,757	2,045	1,231	1,088	5,123	13,623	13,383	16,191	18,949	5,099	1,629
MEAN	161	125	66.0	39.7	38.9	165	454	432	540	611	164	54.3
MAX	244	195	88	44	50	506	726	684	753	1,080	251	128
MIN	116	75	43	32	36	40	237	186	325	272	93	28
AC-FT	9,900	7,450	4,060	2,440	2,160	10,160	27,020	26,550	32,110	37,590	10,110	3,230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

MEAN	41.3	41.1	24.0	15.4	16.9	189	672	258	165	125	67.4	42.7
MAX	392	375	144	68.2	112	1,381	2,623	1,953	875	722	1,033	321
(WY)	(1995)	(2001)	(2001)	(1995)	(1998)	(1995)	(1996)	(1950)	(2004)	(2000)	(1993)	(1994)
MIN	0.83	2.83	3.14	1.94	0.00	2.14	42.4	37.3	6.66	3.84	0.68	0.00
(WY)	(1964)	(1977)	(1977)	(1964)	(1963)	(1964)	(1991)	(1961)	(1961)	(1961)	(1961)	(1959)

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	122,000		87,109			
ANNUAL MEAN	333		239		138	
HIGHEST ANNUAL MEAN					399	1950
LOWEST ANNUAL MEAN					13.2	1977
HIGHEST DAILY MEAN	4,550	Mar 31	1,080	Jul 15	7,410	Apr 17, 1950
LOWEST DAILY MEAN	20	Feb 14	28	Sep 30	0.00	Aug 29, 1959
ANNUAL SEVEN-DAY MINIMUM	20	Feb 12	33	Sep 24	0.00	Aug 29, 1959
MAXIMUM PEAK FLOW			1,120	Jul 15	[a]7,830	Apr 17, 1950
MAXIMUM PEAK STAGE			12.69	Jul 15	19.13	Apr 18, 1996
ANNUAL RUNOFF (AC-FT)	242,000		172,800		100,000	
10 PERCENT EXCEEDS	704		587		309	
50 PERCENT EXCEEDS	123		150		31	
90 PERCENT EXCEEDS	23		38		4.8	

a Gage height, 18.69 ft
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.62	10.48	10.07	9.94	9.79	9.87	11.37	10.42	10.87	10.99	10.56	10.06
2	10.58	10.45	10.05	9.98	9.78	9.84	11.45	10.40	10.79	10.95	10.52	10.13
3	10.56	10.42	10.05	9.96	9.79	9.85	11.47	10.38	10.98	11.04	10.48	10.14
4	10.53	10.40	10.07	9.94	9.80	9.80	11.59	10.36	11.66	11.22	10.43	10.10
5	10.49	10.38	10.03	9.93	9.80	9.79	11.77	10.33	11.15	11.40	10.41	10.07
6	10.45	10.39	10.04	9.94	9.85	9.96	11.80	10.31	10.91	11.58	10.37	10.04
7	10.42	10.37	10.06	9.90	10.04	10.08	11.69	10.28	10.85	11.74	10.34	10.02
8	10.38	10.35	10.05	9.87	10.02	10.19	11.55	10.28	11.54	11.89	10.35	9.99
9	10.34	10.33	10.04	9.87	9.97	10.21	11.42	10.71	11.65	12.00	10.35	9.96
10	10.30	10.32	10.04	9.93	9.93	10.20	11.29	10.84	11.43	12.08	10.32	9.96
11	10.28	10.30	10.05	9.94	9.93	10.19	11.16	11.01	11.34	12.16	10.30	9.98
12	10.25	10.27	10.05	9.91	9.85	10.21	11.15	11.13	11.48	12.25	10.28	9.98
13	10.22	10.20	10.03	9.97	9.81	10.21	11.21	11.24	11.48	12.32	10.31	9.97
14	10.21	10.18	10.05	10.04	9.80	10.23	11.22	11.34	11.68	12.37	10.38	9.96
15	10.21	10.23	10.05	9.91	9.79	10.23	11.22	11.38	11.81	12.59	10.42	9.95
16	10.21	10.28	10.03	9.81	9.80	10.25	11.18	11.30	11.85	12.57	10.38	9.95
17	10.20	10.31	10.02	9.77	9.84	10.28	11.10	11.21	11.87	12.35	10.34	9.94
18	10.20	10.27	10.03	9.85	9.84	10.27	11.02	11.34	11.84	12.06	10.30	9.93
19	10.20	10.19	10.04	9.85	9.86	10.27	10.95	11.67	11.80	11.67	10.28	9.92
20	10.20	10.20	10.08	9.83	9.87	10.28	10.90	11.71	11.73	11.39	10.22	9.92
21	10.22	10.12	10.02	9.82	9.85	10.29	10.89	11.64	11.65	11.21	10.18	9.91
22	10.24	10.13	10.06	9.87	9.83	10.26	10.80	11.46	11.55	11.08	10.16	9.90
23	10.25	10.09	9.99	9.91	9.81	10.25	10.72	11.41	11.41	11.01	10.13	9.89
24	10.28	10.05	9.95	9.86	9.80	10.30	10.66	11.48	11.26	10.96	10.12	9.89
25	10.35	10.16	9.92	9.81	9.78	10.32	10.62	11.46	11.12	10.94	10.11	9.89
26	10.42	10.22	9.87	9.80	9.83	10.37	10.58	11.37	11.00	10.92	10.09	9.89
27	10.43	10.15	9.86	9.84	9.85	10.50	10.53	11.29	10.92	10.89	10.06	9.89
28	10.44	10.13	9.85	9.84	9.84	10.72	10.51	11.19	10.83	10.83	10.04	9.88
29	10.51	10.12	9.85	9.80	---	11.03	10.47	11.08	10.87	10.76	10.03	9.87
30	10.56	10.09	9.86	9.80	---	11.23	10.44	11.00	11.07	10.69	10.01	9.87
31	10.52	---	9.86	9.79	---	11.28	---	10.94	---	10.63	10.00	---
MEAN	10.36	10.25	10.00	9.88	9.85	10.28	11.09	11.03	11.35	11.50	10.27	9.96
MAX	10.62	10.48	10.08	10.04	10.04	11.28	11.80	11.71	11.87	12.59	10.56	10.14
MIN	10.20	10.05	9.85	9.77	9.78	9.79	10.44	10.28	10.79	10.63	10.00	9.87

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1997 to current year.
SPECIFIC CONDUCTANCE: June 1997 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1997.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 30.2°C, Aug. 19, 2003; minimum recorded, -0.4°C, on many days in January and February 2005.
SPECIFIC CONDUCTANCE: Maximum recorded, 2,230 microsiemens, Feb. 15-17, 2002; minimum recorded, 319 microsiemens, Mar. 29, 2003.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 27.9°C, July 13; minimum recorded, 0.4°C, on many days in January and February.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,500 microsiemens, July 26-28, July 31, and Aug. 1; minimum recorded, 546 microsiemens, Mar. 30.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
APR													
25...	0855	304	--	731	9.2	85	8.6	7.6	1,100	1,050	7.0	10.0	72.9
MAY													
31...	0850	352	--	737	8.0	84	8.2	8.3	1,350	1,340	12.0	16.0	81.4
AUG													
08...	1415	--	--	733	--	--	8.3	8.5	1,230	1,250	32.6	25.8	66.8
22...	1430	--	26	730	8.7	99	8.3	8.5	1,290	1,290	23.0	19.2	71.7
SEP													
06...	1415	--	18	731	8.5	100	8.3	8.6	1,220	1,220	24.1	20.9	67.0
22...	1435	--	35	730	9.6	103	8.5	8.5	1,200	1,180	20.3	16.3	75.1

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
APR													
25...	47.7	9.50	2	103	36	357	18.7	.22	17.9	256	724	607	40
MAY													
31...	58.0	9.40	3	129	38	397	18.4	.24	21.9	324	861	838	21
AUG													
08...	47.1	9.50	3	139	45	448	14.4	.22	33.1	237	784	--	--
22...	49.8	10.0	3	142	44	425	17.1	.24	29.4	279	828	--	35
SEP													
06...	47.1	9.90	3	140	45	400	17.0	.21	25.8	256	779	--	18
22...	46.1	8.20	3	119	40	374	17.7	.23	25.0	258	750	--	25

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

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
APR													
25...	.92	1.1	<.010	<.010	<.020	.020	--	--	.94	1.1	.143	.199	1
MAY													
31...	1.2	1.1	.040	.039	.260	.250	1.1	1.1	1.4	1.4	.201	.235	30
AUG													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	1.2	--	.025	--	.470	--	1.1	--	1.6	.308	.367	--
SEP													
06...	--	1.1	--	.019	--	.040	--	1.1	--	1.1	.239	.277	--
22...	--	.80	--	<.010	--	.080	--	--	--	.88	.163	.204	--

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

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

Date	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)
APR													
25...	10	<10	<50	<1	4.0	41.0	<1	130	<1	2	2.2	20	<1
MAY													
31...	30	30	<50	<1	4.3	53.2	<1	160	<1	2	4.0	20	<1
AUG													
08...	--	--	<50	<1	9.9	54.8	<1	280	<1	5	2.7	50	<1
22...	--	--	<50	<1	9.1	56.5	<1	320	<1	5	4.0	40	<1
SEP													
06...	--	--	<50	<1	9.5	52.8	<1	290	<1	3	2.5	30	<1
22...	--	--	<50	<1	19.3	57.5	<1	240	<1	3	2.2	<10	<1

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

Date	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR						
25...	100	4.93	<1	<1	<1.0	2.6
MAY						
31...	140	9.01	2	<1	<1.0	3.6
AUG						
08...	30	5.65	4	<1	<1.0	<1
22...	50	6.44	6	<1	<1.0	1.0
SEP						
06...	80	4.99	7	<1	<1.0	<1
22...	160	6.10	57	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.9	11.1	12.3	5.7	5.4	5.6	-0.2	-0.3	-0.2	-0.1	-0.2	-0.2
2	11.1	9.4	10	5.6	4.4	4.8	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2
3	10.1	9.2	9.7	4.7	3.8	4.2	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2
4	9.9	8.0	8.7	4.7	3.9	4.1	0.0	-0.2	-0.1	-0.2	-0.2	-0.2
5	9.9	7.6	8.5	4.1	3.4	3.8	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2
6	12.0	9.2	10.2	4.5	3.6	4.0	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2
7	13.2	11.7	12.3	4.5	3.6	4.0	-0.2	-0.3	-0.2	-0.1	-0.2	-0.2
8	13.4	12.6	13.0	3.7	2.7	3.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2
9	13.0	11.6	12.2	3.0	2.1	2.5	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2
10	12.5	11.4	12.0	3.0	2.3	2.7	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2
11	12.7	12.2	12.5	2.3	0.6	1.3	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2
12	12.8	12.0	12.4	0.7	0.0	0.3	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3
13	12.1	9.5	11.1	0.3	-0.1	0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2
14	9.5	7.7	8.5	0.3	-0.3	0.1	-0.1	-0.2	-0.2	-0.2	-0.4	-0.3
15	7.7	6.1	7.1	0.7	-0.1	0.3	-0.2	-0.3	-0.2	-0.2	-0.4	-0.3
16	6.1	4.6	5.3	1.0	0.5	0.7	-0.1	-0.2	-0.2	-0.3	-0.4	-0.3
17	4.6	3.5	4.1	1.0	0.8	0.9	-0.1	-0.2	-0.2	-0.3	-0.4	-0.4
18	3.5	3.2	3.4	1.1	0.3	0.7	---	---	---	-0.3	-0.4	-0.4
19	4.5	3.5	4.1	0.3	0.0	0.1	---	---	---	-0.2	-0.4	-0.3
20	5.0	4.5	4.7	0.5	0.1	0.2	-0.1	-0.3	-0.2	-0.2	-0.4	-0.3
21	6.5	5.0	5.8	0.3	-0.2	0.0	-0.1	-0.2	-0.2	-0.3	-0.4	-0.3
22	7.2	6.5	7.0	0.1	-0.2	-0.1	-0.1	-0.2	-0.2	-0.3	-0.4	-0.3
23	7.1	6.7	6.9	0.2	-0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.4	-0.3
24	6.8	5.9	6.4	0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.3	-0.4	-0.3
25	6.0	5.2	5.6	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.3
26	6.4	5.9	6.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2
27	6.4	5.7	6.0	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3
28	7.2	6.3	6.6	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3
29	8.3	7.2	7.8	-0.1	-0.2	-0.2	-0.1	-0.3	-0.2	-0.2	-0.3	-0.3
30	8.1	6.1	7.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2
31	6.1	5.5	5.7	---	---	---	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2
MONTH	13.9	3.2	8.2	5.7	-0.3	1.4	0.0	-0.3	-0.2	-0.1	-0.4	-0.3
		FEBRUARY			MARCH			APRIL			MAY	
1	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	0.0	-0.2	-0.1	6.3	5.2	5.6
2	-0.2	-0.3	-0.2	-0.3	-0.3	-0.3	0.0	-0.2	-0.1	6.9	4.4	5.5
3	-0.2	-0.3	-0.2	-0.3	-0.4	-0.3	2.4	-0.1	1.0	8.9	5.7	7.0
4	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	3.1	1.8	2.5	11.1	7.8	9.0
5	-0.2	-0.2	-0.2	-0.1	-0.3	-0.2	3.8	2.6	3.2	13.5	10.6	11.7
6	-0.2	-0.3	-0.2	0.0	-0.2	-0.2	5.5	3.3	4.3	14.9	12.8	13.7
7	-0.2	-0.3	-0.2	-0.1	-0.3	-0.2	7.6	4.7	6.1	14.9	14.1	14.4
8	-0.2	-0.4	-0.3	-0.1	-0.3	-0.2	9.2	7.2	8.1	16.5	14.3	15.2
9	-0.3	-0.3	-0.3	-0.2	-0.3	-0.2	10.8	8.3	9.4	16.6	14.1	15.0
10	-0.3	-0.3	-0.3	-0.1	-0.2	-0.2	11.6	9.7	10.6	14.8	13.2	14.1
11	-0.2	-0.4	-0.3	-0.1	-0.2	-0.2	11.2	10.3	10.6	13.8	11.4	12.3
12	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2	10.3	9.4	9.8	11.6	9.8	10.5
13	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2	11.1	8.9	9.9	10.2	9.3	9.7
14	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2	12.1	9.8	10.9	10.1	8.8	9.2
15	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	12.7	10.7	11.7	10.2	8.0	9.1
16	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	13.2	10.9	12.1	12.5	9.4	10.8
17	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2	14.2	11.8	12.9	14.0	11.3	12.7
18	-0.2	-0.3	-0.3	-0.2	-0.3	-0.2	16.3	13.2	14.6	16.4	13.7	15.0
19	-0.2	-0.4	-0.3	-0.2	-0.3	-0.2	16.0	14.2	15.0	16.8	15.9	16.3
20	-0.2	-0.3	-0.3	-0.2	-0.3	-0.2	14.2	12.2	13.2	19.0	16.3	17.6
21	-0.3	-0.3	-0.3	-0.2	-0.3	-0.2	14.7	12.2	13.4	19.8	18.5	19.1
22	-0.2	-0.3	-0.3	-0.1	-0.3	-0.2	13.9	11.3	12.4	18.9	17.4	18.2
23	-0.2	-0.3	-0.3	-0.1	-0.2	-0.2	12.3	9.8	11.1	19.2	17.2	18.1
24	-0.2	-0.3	-0.3	0.0	-0.2	-0.1	12.5	10.2	11.4	18.7	17.7	18.2
25	-0.2	-0.3	-0.3	0.0	-0.2	-0.1	12.1	10.0	10.7	17.7	16.5	17.1
26	-0.2	-0.3	-0.3	0.0	-0.2	-0.1	10.3	8.5	9.2	16.5	14.8	15.6
27	-0.2	-0.3	-0.3	0.0	-0.2	-0.2	9.3	7.8	8.3	14.8	13.6	14.0
28	-0.2	-0.3	-0.3	-0.1	-0.2	-0.2	7.9	6.5	7.1	13.6	12.8	13.1
29	---	---	---	0.1	-0.2	-0.1	7.1	5.8	6.4	14.4	12.3	13.2
30	---	---	---	-0.1	-0.2	-0.2	6.7	6.0	6.3	16.0	13.5	14.6
31	---	---	---	0.1	-0.2	-0.1	---	---	---	16.7	14.9	15.8
MONTH	-0.1	-0.4	-0.3	0.1	-0.4	-0.2	16.3	-0.2	8.7	19.8	4.4	13.3

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	15.9	16.9	20.4	17.6	18.8	26.4	24.1	25.3	20.3	17.7	18.9
2	19.2	17.1	18.0	23.2	19.6	21.1	27.7	24.9	26.1	17.8	16.7	17.4
3	19.0	18.2	18.6	23.8	21.6	22.7	27.6	25.0	26.1	18.9	17.4	18.1
4	19.7	17.8	18.7	23.0	21.6	22.0	25.0	22.7	23.5	20.3	18.5	19.4
5	19.7	18.9	19.3	22.5	20.6	21.5	23.6	21.8	22.6	22.3	20.2	21.2
6	20.5	18.0	19.1	23.5	21.5	22.4	24.7	22.1	23.1	21.6	20.4	21.2
7	20.3	18.8	19.3	24.2	22.2	23.2	26.0	23.6	24.6	20.4	19.0	19.8
8	18.9	15.2	17.5	25.0	23.3	24.1	26.1	25.1	25.6	20.4	18.7	19.4
9	18.9	16.7	17.9	26.4	24.4	25.3	26.0	24.6	25.1	20.1	19.4	19.8
10	19.3	18.2	18.7	27.5	25.9	26.6	25.0	22.5	23.3	21.1	19.6	20.3
11	19.1	17.9	18.5	27.1	26.6	26.8	22.5	20.6	21.4	22.2	20.4	21.2
12	19.5	16.8	18.0	27.6	26.0	26.8	20.6	19.6	20.2	21.4	20.1	20.9
13	19.4	18.4	18.8	27.9	26.7	27.2	20.4	19.2	19.6	20.1	18.2	19.2
14	18.4	17.5	17.8	27.7	26.8	27.1	19.8	18.4	19.1	18.5	17.0	17.8
15	19.3	17.5	18.3	26.8	25.7	26.3	21.2	18.7	19.7	18.0	16.2	17.1
16	20.7	18.5	19.6	26.6	25.7	26.2	22.0	20.2	21.0	18.5	16.5	17.5
17	22.0	19.9	20.9	26.6	25.7	26.2	22.0	20.2	20.8	18.5	17.4	17.8
18	23.1	20.8	21.8	25.7	23.2	24.3	21.0	19.9	20.3	17.5	16.6	17.0
19	24.5	22.4	23.4	24.4	22.0	23.1	21.6	20.5	21.1	18.1	16.1	16.8
20	25.4	23.9	24.5	25.3	23.3	24.3	21.6	20.5	21.0	18.2	16.2	17.1
21	25.7	23.9	24.8	24.8	23.2	24.1	20.8	19.8	20.3	17.7	16.5	17.0
22	25.8	24.3	25.1	24.8	22.9	23.9	20.1	19.2	19.7	16.9	15.4	16.0
23	27.0	25.1	26.0	25.3	23.5	24.4	20.5	19.2	19.8	15.5	14.3	14.9
24	26.2	24.7	25.3	26.4	24.0	25.1	20.2	19.5	20.0	15.0	14.1	14.5
25	24.9	23.2	24.0	26.0	23.0	24.5	20.0	19.4	19.6	14.3	13.3	13.7
26	24.0	22.2	22.9	23.0	21.6	22.1	20.1	19.0	19.5	14.2	12.1	13.0
27	23.0	21.7	22.2	21.9	20.7	21.4	20.6	19.4	19.9	14.8	12.2	13.3
28	22.4	20.6	21.4	22.0	19.9	20.9	20.9	19.6	20.2	14.0	12.5	13.1
29	21.8	20.6	20.9	22.7	20.3	21.5	21.6	20.0	20.6	13.0	11.5	12.2
30	20.6	18.6	19.1	24.7	21.3	22.7	22.0	20.6	21.2	13.5	11.1	12.1
31	---	---	---	26.5	23.6	24.8	21.5	20.3	21.2	---	---	---
MONTH	27.0	15.2	20.6	27.9	17.6	23.9	27.7	18.4	21.7	22.3	11.1	17.3

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1,040	1,030	1,030	1,220	1,200	1,210	1,310	1,290	1,300	1,410	1,400	1,410
2	1,030	1,020	1,030	1,200	1,190	1,190	1,310	1,300	1,300	1,410	1,400	1,400
3	1,020	1,020	1,020	1,190	1,180	1,180	1,320	1,310	1,320	1,400	1,390	1,400
4	1,030	1,020	1,030	1,180	1,170	1,180	1,320	1,320	1,320	1,400	1,390	1,400
5	1,030	1,010	1,030	1,180	1,160	1,170	1,320	1,310	1,320	1,400	1,390	1,390
6	1,020	990	1,010	1,170	1,160	1,170	1,310	1,310	1,310	1,410	1,400	1,400
7	1,000	993	995	1,170	1,160	1,170	1,310	1,300	1,300	1,420	1,410	1,420
8	1,020	1,000	1,020	1,180	1,170	1,180	1,310	1,300	1,300	1,430	1,420	1,420
9	1,030	1,020	1,030	1,180	1,160	1,170	1,310	1,290	1,300	1,420	1,410	1,420
10	1,030	1,020	1,020	1,160	1,160	1,160	1,300	1,290	1,290	1,410	1,390	1,400
11	1,040	1,030	1,040	1,190	1,160	1,180	1,290	1,270	1,280	1,390	1,380	1,390
12	1,050	1,040	1,050	1,190	1,180	1,180	1,270	1,260	1,270	1,380	1,370	1,380
13	1,060	1,050	1,050	1,190	1,180	1,180	1,270	1,250	1,260	1,380	1,370	1,370
14	1,070	1,060	1,070	1,190	1,180	1,180	1,270	1,250	1,260	1,370	1,350	1,360
15	1,090	1,070	1,080	1,190	1,180	1,180	1,280	1,270	1,280	1,350	1,340	1,340
16	1,100	1,090	1,090	1,200	1,180	1,190	1,280	1,280	1,280	1,350	1,340	1,350
17	1,100	1,100	1,100	1,200	1,190	1,200	1,280	1,270	1,280	1,360	1,350	1,360
18	1,110	1,100	1,110	1,200	1,180	1,190	1,290	1,270	1,280	1,360	1,350	1,360
19	1,110	1,100	1,110	1,210	1,200	1,200	1,320	1,290	1,310	1,360	1,350	1,350
20	1,110	1,100	1,100	1,210	1,200	1,200	1,340	1,320	1,330	1,380	1,360	1,370
21	1,100	1,100	1,100	1,220	1,200	1,210	1,360	1,340	1,360	1,380	1,370	1,380
22	1,100	1,090	1,100	1,240	1,210	1,220	1,380	1,350	1,360	1,390	1,380	1,390
23	1,100	1,090	1,100	1,220	1,210	1,220	1,430	1,380	1,410	1,390	1,380	1,390
24	1,110	1,100	1,100	1,270	1,220	1,250	1,460	1,430	1,440	1,390	1,390	1,390
25	1,120	1,110	1,110	1,270	1,260	1,270	1,460	1,450	1,460	1,390	1,380	1,380
26	1,120	1,110	1,110	1,270	1,260	1,260	1,460	1,450	1,460	1,380	1,370	1,380
27	1,120	1,110	1,120	1,260	1,250	1,260	1,450	1,430	1,440	1,380	1,370	1,370
28	1,120	1,110	1,120	1,270	1,250	1,260	1,440	1,430	1,430	1,370	1,360	1,370
29	1,150	1,110	1,120	1,270	1,260	1,270	1,430	1,420	1,430	1,380	1,360	1,370
30	1,240	1,150	1,190	1,300	1,270	1,280	1,430	1,420	1,420	1,380	1,370	1,380
31	1,240	1,220	1,230	---	---	---	1,420	1,410	1,410	1,380	1,360	1,370
MONTH	1,240	990	1,080	1,300	1,160	1,210	1,460	1,250	1,340	1,430	1,340	1,380
		FEBRUARY			MARCH			APRIL			MAY	
1	1,360	1,360	1,360	1,270	1,260	1,270	592	570	576	1,010	985	998
2	1,360	1,350	1,350	1,260	1,250	1,260	602	592	598	1,010	996	1,000
3	1,350	1,340	1,340	1,250	1,240	1,250	611	597	602	1,010	996	1,000
4	1,340	1,330	1,340	1,240	1,240	1,240	621	611	616	1,000	985	995
5	1,340	1,330	1,330	1,240	1,240	1,240	631	621	626	1,000	985	994
6	1,340	1,330	1,330	1,240	1,140	1,230	634	630	631	1,020	992	1,000
7	1,340	1,330	1,340	1,140	713	856	643	634	639	1,060	1,010	1,040
8	1,340	1,330	1,330	977	835	922	651	643	647	1,060	1,050	1,060
9	1,330	1,320	1,320	846	779	807	671	651	660	1,180	1,030	1,080
10	1,330	1,320	1,320	864	766	816	693	671	681	1,140	1,070	1,100
11	1,320	1,300	1,300	832	778	799	721	693	707	1,220	1,130	1,170
12	1,300	1,280	1,290	933	832	889	753	721	737	1,220	1,180	1,200
13	1,290	1,270	1,280	933	913	930	836	753	786	1,190	1,150	1,180
14	1,270	1,250	1,260	913	831	860	894	836	863	1,150	1,100	1,120
15	1,260	1,250	1,250	833	817	828	917	894	905	1,120	1,100	1,110
16	1,260	1,250	1,250	895	815	846	925	915	920	1,130	1,100	1,120
17	1,270	1,260	1,260	1,010	895	966	925	908	919	1,130	1,080	1,120
18	1,290	1,270	1,280	1,010	915	973	934	920	926	1,110	1,030	1,080
19	1,310	1,280	1,290	915	867	885	951	934	940	1,080	979	1,030
20	1,300	1,300	1,300	919	868	895	976	951	962	1,060	1,030	1,040
21	1,320	1,300	1,310	1,060	919	963	979	958	975	1,100	1,050	1,080
22	1,320	1,310	1,320	1,130	1,060	1,110	1,010	958	984	1,150	1,100	1,130
23	1,320	1,310	1,320	1,130	975	1,050	1,010	990	1,000	1,160	1,150	1,160
24	1,320	1,320	1,320	975	875	922	999	974	983	1,160	1,120	1,140
25	1,320	1,310	1,320	875	818	841	1,020	982	1,000	1,130	1,100	1,120
26	1,310	1,310	1,310	818	781	797	1,030	1,020	1,020	1,160	1,130	1,150
27	1,310	1,290	1,300	781	728	757	1,020	1,010	1,020	1,180	1,160	1,180
28	1,290	1,270	1,280	728	649	679	1,020	1,010	1,020	1,180	1,150	1,160
29	---	---	---	649	565	610	1,020	1,000	1,010	1,190	1,150	1,170
30	---	---	---	585	546	566	1,010	990	996	1,190	1,180	1,180
31	---	---	---	575	554	565	---	---	---	1,210	1,170	1,180
MONTH	1,360	1,250	1,310	1,270	546	923	1,030	570	832	1,220	979	1,100

05057000 SHEYENNE RIVER NEAR COOPERSTOWN, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1,230	1,210	1,220	1,320	1,310	1,310	1,500	1,490	1,490	1,180	1,170	1,170
2	1,260	1,230	1,240	1,330	1,320	1,320	1,490	1,480	1,490	1,170	1,160	1,170
3	1,280	1,260	1,270	1,330	1,320	1,330	1,490	1,480	1,490	1,170	1,150	1,160
4	1,280	1,260	1,270	1,330	1,320	1,330	1,480	1,470	1,480	1,150	1,150	1,150
5	1,270	1,260	1,260	1,330	1,270	1,290	1,470	1,460	1,470	1,160	1,150	1,160
6	1,260	1,250	1,250	1,300	1,280	1,290	1,460	1,450	1,460	1,160	1,150	1,160
7	1,260	1,250	1,250	1,320	1,300	1,310	1,450	1,430	1,440	1,180	1,160	1,170
8	1,280	1,250	1,260	1,320	1,310	1,320	1,430	1,410	1,420	1,190	1,180	1,180
9	1,250	1,220	1,230	1,320	1,310	1,310	1,410	1,390	1,400	1,180	1,170	1,170
10	1,220	1,210	1,210	1,310	1,300	1,300	1,390	1,380	1,380	1,190	1,170	1,180
11	1,210	1,210	1,210	1,300	1,280	1,290	1,380	1,360	1,370	1,190	1,180	1,180
12	1,220	1,210	1,220	1,280	1,270	1,270	1,360	1,350	1,360	1,180	1,150	1,170
13	1,230	1,220	1,230	1,270	1,250	1,260	1,350	1,340	1,350	1,160	1,140	1,150
14	1,230	1,230	1,230	1,250	1,240	1,250	1,340	1,340	1,340	1,150	1,120	1,140
15	1,240	1,230	1,230	1,250	1,240	1,240	1,340	1,330	1,330	1,140	1,120	1,130
16	1,240	1,230	1,240	1,260	1,240	1,250	1,330	1,330	1,330	1,140	1,130	1,140
17	1,250	1,240	1,240	1,290	1,260	1,270	1,330	1,320	1,320	1,140	1,120	1,130
18	1,250	1,240	1,250	1,310	1,290	1,300	1,320	1,310	1,320	1,140	1,130	1,140
19	1,260	1,250	1,250	1,340	1,310	1,320	1,310	1,310	1,310	1,140	1,130	1,130
20	1,260	1,260	1,260	1,390	1,340	1,360	1,310	1,300	1,300	1,130	1,120	1,130
21	1,260	1,260	1,260	1,420	1,390	1,410	1,300	1,290	1,300	1,130	1,120	1,120
22	1,260	1,230	1,250	1,450	1,420	1,440	1,290	1,280	1,290	1,130	1,130	1,130
23	1,290	1,250	1,270	1,470	1,450	1,460	1,280	1,280	1,280	1,140	1,130	1,140
24	1,310	1,290	1,300	1,480	1,470	1,480	1,290	1,270	1,280	1,140	1,130	1,130
25	1,330	1,310	1,320	1,490	1,480	1,490	1,280	1,250	1,260	1,130	1,120	1,130
26	1,330	1,320	1,330	1,500	1,490	1,500	1,250	1,220	1,230	1,120	1,110	1,120
27	1,340	1,330	1,340	1,500	1,500	1,500	1,220	1,220	1,220	1,120	1,100	1,110
28	1,340	1,290	1,310	1,500	1,470	1,480	1,220	1,210	1,220	1,120	1,100	1,110
29	1,300	1,300	1,300	1,490	1,480	1,480	1,210	1,200	1,210	1,110	1,110	1,110
30	1,310	1,300	1,300	1,490	1,480	1,490	1,200	1,180	1,190	1,120	1,110	1,110
31	---	---	---	1,500	1,490	1,490	1,190	1,180	1,180	---	---	---
MONTH	1,340	1,210	1,260	1,500	1,240	1,360	1,500	1,180	1,340	1,190	1,100	1,140

05057200 BALDHILL CREEK NEAR DAZEY, ND

LOCATION.--Lat 47°13'45", long 98°07'28", in NW¼SE¼SW¼ sec.2, T.143 N., R.59 W., Barnes County, Hydrologic Unit 09020203, on left bank 500 ft upstream from bridge on county highway, 4.5 mi northeast of Dazey, and 14 mi upstream from mouth.

DRAINAGE AREA.--691 mi^2, of which about 340 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,330 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 9, 1956, nonrecording gage 500 ft downstream at same datum.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	78	e29	e8.0	e3.4	e4.8	87	42	48	68	12	1.7
2	38	72	e29	e7.5	e3.6	e5.0	91	40	47	65	12	1.6
3	36	67	e30	e7.0	e3.9	e7.5	88	39	79	65	11	1.5
4	33	63	e29	e6.0	e5.2	e10	78	37	91	63	9.9	1.4
5	31	60	e28	e5.0	e4.6	e20	71	35	61	59	8.8	1.4
6	28	57	e27	e4.5	e4.0	e17	66	34	56	55	7.9	1.4
7	26	54	e27	e3.8	e3.6	e16	62	32	57	52	6.9	1.4
8	24	50	e27	e3.4	e3.3	e15	57	30	157	50	6.0	1.4
9	22	47	e27	e3.2	e4.0	e14	53	68	174	49	5.3	1.4
10	20	45	e27	e3.0	e5.0	e18	49	98	136	47	4.7	1.4
11	18	43	e27	e3.0	e8.0	e16	48	89	123	44	4.2	1.4
12	17	41	e26	e2.9	e7.0	e15	49	86	156	41	3.9	1.3
13	16	39	e26	e2.9	e6.5	e14	52	86	142	38	3.6	1.3
14	14	38	e25	e2.7	e6.0	e13	56	90	164	35	3.3	1.8
15	13	37	e24	e2.6	e5.7	e13	58	89	179	36	2.9	3.8
16	12	37	e24	e2.5	e5.5	e12	60	83	151	36	2.6	3.6
17	11	40	e23	e2.4	e5.3	e12	61	77	130	34	2.4	3.6
18	11	41	e20	e2.5	e5.2	e12	62	71	112	31	2.2	4.6
19	11	40	e18	e2.6	e5.1	e13	64	66	98	28	2.4	4.9
20	11	40	e15	e2.6	e5.0	e14	64	63	90	26	2.7	5.1
21	11	39	e14	e2.6	e4.9	e16	64	64	84	24	2.9	4.6
22	12	38	e12	e2.6	e4.9	e18	62	61	77	22	2.8	4.3
23	14	e31	e9.5	e2.6	e4.8	e20	57	58	72	20	2.6	3.9
24	17	e34	e9.0	e2.6	e4.8	e22	54	58	66	19	2.5	3.9
25	20	e33	e8.8	e2.6	e4.8	e25	53	57	62	17	2.3	5.1
26	25	e32	e8.7	e2.6	e4.8	e30	50	56	60	17	2.2	6.4
27	28	e31	e8.6	e3.0	e4.8	e38	47	56	64	16	2.1	6.4
28	31	e31	e8.6	e3.0	e4.8	43	45	55	66	15	2.0	6.4
29	53	e31	e8.5	e3.1	---	54	44	54	63	15	1.9	5.9
30	81	e30	e8.5	e3.2	---	65	43	52	68	14	1.9	5.6
31	82	---	e8.3	e3.2	---	72	---	49	---	13	1.8	---
TOTAL	806	1,319	612.5	109.2	138.5	664.3	1,795	1,875	2,933	1,114	139.7	98.5
MEAN	26.0	44.0	19.8	3.52	4.95	21.4	59.8	60.5	97.8	35.9	4.51	3.28
MAX	82	78	30	8.0	8.0	72	91	98	179	68	12	6.4
MIN	11	30	8.3	2.4	3.3	4.8	43	30	47	13	1.8	1.3
AC-FT	1,600	2,620	1,210	217	275	1,320	3,560	3,720	5,820	2,210	277	195

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	7.91	7.84	3.59	1.60	2.79	65.3	129	33.1	26.7	20.0	9.01	7.66
MAX	106	54.9	19.8	7.31	34.2	475	1,040	220	276	273	133	58.5
(WY)	(1995)	(2001)	(2005)	(1995)	(1998)	(1995)	(1997)	(1997)	(2004)	(1993)	(1993)	(1957)
MIN	0.47	0.38	0.15	0.00	0.00	0.59	2.44	1.71	0.91	0.02	0.08	0.09
(WY)	(1992)	(1960)	(1959)	(1959)	(1957)	(1964)	(1981)	(1981)	(1961)	(1989)	(1984)	(1984)

05057200 BALDHILL CREEK NEAR DAZEY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005	
ANNUAL TOTAL	29,776.58		11,604.7			
ANNUAL MEAN	81.4		31.8		26.4	
HIGHEST ANNUAL MEAN					115	1997
LOWEST ANNUAL MEAN					1.52	1981
HIGHEST DAILY MEAN	2,370	Mar 29	179	Jun 15	4,500	Apr 19, 1979
LOWEST DAILY MEAN	0.90	Jan 29	1.3	Sep 12	0.00	Jan 25, 1957
ANNUAL SEVEN-DAY MINIMUM	0.97	Jan 24	1.4	Sep 7	0.00	Jan 25, 1957
MAXIMUM PEAK FLOW			234	Jun 8	[a]9,000	Apr 19, 1979
MAXIMUM PEAK STAGE			7.84	Jun 8	[b]17.78	Apr 19, 1979
ANNUAL RUNOFF (AC-FT)	59,060		23,020		19,100	
10 PERCENT EXCEEDS	115		71		45	
50 PERCENT EXCEEDS	29		22		3.8	
90 PERCENT EXCEEDS	1.5		2.6		0.30	

a About
b From floodmark
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.79	7.06	6.48	6.24	6.05	6.12	7.16	6.64	6.73	6.97	6.05	5.63
2	6.77	7.00	6.47	6.24	6.07	6.12	7.20	6.62	6.72	6.94	6.03	5.61
3	6.74	6.95	6.46	6.20	6.09	6.12	7.18	6.60	6.98	6.94	6.00	5.59
4	6.71	6.90	6.47	6.09	6.14	6.13	7.08	6.58	7.16	6.92	5.97	5.58
5	6.68	6.86	6.46	6.06	6.16	6.27	7.00	6.55	6.90	6.87	5.94	5.58
6	6.65	6.82	6.46	6.03	6.16	6.97	6.95	6.52	6.83	6.83	5.91	5.58
7	6.61	6.77	6.47	6.02	6.15	6.94	6.91	6.48	6.84	6.78	5.88	5.58
8	6.58	6.73	6.45	6.01	6.13	7.04	6.86	6.46	7.49	6.76	5.85	5.58
9	6.55	6.69	6.45	6.00	6.11	6.89	6.80	6.93	7.62	6.75	5.83	5.58
10	6.52	6.65	6.46	6.00	6.09	6.80	6.75	7.25	7.46	6.72	5.81	5.57
11	6.49	6.62	6.45	6.00	6.10	6.69	6.73	7.18	7.39	6.67	5.79	5.57
12	6.47	6.59	6.46	6.00	6.14	6.59	6.74	7.16	7.55	6.63	5.78	5.56
13	6.45	6.56	6.43	6.00	6.19	6.56	6.79	7.16	7.49	6.59	5.76	5.56
14	6.42	6.54	6.45	5.97	6.21	6.52	6.84	7.19	7.58	6.54	5.75	5.70
15	6.40	6.52	6.44	5.93	6.19	6.49	6.87	7.18	7.64	6.56	5.73	6.02
16	6.38	6.53	6.43	5.91	6.17	6.46	6.89	7.13	7.53	6.56	5.71	6.07
17	6.37	6.57	6.42	5.88	6.17	6.41	6.90	7.07	7.43	6.52	5.70	6.07
18	6.36	6.59	6.41	5.91	6.15	6.35	6.92	7.01	7.33	6.47	5.69	6.12
19	6.35	6.58	6.37	5.97	6.14	6.35	6.93	6.96	7.26	6.41	5.70	6.13
20	6.36	6.57	6.34	6.00	6.13	6.38	6.93	6.92	7.19	6.37	5.72	6.14
21	6.36	6.55	6.33	6.00	6.11	6.46	6.93	6.93	7.13	6.33	5.73	6.11
22	6.38	6.54	6.29	6.00	6.09	6.50	6.91	6.90	7.07	6.28	5.72	6.11
23	6.42	6.50	6.26	6.00	6.09	6.52	6.85	6.87	7.01	6.24	5.71	6.09
24	6.47	6.59	6.19	6.00	6.10	6.57	6.82	6.86	6.96	6.21	5.71	6.09
25	6.53	6.57	6.12	6.01	6.10	6.55	6.79	6.86	6.91	6.18	5.69	6.13
26	6.60	6.56	6.12	6.03	6.10	6.58	6.76	6.84	6.88	6.16	5.69	6.18
27	6.64	6.54	6.14	6.03	6.10	6.63	6.72	6.83	6.92	6.15	5.68	6.18
28	6.68	6.52	6.16	6.03	6.12	6.80	6.70	6.82	6.95	6.13	5.67	6.18
29	6.88	6.51	6.20	6.03	---	6.91	6.68	6.81	6.92	6.12	5.66	6.16
30	7.11	6.50	6.24	6.04	---	6.99	6.67	6.78	6.98	6.09	5.65	6.15
31	7.11	---	6.25	6.04	---	7.03	---	6.75	---	6.07	5.64	---
MEAN	6.58	6.65	6.36	6.02	6.13	6.57	6.88	6.87	7.16	6.51	5.78	5.87
MAX	7.11	7.06	6.48	6.24	6.21	7.04	7.20	7.25	7.64	6.97	6.05	6.18
MIN	6.35	6.50	6.12	5.88	6.05	6.12	6.67	6.46	6.72	6.07	5.64	5.56

05057200 BALDHILL CREEK NEAR DAZEY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
18...	1300	64	10.4	8.7	8.2	963	970	24.5	16.0	76.4	49.9	9.60	1
AUG													
04...	1805	9.4	--	8.4	8.4	1,120	1,130	24.0	24.0	87.7	54.1	8.80	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
18...	59.3	24	326	18.0	.24	2.22	221	632	109	<50	<1	2.7	35.6
AUG													
04...	74.9	26	351	17.6	.20	31.8	265	720	19.1	<50	<1	6.0	52.5

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
18...	<1	100	<1	<1	1.8	50	<1	150	3.84	1	<1	<1.0	3.4
AUG													
04...	<1	140	<1	<1	1.4	40	<1	230	4.83	8	<1	<1.0	1.8

Remark codes used in this table:
< -- Less than.

05057500 LAKE ASHTABULA AT BALDHILL DAM, ND

LOCATION.--Lat 47°02'00", long 98°05'00", in NW¼ sec.18, T.141 N., R.58 W., Barnes County, Hydrologic Unit 09020203, at Baldhill Dam on Sheyenne River and 8 mi northwest of Valley City.

DRAINAGE AREA.--7,470 mi^2, approximately, of which about 5,560 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

MONTHEND-ELEVATION AND CONTENTS RECORDS

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

REVISED RECORDS.--WSP 1238: 1950(M). WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth-filled dam, 1,650 ft long; storage began on July 30, 1949; dam completed September 1949. Usable capacity, 69,100 acre-ft between invert of outlet conduit, elevation, 1,238.0 ft, and normal pool level, elevation, 1,266.0 ft. Dead storage below elevation 1,238.0 ft, 1,500 acre-ft. Maximum pool elevation, 1,278.5 ft, capacity, 157,500 acre-ft. Maximum elevation and capacity increased by construction, which was completed in the fall of 2003. Low flows are controlled by 2 sluice gates 3 ft in diameter. The spillway crest is 120 ft long at elevation 1,252.0 ft, surmounted by 3 taintor gates, each 15 ft high and 40 ft long. The reservoir is operated for flood control and to increase low-water flow. Figures given for storage capacity (in acre-ft) based on capacity table dated 1978 (provided by U.S. Army Corps of Engineers).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 98,210 acre-ft, Apr. 7, 2004, elevation, 1,270.51 ft; minimum since reservoir first reached spillway level, 6,660 acre-ft, Aug. 11-14, 1950, elevation, 1,245.13 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 75,390 acre-ft, June 4, elevation, 1,266.84 ft; minimum, 52,700 acre-ft, Mar. 5, elevation, 1,262.60 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,266.04	70,830	--
Oct. 31	1,265.32	66,790	-4,040
Nov 30	1,264.60	62,800	-3,990
Dec. 31	1,264.40	61,700	-1,100
CAL YR 2004	--	--	+1,160
Jan. 31	1,263.89	58,950	-2,750
Feb. 28	1,262.81	53,640	-5,310
Mar. 31	1,263.24	55,700	+2,060
Apr. 30	1,265.96	70,380	+14,680
May 31	1,265.90	70,040	-340
June 30	1,266.16	71,510	+1,470
July 31	1,266.02	70,710	-800
Aug. 31	1,265.89	69,980	-730
Sept. 30	[e]1,265.81	69,540	-440
WTR YR 2005	--	--	-1,290

e Estimated

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND

LOCATION.--Lat 47°02'02", long 98°05'00", in NW¼NW¼ sec.18, T.141 N., R.58 W., Barnes County, Hydrologic Unit 09020204, on right bank 0.1 mi downstream from Baldhill Dam, 8 mi northwest of Valley City, and at mile 270.5.

DRAINAGE AREA.--7,470 mi^2, approximately, of which about 5,560 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,200.00 ft above National Geodetic Vertical Datum of 1929. From Dec. 29, 1994, to Sept. 18, 2000, at site 0.7 mi downstream at same datum.

REMARKS.--Records good. Flow completely regulated by Lake Ashtabula (station 05057500). Records 1955 to 1972 include releases at Baldhill Dam to the fish-rearing ponds of the Fish and Wildlife Service. Daily discharges from Dec. 29, 1994, to current water year include releases through fish hatchery siphon.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	208	94	e98	121	165	94	260	436	652	247	79
2	419	303	94	98	121	159	82	259	339	750	227	65
3	419	357	94	98	127	160	84	205	420	757	216	66
4	419	357	95	98	134	124	84	175	1,230	763	216	66
5	370	356	95	98	136	102	83	177	1,470	661	204	66
6	318	355	115	97	137	102	88	177	1,450	616	189	66
7	319	352	129	97	139	102	85	178	1,260	596	189	66
8	318	350	128	97	139	102	83	178	1,270	687	160	67
9	317	351	128	96	139	92	84	276	1,390	768	142	67
10	317	351	129	95	145	123	86	415	1,390	760	142	67
11	317	351	129	95	148	157	188	570	924	768	142	68
12	317	350	126	96	150	157	385	673	770	816	142	67
13	316	350	131	96	147	157	546	702	1,240	924	142	67
14	314	349	129	96	147	158	586	705	1,470	956	143	67
15	314	280	126	96	150	171	534	702	1,470	1,050	144	66
16	315	191	127	96	152	189	510	705	1,200	1,120	143	66
17	315	171	128	96	156	211	519	706	942	1,130	144	66
18	314	186	130	97	162	266	450	707	754	1,130	144	64
19	314	185	132	96	170	297	428	756	757	963	209	64
20	313	186	130	97	165	295	425	786	761	797	243	64
21	233	185	132	97	168	294	421	791	760	629	244	64
22	166	186	131	96	162	293	419	797	761	427	244	65
23	166	185	131	96	167	295	420	796	757	369	246	63
24	166	186	132	95	159	295	417	751	762	371	186	62
25	166	189	132	95	161	295	422	721	575	377	147	62
26	166	186	132	114	159	293	419	726	241	376	147	62
27	166	188	132	129	163	291	371	727	398	311	146	62
28	165	188	111	125	163	288	289	704	509	241	145	62
29	163	139	97	126	---	267	259	654	509	244	116	62
30	164	94	97	124	---	166	259	636	512	244	98	62
31	164	---	e98	122	---	112	---	553	---	248	98	---
TOTAL	8,669	7,665	3,714	3,152	4,187	6,178	9,120	17,168	26,727	20,501	5,345	1,960
MEAN	280	256	120	102	150	199	304	554	891	661	172	65.3
MAX	419	357	132	129	170	297	586	797	1,470	1,130	247	79
MIN	163	94	94	95	121	92	82	175	241	241	98	62
AC-FT	17,190	15,200	7,370	6,250	8,300	12,250	18,090	34,050	53,010	40,660	10,600	3,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	64.6	88.4	79.7	67.2	76.2	217	659	328	223	162	91.5	64.9
MAX	622	587	375	227	300	1,567	3,329	2,906	1,322	1,272	1,555	577
(WY)	(1995)	(2001)	(2001)	(2001)	(1996)	(1995)	(1997)	(1950)	(2004)	(1993)	(1993)	(1994)
MIN	1.92	5.27	4.32	3.64	7.66	7.81	2.07	6.86	5.88	7.28	6.72	0.81
(WY)	(1956)	(1956)	(1980)	(1956)	(1956)	(1955)	(1953)	(1959)	(1958)	(1959)	(1977)	(1955)

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1950 - 2005	
ANNUAL TOTAL	168,669		114,386			
ANNUAL MEAN	461		313		177	
HIGHEST ANNUAL MEAN					574	1995
LOWEST ANNUAL MEAN					12.8	1991
HIGHEST DAILY MEAN	3,610	Apr 7	1,470	Jun 5	5,410	Apr 20, 1996
LOWEST DAILY MEAN	39	Mar 16	62	Sep 24	0.00	Sep 8, 1950
ANNUAL SEVEN-DAY MINIMUM	39	Mar 16	62	Sep 24	0.00	Aug 8, 1952
MAXIMUM PEAK FLOW			1,600	Jun 15	5,460	Apr 20, 1996
MAXIMUM PEAK STAGE			27.94	Jun 15	36.46	Apr 20, 1996
ANNUAL RUNOFF (AC-FT)	334,600		226,900		128,000	
10 PERCENT EXCEEDS	1,560		757		372	
50 PERCENT EXCEEDS	166		178		52	
90 PERCENT EXCEEDS	47		85		9.8	

e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.13	24.55	23.97	e24.00	24.14	24.37	23.97	24.70	25.16	25.69	24.76	23.96
2	25.13	24.85	23.97	24.00	24.14	24.34	23.89	24.70	24.93	25.88	24.69	23.86
3	25.13	25.01	23.97	24.00	24.17	24.35	23.91	24.50	25.10	25.89	24.65	23.86
4	25.13	25.01	23.98	24.00	24.21	24.15	23.91	24.39	27.00	25.91	24.65	23.86
5	25.03	25.01	23.98	24.00	24.22	24.02	23.90	24.40	27.62	25.71	24.61	23.87
6	24.92	25.00	24.10	23.99	24.23	24.02	23.93	24.40	27.56	25.62	24.55	23.87
7	24.93	24.99	24.18	23.99	24.24	24.02	23.91	24.40	27.06	25.59	24.55	23.87
8	24.92	24.99	24.18	23.99	24.23	24.02	23.90	24.40	27.08	25.76	24.42	23.87
9	24.92	24.99	24.18	23.99	24.24	23.96	23.91	24.72	27.39	25.92	24.34	23.87
10	24.92	24.99	24.18	23.98	24.27	24.14	23.92	25.11	27.41	25.90	24.34	23.88
11	24.92	24.99	24.18	23.98	24.29	24.33	24.37	25.44	26.34	25.92	24.34	23.88
12	24.92	24.99	24.17	23.99	24.30	24.33	25.03	25.63	25.95	26.02	24.34	23.87
13	24.92	24.99	24.19	23.99	24.29	24.33	25.39	25.68	27.00	26.25	24.34	23.87
14	24.91	24.99	24.18	23.99	24.29	24.34	25.47	25.69	27.62	26.32	24.34	23.87
15	24.91	24.79	24.17	23.98	24.30	24.39	25.37	25.68	27.59	26.53	24.35	23.87
16	24.91	24.47	24.18	23.98	24.31	24.46	25.33	25.69	26.88	26.69	24.35	23.87
17	24.92	24.40	24.18	23.99	24.33	24.54	25.34	25.69	26.30	26.70	24.35	23.86
18	24.91	24.46	24.19	23.99	24.35	24.72	25.19	25.69	25.89	26.72	24.35	23.85
19	24.91	24.46	24.20	23.99	24.39	24.81	25.15	25.79	25.89	26.34	24.61	23.85
20	24.91	24.46	24.19	23.99	24.37	24.81	25.14	25.85	25.90	25.97	24.75	23.85
21	24.62	24.46	24.20	23.99	24.38	24.81	25.13	25.86	25.90	25.65	24.75	23.85
22	24.37	24.47	24.20	23.99	24.35	24.80	25.13	25.87	25.90	25.24	24.75	23.86
23	24.37	24.46	24.19	23.98	24.37	24.81	25.13	25.87	25.89	25.11	24.75	23.84
24	24.37	24.46	24.20	23.98	24.34	24.81	25.13	25.78	25.91	25.11	24.52	23.83
25	24.37	24.47	24.20	23.98	24.35	24.81	25.14	25.72	25.45	25.13	24.37	23.83
26	24.37	24.46	24.20	24.09	24.34	24.80	25.13	25.73	24.73	25.13	24.36	23.83
27	24.37	24.47	24.20	24.19	24.36	24.80	25.01	25.73	25.16	24.94	24.36	23.82
28	24.37	24.47	24.08	24.16	24.36	24.78	24.78	25.69	25.42	24.74	24.35	23.83
29	24.36	24.20	23.99	24.17	---	24.71	24.70	25.59	25.42	24.75	24.20	23.82
30	24.36	23.97	23.99	24.16	---	24.32	24.70	25.56	25.43	24.75	24.10	23.82
31	24.36	---	e24.00	24.15	---	24.08	---	25.40	---	24.76	24.10	---
MEAN	24.76	24.68	24.13	24.02	24.29	24.45	24.70	25.33	26.23	25.70	24.46	23.86
MAX	25.13	25.01	24.20	24.19	24.39	24.81	25.47	25.87	27.62	26.72	24.76	23.96
MIN	24.36	23.97	23.97	23.98	24.14	23.96	23.89	24.39	24.73	24.74	24.10	23.82

e Estimated

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 1997 to current year.
SPECIFIC CONDUCTANCE: April 1997 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1997.

REMARKS.--Records good. Water-quality samples collected approximately 0.25 mile downstream of water-quality monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 28.3°C, July 20, 1998; minimum recorded, 0.2°C, Feb. 21, 2003.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,640 microsiemens, Feb. 27-28, 2001; minimum recorded, 401 microsiemens, Apr. 14, 1999.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 27.2°C, July 12 and 15; minimum recorded, 0.4°C, Dec. 13-14.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,420 microsiemens, Apr. 2-4; minimum recorded, 824 microsiemens, June 4.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
APR													
11...	1435	258	--	--	11.1	--	8.7	8.2	1,130	1,150	10.5	9.0	78.4
MAY													
09...	1315	338	--	--	11.5	--	8.8	8.3	1,020	1,010	13.0	12.0	70.1
AUG													
05...	1045	212	--	--	--	--	8.8	8.7	1,190	1,200	26.5	24.5	73.0
08...	1620	--	--	726	--	--	8.6	8.7	1,190	1,200	34.0	24.7	75.0
22...	1615	--	8.9	730	9.1	109	8.6	8.7	1,170	1,180	24.8	22.1	74.0
SEP													
06...	1605	--	7.8	734	10.6	125	8.5	8.8	1,180	1,180	27.0	21.4	73.4
22...	1620	--	11	732	10.8	122	8.8	8.8	1,180	1,170	23.0	19.2	73.4

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
APR													
11...	49.0	9.60	2	109	36	395	17.6	.22	14.1	253	755	535	10
MAY													
09...	42.3	9.00	2	91.1	35	333	16.6	.20	<2.00	231	662	603	11
AUG													
05...	49.6	9.00	2	112	38	346	16.4	.23	14.4	306	775	452	--
08...	51.5	9.60	2	113	37	348	16.6	.22	16.2	305	780	--	--
22...	50.6	10.4	2	111	37	343	16.1	.23	18.6	302	771	--	6
SEP													
06...	50.1	10.6	3	119	39	339	16.0	.22	19.8	299	773	--	<5
22...	49.6	9.70	2	112	38	349	16.1	.22	18.2	293	765	--	8

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

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
11...	.98	1.1	<.010	<.010	.038	.040	--	1.0	1.1	.148	.189	20	20
MAY													
09...	.92	.83	<.010	<.010	<.020	.110	--	.94	.94	.076	.105	20	20
AUG													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	1.2	--	.079	--	.030	1.1	--	1.2	.400	.427	--	--
SEP													
06...	--	1.2	--	.097	--	.060	1.2	--	1.3	.415	.433	--	--
22...	--	1.3	--	.030	--	.030	1.2	--	1.3	.395	.422	--	--

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

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

Date	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
APR													
11...	<10	<50	<1	3.9	59.1	<1	160	<1	4	2.4	70	<1	360
MAY													
09...	<10	<50	<1	3.2	44.0	<1	130	<1	<1	2.4	30	<1	200
AUG													
05...	--	<50	<1	5.8	50.5	<1	150	<1	5	2.7	60	<1	20
08...	--	<50	<1	6.2	52.9	<1	150	<1	4	1.2	50	<1	40
22...	--	<50	<1	7.0	53.6	<1	180	<1	4	2.3	50	<1	20
SEP													
06...	--	<50	<1	7.7	57.3	<1	180	<1	2	1.2	10	<1	80
22...	--	<50	<1	19.4	56.4	<1	170	<1	3	1.6	20	<1	40

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
11...	6.13	1	<1	<1.0	3.4
MAY					
09...	4.90	<1	<1	<1.0	4.6
AUG					
05...	5.78	1	<1	<1.0	4.0
08...	5.28	2	<1	<1.0	<1
22...	5.99	6	<1	<1.0	2.2
SEP					
06...	4.87	7	<1	<1.0	<1
22...	5.59	58	<1	<1.0	1.0

Remark codes used in this table:
< -- Less than.

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.9	14.6	15.3	8.1	7.4	7.8	2.1	1.4	1.7	---	---	---
2	14.9	14.1	14.4	8.0	7.0	7.4	2.1	1.4	1.6	2.3	1.8	2.0
3	14.6	13.6	14.1	7.9	7.1	7.4	2.3	1.6	2.0	2.3	1.8	2.0
4	13.8	13.0	13.3	7.5	6.7	7.0	2.2	1.2	1.8	2.4	1.8	2.0
5	13.8	12.7	13.1	7.2	6.6	6.8	1.6	0.9	1.3	2.5	1.8	2.0
6	13.8	12.9	13.3	7.1	6.6	6.8	2.0	1.4	1.7	2.4	1.9	2.1
7	14.0	13.2	13.5	6.8	6.3	6.5	1.9	1.6	1.7	2.4	2.0	2.1
8	14.0	13.3	13.5	6.6	6.1	6.3	2.0	1.6	1.8	2.6	2.1	2.3
9	14.0	13.0	13.4	6.6	5.9	6.2	1.9	1.5	1.6	2.9	2.1	2.4
10	13.9	13.0	13.3	6.1	5.2	5.8	1.8	1.4	1.6	2.7	2.1	2.3
11	14.4	13.1	13.7	5.6	5.1	5.3	2.0	1.5	1.7	2.8	2.1	2.4
12	14.2	13.3	13.7	5.5	4.8	5.1	1.8	0.8	1.5	3.0	2.0	2.5
13	13.6	12.4	13.1	5.3	4.6	4.8	1.0	0.4	0.7	2.4	1.8	2.0
14	12.5	12.1	12.3	4.9	4.1	4.5	1.4	0.4	0.9	2.5	1.9	2.1
15	12.2	10.8	11.6	4.9	4.1	4.3	1.6	1.0	1.3	2.7	2.0	2.2
16	10.8	10.1	10.5	5.2	3.9	4.3	1.3	1.1	1.2	2.8	2.0	2.3
17	10.1	9.4	9.8	5.0	3.8	4.2	1.8	1.0	1.3	2.7	2.0	2.3
18	9.5	9.1	9.3	4.8	3.7	4.1	1.4	0.5	0.9	3.4	2.2	2.7
19	9.5	9.0	9.2	4.2	3.6	3.9	0.8	0.6	0.7	2.6	2.4	2.5
20	9.4	8.9	9.1	4.1	3.2	3.7	1.5	0.6	0.9	2.8	2.3	2.5
21	9.4	9.1	9.2	4.0	3.1	3.3	0.9	0.6	0.7	2.9	1.9	2.4
22	9.3	9.0	9.1	3.9	3.0	3.3	1.1	0.7	0.8	2.9	1.9	2.4
23	9.5	8.4	8.9	3.2	2.3	2.7	1.1	0.8	0.9	3.2	2.2	2.6
24	9.2	8.3	8.7	3.4	1.9	2.5	1.3	0.9	1.1	3.3	2.7	2.9
25	9.5	7.8	8.5	2.3	1.7	2.0	1.4	1.2	1.3	3.7	2.4	3.0
26	8.9	8.1	8.5	2.1	1.8	1.9	1.7	1.2	1.4	2.9	2.3	2.4
27	9.0	7.9	8.4	2.4	1.2	1.7	1.8	1.5	1.7	3.1	2.3	2.6
28	8.9	8.4	8.7	1.6	1.2	1.4	2.2	1.7	1.9	3.0	2.6	2.8
29	9.3	8.5	9.0	2.1	1.1	1.4	2.4	1.9	2.1	2.9	2.5	2.7
30	8.5	7.8	8.0	2.1	1.3	1.5	2.4	1.8	2.1	3.1	2.6	2.8
31	8.7	7.6	7.9	---	---	---	---	---	---	3.1	2.9	3.0
MONTH	15.9	7.6	11.1	8.1	1.1	4.5	2.4	0.4	1.4	3.7	1.8	2.4
		FEBRUARY			MARCH			APRIL			MAY	
1	3.3	2.7	3.0	4.1	2.5	3.1	7.0	3.6	4.6	8.9	7.8	8.4
2	3.5	2.6	2.9	4.3	2.6	3.2	6.1	3.7	4.5	9.5	7.3	8.3
3	3.6	2.7	3.0	4.6	2.7	3.4	6.9	3.6	4.8	9.6	7.5	8.4
4	3.3	2.6	2.9	4.0	3.1	3.5	6.6	4.1	5.0	9.8	7.7	8.6
5	3.7	2.6	2.9	4.8	3.1	3.7	8.6	4.3	6.4	10.2	8.3	9.1
6	3.3	2.4	2.7	4.8	2.9	3.7	9.2	6.1	7.3	12.2	9.2	10.3
7	3.1	2.3	2.6	4.1	2.8	3.2	8.9	6.4	7.3	11.6	9.7	10.5
8	3.2	2.3	2.7	4.3	2.9	3.4	8.8	6.3	7.3	12.4	10.2	11.1
9	3.6	2.5	2.8	4.1	3.2	3.6	9.6	7.0	8.0	11.7	10.8	11.4
10	3.8	2.6	2.9	3.7	3.1	3.4	9.4	7.5	8.2	12.6	11.5	12.0
11	3.9	2.7	3.1	4.1	2.7	3.3	8.6	7.8	8.2	11.5	10.6	11.1
12	3.9	2.7	3.1	4.7	2.9	3.4	8.4	8.2	8.3	10.9	10.2	10.4
13	3.5	2.9	3.2	4.4	3.0	3.5	9.8	8.2	8.8	10.4	10.2	10.3
14	3.3	2.8	3.1	4.1	3.1	3.5	9.2	8.4	8.8	10.3	9.6	9.9
15	4.0	2.6	3.1	4.4	3.1	3.5	9.7	8.9	9.2	11.5	9.6	10.4
16	3.7	2.6	3.0	4.1	3.0	3.4	9.8	9.0	9.4	12.6	10.6	11.6
17	3.7	2.6	2.9	4.9	3.2	3.8	10.3	9.2	9.7	11.6	11.0	11.3
18	3.8	2.5	2.9	4.7	3.3	3.8	11.4	10.0	10.7	12.3	11.3	11.8
19	3.8	2.3	2.7	4.9	3.8	4.1	11.6	10.9	11.2	14.7	12.1	13.1
20	3.6	2.4	3.0	4.9	3.8	4.2	11.6	10.4	11.1	14.1	12.7	13.6
21	4.2	2.6	3.2	4.5	4.1	4.2	13.0	11.0	11.9	14.4	12.6	13.5
22	4.2	3.0	3.3	4.7	4.1	4.3	12.1	10.7	11.4	14.7	13.2	13.9
23	4.0	2.5	3.1	5.0	4.2	4.5	11.8	10.6	11.2	15.5	14.4	14.9
24	4.0	2.8	3.2	5.0	4.0	4.3	11.8	10.9	11.2	15.9	14.7	15.3
25	4.2	2.7	3.2	5.3	4.1	4.5	11.4	10.5	11.1	15.8	14.9	15.5
26	4.0	2.7	3.2	5.5	4.2	4.7	10.6	10.0	10.3	15.4	14.8	15.1
27	3.7	2.6	3.1	5.4	4.4	4.8	10.1	9.6	9.9	14.8	14.3	14.6
28	4.3	2.5	3.1	6.7	4.5	5.4	9.8	8.9	9.4	14.3	14.0	14.2
29	---	---	---	7.7	5.5	6.3	9.6	8.7	9.1	14.7	13.9	14.3
30	---	---	---	6.4	3.7	5.1	9.6	8.5	8.9	16.1	14.3	15.1
31	---	---	---	6.1	3.6	4.4	---	---	---	16.1	14.3	15.4
MONTH	4.3	2.3	3.0	7.7	2.5	4.0	13.0	3.6	8.8	16.1	7.3	12.0

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15.4	14.9	15.1	21.8	21.3	21.6	25.5	24.2	24.8	22.1	19.6	20.6
2	16.0	14.9	15.4	21.7	21.3	21.5	25.3	23.7	24.3	22.4	19.0	20.3
3	16.2	15.5	15.9	21.8	21.2	21.6	25.4	23.5	24.5	22.4	19.3	20.5
4	18.0	16.0	16.8	22.1	21.5	21.8	25.1	23.4	24.2	22.1	19.6	20.7
5	18.0	17.5	17.7	22.8	21.5	22.1	24.9	23.0	23.7	22.8	20.1	21.0
6	20.2	17.5	18.5	22.3	21.6	21.9	24.6	22.6	23.5	22.2	19.6	20.6
7	20.2	18.7	19.2	22.7	21.7	22.1	25.6	23.0	24.0	22.1	19.5	20.4
8	19.0	17.8	18.2	22.8	21.9	22.4	25.4	23.2	24.3	22.6	19.6	20.7
9	18.5	17.6	18.0	23.4	22.6	22.8	25.9	24.1	24.8	21.0	19.9	20.4
10	18.1	17.8	17.9	23.5	22.3	22.8	24.6	23.7	24.2	22.6	20.0	21.1
11	18.4	17.8	18.1	25.1	23.4	24.2	24.6	23.2	23.7	22.4	19.6	20.9
12	18.7	17.8	18.2	27.2	24.7	25.8	24.6	22.7	23.4	21.4	19.8	20.3
13	19.5	18.3	18.7	26.5	25.1	25.9	23.9	22.2	23.0	21.5	19.1	20.1
14	18.3	18.0	18.2	25.2	24.3	24.8	23.6	21.8	22.5	21.5	18.6	19.7
15	18.9	18.0	18.3	27.2	25.2	26.1	23.4	21.6	22.3	21.4	18.4	19.6
16	19.6	18.2	18.8	26.9	25.8	26.3	23.7	21.3	22.4	21.5	18.5	19.7
17	19.5	18.2	18.9	26.0	24.5	25.5	23.2	21.8	22.3	20.6	18.5	19.5
18	19.3	18.2	18.7	25.3	24.6	24.9	23.4	21.8	22.4	20.2	18.8	19.3
19	20.0	19.2	19.6	24.6	24.1	24.4	23.1	21.4	22.2	21.1	18.2	19.4
20	22.1	20.0	21.0	25.7	24.1	24.9	22.8	21.5	22.1	20.9	17.7	19.0
21	22.2	20.5	21.3	25.4	24.6	25.0	23.0	21.5	22.2	19.8	17.9	18.7
22	21.4	20.2	20.9	25.6	24.4	24.9	22.8	21.3	21.9	20.2	17.5	18.6
23	22.6	20.9	21.7	26.0	24.8	25.1	22.4	21.0	21.6	19.8	17.5	18.4
24	22.7	22.4	22.6	25.7	24.5	24.9	21.8	20.9	21.3	18.5	17.1	17.9
25	23.8	22.2	22.7	24.5	23.7	24.3	22.1	20.7	21.2	17.7	16.4	17.1
26	23.3	22.4	22.7	24.1	23.3	23.7	22.5	20.2	21.2	18.8	16.0	17.1
27	24.0	22.4	23.0	24.3	23.1	23.6	22.6	20.4	21.2	18.5	15.9	16.9
28	23.8	23.1	23.3	24.7	22.9	23.8	22.7	20.4	21.3	17.5	15.0	16.1
29	23.2	22.4	22.8	24.7	23.1	23.8	23.2	20.8	21.7	17.0	14.9	15.7
30	22.4	21.7	22.0	24.7	23.1	23.8	23.0	20.4	21.4	17.6	15.0	16.0
31	---	---	---	25.7	22.9	24.1	22.2	20.3	21.0	---	---	---
MONTH	24.0	14.9	19.5	27.2	21.2	23.9	25.9	20.2	22.7	22.8	14.9	19.2

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1,070	1,070	1,070	1,120	1,100	1,100	1,180	1,160	1,170	---	---	---
2	1,080	1,070	1,070	1,110	1,100	1,110	1,180	1,160	1,170	1,180	1,170	1,180
3	1,080	1,070	1,080	1,110	1,100	1,110	1,170	1,160	1,160	1,180	1,180	1,180
4	1,080	1,080	1,080	1,120	1,110	1,110	1,170	1,150	1,160	1,190	1,180	1,180
5	1,080	1,080	1,080	1,120	1,110	1,120	1,170	1,160	1,170	1,190	1,180	1,190
6	1,080	1,070	1,080	1,120	1,110	1,120	1,170	1,160	1,160	1,190	1,180	1,190
7	1,080	1,070	1,080	1,130	1,120	1,120	1,170	1,160	1,170	1,200	1,190	1,190
8	1,080	1,070	1,070	1,130	1,120	1,120	1,170	1,160	1,160	1,200	1,190	1,200
9	1,070	1,070	1,070	1,130	1,120	1,130	1,170	1,160	1,160	1,200	1,190	1,200
10	1,070	1,060	1,070	1,140	1,130	1,140	1,170	1,160	1,170	1,200	1,190	1,200
11	1,070	1,060	1,070	1,140	1,140	1,140	1,170	1,160	1,160	1,200	1,200	1,200
12	1,070	1,060	1,060	1,150	1,140	1,140	1,170	1,160	1,160	1,210	1,200	1,200
13	1,060	1,060	1,060	1,150	1,140	1,140	1,170	1,160	1,170	1,210	1,200	1,210
14	1,070	1,060	1,060	1,150	1,140	1,150	1,170	1,160	1,160	1,220	1,210	1,210
15	1,070	1,060	1,060	1,150	1,140	1,150	1,170	1,160	1,160	1,220	1,210	1,220
16	1,070	1,060	1,060	1,160	1,140	1,150	1,160	1,160	1,160	1,220	1,210	1,220
17	1,070	1,060	1,060	1,160	1,140	1,160	1,160	1,150	1,160	1,230	1,220	1,220
18	1,070	1,060	1,070	1,160	1,140	1,160	1,170	1,160	1,170	1,230	1,210	1,220
19	1,070	1,060	1,070	1,160	1,150	1,160	1,180	1,170	1,180	1,230	1,230	1,230
20	1,070	1,070	1,070	1,160	1,150	1,160	1,180	1,160	1,170	1,240	1,230	1,240
21	1,080	1,070	1,070	1,160	1,150	1,160	1,180	1,170	1,180	1,240	1,230	1,240
22	1,080	1,080	1,080	1,160	1,150	1,160	1,180	1,170	1,180	1,240	1,230	1,240
23	1,090	1,070	1,080	1,170	1,150	1,160	1,180	1,170	1,180	1,250	1,230	1,240
24	1,090	1,080	1,090	1,170	1,150	1,160	1,180	1,170	1,180	1,250	1,240	1,250
25	1,100	1,080	1,100	1,170	1,160	1,160	1,180	1,170	1,180	1,260	1,230	1,240
26	1,110	1,090	1,100	1,170	1,160	1,160	1,180	1,170	1,170	1,260	1,240	1,250
27	1,110	1,100	1,100	1,170	1,160	1,170	1,180	1,170	1,180	1,250	1,240	1,250
28	1,110	1,100	1,100	1,170	1,170	1,170	1,180	1,160	1,170	1,250	1,240	1,250
29	1,110	1,090	1,100	1,180	1,170	1,180	1,180	1,160	1,170	1,260	1,250	1,250
30	1,100	1,090	1,100	1,180	1,170	1,180	1,180	1,160	1,170	1,260	1,240	1,250
31	1,100	1,100	1,100	---	---	---	---	---	---	1,250	1,250	1,250
MONTH	1,110	1,060	1,080	1,180	1,100	1,140	1,180	1,150	1,170	1,260	1,170	1,220
		FEBRUARY			MARCH			APRIL			MAY	
1	1,260	1,250	1,260	1,340	1,310	1,330	1,400	1,380	1,390	1,010	1,000	1,010
2	1,260	1,250	1,260	1,340	1,320	1,330	1,420	1,390	1,410	1,010	1,000	1,010
3	1,270	1,240	1,260	1,340	1,320	1,330	1,420	1,390	1,410	1,010	1,000	1,010
4	1,270	1,250	1,260	1,380	1,340	1,360	1,420	1,390	1,410	1,020	1,010	1,020
5	1,280	1,240	1,270	1,390	1,350	1,380	1,410	965	1,140	1,020	1,000	1,020
6	1,280	1,260	1,280	1,390	1,360	1,380	1,080	1,020	1,040	1,020	1,010	1,020
7	1,280	1,270	1,280	1,400	1,380	1,390	1,160	1,080	1,120	1,020	994	1,000
8	1,290	1,270	1,280	1,400	1,380	1,390	1,160	1,140	1,150	1,000	977	995
9	1,290	1,270	1,280	1,400	1,380	1,390	1,160	1,120	1,130	993	965	982
10	1,290	1,260	1,280	1,400	1,340	1,370	1,140	1,120	1,130	965	946	953
11	1,290	1,260	1,270	1,350	1,330	1,340	1,140	1,120	1,130	965	939	950
12	1,280	1,240	1,260	1,350	1,330	1,340	1,130	1,120	1,120	942	932	937
13	1,300	1,260	1,290	1,350	1,330	1,340	1,130	1,090	1,120	933	925	930
14	1,300	1,290	1,300	1,350	1,340	1,350	1,120	1,110	1,120	926	904	912
15	1,300	1,280	1,290	1,350	1,320	1,340	1,120	1,110	1,110	914	904	909
16	1,300	1,280	1,300	1,340	1,310	1,320	1,110	1,110	1,110	911	896	903
17	1,310	1,290	1,300	1,320	1,300	1,310	1,110	1,100	1,100	903	897	900
18	1,310	1,290	1,300	1,320	1,290	1,310	1,100	1,090	1,100	898	887	892
19	1,310	1,280	1,300	1,310	1,290	1,300	1,090	1,060	1,080	888	869	878
20	1,310	1,290	1,310	1,310	1,290	1,300	1,080	1,070	1,080	871	853	860
21	1,320	1,290	1,310	1,300	1,290	1,300	1,080	1,050	1,070	863	847	856
22	1,320	1,300	1,310	1,300	1,290	1,300	1,060	1,000	1,030	872	857	865
23	1,320	1,300	1,310	1,300	1,270	1,290	1,040	1,020	1,030	885	863	872
24	1,330	1,310	1,320	1,300	1,290	1,300	1,040	1,030	1,030	883	867	874
25	1,330	1,310	1,320	1,300	1,280	1,300	1,030	998	1,020	871	849	857
26	1,330	1,310	1,320	1,300	1,280	1,300	1,000	984	996	855	843	848
27	1,340	1,310	1,330	1,300	1,290	1,300	1,020	996	1,000	846	837	842
28	1,340	1,300	1,330	1,300	1,240	1,270	1,020	1,000	1,010	847	842	845
29	---	---	---	1,260	1,230	1,250	1,010	1,000	1,010	848	841	844
30	---	---	---	1,400	1,240	1,300	1,020	1,010	1,010	844	832	839
31	---	---	---	1,400	1,370	1,390	---	---	---	843	830	835
MONTH	1,340	1,240	1,290	1,400	1,230	1,330	1,420	965	1,120	1,020	830	918

05058000 SHEYENNE RIVER BELOW BALDHILL DAM, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	848	836	843	1,020	1,010	1,010	1,110	1,090	1,100	1,160	1,140	1,150
2	856	844	848	1,010	1,000	1,010	1,110	1,100	1,100	---	---	---
3	847	827	839	1,010	998	1,000	1,110	1,110	1,110	1,150	1,140	1,140
4	896	824	864	1,000	989	995	---	---	---	1,160	1,140	1,150
5	881	862	872	999	994	997	1,130	1,120	1,120	1,160	1,140	1,150
6	897	879	887	1,000	996	997	1,130	1,120	1,120	1,160	1,140	1,150
7	903	885	893	1,000	989	998	1,130	1,120	1,130	1,160	1,150	1,150
8	899	893	896	998	986	993	---	---	---	1,160	1,150	1,160
9	903	895	899	1,000	976	989	1,140	1,120	1,130	1,160	1,150	1,160
10	910	899	903	1,010	981	993	1,130	1,120	1,130	1,160	1,150	1,160
11	913	903	907	1,000	976	989	1,140	1,120	1,130	1,160	1,150	1,160
12	931	913	924	1,000	983	990	1,130	1,130	1,130	1,160	1,150	1,160
13	934	925	929	1,000	981	993	1,130	1,120	1,120	1,160	1,140	1,160
14	956	928	940	1,000	988	998	---	---	---	1,160	1,150	1,160
15	955	938	945	1,030	1,000	1,010	1,170	1,160	1,160	1,160	1,150	1,160
16	961	941	948	1,030	1,020	1,030	1,170	1,160	1,160	1,160	1,150	1,160
17	967	947	956	1,040	1,020	1,030	---	---	---	1,160	1,160	1,160
18	967	946	953	1,050	1,040	1,040	1,170	1,160	1,170	1,160	1,160	1,160
19	985	950	966	1,060	1,040	1,050	1,170	1,150	1,160	1,160	1,150	1,160
20	1,000	979	997	1,070	1,050	1,060	1,170	1,160	1,170	1,170	1,160	1,160
21	1,000	989	996	1,080	1,070	1,070	1,170	1,160	1,170	1,160	1,160	1,160
22	991	978	984	1,080	1,070	1,080	1,170	1,160	1,170	1,160	1,160	1,160
23	987	976	981	1,090	1,080	1,080	1,170	1,160	1,170	1,160	1,150	1,160
24	982	974	978	1,080	1,070	1,070	1,180	1,160	1,170	---	---	---
25	995	973	979	---	---	---	1,160	1,150	1,150	1,160	1,140	1,160
26	988	974	984	---	---	---	1,150	1,150	1,150	1,160	1,150	1,160
27	987	978	984	1,090	1,080	1,090	1,150	1,140	1,150	1,160	1,150	1,160
28	985	981	983	1,100	1,080	1,090	1,150	1,140	1,150	1,160	1,150	1,160
29	---	---	---	1,110	1,090	1,100	1,160	1,140	1,150	1,160	1,150	1,160
30	---	---	---	1,110	1,090	1,100	1,160	1,140	1,150	1,160	1,150	1,160
31	---	---	---	1,100	1,080	1,090	1,170	1,150	1,160	---	---	---
MONTH	1,000	824	931	1,110	976	1,030	1,180	1,090	1,140	1,170	1,140	1,160

05058500 SHEYENNE RIVER AT VALLEY CITY, ND

LOCATION.--Lat 46°54'50", long 98°00'30", in SE¼NW¼ sec.28, T.140 N., R.58 W., Barnes County, Hydrologic Unit 09020204, on left bank 100 ft downstream from College Dam in Valley City and at mile 253.0.

DRAINAGE AREA.--7,810 mi^2, approximately, of which about 5,700 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March to August 1919, March 1938 to September 1975; October 1979 to current year (gage heights and annual maximum discharge); seasonal discharge record for March to September 1995, 1996, and 2002. Records for July 1938, published in WSP 855, have been found to be unreliable and should not be used.

REVISED RECORDS.---WSP 1388: 1939 (M). WSP 1728: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,199.27 ft above National Geodetic Vertical Datum of 1929. March to August 1919, nonrecording gage at site 0.5 mi upstream at different datum. March 18, 1938, to Oct. 13, 1938, nonrecording gage at present site and datum.

REMARKS.--Flow regulated by Lake Ashtabula 13 mi upstream (see station 05057500). Small diversions above station for municipal supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,250 ft^3/s, Apr. 21, 1996, gage height, 18.78 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,830 ft^3/s, June 13, gage height, 9.11 ft.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.52	4.56	3.96	4.01	4.28	4.40	4.10	4.73	5.62	6.27	4.75	3.95
2	5.52	4.85	3.95	4.02	4.27	4.36	3.98	4.74	5.17	6.67	4.71	3.82
3	5.52	5.53	3.95	4.03	4.28	4.37	3.94	4.68	5.34	6.71	4.61	3.82
4	5.52	5.38	3.95	4.10	4.34	4.30	3.95	4.39	7.26	6.71	4.58	3.80
5	5.50	5.35	3.96	4.11	4.33	4.30	3.97	4.36	8.79	6.60	4.56	3.83
6	5.23	5.34	3.98	4.14	4.30	4.69	3.94	4.35	8.77	6.14	4.47	3.83
7	5.17	5.33	4.09	4.14	4.31	4.49	3.93	4.36	8.52	6.07	4.46	3.80
8	5.17	5.33	4.11	4.12	4.33	4.16	3.92	4.40	8.16	6.22	4.44	3.80
9	5.16	5.33	4.12	4.15	4.31	4.06	3.94	4.58	8.52	6.61	4.29	3.81
10	5.16	5.32	4.12	4.10	4.33	4.06	3.94	5.41	8.53	6.66	4.23	3.81
11	5.17	5.31	4.11	4.09	4.40	4.32	4.09	5.84	8.24	6.67	4.31	3.81
12	5.17	5.31	4.10	4.14	4.41	4.35	4.91	6.22	5.84	6.74	4.25	3.83
13	5.17	5.31	4.39	4.06	4.40	4.33	6.13	6.61	8.21	7.10	4.23	3.83
14	5.18	5.31	4.14	4.22	4.38	4.32	6.16	6.59	8.77	7.25	4.23	3.81
15	5.19	5.25	4.14	4.27	4.36	4.34	5.85	6.54	9.04	7.31	4.23	3.81
16	5.17	4.48	4.12	4.35	4.34	4.40	5.76	6.52	8.15	7.57	4.22	3.80
17	5.18	4.38	4.12	4.40	4.35	4.47	5.79	6.52	7.77	7.60	4.32	3.81
18	5.18	4.44	4.11	4.45	4.37	4.59	5.72	6.51	6.86	7.61	4.34	3.80
19	5.20	4.46	4.05	4.38	4.41	4.81	5.48	6.55	6.77	7.46	4.81	3.81
20	5.18	4.46	4.17	4.32	4.42	4.83	5.45	6.75	6.75	6.83	4.79	3.80
21	4.93	4.46	4.15	4.31	4.43	4.84	5.45	6.79	6.75	6.66	4.71	3.81
22	4.46	4.46	4.16	4.26	4.40	4.85	5.45	6.77	6.76	5.68	4.70	3.80
23	4.50	4.45	4.21	4.29	4.41	4.88	5.44	6.78	6.75	5.25	4.70	3.79
24	4.42	4.45	4.22	4.26	4.43	4.90	5.45	6.77	6.74	5.33	4.64	3.84
25	4.39	4.46	4.26	4.24	4.40	4.86	5.47	6.55	6.68	5.37	4.31	3.82
26	4.39	4.46	4.24	4.21	4.40	4.88	5.46	6.51	4.56	5.37	4.24	3.82
27	4.38	4.44	4.22	4.36	4.39	4.89	5.41	6.52	5.30	5.32	4.22	3.82
28	4.44	4.45	4.19	4.38	4.39	4.88	5.13	6.49	5.92	4.56	4.22	3.81
29	4.51	4.42	4.04	4.35	---	5.02	4.42	6.43	5.96	4.67	4.19	3.81
30	4.77	4.05	4.02	4.33	---	4.68	4.64	5.87	5.97	4.73	4.01	3.82
31	4.58	---	4.01	4.30	---	4.23	---	6.44	---	4.74	3.98	---
MEAN	5.00	4.84	4.11	4.22	4.36	4.54	4.91	5.89	7.08	6.27	4.41	3.82
MAX	5.52	5.53	4.39	4.45	4.43	5.02	6.16	6.79	9.04	7.61	4.81	3.95
MIN	4.38	4.05	3.95	4.01	4.27	4.06	3.92	4.35	4.56	4.56	3.98	3.79

Miscellaneous discharge measurements for the Sheyenne River at Valley City

Date	Discharge (ft^3/s)
April 18, 2005	456
June 15, 2005	1,830

05058500 SHEYENNE RIVER AT VALLEY CITY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
18...	1805	452	8.6	8.3	1,160	1,160	27.5	14.0	78.5	49.0	9.60	2	107

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
18...	36	360	20.3	.25	12.6	291	773	958	<50	<1	4.8	46.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
18...	160	<1	<1	4.1	20	<1	170	5.32	1	<1	<1.0	5.5

Remark codes used in this table:
< -- Less than.

05058700 SHEYENNE RIVER AT LISBON, ND

LOCATION.--Lat 46°26'49", long 97°40'44", on line between secs.1 and 2, T.134 N., R.56 W., Ransom County, Hydrologic Unit 09020204, on left bank 150 ft downstream from dam at State Fish Hatchery at north edge of city of Lisbon, 3 mi upstream from Timber Coulee, and at mile 162.1.

DRAINAGE AREA.--8,190 mi^2, approximately, of which about 5,700 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,066.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Ashtabula (station 05057500), 108.5 mi upstream.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	417	342	189	e110	e138	e168	422	273	572	655	211	123
2	418	275	191	e108	e136	e171	248	211	652	610	216	108
3	420	232	152	e110	e135	e180	177	251	508	677	222	100
4	420	254	143	e110	e132	219	158	253	421	766	220	295
5	422	401	119	e110	e130	289	145	247	497	773	200	276
6	421	434	121	e109	e132	426	140	205	975	766	188	183
7	416	419	117	e110	e135	512	137	185	1,440	727	185	155
8	366	413	124	e110	e136	550	131	186	1,500	621	179	125
9	330	413	131	e111	e137	550	125	199	1,430	580	205	108
10	324	408	135	e111	e139	391	122	205	1,350	614	192	96
11	321	406	135	e110	e141	212	127	215	1,460	710	174	94
12	321	400	139	e109	e141	167	130	381	1,510	732	163	87
13	321	389	143	e109	e141	159	135	517	1,410	734	155	83
14	325	386	121	e110	e142	172	269	607	943	757	153	88
15	327	385	119	e111	e142	181	576	718	1,530	841	146	80
16	324	385	136	e112	e146	175	616	724	1,820	886	146	80
17	324	377	144	e112	e150	172	542	705	1,810	922	146	77
18	319	271	143	e111	e153	176	509	703	1,540	990	180	77
19	325	182	133	e110	e153	181	520	697	1,260	1,010	275	79
20	324	184	120	e110	e153	190	498	695	952	1,020	251	80
21	327	190	119	e110	e153	205	443	713	863	952	337	75
22	326	191	e120	e112	e153	257	430	759	842	795	313	76
23	328	188	e123	e112	e157	314	427	772	826	713	265	75
24	227	163	e125	e112	e160	328	426	778	816	499	243	75
25	192	155	e128	e113	e162	349	425	784	804	388	243	76
26	183	177	e132	e112	e165	350	426	775	901	391	245	78
27	175	206	e140	e112	e165	352	429	722	899	391	181	79
28	175	159	e140	e113	e165	359	427	699	469	388	151	75
29	187	148	e139	e126	---	412	419	697	441	378	140	74
30	266	145	e130	e140	---	424	376	687	667	237	137	73
31	308	---	e120	e138	---	452	---	674	---	191	138	---
TOTAL	9,879	8,678	4,171	3,503	4,092	9,043	9,955	16,237	31,108	20,714	6,200	3,150
MEAN	319	289	135	113	146	292	332	524	1,037	668	200	105
MAX	422	434	191	140	165	550	616	784	1,820	1,020	337	295
MIN	175	145	117	108	130	159	122	185	421	191	137	73
AC-FT	19,600	17,210	8,270	6,950	8,120	17,940	19,750	32,210	61,700	41,090	12,300	6,250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	79.8	102	92.6	77.5	92.8	337	836	387	253	211	120	81.7
MAX	716	480	393	217	413	1,525	4,181	2,394	1,369	1,424	1,945	561
(WY)	(1995)	(2001)	(2001)	(2001)	(1996)	(1995)	(1997)	(1997)	(2004)	(1993)	(1993)	(1994)
MIN	7.66	12.2	8.69	8.15	10.7	19.8	20.3	17.5	14.8	6.07	6.54	5.25
(WY)	(1957)	(1991)	(1991)	(1991)	(1991)	(1964)	(1991)	(1959)	(1961)	(1973)	(1961)	(1959)

05058700 SHEYENNE RIVER AT LISBON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	171,420		126,730			
ANNUAL MEAN	468		347		222	
HIGHEST ANNUAL MEAN					719	1997
LOWEST ANNUAL MEAN					25.9	1991
HIGHEST DAILY MEAN	3,210	Apr 14	1,820	Jun 16	5,650	Apr 23, 1997
LOWEST DAILY MEAN	50	Mar 6	73	Sep 30	0.00	Oct 23, 1956
ANNUAL SEVEN-DAY MINIMUM	53	Feb 21	76	Sep 24	0.87	Oct 1, 1956
MAXIMUM PEAK FLOW			1,860	Jun 16	5,670	Apr 23, 1997
MAXIMUM PEAK STAGE			9.31	Jun 16	[a]19.29	Apr 5, 1997
ANNUAL RUNOFF (AC-FT)	340,000		251,400		161,100	
10 PERCENT EXCEEDS	1,580		766		484	
50 PERCENT EXCEEDS	188		205		72	
90 PERCENT EXCEEDS	94		110		16	

a Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.18	3.80	3.11	2.75	3.10	3.23	4.15	3.36	4.77	5.17	3.30	2.92
2	4.18	3.51	3.12	2.73	3.10	3.24	3.38	3.09	5.13	4.99	3.32	2.85
3	4.18	3.31	2.94	2.75	3.14	3.27	3.05	3.26	4.47	5.26	3.34	2.81
4	4.18	3.41	2.89	2.77	3.17	3.25	2.97	3.27	4.04	5.62	3.33	3.64
5	4.19	4.06	2.78	2.83	3.15	3.56	2.90	3.25	4.41	5.65	3.26	3.55
6	4.18	4.21	2.79	2.86	3.12	4.18	2.88	3.07	6.43	5.62	3.21	3.19
7	4.15	4.13	2.77	2.85	3.12	4.59	2.87	2.98	8.12	5.47	3.20	3.08
8	3.92	4.10	2.80	2.87	3.12	4.77	2.83	2.98	8.33	5.03	3.18	2.93
9	3.76	4.10	2.83	2.91	3.07	4.76	2.80	3.04	8.11	4.85	3.28	2.85
10	3.73	4.08	2.85	2.94	3.06	4.02	2.79	3.07	7.82	5.00	3.23	2.79
11	3.72	4.07	2.86	2.98	3.05	3.22	2.81	3.11	8.18	5.40	3.16	2.78
12	3.72	4.05	2.87	3.01	3.06	3.01	2.83	3.86	8.38	5.48	3.11	2.74
13	3.72	4.00	2.89	3.04	3.15	2.97	2.86	4.51	8.03	5.49	3.07	2.72
14	3.74	3.99	2.79	3.07	3.22	3.03	3.43	4.92	6.32	5.58	3.07	2.75
15	3.74	3.98	2.78	3.14	3.25	3.07	4.80	5.41	8.35	5.91	3.04	2.70
16	3.73	3.98	2.86	3.15	3.21	3.05	4.97	5.44	9.21	6.09	3.03	2.71
17	3.73	3.94	2.89	3.16	3.14	3.03	4.63	5.36	9.17	6.22	3.04	2.69
18	3.71	3.49	2.89	3.25	3.10	3.05	4.48	5.35	8.32	6.47	3.18	2.69
19	3.74	3.08	2.85	3.26	3.08	3.07	4.53	5.32	7.41	6.54	3.54	2.70
20	3.73	3.09	2.78	3.20	3.10	3.11	4.42	5.32	6.33	6.57	3.45	2.71
21	3.74	3.12	2.78	3.27	3.19	3.19	4.15	5.39	6.00	6.33	3.77	2.68
22	3.74	3.12	2.80	3.32	3.16	3.43	4.09	5.59	5.92	5.74	3.68	2.68
23	3.74	3.10	2.84	3.27	3.17	3.68	4.07	5.64	5.85	5.41	3.50	2.68
24	3.28	2.99	2.81	3.22	3.18	3.75	4.07	5.66	5.82	4.49	3.42	2.68
25	3.13	2.95	2.84	3.15	3.16	3.84	4.06	5.69	5.77	3.98	3.42	2.69
26	3.08	3.05	2.88	3.12	3.22	3.83	4.07	5.65	6.13	3.99	3.43	2.69
27	3.05	3.19	2.90	3.11	3.18	3.84	4.08	5.43	6.13	3.99	3.18	2.70
28	3.04	2.97	2.90	3.11	3.19	3.87	4.07	5.33	4.34	3.97	3.06	2.68
29	3.10	2.92	2.89	3.09	---	4.10	4.03	5.32	4.23	3.94	3.01	2.67
30	3.47	2.90	2.89	3.14	---	4.16	3.81	5.28	5.22	3.40	2.99	2.67
31	3.66	---	2.84	3.13	---	4.30	---	5.23	---	3.22	3.00	---
MEAN	3.71	3.56	2.86	3.05	3.14	3.60	3.70	4.52	6.56	5.19	3.25	2.82
MAX	4.19	4.21	3.12	3.32	3.25	4.77	4.97	5.69	9.21	6.57	3.77	3.64
MIN	3.04	2.90	2.77	2.73	3.05	2.97	2.79	2.98	4.04	3.22	2.99	2.67

05058700 SHEYENNE RIVER AT LISBON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
19...	1200	523	9.8	8.6	8.1	1,200	1,200	12.5	16.5	81.0	50.4	9.90	2
MAY													
10...	0825	201	8.5	8.6	8.0	1,150	1,140	12.0	16.0	74.3	44.1	9.40	2
AUG													
11...	1715	168	--	8.6	8.5	1,210	1,220	23.0	24.0	78.1	51.3	10.8	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
19...	112	36	358	24.7	.26	12.5	313	808	1,160	63	.95	1.0	<.010
MAY													
10...	98.6	36	341	25.4	.23	4.13	280	739	403	66	.74	.76	.049
AUG													
11...	109	36	338	23.2	.23	16.1	319	795	368	--	--	--	--

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
19...	<.010	<.020	<.020	--	--	.138	.252	.97	1.0	<10	<10	<10	<50
MAY													
10...	.055	.041	.050	.69	.70	.082	.182	.78	.81	150	200	<10	<50
AUG													
11...	--	--	--	--	--	--	--	--	--	--	--	--	<50

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
19...	<1	5.1	35.3	<1	170	<1	<1	3.0	20	<1	30	7.24	1
MAY													
10...	<1	3.1	50.2	<1	160	<1	10	2.3	20	<1	230	7.85	<1
AUG													
11...	<1	8.4	62.8	<1	190	<1	6	3.8	60	<1	160	9.17	4

05058700 SHEYENNE RIVER AT LISBON, ND—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
19...	<1	<1.0	1.6
MAY			
10...	<1	<1.0	1.9
AUG			
11...	<1	<1.0	1.7

Remark codes used in this table:
< -- Less than.

05059000 SHEYENNE RIVER NEAR KINDRED, ND

LOCATION.--Lat 46°37'54", long 97°00'01", in SE¼SE¼SW¼ sec.33, T.137 N., R.50 W., Cass County, Hydrologic Unit 09020204, on left bank 100 ft downstream from North Dakota State Highway 46 bridge crossing, 1.5 mi southeast of Kindred, and at mile 67.9.

DRAINAGE AREA.--8,800 mi^2, approximately, of which about 5,780 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 925.55 ft above National Geodetic Vertical Datum of 1929. From Oct. 1, 1962, to Sept. 30, 1989, gage was located at site 1,500 ft upstream. July 1949 to Sept. 30, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated to a large degree by Lake Ashtabula (station 05057500), 202 mi upstream, and several small reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Spring flood in 1947 or 1948 reached a stage of 22.1 ft from floodmarks, discharge about 3,600 ft^3/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389	404	285	e203	e123	e168	868	427	686	1,240	399	244
2	392	399	297	e195	e125	e165	893	408	677	1,390	326	233
3	397	400	319	e183	e130	e175	853	365	634	1,360	323	243
4	399	390	352	e173	e138	e205	534	305	628	1,200	349	277
5	402	348	342	e160	e149	e264	e360	291	608	1,090	349	307
6	404	323	288	e150	e160	e333	e314	300	514	1,080	338	298
7	404	351	239	e142	e173	e430	e282	300	495	1,040	320	419
8	407	431	231	e135	e180	e520	e255	297	785	1,000	293	372
9	407	437	226	e128	e180	e600	e244	284	e1,200	959	320	333
10	396	430	210	e125	e178	709	e240	275	e1,340	852	303	299
11	365	426	207	e122	e175	732	240	272	e1,450	772	320	257
12	348	423	217	e120	e173	751	247	271	e1,750	754	328	227
13	343	420	197	e120	e170	699	252	276	e1,730	795	294	212
14	341	419	172	e121	e168	581	e248	318	e1,840	821	263	202
15	345	414	190	e121	e165	472	e242	461	e1,770	813	241	193
16	345	409	205	e121	e160	409	e253	551	1,550	812	236	188
17	345	409	224	e120	e160	408	418	641	1,620	867	235	181
18	345	408	218	e120	e160	422	557	702	1,760	929	290	177
19	346	407	206	e120	e161	418	552	728	e1,770	962	281	174
20	350	388	e195	e121	e165	416	506	704	e1,640	1,010	291	e169
21	349	320	e190	e121	e165	424	507	700	1,450	1,050	306	168
22	350	273	e183	e121	e171	438	504	692	1,290	1,050	338	167
23	360	266	e179	e120	e174	468	469	685	1,190	1,030	346	161
24	368	250	e177	e120	e174	513	442	712	1,120	904	372	159
25	378	231	e180	e122	e169	543	435	740	1,050	804	357	159
26	345	261	e190	e122	e170	611	433	754	1,010	674	412	160
27	291	242	e200	e122	e165	686	431	755	1,000	532	380	161
28	268	227	e205	e122	e167	721	429	754	1,080	486	363	158
29	262	242	e210	e121	---	778	430	724	1,270	465	332	155
30	329	256	e210	e121	---	835	430	697	1,350	454	289	155
31	383	---	e208	e121	---	836	---	689	---	439	259	---
TOTAL	11,153	10,604	6,952	4,133	4,548	15,730	12,868	16,078	36,257	27,634	9,853	6,608
MEAN	360	353	224	133	162	507	429	519	1,209	891	318	220
MAX	407	437	352	203	180	836	893	755	1,840	1,390	412	419
MIN	262	227	172	120	123	165	240	271	495	439	235	155
AC-FT	22,120	21,030	13,790	8,200	9,020	31,200	25,520	31,890	71,920	54,810	19,540	13,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)

MEAN	102	121	105	87.1	96.5	334	879	535	341	283	155	107
MAX	693	589	400	242	317	1,256	3,957	3,053	1,938	1,466	2,231	528
(WY)	(1995)	(1995)	(2001)	(2001)	(1996)	(1987)	(1997)	(1950)	(1950)	(1975)	(1993)	(1999)
MIN	24.6	22.7	17.6	17.5	21.7	35.1	71.7	53.6	48.4	26.7	17.5	25.1
(WY)	(1957)	(1956)	(1956)	(1991)	(1956)	(1956)	(1991)	(1990)	(1961)	(1988)	(1988)	(1959)

05059000 SHEYENNE RIVER NEAR KINDRED, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1949 - 2005	
ANNUAL TOTAL	183,606		162,418			
ANNUAL MEAN	502		445		262	
HIGHEST ANNUAL MEAN					770	1997
LOWEST ANNUAL MEAN					48.0	1991
HIGHEST DAILY MEAN	3,060	Apr 18	1,840	Jun 14	5,610	Apr 29, 1997
LOWEST DAILY MEAN	64	Feb 27	120	Jan 12	9.2	Aug 16, 1990
ANNUAL SEVEN-DAY MINIMUM	65	Feb 23	120	Jan 12	11	Dec 26, 1990
MAXIMUM PEAK FLOW			[a]1,870	Jun 14	5,970	Apr 27, 1997
MAXIMUM PEAK STAGE			[b]11.91	Jun 14	[c]22.33	Apr 8, 1997
ANNUAL RUNOFF (AC-FT)	364,200		322,200		190,100	
10 PERCENT EXCEEDS	1,500		941		560	
50 PERCENT EXCEEDS	294		342		102	
90 PERCENT EXCEEDS	101		160		35	

a From estimated stage
b Estimated from graph of incomplete daily record
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.32	4.40	3.70	3.54	3.42	4.09	7.12	4.53	6.07	8.56	4.31	3.43
2	4.33	4.38	3.77	3.53	3.42	4.09	7.26	4.41	6.01	9.52	3.85	3.38
3	4.36	4.38	3.90	3.45	3.46	4.11	7.03	4.15	5.76	9.29	3.83	3.43
4	4.37	4.32	4.10	3.32	3.52	4.11	5.17	3.77	5.72	8.37	3.99	3.60
5	4.39	4.07	4.04	3.28	3.62	4.13	e4.11	3.69	5.60	7.84	3.99	3.75
6	4.41	3.92	3.72	3.28	3.74	4.74	e3.83	3.75	5.05	7.79	3.92	3.71
7	4.40	4.09	3.43	3.33	3.88	5.73	e3.63	3.75	4.94	7.65	3.81	4.44
8	4.42	4.56	3.38	3.34	4.05	5.29	e3.47	3.73	6.49	7.49	3.68	4.14
9	4.42	4.60	3.35	3.36	4.08	5.67	e3.41	3.65	e8.35	7.31	3.82	3.89
10	4.36	4.56	3.26	3.37	3.93	6.20	e3.39	3.59	e9.22	6.84	3.73	3.71
11	4.18	4.53	3.24	3.35	3.85	6.33	3.38	3.57	e9.84	6.47	3.82	3.50
12	4.07	4.51	3.30	3.40	3.79	6.45	3.42	3.57	e11.40	6.38	3.86	3.35
13	4.05	4.50	3.18	3.37	3.77	6.14	3.46	3.60	e11.30	6.58	3.68	3.27
14	4.03	4.49	3.03	e3.36	4.04	5.45	e3.43	3.85	e11.77	6.70	3.53	3.21
15	4.06	4.46	3.14	3.46	4.11	4.81	e3.39	4.73	e11.48	6.66	3.42	3.16
16	4.06	4.43	3.23	e3.53	4.11	4.43	e3.46	5.27	10.43	6.66	3.39	3.12
17	4.05	4.43	3.34	e3.56	4.22	4.42	4.47	5.80	10.79	6.91	3.39	3.08
18	4.05	4.43	3.30	3.65	4.27	4.51	5.30	6.16	11.41	7.18	3.67	3.06
19	4.06	4.42	3.23	3.57	4.32	4.49	5.28	6.31	e11.49	7.32	3.62	3.04
20	4.08	4.31	3.36	3.52	4.20	4.47	5.00	6.17	e10.90	7.53	3.67	e3.01
21	4.08	3.91	3.31	3.63	4.05	4.52	5.01	6.15	9.87	7.66	3.75	3.01
22	4.09	3.63	3.45	3.63	3.96	4.61	4.99	6.10	8.86	7.70	3.92	3.00
23	4.14	3.59	3.57	3.58	3.96	4.78	4.78	6.06	8.29	7.59	3.97	2.96
24	4.19	3.49	3.60	3.58	4.04	5.05	4.62	6.22	7.95	7.07	4.14	2.95
25	4.25	3.38	3.63	3.56	4.10	5.23	4.57	6.38	7.69	6.62	4.04	2.95
26	4.05	3.56	3.63	3.53	4.10	5.62	4.56	6.46	7.51	5.97	4.40	2.96
27	3.74	3.44	3.63	3.48	4.12	6.06	4.55	6.47	7.47	5.16	4.19	2.97
28	3.60	3.35	3.63	3.48	4.09	6.27	4.54	6.46	7.81	4.88	4.08	2.94
29	3.56	3.44	3.61	3.48	---	6.61	4.55	6.29	8.76	4.74	3.89	2.93
30	3.96	3.53	3.60	3.45	---	6.94	4.55	6.13	9.24	4.67	3.66	2.93
31	4.28	---	3.57	3.43	---	6.95	---	6.08	---	4.57	3.51	---
MEAN	4.14	4.10	3.49	3.46	3.94	5.24	4.52	5.06	8.58	6.96	3.82	3.30
MAX	4.42	4.60	4.10	3.65	4.32	6.95	7.26	6.47	11.77	9.52	4.40	4.44
MIN	3.56	3.35	3.03	3.28	3.42	4.09	3.38	3.57	4.94	4.57	3.39	2.93

e Estimated

05059000 SHEYENNE RIVER NEAR KINDRED, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
12...	1505	255	9.6	8.5	8.2	1,030	1,020	8.0	12.0	85.1	42.3	8.60	2
MAY													
11...	0910	274	9.4	8.7	8.6	1,070	1,060	5.0	12.5	84.7	42.9	8.60	2
AUG													
09...	1015	333	--	8.4	8.3	1,060	1,070	24.0	25.5	75.6	43.1	9.60	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
12...	80.2	30	323	23.9	.25	10.6	224	660	461	72	.44	.43	<.010
MAY													
11...	86.0	32	340	23.6	.24	8.12	241	692	517	83	.58	.56	.014
AUG													
09...	85.0	33	310	21.3	.23	16.4	260	682	628	--	--	--	--

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
12...	<.010	<.020	.030	--	--	.038	.107	.46	.46	10	20	<10	<50
MAY													
11...	.037	<.020	.030	.56	.52	.051	.146	.60	.59	--	130	<10	<50
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	<50

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
12...	<1	3.9	66.2	<1	150	<1	<1	2.4	30	<1	80	8.31	1
MAY													
11...	<1	4.5	53.2	<1	130	<1	2	2.2	40	<1	20	6.44	<1
AUG													
09...	<1	7.8	88.3	<1	170	<1	4	3.8	80	<1	20	7.65	5

05059000 SHEYENNE RIVER NEAR KINDRED, ND—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
12...	<1	<1.0	2.6
MAY			
11...	<1	<1.0	2.2
AUG			
09...	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND

LOCATION.--Lat 46°45'01", long 96°55'35", in NE¼SE¼SE¼ sec.24, T.138 N., R.50 W., Cass County, Hydrologic Unit 09020204, on right bank 300 ft upstream from diversion structure 1 mi southwest of Horace.

DRAINAGE AREA.--8,840 mi^2, approximately, of which about 7,580 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 890 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated to a large degree by Lake Ashtabula (station 05057500), 230 mi upstream. These records represent the total Sheyenne River flow immediately upstream from the Horace flood diversion.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e398	e422	e265	212	e124	e172	e910	e429	721	1,330	e430	264
2	e400	e427	e283	214	e125	e164	e910	e433	714	1,360	425	237
3	e405	e423	e301	210	e130	e164	e940	e413	700	1,440	e356	227
4	e409	e416	e310	199	e145	e180	e900	e373	641	1,310	349	239
5	e409	e387	e364	181	e157	e225	e659	e324	657	1,170	352	286
6	e415	e350	e341	e167	e167	e297	e409	e313	587	1,120	347	315
7	e417	e342	e290	e157	e180	e383	e357	e320	504	1,100	326	336
8	e419	e426	e254	e144	e185	e455	e312	e321	567	e1,080	304	439
9	e423	e447	e236	e136	e188	e548	e278	e317	995	e1,060	296	386
10	e413	e443	e227	e130	e186	668	e273	e304	1,360	e995	e328	338
11	e395	e440	e219	e125	e184	756	e263	e291	1,480	e897	e319	298
12	e369	e440	e222	e122	e180	803	e263	e289	1,980	e846	e335	253
13	e366	e436	e207	e122	e175	817	264	e287	1,850	e842	e326	223
14	e362	e435	e172	e123	e172	780	262	e288	1,940	e865	288	210
15	e364	e431	e198	e123	e168	662	257	354	1,960	868	258	201
16	e363	e423	e212	e123	e164	516	247	473	1,730	853	236	192
17	e361	e421	e228	e122	e164	417	277	e596	1,590	867	235	187
18	e365	e427	e228	e122	e164	391	e474	e712	1,780	920	e269	179
19	e364	e422	e212	e122	e167	413	e584	e776	1,900	963	e323	177
20	e370	e414	e203	e123	e169	418	e554	e779	1,820	997	e312	173
21	e374	e377	e198	e123	e169	420	e510	e775	1,590	1,040	e312	169
22	e376	e326	e190	e123	e172	440	e531	e771	1,390	e1,070	e343	167
23	e384	e288	e185	e122	e178	470	e507	e738	1,240	e1,090	e359	167
24	e395	e260	e180	e122	e177	517	e473	e742	1,170	e1,030	380	161
25	e405	e230	e175	e124	e174	549	e439	e762	1,110	e921	420	160
26	e384	e265	e174	e125	e175	587	432	787	1,060	e836	470	161
27	e343	e252	e180	e126	e169	656	430	e796	1,030	e699	476	e161
28	e298	e239	e185	e124	e168	e744	428	e808	1,040	594	e427	e157
29	e282	e238	e195	e123	---	818	427	e792	1,190	e500	e407	e161
30	e363	e246	e205	e123	---	e861	428	e756	1,440	e480	e354	e156
31	e403	---	e208	e123	---	e880	---	728	---	e460	294	---
TOTAL	11,794	11,093	7,047	4,335	4,676	16,171	13,998	16,847	37,736	29,603	10,656	6,780
MEAN	380	370	227	140	167	522	467	543	1,258	955	344	226
MAX	423	447	364	214	188	880	940	808	1,980	1,440	476	439
MIN	282	230	172	122	124	164	247	287	504	460	235	156
AC-FT	23,390	22,000	13,980	8,600	9,270	32,080	27,770	33,420	74,850	58,720	21,140	13,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

MEAN	225	273	228	166	177	556	1,529	953	675	620	425	268
MAX	673	617	429	268	302	1,214	2,964	2,737	1,376	1,157	2,221	582
(WY)	(1995)	(1995)	(2001)	(1997)	(2001)	(1995)	(1997)	(1997)	(2004)	(1993)	(1993)	(1999)
MIN	52.9	54.8	31.7	73.0	61.1	61.2	156	232	252	289	91.5	62.1
(WY)	(1993)	(1993)	(1993)	(1993)	(2003)	(2003)	(2002)	(1993)	(2002)	(2002)	(2002)	(2002)

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	189,842		170,736			
ANNUAL MEAN	519		468		508	
HIGHEST ANNUAL MEAN					749	1999
LOWEST ANNUAL MEAN					182	2002
HIGHEST DAILY MEAN	3,140	Apr 19	1,980	Jun 12	4,480	May 8, 1997
LOWEST DAILY MEAN	67	Feb 29	122	Jan 12	13	Dec 18, 1992
ANNUAL SEVEN-DAY MINIMUM	69	Feb 25	122	Jan 12	16	Dec 13, 1992
MAXIMUM PEAK FLOW			2,060	Jun 12	[a]5,210	May 8, 1997
MAXIMUM PEAK STAGE			22.08	Jun 12	[b]26.66	Mar 25, 1999
ANNUAL RUNOFF (AC-FT)	376,600		338,700		368,300	
10 PERCENT EXCEEDS	1,640		995		1,180	
50 PERCENT EXCEEDS	322		361		280	
90 PERCENT EXCEEDS	104		161		98	

a Gage height, 25.44 ft, backwater from ice
b From high-water mark, backwater from ice and closure of diversion channel
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e15.16	e16.23	e13.51	13.02	13.01	14.30	e17.89	e14.96	17.11	20.55	e15.23	13.39
2	e15.28	e16.22	e13.48	13.04	13.01	14.32	e18.13	e15.00	17.07	20.63	14.73	13.15
3	e15.35	e16.10	e13.57	13.00	13.03	14.34	e18.49	e14.79	16.98	20.92	e14.18	13.06
4	e15.42	e16.04	e13.91	12.89	13.06	14.36	e18.24	e14.36	16.63	20.47	14.12	13.16
5	e15.54	15.76	e14.36	12.73	13.10	14.38	e16.18	e13.82	16.72	19.85	14.15	13.58
6	e15.64	15.30	e14.23	12.64	13.18	14.53	e14.41	e13.69	16.29	19.54	14.10	13.83
7	e15.66	15.05	e13.96	12.61	13.33	15.14	e13.96	e13.77	15.72	19.47	13.92	14.01
8	e15.73	15.59	e13.65	12.62	13.59	16.22	e13.59	e13.78	16.14	e19.34	13.74	14.85
9	e15.85	16.32	e13.35	12.62	13.84	16.19	e13.32	e13.73	18.63	e19.21	13.67	14.43
10	e15.87	16.32	13.21	12.62	13.94	16.28	e13.27	e13.59	20.27	e18.81	e13.94	14.03
11	e15.69	16.26	12.81	12.64	13.83	16.83	e13.19	e13.44	20.80	e18.18	e13.86	13.69
12	e15.52	16.21	12.67	12.73	13.74	17.13	e13.18	e13.42	21.95	e17.83	e14.00	13.29
13	e15.49	16.20	12.62	12.79	13.69	17.23	13.19	e13.39	21.79	e17.80	e13.93	12.98
14	e15.49	16.18	12.34	12.83	13.72	16.99	13.17	e13.41	21.93	e17.96	13.60	12.79
15	e15.44	16.17	12.08	12.86	13.91	16.25	13.12	14.14	21.96	17.98	13.34	12.66
16	e15.45	15.85	12.33	12.85	14.07	15.30	13.04	15.42	21.60	17.88	13.14	12.52
17	e15.46	15.09	12.63	12.85	14.12	14.63	13.31	e16.34	21.33	17.97	13.13	12.44
18	e15.46	15.06	12.85	12.83	14.25	14.45	e15.34	e17.06	21.68	18.33	e13.43	12.33
19	e15.46	15.06	12.79	12.75	14.38	14.61	e16.27	e17.44	21.87	18.61	e13.90	12.29
20	e15.57	15.04	12.64	12.68	14.49	14.64	e16.08	e17.45	21.74	18.83	e13.81	12.24
21	e15.72	14.77	12.79	12.75	14.41	14.65	e15.80	e17.43	21.30	19.10	e13.80	12.18
22	e15.62	e14.19	12.69	12.85	e14.28	14.79	e15.94	e17.40	20.75	e19.28	e14.07	12.14
23	e15.70	e13.84	12.59	12.95	14.21	15.00	e15.76	e17.21	20.17	e19.42	e14.20	12.14
24	e15.77	e13.66	12.55	12.98	e14.22	15.31	e15.42	e17.24	19.83	e19.06	14.37	12.05
25	e15.83	e13.49	12.45	12.99	14.28	15.52	e15.07	e17.35	19.50	e18.34	14.69	12.03
26	e15.90	e13.63	12.48	12.99	14.28	15.77	14.99	17.50	19.22	e17.76	15.09	12.04
27	e15.41	e13.90	12.61	e13.00	14.30	16.21	14.97	e17.55	19.05	e16.80	15.14	14.29
28	e14.65	e13.58	12.68	13.00	14.30	e16.76	14.95	e17.62	19.08	16.04	e14.76	e18.69
29	14.27	e13.52	12.76	12.99	---	17.24	14.94	e17.53	19.92	e15.65	e14.60	e19.61
30	15.01	e13.55	e12.89	13.02	---	e17.53	14.95	e17.32	20.92	15.49	e14.16	e20.36
31	e16.09	---	12.97	13.02	---	e17.80	---	17.15	---	e15.37	13.66	---
MEAN	15.50	15.14	12.98	12.84	13.84	15.64	15.01	15.62	19.60	18.47	14.08	13.68
MAX	16.09	16.32	14.36	13.04	14.49	17.80	18.49	17.62	21.96	20.92	15.23	20.36
MIN	14.27	13.49	12.08	12.61	13.01	14.30	13.04	13.39	15.72	15.37	13.13	12.03

e Estimated

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1997 to current year.
SPECIFIC CONDUCTANCE: June 1997 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1997.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 29.8°C, Aug. 6, 2001; minimum recorded, -0.2°C, on many days in 2002.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,610 microsiemens, May 7-8, 2000; minimum recorded, 555 microsiemens, Apr. 20, 2004.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 28.1°C, July 15; minimum recorded, 0.0°C, on many days in November and December.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,440 microsiemens, Apr. 20; minimum recorded, 693 microsiemens, June 13.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
APR													
13...	1500	260	--	--	10.6	--	8.6	7.8	1,020	1,020	17.5	13.5	83.9
AUG													
09...	0900	--	--	735	--	--	8.3	8.5	1,130	1,150	--	25.0	76.8
23...	0905	--	72	738	8.2	93	8.5	8.4	1,120	1,110	19.0	19.7	82.9
SEP													
07...	0905	--	100	742	7.5	86	8.2	8.3	866	856	17.5	20.7	68.5
23...	0915	--	51	740	9.3	96	8.3	8.3	1,060	1,050	14.1	15.1	87.6

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
APR													
13...	41.9	8.40	2	79.2	30	314	23.6	.24	9.43	234	662	470	--
AUG													
09...	45.6	8.90	2	94.0	34	322	22.5	.24	16.9	280	722	--	--
23...	45.5	9.30	2	90.3	32	310	24.0	.25	19.2	282	721	--	153
SEP													
07...	34.8	8.00	1	58.8	28	261	17.3	.21	19.4	185	530	--	192
23...	39.0	8.50	2	80.2	31	293	32.3	.24	23.5	245	672	--	63

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
APR													
13...	--	--	--	--	--	--	--	<50	<1	3.9	58.5	<1	140
AUG													
09...	--	--	--	--	--	--	--	<50	<1	9.3	69.4	<1	180
23...	.64	<.010	<.020	--	.66	.098	.240	<50	<1	9.0	77.6	<1	180
SEP													
07...	.53	.043	.080	.49	.61	.117	.265	<50	<1	8.7	69.0	<1	120
23...	.41	<.010	.340	--	.75	.107	.179	<50	<1	6.4	78.8	<1	160

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR											
13...	<1	<1	2.4	10	<1	50	8.31	1	<1	<1.0	1.6
AUG											
09...	<1	4	2.4	50	<1	10	7.24	3	<1	<1.0	<1
23...	<1	2	3.3	60	<1	<10	8.23	7	<1	<1.0	1.2
SEP											
07...	<1	2	2.3	<10	<1	<10	6.01	8	<1	<1.0	<1
23...	<1	4	2.3	<10	<1	80	7.12	<1	<1	<1.0	1.2

Remark codes used in this table:
< -- Less than.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.4	13.0	13.9	7.8	7.2	7.4	0.1	0.0	0.0	0.1	0.1	0.1
2	13.0	12.0	12.5	7.2	6.4	6.8	0.1	0.0	0.0	0.1	0.1	0.1
3	12.3	11.4	11.9	6.4	5.9	6.1	0.1	0.0	0.0	0.1	0.1	0.1
4	11.4	10.3	10.8	6.0	5.5	5.8	0.1	0.0	0.0	0.1	0.1	0.1
5	10.7	9.8	10.2	5.7	5.1	5.4	0.1	0.0	0.0	0.1	0.1	0.1
6	12.2	10.4	11.2	5.8	5.1	5.4	0.1	0.0	0.0	0.1	0.1	0.1
7	13.3	12.1	12.7	5.5	4.9	5.3	0.1	0.0	0.0	0.1	0.1	0.1
8	13.8	13.0	13.4	5.1	4.6	4.9	0.1	0.0	0.0	0.1	0.1	0.1
9	13.6	12.8	13.2	4.8	4.2	4.5	0.0	0.0	0.0	0.1	0.1	0.1
10	13.5	12.7	13.1	4.9	4.2	4.7	0.1	0.0	0.0	0.1	0.1	0.1
11	13.7	12.9	13.2	4.2	3.2	3.7	0.1	0.0	0.0	0.1	0.1	0.1
12	14.3	13.2	13.6	3.2	2.2	2.8	0.1	0.0	0.0	0.1	0.1	0.1
13	13.8	12.3	13.1	2.3	1.8	2.0	0.1	0.0	0.1	0.1	0.1	0.1
14	12.3	10.9	11.4	1.8	1.4	1.6	0.1	0.0	0.1	0.1	0.1	0.1
15	10.9	9.2	10.2	1.8	1.2	1.5	0.1	0.0	0.1	0.1	0.1	0.1
16	9.2	7.7	8.4	2.3	1.5	1.9	0.1	0.0	0.0	0.1	0.1	0.1
17	7.7	6.7	7.1	2.5	2.0	2.2	0.1	0.0	0.1	0.1	0.1	0.1
18	6.7	6.2	6.5	2.4	1.9	2.2	0.1	0.0	0.1	0.1	0.1	0.1
19	7.3	6.5	6.8	2.2	1.8	2.0	0.1	0.1	0.1	0.1	0.1	0.1
20	7.4	6.6	7.0	2.3	1.7	2.1	0.1	0.1	0.1	0.1	0.1	0.1
21	8.2	7.3	7.7	1.7	1.2	1.5	0.1	0.1	0.1	0.1	0.1	0.1
22	9.1	8.2	8.7	1.5	1.0	1.2	0.1	0.1	0.1	0.1	0.1	0.1
23	9.3	9.0	9.1	1.3	0.3	0.8	0.1	0.1	0.1	0.1	0.1	0.1
24	9.1	8.6	8.8	0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
25	8.7	8.1	8.4	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
26	8.6	8.2	8.3	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
27	8.3	7.8	8.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
28	9.0	8.2	8.6	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
29	9.9	9.0	9.4	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
30	9.9	8.0	8.8	0.1	0.0	0.0	---	---	---	0.1	0.1	0.1
31	8.0	7.6	7.8	---	---	---	0.1	0.1	0.1	0.1	0.1	0.1
MONTH	14.4	6.2	10.1	7.8	0.0	2.7	0.1	0.0	0.1	0.1	0.1	0.1

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	8.0	7.4	7.6
2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	8.4	6.8	7.5
3	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	9.4	7.4	8.4
4	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	11.2	8.7	9.8
5	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	12.7	10.6	11.5
6	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	14.5	11.7	13.0
7	0.2	0.1	0.1	0.1	0.1	0.1	---	---	---	15.1	13.7	14.3
8	0.2	0.1	0.1	0.1	0.1	0.1	---	---	---	17.5	14.9	16.0
9	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	17.3	16.2	16.9
10	0.2	0.1	0.1	0.1	0.1	0.1	---	---	---	16.2	14.8	15.8
11	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	14.8	13.4	14.0
12	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	13.6	11.1	12.2
13	0.1	0.1	0.1	0.1	0.1	0.1	---	---	---	11.1	10.6	10.8
14	0.1	0.1	0.1	0.1	0.1	0.1	13.6	11.6	12.6	10.8	9.2	9.7
15	0.1	0.1	0.1	0.1	0.1	0.1	13.9	12.1	12.9	10.3	8.6	9.3
16	0.1	0.1	0.1	0.1	0.1	0.1	14.7	12.2	13.4	12.1	9.4	10.6
17	0.1	0.1	0.1	0.1	0.1	0.1	15.1	13.2	14.1	13.7	12.1	12.9
18	0.1	0.1	0.1	0.1	0.1	0.1	16.4	14.4	15.2	15.5	13.6	14.5
19	0.2	0.1	0.1	0.1	0.1	0.1	16.2	15.5	15.8	16.5	15.2	15.7
20	0.1	0.1	0.1	0.1	0.1	0.1	15.8	14.8	15.4	17.6	15.8	16.7
21	0.1	0.1	0.1	0.1	0.1	0.1	15.6	14.5	15.1	19.0	17.4	18.1
22	0.1	0.1	0.1	0.1	0.1	0.1	15.2	13.0	13.9	19.4	18.1	18.7
23	0.1	0.1	0.1	0.1	0.1	0.1	13.0	11.8	12.4	19.9	18.6	19.2
24	0.1	0.1	0.1	0.1	0.1	0.1	12.8	11.5	12.2	19.8	18.8	19.1
25	0.1	0.1	0.1	0.1	0.1	0.1	12.6	11.3	11.9	18.8	17.7	18.2
26	0.1	0.1	0.1	0.1	0.1	0.1	11.3	10.5	10.9	17.7	16.8	17.2
27	0.1	0.1	0.1	0.1	0.1	0.1	10.6	9.5	9.9	16.8	15.6	16.1
28	0.1	0.1	0.1	0.2	0.1	0.1	9.5	8.7	9.1	15.6	15.0	15.2
29	---	---	---	0.2	0.1	0.1	8.9	8.2	8.5	15.8	14.6	15.1
30	---	---	---	0.1	0.1	0.1	8.4	7.9	8.1	16.4	15.4	15.9
31	---	---	---	0.3	0.1	0.1	---	---	---	16.9	15.8	16.4
MONTH	0.2	0.1	0.1	0.3	0.1	0.1	16.4	0.1	11.1	19.9	6.8	14.1
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.6	16.6	17.0	21.3	20.2	20.7	26.3	24.8	25.5	21.3	19.9	20.5
2	17.8	16.8	17.3	22.2	20.4	21.2	26.8	25.6	26.1	20.4	18.7	19.6
3	18.5	17.7	18.0	23.1	21.9	22.5	27.3	26.1	26.6	20.3	18.8	19.5
4	19.0	18.5	18.7	23.2	22.6	22.9	26.2	24.6	25.2	21.4	19.0	20.1
5	19.2	18.8	18.9	23.2	22.4	22.8	25.0	23.4	24.2	22.5	20.9	21.6
6	20.5	18.7	19.5	23.4	22.1	22.8	25.2	23.3	24.2	22.5	21.5	21.9
7	21.6	20.0	20.7	24.2	22.7	23.4	26.1	24.0	24.9	21.8	20.7	21.3
8	22.1	21.2	21.6	25.2	23.8	24.4	26.8	25.0	25.8	21.8	20.5	21.1
9	22.1	21.1	21.6	26.5	24.9	25.6	26.2	25.0	25.6	21.6	21.0	21.2
10	21.8	21.2	21.5	27.5	26.1	26.7	25.5	23.4	24.4	22.7	21.1	21.8
11	21.4	20.1	20.7	27.4	26.7	27.1	23.4	22.3	22.8	22.3	21.7	22.1
12	20.1	19.0	19.6	27.8	26.5	27.1	22.8	21.6	22.2	22.1	20.8	21.5
13	19.8	19.3	19.5	28.0	26.6	27.3	22.1	20.9	21.5	20.8	19.2	19.9
14	19.4	19.0	19.1	27.9	26.7	27.3	21.7	20.1	20.9	19.3	17.9	18.7
15	19.4	18.7	19.0	28.1	26.9	27.5	22.4	20.1	21.2	19.2	17.5	18.4
16	20.0	18.8	19.4	28.1	26.7	27.4	23.0	20.8	21.8	19.5	17.4	18.5
17	21.0	19.5	20.2	27.9	27.0	27.4	23.3	21.7	22.4	19.4	18.1	18.8
18	21.8	20.4	21.0	27.3	25.4	26.2	23.6	22.1	22.7	18.9	18.1	18.5
19	22.9	21.7	22.2	25.5	24.4	25.0	23.5	22.2	22.8	19.2	17.7	18.4
20	23.7	22.8	23.2	25.4	24.7	25.1	23.0	21.7	22.3	19.2	17.6	18.4
21	24.3	23.5	23.8	25.7	24.7	25.2	22.2	21.0	21.5	18.7	17.6	18.1
22	25.2	23.9	24.5	25.9	25.1	25.4	21.3	20.0	20.6	17.8	16.4	17.1
23	26.3	24.9	25.5	25.7	25.2	25.4	21.1	19.7	20.3	16.9	15.5	16.2
24	26.1	25.3	25.6	25.8	24.9	25.3	21.1	19.9	20.4	16.2	15.5	15.8
25	25.4	24.7	25.1	25.6	24.2	25.1	20.8	20.4	20.5	15.5	14.1	14.7
26	24.9	24.2	24.5	24.2	23.1	23.5	21.3	19.9	20.6	14.9	13.1	14.0
27	24.4	23.8	24.1	23.1	21.9	22.5	21.0	20.0	20.5	14.5	13.5	14.0
28	23.9	23.3	23.6	22.5	21.6	22.1	21.4	20.0	20.7	14.5	13.9	14.1
29	23.7	22.7	23.2	22.9	21.6	22.2	21.8	20.4	21.1	14.0	13.2	13.5
30	22.7	20.8	21.7	24.3	22.4	23.2	22.3	20.6	21.4	13.5	13.0	13.2
31	---	---	---	25.5	24.1	24.7	22.2	21.1	21.6	---	---	---
MONTH	26.3	16.6	21.3	28.1	20.2	24.7	27.3	19.7	22.7	22.7	13.0	18.4

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1,030	1,020	1,030	1,100	1,100	1,100	1,150	1,150	1,150	1,260	1,250	1,260
2	1,020	1,020	1,020	1,100	1,100	1,100	1,150	1,150	1,150	1,260	1,260	1,260
3	1,040	1,020	1,030	1,100	1,100	1,100	1,150	1,150	1,150	1,260	1,260	1,260
4	1,050	1,030	1,040	1,100	1,090	1,090	1,160	1,150	1,160	1,260	1,260	1,260
5	1,060	1,040	1,050	1,090	1,080	1,090	1,160	1,160	1,160	1,260	1,260	1,260
6	1,050	1,050	1,050	1,090	1,080	1,080	1,160	1,160	1,160	1,260	1,260	1,260
7	1,060	1,050	1,060	1,080	1,080	1,080	1,160	1,160	1,160	1,270	1,260	1,260
8	1,070	1,060	1,060	1,080	1,080	1,080	1,170	1,160	1,170	1,270	1,270	1,270
9	1,070	1,060	1,070	1,080	1,070	1,080	1,170	1,170	1,170	1,270	1,270	1,270
10	1,070	1,070	1,070	1,080	1,070	1,070	1,170	1,170	1,170	1,270	1,270	1,270
11	1,080	1,070	1,080	1,090	1,080	1,080	1,170	1,170	1,170	1,280	1,270	1,270
12	1,080	1,080	1,080	1,100	1,090	1,090	1,180	1,170	1,170	1,280	1,270	1,270
13	1,080	1,080	1,080	1,110	1,100	1,100	1,180	1,170	1,180	1,280	1,270	1,270
14	1,090	1,080	1,080	1,120	1,110	1,120	1,180	1,170	1,180	1,270	1,270	1,270
15	1,090	1,080	1,090	1,130	1,120	1,120	1,180	1,170	1,180	1,270	1,270	1,270
16	1,090	1,090	1,090	1,140	1,120	1,130	1,180	1,170	1,180	1,270	1,270	1,270
17	1,100	1,090	1,090	1,130	1,130	1,130	1,180	1,170	1,180	1,270	1,260	1,270
18	1,100	1,100	1,100	1,130	1,130	1,130	1,180	1,170	1,180	1,260	1,260	1,260
19	1,100	1,100	1,100	1,140	1,130	1,130	1,180	1,170	1,180	1,260	1,260	1,260
20	1,100	1,100	1,100	1,140	1,130	1,140	1,180	1,180	1,180	1,260	1,260	1,260
21	1,100	1,100	1,100	1,140	1,140	1,140	1,180	1,180	1,180	1,260	1,250	1,260
22	1,100	1,100	1,100	1,140	1,140	1,140	1,190	1,180	1,190	1,260	1,250	1,250
23	1,100	1,090	1,100	1,150	1,140	1,140	1,200	1,190	1,200	1,250	1,240	1,250
24	1,090	1,090	1,090	1,150	1,150	1,150	1,210	1,200	1,200	1,250	1,240	1,240
25	1,090	1,080	1,090	1,150	1,150	1,150	1,210	1,210	1,210	1,240	1,230	1,240
26	1,080	1,080	1,080	1,150	1,150	1,150	1,220	1,210	1,220	1,230	1,220	1,220
27	1,080	1,070	1,070	1,150	1,150	1,150	1,230	1,220	1,220	1,220	1,210	1,210
28	1,080	1,070	1,080	1,150	1,150	1,150	1,240	1,230	1,230	1,210	1,200	1,200
29	1,090	1,080	1,090	1,150	1,150	1,150	1,240	1,240	1,240	1,200	1,190	1,190
30	1,100	1,090	1,100	1,150	1,150	1,150	---	---	---	1,190	1,180	1,190
31	1,100	1,100	1,100	---	---	---	1,250	1,250	1,250	1,180	1,180	1,180
MONTH	1,100	1,020	1,080	1,150	1,070	1,120	1,250	1,150	1,180	1,280	1,180	1,250
		FEBRUARY			MARCH			APRIL			MAY	
1	1,180	1,180	1,180	1,170	1,170	1,170	981	979	980	1,180	1,150	1,160
2	1,180	1,180	1,180	1,170	1,170	1,170	979	931	963	1,150	1,130	1,140
3	1,180	1,170	1,180	1,170	1,170	1,170	---	---	---	1,140	1,120	1,130
4	1,170	1,170	1,170	1,180	1,170	1,170	---	---	---	1,120	1,090	1,110
5	1,170	1,170	1,170	1,180	1,170	1,180	---	---	---	1,090	1,080	1,080
6	1,170	1,170	1,170	1,180	1,180	1,180	---	---	---	1,080	1,070	1,070
7	1,170	1,160	1,170	1,180	1,180	1,180	---	---	---	1,100	1,080	1,100
8	1,160	1,160	1,160	1,180	1,170	1,180	---	---	---	1,100	1,080	1,090
9	1,170	1,160	1,160	1,170	1,160	1,160	---	---	---	1,100	1,090	1,100
10	1,170	1,170	1,170	1,160	1,140	1,150	---	---	---	1,090	1,070	1,080
11	1,180	1,170	1,170	1,140	1,140	1,140	---	---	---	1,070	1,030	1,050
12	1,180	1,170	1,180	1,140	1,130	1,130	---	---	---	1,060	1,030	1,050
13	1,180	1,170	1,180	1,130	1,120	1,120	---	---	---	1,070	1,050	1,060
14	1,170	1,170	1,170	1,120	1,110	1,120	1,210	1,170	1,190	1,070	1,040	1,060
15	1,170	1,160	1,170	1,110	1,100	1,100	1,230	1,210	1,220	1,060	1,050	1,060
16	1,160	1,160	1,160	1,100	1,040	1,070	1,250	1,220	1,240	1,080	1,050	1,060
17	1,160	1,150	1,160	1,040	989	1,010	1,280	1,250	1,260	1,070	989	1,020
18	1,150	1,140	1,150	989	965	976	1,390	1,260	1,330	1,030	992	1,010
19	1,150	1,140	1,150	965	954	958	1,390	1,330	1,370	998	903	958
20	1,150	1,150	1,150	954	952	953	1,440	1,360	1,420	922	867	899
21	1,150	1,150	1,150	957	953	955	1,360	1,230	1,270	948	922	931
22	1,150	1,150	1,150	964	957	959	1,250	1,170	1,190	965	934	953
23	1,160	1,150	1,150	966	963	965	1,180	1,170	1,180	977	921	946
24	1,160	1,160	1,160	967	965	966	1,180	1,170	1,180	949	931	939
25	1,160	1,160	1,160	968	967	967	1,180	1,170	1,170	934	925	929
26	1,160	1,160	1,160	968	966	967	1,180	1,170	1,170	940	922	932
27	1,160	1,160	1,160	967	966	966	1,180	1,180	1,180	925	919	922
28	1,170	1,160	1,160	973	967	969	1,190	1,180	1,190	921	907	916
29	---	---	---	978	973	976	1,200	1,190	1,190	912	901	906
30	---	---	---	980	978	979	1,190	1,180	1,180	918	881	903
31	---	---	---	980	979	980	---	---	---	881	855	869
MONTH	1,180	1,140	1,160	1,180	952	1,060	1,440	931	1,200	1,180	855	1,010

05059300 SHEYENNE RIVER ABOVE SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	864	855	859	839	829	833	1,180	1,160	1,170	1,110	1,080	1,100
2	864	850	860	853	829	840	1,180	1,170	1,180	1,110	1,100	1,110
3	851	829	837	870	853	863	1,170	1,150	1,160	1,130	1,110	1,120
4	846	824	833	881	864	872	1,160	1,130	1,150	1,150	1,130	1,140
5	824	817	821	899	836	882	1,150	1,110	1,130	1,150	962	1,060
6	819	809	816	931	865	898	1,130	1,110	1,130	962	839	919
7	824	805	811	966	931	949	1,150	1,130	1,140	955	881	921
8	833	824	829	1,070	966	1,030	1,160	1,130	1,140	1,170	952	1,080
9	835	821	827	1,080	1,040	1,070	1,160	1,140	1,150	1,190	1,170	1,180
10	879	835	861	1,080	1,070	1,080	1,150	1,040	1,120	1,180	1,160	1,170
11	861	790	829	1,080	1,070	1,070	1,080	1,030	1,060	1,180	1,160	1,170
12	790	700	730	1,080	1,070	1,080	1,120	1,080	1,100	1,160	1,140	1,150
13	733	693	708	1,090	1,080	1,090	1,110	1,090	1,100	1,140	950	1,070
14	782	733	758	1,100	1,090	1,100	1,090	1,080	1,080	950	903	914
15	819	782	801	1,100	1,100	1,100	1,110	1,030	1,070	974	925	953
16	837	819	828	1,100	1,090	1,100	1,140	1,110	1,130	986	974	979
17	868	837	851	1,100	1,090	1,100	1,140	1,040	1,130	992	986	989
18	923	864	878	1,110	1,090	1,100	1,110	1,040	1,090	1,000	992	997
19	988	923	965	1,110	1,090	1,100	1,110	923	1,020	1,000	999	1,000
20	1,020	988	1,010	1,120	1,100	1,120	1,010	923	973	1,040	1,000	1,010
21	---	---	---	1,130	1,120	1,120	1,020	997	1,010	1,100	1,040	1,070
22	---	---	---	1,130	1,120	1,120	1,090	1,010	1,050	1,100	1,040	1,080
23	---	---	---	1,140	1,120	1,130	1,160	1,080	1,130	1,040	1,030	1,040
24	1,110	1,080	1,090	1,150	1,140	1,140	1,180	1,130	1,160	1,040	1,020	1,030
25	1,110	1,100	1,100	1,140	1,130	1,140	1,180	1,040	1,130	1,060	1,020	1,040
26	1,100	1,090	1,100	1,140	1,130	1,130	1,060	1,020	1,040	1,080	1,060	1,070
27	1,100	1,080	1,090	1,140	1,130	1,140	1,060	913	964	1,100	1,080	1,090
28	1,100	1,080	1,090	1,130	1,120	1,120	996	947	967	1,100	1,100	1,100
29	1,090	1,060	1,080	1,130	1,120	1,120	1,080	995	1,050	1,110	1,100	1,110
30	1,060	838	954	1,150	1,120	1,140	1,100	1,050	1,080	1,120	1,110	1,120
31	---	---	---	1,160	1,150	1,160	1,100	1,030	1,060	---	---	---
MONTH	1,110	693	897	1,160	829	1,060	1,180	913	1,090	1,190	839	1,060

05059310 SHEYENNE RIVER DIVERSION NEAR HORACE, ND

LOCATION.--Lat 46°45'06", long 96°55'33", in NE¼SE¼SE¼ sec.24, T.138 N., R.50 W., Cass County, Hydrologic Unit 09020204, at diversion structure 1 mi southwest of Horace.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder for Sheyenne River above Sheyenne River Diversion near Horace (station 05059300) is used to obtain stage record for this station. Datum of gage is 890 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The records are for the flow that is diverted from the Sheyenne River at this location. When flows are greater than about 1,000 ft^3/s at Sheyenne River above Sheyenne River Diversion near Horace (station 05059300), diversions are made in order to control flood discharges downstream. The diverted flow returns to the Sheyenne River main channel at a location about 13 mi downstream, below the city of West Fargo. See Sheyenne River Diversion at West Fargo (station 05059480) for return flows.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	188	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	142	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	468	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	418	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	459	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	469	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	361	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	285	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	388	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	444	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	408	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.4	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	21	0.00	0.00	e2.7
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	187	0.00	0.00	e67
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,560.43	493.40	0.00	69.70
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	152	15.9	0.00	2.32
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	469	188	0.00	67
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,050	979	0.00	138

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

MEAN	0.05	0.50	0.00	0.00	0.00	61.8	495	169	51.9	38.4	67.1	0.18
MAX	0.65	6.50	0.00	0.00	0.00	471	1,507	1,181	187	281	872	2.32
(WY)	(1995)	(1995)	(1993)	(1993)	(1993)	(1995)	(1997)	(1997)	(2004)	(1993)	(1993)	(2005)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(1997)	(2000)	(1993)	(1993)	(1996)	(1994)	(1993)

05059310 SHEYENNE RIVER DIVERSION NEAR HORACE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	27,849.70		5,123.53			
ANNUAL MEAN	76.1		14.0		73.6	
HIGHEST ANNUAL MEAN					226	1997
LOWEST ANNUAL MEAN					0.00	2002
HIGHEST DAILY MEAN	1,520	Apr 18	469	Jun 15	2,390	Apr 26, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1992
MAXIMUM PEAK FLOW			517	Jun 12	[a]2,760	Apr 10, 2001
MAXIMUM PEAK STAGE			21.61	Jun 12	[b]26.66	Mar 25, 1999
ANNUAL RUNOFF (AC-FT)	55,240		10,160		53,300	
10 PERCENT EXCEEDS	230		0.00		45	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Gage height, 25.01 ft
b From high-water mark, backwater from ice and closure of diversion channel
e Estimated

05059480 SHEYENNE RIVER DIVERSION AT WEST FARGO, ND

LOCATION.--Lat 46°53'28", long 96°54'59", in NE¼NE¼NW¼ sec.6, T.139 N., R.50 W., Cass County, Hydrologic Unit 09020204, on right bank, 50 ft upstream from 12th Ave N bridge in West Fargo, and 0.5 mi upstream from confluence with the Sheyenne River.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 876.78 ft above National Geodetic Vertical Datum of 1929. Datum incorrectly set 13.56 ft lower from Oct. 1, 1996, to Sept. 30, 1999. Prior to Oct. 1, 1996, at datum 6.78 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. These records are for the flood flows that are diverted around West Fargo.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e88	e0.00	e212	e124	e172	400	0.00	271	1,110	e476	0.00
2	0.00	e42	e0.00	e214	e125	e175	386	0.00	266	938	e434	0.00
3	0.00	28	e0.00	e214	e130	e164	427	0.00	262	1,070	e369	0.00
4	0.00	19	e0.00	e210	e132	e168	366	0.00	214	968	378	0.00
5	0.00	10	e0.00	e200	e149	e186	192	0.00	205	749	385	1.9
6	0.00	3.5	e0.00	e183	e162	e229	14	0.00	176	626	375	241
7	0.00	0.18	e0.00	e172	e171	e285	0.00	0.00	109	601	367	98
8	0.00	0.27	e0.00	e157	e182	e357	0.00	0.00	68	525	361	54
9	0.00	6.4	e0.00	e147	e188	e458	0.00	0.00	65	471	356	28
10	0.00	16	e0.00	e141	e189	e544	0.00	0.00	125	413	360	2.3
11	0.00	12	e0.00	e133	e187	e665	0.00	0.00	307	326	345	0.00
12	0.00	0.83	e0.00	e126	e184	e764	0.00	0.00	1,230	228	346	0.00
13	0.00	0.00	e207	e122	e182	e797	0.00	e0.00	1,810	202	333	0.00
14	0.00	0.00	e197	e123	e175	e795	0.00	0.00	2,060	244	304	0.00
15	e0.00	0.00	e169	e123	e173	e782	0.00	0.00	2,110	285	152	0.00
16	0.00	0.00	e199	e123	e170	660	0.00	2.2	e2,000	287	2.4	0.00
17	0.00	e0.00	e221	e122	e164	507	0.00	59	e1,800	292	12	e0.00
18	0.00	e0.00	e227	e122	e164	439	0.00	163	e1,900	336	19	0.00
19	0.00	e0.00	e228	e122	e167	e419	14	251	e2,000	412	17	0.00
20	0.00	e0.00	e220	e123	e169	e441	31	285	e1,900	486	12	0.00
21	0.00	e0.00	e210	e123	e169	e458	12	287	e1,700	535	7.8	0.00
22	0.00	e0.00	e206	e123	e172	e466	6.1	287	e1,500	623	6.1	0.00
23	0.00	e0.00	e197	e122	e174	e484	7.9	261	1,140	839	4.2	0.48
24	0.00	e0.00	e190	e122	e180	e501	1.7	254	902	842	0.00	5.7
25	0.00	e0.00	e183	e124	e181	e536	0.00	283	807	773	81	5.0
26	0.00	e0.00	e174	e125	e175	e600	0.00	310	763	712	368	3.9
27	0.00	e0.00	e180	e126	e176	e618	0.00	320	747	646	238	3.9
28	0.00	e0.00	e185	e124	e168	e695	0.00	323	510	571	69	0.32
29	0.00	e0.00	e189	e123	---	e632	0.00	322	623	524	11	22
30	177	e0.00	e201	e123	---	471	0.00	303	996	496	0.40	75
31	211	---	e208	e123	---	412	---	279	---	497	0.00	---
TOTAL	388.00	226.18	3,791.00	4,447	4,682	14,880	1,857.70	3,989.20	28,566	17,627	6,188.90	541.50
MEAN	12.5	7.54	122	143	167	480	61.9	129	952	569	200	18.1
MAX	211	88	228	214	189	797	427	323	2,110	1,110	476	241
MIN	0.00	0.00	0.00	122	124	164	0.00	0.00	65	202	0.00	0.00
AC-FT	770	449	7,520	8,820	9,290	29,510	3,680	7,910	56,660	34,960	12,280	1,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

MEAN	14.4	24.1	10.3	11.0	24.2	356	1,321	644	352	306	222	45.0
MAX	127	138	122	143	167	1,111	3,288	2,937	1,005	1,000	2,144	292
(WY)	(1995)	(2001)	(2005)	(2005)	(2005)	(1995)	(1997)	(1997)	(2004)	(1993)	(1993)	(1995)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(2002)	(2000)	(1993)	(1993)	(1996)	(1994)	(1996)

05059480 SHEYENNE RIVER DIVERSION AT WEST FARGO, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	94,764.05		87,184.48			
ANNUAL MEAN	259		239		278	
HIGHEST ANNUAL MEAN					549	1995
LOWEST ANNUAL MEAN					4.95	2002
HIGHEST DAILY MEAN	3,090	Apr 19	2,110	Jun 15	4,800	Apr 19, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1992
MAXIMUM PEAK FLOW			[a]2,140	Jun 15	[b]4,810	Apr 19, 1997
MAXIMUM PEAK STAGE			[c]19.67	Jun 16	[d]22.90	Apr 9, 1997
ANNUAL RUNOFF (AC-FT)	188,000		172,900		201,100	
10 PERCENT EXCEEDS	1,090		624		800	
50 PERCENT EXCEEDS	0.00		130		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Gage height, 19.29 ft
b Gage height, 22.68 ft
c Backwater from Maple River
d Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gage heights for Nov. 24, Dec. 12, 14, 18-20, and 24 based on once daily observation of gage height. Gaps in record are result of equipment malfunctions and environmental factors. Figures of gage height given here are for the Sheyenne River Diversion only.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.07	e9.48	---	---	---	e10.36	10.23	7.38	9.78	12.47	e10.54	6.91
2	7.08	e9.01	---	---	---	e10.40	10.18	7.36	9.77	12.01	e10.45	6.78
3	7.16	8.77	---	---	---	10.41	10.32	7.25	9.76	12.37	e10.29	6.99
4	7.19	8.58	---	---	---	10.43	10.11	7.01	9.63	12.09	10.31	6.86
5	7.22	8.34	---	---	---	10.39	9.54	6.81	9.61	11.44	10.34	7.30
6	7.25	8.10	---	---	---	10.40	8.36	6.73	9.52	11.04	10.32	9.69
7	7.27	7.89	---	---	---	10.45	7.53	6.73	9.37	10.95	10.30	9.21
8	7.27	7.82	---	---	---	10.84	7.27	6.74	9.64	10.68	10.27	8.96
9	7.28	8.21	---	---	---	11.39	7.15	6.74	10.16	10.48	10.22	8.69
10	7.28	8.49	---	---	---	11.33	6.98	6.74	10.99	10.28	10.26	8.05
11	7.26	8.39	---	---	---	11.55	7.07	6.73	12.13	9.97	10.09	7.40
12	7.14	7.85	e10.28	---	10.84	11.76	7.30	6.68	15.51	9.67	10.11	7.01
13	7.02	7.45	---	---	10.62	11.83	7.40	e6.73	17.45	9.60	9.99	6.87
14	6.95	7.36	e10.46	---	10.53	11.82	7.40	6.81	18.56	9.71	9.89	6.78
15	e6.92	7.35	---	---	10.48	11.60	7.19	6.94	19.33	9.82	9.18	6.72
16	6.87	7.33	---	---	10.56	11.15	7.08	7.35	19.60	9.83	7.94	6.64
17	6.84	---	---	---	10.59	10.62	7.02	8.99	19.32	9.85	8.47	e6.62
18	6.82	---	e10.78	---	10.69	10.37	7.10	9.47	18.79	10.00	8.60	6.55
19	6.83	---	e10.81	---	10.79	10.37	8.30	9.73	17.99	10.27	8.57	6.50
20	6.82	---	e10.51	---	10.92	10.41	8.76	9.82	16.92	10.54	8.47	6.45
21	6.82	---	---	---	10.84	10.44	8.45	9.83	15.46	10.72	8.37	6.42
22	6.85	---	---	---	10.63	10.52	8.31	9.83	13.81	11.02	8.31	6.39
23	6.97	---	---	---	10.53	10.77	8.37	9.76	12.56	11.71	8.13	7.13
24	7.02	e7.91	e10.87	---	10.55	11.30	8.03	9.74	11.90	11.72	7.05	8.30
25	7.06	---	---	---	e10.51	11.21	7.57	9.82	11.62	11.51	7.85	8.27
26	7.07	---	---	---	e10.40	11.37	7.44	9.91	11.48	11.32	10.22	8.22
27	7.06	---	---	---	e10.32	e11.58	7.41	9.94	11.43	11.10	9.70	8.22
28	6.99	---	---	---	e10.33	e11.34	7.40	9.96	10.62	10.85	9.03	7.88
29	7.05	---	---	---	---	e11.05	7.36	9.95	11.01	10.68	8.42	8.20
30	9.95	---	---	---	---	10.48	7.37	9.89	12.16	10.58	7.85	9.11
31	10.29	---	---	---	---	10.27	---	9.80	---	10.59	7.27	---
MEAN	7.25	---	---	---	---	10.91	8.00	8.30	13.20	10.80	9.25	7.50
MAX	10.29	---	---	---	---	11.83	10.32	9.96	19.60	12.47	10.54	9.69
MIN	6.82	---	---	---	---	10.27	6.98	6.68	9.37	9.60	7.05	6.39

e Estimated

05059480 SHEYENNE RIVER DIVERSION AT WEST FARGO, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1440	183	8.5	7.7	961	990	16.5	5.0	70.2	38.6	8.00	2	85.1
AUG													
01...	1320	485	8.4	8.4	1,140	1,180	33.5	27.5	81.6	47.7	8.90	2	99.4

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	35	281	19.3	.21	13.3	219	611	308	<50	<1	3.6	46.9	<1
AUG													
01...	34	335	20.4	.24	17.3	284	744	996	<50	<1	8.5	67.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	130	<1	2	2.3	30	<1	150	7.92	1	<1	<1.0	1.5
AUG												
01...	170	<1	<1	3.5	40	<1	10	9.83	5	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05059500 SHEYENNE RIVER AT WEST FARGO, ND

LOCATION.--Lat 46°53'28", long 96°54'24", in SE¼SE¼ sec.31, T.140 N., R.49 W., Cass County, Hydrologic Unit 09020204, on right bank at downstream side of county highway bridge, 1 mi north of West Fargo, 3 mi upstream from Maple River, and at mile 24.5.

DRAINAGE AREA.--8,870 mi^2, approximately, of which about 5,780 mi^2 is probably noncontributing, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to November 1902 (gage heights only), May 1903 to October 1905, April to August 1919, October 1929 to current year. Published as "at or near Haggart" 1902-7, 1919. Records for March to November 1902 and November 1905 to June 1907, published in WSP 100, 171, 207, and 245, have been found to be unreliable and should not be used. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1388: 1904(M). WSP 1728: Drainage area. See also "PERIOD OF RECORD."

GAGE.--Water-stage recorder. Datum of gage is 877.19 ft above National Geodetic Vertical Datum of 1929. June 27, 1933, to September 1969 on left bank about 600 ft downstream on unimproved channel at same datum. See WSP 1728 or 1913 for history of changes prior to June 27, 1933.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated to a large degree by Lake Ashtabula (station 05057500), 246 mi upstream. Since March 1993, flood flows that are diverted from the Sheyenne River just downstream from gaging station Sheyenne River above Sheyenne River Diversion near Horace (station 05059300) bypass this station. These flows are measured at streamflow station Sheyenne River Diversion at West Fargo (station 05059480). Figures of discharge given here include flow of the bypass. During some years, flow is diverted from just above the station into the Red River of the North in order to maintain adequate supply for municipal uses. Figures of daily discharge do not include this diversion.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368	e611	e245	e212	e124	e172	e900	432	724	1,790	e476	e300
2	386	e493	e260	e214	e125	e175	878	430	717	1,600	e434	e260
3	391	459	e280	e214	e130	e164	931	419	713	1,730	e369	e240
4	396	439	e300	e210	e132	e168	960	389	657	1,630	e378	e230
5	400	422	e330	e200	e149	e186	772	341	648	1,400	e385	280
6	403	388	e360	e183	e162	e229	438	303	605	1,270	e375	691
7	407	353	e340	e172	e171	e285	345	309	505	1,240	e367	459
8	410	354	e310	e157	e182	e357	305	318	480	1,160	e361	411
9	411	413	e280	e147	e188	e458	279	314	567	1,100	e356	375
10	412	444	e250	e141	e189	e544	263	305	825	1,040	e360	320
11	409	453	e240	e133	e187	e665	270	287	1,250	947	e345	291
12	391	432	e230	e126	e184	e764	270	281	2,350	814	e346	259
13	370	427	e207	e122	e182	e797	271	e285	e2,010	774	e333	230
14	363	423	e197	e123	e175	e795	269	296	e2,060	831	e304	213
15	e363	422	e169	e123	e173	e782	266	309	e2,110	883	e282	203
16	362	421	e199	e123	e170	e660	258	397	e2,000	883	234	189
17	363	e424	e221	e122	e164	e507	256	505	e1,800	884	267	e184
18	363	e415	e227	e122	e164	e439	372	638	e1,900	e896	e305	179
19	367	e414	e228	e122	e167	e419	523	733	e2,000	e942	e347	174
20	365	e413	e220	e123	e169	e441	554	759	e1,900	e956	e332	170
21	368	e403	e210	e123	e169	e458	512	763	e1,700	e995	e318	167
22	370	e360	e206	e123	e172	e466	496	771	e1,500	e1,040	e306	163
23	382	e302	e197	e122	e174	e484	496	733	e1,340	e1,170	e344	163
24	380	e220	e190	e122	e180	e501	475	724	e1,200	e1,110	e370	172
25	384	e194	e183	e124	e181	e536	450	770	e1,160	e998	508	166
26	391	e225	e174	e125	e175	e600	438	820	e1,110	e882	944	165
27	380	e280	e180	e126	e176	e668	436	844	1,050	e756	699	158
28	336	e260	e185	e124	e168	e745	433	818	1,150	e641	e589	77
29	318	e240	e189	e123	---	e782	431	802	1,270	e524	e451	90
30	795	e235	e201	e123	---	e871	432	773	1,660	e496	e400	169
31	886	---	e208	e123	---	e862	---	737	---	e497	e340	---
TOTAL	12,690	11,339	7,216	4,447	4,682	15,980	13,979	16,605	38,961	31,879	12,225	7,148
MEAN	409	378	233	143	167	515	466	536	1,299	1,028	394	238
MAX	886	611	360	214	189	871	960	844	2,350	1,790	944	691
MIN	318	194	169	122	124	164	256	281	480	496	234	77
AC-FT	25,170	22,490	14,310	8,820	9,290	31,700	27,730	32,940	77,280	63,230	24,250	14,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	88.0	106	88.7	72.1	78.4	279	817	494	316	250	140	96.0
MAX	713	687	468	276	320	1,184	3,312	3,235	1,785	1,373	2,218	609
(WY)	(1995)	(2001)	(2001)	(2001)	(2001)	(1999)	(1997)	(1997)	(1950)	(2000)	(1993)	(1999)
MIN	9.88	12.4	7.48	6.37	5.47	6.76	65.2	54.0	25.2	14.7	7.46	7.43
(WY)	(1937)	(1937)	(1937)	(1940)	(1937)	(1940)	(1991)	(1959)	(1934)	(1934)	(1936)	(1976)

05059500 SHEYENNE RIVER AT WEST FARGO, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	197,686		177,151			
ANNUAL MEAN	540		485		235	
HIGHEST ANNUAL MEAN					804	1997
LOWEST ANNUAL MEAN					37.1	1934
HIGHEST DAILY MEAN	3,090	Apr 19	[a]2,350	Jun 12	4,800	Apr 19, 1997
LOWEST DAILY MEAN	67	Mar 1	77	Sep 28	[b]1.0	Sep 23, 1976
ANNUAL SEVEN-DAY MINIMUM	69	Feb 26	122	Jan 13	2.0	Sep 17, 1976
MAXIMUM PEAK FLOW			[c]2,140	Jun 15	[d]4,810	Apr 19, 1997
MAXIMUM PEAK STAGE			[f]19.67	Jun 16	[g]22.90	Apr 9, 1997
ANNUAL RUNOFF (AC-FT)	392,100		351,400		170,400	
10 PERCENT EXCEEDS	1,670		958		528	
50 PERCENT EXCEEDS	338		367		87	
90 PERCENT EXCEEDS	104		164		22	

a Combined daily flow in river and diversion channel; neither river nor diversion separately exceeded 1,600 ft^3/s
b Caused by diversion to Red River of the North
c All flow through diversion channel; gage height, 19.29 ft
d All flow through diversion channel; gage height, 22.68 ft
e Estimated
f Maximum gage height in diversion channel, backwater from Maple River
g Maximum gage height in diversion channel, backwater from ice

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors. Figures of gage height given here are for the Sheyenne River only.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.59	8.98	7.57	5.87	5.88	6.79	9.12	8.20	9.42	13.05	7.27	6.60
2	7.77	8.37	6.68	5.93	5.90	6.76	8.73	8.18	9.39	12.78	7.07	6.37
3	7.81	8.19	6.49	5.89	5.89	6.77	8.84	8.08	9.40	12.90	6.55	6.33
4	7.86	8.09	6.06	5.81	5.89	6.81	9.51	7.79	9.29	12.73	6.32	6.27
5	7.90	8.02	6.22	5.58	5.93	7.03	9.42	7.34	9.29	12.10	6.28	6.90
6	7.92	7.75	7.12	5.51	6.12	7.57	8.12	7.00	9.09	11.55	6.27	8.64
7	7.97	7.46	8.15	5.42	6.23	7.56	7.39	7.05	8.63	11.36	6.14	7.78
8	7.99	7.46	7.49	5.40	6.32	7.85	7.02	7.13	8.86	11.09	6.04	7.74
9	8.00	7.97	7.12	5.42	6.54	8.53	6.76	7.10	9.74	10.83	5.91	7.64
10	8.02	8.16	7.02	---	6.92	8.65	6.60	7.02	11.14	10.60	6.04	7.33
11	7.98	8.28	6.84	---	6.90	8.75	6.67	6.84	12.43	10.19	6.21	7.03
12	7.82	8.19	6.69	---	6.76	9.08	6.67	6.78	13.31	9.83	6.09	6.67
13	7.61	8.15	6.22	---	6.70	9.30	6.68	6.82	12.67	9.71	6.18	6.33
14	7.55	8.12	4.87	5.48	6.90	9.28	6.66	6.93	12.84	9.83	5.94	6.12
15	e7.54	8.11	5.70	5.42	6.57	8.96	6.62	7.06	e12.79	9.93	6.54	6.00
16	7.54	8.10	5.50	5.61	6.72	8.33	6.55	8.01	e12.87	9.91	6.42	5.84
17	7.55	8.13	5.68	5.58	6.79	7.66	6.53	8.68	e12.88	9.88	6.67	5.78
18	7.55	8.05	5.86	5.63	6.84	7.24	7.64	9.18	12.90	10.04	6.99	5.72
19	7.58	8.04	6.16	5.72	6.90	7.22	8.88	9.51	12.87	10.36	7.14	5.65
20	7.57	8.03	6.06	5.60	6.99	7.34	9.00	9.67	12.88	10.62	7.05	5.61
21	7.59	7.93	5.97	5.53	7.02	7.40	8.81	9.73	12.88	10.80	6.98	5.57
22	7.61	7.52	6.05	5.63	6.85	7.58	8.72	9.80	12.86	10.32	6.95	5.53
23	7.73	7.03	5.88	5.67	6.71	7.95	8.70	9.68	12.83	10.30	7.25	5.53
24	7.70	6.82	5.78	5.77	6.68	8.64	8.57	9.65	12.89	10.38	7.26	5.56
25	7.74	6.79	5.61	5.80	6.75	8.63	8.36	9.81	12.91	9.99	8.36	5.50
26	7.82	6.57	5.62	5.86	6.81	9.04	8.26	9.97	12.92	9.50	9.74	5.50
27	7.70	6.79	5.64	5.78	6.85	9.58	8.23	10.07	12.43	8.89	8.74	5.40
28	7.30	7.36	5.70	5.79	6.88	9.63	8.21	9.87	11.48	8.14	8.03	4.25
29	7.13	7.58	5.73	5.86	---	10.32	8.19	9.77	11.90	7.63	7.66	4.09
30	9.65	7.45	5.84	5.81	---	10.31	8.20	9.65	12.80	7.37	7.39	4.55
31	10.08	---	5.96	5.83	---	9.68	---	9.49	---	7.36	6.97	---
MEAN	7.84	7.78	6.23	---	6.58	8.27	7.92	8.45	11.62	10.32	6.92	6.13
MAX	10.08	8.98	8.15	---	7.02	10.32	9.51	10.07	13.31	13.05	9.74	8.64
MIN	7.13	6.57	4.87	---	5.88	6.76	6.53	6.78	8.63	7.36	5.91	4.09

e Estimated

05059600 MAPLE RIVER NEAR HOPE, ND

LOCATION.--Lat 47°19'30", long 97°47'25", in NW¼NW¼ sec.4, T.144 N., R.56 W., Steele County, Hydrologic Unit 09020205, 100 ft downstream from box culvert on State Highway 38, 500 ft east of the intersection of State Highways 32 and 38, and 3 mi west of Hope.

DRAINAGE AREA.--20.2 mi^2, of which about 2.8 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year (seasonal records only since 1983).

GAGE.--Water-stage recorder. Datum of gage is 1,296.62 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 904 ft^3/s, June 4, gage height, 6.78 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	e22	0.78	7.7	16	0.00	0.00
2	---	---	---	---	---	e0.00	59	0.86	6.5	31	0.00	0.00
3	---	---	---	---	---	e0.00	40	0.75	132	44	0.00	0.00
4	---	---	---	---	---	e0.10	30	0.36	572	57	0.00	e0.00
5	---	---	---	---	---	e0.30	23	0.43	238	85	0.00	e0.00
6	---	---	---	---	---	e0.75	16	0.74	124	52	0.00	e0.00
7	---	---	---	---	---	e1.5	8.7	0.49	111	34	0.00	e0.00
8	---	---	---	---	---	e3.5	8.4	13	189	27	0.00	e0.00
9	---	---	---	---	---	e3.8	9.7	159	198	e14	0.00	0.00
10	---	---	---	---	---	e4.0	5.2	106	117	e8.3	0.00	0.00
11	---	---	---	---	---	e3.8	13	75	107	e5.1	0.00	0.00
12	---	---	---	---	---	e3.5	37	54	156	e2.6	0.00	0.00
13	---	---	---	---	---	e3.2	44	44	132	e1.5	0.00	0.00
14	---	---	---	---	---	e3.0	28	43	111	1.3	0.00	0.00
15	---	---	---	---	---	e3.1	37	30	88	26	0.00	0.00
16	---	---	---	---	---	e3.2	36	23	79	20	0.00	0.00
17	---	---	---	---	---	e3.7	27	26	57	50	0.00	0.00
18	---	---	---	---	---	e4.2	19	63	42	17	0.00	0.00
19	---	---	---	---	---	e4.8	14	52	29	5.9	0.00	0.00
20	---	---	---	---	---	e5.5	8.9	59	19	2.9	0.00	0.00
21	---	---	---	---	---	e6.5	5.8	49	13	1.5	0.00	0.00
22	---	---	---	---	---	e7.5	4.9	54	9.2	0.91	0.00	0.00
23	---	---	---	---	---	e8.0	2.9	63	6.1	0.64	0.00	0.00
24	---	---	---	---	---	e9.0	2.6	48	3.9	0.47	0.00	0.00
25	---	---	---	---	---	e10	2.0	38	1.7	0.46	0.00	0.00
26	---	---	---	---	---	e11	1.8	27	4.2	0.43	0.00	0.00
27	---	---	---	---	---	e12	1.3	21	4.5	0.27	0.00	0.00
28	---	---	---	---	---	e14	0.89	18	3.3	0.16	0.00	0.00
29	---	---	---	---	---	e16	0.52	14	22	0.05	0.00	0.00
30	---	---	---	---	---	e18	0.39	12	25	0.02	0.00	0.00
31	---	---	---	---	---	e20	---	8.2	---	0.00	e0.00	---
TOTAL	---	---	---	---	---	183.95	509.00	1,103.61	2,608.1	505.51	0.00	0.00
MEAN	---	---	---	---	---	5.93	17.0	35.6	86.9	16.3	0.00	0.00
MAX	---	---	---	---	---	20	59	159	572	85	0.00	0.00
MIN	---	---	---	---	---	0.00	0.39	0.36	1.7	0.00	0.00	0.00
AC-FT	---	---	---	---	---	365	1,010	2,190	5,170	1,000	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

MEAN	0.06	0.00	0.00	0.00	0.00	11.6	15.0	4.38	5.62	4.78	0.83	0.69
MAX	1.07	0.05	0.00	0.00	0.01	56.3	63.8	44.0	86.9	65.3	13.7	15.3
(WY)	(1966)	(1966)	(1965)	(1965)	(1981)	(2004)	(1997)	(1999)	(2005)	(1993)	(2001)	(1994)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
(WY)	(1965)	(1965)	(1965)	(1965)	(1965)	(1969)	(1991)	(1980)	(1973)	(1973)	(1967)	(1967)

05059600 MAPLE RIVER NEAR HOPE, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1965 - 2005	
ANNUAL MEAN	[a]2.82	
HIGHEST ANNUAL MEAN	[a]5.55	1969
LOWEST ANNUAL MEAN	[a]0.00	1981
HIGHEST DAILY MEAN	640	Mar 28, 2004
LOWEST DAILY MEAN	0.00	Oct 1, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1964
MAXIMUM PEAK FLOW	[b]1,000	Mar 28, 2004
MAXIMUM PEAK STAGE	[c]8.83	Mar 31, 1997
ANNUAL RUNOFF (AC-FT)	[a]2,040	
10 PERCENT EXCEEDS	2.5	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1965-82)
b Gage height, 6.98 ft
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.02	4.05	4.40	4.45	3.64	3.25
2	---	---	---	---	---	---	4.81	4.07	4.37	4.58	3.61	3.21
3	---	---	---	---	---	---	4.67	4.06	4.90	4.70	3.58	3.20
4	---	---	---	---	---	---	4.60	3.97	6.25	4.79	3.53	e3.18
5	---	---	---	---	---	---	4.55	3.99	5.64	5.02	3.46	e3.19
6	---	---	---	---	---	---	4.49	4.05	5.25	4.77	3.42	e3.19
7	---	---	---	---	---	---	4.38	4.01	5.18	4.62	3.39	e3.19
8	---	---	---	---	---	e4.92	4.38	4.12	5.50	4.55	3.35	e3.18
9	---	---	---	---	---	4.67	4.40	5.37	5.55	---	3.32	3.19
10	---	---	---	---	---	4.66	4.31	5.24	5.21	---	3.28	3.19
11	---	---	---	---	---	5.35	4.41	5.05	5.12	---	3.36	3.18
12	---	---	---	---	---	5.30	4.65	4.89	5.39	---	3.39	3.17
13	---	---	---	---	---	5.09	4.70	4.80	5.29	---	3.36	3.18
14	---	---	---	---	---	4.89	4.59	4.79	5.18	4.01	3.33	3.16
15	---	---	---	---	---	4.69	4.65	4.68	5.05	4.54	3.30	3.15
16	---	---	---	---	---	4.59	4.65	4.62	4.98	4.45	3.27	3.13
17	---	---	---	---	---	4.63	4.58	4.65	4.81	4.75	3.25	3.13
18	---	---	---	---	---	4.54	4.52	4.96	4.68	4.45	3.27	3.11
19	---	---	---	---	---	4.49	4.46	4.87	4.57	4.25	3.52	3.10
20	---	---	---	---	---	4.46	4.39	4.93	4.48	4.14	3.61	3.08
21	---	---	---	---	---	4.49	4.33	4.84	4.40	4.04	3.55	3.06
22	---	---	---	---	---	4.51	4.30	4.89	4.34	3.98	3.51	3.05
23	---	---	---	---	---	4.72	4.23	4.96	4.26	3.94	3.48	3.03
24	---	---	---	---	---	4.76	4.22	4.83	4.17	3.90	3.45	3.06
25	---	---	---	---	---	4.73	4.18	4.75	4.06	3.90	3.45	3.05
26	---	---	---	---	---	4.81	4.17	4.66	4.19	3.89	3.44	3.04
27	---	---	---	---	---	4.95	4.13	4.60	4.21	3.84	3.41	3.02
28	---	---	---	---	---	5.07	4.07	4.57	4.16	3.80	3.38	3.01
29	---	---	---	---	---	5.03	4.01	4.52	4.48	3.75	3.35	2.99
30	---	---	---	---	---	4.98	3.98	4.49	4.54	3.72	3.33	2.97
31	---	---	---	---	---	4.97	---	4.41	---	3.68	e3.30	---
MEAN	---	---	---	---	---	---	4.43	4.60	4.82	---	3.42	3.12
MAX	---	---	---	---	---	---	5.02	5.37	6.25	---	3.64	3.25
MIN	---	---	---	---	---	---	3.98	3.97	4.06	---	3.25	2.97

e Estimated

05059600 MAPLE RIVER NEAR HOPE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1430	6.0	8.0	7.4	1,320	1,350	12.5	9.0	95.9	59.9	8.20	2	116
JUL													
13...	1005	1.2	7.7	8.0	1,700	1,750	22.5	24.0	132	81.6	5.80	3	149

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	34	257	35.5	.17	15.2	420	892	14.7	<50	<1	2.8	31.1	<1
JUL													
13...	32	432	35.8	.27	24.6	510	1,180	3.88	<50	<1	13.1	34.2	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	100	<1	2	2.1	60	<1	160	6.66	1	<1	<1.0	2.9
JUL												
13...	190	<1	10	8.7	60	1.38	400	10.4	3	<1	<1.0	14.6

Remark codes used in this table:
< -- Less than.

05059700 MAPLE RIVER NEAR ENDERLIN, ND

LOCATION.--Lat 46°37'18", long 97°34'25", on west line sec.2, T.136 N., R.55 W., Ransom County, Hydrologic Unit 09020205, on left bank 25 ft downstream from county highway bridge, 1 mi downstream from South Branch Creek, and 1.2 mi east of Enderlin.

DRAINAGE AREA.--843 mi^2, of which about 47 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.72 ft above National Geodetic Vertical Datum of 1929. Sept. 21, 1956, to June 9, 1969, recording gage on right bank at same datum. Prior to Sept. 20, 1956, nonrecording gage at site 25 ft upstream at same datum.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e21	265	25	e4.2	4.0	e2.8	196	28	85	254	14	11
2	e24	270	23	e4.0	4.0	e3.0	172	26	76	256	12	8.9
3	34	282	21	e3.8	4.3	e2.8	166	24	73	317	12	9.3
4	36	270	e21	e3.8	4.6	e2.9	152	23	78	326	9.2	9.2
5	36	245	e19	e3.8	e4.6	e10	133	21	94	278	8.0	9.2
6	34	218	e17	e3.8	e4.4	e24	118	18	113	230	6.0	10
7	30	189	e16	e3.6	e4.2	e70	106	17	124	184	5.0	11
8	26	165	e16	e3.6	e4.0	e90	95	19	165	164	4.8	11
9	23	144	e15	e3.5	e3.8	e74	87	22	230	155	8.6	30
10	20	129	e15	e3.4	3.8	e80	81	23	300	149	7.8	31
11	17	117	e15	e3.4	3.7	e80	78	29	385	139	8.1	23
12	14	106	e16	e3.6	4.1	e70	78	61	468	123	6.5	20
13	13	95	e16	e3.6	e4.1	e74	78	76	586	102	5.0	39
14	11	85	e15	e3.6	e4.0	e68	74	83	824	86	4.3	30
15	9.0	76	14	e3.8	e3.9	e60	74	97	1,170	74	9.4	23
16	8.2	70	14	e3.8	e3.9	e62	75	109	1,400	63	3.1	18
17	8.6	65	12	e3.8	e3.9	e62	79	119	1,200	54	3.5	14
18	9.4	62	e12	e3.8	e3.9	e59	85	124	1,060	45	9.0	12
19	9.8	56	e11	e3.8	e3.9	e55	85	123	988	39	22	11
20	9.7	51	e9.2	e3.8	e3.9	e48	77	130	967	35	37	9.4
21	9.0	45	e7.8	e4.0	e3.9	e38	73	162	913	34	71	8.5
22	8.4	40	e7.6	e4.4	3.7	e36	70	205	850	42	107	7.3
23	12	38	e8.0	e4.2	3.3	41	63	174	771	48	110	5.7
24	25	37	e8.4	e4.0	3.2	52	58	185	673	45	86	4.2
25	27	35	e8.8	e3.8	3.1	52	54	202	571	40	73	4.3
26	26	33	e7.8	e3.6	e2.8	80	46	191	498	36	65	4.1
27	22	e31	e6.0	e3.6	e2.8	95	41	166	406	32	48	4.2
28	21	e31	e5.0	e3.8	e2.8	108	38	144	319	28	36	3.5
29	26	e29	e4.8	e3.8	---	146	35	126	275	25	27	3.2
30	80	26	e4.6	4.0	---	189	31	108	245	20	21	3.2
31	183	---	e4.4	4.0	---	209	---	94	---	17	15	---
TOTAL	833.1	3,305	395.4	117.7	106.6	2,043.5	2,598	2,929	15,907	3,440	854.3	388.2
MEAN	26.9	110	12.8	3.80	3.81	65.9	86.6	94.5	530	111	27.6	12.9
MAX	183	282	25	4.4	4.6	209	196	205	1,400	326	110	39
MIN	8.2	26	4.4	3.4	2.8	2.8	31	17	73	17	3.1	3.2
AC-FT	1,650	6,560	784	233	211	4,050	5,150	5,810	31,550	6,820	1,690	770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	10.5	9.67	4.82	2.72	5.74	142	277	71.5	60.0	66.9	21.6	12.8
MAX	211	110	50.4	7.78	123	622	2,162	669	530	875	506	122
(WY)	(1995)	(2005)	(1999)	(1999)	(1998)	(1966)	(1997)	(1999)	(2005)	(1993)	(1993)	(1999)
MIN	1.52	1.49	1.32	1.21	1.27	2.10	2.06	2.19	1.41	1.44	1.33	1.28
(WY)	(1993)	(1961)	(1961)	(1969)	(2002)	(1969)	(1991)	(1992)	(1961)	(1961)	(1961)	(1984)

05059700 MAPLE RIVER NEAR ENDERLIN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005	
ANNUAL TOTAL	35,534.9		32,917.8			
ANNUAL MEAN	97.1		90.2		57.4	
HIGHEST ANNUAL MEAN					242	1997
LOWEST ANNUAL MEAN					2.14	1990
HIGHEST DAILY MEAN	1,330	Mar 31	1,400	Jun 16	5,450	Jun 30, 1975
LOWEST DAILY MEAN	2.2	Jan 17	2.8	Feb 26	0.10	Dec 7, 1963
ANNUAL SEVEN-DAY MINIMUM	2.4	Jan 4	2.8	Feb 26	0.67	Dec 7, 1963
MAXIMUM PEAK FLOW			1,430	Jun 16	7,610	Jun 30, 1975
MAXIMUM PEAK STAGE			8.84	Jun 16	15.41	Jun 30, 1975
ANNUAL RUNOFF (AC-FT)	70,480		65,290		41,600	
10 PERCENT EXCEEDS	276		203		94	
50 PERCENT EXCEEDS	20		28		4.0	
90 PERCENT EXCEEDS	2.7		3.8		1.8	

e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.05	4.90	3.04	2.75	2.72	2.69	4.48	3.08	3.61	4.84	2.88	2.82
2	3.07	4.93	3.02	2.73	2.72	2.69	4.32	3.06	3.52	4.85	2.84	2.78
3	3.14	4.99	3.00	2.73	2.73	2.69	4.27	3.04	3.50	5.18	2.84	2.79
4	3.16	4.93	3.01	2.72	2.74	2.69	4.18	3.02	3.54	5.23	2.79	2.79
5	3.16	4.78	3.30	2.72	2.75	2.91	4.03	3.00	3.70	4.97	2.76	2.79
6	3.14	4.62	2.95	2.73	2.89	3.70	3.90	2.97	3.87	4.69	2.72	2.81
7	3.10	4.44	2.97	2.72	2.77	3.82	3.81	2.95	3.96	4.40	2.71	2.82
8	3.06	4.27	2.96	2.72	2.75	4.01	3.70	2.98	4.27	4.26	2.71	2.83
9	3.02	4.12	2.95	2.71	2.73	3.69	3.62	3.01	4.69	4.20	2.77	3.07
10	2.99	4.00	2.95	2.70	2.71	3.86	3.57	3.03	5.09	4.15	2.75	3.10
11	2.95	3.90	2.94	2.70	2.71	3.91	3.54	3.09	5.51	4.08	2.76	3.01
12	2.92	3.81	2.98	2.71	2.72	3.70	3.54	3.39	5.89	3.94	2.73	2.96
13	2.89	3.70	3.40	2.72	2.78	3.82	3.54	e3.53	6.37	3.77	2.71	3.18
14	2.86	3.61	2.95	2.77	2.91	3.73	3.51	e3.60	7.21	3.62	2.71	3.09
15	2.83	3.53	2.91	2.79	2.89	3.67	3.51	3.73	8.21	3.51	2.79	3.00
16	2.81	3.47	2.91	2.78	3.21	3.71	3.52	3.83	8.80	3.41	2.68	2.94
17	2.82	3.43	2.88	2.78	2.77	3.56	3.55	3.91	8.66	3.33	2.68	2.88
18	2.83	3.40	2.90	2.77	2.76	3.53	3.61	3.96	8.27	3.25	2.78	2.84
19	2.84	3.35	2.96	2.74	2.74	3.50	3.61	3.95	7.95	3.19	2.98	2.82
20	2.84	3.30	2.84	2.73	2.74	3.44	3.54	4.01	7.86	3.14	3.17	2.79
21	2.83	3.25	2.87	2.74	2.73	3.20	3.50	4.24	7.61	3.14	3.49	2.77
22	2.81	3.20	2.86	2.86	2.71	3.17	3.47	4.54	7.32	3.22	3.81	2.74
23	2.89	3.18	2.95	2.82	2.70	3.21	3.41	4.33	7.04	3.27	3.84	2.72
24	3.05	3.18	2.93	2.76	2.69	3.31	3.36	4.41	6.69	3.25	3.62	2.70
25	3.07	3.16	2.85	2.74	2.69	3.31	3.33	4.52	6.31	3.20	3.50	2.70
26	3.06	3.14	2.81	2.73	2.69	3.57	3.26	4.45	6.02	3.16	3.43	2.70
27	3.01	3.12	2.78	2.73	2.69	3.70	3.21	4.28	5.61	3.12	3.27	2.70
28	3.00	3.23	2.75	2.74	2.69	3.82	3.18	4.12	5.19	3.07	3.16	2.69
29	3.05	3.20	2.75	2.73	---	4.12	3.15	3.97	4.95	3.03	3.06	2.69
30	3.57	3.06	2.74	2.72	---	4.43	3.11	3.82	4.79	2.97	2.97	2.69
31	4.37	---	2.83	2.72	---	4.56	---	3.70	---	2.92	2.89	---
MEAN	3.04	3.77	2.93	2.74	2.76	3.54	3.61	3.66	5.87	3.75	2.99	2.84
MAX	4.37	4.99	3.40	2.86	3.21	4.56	4.48	4.54	8.80	5.23	3.84	3.18
MIN	2.81	3.06	2.74	2.70	2.69	2.69	3.11	2.95	3.50	2.92	2.68	2.69

e Estimated

05059700 MAPLE RIVER NEAR ENDERLIN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
08...	0940	97	8.3	7.2	1,080	1,070	11.0	10.0	82.3	40.5	11.4	2	87.8
AUG													
12...	0955	6.7	8.0	8.0	1,720	1,730	19.0	18.0	159	75.6	11.8	2	111

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
08...	33	208	38.7	.21	14.7	315	703	188	<50	<1	3.4	32.9	<1
AUG													
12...	25	384	58.3	.25	22.3	543	1,190	21.8	<50	<1	10.5	63.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
08...	100	<1	<1	2.1	30	<1	230	6.64	1	<1	<1.0	2.4
AUG												
12...	240	<1	6	3.2	70	<1	1,340	9.20	5	<1	<1.0	3.2

Remark codes used in this table:
< -- Less than.

05060000 MAPLE RIVER NEAR MAPLETON, ND

LOCATION.--Lat 46°51'58", long 97°06'22", in SW¼NE¼ sec.10, T.139 N., R.51 W., Cass County, Hydrologic Unit 09020204, on right bank upstream of county bridge and 3 mi southwest of Mapleton.

DRAINAGE AREA.-- 1,450 mi^2, approximately, of which 70 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1975, March 1, 2001, to current year (seasonal). Record not equivalent to extreme high flows to station 05060100 that was operated from April 1944 to September 1958 (7 mi downstream) published as "at Mapleton" and March 1995 to present (9 mi downstream) published as "below Mapleton".

GAGE.--Water-stage recorder and rubble masonary dam. Datum of gage is 886.43 ft above National Geodetic Vertical Datum of 1929 (survey by North Dakota State Water Commission, 2004). Prior to Oct. 1, 2001, at datum 7.10 ft higher.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,680 ft^3/s, June 15, gage height, 22.34 ft; minimum daily discharge, 6.1 ft^3/s, Mar. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e6.1	e260	63	130	390	45	56
2	---	---	---	---	---	e6.2	e287	62	119	314	40	44
3	---	---	---	---	---	e6.4	308	57	112	277	35	39
4	---	---	---	---	---	e6.4	254	59	105	255	32	35
5	---	---	---	---	---	e6.4	223	54	145	261	30	53
6	---	---	---	---	---	e13	212	49	163	273	28	358
7	---	---	---	---	---	e27	192	46	204	250	23	272
8	---	---	---	---	---	e48	173	45	331	225	20	162
9	---	---	---	---	---	e97	158	47	463	199	19	109
10	---	---	---	---	---	e105	144	52	441	176	19	87
11	---	---	---	---	---	e94	138	75	583	159	26	66
12	---	---	---	---	---	e82	136	69	2,620	150	30	51
13	---	---	---	---	---	e78	139	63	3,850	145	23	56
14	---	---	---	---	---	e77	138	62	4,120	140	23	49
15	---	---	---	---	---	e77	130	89	4,540	125	20	39
16	---	---	---	---	---	e77	125	103	3,760	112	16	48
17	---	---	---	---	---	e77	119	112	2,710	100	33	59
18	---	---	---	---	---	e77	118	134	2,180	91	39	47
19	---	---	---	---	---	e78	112	170	1,890	85	66	33
20	---	---	---	---	---	e79	116	167	1,630	75	70	27
21	---	---	---	---	---	e87	115	638	1,350	70	71	21
22	---	---	---	---	---	e107	110	511	1,130	64	73	18
23	---	---	---	---	---	e140	110	253	990	61	78	16
24	---	---	---	---	---	e200	111	e234	850	60	89	13
25	---	---	---	---	---	e300	92	e222	731	63	119	9.9
26	---	---	---	---	---	e360	86	197	631	67	210	8.7
27	---	---	---	---	---	e410	80	192	542	65	230	9.0
28	---	---	---	---	---	e460	75	184	467	63	152	8.0
29	---	---	---	---	---	e500	72	171	457	61	110	9.5
30	---	---	---	---	---	e405	66	155	438	56	87	8.6
31	---	---	---	---	---	e275	---	142	---	49	70	---
TOTAL	---	---	---	---	---	4,361.5	4,399	4,477	37,682	4,481	1,926	1,811.7
MEAN	---	---	---	---	---	141	147	144	1,256	145	62.1	60.4
MAX	---	---	---	---	---	500	308	638	4,540	390	230	358
MIN	---	---	---	---	---	6.1	66	45	105	49	16	8.0
AC-FT	---	---	---	---	---	8,650	8,730	8,880	74,740	8,890	3,820	3,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2005, BY WATER YEAR (WY)

MEAN	12.3	11.0	4.22	1.24	0.72	136	473	140	171	215	34.8	20.1
MAX	49.1	36.2	12.2	4.30	4.85	1,040	1,708	428	1,256	2,375	267	65.8
(WY)	(1972)	(1972)	(1963)	(1973)	(1973)	(1966)	(1969)	(1970)	(2005)	(1975)	(1962)	(1962)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	13.9	8.35	1.71	0.00	0.00	0.00
(WY)	(1961)	(1961)	(1961)	(1959)	(1959)	(1969)	(1959)	(1959)	(1961)	(1961)	(1960)	(1959)

05060000 MAPLE RIVER NEAR MAPLETON, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1958 - 2005	
ANNUAL MEAN	[a]95.8	
HIGHEST ANNUAL MEAN	[a]374	1975
LOWEST ANNUAL MEAN	[a]5.98	1961
HIGHEST DAILY MEAN	11,300	Jul 2, 1975
LOWEST DAILY MEAN	0.00	Dec 13, 1958
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 13, 1958
MAXIMUM PEAK FLOW	[b]11,600	Jul 2, 1975
MAXIMUM PEAK STAGE	[c]23.15	Apr 8, 2001
ANNUAL RUNOFF (AC-FT)	[a]69,430	
10 PERCENT EXCEEDS	149	
50 PERCENT EXCEEDS	7.4	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1959-75)
b Gage height, 22.13 ft, present datum
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	10.79	9.21	9.86	11.68	9.00	9.11
2	---	---	---	---	---	---	10.81	9.20	9.76	11.20	8.95	9.00
3	---	---	---	---	---	---	10.79	9.16	9.70	10.96	8.90	8.94
4	---	---	---	---	---	---	10.43	9.17	9.64	10.80	8.86	8.89
5	---	---	---	---	---	8.91	10.21	9.12	9.99	10.84	8.84	9.08
6	---	---	---	---	---	9.16	10.14	9.08	10.13	10.93	8.81	11.46
7	---	---	---	---	---	9.62	10.03	9.05	10.46	10.77	8.74	10.92
8	---	---	---	---	---	11.21	9.92	9.05	11.32	10.59	8.70	10.09
9	---	---	---	---	---	13.02	9.84	9.06	12.14	10.39	8.68	9.64
10	---	---	---	---	---	14.57	9.76	9.11	12.01	10.21	8.69	9.43
11	---	---	---	---	---	12.72	9.72	9.33	12.61	10.08	8.78	9.20
12	---	---	---	---	---	11.57	9.71	9.27	20.11	10.00	8.84	9.06
13	---	---	---	---	---	11.43	9.73	9.21	21.74	9.95	8.74	9.10
14	---	---	---	---	---	11.08	9.72	9.20	21.96	9.92	8.74	9.04
15	---	---	---	---	---	10.88	9.66	9.48	22.26	9.79	8.70	8.94
16	---	---	---	---	---	10.66	9.61	9.62	21.66	9.67	8.64	9.03
17	---	---	---	---	---	10.52	9.57	9.69	20.56	9.56	8.85	9.13
18	---	---	---	---	---	10.45	9.56	9.89	19.27	9.47	8.93	9.02
19	---	---	---	---	---	10.39	9.51	10.19	18.27	9.40	9.21	8.88
20	---	---	---	---	---	10.45	9.54	10.17	17.33	9.30	9.25	8.80
21	---	---	---	---	---	10.47	9.54	13.07	16.27	9.25	9.26	8.72
22	---	---	---	---	---	10.56	9.49	12.38	15.37	9.19	9.28	8.67
23	---	---	---	---	---	11.09	9.49	10.82	14.76	9.16	9.33	8.64
24	---	---	---	---	---	11.91	9.53	e10.68	14.13	9.14	9.45	8.58
25	---	---	---	---	---	12.12	9.41	e10.59	13.55	9.17	9.72	8.53
26	---	---	---	---	---	12.67	9.39	10.41	13.04	9.22	10.47	8.51
27	---	---	---	---	---	12.76	9.37	10.36	12.56	9.20	10.62	8.51
28	---	---	---	---	---	12.97	9.33	10.30	12.15	9.18	10.01	8.49
29	---	---	---	---	---	13.18	9.30	10.20	12.09	9.16	9.65	8.52
30	---	---	---	---	---	12.58	9.25	10.07	11.97	9.10	9.42	8.50
31	---	---	---	---	---	11.71	---	9.96	---	9.04	9.25	---
MEAN	---	---	---	---	---	---	9.77	9.87	14.56	9.88	9.14	9.08
MAX	---	---	---	---	---	---	10.81	13.07	22.26	11.68	10.62	11.46
MIN	---	---	---	---	---	---	9.25	9.05	9.64	9.04	8.64	8.49

e Estimated

05060000 MAPLE RIVER NEAR MAPLETON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1020	218	8.3	6.9	760	760	9.0	10.1	67.5	30.4	9.80	1	43.4
AUG													
08...	1425	27	8.5	8.4	1,560	1,580	33.5	31.0	127	76.2	11.6	2	108

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	24	167	21.2	.17	15.3	203	478	289	<50	<1	4.0	31.7	<1
AUG													
08...	27	354	45.6	.25	24.3	496	1,080	80.3	<50	<1	13.2	72.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	70	<1	<1	2.4	60	<1	40	6.76	<1	<1	<1.0	2.3
AUG												
08...	230	<1	5	3.9	70	<1	80	10.1	7	<1	<1.0	2.4

Remark codes used in this table:
< -- Less than.

05060100 MAPLE RIVER BELOW MAPLETON, ND

LOCATION.--Lat 46°54'19", long 97°03'08", in NW¼NW¼NW¼ sec.31, T.140 N., R.50 W., Cass County, Hydrologic Unit 09020205, on left bank just downstream from bridge on county highway and 1.0 mi north of Mapleton.

DRAINAGE AREA.-- 1,480 mi^2, approximately, of which 70 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1944 to September 1958, March 1995 to current year. April 1944 to September 1958 published as "at Mapleton". Record not equivalent at extreme high flows to station 05060000 (site 9 mi upstream), which was operated for water years 1959 to 1975, and operated as a seasonal gage beginnning in March 2001.

GAGE.--Water-stage recorder. Datum of gage is 880.43 ft above National Geodetic Vertical Datum of 1929 (surveyed by North Dakota State Water Commission, 2004). From Feb. 16, 1944, to Sept. 30, 1958, nonrecording gage at site 2 mi upstream at datum 6.24 ft higher.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	656	e26	e4.5	e7.7	e10	e292	58	187	472	47	46
2	30	489	e26	e4.3	e8.0	e10	e314	57	164	415	44	40
3	30	399	e28	e4.3	e8.6	e11	e330	52	149	369	41	37
4	29	354	e27	e4.3	e9.2	e11	e280	49	138	348	34	33
5	32	316	e26	e4.3	e9.5	e12	249	47	174	341	32	58
6	31	292	e25	e4.3	e8.9	e15	234	47	226	356	30	399
7	36	267	e24	e4.4	e8.4	e23	208	50	282	341	29	400
8	40	e230	e21	e4.4	e7.9	e34	188	47	383	312	26	268
9	40	e207	e20	e4.4	e9.0	e75	169	44	510	285	25	168
10	36	e185	e21	e4.4	e10	e125	151	47	526	254	24	113
11	33	e170	e21	e4.3	e10	e110	148	78	517	229	27	80
12	30	e156	e21	e4.3	e10	e95	146	83	1,960	213	31	63
13	28	e139	e20	e4.3	e10	e88	143	63	3,340	202	29	56
14	26	124	e19	e4.5	e9.5	e86	145	63	3,980	198	24	56
15	25	114	e19	e4.7	e9.5	e86	134	82	4,500	178	23	46
16	23	105	e17	e4.9	e9.5	e85	123	131	4,440	154	23	40
17	23	99	e15	e5.1	e10	e85	118	e154	3,570	128	23	47
18	24	90	e15	e5.1	e10	e84	108	e199	2,710	109	32	47
19	25	83	e16	e5.1	e10	e85	112	240	2,170	99	52	40
20	23	75	e16	e5.1	e10	e86	116	251	1,770	86	63	34
21	20	69	e14	e5.1	e11	e100	110	554	1,420	78	62	30
22	19	65	e12	e5.1	e11	e110	113	623	1,150	73	65	26
23	19	59	e10	e5.1	e11	e145	106	373	976	66	67	24
24	20	49	e8.0	e5.0	e11	e210	106	330	843	61	83	21
25	22	49	e6.0	e5.0	e10	e320	96	320	734	65	156	19
26	27	50	e5.0	e5.3	e9.7	e370	90	284	659	71	279	16
27	27	e38	e5.0	e5.5	e10	e425	79	272	594	e70	308	15
28	30	e35	e5.0	e5.6	e10	e470	72	265	538	e68	217	15
29	42	e35	e5.0	e5.8	---	e520	67	253	529	65	142	14
30	220	e31	e5.0	e6.9	---	e425	61	231	508	59	99	14
31	545	---	e4.8	e6.9	---	e290	---	207	---	52	66	---
TOTAL	1,588	5,030	502.8	152.3	269.4	4,601	4,608	5,554	39,647	5,817	2,203	2,265
MEAN	51.2	168	16.2	4.91	9.62	148	154	179	1,322	188	71.1	75.5
MAX	545	656	28	6.9	11	520	330	623	4,500	472	308	400
MIN	19	31	4.8	4.3	7.7	10	61	44	138	52	23	14
AC-FT	3,150	9,980	997	302	534	9,130	9,140	11,020	78,640	11,540	4,370	4,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2005, BY WATER YEAR (WY)

MEAN	16.9	30.9	12.4	4.56	16.7	213	528	179	194	99.6	20.9	33.4
MAX	96.5	256	125	20.7	288	1,376	2,956	1,035	1,322	373	71.1	401
(WY)	(1999)	(2001)	(1999)	(1999)	(1998)	(1998)	(1997)	(1999)	(2005)	(2000)	(2005)	(1999)
MIN	0.00	1.75	0.63	0.02	0.00	0.00	21.0	6.30	6.52	2.90	0.04	0.00
(WY)	(1953)	(1953)	(1956)	(1956)	(1945)	(1956)	(1953)	(1955)	(1954)	(1956)	(1946)	(1949)

05060100 MAPLE RIVER BELOW MAPLETON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1944 - 2005	
ANNUAL TOTAL	52,420.1		72,237.5			
ANNUAL MEAN	143		198		112	
HIGHEST ANNUAL MEAN					343	1999
LOWEST ANNUAL MEAN					11.1	1954
HIGHEST DAILY MEAN	1,460	Jul 13	4,500	Jun 15	6,620	Apr 16, 1997
LOWEST DAILY MEAN	2.7	Feb 1	4.3	Jan 2	0.00	Jan 16, 1945
ANNUAL SEVEN-DAY MINIMUM	2.7	Jan 29	4.3	Jan 2	0.00	Jan 16, 1945
MAXIMUM PEAK FLOW			4,740	Jun 15	[a]7,150	Apr 16, 1997
MAXIMUM PEAK STAGE			22.95	Jun 15	[b]24.96	Apr 8, 1997
ANNUAL RUNOFF (AC-FT)	104,000		143,300		80,800	
10 PERCENT EXCEEDS	478		389		200	
50 PERCENT EXCEEDS	38		56		12	
90 PERCENT EXCEEDS	4.1		6.5		0.10	

a Gage height, 23.76 ft
b Observed, backwater from ice, may have been higher during period of no gage-height record, Apr. 6-9, 1997
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.97	13.76	9.87	9.46	9.50	9.61	13.23	9.91	10.78	12.68	9.72	9.71
2	9.93	12.95	9.88	9.47	9.51	9.63	12.41	9.90	10.63	12.33	9.69	9.66
3	9.93	12.47	9.91	9.46	9.51	9.63	11.96	9.85	10.54	12.02	9.66	9.63
4	9.92	12.21	9.91	9.46	9.52	9.63	11.54	9.83	10.47	11.87	9.59	9.58
5	9.95	11.98	9.88	9.47	9.52	9.68	11.18	9.81	10.69	11.82	9.57	9.76
6	9.94	11.84	9.86	9.47	9.54	9.86	11.06	9.81	11.02	11.93	9.55	12.18
7	9.99	11.69	9.85	9.47	9.52	10.13	10.91	9.84	11.43	11.83	9.53	12.22
8	10.03	---	9.80	9.46	9.50	10.62	10.78	9.81	12.13	11.62	9.49	11.29
9	10.04	---	9.81	9.47	9.52	12.56	10.67	9.78	12.93	11.42	9.48	10.61
10	10.03	---	9.84	9.48	9.51	14.85	10.55	9.81	13.02	11.19	9.47	10.24
11	10.00	---	9.85	9.46	9.52	14.86	10.53	10.06	12.96	11.00	9.51	10.01
12	9.96	---	9.85	9.46	9.52	13.46	10.52	10.10	18.58	10.91	9.56	9.87
13	9.94	---	9.83	9.47	9.53	12.79	10.50	9.95	21.71	10.83	9.53	9.81
14	9.92	10.64	9.80	9.49	9.56	12.46	10.51	9.95	22.40	10.81	9.47	9.80
15	9.91	10.57	9.78	9.52	9.56	12.11	10.44	10.09	22.80	10.68	9.45	9.71
16	9.87	10.50	9.75	9.55	9.57	11.84	10.37	10.42	22.76	10.52	9.45	9.66
17	9.87	10.45	9.69	9.57	9.57	11.66	10.33	e10.57	21.98	10.35	9.45	9.73
18	9.89	10.38	9.69	9.60	9.57	11.63	10.27	e10.77	20.75	10.21	9.57	9.73
19	9.90	10.31	9.73	9.56	9.58	11.60	10.30	11.12	19.31	10.15	9.76	9.66
20	9.87	10.24	9.73	9.50	9.58	11.63	10.33	11.20	18.05	10.05	9.87	9.60
21	9.82	10.18	9.69	9.50	9.58	11.69	10.29	13.13	16.88	9.99	9.85	9.54
22	9.81	10.14	9.64	9.55	9.59	11.72	10.31	13.56	15.88	9.95	9.89	9.50
23	9.81	10.08	9.58	9.51	9.59	12.06	10.26	12.06	15.19	9.90	9.90	9.46
24	9.84	9.99	9.53	9.49	9.60	12.85	10.26	11.78	14.63	9.84	10.02	9.43
25	9.86	9.99	9.49	9.49	9.60	13.18	10.20	11.70	14.14	9.88	10.53	9.38
26	9.93	10.0	9.47	9.50	9.61	13.57	10.15	11.44	13.77	9.93	11.37	9.34
27	9.93	10.01	9.44	9.49	9.60	13.77	10.07	11.35	13.41	e9.93	11.59	9.31
28	9.96	9.99	9.43	9.50	9.61	13.87	10.02	11.31	13.08	e9.91	10.94	9.31
29	10.09	10.0	9.43	9.50	---	14.13	9.98	11.21	13.03	9.89	10.44	9.29
30	11.36	9.94	9.44	9.49	---	14.04	9.93	11.04	12.90	9.83	10.14	9.29
31	13.24	---	9.46	9.49	---	13.55	---	10.90	---	9.77	9.89	---
MEAN	10.08	---	9.71	9.50	9.55	12.09	10.66	10.71	15.26	10.74	9.87	9.88
MAX	13.24	---	9.91	9.60	9.61	14.86	13.23	13.56	22.80	12.68	11.59	12.22
MIN	9.81	---	9.43	9.46	9.50	9.61	9.93	9.78	10.47	9.77	9.45	9.29

e Estimated

05060100 MAPLE RIVER BELOW MAPLETON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1995 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
12...	0935	139	9.1	8.5	7.6	1,070	1,030	8.5	12.5	87.1	41.0	11.1	2
MAY													
10...	1410	44	8.6	8.5	8.1	1,810	1,810	12.0	16.0	151	86.0	11.9	2
AUG													
08...	1835	24	--	8.5	8.4	1,580	1,600	29.0	29.0	125	77.4	11.6	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
12...	76.7	29	219	37.0	.22	14.9	298	685	262	166	.47	.51	<.010
MAY													
10...	128	27	336	71.2	.27	11.7	636	1,290	155	57	.88	.93	.058
AUG													
08...	110	27	334	46.1	.26	23.2	511	1,080	72.3	--	--	--	--

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
12...	<.010	.070	.070	--	--	.513	.667	.54	.58	20	10	<10	<50
MAY													
10...	.038	<.020	.040	.82	.90	.190	.263	.90	.97	20	20	<10	<50
AUG													
08...	--	--	--	--	--	--	--	--	--	--	--	--	<50

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
12...	<1	6.3	39.7	<1	90	<1	<1	3.2	50	<1	<10	10.1	1
MAY													
10...	<1	5.6	63.4	<1	140	<1	10	2.8	60	<1	80	9.05	2
AUG													
08...	1	13.1	77.6	<1	230	<1	5	5.0	50	<1	130	10.3	6

05060100 MAPLE RIVER BELOW MAPLETON, ND—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
12...	<1	<1.0	3.3
MAY			
10...	<1	<1.0	2.6
AUG			
08...	<1	<1.0	5.7

Remark codes used in this table:
< -- Less than.

05060400 SHEYENNE RIVER AT HARWOOD, ND

LOCATION.--Lat 46°58'39", long 96°53'29", in SW¼SE¼SW¼ sec.33, T.141 N., R.49 W., Cass County, Hydrologic Unit 09020204, at bridge crossing 0.5 mi west of Harwood.

DRAINAGE AREA.--Not determined.

GAGE HEIGHT RECORDS

PERIOD OF RECORD.--March 1995 to current year (gage heights and maximum discharge only).

GAGE.--Water stage recorder. Datum of gage is 800 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage at same site and datum from March 1995 to March 1997.

REMARKS.--Flow regulated to a large degree by Lake Ashtabula (station 05057500), 255 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 11,000 ft^3/s, Apr. 16, 1997, gage height, 92.02 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 7,300 ft^3/s, June 16, gage height, 89.70 ft; minimum gage height, 66.95 ft, Sept. 29.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.57	e75.58	e71.17	69.03	69.01	69.73	75.06	70.47	72.45	77.42	70.67	70.41
2	69.86	e74.38	71.00	69.02	69.01	69.69	74.03	70.47	72.38	76.86	70.66	70.11
3	69.92	e72.99	70.79	69.03	69.03	69.74	73.19	70.40	72.28	76.91	70.22	69.88
4	69.93	e72.47	71.25	69.01	69.03	e69.86	73.21	70.18	72.13	76.82	69.93	69.81
5	69.96	72.15	71.08	68.91	69.05	69.89	72.86	69.85	72.15	76.41	69.87	70.20
6	69.99	71.84	71.47	68.72	69.13	70.17	71.70	69.48	72.33	76.15	69.86	74.38
7	70.02	---	72.10	68.69	69.18	70.59	70.84	69.41	72.22	75.99	69.70	74.79
8	70.05	---	71.29	68.63	69.24	70.67	70.35	69.52	72.80	75.69	69.53	73.72
9	70.04	e71.28	70.88	68.63	69.32	71.34	70.03	69.42	74.11	75.07	69.43	72.37
10	70.04	---	70.76	68.69	69.54	72.93	69.80	69.40	75.52	74.45	69.59	71.35
11	70.04	---	70.67	68.70	69.67	74.05	69.72	69.25	76.65	73.83	69.83	70.51
12	69.91	---	70.54	68.70	69.65	73.84	69.73	69.35	81.51	73.29	69.90	69.91
13	69.75	---	70.45	68.77	69.59	73.44	69.76	69.36	85.50	73.00	69.83	69.45
14	---	---	---	68.76	69.76	73.25	69.72	69.37	87.48	73.04	69.74	69.18
15	---	---	e68.77	68.75	69.64	72.91	69.69	69.42	88.82	73.08	69.79	68.97
16	---	---	68.83	68.84	69.61	72.34	69.60	70.22	89.53	72.98	69.55	68.80
17	---	e70.73	68.74	68.89	69.71	71.70	69.46	71.12	89.49	72.88	69.64	68.67
18	---	70.62	68.88	---	69.71	71.26	69.90	71.81	88.96	72.93	70.01	68.66
19	e69.56	70.56	68.94	---	69.78	71.11	71.09	72.37	87.93	73.09	70.87	68.55
20	---	70.56	68.95	---	69.84	71.13	71.43	72.76	86.37	73.16	71.16	68.42
21	69.57	70.45	69.00	68.82	69.89	71.23	71.32	73.54	84.53	73.19	70.96	68.38
22	69.59	70.13	69.00	68.92	69.82	71.48	71.10	75.24	82.57	73.09	70.94	68.47
23	69.65	69.70	68.88	68.89	69.70	72.11	71.10	74.03	80.43	73.07	71.04	68.44
24	69.68	69.39	68.78	68.92	69.63	73.38	70.99	73.25	78.74	73.42	70.99	68.47
25	69.70	69.28	68.69	68.96	69.63	73.90	70.80	73.18	77.39	73.15	71.79	68.37
26	---	69.12	68.65	69.01	69.71	74.72	70.63	73.21	76.65	72.76	74.64	68.30
27	---	69.33	68.64	68.98	69.73	75.61	70.59	73.18	76.36	72.20	74.22	68.24
28	---	70.25	68.71	68.97	69.76	75.63	70.56	73.15	75.95	71.67	73.27	67.64
29	69.28	70.15	68.76	69.04	---	76.31	70.53	73.08	75.87	71.14	72.15	67.02
30	---	---	68.86	69.03	---	76.62	70.50	72.92	76.94	70.83	71.37	67.95
31	---	---	69.00	68.98	---	75.72	---	72.68	---	70.76	70.84	---
MEAN	---	---	---	---	69.51	72.46	70.98	71.33	79.20	73.82	70.71	69.65
MAX	---	---	---	---	69.89	76.62	75.06	75.24	89.53	77.42	74.64	74.79
MIN	---	---	---	---	69.01	69.69	69.46	69.25	72.13	70.76	69.43	67.02

e Estimated

Miscellaneous discharge measurements for Sheyenne River at Harwood

Date	Discharge (ft^3/s)
April 5, 2005	1,020
June 15, 2005	7,150
June 16, 2005	6,270
June 17, 2005	6,340

05060400 SHEYENNE RIVER AT HARWOOD, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD -- Water year 1997 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1400	1,020	8.5	7.5	864	898	16.5	5.0	65.5	34.5	8.10	2	72.8

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	33	238	18.6	.19	13.1	203	547	1,540	<50	<1	3.6	39.2	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	120	<1	1	2.2	30	<1	120	7.39	1	<1	<1.0	1.5

Remark codes used in this table:
< -- Less than.

05060500 RUSH RIVER AT AMENIA, ND

LOCATION.--Lat 47°01'00", long 97°12'50", in SE¼NW¼ sec.24, T.141 N., R.52 W., Cass County, Hydrologic Unit 09020204, on left bank on downstream side of bridge on State Highway 18 and 0.6 mi north of Amenia.

DRAINAGE AREA.--116 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 943 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1913 for history of changes prior to June 10, 1961.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	51	e2.4	e1.0	e0.50	e0.40	e58	4.8	11	39	0.82	1.0
2	2.1	38	e2.4	e0.90	e0.50	e0.50	e46	4.8	8.4	28	0.78	0.76
3	2.6	28	e2.4	e1.0	e0.50	e0.50	33	4.1	8.6	21	0.80	0.68
4	2.8	19	e2.6	e0.90	e0.50	e0.50	28	3.9	11	17	0.61	0.62
5	2.8	15	e2.6	e0.90	e0.50	e0.60	27	3.8	15	14	0.35	7.0
6	2.8	12	e2.5	e0.90	e0.50	e1.0	25	3.8	25	11	0.44	47
7	3.1	13	e2.5	e0.90	e0.50	e0.80	21	3.6	35	8.7	0.36	81
8	2.7	11	e2.5	e0.80	e0.40	e8.5	17	3.1	33	7.8	0.39	61
9	2.3	8.4	e2.6	e0.80	e0.40	e9.8	14	3.8	46	7.3	0.56	32
10	2.1	8.3	e2.7	e0.80	e0.40	e10	13	12	59	6.2	0.61	21
11	1.8	7.6	e2.8	e0.80	e0.40	e4.4	13	13	87	5.0	0.71	15
12	1.8	6.1	e2.8	e0.90	e0.40	e3.6	15	7.2	418	4.3	0.81	11
13	1.5	5.0	e3.0	e0.80	e0.40	e3.7	20	5.4	457	3.7	0.80	8.3
14	1.5	4.9	e2.5	e0.80	e0.50	e3.0	22	6.1	742	3.2	0.72	7.5
15	1.5	5.0	e2.2	e0.80	e0.50	e2.4	20	11	714	2.3	0.69	7.3
16	1.6	5.2	e2.3	e0.80	e0.50	e1.0	18	13	419	1.8	0.64	7.9
17	1.5	5.3	e2.2	e0.70	e0.40	e0.80	15	11	238	1.5	1.2	8.1
18	1.5	5.1	e2.0	e0.70	e0.40	e0.70	13	10	156	1.2	20	8.9
19	1.6	5.4	e1.6	e0.60	e0.40	e0.80	11	28	120	1.1	20	6.8
20	1.9	5.6	e1.4	e0.60	e0.40	e1.2	10	29	101	0.97	40	5.7
21	2.0	5.7	e1.4	e0.50	e0.40	e1.6	9.0	29	82	0.88	39	4.9
22	2.1	5.5	e1.2	e0.50	e0.40	e2.4	8.3	83	68	0.85	16	3.8
23	2.8	5.2	e1.2	e0.50	e0.40	e3.4	7.0	71	54	0.86	9.3	3.1
24	3.7	e4.8	e1.1	e0.50	e0.40	e4.8	6.5	49	42	0.83	6.7	2.7
25	6.8	e4.4	e1.0	e0.50	e0.40	e7.0	6.1	37	34	0.82	4.8	2.5
26	7.3	e3.9	e1.0	e0.50	e0.40	e9.4	6.0	32	29	0.92	4.4	2.2
27	5.5	e3.5	e1.0	e0.50	e0.40	e8.8	6.6	28	28	1.1	3.1	2.4
28	4.7	e3.4	e0.90	e0.50	e0.40	e11	5.8	24	25	1.1	2.2	1.7
29	6.1	e2.9	e0.90	e0.40	---	e26	5.3	20	27	1.1	1.8	1.5
30	49	e2.6	e0.90	e0.40	---	e68	5.0	16	38	1.0	1.4	1.1
31	67	---	e0.90	e0.40	---	e64	---	13	---	0.94	1.2	---
TOTAL	199.0	300.8	59.50	21.60	12.20	260.60	504.6	583.4	4,131.0	195.47	181.19	364.46
MEAN	6.42	10.0	1.92	0.70	0.44	8.41	16.8	18.8	138	6.31	5.84	12.1
MAX	67	51	3.0	1.0	0.50	68	58	83	742	39	40	81
MIN	1.5	2.6	0.90	0.40	0.40	0.40	5.0	3.1	8.4	0.82	0.35	0.62
AC-FT	395	597	118	43	24	517	1,000	1,160	8,190	388	359	723

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

MEAN	2.23	1.76	0.66	0.24	1.73	29.4	69.1	14.4	16.5	12.5	1.47	2.35
MAX	50.7	22.1	12.5	2.84	84.2	200	531	81.3	138	168	22.3	47.3
(WY)	(1995)	(2001)	(1999)	(1997)	(1998)	(1999)	(1997)	(1950)	(2005)	(1993)	(1993)	(1996)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.12	0.01	0.00	0.00	0.00
(WY)	(1949)	(1953)	(1950)	(1947)	(1947)	(1948)	(1981)	(1955)	(1988)	(1955)	(1946)	(1946)

05060500 RUSH RIVER AT AMENIA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	8,325.30		6,813.82			
ANNUAL MEAN	22.7		18.7		12.7	
HIGHEST ANNUAL MEAN					62.9	1997
LOWEST ANNUAL MEAN					0.68	1977
HIGHEST DAILY MEAN	945	Mar 28	742	Jun 14	3,160	Apr 19, 1979
LOWEST DAILY MEAN	0.07	Sep 1	0.35	Aug 5	0.00	Aug 1, 1946
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 28	0.40	Feb 17	0.00	Aug 1, 1946
MAXIMUM PEAK FLOW			863	Jun 14	[a]3,490	Apr 19, 1979
MAXIMUM PEAK STAGE			9.13	Jun 14	[b]12.15	Mar 23, 1966
ANNUAL RUNOFF (AC-FT)	16,510		13,520		9,180	
10 PERCENT EXCEEDS	33		34		17	
50 PERCENT EXCEEDS	2.9		3.1		0.26	
90 PERCENT EXCEEDS	0.44		0.50		0.00	

a Gage height, 10.37 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.07	5.04	4.10	3.98	3.99	3.95	5.06	4.22	4.39	4.91	3.94	3.89
2	4.04	4.85	4.11	3.98	4.00	3.96	4.92	4.22	4.34	4.79	3.93	3.83
3	4.08	4.68	4.12	3.98	4.00	3.96	4.78	4.19	4.34	4.69	3.93	3.80
4	4.09	4.55	4.14	3.97	4.02	3.96	4.69	4.18	4.41	4.63	3.85	3.78
5	4.10	4.47	4.13	3.97	4.02	3.97	4.66	4.17	4.48	4.56	3.69	4.00
6	4.10	4.43	4.13	3.97	4.01	4.11	4.62	4.18	4.65	4.50	3.72	4.93
7	4.12	4.44	4.12	3.96	3.99	4.75	4.57	4.17	4.81	4.44	3.68	5.21
8	4.10	4.39	4.12	3.95	3.97	4.77	4.52	4.14	4.78	4.41	3.70	5.06
9	4.07	4.34	4.14	3.95	3.98	4.82	4.47	4.17	4.97	4.39	3.76	4.78
10	4.05	4.34	4.14	3.95	3.97	4.95	4.44	4.41	5.13	4.36	3.78	4.62
11	4.03	4.32	4.14	3.95	3.97	4.56	4.45	4.44	5.32	4.31	3.82	4.50
12	4.03	4.27	4.14	3.96	3.97	4.50	4.48	4.30	7.45	4.28	3.85	4.41
13	4.00	4.23	4.16	3.95	3.97	4.53	4.57	4.24	7.62	4.25	3.84	4.33
14	4.00	4.23	4.10	3.95	3.99	4.40	4.59	4.27	8.71	4.22	3.82	4.31
15	4.00	4.23	4.09	3.94	3.99	4.28	4.56	4.39	8.61	4.16	3.81	4.30
16	4.02	4.23	4.11	3.94	3.99	4.20	4.52	4.43	7.42	4.11	3.79	4.32
17	4.01	4.24	4.10	3.94	3.98	4.17	4.49	4.39	6.47	4.08	3.92	4.32
18	4.01	4.23	4.11	3.95	3.97	4.16	4.44	4.38	5.92	4.03	4.57	4.35
19	4.03	4.24	4.05	3.95	3.95	4.18	4.40	4.70	5.59	4.01	4.62	4.28
20	4.06	4.26	4.03	3.95	3.95	4.22	4.38	4.71	5.38	3.98	4.87	4.24
21	4.07	4.26	4.03	3.97	3.95	4.28	4.36	4.71	5.25	3.96	4.86	4.20
22	4.08	4.25	4.00	3.97	3.94	4.38	4.34	5.41	5.14	3.95	4.53	4.15
23	4.12	4.24	3.97	3.97	3.94	4.52	4.30	5.28	5.04	3.95	4.38	4.11
24	4.17	4.22	3.95	3.96	3.95	4.66	4.28	5.02	4.94	3.95	4.30	4.08
25	4.29	4.21	3.95	3.97	3.95	4.77	4.27	4.84	4.85	3.94	4.22	4.07
26	4.31	4.19	3.95	3.99	3.95	4.88	4.27	4.75	4.80	3.97	4.20	4.05
27	4.25	4.17	3.94	3.98	3.95	4.80	4.28	4.69	4.78	4.00	4.12	4.06
28	4.22	4.16	3.96	3.98	3.95	4.92	4.26	4.62	4.75	4.01	4.06	4.00
29	4.26	4.13	3.97	3.98	---	5.20	4.24	4.55	4.77	4.01	4.02	3.98
30	5.01	4.12	3.98	3.99	---	5.33	4.23	4.50	4.89	3.99	3.98	3.90
31	5.24	---	3.99	3.99	---	5.31	---	4.44	---	3.97	3.94	---
MEAN	4.16	4.33	4.06	3.96	3.97	4.50	4.48	4.49	5.47	4.22	4.05	4.26
MAX	5.24	5.04	4.16	3.99	4.02	5.33	5.06	5.41	8.71	4.91	4.87	5.21
MIN	4.00	4.12	3.94	3.94	3.94	3.95	4.23	4.14	4.34	3.94	3.68	3.78

05060500 RUSH RIVER AT AMENIA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1530	26	8.4	7.3	725	715	17.5	11.5	76.4	31.3	8.00	.7	28.7
AUG													
04...	1330	.67	8.3	8.3	1,310	1,320	21.0	24.5	128	67.7	11.3	1	54.9

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	16	197	10.0	.18	14.6	179	454	32.3	<50	<1	4.0	40.9	<1
AUG													
04...	16	290	17.7	.29	19.7	448	904	1.67	<50	<1	13.0	76.3	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	80	<1	1	1.4	40	<1	220	5.86	<1	<1	<1.0	3.2
AUG												
04...	220	<1	4	2.9	40	<1	430	8.10	5	<1	<1.0	2.3

Remark codes used in this table:
< -- Less than.

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN

LOCATION.--Lat 47°21'10", long 96°50'50", sec.25, T.145 N., R.49 W., Traill County, Hydrologic Unit 09020107, on left bank on downstream side of highway bridge, 0.5 mi west of Halstad, MN, 2.5 mi downstream from Wild Rice River, and at mile 375.2.

DRAINAGE AREA.--21,800 mi^2, approximately, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to June 1937 (no winter records), April 1942 to September 1960 (spring and summer months only), June 1961 to current year.

REVISED RECORDS.--WSP 1388: 1936, 1950. WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 826.65 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1961, nonrecording gage at same site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1897 reached a stage of about 38.5 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,700	e12,700	e2,300	e950	e985	e1,080	12,500	2,900	4,410	8,250	3,750	3,830
2	3,270	e12,800	e2,210	e940	e1,010	e1,140	12,100	2,880	4,210	8,890	3,510	3,400
3	2,940	e12,500	e2,120	e930	e1,030	e1,160	11,900	2,830	3,980	9,550	3,280	3,120
4	2,700	11,700	e2,110	e915	e1,030	e1,180	11,300	2,770	3,840	10,300	3,090	2,900
5	2,550	10,500	e2,110	e900	e1,020	e1,200	9,410	2,690	4,070	e10,700	2,950	2,810
6	2,560	9,420	e2,090	e895	e1,000	e1,200	7,310	2,570	4,760	e11,100	3,130	5,000
7	2,620	8,340	e2,040	e900	e980	e1,180	5,950	2,450	5,590	e11,300	3,700	7,820
8	2,590	7,370	e2,040	e915	e970	e1,140	4,980	2,360	6,220	e11,100	4,050	6,980
9	2,510	6,550	e2,030	e920	e960	e1,130	4,300	2,330	7,050	e10,300	3,960	5,770
10	2,420	5,730	e1,980	e910	e960	e1,130	3,870	2,330	8,330	e9,180	3,610	5,420
11	2,340	5,160	e1,970	e900	e960	e1,130	3,610	3,010	9,670	e8,240	3,280	4,730
12	2,300	4,740	e1,940	e900	e960	e1,130	3,600	3,270	12,800	e7,770	3,140	4,110
13	2,260	4,360	e1,810	e900	e960	e1,150	3,930	3,130	15,800	e7,300	3,130	3,380
14	2,220	4,040	e1,470	e890	e950	e1,180	4,550	3,110	18,000	e7,050	3,000	2,890
15	2,190	3,790	e1,430	e875	e940	e1,210	4,830	3,100	20,300	6,860	2,750	2,560
16	2,190	3,610	e1,420	e870	e930	e1,250	5,100	3,070	21,200	6,660	2,460	2,260
17	2,200	3,480	e1,410	e880	e920	e1,290	5,390	3,100	21,100	6,410	2,280	2,040
18	2,190	3,370	e1,390	e890	e910	e1,340	5,250	3,220	20,900	6,110	3,000	2,040
19	2,150	3,270	e1,310	e880	e900	e1,380	4,750	3,350	20,500	5,770	3,970	2,090
20	2,100	3,170	e1,240	e875	e890	e1,430	4,390	3,430	19,900	5,400	3,800	2,070
21	2,040	3,130	e1,230	e865	e890	e1,480	4,110	3,550	19,100	5,060	3,490	2,020
22	1,980	3,110	e1,120	e855	e900	e1,530	3,840	3,720	18,000	4,780	3,670	1,990
23	1,950	e3,080	e1,010	e850	e930	e1,580	3,640	4,050	16,600	4,550	4,160	1,940
24	2,040	2,910	e990	e870	e970	e1,600	3,500	3,980	14,800	4,340	4,270	1,860
25	2,310	2,650	e980	e885	e1,030	e1,660	3,390	3,700	13,200	4,240	3,940	1,750
26	2,780	2,500	e975	e900	e1,070	e2,150	3,280	3,500	11,500	4,110	4,420	1,660
27	3,570	2,480	e975	e900	e1,080	e3,300	3,150	3,420	10,100	3,980	5,860	1,610
28	4,440	e2,480	e970	e910	e1,080	e4,900	3,060	3,650	8,720	3,870	6,560	1,560
29	4,850	e2,480	e965	e920	---	e7,800	2,990	3,970	7,880	3,880	6,320	1,480
30	6,660	e2,450	e960	e940	---	e11,600	2,930	4,260	7,790	3,910	5,480	1,320
31	11,000	---	e960	e960	---	e12,700	---	4,440	---	3,910	4,520	---
TOTAL	93,620	163,870	47,555	27,890	27,215	74,330	162,910	100,140	360,320	214,870	118,530	92,410
MEAN	3,020	5,462	1,534	900	972	2,398	5,430	3,230	12,010	6,931	3,824	3,080
MAX	11,000	12,800	2,300	960	1,080	12,700	12,500	4,440	21,200	11,300	6,560	7,820
MIN	1,950	2,450	960	850	890	1,080	2,930	2,330	3,840	3,870	2,280	1,320
AC-FT	185,700	325,000	94,330	55,320	53,980	147,400	323,100	198,600	714,700	426,200	235,100	183,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

MEAN	927	1,002	688	536	572	2,612	7,865	3,984	3,403	3,163	1,283	966
MAX	3,020	5,707	2,413	1,240	1,952	9,444	38,460	15,570	12,010	20,060	11,700	4,705
(WY)	(2005)	(2001)	(2001)	(2001)	(1998)	(1995)	(1997)	(1997)	(2005)	(1975)	(1993)	(1999)
MIN	61.5	92.3	51.2	32.1	45.9	249	705	449	242	153	59.5	38.4
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1962)	(1981)	(1977)	(1977)	(1988)	(1977)	(1976)

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1961 - 2005	
ANNUAL TOTAL	1,028,245		1,483,660			
ANNUAL MEAN	2,809		4,065		2,265	
HIGHEST ANNUAL MEAN					6,028	1997
LOWEST ANNUAL MEAN					214	1977
HIGHEST DAILY MEAN	18,000	Mar 29	21,200	Jun 16	69,900	Apr 19, 1997
LOWEST DAILY MEAN	305	Jan 30	850	Jan 23	10	Sep 2, 1976
ANNUAL SEVEN-DAY MINIMUM	308	Jan 28	869	Jan 19	17	Aug 28, 1976
MAXIMUM PEAK FLOW			[a]21,300	Jun 16	71,500	Apr 19, 1997
MAXIMUM PEAK STAGE			29.54	Jun 17	40.74	Apr 19, 1997
INSTANTANEOUS LOW FLOW					5.4	Oct 8, 1936
ANNUAL RUNOFF (AC-FT)	2,040,000		2,943,000		1,641,000	
10 PERCENT EXCEEDS	6,090		9,470		5,050	
50 PERCENT EXCEEDS	2,030		3,000		930	
90 PERCENT EXCEEDS	347		940		240	

a Gage height, 29.45
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.13	e20.01	8.32	8.04	7.14	7.38	23.71	8.80	11.18	15.90	10.19	10.32
2	9.55	e20.75	8.54	8.16	7.15	7.39	22.48	8.77	10.89	16.50	9.81	9.64
3	9.07	e20.63	9.05	8.25	7.17	7.45	21.07	8.69	10.54	17.10	9.44	9.18
4	8.68	19.94	9.54	8.27	7.20	7.42	19.32	8.58	10.33	17.76	9.12	8.80
5	8.43	18.84	9.79	8.22	7.24	7.44	16.97	8.44	10.68	18.40	8.90	8.65
6	8.46	17.44	9.62	8.12	7.26	7.66	14.93	8.23	11.68	18.85	9.19	11.90
7	8.55	15.97	9.89	8.00	7.28	8.16	13.29	8.00	12.82	19.06	10.11	15.48
8	8.50	14.56	10.25	7.85	7.27	8.77	11.99	7.84	13.64	19.01	10.65	14.57
9	8.38	13.31	10.10	7.66	7.29	9.09	11.02	7.79	14.65	18.58	10.52	13.06
10	8.22	12.39	9.96	7.50	7.29	9.53	10.37	7.79	15.97	17.74	9.97	12.59
11	8.09	11.80	9.82	7.47	7.28	10.31	9.98	8.98	17.22	16.72	9.45	11.64
12	8.01	11.34	9.69	7.42	7.30	10.97	9.96	9.43	20.33	15.80	9.21	10.73
13	7.94	10.92	9.82	7.29	7.35	11.20	10.47	9.19	23.46	15.11	9.20	9.60
14	7.88	10.54	9.32	7.19	7.44	11.26	11.38	9.16	25.98	14.64	8.98	8.79
15	7.83	10.25	8.77	7.16	7.66	11.14	11.79	9.14	28.22	14.44	8.54	8.21
16	7.83	10.02	8.48	7.15	7.76	10.95	12.16	9.10	29.26	14.19	8.03	7.64
17	7.85	9.84	8.31	7.16	7.67	10.77	12.55	9.15	29.50	13.88	7.69	7.23
18	7.83	9.70	8.05	7.14	7.68	10.51	12.36	9.35	29.32	13.50	8.95	7.23
19	7.77	9.55	7.97	7.10	7.66	10.20	11.67	9.56	28.91	13.05	10.52	7.33
20	7.66	9.41	8.16	7.05	7.68	9.89	11.15	9.68	28.33	12.56	10.27	7.30
21	7.57	9.34	8.44	7.05	7.68	9.73	10.74	9.87	27.61	12.09	9.78	7.19
22	7.45	9.32	8.51	7.04	7.66	9.74	10.33	10.14	26.66	11.71	10.06	7.13
23	7.40	e9.29	8.19	6.98	7.67	9.96	10.01	10.65	25.41	11.38	10.82	7.04
24	7.57	9.01	7.85	6.93	7.65	10.66	9.79	10.54	23.74	11.08	10.98	6.86
25	8.03	8.61	7.64	6.89	7.60	11.84	9.62	10.11	21.71	10.93	10.49	6.65
26	8.80	8.36	7.65	6.91	7.57	13.34	9.44	9.80	19.62	10.74	11.18	6.46
27	9.96	8.33	7.78	6.99	7.49	15.08	9.22	9.67	17.77	10.54	13.17	6.34
28	11.00	8.50	7.92	7.08	7.43	17.10	9.07	10.03	16.34	10.37	14.06	6.23
29	11.46	8.55	7.98	7.12	---	19.16	8.96	10.53	15.54	10.38	13.77	6.06
30	13.39	8.46	7.99	7.12	---	21.53	8.86	10.96	15.46	10.44	12.66	5.70
31	17.88	---	7.98	7.13	---	23.10	---	11.22	---	10.44	11.34	---
MEAN	8.94	12.17	8.75	7.40	7.45	11.25	12.49	9.33	19.76	14.29	10.23	8.85
MAX	17.88	20.75	10.25	8.27	7.76	23.10	23.71	11.22	29.50	19.06	14.06	15.48
MIN	7.40	8.33	7.64	6.89	7.14	7.38	8.86	7.79	10.33	10.37	7.69	5.70

e Estimated

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-67, 1972 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1997 to current year.
SPECIFIC CONDUCTANCE: October 1997 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1997.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 29.0°C, Aug. 8, 2001; minimum recorded, -0.4°C, Feb. 2 and Mar. 2, 2004.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,180 microsiemens, Dec. 30-31, 2004; minimum recorded, 235 microsiemens, June 21, 2000.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 27.8°C, July 16; minimum recorded, -0.3°C, for many days in December, January, February, and March.
SPECIFIC CONDUCTANCE: Maximum recorded, 1,180 microsiemens, Dec. 30-31; minimum recorded, 480 microsiemens, Apr. 1.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
APR													
06...	1300	7,120	--	--	--	--	8.2	7.2	584	597	17.0	9.5	54.1
AUG													
02...	1310	3,570	--	--	--	--	8.3	8.2	928	966	32.5	28.0	74.8
23...	1225	--	250	743	7.2	84	8.3	8.2	844	844	23.3	21.4	66.7
SEP													
07...	1150	--	380	745	5.6	63	7.7	7.5	467	458	26.8	20.2	34.6
23...	1225	--	130	741	9.0	97	8.3	8.3	874	871	21.2	17.5	70.3

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)
APR													
06...	27.7	7.00	.6	22.4	16	186	12.7	.15	13.2	104	341	6,780	--
AUG													
02...	46.7	7.70	.9	42.3	19	242	16.3	.20	17.1	255	591	5,830	--
23...	43.5	8.90	.9	39.3	19	219	20.1	.20	18.8	214	528	--	504
SEP													
07...	20.5	6.70	.7	21.1	20	123	8.8	.15	16.0	93.6	263	--	621
23...	46.1	9.10	.9	37.7	18	252	19.5	.19	20.0	206	543	--	137

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
APR													
06...	--	--	--	--	--	--	--	<50	<1	2.6	41.3	<1	60
AUG													
02...	--	--	--	--	--	--	--	<50	<1	8.3	66.9	<1	110
23...	.74	.034	.500	.71	1.2	.233	.531	<50	<1	8.3	60.9	<1	110
SEP													
07...	.43	.029	.450	.40	.88	.287	.613	<50	<1	5.8	32.2	<1	<50
23...	.68	<.010	.320	--	1.0	.193	.295	<50	<1	19.6	64.0	<1	80

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

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

Date	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR											
06...	<1	<1	2.0	30	<1	30	5.42	<1	<1	<1.0	2.6
AUG											
02...	<1	<1	3.6	60	<1	<10	7.66	7	<1	<1.0	1.4
23...	<1	2	3.5	50	<1	<10	5.80	6	<1	<1.0	1.1
SEP											
07...	<1	1	3.0	<10	<1	<10	3.96	3	<1	<1.0	<1
23...	<1	2	2.5	<10	<1	<10	5.28	57	<1	<1.0	1.6

Remark codes used in this table:
< -- Less than.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.8	13.9	14.4	---	---	---	0.0	-0.1	-0.1	0.0	-0.1	-0.1
2	13.9	13.0	13.3	---	---	---	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
3	13.2	12.1	12.6	---	---	---	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1
4	12.1	11.2	11.6	---	---	---	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
5	11.5	10.6	11.1	---	---	---	-0.1	-0.2	-0.1	0.0	-0.1	-0.1
6	12.7	11.2	11.8	---	---	---	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
7	13.2	12.6	12.8	5.4	5.2	5.3	0.0	-0.1	-0.1	0.0	-0.1	-0.1
8	13.5	12.8	13.2	5.2	5.0	5.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
9	13.1	12.3	12.8	5.0	4.6	4.7	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
10	13.2	12.2	12.7	4.7	4.1	4.5	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
11	13.6	12.7	13.1	4.1	3.5	3.8	-0.1	-0.1	-0.1	0.2	-0.1	-0.1
12	14.2	13.3	13.7	3.5	2.8	3.1	-0.1	-0.3	-0.1	0.0	-0.1	0.0
13	14.1	12.6	13.4	2.8	2.3	2.6	-0.1	-0.2	-0.1	0.0	-0.3	-0.1
14	12.6	11.3	11.9	2.6	2.1	2.3	-0.1	-0.3	-0.1	0.0	-0.2	-0.1
15	11.3	9.9	10.6	2.3	1.8	2.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
16	9.9	9.3	9.6	2.4	1.9	2.2	-0.1	-0.2	-0.1	0.0	-0.2	-0.1
17	9.5	8.7	9.1	2.5	2.2	2.4	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1
18	8.7	8.1	8.4	2.5	2.0	2.3	0.0	-0.1	-0.1	0.0	-0.1	-0.1
19	8.9	8.4	8.6	2.2	1.9	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
20	9.1	8.7	8.9	2.4	2.0	2.1	0.0	-0.2	-0.1	0.0	-0.1	-0.1
21	9.6	9.0	9.4	2.0	1.6	1.8	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
22	10.3	9.6	10	1.8	1.3	1.6	-0.1	-0.2	-0.1	0.0	-0.1	-0.1
23	10.6	10.0	10.3	1.6	0.9	1.2	-0.1	-0.3	-0.1	0.0	-0.1	0.0
24	10.8	10.1	10.5	0.9	0.4	0.6	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
25	---	---	---	0.4	0.2	0.3	-0.1	-0.2	-0.1	0.0	-0.2	-0.1
26	---	---	---	0.4	0.3	0.3	0.0	-0.1	-0.1	0.0	-0.2	-0.1
27	---	---	---	0.4	-0.1	0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.1
28	---	---	---	-0.1	-0.2	-0.1	0.0	-0.1	-0.1	0.0	0.0	0.0
29	---	---	---	0.0	-0.1	-0.1	-0.1	-0.3	-0.1	0.0	-0.1	-0.1
30	---	---	---	0.0	-0.1	-0.1	0.0	-0.1	0.0	0.0	-0.1	0.0
31	---	---	---	---	---	---	0.0	-0.1	-0.1	0.0	-0.3	-0.1
MONTH	14.8	8.1	11.4	5.4	-0.2	2.1	0.0	-0.3	-0.1	0.2	-0.3	-0.1

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	-0.1	-0.1	-0.1	0.0	-0.2	-0.1	0.7	-0.1	0.2	8.3	7.7	8.0
2	0.0	-0.2	-0.1	0.0	-0.2	-0.1	1.8	0.6	1.3	8.2	6.9	7.6
3	-0.1	-0.3	-0.2	0.0	-0.3	-0.1	2.5	1.6	1.9	8.8	7.2	8.0
4	-0.1	-0.3	-0.2	0.0	-0.2	-0.1	4.8	2.5	3.5	10.2	8.4	9.1
5	0.0	-0.3	-0.1	0.0	-0.2	-0.1	6.5	4.8	5.5	11.9	10.0	10.8
6	0.0	-0.2	-0.1	0.0	-0.2	-0.1	7.5	6.2	6.8	13.2	11.5	12.3
7	-0.1	-0.2	-0.1	0.0	-0.2	-0.1	8.4	6.8	7.6	13.4	12.6	13.0
8	0.0	-0.1	-0.1	0.0	-0.3	-0.1	9.6	8.2	8.8	15.8	13.4	14.3
9	0.0	-0.3	-0.1	0.0	-0.2	-0.1	11.5	9.6	10.4	15.8	15.4	15.6
10	0.0	-0.2	-0.1	0.0	-0.3	-0.1	12.2	11.2	11.7	15.7	14.9	15.5
11	0.0	-0.2	-0.1	0.0	-0.2	-0.1	12.4	12.2	12.3	14.9	13.3	13.9
12	-0.1	-0.3	-0.2	0.0	-0.3	-0.2	12.3	11.9	12.1	13.6	12.3	12.8
13	0.0	-0.2	-0.1	0.0	-0.2	-0.2	12.4	11.4	11.8	12.3	11.7	12.0
14	0.0	-0.3	-0.1	-0.1	-0.3	-0.2	12.3	11.0	11.7	11.8	10.7	11.2
15	-0.1	-0.2	-0.1	0.0	-0.2	-0.1	12.7	11.9	12.2	11.0	10.2	10.5
16	0.0	-0.3	-0.1	-0.1	-0.2	-0.1	13.4	12.2	12.7	12.0	10.0	10.8
17	0.0	-0.3	-0.1	0.0	-0.3	-0.1	13.6	12.5	13.0	13.6	11.8	12.5
18	0.0	-0.1	-0.1	0.0	-0.3	-0.1	15.0	13.3	14.0	15.0	13.5	14.0
19	0.0	-0.2	-0.1	0.0	-0.2	-0.1	15.3	14.4	14.8	16.1	14.8	15.3
20	0.0	-0.1	-0.1	0.0	-0.2	-0.1	15.1	14.2	14.7	17.5	16.1	16.7
21	0.0	-0.2	-0.1	0.0	-0.3	-0.1	15.1	14.0	14.6	18.4	17.2	17.7
22	0.0	-0.1	-0.1	0.0	-0.3	-0.1	14.9	13.4	14.0	18.4	17.5	18.0
23	0.0	-0.2	-0.1	0.0	-0.2	-0.1	13.7	12.7	13.1	18.5	17.8	18.2
24	0.0	-0.2	-0.1	0.0	-0.3	-0.1	13.0	12.1	12.6	18.5	18.1	18.2
25	0.0	-0.2	-0.1	0.0	-0.2	-0.1	12.9	12.0	12.3	18.2	17.6	17.8
26	0.0	-0.1	-0.1	0.0	-0.2	-0.1	12.0	11.1	11.5	17.6	16.4	16.9
27	0.0	-0.2	-0.1	0.0	-0.2	-0.1	11.1	10.0	10.4	16.4	15.5	15.9
28	0.0	-0.3	-0.1	0.0	-0.2	-0.1	10.0	9.3	9.5	15.5	14.8	15.0
29	---	---	---	0.0	-0.2	-0.1	9.3	8.4	8.7	15.2	14.4	14.8
30	---	---	---	0.0	-0.2	-0.1	8.5	8.1	8.3	16.5	14.9	15.6
31	---	---	---	0.1	-0.2	-0.1	---	---	---	17.2	16.1	16.6
MONTH	0.0	-0.3	-0.1	0.1	-0.3	-0.1	15.3	-0.1	10.1	18.5	6.9	13.8
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	16.9	17.4	21.9	21.2	21.6	25.6	24.3	24.9	21.5	20.5	20.9
2	18.3	17.7	17.9	22.2	21.3	21.7	26.4	25.0	25.6	20.9	19.9	20.5
3	18.4	17.9	18.2	22.9	22.1	22.4	26.4	25.8	26.1	20.7	19.9	20.3
4	18.4	18.2	18.3	22.7	21.9	22.2	25.9	25.1	25.5	20.8	19.9	20.3
5	18.5	18.3	18.4	22.0	21.4	21.8	25.5	24.4	25.0	21.7	20.6	21.1
6	19.5	18.3	18.8	22.3	21.5	21.9	25.7	24.3	25.0	21.5	20.3	21.1
7	19.9	18.7	19.2	23.1	22.0	22.5	26.4	25.1	25.7	20.6	19.8	20.2
8	20.4	19.4	19.9	24.0	23.0	23.4	26.2	25.7	26.0	20.8	20.0	20.4
9	20.8	19.8	20.3	25.0	23.8	24.3	25.9	25.3	25.6	20.7	20.3	20.5
10	20.9	20.3	20.6	25.8	24.7	25.1	25.6	24.9	25.2	21.3	20.2	20.6
11	20.9	20.4	20.7	26.1	25.6	25.8	25.0	24.0	24.3	21.7	21.2	21.4
12	20.4	19.5	19.8	26.8	25.9	26.3	24.0	23.2	23.6	21.7	21.2	21.5
13	19.7	19.6	19.6	27.3	26.4	26.8	23.7	22.7	23.1	21.2	20.3	20.7
14	19.6	18.8	19.2	27.6	26.8	27.2	22.9	22.0	22.5	20.3	19.4	19.8
15	19.3	18.6	18.9	27.7	27.1	27.4	22.7	21.6	22.2	20.0	19.3	19.7
16	19.9	19.2	19.5	27.8	27.0	27.4	23.1	21.9	22.5	20.5	19.4	20.0
17	20.6	19.9	20.2	27.7	27.2	27.4	22.9	22.2	22.4	20.6	19.8	20.2
18	21.4	20.5	20.9	27.3	26.1	26.6	22.2	21.2	21.9	20.2	19.4	19.7
19	22.3	21.4	21.8	26.1	25.4	25.8	22.5	21.1	21.6	20.0	18.9	19.4
20	22.8	22.3	22.5	25.9	25.2	25.6	22.4	21.5	22.0	19.9	18.8	19.4
21	23.4	22.7	23.0	25.9	25.1	25.5	22.2	21.4	21.7	19.6	18.9	19.2
22	24.2	23.4	23.7	25.9	25.1	25.5	21.8	21.0	21.4	19.0	18.1	18.6
23	25.2	24.2	24.6	25.8	25.3	25.6	---	---	---	18.5	17.5	17.9
24	25.3	24.9	25.1	26.2	25.2	25.7	---	---	---	17.7	17.0	17.4
25	25.3	24.6	25.0	26.1	24.8	25.4	21.2	20.8	21.0	17.0	16.1	16.5
26	25.0	24.2	24.5	24.8	23.8	24.2	20.9	20.2	20.7	16.5	15.2	15.9
27	24.7	24.1	24.4	24.0	22.9	23.3	21.0	20.2	20.7	16.6	15.4	16.0
28	24.5	24.1	24.3	23.6	22.6	23.1	20.8	20.3	20.6	16.3	14.9	15.5
29	24.4	23.3	23.9	23.7	22.7	23.2	21.3	20.3	20.8	14.9	14.0	14.3
30	23.3	21.9	22.6	24.4	22.9	23.6	21.5	20.8	21.1	15.2	13.7	14.4
31	---	---	---	24.9	23.8	24.3	21.7	21.0	21.3	---	---	---
MONTH	25.3	16.9	21.1	27.8	21.2	24.6	26.4	20.2	23.1	21.7	13.7	19.1

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	786	751	769	---	---	---	965	957	961	1,060	980	1,020
2	795	785	789	---	---	---	978	960	968	991	951	967
3	798	785	789	---	---	---	982	961	968	1,030	991	1,020
4	800	790	796	---	---	---	1,010	980	990	1,020	992	1,000
5	812	799	803	---	---	---	1,020	990	1,000	1,010	971	997
6	822	812	818	---	---	---	997	968	978	971	927	939
7	837	819	826	---	---	---	1,020	997	1,010	938	935	936
8	875	832	848	---	---	---	1,010	997	1,000	936	919	927
9	880	841	862	---	---	---	997	943	958	928	911	918
10	844	832	837	---	---	---	957	926	939	944	919	932
11	848	844	846	912	899	905	946	935	942	932	909	917
12	858	847	851	924	912	918	960	933	942	932	904	917
13	877	858	870	945	923	932	967	957	961	921	875	896
14	868	839	849	966	942	952	960	923	938	894	881	888
15	866	855	863	983	966	977	970	934	952	884	840	865
16	887	864	879	980	964	971	1,010	970	986	849	835	843
17	907	887	901	965	960	963	1,020	978	1,010	859	843	847
18	917	902	908	971	963	966	986	957	970	888	859	878
19	903	875	885	973	960	967	1,030	986	1,010	875	845	853
20	875	863	866	960	947	956	1,080	1,030	1,060	853	845	849
21	877	854	862	961	948	953	1,080	1,070	1,080	849	839	845
22	874	854	860	967	955	962	1,070	1,010	1,050	839	828	833
23	862	854	857	967	961	965	1,010	994	1,000	839	824	832
24	---	---	---	986	958	968	1,040	1,010	1,030	838	818	833
25	---	---	---	966	953	960	1,100	1,040	1,060	841	831	835
26	---	---	---	956	935	947	1,170	1,100	1,140	843	837	839
27	---	---	---	964	931	948	1,150	1,080	1,120	841	828	834
28	---	---	---	970	943	955	1,080	1,050	1,060	831	817	823
29	---	---	---	970	943	953	1,130	1,060	1,070	856	823	839
30	---	---	---	965	954	961	1,180	1,130	1,150	856	827	836
31	---	---	---	---	---	---	1,180	1,050	1,110	827	814	819
MONTH	917	751	845	986	899	954	1,180	923	1,010	1,060	814	890
		FEBRUARY			MARCH			APRIL			MAY	
1	814	805	809	935	909	921	514	480	494	871	866	868
2	805	795	799	963	926	939	532	514	526	870	860	864
3	802	793	796	960	923	938	547	532	541	872	859	862
4	800	792	797	986	943	954	568	547	561	879	872	875
5	832	800	819	987	942	962	590	568	579	880	878	879
6	850	817	831	995	971	988	607	590	601	879	869	875
7	878	850	861	999	985	992	618	607	614	870	856	863
8	885	853	869	999	951	983	629	617	624	929	838	851
9	890	862	873	951	912	924	635	624	629	841	828	836
10	863	823	841	913	872	889	633	623	627	869	836	854
11	823	804	810	---	---	---	---	---	---	839	740	778
12	812	804	808	875	806	846	---	---	---	777	741	754
13	821	811	816	806	750	771	767	682	700	---	---	---
14	828	818	822	795	766	786	759	685	728	---	---	---
15	827	815	820	802	795	799	759	750	753	843	819	828
16	860	819	837	796	788	791	750	734	745	837	809	821
17	851	807	826	809	789	795	760	727	733	---	---	---
18	839	819	826	839	809	824	845	760	799	---	---	---
19	854	810	833	916	839	889	880	767	826	927	878	896
20	915	853	881	914	846	882	888	872	879	---	---	---
21	909	885	898	846	828	836	887	869	877	---	---	---
22	997	905	957	835	813	825	892	875	885	1,010	982	1,000
23	992	941	962	815	800	809	898	873	883	---	---	---
24	951	933	942	800	760	787	897	871	883	---	---	---
25	967	934	949	760	726	742	872	858	865	---	---	---
26	934	922	926	726	661	702	862	854	858	---	---	---
27	942	913	929	661	613	640	863	857	860	---	---	---
28	941	901	920	614	562	591	862	857	859	---	---	---
29	---	---	---	562	505	540	863	854	858	936	905	919
30	---	---	---	505	483	493	867	858	862	905	868	886
31	---	---	---	---	---	---	---	---	---	881	863	871
MONTH	997	792	859	999	483	822	898	480	737	1,010	740	862

05064500 RED RIVER OF THE NORTH AT HALSTAD, MN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	895	877	883	1,000	988	998	807	792	797	---	---	---
2	911	895	905	1,000	998	999	---	---	---	---	---	---
3	---	---	---	999	959	983	---	---	---	---	---	---
4	---	---	---	959	859	909	---	---	---	---	---	---
5	---	---	---	859	719	786	---	---	---	---	---	---
6	894	802	861	719	677	689	---	---	---	---	---	---
7	827	790	802	727	675	705	---	---	---	---	---	---
8	839	788	805	741	727	733	---	---	---	---	---	---
9	858	812	830	758	741	750	---	---	---	---	---	---
10	836	811	819	790	758	772	---	---	---	---	---	---
11	840	759	812	845	790	812	---	---	---	---	---	---
12	759	524	649	866	816	855	---	---	---	---	---	---
13	551	508	521	894	847	873	---	---	---	---	---	---
14	---	---	---	913	892	902	---	---	---	---	---	---
15	---	---	---	899	836	870	---	---	---	---	---	---
16	---	---	---	837	814	825	---	---	---	---	---	---
17	558	514	538	870	804	824	---	---	---	---	---	---
18	580	558	567	907	861	878	---	---	---	---	---	---
19	616	580	597	861	844	848	---	---	---	---	---	---
20	655	616	634	844	825	836	---	---	---	---	---	---
21	695	653	671	825	763	780	---	---	---	---	---	---
22	747	695	721	768	761	764	---	---	---	---	---	---
23	792	747	771	837	768	782	---	---	---	---	---	---
24	831	792	809	871	757	843	---	---	---	---	---	---
25	894	831	864	894	845	880	---	---	---	---	---	---
26	916	894	907	872	847	858	---	---	---	---	---	---
27	925	904	914	847	829	836	---	---	---	---	---	---
28	955	925	939	829	821	824	---	---	---	913	904	910
29	985	955	969	821	810	814	---	---	---	905	892	900
30	1,000	985	993	810	800	804	---	---	---	898	878	893
31	---	---	---	801	792	797	---	---	---	---	---	---
MONTH	1,000	508	783	1,000	675	833	807	792	797	913	878	901

05066500 GOOSE RIVER AT HILLSBORO, ND

LOCATION.--Lat 47°24'34", long 97°03'39", in NW$^1/_4$ sec.5, T.145 N., R.50 W., Traill County, Hydrologic Unit 09020109, on right bank 600 ft upstream from Foogman Dam in Hillsboro and 27.5 mi upstream from mouth.

DRAINAGE AREA.--1,203 mi^2, of which about 110 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1931 to current year (no winter records 1932-34). Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder and masonry dam. Datum of gage is 879.52 ft above National Geodetic Vertical Datum of 1929. Sept. 26, 1941, to Oct. 27, 1965, at site 600 ft downstream at same datum. See WSP 1728 or 1913 for history of changes prior to Sept. 26, 1941.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	422	e59	e34	e33	e29	1,340	106	375	1,210	129	31
2	99	400	e57	e33	e34	e29	1,500	101	348	1,110	126	30
3	91	343	56	e32	e34	e30	1,440	96	356	1,300	120	28
4	81	299	58	e32	e33	e31	1,250	93	395	1,560	113	27
5	73	259	54	e32	e32	e32	940	90	847	1,500	107	29
6	65	221	e53	e32	e30	e30	698	88	1,670	1,190	104	29
7	59	193	e52	e32	e29	e29	556	87	1,600	827	100	34
8	58	170	e51	e32	e29	e29	443	89	1,520	618	95	39
9	54	156	e51	e31	e31	e30	373	111	1,840	527	92	43
10	48	142	e52	e31	e32	e30	323	133	2,100	452	86	40
11	46	127	e54	e32	e32	e30	289	336	2,350	393	91	38
12	44	116	e49	e31	e32	e30	268	446	3,490	347	e92	38
13	42	101	e46	e30	e32	e30	279	e362	4,240	334	e90	38
14	43	90	e47	e30	e31	e30	363	e358	4,650	303	e88	38
15	e43	94	e46	e30	e31	e31	384	e356	4,650	265	e86	39
16	42	100	e47	e30	e30	e31	364	e354	4,280	290	83	40
17	42	102	e43	e31	e29	e32	328	e343	3,710	384	81	43
18	45	99	e42	e32	e29	e32	295	e332	2,940	389	78	42
19	47	93	e42	e31	e28	e32	260	374	2,100	281	282	40
20	47	e89	e38	e30	e28	e32	228	757	1,510	219	113	39
21	48	e80	e35	e30	e28	e33	207	967	1,130	188	87	41
22	50	e72	e34	e30	e28	e36	189	1,230	835	172	107	38
23	55	e71	e34	e31	e28	e40	171	1,100	687	162	93	35
24	58	e70	e34	e32	e28	e55	157	902	582	156	77	34
25	61	e70	e34	e31	e28	e70	150	788	501	151	58	30
26	66	e69	e34	e30	e28	e95	138	652	445	141	48	32
27	75	e66	e35	e30	e28	e140	127	560	480	136	40	32
28	74	e65	e36	e31	e28	e310	124	500	531	135	36	31
29	84	e65	e36	e31	---	703	118	456	456	132	35	30
30	212	e62	e35	e31	---	1,090	110	420	689	129	33	29
31	328	---	e35	e32	---	1,280	---	396	---	126	31	---
TOTAL	2,279	4,306	1,379	967	843	4,461	13,412	12,983	51,307	15,127	2,801	1,057
MEAN	73.5	144	44.5	31.2	30.1	144	447	419	1,710	488	90.4	35.2
MAX	328	422	59	34	34	1,280	1,500	1,230	4,650	1,560	282	43
MIN	42	62	34	30	28	29	110	87	348	126	31	27
AC-FT	4,520	8,540	2,740	1,920	1,670	8,850	26,600	25,750	101,800	30,000	5,560	2,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2005, BY WATER YEAR (WY)

MEAN	18.2	22.3	9.77	6.10	9.73	178	517	149	116	89.4	28.1	19.8
MAX	436	469	79.9	47.1	217	1,220	3,412	2,275	1,710	821	515	326
(WY)	(1995)	(2001)	(1995)	(2001)	(1998)	(1995)	(1997)	(1950)	(2005)	(2002)	(1993)	(1994)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	6.51	1.12	1.35	0.00	0.00	0.00
(WY)	(1939)	(1939)	(1939)	(1939)	(1939)	(1940)	(1938)	(1939)	(1938)	(1940)	(1938)	(1938)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1931 - 2005	
ANNUAL TOTAL	96,757		110,922			
ANNUAL MEAN	264		304		99.6	
HIGHEST ANNUAL MEAN					400	1999
LOWEST ANNUAL MEAN					3.47	1937
HIGHEST DAILY MEAN	7,060	Mar 31	4,650	Jun 14	14,400	Apr 21, 1979
LOWEST DAILY MEAN	10	Jan 30	27	Sep 4	0.00	Mar 1, 1936
ANNUAL SEVEN-DAY MINIMUM	10	Jan 30	28	Feb 19	0.00	Mar 1, 1936
MAXIMUM PEAK FLOW			4,740	Jun 15	14,800	Apr 21, 1979
MAXIMUM PEAK STAGE			11.90	Jun 15	16.76	Apr 21, 1979
ANNUAL RUNOFF (AC-FT)	191,900		220,000		72,150	
10 PERCENT EXCEEDS	431		804		162	
50 PERCENT EXCEEDS	70		73		7.6	
90 PERCENT EXCEEDS	13		30		0.20	

e Estimated

05066500 GOOSE RIVER AT HILLSBORO, ND—Continued

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.24	2.91	2.06	1.87	1.81	1.80	4.06	2.23	2.83	4.05	2.23	1.97
2	2.24	2.88	2.04	1.86	1.81	1.80	4.28	2.21	2.77	3.85	2.22	1.97
3	2.21	2.78	2.03	1.87	1.81	1.79	4.21	2.19	2.78	4.02	2.20	1.95
4	2.19	2.70	2.04	1.88	1.81	1.79	3.94	2.18	2.87	4.34	2.18	1.95
5	2.16	2.62	2.02	1.89	1.81	1.80	3.57	2.17	3.64	4.22	2.16	1.96
6	2.12	2.54	2.02	1.89	1.83	1.82	3.29	2.16	4.84	3.79	2.15	1.96
7	2.09	2.47	2.03	1.89	1.91	1.82	3.11	2.16	4.70	3.37	2.14	1.99
8	2.09	2.41	2.01	1.87	1.94	1.81	2.94	2.17	4.55	3.12	2.12	2.02
9	2.07	2.37	2.02	1.86	1.93	1.82	2.83	2.24	5.18	3.00	2.10	2.05
10	2.04	2.33	2.02	1.87	1.90	1.84	2.74	2.31	5.74	2.89	2.09	2.03
11	2.03	2.29	2.03	1.89	1.84	1.85	2.68	2.76	6.36	2.79	2.10	2.02
12	2.02	2.26	2.03	1.89	1.81	1.87	2.64	2.95	9.38	2.72	---	2.01
13	2.01	2.21	2.03	1.87	1.81	1.93	2.66	---	11.07	2.69	---	2.02
14	2.01	2.17	2.08	1.88	1.81	2.03	2.81	---	11.75	2.64	---	2.02
15	---	2.18	2.07	1.88	1.81	2.01	2.85	---	11.76	2.56	---	2.02
16	2.01	2.21	1.99	1.89	1.82	1.98	2.82	---	11.14	2.61	2.07	2.03
17	2.01	2.21	1.97	1.88	1.82	1.96	2.75	---	9.95	2.78	2.07	2.04
18	2.03	2.20	1.97	1.87	1.84	1.94	2.69	---	7.90	2.79	2.05	2.04
19	2.04	2.18	2.01	1.85	1.82	1.93	2.62	2.83	5.75	2.59	2.56	2.04
20	2.03	2.18	2.06	1.84	1.81	1.92	2.55	3.36	4.57	2.46	2.26	2.04
21	2.04	2.16	1.94	1.86	1.80	1.93	2.50	3.60	4.04	2.39	2.21	2.05
22	2.05	2.10	1.98	1.85	1.80	1.93	2.46	3.93	3.69	2.35	2.27	2.03
23	2.07	2.10	1.99	1.83	1.79	1.98	2.41	3.97	3.45	2.32	2.23	2.02
24	2.09	2.10	1.99	1.83	1.79	2.08	2.38	3.79	3.26	2.30	2.18	2.01
25	2.10	2.09	1.98	1.83	1.79	2.14	2.36	3.62	3.11	2.29	2.11	2.00
26	2.12	2.18	1.93	1.83	1.79	2.23	2.32	3.39	2.99	2.26	2.06	2.01
27	2.16	2.18	1.92	1.84	1.79	2.38	2.29	3.22	3.06	2.25	2.03	2.01
28	2.16	2.11	1.87	1.83	1.80	2.73	2.28	3.10	3.16	2.24	2.01	2.01
29	2.19	2.09	1.86	1.82	---	3.29	2.26	3.01	3.01	2.24	2.00	2.01
30	2.53	2.09	1.86	1.82	---	3.74	2.24	2.93	3.37	2.23	1.99	2.00
31	2.76	---	1.86	1.82	---	3.99	---	2.88	---	2.22	1.98	---
MEAN	---	2.31	1.99	1.86	1.82	2.13	2.85	---	5.42	2.85	---	2.01
MAX	---	2.91	2.08	1.89	1.94	3.99	4.28	---	11.76	4.34	---	2.05
MIN	---	2.09	1.86	1.82	1.79	1.79	2.24	---	2.77	2.22	---	1.95

05066500 GOOSE RIVER AT HILLSBORO, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
14...	1030	370	744	10.8	102	8.2	7.1	1,140	1,200	15.5	11.5	114	54.1
MAY													
24...	0835	906	741	8.5	94	8.2	8.2	1,310	1,350	16.0	18.5	120	63.6
JUL													
20...	1435	223	--	--	--	8.3	8.2	1,260	1,290	28.5	25.3	121	61.2

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
14...	8.60	1	61.5	20	245	30.1	.23	19.4	439	860	877	57	.90
MAY													
24...	9.20	1	70.9	21	233	22.1	.24	20.6	466	896	2,240	303	1.1
JUL													
20...	7.70	1	70.9	21	262	22.0	.23	26.4	417	859	532	--	--

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
14...	.87	.073	.083	.784	.770	.82	.79	.142	.198	1.7	1.6	M	<10
MAY													
24...	.93	.103	.109	.670	.610	.97	.82	.151	.314	1.7	1.5	30	30
JUL													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)
APR													
14...	<10	<50	<1	3.9	47.8	<1	80	<1	<1	2.2	<10	<1	140
MAY													
24...	<10	<50	<1	4.2	60.9	<1	120	<1	1	2.0	20	<1	<10
JUL													
20...	--	<50	<1	8.5	60.0	<1	160	<1	<1	3.6	40	<1	40

05066500 GOOSE RIVER AT HILLSBORO, ND—Continued

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
14...	9.03	3	<1	<1.0	3.7
MAY					
24...	8.98	2	<1	<1.0	4.6
JUL					
20...	10.2	6	<1	<1.0	3.0

Remark codes used in this table:
< -- Less than.
M -- Presence verified but not quantified.

05070000 RED RIVER OF THE NORTH NEAR THOMPSON, ND

LOCATION.--Lat 47°45'32", long 96°56'37", in NW¼NE¼ sec.5, T.149 N.,R.49 W., Grand Forks County, Hydrologic Unit 09020301, on left bank 50 ft upstream of county highway, 7.6 miles east of Thompson, and at river mile 317.7.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1999 to current year. Gage heights and maximum discharge only, March 1999 to September 2003.

GAGE.--Water stage recorder. Datum of gage is 779.00 ft above National Geodetic Vertical Datum of 1929 (levels by Grand Forks County Highway Department).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 41,000 ft^3/s, Apr. 14, 2001, gage height, 57.66 ft; minimum recorded gage height, 15.12 ft, Sept. 12, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--A peak stage from floodmarks of 67.74 ft for spring 1997 and 63.66 ft for spring 1979, from U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,300 ft^3/s, June 18, gage height, 50.10 ft; minimum daily discharge, 895 ft^3/s, Jan. 23-24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,100	10,500	e2,460	e990	e1,110	e1,120	e11,900	3,410	5,150	9,150	4,060	4,880
2	3,790	12,600	e2,310	e980	e1,120	e1,130	e17,500	3,370	5,080	9,800	3,910	4,180
3	3,480	13,800	e2,300	e970	e1,120	e1,150	e19,500	3,320	4,890	10,500	3,710	3,700
4	3,210	13,400	e2,300	e955	e1,110	e1,190	17,400	3,260	4,670	11,100	3,480	3,390
5	2,990	12,600	e2,300	e930	e1,100	e1,220	14,900	3,180	4,710	11,600	3,280	3,220
6	2,850	11,500	e2,240	e915	e1,080	e1,230	12,600	3,080	5,120	12,000	3,130	3,420
7	2,820	10,200	e2,200	e920	e1,060	e1,230	10,300	2,950	6,220	12,100	3,250	5,330
8	2,850	8,760	e2,200	e930	e1,040	e1,210	8,510	2,830	7,460	12,000	3,700	7,010
9	2,800	7,590	e2,200	e935	e1,030	e1,200	7,070	2,820	8,440	11,700	4,010	6,790
10	2,710	6,610	e2,160	e940	e1,030	e1,190	5,940	2,900	9,450	11,200	3,960	6,220
11	2,650	5,820	e2,140	e955	e1,030	e1,180	5,160	3,100	10,800	10,600	3,710	5,950
12	2,590	5,280	e2,140	e970	e1,030	e1,180	4,660	3,580	13,400	9,600	3,440	5,600
13	2,560	4,940	e2,060	e945	e1,030	e1,180	4,510	3,920	17,000	8,730	3,260	4,970
14	2,510	4,710	e1,830	e930	e1,020	e1,210	4,910	3,900	19,400	8,070	3,220	4,160
15	2,470	4,460	e1,590	e920	e1,010	e1,240	5,580	3,820	21,700	7,600	3,110	3,500
16	2,420	4,270	e1,570	e910	e990	e1,300	5,900	3,770	24,300	7,270	2,900	3,050
17	2,400	4,130	e1,550	e910	e965	e1,370	6,020	3,760	25,800	6,990	2,920	2,690
18	2,400	3,990	e1,480	e920	e950	e1,420	6,110	3,810	26,200	6,730	3,030	2,410
19	2,360	3,880	e1,400	e930	e930	e1,480	5,980	3,880	26,000	6,470	3,550	2,310
20	2,350	3,780	e1,350	e925	e915	e1,530	5,600	3,970	25,200	6,130	4,790	2,300
21	2,300	3,680	e1,350	e920	e915	e1,600	5,200	4,230	24,100	5,740	4,830	2,280
22	2,270	3,610	e1,280	e905	e930	e1,680	4,840	4,560	22,800	5,410	4,330	2,230
23	2,250	3,580	e1,210	e895	e965	e1,720	4,520	4,810	21,300	5,180	4,220	2,180
24	2,200	e3,400	e1,110	e895	e1,000	e1,750	4,250	5,110	19,600	4,960	4,430	2,150
25	2,260	e3,080	e1,100	e920	e1,040	e1,760	4,080	5,060	17,500	4,770	4,470	2,050
26	2,480	e2,800	e1,080	e980	e1,080	e1,820	3,960	4,780	15,100	4,630	4,280	1,950
27	2,960	e2,530	e1,060	e985	e1,120	e2,090	3,830	4,510	12,900	4,480	4,850	1,870
28	3,640	e2,510	e1,050	e1,000	e1,120	e2,700	3,680	4,360	11,100	4,320	6,090	1,800
29	4,280	e2,500	e1,040	e1,030	---	e3,900	3,560	4,520	9,850	4,160	6,600	1,740
30	4,960	e2,490	e1,020	e1,060	---	e5,600	3,480	4,810	9,140	4,090	6,390	1,660
31	7,340	---	e1,000	e1,090	---	e8,100	---	5,040	---	4,090	5,710	---
TOTAL	93,250	183,000	52,080	29,460	28,840	57,680	221,450	120,420	434,380	241,170	126,620	104,990
MEAN	3,008	6,100	1,680	950	1,030	1,861	7,382	3,885	14,480	7,780	4,085	3,500
MAX	7,340	13,800	2,460	1,090	1,120	8,100	19,500	5,110	26,200	12,100	6,600	7,010
MIN	2,200	2,490	1,000	895	915	1,120	3,480	2,820	4,670	4,090	2,900	1,660
AC-FT	185,000	363,000	103,300	58,430	57,200	114,400	439,200	238,900	861,600	478,400	251,200	208,200

e Estimated

05070000 RED RIVER OF THE NORTH NEAR THOMPSON, ND—Continued

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.79	33.83	20.98	18.69	18.16	18.50	40.43	21.52	24.57	31.56	22.70	24.11
2	22.22	36.56	20.69	18.74	18.17	18.45	43.54	21.43	24.45	32.24	22.44	22.90
3	21.63	37.86	20.36	18.82	18.20	18.42	44.48	21.34	24.13	33.10	22.08	22.05
4	21.14	38.01	20.26	18.94	18.23	18.45	43.27	21.24	23.75	33.98	21.65	21.47
5	20.73	37.27	20.79	e19.04	18.26	18.46	41.34	21.09	23.81	34.74	21.27	21.17
6	20.47	35.94	20.91	19.01	18.28	18.46	38.74	20.90	24.51	35.37	21.00	21.54
7	20.42	34.17	20.80	18.96	18.31	18.58	35.73	20.65	26.40	35.55	21.22	24.88
8	20.47	32.11	21.06	18.89	18.34	18.87	32.73	20.43	28.50	35.41	22.04	27.74
9	20.37	30.01	21.53	18.80	18.35	19.35	29.97	20.42	30.15	34.96	22.61	27.37
10	20.22	28.08	21.66	18.66	18.35	19.77	27.75	20.56	31.69	34.24	22.53	26.39
11	20.09	26.47	21.39	18.48	18.36	20.18	26.14	20.93	33.52	33.20	22.07	25.93
12	19.99	25.30	21.20	18.37	18.38	20.85	25.06	21.82	37.16	31.90	21.56	25.34
13	19.92	24.51	20.95	18.34	18.39	21.64	24.62	22.46	40.80	30.63	21.23	24.26
14	19.83	23.92	20.42	18.24	18.43	22.13	25.18	22.42	43.88	29.54	21.15	22.86
15	19.77	23.46	19.94	18.13	18.47	22.29	26.23	22.27	46.98	28.74	20.95	21.69
16	19.67	23.10	19.47	18.08	18.58	22.28	26.63	22.18	48.91	28.18	20.56	20.85
17	19.63	22.84	19.21	18.07	18.73	22.13	26.69	22.15	49.86	27.70	20.60	20.18
18	19.63	22.59	19.08	18.10	18.73	21.99	26.69	22.25	50.04	27.26	20.81	19.65
19	19.56	22.38	18.87	18.14	18.73	21.76	26.30	22.38	49.70	26.81	21.75	19.46
20	19.54	22.20	18.66	18.12	18.73	21.43	25.48	22.55	49.01	26.24	23.96	19.45
21	19.44	22.02	18.66	18.11	18.71	21.08	24.67	22.99	48.06	25.58	24.02	19.41
22	19.38	21.87	18.85	18.09	18.72	20.84	24.04	23.56	46.91	25.01	23.17	19.31
23	19.35	21.83	19.04	18.01	18.71	20.77	23.50	23.98	45.62	24.62	22.97	19.22
24	19.26	21.65	18.87	17.97	18.70	20.98	23.03	24.50	44.15	24.25	23.34	19.17
25	19.37	21.34	18.56	17.93	18.70	21.49	22.73	24.41	42.28	23.92	23.41	18.98
26	19.78	20.98	18.30	17.91	18.66	22.63	22.53	23.93	40.01	23.68	23.07	18.78
27	20.67	20.64	e18.20	17.91	18.63	24.53	22.28	23.47	37.55	23.41	24.06	18.64
28	21.93	20.77	e18.27	17.96	18.58	27.10	22.01	23.22	35.05	23.14	26.18	18.51
29	23.13	21.07	18.45	18.08	---	30.32	21.80	23.49	32.96	22.87	27.04	18.38
30	24.37	21.05	18.60	18.13	---	34.12	21.64	23.99	31.76	22.74	26.68	18.24
31	28.70	---	18.67	18.16	---	37.38	---	24.38	---	22.74	25.52	---
MEAN	20.76	26.46	19.76	18.35	18.49	22.10	28.84	22.35	37.21	28.82	22.70	21.60
MAX	28.70	38.01	21.66	19.04	18.73	37.38	44.48	24.50	50.04	35.55	27.04	27.74
MIN	19.26	20.64	18.20	17.91	18.16	18.42	21.64	20.42	23.75	22.74	20.56	18.24

e Estimated

05070000 RED RIVER OF THE NORTH NEAR THOMPSON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2005.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1405	4,500	8.3	7.0	658	675	17.5	13.0	64.6	31.9	6.50	.6	23.0
AUG													
02...	1625	4,010	8.1	8.2	967	1,000	33.0	27.5	79.8	49.1	8.10	1	45.3

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	14	214	14.4	.20	12.5	130	401	5,000	<50	<1	3.3	44.6	<1
AUG													
02...	19	251	16.9	.18	18.7	265	617	6,860	<50	<1	7.4	71.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	<50	<1	<1	1.3	30	<1	<10	4.12	<1	<1	<1.0	4.3
AUG												
02...	110	<1	3	3.3	40	<1	<10	6.12	<1	<1	<1.0	1.3

Remark codes used in this table:
< -- Less than.

05080000 RED LAKE RIVER AT FISHER, MN

LOCATION.--Lat 47°48'01", long 96°48'31", in SW¼NE¼ sec. 21, T.150 N., R.48 W., Polk County, Hydrologic Unit 09020303, on left bank 10 ft upstream from bridge on county highway, 0.3 mile west of Fisher, MN, and at river mile 27.6.

DRAINAGE AREA.--5,680 mi^2.

PERIOD OF RECORD.--Mar. to Sept. 1999 (gage heights and maximum discharge only), Oct. 1, 1999, to current year.

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft above sea level (levels by Minnesota Department of Transportation).

REMARKS.-- Records good except those for estimated daily discharges, which are poor. Runoff from 1,950 mi^2 of Red Lake River basin above Lower Red Lake outlet is completely controlled by dam at outlet of Lower Red Lake. Flow partially affected by occasional runoff of Thief and Mud Lakes in Thief River basin.

EXTREMES OUTSIDE PERIOD OF RECORD.-- A stage of 41.00 ft occurred in spring of 1997 (from information provided by the National Weather Service).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	8,740	e1,410	e940	e1,040	e1,020	e10,000	2,170	3,410	3,850	1,220	1,210
2	1,410	9,380	e1,340	e900	e1,150	e1,050	e10,700	2,160	3,170	4,970	1,160	e1,170
3	1,420	8,770	e1,410	e850	e1,220	e1,080	e10,900	2,140	2,950	5,280	1,120	e1,140
4	1,500	7,730	e1,420	e800	e1,250	e1,100	e10,400	e2,050	2,870	5,300	1,080	1,170
5	1,510	6,720	e1,320	e760	e1,230	e1,120	9,600	e2,060	2,960	5,630	1,070	1,150
6	1,460	5,810	e1,310	e725	e1,200	e1,140	7,780	2,000	3,220	5,390	1,050	e1,270
7	1,430	5,130	e1,310	e720	e1,160	e1,140	6,630	1,860	4,880	4,880	1,010	e1,420
8	1,280	4,560	e1,310	e720	e1,110	e1,140	5,870	1,860	6,290	4,340	910	e1,430
9	1,190	4,140	e1,330	e720	e1,100	e1,140	5,280	1,970	7,060	3,910	906	1,450
10	1,250	3,830	e1,370	e685	e1,100	e1,170	4,830	2,980	7,480	3,730	906	e1,430
11	1,270	3,600	e1,390	e675	e1,110	e1,170	4,520	3,540	7,300	3,340	859	e1,350
12	1,300	3,370	e1,400	e680	e1,110	e1,160	4,420	3,160	7,390	3,020	854	e1,350
13	1,280	3,240	e1,410	e680	e1,110	e1,150	4,790	2,910	9,010	2,880	852	e1,270
14	1,210	3,130	e1,390	e620	e1,100	e1,120	5,540	2,870	10,800	2,760	857	e1,220
15	977	3,040	e1,390	e590	e1,090	e1,110	5,460	2,810	11,600	e2,730	857	e1,180
16	1,050	2,960	e1,390	e575	e1,060	e1,110	4,910	2,820	11,500	2,590	852	e1,140
17	1,110	2,740	e1,330	e580	e1,030	e1,120	4,410	2,780	9,960	2,490	953	1,140
18	885	2,510	e1,330	e585	e990	e1,140	4,120	2,740	8,190	2,390	1,180	e1,130
19	960	2,390	e1,300	e590	e980	e1,160	3,880	2,670	6,760	2,350	1,570	e1,120
20	978	2,410	e1,250	e590	e980	e1,200	3,640	2,410	5,450	2,240	1,700	e1,070
21	987	2,390	e1,200	e595	e980	e1,250	3,210	2,290	4,360	2,070	1,840	1,040
22	1,020	2,240	e1,050	e575	e990	e1,300	2,950	2,260	3,950	2,590	1,640	e1,070
23	962	2,130	e960	e580	e1,000	e1,320	2,690	2,210	3,720	2,790	1,400	1,020
24	991	e2,120	e960	e610	e1,010	e1,340	2,550	2,350	3,620	2,660	1,190	e1,020
25	1,030	e1,920	e960	e675	e1,030	e1,360	2,520	2,460	3,490	2,500	1,140	e1,010
26	1,530	e1,460	e970	e680	e1,030	e1,440	2,410	2,450	3,440	2,320	1,150	e1,060
27	1,950	e1,520	e980	e680	e1,020	e1,640	2,400	2,510	3,370	2,130	1,180	e1,050
28	2,300	e1,510	e990	e720	e1,020	e2,490	2,360	2,980	3,340	1,860	1,170	e1,040
29	2,430	e1,500	e1,000	e780	---	e3,840	2,350	3,470	3,260	1,460	e1,280	e1,010
30	3,050	e1,390	e1,000	e850	---	e5,690	2,220	3,740	3,360	1,320	e1,310	e1,010
31	6,530	---	e970	e940	---	e8,150	---	3,670	---	1,290	1,200	---
TOTAL	47,720	112,380	38,150	21,670	30,200	52,360	153,340	80,350	168,160	97,060	35,466	35,140
MEAN	1,539	3,746	1,231	699	1,079	1,689	5,111	2,592	5,605	3,131	1,144	1,171
MAX	6,530	9,380	1,420	940	1,250	8,150	10,900	3,740	11,600	5,630	1,840	1,450
MIN	885	1,390	960	575	980	1,020	2,220	1,860	2,870	1,290	852	1,010
AC-FT	94,650	222,900	75,670	42,980	59,900	103,900	304,100	159,400	333,500	192,500	70,350	69,700
CFSM	0.27	0.66	0.22	0.12	0.19	0.30	0.90	0.46	0.99	0.55	0.20	0.21
IN.	0.31	0.74	0.25	0.14	0.20	0.34	1.00	0.53	1.10	0.64	0.23	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	1,250	2,126	1,044	743	743	1,384	3,314	2,317	3,694	2,470	1,487	1,272
MAX	2,261	4,103	1,582	1,187	1,106	2,280	8,063	3,666	6,374	5,711	3,188	2,878
(WY)	(2000)	(2001)	(2002)	(2001)	(2001)	(2000)	(2001)	(2001)	(2002)	(2002)	(2001)	(2002)
MIN	152	163	159	152	114	917	594	750	1,398	674	208	164
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

05080000 RED LAKE RIVER AT FISHER, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2000 - 2005	
ANNUAL TOTAL	580,999		871,996			
ANNUAL MEAN	1,587		2,389		1,820	
HIGHEST ANNUAL MEAN					2,591	2001
LOWEST ANNUAL MEAN					672	2003
HIGHEST DAILY MEAN	10,800	Jun 1	11,600	Jun 15	22,200	Apr 10, 2001
LOWEST DAILY MEAN	110	Feb 3	575	Jan 16, 22	101	Sep 9, 2003
ANNUAL SEVEN-DAY MINIMUM	110	Feb 3	584	Jan 16	110	Feb 3, 2004
MAXIMUM PEAK FLOW			[a]11,900	Jun 16	24,500	Apr 10, 2001
MAXIMUM PEAK STAGE			[b]31.76	Apr 2	38.00	Apr 10, 2001
ANNUAL RUNOFF (AC-FT)	1,152,000		1,730,000		1,318,000	
ANNUAL RUNOFF (CFSM)	0.279		0.421		0.320	
ANNUAL RUNOFF (INCHES)	3.81		5.71		4.35	
10 PERCENT EXCEEDS	3,750		5,280		3,750	
50 PERCENT EXCEEDS	1,130		1,390		1,230	
90 PERCENT EXCEEDS	125		904		210	

a Gage height, 31.39 ft
b Backwater from ice
e Estimated

05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND

LOCATION.--Lat 47°55'37", long 97°01'44", in sec.3, T.151 N., R.50 W., Grand Forks County, Hydrologic Unit 09020301, on left bank 50 ft downstream from the DeMers Avenue bridge, 0.4 mi downstream from Red Lake River, and at mile 297.6.

DRAINAGE AREA.--30,100 mi^2, approximately, including 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1882 to current year. Prior to January 1904 monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 855: 1936(M). WSP 1115: 1942. WSP 1175: 1897(M). WSP 1388: 1904, 1914-15, 1917-19, 1921-22, 1927, 1950. WSP 1728: Drainage area. WRD-ND-81-1: 1882, 1897 (M).

GAGE.--Water stage recorder. Datum of gage is 779.00 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1983, to Sept. 30, 1986, datum of gage was 780.00 ft at same site. Apr. 14, 1965, to Sept. 30, 1983, water-stage recorder 1.9 mi downstream at a datum of 778.35 ft. Nov. 3, 1933, to Apr. 13, 1965, water-stage recorder 0.3 mi upstream at 778.35 ft datum. See WSP 1728 or 1913 for history of changes prior to Nov. 3, 1933.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,260	17,800	3,330	e1,910	e2,120	e2,150	e20,400	5,450	8,620	12,500	5,420	6,490
2	5,800	e21,900	2,910	e1,850	e2,220	e2,170	e25,100	5,370	8,340	13,600	5,200	5,560
3	5,270	e23,800	2,840	e1,800	e2,310	e2,200	e30,100	5,310	7,880	15,100	4,920	4,930
4	4,940	24,100	2,930	e1,740	e2,300	e2,220	e29,900	5,200	7,470	16,000	4,600	4,560
5	4,640	23,100	e3,100	e1,690	e2,270	e2,250	28,300	4,940	7,400	16,700	4,370	4,350
6	4,440	21,400	e3,170	e1,620	e2,200	e2,280	24,800	4,780	7,970	17,100	4,170	4,540
7	4,350	19,400	3,180	e1,620	e2,110	e2,280	21,900	4,540	10,200	17,200	4,240	6,810
8	4,280	16,900	3,450	e1,630	e2,100	e2,280	19,200	4,370	14,100	16,900	4,720	9,150
9	4,140	14,100	3,900	e1,640	e2,100	e2,290	16,500	4,480	16,700	16,300	5,070	9,180
10	3,990	11,900	4,000	e1,600	e2,100	e2,360	14,000	5,010	18,400	15,600	5,080	8,410
11	3,950	10,400	4,020	e1,610	e2,120	e2,380	11,700	6,160	19,900	14,700	4,780	7,990
12	3,920	9,630	3,930	e1,620	e2,120	e2,380	10,000	6,620	22,500	13,500	4,400	7,530
13	3,840	8,770	3,860	e1,580	e2,120	e2,380	9,490	6,820	25,800	12,200	4,180	6,740
14	3,840	8,180	3,510	e1,520	e2,120	e2,390	10,500	6,690	29,500	11,100	4,170	5,650
15	3,640	7,710	3,020	e1,480	e2,100	e2,400	12,100	6,540	33,400	e10,300	4,090	4,800
16	3,420	7,410	2,790	e1,460	e2,030	e2,420	12,300	6,460	36,300	9,850	3,850	4,220
17	3,460	7,130	2,720	e1,450	e1,980	e2,490	11,900	6,460	37,900	9,660	4,180	3,800
18	3,470	6,710	2,660	e1,480	e1,940	e2,580	11,500	6,480	37,900	9,590	e4,490	3,460
19	3,320	6,430	2,470	e1,490	e1,890	e2,650	10,900	6,490	36,000	9,530	5,320	3,310
20	3,340	6,270	2,400	e1,500	e1,880	e2,750	9,890	6,480	33,900	9,090	7,230	3,310
21	3,320	6,140	2,340	e1,500	e1,880	e2,850	8,830	6,620	31,700	8,350	7,400	3,240
22	3,280	5,940	e2,260	e1,480	e1,900	e2,940	7,990	7,040	29,500	8,030	6,590	3,180
23	3,260	5,790	e2,190	e1,460	e1,920	e3,020	7,420	7,300	27,300	8,140	6,130	3,120
24	3,190	5,630	e2,130	e1,470	e1,980	e3,060	6,830	7,670	25,400	7,870	6,130	3,080
25	3,230	5,410	e2,100	e1,530	e2,040	e3,090	6,540	7,730	23,300	7,490	6,070	2,970
26	3,480	4,820	e2,090	e1,620	e2,090	e3,300	6,340	7,410	21,100	7,210	5,770	2,880
27	4,410	4,190	e2,090	e1,640	e2,120	e3,910	6,160	7,070	18,900	6,810	6,390	2,790
28	5,570	3,860	e2,040	e1,670	e2,130	e4,700	5,980	7,090	16,600	6,500	7,920	2,700
29	6,880	3,440	e2,020	e1,730	---	e7,400	5,800	7,680	14,200	5,910	8,600	2,650
30	7,750	3,450	e2,010	e1,820	---	e11,400	5,630	8,310	12,800	5,580	8,460	2,540
31	11,100	---	e1,990	e1,990	---	e16,100	---	8,640	---	5,500	7,600	---
TOTAL	139,780	321,710	87,450	50,200	58,190	109,070	408,000	197,210	640,980	343,910	171,540	143,940
MEAN	4,509	10,720	2,821	1,619	2,078	3,518	13,600	6,362	21,370	11,090	5,534	4,798
MAX	11,100	24,100	4,020	1,990	2,310	16,100	30,100	8,640	37,900	17,200	8,600	9,180
MIN	3,190	3,440	1,990	1,450	1,880	2,150	5,630	4,370	7,400	5,500	3,850	2,540
AC-FT	277,300	638,100	173,500	99,570	115,400	216,300	809,300	391,200	1,271,000	682,100	340,200	285,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2005, BY WATER YEAR (WY)

MEAN	1,525	1,468	1,095	898	881	2,820	10,260	5,598	4,545	3,853	1,924	1,654
MAX	5,127	10,720	3,832	2,656	3,520	15,370	56,210	36,510	21,370	25,270	17,050	11,340
(WY)	(1995)	(2005)	(2001)	(2001)	(1998)	(1995)	(1997)	(1950)	(2005)	(1975)	(1993)	(1999)
MIN	12.1	30.5	17.8	18.8	2.87	42.1	954	373	151	88.8	30.6	20.3
(WY)	(1937)	(1937)	(1937)	(1937)	(1937)	(1937)	(1938)	(1934)	(1934)	(1936)	(1934)	(1936)

05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1904 - 2005	
ANNUAL TOTAL	1,864,516		2,671,980			
ANNUAL MEAN	5,094		7,320		3,029	
HIGHEST ANNUAL MEAN					10,070	1997
LOWEST ANNUAL MEAN					244	1934
HIGHEST DAILY MEAN	32,900	Mar 31	37,900	Jun 17	127,000	Apr 18, 1997
LOWEST DAILY MEAN	430	Feb 1	1,450	Jan 17	1.80	Sep 2, 1977
ANNUAL SEVEN-DAY MINIMUM	440	Jan 28	1,480	Jan 15	2.5	Feb 12, 1937
MAXIMUM PEAK FLOW			38,300	Jun 18	[a]137,000	Apr 18, 1997
MAXIMUM PEAK STAGE			40.11	Jun 18	[b]54.35	Apr 22, 1997
ANNUAL RUNOFF (AC-FT)	3,698,000		5,300,000		2,194,000	
10 PERCENT EXCEEDS	12,000		16,900		6,650	
50 PERCENT EXCEEDS	3,320		4,920		1,460	
90 PERCENT EXCEEDS	497		1,960		295	

a Maximum observed, affected by breakout from Red River of the North about 20 mi upstream of gage that entered Red Lake River about 2 mi upstream of confluence with the Red River of the North
b From floodmark
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1997 to current year.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.41	25.39	17.04	16.58	16.49	16.61	32.14	18.06	19.45	25.70	18.05	18.50
2	18.21	e29.03	16.81	16.60	16.49	16.59	35.24	18.02	19.31	26.22	17.95	18.11
3	17.98	e30.66	16.77	16.62	16.50	16.59	37.28	18.00	19.10	27.10	17.82	17.83
4	17.83	30.95	16.83	16.63	16.52	16.61	37.04	17.95	18.92	27.79	17.68	17.66
5	17.69	30.46	17.02	16.66	16.52	16.61	35.90	17.83	18.89	28.28	17.56	17.56
6	17.60	29.38	17.04	16.66	16.52	16.59	34.00	17.76	19.15	28.64	17.47	17.64
7	17.56	27.89	16.96	16.65	16.54	16.59	31.48	17.65	20.29	28.61	17.50	18.64
8	17.52	26.16	17.11	16.64	16.55	16.65	28.80	17.57	22.51	28.28	17.73	19.72
9	17.46	24.31	17.34	16.62	16.57	16.79	26.22	17.61	24.41	27.73	17.89	19.73
10	17.38	22.56	17.38	16.59	16.57	16.90	24.05	17.86	25.85	27.09	17.90	19.35
11	17.36	21.10	17.39	16.55	16.57	16.99	22.45	18.37	27.17	26.23	17.76	19.16
12	17.35	20.07	17.35	16.54	16.59	17.15	21.32	18.56	29.53	25.10	17.58	18.94
13	17.31	19.53	17.32	16.52	16.60	17.36	20.77	18.64	32.30	23.94	17.48	18.60
14	17.30	19.24	17.14	16.47	16.61	17.49	21.15	18.59	35.01	22.90	17.47	18.15
15	17.21	19.03	16.88	16.43	16.61	17.51	21.86	18.52	37.53	e22.06	17.43	17.77
16	17.09	18.89	16.75	16.42	16.62	17.54	21.92	18.49	39.19	21.41	17.31	17.49
17	17.11	18.76	16.71	16.42	16.67	17.51	21.58	18.49	39.93	20.87	17.47	17.29
18	17.12	18.59	16.67	16.45	16.68	17.46	21.28	18.50	40.00	20.40	e17.62	17.11
19	17.04	18.48	16.56	16.45	16.67	17.36	20.86	18.50	39.61	20.02	18.00	17.03
20	17.05	18.42	16.51	16.43	16.67	17.20	20.22	18.50	38.97	19.69	18.81	17.03
21	17.04	18.36	16.48	16.43	16.65	17.09	19.57	18.56	38.16	19.33	18.88	16.99
22	17.01	18.27	16.54	16.41	16.66	17.03	19.15	18.73	37.22	19.18	18.55	16.96
23	17.01	18.21	16.66	16.38	16.66	17.00	18.89	18.84	36.21	19.23	18.35	16.93
24	16.97	18.14	16.60	16.37	16.66	17.03	18.64	19.01	35.10	19.10	18.35	16.91
25	16.99	18.04	16.53	16.35	16.67	17.19	18.52	19.04	33.83	18.93	18.33	16.85
26	17.12	17.77	16.46	16.32	16.65	17.54	18.44	18.89	32.30	18.80	18.20	16.80
27	17.58	17.48	16.43	16.33	16.64	18.13	18.36	18.74	30.63	18.64	18.46	16.75
28	18.11	17.32	16.45	16.39	16.64	19.35	18.29	18.75	28.61	18.51	19.12	16.70
29	18.66	17.10	16.50	16.44	---	22.16	18.21	19.01	26.75	18.26	19.44	16.67
30	19.05	17.10	16.55	16.47	---	25.88	18.14	19.30	25.89	18.12	19.37	16.61
31	20.78	---	16.57	16.48	---	29.13	---	19.46	---	18.08	18.98	---
MEAN	17.61	21.56	16.82	16.49	16.60	17.99	24.06	18.45	29.73	22.72	18.08	17.72
MAX	20.78	30.95	17.39	16.66	16.68	29.13	37.28	19.46	40.00	28.64	19.44	19.73
MIN	16.97	17.10	16.43	16.32	16.49	16.59	18.14	17.57	18.89	18.08	17.31	16.61

e Estimated

05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1956 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
13...	1550	9,800	744	10.7	99	8.1	6.8	496	512	17.8	10.8	52.8	22.8
MAY													
03...	1120	5,540	740	10.5	90	8.2	7.6	703	667	19.5	7.2	68.4	33.4
23...	1330	7,330	739	8.8	96	8.3	8.3	855	878	26.4	17.7	78.8	42.4
JUN													
21...	1415	--	744	5.0	60	7.6	7.9	615	650	34.5	22.8	67.5	31.5
JUL													
18...	1715	--	737	6.7	87	8.0	8.2	792	825	23.0	26.5	72.8	39.0
AUG													
15...	1300	--	744	7.4	87	8.1	8.2	819	864	31.7	21.9	69.8	41.8

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
13...	5.10	.4	13.5	11	177	9.9	.14	10.2	75.3	289	7,870	185	.76
MAY													
03...	5.10	.7	27.4	16	231	14.6	.15	8.12	130	420	6,380	79	.67
23...	6.10	.8	36.8	17	252	18.5	.18	8.93	208	544	10,900	301	.62
JUN													
21...	7.70	.5	21.6	13	191	9.5	.14	24.5	118	375	--	82	.97
JUL													
18...	8.60	.8	34.8	18	226	15.2	.17	20.2	190	500	--	350	.91
AUG													
15...	7.10	.8	34.4	17	226	14.9	.19	15.8	215	523	--	309	.80

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
13...	.56	<.010	<.010	.391	.370	--	--	.070	.198	1.1	.93	<10	<10
MAY													
03...	.60	<.010	<.010	.115	.120	--	--	.062	.119	.78	.72	<10	<10
23...	.74	.037	<.010	.350	.370	.58	.70	.248	.081	.97	1.1	90	200
JUN													
21...	.75	.059	.063	.562	.590	.91	.69	.231	.297	1.5	1.3	80	110
JUL													
18...	.67	.013	.025	.362	.380	.90	.65	.219	.429	1.3	1.1	10	10
AUG													
15...	.68	.016	.038	.399	.380	.79	.64	.177	.342	1.2	1.1	50	50

05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND—Continued

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

Date	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
APR													
13...	<10	<50	<1	1.9	41.5	<1	<50	<1	<1	1.4	<10	<1	<10
MAY													
03...	<10	<50	<1	2.4	45.2	<1	<50	<1	<1	1.1	20	<1	<10
23...	<10	<50	<1	1.6	52.8	<1	60	<1	2	1.4	20	<1	<10
JUN													
21...	510	<50	<1	5.8	56.2	<1	60	<1	2	2.4	<10	<1	10
JUL													
18...	50	<50	<1	7.2	65.3	<1	120	<1	1	3.0	20	<1	<10
AUG													
15...	10	<50	<1	9.0	61.0	<1	100	<1	5	3.0	50	<1	<10

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
13...	5.55	<1	<1	<1.0	<1
MAY					
03...	3.66	<1	<1	<1.0	<1
23...	5.02	<1	<1	<1.0	<1
JUN					
21...	7.61	1	<1	<1.0	1.1
JUL					
18...	7.30	2	<1	<1.0	1.3
AUG					
15...	6.21	10	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05082625 TURTLE RIVER AT TURTLE RIVER STATE PARK NEAR ARVILLA, ND

LOCATION.--Lat 47°55'55", long 97°30'51", in NE¼NW¼NW¼ sec.1, T.l51 N., R.54 W., Grand Forks County, Hydrologic Unit 09020307, on right bank 200 ft upstream from U.S. Highway 2, 0.25 mi upstream from Turtle River State Park, 1 mi northwest of Arvilla, and 65 mi above mouth.

DRAINAGE AREA.--311 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 980 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some regulation by Larimore Dam located 4 mi upstream on the south branch of the Turtle River.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	32	e11	e7.0	e10	e8.0	e340	24	34	171	15	12
2	13	30	e12	e6.7	e10	e8.0	285	24	e36	135	15	12
3	13	29	e12	e6.2	e9.5	e8.0	229	22	49	107	17	11
4	12	28	e12	e6.2	e9.4	e8.0	189	21	65	84	16	12
5	12	28	e12	e6.2	e9.3	e10	161	20	70	70	15	12
6	12	27	e12	e6.3	e9.2	e9.0	131	19	69	59	14	12
7	12	25	e12	e6.3	e9.0	e9.0	106	17	65	53	14	12
8	12	24	e12	e6.3	e9.0	e9.5	90	20	89	53	13	12
9	12	24	e12	e6.3	e9.0	e9.8	79	26	106	49	13	13
10	12	23	e12	e6.5	e9.0	e10	71	35	125	45	13	13
11	12	23	e12	e6.8	e9.0	e10	67	45	131	42	15	14
12	12	26	e10	e6.8	e9.0	e10	69	49	226	40	17	14
13	12	28	e9.0	e6.8	e9.0	e10	70	51	260	38	16	14
14	12	20	e7.6	e6.8	e8.8	e10	69	54	428	40	15	14
15	13	19	e7.4	e6.8	e8.5	e11	69	55	426	45	14	14
16	13	14	e7.3	e6.8	e8.0	e11	63	51	431	40	14	14
17	13	14	e7.2	e7.3	e8.0	e12	58	49	396	35	16	14
18	14	13	e7.1	e7.5	e8.0	e13	52	56	314	31	e16	14
19	16	e13	e7.0	e7.5	e8.0	e14	48	54	239	29	e17	13
20	17	e13	e7.0	e7.5	e8.0	e15	45	51	186	27	16	13
21	20	e13	e7.0	e7.8	e8.0	e16	43	56	153	24	15	13
22	23	e12	e7.0	e8.0	e8.0	e17	40	55	131	23	e14	13
23	30	e12	e7.0	e8.2	e8.0	e18	37	57	113	21	e14	13
24	30	e12	e7.0	e8.5	e8.0	e25	34	58	101	19	13	13
25	31	e12	e7.0	e8.7	e8.0	e35	32	57	89	19	14	14
26	31	e12	e7.0	e9.0	e8.0	e45	29	52	83	18	14	14
27	31	e12	e7.0	e9.2	e8.0	e65	27	48	119	18	14	13
28	31	e12	e7.2	e9.4	e8.0	e100	26	45	92	17	13	13
29	31	e12	e7.3	e9.7	---	e220	25	41	127	16	13	13
30	33	e11	e7.3	e9.8	---	e410	24	38	192	16	13	13
31	32	---	e7.2	e9.9	---	e370	---	35	---	15	13	---
TOTAL	581	573	278.6	232.8	241.7	1,526.3	2,608	1,285	4,945	1,399	451	391
MEAN	18.7	19.1	8.99	7.51	8.63	49.2	86.9	41.5	165	45.1	14.5	13.0
MAX	33	32	12	9.9	10	410	340	58	431	171	17	14
MIN	12	11	7.0	6.2	8.0	8.0	24	17	34	15	13	11
AC-FT	1,150	1,140	553	462	479	3,030	5,170	2,550	9,810	2,770	895	776
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)												
MEAN	16.0	18.4	11.2	9.15	11.2	90.3	160	55.4	123	48.1	23.4	19.4
MAX	70.0	58.3	18.2	13.5	32.3	250	525	192	923	168	84.4	74.7
(WY)	(1995)	(2001)	(2001)	(2001)	(1998)	(1995)	(1997)	(1999)	(2000)	(1997)	(1993)	(1993)
MIN	5.47	7.71	5.59	3.97	3.46	11.5	18.3	12.5	13.8	12.6	5.47	2.80
(WY)	(1993)	(1993)	(1993)	(1993)	(2004)	(1996)	(2000)	(1993)	(1993)	(2003)	(1998)	(1998)

05082625 TURTLE RIVER AT TURTLE RIVER STATE PARK NEAR ARVILLA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1993 - 2005	
ANNUAL TOTAL	18,859.2		14,512.4			
ANNUAL MEAN	51.5		39.8		48.7	
HIGHEST ANNUAL MEAN					94.7	2000
LOWEST ANNUAL MEAN					14.8	2003
HIGHEST DAILY MEAN	1,900	Mar 29	431	Jun 16	5,000	Jun 13, 2000
LOWEST DAILY MEAN	2.4	Mar 1	6.2	Jan 3	2.1	Sep 8, 2003
ANNUAL SEVEN-DAY MINIMUM	2.5	Feb 27	6.3	Jan 3	2.2	Sep 3, 2003
MAXIMUM PEAK FLOW			[a]463	Jun 14	12,400	Jun 13, 2000
MAXIMUM PEAK STAGE			[b]5.93	Mar 31	[c]18.74	Jun 13, 2000
ANNUAL RUNOFF (AC-FT)	37,410		28,790		35,270	
10 PERCENT EXCEEDS	91		89		96	
50 PERCENT EXCEEDS	12		14		14	
90 PERCENT EXCEEDS	3.3		7.5		7.0	

a Gage height, 4.99 ft
b Backwater from ice
c From floodmark
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.29	2.39	2.21	2.63	---	e2.87	5.03	2.31	2.38	3.44	2.12	2.06
2	2.27	2.38	2.22	2.64	---	e2.88	4.11	2.31	e2.40	3.21	2.11	2.05
3	2.27	2.37	2.23	2.70	---	e2.89	3.80	2.29	2.53	3.01	2.16	2.04
4	2.27	2.36	2.23	2.78	e2.92	2.89	3.57	2.27	2.68	2.84	2.13	2.05
5	2.26	2.35	2.24	2.83	2.93	2.91	3.40	2.26	2.72	2.72	2.12	2.07
6	2.25	2.34	2.25	2.88	2.91	3.08	3.20	2.24	2.71	2.63	2.11	2.07
7	2.25	2.32	2.27	2.88	2.90	3.03	3.03	2.21	2.68	2.57	2.10	2.06
8	2.25	2.31	2.26	2.86	e2.91	3.02	2.91	2.24	2.87	2.57	2.09	2.05
9	2.25	2.32	2.27	2.84	e2.91	3.01	2.82	2.32	3.00	2.53	2.08	2.07
10	2.26	2.30	2.30	2.82	2.90	3.12	2.76	2.41	3.14	2.49	2.07	2.07
11	2.25	2.30	2.29	2.82	2.91	3.07	2.73	2.50	3.18	2.47	2.13	2.09
12	2.26	2.33	2.28	2.83	2.90	2.93	2.74	2.54	3.78	2.45	2.16	2.09
13	2.25	2.35	2.27	2.80	2.90	2.87	2.75	2.55	3.97	2.43	2.14	2.09
14	2.25	2.24	2.31	2.79	2.89	2.87	2.75	2.58	4.83	2.45	2.12	2.09
15	2.27	2.22	2.33	2.78	2.87	2.84	2.74	2.59	4.82	2.50	2.11	2.10
16	2.27	2.16	2.32	2.77	2.84	2.86	2.70	2.56	4.85	2.45	2.09	2.10
17	2.28	2.15	e2.37	2.76	2.83	2.84	2.66	2.54	4.68	2.39	2.14	2.10
18	2.28	2.14	e2.38	e2.78	2.82	2.84	2.61	2.60	4.27	2.35	e2.14	2.09
19	2.30	2.25	2.43	e2.78	2.82	2.83	2.57	2.58	3.85	2.32	e2.16	2.09
20	2.29	2.15	e2.48	2.78	2.82	2.81	2.54	2.56	3.54	2.29	2.13	2.09
21	2.31	2.27	2.52	2.78	2.82	2.81	2.51	2.60	3.33	2.27	2.12	2.09
22	2.32	2.15	2.60	2.80	2.83	2.83	2.48	2.60	3.18	2.24	e2.10	2.09
23	2.38	2.22	2.67	---	2.83	2.95	2.45	2.61	3.06	2.22	e2.09	2.08
24	2.38	2.16	2.66	---	2.84	3.06	2.42	2.62	2.96	2.20	2.08	2.08
25	2.39	2.16	2.77	---	2.85	3.25	2.40	2.61	2.87	2.19	2.10	2.09
26	2.39	2.15	2.87	---	2.85	3.33	2.38	2.57	2.83	2.18	2.11	2.10
27	2.38	2.16	2.84	---	e2.87	3.67	2.36	2.53	3.09	2.17	2.09	2.08
28	2.38	2.17	---	e2.93	e2.87	3.94	2.34	2.50	2.89	2.16	2.08	2.08
29	2.39	2.18	---	---	---	4.70	2.33	2.45	3.11	2.15	2.08	2.07
30	2.41	2.19	---	---	---	5.54	2.31	2.42	3.57	2.14	2.08	2.07
31	2.39	---	---	e2.92	---	5.52	---	2.39	---	2.13	2.07	---
MEAN	2.30	2.25	---	---	---	3.23	2.85	2.46	3.33	2.46	2.11	2.08
MAX	2.41	2.39	---	---	---	5.54	5.03	2.62	4.85	3.44	2.16	2.10
MIN	2.25	2.14	---	---	---	2.81	2.31	2.21	2.38	2.13	2.07	2.04

e Estimated

05082625 TURTLE RIVER AT TURTLE RIVER STATE PARK NEAR ARVILLA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1355	132	8.2	6.8	701	712	17.5	9.0	59.9	22.8	7.80	1	50.3
AUG													
10...	1500	14	8.3	8.4	984	989	21.6	22.6	97.1	39.0	5.30	1	49.6

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	30	154	19.8	.18	17.4	174	429	159	<50	2	3.1	41.4	<1
AUG													
10...	21	266	30.1	.26	23.3	237	619	24.2	<50	<1	6.9	57.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	50	<1	<1	2.1	30	18.2	230	6.06	2	<1	<1.0	3.0
AUG												
10...	80	<1	3	1.4	50	<1	70	5.79	4	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05083000 TURTLE RIVER AT MANVEL, ND

LOCATION.--Lat 48°04'43", long 97°11'03", in SE$^1/_4$ sec.10, T.153 N., R.51 W., Grand Forks County, Hydrologic Unit 09020307, on left bank 10 ft downstream from bridge on State Highway No. 33, 0.3 mi west of Manvel and 10 mi upstream from mouth.

DRAINAGE AREA.--613 mi^2, of which 57 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1980-90, 1992, 2005

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

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR													
11...	1540	732	10.2	99	8.3	7.2	2,010	2,060	11.0	12.0	109	48.0	11.8
MAY													
02...	1445	742	--	--	8.2	7.9	2,490	2,540	8.5	7.5	155	72.8	11.3
24...	1410	738	8.5	93	8.2	8.2	4,250	4,310	16.4	17.6	217	118	16.8
JUN													
20...	1445	746	4.4	55	7.7	8.0	2,290	2,360	33.5	25.2	139	70.6	11.9
JUL													
26...	1140	744	12.1	141	8.0	8.4	2,650	2,670	26.6	21.2	151	77.3	12.6
AUG													
10...	1345	745	13.7	168	8.6	8.6	2,240	2,290	27.3	23.9	123	66.9	11.5

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

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
APR													
11...	4	223	50	188	325	.38	15.0	327	1,160	46	.87	.79	.018
MAY													
02...	4	262	45	279	404	.39	8.70	477	1,550	65	.65	.69	<.010
24...	7	523	52	270	869	.59	13.7	744	2,650	56	1.1	1.2	<.010
JUN													
20...	4	240	44	257	352	.36	33.1	468	1,440	<5	1.4	1.5	.049
JUL													
26...	5	289	47	317	430	.43	18.8	509	1,660	349	1.1	1.1	<.010
AUG													
10...	4	236	46	260	352	.41	18.6	441	1,390	53	.91	1.0	<.010

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

Date	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, ug/L (01106)
APR													
11...	.045	.402	.440	.85	.74	.104	.173	1.3	1.2	<10	<10	<10	<50
MAY													
02...	<.010	.032	.050	--	--	.052	.127	.69	.74	<10	<10	<10	<50
24...	<.010	<.020	<.020	--	--	.077	.146	1.1	1.2	30	30	<10	<50
JUN													
20...	.049	.100	.090	1.3	1.5	.346	.382	1.5	1.6	80	80	180	<50
JUL													
26...	<.010	<.020	<.020	--	--	.193	.307	1.1	1.1	30	40	50	<50
AUG													
10...	.021	<.020	<.020	--	.98	.075	.165	.93	1.0	20	20	10	<50

05083000 TURTLE RIVER AT MANVEL, ND—Continued

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

Date	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
APR													
11...	<1	4.2	50.6	<1	280	<1	2	3.3	40	<1	140	7.28	5
MAY													
02...	<1	3.7	55.3	<1	300	<1	<1	3.4	40	<1	260	7.45	4
24...	<1	7.3	72.5	<1	560	<1	2	4.6	40	<1	250	9.22	9
JUN													
20...	<1	7.8	77.6	<1	340	<1	4	5.6	20	<1	100	13.6	8
JUL													
26...	<1	11.4	76.5	<1	490	<1	1	7.7	60	<1	310	9.85	14
AUG													
10...	<1	13.4	70.7	<1	400	<1	<1	3.5	80	<1	400	9.56	19

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

Date	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR			
11...	<1	<1.0	1.8
MAY			
02...	<1	<1.0	3.4
24...	<1	<1.0	4.3
JUN			
20...	<1	<1.0	5.2
JUL			
26...	<1	<1.0	3.7
AUG			
10...	<1	<1.0	1.6

Remark codes used in this table:
< -- Less than.

05083500 RED RIVER OF THE NORTH AT OSLO, MN

LOCATION.--Lat 48°11'38", long 97°08'25", in SW¼SW¼ sec.36, T.154 N., R.50 W., Marshall County, MN, Hydrologic Unit 09020306, on bridge crossing the Red River of the North, 0.5 mi west of Oslo, and at mile 271.2.

DRAINAGE AREA.--31,200 mi^2, approximately, including 3,800 mi^2 in closed basins.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--1936-37, 1941-47 (high-water periods only), April 1948 to September 1960 (spring and summer months only), October 1973 to September 1976, October 1984 to September 2001 (peak gage height and discharge only), April 2002 to current year (gage height and maximum discharge only).

GAGE.--Water stage recorder. Datum of gage is 772.79 ft above National Geodetic Vertical Datum of 1929. Prior to September 1959 at datum 5.00 ft higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s, Apr. 23, 1997, gage height, 38.00 ft (observed).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,100 ft^3/s, gage height, 36.05 ft, June 19; minimum gage height, 8.27 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.49	21.93	10.31	11.35	---	10.56	28.76	12.77	16.44	26.66	12.47	14.69
2	13.06	25.18	11.24	11.42	---	10.50	31.42	12.58	16.31	26.67	12.32	13.53
3	12.48	27.03	12.55	11.44	---	10.45	33.21	12.47	15.96	27.09	12.04	12.54
4	11.99	27.83	12.72	11.48	---	10.40	34.02	12.38	15.51	27.58	11.65	11.83
5	11.64	27.90	12.73	11.51	---	10.41	33.73	12.17	15.26	27.87	11.27	11.37
6	11.34	27.40	13.34	11.53	---	10.45	32.93	11.92	15.52	28.08	10.97	11.12
7	11.13	26.45	13.40	11.48	---	10.54	31.53	11.66	16.84	28.05	10.76	12.11
8	11.02	25.14	13.23	11.43	---	10.63	29.70	11.33	19.44	27.82	11.03	15.18
9	10.87	23.61	13.60	11.35	---	10.90	27.66	11.39	21.66	27.37	11.51	16.66
10	10.66	21.87	13.91	11.24	---	11.23	25.74	11.66	23.18	26.85	11.81	16.40
11	10.53	20.20	14.07	11.09	10.53	11.53	24.11	12.71	24.46	26.21	11.72	15.84
12	10.47	18.64	13.96	10.95	10.54	11.90	22.72	13.66	26.26	25.34	11.32	15.37
13	10.38	17.41	13.66	10.87	10.59	12.43	21.58	14.18	28.42	24.34	10.85	14.76
14	10.34	16.51	13.53	10.76	10.63	13.00	21.01	14.29	30.73	23.31	10.62	13.71
15	10.20	15.82	13.03	10.59	10.64	13.35	21.08	14.16	32.68	e22.31	10.54	12.58
16	9.87	15.29	12.29	10.44	10.68	13.47	21.04	13.99	34.02	21.39	10.35	11.61
17	9.78	14.89	11.91	10.35	10.76	13.51	20.62	13.93	34.74	20.47	10.60	10.89
18	9.83	14.45	11.73	10.28	10.83	13.44	20.10	13.99	35.23	19.58	12.24	10.28
19	9.67	14.03	11.65	10.25	10.81	13.28	19.54	13.95	35.43	18.72	12.99	9.86
20	9.62	13.75	11.47	10.24	10.78	12.96	18.72	13.95	35.38	17.89	14.64	9.68
21	9.61	13.55	11.44	10.22	10.75	12.56	17.67	14.00	35.03	17.00	15.53	9.62
22	9.54	13.37	11.52	10.18	10.73	12.26	16.60	14.28	34.47	16.19	15.27	9.52
23	9.52	13.13	11.75	10.14	10.72	12.13	15.73	14.65	33.93	15.97	14.47	9.44
24	9.45	12.92	11.81	10.06	10.70	12.16	14.93	15.03	33.31	15.76	13.95	9.29
25	9.42	12.71	11.64	10.02	10.69	12.37	14.33	15.37	32.50	15.35	13.66	9.20
26	9.62	12.34	11.44	9.98	10.69	13.02	14.01	15.28	31.55	14.91	13.34	9.01
27	10.56	11.94	11.24	9.94	10.66	14.28	13.72	14.95	30.57	14.48	13.13	8.85
28	11.96	11.30	11.14	9.92	10.62	16.26	13.46	14.70	29.02	14.04	14.29	8.68
29	13.46	10.86	11.17	10.01	---	19.00	13.20	14.98	27.52	13.51	15.63	8.57
30	14.63	10.39	11.25	10.15	---	22.89	12.98	15.65	27.04	12.92	16.12	8.37
31	17.16	---	11.33	10.24	---	26.12	---	16.20	---	12.61	15.72	---
MEAN	11.07	17.93	12.26	10.67	---	13.16	22.20	13.68	26.95	21.17	12.67	11.69
MAX	17.16	27.90	14.07	11.53	---	26.12	34.02	16.20	35.43	28.08	16.12	16.66
MIN	9.42	10.39	10.31	9.92	---	10.40	12.98	11.33	15.26	12.61	10.35	8.37

e Estimated

Miscellaneous discharge measurements for Red River of the North at Oslo, MN

Date	Discharge (ft^3/s)
April 5, 2005	31,500
June 20, 2005	35,000

05083500 RED RIVER OF THE NORTH AT OSLO, MN—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-77, 1986-96, 1998 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1040	31,500	8.1	6.7	404	416	10.5	4.0	38.7	17.3	7.10	.5	13.8

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	14	125	9.3	.13	11.0	59.7	223	19,700	<50	<1	2.6	32.5	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	<50	<1	<1	2.3	70	<1	40	4.65	<1	<1	<1.0	1.6

Remark codes used in this table:
< -- Less than.

05084000 FOREST RIVER NEAR FORDVILLE, ND

LOCATION.--Lat 48°11'50", long 97°43'49", on line between secs.32 and 33, T.155 N., R.55 W., Walsh County, Hydrologic Unit 09020308, on right bank 50 ft upstream from highway bridge, 0.5 mi downstream from South Branch, and 3 mi southeast of Fordville.

DRAINAGE AREA.--456 mi^2, of which about 120 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,035 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 21, 1951, nonrecording gage at site 50 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some regulation of high flows by temporary retention in several retarding basins above station. Retarding basins have a combined capacity of about 14,000 acre-ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	24	e17	e10	e7.8	e7.2	339	40	40	137	29	15
2	23	23	e17	e10	e8.0	e7.2	292	38	40	181	27	14
3	22	23	e17	e9.9	e8.1	e8.5	249	37	e44	172	33	15
4	20	23	e17	e9.8	e7.9	e9.3	227	35	e48	187	32	14
5	18	23	e17	e9.8	e7.7	e9.5	200	33	e47	193	27	14
6	18	21	e17	e9.8	e7.2	e9.0	176	32	e45	194	25	14
7	18	20	e17	e9.8	e7.1	e8.8	159	31	e44	194	23	14
8	17	20	e17	e9.8	e7.3	e9.0	143	34	e46	195	22	14
9	16	20	e17	e9.8	e7.4	e9.2	131	39	48	190	21	14
10	17	21	e16	e9.8	e7.5	e9.5	118	43	48	179	19	18
11	17	21	e16	e9.9	e7.6	e9.2	113	42	47	173	21	18
12	e19	21	e16	e8.9	e7.6	e8.9	112	41	59	161	21	16
13	e20	20	e16	e7.9	e7.6	e8.9	114	40	67	148	19	17
14	20	19	e16	e7.1	e7.3	e9.0	115	42	77	135	18	16
15	22	19	e16	e7.0	e7.1	e9.1	110	42	99	124	16	16
16	21	19	e16	e7.0	e7.0	e9.2	97	41	115	114	15	15
17	21	19	e16	e7.1	e7.0	e9.5	87	41	110	97	17	15
18	21	19	e15	e7.2	e7.0	e9.9	81	45	98	83	23	15
19	25	18	e15	e7.1	e7.1	e10	76	48	85	72	20	15
20	24	20	e14	e7.0	e7.1	e11	72	e49	77	63	18	15
21	24	18	e12	e7.0	e7.1	e12	67	e47	69	56	16	14
22	23	e18	e11	e7.0	e7.1	e13	62	e46	64	51	16	14
23	26	e17	e11	e7.0	e7.1	e15	58	e48	60	48	15	14
24	28	e17	e11	e7.1	e7.1	e17	56	e49	59	45	15	14
25	29	e17	e11	e7.0	e7.2	e19	53	48	55	42	16	15
26	28	e17	e11	e7.0	e7.2	e23	51	46	54	39	17	15
27	25	e17	e11	e7.0	e7.2	e30	48	45	61	36	16	14
28	24	e17	e11	e7.0	e7.2	e65	46	43	73	36	15	14
29	23	e17	e11	e7.1	---	e306	44	41	96	33	14	14
30	25	e17	e11	e7.3	---	470	42	39	100	32	14	15
31	24	---	e10	e7.5	---	378	---	37	---	30	14	---
TOTAL	682	585	446	252.7	205.6	1,529.9	3,538	1,282	1,975	3,440	614	447
MEAN	22.0	19.5	14.4	8.15	7.34	49.4	118	41.4	65.8	111	19.8	14.9
MAX	29	24	17	10	8.1	470	339	49	115	195	33	18
MIN	16	17	10	7.0	7.0	7.2	42	31	40	30	14	14
AC-FT	1,350	1,160	885	501	408	3,030	7,020	2,540	3,920	6,820	1,220	887

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

MEAN	10.8	10.1	8.17	6.99	8.09	70.8	210	69.5	38.2	29.8	14.1	9.57
MAX	57.9	36.5	19.3	16.3	38.4	353	1,182	1,037	255	232	280	53.3
(WY)	(1983)	(2001)	(1998)	(1986)	(1998)	(2004)	(1950)	(1950)	(1964)	(1982)	(1993)	(1993)
MIN	1.52	2.03	2.06	2.70	1.21	4.07	9.46	7.07	2.74	3.34	1.64	0.91
(WY)	(1941)	(1941)	(1941)	(1941)	(1963)	(1941)	(1991)	(1961)	(1940)	(1941)	(1945)	(1940)

05084000 FOREST RIVER NEAR FORDVILLE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	37,667.7		14,997.2			
ANNUAL MEAN	103		41.1		40.9	
HIGHEST ANNUAL MEAN					193	1950
LOWEST ANNUAL MEAN					6.37	1990
HIGHEST DAILY MEAN	4,960	Mar 28	470	Mar 30	10,900	Apr 18, 1950
LOWEST DAILY MEAN	7.8	Mar 7	7.0	Jan 15	0.00	Apr 1, 1940
ANNUAL SEVEN-DAY MINIMUM	8.0	Mar 10	7.0	Jan 20	0.00	Apr 1, 1940
MAXIMUM PEAK FLOW			590	Mar 30	[a]16,400	Apr 18, 1950
MAXIMUM PEAK STAGE			4.00	Mar 30	[b]14.48	Apr 18, 1950
ANNUAL RUNOFF (AC-FT)	74,710		29,750		29,640	
10 PERCENT EXCEEDS	204		104		60	
50 PERCENT EXCEEDS	19		19		9.3	
90 PERCENT EXCEEDS	8.4		7.3		4.0	

a From rating curve extended above 5,600 ft^3/s on basis of indirect measurement
b From floodmark
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.52	1.52	1.47	---	1.53	1.54	3.28	1.69	1.68	2.38	1.57	1.40
2	1.50	1.51	1.47	---	1.52	1.54	3.12	1.67	1.69	2.62	1.55	1.39
3	1.49	1.51	1.48	---	1.52	1.53	2.95	1.65	---	2.58	1.61	1.41
4	1.47	1.51	1.48	---	1.52	1.52	2.85	1.63	---	2.66	1.60	1.39
5	1.44	1.51	1.46	---	1.51	1.51	2.72	1.62	---	2.69	1.55	1.39
6	1.44	1.50	1.48	---	1.51	1.52	2.60	1.61	---	2.69	1.53	1.39
7	1.43	1.49	1.48	1.68	1.51	1.56	2.51	1.59	---	2.69	1.50	1.38
8	1.42	1.48	1.48	1.66	1.53	1.56	2.42	1.62	---	2.69	1.49	1.38
9	1.42	1.49	1.48	1.63	1.55	1.58	2.35	1.68	1.76	2.67	1.48	1.38
10	1.43	1.49	1.47	1.62	1.57	1.60	2.28	1.72	1.76	2.62	1.46	1.44
11	1.43	1.49	1.47	1.62	1.57	1.61	2.24	1.71	1.75	2.59	1.47	1.45
12	---	1.49	1.46	1.62	1.55	1.58	2.24	1.70	1.86	2.52	1.48	1.42
13	---	1.49	1.45	1.60	1.55	1.55	2.25	1.69	1.92	2.45	1.46	1.42
14	1.47	1.48	1.47	1.61	1.53	1.54	2.25	1.71	2.00	2.37	1.43	1.42
15	1.49	1.48	1.48	1.62	1.52	1.53	2.22	1.71	2.15	2.31	1.42	1.41
16	1.48	1.48	1.48	---	1.52	1.54	2.14	1.70	2.25	2.25	1.40	1.40
17	1.47	1.48	1.47	---	1.53	1.53	2.07	1.69	2.22	2.14	1.42	1.40
18	1.47	1.48	1.46	---	1.55	1.52	2.03	1.73	2.15	2.04	1.50	1.41
19	1.52	1.47	1.49	1.72	1.56	1.52	1.99	1.76	2.06	1.96	1.47	1.40
20	1.51	1.49	1.52	1.70	1.57	1.51	1.96	---	1.99	1.89	1.44	1.40
21	1.51	1.46	1.49	1.67	1.58	1.51	1.92	---	1.94	1.83	1.42	1.39
22	1.51	1.49	1.53	1.66	1.58	1.51	1.88	---	1.89	1.79	1.41	1.38
23	1.54	1.45	1.52	1.62	1.57	1.52	1.85	---	1.86	1.76	1.40	1.39
24	1.56	1.48	1.51	1.58	1.56	1.55	1.83	---	1.85	1.73	1.40	1.39
25	1.57	1.47	1.51	1.56	1.56	1.54	1.81	1.77	1.82	1.71	1.41	1.39
26	1.56	1.48	1.50	1.54	1.55	1.59	1.79	1.74	1.81	1.67	1.43	1.40
27	1.53	1.47	1.50	1.53	1.56	1.70	1.76	1.73	1.87	1.65	1.41	1.39
28	1.51	1.47	---	1.53	1.55	3.01	1.74	1.71	1.96	1.64	1.40	1.39
29	1.51	1.47	---	1.52	---	3.50	1.72	1.70	2.13	1.62	1.39	1.39
30	1.53	1.47	---	1.52	---	3.67	1.70	1.67	2.16	1.60	1.39	1.40
31	1.53	---	---	1.53	---	3.40	---	1.66	---	1.58	1.39	---
MEAN	---	1.49	---	---	1.54	1.79	2.22	---	---	2.17	1.46	1.40
MAX	---	1.52	---	---	1.58	3.67	3.28	---	---	2.69	1.61	1.45
MIN	---	1.45	---	---	1.51	1.51	1.70	---	---	1.58	1.39	1.38

05084000 FOREST RIVER NEAR FORDVILLE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1010	157	8.2	6.8	824	825	20.0	5.0	58.6	29.3	9.00	2	69.3
AUG													
16...	1310	15	8.3	8.3	994	998	30.0	19.7	84.4	41.2	6.50	1	65.2

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	35	164	17.3	.14	14.0	238	523	227	<50	<1	2.5	29.2	<1
AUG													
16...	27	262	17.7	.18	19.3	272	646	26.2	<50	<1	4.4	43.1	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	<50	<1	<1	1.9	40	<1	380	6.66	1	<1	<1.0	3.8
AUG												
16...	60	<1	3	1.4	70	<1	180	4.92	3	<1	<1.0	1.0

Remark codes used in this table:
< -- Less than.

05085000 FOREST RIVER AT MINTO, ND

LOCATION.--Lat 48°16'10", long 97°22'10", in SE¼ sec.31, T.156 N., R.52 W., Walsh County, Hydrologic Unit 09020308, on right bank 30 ft upstream from dam in Minto, 150 ft upstream from Burlington Northern Railway bridge, and 900 ft east of U.S. Highway 81.

DRAINAGE AREA.--740 mi^2, of which about 120 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1944 to current year.

REVISED RECORDS.--WSP 1438: 1948-50. WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 806.95 ft above National Geodetic Vertical Datum of 1929. Prior to July 15, 1954, nonrecording gage at site 400 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Occasionally during high stages, particularly when the channel is filled with snow, overflow occurs 0.5 mi below the municipality of Forest River and bypasses the gage 3 mi south of Minto and flows into Lake Ardoch. Bypass flow is not included in computation of discharge record for station at Minto.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	31	e18	e4.0	e5.6	e8.4	509	57	51	275	38	21
2	21	31	e18	e3.7	e5.7	e9.0	476	51	47	253	37	21
3	22	30	e17	e3.4	e5.8	e10	431	46	58	272	35	20
4	22	30	e17	e3.2	e5.8	e12	407	44	63	276	31	17
5	22	32	e16	e3.1	e5.8	e15	372	42	63	281	33	18
6	22	30	e16	e3.2	e5.8	e14	339	44	55	281	32	19
7	22	29	e15	e3.3	e5.9	e14	305	43	54	278	29	18
8	22	26	e16	e3.4	e6.1	e13	264	41	56	279	27	18
9	21	25	e16	e3.4	e6.5	e14	230	46	62	274	26	17
10	21	25	e16	e3.5	e7.0	e14	209	50	70	268	25	18
11	22	20	e16	e3.5	e7.6	e15	191	54	72	279	24	22
12	21	17	e16	e3.5	e8.0	e14	181	49	93	284	26	23
13	22	18	e16	e3.5	e8.0	e14	180	51	98	264	25	23
14	23	e20	e15	e3.5	e7.9	e14	175	51	122	244	24	24
15	26	e22	e14	e3.6	e7.8	e15	172	60	151	217	23	22
16	25	e23	e13	e3.6	e7.6	e15	170	60	187	197	21	21
17	25	e24	e12	e3.8	e7.5	e15	149	53	202	174	52	21
18	25	e22	e12	e4.0	e7.5	e15	145	63	199	147	74	22
19	25	e19	e12	e4.1	e7.4	e15	143	69	188	132	53	22
20	25	e18	e12	e4.2	e7.5	e15	132	68	163	119	45	21
21	26	e17	e11	e4.3	e7.5	e15	112	61	141	99	36	21
22	27	e16	e10	e4.4	e7.6	16	104	61	120	87	30	17
23	28	e14	e10	e4.4	e7.7	17	97	69	102	82	37	20
24	29	e16	e9.1	e4.5	e7.8	17	87	66	79	74	39	19
25	32	e17	e8.3	e4.6	e7.9	17	75	65	72	68	33	22
26	32	e19	e7.6	e4.6	e7.9	18	68	65	66	57	32	22
27	31	e19	e6.9	e4.6	e7.9	39	65	63	64	48	29	22
28	32	e19	e6.3	e4.6	e8.0	73	60	58	68	44	27	20
29	32	e19	e5.6	e4.8	---	168	56	54	79	43	25	22
30	31	e19	e5.0	e5.0	---	408	57	51	212	42	24	21
31	31	---	e4.4	e5.2	---	480	---	52	---	41	23	---
TOTAL	787	667	387.2	122.5	199.1	1,538.4	5,961	1,707	3,057	5,479	1,015	614
MEAN	25.4	22.2	12.5	3.95	7.11	49.6	199	55.1	102	177	32.7	20.5
MAX	32	32	18	5.2	8.0	480	509	69	212	284	74	24
MIN	21	14	4.4	3.1	5.6	8.4	56	41	47	41	21	17
AC-FT	1,560	1,320	768	243	395	3,050	11,820	3,390	6,060	10,870	2,010	1,220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2005, BY WATER YEAR (WY)

MEAN	10.6	10.4	6.24	3.67	3.78	77.9	303	99.8	52.6	37.5	17.7	10.5
MAX	59.1	32.4	20.9	15.8	50.2	559	1,573	1,515	267	348	328	69.0
(WY)	(1983)	(2001)	(1998)	(1998)	(1998)	(2004)	(1950)	(1950)	(1964)	(1997)	(1993)	(1993)
MIN	0.00	0.97	0.29	0.00	0.00	0.00	17.8	10.6	4.21	1.87	0.00	0.00
(WY)	(1991)	(1991)	(1990)	(1977)	(1961)	(1962)	(2000)	(1946)	(1991)	(1980)	(1946)	(1961)

05085000 FOREST RIVER AT MINTO, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1944 - 2005	
ANNUAL TOTAL	52,218.5		21,534.2			
ANNUAL MEAN	143		59.0		53.3	
HIGHEST ANNUAL MEAN					268	1950
LOWEST ANNUAL MEAN					4.36	1990
HIGHEST DAILY MEAN	5,700	Mar 29	509	Apr 1	11,600	Apr 19, 1950
LOWEST DAILY MEAN	4.4	Dec 31	3.1	Jan 5	0.00	Sep 5, 1945
ANNUAL SEVEN-DAY MINIMUM	6.3	Dec 25	3.3	Jan 3	0.00	Sep 5, 1945
MAXIMUM PEAK FLOW			552	Mar 31	[a]16,600	Apr 18, 1950
MAXIMUM PEAK STAGE			3.11	Mar 31	[b]11.80	Apr 18, 1950
ANNUAL RUNOFF (AC-FT)	103,600		42,710		38,590	
10 PERCENT EXCEEDS	303		177		84	
50 PERCENT EXCEEDS	23		24		9.3	
90 PERCENT EXCEEDS	8.1		5.8		0.50	

a From rating curve extended above 7,200 ft^3/s on basis of contracted opening measurement of peak flow
b From floodmark
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.46	1.51	1.41	1.23	1.22	1.34	3.00	1.60	1.57	2.31	1.49	1.39
2	1.45	1.51	1.41	1.23	1.22	1.37	2.91	1.57	1.54	2.24	1.48	1.39
3	1.46	1.50	1.40	1.24	1.22	1.38	2.78	1.54	1.60	2.30	1.47	1.39
4	1.46	1.50	1.40	1.26	1.22	1.33	2.71	1.53	1.63	2.31	1.44	1.36
5	1.46	1.52	1.40	1.29	1.23	1.31	2.60	1.51	1.63	2.33	1.47	1.36
6	1.46	1.50	1.40	1.30	1.25	1.31	2.50	1.53	1.59	2.33	1.47	1.38
7	1.46	1.49	1.39	1.28	1.28	1.31	2.40	1.52	1.59	2.31	1.45	1.37
8	1.46	1.48	1.39	1.26	1.29	1.34	2.27	1.51	1.59	2.32	1.44	1.36
9	1.45	1.47	1.40	1.26	1.28	1.35	2.17	1.54	1.62	2.30	1.43	1.35
10	1.45	1.47	1.40	1.26	1.28	1.33	2.11	1.56	1.66	2.29	1.42	1.37
11	1.46	1.43	1.39	1.25	1.25	1.33	2.05	1.58	1.67	2.32	1.42	1.40
12	1.46	1.40	1.40	1.24	1.25	1.36	2.02	1.56	1.75	2.34	1.43	1.41
13	1.46	1.42	1.40	1.25	1.25	1.38	2.02	1.57	1.78	2.27	1.42	1.41
14	1.47	1.47	1.42	1.26	1.26	1.40	2.00	1.57	1.86	2.21	1.42	1.41
15	1.48	1.47	1.39	1.26	1.27	1.36	2.00	1.61	1.96	2.13	1.41	1.40
16	1.48	1.50	1.37	1.27	1.29	1.33	1.99	1.61	2.07	2.07	1.39	1.39
17	1.47	1.51	1.38	1.27	1.35	1.35	1.92	1.58	2.12	2.00	1.57	1.39
18	1.47	1.50	1.36	1.26	1.36	1.35	1.91	1.63	2.12	1.92	1.68	1.40
19	1.47	1.42	1.39	1.24	1.35	1.36	1.90	1.65	2.08	1.87	1.59	1.40
20	1.47	1.48	1.36	1.23	1.33	1.36	1.87	1.65	2.01	1.83	1.55	1.39
21	1.48	1.40	1.33	1.23	1.32	1.34	1.80	1.61	1.95	1.76	1.50	1.39
22	1.49	1.44	1.33	1.23	1.32	1.31	1.78	1.62	1.88	1.72	1.46	1.36
23	1.49	1.38	1.31	1.23	1.34	1.32	1.76	1.65	1.82	1.70	1.50	1.38
24	1.50	1.42	1.28	1.22	1.36	1.32	1.72	1.64	1.74	1.67	1.51	1.38
25	1.52	1.41	1.26	---	1.34	1.32	1.68	1.63	1.71	1.65	1.48	1.40
26	1.52	1.45	1.24	---	1.36	1.33	1.65	1.63	1.69	1.59	1.47	1.40
27	1.51	1.46	1.23	1.25	1.33	1.46	1.63	1.63	1.68	1.55	1.45	1.40
28	1.52	1.44	1.23	1.23	1.31	1.65	1.61	1.60	1.70	1.53	1.44	1.39
29	1.52	1.43	1.23	1.22	---	1.98	1.59	1.59	1.74	1.52	1.42	1.40
30	1.51	1.42	1.22	1.22	---	2.71	1.60	1.57	2.13	1.52	1.42	1.39
31	1.51	---	1.23	1.22	---	2.91	---	1.57	---	1.51	1.41	---
MEAN	1.48	1.46	1.35	---	1.29	1.47	2.06	1.59	1.78	1.99	1.47	1.39
MAX	1.52	1.52	1.42	---	1.36	2.91	3.00	1.65	2.13	2.34	1.68	1.41
MIN	1.45	1.38	1.22	---	1.22	1.31	1.59	1.51	1.54	1.51	1.39	1.35

05085000 FOREST RIVER AT MINTO, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
13...	1225	181	747	12.0	104	8.2	8.0	920	945	16.8	8.2	80.0	37.6
MAY													
03...	1130	46	742	11.0	91	8.2	7.9	1,130	1,120	27.8	5.9	98.8	45.5
23...	1140	--	738	9.3	98	8.3	8.3	1,180	1,180	20.8	16.3	104	54.2
JUN													
21...	1230	143	746	6.5	79	8.0	8.1	1,550	1,550	45.4	23.6	141	78.4
JUL													
26...	1000	54	744	10.2	117	7.9	8.4	1,270	1,270	32.2	20.6	102	51.6
AUG													
15...	1130	23	742	9.2	101	8.3	8.4	1,050	1,050	22.0	18.2	88.1	45.6

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
13...	8.40	2	65.3	28	197	25.9	.17	16.9	274	617	309	48	.75
MAY													
03...	7.00	1	66.4	24	264	30.7	.19	9.84	323	733	92.4	14	.54
23...	8.10	1	69.6	23	297	33.7	.20	9.21	348	798	--	29	.67
JUN													
21...	10.8	2	120	27	309	26.8	.20	33.7	527	1,090	434	148	1.2
JUL													
26...	8.60	2	95.5	30	314	28.7	.20	26.9	367	846	127	17	.81
AUG													
15...	6.80	2	69.8	27	257	26.1	.18	16.7	294	688	44.3	22	.57

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
13...	.75	.013	<.010	1.18	1.17	.74	.74	.148	.208	1.9	1.9	20	20
MAY													
03...	.55	<.010	<.010	.222	.230	--	--	.031	.060	.76	.78	<10	<10
23...	.66	.012	<.010	.137	.140	.66	.65	.056	.084	.81	.80	20	20
JUN													
21...	1.1	.026	.040	.336	.360	1.2	1.0	.246	.348	1.6	1.4	120	80
JUL													
26...	.72	<.010	<.010	.796	.830	--	--	.219	.250	1.6	1.6	30	80
AUG													
15...	.55	.081	.080	.474	.460	.48	.47	.079	.106	1.0	1.0	30	30

05085000 FOREST RIVER AT MINTO, ND—Continued

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

Date	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
APR													
13...	<10	<50	<1	2.8	44.2	<1	60	<1	<1	1.7	20	<1	90
MAY													
03...	<10	<50	<1	2.2	40.2	<1	50	<1	<1	1.2	30	<1	160
23...	10	<50	<1	1.9	51.6	<1	60	<1	2	<1	20	<1	290
JUN													
21...	250	<50	<1	6.5	81.3	<1	100	<1	4	3.3	10	<1	120
JUL													
26...	80	<50	<1	7.1	54.7	<1	80	<1	<1	2.2	40	<1	120
AUG													
15...	120	<50	<1	6.9	47.6	<1	70	<1	5	1.4	40	<1	270

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
13...	7.28	2	<1	<1.0	3.0
MAY					
03...	5.54	1	<1	<1.0	2.0
23...	6.42	1	<1	<1.0	2.0
JUN					
21...	13.5	2	<1	<1.0	2.3
JUL					
26...	8.48	6	<1	<1.0	1.1
AUG					
15...	6.86	12	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05090000 PARK RIVER AT GRAFTON, ND

LOCATION.--Lat 48°25'29", long 97°24'42", in NE$^{1}/_{4}$ sec.13, T.157 N., R.53 W., Walsh County, Hydrologic Unit 09020310, on right bank just upstream of U.S. Highway 81 bridge in Grafton and 3.5 mi downstream from South Branch Park River.

DRAINAGE AREA.--695 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1931 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 955: 1941. WSP 1438: 1932, 1933(M), 1936-37(M), 1939(M), 1944. WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 811.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1984, gage located on right bank 30 ft upstream of Wakeman Avenue bridge. Datum of gage was 807.39 ft. Prior to Sept. 30, 1940, nonrecording gage at site 30 ft downstream at same datum. Oct. 1, 1940, to Sept. 17, 1946, nonrecording gage at site 2 mi downstream above masonry dam at same datum. Sept. 18, 1946, to July 25, 1952, nonrecording gage at site 30 ft downstream at same datum.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	39	10	e3.1	e23	e9.4	e720	74	112	1,010	19	7.4
2	20	40	9.8	e3.1	e39	e9.0	e1,300	70	98	1,580	18	8.5
3	13	41	e9.6	e3.2	e41	e8.5	e1,760	72	98	1,360	17	9.5
4	9.6	51	e9.6	e3.3	e41	e8.2	1,800	67	99	1,360	19	7.5
5	8.7	61	e9.6	e3.4	e39	e8.0	1,520	56	99	1,290	22	7.0
6	8.5	51	e9.6	e3.5	e37	e7.8	1,300	54	104	1,120	20	7.2
7	7.2	44	e9.6	e3.6	e36	e7.6	1,260	49	106	826	16	7.0
8	8.2	38	e9.2	e3.6	e36	e7.5	1,130	61	111	621	14	7.1
9	17	36	e8.8	e3.6	e35	e7.4	904	79	112	505	13	6.8
10	20	33	e8.8	e3.6	e34	e7.3	700	86	107	453	13	6.4
11	20	24	e8.6	e3.6	e34	e7.3	563	90	104	434	13	6.9
12	21	22	e7.6	e3.6	e34	e7.3	480	107	144	359	11	6.8
13	23	22	e7.2	e3.6	e33	e7.3	510	107	152	256	11	6.6
14	30	21	e7.0	e3.6	e31	e7.4	691	104	181	178	15	6.1
15	26	20	e7.0	e3.5	e30	e7.4	699	101	277	132	11	5.9
16	17	20	e7.0	e3.5	e29	e7.4	537	101	505	112	11	6.2
17	12	19	e6.5	e3.4	e27	e7.5	422	101	694	104	28	6.5
18	8.4	18	e5.8	e3.4	e25	e7.5	359	112	774	158	56	6.1
19	7.8	16	e5.6	e3.4	e23	e7.6	282	117	844	162	136	6.2
20	7.6	20	e5.0	e3.4	e22	e7.7	232	160	736	96	154	6.2
21	7.0	16	e4.4	e3.3	e21	e7.9	206	178	489	61	136	6.1
22	7.0	21	e3.8	e3.3	e18	e8.3	189	189	314	48	106	5.7
23	14	15	e3.5	e3.3	e17	e8.7	176	198	234	41	85	5.6
24	17	17	e3.3	e3.3	e15	e9.1	151	216	189	36	61	5.6
25	23	16	e3.1	e3.3	e13	e9.2	136	247	177	32	46	5.5
26	28	15	e3.1	e3.3	e11	e9.4	118	228	167	29	47	5.6
27	35	13	e3.0	e3.3	e11	e9.7	101	193	181	27	33	5.7
28	42	12	e3.0	e3.3	e10	e16	96	169	168	25	19	5.1
29	37	11	e3.0	e3.6	---	e40	92	151	274	22	12	6.0
30	29	11	e3.0	e6.0	---	e100	93	138	564	20	11	6.6
31	27	---	e3.0	e12	---	e290	---	129	---	20	9.4	---
TOTAL	579.0	783	198.1	117.0	765	663.4	18,527	3,804	8,214	12,477	1,182.4	195.4
MEAN	18.7	26.1	6.39	3.77	27.3	21.4	618	123	274	402	38.1	6.51
MAX	42	61	10	12	41	290	1,800	247	844	1,580	154	9.5
MIN	7.0	11	3.0	3.1	10	7.3	92	49	98	20	9.4	5.1
AC-FT	1,150	1,550	393	232	1,520	1,320	36,750	7,550	16,290	24,750	2,350	388

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2005, BY WATER YEAR (WY)

MEAN	5.30	4.10	2.61	1.53	2.88	81.6	423	119	57.3	39.1	15.3	9.49
MAX	69.9	31.3	17.4	13.9	45.7	654	2,051	2,071	576	441	569	185
(WY)	(1983)	(1981)	(1983)	(1983)	(1981)	(1995)	(1950)	(1950)	(1964)	(1997)	(1993)	(2002)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.00	0.00	0.00	0.00
(WY)	(1934)	(1934)	(1933)	(1932)	(1933)	(1936)	(1991)	(1939)	(1961)	(1990)	(1932)	(1932)

05090000 PARK RIVER AT GRAFTON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1931 - 2005	
ANNUAL TOTAL	61,718.44		47,505.3			
ANNUAL MEAN	169		130		63.5	
HIGHEST ANNUAL MEAN					353	1950
LOWEST ANNUAL MEAN					1.38	1990
HIGHEST DAILY MEAN	5,000	Mar 30	1,800	Apr 4	11,700	Apr 19, 1950
LOWEST DAILY MEAN	0.04	Jan 29	3.0	Dec 27	0.00	Aug 10, 1931
ANNUAL SEVEN-DAY MINIMUM	0.04	Jan 29	3.0	Dec 25	0.00	Aug 21, 1931
MAXIMUM PEAK FLOW			[a]1,900	Apr 4	[b]12,600	Apr 19, 1950
MAXIMUM PEAK STAGE			[c]11.35	Apr 3	[d]20.13	Apr 19, 1950
ANNUAL RUNOFF (AC-FT)	122,400		94,230		46,000	
10 PERCENT EXCEEDS	319		359		90	
50 PERCENT EXCEEDS	16		21		2.1	
90 PERCENT EXCEEDS	0.05		3.6		0.00	

a Gage height, 11.01 ft
b From rating curve extended above 9,000 ft^3/s
c Backwater from ice
d Site and datum then in use
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.49	7.52	7.32	7.16	7.53	7.23	9.39	7.57	7.70	9.54	7.33	7.21
2	7.44	7.52	7.31	7.17	7.52	7.22	10.15	7.56	7.65	10.51	7.32	7.23
3	7.38	7.53	7.32	7.18	7.51	7.21	10.86	7.56	7.65	10.16	7.31	7.25
4	7.34	7.56	7.33	7.19	7.49	7.21	10.86	7.54	7.65	10.16	7.32	7.21
5	7.32	7.59	7.32	7.19	7.48	7.22	10.43	7.51	7.65	10.03	7.35	7.20
6	7.32	7.56	7.33	7.19	7.48	7.23	10.06	7.50	7.67	9.74	7.33	7.21
7	7.30	7.54	7.33	7.19	7.51	7.22	9.98	7.48	7.69	9.21	7.29	7.20
8	7.31	7.52	7.32	7.19	7.50	7.21	9.76	7.52	7.70	8.84	7.27	7.20
9	7.42	7.51	7.32	7.19	7.47	7.21	9.35	7.59	7.70	8.63	7.26	7.20
10	7.45	7.49	7.31	7.19	7.45	7.22	8.99	7.61	7.69	8.52	7.26	7.19
11	7.45	7.44	7.31	7.19	7.47	7.21	8.77	7.62	7.68	8.49	7.26	7.20
12	7.45	7.43	7.31	7.19	7.47	7.21	8.63	7.69	7.81	8.33	7.24	7.20
13	7.46	7.43	7.29	7.19	7.48	7.21	8.68	7.69	7.84	8.10	7.24	7.19
14	7.51	7.42	7.27	7.19	7.46	7.20	8.97	7.68	7.92	7.93	7.28	7.18
15	7.48	7.42	7.28	7.19	7.45	7.20	8.98	7.67	8.15	7.79	7.24	7.17
16	7.42	7.42	7.27	7.18	7.44	7.21	8.73	7.66	8.62	7.73	7.23	7.18
17	7.37	7.41	7.27	7.18	7.42	7.21	8.50	7.66	8.97	7.69	7.36	7.19
18	7.32	7.40	7.27	7.18	7.44	7.20	8.35	7.71	9.12	7.87	7.52	7.18
19	7.31	7.37	7.24	7.17	7.44	7.20	8.16	7.72	9.24	7.89	7.80	7.18
20	7.30	7.42	7.24	7.17	7.44	7.20	8.04	7.85	9.05	7.66	7.86	7.18
21	7.29	7.38	7.23	7.17	7.43	7.20	7.98	7.91	8.59	7.53	7.79	7.18
22	7.29	7.42	7.20	7.17	7.42	7.21	7.94	7.94	8.23	7.49	7.69	7.17
23	7.39	7.38	7.17	7.16	7.40	7.22	7.90	7.96	8.06	7.46	7.62	7.17
24	7.42	7.39	7.15	7.17	e7.35	7.22	7.82	8.00	7.95	7.43	7.54	7.17
25	7.45	7.38	7.15	7.17	7.31	7.22	7.78	8.07	7.93	7.41	7.49	7.17
26	7.49	7.38	7.13	7.16	7.27	7.24	7.72	8.03	7.90	7.39	7.49	7.17
27	7.52	7.35	7.13	7.16	7.26	7.28	7.66	7.95	7.94	7.38	7.43	7.17
28	7.54	7.34	7.14	7.16	7.24	7.37	7.64	7.88	7.90	7.37	7.35	7.15
29	7.52	7.33	7.13	7.37	---	7.73	7.63	7.82	8.14	7.35	7.28	7.18
30	7.48	7.33	7.16	7.47	---	8.56	7.63	7.79	8.73	7.34	7.27	7.19
31	7.47	---	7.16	7.52	---	8.86	---	7.76	---	7.34	7.24	---
MEAN	7.41	7.44	7.25	7.20	7.43	7.33	8.78	7.73	8.08	8.27	7.40	7.19
MAX	7.54	7.59	7.33	7.52	7.53	8.86	10.86	8.07	9.24	10.51	7.86	7.25
MIN	7.29	7.33	7.13	7.16	7.24	7.20	7.63	7.48	7.65	7.34	7.23	7.15

e Estimated

05090000 PARK RIVER AT GRAFTON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
13...	1200	493	--	11.6	--	8.0	6.7	--e	673	7.8	7.8	57.9	23.0
MAY													
03...	0855	71	741	10.6	85	8.1	7.7	1,220	1,220	11.0	4.9	109	46.9
23...	1000	--	737	8.7	91	8.2	8.2	1,260	1,260	18.3	15.9	112	52.2
JUN													
21...	0940	528	744	6.9	83	7.8	8.0	1,210	1,210	22.1	23.0	101	44.4
JUL													
18...	1525	163	736	9.0	109	9.0	8.3	1,330	1,350	19.0	22.9	124	54.1
AUG													
15...	0950	11	740	7.1	79	8.1	8.2	1,400	1,400	--	19.1	104	54.3

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
13...	8.00	1	43.0	27	151	27.2	.25	19.5	152	411	571	166	.97
MAY													
03...	9.10	2	83.7	28	262	62.8	.31	17.7	323	798	157	20	.61
23...	8.20	2	78.3	25	273	54.4	.29	10.9	345	818	--	38	.78
JUN													
21...	11.2	2	88.0	30	246	35.3	.28	32.2	348	782	1,160	113	1.2
JUL													
18...	9.80	2	92.9	27	319	52.4	.34	32.2	357	885	403	57	.78
AUG													
15...	8.80	2	108	32	314	84.6	.35	21.8	357	908	26.8	28	.69

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
13...	.79	.123	.108	1.72	1.68	.85	.68	.255	.361	2.7	2.5	10	10
MAY													
03...	.60	<.010	.021	.985	1.03	--	.58	.136	.165	1.6	1.6	10	10
23...	.71	.033	<.010	.365	.350	.74	.68	.090	.134	1.1	1.1	20	20
JUN													
21...	1.0	.061	.056	.932	.960	1.2	.97	.285	.360	2.1	2.0	400	250
JUL													
18...	.71	<.010	<.010	.549	.570	--	--	.238	.300	1.3	1.3	130	180
AUG													
15...	.66	.029	.012	.061	.060	.66	.64	.083	.112	.75	.71	40	40

05090000 PARK RIVER AT GRAFTON, ND—Continued

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

Date	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
APR													
13...	<10	<50	<1	3.1	27.9	<1	70	<1	<1	2.4	<10	<1	60
MAY													
03...	<10	<50	<1	2.7	36.7	<1	100	<1	<1	1.9	<10	<1	220
23...	<10	<50	<1	2.7	41.3	<1	100	<1	2	1.5	20	<1	80
JUN													
21...	1,000	<50	<1	6.0	58.3	<1	140	<1	3	3.7	<10	<1	40
JUL													
18...	170	<50	<1	7.5	51.1	<1	190	<1	9	2.2	30	<1	110
AUG													
15...	460	<50	<1	10.5	54.5	<1	210	<1	8	2.4	50	<1	250

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
13...	7.65	2	<1	<1.0	2.0
MAY					
03...	6.72	2	<1	<1.0	3.2
23...	7.24	2	<1	<1.0	2.2
JUN					
21...	12.1	3	<1	<1.0	2.4
JUL					
18...	10.7	5	<1	<1.0	3.0
AUG					
15...	9.19	17	<1	<1.0	1.1

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

05092000 RED RIVER OF THE NORTH AT DRAYTON, ND

LOCATION.--Lat 48°34'20", long 97°08'50", in SE¼SE¼SE¼ sec.24, T.159 N., R.51 W., Pembina County, Hydrologic Unit 09020311, on downstream side of bridge on North Dakota State Highway 66, at the North Dakota-Minnesota border, 1.5 mi northeast of Drayton, and at mile 206.7.

DRAINAGE AREA.--34,800 mi^2, approximately, includes 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to June 1937, April 1941 to current year (fragmentary prior to April 1949).

REVISED RECORDS.--WSP 1388: 1949-50. WSP 1728: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 755.00 ft above National Geodetic Vertical Datum of 1929 (Minnesota highway bench mark). Prior to Nov. 30, 1954, nonrecording gage at site 1.5 mi upstream at datum 1.59 ft higher.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1897 reached a stage of about 41 ft at site and datum in use prior to Nov. 30, 1954.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,330	10,100	e3,690	e2,310	e2,200	e2,160	e10,800	6,460	10,300	24,700	6,280	8,350
2	6,150	14,000	e3,550	e2,300	e2,290	e2,190	e16,300	6,200	10,500	24,300	5,990	7,470
3	5,760	17,300	e3,430	e2,300	e2,340	e2,220	e25,900	5,940	10,500	23,800	5,710	6,430
4	5,330	19,800	e3,450	e2,300	e2,350	e2,250	e29,100	5,740	10,600	23,300	5,370	5,440
5	4,950	21,500	e3,580	e2,290	e2,330	e2,270	e30,900	5,580	11,000	22,800	4,990	4,840
6	4,690	22,500	e3,680	e2,290	e2,290	e2,300	30,600	5,390	11,700	22,200	4,680	4,410
7	4,490	22,700	e3,740	e2,280	e2,220	e2,310	28,900	5,170	11,900	22,200	4,520	4,300
8	4,350	20,700	e3,810	e2,280	e2,210	e2,320	27,800	5,020	13,200	22,200	4,390	5,120
9	4,280	19,700	e3,880	e2,270	e2,210	e2,330	26,400	5,580	15,500	22,100	4,340	7,200
10	4,180	18,500	e3,920	e2,260	e2,220	e2,430	24,600	6,240	17,700	21,900	4,640	8,530
11	4,060	16,800	e3,990	e2,250	e2,230	e2,460	22,400	6,150	19,400	21,500	4,860	8,650
12	4,000	14,800	e4,000	e2,250	e2,230	e2,460	19,900	6,670	21,600	21,100	4,790	8,310
13	3,950	12,600	e4,000	e2,180	e2,230	e2,460	17,500	7,540	24,000	20,400	4,550	7,870
14	3,940	10,700	e3,950	e2,130	e2,200	e2,460	16,600	8,120	26,300	19,500	4,240	7,280
15	3,900	9,300	e3,850	e2,090	e2,160	e2,470	16,100	8,300	28,200	18,300	4,070	6,430
16	3,840	8,440	e3,700	e2,050	e2,060	e2,510	15,800	8,100	29,400	16,900	3,950	5,390
17	3,720	7,910	e3,550	e2,020	e2,000	e2,580	15,500	7,870	30,200	15,300	3,920	4,720
18	3,660	7,550	e3,390	e2,010	e1,910	e2,650	15,000	7,760	30,600	13,800	5,310	4,220
19	3,660	7,230	e3,200	e2,010	e1,900	e2,750	14,600	7,690	30,900	12,900	7,110	3,820
20	3,590	6,990	e3,080	e2,000	e1,900	e2,850	14,000	7,580	30,900	12,100	8,490	3,640
21	3,570	6,660	e2,950	e1,990	e1,910	e2,950	13,300	7,540	31,100	11,400	10,200	3,640
22	3,540	6,400	e2,790	e1,950	e1,930	e3,050	12,700	7,620	31,100	10,700	11,400	3,550
23	3,550	6,180	e2,640	e1,940	e1,950	e3,190	11,900	7,870	31,000	10,400	11,400	3,400
24	3,540	5,930	e2,520	e1,940	e1,980	e3,200	11,200	8,220	30,400	e9,830	10,500	3,310
25	3,510	5,730	e2,480	e1,940	e2,060	e3,250	10,100	8,790	29,700	e9,510	9,330	3,140
26	3,500	5,540	e2,470	e1,930	e2,100	e3,460	9,020	9,240	28,800	e9,150	8,240	3,080
27	3,630	5,060	e2,430	e1,900	e2,130	e3,800	8,230	9,320	27,800	e8,700	7,360	2,990
28	4,100	4,580	e2,400	e1,900	e2,140	e4,110	7,600	9,150	26,800	e8,380	6,950	2,900
29	4,890	3,800	e2,390	e1,960	---	e4,510	7,110	9,020	25,700	e7,930	7,550	2,850
30	5,900	e3,780	e2,350	e2,010	---	e4,950	6,750	9,270	25,000	e7,340	8,440	2,760
31	7,230	---	e2,330	e2,110	---	e7,000	---	9,820	---	6,840	8,790	---
TOTAL	135,790	342,780	101,190	65,440	59,680	91,900	516,610	228,960	681,800	501,480	202,360	154,040
MEAN	4,380	11,430	3,264	2,111	2,131	2,965	17,220	7,386	22,730	16,180	6,528	5,135
MAX	7,230	22,700	4,000	2,310	2,350	7,000	30,900	9,820	31,100	24,700	11,400	8,650
MIN	3,500	3,780	2,330	1,900	1,900	2,160	6,750	5,020	10,300	6,840	3,920	2,760
AC-FT	269,300	679,900	200,700	129,800	118,400	182,300	1,025,000	454,100	1,352,000	994,700	401,400	305,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)

MEAN	2,003	2,055	1,473	1,202	1,164	3,372	15,360	9,495	6,484	5,739	2,732	2,241
MAX	5,194	11,840	4,168	2,679	2,598	16,290	54,710	58,890	23,420	28,240	21,580	12,140
(WY)	(1995)	(2001)	(1999)	(2001)	(1998)	(1998)	(1997)	(1950)	(1962)	(1975)	(1993)	(1999)
MIN	317	277	149	174	201	280	1,275	938	676	348	243	329
(WY)	(1991)	(1977)	(1977)	(1990)	(1977)	(1962)	(1981)	(1977)	(1977)	(1988)	(1977)	(1988)

05092000 RED RIVER OF THE NORTH AT DRAYTON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1949 - 2005	
ANNUAL TOTAL	2,231,535		3,082,030			
ANNUAL MEAN	6,097		8,444		4,465	
HIGHEST ANNUAL MEAN					11,280	1997
LOWEST ANNUAL MEAN					536	1977
HIGHEST DAILY MEAN	37,000	Apr 2	31,100	Jun 21	124,000	Apr 24, 1997
LOWEST DAILY MEAN	430	Feb 3	1,900	Jan 27	110	Dec 23, 1989
ANNUAL SEVEN-DAY MINIMUM	431	Feb 2	1,930	Feb 18	118	Dec 28, 1989
MAXIMUM PEAK FLOW			[a]31,200	Jun 21	124,000	Apr 24, 1997
MAXIMUM PEAK STAGE			37.16	Jun 24	45.55	Apr 24, 1997
INSTANTANEOUS LOW FLOW					7.7	Oct 16, 1936
ANNUAL RUNOFF (AC-FT)	4,426,000		6,113,000		3,235,000	
10 PERCENT EXCEEDS	16,900		22,200		10,400	
50 PERCENT EXCEEDS	3,700		5,310		1,970	
90 PERCENT EXCEEDS	520		2,200		500	

a Gage height, 37.00 ft
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.81	17.38	13.13	12.33	12.14	12.50	24.52	14.93	17.55	36.00	14.81	16.22
2	14.69	20.14	12.94	12.36	12.15	12.51	27.91	14.75	17.67	36.15	14.61	15.62
3	14.41	22.61	12.76	12.37	12.17	12.53	30.79	14.58	17.67	36.28	14.42	14.91
4	14.09	24.48	12.87	12.38	12.19	12.58	33.47	14.44	17.71	36.38	14.19	14.24
5	13.82	25.79	13.12	12.41	12.19	12.56	35.26	14.33	17.97	36.46	13.93	13.83
6	13.63	26.55	13.20	12.42	12.20	12.51	36.17	14.20	18.47	36.44	13.72	13.54
7	13.49	26.85	13.34	12.44	12.20	12.41	36.58	14.05	18.64	36.35	13.61	13.46
8	13.39	26.70	13.50	12.44	12.23	12.36	36.62	13.95	19.59	36.26	13.52	14.02
9	13.34	26.08	13.53	12.45	12.22	12.46	36.32	14.33	21.30	36.06	13.48	15.44
10	13.26	25.06	13.65	12.43	12.25	12.61	35.70	14.78	22.88	35.73	13.69	16.34
11	13.17	23.70	13.83	12.40	12.31	12.63	34.82	14.72	24.16	35.36	13.84	16.42
12	13.13	22.06	14.00	12.34	12.29	12.71	33.74	15.07	25.82	34.88	13.80	16.19
13	13.10	20.34	14.10	12.27	12.32	12.88	32.44	15.67	27.68	34.27	13.63	15.89
14	13.09	18.82	13.97	12.24	12.33	13.15	31.06	16.06	29.40	33.44	13.42	15.49
15	13.06	17.70	13.81	12.24	12.28	13.49	29.79	16.18	31.25	32.42	13.31	14.91
16	13.02	16.91	13.56	12.21	12.26	13.84	28.72	16.05	32.69	31.24	13.22	14.20
17	12.93	16.36	13.26	12.16	12.29	14.02	27.62	15.89	33.90	29.91	13.20	13.74
18	12.89	15.95	12.98	12.16	12.37	14.10	26.41	15.82	34.87	28.51	14.15	13.41
19	12.89	15.57	12.81	12.12	12.43	14.08	25.21	15.77	35.65	26.98	15.37	13.13
20	12.84	15.27	12.65	12.14	12.48	14.00	23.93	15.70	36.24	25.41	16.31	13.01
21	12.82	15.03	12.52	12.15	12.47	13.83	22.55	15.66	36.68	23.88	17.43	13.01
22	12.80	14.86	12.41	12.13	12.47	13.58	21.17	15.72	36.93	22.44	18.24	12.95
23	12.81	14.71	12.36	12.13	12.45	13.34	19.73	15.89	37.08	21.19	18.25	12.85
24	12.80	14.53	12.40	12.12	12.49	13.17	18.44	16.13	37.10	20.29	17.63	12.79
25	12.78	14.39	12.44	12.10	12.52	13.08	17.42	16.51	37.01	19.49	16.87	12.67
26	12.77	14.25	12.42	12.04	12.54	13.15	16.67	16.82	36.81	18.61	16.14	12.63
27	12.86	13.90	12.36	12.01	12.58	13.44	16.14	16.87	36.52	17.78	15.55	12.57
28	13.21	13.55	12.29	12.03	12.55	14.24	15.70	16.76	36.24	17.02	15.26	12.51
29	13.78	12.99	12.24	11.99	---	15.74	15.37	16.66	35.81	16.35	15.67	12.48
30	14.51	13.09	12.27	12.01	---	18.19	15.13	16.83	35.76	15.73	16.28	12.41
31	15.42	---	12.29	12.10	---	21.08	---	17.21	---	15.19	16.51	---
MEAN	13.41	18.85	13.00	12.23	12.33	13.64	26.85	15.56	28.90	28.47	14.97	14.03
MAX	15.42	26.85	14.10	12.45	12.58	21.08	36.62	17.21	37.10	36.46	18.25	16.42
MIN	12.77	12.99	12.24	11.99	12.14	12.36	15.13	13.95	17.55	15.19	13.20	12.41

05092000 RED RIVER OF THE NORTH AT DRAYTON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
07...	1055	28,900	--	7.9	6.6	419	437	8.0	4.0	39.8	17.3	7.50	.5
JUL													
18...	1310	13,600	733	8.0	8.1	839	855	19.2	25.9	75.4	38.4	8.00	1

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
07...	15.3	16	125	15.6	.14	10.9	61.5	234	19,000	<50	<1	2.6	30.8
JUL													
18...	41.6	20	230	31.1	.17	20.9	181	516	19,600	<50	<1	7.1	63.0

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
07...	<1	<50	<1	<1	2.7	40	<1	40	4.76	<1	<1	<1.0	1.1
JUL													
18...	<1	120	<1	1	3.0	20	<1	10	7.11	2	<1	<1.0	2.4

Remark codes used in this table:
< -- Less than.

05099100 SNOWFLAKE CREEK NEAR SNOWFLAKE, MANITOBA
(International gaging station)

LOCATION.--Lat 49°01'17", long 98°36'13", in SW¼ sec.10, T.1, R.9 W., first meridian, Hydrologic Unit 09020313, 200 ft upstream from road crossing, 2.5 mi east, and 1.5 mi south of Snowflake, Manitoba.

DRAINAGE AREA.--348 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder since March 1968 and nonrecording gage prior thereto. Datum of gage is Geodetic Survey of Canada Datum of 1929. Prior to Jan. 1, 1987, recording gage at same site at datum of 1,221.66 ft above Geodetic Survey of Canada Datum of 1929. Prior to Apr. 2, 1964, nonrecording gage at present site and datum. Apr. 2, 1964, to May 10, 1965, nonrecording gage at site 0.5 mi downstream at present datum.

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by the Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	7.9	e0.32	e0.00	e0.00	e0.00	e4.2	173	25	555	170	39
2	2.2	5.6	e0.21	e0.00	e0.00	e0.00	e13	153	27	399	160	34
3	2.1	9.5	e0.18	e0.00	e0.00	e0.00	e36	143	23	336	149	33
4	2.4	6.6	e0.14	e0.00	e0.00	e0.00	e140	128	22	312	142	32
5	2.8	5.8	e0.14	e0.00	e0.00	e0.00	e477	110	20	285	136	30
6	3.5	6.3	e0.14	e0.00	e0.00	e0.00	e420	97	17	295	128	28
7	3.2	4.4	e0.14	e0.00	e0.00	e0.00	654	87	15	328	120	25
8	3.3	5.3	e0.14	e0.00	e0.00	e0.00	728	92	17	424	113	25
9	2.3	5.5	e0.14	e0.00	e0.00	e0.00	731	80	28	399	106	24
10	3.0	4.0	e0.14	e0.00	e0.00	e0.00	710	72	22	385	100	23
11	2.9	2.3	e0.14	e0.00	e0.00	e0.00	686	59	20	424	97	21
12	2.7	3.1	e0.14	e0.00	e0.00	e0.00	717	57	80	406	94	18
13	2.7	3.1	e0.14	e0.00	e0.00	e0.00	735	55	65	389	87	17
14	2.8	3.1	e0.11	e0.00	e0.00	e0.00	664	41	106	378	83	16
15	4.0	2.9	e0.11	e0.00	e0.00	e0.00	618	40	112	364	77	15
16	2.3	3.9	e0.11	e0.00	e0.00	e0.00	569	37	69	352	72	12
17	2.1	3.1	e0.07	e0.00	e0.00	e0.00	530	34	44	389	71	17
18	2.4	2.9	e0.07	e0.00	e0.00	e0.00	512	33	33	371	71	12
19	5.5	2.2	e0.07	e0.00	e0.00	e0.00	456	31	30	341	70	11
20	5.5	4.3	e0.04	e0.00	e0.00	e0.00	438	30	24	320	66	9.6
21	4.8	1.9	e0.00	e0.00	e0.00	e0.00	417	48	21	295	60	7.1
22	5.7	2.1	e0.00	e0.00	e0.00	e0.00	371	57	19	276	58	4.5
23	4.4	2.0	e0.00	e0.00	e0.00	e0.00	357	46	18	258	54	3.9
24	5.5	1.9	e0.00	e0.00	e0.00	e0.00	334	39	15	246	54	4.2
25	6.2	1.8	e0.00	e0.00	e0.00	e0.00	295	32	13	229	52	3.0
26	6.9	1.5	e0.00	e0.00	e0.00	e0.00	267	27	13	217	49	2.9
27	6.8	1.1	e0.00	e0.00	e0.00	e0.00	253	26	118	212	46	2.9
28	8.5	e0.81	e0.00	e0.00	e0.00	e0.04	239	26	96	208	43	2.4
29	7.5	e0.53	e0.00	e0.00	---	e0.11	220	25	523	196	42	2.3
30	4.3	e0.42	e0.00	e0.00	---	e0.35	199	24	1,090	188	41	2.4
31	6.1	---	e0.00	e0.00	---	e1.2	---	23	---	178	41	---
TOTAL	126.8	105.86	2.69	0.00	0.00	1.70	12,790.2	1,925	2,725	9,955	2,652	477.2
MEAN	4.09	3.53	0.09	0.00	0.00	0.05	426	62.1	90.8	321	85.5	15.9
MAX	8.5	9.5	0.32	0.00	0.00	1.2	735	173	1,090	555	170	39
MIN	2.1	0.42	0.00	0.00	0.00	0.00	4.2	23	13	178	41	2.3
AC-FT	252	210	5.3	0.00	0.00	3.4	25,370	3,820	5,410	19,750	5,260	947

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

MEAN	5.13	2.25	0.25	0.04	0.14	8.38	156	87.8	27.3	28.5	12.7	6.14
MAX	70.5	39.9	7.67	1.36	4.90	74.6	668	945	131	529	139	99.7
(WY)	(1995)	(1995)	(1995)	(1995)	(1981)	(1995)	(1995)	(1997)	(2002)	(1997)	(1997)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.06	0.00	0.00	0.00	0.00
(WY)	(1962)	(1962)	(1962)	(1962)	(1962)	(1962)	(1973)	(1988)	(1962)	(1961)	(1961)	(1961)

05099100 SNOWFLAKE CREEK NEAR SNOWFLAKE, MANITOBA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1961 - 2005	
ANNUAL TOTAL	28,296.05		30,761.45			
ANNUAL MEAN	77.3		84.3		28.5	
HIGHEST ANNUAL MEAN					197	1997
LOWEST ANNUAL MEAN					0.14	2000
HIGHEST DAILY MEAN	1,000	Apr 7	1,090	Jun 30	2,160	Apr 30, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Dec 21	0.00	Mar 1, 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Dec 21	0.00	Mar 1, 1961
MAXIMUM PEAK FLOW			(a)		2,710	Jul 12, 1997
MAXIMUM PEAK STAGE			1,228.47	Jun 30	1,232.08	Apr 24, 1997
ANNUAL RUNOFF (AC-FT)	56,130		61,020		20,640	
10 PERCENT EXCEEDS	186		335		52	
50 PERCENT EXCEEDS	6.2		6.1		0.06	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Unavailable
e Estimated

05099150 MOWBRAY CREEK NEAR MOWBRAY, MANITOBA
(International gaging station)

LOCATION.--Lat 49°00'00", long 98°27'15", in SE¼ sec.3, T.1, R.8 W., first meridian, Hydrologic Unit 09020313, on downstream side of bridge on Municipal Road on international boundary and 1.5 mi east of Mowbray, Manitoba.

DRAINAGE AREA.--93.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1962 to current year (seasonal records only most years).

GAGE.--Water-stage recorder. Datum of gage is Geodetic Survey of Canada Datum of 1929. Nonrecording gage prior to 1971.

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by the Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.2	0.57	e0.00	e0.00	e0.00	e1.8	11	5.7	424	4.1	0.74
2	4.5	2.8	0.49	e0.00	e0.00	e0.00	54	10	6.0	442	3.7	0.71
3	3.5	2.5	0.49	e0.00	e0.00	e0.00	215	9.6	5.7	512	3.4	0.46
4	3.1	2.1	0.42	e0.00	e0.00	e0.00	523	8.9	5.2	477	3.3	0.39
5	2.3	1.9	0.35	e0.00	e0.00	e0.00	703	7.8	4.4	452	2.4	0.46
6	1.6	1.8	0.28	e0.00	e0.00	e0.00	654	6.7	4.0	406	2.6	0.39
7	2.2	1.7	0.28	e0.00	e0.00	e0.00	615	6.3	3.7	352	2.0	0.42
8	5.0	1.6	0.28	e0.00	e0.00	e0.00	558	7.6	6.9	336	1.7	0.49
9	3.1	1.3	0.28	e0.00	e0.00	e0.00	516	8.1	8.7	271	2.1	0.46
10	2.0	1.4	0.28	e0.00	e0.00	e0.00	435	8.6	8.3	203	1.3	0.39
11	1.3	1.2	0.28	e0.00	e0.00	e0.00	357	8.2	7.3	229	e1.1	0.25
12	1.1	1.2	0.25	e0.00	e0.00	e0.00	330	20	21	178	1.1	0.18
13	1.1	1.1	0.25	e0.00	e0.00	e0.00	317	18	51	121	0.85	0.35
14	1.1	1.2	0.25	e0.00	e0.00	e0.00	265	16	69	79	0.81	0.28
15	1.1	1.2	0.25	e0.00	e0.00	e0.00	190	14	92	51	0.57	0.18
16	1.1	1.3	0.25	e0.00	e0.00	e0.00	125	14	90	36	0.53	0.11
17	1.1	2.2	0.21	e0.00	e0.00	e0.00	82	11	75	32	0.57	0.18
18	1.1	2.4	0.18	e0.00	e0.00	e0.00	67	8.6	56	26	0.64	0.11
19	1.5	1.9	0.04	e0.00	e0.00	e0.00	63	7.2	38	21	1.1	0.14
20	1.6	1.9	0.00	e0.00	e0.00	e0.00	46	6.9	34	17	1.7	0.07
21	1.7	5.4	0.00	e0.00	e0.00	e0.00	34	12	40	14	0.95	0.04
22	2.0	9.9	0.00	e0.00	e0.00	e0.00	26	26	40	12	0.67	0.04
23	7.5	7.2	0.00	e0.00	e0.00	e0.00	22	31	34	9.9	0.57	0.07
24	12	5.7	0.00	e0.00	e0.00	e0.00	20	22	24	8.3	1.0	0.11
25	9.5	5.2	0.00	e0.00	e0.00	e0.00	17	15	18	7.1	17	0.07
26	7.3	3.8	0.00	e0.00	e0.00	e0.00	15	11	16	6.3	19	0.07
27	6.3	2.8	0.00	e0.00	e0.00	e0.00	14	8.3	173	5.9	11	0.18
28	5.4	1.6	0.00	e0.00	e0.00	e0.00	13	7.3	134	5.8	5.8	0.00
29	4.5	0.88	0.00	e0.00	---	e0.04	13	6.3	287	5.4	3.6	0.00
30	4.0	0.71	0.00	e0.00	---	e0.18	12	5.7	498	4.8	2.0	0.00
31	3.7	---	0.00	e0.00	---	e0.35	---	5.2	---	4.3	1.3	---
TOTAL	109.3	79.09	5.68	0.00	0.00	0.57	6,302.8	358.3	1,855.9	4,748.8	98.46	7.34
MEAN	3.53	2.64	0.18	0.00	0.00	0.02	210	11.6	61.9	153	3.18	0.24
MAX	12	9.9	0.57	0.00	0.00	0.35	703	31	498	512	19	0.74
MIN	1.1	0.71	0.00	0.00	0.00	0.00	1.8	5.2	3.7	4.3	0.53	0.00
AC-FT	217	157	11	0.00	0.00	1.1	12,500	711	3,680	9,420	195	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY)

MEAN	2.01	0.95	0.07	0.00	0.23	14.0	88.8	19.5	11.1	12.2	8.21	1.90
MAX	56.5	16.4	1.35	0.08	5.68	122	344	159	69.0	189	161	28.6
(WY)	(1995)	(1995)	(1995)	(1995)	(1981)	(1995)	(1997)	(1974)	(2002)	(1997)	(1995)	(1995)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.01	0.00	0.00	0.00	0.00
(WY)	(1963)	(1963)	(1963)	(1963)	(1963)	(1962)	(2000)	(1973)	(1968)	(1968)	(1962)	(1962)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005	
ANNUAL TOTAL	11,451.32		13,566.24			
ANNUAL MEAN	31.3		37.2		16.7	
HIGHEST ANNUAL MEAN					57.9	1997
LOWEST ANNUAL MEAN					0.59	1963
HIGHEST DAILY MEAN	1,090	Apr 2	703	Apr 5	1,350	Apr 24, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Dec 20	0.00	Mar 1, 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Dec 20	0.00	Mar 1, 1962
MAXIMUM PEAK FLOW			816	Apr 4	1,470	Apr 23, 1997
MAXIMUM PEAK STAGE			1,534.54	Apr 4	1,534.83	Apr 21, 1997
ANNUAL RUNOFF (AC-FT)	22,710		26,910		12,080	
10 PERCENT EXCEEDS	41		71		21	
50 PERCENT EXCEEDS	1.6		1.3		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

05099300 PEMBINA RIVER NEAR WINDYGATES, MANITOBA
(International gaging station)

LOCATION.--Lat 49°01'53", long 98°16'40", in SE¼ sec.13, T.1, R.7 W., first meridian, Hydrologic Unit 09020313, on left bank 0.2 mi downstream from bridge and 3 mi northeast of Windygates, Manitoba.

DRAINAGE AREA.--3,020 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is Geodetic Survey of Canada datum of 1929. Prior to Jan. 1, 1985, datum of gage at 1,102.02 ft above Geodetic Survey of Canada Datum of 1929.

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	134	e101	e39	e39	e40	e813	e1,590	890	3,080	e1,910	636
2	164	127	e104	e39	e39	e41	e1,240	e1,500	873	2,600	e1,840	633
3	165	124	e101	e40	e39	e41	e1,700	e1,410	848	2,570	e1,790	640
4	170	122	e94	e41	e39	e42	e2,820	e1,320	827	e2,210	e1,720	608
5	e159	122	e88	e41	e40	e42	e4,060	e1,250	806	e1,910	e1,640	580
6	148	123	e78	e42	e40	e43	e3,920	e1,220	777	e2,010	e1,590	548
7	e127	121	e96	e42	e40	e44	3,470	e1,180	784	e2,170	e1,530	530
8	130	118	e84	e41	e41	e45	3,170	e1,170	781	e2,520	e1,460	509
9	134	e114	e76	e41	e41	e45	2,870	e1,150	908	2,790	e1,410	484
10	140	113	e71	e40	e41	e44	2,740	e1,130	876	e3,260	e1,360	456
11	141	e108	e74	e40	e41	e43	2,570	e1,110	845	4,420	1,330	435
12	138	e108	e71	e40	e41	e43	2,590	e1,080	1,080	e4,380	1,240	410
13	139	e108	e60	e41	e41	e42	2,820	e1,060	e1,180	e4,170	1,180	399
14	143	e107	e69	e41	e41	e42	2,740	e1,040	e1,420	e3,890	e1,140	371
15	146	e107	e72	e41	e40	e42	2,650	e1,020	e1,640	e3,710	1,110	360
16	145	107	e64	e42	e40	e42	2,570	e1,000	e1,410	e3,520	1,070	335
17	146	101	e65	e42	e39	e42	2,550	1,000	e1,310	e3,510	1,060	399
18	148	100	e64	e41	e38	e43	2,540	965	1,160	e3,410	1,050	364
19	146	e100	e62	e40	e38	e44	2,470	919	1,020	e3,280	1,000	e342
20	141	e95	e64	e39	e38	e45	2,410	887	919	e3,110	961	e318
21	143	85	e44	e38	e39	e47	2,350	e968	873	e2,960	922	e304
22	147	e96	e35	e37	e40	e50	2,250	1,080	827	e2,840	901	e283
23	149	e83	e33	e37	e40	e52	2,170	1,110	788	e2,710	866	322
24	154	66	e33	e37	e40	e55	2,110	1,160	742	e2,610	855	311
25	166	e71	e32	e37	e40	e60	2,020	1,100	703	e2,550	866	299
26	159	115	e33	e37	e40	e66	1,950	1,030	e958	e2,450	855	288
27	152	115	e34	e37	e40	e75	e1,870	e986	e1,440	e2,370	816	273
28	145	e90	e35	e38	e40	e84	1,810	958	e1,430	e2,310	777	260
29	140	e92	e36	e38	---	e100	e1,740	e933	1,970	e2,210	746	256
30	140	e99	e37	e38	---	e170	e1,660	901	3,270	e2,120	717	253
31	139	---	e38	e38	---	e367	---	890	---	e2,050	682	---
TOTAL	4,567	3,171	1,948	1,225	1,115	1,981	72,643	34,117	33,355	89,700	36,394	12,206
MEAN	147	106	62.8	39.5	39.8	63.9	2,421	1,101	1,112	2,894	1,174	407
MAX	170	134	104	42	41	367	4,060	1,590	3,270	4,420	1,910	640
MIN	127	66	32	37	38	40	813	887	703	1,910	682	253
AC-FT	9,060	6,290	3,860	2,430	2,210	3,930	144,100	67,670	66,160	177,900	72,190	24,210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY)

MEAN	57.4	37.0	18.3	9.82	8.68	101	1,140	844	384	238	137	82.5
MAX	343	391	195	82.7	64.9	949	4,257	3,616	1,752	2,894	1,174	543
(WY)	(1969)	(1995)	(1995)	(1995)	(1995)	(1995)	(1998)	(1974)	(1999)	(2005)	(2005)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	21.3	27.0	4.03	0.07	0.00	0.00
(WY)	(1989)	(1989)	(1989)	(1965)	(1963)	(1964)	(1977)	(1988)	(1988)	(1988)	(1988)	(1988)

05099300 PEMBINA RIVER NEAR WINDYGATES, MANITOBA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005	
ANNUAL TOTAL	151,719.94		292,422			
ANNUAL MEAN	415		801		258	
HIGHEST ANNUAL MEAN					936	1995
LOWEST ANNUAL MEAN					9.61	1977
HIGHEST DAILY MEAN	3,810	Apr 1	4,420	Jul 11	13,500	Apr 26, 1997
LOWEST DAILY MEAN	0.49	Jan 24	32	Dec 25	0.00	Jan 29, 1963
ANNUAL SEVEN-DAY MINIMUM	0.49	Jan 24	34	Dec 22	0.00	Jan 29, 1963
MAXIMUM PEAK FLOW			(a)		13,700	Apr 26, 1997
MAXIMUM PEAK STAGE			(a)		1,122.27	Apr 26, 1997
ANNUAL RUNOFF (AC-FT)	300,900		580,000		187,200	
10 PERCENT EXCEEDS	1,150		2,530		654	
50 PERCENT EXCEEDS	145		256		34	
90 PERCENT EXCEEDS	1.2		40		0.11	

a Unavailable
e Estimated

05099400 LITTLE SOUTH PEMBINA RIVER NEAR WALHALLA, ND

LOCATION.--Lat 48°51'55", long 98°00'20", in SE¼SW¼ sec.10, T.162 N., R.57 W., Cavalier County, Hydrologic Unit 09020313, on right bank 10 ft upstream from county bridge, 3.5 mi above mouth, and 6 mi southwest of Walhalla.

DRAINAGE AREA.--182 mi^2, of which 10 mi^2 is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1956 to Sept. 1982, March 2001 to current year.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,101.04 ft above National Geodetic Vertical Datum of 1929 (levels by North Dakota State Water Commission, 2004). From March 2001 to September 2002, at datum 80.00 ft lower and prior to March 2001, at datum 1.56 ft lower. Prior to September 10, 1956, nonrecording gage at bridge 25 ft downstream at datum 1.56 ft lower.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 5,080 ft^3/s, gage height, unknown, was measured on Apr. 24, 1997. A high-water mark 3 ft higher than gage height of measurement was observed.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	7.5	e3.6	e1.1	e1.1	e1.2	e140	28	32	e1,620	13	5.7
2	8.6	6.9	e3.8	e1.1	e1.2	e1.3	e500	29	35	676	13	5.4
3	8.1	7.0	e3.8	e1.1	e1.3	e1.4	e800	25	37	407	13	3.4
4	7.6	7.1	e3.8	e1.1	e1.3	e1.5	1,090	23	33	331	12	3.0
5	7.1	6.8	e3.7	e1.1	e1.2	e1.6	1,040	22	31	259	13	2.8
6	6.3	6.6	e3.7	e1.1	e1.2	e1.5	812	21	30	168	12	3.5
7	6.0	6.3	e3.7	e1.1	e1.1	e1.4	505	27	30	118	e10	3.5
8	6.6	5.9	e3.6	e1.1	e1.2	e1.5	391	33	35	375	e9.9	3.2
9	6.5	7.0	e3.6	e1.1	e1.2	e1.6	335	33	40	374	e9.4	3.1
10	6.2	5.8	e3.7	e1.1	e1.3	e1.6	251	35	42	189	e9.6	3.1
11	6.0	7.0	e3.5	e1.1	e1.4	e1.5	187	32	34	115	e11	e3.1
12	6.0	5.8	e3.0	e1.1	e1.4	e1.5	274	29	63	92	e12	e3.1
13	5.9	6.4	e2.9	e1.0	e1.3	e1.5	420	28	103	73	e10	e3.1
14	6.1	5.6	e2.9	e0.90	e1.3	e1.5	255	34	379	59	e9.6	e3.1
15	7.2	5.4	e2.8	e0.90	e1.2	e1.5	153	42	629	e52	e8.0	e3.1
16	6.8	5.5	e2.9	e0.90	e1.2	e1.5	115	36	355	e45	e8.0	e3.1
17	6.7	5.5	e2.8	e0.90	e1.2	e1.5	91	32	185	e39	e9.0	e3.4
18	6.4	5.2	e2.6	e0.90	e1.2	e1.5	86	42	116	e35	e10	e4.0
19	7.7	6.9	e2.6	e0.90	e1.2	e1.5	86	43	181	e31	e9.0	e3.4
20	7.7	5.7	e2.1	e0.90	e1.2	e1.5	74	39	178	29	e7.0	e3.4
21	7.5	7.2	e1.8	e0.90	e1.2	e1.9	63	88	99	26	e5.4	e3.4
22	7.3	5.8	e1.6	e0.90	e1.2	e2.4	56	155	70	23	e5.0	e3.4
23	7.6	e5.7	e1.5	e0.90	e1.2	e2.9	48	103	55	21	5.2	e3.8
24	7.9	e5.4	e1.4	e0.90	e1.2	e3.0	42	71	57	20	7.7	e4.2
25	8.3	5.1	e1.3	e0.90	e1.2	e3.1	41	57	50	20	10	e3.8
26	8.2	4.7	e1.3	e0.90	e1.2	e3.3	40	50	41	18	9.5	e3.8
27	8.1	4.3	e1.2	e0.90	e1.2	e4.0	38	46	359	17	7.7	e3.8
28	7.9	e4.0	e1.2	e0.90	e1.2	e6.0	35	43	624	17	5.9	e3.8
29	8.4	e4.0	e1.2	e0.90	---	e10	31	35	e550	16	5.2	e3.8
30	8.6	e3.8	e1.2	e0.93	---	e30	29	32	e2,280	15	5.6	e3.8
31	7.9	---	e1.1	e1.0	---	e60	---	30	---	14	6.1	---
TOTAL	226.8	175.9	79.9	30.53	34.3	156.2	8,028	1,343	6,753	5,294	281.8	107.1
MEAN	7.32	5.86	2.58	0.98	1.23	5.04	268	43.3	225	171	9.09	3.57
MAX	9.6	7.5	3.8	1.1	1.4	60	1,090	155	2,280	1,620	13	5.7
MIN	5.9	3.8	1.1	0.90	1.1	1.2	29	21	30	14	5.0	2.8
AC-FT	450	349	158	61	68	310	15,920	2,660	13,390	10,500	559	212

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	1.91	1.43	0.72	0.41	1.33	24.4	181	43.4	31.2	14.7	4.26	3.47
MAX	7.32	5.86	2.58	1.09	30.1	139	461	255	225	171	23.1	20.7
(WY)	(2005)	(2005)	(2005)	(2003)	(1981)	(1966)	(1970)	(1974)	(2005)	(2005)	(2002)	(2002)
MIN	0.18	0.18	0.05	0.00	0.00	0.00	4.92	2.34	0.44	0.18	0.01	0.09
(WY)	(1962)	(1962)	(1977)	(1973)	(1961)	(1962)	(1973)	(1958)	(1958)	(1961)	(1961)	(1961)

05099400 LITTLE SOUTH PEMBINA RIVER NEAR WALHALLA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005[a]	
ANNUAL TOTAL	21,210.20		22,510.53			
ANNUAL MEAN	58.0		61.7		23.9	
HIGHEST ANNUAL MEAN					63.2	1974
LOWEST ANNUAL MEAN					1.78	1958
HIGHEST DAILY MEAN	1,360	Apr 1	2,280	Jun 30	3,260	Apr 10, 1969
LOWEST DAILY MEAN	0.00	Jan 30	0.90	Jan 14	0.00	Jan 4, 1958
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 30	0.90	Jan 14	0.00	Jan 4, 1958
MAXIMUM PEAK FLOW			2,720	Jun 30	6,600	Apr 25, 1970
MAXIMUM PEAK STAGE			[b]9.23	Jun 30	[c]13.95	Apr 25, 1970
ANNUAL RUNOFF (AC-FT)	42,070		44,650		17,310	
10 PERCENT EXCEEDS	127		117		30	
50 PERCENT EXCEEDS	7.1		6.4		1.1	
90 PERCENT EXCEEDS	0.00		1.2		0.13	

a Complete water years only
b From floodmark
c Site and datum then in use
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of damage to stage sensor by debris.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.50	2.48	2.35	2.17	2.20	2.21	4.34	2.90	2.97	---	2.61	2.35
2	2.47	2.47	2.35	2.13	e2.24	2.22	5.27	2.91	3.00	5.45	2.60	2.33
3	2.45	2.47	2.38	2.14	e2.25	2.22	5.97	2.86	3.03	4.74	2.59	2.23
4	2.43	2.47	2.38	2.13	2.26	2.23	5.88	2.82	2.98	4.54	2.57	2.19
5	2.41	2.46	2.39	2.12	2.21	2.27	5.85	2.79	2.94	4.31	2.59	2.18
6	2.41	2.45	2.34	2.11	2.21	2.31	5.52	2.78	2.94	3.96	2.57	2.23
7	2.42	2.44	2.35	2.10	2.18	2.29	4.97	2.87	2.94	3.70	---	2.23
8	2.45	2.42	2.35	2.10	2.16	2.28	4.70	2.97	3.00	4.56	---	2.21
9	2.45	2.46	2.34	2.10	2.15	2.28	4.55	2.98	3.07	4.65	---	2.20
10	2.44	2.42	2.33	2.10	2.16	2.29	4.28	3.00	3.09	4.04	---	2.20
11	2.43	2.45	2.33	e2.10	2.17	2.28	4.04	2.97	2.99	3.68	---	2.23
12	2.43	2.42	2.33	e2.11	2.18	2.27	4.35	2.92	3.30	3.53	---	2.25
13	2.42	2.43	2.46	2.17	2.22	2.26	4.77	2.90	3.61	3.39	---	2.29
14	2.43	2.40	2.29	2.16	2.23	2.27	4.29	3.00	4.59	3.27	---	---
15	2.47	2.40	2.28	2.12	2.23	2.26	3.89	3.10	5.21	---	---	---
16	2.46	2.40	e2.28	2.11	2.23	2.27	3.68	3.02	4.59	---	---	2.27
17	2.45	2.40	2.29	2.10	2.22	2.27	3.53	2.96	4.04	---	---	2.37
18	2.44	2.39	2.43	2.11	2.21	2.27	3.49	3.09	3.72	---	---	2.37
19	2.49	2.45	2.47	2.11	2.20	2.26	3.49	3.10	3.98	---	---	2.41
20	2.49	2.41	2.24	2.10	2.21	2.26	3.40	3.05	4.00	2.91	---	2.39
21	2.48	2.46	2.38	e2.09	2.21	2.26	3.30	3.43	3.62	2.88	---	2.40
22	2.48	2.41	2.60	e2.09	2.21	2.26	3.24	3.90	3.41	2.81	---	2.44
23	2.48	2.47	3.12	e2.09	2.21	2.27	3.16	3.60	3.27	2.78	2.32	2.44
24	2.50	2.45	3.39	2.09	2.21	2.27	3.10	3.38	3.29	2.76	2.42	2.49
25	2.51	2.38	2.99	2.09	2.21	2.28	3.08	3.25	3.21	2.77	2.53	2.48
26	2.50	2.36	3.26	2.08	2.21	2.29	3.07	3.19	3.11	2.72	2.50	2.49
27	2.50	2.34	3.00	2.09	2.21	2.76	3.04	3.14	4.38	2.70	2.43	2.51
28	2.49	2.33	3.06	2.08	2.21	3.73	3.00	3.10	5.30	2.70	2.36	2.51
29	2.51	2.33	3.11	2.09	---	3.59	2.94	3.01	---	2.68	2.33	2.52
30	2.52	2.33	2.73	2.08	---	3.57	2.92	2.97	---	2.65	2.35	2.54
31	2.49	---	2.27	2.09	---	3.64	---	2.94	---	2.63	2.37	---
MEAN	2.46	2.42	2.54	2.11	2.21	2.46	4.04	3.06	---	---	---	---
MAX	2.52	2.48	3.39	2.17	2.26	3.73	5.97	3.90	---	---	---	---
MIN	2.41	2.33	2.24	2.08	2.15	2.21	2.92	2.78	---	---	---	---

e Estimated

05099400 LITTLE SOUTH PEMBINA RIVER NEAR WALHALLA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2001 to present.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
05...	1000	991	--	8.1	6.5	473	461	5.9	2.1	35.7	11.0	7.80	1
SEP													
09...	0850	2.9	723	7.8	8.2	921	921	20.2	17.0	83.8	25.9	9.60	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
05...	36.5	35	108	8.3	.26	15.3	110	276	776	<50	<1	2.8	7.5
SEP													
09...	72.5	32	249	12.9	.40	25.0	225	581	4.72	<50	<1	4.4	17.6

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
05...	<1	50	<1	<1	2.7	30	2.00	90	8.30	2	<1	<1.0	2.3
SEP													
09...	<1	140	<1	3	1.9	<10	<1	40	5.22	5	<1	<1.0	2.4

Remark codes used in this table:
< -- Less than.

05099600 PEMBINA RIVER AT WALHALLA, ND

LOCATION.--Lat 48°54'48", long 97°55'00", in SW¼NE¼NE¼ sec.29, T.163 N., R.56 W., Pembina County, Hydrologic Unit 09020313, on southeast corner of State Highway 32 bridge, 0.5 mi south of Walhalla, and 7 mi downstream from Little South Pembina River.

DRAINAGE AREA.--3,350 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1990, April 2000 to current year. Water years 1991-94 and 1997, miscellaneous discharge measurements only. Prior to October 1963, published as "near Walhalla".

REVISED RECORDS.--WSP 1388: 1943, 1950(P). WSP 1558: 1957. WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 933.34 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 10, 1943, nonrecording gage and Nov. 10, 1943, to Sept. 30, 1963, water stage recorder at site 5.5 mi upstream and at datum 33.57 ft higher.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--A peak gage height of 16.53 ft (from floodmark), discharge not determined, occurred on Apr. 25 or 26, 1997. A measured discharge of 22,500 ft^3/s, gage height, 16.20 ft, occurred on Apr. 26, 1997.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	168	e118	e41	e44	e46	e531	1,590	799	8,150	2,020	738
2	158	164	e116	e41	e44	e47	e1,430	1,530	785	5,230	1,950	710
3	156	155	e125	e41	e45	e48	e2,610	1,460	776	4,580	1,870	709
4	156	152	e130	e41	e46	e50	e4,270	1,410	745	3,960	1,780	696
5	152	151	e122	e41	e46	e53	4,950	1,350	724	3,170	1,700	680
6	149	150	e115	e41	e46	e55	5,380	1,280	699	2,700	1,630	650
7	147	150	e112	e41	e45	e56	4,420	1,250	706	2,420	1,560	631
8	146	146	e97	e41	e45	e56	4,060	1,250	715	2,970	1,510	612
9	144	142	e94	e41	e45	e56	3,570	1,280	759	3,030	1,450	591
10	144	153	e92	e41	e47	e56	3,240	1,250	799	3,220	1,390	569
11	146	144	e91	e41	e48	e55	2,990	1,190	740	3,830	1,350	546
12	141	116	e90	e42	e48	e53	3,050	1,140	996	4,650	1,320	524
13	137	144	e88	e42	e48	e49	3,500	1,120	1,130	e4,830	1,280	509
14	142	151	e84	e42	e48	e47	3,280	1,120	2,110	4,460	1,230	495
15	150	154	e83	e42	e46	e45	2,980	1,090	2,780	e4,350	1,190	465
16	149	139	e82	e42	e44	e45	2,810	1,060	1,940	4,060	1,150	438
17	145	141	e77	e44	e43	e44	2,710	1,020	1,460	3,860	1,130	448
18	150	131	e70	e44	e43	e45	2,710	1,050	1,170	3,850	1,120	454
19	158	124	e69	e44	e43	e47	2,660	1,000	1,270	3,640	1,090	431
20	152	139	e69	e42	e43	e48	2,540	950	1,080	3,430	1,040	404
21	149	151	e55	e41	e43	e50	2,460	1,210	878	3,290	e1,020	382
22	152	123	e42	e40	e44	e55	2,360	1,350	789	3,110	e985	371
23	162	140	e37	e40	e45	e57	2,230	1,240	730	2,940	964	362
24	165	142	e35	e41	e46	e57	2,160	1,160	677	2,790	963	366
25	179	e111	e34	e42	e46	e59	2,060	1,070	629	2,660	982	346
26	185	e115	e35	e42	e46	e64	1,970	986	616	2,540	952	331
27	178	e120	e36	e42	e46	e72	1,890	929	1,480	2,450	923	324
28	175	e122	e37	e43	e46	e81	1,820	894	2,110	2,380	888	303
29	177	e125	e38	e43	---	e93	1,730	861	2,560	2,290	855	291
30	176	e122	e40	e43	---	e130	1,660	826	8,230	2,210	791	290
31	170	---	e41	e43	---	e240	---	800	---	2,120	768	---
TOTAL	4,856	4,185	2,354	1,295	1,269	1,959	84,031	35,716	40,882	109,170	38,851	14,666
MEAN	157	140	75.9	41.8	45.3	63.2	2,801	1,152	1,363	3,522	1,253	489
MAX	185	168	130	44	48	240	5,380	1,590	8,230	8,150	2,020	738
MIN	137	111	34	40	43	44	531	800	616	2,120	768	290
AC-FT	9,630	8,300	4,670	2,570	2,520	3,890	166,700	70,840	81,090	216,500	77,060	29,090

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

MEAN	65.9	44.8	22.1	12.6	9.85	128	1,115	785	376	228	136	84.9
MAX	600	454	216	120	68.9	1,206	4,950	4,672	1,933	3,522	1,253	489
(WY)	(1995)	(1995)	(1995)	(1995)	(1995)	(1995)	(1995)	(1974)	(1974)	(2005)	(2005)	(2005)
MIN	0.04	0.15	0.00	0.00	0.00	0.00	49.6	18.8	2.83	0.74	0.10	0.00
(WY)	(1940)	(1941)	(1941)	(1940)	(1940)	(1940)	(1977)	(1940)	(1940)	(1940)	(1961)	(1940)

05099600 PEMBINA RIVER AT WALHALLA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	190,575.5		339,234			
ANNUAL MEAN	521		929		253	
HIGHEST ANNUAL MEAN					1,146	1995
LOWEST ANNUAL MEAN					9.77	1940
HIGHEST DAILY MEAN	5,890	Apr 1	8,230	Jun 30	13,800	Apr 18, 1950
LOWEST DAILY MEAN	5.9	Jan 13	34	Dec 25	0.00	Oct 14, 1939
ANNUAL SEVEN-DAY MINIMUM	6.0	Jan 11	36	Dec 23	0.00	Oct 14, 1939
MAXIMUM PEAK FLOW			10,500	Jun 30	[a]20,400	Apr 18, 1950
MAXIMUM PEAK STAGE			14.38	Jun 30	[b]16.20	Apr 18, 1950
ANNUAL RUNOFF (AC-FT)	378,000		672,900		183,200	
10 PERCENT EXCEEDS	1,490		2,780		622	
50 PERCENT EXCEEDS	161		290		40	
90 PERCENT EXCEEDS	7.0		43		2.0	

a From rating curve extended above 7,000 ft^3/s on basis of contracted-opening measurement of discharge
b Approximate stage, from rating curve, at present location and datum; stage at site and datum then in use, 19.2 ft
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.42	2.43	2.61	2.75	2.27	2.18	---	6.01	4.38	13.35	6.67	4.09
2	2.38	2.41	2.64	2.80	2.26	2.17	---	5.89	4.34	10.92	6.55	4.02
3	2.37	2.37	2.63	2.82	2.27	2.17	9.52	5.77	4.32	10.18	6.42	4.01
4	2.37	2.35	2.64	2.81	2.28	2.22	10.25	5.68	4.24	9.42	6.26	3.98
5	2.35	2.35	2.59	2.82	2.23	2.26	10.61	5.56	4.19	8.40	6.11	3.94
6	2.33	2.34	2.53	2.82	2.19	2.29	11.10	5.42	4.13	7.72	5.99	3.85
7	2.33	2.34	2.46	2.83	2.14	2.47	9.99	5.37	4.14	7.30	5.86	3.80
8	2.32	2.32	2.55	2.85	2.17	2.38	9.55	5.37	4.17	8.11	5.76	3.75
9	2.31	2.30	2.52	2.85	2.23	2.32	8.93	5.42	4.28	8.20	5.65	3.69
10	2.31	2.35	2.45	2.84	2.24	2.31	8.48	5.36	4.38	8.45	5.53	3.63
11	2.32	2.31	2.44	2.80	2.25	2.27	8.14	5.25	4.23	9.26	5.46	3.57
12	2.30	2.17	2.49	2.75	2.25	2.27	8.23	5.14	4.82	10.27	5.40	3.50
13	2.27	2.31	2.50	2.73	2.26	2.25	8.83	5.10	5.12	---	5.30	3.46
14	2.30	2.35	2.45	2.69	2.29	2.23	8.54	5.10	6.81	10.05	5.21	3.42
15	2.34	2.36	2.52	2.64	2.29	2.23	8.14	5.04	7.85	---	5.13	3.33
16	2.33	2.28	2.57	2.60	2.26	2.22	7.90	4.97	6.60	9.55	5.05	3.25
17	2.31	2.29	2.53	2.51	2.20	2.22	7.77	4.89	5.77	9.30	5.01	3.28
18	2.34	2.24	2.48	2.52	2.19	2.18	7.76	4.95	5.21	9.29	4.98	3.30
19	2.38	2.21	2.49	2.50	2.18	2.14	7.69	4.84	5.40	9.02	4.91	3.23
20	2.35	2.29	2.53	2.39	2.19	2.12	7.52	4.73	5.00	8.75	4.81	3.14
21	2.34	2.34	2.56	2.33	2.20	2.08	7.40	5.26	4.56	8.55	---	3.08
22	2.35	2.20	2.52	2.33	2.16	2.04	7.26	5.56	4.35	8.31	---	3.04
23	2.40	2.29	2.49	2.32	2.14	1.97	7.05	5.34	4.21	8.07	4.63	3.01
24	2.41	2.30	2.54	2.31	2.15	2.00	6.94	5.18	4.07	7.86	4.63	3.03
25	2.48	2.12	2.57	2.30	2.18	2.26	6.80	5.00	3.94	7.66	4.67	2.96
26	2.51	2.21	2.57	2.30	2.14	2.02	6.65	4.81	3.91	7.48	4.60	2.92
27	2.47	2.54	2.65	2.28	2.17	1.99	6.52	4.68	5.67	7.35	4.54	2.89
28	2.46	2.58	2.55	2.30	2.19	2.05	6.39	4.60	6.87	7.24	4.46	2.82
29	2.47	2.60	2.63	2.31	---	2.90	6.25	4.52	7.42	7.10	4.37	2.79
30	2.47	2.59	2.63	2.27	---	3.49	6.12	4.44	13.24	6.97	4.22	2.78
31	2.44	---	2.69	2.27	---	3.97	---	4.38	---	6.83	4.16	---
MEAN	2.37	2.34	2.55	2.57	2.21	2.31	---	5.15	5.25	---	---	3.39
MAX	2.51	2.60	2.69	2.85	2.29	3.97	---	6.01	13.24	---	---	4.09
MIN	2.27	2.12	2.44	2.27	2.14	1.97	---	4.38	3.91	---	---	2.78

05099600 PEMBINA RIVER AT WALHALLA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-90, 1992-95, 2000 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
14...	1340	3,300	--	8.3	6.6	632	640	22.2	11.6	55.9	19.7	12.2	1
SEP													
09...	1115	584	727	8.2	8.4	837	837	30.2	19.1	69.4	36.5	12.0	1

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
14...	38.9	26	152	13.8	.24	19.2	175	409	3,790	<50	<1	3.8	19.5
SEP													
09...	50.5	24	283	13.3	.21	24.1	162	515	848	<50	<1	5.3	30.0

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
14...	<1	<50	<1	<1	3.2	20	<1	10	6.49	3	<1	<1.0	3.9
SEP													
09...	<1	120	<1	3	1.8	<10	<1	<10	5.79	3	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

05100000 PEMBINA RIVER AT NECHE, ND
(International gaging station)

LOCATION.--Lat 48°59'23", long 97°33'24", in NW¼NW¼ sec.31, T.164 N., R.53 W., Pembina County, Hydrologic Unit 09020313, on right bank at bridge on State Highway 18 and at northwest corner of Neche.

DRAINAGE AREA.--3,410 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1903 to September 1908, June 1909 to September 1915, April 1919 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1904-8, 1910-15, 1920, 1921, 1923, 1924. WSP 1388: 1904(M), 1914, 1915(M), 1931(M), 1933, 1938(M). WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 809.69 ft above National Geodetic Vertical Datum of 1929. From Apr. 18, 1939, to July 21, 1999, at site 0.8 mi downstream at same datum. May 25, 1932, to Apr. 17, 1939, nonrecording gage on bridge on State Highway 18 at same datum. Prior to May 24, 1932, nonrecording gage at Burlington Northern Railway bridge, 0.1 mi upstream, at same datum.

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

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	164	e123	e44	e44	e46	e234	1,680	e840	5,470	e2,270	767
2	180	163	e120	e43	e44	e46	e553	e1,660	820	6,590	2,130	740
3	170	159	e118	e43	e45	e47	e1,460	1,560	e810	6,520	2,050	718
4	165	152	e128	e43	e46	e49	e2,640	e1,500	794	5,580	1,960	714
5	160	146	e132	e43	e46	e52	e4,290	e1,450	770	e4,680	1,860	698
6	158	144	e128	e43	e46	e54	5,040	e1,390	740	3,700	1,790	676
7	151	139	e120	e43	e45	e55	5,140	e1,330	719	3,220	1,720	649
8	150	139	e115	e43	e45	e56	4,760	1,340	731	3,040	1,640	630
9	145	133	e100	e43	e45	e56	4,070	1,360	769	3,580	1,580	613
10	143	131	e96	e43	e46	e56	e3,480	1,340	786	3,700	1,510	595
11	142	e155	e94	e43	e48	e55	e3,220	1,290	808	3,860	1,440	573
12	143	e165	e92	e43	e48	e54	3,150	1,230	770	e4,190	1,400	552
13	142	e170	e90	e43	e48	e50	3,250	1,170	986	e4,800	1,360	533
14	141	e165	e88	e44	e48	e48	3,530	1,150	1,180	5,140	1,300	518
15	145	e165	e86	e44	e46	e46	3,300	1,140	2,390	5,220	1,260	505
16	154	e165	e84	e44	e45	e46	3,020	1,110	2,630	5,100	1,220	487
17	158	e160	e80	e44	e44	e46	2,890	1,080	1,920	4,790	1,190	480
18	152	140	e77	e45	e44	e46	2,760	1,050	e1,490	e4,330	1,170	478
19	153	133	e74	e45	e44	e46	2,720	1,070	1,260	e4,270	1,140	485
20	158	121	e72	e44	e44	e47	e2,710	1,020	1,410	e4,020	1,100	462
21	158	e135	e70	e43	e45	e49	e2,550	990	1,170	e3,800	1,060	446
22	153	e145	e56	e42	e46	e52	2,440	1,260	988	e3,560	1,020	427
23	155	e140	e46	e42	e46	e56	e2,330	1,350	e846	3,380	998	416
24	162	e135	e38	e42	e46	e57	e2,240	1,250	e770	3,210	971	408
25	168	e128	e37	e43	e46	e62	2,160	1,160	e720	3,030	960	398
26	174	e113	e37	e43	e46	e67	2,070	1,080	723	2,850	948	385
27	181	e118	e38	e43	e46	e73	1,970	1,010	763	2,720	924	375
28	176	e120	e40	e44	e46	e82	1,900	956	1,610	2,620	901	364
29	171	e123	e44	e44	---	e90	1,820	913	2,050	2,520	862	352
30	167	e125	e44	e44	---	e100	1,750	881	2,910	2,430	829	346
31	169	---	e44	e44	---	e129	---	e860	---	e2,340	798	---
TOTAL	4,930	4,291	2,511	1,344	1,278	1,818	83,447	37,630	35,173	124,260	41,361	15,790
MEAN	159	143	81.0	43.4	45.6	58.6	2,782	1,214	1,172	4,008	1,334	526
MAX	186	170	132	45	48	129	5,140	1,680	2,910	6,590	2,270	767
MIN	141	113	37	42	44	46	234	860	719	2,340	798	346
AC-FT	9,780	8,510	4,980	2,670	2,530	3,610	165,500	74,640	69,770	246,500	82,040	31,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	75.8	49.7	24.6	13.1	9.57	109	957	736	367	230	128	87.0
MAX	643	486	261	120	65.8	1,216	4,713	4,770	1,894	4,008	1,334	648
(WY)	(1995)	(1995)	(1995)	(1995)	(1995)	(1995)	(1998)	(1997)	(1999)	(2005)	(2005)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	24.7	11.8	6.56	0.00	0.00	0.00
(WY)	(1939)	(1939)	(1939)	(1933)	(1933)	(1936)	(1939)	(1939)	(1940)	(1940)	(1939)	(1938)

05100000 PEMBINA RIVER AT NECHE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	212,003.1		353,833			
ANNUAL MEAN	579		969		234	
HIGHEST ANNUAL MEAN					1,116	1995
LOWEST ANNUAL MEAN					3.96	1939
HIGHEST DAILY MEAN	5,770	Apr 1	6,590	Jul 2	14,300	Apr 27, 1997
LOWEST DAILY MEAN	6.1	Jan 16	37	Dec 25	0.00	Feb 1, 1932
ANNUAL SEVEN-DAY MINIMUM	6.2	Jan 14	40	Dec 24	0.00	Feb 1, 1932
MAXIMUM PEAK FLOW			6,890	Jul 2	[a]15,100	Apr 27, 1997
MAXIMUM PEAK STAGE			21.30	Jul 2	[b]24.51	Apr 21, 1997
ANNUAL RUNOFF (AC-FT)	420,500		701,800		169,800	
10 PERCENT EXCEEDS	1,640		3,020		540	
50 PERCENT EXCEEDS	171		234		44	
90 PERCENT EXCEEDS	7.2		44		1.5	

a Gage height, 24.20 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.---Gaps in record are result of damage to stage sensor by ice and debris.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.63	3.48	3.44	3.46	3.81	3.82	7.97	10.75	---	19.80	e12.80	7.28
2	3.59	3.47	3.41	3.49	3.85	3.82	10.82	e10.57	7.30	21.06	12.47	7.15
3	3.52	3.45	3.32	3.50	3.83	3.83	14.25	10.34	---	21.02	12.20	7.04
4	3.49	3.39	3.41	3.52	3.82	3.83	---	---	7.19	20.33	11.91	7.01
5	3.45	3.35	3.55	3.56	3.85	3.85	---	e9.85	7.07	e19.54	11.61	6.94
6	3.44	3.34	3.64	3.60	3.87	3.88	19.30	---	6.93	17.31	11.37	6.83
7	3.39	3.31	3.59	3.63	3.86	3.88	19.44	---	6.83	15.70	11.12	6.69
8	3.38	3.31	3.51	3.66	3.84	3.89	18.91	9.49	6.89	15.12	10.85	6.60
9	3.35	3.27	3.51	3.67	3.80	3.91	17.81	9.57	7.07	16.76	10.63	6.51
10	3.34	3.25	3.64	3.69	3.79	3.93	---	9.49	7.15	17.01	10.38	6.42
11	3.33	3.55	3.60	3.73	3.79	3.94	e15.45	9.29	7.25	17.36	10.15	6.31
12	3.34	3.82	3.54	3.76	3.79	3.96	15.45	9.05	7.08	---	9.99	6.20
13	3.33	3.97	3.53	3.78	3.76	3.98	15.75	8.83	8.04	---	9.80	6.09
14	3.32	3.85	3.48	3.80	3.76	4.00	16.52	8.74	8.85	19.43	9.59	6.00
15	3.35	3.94	3.44	3.80	3.76	4.01	15.87	8.70	13.07	19.54	9.42	5.93
16	3.41	3.82	3.39	3.82	3.78	4.02	15.07	8.59	13.90	19.38	9.25	5.84
17	3.44	3.36	3.50	3.83	3.80	4.03	14.68	8.45	11.60	18.96	9.14	5.79
18	3.40	3.31	3.49	3.84	3.81	4.05	14.30	8.33	---	e18.54	9.05	5.78
19	3.40	3.26	3.42	3.83	3.83	4.05	14.17	8.39	9.18	e18.34	8.95	5.83
20	3.44	3.18	3.38	3.82	3.84	4.05	---	8.21	9.77	e17.91	8.77	5.70
21	3.44	3.52	3.39	3.85	3.83	4.05	---	8.06	8.82	e17.33	8.58	5.60
22	3.40	3.23	3.36	3.78	3.83	4.05	13.30	9.16	8.06	e16.76	8.43	5.49
23	3.42	3.64	3.38	3.78	3.83	4.06	---	9.55	---	16.11	8.33	5.43
24	3.46	4.00	3.30	3.81	3.81	4.06	---	9.13	---	15.63	8.21	5.39
25	3.51	3.91	3.23	3.83	3.81	4.05	12.42	8.78	---	15.12	8.17	5.33
26	3.55	3.68	3.22	3.81	3.80	4.06	12.11	8.43	6.85	14.63	8.11	5.25
27	3.60	3.55	3.24	3.80	3.80	4.07	11.79	8.14	7.04	14.25	8.00	5.19
28	3.56	3.51	3.28	3.79	3.81	4.08	11.54	7.92	10.40	13.97	7.89	5.12
29	3.53	3.46	3.34	3.78	---	4.11	11.27	7.73	12.04	13.66	7.72	5.05
30	3.50	3.40	3.40	3.78	---	4.20	11.00	7.59	14.60	13.38	7.57	5.01
31	3.52	---	3.45	3.79	---	5.06	---	e7.42	---	---	7.42	---
MEAN	3.45	3.52	3.43	3.73	3.81	4.02	---	---	---	---	9.61	6.03
MAX	3.63	4.00	3.64	3.85	3.87	5.06	---	---	---	---	12.80	7.28
MIN	3.32	3.18	3.22	3.46	3.76	3.82	---	---	---	---	7.42	5.01

e Estimated

05100000 PEMBINA RIVER AT NECHE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
11...	1100	3,210	740	9.3	81	8.1	6.7	495	505	9.5	8.0	44.7	14.4
MAY													
02...	1210	1,640	--	10.0	--	8.3	6.9	595	593	7.1	4.9	55.6	20.3
24...	1135	--	737	14.4	151	8.0	8.1	855	848	17.7	16.0	76.0	29.6
JUN													
20...	1210	1,560	745	7.0	85	8.0	8.1	837	853	31.8	23.5	80.2	29.7
JUL													
18...	0920	4,330	730	7.0	87	7.8	8.0	707	718	17.1	24.0	66.8	25.3
AUG													
10...	1125	1,510	745	8.5	100	8.0	8.2	767	787	27.6	22.3	64.6	30.1

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
APR													
11...	10.0	.9	26.7	24	131	8.4	.22	21.2	100	297	2,750	741	1.2
MAY													
02...	10.8	1	33.2	23	186	11.1	.18	15.1	133	379	1,730	719	.84
24...	12.7	1	51.4	25	214	13.7	.27	21.7	222	539	--	752	.80
JUN													
20...	13.2	1	59.1	27	215	13.7	.26	28.4	218	548	2,430	1,020	.88
JUL													
18...	12.3	1	43.9	25	216	11.3	.20	30.3	150	442	5,500	1,460	.88
AUG													
10...	10.5	1	42.2	23	265	11.7	.18	29.0	150	472	2,030	884	.99

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

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
APR													
11...	.81	.237	.254	2.82	2.75	.93	.56	.031	1.02	4.0	3.6	<10	<10
MAY													
02...	.59	<.010	.018	.160	.180	--	.58	.197	.545	1.0	.78	80	80
24...	.59	<.010	<.010	.721	.650	--	--	.208	.615	1.5	1.2	90	110
JUN													
20...	.65	<.010	<.010	.690	.700	--	--	.314	.837	1.6	1.4	270	630
JUL													
18...	.58	<.010	.016	.169	.190	--	.57	.331	.983	1.1	.77	60	60
AUG													
10...	.64	<.010	<.010	.220	.250	--	--	.484	.887	1.2	.89	<10	120

05100000 PEMBINA RIVER AT NECHE, ND—Continued

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

Date	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)
APR													
11...	<10	82	<1	3.4	23.5	<1	60	<1	1	3.7	80	<1	20
MAY													
02...	<10	<50	<1	2.8	19.6	<1	50	<1	<1	2.5	20	<1	<10
24...	<10	63	<1	3.5	28.1	<1	90	<1	2	2.4	10	<1	<10
JUN													
20...	M	<50	<1	7.2	31.7	<1	120	<1	2	3.7	<10	<1	<10
JUL													
18...	640	<50	<1	6.2	29.9	<1	120	<1	6	2.9	20	<1	<10
AUG													
10...	140	<50	<1	7.6	26.8	<1	110	<1	<1	2.9	50	<1	<10

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

Date	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR					
11...	9.79	2	<1	<1.0	3.2
MAY					
02...	6.22	<1	<1	<1.0	1.7
24...	6.38	2	<1	<1.0	<1
JUN					
20...	9.92	3	<1	<1.0	1.0
JUL					
18...	8.24	2	<1	<1.0	1.3
AUG					
10...	7.80	7	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.
M -- Presence verified but not quantified.

05101000 TONGUE RIVER AT AKRA, ND

LOCATION.--Lat 48°46'42", long 97°44'47", in SW$^1/_4$ sec.10, T.161 N., R.55 W., Pembina County, Hydrologic Unit 09020313, on left bank 300 ft downstream from Renwick Dam, 0.9 mi northwest of Akra, and 6 mi west of Cavalier.

DRAINAGE AREA.--160 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to June 1950 (WSP 1137-B), October 1951 to current year (seasonal record since 1983).

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1954, nonrecording gage 1.2 mi downstream at datum 30.00 ft lower. July 23, 1954, to Dec. 19, 1973, water stage recorder 2.7 mi downstream at datum 9.10 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by temporary retention in ten retarding basins beginning 300 ft above station, four of which have slow release outlet structures to regulate the flow. Retarding basins were completed during the period l955 to l961 and have a combined capacity of l9,245 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 496 ft^3/s, July 2, gage height, 14.55 ft; minimum daily discharge, 3.6 ft^3/s, Aug. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e4.0	47	73	43	435	14	6.7
2	---	---	---	---	---	5.4	173	65	42	488	14	6.6
3	---	---	---	---	---	5.4	269	57	42	442	13	6.6
4	---	---	---	---	---	7.5	339	50	45	356	13	6.8
5	---	---	---	---	---	8.4	402	46	50	277	13	6.9
6	---	---	---	---	---	8.3	429	41	47	218	13	6.9
7	---	---	---	---	---	8.3	393	38	44	182	13	6.6
8	---	---	---	---	---	8.2	327	43	47	165	13	6.5
9	---	---	---	---	---	8.2	265	54	61	164	13	6.6
10	---	---	---	---	---	8.2	217	62	69	154	13	6.6
11	---	---	---	---	---	8.8	187	64	62	134	13	6.7
12	---	---	---	---	---	9.7	185	59	61	113	7.9	6.8
13	---	---	---	---	---	9.6	227	55	72	99	4.3	7.2
14	---	---	---	---	---	9.6	233	55	114	90	4.1	7.2
15	---	---	---	---	---	9.6	206	56	291	83	3.9	7.3
16	---	---	---	---	---	12	173	55	381	77	3.8	7.3
17	---	---	---	---	---	17	147	53	318	72	3.7	7.6
18	---	---	---	---	---	16	135	56	235	66	3.7	7.7
19	---	---	---	---	---	16	127	61	177	61	3.6	7.8
20	---	---	---	---	---	16	118	62	138	58	3.8	7.8
21	---	---	---	---	---	16	111	68	110	53	4.3	8.0
22	---	---	---	---	---	16	96	90	87	48	4.7	7.7
23	---	---	---	---	---	19	89	103	76	42	5.1	7.6
24	---	---	---	---	---	19	86	101	86	36	5.5	7.9
25	---	---	---	---	---	20	83	90	90	30	5.9	7.7
26	---	---	---	---	---	19	80	77	81	25	6.3	7.7
27	---	---	---	---	---	18	80	66	152	22	6.8	7.7
28	---	---	---	---	---	18	80	58	299	21	7.0	7.6
29	---	---	---	---	---	18	81	52	287	18	7.0	9.7
30	---	---	---	---	---	19	77	48	300	16	7.0	16
31	---	---	---	---	---	21	---	45	---	15	7.1	---
TOTAL	---	---	---	---	---	399.2	5,462	1,903	3,907	4,060	250.5	227.8
MEAN	---	---	---	---	---	12.9	182	61.4	130	131	8.08	7.59
MAX	---	---	---	---	---	21	429	103	381	488	14	16
MIN	---	---	---	---	---	4.0	47	38	42	15	3.6	6.5
AC-FT	---	---	---	---	---	792	10,830	3,770	7,750	8,050	497	452

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	6.29	6.76	4.46	3.16	3.60	24.4	123	62.4	25.3	17.0	7.54	7.03
MAX	30.1	22.7	12.9	7.27	18.7	135	451	587	196	216	144	42.8
(WY)	(1981)	(1981)	(1971)	(1971)	(1981)	(1966)	(1950)	(1950)	(2002)	(1997)	(1993)	(2002)
MIN	0.51	0.56	0.06	0.51	0.24	0.22	0.43	1.63	0.47	0.09	0.21	0.10
(WY)	(1962)	(1976)	(1953)	(1953)	(1953)	(1964)	(1991)	(1980)	(1988)	(1978)	(1988)	(1989)

05101000 TONGUE RIVER AT AKRA, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1950 - 2005	
ANNUAL MEAN	[a]21.4	
HIGHEST ANNUAL MEAN	[a]50.1	1956
LOWEST ANNUAL MEAN	[a]3.11	1961
HIGHEST DAILY MEAN	5,240	Apr 18, 1950
LOWEST DAILY MEAN	0.00	Dec 1, 1952
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 1, 1952
MAXIMUM PEAK FLOW	[b]11,800	Apr 18, 1950
MAXIMUM PEAK STAGE	[c]16.75	Apr 22, 1979
ANNUAL RUNOFF (AC-FT)	[a]15,480	
10 PERCENT EXCEEDS	39	
50 PERCENT EXCEEDS	4.1	
90 PERCENT EXCEEDS	0.80	

a Based on complete water years only (1952-82)
b From rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement of peak flow; gage height, 48.7 ft; from floodmark; site and datum then in use
c Present location
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2001 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	8.39	8.84	8.23	13.95	7.49	7.31
2	---	---	---	---	---	7.41	10.66	8.68	8.22	14.48	7.46	7.30
3	---	---	---	---	---	7.41	12.06	8.52	8.22	14.01	7.46	7.30
4	---	---	---	---	---	7.50	13.03	8.39	8.29	13.13	7.46	7.31
5	---	---	---	---	---	7.54	13.57	8.29	8.39	12.11	7.45	7.32
6	---	---	---	---	---	7.53	13.75	8.20	8.33	11.31	7.44	7.32
7	---	---	---	---	---	7.54	13.43	8.13	8.26	10.77	7.44	7.31
8	---	---	---	---	---	7.53	12.74	8.25	8.32	10.48	7.44	7.30
9	---	---	---	---	---	7.53	11.95	8.46	8.60	10.48	7.45	7.30
10	---	---	---	---	---	7.53	11.30	8.63	8.76	10.31	7.44	7.30
11	---	---	---	---	---	7.55	10.85	8.66	8.63	9.97	7.44	7.31
12	---	---	---	---	---	7.59	10.81	8.55	8.61	9.60	7.27	7.31
13	---	---	---	---	---	7.59	11.44	8.48	8.85	9.34	7.18	7.33
14	---	---	---	---	---	7.59	11.53	8.48	9.65	9.16	7.19	7.33
15	---	---	---	---	---	7.58	11.13	8.50	12.23	9.03	7.18	7.33
16	---	---	---	---	---	7.63	10.62	8.48	13.24	8.90	7.17	7.33
17	---	---	---	---	---	7.69	10.21	8.45	12.59	8.80	7.17	7.34
18	---	---	---	---	---	7.69	10.01	8.50	11.55	8.69	7.16	7.35
19	---	---	---	---	---	7.68	9.86	8.60	10.74	8.58	7.16	7.35
20	---	---	---	---	---	7.68	9.71	8.63	10.13	8.51	7.17	7.35
21	---	---	---	---	---	7.66	9.58	8.74	9.67	8.42	7.19	7.36
22	---	---	---	---	---	7.68	9.31	9.19	9.25	8.33	7.22	7.35
23	---	---	---	---	---	7.75	9.17	9.43	9.04	8.19	7.23	7.35
24	---	---	---	---	---	7.75	9.11	9.40	9.23	8.07	7.25	7.36
25	---	---	---	---	---	7.78	9.05	9.19	9.31	7.93	7.27	7.35
26	---	---	---	---	---	7.75	8.99	8.94	9.15	7.81	7.29	7.35
27	---	---	---	---	---	7.75	8.98	8.70	10.32	7.73	7.31	7.35
28	---	---	---	---	---	7.74	8.99	8.55	12.40	7.68	7.32	7.34
29	---	---	---	---	---	7.74	9.00	8.43	12.26	7.60	7.32	7.40
30	---	---	---	---	---	7.76	8.93	8.34	12.45	7.56	7.32	7.59
31	---	---	---	---	---	7.81	---	8.27	---	7.53	7.32	---
MEAN	---	---	---	---	---	---	10.61	8.61	9.76	9.63	7.31	7.34
MAX	---	---	---	---	---	---	13.75	9.43	13.24	14.48	7.49	7.59
MIN	---	---	---	---	---	---	8.39	8.13	8.22	7.53	7.16	7.30

05101000 TONGUE RIVER AT AKRA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
14...	1030	216	--	--	--	8.0	6.5	431	435	17.5	6.9	44.6	11.4
SEP													
08...	1645	6.5	735	10.0	114	8.2	8.7	678	676	30.3	19.8	72.8	20.9

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
APR													
14...	5.70	.8	22.1	22	127	10.5	.27	16.9	78.0	251	155	<50	<1
SEP													
08...	7.50	1	38.4	23	242	11.0	.33	17.2	110	407	7.50	<50	<1

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

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
APR													
14...	2.6	23.8	<1	<50	<1	<1	2.0	<10	<1	160	6.51	2	<1
SEP													
08...	9.5	63.1	<1	90	<1	3	1.3	<10	<1	1,000	8.17	2	<1

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

Date	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR		
14...	<1.0	7.2
SEP		
08...	<1.0	1.1

Remark codes used in this table:
< -- Less than.

05102490 RED RIVER OF THE NORTH AT PEMBINA, ND

LOCATION.--Lat 48°58'25", long 97°14'29", in NE$^1/_4$ sec.4, T.163 N., R.51 W., Pembina County, Hydrologic Unit 09020311, on left bank on bridge crossing the Red River of the North, 0.2 mi north of Pembina.

DRAINAGE AREA.--40,200 mi^2.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1985 to September 2002 (peak gage height and discharge only), October 2002 to current year (gage height and maximum discharge only).

GAGE.--Water stage recorder. Datum of gage is 739.45 ft above National Geodetic Vertical Datum of 1929 (levels by North Dakota State Water Commission).

REMARKS.--Gage heights for Dec. 18, 21, and 25 and Jan. 2, 10, 16, and 17 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 141,000 ft^3/s, Apr. 26, 1997, gage height, 54.94 ft; minimum recorded gage height, 7.37 ft, Sept. 15, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 38,000 ft^3/s, gage height, 46.15 ft, July 6; minimum gage height, 13.36 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.61	20.15	15.15	14.17	13.77	14.71	26.43	21.35	23.58	44.51	21.61	20.81
2	18.60	22.74	15.63	e14.26	13.90	14.67	31.26	20.99	23.67	45.05	21.02	20.49
3	18.39	25.30	16.13	---	14.00	14.59	35.67	20.67	23.62	45.58	20.56	19.78
4	18.02	27.31	16.33	---	14.09	14.52	39.31	20.37	23.78	45.90	20.14	18.89
5	17.52	28.82	16.46	---	14.19	14.48	41.95	20.08	24.18	46.08	19.71	18.04
6	17.02	29.88	16.73	---	14.28	14.48	42.98	19.77	24.98	46.08	19.21	17.29
7	16.60	30.60	17.00	14.46	14.35	14.51	43.60	19.45	25.53	45.91	18.72	16.74
8	16.24	30.87	17.23	14.51	14.38	14.56	43.99	19.23	26.26	45.81	18.29	16.55
9	16.01	30.80	17.44	14.54	14.40	14.57	44.07	19.34	27.57	45.58	17.95	17.52
10	15.81	30.29	17.58	e14.54	14.44	14.62	43.88	20.50	28.95	45.26	17.86	19.19
11	15.60	29.44	17.76	14.53	14.46	14.82	43.43	21.40	30.03	44.90	17.94	20.12
12	15.39	28.23	18.00	14.47	14.48	15.08	42.77	21.71	31.31	44.46	17.96	20.28
13	15.22	26.74	18.18	14.41	14.49	15.32	41.91	22.03	33.06	43.89	17.79	20.10
14	15.14	25.13	18.28	14.31	14.49	15.62	40.95	22.22	34.82	43.21	17.45	19.74
15	15.02	23.62	18.23	14.23	14.55	16.00	39.78	22.30	36.91	42.36	17.05	19.15
16	14.96	22.40	18.09	e14.14	14.59	16.44	38.46	22.19	38.62	41.27	16.74	18.37
17	14.86	21.43	17.81	e14.03	14.62	16.87	37.05	21.98	39.80	39.98	16.54	17.50
18	14.70	20.69	e17.43	13.93	14.64	17.20	35.59	21.72	40.52	38.58	16.66	16.65
19	14.61	20.07	---	13.84	14.68	17.39	34.11	21.48	41.02	37.07	18.08	15.92
20	14.54	19.57	16.47	13.77	14.74	17.47	32.75	21.29	41.45	35.41	19.54	15.29
21	14.46	19.07	e16.03	13.73	14.77	17.42	31.38	21.17	41.80	33.74	20.83	14.83
22	14.39	18.67	---	13.75	14.78	17.26	29.96	21.18	42.02	32.13	22.16	14.54
23	14.44	18.38	---	13.75	14.76	17.03	28.55	21.67	42.18	30.63	22.96	14.37
24	14.57	18.02	---	13.72	14.74	16.78	27.14	22.07	42.48	29.30	22.96	14.23
25	14.75	17.70	e14.85	13.71	14.71	16.56	25.80	22.48	42.51	28.14	22.39	14.13
26	14.91	17.45	---	13.70	14.71	16.45	24.65	22.84	42.44	27.02	21.64	14.03
27	15.06	17.32	14.71	13.69	14.70	16.52	23.74	23.01	42.47	25.91	20.86	13.90
28	15.37	16.82	14.53	13.65	14.70	16.94	22.99	23.00	42.57	24.87	20.17	13.73
29	16.08	16.39	14.33	13.63	---	17.89	22.33	22.92	42.78	23.94	19.91	13.62
30	17.22	15.20	14.18	13.65	---	19.82	21.79	22.97	43.70	23.14	20.27	13.45
31	18.58	---	14.16	13.67	---	22.70	---	23.26	---	22.33	20.73	---
MEAN	15.89	22.97	---	---	14.48	16.24	34.61	21.50	34.82	37.68	19.54	16.98
MAX	18.61	30.87	---	---	14.78	22.70	44.07	23.26	43.70	46.08	22.96	20.81
MIN	14.39	15.20	---	---	13.77	14.48	21.79	19.23	23.58	22.33	16.54	13.45

e Estimated

Miscellaneous discharge measurements for the Red River of the North at Pembina

Date	Discharge (ft^3/s)
April 8, 2005	36,400
July 6, 2005	36,400

05102490 RED RIVER OF THE NORTH AT PEMBINA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1994 to current year.

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

Date	Time	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
APR													
11...	1315	--	741	9.4	86	7.9	6.8	444	450	10.5	10.0	41.7	17.3
MAY													
02...	0930	--	741	10.5	88	8.3	7.4	729	716	9.7	6.6	64.0	30.5
24...	1010	--	736	9.3	99	8.2	8.3	842	838	17.7	16.5	76.4	38.5
JUN													
20...	0930	--	741	5.5	65	8.1	8.0	573	583	25.5	21.9	57.5	26.2
AUG													
10...	0905	--	743	8.6	105	8.1	8.2	844	864	19.1	23.9	71.3	38.4
24...	1145	280	738	7.5	85	8.0	8.0	689	697	22.4	19.7	57.8	29.9
SEP													
08...	0855	180	741	7.8	89	7.8	8.2	660	677	19.2	20.2	55.4	30.0

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
APR													
11...	7.30	.6	16.9	16	132	17.0	.15	12.0	63.4	251	215	.99	.75
MAY													
02...	6.80	.8	31.2	19	235	25.2	.17	10.5	138	440	330	.76	.59
24...	7.00	.9	38.0	19	231	35.8	.20	10.3	173	510	363	.78	.59
JUN													
20...	7.20	.6	20.9	15	165	16.8	.17	21.3	106	340	127	.71	.69
AUG													
10...	7.80	1	40.9	20	250	21.9	.20	19.9	194	529	606	.83	.53
24...	7.30	.8	31.0	20	187	28.2	.17	15.5	143	413	533	--	.59
SEP													
08...	7.40	.8	30.4	20	187	18.7	.18	18.0	134	392	279	--	.54

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

Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)
APR													
11...	.225	.229	1.43	1.41	.77	.52	.205	.339	2.4	2.2	10	10	<10
MAY													
02...	<.010	<.010	.175	.180	--	--	.106	.288	.93	.77	10	10	<10
24...	<.010	<.010	.442	.410	--	--	.094	.292	1.2	1.0	30	30	<10
JUN													
20...	.043	.030	.833	.800	.66	.66	.230	.327	1.5	1.5	80	90	230
AUG													
10...	<.010	<.010	.450	.490	--	--	.234	.569	1.3	1.0	40	20	80
24...	--	.025	--	.420	--	.56	.175	.468	--	1.0	--	--	--
SEP													
08...	--	.018	--	.420	--	.52	.216	.400	--	.96	--	--	--

05102490 RED RIVER OF THE NORTH AT PEMBINA, ND—Continued

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

Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)
APR													
11...	<50	<1	2.8	33.2	<1	<50	<1	1	2.7	30	<1	10	4.65
MAY													
02...	<50	<1	2.8	41.3	<1	<50	<1	<1	1.9	<10	<1	<10	4.82
24...	<50	<1	2.6	45.9	<1	60	<1	2	1.6	10	<1	<10	4.59
JUN													
20...	<50	<1	4.7	48.9	<1	60	<1	2	3.7	<10	<1	<10	7.66
AUG													
10...	<50	<1	7.8	54.2	<1	110	<1	<1	4.2	50	<1	<10	7.46
24...	<50	<1	4.9	51.2	<1	100	<1	3	3.6	10	<1	<10	5.46
SEP													
08...	<50	<1	6.4	45.0	<1	80	<1	<1	3.1	<10	<1	<10	4.45

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

Date	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR				
11...	<1	<1	<1.0	2.1
MAY				
02...	<1	<1	<1.0	2.0
24...	<1	<1	<1.0	<1
JUN				
20...	2	<1	<1.0	1.8
AUG				
10...	8	<1	<1.0	1.2
24...	1	<1	<1.0	<1
SEP				
08...	5	<1	<1.0	1.4

Remark codes used in this table:
< -- Less than.

05102500 RED RIVER OF THE NORTH AT EMERSON, MANITOBA
(International gaging station)

LOCATION.--Lat 49°00'30", long 97°12'40", in sec.2, T.1, R.2 E., Hydrologic Unit 09020311, on right bank 1,500 ft downstream from Canadian National Railway bridge in Emerson, 0.8 mi downstream from international boundary, 3.6 mi downstream from Pembina River, and at mile 154.3.

DRAINAGE AREA.--40,200 mi^2, approximately, includes 3,800 mi^2 in closed basins.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to November 1902 (gage heights only), May 1912 to September 1929 (monthly discharge only, published in WSP 1308), October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is Geodetic Survey of Canada Datum of 1929. See WSP 1728 or 1913 for history of changes prior to Apr. 10, 1953.

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,860	8,870	e4,030	e2,410	e1,950	e2,300	e12,900	8,230	10,800	36,000	10,300	9,260
2	6,860	11,400	e3,850	e2,410	e2,010	e2,330	e19,100	7,990	11,000	36,700	9,750	8,980
3	6,680	14,300	e3,780	e2,400	e2,060	e2,360	e25,500	7,770	10,900	37,500	9,290	8,340
4	6,360	16,700	e3,600	e2,390	e2,110	e2,320	e30,700	7,560	11,000	37,800	8,900	7,530
5	e5,940	18,600	e3,460	e2,380	e2,160	e2,290	e34,700	7,420	11,400	38,200	8,480	6,780
6	5,480	20,000	e3,460	e2,370	e2,200	e2,290	36,700	e7,210	12,300	38,200	7,990	6,150
7	5,160	20,800	e3,570	e2,370	e2,240	e2,300	38,200	e6,960	13,000	37,800	7,530	5,690
8	4,880	21,200	e3,670	e2,370	e2,260	e2,320	37,800	6,780	13,900	37,500	7,100	5,440
9	4,700	21,200	e3,750	e2,370	e2,270	e2,330	e37,100	6,820	15,500	37,100	6,820	6,150
10	4,560	20,600	e3,820	e2,370	e2,280	e2,370	e36,000	7,810	17,300	36,700	6,710	7,600
11	4,380	19,600	e3,890	e2,360	e2,290	e2,410	e34,400	8,730	18,700	36,000	6,750	8,520
12	4,240	e18,200	e3,920	e2,340	e2,300	e2,460	e33,000	9,050	20,300	35,700	6,750	8,730
13	4,100	e16,400	e3,990	e2,300	e2,310	e2,510	31,300	9,330	22,500	34,800	6,570	8,590
14	4,030	e14,500	e3,990	e2,250	e2,310	e2,580	29,600	e9,510	24,700	33,900	e6,290	8,270
15	3,960	12,800	e3,990	e2,200	e2,290	e2,670	27,700	9,540	27,300	32,700	5,940	7,740
16	3,890	11,400	e3,960	e2,160	e2,210	e2,750	26,100	9,470	29,500	e31,400	5,650	7,140
17	3,850	10,500	e3,850	e2,100	e2,190	e2,840	24,500	9,260	31,100	29,900	5,480	6,470
18	3,750	9,720	e3,710	e2,050	e2,120	e2,980	22,900	9,010	32,000	28,300	5,510	5,800
19	3,670	e9,120	e3,570	e2,000	e2,080	e3,160	21,200	8,760	e32,600	26,500	6,640	5,230
20	3,640	e8,620	e3,390	e1,960	e2,040	e3,420	19,600	8,590	33,100	24,700	7,950	4,810
21	3,600	8,130	e3,220	e1,940	e2,050	e3,480	18,100	8,480	33,500	22,800	9,190	e4,450
22	3,570	7,740	e3,110	e1,940	e2,060	e3,470	16,500	8,520	33,800	21,000	10,500	4,200
23	3,640	7,460	e2,970	e1,940	e2,060	e3,440	14,900	8,940	34,000	19,300	11,400	4,060
24	3,780	7,100	e2,790	e1,930	e2,110	e3,400	13,400	9,360	34,400	e17,800	11,400	3,960
25	3,990	e6,330	e2,720	e1,920	e2,130	e3,360	12,100	9,720	34,500	16,500	10,900	3,890
26	4,200	e6,040	e2,650	e1,920	e2,180	e3,340	11,000	10,100	34,300	15,300	10,200	3,820
27	4,380	e5,830	e2,600	e1,910	e2,240	e3,370	10,200	10,200	34,500	14,200	9,400	3,750
28	4,660	e5,650	e2,550	e1,900	e2,290	e3,520	9,540	e10,300	34,600	13,100	8,730	3,640
29	5,230	e5,160	e2,500	e1,890	---	e4,240	9,010	e10,200	e34,800	12,300	e8,450	3,570
30	6,220	e4,700	e2,480	e1,890	---	e5,970	8,590	10,200	35,300	11,600	8,730	3,460
31	7,390	---	e2,460	e1,900	---	e8,760	---	10,500	---	10,800	9,150	---
TOTAL	147,650	368,670	105,300	66,640	60,800	97,340	702,340	272,320	742,600	862,100	254,450	182,020
MEAN	4,763	12,290	3,397	2,150	2,171	3,140	23,410	8,785	24,750	27,810	8,208	6,067
MAX	7,390	21,200	4,030	2,410	2,310	8,760	38,200	10,500	35,300	38,200	11,400	9,260
MIN	3,570	4,700	2,460	1,890	1,950	2,290	8,590	6,780	10,800	10,800	5,480	3,460
AC-FT	292,900	731,300	208,900	132,200	120,600	193,100	1,393,000	540,100	1,473,000	1,710,000	504,700	361,000

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

MEAN	1,679	1,714	1,151	916	872	2,596	14,100	9,589	5,942	5,023	2,354	1,916
MAX	6,015	13,780	4,257	2,684	2,459	20,490	48,890	72,820	25,430	28,020	27,000	11,480
(WY)	(1995)	(2001)	(1999)	(2001)	(2001)	(1998)	(1997)	(1950)	(1962)	(1975)	(1993)	(1999)
MIN	28.6	23.8	33.4	7.05	1.21	2.25	1,282	663	196	121	46.6	23.8
(WY)	(1937)	(1937)	(1937)	(1937)	(1937)	(1937)	(1938)	(1934)	(1934)	(1936)	(1934)	(1934)

05102500 RED RIVER OF THE NORTH AT EMERSON, MANITOBA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1912 - 2005	
ANNUAL TOTAL	2,832,175		3,862,230			
ANNUAL MEAN	7,738		10,580		3,999	
HIGHEST ANNUAL MEAN					12,830	1997
LOWEST ANNUAL MEAN					333	1934
HIGHEST DAILY MEAN	45,200	Apr 7	38,200	Apr 7	133,000	Apr 26, 1997
LOWEST DAILY MEAN	403	Feb 10	1,890	Jan 29	0.90	Feb 6, 1937
ANNUAL SEVEN-DAY MINIMUM	413	Feb 7	1,900	Jan 25	0.97	Feb 4, 1937
MAXIMUM PEAK FLOW			38,200	Jul 5	133,000	Apr 26, 1997
MAXIMUM PEAK STAGE			784.77	Jul 5	792.41	Apr 26, 1997
INSTANTANEOUS LOW FLOW					0.90	Feb 6, 1937
ANNUAL RUNOFF (AC-FT)	5,618,000		7,661,000		2,897,000	
10 PERCENT EXCEEDS	20,700		31,600		9,300	
50 PERCENT EXCEEDS	3,990		6,780		1,600	
90 PERCENT EXCEEDS	501		2,250		290	

e Estimated

05113360 LONG CREEK AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°00'01", long 103°21'08", in SE$^1/_4$ sec.1, T.1, R.11 W., second meridian, Hydrologic Unit 09010001, on right bank 10 mi south of Outram, Saskatchewan.

DRAINAGE AREA.--1,320 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and artificial control. Datum of gage is 1,894.00 ft above National Geodetic Vertical Datum of 1929 (international boundary survey).

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by the Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.00	e0.00	e0.00	e240	15	5.9	38	0.18	0.00
2	0.00	0.00	0.00	e0.00	e0.00	e0.00	e161	14	6.4	35	0.14	0.00
3	0.00	0.00	0.00	e0.00	e0.00	e0.00	e205	13	6.4	29	0.11	0.00
4	0.00	0.00	0.00	e0.00	e0.00	e0.00	e283	12	6.2	40	0.07	0.00
5	0.00	0.00	0.00	e0.00	e0.00	e0.00	e275	11	5.9	32	0.04	0.00
6	0.00	0.00	0.00	e0.00	e0.00	e0.00	233	10	5.1	21	0.04	0.00
7	0.00	0.00	0.00	e0.00	e0.00	e0.07	197	9.7	6.0	15	0.04	0.00
8	0.00	0.00	0.00	e0.00	e0.00	e0.71	177	12	12	11	0.00	0.00
9	0.00	0.00	0.00	e0.00	e0.00	e3.6	156	13	26	8.3	0.00	0.00
10	0.00	0.00	0.00	e0.00	e0.00	e5.9	133	12	49	6.6	0.00	0.00
11	0.00	0.00	0.00	e0.00	e0.00	e9.6	112	11	81	5.4	0.18	0.00
12	0.00	0.00	0.00	e0.00	e0.00	e15	97	9.6	76	4.4	0.11	0.00
13	0.00	0.00	0.00	e0.00	e0.00	e16	86	9.4	64	3.5	0.04	0.00
14	0.00	0.00	0.00	e0.00	e0.00	e22	78	8.9	46	3.1	0.04	0.00
15	0.00	0.00	0.00	e0.00	e0.00	e20	70	8.0	32	2.3	0.04	0.00
16	0.00	0.00	0.00	e0.00	e0.00	e17	61	7.2	25	2.1	0.00	0.00
17	0.00	0.00	0.00	e0.00	e0.00	e13	53	6.9	20	2.1	0.00	0.00
18	0.00	0.00	0.00	e0.00	e0.00	e10	48	8.4	17	1.9	0.04	0.00
19	0.00	0.00	0.00	e0.00	e0.00	e9.1	42	9.2	14	1.6	0.04	0.00
20	0.00	0.00	0.00	e0.00	e0.00	e8.0	36	9.0	12	1.6	0.00	0.00
21	0.00	0.00	0.00	e0.00	e0.00	e6.8	31	8.2	10	1.5	0.00	0.00
22	0.00	0.00	0.00	e0.00	e0.00	e6.1	27	7.9	8.6	1.3	0.00	0.00
23	0.00	0.00	0.00	e0.00	e0.00	e6.4	23	8.1	7.6	1.1	0.00	0.00
24	0.00	0.00	0.00	e0.00	e0.00	e6.2	23	7.2	6.1	0.99	0.00	0.00
25	0.00	0.00	0.00	e0.00	e0.00	e6.6	22	7.1	5.3	0.99	0.00	0.00
26	0.00	0.00	0.00	e0.00	e0.00	e7.1	20	6.9	48	0.81	0.00	0.00
27	0.00	0.00	0.00	e0.00	e0.00	e12	18	6.8	91	0.71	0.00	0.00
28	0.00	0.00	0.00	e0.00	e0.00	e85	17	6.7	81	0.64	0.00	0.00
29	0.00	0.00	0.00	e0.00	---	e156	16	6.0	73	0.46	0.00	0.00
30	0.00	0.00	0.00	e0.00	---	e239	16	5.0	49	0.39	0.00	0.00
31	0.00	---	0.00	e0.00	---	e292	---	4.9	---	0.25	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	973.18	2,956	284.1	895.5	273.04	1.11	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	31.4	98.5	9.16	29.9	8.81	0.04	0.00
MAX	0.00	0.00	0.00	0.00	0.00	292	283	15	91	40	0.18	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	16	4.9	5.1	0.25	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	1,930	5,860	564	1,780	542	2.2	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	0.87	0.29	0.22	0.11	1.12	81.4	185	48.7	28.7	27.4	5.63	2.38
MAX	25.1	4.17	2.75	1.75	26.5	545	1,052	578	360	415	115	61.4
(WY)	(1979)	(1979)	(1994)	(2001)	(1981)	(1994)	(1979)	(1970)	(1976)	(1978)	(1993)	(1978)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1960)	(1960)	(1960)	(1960)	(1960)	(1964)	(1961)	(1961)	(1961)	(1961)	(1960)	(1960)

05113360 LONG CREEK AT WESTERN CROSSING OF INTERNATIONAL BOUNDARY, SASKATCHEWAN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	4,950.93		5,382.93			
ANNUAL MEAN	13.5		14.7		31.8	
HIGHEST ANNUAL MEAN					150	1976
LOWEST ANNUAL MEAN					0.00	1988
HIGHEST DAILY MEAN	268	Jun 4	292	Mar 31	4,350	Apr 1, 1976
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1959
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1959
MAXIMUM PEAK FLOW			330	Mar 31	4,690	Apr 1, 1976
MAXIMUM PEAK STAGE			[a]4.51	Mar 31	12.05	Apr 1, 1976
ANNUAL RUNOFF (AC-FT)	9,820		10,680		23,050	
10 PERCENT EXCEEDS	43		35		34	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Backwater from ice
e Estimated

05113600 LONG CREEK NEAR NOONAN, ND
(International gaging station)

LOCATION.--Lat 48°58'52", long 103°04'34", near north line of NE¼ sec.1, T.163 N., R.96 W., Divide County, Hydrologic Unit 09010001, on right bank 150 ft upstream from county highway bridge, 1.5 mi upstream from international boundary, and 7 mi northwest of Noonan.

DRAINAGE AREA.--1,790 mi^2, approximately, of which about 1,160 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2113: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 18, 1960, nonrecording gage at same site and datum.

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

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	e1.6	e1.0	e0.64	e0.46	e0.00	e430	19	9.8	e45	1.5	4.4
2	0.12	e1.6	e1.1	e0.64	e0.45	e0.02	335	17	12	e70	1.4	3.6
3	0.18	e1.6	e1.0	e0.63	e0.42	e0.20	228	14	12	e100	1.2	2.6
4	0.25	e1.6	e1.0	e0.63	e0.35	e0.80	287	14	11	e85	1.2	2.2
5	0.33	e1.6	e1.0	e0.62	e0.24	e5.0	332	13	11	e70	1.1	2.1
6	0.42	e1.6	e1.0	e0.62	e0.13	e11	306	12	10	e55	1.2	1.7
7	0.56	e1.6	e1.0	e0.61	e0.07	e14	259	10	13	e40	0.93	1.5
8	0.64	e1.5	e1.0	e0.61	e0.01	e20	225	16	21	31	0.87	1.5
9	0.67	e1.5	e1.0	e0.60	e0.00	e24	201	21	64	24	0.80	1.5
10	0.83	e1.5	e1.0	e0.60	e0.00	e23	175	18	108	20	0.75	1.4
11	0.93	e1.5	e1.0	e0.59	e0.00	e22	148	19	149	17	3.9	1.2
12	1.4	e1.5	e1.0	e0.58	e0.00	e21	125	23	160	14	5.2	1.0
13	1.8	e1.4	e1.0	e0.57	e0.00	e21	107	21	140	12	4.3	1.1
14	e2.1	e1.4	e1.0	e0.56	e0.00	e20	96	19	114	12	3.3	1.1
15	e1.9	e1.3	e1.0	e0.56	e0.00	e20	88	15	86	9.4	2.3	1.1
16	e1.8	e1.3	e1.1	e0.55	e0.00	e20	79	13	68	8.6	1.9	0.85
17	e1.8	e1.3	e1.1	e0.54	e0.00	e20	72	11	57	9.2	1.9	0.96
18	e1.8	e1.2	e1.1	e0.54	e0.00	e20	67	14	48	7.5	2.4	0.95
19	e1.8	e1.1	e1.0	e0.53	e0.00	e20	60	18	43	6.5	2.1	0.92
20	e1.9	e1.1	e0.75	e0.52	e0.00	e21	54	15	35	5.2	1.8	0.84
21	e1.9	e1.1	e0.68	e0.51	e0.00	e22	49	19	30	3.9	1.7	0.87
22	e2.0	e1.1	e0.66	e0.51	e0.00	e23	42	22	24	3.4	1.8	0.71
23	e1.9	e1.1	e0.66	e0.50	e0.00	e23	36	15	22	3.2	1.6	0.90
24	e1.8	e1.1	e0.66	e0.50	e0.00	e22	32	12	20	2.7	1.9	1.1
25	e1.7	e1.1	e0.66	e0.49	e0.00	e22	30	14	e19	2.7	1.9	0.93
26	e1.7	e1.1	e0.66	e0.49	e0.00	e21	27	12	e18	2.5	1.6	0.85
27	e1.7	e1.0	e0.66	e0.48	e0.00	e45	26	12	e21	2.1	1.6	0.80
28	e1.7	e1.0	e0.66	e0.47	e0.00	e85	23	11	e20	1.8	1.5	0.57
29	e1.7	e1.0	e0.65	e0.47	---	e170	21	10	e19	1.4	1.4	0.51
30	e1.7	e1.0	e0.65	e0.47	---	e316	20	8.9	e30	1.3	1.8	0.55
31	e1.7	---	e0.64	e0.47	---	e370	---	9.1	---	1.2	5.4	---
TOTAL	40.89	39.4	27.39	17.10	2.13	1,422.02	3,980	467.0	1,394.8	667.6	62.25	40.31
MEAN	1.32	1.31	0.88	0.55	0.08	45.9	133	15.1	46.5	21.5	2.01	1.34
MAX	2.1	1.6	1.1	0.64	0.46	370	430	23	160	100	5.4	4.4
MIN	0.12	1.0	0.64	0.47	0.00	0.00	20	8.9	9.8	1.2	0.75	0.51
AC-FT	81	78	54	34	4.2	2,820	7,890	926	2,770	1,320	123	80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	1.44	0.85	0.65	0.43	2.60	104	241	61.3	34.7	36.4	7.41	3.20
MAX	31.0	7.17	4.35	5.11	71.3	600	1,396	728	376	452	131	77.2
(WY)	(1979)	(1979)	(1976)	(1976)	(1981)	(1994)	(1979)	(1970)	(1976)	(1978)	(1993)	(1978)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1960)	(1961)	(1961)	(1961)	(1961)	(1965)	(1990)	(1990)	(1961)	(1961)	(1960)	(1960)

05113600 LONG CREEK NEAR NOONAN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	7,327.30		8,160.89			
ANNUAL MEAN	20.0		22.4		41.1	
HIGHEST ANNUAL MEAN					200	1976
LOWEST ANNUAL MEAN					0.02	1988
HIGHEST DAILY MEAN	283	Jun 5	430	Apr 1	5,710	Apr 1, 1976
LOWEST DAILY MEAN	0.00	Feb 8	0.00	Feb 9	0.00	Oct 1, 1959
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 8	0.00	Feb 9	0.00	Oct 1, 1959
MAXIMUM PEAK FLOW			[a]450	Apr 1	6,310	Mar 31, 1976
MAXIMUM PEAK STAGE			[b]7.45	Apr 1	17.61	Mar 31, 1976
ANNUAL RUNOFF (AC-FT)	14,530		16,190		29,790	
10 PERCENT EXCEEDS	60		56		47	
50 PERCENT EXCEEDS	1.4		1.7		0.44	
90 PERCENT EXCEEDS	0.05		0.46		0.00	

a About
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.32	3.64	3.76	3.77	3.77	3.77	7.07	3.58	3.36	---	3.06	3.15
2	3.29	3.65	3.75	3.77	3.78	3.78	6.47	3.55	3.39	---	3.06	3.11
3	3.30	3.66	3.76	3.77	3.78	3.79	5.73	3.51	3.39	---	3.05	3.08
4	3.31	3.67	3.77	3.76	3.78	3.81	6.15	3.50	3.37	---	3.05	3.06
5	3.32	3.68	3.77	3.76	3.78	3.85	6.46	3.48	3.35	---	3.04	3.06
6	3.33	3.68	3.79	3.76	3.77	3.89	6.29	3.46	3.34	---	3.04	3.04
7	3.33	3.67	3.80	3.75	3.76	3.91	5.96	3.43	3.39	---	3.03	3.02
8	3.33	3.66	3.80	3.75	3.77	4.05	5.71	3.54	3.51	3.65	3.02	3.03
9	3.33	3.68	3.80	3.76	3.77	4.15	5.51	3.62	4.05	3.55	3.02	3.02
10	3.33	---	3.79	3.76	3.76	4.13	5.29	3.56	4.52	3.49	3.01	3.02
11	3.33	---	3.80	3.75	3.77	4.14	5.03	3.59	4.94	3.44	3.14	3.01
12	3.35	3.69	3.80	3.75	3.77	4.72	4.81	3.65	5.05	3.39	3.15	2.99
13	3.38	3.70	3.78	3.75	3.77	4.57	4.63	3.62	4.85	3.36	3.12	3.00
14	3.39	3.71	3.79	3.75	3.79	5.03	4.52	3.59	4.59	3.35	3.08	3.00
15	3.38	3.70	3.79	3.75	3.78	4.88	4.44	3.52	4.31	3.30	3.05	3.00
16	3.39	3.70	3.79	3.74	3.78	4.65	4.34	3.48	4.10	3.28	3.03	2.98
17	3.41	3.71	3.78	3.74	3.77	4.52	4.26	3.46	3.97	3.30	3.03	2.99
18	3.44	3.71	3.79	3.75	3.77	4.41	4.20	3.50	3.86	3.26	3.05	2.99
19	3.46	3.70	3.78	3.76	3.77	4.29	4.11	3.56	3.80	3.24	3.04	2.99
20	3.46	3.70	3.80	3.76	3.77	4.18	4.05	3.52	3.70	3.20	3.02	2.98
21	3.49	3.70	3.78	3.76	3.76	4.11	3.97	3.58	3.64	3.16	3.02	2.98
22	3.52	3.71	3.77	3.75	3.76	4.06	3.90	3.63	3.56	3.15	3.03	2.97
23	3.55	3.70	3.76	3.75	3.76	4.06	3.83	3.51	3.53	3.14	3.01	2.98
24	3.58	3.71	3.76	3.75	3.76	4.06	3.77	3.46	3.49	3.12	3.03	3.00
25	3.58	3.72	3.76	3.76	3.77	4.02	3.75	3.49	---	3.12	3.03	2.99
26	3.60	3.73	3.76	3.76	3.78	3.94	3.71	3.45	---	3.12	3.01	2.98
27	3.62	3.73	3.77	3.76	3.78	4.48	3.69	3.44	---	3.10	3.01	2.98
28	3.64	3.72	3.77	3.76	3.78	5.91	3.65	3.42	---	3.08	3.01	2.95
29	3.66	3.74	3.76	3.76	---	6.90	3.61	3.39	---	3.06	3.00	2.94
30	3.64	3.75	3.76	3.77	---	6.88	3.60	3.36	---	3.06	3.02	2.95
31	3.63	---	3.77	3.77	---	7.25	---	3.35	---	3.05	3.17	---
MEAN	3.44	---	3.78	3.76	3.77	4.52	4.75	3.51	---	---	3.05	3.01
MAX	3.66	---	3.80	3.77	3.79	7.25	7.07	3.65	---	---	3.17	3.15
MIN	3.29	---	3.75	3.74	3.76	3.77	3.60	3.35	---	---	3.00	2.94

05113600 LONG CREEK NEAR NOONAN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
30...	1540	316	7.8	6.5	605	653	7.1	.4	28.1	18.4	14.0	2	58.2
AUG													
16...	1315	1.7	8.9	8.8	1,790	1,770	24.5	21.0	82.0	65.7	13.6	4	214

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
30...	44	109	7.3	.08	9.74	166	359	314	243	<1	2.2	26.4	<1
AUG													
16...	48	391	25.9	.25	7.01	600	1,240	5.68	<50	<1	11.4	66.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
30...	50	<1	<1	3.2	330	<1	150	3.91	1	<1	<1.0	8.2
AUG												
16...	140	<1	7	5.2	60	<1	40	5.48	5	<1	<1.0	2.5

Remark codes used in this table:
< -- Less than.

05113750 EAST BRANCH SHORT CREEK RESERVOIR NEAR COLUMBUS, ND

LOCATION.--Lat 48°59'26", long 102°47'07", in SW ¼NW ¼ sec.32, T.164 N., R.93 W., Burke County, Hydrologic Unit 09010001, on left bank of reservoir on East Branch Short Creek, 0.5 mi south of international boundary, and 6.0 mi north of Columbus.

DRAINAGE AREA.--280 mi^2, of which 175 mi^2 is probably noncontributing.

MONTHEND-GAGE HEIGHT AND CONTENTS RECORDS

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,860.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated periods, which are fair. Reservoir is formed by earth-fill dam; storage began April 1963. Outlet of lake is a fixed-crest concrete dam; average crest elevation, 1,886.90 ft above sea level. Reservoir capacity at crest elevation, 1,200 acre-ft. The reservoir is operated for water supply and recreation. Records of daily reservoir stage and contents are available from files at the North Dakota Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,850 acre-ft, Mar. 28, 1976, gage height, 32.13 ft; minimum, 770 acre-ft, Dec. 10, 1988, gage height, 22.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,420 acre-ft, Mar. 30, gage height, 28.85 ft; minimum, 950 acre-ft, on many days, gage height, 24.53 ft.

MONTHEND GAGE HEIGHT AND CONTENTS AT 2400, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	26.94	1,190	--
Oct. 31	26.47	1,140	-50
Nov. 30	25.89	1,080	-60
Dec. 31	25.36	1,030	-50
CAL YR 2004	--	--	-60
Jan. 31	24.83	970	-60
Feb. 28	24.54	950	-20
Mar. 31	28.78	1,410	+460
Apr. 30	27.73	1,290	-120
May 31	27.79	1,300	+10
June 30	28.57	1,390	+90
July 31	27.94	1,310	-80
Aug. 31	27.49	1,260	-50
Sept. 30	e27.25	e1,230	-30
WTR YR 2005	--	--	+40

e Estimated

05113800 SHORT CREEK BELOW INTERNATIONAL BOUNDARY NEAR ROCHE PERCEE, SASKATCHEWAN
(International gaging station)

LOCATION.--Lat 49°01'42", long 102°51'00", in SW$^1/_4$ sec.14, T.1, R.7 W., second meridian, Hydrologic Unit 09010001, 4 mi southwest of Roche Percee, Saskatchewan, and 5 mi upstream from mouth.

DRAINAGE AREA.--480 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder.

COOPERATION.--This station is one of the international gaging stations maintained by Canada under agreement with the United States. Records provided by the Water Survey of Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.49	0.74	0.74	e0.85	e0.49	e0.14	e163	0.85	5.1	27	2.4	0.64
2	0.46	0.71	0.74	e0.85	e0.53	e0.14	e111	0.71	6.7	28	2.2	0.49
3	0.53	0.71	0.85	e0.85	e0.49	e0.18	e93	0.64	7.2	27	1.9	0.64
4	0.49	0.81	e0.88	e0.85	e0.53	e0.39	e77	0.56	5.9	26	1.6	1.2
5	0.46	0.85	e0.78	e0.88	e0.46	e1.1	e60	0.42	5.0	26	1.4	0.95
6	0.46	0.81	e0.78	e1.1	e0.42	e5.4	48	0.42	9.4	25	1.3	0.64
7	0.64	0.81	e0.74	e0.85	e0.39	e7.7	41	0.42	13	23	1.1	0.85
8	0.56	0.78	e0.74	e0.81	e0.39	e6.9	33	1.9	19	21	1.1	1.4
9	0.49	0.78	e0.78	e0.81	e0.42	e4.4	27	3.1	36	20	1.0	1.4
10	0.64	0.81	e0.78	e0.81	e0.46	e7.7	23	3.5	82	18	0.88	1.3
11	0.81	0.78	e0.88	e0.85	e0.49	e13	18	10	121	17	1.1	1.0
12	0.64	0.78	e0.88	e0.81	e0.56	e12	16	19	119	16	0.88	0.74
13	0.60	0.81	e0.81	e0.78	e0.56	e10	14	15	98	15	0.81	0.53
14	0.71	0.85	e0.71	e0.46	e0.56	e24	12	11	83	13	0.74	0.42
15	0.74	0.92	e0.74	e0.28	e0.56	e12	10	8.3	74	12	0.60	0.35
16	0.74	0.88	e0.81	e0.32	e0.53	e6.1	7.9	6.6	64	11	0.56	0.32
17	0.78	0.81	e0.71	e0.49	e0.46	e5.2	6.6	5.2	53	13	0.53	0.32
18	0.81	0.78	e0.85	e0.67	e0.46	e4.4	5.8	5.9	42	11	0.56	0.28
19	1.1	0.81	e0.64	e0.67	e0.46	e4.2	4.6	6.2	35	10	0.49	0.28
20	1.1	0.81	e0.85	e0.60	e0.42	e11	3.9	6.1	30	8.8	0.39	0.25
21	1.3	0.74	e0.56	e0.56	e0.42	e4.9	3.6	9.3	26	7.9	0.39	0.25
22	1.4	0.81	e0.49	e0.53	e0.35	e3.7	3.0	13	22	7.2	0.42	0.21
23	1.2	0.81	e0.53	e0.60	e0.32	e4.6	2.6	14	20	6.7	0.49	0.21
24	0.95	0.78	e0.53	e0.67	e0.25	e3.7	2.4	17	18	5.4	0.81	0.21
25	0.88	0.81	e0.74	e0.67	e0.21	e3.1	2.0	15	17	5.2	0.42	0.18
26	0.81	0.81	e0.88	e0.67	e0.18	e4.9	1.7	12	27	5.0	0.42	0.18
27	0.74	0.78	e0.92	e0.64	e0.18	e27	1.6	9.5	26	4.6	0.39	0.18
28	0.74	0.74	e0.95	e0.60	e0.14	e112	1.2	8.5	25	3.9	0.35	0.14
29	0.74	0.71	e0.92	e0.60	---	e141	1.1	7.2	26	3.6	0.35	0.14
30	0.81	0.74	e0.88	e0.56	---	e177	0.95	5.7	27	3.4	0.39	0.14
31	0.81	---	e0.85	e0.53	---	e185	---	5.0	---	2.6	1.6	---
TOTAL	23.63	23.77	23.94	21.22	11.69	802.85	794.95	222.02	1,142.3	423.3	27.57	15.84
MEAN	0.76	0.79	0.77	0.68	0.42	25.9	26.5	7.16	38.1	13.7	0.89	0.53
MAX	1.4	0.92	0.95	1.1	0.56	185	163	19	121	28	2.4	1.4
MIN	0.46	0.71	0.49	0.28	0.14	0.14	0.95	0.42	5.0	2.6	0.35	0.14
AC-FT	47	47	47	42	23	1,590	1,580	440	2,270	840	55	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	0.75	0.33	0.10	0.04	1.23	36.3	59.0	18.8	10.4	6.47	3.81	1.17
MAX	10.9	6.00	1.42	0.68	27.9	285	311	169	100	41.1	69.9	16.5
(WY)	(1976)	(1976)	(1976)	(2005)	(1983)	(1976)	(1979)	(1975)	(1975)	(1986)	(1993)	(1975)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00
(WY)	(1962)	(1962)	(1961)	(1962)	(1962)	(1965)	(1991)	(1990)	(1980)	(1961)	(1961)	(1961)

05113800 SHORT CREEK BELOW INTERNATIONAL BOUNDARY NEAR ROCHE PERCEE, SASKATCHEWAN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	4,164.32		3,533.08			
ANNUAL MEAN	11.4		9.68		11.3	
HIGHEST ANNUAL MEAN					51.9	1976
LOWEST ANNUAL MEAN					0.03	1988
HIGHEST DAILY MEAN	235	Jun 13	185	Mar 31	1,410	Apr 7, 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.14	Feb 28	0.00	Mar 1, 1960
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.17	Feb 25	0.00	Mar 1, 1960
MAXIMUM PEAK FLOW			272	Mar 31	1,700	Apr 7, 1969
MAXIMUM PEAK STAGE			[a]6.67	Mar 31	14.39	Mar 28, 1960
ANNUAL RUNOFF (AC-FT)	8,260		7,010		8,220	
10 PERCENT EXCEEDS	29		25		15	
50 PERCENT EXCEEDS	0.88		0.85		0.07	
90 PERCENT EXCEEDS	0.00		0.39		0.00	

a Backwater from ice
e Estimated

05114000 SOURIS RIVER NEAR SHERWOOD, ND
(International gaging station)

LOCATION.--Lat 48°59'24", long 101°57'28", in NW¼SE¼NE¼ sec.33, T.164 N., R.87 W., Renville County, Hydrologic Unit 09010001, on right bank 0.8 mi downstream from international boundary, 16 mi northwest of Sherwood, and at mile 511.4.

DRAINAGE AREA.--8,940 mi^2, approximately, of which about 5,900 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1934, 1945. WSP 2113: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,603.73 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 8, 1935, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow is regulated by reservoirs in Canada (Boundary Reservoir, 48,990 acre-ft - 1958; Rafferty Reservoir, 356,400 acre-ft - 1991; and Alameda Reservoir, 85,560 ac-ft - 1992). Total reservoir capacity is about 490,000 acre-ft. Some diversions for irrigation and municipal supply.

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1927 reached a stage of about 22 ft and flood in 1904 reached a stage of about 25.8 ft from information by local residents.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	12	7.2	e2.7	e2.7	e3.0	1,380	78	78	360	117	e115
2	56	11	7.3	e2.7	e2.7	e3.2	1,230	75	86	476	117	e123
3	55	10	e7.3	e2.7	e2.7	e3.5	964	73	97	490	121	e128
4	33	9.4	e7.2	e2.7	e2.6	e3.9	776	72	86	435	111	e130
5	19	14	e7.1	e2.7	e2.6	e4.7	629	72	78	344	97	e127
6	13	16	e7.0	e2.7	e2.6	e5.5	594	69	74	294	102	e124
7	11	13	e6.9	e2.7	e2.5	e6.7	531	70	72	259	112	e121
8	9.3	11	e6.8	e2.7	e2.5	e8.5	476	75	79	235	117	e115
9	8.6	10	e6.8	e2.6	e2.6	e9.6	428	80	112	230	119	e108
10	8.1	9.8	e6.7	e2.7	e2.7	e11	389	78	142	223	112	e100
11	7.5	9.2	e6.6	e2.7	e2.7	e10	364	69	146	203	101	e95
12	7.2	9.1	e6.6	e2.7	e2.7	e9.0	355	65	172	184	100	e92
13	6.8	8.9	e6.6	e2.7	e2.7	e8.0	347	67	248	171	100	e90
14	6.6	8.8	e6.5	e2.7	e2.6	e7.3	334	73	313	164	100	e91
15	6.3	8.7	e6.7	e2.6	e2.6	e7.1	324	73	366	156	100	93
16	6.3	8.7	e6.6	e2.6	e2.6	e6.9	316	72	382	148	100	94
17	6.3	8.6	e6.5	e2.5	e2.6	e7.0	352	74	361	152	99	93
18	6.5	8.5	e6.6	e2.6	e2.6	e7.4	402	83	326	155	97	94
19	6.8	8.3	e6.8	e2.6	e2.6	e7.6	423	86	293	145	97	95
20	6.8	7.9	e6.3	e2.7	e2.6	e7.8	427	90	261	136	97	95
21	8.2	7.8	e5.0	e2.7	e2.6	e8.0	422	96	232	132	96	94
22	9.1	8.1	e4.2	e2.7	e2.6	e8.1	200	97	208	129	94	93
23	9.9	7.5	e3.5	e2.7	e2.6	e8.2	104	91	189	128	94	93
24	9.7	8.6	e3.2	e2.7	e2.6	e8.4	89	84	176	127	e93	97
25	9.6	7.8	e2.9	e2.7	e2.6	e8.6	82	87	159	126	e93	97
26	9.0	8.0	e2.8	e2.6	e2.6	e15	74	88	172	124	e92	95
27	8.5	8.0	e2.7	e2.6	e2.6	e50	67	84	224	124	e91	95
28	8.6	7.7	e2.7	e2.6	e2.8	e350	62	82	215	124	e91	94
29	11	7.3	e2.7	e2.6	---	e700	62	81	209	121	e90	91
30	13	7.2	e2.7	e2.6	---	e1,180	76	81	304	119	e95	87
31	13	---	e2.7	e2.7	---	e1,280	---	79	---	117	e105	---
TOTAL	445.7	280.9	171.2	82.5	73.5	3,754.0	12,279	2,444	5,860	6,331	3,150	3,059
MEAN	14.4	9.36	5.52	2.66	2.62	121	409	78.8	195	204	102	102
MAX	56	16	7.3	2.7	2.8	1,280	1,380	97	382	490	121	130
MIN	6.3	7.2	2.7	2.5	2.5	3.0	62	65	72	117	90	87
AC-FT	884	557	340	164	146	7,450	24,360	4,850	11,620	12,560	6,250	6,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	13.8	9.64	4.73	3.03	6.17	135	671	398	126	85.4	27.8	17.6
MAX	121	65.4	47.7	44.5	143	1,148	6,739	3,995	954	1,050	324	173
(WY)	(1994)	(1955)	(1976)	(1976)	(1981)	(1972)	(1976)	(1975)	(1953)	(1953)	(1999)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	1.82	2.63	0.17	0.00	0.00	0.00
(WY)	(1932)	(1935)	(1932)	(1931)	(1931)	(1936)	(1988)	(1988)	(1988)	(1937)	(1931)	(1931)

05114000 SOURIS RIVER NEAR SHERWOOD, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	14,391.90		37,930.8			
ANNUAL MEAN	39.3		104		126	
HIGHEST ANNUAL MEAN					878	1976
LOWEST ANNUAL MEAN					0.62	1988
HIGHEST DAILY MEAN	778	Jul 12	1,380	Apr 1	13,700	Apr 10, 1976
LOWEST DAILY MEAN	0.40	Mar 5	2.5	Jan 17	0.00	Sep 4, 1930
ANNUAL SEVEN-DAY MINIMUM	0.41	Mar 1	2.6	Feb 3	0.00	Sep 4, 1930
MAXIMUM PEAK FLOW			1,450	Mar 31	14,800	Apr 10, 1976
MAXIMUM PEAK STAGE			12.86	Mar 31	25.15	Apr 10, 1976
ANNUAL RUNOFF (AC-FT)	28,550		75,240		91,020	
10 PERCENT EXCEEDS	99		298		217	
50 PERCENT EXCEEDS	9.3		67		6.5	
90 PERCENT EXCEEDS	0.55		2.7		0.00	

e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.69	1.96	1.78	1.68	1.71	1.96	12.39	2.68	2.83	4.50	3.19	---
2	2.69	1.92	1.78	1.69	1.72	1.75	11.41	2.66	2.88	5.21	3.20	---
3	2.67	1.89	1.80	1.69	1.73	1.68	9.60	2.65	2.95	5.31	3.22	---
4	2.40	1.87	1.83	1.69	1.72	1.67	8.01	2.64	2.88	4.89	3.15	---
5	2.16	2.02	1.77	1.68	1.72	1.80	6.64	2.64	2.83	4.41	3.03	---
6	2.03	2.09	1.83	1.69	1.71	2.26	6.30	2.63	2.80	4.15	3.07	---
7	1.95	1.98	1.80	1.69	1.73	3.27	5.71	2.63	2.79	3.96	3.15	---
8	1.89	1.91	1.79	1.70	1.76	2.87	5.34	2.68	2.83	3.84	3.19	---
9	1.86	1.89	1.79	1.70	1.76	2.65	5.02	2.78	3.04	3.81	3.21	---
10	1.84	1.88	1.79	1.70	1.75	3.02	4.77	2.83	3.23	3.77	3.16	---
11	1.81	1.86	1.80	1.71	1.73	3.87	4.61	2.76	3.25	3.66	3.06	---
12	1.80	1.85	1.80	1.72	1.70	4.92	4.55	2.73	3.40	3.56	3.06	---
13	1.78	1.83	1.78	1.71	1.72	4.99	4.50	2.74	3.84	3.49	3.06	---
14	1.77	1.83	1.74	1.70	1.70	4.79	4.41	2.79	4.21	3.45	3.06	---
15	1.75	1.83	1.82	1.67	1.70	4.87	4.34	2.79	4.49	3.41	3.06	3.00
16	1.75	1.82	1.80	1.65	1.68	4.80	4.29	2.79	4.58	3.37	3.06	3.00
17	1.75	1.82	1.80	1.63	1.70	4.20	4.53	2.80	4.47	3.39	3.05	3.00
18	1.75	1.82	1.74	1.65	1.69	3.79	4.85	2.86	4.28	3.40	3.03	3.00
19	1.77	1.82	1.78	1.67	1.65	3.41	4.99	2.88	4.10	3.35	3.03	3.01
20	1.77	1.80	1.81	1.73	1.67	3.27	5.02	2.90	3.93	3.31	3.03	3.02
21	1.83	1.80	1.74	1.85	1.65	3.22	4.98	2.94	3.78	3.28	3.03	3.01
22	1.87	1.82	1.63	1.80	1.65	3.17	3.51	2.95	3.66	3.26	3.01	3.00
23	1.90	1.75	1.55	1.76	1.65	3.07	2.86	2.91	3.57	3.26	3.01	3.00
24	1.90	1.84	1.71	1.74	1.65	3.01	2.76	2.87	3.50	3.26	---	3.03
25	1.89	1.81	1.68	1.73	1.68	2.94	2.71	2.89	3.42	3.25	---	3.03
26	1.87	1.81	1.67	1.72	1.83	2.86	2.66	2.89	3.50	3.24	---	3.01
27	1.84	1.82	1.67	1.72	1.98	3.17	2.61	2.87	3.78	3.24	---	3.02
28	1.84	1.80	1.67	1.72	2.18	6.14	2.57	2.85	3.72	3.24	---	3.01
29	1.92	1.78	1.67	1.72	---	10.47	2.57	2.84	3.69	3.22	---	2.99
30	1.99	1.78	1.67	1.72	---	11.97	2.67	2.84	4.20	3.21	---	2.96
31	1.99	---	1.68	1.71	---	12.62	---	2.84	---	3.20	---	---
MEAN	1.96	1.86	1.75	1.71	1.73	4.14	5.04	2.79	3.55	3.67	---	---
MAX	2.69	2.09	1.83	1.85	2.18	12.62	12.39	2.95	4.58	5.31	---	---
MIN	1.75	1.75	1.55	1.63	1.65	1.67	2.57	2.63	2.79	3.20	---	---

05114000 SOURIS RIVER NEAR SHERWOOD, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970, 1972 to current year.

REMARKS.-- Quality assurance samples also collected at this location. Environment Canada also collected a sample on November 16.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV													
16...	1045	8.7	--	3.6	--	8.2	8.3	1,240	1,300	7.0	1.1	82.2	56.6
FEB													
23...	1415	2.6	720	1.6	12	7.4	7.8	2,150	2,240	-3.5	.0	123d	76.9d
APR													
26...	1240	72	711	10.8	102	8.4	8.1	1,000	1,080	9.0	9.5	70.0	47.5
MAY													
17...	1235	74	705	9.1	95	8.6	8.3	954	1,030	18.0	13.5	66.4	50.0
JUL													
19...	1530	149	705	4.9	63	8.4	8.3	1,080	1,110	31.0	24.0	67.8	52.4
AUG													
23...	1630	92	790	11.3	125	8.4	8.5	1,410	1,470	26.5	22.0	64.4	51.3
SEP													
07...	1215	121	725	7.5	83	8.4	7.6	884	800	16.0	17.5	58.0	41.8

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
NOV													
16...	--	3	126	--	299@c	74.3	.2	259	--	--	849	<10	.83
FEB													
23...	--	5	315d	--	578@c	75.0d	.3	563d	--	--	1,600	10	1.9
APR													
26...	--	2	93.0	--	287@c	28.7	.2	223	--	--	692	17	1.3
MAY													
17...	--	2	95.2	--	270@c	27.2	.2	227	--	--	682	<10	1.1
JUL													
19...	--	2	102	--	298@c	25.5	.2	271	--	--	735	24	1.5
AUG													
23...	--	4	192	--	336@c	41.2	.2	388d	--	--	1,010	34	1.5
SEP													
07...	14.7	2	83.7	35	273@c	24.1	.2	183	570	196	600	42	1.3

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

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)
NOV													
16...	<.04	<.06	--	--	E.04n	15.1	10k	.2d	<.1d	60	E1n	73	<.06
FEB													
23...	.87	.31	1.0	2.2	.12	19.0	40k	--	--	<250d	<2	102	<.06
APR													
26...	.13	.19	1.2	1.5	.16	20.0	--	.6d	<.1d	180	2	76	<.06
MAY													
17...	<.04	<.06	--	--	.13	16.4	32	1.8d	<.1d	120	3	63	<.06
JUL													
19...	<.04	.11	--	1.6	.30	23.3	63	E1.3d	<.1d	360	4	68	<.06
AUG													
23...	<.04	E.03n	--	--	.31	20.6	55	E1.4d	E.2d	420	4.8oc	68	E.04n
SEP													
07...	.04	.09	1.3	1.4	.22	16.9	82k	E.5d	<.1d	530	3.7	64	E.03n

05114000 SOURIS RIVER NEAR SHERWOOD, ND—Continued

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

Date	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Phen- olic com- pounds, water, unfltrd ug/L (32730)
NOV												
16...	149	E.04n	2.3	.878	10.6	240	.17	2.1	7.73	1.3	4	<16
FEB												
23...	274	.08	E.6n	1.21	7.4	430d	.22	3.0	8.43	2.2	8	<16
APR												
26...	106	E.04n	E.5n	1.03	3.3	580	.47	2.1	4.68	1.2	5	<16
MAY												
17...	98	.06	E.5n	.843	5.6	380	.36	2.0	5.43	1.1	4	<16
JUL												
19...	123d	E.04n	E.8n	.881	2.6	700	.54	1.8	5.80	.5	5	<16
AUG												
23...	230d	.05	.70oc	.946	3.1	970	.61	2.8	4.50	<.4	5	<16
SEP												
07...	187d	.05	.68oc	.874	2.7	1,160	.70	4.3	4.35	.4	5	<16

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

05115500 LAKE DARLING NEAR FOXHOLM, ND

LOCATION.--Lat 48°27'29", long 101°35'00", in NE¼NE¼ sec.1, T.157 N., R.85 W., Ward County, Hydrologic Unit 09010001, on embankment of Lake Darling Dam, reservoir of Fish and Wildlife Service, on Souris River about 6 mi north of Foxholm, and at mile 430.0.

DRAINAGE AREA.--9,450 mi^2, approximately, of which about 6,200 mi^2 is probably noncontributing.

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--April 1936 to current year (no winter records 1936-39).

REVISED RECORDS.--WSP 1338: 1942. WSP 2113: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. April 1936 to Aug. 8, 1963, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam; storage began in April 1936; dam completed in July 1936. Usable capacity, 118,600 acre-ft between elevation of 1,577 ft, sill of control gages, and 1,598 ft, legal full-capacity level. Flood-emergency maximum level is 1,601 ft (148,600 acre-ft). Dead storage below sill at control gages is 144 acre-ft. Figures given herein represent total contents based on capacity table dated April 12, 1995 (provided by U.S. Fish and Wildlife Service). Water is used during periods of low flow at wildlife refuges downstream. Elevations are adjusted for wind effect.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 145,400 acre-ft, Apr. 17, 1976, elevation, 1601.24 ft; minimum observed since April 1943 when reservoir was first filled to spillway level, 31,200 acre-ft, Feb. 18 and 25, 1963, elevation, 1587.04 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 112,700 acre-ft, Apr. 4, elevation, 1,597.39 ft; minimum daily observed, 95,250 acre-ft, Oct. 18, elevation, 1,595.57 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,596.20	101,200	--
Oct. 31	1,595.77	97,140	-4,060
Nov. 30	1,595.68	96,290	-850
Dec. 31	1,595.79	97,330	+1,040
CAL YR 2004	--	--	-90
Jan. 31	1,595.86	97,990	+660
Feb. 28	1,595.90	98,370	+380
Mar. 31	1,597.20	110,800	+12,430
Apr. 30	1,596.95	108,400	-2,400
May 31	1,596.45	103,600	-4,800
June 30	1,596.97	108,600	+5,000
July 31	1,596.60	105,000	-3,600
Aug. 31	1,596.03	99,600	-5,400
Sept. 30	1,595.98	99,130	-470
WTR YR 2005	--	--	-2,070

05115500 LAKE DARLING NEAR FOXHOLM, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1993 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
20...	1015	1.0	1.0	8.4	1,060	310	54.5	43.2	--	3	121	--	286@c
20...	1020	6.0	6.0	8.5	1,060	320	54.6	43.4	--	3	122	--	286@c
20...	1025	4.8	2.4	--	--	--	--	--	--	--	--	--	--
MAR													
16...	1300	2.4	1.9	8.6	1,080	350	60.8	49.1	--	3	138	--	304@c
16...	1305	4.5	4.0	8.4	1,190	400	68.7	55.2	--	3	155	--	338@c
JUN													
22...	0940	1.4	1.0	8.8	976	310	51.4	44.0	--	3	121	--	267@c
22...	0950	6.4	6.0	8.2	994	320	55.1	45.2	--	3	121	--	282@c
22...	1000	6.0	3.0	--	--	--	--	--	--	--	--	--	--
AUG													
25...	1040	1.5	.50	8.6	986	300	50.1	41.3	15.9	3	116	44	257@c
25...	1045	6.5	5.5	8.8	985	290	48.0	40.3	15.7	3	113	45	256@c
25...	1050	5.5	4.5	--	--	--	--	--	--	--	--	--	--

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
OCT													
20...	31.8	.3	253	--	730	<10	1.2	.08	.10	1.2	1.4	.22	15.0
20...	31.7	.3	253	--	721	<10	1.3	.08	.11	1.3	1.5	.24	14.2
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	33.2	.3	270	--	760	<10	1.7	<.04	<.06	--	--	.22	16.6
16...	36.4	.3	298d	--	877	<10	1.3	<.04	<.06	--	--	.20	18.1
JUN													
22...	28.6	.2	253	--	714	<10	1.1	<.04	<.06	--	--	.15	13.4
22...	28.9	.2	252	--	724	<10	1.3	.13	<.06	1.2	--	.36	16.9
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
25...	26.6	.2	234	639	675	<10	1.3	.06	<.06	1.2	--	.28	14.0
25...	26.2	.2	234	631	675	<10	1.2	.07	<.06	1.1	--	.28	13.5
25...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT													
20...	--	--	90	8	73	<.06	258	E.03n	<.8	.517	3.5	100	.09
20...	--	--	90	7	72	<.06	260	E.02n	<.8	.505	3.2	90	.08
20...	E1.8d	<.2d	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	8oc	5	79	<.06	253	.06	<.8	.621	6.3	30	1.31
16...	--	--	13oc	6	85	<.06	266	.04	<.8	.658	6.9	30	.19
JUN													
22...	--	--	8oc	6	54	<.06	193	E.04n	<.8	.595	7.6	20	.25
22...	--	--	200	2	7	.16	<8	.29	<.8	.070	17.8	110	.82
22...	E1.3d	<.1d	--	--	--	--	--	--	--	--	--	--	--
AUG													
25...	--	--	60	7.4oc	63	<.06	191d	.05	.20oc	.389	1.9	50	.43
25...	--	--	19	7.1oc	62	<.06	197d	E.02n	.16oc	.397	1.8	40	.06
25...	E.6d	<.1d	--	--	--	--	--	--	--	--	--	--	--

05115500 LAKE DARLING NEAR FOXHOLM, ND—Continued

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

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Phen- olic com- pounds, water, unfltrd ug/L (32730)
OCT						
20...	E.01n	7.1	3.30	.8	E2n	<16
20...	.02	7.0	3.18	.6	3	<16
20...	--	--	--	--	--	--
MAR						
16...	E.01n	6.8	4.13	.8	<2	<16
16...	<.01	7.2	4.62	1.2	<2	<16
JUN						
22...	E.01n	5.0	4.06	1.0	3	<16
22...	<.01	<.2	.54	E.3n	50	<16
22...	--	--	--	--	--	--
AUG						
25...	E.01n	4.4	2.86	<.4	E2n	<16
25...	E.01n	4.4	2.95	<.4	E1n	<16
25...	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

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

Date	Time	Depth of lake, maximum meters (85310)	Ice thick- ness, meters (82131)	Sam- pling depth, meters (00098)	Trans- parency Secchi disc, inches (00077)	Wind direc- tion, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)
OCT													
20...	1005	6.8	--	.00	96.0	45	<5.0	720	11.3	95	8.7	1,050	-1.0
20...	1006	--	--	.50	--	--	--	--	11.2	--	8.7	1,060	--
20...	1007	--	--	1.0	--	--	--	--	11.1	--	8.8	1,060	--
20...	1008	--	--	1.5	--	--	--	--	11.1	--	8.8	1,060	--
20...	1009	--	--	2.0	--	--	--	--	11.0	--	8.8	1,050	--
20...	1010	--	--	3.0	--	--	--	--	11.0	--	8.8	1,060	--
20...	1011	--	--	4.1	--	--	--	--	10.9	--	8.8	1,060	--
20...	1012	--	--	5.0	--	--	--	--	10.9	--	8.8	1,060	--
20...	1013	--	--	6.1	--	--	--	--	10.9	--	8.8	1,060	--
20...	1014	--	--	6.8	--	--	--	--	10.8	--	8.8	1,060	--
MAR													
16...	1251	4.8	1.90	1.0	102	320	9.0	730	25.2	200	8.1	1,220	-2.0
16...	1252	--	--	2.0	--	--	--	--	25.7	--	8.1	1,260	--
16...	1253	--	--	3.0	--	--	--	--	25.6	--	8.1	1,270	--
16...	1254	--	--	4.0	--	--	--	--	22.5	--	8.0	1,310	--
16...	1255	--	--	4.8	--	--	--	--	18.2	--	8.0	1,320	--
JUN													
22...	0930	7.6	--	.00	108	180	8.0	714	11.6	146	8.3	1,060	26.0
22...	0931	--	--	1.0	--	--	--	--	11.6	--	8.4	1,060	--
22...	0932	--	--	2.0	--	--	--	--	10.8	--	8.4	1,070	--
22...	0933	--	--	3.0	--	--	--	--	9.4	--	8.4	1,070	--
22...	0934	--	--	4.0	--	--	--	--	8.6	--	8.4	1,070	--
22...	0935	--	--	5.0	--	--	--	--	5.6	--	8.3	1,080	--
22...	0936	--	--	6.0	--	--	--	--	4.2	--	8.3	1,090	--
22...	0937	--	--	7.0	--	--	--	--	1.8	--	8.2	1,100	--
22...	0938	--	--	7.6	--	--	--	--	.5	--	8.1	1,110	--
AUG													
25...	1030	6.8	--	.00	60.0	240	17	715	7.0	82	8.5	959	17.0
25...	1031	--	--	1.0	--	--	--	--	7.0	--	8.5	959	--
25...	1032	--	--	2.0	--	--	--	--	7.1	--	8.5	960	--
25...	1033	--	--	3.0	--	--	--	--	7.1	--	8.5	960	--
25...	1034	--	--	4.0	--	--	--	--	7.2	--	8.6	960	--
25...	1035	--	--	5.0	--	--	--	--	7.2	--	8.6	961	--
25...	1036	--	--	6.0	--	--	--	--	7.1	--	8.6	961	--
25...	1037	--	--	6.8	--	--	--	--	6.1	--	8.6	964	--

05115500 LAKE DARLING NEAR FOXHOLM, ND—Continued

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

Date	Temperature, water, deg C (00010)
OCT	
20...	5.5
20...	5.5
20...	5.6
20...	5.5
20...	5.5
20...	5.5
20...	5.5
20...	5.5
20...	5.5
20...	5.5
MAR	
16...	3.7
16...	4.1
16...	4.2
16...	4.3
16...	4.7
JUN	
22...	23.5
22...	23.5
22...	22.4
22...	21.0
22...	20.4
22...	19.1
22...	18.3
22...	17.4
22...	16.9
AUG	
25...	19.2
25...	19.2
25...	19.2
25...	19.2
25...	19.2
25...	19.2
25...	19.1
25...	19.0

Remark codes used in this table:
< -- Less than.

05116000 SOURIS RIVER NEAR FOXHOLM, ND

LOCATION.--Lat 48°22'20", long 101°30'18", in SW¼SE¼ sec.34, T.157 N., R.84 W., Ward County, Hydrologic Unit 09010001, on left bank 30 ft upstream from county highway bridge, 3 mi east of Foxholm, 19 mi upstream from Des Lacs River, and at mile 414.5.

DRAINAGE AREA.--9,470 mi^2, approximately, of which about 6,200 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to November 1905, March to July 1906 (gage heights only), October 1936 to current year. Monthly discharge only for some periods, published in WSP 1308. Published as Mouse River near Foxholm, 1904-06.

REVISED RECORDS.--WSP 1308: 1905. WSP 2113: Drainage area.

GAGE.--Water-stage recorder and sheet piling weir. Datum of gage is 1,560.73 ft above National Geodetic Vertical Datum of 1929. June 23, 1904, to July 31, 1906, nonrecording gage at site 3.2 mi upstream at different datum. Apr. 1, 1937, to Mar. 25, 1938, nonrecording gage at site 600 ft downstream at datum about 0.5 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow almost completely regulated since 1936 by Lake Darling (station 05115500), 15 mi upstream, Canadian Reservoirs (Boundary Reservoir, 48,990 acre-ft - 1958; Rafferty Reservoir, 356,400 acre-ft - 1991; and Alameda Reservoir, 85,560 acre-ft - 1992) and several small reservoirs, combined capacity, about 646,000 acre-ft. Some small diversions for irrigation and municipal supply.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	0.05	0.04	e0.05	0.04	0.02	532	36	97	36	180	61
2	102	0.04	0.04	e0.04	0.04	0.02	830	28	94	25	184	61
3	101	0.04	0.04	e0.04	0.04	0.02	936	4.9	98	17	181	61
4	100	0.04	0.05	e0.04	0.04	0.02	966	2.5	95	21	181	61
5	100	0.03	0.05	e0.04	0.04	0.04	976	2.1	73	355	180	60
6	129	0.03	0.05	e0.04	0.04	0.07	980	1.9	73	405	156	60
7	174	0.02	0.06	e0.04	0.03	0.09	908	1.7	74	393	152	60
8	183	0.02	0.06	e0.04	0.02	0.08	725	2.2	76	380	152	60
9	190	0.02	0.06	0.05	0.02	0.07	688	4.1	76	369	152	60
10	191	0.02	0.06	0.05	0.02	0.08	674	29	113	324	161	60
11	190	0.02	0.07	0.05	0.02	0.09	649	92	146	193	184	60
12	190	0.02	0.07	0.05	0.02	0.12	638	89	151	190	186	60
13	185	0.02	0.07	0.04	0.02	0.11	546	82	192	210	176	59
14	183	0.02	0.06	0.03	0.02	0.10	383	80	290	239	162	59
15	142	0.02	0.05	0.03	0.02	0.09	370	78	352	241	169	59
16	59	0.02	0.06	0.03	0.01	0.09	359	78	357	235	191	58
17	54	0.03	0.06	0.02	0.01	0.09	354	96	361	285	200	59
18	36	0.03	0.06	0.02	0.01	0.09	357	136	367	269	203	58
19	1.5	0.03	0.06	0.03	0.01	0.09	360	150	380	246	201	57
20	0.12	0.03	0.05	0.03	0.01	0.09	349	155	372	239	199	57
21	0.04	0.03	0.05	0.03	0.01	0.08	229	162	285	235	196	57
22	0.01	0.03	0.05	0.04	0.01	0.09	187	164	277	235	194	56
23	0.01	0.03	0.04	0.04	0.01	0.11	79	158	206	228	191	57
24	0.00	0.02	0.04	0.04	0.01	0.14	73	157	157	213	189	57
25	0.00	0.02	0.04	0.04	0.01	0.15	72	155	167	206	150	57
26	0.00	0.03	0.04	0.04	0.01	0.17	67	153	209	199	115	58
27	0.00	0.04	0.04	0.04	0.02	0.33	48	153	305	243	116	58
28	0.00	0.04	0.05	0.04	0.02	0.55	37	151	188	241	116	57
29	0.01	0.04	0.05	0.04	---	10	37	151	70	191	117	57
30	0.05	0.04	0.05	0.04	---	107	36	151	79	181	93	57
31	0.05	---	0.05	0.04	---	226	---	127	---	179	72	---
TOTAL	2,413.79	0.87	1.62	1.19	0.58	346.09	13,445	2,830.4	5,780	7,023	5,099	1,761
MEAN	77.9	0.03	0.05	0.04	0.02	11.2	448	91.3	193	227	164	58.7
MAX	191	0.05	0.07	0.05	0.04	226	980	164	380	405	203	61
MIN	0.00	0.02	0.04	0.02	0.01	0.02	36	1.7	70	17	72	56
AC-FT	4,790	1.7	3.2	2.4	1.2	686	26,670	5,610	11,460	13,930	10,110	3,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2005, BY WATER YEAR (WY)

MEAN	26.7	24.6	24.1	25.1	31.0	101	485	474	141	101	58.7	38.7
MAX	146	137	144	166	334	1,058	5,443	4,242	1,138	1,238	440	345
(WY)	(2000)	(1952)	(1976)	(1976)	(1997)	(1976)	(1976)	(1975)	(1975)	(1953)	(1999)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00
(WY)	(1937)	(1937)	(1937)	(1937)	(1937)	(1937)	(1942)	(1942)	(1991)	(1991)	(1937)	(1937)

05116000 SOURIS RIVER NEAR FOXHOLM, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1937 - 2005	
ANNUAL TOTAL	14,298.15		38,702.54			
ANNUAL MEAN	39.1		106		128	
HIGHEST ANNUAL MEAN					948	1976
LOWEST ANNUAL MEAN					1.13	1989
HIGHEST DAILY MEAN	368	Jul 17	980	Apr 6	8,500	Apr 17, 1976
LOWEST DAILY MEAN	0.00	Jul 2	0.00	Oct 24	-5.0	Apr 5, 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 2	0.00	Oct 22	0.00	Oct 1, 1936
MAXIMUM PEAK FLOW			983	Apr 7	8,600	Apr 17, 1976
MAXIMUM PEAK STAGE			10.35	Apr 7	17.17	Apr 17, 1976
INSTANTANEOUS LOW FLOW					[a]-25	Apr 4, 1949
ANNUAL RUNOFF (AC-FT)	28,360		76,770		92,550	
10 PERCENT EXCEEDS	114		280		239	
50 PERCENT EXCEEDS	0.12		56		11	
90 PERCENT EXCEEDS	0.02		0.02		0.00	

a Reverse flow caused by backwater from Des Lacs River
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.49	4.78	4.78	4.84	4.84	4.81	8.36	5.82	6.45	5.90	7.00	6.11
2	6.48	4.78	4.79	4.85	4.83	4.82	9.65	5.67	6.43	5.72	7.01	6.11
3	6.48	4.77	4.79	4.86	4.83	4.81	10.12	5.06	6.46	5.57	6.98	6.11
4	6.47	4.77	4.80	4.85	4.83	4.82	10.27	4.91	6.43	5.51	6.97	6.11
5	6.47	4.76	4.81	4.85	4.83	4.84	10.32	4.89	6.29	7.87	6.96	6.10
6	6.67	4.76	4.81	4.85	4.83	4.87	10.34	4.88	6.29	8.40	6.84	6.10
7	6.97	4.76	4.82	4.85	4.82	4.89	10.01	4.87	6.30	8.53	6.81	6.10
8	7.01	4.75	4.82	4.85	4.82	4.88	9.20	4.93	6.31	8.47	6.80	6.10
9	7.04	4.75	4.82	4.85	4.82	4.87	9.04	5.08	6.31	8.43	6.79	6.10
10	7.04	4.75	4.82	4.85	4.82	4.88	8.98	5.53	6.54	8.17	6.82	6.10
11	7.04	4.75	4.83	4.85	4.82	4.89	8.87	6.42	6.73	7.32	6.92	6.10
12	7.04	4.75	4.83	4.84	4.81	4.90	8.83	6.40	6.76	7.23	6.92	6.10
13	7.02	4.75	4.83	4.83	4.81	4.90	8.44	6.35	6.94	7.31	6.86	6.09
14	7.01	4.75	4.83	4.83	4.81	4.89	7.71	6.34	7.39	7.42	6.79	6.09
15	6.78	4.75	4.82	4.82	4.81	4.88	7.65	6.33	7.68	7.42	6.81	6.09
16	6.28	4.76	4.83	4.82	4.80	4.87	7.60	6.33	7.71	7.38	6.90	6.09
17	6.26	4.76	4.83	4.81	4.80	4.87	7.59	6.44	7.73	7.61	6.94	6.09
18	5.99	4.76	4.83	4.81	4.79	4.87	7.61	6.68	7.76	7.52	6.95	6.08
19	5.08	4.76	4.83	4.82	4.79	4.87	7.63	6.75	7.82	7.41	6.95	6.08
20	4.85	4.76	4.82	4.82	4.79	4.87	7.58	6.78	7.78	7.37	6.94	6.08
21	4.77	4.76	4.82	4.83	4.79	4.86	7.00	6.81	7.37	7.34	6.93	6.07
22	4.74	4.76	4.82	4.83	4.79	4.86	6.78	6.82	7.33	7.33	6.91	6.07
23	4.72	4.76	4.81	4.83	4.79	4.87	6.17	6.79	7.01	7.29	6.90	6.08
24	4.71	4.76	4.81	4.83	4.80	4.90	6.14	6.79	6.79	7.22	6.89	6.08
25	4.70	4.76	4.81	4.83	4.80	4.90	6.14	6.78	6.84	7.18	6.70	6.08
26	4.70	4.77	4.82	4.83	4.80	4.91	6.11	6.77	7.02	7.14	6.52	6.08
27	4.70	4.78	4.82	4.84	4.81	4.97	5.93	6.77	7.46	7.32	6.52	6.08
28	4.70	4.78	4.83	4.83	4.81	5.01	5.81	6.76	6.87	7.31	6.51	6.07
29	4.73	4.78	4.83	4.84	---	5.13	5.81	6.76	6.22	7.08	6.51	6.08
30	4.79	4.78	4.83	4.83	---	6.33	5.81	6.76	6.33	7.02	6.35	6.08
31	4.79	---	4.84	4.84	---	6.95	---	6.62	---	7.00	6.21	---
MEAN	5.89	4.76	4.82	4.84	4.81	5.00	7.92	6.16	6.91	7.28	6.80	6.09
MAX	7.04	4.78	4.84	4.86	4.84	6.95	10.34	6.82	7.82	8.53	7.01	6.11
MIN	4.70	4.75	4.78	4.81	4.79	4.81	5.81	4.87	6.22	5.51	6.21	6.07

05116000 SOURIS RIVER NEAR FOXHOLM, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
12...	0920	756	8.7	8.0	1,220	1,220	5.5	8.0	58.0	45.7	16.3	3	137
AUG													
23...	1215	191	8.5	8.6	1,020	1,020	30.5	22.0	43.8	37.4	14.0	3	110

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
12...	46	319	37.2	.26	11.1	329	817	1,690	<50	<1	6.5	72.9	<1
AUG													
23...	46	265	27.7	.18	2.78	244	637	330	<50	<1	14.8	54.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
12...	220	<1	<1	2.6	20	<1	20	4.22	1.4	<1	<1.0	3.3
AUG												
23...	200	<1	<1	2.1	60	<1	40	2.91	27.5	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

05116500 DES LACS RIVER AT FOXHOLM, ND

LOCATION.--Lat 48°22'14", long 101°34'11", in NW¼NE¼NW¼ sec 2, T.156 N., R.85 W., Ward County, Hydrologic Unit 09010002, on left bank 200 ft upstream from county highway bridge in Foxholm and at mile 23.0.

DRAINAGE AREA.--939 mi^2, of which about 400 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to July 1906, October 1945 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,632.98 ft above National Geodetic Vertical Datum of 1929. June 14 to Oct. 23, 1955, nonrecording gage at site 200 ft downstream from present gage at same datum. See WSP 1728 or 1913 for history of changes prior to June 14, 1955.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow is affected by reservoirs of Des Lacs National Wildlife Refuge. Combined reservoir capacity is about 54,000 acre-ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	35	e13	e0.04	e0.05	e0.60	327	35	80	417	32	11
2	53	34	e12	e0.03	e0.08	e1.0	242	34	89	263	29	11
3	50	34	e10	e0.03	e0.11	e1.4	212	34	132	174	28	11
4	47	33	e9.0	e0.02	e0.10	e2.3	195	32	121	134	26	11
5	45	33	e8.5	e0.02	e0.07	e4.0	180	31	91	111	25	11
6	43	32	e8.0	e0.01	e0.05	e6.5	165	29	79	95	23	9.7
7	42	32	e7.6	e0.01	e0.04	e10	156	24	85	83	22	9.2
8	45	31	e7.2	e0.01	e0.06	e20	140	30	96	73	20	8.9
9	58	31	e7.0	e0.01	e0.09	e17	122	47	148	67	19	8.8
10	53	29	e6.8	e0.00	e0.15	e15	115	53	232	62	19	8.7
11	47	29	e6.8	e0.00	e0.30	e13	106	38	182	57	19	8.7
12	45	27	e6.8	e0.00	e0.50	e12	103	32	135	54	18	8.2
13	42	24	e6.8	e0.00	e0.65	e11	98	31	113	51	18	8.4
14	40	32	e6.7	e0.00	e0.58	e10	91	32	102	48	17	e8.2
15	38	30	e6.7	e0.00	e0.47	e10	82	33	97	45	16	e8.1
16	37	28	e6.7	e0.00	e0.40	e9.5	73	33	92	43	15	e8.0
17	36	28	e6.8	e0.00	e0.38	e9.2	68	33	84	49	17	e7.9
18	35	27	e6.6	e0.00	e0.36	e9.5	64	36	78	47	17	e7.8
19	35	27	e6.4	e0.00	e0.36	e9.8	60	40	73	45	18	e7.7
20	35	e26	e3.5	e0.00	e0.36	e10	58	43	70	41	16	e7.6
21	36	e24	e2.0	e0.00	e0.36	e10	54	50	65	39	15	e7.5
22	35	e21	e1.5	e0.00	e0.36	e9.5	49	61	61	38	14	e7.4
23	34	e18	e1.0	e0.00	e0.37	e9.0	47	61	58	36	14	e7.3
24	34	e17	e0.70	e0.00	e0.37	e9.2	45	59	55	35	13	e7.2
25	33	e16	e0.50	e0.00	e0.36	e10	44	55	53	34	13	e7.1
26	34	e15	e0.40	e0.00	e0.39	e14	42	53	67	33	12	e7.0
27	34	e14	e0.25	e0.00	e0.42	e30	41	66	1,020	32	12	e6.9
28	33	e14	e0.15	e0.00	e0.48	e144	40	92	981	32	12	e6.8
29	34	e14	e0.10	e0.00	---	e400	39	90	355	31	12	e6.7
30	37	e14	e0.07	e0.01	---	e850	37	84	408	35	12	e6.6
31	37	---	e0.05	e0.03	---	e575	---	81	---	30	11	---
TOTAL	1,263	769	159.62	0.22	8.27	2,242.50	3,095	1,452	5,302	2,334	554	251.4
MEAN	40.7	25.6	5.15	0.01	0.30	72.3	103	46.8	177	75.3	17.9	8.38
MAX	58	35	13	0.04	0.65	850	327	92	1,020	417	32	11
MIN	33	14	0.05	0.00	0.04	0.60	37	24	53	30	11	6.6
AC-FT	2,510	1,530	317	0.4	16	4,450	6,140	2,880	10,520	4,630	1,100	499

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2005, BY WATER YEAR (WY)

MEAN	10.0	6.66	2.95	1.32	4.13	47.8	115	59.7	39.0	23.4	11.8	11.0
MAX	83.5	50.7	16.3	8.52	76.1	362	730	399	228	216	108	97.9
(WY)	(1976)	(1976)	(2000)	(2000)	(1981)	(1976)	(1976)	(1975)	(1975)	(1999)	(1972)	(1975)
MIN	0.00	0.00	0.00	0.00	0.00	0.10	1.77	0.30	0.02	0.00	0.00	0.00
(WY)	(1993)	(1993)	(1959)	(1946)	(1946)	(1948)	(1963)	(1993)	(1961)	(1961)	(1961)	(1958)

05116500 DES LACS RIVER AT FOXHOLM, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1904 - 2005	
ANNUAL TOTAL	6,931.47		17,431.01			
ANNUAL MEAN	18.9		47.8		27.8	
HIGHEST ANNUAL MEAN					148	1976
LOWEST ANNUAL MEAN					0.44	1991
HIGHEST DAILY MEAN	177	Jun 13	1,020	Jun 27	3,200	Apr 30, 1970
LOWEST DAILY MEAN	0.05	Dec 31	0.00	Jan 10	0.00	Dec 11, 1945
ANNUAL SEVEN-DAY MINIMUM	0.15	Feb 2	0.00	Jan 10	0.00	Dec 11, 1945
MAXIMUM PEAK FLOW			1,500	Jun 27	4,260	Apr 19, 1979
MAXIMUM PEAK STAGE			14.90	Jun 27	[a]21.23	Apr 19, 1979
ANNUAL RUNOFF (AC-FT)	13,750		34,570		20,120	
10 PERCENT EXCEEDS	49		95		59	
50 PERCENT EXCEEDS	11		24		3.0	
90 PERCENT EXCEEDS	0.28		0.07		0.02	

a From high-water mark
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.57	6.24	5.94	5.23	5.14	5.27	8.61	6.24	6.85	9.13	6.20	5.60
2	6.52	6.22	5.96	5.05	5.18	5.15	8.04	6.22	6.94	8.13	6.15	5.58
3	6.49	6.22	5.96	5.01	5.25	5.10	7.84	6.22	7.29	7.55	6.12	5.58
4	6.43	6.20	5.97	4.98	5.32	5.38	7.73	6.18	7.22	7.29	6.08	5.59
5	6.40	6.20	5.92	4.86	---	5.48	7.63	6.16	6.96	7.11	6.04	5.57
6	6.38	6.19	5.88	4.84	---	5.98	7.53	6.13	6.84	6.99	6.00	5.54
7	6.37	6.17	5.77	4.90	---	6.96	7.47	6.01	6.90	6.88	5.96	5.51
8	6.41	6.16	5.73	4.91	5.18	7.22	7.36	6.14	7.00	6.77	5.93	5.50
9	6.59	6.15	5.83	4.89	5.29	6.69	7.23	6.44	7.41	6.70	5.90	5.49
10	6.52	6.13	5.84	4.78	5.44	6.56	7.17	6.52	7.98	6.65	5.88	5.49
11	6.45	6.11	5.82	4.79	5.35	6.56	7.09	6.30	7.64	6.59	5.87	5.49
12	6.40	6.06	5.83	5.08	5.33	6.45	7.07	6.18	7.32	6.54	5.86	5.46
13	6.36	6.01	5.87	5.11	5.37	6.28	7.03	6.17	7.15	6.50	5.84	5.47
14	6.32	6.18	5.86	5.15	5.41	6.30	6.96	6.18	7.06	6.45	5.81	5.50
15	6.29	6.15	5.82	5.09	5.21	6.08	6.87	6.19	7.01	6.42	5.78	5.52
16	6.28	6.10	5.84	5.21	5.01	6.07	6.77	6.20	6.97	6.38	5.76	5.52
17	6.26	6.08	5.85	5.22	5.17	5.89	6.71	6.20	6.90	6.47	5.80	5.50
18	6.23	6.07	5.83	5.19	5.39	5.83	6.67	6.26	6.83	6.44	5.80	5.52
19	6.23	6.08	5.84	5.18	4.97	5.82	6.62	6.32	6.78	6.41	5.84	5.52
20	6.23	6.18	5.80	5.05	4.81	5.78	6.59	6.37	6.74	6.35	5.79	5.50
21	6.25	5.99	5.70	4.97	4.81	5.76	6.54	6.49	6.68	6.32	5.75	5.52
22	6.23	6.11	5.89	4.89	4.91	5.74	6.47	6.63	6.64	6.29	5.72	5.52
23	6.21	5.79	5.72	4.92	4.76	5.77	6.44	6.63	6.59	6.28	5.70	5.58
24	6.21	6.02	5.49	5.06	4.97	5.79	6.41	6.60	6.55	6.26	5.68	5.66
25	6.20	6.00	5.41	5.14	5.07	5.79	6.38	6.55	6.53	6.23	5.67	5.71
26	6.21	6.00	5.39	4.97	4.78	5.85	6.36	6.53	6.65	6.22	5.65	5.75
27	6.21	6.10	5.39	4.83	4.73	6.19	6.35	6.68	12.50	6.20	5.63	5.81
28	6.20	6.02	5.38	5.04	4.80	7.69	6.33	6.97	12.34	6.19	5.63	5.90
29	6.22	5.98	5.33	5.00	---	10.77	6.30	6.95	8.71	6.19	5.63	5.94
30	6.28	5.97	5.32	5.06	---	13.63	6.27	6.89	9.07	6.25	5.62	5.97
31	6.27	---	5.26	5.04	---	11.75	---	6.86	---	6.16	5.61	---
MEAN	6.33	6.10	5.72	5.01	---	6.63	6.96	6.40	7.47	6.66	5.83	5.59
MAX	6.59	6.24	5.97	5.23	---	13.63	8.61	6.97	12.50	9.13	6.20	5.97
MIN	6.20	5.79	5.26	4.78	---	5.10	6.27	6.01	6.53	6.16	5.61	5.46

05116500 DES LACS RIVER AT FOXHOLM, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1969-70, 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
28...	1610	144	--e	6.3	333	337	16.0	1.0	19.8	9.90	14.0	.9	19.3
AUG													
19...	1050	19	8.8	8.7	1,760	1,780	14.5	18.5	70.4	60.6	15.6	5	215

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
28...	28	76	5.3	.06	8.28	65.5	182	73.2	159	<1	1.3	29.0	<1
AUG													
19...	51	347	26.4	.25	7.60	608	1,210	61.6	<50	<1	9.1	61.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
28...	<50	<1	<1	2.3	230	<1	70	3.03	<1	<1	<1.0	4.7
AUG												
19...	120	<1	6	6.0	90	<1	90	6.00	5.5	<1	<1.0	6.2

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

05117500 SOURIS RIVER ABOVE MINOT, ND

LOCATION.--Lat 48°14'45", long 101°22'15", in NW¼NW¼SE¼ sec.17, T.155 N., R.83 W., Ward County, Hydrologic Unit 09010001, on right bank 180 ft downstream from county highway bridge, 3.5 mi west of Minot, 7 mi downstream from Des Lacs River, and at mile 388.5.

DRAINAGE AREA.--10,600 mi^2, approximately, of which about 6,700 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1903 to current year. Monthly discharge only for some periods, published in WSP 1308. Published as Mouse River at Minot, 1903-24, Souris River at Minot, 1927-28, 1929-34, and Souris River near Minot, 1928-29.

REVISED RECORDS.--WSP 1308: 1905, 1909-14, 1918, 1924-25, 1927. WSP 1338: 1903-4, 1906, 1917, 1928, 1929(M). WSP 2113: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,545.75 ft above National Geodetic Vertical Datum of 1929. May 5, 1903, to Sept. 30, 1928; Oct. 1, 1929, to Sept. 30, 1934; nonrecording gages at mile 377.6 in Minot, at datum 12.5 ft lower, Oct. 1, 1928, to Sept. 30, 1929, nonrecording gages at Saugstad bridge at mile 366.8, 5 mi southeast of Minot and at datum 19.2 ft lower than present datum. Records equivalent except those for periods of extreme low flow, as some industrial and sanitary waste enters the river between the sites.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by reservoirs on Souris and Des Lacs Rivers, combined capacity, about 700,000 acre-ft; some small diversions for irrigation and municipal supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage in Minot at least 3 ft higher than 1904 peak, in 1881, according to Apr. 20, 1904, issue of Minot Daily Optic. This peak probably occurred in 1882.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	46	e17	e3.6	e2.5	e4.0	e940	78	231	808	228	98
2	168	42	e17	e3.6	e2.5	e3.8	1,030	77	269	566	237	73
3	165	41	e16	e3.6	e2.4	e3.6	1,110	73	214	341	233	64
4	162	39	e14	e3.6	e2.2	e4.3	1,130	52	255	239	229	63
5	160	38	e11	e3.6	e2.0	e5.5	1,130	47	221	199	224	66
6	160	37	e9.6	e3.6	e1.8	e7.0	1,120	39	180	321	222	65
7	168	35	e9.6	e3.6	e1.9	e9.0	1,110	39	216	405	208	63
8	191	33	e9.6	e3.7	e2.2	e13	998	62	225	413	201	62
9	201	33	e9.6	e3.7	e2.7	e26	854	61	246	399	199	62
10	210	32	e9.7	e3.7	e3.5	e23	816	68	322	389	197	62
11	209	31	e9.8	e3.7	e4.4	e20	795	87	402	343	204	59
12	204	30	e9.8	e3.7	e4.8	e18	780	138	353	272	214	57
13	201	27	e9.9	e3.6	e4.7	e15	765	144	306	256	217	61
14	193	25	e9.9	e3.5	e4.5	e14	636	136	326	258	210	62
15	190	29	e10	e3.5	e4.2	e13	513	131	393	264	198	62
16	179	31	e10	e3.4	e4.0	e12	469	129	442	264	199	63
17	142	30	e10	e3.4	e3.9	e11	446	130	433	284	224	63
18	121	28	e10	e3.3	e3.9	e11	440	154	410	297	226	63
19	116	27	e8.8	e3.3	e3.9	e12	438	187	407	287	224	62
20	97	26	e7.3	e3.2	e3.9	e12	443	196	399	271	223	62
21	73	25	e4.7	e3.2	e4.0	e12	399	227	368	264	220	60
22	62	25	e4.0	e3.2	e4.1	e12	281	228	307	260	219	59
23	54	23	e3.8	e3.1	e4.0	e11	190	222	283	256	217	62
24	51	21	e3.8	e3.1	e3.9	e11	129	218	221	251	216	67
25	48	e19	e3.7	e3.0	e3.9	e12	116	213	193	246	214	64
26	46	e18	e3.7	e3.0	e3.9	e14	113	208	206	242	187	61
27	44	e18	e3.7	e2.9	e3.9	e18	108	208	413	240	154	60
28	43	e17	e3.7	e2.8	e4.0	e40	94	220	1,260	253	143	61
29	45	e17	e3.7	e2.5	---	e150	82	243	1,790	251	141	61
30	50	e17	e3.6	e2.5	---	e300	79	245	1,160	236	138	61
31	48	---	e3.6	e2.5	---	e700	---	237	---	232	123	---
TOTAL	3,969	860	260.6	102.7	97.6	1,517.2	17,554	4,497	12,451	9,607	6,289	1,908
MEAN	128	28.7	8.41	3.31	3.49	48.9	585	145	415	310	203	63.6
MAX	210	46	17	3.7	4.8	700	1,130	245	1,790	808	237	98
MIN	43	17	3.6	2.5	1.8	3.6	79	39	180	199	123	57
AC-FT	7,870	1,710	517	204	194	3,010	34,820	8,920	24,700	19,060	12,470	3,780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	33.3	27.6	22.2	20.4	27.7	135	639	551	195	125	63.4	46.8
MAX	266	159	164	170	399	1,272	6,209	4,916	1,402	1,393	480	748
(WY)	(1904)	(1952)	(1976)	(1976)	(1997)	(1976)	(1976)	(1904)	(1975)	(1953)	(1999)	(1903)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.31	0.00	0.00	0.00	0.00
(WY)	(1935)	(1935)	(1935)	(1935)	(1935)	(1936)	(1937)	(1993)	(1938)	(1937)	(1937)	(1935)

05117500 SOURIS RIVER ABOVE MINOT, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	21,076.6		59,113.1			
ANNUAL MEAN	57.6		162		157	
HIGHEST ANNUAL MEAN					1,105	1976
LOWEST ANNUAL MEAN					1.30	1931
HIGHEST DAILY MEAN	325	Jul 19	1,790	Jun 29	11,400	Apr 22, 1904
LOWEST DAILY MEAN	1.1	Feb 23	1.8	Feb 6	0.00	Sep 26, 1917
ANNUAL SEVEN-DAY MINIMUM	1.2	Feb 20	2.1	Feb 2	0.00	Sep 26, 1917
MAXIMUM PEAK FLOW			2,100	Jun 29	[a]12,000	Apr 20, 1904
MAXIMUM PEAK STAGE			11.98	Jun 29	[b]21.90	Apr 20, 1904
ANNUAL RUNOFF (AC-FT)	41,810		117,300		113,600	
10 PERCENT EXCEEDS	168		399		307	
50 PERCENT EXCEEDS	23		63		21	
90 PERCENT EXCEEDS	1.7		3.6		0.20	

a At site in Minot, from rating curve extended above 8,000 ft^3/s
b At site in Minot, maximum stage at present location 23 ft
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.38	4.47	4.32	---	---	---	10.64	4.54	5.26	7.76	5.15	4.71
2	5.37	4.45	4.31	---	---	4.15	8.60	4.54	5.43	6.75	5.21	4.63
3	5.35	4.44	4.32	---	---	4.12	8.90	4.51	5.19	5.73	5.18	4.59
4	5.33	4.43	4.32	---	---	4.16	8.97	4.41	5.37	5.22	5.16	4.59
5	5.32	4.42	4.31	---	---	4.21	8.97	4.38	5.22	5.03	5.14	4.60
6	5.31	4.42	4.33	---	---	4.46	8.95	4.35	5.04	5.63	5.13	4.60
7	5.38	4.41	4.31	---	---	4.75	8.90	4.35	5.20	6.03	5.07	4.59
8	5.57	4.40	4.29	---	---	4.97	8.50	4.46	5.24	6.06	5.04	4.58
9	5.66	4.40	4.27	---	---	5.61	7.96	4.46	5.33	6.00	5.03	4.58
10	5.74	4.40	4.27	---	---	5.31	7.81	4.49	5.67	5.96	5.03	4.58
11	5.73	4.38	4.28	---	---	5.00	7.73	4.59	6.04	5.74	5.05	4.57
12	5.69	4.37	4.29	---	---	4.79	7.67	4.84	5.82	5.39	5.09	4.56
13	5.66	4.36	4.28	---	---	4.70	7.61	4.87	5.60	5.31	5.09	4.58
14	5.59	4.34	4.29	---	---	4.57	7.08	4.83	5.69	5.32	5.07	4.58
15	5.57	4.37	4.29	---	---	4.56	6.55	4.80	6.00	5.35	5.03	4.58
16	5.48	4.39	4.29	---	---	4.49	6.34	4.80	6.21	5.35	5.03	4.59
17	5.18	4.37	4.29	---	---	4.47	6.24	4.80	6.18	5.45	5.14	4.59
18	5.02	4.36	4.29	---	---	4.40	6.20	4.92	6.08	5.52	5.14	4.59
19	4.99	4.36	4.29	---	---	4.34	6.19	5.07	6.07	5.47	5.14	4.58
20	4.84	4.35	4.28	---	---	4.32	6.22	5.11	6.03	5.39	5.13	4.58
21	4.66	4.35	4.27	---	---	4.30	6.02	5.25	5.89	5.35	5.11	4.57
22	4.58	4.34	4.26	---	---	4.30	5.48	5.25	5.60	5.33	5.11	4.57
23	4.53	4.33	4.25	---	---	4.32	5.08	5.23	5.48	5.31	5.10	4.58
24	4.50	4.32	4.25	---	---	4.34	4.79	5.21	5.22	5.28	5.09	4.60
25	4.47	4.34	4.22	---	---	4.33	4.73	5.19	5.10	5.26	5.08	4.59
26	4.46	4.34	4.20	---	---	4.34	4.71	5.17	5.16	5.24	4.99	4.58
27	4.45	4.33	4.19	---	---	4.70	4.69	5.17	6.06	5.23	4.88	4.57
28	4.45	4.35	4.17	---	---	6.43	4.62	5.22	9.41	5.29	4.85	4.58
29	4.47	4.34	4.17	---	---	7.93	4.56	5.32	11.06	5.28	4.84	4.58
30	4.50	4.32	---	---	---	9.69	4.55	5.33	9.06	5.20	4.83	4.58
31	4.48	---	---	---	---	10.84	---	5.29	---	5.18	4.79	---
MEAN	5.09	4.38	---	---	---	---	6.84	4.86	6.02	5.56	5.06	4.59
MAX	5.74	4.47	---	---	---	---	10.64	5.33	11.06	7.76	5.21	4.71
MIN	4.45	4.32	---	---	---	---	4.55	4.35	5.04	5.03	4.79	4.56

05117500 SOURIS RIVER ABOVE MINOT, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV													
15...	1700	30	--	2.7	--	8.0	8.3	2,180	2,220	8.0	2.6	92.4d	88.0d
FEB													
25...	1305	3.9	719	17.0	125	7.9	7.9	2,360	2,430	-4.6	.1	142d	108d
APR													
26...	1730	118	712	11.4	114	8.6	8.4	1,240	1,310	10.5	12.0	66.0	50.3
MAY													
18...	1130	150	705	11.6	125	8.7	8.5	1,290	1,350	21.5	15.0	66.3	55.4
JUL													
20...	1110	272	705	6.5	82	8.6	8.5	1,120	1,170	22.0	23.0	55.9	47.7
AUG													
24...	1645	212	695	7.5	97	8.3	8.4	1,070	1,100	25.0	23.0	52.1	46.0
SEP													
07...	1710	76	724	7.3	84	8.4	8.2	1,180	1,100	22.5	19.5	60.7	51.8

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
NOV													
15...	--	5	290d	--	373@c	32.1d	.3	795d	--	--	1650d	28	3.0
FEB													
25...	--	5	319d	--	581@c	56.5d	.4	744d	--	--	1,850	<10	2.4
APR													
26...	--	3	149	--	294@c	29.5	.3	340d	--	--	885	10	1.5
MAY													
18...	--	3	156	--	308@c	34.4	.2	355d	--	--	933	<10	1.4
JUL													
20...	--	3	129	--	274@c	27.0	.2	295	--	--	781	10	1.3
AUG													
24...	16.7	3	128	45	275@c	28.2	.2	260	697	418	730	<10	1.2
SEP													
07...	17.3	3	134	43	306@c	32.1	.2	303d	783	173	839	<10	1.4d

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

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)
NOV													
15...	.54	.27	2.4	3.2	.18	33.4	<2k	13.2d	2.0d	110	3	69	<.06
FEB													
25...	<.04	.99	--	3.3	.27	23.7	<2k	--	--	<250d	3	86	<.06
APR													
26...	<.04	<.06	--	--	.20	19.0	--	1.9d	<.1d	90	4	68	<.06
MAY													
18...	E.03n	<.06	--	--	.19	16.7	25	3.0d	<.1d	44oc	5	59	<.06
JUL													
20...	E.03n	<.06	--	--	.35	16.7	54	E1.5d	<.1d	120	8	59	<.06
AUG													
24...	.04	<.06	1.2	--	.28	14.5	3k	E.5d	<.1d	70	6.7oc	55	<.06
SEP													
07...	.06	E.05n	1.3	--	.29d	18.9	5k	E.7d	<.1d	70	7.3	58	<.06

05117500 SOURIS RIVER ABOVE MINOT, ND—Continued

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

Date	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Phen- olic com- pounds, water, unfltrd ug/L (32730)
NOV												
15...	136	E.03n	.9	1.07	11.6	250	.44	2.9	9.49	1.2	14	<16
FEB												
25...	176	E.04n	E.5n	1.37	11.8	330d	.22	3.1	8.38	2.1	5	<16
APR												
26...	175	.04	<.8	.988	4.3	250	.23	4.7	4.98	1.5	3	<16
MAY												
18...	196	.07	E.6n	.809	6.5	140	.54	5.5	5.04	1.2	5	<16
JUL												
20...	165	.10	E.7n	.613	1.8	190	.54	3.6	4.61	.7	2	<16
AUG												
24...	189d	E.03n	.17oc	.436	1.4	100	.17	3.8	2.82	<.4	2	<16
SEP												
07...	187d	E.04n	.07oc	.600	2.3	130	.14	4.1	3.81	.28oc	E2n	E15n

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

05120000 SOURIS RIVER NEAR VERENDRYE, ND

LOCATION.--Lat 48°09'35", long 100°43'45", in NW¼SW¼ sec.17, T.154 N., R.78 W., McHenry County, Hydrologic Unit 09010003, on left bank 2.7 mi north of Verendrye, 19 mi upstream from mouth of Wintering River, and at mile 302.0.

DRAINAGE AREA.--11,300 mi^2, approximately, of which about 6,900 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to June 1933 (gage heights only), April 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 2113: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,464.87 ft above National Geodetic Vertical Datum of 1929. February to June 1933, at site 4 mi upstream at datum 1.65 ft higher. Apr. 1, 1937, to Mar. 3, 1938, nonrecording gage at present site, at datum 1.97 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by reservoirs on Souris and Des Lacs Rivers, combined capacity about 700,000 acre-ft; some diversions for irrigation and municipal supply.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	101	e27	e11	e11	e13	e700	140	259	1,760	254	135
2	159	87	e27	e11	e10	e13	e900	127	291	2,480	251	133
3	159	69	e26	e11	e10	e14	e1,100	121	e1,200	2,410	256	123
4	161	63	e25	e11	e9.2	e13	e1,230	116	e2,000	1,630	273	105
5	160	59	e25	e11	e8.7	e16	1,280	111	1,400	917	260	88
6	159	57	e24	e11	e8.3	e20	1,200	104	705	579	250	76
7	158	55	e23	e11	e9.0	e25	1,150	90	484	402	249	72
8	156	53	e21	e11	e10	e30	1,100	84	406	383	248	71
9	155	51	e21	e11	e11	e35	1,040	81	549	455	243	71
10	163	50	e21	e11	e12	e34	1,010	115	689	513	236	68
11	183	51	e21	e11	e13	e33	904	147	634	477	232	64
12	198	49	e22	e11	e14	e32	819	106	561	436	225	63
13	207	46	e22	e10	e14	e31	775	97	544	402	217	61
14	216	47	e22	e10	e13	e30	758	113	506	353	222	59
15	222	46	e22	e10	e13	e29	738	157	448	323	226	56
16	213	46	e22	e10	e12	e28	674	161	427	300	224	58
17	208	44	e22	e10	e12	e27	578	150	437	298	219	59
18	205	42	e22	e10	e12	e26	515	144	462	299	220	60
19	195	e39	e20	e10	e12	e26	482	144	466	316	262	63
20	172	e36	e17	e10	e12	e26	463	152	459	325	239	65
21	158	e34	e14	e10	e12	e25	449	191	455	318	224	61
22	148	e32	e13	e10	e13	e25	446	236	440	302	217	60
23	130	e32	e12	e10	e12	e24	431	348	415	290	211	58
24	110	e30	e12	e10	e12	e24	360	325	362	285	205	57
25	96	e29	e12	e10	e12	e24	282	276	323	274	203	56
26	84	e28	e12	e11	e12	e27	221	251	285	268	200	57
27	77	e28	e12	e11	e12	e40	185	236	255	263	198	61
28	70	e27	e12	e11	e12	e70	167	230	278	256	190	58
29	66	e27	e12	e11	---	e120	160	228	421	249	169	56
30	69	e27	e12	e11	---	e200	153	230	940	250	151	56
31	76	---	e12	e11	---	e400	---	245	---	256	141	---
TOTAL	4,695	1,385	587	328	323.2	1,480	20,270	5,256	17,101	18,069	6,915	2,130
MEAN	151	46.2	18.9	10.6	11.5	47.7	676	170	570	583	223	71.0
MAX	222	101	27	11	14	400	1,280	348	2,000	2,480	273	135
MIN	66	27	12	10	8.3	13	153	81	255	249	141	56
AC-FT	9,310	2,750	1,160	651	641	2,940	40,210	10,430	33,920	35,840	13,720	4,220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2005, BY WATER YEAR (WY)

MEAN	52.5	42.8	33.6	29.9	47.1	225	668	659	260	168	87.7	56.8
MAX	225	169	160	171	277	1,209	6,280	4,918	2,122	1,599	512	363
(WY)	(2000)	(1976)	(1976)	(1976)	(1976)	(1976)	(1976)	(1975)	(1975)	(1953)	(1976)	(1999)
MIN	1.50	1.00	1.00	0.50	0.50	2.25	11.7	6.80	2.33	0.67	0.42	0.10
(WY)	(1938)	(1938)	(1938)	(1938)	(1938)	(1940)	(1937)	(1938)	(1938)	(1937)	(1937)	(1937)

05120000 SOURIS RIVER NEAR VERENDRYE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1937 - 2005	
ANNUAL TOTAL	29,767.5		78,539.2			
ANNUAL MEAN	81.3		215		197	
HIGHEST ANNUAL MEAN					1,185	1976
LOWEST ANNUAL MEAN					18.8	1991
HIGHEST DAILY MEAN	500	Mar 29	2,480	Jul 2	9,700	Apr 20, 1976
LOWEST DAILY MEAN	5.5	Jan 30	8.3	Feb 6	0.10	Sep 1, 1937
ANNUAL SEVEN-DAY MINIMUM	5.6	Jan 27	9.3	Feb 2	0.10	Sep 1, 1937
MAXIMUM PEAK FLOW			2,770	Jul 3	9,900	Apr 19, 1976
MAXIMUM PEAK STAGE			14.60	Jul 3	17.84	Apr 19, 1976
ANNUAL RUNOFF (AC-FT)	59,040		155,800		142,600	
10 PERCENT EXCEEDS	200		493		414	
50 PERCENT EXCEEDS	54		96		38	
90 PERCENT EXCEEDS	6.3		11		4.2	

e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.46	4.16	3.83	3.95	3.64	3.64	8.59	4.15	4.74	12.96	4.74	4.30
2	4.44	4.09	3.83	3.99	3.64	3.62	10.12	4.09	4.90	14.29	4.73	4.30
3	4.44	3.99	3.85	3.93	3.63	3.60	---	4.07	---	14.22	4.75	4.27
4	4.45	3.96	3.85	3.91	3.62	3.60	---	4.06	---	12.70	4.80	4.21
5	4.44	3.93	3.87	3.93	3.63	3.63	10.55	4.04	10.66	9.60	4.76	4.16
6	4.44	3.92	3.84	3.95	3.65	3.68	10.23	4.01	7.39	6.99	4.73	4.12
7	4.43	3.91	3.83	3.93	3.75	3.67	10.04	3.95	5.98	5.57	4.72	4.10
8	4.43	3.89	3.85	3.92	3.79	3.70	9.84	3.92	5.49	5.42	4.72	4.09
9	4.42	3.89	3.85	3.88	3.81	3.81	9.55	3.91	6.39	5.99	4.70	4.08
10	4.46	3.88	3.81	3.86	3.79	4.14	9.43	4.08	7.28	6.46	4.68	4.07
11	4.55	3.88	3.79	3.86	3.74	4.52	8.86	4.25	6.93	6.17	4.66	4.05
12	4.62	3.87	3.79	3.84	3.71	4.72	8.42	4.06	6.46	5.84	4.64	4.04
13	4.66	3.85	3.79	3.83	3.68	4.57	8.23	4.02	6.35	5.57	4.61	4.03
14	4.70	3.85	3.78	3.83	3.68	4.50	8.09	4.10	6.12	5.18	4.63	4.01
15	4.73	3.85	3.77	3.85	3.68	4.33	7.91	4.32	5.75	4.98	4.64	4.00
16	4.69	3.84	3.76	3.86	3.69	4.25	7.40	4.33	5.62	4.90	4.63	4.00
17	4.66	3.83	3.76	3.87	3.70	4.17	6.68	4.30	5.68	4.89	4.62	4.01
18	4.65	3.82	3.77	3.86	3.72	4.09	6.22	4.28	5.84	4.89	4.62	4.01
19	4.60	3.83	3.81	3.81	3.73	4.02	5.98	4.28	5.86	4.95	4.76	4.03
20	4.50	3.86	3.77	3.77	3.75	3.97	5.84	4.31	5.82	4.98	4.68	4.03
21	4.43	3.76	3.81	3.75	3.74	3.91	5.74	4.47	5.79	4.96	4.63	4.01
22	4.39	3.83	3.81	3.75	3.72	3.86	5.72	4.65	5.70	4.90	4.61	4.00
23	4.30	3.78	3.86	3.74	3.70	3.82	5.61	5.15	5.55	4.86	4.59	3.99
24	4.21	3.79	3.91	3.73	3.69	3.80	5.16	5.02	5.22	4.84	4.57	3.98
25	4.14	3.85	3.91	3.71	3.67	3.80	4.77	4.81	5.00	4.81	4.56	3.97
26	4.07	3.88	3.89	3.70	3.66	3.79	4.50	4.71	4.84	4.78	4.55	3.98
27	4.03	3.86	3.89	3.70	3.66	3.84	4.33	4.65	4.72	4.77	4.54	4.00
28	4.00	3.83	3.90	3.69	3.66	3.97	4.26	4.63	4.82	4.74	4.51	3.99
29	3.97	3.83	3.90	3.68	---	4.19	4.23	4.62	5.65	4.72	4.42	3.97
30	3.99	3.83	3.90	3.67	---	5.14	4.20	4.63	9.35	4.72	4.35	3.97
31	4.03	---	3.91	3.66	---	7.03	---	4.68	---	4.74	4.32	---
MEAN	4.40	3.88	3.84	3.82	3.70	4.11	---	4.34	---	6.43	4.63	4.06
MAX	4.73	4.16	3.91	3.99	3.81	7.03	---	5.15	---	14.29	4.80	4.30
MIN	3.97	3.76	3.76	3.66	3.62	3.60	---	3.91	---	4.72	4.32	3.97

05120000 SOURIS RIVER NEAR VERENDRYE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1957 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV													
15...	1315	46	--	2.4	--	7.7	8.2	1,810	1,790	7.0	3.2	88.1	67.5
FEB													
24...	1655	12	--	7.0	--	7.6	7.7	2,350	2,430	3.0	.1	152d	101d
APR													
25...	1510	272	714	5.1	51	8.5	8.2	1,220	1,270	11.5	12.5	65.3	49.2
MAY													
18...	1520	145	705	8.3	93	8.6	8.3	1,330	1,390	25.0	17.0	70.1	55.4
JUL													
20...	1510	325	705	--	--	8.5	8.4	1,210	1,270	24.0	24.0	66.6	50.3
AUG													
24...	1130	206	794	8.4	92	8.4	8.3	1,140	1,180	24.0	21.5	56.7	47.4
SEP													
06...	1510	76	729	6.2	72	8.2	8.3	1,200	1,130	21.5	20.0	65.3	49.3

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
NOV													
15...	--	4	225	--	332@c	48.4d	.3	558d	--	--	1250d	<10	1.4
FEB													
24...	--	5	309d	--	518@c	48.8d	.3	798d	--	--	1,820	<10	1.7
APR													
25...	--	3	145	--	302@c	33.7	.3	309d	--	--	863	28	1.4
MAY													
18...	--	4	172	--	280@dc	37.9	.3	394d	--	--	964	22	1.5
JUL													
20...	--	3	140	--	304@c	34.7	.3	319d	--	--	835	52	1.5
AUG													
24...	16.1	3	138	46	282@c	34.9	.2	282	745	439	790	41	1.2
SEP													
06...	16.3	3	134	43	312@c	38.6	.2	296	787	172	840	20	1.3

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

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)
NOV													
15...	.13	.44	1.3	1.8	.12	16.7	12k	.9d	<.1d	100	3	73	<.06
FEB													
24...	.11	.96	1.6	2.7	.15	23.8	3k	--	--	<150d	3	95	<.06
APR													
25...	.06	.07	1.3	1.5	.22	17.9	2k	2.3d	<.1d	350	5	77	E.05n
MAY													
18...	<.04	<.06	--	--	.17	19.3	32	9.9d	1.1d	240	4	70	<.06
JUL													
20...	<.04	<.06	--	--	.41	23.5	21	E7.7d	E1.5d	550	8	76	E.05n
AUG													
24...	E.04n	E.04n	--	--	.33	17.8	45	E1.0d	<.1d	470	7.4oc	65	E.03n
SEP													
06...	.06	E.04n	1.2	--	.27	17.7	2k	E.8d	<.1d	330	7.0	66	<.06

05120000 SOURIS RIVER NEAR VERENDRYE, ND—Continued

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

Date	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Phen- olic com- pounds, water, unfltrd ug/L (32730)
NOV												
15...	198	E.04n	<.8	.898	8.9	290	.26	4.1	7.26	1.4	6	<16
FEB												
24...	231	.05	E.5n	1.31	9.9	470d	.20	3.5	8.18	2.3	5	<16
APR												
25...	212	.08	E.7n	1.19	5.2	800	.86	5.9	6.21	1.4	6	<16
MAY												
18...	164	.05	E.5n	1.11	8.3	590	.67	3.6	6.33	1.3	5	<16
JUL												
20...	189d	.06	1.0	1.10	3.3	1,080	1.08	3.7	7.12	.9	5	<16
AUG												
24...	207d	.04	.66oc	.877	2.8	990	.74	3.6	4.57	<.4	5	<16
SEP												
06...	240d	E.04n	.41oc	.790	3.0	560	.39	3.9	4.84	.6	4	<16

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

05120500 WINTERING RIVER NEAR KARLSRUHE, ND

LOCATION.--Lat 48°08'18", long 100°32'22", SW¼SW¼SW¼ sec.23, T.154 N., R.77 W., McHenry County, Hydrologic Unit 09010003, on right bank 400 ft south of county highway bridge, 9 mi upstream from mouth, and 5 mi northeast of Karlsruhe.

DRAINAGE AREA.--705 mi^2, of which about 420 mi^2 is probably noncontributing. (Drainage area shown is for former location 5 river miles downstream. Total drainage area has been reduced about 10 percent, which mostly consists of noncontributing area.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 1937 to Sept. 30, 1994, at site 5 mi downstream, at datum 20 ft lower.

REMARKS.--Records poor. Some regulation by Fish and Wildlife Service dams on Cottonwood and Wintering Lakes, controlled capacity, about 850 acre-ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.1	e6.6	e4.1	e3.9	e3.2	e2.6	e7.9	8.3	17	25	26	e6.4
2	e2.2	e6.2	e4.2	e3.8	e3.2	e2.6	e10	7.1	13	25	26	e6.4
3	e2.8	e5.8	e4.3	e3.8	e3.2	e2.6	e12	6.4	5.7	26	26	e6.4
4	e5.6	e5.7	e4.1	e3.8	e3.2	e2.6	e14	6.0	8.5	27	24	e6.3
5	e4.8	e5.5	e4.1	e3.8	e3.1	e2.5	e13	7.7	12	27	21	e6.3
6	e3.7	e5.1	e4.1	e3.8	e3.1	e2.5	e12	10	15	26	18	e6.3
7	e3.0	e5.0	e4.1	e3.8	e3.1	e2.5	9.7	10	18	25	16	e6.3
8	e2.7	e4.9	e4.0	e3.8	e3.0	e2.5	10	11	21	24	15	e6.2
9	e2.4	e4.8	e4.0	e3.8	e3.0	e2.5	10	9.4	17	24	16	e6.2
10	e2.2	e4.7	e4.1	e3.8	e3.0	e2.5	11	8.1	13	26	16	e6.2
11	e2.1	e4.6	e4.1	e3.8	e3.0	e2.5	12	8.3	11	26	16	e6.3
12	e2.0	e4.6	e4.2	e3.8	e2.9	e2.5	13	7.8	10	26	16	e7.0
13	e2.0	e4.6	e4.2	e3.8	e2.9	e2.5	13	8.2	9.5	26	14	e7.6
14	e1.9	e4.5	e4.2	e3.7	e2.8	e2.5	13	7.9	11	30	12	e7.1
15	e1.9	e4.5	e4.3	e3.7	e2.8	e2.5	12	6.9	10	33	e9.4	e7.4
16	e1.9	e4.5	e4.3	e3.7	e2.7	e2.5	12	7.9	9.4	34	8.3	e7.8
17	e2.2	e4.4	e4.4	e3.7	e2.7	e2.5	12	7.0	8.2	38	11	e7.6
18	e3.2	e4.4	e4.4	e3.6	e2.7	e2.5	12	4.9	7.3	37	10	e7.4
19	e5.7	e4.3	e4.5	e3.6	e2.6	e2.5	12	4.0	7.8	36	9.0	e7.2
20	e4.7	e4.3	e4.2	e3.5	e2.6	e2.5	12	4.6	8.1	36	7.0	e7.1
21	e4.0	e4.3	e4.0	e3.5	e2.6	e2.4	12	12	10	42	6.7	e7.0
22	e3.7	e4.3	e4.0	e3.4	e2.6	e2.4	11	15	13	39	e6.7	e6.9
23	e3.5	e4.2	e4.0	e3.4	e2.6	e2.4	10	7.6	12	42	e6.7	e6.9
24	e3.4	e4.2	e4.0	e3.4	e2.6	e2.4	10	6.9	11	42	e6.6	e6.9
25	e3.9	e4.2	e4.0	e3.3	e2.6	e2.4	10	5.7	13	42	e6.6	e6.8
26	e4.7	e4.2	e4.0	e3.3	e2.6	e2.4	9.5	5.0	15	40	e6.6	e6.8
27	e6.9	e4.1	e4.0	e3.3	e2.6	e2.5	9.1	5.1	17	38	e6.5	e6.8
28	e6.5	e4.0	e3.9	e3.3	e2.6	e2.7	8.2	5.3	15	37	e6.5	e6.7
29	e8.0	e4.0	e3.9	e3.3	---	e3.1	8.4	9.1	25	34	e6.5	e6.7
30	e8.0	e4.0	e3.9	e3.3	---	e4.3	8.6	12	31	31	e6.4	e6.7
31	e7.3	---	e3.9	e3.3	---	e5.8	---	16	---	29	e6.4	---
TOTAL	119.0	140.5	127.5	111.8	79.6	83.2	329.4	251.2	394.5	993	388.9	203.7
MEAN	3.84	4.68	4.11	3.61	2.84	2.68	11.0	8.10	13.2	32.0	12.5	6.79
MAX	8.0	6.6	4.5	3.9	3.2	5.8	14	16	31	42	26	7.8
MIN	1.9	4.0	3.9	3.3	2.6	2.4	7.9	4.0	5.7	24	6.4	6.2
AC-FT	236	279	253	222	158	165	653	498	782	1,970	771	404

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2005, BY WATER YEAR (WY)

MEAN	6.28	6.11	2.63	1.34	1.57	25.9	71.4	33.6	18.9	12.4	7.49	5.67
MAX	109	98.8	22.7	9.77	10.7	343	465	304	194	95.1	87.3	67.3
(WY)	(1995)	(1995)	(2001)	(2002)	(2000)	(1995)	(1997)	(1999)	(1999)	(1999)	(1993)	(1999)
MIN	0.03	0.50	0.00	0.00	0.00	0.00	2.81	1.65	0.43	0.23	0.01	0.00
(WY)	(1993)	(1938)	(1938)	(1938)	(1938)	(1951)	(1992)	(1992)	(1992)	(1989)	(1989)	(1992)

05120500 WINTERING RIVER NEAR KARLSRUHE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1937 - 2005	
ANNUAL TOTAL	6,383.9		3,222.3			
ANNUAL MEAN	17.4		8.83		16.3	
HIGHEST ANNUAL MEAN					82.0	1999
LOWEST ANNUAL MEAN					1.36	1992
HIGHEST DAILY MEAN	150	Apr 4	42	Jul 21	2,500	Apr 7, 1949
LOWEST DAILY MEAN	1.9	Jul 29	1.9	Oct 14	0.00	Mar 1, 1937
ANNUAL SEVEN-DAY MINIMUM	2.0	Oct 10	2.0	Oct 10	0.00	Mar 1, 1937
MAXIMUM PEAK FLOW			[a]53	Jul 21	[b]3,000	Apr 7, 1949
MAXIMUM PEAK STAGE			[c]5.30	Mar 11	12.00	Apr 7, 1949
ANNUAL RUNOFF (AC-FT)	12,660		6,390		11,800	
10 PERCENT EXCEEDS	48		24		34	
50 PERCENT EXCEEDS	4.3		5.8		3.5	
90 PERCENT EXCEEDS	2.1		2.6		0.10	

a Gage height, 3.86 ft
b By velocity-area study
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.25	3.02	2.64	3.61	---	---	4.35	2.31	2.65	3.14	3.11	2.74
2	2.38	3.01	2.66	3.65	---	3.37	4.01	2.36	2.51	3.15	3.12	2.73
3	2.55	3.01	2.68	3.70	---	---	3.77	2.56	2.26	3.23	3.14	2.76
4	2.74	3.02	2.66	3.76	---	---	3.23	2.61	2.36	3.24	3.07	2.79
5	2.72	2.91	2.56	3.79	---	---	2.58	2.70	2.50	3.23	2.99	2.81
6	2.80	2.91	2.67	3.85	---	---	2.41	2.83	2.58	3.21	2.90	2.78
7	2.84	2.93	2.68	3.90	---	---	2.35	2.85	2.69	3.17	2.86	2.77
8	2.82	2.94	2.67	3.95	---	---	2.37	2.93	2.81	3.15	2.84	2.76
9	2.83	2.96	2.67	3.98	4.68	e5.10	2.37	2.89	2.66	3.16	2.87	2.77
10	2.85	3.00	2.57	3.97	4.41	5.10	2.40	2.88	2.51	3.20	2.87	2.75
11	2.88	3.01	2.55	3.96	4.41	e5.16	2.43	2.91	2.46	3.22	2.90	2.76
12	2.91	3.03	2.54	3.95	---	---	2.47	2.93	2.42	3.21	2.90	2.81
13	2.93	3.08	2.51	3.85	---	---	2.47	2.98	2.40	3.22	2.84	2.95
14	2.95	3.03	2.53	3.64	---	---	2.46	2.99	2.46	3.33	2.80	2.89
15	2.96	3.03	2.56	3.39	---	---	2.45	2.99	2.43	3.42	e2.73	2.97
16	2.94	3.00	2.53	3.30	---	4.46	2.43	3.06	2.40	3.44	2.70	3.05
17	2.97	3.05	2.54	3.39	4.39	4.25	2.42	3.06	2.35	3.53	2.79	3.04
18	2.98	3.05	2.52	3.72	4.12	4.06	2.44	3.01	2.32	3.51	2.77	3.05
19	2.98	2.55	2.52	4.11	3.85	3.98	2.44	3.01	2.34	3.48	2.74	3.11
20	2.95	2.34	2.62	e4.38	3.57	4.06	2.43	3.07	2.35	3.50	2.67	3.15
21	2.95	2.39	2.57	e4.45	3.43	4.21	2.42	3.18	2.44	3.57	2.66	3.12
22	2.95	2.49	2.80	---	3.33	4.18	2.41	2.86	2.54	3.50	2.70	3.12
23	2.98	2.59	2.83	---	3.63	4.38	2.38	2.33	2.53	3.56	2.74	3.23
24	2.99	2.57	2.96	e4.59	3.61	4.75	2.37	2.30	2.53	3.58	2.73	3.14
25	2.99	2.60	3.08	e4.60	3.61	4.66	2.37	2.26	2.59	3.56	2.74	3.18
26	2.99	2.62	3.22	---	---	4.75	2.35	2.24	2.70	3.52	2.72	3.26
27	2.98	2.62	3.33	---	---	5.06	2.33	2.24	2.80	3.47	2.73	3.32
28	3.00	2.61	3.44	e4.80	---	5.22	2.30	2.25	2.73	3.43	2.75	3.37
29	3.09	2.61	3.50	---	---	5.15	2.31	2.38	3.08	3.36	2.77	3.36
30	3.10	2.63	3.49	e4.79	---	5.08	2.32	2.48	3.32	3.28	2.77	3.38
31	3.04	---	3.55	e4.76	---	4.77	---	2.64	---	3.20	2.72	---
MEAN	2.88	2.82	2.80	---	---	---	2.59	2.71	2.56	3.35	2.83	3.00
MAX	3.10	3.08	3.55	---	---	---	4.35	3.18	3.32	3.58	3.14	3.38
MIN	2.25	2.34	2.51	---	---	---	2.30	2.24	2.26	3.14	2.66	2.73

e Estimated

05120500 WINTERING RIVER NEAR KARLSRUHE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-56, 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAY													
03...	1310	6.0	8.8	8.4	1,390	1,400	13.5	12.0	64.7	38.5	9.20	5	194
AUG													
19...	1535	9.2	8.6	8.5	1,990	2,010	19.5	22.5	53.5	43.4	8.50	8	328

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAY													
03...	56	403	31.1	.19	7.70	336	916	15.0	<50	<1	2.5	83.9	<1
AUG													
19...	69	594	33.9	.20	31.4	474	1,300	32.9	<50	<1	11.9	96.7	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAY												
03...	300	<1	10	2.2	160	<1	90	3.13	<1	<1	<1.0	1.7
AUG												
19...	700	<1	19	6.3	200	<1	70	3.13	7.6	<1	<1.0	3.8

Remark codes used in this table:
< -- Less than.

05121000 SOURIS RIVER WEST OUTFALL AT EATON DAM NEAR TOWNER, ND

LOCATION.--Lat 48°16'30", long 100°29'34", NW$^1/_4$SW$^1/_4$ sec.6, T.155 N., R.76 W., McHenry County, Hydrologic Unit 09010003, on left bank at Eaton Dam and 5.8 mi southwest of Towner.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to April 2004, March to May 2005

GAGE.--Water-stage recorder. Datum of gage is 1,460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft^3/s, Apr. 9, gage height, 6.18 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e80	92	---	---	---	---
2	---	---	---	---	---	---	e88	72	---	---	---	---
3	---	---	---	---	---	e0.00	e96	e30	---	---	---	---
4	---	---	---	---	---	e0.00	e106	e7.0	---	---	---	---
5	---	---	---	---	---	e0.00	e113	e1.1	---	---	---	---
6	---	---	---	---	---	e0.02	112	e0.20	---	---	---	---
7	---	---	---	---	---	e0.05	108	e0.00	---	---	---	---
8	---	---	---	---	---	e0.10	114	e0.00	---	---	---	---
9	---	---	---	---	---	e0.20	116	e0.00	---	---	---	---
10	---	---	---	---	---	e0.50	114	e0.00	---	---	---	---
11	---	---	---	---	---	e1.2	115	---	---	---	---	---
12	---	---	---	---	---	e1.5	115	---	---	---	---	---
13	---	---	---	---	---	e5.5	109	---	---	---	---	---
14	---	---	---	---	---	e8.0	108	---	---	---	---	---
15	---	---	---	---	---	e11	114	---	---	---	---	---
16	---	---	---	---	---	e14	114	---	---	---	---	---
17	---	---	---	---	---	e15	106	---	---	---	---	---
18	---	---	---	---	---	e16	102	---	---	---	---	---
19	---	---	---	---	---	e18	112	---	---	---	---	---
20	---	---	---	---	---	e19	114	---	---	---	---	---
21	---	---	---	---	---	e22	107	---	---	---	---	---
22	---	---	---	---	---	e27	106	---	---	---	---	---
23	---	---	---	---	---	e31	111	---	---	---	---	---
24	---	---	---	---	---	e34	114	---	---	---	---	---
25	---	---	---	---	---	e39	102	---	---	---	---	---
26	---	---	---	---	---	e43	86	---	---	---	---	---
27	---	---	---	---	---	e48	93	---	---	---	---	---
28	---	---	---	---	---	e53	96	---	---	---	---	---
29	---	---	---	---	---	e58	95	---	---	---	---	---
30	---	---	---	---	---	e63	93	---	---	---	---	---
31	---	---	---	---	---	e72	---	---	---	---	---	---
TOTAL	---	---	---	---	---	600.07	3,159	202.30	---	---	---	---
MEAN	---	---	---	---	---	20.7	105	20.2	---	---	---	---
MAX	---	---	---	---	---	72	116	92	---	---	---	---
MIN	---	---	---	---	---	0.00	80	0.00	---	---	---	---
AC-FT	---	---	---	---	---	1,190	6,270	401	---	---	---	---

e Estimated

05121000 SOURIS RIVER WEST OUTFALL AT EATON DAM NEAR TOWNER, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March to May 2004, March to May 2005.

REMARKS.--Daily values from Mar. 6-30 are based on an incomplete daily record.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	5.72	---	---	---	---
2	---	---	---	---	---	---	---	5.15	---	---	---	---
3	---	---	---	---	---	---	---	4.13	---	---	---	---
4	---	---	---	---	---	2.19	---	3.61	---	---	---	---
5	---	---	---	---	---	2.19	---	2.03	---	---	---	---
6	---	---	---	---	---	2.46	6.02	0.94	---	---	---	---
7	---	---	---	---	---	2.79	5.92	0.92	---	---	---	---
8	---	---	---	---	---	2.76	6.06	0.93	---	---	---	---
9	---	---	---	---	---	2.80	6.11	0.93	---	---	---	---
10	---	---	---	---	---	2.91	6.07	0.93	---	---	---	---
11	---	---	---	---	---	2.91	6.09	---	---	---	---	---
12	---	---	---	---	---	2.89	6.08	---	---	---	---	---
13	---	---	---	---	---	2.66	5.94	---	---	---	---	---
14	---	---	---	---	---	2.88	5.94	---	---	---	---	---
15	---	---	---	---	---	3.23	6.06	---	---	---	---	---
16	---	---	---	---	---	5.42	6.08	---	---	---	---	---
17	---	---	---	---	---	---	5.89	---	---	---	---	---
18	---	---	---	---	---	5.45	5.78	---	---	---	---	---
19	---	---	---	---	---	5.44	6.02	---	---	---	---	---
20	---	---	---	---	---	5.43	6.07	---	---	---	---	---
21	---	---	---	---	---	3.92	5.91	---	---	---	---	---
22	---	---	---	---	---	4.00	5.89	---	---	---	---	---
23	---	---	---	---	---	5.53	5.99	---	---	---	---	---
24	---	---	---	---	---	---	6.08	---	---	---	---	---
25	---	---	---	---	---	5.58	5.84	---	---	---	---	---
26	---	---	---	---	---	5.59	5.53	---	---	---	---	---
27	---	---	---	---	---	5.62	5.75	---	---	---	---	---
28	---	---	---	---	---	5.67	5.81	---	---	---	---	---
29	---	---	---	---	---	5.76	5.79	---	---	---	---	---
30	---	---	---	---	---	5.84	5.75	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

05121001 SOURIS RIVER EAST OUTFALL AT EATON DAM NEAR TOWNER, ND

LOCATION.--Lat 48°16'33", long 100°29'17", SE¼NW¼ sec.6, T.155 N., R.76 W., McHenry County, Hydrologic Unit 09010003, on right bank at Eaton Dam and 5.7 mi southwest of Towner.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to May 2004, March to May 2005.

GAGE.--Water-stage recorder. Datum of gage is 1,460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft^3/s, Apr. 14, gage height, 8.54 ft; maximum gage height, 8.67 ft, Apr. 20; no flow on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	22	e0.00	---	---	---	---
2	---	---	---	---	---	---	68	e0.00	---	---	---	---
3	---	---	---	---	---	e0.00	87	e0.00	---	---	---	---
4	---	---	---	---	---	e0.00	93	e38	---	---	---	---
5	---	---	---	---	---	e0.00	89	32	---	---	---	---
6	---	---	---	---	---	e0.00	86	17	---	---	---	---
7	---	---	---	---	---	e0.00	87	2.6	---	---	---	---
8	---	---	---	---	---	e0.00	93	e0.23	---	---	---	---
9	---	---	---	---	---	e0.00	96	e0.00	---	---	---	---
10	---	---	---	---	---	e0.01	98	e0.00	---	---	---	---
11	---	---	---	---	---	e0.03	102	---	---	---	---	---
12	---	---	---	---	---	e0.09	105	---	---	---	---	---
13	---	---	---	---	---	e0.25	107	---	---	---	---	---
14	---	---	---	---	---	e0.90	106	---	---	---	---	---
15	---	---	---	---	---	e2.2	106	---	---	---	---	---
16	---	---	---	---	---	e2.7	106	---	---	---	---	---
17	---	---	---	---	---	e2.7	103	---	---	---	---	---
18	---	---	---	---	---	e2.7	99	---	---	---	---	---
19	---	---	---	---	---	e2.6	101	---	---	---	---	---
20	---	---	---	---	---	e2.6	102	---	---	---	---	---
21	---	---	---	---	---	e2.5	100	---	---	---	---	---
22	---	---	---	---	---	e2.4	100	---	---	---	---	---
23	---	---	---	---	---	e2.4	68	---	---	---	---	---
24	---	---	---	---	---	e2.4	1.4	---	---	---	---	---
25	---	---	---	---	---	e2.5	e0.30	---	---	---	---	---
26	---	---	---	---	---	e2.5	e0.05	---	---	---	---	---
27	---	---	---	---	---	e2.6	e0.00	---	---	---	---	---
28	---	---	---	---	---	e2.7	e0.00	---	---	---	---	---
29	---	---	---	---	---	e2.8	e0.00	---	---	---	---	---
30	---	---	---	---	---	3.0	e0.00	---	---	---	---	---
31	---	---	---	---	---	2.9	---	---	---	---	---	---
TOTAL	---	---	---	---	---	45.48	2,125.75	89.83	---	---	---	---
MEAN	---	---	---	---	---	1.57	70.9	8.98	---	---	---	---
MAX	---	---	---	---	---	3.0	107	38	---	---	---	---
MIN	---	---	---	---	---	0.00	0.00	0.00	---	---	---	---
AC-FT	---	---	---	---	---	90	4,220	178	---	---	---	---

e Estimated

05121001 SOURIS RIVER EAST OUTFALL AT EATON DAM NEAR TOWNER, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March to May 2004, March to May 2005.

REMARKS.--Records good.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.57	5.47	---	---	---	---
2	---	---	---	---	---	---	7.99	5.46	---	---	---	---
3	---	---	---	---	---	---	8.46	5.45	---	---	---	---
4	---	---	---	---	---	3.87	8.66	7.13	---	---	---	---
5	---	---	---	---	---	3.87	8.63	7.33	---	---	---	---
6	---	---	---	---	---	4.03	8.58	6.85	---	---	---	---
7	---	---	---	---	---	4.08	8.54	5.94	---	---	---	---
8	---	---	---	---	---	---	8.57	5.50	---	---	---	---
9	---	---	---	---	---	4.01	8.56	5.37	---	---	---	---
10	---	---	---	---	---	3.94	8.53	---	---	---	---	---
11	---	---	---	---	---	4.47	8.52	---	---	---	---	---
12	---	---	---	---	---	5.34	8.51	---	---	---	---	---
13	---	---	---	---	---	6.36	8.49	---	---	---	---	---
14	---	---	---	---	---	6.55	8.50	---	---	---	---	---
15	---	---	---	---	---	6.17	8.54	---	---	---	---	---
16	---	---	---	---	---	6.18	8.58	---	---	---	---	---
17	---	---	---	---	---	6.20	8.58	---	---	---	---	---
18	---	---	---	---	---	6.21	8.57	---	---	---	---	---
19	---	---	---	---	---	6.20	8.63	---	---	---	---	---
20	---	---	---	---	---	6.17	8.65	---	---	---	---	---
21	---	---	---	---	---	6.13	8.62	---	---	---	---	---
22	---	---	---	---	---	6.15	8.62	---	---	---	---	---
23	---	---	---	---	---	6.14	7.90	---	---	---	---	---
24	---	---	---	---	---	6.19	5.84	---	---	---	---	---
25	---	---	---	---	---	6.17	5.64	---	---	---	---	---
26	---	---	---	---	---	6.15	5.57	---	---	---	---	---
27	---	---	---	---	---	6.13	5.52	---	---	---	---	---
28	---	---	---	---	---	6.03	5.49	---	---	---	---	---
29	---	---	---	---	---	5.92	5.48	---	---	---	---	---
30	---	---	---	---	---	5.84	5.47	---	---	---	---	---
31	---	---	---	---	---	5.82	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	7.76	---	---	---	---	---
MAX	---	---	---	---	---	---	8.66	---	---	---	---	---
MIN	---	---	---	---	---	---	5.47	---	---	---	---	---

05122000 SOURIS RIVER NEAR BANTRY, ND

LOCATION.--Lat 48°30'20", long 100°26'04", in SE¼NW¼SE¼ sec.14, T.158 N., R.76 W., McHenry County, Hydrologic Unit 09010003, on left bank 200 ft upstream from Nelson bridge, 8 mi east of Bantry, 18 mi upstream from Willow Creek, and at mile 228.0.

DRAINAGE AREA.--12,300 mi^2 approximately, of which about 7,600 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 2113: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,427.56 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 16, 1938, nonrecording gage at same site at datum 0.17 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by reservoirs on Souris, Des Lacs, and Wintering Rivers, total capacity, about 700,800 acre-ft. Diversions for irrigation of about 7,600 acres at Eaton Dam about 42 mi above station and other small diversions for irrigation and municipal supply.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	96	e42	e25	e15	e14	e200	e150	454	612	368	192
2	162	91	e42	e25	e15	e14	e250	e120	444	685	354	173
3	164	88	e42	e25	e13	e14	e320	e97	439	746	356	158
4	162	89	e41	e24	e12	e18	e380	e90	445	788	346	146
5	163	94	e40	e24	e11	e23	e460	e85	563	832	329	137
6	162	95	e38	e24	e12	e28	e619	e82	669	877	317	131
7	161	91	e38	e24	e13	e34	e671	e80	725	910	310	121
8	163	85	e37	e24	e14	e40	e695	e80	746	946	301	111
9	164	79	e36	e24	e15	e43	e705	e95	734	939	288	103
10	163	75	e35	e24	e16	e42	e706	e120	701	883	276	96
11	160	71	e36	e24	e17	e41	e704	e160	664	836	267	89
12	158	69	e36	e24	e18	e41	707	e150	641	804	256	85
13	158	67	e36	e22	e18	e40	686	e140	625	782	246	83
14	166	65	e37	e20	e17	e39	665	e175	624	759	238	80
15	181	64	e37	e18	e16	e39	640	e210	613	733	232	79
16	196	63	e37	e16	e15	e38	604	e220	591	701	226	78
17	212	62	e37	e14	e14	e37	552	e200	571	687	236	77
18	221	61	e37	e13	e14	e36	532	e260	546	661	e236	78
19	229	60	e37	e13	e14	e35	514	e330	529	631	236	79
20	230	59	e34	e13	e14	e34	436	e400	516	603	233	79
21	228	e55	e32	e13	e14	e33	361	445	511	582	233	79
22	223	e54	e31	e13	e15	e33	326	488	510	567	242	79
23	213	e53	e28	e13	e15	e33	308	482	510	551	248	82
24	201	e52	e26	e14	e14	e34	294	474	505	536	249	83
25	187	e51	e25	e14	e14	e35	291	498	498	515	247	81
26	174	e50	e25	e14	e14	e38	290	508	487	494	239	80
27	160	e48	e25	e14	e14	e44	290	500	484	472	228	78
28	144	e45	e25	e14	e14	e60	244	485	467	450	220	76
29	131	e44	e25	e14	---	e80	e210	479	470	424	214	76
30	116	e42	e25	e15	---	e100	e170	467	558	405	208	75
31	106	---	e25	e15	---	e130	---	454	---	386	203	---
TOTAL	5,418	2,018	1,047	573	407	1,270	13,830	8,524	16,840	20,797	8,182	2,964
MEAN	175	67.3	33.8	18.5	14.5	41.0	461	275	561	671	264	98.8
MAX	230	96	42	25	18	130	707	508	746	946	368	192
MIN	106	42	25	13	11	14	170	80	439	386	203	75
AC-FT	10,750	4,000	2,080	1,140	807	2,520	27,430	16,910	33,400	41,250	16,230	5,880

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2005, BY WATER YEAR (WY)

MEAN	67.5	58.7	42.0	33.0	41.5	140	618	788	409	224	123	72.7
MAX	421	219	172	175	388	912	5,666	5,161	2,821	1,616	1,080	633
(WY)	(2000)	(1976)	(1976)	(1976)	(1997)	(1995)	(1976)	(1979)	(1975)	(1953)	(1999)	(1999)
MIN	0.68	0.50	1.00	0.50	0.00	0.44	5.60	3.04	11.7	2.73	1.03	0.01
(WY)	(1941)	(1941)	(1938)	(1938)	(1938)	(1937)	(1990)	(1937)	(1992)	(1992)	(1992)	(1939)

05122000 SOURIS RIVER NEAR BANTRY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1937 - 2005	
ANNUAL TOTAL	43,598		81,870			
ANNUAL MEAN	119		224		222	
HIGHEST ANNUAL MEAN					1,226	1976
LOWEST ANNUAL MEAN					15.9	1938
HIGHEST DAILY MEAN	519	Jun 16	946	Jul 8	9,260	Apr 23, 1976
LOWEST DAILY MEAN	12	Jan 27	11	Feb 5	0.00	Mar 1, 1937
ANNUAL SEVEN-DAY MINIMUM	12	Jan 27	13	Feb 2	0.00	Mar 1, 1937
MAXIMUM PEAK FLOW			963	Jul 8	9,330	Apr 23, 1976
MAXIMUM PEAK STAGE			11.39	Jul 8	14.59	Apr 23, 1976
ANNUAL RUNOFF (AC-FT)	86,480		162,400		160,500	
10 PERCENT EXCEEDS	328		621		525	
50 PERCENT EXCEEDS	66		120		52	
90 PERCENT EXCEEDS	14		15		5.6	

e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.64	2.88	2.52	2.68	2.34	2.61	2.68	---	6.61	8.44	5.96	3.99
2	3.68	2.81	2.52	2.71	2.35	2.60	2.56	---	6.52	9.18	5.82	3.78
3	3.70	2.77	2.50	2.73	2.37	2.61	2.46	---	6.47	9.77	5.84	3.60
4	3.68	2.78	2.49	2.73	2.38	2.63	---	---	6.53	10.18	5.73	3.46
5	3.69	2.85	2.49	---	2.40	2.67	7.09	---	7.64	10.55	5.56	3.35
6	3.67	2.86	2.47	---	2.40	2.74	8.41	---	8.69	10.86	5.43	3.28
7	3.66	2.81	2.59	---	2.39	2.76	8.81	---	9.35	11.07	5.34	3.15
8	3.69	2.73	2.63	---	2.36	2.69	8.99	---	9.73	11.30	5.25	3.02
9	3.70	2.66	2.63	---	2.34	2.58	9.06	---	9.66	11.26	5.11	2.93
10	3.69	2.60	2.64	---	2.33	2.46	9.06	---	9.34	10.90	4.97	2.84
11	3.65	2.55	2.66	---	2.36	2.35	9.05	---	8.97	10.58	4.85	2.74
12	3.63	2.53	2.66	e2.51	2.38	2.28	9.07	---	8.74	10.30	4.73	2.68
13	3.62	2.50	2.68	2.49	2.40	2.24	8.93	---	8.58	10.08	4.60	2.65
14	3.73	2.47	2.69	e2.46	2.43	2.15	8.76	---	8.56	9.83	4.51	2.62
15	3.91	2.46	2.69	2.44	2.46	2.10	8.54	---	8.45	9.57	4.43	2.61
16	4.09	2.44	2.69	2.42	2.49	2.05	8.24	---	8.23	9.25	4.36	2.59
17	4.27	2.43	2.69	2.39	2.51	2.02	7.80	---	8.02	9.10	4.45	2.58
18	4.38	2.41	2.68	2.39	2.52	2.00	7.61	---	7.75	8.83	---	2.59
19	4.46	2.40	2.69	2.37	2.55	2.00	7.45	---	7.57	8.54	4.45	2.60
20	4.47	2.38	2.67	2.33	2.56	2.00	6.75	---	7.43	8.26	4.42	2.60
21	4.45	2.32	2.65	2.14	2.58	2.01	6.04	6.53	7.38	8.04	4.41	2.60
22	4.40	---	2.65	2.09	2.60	2.02	5.69	6.91	7.36	7.89	4.51	2.60
23	4.29	---	2.65	2.10	2.62	e2.03	5.49	6.86	7.36	7.73	4.59	2.64
24	4.14	---	2.66	2.21	2.63	2.04	5.32	6.79	7.31	7.58	4.60	2.66
25	3.99	2.52	2.65	2.23	2.64	2.05	5.27	7.00	7.23	7.37	4.57	2.63
26	3.83	2.45	2.64	2.23	2.63	2.05	5.24	7.09	7.11	7.16	4.48	2.61
27	3.65	2.38	2.60	2.22	2.63	2.19	5.22	7.02	7.08	6.94	4.37	2.58
28	3.46	2.42	2.64	2.25	2.62	2.51	4.71	6.88	6.91	6.75	4.28	2.56
29	3.29	2.52	2.63	2.28	---	2.69	---	6.84	6.95	6.51	4.23	2.55
30	3.12	2.52	2.62	2.31	---	2.76	---	6.72	7.87	6.33	4.16	2.54
31	2.99	---	2.62	2.32	---	2.74	---	6.61	---	6.14	4.10	---
MEAN	3.83	---	2.62	---	2.47	2.34	---	---	7.85	8.91	---	2.85
MAX	4.47	---	2.69	---	2.64	2.76	---	---	9.73	11.30	---	3.99
MIN	2.99	---	2.47	---	2.33	2.00	---	---	6.47	6.14	---	2.54

e Estimated

05122000 SOURIS RIVER NEAR BANTRY, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1520	688	8.3	7.3	1,080	1,050	13.5	10.0	54.9	38.2	15.7	3	112
AUG													
18...	1620	242	8.4	8.3	1,210	1,230	20.0	21.0	52.2	39.1	12.3	3	130

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	44	273	32.9	.23	11.4	286	706	1,330	<50	<1	3.6	70.9	<1
AUG													
18...	48	311	33.1	.21	9.68	298	753	498	<50	<1	10.1	66.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	160	<1	<1	2.4	30	<1	40	4.71	1.6	<1	<1.0	1.6
AUG												
18...	210	<1	10	4.0	50	<1	<10	4.83	8.2	<1	<1.0	3.5

Remark codes used in this table:
< -- Less than.

05123400 WILLOW CREEK NEAR WILLOW CITY, ND

LOCATION.--Lat 48°35'20", long l00°26'30", in NE¼NW¼ sec.23, T.159 N., R.76 W., McHenry County, Hydrologic Unit 09010004, on left bank 50 ft downstream from culverts on county road, 1.5 mi upstream from Snake Creek, and 7 mi west of Willow City.

DRAINAGE AREA.--1,160 mi^2, approximately, of which about 430 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,430 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 5, 1956, nonrecording gage at site 50 ft upstream at same datum.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	e14	e0.06	e0.00	e0.00	e110	86	120	409	708	142
2	11	18	e13	e0.04	e0.00	e0.00	e180	79	109	664	685	130
3	11	19	e13	e0.02	e0.00	e0.01	e250	74	100	928	662	124
4	11	20	e13	e0.01	e0.00	e0.04	309	69	99	936	628	118
5	11	20	e12	e0.00	e0.00	e0.10	322	65	103	1,040	600	110
6	10	21	e12	e0.00	e0.00	e0.09	343	61	108	1,600	578	103
7	10	21	e11	e0.00	e0.00	e0.04	359	57	117	1,850	555	95
8	11	21	e10	e0.00	e0.00	e0.00	366	56	134	2,150	539	89
9	11	21	e9.7	e0.00	e0.00	e0.05	358	56	153	2,300	529	84
10	11	21	e9.6	e0.00	e0.00	e0.10	338	56	167	2,460	516	78
11	10	21	e9.9	e0.00	e0.00	e0.13	318	56	175	2,670	504	73
12	9.5	20	e9.8	e0.00	e0.00	e0.15	306	57	178	2,460	494	69
13	9.1	20	e10	e0.00	e0.00	e0.10	300	57	179	2,220	471	64
14	9.3	20	e10	e0.00	e0.00	e0.06	297	56	186	2,040	450	61
15	9.1	21	e10	e0.00	e0.00	e0.05	293	54	190	1,870	433	58
16	8.9	23	e10	e0.00	e0.00	e0.05	285	52	191	1,750	418	55
17	9.2	22	e9.9	e0.00	e0.00	e0.05	274	50	189	1,820	420	51
18	9.7	22	e10	e0.00	e0.00	e0.05	264	50	185	1,700	416	48
19	10	22	e10	e0.00	e0.00	e0.05	252	48	182	1,550	414	47
20	9.4	22	e9.5	e0.00	e0.00	e0.06	236	47	178	1,390	406	45
21	9.3	e21	e8.8	e0.00	e0.00	e0.06	219	58	173	1,300	394	43
22	8.9	e21	e6.0	e0.00	e0.00	e0.06	198	74	168	1,220	373	41
23	8.4	e20	e4.8	e0.00	e0.00	e0.06	176	98	164	1,160	345	40
24	8.7	e19	e3.5	e0.00	e0.00	e0.06	158	117	161	1,120	315	41
25	9.1	e18	e2.5	e0.00	e0.00	e0.06	142	131	159	1,060	284	40
26	9.0	e17	e1.5	e0.00	e0.00	e0.20	129	145	169	994	253	40
27	8.6	e17	e1.0	e0.00	e0.00	e1.0	117	156	196	930	225	39
28	8.5	e16	e0.50	e0.00	e0.00	e3.0	107	160	203	896	202	37
29	12	e16	e0.25	e0.00	---	e13	99	158	257	844	185	35
30	18	e15	e0.12	e0.00	---	e25	92	149	361	795	171	34
31	16	---	e0.08	e0.00	---	e60	---	134	---	744	157	---
TOTAL	318.7	591	245.45	0.13	0.00	103.68	7,197	2,566	5,054	44,870	13,330	2,034
MEAN	10.3	19.7	7.92	0.00	0.00	3.34	240	82.8	168	1,447	430	67.8
MAX	18	23	14	0.06	0.00	60	366	160	361	2,670	708	142
MIN	8.4	15	0.08	0.00	0.00	0.00	92	47	99	409	157	34
AC-FT	632	1,170	487	0.3	0.00	206	14,280	5,090	10,020	89,000	26,440	4,030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2005, BY WATER YEAR (WY)

MEAN	6.94	7.30	2.18	0.28	0.57	36.9	253	143	67.8	56.4	30.1	9.93
MAX	71.8	57.7	24.8	4.39	16.4	342	1,242	1,424	769	1,447	430	75.5
(WY)	(1981)	(2001)	(1960)	(1960)	(1981)	(1995)	(1969)	(1999)	(1999)	(2005)	(2005)	(1980)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1957)	(1957)	(1957)	(1957)	(1958)	(1959)	(1977)	(1959)	(1959)	(1958)	(1957)	(1957)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1956 - 2005	
ANNUAL TOTAL	21,581.52		76,309.96			
ANNUAL MEAN	59.0		209		51.2	
HIGHEST ANNUAL MEAN					323	1999
LOWEST ANNUAL MEAN					0.01	1990
HIGHEST DAILY MEAN	807	Jun 17	2,670	Jul 11	5,310	Apr 12, 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Jan 5	0.00	Sep 23, 1956
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jan 5	0.00	Sep 23, 1956
MAXIMUM PEAK FLOW			2,710	Jul 11	5,900	Apr 12, 1969
MAXIMUM PEAK STAGE			15.77	Jul 11	16.76	Apr 12, 1969
ANNUAL RUNOFF (AC-FT)	42,810		151,400		37,110	
10 PERCENT EXCEEDS	182		564		103	
50 PERCENT EXCEEDS	14		35		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

05123400 WILLOW CREEK NEAR WILLOW CITY, ND—Continued

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.15	5.19	5.18	4.50	4.35	4.30	9.19	6.67	7.09	10.55	12.39	7.49
2	5.16	5.24	5.17	4.47	4.35	4.28	9.54	6.55	6.93	12.01	12.30	7.32
3	5.15	5.27	5.14	4.46	4.35	4.24	9.43	6.44	6.79	13.00	12.21	7.22
4	5.13	5.28	5.14	4.44	4.36	4.18	9.30	6.36	6.78	13.04	12.06	7.12
5	5.13	5.31	5.27	4.42	4.36	4.60	9.43	6.27	6.86	13.33	11.91	7.00
6	5.12	5.33	5.34	4.41	4.35	5.34	9.69	6.18	6.95	14.32	11.79	6.88
7	5.12	5.33	5.40	4.41	4.34	5.21	9.89	6.10	7.10	14.69	11.66	6.75
8	5.14	5.33	5.42	4.40	4.34	4.73	9.99	6.07	7.36	15.09	11.57	6.65
9	5.15	5.32	5.41	4.40	4.33	4.83	9.94	6.05	7.64	15.26	11.50	6.55
10	5.14	5.31	5.37	4.39	4.32	5.02	9.76	6.05	7.84	15.50	11.42	6.45
11	5.11	5.32	5.29	4.39	4.32	4.99	9.58	6.04	7.96	15.74	11.34	6.35
12	5.09	5.28	5.24	4.39	4.32	5.13	9.48	6.04	8.01	15.56	11.27	6.27
13	5.07	5.29	5.18	4.40	4.33	4.42	9.44	6.03	8.03	15.30	11.11	6.18
14	5.08	5.28	5.20	4.38	4.33	4.09	9.41	6.00	8.12	15.08	10.94	6.11
15	5.07	5.33	5.19	4.36	4.34	4.08	9.37	5.96	8.17	14.87	10.77	6.04
16	5.07	5.36	5.18	4.34	4.33	4.07	9.29	5.90	8.20	14.69	10.62	5.99
17	5.08	5.35	5.16	4.32	4.33	4.06	9.16	5.85	8.17	14.79	10.65	5.90
18	5.10	5.34	5.18	4.34	4.32	4.06	9.05	5.83	8.12	14.62	10.60	5.83
19	5.12	5.36	5.14	4.34	4.31	4.07	8.92	5.79	8.08	14.41	10.59	5.81
20	5.08	5.34	5.15	4.33	4.32	4.08	8.73	5.77	8.03	14.20	10.51	5.77
21	5.08	5.42	5.09	4.34	4.31	4.08	8.53	5.96	7.97	14.03	10.40	5.72
22	5.07	5.33	5.05	4.34	4.30	4.08	8.28	6.25	7.89	13.88	10.20	5.67
23	5.05	---	5.08	4.34	4.30	4.10	8.00	6.63	7.84	13.76	9.92	5.65
24	5.06	5.36	5.09	4.34	4.30	4.09	7.76	6.96	7.80	13.67	9.61	5.65
25	5.07	5.30	4.97	4.34	4.29	4.08	7.55	7.19	7.78	13.50	9.26	5.63
26	5.07	5.28	4.80	4.34	4.29	4.24	7.36	7.42	7.91	13.32	8.92	5.63
27	5.05	5.28	4.73	4.33	4.28	4.76	7.19	7.59	8.25	13.14	8.59	5.59
28	5.05	5.26	4.67	4.33	4.29	5.65	7.04	7.66	8.34	13.03	8.30	5.54
29	5.14	5.24	4.59	4.34	---	---	6.90	7.64	8.97	12.86	8.08	5.50
30	5.22	5.21	4.57	4.35	---	6.10	6.78	7.51	10.09	12.70	7.90	5.47
31	5.18	---	4.53	4.35	---	8.00	---	7.29	---	12.52	7.70	---
MEAN	5.11	---	5.09	4.38	4.32	---	8.80	6.45	7.84	13.95	10.52	6.19
MAX	5.22	---	5.42	4.50	4.36	---	9.99	7.66	10.09	15.74	12.39	7.49
MIN	5.05	---	4.53	4.32	4.28	---	6.78	5.77	6.78	10.55	7.70	5.47

05123400 WILLOW CREEK NEAR WILLOW CITY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-62, 1964-65, 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1640	300	8.1	7.0	746	749	13.7	13.1	44.4	34.7	12.4	2	55.1
AUG													
18...	1210	410	8.2	8.2	758	787	21.0	20.5	42.8	41.7	10.1	1	38.8

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	31	209	18.1	.13	14.2	184	476	396	<50	<1	2.8	35.3	<1
AUG													
18...	22	309	9.7	.14	11.2	96.7	428	484	<50	<1	5.2	49.1	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	90	<1	<1	1.7	70	<1	20	3.73	<1	<1	<1.0	3.1
AUG												
18...	100	<1	5	1.8	60	<1	60	4.08	2.8	<1	<1.0	10.1

Remark codes used in this table:
< -- Less than.

05123510 DEEP RIVER NEAR UPHAM, ND

LOCATION.--Lat 48°35'03", long 100°51'44", in SW¼NW¼ sec.22, T.159 N., R.79 W., McHenry County, Hydrologic Unit 09010005, 60 ft downstream from county highway bridge, 0.8 mi downstream from Little Deep River, and 6.3 mi west of Upham.

DRAINAGE AREA.--975 mi^2, of which about 605 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to September 1980, March 1985 to current year (seasonal records only since 1985).

GAGE.--Water-stage recorder. Datum of gage is 1,430 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1951 reached a stage of about 16 ft, discharge, 2,700 ft^3/s, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 518 ft^3/s, July 5, gage height, 12.11 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.00	40	41	10	176	46	6.8
2	---	---	---	---	---	e0.00	44	40	60	222	44	6.1
3	---	---	---	---	---	e0.00	278	38	65	273	42	5.5
4	---	---	---	---	---	e0.03	484	37	69	468	40	4.7
5	---	---	---	---	---	e0.10	414	35	74	507	38	4.1
6	---	---	---	---	---	e0.50	e343	33	74	461	36	3.8
7	---	---	---	---	---	1.0	281	31	71	414	35	3.5
8	---	---	---	---	---	1.3	226	29	73	391	33	3.3
9	---	---	---	---	---	1.8	191	27	78	371	30	3.1
10	---	---	---	---	---	1.8	164	25	79	343	27	2.9
11	---	---	---	---	---	2.8	138	23	76	311	23	2.7
12	---	---	---	---	---	3.3	116	20	73	278	21	2.5
13	---	---	---	---	---	2.9	98	18	68	246	19	2.3
14	---	---	---	---	---	2.0	89	18	65	217	18	2.1
15	---	---	---	---	---	1.4	82	17	62	188	16	2.0
16	---	---	---	---	---	1.1	77	15	59	164	14	1.8
17	---	---	---	---	---	0.85	72	14	56	147	13	1.6
18	---	---	---	---	---	0.70	67	13	54	134	14	1.5
19	---	---	---	---	---	0.61	61	12	51	123	14	1.4
20	---	---	---	---	---	0.54	58	12	49	112	14	1.3
21	---	---	---	---	---	0.54	57	12	48	101	13	1.2
22	---	---	---	---	---	0.53	54	12	46	91	13	1.2
23	---	---	---	---	---	0.52	52	12	44	83	12	1.1
24	---	---	---	---	---	0.54	51	11	42	77	12	0.98
25	---	---	---	---	---	0.57	49	11	40	71	11	0.95
26	---	---	---	---	---	0.61	48	10	39	66	11	0.89
27	---	---	---	---	---	1.3	46	10	46	62	10	0.83
28	---	---	---	---	---	3.7	44	10	50	59	9.4	0.82
29	---	---	---	---	---	14	42	9.5	65	55	8.6	0.79
30	---	---	---	---	---	27	41	9.4	108	52	8.0	0.75
31	---	---	---	---	---	36	---	9.4	---	49	7.3	---
TOTAL	---	---	---	---	---	108.04	3,807	614.3	1,794	6,312	652.3	72.51
MEAN	---	---	---	---	---	3.49	127	19.8	59.8	204	21.0	2.42
MAX	---	---	---	---	---	36	484	41	108	507	46	6.8
MIN	---	---	---	---	---	0.00	40	9.4	10	49	7.3	0.75
AC-FT	---	---	---	---	---	214	7,550	1,220	3,560	12,520	1,290	144

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2005, BY WATER YEAR (WY)

MEAN	0.12	0.72	0.24	0.03	0.10	26.3	139	43.0	12.0	10.4	4.44	0.56
MAX	1.99	16.1	5.08	0.77	2.37	276	1,300	469	137	204	81.5	12.9
(WY)	(1976)	(1976)	(1976)	(1976)	(1976)	(1976)	(1976)	(1999)	(2004)	(2005)	(2001)	(2004)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1958)	(1958)	(1958)	(1958)	(1958)	(1959)	(1959)	(1959)	(1958)	(1958)	(1958)	(1958)

05123510 DEEP RIVER NEAR UPHAM, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1958 - 2005	
ANNUAL MEAN	[a]20.5	
HIGHEST ANNUAL MEAN	[a]140	1976
LOWEST ANNUAL MEAN	[a]0.00	1959
HIGHEST DAILY MEAN	5,700	Apr 12, 1969
LOWEST DAILY MEAN	0.00	Oct 1, 1957
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1957
MAXIMUM PEAK FLOW	6,760	Apr 12, 1969
MAXIMUM PEAK STAGE	18.18	Apr 12, 1969
ANNUAL RUNOFF (AC-FT)	[a]14,820	
10 PERCENT EXCEEDS	6.8	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1958-80).
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--February 2000 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	6.08	7.19	7.62	7.24	9.42	7.88	7.13
2	---	---	---	---	---	6.08	7.22	7.60	8.00	9.88	7.83	7.10
3	---	---	---	---	---	6.08	9.18	7.58	8.10	10.35	7.80	7.07
4	---	---	---	---	---	6.08	10.56	7.56	8.16	11.78	7.75	7.04
5	---	---	---	---	---	6.16	10.17	7.53	8.22	12.06	7.71	7.00
6	---	---	---	---	---	6.39	e9.74	7.50	8.22	11.78	7.68	6.98
7	---	---	---	---	---	6.53	9.36	7.47	8.19	11.48	7.64	6.95
8	---	---	---	---	---	6.58	9.02	7.46	8.21	11.33	7.60	6.93
9	---	---	---	---	---	6.64	8.81	7.44	8.27	11.19	7.57	6.91
10	---	---	---	---	---	6.63	8.64	7.42	8.28	10.99	7.55	6.89
11	---	---	---	---	---	6.71	8.49	7.40	8.25	10.75	7.49	6.86
12	---	---	---	---	---	6.75	8.37	7.38	8.21	10.49	7.47	6.84
13	---	---	---	---	---	6.72	8.27	7.36	8.15	10.22	7.44	6.81
14	---	---	---	---	---	6.66	8.18	7.36	8.11	9.95	7.41	6.78
15	---	---	---	---	---	6.59	8.11	7.34	8.08	9.67	7.37	6.75
16	---	---	---	---	---	6.53	8.05	7.33	8.04	9.42	7.34	6.72
17	---	---	---	---	---	6.48	7.99	7.30	7.99	9.24	7.33	6.69
18	---	---	---	---	---	6.43	7.93	7.29	7.95	9.11	7.34	6.66
19	---	---	---	---	---	6.40	7.86	7.28	7.92	8.99	7.34	6.64
20	---	---	---	---	---	6.38	7.83	7.28	7.89	8.86	7.34	6.61
21	---	---	---	---	---	6.38	7.81	7.29	7.86	8.72	7.32	6.59
22	---	---	---	---	---	6.38	7.79	7.29	7.83	8.60	7.32	6.57
23	---	---	---	---	---	6.37	7.77	7.28	7.80	8.49	7.30	6.54
24	---	---	---	---	---	6.38	7.76	7.26	7.77	8.39	7.28	6.52
25	---	---	---	---	---	6.39	7.74	7.26	7.73	8.31	7.28	6.50
26	---	---	---	---	---	6.40	7.72	7.24	7.72	8.23	7.26	6.49
27	---	---	---	---	---	6.56	7.70	7.24	7.83	8.17	7.24	6.47
28	---	---	---	---	---	6.75	7.67	7.23	7.91	8.11	7.22	6.46
29	---	---	---	---	---	6.97	7.65	7.22	8.15	8.05	7.20	6.45
30	---	---	---	---	---	7.09	7.63	7.22	8.70	7.99	7.18	6.44
31	---	---	---	---	---	7.17	---	7.22	---	7.94	7.15	---
MEAN	---	---	---	---	---	6.51	8.27	7.36	8.03	9.61	7.44	6.75
MAX	---	---	---	---	---	7.17	10.56	7.62	8.70	12.06	7.88	7.13
MIN	---	---	---	---	---	6.08	7.19	7.22	7.24	7.94	7.15	6.44

e Estimated

05123510 DEEP RIVER NEAR UPHAM, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-80, 1985 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
29...	1815	18	7.9	6.7	552	538	9.5	.4	39.3	26.2	19.5	.6	19.1
AUG													
17...	1640	14	8.5	8.5	1,020	1,040	25.0	21.5	68.6	58.0	16.7	1	45.8

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
29...	15	150	15.0	.06	9.72	101	312	15.8	<50	<1	2.3	49.3	<1
AUG													
17...	19	387	34.6	.13	27.3	149	606	23.6	<50	<1	6.7	98.7	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
29...	<50	<1	<1	1.9	170	<1	540	3.81	<1	<1	<1.0	6.4
AUG												
17...	60	<1	5	2.0	60	<1	100	4.55	4.0	<1	<1.0	3.4

Remark codes used in this table:
< -- Less than.

05123990 J. CLARK SALYER POOL 357 NEAR WESTHOPE, ND

LOCATION.--Lat 48°58'40", long 100°57'45", in SW$^1/_4$ sec.31, T.164 N., R.79 W., Bottineau County, Hydrologic Unit 09010003, just upstream from U.S. Fish and Wildlife Service Dam 357, 1.2 mi upstream of International border, 7 mi northeast of Westhope, 10 mi downstream from Boundary Creek, and at mile 154.2.

DRAINAGE AREA.--16,900 mi^2, of which about 10,300 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1994 to current year.

REVISED RECORDS.--WSP 1728: Drainage area.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
20...	1220	1.0	1.0	8.3	1,390	450	73.8	63.5	--	3	163	--	396@c
20...	1225	2.0	2.0	8.3	1,390	450	74.5	63.1	--	3	165	--	396@c
20...	1230	2.0	1.0	--	--	--	--	--	--	--	--	--	--
FEB													
24...	1305	1.3	.80	7.8	2,930	1,100	182d	149d	--	5	387d	--	829@c
JUN													
21...	1715	1.0	.50	8.5	920	330	57.9	44.4	--	2	96.1	--	255@c
21...	1725	2.9	2.5	8.4	925	340	59.9	46.0	--	2	98.3	--	254@c
21...	1735	1.6	.80	--	--	--	--	--	--	--	--	--	--
AUG													
31...	1400	1.5	.50	7.9	1,070	340	56.6	49.4	13.2	2	79.5	32	417@c
31...	1405	2.3	1.3	8.0	1,060	400	64.7	57.0	--	2	94.0	--	416@c
31...	1410	.30	.00	--	--	--	--	--	--	--	--	--	--

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

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitro-gen, water, unfltrd mg/L (00605)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
OCT													
20...	44.8	.3	323d	--	992	92d	2.8	.21	E.03n	2.6	.31	49.5	--
20...	45.1	.3	323d	--	953	92d	2.7	.21	E.03n	2.5	.30	39.9d	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	E23.4d
FEB													
24...	92.2d	.5	816d	--	2,180	36	3.6	.62	E.05n	3.0	.57	36.4	--
JUN													
21...	25.0	.2	241	--	688	<10	1.4	<.04	<.06	--	.36	23.5	--
21...	23.6	.2	238	--	678	<10	1.3	<.04	<.06	--	.34	20.4	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	3.8d
AUG													
31...	22.0	.2	187	658	741	610d	10d	.10	<.06	9.9	1.43	104d	--
31...	21.9	.2	186	--	699	662c	7.7d	.08	<.06	7.7	1.41	105d	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	E2.9d

05123990 J. CLARK SALYER POOL 357 NEAR WESTHOPE, ND—Continued

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

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Cobalt water, unfltrd recover -able, ug/L (01037)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, unfltrd recover -able, ug/L (01051)
OCT													
20...	--	1,240	5	130	.09	--	247	.07	1.8	1.82	5.8	1,990	2.52
20...	--	1,230	5	130	.11	--	249	.06	2.5	1.79	8.9	1,980	2.42
20...	3.0d	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24...	--	<150d	7	197d	<.12d	--	380d	.12d	E.5n	1.69d	17.5d	210d	1.60d
JUN													
21...	--	180	5	56	<.06	--	152	.08	<.8	.717	5.8	240	.37
21...	--	E2noc	5	55	<.06	--	161	E.02n	<.8	.711	4.6	10	<.06
21...	.6d	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
31...	--	7,590	10.5oc	286	.66	156	247dc	.71	12.3	7.50	23.3	14400d	13.3
31...	--	7,810	10.4oc	290	.70	--	238d	.73	9.6oc	7.60	23.8	14400d	13.3
31...	E3.6d	--	--	--	--	--	--	--	--	--	--	--	--

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

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Molyb-denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Phen-olic com-pounds, water, unfltrd ug/L (32730)
OCT						
20...	E.01n	4.1	6.57	.5	12	<16
20...	E.01n	4.1	7.48	E.3n	11	<16
20...	--	--	--	--	--	--
FEB						
24...	--	5.3d	10.1d	2.4d	8d	<16
JUN						
21...	.02	1.8	4.08	.8	29	<16+c
21...	E.01n	1.9	4.17	1.0	2	E14n
21...	--	--	--	--	--	--
AUG						
31...	.12d	.9	25.8	.31oc	67	<16
31...	.10	.9	25.9	.31oc	67	<16
31...	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
+ -- Improper preservation
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

05123990 J. CLARK SALYER POOL 357 NEAR WESTHOPE, ND—Continued

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

Date	Time	Depth of lake, maximum meters (85310)	Ice thick-ness, meters (82131)	Sam-pling depth, meters (00098)	Trans-parency Secchi disc, inches (00077)	Wind direc-tion, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)
OCT													
20...	1210	2.5	--	.00	42.0	50	<5.0	725	12.8	99	8.8	1,390	2.0
20...	1211	--	--	.50	--	--	--	--	12.6	--	8.8	1,380	--
20...	1212	--	--	1.0	--	--	--	--	12.5	--	8.7	1,380	--
20...	1213	--	--	1.5	--	--	--	--	12.4	--	8.7	1,380	--
20...	1214	--	--	2.0	--	--	--	--	12.4	--	8.8	1,380	--
20...	1215	--	--	2.5	--	--	--	--	12.4	--	8.7	1,380	--
FEB													
24...	1300	1.5	.60	.80	17.0	165	<5.0	719	2.4	18	7.5	3,000	5.0
24...	1301	--	--	1.0	--	--	--	--	2.3	--	7.5	3,050	--
24...	1302	--	--	1.5	--	--	--	--	1.8	--	7.5	3,090	--
JUN													
21...	1710	3.1	--	.00	30.0	170	10	724	10.6	141	8.7	1,000	28.5
21...	1711	--	--	1.0	--	--	--	--	10.5	--	8.6	1,000	--
21...	1712	--	--	2.0	--	--	--	--	10.5	--	8.5	1,000	--
21...	1713	--	--	3.0	--	--	--	--	10.5	--	8.5	1,000	--
AUG													
31...	1355	2.3	--	.00	6.00	280	30	715	7.3	78	8.5	869	10.5
31...	1356	--	--	1.0	--	--	--	--	7.3	--	8.5	869	--
31...	1357	--	--	2.0	--	--	--	--	7.3	--	8.6	869	--
31...	1358	--	--	2.3	--	--	--	--	7.2	--	8.6	871	--

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

Date	Temper-ature, water, deg C (00010)
OCT	
20...	2.3
20...	2.2
20...	2.2
20...	2.2
20...	2.2
20...	2.2
FEB	
24...	.5
24...	.4
24...	.3
JUN	
21...	27.2
21...	27.1
21...	26.9
21...	27.1
AUG	
31...	15.4
31...	15.4
31...	15.4
31...	15.4

Remark codes used in this table:
< -- Less than.

05124000 SOURIS RIVER NEAR WESTHOPE, ND
(International gaging station)

LOCATION.--Lat 48°59'47", long 100°57'29", in SW¼SE¼ sec.30, T.164 N., R.79 W., Bottineau County, Hydrologic Unit 09010003, on left bank 1,200 ft upstream from second crossing of international boundary, 1 mi downstream from Fish and Wildlife Service Dam 357, 7 mi northeast of Westhope, 11 mi downstream from Boundary Creek, and at mile 154.5.

DRAINAGE AREA.--16,900 mi^2, approximately, of which about 10,300 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to October 1929, April 1930 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1338: 1932. WSP 2113: Drainage area.

GAGE.--Water-stage recorder and control. Datum of gage is 1,402.45 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 28, 1938, nonrecording gage at site 6.3 mi upstream at datum 2.52 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by dams on Souris River and tributaries, combined capacity, about 321,000 acre-ft. Diversion at Eaton Dam for irrigation of about 7,000 acres and other small diversions for irrigation and municipal supply upstream from station.

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	37	178	e2.2	e2.5	e2.3	e40	573	572	1,210	2,890	438
2	134	9.2	178	e2.1	e2.5	e2.3	134	579	824	1,670	2,850	433
3	130	6.3	177	e2.0	e2.5	e2.2	258	581	1,300	2,040	2,770	426
4	134	5.4	176	e2.0	e2.4	e2.2	471	580	1,770	2,300	2,670	401
5	136	4.8	181	e2.0	e2.3	e2.2	539	573	2,090	2,490	2,590	310
6	137	4.7	181	e2.1	e2.2	e2.2	629	581	2,220	2,640	2,550	167
7	136	4.7	176	e2.1	e2.1	e1.9	646	585	2,340	2,740	2,420	167
8	133	5.4	175	e2.1	e2.1	e1.8	659	585	2,420	2,830	2,350	145
9	139	5.9	174	e2.1	e2.1	e1.7	735	588	2,340	2,890	e2,260	116
10	135	51	120	e2.1	e2.1	e1.5	788	589	2,280	e2,980	2,260	119
11	135	130	6.7	e2.1	e2.2	e1.4	872	596	2,230	e3,040	2,330	117
12	133	131	4.8	e2.0	e2.1	e1.2	835	597	2,140	e3,100	2,320	118
13	131	131	4.3	e2.0	e2.2	e1.2	708	591	2,060	3,110	2,220	117
14	131	131	4.2	e2.0	e2.2	e1.2	597	582	1,880	e3,150	2,170	120
15	122	131	4.2	e2.0	e2.2	e1.1	586	592	1,700	e3,170	2,100	119
16	132	145	4.2	e2.1	e2.2	e1.1	e585	596	1,590	e3,190	1,880	118
17	135	187	4.2	e2.2	e2.3	e1.1	584	595	1,450	e3,190	1,750	118
18	100	187	4.0	e2.2	e2.3	e1.0	572	593	1,320	e3,210	1,680	121
19	49	186	4.0	e2.2	e2.3	e1.0	622	579	1,230	3,220	1,600	122
20	48	183	3.9	e2.2	e2.3	e1.0	620	565	1,030	3,260	1,550	133
21	50	185	e3.0	e2.2	e2.3	e0.98	613	563	760	3,240	1,460	153
22	50	182	e2.6	e2.2	e2.3	e0.92	606	537	584	3,230	1,290	158
23	51	172	e2.4	e2.2	e2.3	e0.90	601	543	482	3,210	1,050	162
24	51	183	e2.4	e2.3	e2.1	e0.89	590	533	363	3,210	934	160
25	51	183	e2.4	e2.3	e2.6	e0.92	581	525	302	3,190	868	158
26	52	182	e2.4	e2.4	e2.4	e0.93	579	524	288	3,130	821	148
27	53	181	e2.4	e2.4	e2.3	e1.2	576	526	290	3,110	719	189
28	53	181	e2.4	e2.4	e2.3	e1.8	581	533	290	3,090	591	281
29	53	180	e2.4	e2.4	---	e3.2	578	536	423	3,030	545	289
30	52	179	e2.3	e2.4	---	e6.0	574	537	845	3,010	500	286
31	53	---	e2.3	e2.4	---	e15	---	544	---	2,960	473	---
TOTAL	3,030	3,484.4	1,787.5	67.4	63.7	64.34	17,359	17,601	39,413	89,840	54,461	5,909
MEAN	97.7	116	57.7	2.17	2.27	2.08	579	568	1,314	2,898	1,757	197
MAX	139	187	181	2.4	2.6	15	872	597	2,420	3,260	2,890	438
MIN	48	4.7	2.3	2.0	2.1	0.89	40	524	288	1,210	473	116
AC-FT	6,010	6,910	3,550	134	126	128	34,430	34,910	78,180	178,200	108,000	11,720

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

MEAN	67.9	55.7	34.5	27.2	25.9	70.0	843	984	597	318	154	76.2
MAX	473	387	201	191	190	779	8,850	5,967	4,919	2,898	1,757	657
(WY)	(1976)	(1995)	(1976)	(1976)	(1976)	(1983)	(1976)	(1976)	(1999)	(2005)	(2005)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
(WY)	(1933)	(1935)	(1935)	(1935)	(1935)	(1936)	(1941)	(1937)	(1937)	(1937)	(1931)	(1931)

05124000 SOURIS RIVER NEAR WESTHOPE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	69,961.52		233,080.34			
ANNUAL MEAN	191		639		274	
HIGHEST ANNUAL MEAN					1,697	1976
LOWEST ANNUAL MEAN					0.15	1937
HIGHEST DAILY MEAN	1,510	Jun 21	3,260	Jul 20	12,400	Apr 26, 1976
LOWEST DAILY MEAN	0.43	Feb 5	0.89	Mar 24	0.00	Jul 20, 1931
ANNUAL SEVEN-DAY MINIMUM	0.43	Feb 5	0.93	Mar 20	0.00	Jul 20, 1931
MAXIMUM PEAK FLOW			[a]3,310	Jul 20	12,600	Apr 26, 1976
MAXIMUM PEAK STAGE			[b]13.95	Jul 10	19.16	Apr 26, 1976
INSTANTANEOUS LOW FLOW					[c]-35	Apr 8, 1943
ANNUAL RUNOFF (AC-FT)	138,800		462,300		198,200	
10 PERCENT EXCEEDS	514		2,340		623	
50 PERCENT EXCEEDS	90		172		27	
90 PERCENT EXCEEDS	0.45		2.1		0.00	

a Gage height, 13.81
b Backwater from vegetation
c Reverse flow caused by backwater from downstream tributary inflow
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.56	5.62	6.82	---	4.81	4.85	6.54	7.85	7.86	10.31	13.29	7.14
2	6.58	5.06	6.82	---	4.81	4.83	6.63	7.87	8.29	11.22	13.24	7.13
3	6.55	4.97	6.82	---	4.81	4.81	7.26	7.87	9.10	12.03	13.14	7.11
4	6.58	4.94	6.81	---	4.80	4.79	7.92	7.87	9.79	12.68	12.99	7.03
5	6.59	4.92	6.84	---	4.80	4.78	8.09	7.85	10.31	13.16	12.88	6.70
6	6.60	4.92	6.84	---	4.80	4.76	8.28	7.87	10.60	13.53	12.85	6.09
7	6.59	4.92	6.81	---	4.80	4.75	8.32	7.88	10.91	13.73	12.66	6.09
8	6.57	4.94	6.81	---	4.81	4.74	8.35	7.88	11.10	13.81	12.57	5.96
9	6.61	4.96	6.80	---	4.82	4.74	8.49	7.88	11.06	13.83	e12.42	5.78
10	6.58	5.61	6.36	---	4.81	4.72	8.58	7.88	11.06	---	12.24	5.80
11	6.59	6.56	5.02	---	4.78	4.71	8.72	7.90	11.06	---	12.15	5.79
12	6.58	6.56	4.92	---	4.78	4.69	8.66	7.90	11.00	---	11.90	5.80
13	6.56	6.56	4.90	---	4.78	4.70	8.47	7.89	10.96	13.86	11.49	5.79
14	6.56	6.56	4.89	---	4.77	4.70	8.27	7.87	10.74	---	11.20	5.81
15	6.51	6.56	4.89	---	4.77	4.69	8.12	7.89	10.50	---	10.91	5.81
16	6.57	6.64	4.89	---	4.77	4.68	7.96	7.90	10.40	---	10.41	5.80
17	6.59	6.87	4.89	---	4.78	4.68	7.88	7.90	10.26	---	10.09	5.79
18	6.31	6.87	4.88	---	4.78	4.67	7.86	7.89	10.16	---	9.88	5.82
19	5.84	6.87	4.88	---	4.78	4.67	7.95	7.87	10.11	13.67	9.68	5.82
20	5.82	6.85	4.88	---	4.78	4.67	7.94	7.84	9.83	13.74	9.53	5.89
21	5.84	6.86	---	---	4.77	4.66	7.93	7.84	9.31	13.71	9.35	6.01
22	5.83	6.84	---	---	4.77	4.65	7.92	7.79	8.98	13.71	9.07	6.04
23	5.85	6.79	---	---	4.77	4.65	7.91	7.80	8.77	13.69	8.65	6.06
24	5.84	6.85	---	---	4.85	4.64	7.89	7.78	8.48	13.70	8.42	6.05
25	5.85	6.85	---	e4.81	4.96	4.65	7.87	7.77	8.30	13.67	8.29	6.04
26	5.86	6.84	---	4.82	4.91	4.65	7.87	7.76	8.25	13.59	8.18	5.98
27	5.87	6.84	---	4.82	4.89	4.68	7.86	7.77	8.26	13.58	7.93	6.23
28	5.88	6.84	---	4.82	4.87	4.80	7.87	7.78	8.26	13.56	7.59	6.75
29	5.87	6.83	---	4.81	---	5.58	7.86	7.79	8.59	13.47	7.46	6.79
30	5.86	6.83	---	4.82	---	6.35	7.86	7.79	9.54	13.45	7.32	6.79
31	5.88	---	---	4.82	---	6.65	---	7.80	---	13.38	7.23	---
MEAN	6.26	6.20	---	---	4.81	4.86	7.97	7.85	9.73	---	10.48	6.19
MAX	6.61	6.87	---	---	4.96	6.65	8.72	7.90	11.10	---	13.29	7.14
MIN	5.82	4.92	---	---	4.77	4.64	6.54	7.76	7.86	---	7.23	5.78

e Estimated

05124000 SOURIS RIVER NEAR WESTHOPE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970, 1972 to current year.

REMARKS.--Environment Canada also collected a sample on Sept. 27.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
NOV													
16...	1345	113	43	--	18.4	--	8.5	8.4	1,480	1,400	12.0	2.6	72.7
SEP													
27...	1740	--	--	713	8.1	84	8.8	7.8	1,160	1,160	7.5	14.0	65.3

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

Date	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)
NOV													
16...	60.0	3	160	373@c	46.2	.3	335d	954d	44	2.4	E.02n	<.06	.17
SEP													
27...	60.4	2	107	403@c	27.0	.2	231	821	108d	3.4	<.04	<.06	.32

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

Date	Organic carbon, water, unfltrd mg/L (00680)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Boron, water, unfltrd recoverable, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, unfltrd recoverable, ug/L (01042)
NOV													
16...	34.2	--	12.5d	1.8d	470	4	107	E.04n	223	E.03n	E.7n	1.19	6.8
SEP													
27...	43.3	20.6	25.9	--	1,360	6.4	117	.09	180d	.09	2.0	1.71	5.4

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

Date	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Molybdenum, water, unfltrd recoverable, ug/L (01062)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recoverable, ug/L (01092)	Phenolic compounds, water, unfltrd ug/L (32730)
NOV							
16...	800	1.12	4.9	6.92	1.0	7	<16+c
SEP							
27...	2,130	1.96	3.2	7.35	.26oc	11	<16

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
+ -- Improper preservation
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL
o -- Result determined by alternate method

06185500 MISSOURI RIVER NEAR CULBERTSON, MT
(National Stream Quality Accounting Network Station)

LOCATION.--Lat 48°07'30", long 104°28'20" (NAD 27), in $SE^1/_4NW^1/_4$ sec.3, T.27 N., R.56 E., Richland County, Hydrologic Unit 10060005, on right bank at upstream side of bridge on State Highway 16, 2.5 mi southeast of Culbertson, 10 mi downstream from Big Muddy Creek, and at river mile 1,620.76.

DRAINAGE AREA.--91,557 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1941 to December 1951, April 1958 to current year.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,883.4 ft (NGVD 29) (U.S. Army Corps of Engineers bench mark). July 1 to Nov. 6, 1941, water-stage recorder at site 400 ft upstream at elevation 0.11 ft higher. Nov. 7, 1941, to Aug. 17, 1950, water-stage recorder at site 580 ft downstream at present elevation. Aug. 18, 1950, to Dec. 31, 1951, nonrecording gage on bridge at present elevation. Apr. 1, 1958, to Nov. 1, 1967, water-stage recorder at site 580 ft downstream at present elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow partly regulated by Fort Peck Lake (station number 06131500) and many other reservoirs upstream from station. Diversions for irrigation of about 1,030,400 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,870	4,270	5,850	e5,900	e8,100	e5,600	5,420	5,640	5,360	6,970	6,790	5,940
2	4,790	4,310	6,080	e6,000	e7,400	e5,800	5,370	5,670	5,580	6,720	6,200	5,870
3	4,710	4,330	5,970	e6,100	e7,900	e5,600	5,340	5,650	5,500	6,270	6,100	5,930
4	4,690	4,430	e6,000	e6,000	e7,300	e6,300	5,240	5,600	5,480	6,260	6,040	5,840
5	4,560	4,480	6,060	e5,800	e6,800	e5,800	5,210	5,510	5,520	6,690	6,330	5,840
6	4,760	4,370	5,940	e5,800	e6,900	e5,700	5,410	5,320	5,370	6,560	6,450	5,770
7	4,830	4,290	5,950	e5,900	e6,700	e5,600	5,570	5,300	5,500	6,280	6,060	5,710
8	4,640	4,240	6,200	e6,000	e6,300	e5,400	5,410	5,690	5,730	6,020	5,990	5,850
9	4,530	4,210	e5,800	e6,600	e5,900	e5,300	5,410	6,030	6,520	5,810	6,360	5,750
10	4,380	4,290	e5,800	e6,400	e5,900	e5,400	5,320	5,990	7,490	5,710	6,140	5,690
11	4,350	4,400	e5,900	e6,000	e5,700	e5,000	5,600	5,950	8,430	5,770	6,010	5,840
12	4,340	4,520	6,140	e6,300	e6,300	e4,800	5,590	5,890	8,440	6,480	5,900	5,890
13	4,340	4,470	6,030	e6,400	e5,800	5,310	5,480	6,040	9,180	7,140	5,960	5,920
14	4,310	4,530	6,170	e6,100	e5,800	5,220	5,430	5,550	9,930	7,210	5,980	5,900
15	4,290	4,540	6,350	e6,100	e5,800	5,150	5,390	5,190	9,480	7,060	5,980	5,870
16	4,310	4,380	6,300	e6,300	e5,800	5,160	5,590	5,210	8,530	6,860	5,970	5,920
17	4,280	4,410	6,240	e6,200	e5,800	5,130	5,680	5,680	7,870	6,560	6,060	5,930
18	4,270	4,690	e5,900	e6,300	e5,900	4,960	5,730	5,810	7,440	6,640	6,370	6,290
19	4,350	4,870	6,160	e6,300	e5,900	6,170	5,730	5,750	6,880	6,560	6,780	6,420
20	4,350	5,020	5,890	e6,600	e5,900	5,770	5,780	5,600	6,550	6,530	6,500	5,070
21	4,330	4,940	e5,900	e6,200	e5,900	5,130	5,640	5,500	6,430	6,400	6,510	4,520
22	4,340	4,720	e6,100	e6,300	e5,800	4,940	5,590	5,470	6,610	6,160	6,320	4,420
23	4,410	4,910	e6,000	e6,000	e5,700	5,030	5,530	5,520	7,090	6,070	6,210	4,540
24	4,350	5,060	e6,000	e6,100	e5,400	5,270	5,550	5,540	7,240	5,940	6,050	4,470
25	4,310	5,260	e6,000	e6,000	e5,600	5,400	5,610	5,380	7,530	5,920	5,930	4,360
26	4,300	5,420	e6,000	e6,100	e5,500	5,470	5,690	5,190	7,510	5,910	6,010	4,260
27	4,310	5,510	e6,000	e6,100	e5,500	5,590	5,710	5,100	6,780	5,870	5,910	4,040
28	4,280	5,580	e6,000	e6,200	e5,500	5,710	5,700	5,330	6,620	5,890	5,910	3,980
29	4,260	5,670	e5,900	e6,300	---	5,540	5,680	5,390	6,780	6,390	5,940	4,010
30	4,350	5,760	e6,000	e6,400	---	5,420	5,590	5,380	6,820	6,640	5,960	3,990
31	4,280	---	e5,700	e7,200	---	5,360	---	5,280	---	6,770	5,960	---
TOTAL	137,470	141,880	186,330	192,000	172,800	168,030	165,990	172,150	210,190	198,060	190,680	159,830
MEAN	4,435	4,729	6,011	6,194	6,171	5,420	5,533	5,553	7,006	6,389	6,151	5,328
MAX	4,870	5,760	6,350	7,200	8,100	6,300	5,780	6,040	9,930	7,210	6,790	6,420
MIN	4,260	4,210	5,700	5,800	5,400	4,800	5,210	5,100	5,360	5,710	5,900	3,980
AC-FT	272,700	281,400	369,600	380,800	342,700	333,300	329,200	341,500	416,900	392,900	378,200	317,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)*

MEAN	10,390	9,051	9,095	9,837	10,420	10,200	10,370	9,530	9,651	10,090	11,140	10,850
MAX	28,570	22,440	13,280	14,400	17,450	20,690	32,840	26,220	26,650	37,050	25,300	26,590
(WY)	(1949)	(1952)	(1944)	(1986)	(1976)	(1976)	(1979)	(1979)	(1975)	(1975)	(1948)	(1948)
MIN	1,237	1,126	1,061	1,010	1,167	2,674	1,965	1,353	1,366	1,273	3,823	3,771
(WY)	(1942)	(1942)	(1942)	(1943)	(1942)	(1950)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

06185500 MISSOURI RIVER NEAR CULBERTSON, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005*	
ANNUAL TOTAL	2,784,890		2,095,410			
ANNUAL MEAN	7,609		5,741		10,050	
HIGHEST ANNUAL MEAN					19,910	1952
LOWEST ANNUAL MEAN					4,083	1942
HIGHEST DAILY MEAN	15,700	May 29	9,930	Jun 14	69,200	Mar 27, 1943
LOWEST DAILY MEAN	3,500	Nov 6	3,980	Sep 28	575	Nov 22, 1941
ANNUAL SEVEN-DAY MINIMUM	4,290	Oct 26	4,160	Sep 24	709	Nov 19, 1941
MAXIMUM PEAK FLOW			a10,000	Jun 14	c78,200	Mar 26, 1943
MAXIMUM PEAK STAGE			b7.19	Dec 28	b19.66	Apr 14, 1979
INSTANTANEOUS LOW FLOW					575	Nov 22, 1941
ANNUAL RUNOFF (AC-FT)	5,524,000		4,156,000		7,282,000	
10 PERCENT EXCEEDS	11,100		6,640		15,700	
50 PERCENT EXCEEDS	7,140		5,800		9,220	
90 PERCENT EXCEEDS	4,510		4,390		4,500	

SUMMARY STATISTICS	WATER YEARS 1941 - 1951**		WATER YEARS 1958 - 2005***	
ANNUAL MEAN	9,245		10,180	
HIGHEST ANNUAL MEAN	14,520	1948	16,580	1975
LOWEST ANNUAL MEAN	4,083	1942	5,741	2005
HIGHEST DAILY MEAN	69,200	Mar 27, 1943	52,000	Apr 18, 1979
LOWEST DAILY MEAN	575	Nov 22, 1941	2,000	Nov 20, 1964
ANNUAL SEVEN-DAY MINIMUM	709	Nov 19, 1941	2,130	Nov 19, 1964
MAXIMUM PEAK FLOW	c78,200	Mar 26, 1943	d55,000	Mar 23, 1960
MAXIMUM PEAK STAGE	b15.12	Mar 26, 1943	b19.66	Apr 14, 1979
ANNUAL RUNOFF (AC-FT)	6,698,000		7,375,000	
10 PERCENT EXCEEDS	21,000		15,000	
50 PERCENT EXCEEDS	6,190		9,420	
90 PERCENT EXCEEDS	1,400		5,600	

* During period of operation (1941-52, 1958 to current year)
** Before operational level at Fort Peck Lake was reached
*** After operational level at Fort Peck Lake was reached
a Gage height, 5.79 ft
b Backwater from ice
c Gage height, 14.80 ft, from rating curve extended above 30,000 ft^3/s
d Gage height, 19.14 ft
e Estimated

06185600 MISSOURI RIVER STAGE GAGE NO. 4 NEAR NOHLY, MT

LOCATION.--Lat 48°02'10", long 104°09'40", in NE$^1/_4$ sec.1, T.26 N., R.58 E., Richland County, Hydrologic Unit 10060005, on right bank 4.5 mi northwest of Nohly, MT, and at mile 1,595.7.

DRAINAGE AREA.--93,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1959 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,860.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 18, 1962, at datum 60.00 ft lower.

REMARKS.--Stage regulated by Fort Peck Lake. Gage heights for Apr. 7 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 21.20 ft, Mar. 23, 1960, present datum; minimum daily recorded, 6.87 ft, Apr. 18, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 12.17 ft, June 15; minimum recorded, 9.12 ft, Sept. 28 and 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.73	---	---	---	---	---	---	9.88	9.73	10.88	10.93	10.53
2	9.69	---	---	---	---	---	---	9.91	9.85	10.90	10.75	10.42
3	9.66	---	---	---	---	---	---	9.90	9.85	10.61	10.60	10.49
4	9.60	---	---	---	---	---	---	9.88	9.84	10.46	10.52	10.44
5	9.58	---	---	---	---	---	---	9.85	9.86	10.64	10.60	10.42
6	9.58	---	---	---	---	---	---	9.74	9.79	10.75	10.80	10.40
7	9.71	---	---	---	---	---	e9.88	9.70	9.83	10.58	10.67	10.29
8	9.63	---	---	---	---	---	9.85	9.88	9.96	10.41	10.45	10.38
9	9.54	---	---	---	---	---	9.83	10.07	10.13	10.22	10.67	10.41
10	9.48	---	---	---	---	---	9.78	10.12	10.69	10.11	10.73	10.27
11	9.41	---	---	---	---	---	9.85	10.08	11.19	10.12	10.63	10.37
12	9.41	---	---	---	---	---	9.92	10.05	11.43	10.34	10.45	10.43
13	9.35	---	---	---	---	---	9.86	10.08	11.57	10.85	10.49	10.48
14	---	---	---	---	---	---	9.81	10.04	12.02	11.09	10.49	10.47
15	---	---	---	---	---	---	9.79	9.65	12.10	10.91	10.54	10.46
16	---	---	---	---	---	---	9.85	9.63	11.72	10.90	10.49	10.47
17	---	---	---	---	---	---	9.94	9.78	11.34	10.76	10.55	10.51
18	---	---	---	---	---	---	10.01	10.02	11.12	10.73	10.66	10.59
19	---	---	---	---	---	---	10.00	9.98	10.82	10.73	10.92	10.81
20	---	---	---	---	---	---	10.00	9.93	10.63	10.71	10.84	10.31
21	---	---	---	---	---	---	10.00	9.88	10.52	10.67	10.80	9.64
22	---	---	---	---	---	---	9.91	9.79	10.56	10.56	10.77	9.47
23	---	---	---	---	---	---	9.85	9.81	10.77	10.46	10.70	9.52
24	---	---	---	---	---	---	9.86	9.86	10.97	10.38	10.64	9.53
25	---	---	---	---	---	---	9.88	9.84	11.03	10.35	10.51	9.43
26	---	---	---	---	---	---	9.91	9.78	11.23	10.34	10.52	9.37
27	---	---	---	---	---	---	9.96	9.69	11.02	10.33	10.47	9.26
28	---	---	---	---	---	---	9.93	9.76	10.82	10.30	10.45	9.14
29	---	---	---	---	---	---	9.94	9.81	10.87	10.50	10.45	9.15
30	---	---	---	---	---	---	9.89	9.79	11.00	10.80	10.50	9.15
31	---	---	---	---	---	---	---	9.76	---	10.83	10.52	---
MEAN	---	---	---	---	---	---	---	9.87	10.74	10.59	10.62	10.09
MAX	---	---	---	---	---	---	---	10.12	12.10	11.09	10.93	10.81
MIN	---	---	---	---	---	---	---	9.63	9.73	10.11	10.45	9.14

e Estimated

06185650 MISSOURI RIVER STAGE GAGE NO. 5 AT NOHLY, MT

LOCATION.--Lat 48°00'10", long 104°05'30", in SE¼ sec.16, T.26 N., R.59 E., Richland County, Hydrologic Unit 10060005, at downstream side of bridge, 0.2 mi northwest of Nohly, MT, and at mile 1,587.7.

DRAINAGE AREA.--93,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1959 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,800.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage regulated by Fort Peck Lake. Gage height for Oct. 14, Apr. 6, 12, 14, 15, 20; June 4, 5, 7, 14, 18, 19, 23; and Sept. 5 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 77.22 ft, Mar. 15, 1972; minimum daily recorded, 59.12 ft, Nov. 22, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 67.57 ft, June 30; minimum recorded, 62.32 ft, Sept. 28 and 29.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.76	---	---	---	---	---	---	62.75	63.85	66.57	63.94	63.57
2	62.73	---	---	---	---	---	---	62.84	63.97	66.12	63.81	63.49
3	62.69	---	---	---	---	---	---	62.92	63.92	65.55	63.65	63.54
4	62.63	---	---	---	---	---	---	62.87	e63.81	65.07	63.59	63.52
5	62.62	---	---	---	---	---	---	62.79	e63.81	64.97	63.62	e63.48
6	62.59	---	---	---	---	---	e62.62	62.75	63.83	64.96	63.80	63.49
7	62.72	---	---	---	---	---	62.69	62.67	e63.67	64.69	63.72	63.40
8	62.67	---	---	---	---	---	62.70	62.73	63.85	64.38	63.52	63.46
9	62.57	---	---	---	---	---	62.66	62.99	64.26	63.99	63.66	63.51
10	62.52	---	---	---	---	---	62.59	63.15	65.33	63.70	63.76	63.37
11	62.45	---	---	---	---	---	62.64	63.13	65.55	63.61	63.66	63.44
12	62.45	---	---	---	---	---	e62.82	63.12	65.43	63.66	63.51	63.52
13	62.44	---	---	---	---	---	62.82	63.03	65.32	64.06	63.51	63.56
14	e62.43	---	---	---	---	---	e62.74	63.28	e65.55	64.28	63.53	63.57
15	---	---	---	---	---	---	e62.74	64.12	65.83	64.16	63.57	63.56
16	---	---	---	---	---	---	62.77	64.10	65.49	64.10	63.53	63.56
17	---	---	---	---	---	---	62.85	63.81	65.14	63.91	63.56	63.60
18	---	---	---	---	---	---	62.79	63.60	e64.81	63.81	63.63	63.66
19	---	---	---	---	---	---	62.85	63.56	e64.59	63.84	63.85	63.87
20	---	---	---	---	---	---	e62.92	63.49	64.81	63.82	63.85	63.55
21	---	---	---	---	---	---	62.85	63.75	65.23	63.78	63.80	62.84
22	---	---	---	---	---	---	62.84	64.00	65.76	63.70	63.78	62.66
23	---	---	---	---	---	---	62.83	63.81	e65.70	63.58	63.73	62.66
24	---	---	---	---	---	---	62.77	64.59	65.75	63.50	63.66	62.69
25	---	---	---	---	---	---	62.73	65.45	65.97	63.44	63.55	62.60
26	---	---	---	---	---	---	62.77	65.57	66.35	63.43	63.54	62.54
27	---	---	---	---	---	---	62.81	65.52	66.87	63.42	63.53	62.46
28	---	---	---	---	---	---	62.81	65.51	67.10	63.38	63.51	62.34
29	---	---	---	---	---	---	62.84	64.98	67.11	63.50	63.51	62.34
30	---	---	---	---	---	---	62.78	64.35	67.39	63.79	63.54	62.35
31	---	---	---	---	---	---	---	63.96	---	63.84	63.55	---
MEAN	---	---	---	---	---	---	---	63.72	65.20	64.15	63.64	63.21
MAX	---	---	---	---	---	---	---	65.57	67.39	66.57	63.94	63.87
MIN	---	---	---	---	---	---	---	62.67	63.67	63.38	63.51	62.34

e Estimated

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT
(National Water-Quality Assessment Program)

LOCATION.--Lat 47°40'42", long 104°09'22" (NAD 27), in $SW^1/_4$ $NE^1/_4$ $SW^1/_4$ sec.9, T.22 N., R.59 E., Richland County, Hydrologic Unit 10100004, on left bank at Montana-Dakota Utilities Company powerplant, 0.2 mi downstream from bridge on State Highway 23, 2.5 mi south of Sidney, 3.0 mi downstream from Fox Creek, and at river mile 29.2.

DRAINAGE AREA.--69,083 mi^2. Area at site 4.5 mi upstream, 68,812 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to September 1931 (published as "at Intake"), October 1933 to current year. If monthly figures of diversions to Lower Yellowstone Canal at Intake are added to records at this site, records equivalent to those published as Yellowstone River at Glendive (1898-1910, 1931-34) can be obtained. Monthly discharge only for some periods, published in WSP 1309. Monthly figures of diversions into Lower Yellowstone Canal prior to 1951 published in WSP 1309, 1951-60 published in WSP 1729, 1961-65 published in WSP 1916, 1966-70 published in WSP 2116, and 1971 to current year are published in annual reports.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,881.3 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Jan. 1, 1911, to Sept. 30, 1931, nonrecording gage at site 32 miles upstream at different elevation. Apr. 9, 1934, water-stage recorder at two sites within 500 ft of highway bridge 0.2 mi upstream and May 17, 1945, to Apr. 3, 1952, nonrecording gage on same bridge at elevation 1.36 ft higher. Apr. 4, 1952, to Nov. 19, 1967, water-stage recorder at site 4.5 mi upstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated to some extent by Bighorn Lake, usable capacity, 1,312,000 acre-ft, on the Bighorn River and on other tributary streams in Wyoming and Montana. Diversion for irrigation of about 1,250,000 acres upstream from station. Lower Yellowstone Project Main Canal diverts from left bank in $NW^1/_4$ sec.36, T.18 N., R.56 E., at Lower Yellowstone diversion dam at Intake about 36.6 mi upstream for irrigation of about 52,000 acres of which about one-third lies upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,970	6,720	5,900	e5,500	e5,400	e4,400	4,210	6,850	21,700	32,900	4,960	3,360
2	5,810	7,150	5,380	e4,800	e5,300	e4,400	4,150	6,920	22,000	30,600	4,540	3,180
3	5,750	7,180	5,120	e3,200	e5,200	e4,300	4,150	6,420	20,900	27,500	4,380	3,110
4	5,840	6,680	5,070	e2,400	e5,000	e4,300	4,140	5,840	20,100	25,500	4,350	3,150
5	5,870	6,400	5,030	e2,100	e5,000	e4,300	4,080	5,460	19,800	24,600	4,170	3,220
6	6,000	6,280	4,870	e2,000	e4,900	e4,400	4,030	4,980	19,200	23,600	3,960	3,170
7	5,900	6,090	5,110	e1,800	e4,800	e4,400	4,010	4,800	19,400	21,900	3,980	3,170
8	5,790	6,130	5,390	e1,500	e4,800	e4,600	3,920	5,180	19,300	19,900	4,230	3,170
9	5,700	6,220	5,230	e1,500	e4,700	e5,000	3,980	8,820	27,200	18,100	4,130	3,190
10	5,620	6,130	5,180	e1,600	e4,700	e4,600	4,120	8,460	27,900	16,900	4,090	3,160
11	5,540	6,060	5,610	e1,800	e4,600	4,500	4,490	9,150	24,600	16,100	5,410	3,300
12	5,570	6,050	5,590	e2,400	e4,400	4,420	5,020	10,700	22,300	15,500	4,090	3,200
13	5,590	5,980	5,710	e3,600	e4,200	4,360	5,100	11,600	21,500	15,300	3,730	3,010
14	5,530	5,930	5,690	e4,400	e4,300	4,300	4,790	21,600	22,000	15,900	3,730	3,080
15	5,560	5,910	5,960	e4,400	e4,500	4,350	4,750	26,800	20,600	15,100	3,720	3,190
16	5,650	5,960	5,610	e4,500	e4,700	4,410	4,480	21,900	20,200	13,100	3,800	3,340
17	5,720	5,900	5,800	e4,400	e4,800	4,460	4,250	20,000	19,800	11,300	4,520	3,490
18	5,890	5,800	5,620	e4,300	e4,800	4,420	4,090	18,400	19,200	10,200	4,570	3,620
19	6,320	5,710	5,850	e4,200	e4,800	4,390	4,130	18,000	21,900	9,170	4,210	3,640
20	6,600	5,690	5,840	e4,400	e4,700	4,280	4,300	20,000	25,600	8,320	3,780	3,740
21	6,490	5,630	e5,600	e4,400	e4,600	4,320	4,510	23,400	30,900	7,670	3,740	3,830
22	6,500	5,590	e5,200	e4,500	e4,500	4,370	4,770	22,000	30,700	7,190	3,920	3,830
23	6,390	5,650	4,760	e5,300	e4,300	4,380	6,760	24,600	29,200	6,520	4,210	3,890
24	6,310	5,620	4,250	e5,900	e4,400	4,300	7,440	31,500	29,600	5,840	4,520	3,940
25	6,390	5,580	5,270	e6,200	e4,500	4,360	6,730	34,400	31,300	5,470	4,790	4,160
26	6,250	5,540	5,340	e6,200	e4,600	4,400	5,840	33,400	35,300	5,690	4,290	4,730
27	6,230	5,560	4,820	e6,100	e4,600	4,410	5,720	34,500	39,300	5,290	3,920	5,120
28	6,230	5,540	4,730	e5,900	e4,500	4,480	5,520	31,200	39,600	5,110	3,870	5,550
29	6,670	5,780	4,200	e5,800	---	4,400	5,320	26,100	42,900	5,170	3,770	5,920
30	7,550	5,720	e5,000	e5,700	---	4,290	5,950	22,500	38,100	5,360	3,600	6,030
31	7,000	---	e5,200	e5,600	---	4,230	---	21,200	---	5,280	3,420	---
TOTAL	188,230	180,180	163,930	126,400	131,600	136,530	144,750	546,680	782,100	436,080	128,400	112,490
MEAN	6,072	6,006	5,288	4,077	4,700	4,404	4,825	17,630	26,070	14,070	4,142	3,750
MAX	7,550	7,180	5,960	6,200	5,400	5,000	7,440	34,500	42,900	32,900	5,410	6,030
MIN	5,530	5,540	4,200	1,500	4,200	4,230	3,920	4,800	19,200	5,110	3,420	3,010
AC-FT	373,400	357,400	325,200	250,700	261,000	270,800	287,100	1,084,000	1,551,000	865,000	254,700	223,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2005, BY WATER YEAR (WY)*

MEAN	8,204	7,277	5,918	5,673	6,790	10,790	10,170	18,090	38,310	22,640	8,548	7,046
MAX	29,130	12,150	9,594	13,110	17,750	25,980	39,160	38,100	77,280	55,000	20,470	16,000
(WY)	(1924)	(1924)	(1976)	(1925)	(1971)	(1972)	(1924)	(1928)	(1918)	(1917)	(1912)	(1941)
MIN	3,726	3,700	3,019	2,087	2,702	3,235	2,821	5,409	11,580	3,311	1,602	2,389
(WY)	(1922)	(1922)	(1961)	(1937)	(1936)	(2002)	(1961)	(1961)	(1919)	(1919)	(1961)	(1934)

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1911 - 2005*	
ANNUAL TOTAL	2,204,390		3,077,370			
ANNUAL MEAN	6,023		8,431		12,470	
HIGHEST ANNUAL MEAN					21,250	1924
LOWEST ANNUAL MEAN					5,673	2004
HIGHEST DAILY MEAN	24,900	Jun 14	42,900	Jun 29	142,000	Jun 21, 1921
LOWEST DAILY MEAN	1,480	Aug 22	1,500	Jan 8	570	May 17, 1961
ANNUAL SEVEN-DAY MINIMUM	1,650	Aug 19	1,760	Jan 5	1,010	Aug 8, 1961
MAXIMUM PEAK FLOW			48,100	Jun 29	a159,000	Jun 21, 1921
MAXIMUM PEAK STAGE			13.49	Jun 29	b24.03	Mar 6, 1994
INSTANTANEOUS LOW FLOW					c470	May 17, 1961
ANNUAL RUNOFF (AC-FT)	4,372,000		6,104,000		9,033,000	
10 PERCENT EXCEEDS	10,100		21,900		27,800	
50 PERCENT EXCEEDS	5,500		5,320		8,000	
90 PERCENT EXCEEDS	2,860		3,740		4,040	

SUMMARY STATISTICS	WATER YEARS 1911 - 1965**		WATER YEARS 1967 - 2005***	
ANNUAL MEAN	12,890		12,100	
HIGHEST ANNUAL MEAN	21,250	1924	19,150	1997
LOWEST ANNUAL MEAN	5,814	1934	5,673	2004
HIGHEST DAILY MEAN	142,000	Jun 21, 1921	104,000	May 23, 1978
LOWEST DAILY MEAN	570	May 17, 1961	800	Jan 2, 1989
ANNUAL SEVEN-DAY MINIMUM	1,010	Aug 8, 1961	1,060	Aug 23, 2001
MAXIMUM PEAK FLOW	a159,000	Jun 21, 1921	d111,000	May 23, 1978
MAXIMUM PEAK STAGE	b21.85	Mar 22, 1947	b24.03	Mar 6, 1994
INSTANTANEOUS LOW FLOW	c470	May 17, 1961		
ANNUAL RUNOFF (AC-FT)	9,341,000		8,695,000	
10 PERCENT EXCEEDS	29,900		25,800	
50 PERCENT EXCEEDS	7,690		8,410	
90 PERCENT EXCEEDS	3,820		4,500	

* During period of operation 1911-31, 1934 to current year. Published as “At Intake” 1911-31
** Prior to Bighorn Lake reaching operational level
*** After Bighorn Lake reached operational level
a Gage height, 12.60 ft, site and datum then in use
b Backwater from ice
c Gage height, 2.73 ft, site and datum then in use
d Gage height, 20.02 ft
e Estimated

06329590 YELLOWSTONE RIVER STAGE GAGE NO. 1 NEAR FAIRVIEW, MT

LOCATION.--Lat 47°48'29", long 104°02'32", sec. 18, T.150 N., R.104 W., McKenzie County, Hydrologic Unit 10100004, on left bank 3 mi south of Fairview, MT, and at mile 15.2.

DRAINAGE AREA.--70,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 1959 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,860.00 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 19, 1962, at datum 60.00 ft lower.

REVISED RECORDS.--WDR ND-82: 1980-81.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 23.78 ft, Mar. 21, 1960, present datum; minimum daily recorded, 6.99 ft, Aug. 29, 2001, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 19.48 ft, June 29; minimum recorded, 8.53 ft, Sept. 13.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.52	---	---	---	---	---	---	9.91	14.67	17.23	9.78	8.78
2	9.47	---	---	---	---	---	---	10.09	14.76	16.76	9.57	8.72
3	9.44	---	---	---	---	---	---	9.95	14.49	16.13	9.49	8.66
4	9.45	---	---	---	---	---	---	9.72	14.34	15.60	9.47	8.65
5	9.46	---	---	---	---	---	---	9.54	14.19	15.35	9.40	8.67
6	9.51	---	---	---	---	---	---	9.39	14.12	15.18	9.29	8.66
7	9.47	---	---	---	---	---	---	9.22	13.87	14.82	9.26	8.64
8	9.43	---	---	---	---	---	8.72	9.32	14.13	14.35	9.32	8.65
9	9.39	---	---	---	---	---	8.73	10.23	15.50	13.87	9.33	8.67
10	9.34	---	---	---	---	---	8.73	10.70	16.08	13.52	9.29	8.63
11	9.31	---	---	---	---	---	8.88	10.66	15.54	13.30	9.65	8.67
12	9.30	---	---	---	---	---	9.16	11.18	14.86	13.09	9.49	8.73
13	9.32	---	---	---	---	---	9.33	11.41	14.61	12.98	9.10	8.59
14	---	---	---	---	---	---	9.12	13.33	14.65	13.14	9.07	8.61
15	---	---	---	---	---	---	9.11	15.93	14.39	13.00	9.07	8.68
16	---	---	---	---	---	---	9.02	15.15	14.18	12.53	9.08	8.74
17	---	---	---	---	---	---	8.92	14.52	14.14	11.94	9.19	8.83
18	---	---	---	---	---	---	8.81	13.86	13.90	11.57	9.54	8.89
19	---	---	---	---	---	---	8.83	13.84	14.31	11.26	9.28	8.91
20	---	---	---	---	---	---	8.86	13.95	15.31	10.99	9.10	8.94
21	---	---	---	---	---	---	8.98	15.06	16.40	10.78	9.01	8.99
22	---	---	---	---	---	---	9.02	15.01	16.73	10.64	9.07	9.00
23	---	---	---	---	---	---	9.58	14.94	16.37	10.41	9.18	9.02
24	---	---	---	---	---	---	10.15	16.70	16.35	10.18	9.28	9.05
25	---	---	---	---	---	---	9.98	17.52	16.70	10.02	9.45	9.09
26	---	---	---	---	---	---	9.62	17.27	17.34	10.04	9.31	9.30
27	---	---	---	---	---	---	9.55	17.44	18.24	9.92	9.12	9.49
28	---	---	---	---	---	---	9.53	17.04	18.39	9.85	9.06	9.64
29	---	---	---	---	---	---	9.42	16.00	18.60	9.82	9.02	9.80
30	---	---	---	---	---	---	9.57	15.10	18.41	9.87	8.89	9.86
31	---	---	---	---	---	---	---	14.64	---	9.85	8.80	---
MEAN	---	---	---	---	---	---	---	13.18	15.52	12.52	9.26	8.92
MAX	---	---	---	---	---	---	---	17.52	18.60	17.23	9.78	9.86
MIN	---	---	---	---	---	---	---	9.22	13.87	9.82	8.80	8.59

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND

LOCATION.--Lat 47°51'43", long 103°57'59", in NW¼NW¼NW¼, sec. 35, T.151 N., R.104 W., McKenzie County, Hydrologic Unit 10100004, on bridge on State Highway 200, 2 mi west of Cartwright, and at mile 8.5.

DRAINAGE AREA.--70,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1959 to September 2001 (seasonal), October 2001 to current year.

REVISED RECORDS.--Records for water years 1999-2004 published with incorrect datum of 1,799 ft, National Geodetic Vertical Datum of 1929. Records for 1999-2004 water years were revised in water year 2005 to correct datum of 1,800 ft National Geodetic Vertical Datum of 1929.

GAGE.--Water-stage recorder. Datum of gage is 1,800.00 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 87.08 ft, Mar. 23, 1978; minimum daily recorded, 58.58 ft, July 26, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 74.44 ft, June 30; minimum recorded, 63.26 ft, Sept. 13.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.33	63.58	63.38	65.39	65.39	64.82	62.74	63.50	68.46	71.26	63.22	62.43
2	63.27	63.66	63.31	65.35	65.29	64.79	62.71	63.65	68.56	70.72	63.05	62.37
3	63.25	63.78	63.11	64.83	65.21	64.87	62.70	63.53	68.30	70.07	62.96	62.34
4	e63.24	63.62	63.03	64.25	65.16	65.02	62.70	63.34	68.13	69.47	62.93	62.34
5	63.26	e63.49	62.99	63.86	65.15	65.11	62.69	63.19	67.98	69.18	62.86	62.35
6	63.31	63.44	62.96	63.53	65.00	65.23	62.65	63.03	67.90	68.99	62.78	62.35
7	63.29	63.38	62.97	63.53	64.93	66.30	62.64	62.92	67.65	68.65	62.75	62.33
8	63.25	63.35	63.10	63.27	64.90	67.13	62.61	63.04	67.95	68.16	62.80	62.33
9	63.21	63.40	63.06	62.97	64.71	65.75	62.61	63.75	69.22	67.67	62.83	62.34
10	63.18	63.39	63.13	62.94	64.66	63.95	62.63	64.25	69.98	67.30	62.78	62.33
11	e63.16	63.34	63.22	62.95	64.55	63.05	62.69	64.16	69.45	67.03	63.06	62.35
12	63.15	63.34	63.23	63.14	64.18	62.87	62.90	64.67	68.71	66.80	63.11	62.40
13	63.17	63.32	63.25	63.88	64.13	62.84	63.02	64.93	68.45	66.65	62.68	62.30
14	63.15	63.30	63.38	65.14	64.32	62.79	62.90	66.68	68.47	66.80	62.64	62.30
15	63.16	63.28	63.36	65.37	64.64	62.79	62.89	69.41	68.26	e66.65	62.64	62.35
16	63.16	63.30	63.36	65.37	64.77	62.80	62.81	68.70	68.02	66.20	62.63	62.39
17	63.20	63.29	63.31	65.45	64.88	62.84	62.73	68.00	67.98	65.58	62.70	62.47
18	63.24	63.26	63.26	65.52	64.81	62.84	62.64	67.43	67.77	65.14	63.06	62.50
19	63.38	63.23	63.26	65.60	64.73	62.81	62.65	67.39	68.13	64.80	62.85	62.53
20	63.51	63.22	63.49	65.21	64.76	62.77	62.66	67.47	69.13	64.50	62.69	62.56
21	63.53	63.20	63.68	65.25	64.61	62.77	62.76	68.71	70.23	64.27	62.59	62.60
22	63.51	63.19	64.85	65.46	64.48	62.79	62.78	68.70	70.65	64.10	62.63	62.59
23	63.48	63.19	64.87	66.02	64.51	62.83	63.19	68.58	70.30	63.88	62.72	62.61
24	63.45	63.20	64.41	66.29	64.54	62.85	63.77	70.37	70.20	63.64	62.82	62.63
25	63.46	63.19	64.81	66.52	64.60	62.80	63.65	71.31	70.54	63.46	62.97	62.64
26	63.43	63.17	65.17	66.84	64.77	62.83	63.32	71.12	71.17	63.45	62.88	62.80
27	63.41	63.17	65.23	66.73	64.76	62.83	63.25	71.29	72.12	e63.36	62.71	62.98
28	63.41	63.18	65.05	65.95	64.69	62.85	63.21	70.95	72.32	63.26	62.64	63.10
29	63.48	63.25	65.03	65.78	---	62.86	63.11	69.92	72.49	63.22	62.61	63.27
30	63.77	63.36	64.92	65.62	---	62.80	63.23	68.96	72.57	63.30	62.53	63.35
31	63.80	---	65.36	65.54	---	62.76	---	68.45	---	63.29	62.47	---
MEAN	63.34	63.34	63.79	64.95	64.75	63.62	62.89	66.82	69.37	66.16	62.79	62.54
MAX	63.80	63.78	65.36	66.84	65.39	67.13	63.77	71.31	72.57	71.26	63.22	63.35
MIN	63.15	63.17	62.96	62.94	64.13	62.76	62.61	62.92	67.65	63.22	62.47	62.30

e Estimated

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.66	63.01	63.41	64.80	65.22	67.75	63.21	62.35	63.84	66.46	63.03	62.39
2	62.64	63.02	64.01	64.77	64.88	67.36	63.18	62.25	64.10	66.32	62.94	62.56
3	62.64	63.09	64.30	64.70	64.61	66.30	63.12	62.17	64.73	66.08	62.88	62.47
4	62.63	63.14	64.30	64.59	64.54	66.08	63.05	62.41	64.57	66.11	62.88	62.36
5	62.68	63.07	65.08	64.50	64.84	65.83	63.01	62.48	64.17	66.27	62.92	62.28
6	62.70	62.78	65.41	e64.39	65.41	65.68	63.04	62.21	63.80	66.11	62.89	62.26
7	62.69	63.21	65.19	e64.78	65.86	65.62	63.16	61.97	63.62	65.99	63.05	62.30
8	62.67	64.35	65.00	64.80	65.90	65.71	63.24	61.84	63.67	66.25	62.87	62.43
9	62.67	64.42	65.25	64.51	65.75	66.01	63.23	62.04	64.59	66.63	62.89	62.54
10	62.65	64.43	65.37	64.31	65.75	66.96	63.19	63.03	66.17	66.33	62.82	62.56
11	62.62	64.49	65.16	64.24	65.93	67.49	63.28	63.93	67.35	65.86	62.70	62.54
12	62.61	64.46	65.08	64.23	66.04	67.25	63.39	64.33	67.50	65.84	62.60	62.52
13	62.59	64.42	64.97	64.41	66.10	66.92	63.52	64.45	68.36	65.61	62.51	62.57
14	62.61	64.46	65.01	64.64	66.08	66.90	63.67	64.34	69.70	65.19	62.38	62.64
15	62.68	64.42	65.22	65.15	65.98	66.74	63.62	64.12	69.09	64.96	62.26	62.75
16	62.72	64.54	65.16	65.84	65.89	66.68	63.47	64.10	68.26	64.63	62.16	62.76
17	62.75	64.60	65.01	66.40	65.75	66.49	63.37	63.86	67.51	64.35	62.03	62.85
18	62.80	64.48	65.15	66.58	65.71	66.36	63.33	63.52	66.91	64.09	61.89	62.83
19	62.83	64.57	65.27	66.55	65.73	66.36	63.34	63.33	66.59	63.88	61.83	62.84
20	62.84	64.42	65.61	66.44	65.77	66.22	63.46	63.17	66.41	63.74	61.76	62.90
21	62.82	63.86	65.24	66.30	65.89	66.27	63.45	63.06	66.21	63.61	61.71	63.07
22	62.80	63.33	64.37	66.30	e66.04	66.13	63.33	63.04	65.96	63.44	61.65	63.11
23	62.80	63.37	64.22	66.30	e66.27	65.94	63.21	63.18	65.81	63.28	61.65	63.18
24	62.92	63.19	64.32	66.29	66.66	64.82	63.16	63.24	65.70	63.33	61.67	63.25
25	62.91	62.94	64.20	66.33	67.08	63.77	63.11	63.63	65.57	63.55	61.79	63.34
26	62.82	63.23	64.09	66.35	67.15	63.46	63.00	63.89	65.50	63.45	61.83	63.43
27	62.76	63.21	64.13	66.33	---	63.47	62.71	64.23	65.56	63.40	61.86	63.43
28	62.80	63.44	64.19	66.26	e67.39	63.22	62.62	64.51	65.93	63.39	61.84	63.34
29	62.83	63.45	64.75	66.19	67.73	63.18	62.56	64.61	66.35	63.28	61.81	63.27
30	62.94	63.30	65.37	66.00	---	63.20	62.43	64.30	66.51	63.17	61.86	63.27
31	63.06	---	65.03	65.63	---	63.22	---	63.99	---	63.05	62.03	---
MEAN	62.75	63.76	64.80	65.45	---	65.72	63.18	63.34	66.00	64.76	62.29	62.80
MAX	63.06	64.60	65.61	66.58	---	67.75	63.67	64.61	69.70	66.63	63.05	63.43
MIN	62.59	62.78	63.41	64.23	---	63.18	62.43	61.84	63.62	63.05	61.65	62.26

e Estimated

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.72	62.94	62.80	64.30	65.44	64.85	63.72	64.20	71.32	65.96	63.32	61.80
2	62.77	62.92	62.77	---	66.07	64.85	63.63	64.18	72.15	65.82	63.17	61.87
3	62.83	62.92	62.88	64.66	66.54	65.05	63.50	64.00	72.93	65.96	63.01	61.97
4	62.86	62.91	62.89	---	67.02	65.20	63.43	63.96	73.08	66.26	62.89	62.07
5	62.84	62.74	62.62	---	67.02	65.49	63.42	64.06	73.22	66.18	62.72	62.14
6	62.87	62.72	62.67	65.22	66.75	65.80	63.46	64.26	72.61	66.07	62.69	62.16
7	62.93	62.74	63.09	65.21	66.66	65.89	63.54	64.59	71.31	65.87	62.73	62.14
8	63.01	62.79	64.16	65.07	66.52	65.79	63.59	64.87	70.47	65.63	62.61	62.13
9	62.99	62.88	65.39	64.98	66.39	65.55	63.63	64.52	69.74	65.55	62.51	62.19
10	62.97	62.94	65.48	64.75	66.16	65.36	63.53	64.36	69.25	65.34	62.49	62.22
11	62.94	62.95	65.27	64.51	66.03	65.17	63.42	64.29	68.63	65.11	62.41	62.22
12	62.94	62.94	65.28	64.25	65.68	64.87	63.31	64.23	68.59	64.95	62.28	62.27
13	62.91	62.93	64.94	64.12	65.68	64.71	63.19	64.49	69.17	64.74	62.20	62.32
14	62.91	62.92	64.78	63.91	65.63	65.33	63.11	64.67	69.82	64.60	62.18	62.41
15	62.91	62.90	64.43	63.66	65.62	68.12	63.07	64.56	69.99	64.42	62.14	62.49
16	62.92	62.88	64.21	63.60	65.81	69.97	63.12	64.29	69.73	64.32	62.11	62.54
17	62.90	62.86	63.98	63.65	66.05	71.63	63.23	64.06	69.50	64.18	62.02	62.55
18	62.91	62.84	64.07	64.15	66.13	81.59	63.42	63.96	69.53	64.03	61.94	62.56
19	62.90	62.83	63.72	64.64	66.13	82.37	63.66	64.07	69.45	63.93	61.90	62.61
20	62.88	62.83	63.49	64.82	66.24	80.61	63.89	64.47	69.38	63.82	61.84	62.61
21	62.88	62.82	63.33	65.09	66.39	78.28	64.03	65.40	69.45	63.68	61.87	62.61
22	62.92	62.81	63.45	65.30	66.59	75.71	63.91	65.92	69.54	63.53	61.85	62.64
23	62.90	62.80	63.66	65.44	66.57	72.84	63.73	65.85	69.54	63.40	61.82	62.73
24	62.88	62.81	63.76	65.58	66.20	68.70	63.63	65.34	69.35	63.30	61.84	62.77
25	62.86	62.79	63.17	65.64	65.90	65.42	63.50	64.97	69.00	63.23	61.88	62.72
26	62.86	62.90	63.02	65.46	65.76	64.59	63.36	64.82	68.29	63.16	61.87	62.71
27	62.87	62.87	62.85	---	65.42	64.26	63.48	65.19	67.67	63.12	61.85	62.70
28	62.89	62.81	62.87	---	65.07	64.10	63.84	66.90	67.26	63.07	61.80	62.71
29	62.91	62.84	63.16	65.02	---	63.94	64.26	68.77	66.80	63.04	61.81	62.73
30	62.89	62.88	63.66	65.07	---	63.79	64.29	70.00	66.31	63.07	61.78	62.72
31	62.89	---	64.07	65.24	---	63.72	---	70.61	---	63.34	61.79	---
MEAN	62.89	62.86	63.74	---	66.12	68.18	63.56	65.16	69.77	64.47	62.24	62.41
MAX	63.01	62.95	65.48	---	67.02	82.37	64.29	70.61	73.22	66.26	63.32	62.77
MIN	62.72	62.72	62.62	---	65.07	63.72	63.07	63.96	66.31	63.04	61.78	61.80

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	62.88	62.59	64.20	63.92	63.43	66.98	63.01	65.49	67.81	63.13	62.28
2	---	62.87	62.61	64.15	63.70	63.19	66.32	62.87	66.61	67.39	63.08	62.29
3	62.54	62.88	62.63	63.81	63.41	63.04	66.24	63.00	68.91	67.05	62.97	62.59
4	62.50	62.88	62.90	63.70	63.50	64.02	66.29	63.02	70.73	66.88	62.78	62.72
5	62.48	62.87	63.73	63.61	63.81	64.23	66.10	63.04	71.57	66.59	62.68	62.61
6	62.46	62.88	64.07	63.55	64.10	64.15	66.09	63.39	71.96	66.12	62.65	62.53
7	62.48	62.90	64.06	63.52	64.31	64.41	65.70	63.39	71.06	65.69	62.73	62.44
8	62.47	62.91	63.95	64.04	64.40	64.98	66.04	63.50	69.77	65.43	62.68	62.41
9	62.50	62.88	63.97	---	64.50	65.33	66.04	63.77	69.23	65.21	62.75	62.50
10	62.54	62.86	63.80	---	---	64.98	---	63.94	70.16	65.01	62.83	62.66
11	62.58	62.84	63.71	64.93	---	64.68	67.00	64.00	70.49	64.76	62.81	62.72
12	62.61	62.85	63.78	65.34	64.48	64.44	64.29	63.83	70.12	64.55	62.79	62.80
13	62.61	62.88	63.75	---	64.47	64.15	63.28	63.72	69.29	64.37	62.88	62.78
14	62.65	62.92	63.83	---	64.60	64.13	63.20	63.55	68.58	64.19	62.83	62.88
15	62.69	62.90	63.68	---	64.50	64.84	63.13	63.37	67.73	63.95	62.71	62.85
16	62.69	62.88	63.45	---	64.48	---	63.07	63.27	67.14	63.70	62.58	62.75
17	62.69	62.86	63.40	---	64.53	---	63.02	63.17	66.76	63.53	62.45	62.70
18	62.70	62.87	63.51	---	64.49	66.47	63.03	63.26	66.59	63.79	62.31	62.66
19	62.75	62.87	63.38	---	64.54	66.53	63.21	63.91	66.95	63.83	62.21	62.63
20	62.82	62.85	63.38	---	64.62	66.30	63.68	64.47	67.70	63.55	62.10	62.61
21	62.84	62.87	63.47	---	64.62	65.98	63.97	64.56	68.45	63.54	62.02	62.61
22	62.82	62.88	63.49	64.12	64.72	65.69	63.90	64.48	69.23	63.59	61.98	62.62
23	62.79	62.88	63.40	64.16	64.90	65.34	63.66	65.26	69.52	63.58	62.21	62.63
24	62.83	62.87	63.36	---	64.72	64.79	63.43	67.19	68.51	63.59	62.33	62.64
25	62.87	62.84	63.05	---	64.79	64.65	63.31	68.61	68.27	63.63	62.15	62.68
26	62.86	62.82	62.96	---	64.65	64.61	63.18	68.38	68.35	63.52	62.35	62.70
27	62.84	62.83	62.92	---	64.16	64.94	63.12	67.37	68.26	63.40	62.19	62.71
28	62.82	62.39	62.78	---	63.90	65.60	63.10	66.50	68.35	63.37	62.23	62.72
29	62.82	62.44	---	64.38	---	66.32	63.09	65.88	68.27	63.29	62.26	62.74
30	62.89	62.54	63.72	64.33	---	66.72	63.04	65.42	68.09	63.19	62.26	62.72
31	62.90	---	64.26	64.02	---	67.00	---	65.30	---	63.20	62.17	---
MEAN	---	62.83	---	---	---	---	---	64.47	68.74	64.56	62.52	62.64
MAX	---	62.92	---	---	---	---	---	68.61	71.96	67.81	63.13	62.88
MIN	---	62.39	---	---	---	---	---	62.87	65.49	63.19	61.98	62.28

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.42	---	---	---	---	---	---	62.92	65.88	66.38	64.80	61.49
2	63.37	63.92	---	---	---	---	---	63.04	66.03	65.98	64.93	61.49
3	63.41	63.84	---	---	---	---	---	63.55	65.90	65.80	63.41	61.51
4	63.44	63.58	---	---	---	---	---	64.03	65.36	65.70	62.96	61.53
5	---	63.53	---	---	---	---	---	64.24	65.35	65.37	62.72	61.60
6	63.40	---	---	---	---	---	---	64.11	66.05	64.89	62.50	61.65
7	---	---	---	---	---	---	---	63.93	66.34	64.44	62.34	61.77
8	63.64	---	---	---	---	---	---	63.53	65.99	64.22	---	61.98
9	63.56	---	---	---	---	---	---	63.27	65.35	63.98	62.03	62.13
10	63.52	---	---	---	---	---	---	63.14	64.90	63.70	61.91	62.16
11	63.51	---	---	---	---	---	---	63.24	64.53	63.69	61.79	62.27
12	63.48	---	---	---	---	---	---	63.32	64.25	64.19	61.69	62.39
13	63.46	---	---	---	---	---	---	63.10	64.48	63.74	61.64	62.45
14	63.45	---	---	---	---	---	---	63.34	65.43	63.42	61.59	62.56
15	63.46	---	---	---	---	---	---	63.66	65.89	63.40	61.56	63.18
16	63.51	---	---	---	---	---	---	63.51	66.45	63.56	61.55	62.74
17	63.56	---	---	---	---	---	---	63.82	68.37	63.70	61.52	62.57
18	63.55	---	---	---	---	---	---	65.59	67.61	63.85	61.53	62.57
19	63.53	---	---	---	---	---	---	67.08	66.73	64.09	61.49	62.61
20	63.54	---	---	---	---	---	---	67.22	66.48	64.16	61.44	62.64
21	63.52	---	---	---	---	---	---	66.57	66.67	63.86	61.40	62.62
22	63.48	---	---	---	---	---	---	65.74	66.90	64.08	61.44	62.60
23	63.32	---	---	---	---	---	---	65.19	66.68	63.81	61.41	62.56
24	63.27	---	---	---	---	---	---	64.98	66.31	63.89	61.38	62.53
25	63.40	---	---	---	---	---	---	64.84	66.19	63.51	61.39	62.51
26	63.42	---	---	---	---	---	---	64.18	66.21	63.85	61.36	62.48
27	63.40	---	---	---	---	---	---	63.81	66.36	63.56	61.36	62.51
28	63.40	---	---	---	---	---	---	64.08	66.57	63.99	61.36	62.54
29	63.41	---	---	---	---	---	---	64.91	66.46	64.83	61.40	62.55
30	63.39	---	---	---	---	---	---	65.56	67.26	64.07	61.40	---
31	63.39	---	---	---	---	---	---	65.99	---	63.63	61.44	---
MEAN	---	---	---	---	---	---	---	64.37	66.10	64.24	---	---
MAX	---	---	---	---	---	---	---	67.22	68.37	66.38	---	---
MIN	---	---	---	---	---	---	---	62.92	64.25	63.40	---	---

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—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	64.10	64.00	63.83	---	---	66.88	63.48	63.95	70.13	66.72	63.47	62.36
2	63.97	63.99	63.87	---	---	67.16	63.53	63.82	70.69	66.36	63.44	62.45
3	64.00	63.97	63.87	---	---	66.63	63.50	63.92	70.03	66.25	63.39	62.48
4	64.12	63.98	63.86	---	---	65.90	63.50	64.69	69.64	66.30	63.15	62.56
5	64.24	63.99	63.84	---	---	66.08	63.45	64.56	69.13	66.46	63.13	62.61
6	64.30	64.00	63.77	---	---	65.83	63.43	64.39	68.84	66.77	63.13	62.64
7	64.32	63.99	63.77	---	---	64.73	63.39	64.99	69.19	66.46	63.10	62.67
8	64.31	63.88	63.76	---	---	---	63.37	65.60	69.44	66.14	63.06	62.67
9	64.29	63.88	---	---	---	---	63.36	66.01	69.56	65.97	63.03	62.68
10	64.29	63.90	63.75	---	---	---	63.35	65.86	69.79	65.61	63.03	62.68
11	64.27	63.91	---	---	---	64.00	---	65.61	70.16	65.81	63.02	62.72
12	64.27	63.89	---	---	---	---	63.31	65.21	70.15	65.79	62.99	62.74
13	64.29	63.88	63.66	---	---	63.92	---	64.89	69.84	65.41	62.88	62.76
14	64.27	63.88	---	---	---	---	---	64.68	69.16	64.98	62.78	62.78
15	64.29	63.89	---	---	---	---	---	64.57	68.53	64.65	62.73	62.77
16	64.30	63.89	---	---	---	---	---	64.36	68.32	64.34	62.70	62.76
17	64.30	63.88	---	---	---	63.63	63.47	64.14	68.67	64.10	62.66	62.74
18	64.29	63.88	63.89	---	---	63.60	63.48	63.85	68.19	63.98	62.62	62.72
19	64.19	63.89	---	---	---	63.56	63.50	63.60	68.13	63.90	62.59	62.68
20	64.16	63.88	---	---	---	63.53	63.59	63.47	68.31	63.83	62.56	62.70
21	64.18	63.90	---	---	---	63.51	63.56	63.99	67.79	63.82	62.53	62.69
22	64.19	63.87	---	---	---	63.48	63.50	65.49	67.35	63.94	62.51	62.73
23	64.18	63.80	---	---	---	63.49	63.51	65.77	67.52	64.03	62.51	62.78
24	64.17	63.78	---	---	---	63.48	63.54	65.92	67.96	64.06	62.49	62.88
25	64.17	63.78	---	---	---	63.47	---	66.04	67.40	63.99	62.50	62.93
26	64.14	63.77	---	---	---	63.45	---	66.63	67.20	63.85	62.48	63.10
27	64.16	63.77	---	---	---	63.43	63.95	67.74	67.29	63.70	62.44	63.25
28	64.15	63.77	---	---	---	63.42	64.28	68.39	67.45	63.70	62.37	63.35
29	64.14	63.81	---	---	---	63.43	64.33	68.92	67.57	63.61	62.29	63.42
30	64.14	63.78	---	---	---	63.46	64.12	69.34	67.27	63.55	62.27	63.48
31	64.10	---	---	---	---	63.48	---	69.17	---	63.51	62.30	---
MEAN	64.20	63.88	---	---	---	---	---	65.47	68.69	64.89	62.78	62.79
MAX	64.32	64.00	---	---	---	---	---	69.34	70.69	66.77	63.47	63.48
MIN	63.97	63.77	---	---	---	---	---	63.47	67.20	63.51	62.27	62.36

06329610 YELLOWSTONE RIVER STAGE GAGE NO. 2 NEAR CARTWRIGHT, ND—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	67.25	67.58	69.35	65.02	64.09	71.76	71.27	65.70	64.13
2	---	---	---	67.33	67.75	69.60	64.96	64.42	72.43	70.48	65.62	64.38
3	---	---	---	67.29	67.81	69.45	64.87	65.00	72.87	69.96	65.59	64.41
4	---	---	---	66.78	67.76	69.34	64.83	65.81	72.39	69.93	65.50	64.46
5	---	---	---	66.57	67.82	68.85	64.79	66.13	71.46	70.04	65.32	64.59
6	---	---	---	66.50	66.94	68.49	64.80	66.78	71.09	69.78	65.06	64.84
7	---	---	---	66.33	66.69	68.35	64.75	67.22	71.87	69.68	64.85	64.99
8	---	---	---	66.65	66.71	68.18	64.67	67.28	72.25	69.74	64.73	65.11
9	---	---	---	66.61	66.86	67.62	64.65	67.22	72.37	69.63	64.82	65.08
10	---	---	---	66.57	67.34	67.30	64.65	67.15	72.56	69.23	64.82	64.92
11	---	---	---	66.56	67.71	67.27	64.54	67.25	72.77	69.16	64.76	64.77
12	---	---	---	66.72	68.14	67.12	64.52	67.29	72.42	69.20	64.74	64.67
13	---	---	---	66.17	68.02	67.01	---	67.72	72.09	68.87	65.01	64.59
14	---	---	---	66.80	67.81	67.07	64.32	67.94	71.80	68.52	65.94	64.52
15	---	---	---	67.49	67.64	66.00	64.35	67.87	71.58	68.39	65.74	64.50
16	---	---	63.93	68.21	67.58	65.79	64.25	67.57	71.37	68.40	65.33	64.46
17	---	---	64.11	68.27	67.53	65.70	64.14	67.30	71.29	68.08	65.54	64.43
18	---	---	64.11	68.22	67.54	65.13	64.01	67.19	71.60	67.97	65.83	64.39
19	---	---	64.09	68.73	67.55	64.92	63.94	67.12	72.22	67.95	65.64	64.34
20	---	---	63.68	68.74	67.48	64.96	63.93	67.08	72.67	67.87	65.31	64.29
21	---	---	63.61	69.38	67.34	64.70	63.86	66.98	73.43	67.79	64.98	64.25
22	---	---	64.14	69.13	67.30	64.61	63.83	66.80	73.62	67.54	64.74	64.22
23	---	---	63.88	68.95	67.19	64.59	64.06	66.64	73.71	67.35	64.55	64.24
24	---	---	63.75	68.73	67.07	64.48	64.71	66.63	73.94	67.06	64.39	64.23
25	---	---	63.76	68.46	67.20	64.54	64.54	67.02	73.86	66.87	64.25	64.25
26	---	---	63.35	68.11	67.86	64.57	64.45	67.84	73.95	66.64	64.12	64.08
27	---	---	64.21	67.59	68.60	64.62	64.53	68.66	73.55	66.46	64.04	63.91
28	---	---	65.14	67.17	69.26	64.68	64.55	69.36	72.74	66.30	63.93	63.86
29	---	---	65.94	66.91	---	64.82	64.41	70.25	72.60	66.17	63.85	63.96
30	---	---	66.91	67.15	---	64.96	64.22	70.91	72.19	66.03	64.23	64.11
31	---	---	67.27	67.25	---	64.98	---	71.38	---	65.84	64.06	---
MEAN	---	---	---	67.50	67.57	66.42	---	67.35	72.48	68.33	64.94	64.43
MAX	---	---	---	69.38	69.26	69.60	---	71.38	73.95	71.27	65.94	65.11
MIN	---	---	---	66.17	66.69	64.48	---	64.09	71.09	65.84	63.85	63.86

06329620 YELLOWSTONE RIVER STAGE GAGE NO. 3 NEAR BUFORD, ND

LOCATION.--Lat 47°55'14", long 103°57'56", in SW$^1/_4$ sec.2, T.151 N., R.104 W., McKenzie County, Hydrologic Unit 10100004, on left bank 4 mi south of Buford and 6.5 mi southeast of Nohly, MT.

DRAINAGE AREA.--70,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1959 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,850.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 19, 1962, at datum 50.00 ft lower. Prior to Apr. 23, 1987, gage was located 1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 36.20 ft from floodmark, probably occurred sometime between Mar. 3-10, 1994; minimum daily recorded, 6.18 ft, Aug. 24, 1961, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 20.91 ft, June 30; minimum recorded, 8.70 ft, Sept. 13 and 14.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.98	---	---	---	---	---	---	10.24	15.79	19.12	10.01	8.91
2	9.92	---	---	---	---	---	---	10.50	15.93	18.50	9.78	8.84
3	9.88	---	---	---	---	---	---	10.38	15.68	17.82	9.64	8.79
4	9.87	---	---	---	---	---	---	10.13	15.49	17.11	9.62	8.78
5	9.90	---	---	---	---	---	---	9.90	15.29	16.77	9.53	8.80
6	9.95	---	---	---	---	---	---	9.67	15.25	16.57	9.45	8.79
7	9.97	---	---	---	---	---	e9.12	9.46	14.91	16.18	9.40	8.75
8	9.91	---	---	---	---	---	9.07	9.54	15.31	15.65	9.42	8.76
9	9.85	---	---	---	---	---	9.05	10.32	16.35	15.07	9.49	8.79
10	9.81	---	---	---	---	---	9.05	11.25	17.59	14.61	9.45	8.76
11	9.76	---	---	---	---	---	9.16	11.02	17.20	14.31	9.68	8.75
12	9.73	---	---	---	---	---	9.45	11.62	16.38	14.04	9.94	8.87
13	9.76	---	---	---	---	---	9.65	12.01	16.05	13.88	9.30	8.76
14	e9.75	---	---	---	---	---	9.49	13.57	16.05	14.07	9.23	8.73
15	---	---	---	---	---	---	9.44	16.65	15.99	13.94	9.23	8.81
16	---	---	---	---	---	---	9.36	16.28	15.61	13.46	9.21	8.87
17	---	---	---	---	---	---	9.24	15.55	15.53	12.75	9.28	8.98
18	---	---	---	---	---	---	9.11	14.89	15.26	12.22	9.77	9.04
19	---	---	---	---	---	---	9.07	14.79	15.49	11.83	9.54	9.12
20	---	---	---	---	---	---	9.08	14.73	16.58	11.47	9.34	9.13
21	---	---	---	---	---	---	9.22	16.04	17.68	11.20	9.19	9.08
22	---	---	---	---	---	---	9.26	16.24	18.32	11.00	9.22	9.04
23	---	---	---	---	---	---	9.69	15.86	17.97	10.74	9.33	9.04
24	---	---	---	---	---	---	10.56	17.69	17.85	10.46	9.47	9.08
25	---	---	---	---	---	---	10.48	18.75	18.19	10.22	9.64	9.08
26	---	---	---	---	---	---	10.08	18.69	18.82	10.18	9.56	9.26
27	---	---	---	---	---	---	9.92	18.77	19.80	10.12	9.31	9.51
28	---	---	---	---	---	---	9.91	18.55	20.08	9.98	9.20	9.66
29	---	---	---	---	---	---	9.77	17.57	20.17	9.92	9.16	9.86
30	---	---	---	---	---	---	9.87	16.51	20.39	10.05	9.06	9.95
31	---	---	---	---	---	---	---	15.83	---	10.07	8.99	---
MEAN	---	---	---	---	---	---	---	13.97	16.90	13.33	9.43	9.02
MAX	---	---	---	---	---	---	---	18.77	20.39	19.12	10.01	9.95
MIN	---	---	---	---	---	---	---	9.46	14.91	9.92	8.99	8.73

e Estimated

06329640 MISSOURI RIVER STAGE GAGE NO. 5A AT BUFORD, ND

LOCATION.--Lat 47°59'08", long 103°59'07", in SE$^1/_4$ sec.15, T.152 N., R.104 W., Williams County, Hydrologic Unit 10110101, on left bank 1.5 mi southwest of Buford, at confluence, and at mile 1,580.7.

DRAINAGE AREA.--164,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1960 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,850.00 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 8, 1962, at datum 50.00 ft lower.

REMARKS.--Stage regulated by upstream reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 20.37 ft, June 18, 1997; minimum daily recorded, 2.63 ft, Aug. 15-16, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 17.23 ft, June 30; minimum recorded, 5.91 ft, Sept. 23 and 25.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.00	---	---	---	---	---	---	e7.19	12.44	15.96	7.83	6.62
2	e6.96	---	---	---	---	---	---	e7.48	12.59	15.34	7.63	6.55
3	6.88	---	---	---	---	---	---	e7.43	12.45	14.71	7.39	6.50
4	e6.84	---	---	---	---	---	---	e7.19	12.23	14.00	7.32	6.52
5	6.86	---	---	---	---	---	---	e6.96	12.04	13.68	7.26	6.48
6	6.86	---	---	---	---	---	e6.15	6.74	12.00	13.53	7.31	6.48
7	6.95	---	---	---	---	---	6.20	6.48	11.73	13.17	7.25	6.41
8	6.92	---	---	---	---	---	6.20	6.53	12.03	12.66	7.10	6.40
9	6.79	---	---	---	---	---	6.15	7.23	12.72	12.06	7.20	6.49
10	6.69	---	---	---	---	---	6.09	e8.35	14.17	11.57	7.27	6.38
11	6.61	---	---	---	---	---	e6.18	e8.17	14.17	11.26	7.32	6.37
12	6.57	---	---	---	---	---	e6.50	e8.59	13.62	11.03	7.54	6.52
13	e6.59	---	---	---	---	---	e6.70	e9.00	13.35	11.06	7.01	6.47
14	---	---	---	---	---	---	6.54	e10.11	13.43	11.34	6.95	6.43
15	---	---	---	---	---	---	e6.47	e12.95	13.60	11.25	6.95	6.47
16	---	---	---	---	---	---	e6.44	e12.85	13.17	10.85	6.89	6.51
17	---	---	---	---	---	---	6.41	12.16	12.92	10.22	6.91	6.63
18	---	---	---	---	---	---	6.30	11.60	12.59	9.70	7.31	6.70
19	---	---	---	---	---	---	6.30	e11.44	12.55	9.35	7.30	6.89
20	---	---	---	---	---	---	6.31	11.34	13.28	9.02	7.22	e6.81
21	---	---	---	---	---	---	6.39	12.30	14.14	8.78	7.05	6.19
22	---	---	---	---	---	---	e6.39	e12.76	14.90	8.56	7.04	5.98
23	---	---	---	---	---	---	e6.61	12.38	14.71	8.28	7.06	5.94
24	---	---	---	---	---	---	e7.33	13.76	14.63	8.00	7.11	6.02
25	---	---	---	---	---	---	e7.37	e14.95	14.91	7.76	7.15	5.95
26	---	---	---	---	---	---	e7.09	e15.10	15.46	7.70	7.09	6.02
27	---	---	---	---	---	---	e6.94	e15.14	16.26	7.66	6.93	6.15
28	---	---	---	---	---	---	e6.97	e15.03	16.60	7.50	6.81	e6.18
29	---	---	---	---	---	---	e6.87	e14.25	16.65	7.48	6.79	6.35
30	---	---	---	---	---	---	e6.93	e13.28	16.96	7.74	6.71	6.46
31	---	---	---	---	---	---	---	12.58	---	7.81	6.66	---
MEAN	---	---	---	---	---	---	---	10.69	13.74	10.61	7.14	6.40
MAX	---	---	---	---	---	---	---	15.14	16.96	15.96	7.83	6.89
MIN	---	---	---	---	---	---	---	6.48	11.73	7.48	6.66	5.94

e Estimated

06329650 MISSOURI RIVER STAGE GAGE NO. 6 NEAR BUFORD, ND

LOCATION.--Lat 47°57'21", long 103°54'31", in SE$^1/_4$ sec.30, T.152 N., R.103 W., McKenzie County, Hydrologic Unit 10110101, on right bank 5 mi southeast of Buford and at mile 1,576.0.

DRAINAGE AREA.--164,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1959 to current year (seasonal).

GAGE.--Water-stage recorder. Datum of gage is 1,840.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 17, 1962, at datum 40.00 ft lower.

REMARKS.--Stage regulated by upstream reservoirs. Gage height for Oct. 14 and Apr. 17 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 27.39 ft, June 24, 1997; minimum daily recorded, 8.23 ft, Aug. 15 and 22, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 24.39 ft, June 30; minimum recorded, 13.62 ft, Sept. 22, 23, 25, and 26.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.28	---	---	---	---	---	---	14.74	19.83	23.28	15.35	14.23
2	14.27	---	---	---	---	---	---	15.04	19.95	22.63	15.20	14.16
3	14.20	---	---	---	---	---	---	15.01	19.85	22.05	14.98	14.11
4	14.14	---	---	---	---	---	---	14.80	19.61	21.33	14.92	14.14
5	14.16	---	---	---	---	---	---	14.60	19.41	20.92	14.84	14.12
6	14.15	---	---	---	---	---	---	14.40	19.32	20.76	14.88	14.11
7	14.25	---	---	---	---	---	e13.78	14.19	19.07	20.43	14.83	14.05
8	14.23	---	---	---	---	---	13.78	14.23	19.32	19.94	14.72	14.04
9	14.11	---	---	---	---	---	13.73	14.76	19.94	19.35	14.78	14.12
10	14.03	---	---	---	---	---	13.70	15.92	21.49	18.86	14.85	14.03
11	13.95	---	---	---	---	---	13.78	15.79	21.55	18.55	14.87	14.00
12	13.91	---	---	---	---	---	14.05	16.14	21.02	18.34	15.11	14.14
13	13.92	---	---	---	---	---	14.23	16.55	20.70	18.36	14.62	14.12
14	e13.91	---	---	---	---	---	14.12	17.40	20.72	18.61	14.55	14.11
15	---	---	---	---	---	---	14.03	20.14	20.91	18.56	14.55	14.14
16	---	---	---	---	---	---	14.02	20.19	20.51	18.21	14.50	14.18
17	---	---	---	---	---	---	13.98	19.56	20.25	17.65	14.51	14.28
18	---	---	---	---	---	---	13.93	19.05	19.92	17.16	14.84	14.35
19	---	---	---	---	---	---	13.90	18.85	19.83	16.84	14.84	14.51
20	---	---	---	---	---	---	13.90	18.72	20.50	16.54	14.78	14.50
21	---	---	---	---	---	---	13.98	19.60	21.35	16.31	14.61	13.94
22	---	---	---	---	---	---	13.99	20.16	22.16	16.08	14.60	13.70
23	---	---	---	---	---	---	14.15	19.80	22.03	15.83	14.62	13.67
24	---	---	---	---	---	---	14.87	20.98	21.91	15.57	14.66	13.74
25	---	---	---	---	---	---	15.00	22.19	22.15	15.34	14.69	13.68
26	---	---	---	---	---	---	14.74	22.43	22.66	15.26	14.66	13.72
27	---	---	---	---	---	---	14.55	22.44	23.42	15.24	14.53	13.87
28	---	---	---	---	---	---	14.58	22.41	23.80	15.12	14.42	13.89
29	---	---	---	---	---	---	14.48	21.70	23.90	15.07	14.38	14.03
30	---	---	---	---	---	---	14.51	20.76	24.21	15.28	14.32	14.14
31	---	---	---	---	---	---	---	20.03	---	15.35	14.27	---
MEAN	---	---	---	---	---	---	---	18.15	21.04	18.03	14.72	14.06
MAX	---	---	---	---	---	---	---	22.44	24.21	23.28	15.35	14.51
MIN	---	---	---	---	---	---	---	14.19	19.07	15.07	14.27	13.67

e Estimated

06330000 MISSOURI RIVER NEAR WILLISTON, ND

LOCATION.--Lat 48°06'29", long 103°42'51", in NW¼NE¼ sec.06, T.153 N., R.101 W., McKenzie County, Hydrologic Unit 10110101, on right bank, 5 mi southwest of Williston, 29.3 mi downstream from Yellowstone River, and at mile 1,552.7.

DRAINAGE AREA.--164,500 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--April 1966 to current year. Operated as a stage-discharge station October 1897 to July 1965.

GAGE.--Water-stage recorder. Datum of gage is 1,830.20 ft above National Geodetic Vertical Datum of 1929. See WSP 1917 for history of changes prior to April 1966.

REMARKS.--Stage regulated by upstream reservoirs and backwater from Lake Sakakawea.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height observed, 26.60 ft, Mar. 8, 1994; minimum daily recorded, 7.80 ft, Nov. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 20.74 ft, June 28; minimum, 12.23 ft, Apr. 10.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.00	13.20	13.82	17.21	17.07	15.55	12.54	13.16	18.12	20.06	13.92	12.94
2	13.04	13.03	13.94	e17.08	17.03	15.59	12.49	13.48	18.14	19.64	13.86	12.94
3	12.96	13.15	13.80	e16.88	16.93	15.66	12.52	13.58	18.16	19.40	13.62	12.83
4	12.92	13.18	13.41	e16.38	16.83	15.78	12.45	13.45	17.99	19.12	13.52	12.84
5	12.91	13.05	13.53	e15.75	16.73	15.98	12.40	13.23	17.84	18.95	13.46	12.80
6	12.89	12.95	14.04	e15.33	16.59	16.18	12.34	13.08	17.78	18.84	13.45	12.79
7	12.93	12.90	14.60	15.23	16.54	16.43	12.36	12.81	17.67	18.70	13.46	12.78
8	12.96	12.82	15.10	15.38	16.49	16.64	12.41	12.71	17.64	18.41	13.35	12.72
9	12.88	12.76	15.32	15.47	16.22	16.66	12.36	13.04	17.94	17.98	13.33	12.79
10	12.75	12.75	15.21	e15.43	15.62	16.74	12.28	14.07	19.03	17.51	13.44	12.77
11	12.69	12.75	15.32	e15.53	15.29	16.53	12.31	14.31	19.25	17.14	13.45	12.68
12	12.63	12.75	15.23	15.68	15.23	16.35	12.52	14.47	19.09	16.88	13.70	12.79
13	12.64	12.79	15.13	e15.83	15.34	16.34	12.81	14.84	18.83	16.78	13.41	12.86
14	12.60	12.76	15.15	e16.10	15.45	16.06	12.84	15.38	18.68	16.88	13.23	12.81
15	12.60	12.75	15.43	e16.27	15.58	15.67	12.62	17.58	18.82	e16.98	13.20	12.83
16	12.64	12.75	15.60	e16.26	15.75	15.11	12.63	17.93	18.74	16.76	13.20	12.86
17	12.67	12.71	15.74	16.16	15.83	14.35	12.61	17.81	18.53	16.29	13.16	12.93
18	12.72	12.70	16.38	16.16	15.84	13.94	12.51	17.61	18.28	15.80	13.34	13.02
19	12.70	12.71	16.98	16.26	15.74	14.45	12.49	17.40	18.06	15.43	13.52	13.13
20	12.90	12.74	17.59	16.26	15.72	15.21	12.50	17.28	18.28	e15.11	13.52	13.23
21	13.02	12.79	17.57	16.13	15.68	14.64	12.53	17.54	18.87	14.87	13.37	12.85
22	13.01	12.75	16.43	16.14	15.46	13.50	12.59	18.17	e19.51	14.67	13.32	12.48
23	12.98	12.67	15.98	16.27	15.23	12.79	12.63	18.15	e19.62	14.46	13.31	12.37
24	12.96	12.70	16.00	16.48	15.19	12.58	13.13	18.54	e19.69	14.21	13.31	12.41
25	12.93	12.79	15.81	16.61	15.19	12.57	13.47	19.40	19.78	13.97	13.33	12.40
26	12.93	12.83	15.95	16.69	15.33	12.58	13.36	19.68	19.98	13.84	13.37	12.38
27	12.90	12.84	16.22	16.89	15.45	12.64	13.12	19.62	20.36	13.85	13.29	12.48
28	12.87	12.87	16.34	17.12	15.50	12.73	13.13	19.52	20.67	13.74	13.15	12.55
29	12.85	13.04	16.69	17.22	---	12.79	13.07	19.11	20.66	13.65	13.09	12.63
30	12.99	13.38	17.10	17.16	---	12.73	13.02	18.59	20.58	13.75	13.04	12.76
31	13.25	---	17.17	17.09	---	12.59	---	18.30	---	13.90	12.93	---
MEAN	12.86	12.86	15.57	16.27	15.89	14.75	12.67	16.25	18.89	16.37	13.38	12.76
MAX	13.25	13.38	17.59	17.22	17.07	16.74	13.47	19.68	20.67	20.06	13.92	13.23
MIN	12.60	12.67	13.41	15.23	15.19	12.57	12.28	12.71	17.64	13.65	12.93	12.37

e Estimated

06330110 MISSOURI RIVER STAGE GAGE NO. 9 AT WILLISTON, ND

LOCATION.--Lat 48°08'13", long 103°36'16", in NE¼NE¼ sec.25, T.154 N., R.101 W., Williams County, Hydrologic Unit 10110101, on left bank levee at southeast edge of Williston, 0.5 mi upstream from Little Muddy Creek, and at mile 1,546.2.

DRAINAGE AREA.--164,500 mi, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,820.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 13, 1969, at site 900 ft downstream. At datum 20.00 ft lower prior to Apr. 7, 1962.

REMARKS.--Stage regulated by upstream reservoirs and backwater from Lake Sakakawea. Estimated daily gage heights are based on incomplete daily record. The incomplete daily record generally is the result of water transfer to the city of Williston, which causes temporary fluctuations in gage height.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 34.61 ft, July 6, 1997; minimum daily recorded, 5.44 ft, Aug. 20, 1961, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 27.07 ft, June 29; minimum recorded, 21.63 ft, Sept. 29.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e21.75	e21.84	e21.92	---	e24.81	23.02	22.79	21.77	25.14	26.78	e22.38	21.84
2	e21.78	e21.87	e21.95	---	24.75	23.04	22.60	e21.85	25.20	26.38	e22.36	21.83
3	21.73	e21.85	e21.93	---	e24.68	23.07	22.63	e21.92	e25.27	e26.08	e22.28	21.84
4	e21.69	e21.87	e21.93	---	24.58	23.13	22.59	21.91	e25.18	25.93	e22.19	21.84
5	e21.80	e21.89	21.98	---	24.47	23.26	e22.51	e21.88	25.07	25.82	e22.18	21.80
6	e21.77	e21.86	e21.98	---	24.33	23.46	22.42	22.00	25.07	25.74	e22.08	21.75
7	e21.80	21.87	e21.98	---	24.18	23.76	e22.40	21.99	25.08	25.68	22.04	21.75
8	e21.83	e21.88	e22.02	---	24.08	24.08	22.39	22.00	e24.98	25.50	e22.05	21.75
9	21.78	e21.91	e22.41	---	23.91	24.24	22.34	e22.02	e25.07	25.22	e22.10	21.73
10	21.74	e21.90	e22.49	e22.99	e23.65	24.21	22.19	e22.08	25.67	24.81	e22.10	21.73
11	21.72	21.84	22.48	23.00	e23.48	24.00	22.14	e22.15	26.01	24.54	e22.11	21.70
12	e21.70	e21.82	22.47	23.07	e23.32	23.68	e22.16	e22.17	25.97	24.28	e22.10	e21.80
13	e21.82	e21.86	e22.54	23.17	23.23	23.86	e22.21	e22.22	25.83	24.18	22.03	e21.96
14	e21.83	21.84	e22.50	23.40	23.18	23.67	22.26	22.51	25.71	24.23	21.93	e21.99
15	e21.80	e21.83	e22.61	23.68	e23.15	23.29	22.03	24.19	25.81	24.27	e21.95	e22.00
16	21.80	e21.89	e22.79	23.83	e23.18	23.03	22.08	24.78	25.82	24.20	e22.02	e21.98
17	21.83	e21.86	23.15	23.85	23.18	e22.80	22.09	24.73	25.73	23.87	21.97	21.90
18	e21.84	e21.88	24.01	23.83	23.21	e22.58	22.07	24.63	25.59	e23.47	21.94	21.86
19	e21.82	e21.92	24.54	e23.88	23.20	22.50	e22.08	24.46	25.37	e23.17	21.93	e21.88
20	e21.87	e21.87	25.08	e23.96	23.18	22.49	22.00	24.42	25.42	e22.92	21.96	e21.94
21	e21.87	21.86	e25.20	e23.93	23.17	e22.55	e21.98	24.56	e25.68	e22.66	22.05	e21.98
22	e21.86	e21.84	e23.83	23.85	23.13	e22.39	21.97	24.87	26.04	e22.70	22.16	e22.00
23	e21.83	e21.87	e22.25	23.87	e23.05	22.24	21.94	25.08	26.27	22.80	22.19	21.96
24	21.83	e21.92	---	e24.02	23.00	22.33	21.91	25.24	26.31	22.65	e22.23	21.83
25	e21.85	e21.96	---	e24.23	22.97	e22.43	21.89	25.81	26.35	e22.52	22.06	21.79
26	e21.89	e21.93	---	e24.34	22.96	22.35	21.85	26.09	26.45	e22.44	22.03	21.77
27	e21.91	e21.94	---	e24.50	22.98	22.40	21.79	26.08	26.61	e22.36	22.03	21.76
28	e21.89	21.89	---	e24.70	22.99	22.75	21.76	26.05	26.83	e22.34	22.01	21.72
29	e21.89	e21.90	---	24.84	---	23.10	21.77	25.83	27.03	22.29	21.96	21.70
30	e21.86	e21.91	---	24.88	---	23.05	e21.77	25.45	27.00	22.32	21.96	21.67
31	21.85	---	---	e24.83	---	e22.93	---	25.22	---	22.31	21.87	---
MEAN	21.81	21.88	---	---	23.57	23.09	22.15	23.74	25.79	24.01	22.07	21.84
MAX	21.91	21.96	---	---	24.81	24.24	22.79	26.09	27.03	26.78	22.38	22.00
MIN	21.69	21.82	---	---	22.96	22.24	21.76	21.77	24.98	22.29	21.87	21.67

e Estimated

06331000 LITTLE MUDDY RIVER BELOW COW CREEK NEAR WILLISTON, ND

LOCATION.--Lat 48°17'04", long 103°34'21", in NE¼NW¼ sec.5, T.155 N., R.100 W., Williams County, Hydrologic Unit 10110102, on left bank 37 ft downstream from centerline of highway, 1 mi downstream from Cow Creek, 4 mi upstream from Camp Creek, 10 mi northeast of Williston, and 13 mi upstream from mouth.

DRAINAGE AREA.--875 mi^2, approximately, of which about 100 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1954 to current year (seasonal records only 1984 to 2001).

GAGE.--Water-stage recorder. Datum of gage is 1,863.18 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some small diversions for irrigation. Some regulation by Lake Zahl, Fish and Wildlife Service reservoir, 22 mi upstream and by Blacktail Dam about 15 mi upstream.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.1	12	11	e10	12	11	62	12	16	14	9.3	6.2
2	e7.2	11	11	e10	12	11	69	11	21	15	8.0	6.2
3	e7.1	11	12	e10	12	12	75	11	23	14	7.5	6.2
4	e7.1	11	12	10	e11	15	61	11	19	e13	7.4	6.2
5	e7.0	11	11	10	e10	20	51	11	17	e13	7.1	6.0
6	e7.0	11	12	10	e10	36	44	11	14	e12	6.8	5.7
7	e7.0	11	12	10	11	58	35	12	21	e11	6.2	5.8
8	e6.9	11	12	10	11	82	29	14	23	9.9	6.0	5.8
9	e6.9	11	12	10	11	67	31	17	31	9.2	6.2	5.6
10	e6.8	11	12	11	11	56	30	19	36	8.7	6.0	5.6
11	e7.1	11	12	11	11	43	24	21	37	8.6	6.0	5.5
12	e7.3	11	12	11	11	40	21	20	35	8.5	6.0	5.4
13	e7.4	11	12	e10	12	e33	20	20	31	8.0	6.0	5.6
14	7.5	11	11	e10	13	27	20	17	26	8.3	5.6	5.5
15	7.4	12	11	e10	13	24	18	16	21	7.6	5.4	5.3
16	7.5	12	12	10	12	19	17	15	19	7.3	5.4	5.3
17	8.0	12	11	10	12	17	16	14	16	9.4	6.5	5.5
18	8.6	11	11	9.5	12	17	15	19	15	8.7	e8.5	5.8
19	9.5	11	11	9.7	11	16	14	20	13	7.7	e10	5.9
20	10	11	11	10	11	16	14	21	12	7.3	e11	5.5
21	12	11	9.7	10	11	17	13	26	12	34	e10	5.2
22	12	12	9.9	10	11	18	13	21	12	140	e9.5	5.4
23	12	11	8.7	9.9	11	21	12	24	11	75	e9.1	5.6
24	12	12	8.3	10	11	e29	12	25	10	48	e8.8	5.6
25	11	12	9.0	11	11	33	12	21	9.3	34	e8.8	5.8
26	11	12	9.9	11	11	42	11	17	11	25	e8.4	6.0
27	11	12	10	11	11	44	11	16	11	17	e8.1	6.0
28	11	12	10	11	11	69	11	15	12	15	e8.0	5.7
29	12	11	10	11	---	101	12	15	17	13	e7.5	5.9
30	12	11	10	11	---	92	12	15	14	11	e7.1	5.9
31	13	---	10	11	---	75	---	15	---	10	6.2	---
TOTAL	279.4	340	336.5	319.1	317	1,161	785	522	565.3	623.2	232.4	171.7
MEAN	9.01	11.3	10.9	10.3	11.3	37.5	26.2	16.8	18.8	20.1	7.50	5.72
MAX	13	12	12	11	13	101	75	26	37	140	11	6.2
MIN	6.8	11	8.3	9.5	10	11	11	11	9.3	7.3	5.4	5.2
AC-FT	554	674	667	633	629	2,300	1,560	1,040	1,120	1,240	461	341

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	9.89	10.9	8.78	7.35	24.1	179	103	25.8	19.0	25.0	8.08	7.43
MAX	17.4	17.7	12.1	24.5	363	1,018	996	114	91.6	170	49.1	18.9
(WY)	(1973)	(1973)	(1955)	(1974)	(1996)	(1976)	(1979)	(1965)	(1994)	(1978)	(1972)	(1954)
MIN	5.28	4.66	3.55	2.33	0.91	6.21	10.6	8.44	3.77	2.80	2.51	2.54
(WY)	(1962)	(1961)	(1961)	(1962)	(1959)	(1965)	(1990)	(1958)	(1988)	(1988)	(1988)	(1990)

06331000 LITTLE MUDDY RIVER BELOW COW CREEK NEAR WILLISTON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1954 - 2005	
ANNUAL TOTAL	5,869.1		5,652.6			
ANNUAL MEAN	16.0		15.5		[a]37.3	
HIGHEST ANNUAL MEAN					[a]110	1976
LOWEST ANNUAL MEAN					[a]9.24	1961
HIGHEST DAILY MEAN	175	Mar 29	140	Jul 22	6,610	Apr 18, 1979
LOWEST DAILY MEAN	6.0	Aug 19	5.2	Sep 21	0.50	Feb 17, 1959
ANNUAL SEVEN-DAY MINIMUM	6.3	Aug 18	5.4	Sep 11	0.50	Feb 17, 1959
MAXIMUM PEAK FLOW			219	Jul 22	[b]9,180	Apr 18, 1979
MAXIMUM PEAK STAGE			6.39	Jul 22	13.57	Mar 27, 1960
ANNUAL RUNOFF (AC-FT)	11,640		11,210		[a]27,010	
10 PERCENT EXCEEDS	28		28		39	
50 PERCENT EXCEEDS	11		11		9.8	
90 PERCENT EXCEEDS	7.0		6.2		4.6	

a Based on complete water years only (1954-83, 2002-05)
b Gage height, 12.77 ft
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	4.75	4.75	4.76	4.78	4.77	5.33	4.79	4.86	4.84	4.73	4.62
2	---	4.74	4.76	4.76	4.78	4.78	5.40	4.79	4.94	4.85	4.69	4.62
3	---	4.74	4.76	4.76	4.79	4.79	5.46	4.78	4.96	4.83	4.67	4.62
4	---	4.74	4.77	4.75	4.80	4.85	5.32	4.79	4.91	e4.81	4.67	4.62
5	---	4.74	4.75	4.75	4.81	4.92	5.23	4.78	4.88	---	4.66	4.61
6	---	4.74	4.76	4.75	4.80	5.08	5.16	4.77	4.84	---	4.64	4.60
7	---	4.73	4.76	4.75	4.77	5.29	5.09	4.79	4.93	e4.77	4.62	4.60
8	---	4.73	4.76	4.75	4.76	5.52	5.03	4.84	4.96	4.75	4.61	4.60
9	---	4.73	4.76	4.75	4.76	5.38	5.05	4.88	5.05	4.73	4.62	4.59
10	---	4.73	4.76	4.76	4.76	5.28	5.04	4.91	5.09	4.72	4.61	4.59
11	---	4.74	4.77	4.77	4.77	5.16	4.97	4.93	5.10	4.71	4.61	4.59
12	---	e4.74	4.78	4.77	4.78	5.13	4.94	4.93	5.08	4.71	4.61	4.58
13	e4.65	e4.74	4.77	4.79	4.79	5.11	4.93	4.92	5.05	4.69	4.61	4.59
14	4.65	4.74	4.76	4.77	4.80	5.00	4.92	4.89	4.99	4.70	4.59	4.58
15	4.65	4.75	4.76	4.76	4.80	4.97	4.89	4.88	4.95	4.68	4.58	4.58
16	4.66	4.75	4.77	4.75	4.79	4.92	4.88	4.86	4.91	4.66	4.58	4.58
17	4.67	4.76	4.76	4.74	4.79	4.89	4.88	4.84	4.87	4.74	4.63	4.59
18	4.68	4.75	4.76	4.73	4.78	4.88	4.86	4.90	4.86	4.72	---	4.60
19	4.71	4.74	4.75	4.73	4.78	4.87	4.83	4.92	4.83	4.68	---	4.60
20	4.72	4.73	4.76	4.75	4.77	4.87	4.83	4.93	4.80	4.67	---	4.59
21	4.77	4.74	4.72	4.75	4.77	4.88	4.83	5.00	4.81	5.01	---	4.57
22	4.77	4.75	4.73	4.75	4.76	4.89	4.82	4.94	4.80	5.95	---	4.58
23	4.77	4.73	4.69	4.74	4.77	4.94	4.81	4.97	4.78	5.45	---	4.59
24	4.75	4.75	4.68	4.74	4.77	5.06	4.80	4.99	4.76	5.20	---	4.59
25	4.74	4.75	4.70	4.76	4.78	5.06	4.79	4.93	4.73	5.08	---	4.60
26	4.74	4.77	4.73	4.77	4.78	5.14	4.78	4.89	4.77	4.98	---	4.61
27	4.74	4.76	4.73	4.76	4.78	5.16	4.78	4.87	4.77	4.89	---	4.61
28	4.74	4.76	4.74	4.77	4.77	5.40	4.78	4.86	4.81	4.85	---	4.59
29	4.76	4.76	4.74	4.76	---	5.69	4.79	4.86	4.88	4.81	---	4.61
30	4.77	4.75	4.74	4.76	---	5.61	4.79	4.85	4.83	4.79	---	4.60
31	4.77	---	4.74	4.77	---	5.46	---	4.85	---	4.76	4.62	---
MEAN	---	4.74	4.75	4.76	4.78	5.09	4.97	4.88	4.89	---	---	4.60
MAX	---	4.77	4.78	4.79	4.81	5.69	5.46	5.00	5.10	---	---	4.62
MIN	---	4.73	4.68	4.73	4.76	4.77	4.78	4.77	4.73	---	---	4.57

e Estimated

06331000 LITTLE MUDDY RIVER BELOW COW CREEK NEAR WILLISTON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
MAR													
08...	1530	76	--	--	--	8.0	8.0	1,400	1,400	3.5	.0	57.0	48.2
AUG													
30...	1245	7.2	704	8.9	107	8.4	8.5	1,960	1,830	32.5	19.9	50.4	57.8

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

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
MAR													
08...	10.2	4	179	52	351	6.3	.16	10.1	410	924	190	<50	<1
AUG													
30...	12.6	7	314	64	521	9.9	.30	7.49	562	1,320	25.6	<50	<1

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

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
MAR													
08...	3.3	21.5	<1	270	<1	<1	5.4	120	<1	50	2.76	<1	<1
AUG													
30...	11.7	35.6	<1	400	<1	<1	5.2	70	<1	<10	4.06	13.6	<1

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

Date	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR		
08...	<1.0	6.8
AUG		
30...	<1.0	3.9

Remark codes used in this table:
< -- Less than.

06332515 BEAR DEN CREEK NEAR MANDAREE, ND

LOCATION.--Lat 47°47'14", long 102°46'05", in NW$^1/_4$ sec.30, T.150 N., R.94 W., McKenzie County, Hydrologic Unit 10110101, on right bank 0.5 mi upstream from county highway culvert and 5.5 mi northwest of Mandaree.

DRAINAGE AREA.--74 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,947.58 ft above National Geodetic Vertical Datum of 1929.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.23	0.25	0.18	e0.10	e0.67	e1.5	1.6	0.32	0.52	11	e0.09	0.17
2	0.16	0.22	0.18	e0.09	e0.72	e1.8	e1.3	0.32	8.5	3.8	e0.10	0.18
3	0.14	0.21	e0.18	e0.09	e0.65	e2.1	e1.0	0.32	2.6	1.8	e0.10	0.19
4	0.13	0.20	e0.19	e0.09	e0.59	e2.4	e0.80	0.33	0.98	0.66	e0.09	0.20
5	0.14	0.20	e0.19	e0.09	e0.50	e2.6	e0.68	0.33	0.48	0.47	e0.09	0.20
6	0.16	0.19	e0.20	e0.09	e0.43	e2.5	e0.60	0.35	0.33	0.33	e0.08	0.19
7	0.16	0.18	e0.20	e0.10	e0.42	e2.3	e0.53	0.41	7.2	0.31	e0.08	0.18
8	0.14	0.18	e0.20	e0.10	e0.47	e2.1	e0.48	1.7	3.5	0.27	e0.08	0.17
9	0.15	0.19	e0.20	e0.10	e0.58	e1.9	e0.42	3.2	2.4	0.25	e0.08	0.16
10	0.15	0.18	e0.21	e0.10	e0.67	e2.0	e0.39	0.78	1.4	0.22	e0.08	0.16
11	0.16	0.18	e0.23	e0.10	e0.80	e1.9	e0.37	0.46	0.97	0.18	e0.08	0.13
12	0.16	0.18	e0.20	e0.10	e0.95	e1.7	e0.35	0.43	0.53	0.14	e0.09	0.12
13	0.17	0.18	e0.20	e0.09	e1.1	e1.5	e0.33	0.43	0.33	0.10	e0.09	0.15
14	0.17	0.18	e0.18	e0.09	e0.95	e1.4	e0.32	0.39	0.28	0.15	e0.10	0.15
15	0.17	0.19	e0.18	e0.10	e0.85	e1.3	e0.31	0.36	0.23	0.14	0.11	0.12
16	0.17	0.19	e0.18	e0.12	e0.78	e1.1	e0.31	0.33	0.20	0.28	0.11	0.11
17	0.20	0.20	e0.18	e0.15	e0.79	e0.85	e0.31	0.32	0.19	1.1	0.16	0.12
18	0.21	0.19	e0.18	e0.19	e0.82	e0.68	e0.30	1.8	0.18	0.34	0.14	0.19
19	0.23	0.19	e0.18	e0.21	e0.90	e0.75	e0.30	3.8	0.20	0.14	0.15	0.22
20	0.21	0.19	e0.15	e0.20	e1.0	e0.85	0.30	1.0	0.20	e0.11	0.15	0.20
21	0.20	0.18	e0.13	e0.19	e1.1	e1.0	0.30	4.9	0.70	e0.10	0.16	0.20
22	0.21	e0.18	e0.12	e0.25	e1.3	e1.7	0.29	3.5	0.53	e0.10	0.15	0.23
23	0.22	0.19	e0.12	e0.34	e1.4	e3.0	0.29	0.77	0.30	e0.10	0.16	0.25
24	0.22	0.18	e0.13	e0.32	e1.4	e0.80	0.29	0.39	0.23	e0.11	0.16	0.27
25	0.21	e0.18	e0.12	e0.31	e1.3	17	0.28	0.26	0.18	e0.12	0.17	0.26
26	0.19	e0.17	e0.12	e0.30	e1.3	38	0.28	0.24	25	e0.11	0.15	0.26
27	0.20	e0.18	e0.12	e0.33	e1.2	217	0.29	0.21	116	e0.10	0.13	0.25
28	0.21	0.19	e0.12	e0.36	e1.3	215	0.29	0.21	25	e0.09	0.15	0.24
29	4.5	0.19	e0.12	e0.41	---	72	0.31	0.20	147	e0.09	0.18	e0.25
30	4.0	0.19	e0.11	e0.50	---	22	0.31	0.19	56	e0.08	0.18	e0.25
31	0.55	---	e0.11	e0.59	---	4.5	---	0.21	---	e0.08	0.19	---
TOTAL	14.12	5.70	5.11	6.20	24.94	625.23	13.93	28.46	402.16	22.87	3.83	5.77
MEAN	0.46	0.19	0.16	0.20	0.89	20.2	0.46	0.92	13.4	0.74	0.12	0.19
MAX	4.5	0.25	0.23	0.59	1.4	217	1.6	4.9	147	11	0.19	0.27
MIN	0.13	0.17	0.11	0.09	0.42	0.68	0.28	0.19	0.18	0.08	0.08	0.11
AC-FT	28	11	10	12	49	1,240	28	56	798	45	7.6	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	1.31	0.31	0.14	0.15	5.99	35.1	18.2	3.62	2.98	3.07	0.29	0.58
MAX	23.0	1.45	0.33	1.51	41.7	217	243	42.0	21.0	40.5	1.52	5.12
(WY)	(1983)	(2001)	(1974)	(1974)	(1983)	(1982)	(1975)	(1970)	(1994)	(1993)	(1974)	(1973)
MIN	0.11	0.13	0.03	0.00	0.00	0.30	0.26	0.15	0.12	0.08	0.07	0.06
(WY)	(2000)	(1968)	(1985)	(1967)	(1967)	(2000)	(2000)	(1981)	(1987)	(1968)	(1988)	(1999)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005	
ANNUAL TOTAL	209.84		1,158.32			
ANNUAL MEAN	0.57		3.17		5.98	
HIGHEST ANNUAL MEAN					22.7	1982
LOWEST ANNUAL MEAN					0.21	2000
HIGHEST DAILY MEAN	80	Mar 13	217	Mar 27	1,110	Mar 14, 1972
LOWEST DAILY MEAN	0.05	Jul 17	0.08	Jul 30	0.00	Dec 10, 1966
ANNUAL SEVEN-DAY MINIMUM	0.06	Jan 25	0.08	Aug 5	0.00	Dec 25, 1966
MAXIMUM PEAK FLOW			480	Jun 29	[a]2,840	Mar 13, 1972
MAXIMUM PEAK STAGE			6.23	Jun 29	10.03	Apr 6, 1969
ANNUAL RUNOFF (AC-FT)	416		2,300		4,330	
10 PERCENT EXCEEDS	0.30		1.8		3.6	
50 PERCENT EXCEEDS	0.17		0.21		0.22	
90 PERCENT EXCEEDS	0.07		0.10		0.03	

a Gage height, 9.02 ft
e Estimated

06332515 BEAR DEN CREEK NEAR MANDAREE, ND—Continued

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.48	3.29	3.23	---	---	4.01	3.90	3.86	3.79	4.43	3.55	3.89
2	3.43	3.26	3.23	---	3.71	3.66	---	3.86	4.35	4.17	3.58	3.90
3	3.40	3.26	3.26	---	---	3.83	---	3.86	4.13	4.01	3.59	3.91
4	3.40	3.25	3.25	---	---	3.94	---	3.86	3.97	3.84	3.58	3.92
5	3.33	3.24	3.24	---	4.24	4.38	---	3.86	3.85	3.78	3.57	3.92
6	3.22	3.23	3.25	---	4.26	4.57	---	3.87	3.78	3.70	3.54	3.92
7	3.21	3.22	3.25	---	4.08	4.44	---	3.90	4.31	3.69	3.48	3.91
8	3.20	3.23	3.24	---	3.72	4.23	---	4.06	4.20	3.67	3.48	3.90
9	3.21	3.23	3.25	---	3.88	4.24	---	4.20	4.12	3.66	3.52	3.90
10	3.20	3.23	3.25	---	---	4.03	---	3.99	4.02	3.64	3.63	3.90
11	3.21	3.23	3.27	---	3.94	3.90	---	3.90	3.97	3.61	3.71	3.88
12	3.21	3.22	3.24	---	3.98	3.86	---	3.89	3.87	3.59	3.75	3.87
13	3.22	3.22	3.25	3.29	4.02	3.74	---	3.89	3.78	3.55	3.75	3.90
14	3.22	3.22	3.22	3.22	4.25	3.80	---	3.87	3.75	3.61	3.77	3.90
15	3.22	3.23	3.25	3.53	4.25	3.79	---	3.84	3.71	3.61	3.80	3.87
16	3.22	3.23	3.26	3.73	4.03	3.67	---	3.82	3.69	3.63	3.81	3.87
17	3.25	3.24	3.23	3.85	4.11	3.76	---	3.81	3.67	3.98	3.86	3.87
18	3.25	3.23	3.25	3.85	3.74	3.48	---	4.04	3.66	3.79	3.85	3.93
19	3.27	3.23	3.22	3.55	3.80	3.59	---	4.22	3.68	3.63	3.86	3.95
20	3.25	3.23	3.25	3.48	3.96	3.57	3.84	3.99	3.68	3.55	3.86	3.94
21	3.25	3.23	---	---	---	3.63	3.84	4.22	3.83	3.54	3.86	3.94
22	3.26	3.24	---	---	---	3.83	3.83	4.18	3.86	3.51	3.85	3.97
23	3.26	3.24	---	3.95	---	4.72	3.83	3.94	3.76	3.49	3.86	3.98
24	3.26	3.22	---	3.81	4.18	4.40	3.83	3.82	3.71	3.55	3.87	3.99
25	3.25	3.26	---	3.90	4.32	4.34	3.82	3.74	3.66	3.58	3.87	3.99
26	3.24	3.28	---	4.03	3.93	4.45	3.82	3.72	4.15	3.58	3.86	3.98
27	3.24	3.25	---	4.45	3.85	5.59	3.83	3.69	5.38	3.57	3.85	3.98
28	3.25	3.23	---	4.46	3.84	5.57	3.83	3.69	4.68	3.55	3.87	3.97
29	3.70	3.24	---	4.12	---	5.02	3.84	3.68	5.43	3.54	3.89	---
30	3.79	3.24	---	3.91	---	4.49	3.85	3.67	5.00	3.54	3.90	---
31	3.44	---	---	---	---	4.10	---	3.69	---	3.52	3.91	---
MEAN	3.30	3.24	---	---	---	4.15	---	3.89	4.05	3.68	3.75	---
MAX	3.79	3.29	---	---	---	5.59	---	4.22	5.43	4.43	3.91	---
MIN	3.20	3.22	---	---	---	3.48	---	3.67	3.66	3.49	3.48	---

06332515 BEAR DEN CREEK NEAR MANDAREE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1968 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
29...	1715	91	8.2	6.6	468	445	12.0	1.2	13.3	5.70	9.30	4	67.2
AUG													
16...	1430	.10	8.7	8.7	2,490	2,510	26.0	23.0	23.3	21.9	7.50	18	513

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
29...	68	123	2.8	.12	8.32	93.2	268	67.8	136	<1	2.0	23.2	<1
AUG													
16...	88	670	3.3	.36	2.76	675	1,650	.45	<50	<1	5.0	43.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
29...	70	<1	<1	4.0	410	<1	90	5.28	<1	<1	<1.0	3.3
AUG												
16...	290	<1	19	11.3	60	<1	10	4.29	8.8	<1	<1.0	2.5

Remark codes used in this table:
< -- Less than.

06332523 EAST FORK SHELL CREEK NEAR PARSHALL, ND

LOCATION.--Lat 47°56'55", long 102°12'52", in NW¼NW¼NW¼ sec.33, T.152 N., R.90 W., Mountrail County, Hydrologic Unit 10110101, on right bank 10 ft upstream from bridge on county road and 4 mi west of Parshall.

DRAINAGE AREA.--360 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.10	0.82	e0.39	e0.20	e0.37	e0.35	11	e0.48	2.6	93	e0.04	e0.00
2	e0.10	0.61	e0.39	e0.19	e0.36	e0.38	6.6	e0.75	4.9	80	e0.11	e0.00
3	e0.12	0.53	e0.41	e0.16	e0.35	e0.44	4.0	e0.75	6.2	59	e0.08	e0.00
4	e0.12	0.40	e0.42	e0.16	e0.31	e0.47	2.7	e0.34	5.2	45	e0.03	e0.00
5	e0.13	0.37	e0.42	e0.16	e0.28	e0.60	1.6	e0.55	6.0	37	e0.01	e0.00
6	e0.14	0.37	e0.42	e0.15	e0.23	e0.78	0.93	e0.96	6.0	29	e0.00	e0.00
7	e0.16	0.32	e0.42	e0.16	e0.27	e0.96	0.84	e1.0	6.7	23	e0.00	e0.00
8	e0.16	0.36	e0.43	e0.15	e0.27	e1.7	0.80	e1.1	8.2	18	e0.00	e0.00
9	e0.19	0.40	e0.44	e0.15	e0.30	e1.6	0.68	e1.4	8.1	13	e0.01	e0.00
10	e0.25	0.43	e0.46	e0.15	e0.34	e1.5	0.62	e2.8	7.7	9.5	e0.01	e0.00
11	e0.25	0.44	e0.47	e0.15	e0.37	e1.4	0.54	e3.1	7.0	7.4	e0.00	e0.00
12	e0.25	0.45	e0.48	e0.15	e0.36	e1.1	0.42	e3.4	4.8	5.4	e0.00	e0.00
13	e0.23	0.51	e0.47	e0.12	e0.33	e0.82	0.40	4.0	4.0	e3.7	e0.00	e0.00
14	0.23	0.51	e0.46	e0.10	e0.35	e0.55	0.42	3.8	3.4	e2.0	e0.00	e0.01
15	e0.25	e0.49	e0.44	e0.08	e0.35	e0.41	0.33	3.9	2.8	e1.2	e0.00	e0.01
16	e0.24	e0.50	e0.43	e0.06	e0.35	e0.34	0.37	3.6	2.3	e0.69	e0.00	e0.01
17	e0.24	e0.50	e0.43	e0.06	e0.32	e0.31	0.46	3.6	1.9	e0.57	e0.00	e0.02
18	e0.25	0.45	e0.43	e0.05	e0.33	e0.30	0.54	4.2	1.5	e0.36	e0.00	e0.02
19	e0.25	e0.50	e0.41	e0.05	e0.34	e0.32	0.38	4.6	1.3	e0.20	e0.00	e0.01
20	e0.26	e0.47	e0.39	e0.05	e0.28	e0.37	0.38	4.3	1.1	e0.16	e0.00	e0.00
21	e0.25	0.46	e0.36	e0.11	e0.28	e0.47	0.33	12	1.2	e0.16	e0.00	e0.00
22	e0.27	0.44	e0.32	e0.12	e0.29	e0.90	0.40	7.8	2.2	e0.12	e0.00	e0.00
23	e0.24	0.44	e0.29	e0.14	e0.27	e2.0	0.50	4.7	1.9	e0.28	e0.00	e0.00
24	e0.25	0.42	e0.26	e0.21	e0.27	e4.8	0.52	3.9	0.81	e0.24	e0.00	e0.00
25	e0.22	0.42	e0.25	e0.23	e0.27	15	e0.41	e3.2	0.35	e0.20	e0.00	e0.00
26	e0.25	0.43	e0.24	e0.22	e0.26	14	e0.34	e2.8	2.1	e0.04	e0.00	e0.00
27	e0.24	0.41	e0.23	e0.19	e0.28	32	e0.48	e2.7	8.9	e0.04	e0.00	e0.00
28	e0.27	0.39	e0.23	e0.20	e0.34	53	e0.48	2.6	8.6	e0.04	e0.00	e0.01
29	e0.33	0.39	e0.22	e0.21	---	53	e0.41	2.6	125	e0.08	e0.00	e0.01
30	e0.35	0.37	e0.22	e0.26	---	34	e0.48	2.6	119	e0.04	e0.00	e0.01
31	1.3	---	e0.20	e0.32	---	18	---	2.5	---	e0.04	e0.00	---
TOTAL	7.89	13.60	11.43	4.71	8.72	241.87	38.36	96.03	361.76	429.46	0.29	0.11
MEAN	0.25	0.45	0.37	0.15	0.31	7.80	1.28	3.10	12.1	13.9	0.01	0.00
MAX	1.3	0.82	0.48	0.32	0.37	53	11	12	125	93	0.11	0.02
MIN	0.10	0.32	0.20	0.05	0.23	0.30	0.33	0.34	0.35	0.04	0.00	0.00
AC-FT	16	27	23	9.3	17	480	76	190	718	852	0.6	0.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

MEAN	1.24	1.56	0.90	0.38	0.73	33.5	13.8	5.01	5.23	3.64	1.16	0.67
MAX	4.71	3.10	1.54	1.22	3.58	134	64.9	16.0	16.4	23.5	11.6	2.66
(WY)	(1995)	(2000)	(2000)	(1995)	(1995)	(1999)	(1996)	(1999)	(1998)	(1993)	(1993)	(1991)
MIN	0.18	0.45	0.02	0.00	0.00	4.04	1.28	1.64	0.66	0.01	0.00	0.00
(WY)	(2001)	(2005)	(2001)	(2001)	(2001)	(2002)	(2005)	(1992)	(1992)	(2001)	(2003)	(2001)

06332523 EAST FORK SHELL CREEK NEAR PARSHALL, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1991 - 2005	
ANNUAL TOTAL	653.65		1,214.23			
ANNUAL MEAN	1.79		3.33		5.70	
HIGHEST ANNUAL MEAN					15.1	1999
LOWEST ANNUAL MEAN					1.84	2004
HIGHEST DAILY MEAN	44	Mar 27	125	Jun 29	930	Mar 27, 1999
LOWEST DAILY MEAN	0.00	Feb 2	0.00	Aug 6	0.00	Sep 2, 1991
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 2	0.00	Aug 11	0.00	Sep 10, 1998
MAXIMUM PEAK FLOW			257	Jun 29	[a]1,170	Mar 27, 1999
MAXIMUM PEAK STAGE			[b]5.72	Jun 29	6.46	Mar 27, 1997
ANNUAL RUNOFF (AC-FT)	1,300		2,410		4,130	
10 PERCENT EXCEEDS	3.0		5.0		8.1	
50 PERCENT EXCEEDS	0.38		0.36		0.93	
90 PERCENT EXCEEDS	0.00		0.00		0.09	

a Gage height, 6.39 ft
b Backwater from beaver dam
e Estimated

GAGE-HEIGHT RECORDS

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

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.71	4.85	4.77	4.79	4.77	4.70	4.93	4.65	4.54	5.22	4.79	4.89
2	4.71	4.83	4.77	4.79	4.77	4.70	4.87	4.65	4.69	5.16	4.78	4.89
3	4.72	4.82	4.78	4.78	4.77	4.72	4.82	4.65	4.76	5.02	4.78	4.90
4	4.73	4.78	4.78	4.78	4.78	4.76	4.78	4.65	4.72	4.90	e4.78	4.90
5	4.73	4.77	4.78	4.77	4.77	4.85	4.73	4.64	4.75	4.80	e4.78	4.90
6	4.73	4.78	4.78	4.78	4.75	4.90	4.69	4.65	4.75	4.69	4.79	4.89
7	4.73	4.76	4.78	4.77	4.74	4.94	4.67	e4.66	4.77	4.57	4.79	e4.89
8	4.72	4.77	4.78	4.77	4.75	4.87	4.66	4.70	4.82	4.44	4.79	4.89
9	4.72	4.78	4.80	4.77	4.75	4.91	4.64	4.73	4.82	4.29	4.80	e4.90
10	4.72	4.79	4.80	4.77	4.75	4.88	4.62	4.69	4.80	4.14	4.80	4.89
11	4.72	4.80	4.81	4.76	4.75	4.81	4.61	4.66	4.78	4.03	4.83	4.89
12	4.41	4.80	4.81	4.77	4.74	4.80	4.58	4.65	4.71	3.90	e4.83	4.90
13	4.55	4.81	4.80	4.76	4.75	4.78	4.58	4.67	4.66	3.84	e4.84	4.91
14	4.72	4.81	4.80	4.75	4.74	4.70	4.58	4.65	4.61	3.84	e4.84	4.91
15	4.74	4.80	4.79	4.75	4.72	4.66	4.55	4.65	4.56	4.13	e4.84	4.91
16	4.75	4.81	4.79	4.74	4.72	4.65	4.56	4.63	4.51	4.37	e4.85	4.92
17	4.76	4.80	4.78	4.72	4.71	4.64	4.57	4.63	4.46	4.42	e4.86	4.93
18	4.79	4.80	4.79	4.75	4.71	4.62	4.58	4.68	4.40	4.01	e4.88	4.93
19	4.81	4.83	4.78	4.73	4.71	4.61	4.55	4.70	4.37	3.72	e4.88	e4.93
20	4.82	4.82	4.78	4.73	4.70	4.62	4.55	4.69	4.34	4.35	e4.88	4.92
21	4.82	4.80	4.77	4.73	4.71	4.64	4.53	4.90	4.35	4.47	e4.88	e4.92
22	4.83	4.80	e4.76	4.74	4.70	4.69	4.55	4.80	4.49	e4.58	e4.88	4.93
23	4.83	4.80	4.75	4.76	4.70	4.86	4.57	4.70	4.45	4.67	e4.88	4.94
24	4.85	4.79	e4.75	4.75	4.70	4.99	4.57	4.66	4.28	4.68	e4.88	4.94
25	4.86	4.79	4.80	4.76	4.70	5.01	4.59	e4.60	4.15	4.73	4.88	4.94
26	4.85	4.79	4.82	4.77	4.70	4.99	4.60	e4.58	4.29	4.78	4.88	4.95
27	4.85	4.79	4.83	4.77	4.70	5.12	4.59	e4.56	4.83	4.80	4.89	4.95
28	4.85	4.78	4.83	4.78	4.69	5.22	4.61	4.54	4.83	e4.80	e4.89	4.94
29	4.88	4.78	4.82	4.78	---	5.20	4.63	4.54	5.41	4.81	4.89	4.94
30	4.91	4.78	4.82	4.78	---	5.11	4.65	4.54	5.31	4.80	4.90	4.92
31	4.88	---	4.80	4.77	---	5.01	---	4.54	---	4.79	4.89	---
MEAN	4.76	4.80	4.79	4.76	4.73	4.84	4.63	4.65	4.64	4.51	4.84	4.92
MAX	4.91	4.85	4.83	4.79	4.78	5.22	4.93	4.90	5.41	5.22	4.90	4.95
MIN	4.41	4.76	4.75	4.72	4.69	4.61	4.53	4.54	4.15	3.72	4.78	4.89

e Estimated

06332523 EAST FORK SHELL CREEK NEAR PARSHALL, ND—Continued

WATER-QUALITY RECORDS

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

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
18...	1125	.46	8.6	8.4	2,700	2,760	10.0	10.0	63.4	63.1	11.5	11	509
MAY													
18...	1040	4.2	8.7	8.7	3,810	3,820	10.0	12.0	66.3	78.7	11.5	15	759

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
18...	72	636	20.0	.37	10.9	977	2,030	2.53	<50	<1	4.8	29.8	<1
MAY													
18...	76	750	21.4	.31	10.2	1,400	2,790	31.8	<50	<1	4.9	25.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
18...	470	<1	2	7.2	50	<1	40	4.11	1.5	<1	<1.0	3.4
MAY												
18...	550	<1	5	8.0	70	<1	40	4.50	1.6	<1	<1.0	2.8

Remark codes used in this table:
< -- Less than.

06332770 DEEPWATER CREEK AT MOUTH NEAR RAUB, ND

LOCATION.--Lat 47°44'16", long 102°06'26", in NW¼NW¼SW¼ sec.8, T.149 N., R.89 W., McLean County, Hydrologic Unit 10110101, on right bank 20 ft upstream from Highway 1804 bridge, 0.6 mi south of junction of State Highway 37 and 1804, and 3 mi west and 0.6 mi south of Raub.

DRAINAGE AREA.--220 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,832 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and discharges below 1.0 ft^3/s, which are poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	8.7	e0.53	e0.24	e0.39	e0.44	41	1.7	4.4	191	0.19	0.03
2	e0.00	7.2	e0.52	e0.22	e0.41	e0.47	27	1.9	23	123	0.31	0.03
3	0.00	4.3	e0.53	e0.20	e0.41	e0.50	19	1.8	107	87	0.40	0.02
4	0.00	2.9	e0.54	e0.20	e0.39	e0.58	13	1.5	65	68	0.20	0.03
5	0.00	2.1	e0.54	e0.20	e0.36	e0.70	9.9	1.7	46	52	0.16	0.03
6	e0.00	1.8	e0.53	e0.20	e0.31	e0.99	8.5	2.3	30	39	0.13	0.03
7	e0.00	1.8	e0.52	e0.20	e0.32	e1.5	9.0	2.4	23	30	0.10	0.03
8	e0.00	2.0	e0.51	e0.20	e0.33	e1.9	7.3	2.8	26	23	0.06	0.04
9	e0.00	1.1	e0.52	e0.20	e0.36	e1.8	5.5	2.9	53	15	0.05	0.05
10	e0.00	0.63	e0.52	e0.20	e0.39	e1.7	4.5	4.4	55	11	0.06	0.05
11	0.00	2.0	e0.53	e0.19	e0.42	e1.5	4.9	5.8	38	8.5	0.07	0.05
12	0.00	1.6	e0.52	e0.19	e0.43	e1.3	4.9	5.7	30	6.3	0.08	0.05
13	e0.00	1.4	e0.52	e0.18	e0.44	e1.0	5.0	5.0	20	4.4	0.08	0.08
14	e0.00	1.1	e0.52	e0.15	e0.44	e0.74	5.9	4.7	14	3.5	0.06	0.07
15	e0.00	1.0	e0.50	e0.13	e0.44	e0.53	5.8	4.9	10	2.5	0.05	0.07
16	0.00	0.98	e0.49	e0.12	e0.44	e0.50	4.6	5.0	7.4	1.9	0.03	0.08
17	e0.00	0.88	e0.49	e0.12	e0.43	e0.48	3.6	5.7	5.8	1.8	0.11	0.09
18	e0.00	0.87	e0.48	e0.10	e0.42	e0.48	3.1	6.2	4.6	1.3	0.07	0.11
19	e0.00	0.81	e0.47	e0.09	e0.41	e0.54	3.0	5.2	5.2	0.92	0.08	0.10
20	e0.00	0.63	e0.46	e0.09	e0.40	e0.62	2.9	4.7	4.1	0.56	0.06	0.07
21	e0.00	e0.59	e0.43	e0.10	e0.39	e1.2	2.6	7.6	6.2	0.42	0.05	0.06
22	e0.00	e0.59	e0.38	e0.10	e0.38	e2.5	2.8	15	7.2	0.74	0.05	0.05
23	e0.00	e0.58	e0.32	e0.12	e0.37	e5.0	2.6	30	12	0.89	0.06	0.03
24	e0.00	e0.56	e0.28	e0.14	e0.36	e10	2.2	e24	12	0.60	0.06	0.02
25	e0.00	e0.56	e0.27	e0.23	e0.36	e19	1.9	e15	10	0.35	0.07	0.03
26	e0.00	e0.55	e0.26	e0.22	e0.37	e25	1.7	e9.0	6.8	0.79	0.06	0.03
27	e0.00	e0.57	e0.25	e0.21	e0.39	39	1.4	e6.5	6.4	0.44	0.07	0.03
28	e0.00	e0.55	e0.25	e0.23	e0.42	54	1.4	6.1	4.9	0.32	0.09	0.03
29	0.07	e0.56	e0.25	e0.25	---	108	1.5	5.2	184	0.23	0.09	0.04
30	0.09	e0.55	e0.25	e0.30	---	80	1.4	4.3	420	0.29	0.06	0.04
31	7.4	---	e0.25	e0.36	---	55	---	4.1	---	0.25	0.04	---
TOTAL	7.56	49.46	13.43	5.68	10.98	416.97	207.9	203.1	1,241.0	676.00	3.05	1.47
MEAN	0.24	1.65	0.43	0.18	0.39	13.5	6.93	6.55	41.4	21.8	0.10	0.05
MAX	7.4	8.7	0.54	0.36	0.44	108	41	30	420	191	0.40	0.11
MIN	0.00	0.55	0.25	0.09	0.31	0.44	1.4	1.5	4.1	0.23	0.03	0.02
AC-FT	15	98	27	11	22	827	412	403	2,460	1,340	6.0	2.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

MEAN	1.03	1.79	1.06	0.58	1.08	56.9	18.4	6.37	7.75	3.47	0.77	0.42
MAX	4.15	3.97	2.01	1.81	5.40	279	68.3	21.8	41.4	21.8	5.68	4.49
(WY)	(1995)	(2001)	(1999)	(2000)	(1992)	(1999)	(1996)	(1999)	(2005)	(2005)	(1993)	(1991)
MIN	0.00	0.16	0.05	0.00	0.00	5.34	4.09	0.80	0.04	0.01	0.00	0.00
(WY)	(2002)	(1993)	(2001)	(1993)	(2001)	(2002)	(2000)	(1992)	(1992)	(1992)	(1994)	(1995)

06332770 DEEPWATER CREEK AT MOUTH NEAR RAUB, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1991 - 2005	
ANNUAL TOTAL	1,087.10		2,836.60			
ANNUAL MEAN	2.97		7.77		8.37	
HIGHEST ANNUAL MEAN					29.8	1999
LOWEST ANNUAL MEAN					2.04	1992
HIGHEST DAILY MEAN	100	Mar 20	420	Jun 30	1,100	Mar 27, 1997
LOWEST DAILY MEAN	0.00	Jul 15	0.00	Oct 1	0.00	Jul 27, 1991
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 6	0.00	Oct 1	0.00	Jul 27, 1991
MAXIMUM PEAK FLOW			637	Jun 30	[a]1,300	Mar 27, 1997
MAXIMUM PEAK STAGE			10.14	Jun 30	[b]13.26	
ANNUAL RUNOFF (AC-FT)	2,160		5,630		6,070	
10 PERCENT EXCEEDS	5.4		15		11	
50 PERCENT EXCEEDS	0.52		0.52		0.80	
90 PERCENT EXCEEDS	0.00		0.03		0.00	

a About
b March 13, 1996, backwater from ice; March 27, 1997, from floodmark, backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.37	6.43	5.82	5.71	5.67	5.74	6.96	5.73	5.87	8.45	5.65	5.54
2	5.37	6.35	5.80	5.71	5.69	5.75	6.70	5.74	6.29	7.99	5.68	5.53
3	5.36	6.16	5.80	5.70	5.71	5.77	6.50	5.72	7.77	7.68	5.70	5.53
4	5.36	6.02	5.83	e5.70	e5.81	5.80	6.32	5.67	7.37	7.46	5.65	5.53
5	5.37	5.94	5.82	e5.70	e5.88	5.91	6.21	5.69	7.09	7.25	5.64	5.54
6	5.37	5.89	5.82	e5.68	5.89	6.07	6.15	5.75	6.81	7.05	5.62	5.54
7	5.38	5.88	5.83	5.67	e6.07	6.44	6.18	5.76	6.65	6.86	5.60	5.54
8	5.38	5.91	5.84	5.67	6.13	6.69	6.11	5.79	6.72	6.69	5.58	5.55
9	5.38	5.78	5.84	5.68	6.33	6.65	6.01	5.79	7.21	6.48	5.57	5.57
10	5.37	5.70	5.84	5.69	6.10	6.44	5.95	5.91	7.24	6.32	5.58	5.57
11	5.36	5.91	5.83	5.68	5.79	6.24	5.99	6.01	6.98	6.19	5.59	5.57
12	5.36	5.86	5.83	5.67	5.74	6.30	6.00	5.99	6.83	6.08	5.60	5.57
13	5.37	5.82	5.83	5.67	5.75	6.30	6.01	5.94	6.60	5.98	5.60	5.59
14	5.38	5.79	5.83	e5.65	5.83	6.33	6.08	5.90	6.42	5.94	5.58	5.59
15	5.37	5.78	5.83	5.60	5.85	6.28	6.08	5.91	6.25	5.88	5.56	5.59
16	5.36	5.77	5.82	e5.55	5.92	6.26	6.01	5.90	6.11	5.84	5.54	5.60
17	5.37	5.76	5.80	5.51	5.94	6.19	5.94	5.94	6.01	5.86	5.61	5.60
18	5.38	5.75	5.80	5.50	5.89	6.18	5.91	5.96	5.94	5.81	5.59	5.61
19	5.38	5.74	5.79	5.49	5.93	6.20	5.89	5.90	5.99	5.77	5.60	5.61
20	5.38	5.71	5.81	5.48	5.88	6.22	5.88	5.87	5.90	5.73	5.58	5.59
21	5.38	5.76	5.79	5.49	5.82	6.30	5.85	6.05	6.05	5.70	5.57	5.57
22	5.39	5.85	5.77	5.50	5.72	6.57	5.87	6.31	6.12	5.75	5.57	5.56
23	5.39	5.84	5.80	e5.50	5.70	6.88	5.85	6.78	6.35	5.77	5.58	5.54
24	5.40	5.85	5.70	5.51	5.69	6.99	5.80	---	6.35	5.74	5.58	5.53
25	5.40	5.85	5.71	5.57	5.68	6.91	5.77	---	6.27	5.68	5.59	5.53
26	5.39	5.84	5.70	5.64	5.69	6.99	5.73	---	6.11	5.76	5.58	5.53
27	5.39	5.82	5.68	5.67	5.74	6.99	5.69	---	6.09	5.71	5.59	5.53
28	5.39	5.82	5.69	5.69	5.79	7.19	5.69	5.99	5.99	5.68	5.60	5.54
29	5.46	5.82	5.69	5.71	---	7.74	5.70	5.93	7.71	5.66	5.60	5.55
30	5.48	5.82	5.69	5.68	---	7.47	5.69	5.86	9.42	5.68	5.58	5.55
31	6.30	---	5.71	5.68	---	7.18	---	5.85	---	5.67	5.56	---
MEAN	5.41	5.87	5.79	5.62	5.84	6.48	6.02	---	6.62	6.26	5.60	5.56
MAX	6.30	6.43	5.84	5.71	6.33	7.74	6.96	---	9.42	8.45	5.70	5.61
MIN	5.36	5.70	5.68	5.48	5.67	5.74	5.69	---	5.87	5.66	5.54	5.53

e Estimated

06332770 DEEPWATER CREEK AT MOUTH NEAR RAUB, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
18...	1315	3.1	8.5	8.2	1,510	1,490	12.0	14.0	54.5	49.1	12.0	5	222
MAY													
18...	1300	--	8.7	8.6	2,290	2,290	10.0	12.5	64.5	74.2	10.5	8	375

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
18...	58	412	11.0	.40	8.60	456	1,050	8.97	<50	<1	4.8	38.6	<1
MAY													
18...	63	584	14.9	.50	4.33	704	1,600	--	<50	<1	5.3	34.1	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
18...	320	<1	1	3.8	90	<1	30	4.42	<1	<1	<1.0	7.2
MAY												
18...	480	<1	4	4.1	50	<1	20	4.67	<1	<1	<1.0	1.1

Remark codes used in this table:
< -- Less than.

06335500 LITTLE MISSOURI RIVER AT MARMARTH, ND

LOCATION.--Lat 46°17'52", long 103°55'03", in SW$^1/_4$ sec.30, T.133 N., R.105 W., Slope County, Hydrologic Unit 10110203, on left bank 90 ft downstream from bridge on U.S. Highway 12 in Marmarth and 1.5 mi downstream from Little Beaver Creek.

DRAINAGE AREA.--4,640 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1938 to current year.

REVISED RECORDS (WATER YEARS).--WSP 896: 1938-39. WSP 1086: 1943-44. WSP 1279: 1943(M), 1945-46, 1948. WSP 1439: 1950 (calendar year figures).

GAGE.--Water-stage recorder. Datum of gage is 2,686.32 ft above National Geodetic Vertical Datum of 1929. Prior to June 23, 1950, various nonrecording gages on former highway bridge at present site and datum. June 23, 1950, to Sept. 2, 1957, nonrecording gage at site 90 ft upstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Small diversions for irrigation upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, the greatest known flood prior to 1953 occurred in June 1907 (stage unknown). Other major floods reached stages of about 21.5 ft in March 1913, 19.7 ft in March 1920, and 20.2 ft in May 1929. These stages are not comparable to stages during period of record, owing to construction of levees.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	e889	e33	e4.4	e12	e52	31	21	767	388	6.1	4.4
2	12	e484	e34	e3.1	e15	e62	28	25	2,590	215	4.1	3.5
3	11	e148	e31	e2.2	e14	e65	28	25	1,100	149	5.3	2.6
4	11	e63	e29	e1.8	e13	e62	27	24	447	153	7.6	2.4
5	11	e50	e28	e1.5	e11	e50	26	24	193	116	34	2.1
6	11	e46	e29	e1.2	e11	e42	26	21	148	75	41	1.8
7	10	e45	e30	e1.1	e11	e41	26	19	622	58	27	2.5
8	10	e45	e29	e0.88	e12	e38	25	2,300	275	45	19	3.0
9	10	e42	e28	e0.74	e14	35	26	1,280	150	35	14	3.1
10	10	e42	e29	e0.65	e17	31	25	321	110	30	15	2.9
11	9.5	e39	e37	e0.57	e19	e29	25	278	90	26	18	3.1
12	9.1	e37	e34	e0.52	e21	27	23	269	84	23	18	3.6
13	10	e35	e33	e0.49	e22	25	24	725	136	20	104	13
14	8.8	e35	e35	e0.56	e21	22	23	4,150	208	19	117	14
15	9.0	e34	e37	e0.70	e20	32	22	1,220	199	17	74	21
16	10	e32	e37	e0.88	e21	27	22	790	90	17	42	23
17	11	28	e35	e1.3	e21	31	21	1,080	61	23	28	14
18	e11	28	e33	e1.7	e22	34	20	1,220	47	24	22	9.5
19	e12	27	e26	e2.3	e23	28	48	802	809	24	19	6.5
20	e12	24	e17	e3.1	e26	32	55	477	316	23	16	4.9
21	e30	35	e13	e4.3	e29	40	32	405	88	21	14	4.2
22	e65	37	e9.4	e5.3	e33	39	31	267	47	21	11	3.7
23	e129	32	e4.5	e5.9	e38	33	45	170	24	35	10	2.7
24	e242	36	e2.7	e6.6	e50	31	35	118	16	27	8.4	3.4
25	e206	37	e3.8	e6.9	e53	29	29	91	14	26	66	3.4
26	e153	37	e5.3	e7.3	e43	28	25	76	139	22	39	3.6
27	e201	e35	e10	e7.6	e36	31	23	64	1,520	23	22	3.8
28	e674	e35	e11	e8.5	e41	31	22	57	1,270	19	14	5.2
29	e1,590	e34	e8.8	e8.9	---	31	20	53	3,150	19	9.5	4.5
30	e1,940	e33	e6.2	e9.9	---	30	20	46	997	14	6.2	4.0
31	e1,330	---	e4.9	e11	---	30	---	108	---	9.0	5.4	---
TOTAL	6,770.4	2,524	703.6	111.89	669	1,118	833	16,526	15,707	1,716.0	836.6	179.4
MEAN	218	84.1	22.7	3.61	23.9	36.1	27.8	533	524	55.4	27.0	5.98
MAX	1,940	889	37	11	53	65	55	4,150	3,150	388	117	23
MIN	8.8	24	2.7	0.49	11	22	20	19	14	9.0	4.1	1.8
AC-FT	13,430	5,010	1,400	222	1,330	2,220	1,650	32,780	31,150	3,400	1,660	356

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

MEAN	108	39.0	17.0	17.0	187	905	744	571	638	216	81.9	68.4
MAX	1,489	250	107	260	2,208	5,079	6,691	3,840	4,705	1,917	400	526
(WY)	(1972)	(1999)	(1952)	(1973)	(1943)	(1978)	(1952)	(1975)	(1944)	(1993)	(1993)	(1941)
MIN	0.87	0.37	0.00	0.00	0.00	22.1	10.7	4.75	3.51	0.10	0.16	0.00
(WY)	(1959)	(1956)	(1956)	(1939)	(1939)	(2002)	(1981)	(1980)	(1961)	(1980)	(1988)	(1955)

06335500 LITTLE MISSOURI RIVER AT MARMARTH, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	43,968.8		47,694.89			
ANNUAL MEAN	120		131		301	
HIGHEST ANNUAL MEAN					986	1944
LOWEST ANNUAL MEAN					20.5	1988
HIGHEST DAILY MEAN	2,700	Mar 10	4,150	May 14	28,600	Apr 5, 1944
LOWEST DAILY MEAN	1.9	Feb 14	0.49	Jan 13	0.00	Dec 18, 1938
ANNUAL SEVEN-DAY MINIMUM	2.0	Feb 9	0.60	Jan 9	0.00	Dec 18, 1938
MAXIMUM PEAK FLOW			[a]6,810	May 14	[b]45,000	Mar 23, 1947
MAXIMUM PEAK STAGE			9.06	Jun 29	[c]23.40	Mar 31, 1952
ANNUAL RUNOFF (AC-FT)	87,210		94,600		218,000	
10 PERCENT EXCEEDS	366		211		611	
50 PERCENT EXCEEDS	26		26		32	
90 PERCENT EXCEEDS	3.0		3.8		1.0	

a Gage height, 8.99 ft
b Gage height, 21.7 ft
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.06	---	1.43	---	---	1.94	1.25	1.16	3.42	2.73	0.91	0.88
2	1.06	---	1.40	---	---	1.93	1.23	1.21	6.10	2.24	0.87	0.86
3	1.04	---	1.41	---	---	1.89	1.23	1.20	4.04	1.99	0.90	0.84
4	1.05	---	1.42	---	2.36	1.84	1.21	1.19	2.87	2.00	0.94	0.83
5	1.04	---	1.43	---	---	1.83	1.20	1.19	2.22	1.83	1.23	0.82
6	1.03	---	1.42	---	---	1.80	1.21	1.16	2.02	1.60	1.34	0.81
7	1.03	---	1.43	1.53	2.11	1.56	1.20	1.13	3.21	1.48	1.20	0.83
8	1.03	---	1.40	1.41	2.00	1.37	1.19	4.75	2.48	1.37	1.10	0.85
9	1.03	---	1.44	0.87	1.95	1.29	1.20	4.09	2.05	1.29	1.04	0.85
10	1.03	---	1.39	---	1.95	1.25	1.19	2.49	1.87	1.22	1.06	0.84
11	1.02	---	1.51	0.73	1.96	---	1.20	2.38	1.77	1.19	1.10	0.85
12	1.01	---	1.43	0.68	2.00	1.20	1.18	2.36	1.73	1.15	1.10	0.86
13	1.02	---	1.48	---	2.04	1.18	1.20	3.15	2.00	1.12	1.77	1.02
14	1.00	---	1.49	---	2.05	1.15	1.18	6.98	2.26	1.11	1.83	1.04
15	1.01	---	1.47	---	2.06	1.26	1.17	4.09	2.23	1.09	1.58	1.13
16	1.03	---	1.46	---	2.08	1.21	1.17	3.48	1.77	1.08	1.35	1.15
17	1.05	1.25	1.55	1.69	2.07	1.25	1.16	3.91	1.58	1.15	1.21	1.04
18	---	1.25	1.54	---	2.05	1.28	1.14	4.11	1.48	1.16	1.14	0.98
19	---	1.23	1.57	---	2.04	1.21	1.34	3.48	3.43	1.16	1.11	0.92
20	---	1.20	1.62	2.38	2.01	1.26	1.44	2.88	2.49	1.16	1.07	0.89
21	---	1.31	---	3.25	2.01	1.34	1.28	2.71	1.75	1.13	1.04	0.87
22	---	1.33	---	---	2.02	1.34	1.27	2.36	1.47	1.13	1.01	0.86
23	---	1.29	---	---	2.01	1.28	1.40	2.04	1.26	1.28	0.99	0.84
24	---	1.33	---	---	2.00	1.25	1.31	1.82	1.17	1.20	0.96	0.86
25	---	1.34	1.68	---	1.99	1.24	1.25	1.69	1.15	1.19	1.46	0.86
26	---	1.34	1.70	---	1.99	1.22	1.21	1.60	1.53	1.15	1.32	0.86
27	---	1.34	1.77	---	1.97	1.26	1.18	1.53	4.79	1.15	1.14	0.87
28	---	1.48	1.80	---	1.95	1.26	1.17	1.47	4.43	1.10	1.05	0.89
29	---	1.48	1.81	---	---	1.26	1.15	1.44	6.58	1.11	0.98	0.88
30	---	1.40	1.86	---	---	1.25	1.15	1.40	3.89	1.04	0.92	0.87
31	---	---	---	---	---	1.25	---	1.73	---	0.97	0.90	---
MEAN	---	---	---	---	---	---	1.22	2.46	2.63	1.34	1.15	0.90
MAX	---	---	---	---	---	---	1.44	6.98	6.58	2.73	1.83	1.15
MIN	---	---	---	---	---	---	1.14	1.13	1.15	0.97	0.87	0.81

06335500 LITTLE MISSOURI RIVER AT MARMARTH, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1970 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
20...	1525	30	8.9	8.2	1,060	1,110	12.0	8.0	9.79	4.60	3.90	14	210
JUL													
13...	1135	20	8.9	8.6	1,660	1,650	33.0	26.0	47.4	23.8	8.30	9	293

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
20...	90	242	5.2	.26	3.71	303	684	56.1	<50	<1	2.7	24.4	<1
JUL													
13...	74	389	8.4	.38	11.4	478	1,090	59.4	<50	<1	3.8	74.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
20...	140	<1	1	19.0	10	<1	<10	8.06	3.3	<1	<1.0	10.7
JUL												
13...	430	<1	1	9.8	50	<1	<10	7.39	2.6	<1	<1.0	19.8

Remark codes used in this table:
< -- Less than.

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND

LOCATION.--Lat 46°55'10", long 103°31'40", in NE$^1/_4$ sec.27, T.140 N., R.102 W., Billings County, Hydrologic Unit 10110203, on left bank 50 ft upstream from bridge on county highway and 1 mi upstream from Andrews Creek and bridge on I-94.

DRAINAGE AREA.--6,190 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1903 to October 1908, October to November 1921, April, May, and December 1922, May 1923 to September 1924, October 1928 to September 1934, October 1945 to September 1975, March 2001 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder on upstream side of highway bridge. Datum of gage is 2,246.75 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1945, nonrecording gages at several sites within 0.2 mi upstream from present site at various datums. Oct. 9, 1945, to Aug. 22, 1951, nonrecording gage at current location at current datum. Sept. 1951 to Sept. 1975 recording gage 600 ft downstream at current datum.

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

REVISIONS (WATER YEARS).--WSP 546: Drainage area. WSP 1279: 1903-7, 1923-24, 1930-31, 1934(M).

CORRECTION.--When the gage was re-established in March 2001, the base gage was incorrectly set 0.84 ft too low. All gage heights since Oct. 1, 2002, and the 2001 peak stage have been corrected. Unit values and daily values data for water years 2001-02 have not been adjusted. Discharge data for those years are unaffected by this correction.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	1,940	e54	e22	e160	e450	e51	e36	194	4,140	15	20
2	17	752	e55	e19	e170	e520	51	e35	704	1,360	16	19
3	17	407	e54	e14	e160	e600	47	e35	1,860	787	16	16
4	16	260	e49	e11	e130	e800	46	e32	2,720	554	15	13
5	16	187	e49	e9.7	e110	e700	44	31	1,150	384	13	12
6	15	149	e48	e7.1	e95	e600	e43	30	689	293	11	11
7	14	127	e49	e5.8	e90	e450	e41	27	511	280	11	13
8	13	107	e48	e5.7	e95	e320	38	64	841	219	11	13
9	14	95	e51	e5.0	e100	e240	36	110	909	169	9.5	12
10	14	84	e59	e3.6	e120	227	35	2,090	516	135	125	12
11	13	74	e72	e2.9	e160	132	e36	e1,200	319	113	246	13
12	15	57	e65	e2.5	e190	109	e36	e500	205	96	95	13
13	15	58	e60	e2.5	e180	90	e35	357	330	80	36	17
14	14	55	e61	e4.1	e160	62	34	e793	360	64	28	17
15	14	55	e64	e10	e150	87	e31	e1,660	294	53	23	18
16	15	52	e68	e20	e150	51	e29	2,580	340	47	31	18
17	16	53	e68	e35	e140	100	31	1,070	391	43	128	18
18	16	51	e65	e55	e150	94	29	820	230	31	111	18
19	18	46	e62	e85	e160	73	39	1,130	278	24	88	18
20	18	36	e59	e100	e180	65	45	1,020	660	22	63	29
21	20	21	e45	e110	e200	76	42	1,310	1,020	23	45	19
22	28	33	e34	e100	e250	73	36	985	925	21	28	22
23	37	29	e19	e90	e300	84	e77	826	344	21	20	20
24	68	39	e26	e95	e400	75	e58	413	201	33	19	17
25	118	49	e32	e115	e450	68	e49	262	140	60	18	15
26	272	45	e36	e110	e400	68	e41	180	121	240	16	13
27	213	e46	e42	e105	e350	65	e42	121	125	87	12	11
28	124	e47	e46	e100	e400	70	e41	e90	1,170	38	11	8.5
29	222	e46	e39	e120	---	64	e39	75	3,470	21	11	7.1
30	615	e49	e31	e150	---	e59	e37	62	5,880	18	28	6.2
31	1,700	---	e27	e155	---	e54	---	79	---	16	26	---
TOTAL	3,725	5,049	1,537	1,669.9	5,600	6,526	1,239	18,023	26,897	9,472	1,325.5	458.8
MEAN	120	168	49.6	53.9	200	211	41.3	581	897	306	42.8	15.3
MAX	1,700	1,940	72	155	450	800	77	2,580	5,880	4,140	246	29
MIN	13	21	19	2.5	90	51	29	27	121	16	9.5	6.2
AC-FT	7,390	10,010	3,050	3,310	11,110	12,940	2,460	35,750	53,350	18,790	2,630	910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	152	51.3	20.9	15.9	156	1,209	1,195	744	1,068	424	229	142
MAX	2,226	369	127	213	1,075	6,831	9,847	4,077	4,692	3,541	2,521	1,314
(WY)	(1924)	(1947)	(1947)	(1974)	(1947)	(1972)	(1952)	(1975)	(1929)	(1905)	(1903)	(1903)
MIN	1.67	1.97	0.02	0.00	0.00	32.8	8.12	3.94	41.7	11.4	0.75	0.29
(WY)	(1959)	(1956)	(1956)	(1950)	(1950)	(1964)	(1905)	(1931)	(2004)	(2002)	(1934)	(1934)

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	58,095.5		81,522.2			
ANNUAL MEAN	159		223		[a]442	
HIGHEST ANNUAL MEAN					[a]1,329	1929
LOWEST ANNUAL MEAN					[a]52.7	2002
HIGHEST DAILY MEAN	5,050	Mar 10	5,880	Jun 30	39,600	Apr 8, 1952
LOWEST DAILY MEAN	2.0	Feb 15	2.5	Jan 12	0.00	Feb 1, 1932
ANNUAL SEVEN-DAY MINIMUM	2.1	Feb 10	3.8	Jan 8	0.00	Jan 21, 1933
MAXIMUM PEAK FLOW			7,680	Jun 30	65,000	Mar 23, 1947
MAXIMUM PEAK STAGE			11.41	Jun 30	20.50	Mar 23, 1947
ANNUAL RUNOFF (AC-FT)	115,200		161,700		[a]320,300	
10 PERCENT EXCEEDS	390		572		978	
50 PERCENT EXCEEDS	38		55		50	
90 PERCENT EXCEEDS	3.7		14		1.2	

a Based on complete water years only
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.08	6.05	2.45	2.46	---	---	---	---	2.96	8.43	1.88	1.96
2	2.06	4.32	2.44	2.50	---	---	2.27	---	4.16	5.31	1.90	1.94
3	2.05	3.53	2.46	---	3.44	---	2.24	---	6.02	4.29	1.89	1.89
4	2.04	3.11	2.49	---	3.37	---	2.23	---	7.15	3.76	1.88	1.86
5	2.04	2.87	2.47	---	---	---	2.21	2.10	5.05	3.34	1.86	1.85
6	2.03	2.74	2.47	---	---	---	---	2.10	4.18	3.08	1.84	1.84
7	2.02	2.66	2.46	---	---	---	---	2.09	3.79	3.01	1.83	1.85
8	2.02	2.58	2.45	---	---	---	2.17	2.38	4.39	2.81	1.83	1.86
9	2.03	2.53	2.47	---	---	---	2.16	2.65	4.61	2.64	1.82	1.85
10	2.03	2.49	---	---	---	3.05	2.14	6.36	3.80	2.51	2.39	1.84
11	2.03	2.45	---	---	---	2.68	---	---	3.33	2.42	2.88	1.86
12	2.06	2.38	---	---	---	2.58	---	---	3.01	2.34	2.34	1.86
13	2.07	2.39	---	---	---	2.49	---	3.43	3.35	2.27	2.08	1.90
14	2.06	2.38	---	---	---	2.30	2.13	---	3.43	2.20	2.03	1.91
15	2.06	2.39	---	---	---	2.47	---	---	3.26	2.15	2.00	1.92
16	2.07	2.38	---	---	---	2.22	---	6.97	3.39	2.12	2.05	1.92
17	2.10	2.39	---	---	---	2.53	2.11	4.90	3.51	2.11	2.48	1.93
18	2.10	2.38	---	---	---	2.50	2.08	4.45	3.08	2.05	2.41	1.93
19	2.13	2.36	---	---	3.28	2.40	2.17	5.02	3.16	2.01	2.31	1.94
20	2.12	2.31	---	---	---	2.34	2.23	4.83	4.11	1.99	2.19	2.04
21	2.14	2.23	2.41	---	---	2.41	2.20	5.31	4.79	2.01	2.12	1.95
22	2.20	2.30	2.37	---	---	2.40	2.15	4.76	4.61	1.98	2.04	1.99
23	2.25	2.27	2.27	---	---	2.45	---	4.44	3.39	1.98	1.96	1.96
24	2.41	2.32	2.37	---	---	2.41	---	3.56	3.00	2.06	1.94	1.91
25	2.61	2.37	2.47	---	---	2.37	---	3.17	2.79	2.18	1.92	1.88
26	3.15	2.36	2.45	---	---	2.37	---	2.92	2.73	2.85	1.89	1.85
27	2.96	2.42	2.41	---	---	2.36	---	2.72	2.74	2.30	1.85	1.83
28	2.64	2.43	2.42	---	---	2.38	---	---	4.70	2.09	1.83	1.80
29	2.95	2.43	2.43	---	---	2.36	---	2.53	8.01	1.98	1.83	1.78
30	4.04	2.42	2.43	---	---	---	---	2.48	10.07	1.92	2.00	1.76
31	5.73	---	2.38	---	---	---	---	2.55	---	1.88	2.02	---
MEAN	2.40	2.67	---	---	---	---	---	---	4.22	2.71	2.04	1.89
MAX	5.73	6.05	---	---	---	---	---	---	10.07	8.43	2.88	2.04
MIN	2.02	2.23	---	---	---	---	---	---	2.73	1.88	1.82	1.76

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2001 to present.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
09...	1500	232	8.4	8.2	1,160	1,150	11.0	1.5	21.2	12.7	3.70	9	209
AUG													
04...	1145	15	8.5	8.6	2,250	2,270	23.5	20.2	62.4	33.9	11.0	10	394

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
09...	80	255	4.3	.27	6.46	335	741	468	442	<1	2.2	23.8	<1
AUG													
04...	73	345	9.8	.36	10.3	835	1,550	64.2	<50	<1	3.2	65.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
09...	170	<1	<1	5.3	360	<1	<10	2.65	<1	<1	<1.0	4.5
AUG												
04...	500	<1	<1	7.7	40	<1	20	6.97	7.2	<1	<1.0	1.0

Remark codes used in this table:
< -- Less than.

06336600 BEAVER CREEK NEAR TROTTERS, ND

LOCATION.--Lat 47°09'47", long 103°59'32", in SW¼SW¼NE¼ sec.33, T.143 N., R.105 W., Golden Valley County, Hydrologic Unit 10110204, on left bank 100 ft upstream from bridge on county road, 2.4 mi east of Montana-North Dakota State line, 13 mi southwest of Trotters, 17 mi north of Beach, 20 mi upstream from Elk Creek, and 27 mi above mouth.

DRAINAGE AREA.--616 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year (seasonal records only since 1984).

REVISED RECORDS.--1982: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,371.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for discharges less than 1.0 ft^3/s and for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 391 ft^3/s, June 27, gage height, 7.89 ft; minimum daily discharge, 0.52 ft^3/s, Sept. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e26	7.2	5.2	3.2	26	31	2.9	0.86
2	---	---	---	---	25	7.4	5.1	3.8	24	44	2.6	0.83
3	---	---	---	---	23	7.7	4.8	3.9	20	77	3.0	0.91
4	---	---	---	---	22	8.1	4.6	4.4	17	61	3.7	0.86
5	---	---	---	---	20	8.3	4.3	4.5	14	46	3.1	0.71
6	---	---	---	---	19	8.8	4.1	4.4	64	34	2.8	0.76
7	---	---	---	---	17	e9.0	3.9	4.5	57	25	2.5	0.68
8	---	---	---	---	13	9.2	3.6	5.2	48	20	2.2	0.73
9	---	---	---	---	12	9.4	3.3	5.8	91	17	2.1	0.65
10	---	---	---	---	11	9.5	3.3	6.4	99	14	2.2	0.75
11	---	---	---	---	11	9.3	3.2	6.2	74	12	2.0	0.74
12	---	---	---	---	12	e8.3	3.1	6.7	55	10	2.1	0.76
13	---	---	---	---	12	e7.3	3.0	7.2	53	9.1	1.9	0.85
14	---	---	---	---	12	6.2	2.8	7.3	53	7.9	1.8	0.87
15	---	---	---	---	11	6.0	2.9	8.0	45	6.8	1.6	0.78
16	---	---	---	---	11	5.5	2.7	7.7	33	6.3	1.7	0.77
17	---	---	---	---	9.5	5.7	2.9	7.4	28	6.0	2.2	0.78
18	---	---	---	---	9.0	5.7	2.8	7.5	27	5.7	1.9	0.70
19	---	---	---	---	8.6	5.4	2.8	8.3	22	5.0	1.9	0.73
20	---	---	---	---	8.3	5.3	3.1	16	17	4.4	1.8	0.61
21	---	---	---	---	7.9	6.0	3.0	20	12	3.9	1.5	0.62
22	---	---	---	---	7.6	6.3	3.2	23	11	3.6	1.3	0.63
23	---	---	---	---	7.4	6.0	3.2	25	9.5	3.8	1.2	0.54
24	---	---	---	---	7.5	5.3	2.9	32	8.0	3.0	1.1	0.68
25	---	---	---	---	7.7	5.1	2.7	81	6.6	2.7	1.1	0.68
26	---	---	---	---	8.0	5.7	2.9	62	88	2.8	1.0	0.69
27	---	---	---	---	8.0	6.1	3.1	51	269	2.7	1.0	0.52
28	---	---	---	---	7.5	6.1	3.0	43	86	3.1	1.0	0.64
29	---	---	---	---	---	5.8	3.0	36	41	3.3	1.1	0.66
30	---	---	---	---	---	5.2	3.2	30	36	3.5	0.99	0.64
31	---	---	---	---	---	5.1	---	27	---	3.3	0.92	---
TOTAL	---	---	---	---	354.0	212.0	101.7	558.4	1,434.1	477.9	58.21	21.63
MEAN	---	---	---	---	12.6	6.84	3.39	18.0	47.8	15.4	1.88	0.72
MAX	---	---	---	---	26	9.5	5.2	81	269	77	3.7	0.91
MIN	---	---	---	---	7.4	5.1	2.7	3.2	6.6	2.7	0.92	0.52
AC-FT	---	---	---	---	702	421	202	1,110	2,840	948	115	43

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

MEAN	1.10	2.62	2.59	4.40	26.0	117	44.2	15.4	18.9	10.3	2.03	0.68
MAX	3.29	6.34	5.13	14.7	141	609	406	50.2	125	64.2	18.4	4.72
(WY)	(1983)	(1983)	(1979)	(1983)	(1983)	(1978)	(1979)	(1999)	(1982)	(1997)	(1993)	(1986)
MIN	0.01	0.01	0.03	0.00	0.00	1.21	1.11	1.05	0.12	0.00	0.00	0.00
(WY)	(1982)	(1982)	(1982)	(1982)	(1989)	(1991)	(1991)	(1981)	(1992)	(1988)	(1985)	(1981)

06336600 BEAVER CREEK NEAR TROTTERS, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1978 - 2005	
ANNUAL MEAN	[a]33.3	
HIGHEST ANNUAL MEAN	[a]79.7	1978
LOWEST ANNUAL MEAN	[a]2.77	1981
HIGHEST DAILY MEAN	2,500	Mar 22, 1978
LOWEST DAILY MEAN	0.00	Aug 1, 1981
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 10, 1981
MAXIMUM PEAK FLOW	[b]2,720	Mar 29, 1978
MAXIMUM PEAK STAGE	[c]19.27	Mar 22, 1978
ANNUAL RUNOFF (AC-FT)	[a]24,110	
10 PERCENT EXCEEDS	51	
50 PERCENT EXCEEDS	2.8	
90 PERCENT EXCEEDS	0.03	

a Based on complete water years only (1978-83)
b Gage height, 18.61 ft
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	4.22	3.41	3.36	3.22	3.65	3.72	2.68	2.27
2	---	---	---	---	3.95	3.43	3.35	3.27	3.65	4.00	2.65	2.26
3	---	---	---	---	3.88	3.46	3.34	3.28	3.60	4.64	2.68	2.27
4	---	---	---	---	3.86	3.49	3.32	3.31	3.57	4.33	2.73	2.26
5	---	---	---	---	3.81	3.51	3.30	3.32	3.55	4.01	2.68	2.22
6	---	---	---	---	3.75	3.54	3.29	3.31	4.40	3.78	2.64	2.23
7	---	---	---	---	3.68	3.60	3.26	3.32	4.25	3.60	2.61	2.21
8	---	---	---	---	3.57	3.58	3.25	3.37	4.06	3.48	2.57	2.21
9	---	---	---	---	3.48	3.60	3.23	3.41	4.85	3.38	2.55	2.19
10	---	---	---	---	3.47	3.61	3.22	3.44	4.99	3.29	2.55	2.21
11	---	---	---	---	3.50	3.59	3.21	3.43	4.57	3.21	2.53	2.20
12	---	---	---	---	3.55	3.66	3.21	3.46	4.21	3.16	2.53	2.21
13	---	---	---	---	3.56	3.59	3.19	3.49	4.17	3.11	2.50	2.22
14	---	---	---	---	3.55	3.41	3.18	3.49	4.18	3.06	2.49	2.22
15	---	---	---	---	3.53	3.40	3.19	3.53	4.01	3.02	2.46	2.20
16	---	---	---	---	3.50	3.37	3.17	3.52	3.85	2.99	2.46	2.19
17	---	---	---	---	3.45	3.38	3.19	3.50	3.77	2.98	2.51	2.19
18	---	---	---	---	3.43	3.38	3.18	3.51	3.76	2.96	2.48	2.17
19	---	---	---	---	3.42	3.37	3.17	3.54	3.68	2.92	2.47	2.17
20	---	---	---	---	3.41	3.36	3.21	3.76	3.59	2.89	2.45	2.14
21	---	---	---	---	3.39	3.41	3.20	3.76	3.50	2.86	2.41	2.14
22	---	---	---	---	3.38	3.43	3.21	3.68	3.46	2.82	2.38	2.14
23	---	---	---	---	3.38	3.41	3.21	3.60	3.43	2.83	2.36	2.12
24	---	---	---	---	3.39	3.37	3.19	3.60	3.39	2.75	2.34	2.14
25	---	---	---	---	3.41	3.35	3.17	4.57	3.35	2.71	2.34	2.14
26	---	---	---	---	3.44	3.39	3.19	4.21	4.42	2.72	2.32	2.14
27	---	---	---	---	3.45	3.42	3.20	3.99	6.89	2.70	2.32	2.09
28	---	---	---	---	3.43	3.42	3.20	3.85	4.73	2.73	2.32	2.12
29	---	---	---	---	---	3.40	3.20	3.75	3.92	2.74	2.31	2.12
30	---	---	---	---	---	3.36	3.21	3.66	3.83	2.75	2.30	2.11
31	---	---	---	---	---	3.35	---	3.63	---	2.73	2.28	---
MEAN	---	---	---	---	3.57	3.45	3.23	3.57	4.04	3.19	2.48	2.18
MAX	---	---	---	---	4.22	3.66	3.36	4.57	6.89	4.64	2.73	2.27
MIN	---	---	---	---	3.38	3.35	3.17	3.22	3.35	2.70	2.28	2.09

06336600 BEAVER CREEK NEAR TROTTERS, ND—Continued

WATER-QUALITY RECORDS

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

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
09...	1145	9.2	8.2	8.3	1,600	1,600	7.0	.0	60.9	48.1	6.00	5	218
AUG													
17...	1020	2.1	8.4	8.4	2,410	2,420	21.0	19.1	68.5	79.9	11.0	7	357

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
09...	57	248	7.0	.17	<2.00	621	1,110	27.7	<50	<1	2.3	15.7	<1
AUG													
17...	60	363	10.2	.25	3.82	989	1,730	9.91	<50	<1	3.5	57.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
09...	310	<1	<1	4.9	30	<1	10	2.57	<1	<1	<1.0	3.9
AUG												
17...	830	<1	11	7.2	60	<1	30	3.89	6.9	<1	<1.0	2.8

Remark codes used in this table:
< -- Less than.

06337000 LITTLE MISSOURI RIVER NEAR WATFORD CITY, ND

LOCATION.--Lat 47°35'45", long 103°15'50", in SE¼SE¼NW¼ sec.35, T.148 N., R.99 W., McKenzie County, Hydrologic Unit 10110205, on left bank 0.8 mi upstream from U.S. Highway 85 crossing, 17 mi upstream from Cherry Creek, and 17.5 mi south of Watford City.

DRAINAGE AREA.--8,310 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS (WATER YEARS).--WSP 926: 1935. WSP 1270: 1943.

GAGE.--Water-stage recorder. Datum of gage is 1,929.03 ft above National Geodetic Vertical Datum of 1929. From Oct. 2, 1959, to June 17, 1963, and Nov. 28, 1964, to Sept. 30, 1990, water-stage recorder at site at U.S. Highway 85 crossing, 0.8 mi downstream. From June 18, 1963, to Nov. 28, 1964, at site 0.6 mi downstream at present datum. See WSP 1729 or 1917 for history of changes prior to Oct. 2, 1959.

REMARKS.--Records poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	e800	e62	e31	e195	e473	e280	18	367	4,410	68	23
2	38	e1,600	e63	e27	e200	e537	e220	18	1,690	5,460	57	22
3	29	1,010	e64	e24	e210	e603	e170	15	1,640	2,660	57	20
4	e27	608	e60	e20	e200	e709	e140	12	1,150	1,600	66	24
5	25	e400	e58	e17	e170	e819	e110	9.8	2,970	1,220	69	28
6	25	260	e57	e14	e140	e855	e95	8.3	2,050	1,020	54	24
7	25	191	e56	e11	e120	e730	e80	20	1,700	808	44	23
8	23	150	e58	e9.0	e130	e610	79	306	2,940	682	39	21
9	27	125	e62	e7.0	e140	e528	71	347	1,890	590	37	20
10	23	107	e68	e5.4	e180	e442	65	327	1,570	495	50	17
11	e23	e90	e75	e4.0	e200	e361	e55	257	1,210	417	131	16
12	24	e80	e82	e3.5	e220	e293	e53	983	722	351	228	15
13	24	e75	e75	e3.0	e240	e258	e51	666	524	304	255	22
14	24	e72	e72	e3.0	e220	e227	e46	531	549	522	173	17
15	27	e70	e73	e4.0	e200	e197	46	477	906	e400	131	15
16	30	e69	e75	e6.0	e190	e192	43	443	616	222	89	15
17	31	e68	e77	e10	e180	e189	41	2,140	453	681	352	14
18	32	e64	e78	e17	e170	e175	35	2,140	464	704	297	14
19	31	e62	e74	e28	e189	e188	32	1,830	464	293	157	13
20	33	e56	e70	e50	e214	e164	31	1,710	414	164	129	e13
21	32	e48	e62	e90	e247	e164	27	2,540	334	e125	115	e12
22	32	e52	e50	e130	e302	e164	26	2,150	643	e95	92	e15
23	32	e50	e40	e125	e405	e155	34	2,040	945	82	76	27
24	32	e53	e44	e120	e444	e144	34	1,120	992	138	178	17
25	33	e57	e48	e130	e487	e144	28	936	479	158	135	12
26	36	e54	e50	e140	e484	e137	22	534	581	98	71	13
27	48	e52	e52	e135	e411	e185	34	417	1,070	91	46	15
28	e100	e54	e56	e130	e422	e250	33	368	578	214	39	15
29	e720	e55	e50	e150	---	e435	27	341	3,000	171	36	15
30	e1,030	e58	e45	e180	---	e430	23	310	4,430	128	32	13
31	e950	---	e36	e190	---	e350	---	294	---	84	27	---
TOTAL	3,601	6,490	1,892	1,813.9	6,910	11,108	2,031	23,308.1	37,341	24,387	3,330	530
MEAN	116	216	61.0	58.5	247	358	67.7	752	1,245	787	107	17.7
MAX	1,030	1,600	82	190	487	855	280	2,540	4,430	5,460	352	28
MIN	23	48	36	3.0	120	137	22	8.3	334	82	27	12
AC-FT	7,140	12,870	3,750	3,600	13,710	22,030	4,030	46,230	74,070	48,370	6,610	1,050

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

MEAN	158	65.1	18.6	12.2	256	1,822	1,396	728	1,038	507	216	159
MAX	2,364	509	138	121	3,023	10,220	12,170	4,302	5,646	2,759	1,405	1,174
(WY)	(1972)	(2001)	(1947)	(1983)	(1943)	(1972)	(1952)	(1975)	(1944)	(1993)	(1937)	(1941)
MIN	0.83	0.33	0.00	0.00	0.00	22.2	29.5	18.0	14.8	9.26	0.02	1.38
(WY)	(1989)	(1989)	(1989)	(1935)	(1935)	(1964)	(1981)	(1981)	(1988)	(1980)	(1988)	(1936)

06337000 LITTLE MISSOURI RIVER NEAR WATFORD CITY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005	
ANNUAL TOTAL	77,321.3		122,742.0			
ANNUAL MEAN	211		336		532	
HIGHEST ANNUAL MEAN					1,637	1971
LOWEST ANNUAL MEAN					38.0	1988
HIGHEST DAILY MEAN	5,360	Mar 15	5,460	Jul 2	55,000	Mar 25, 1947
LOWEST DAILY MEAN	1.8	Feb 19	3.0	Jan 13	0.00	Jan 1, 1935
ANNUAL SEVEN-DAY MINIMUM	1.9	Feb 17	4.1	Jan 10	0.00	Jan 1, 1935
MAXIMUM PEAK FLOW			6,770	Jul 2	110,000	Mar 25, 1947
MAXIMUM PEAK STAGE			8.01	Jul 2	24.00	Mar 25, 1947
ANNUAL RUNOFF (AC-FT)	153,400		243,500		385,300	
10 PERCENT EXCEEDS	507		875		1,150	
50 PERCENT EXCEEDS	50		95		72	
90 PERCENT EXCEEDS	3.5		17		0.75	

e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.10	---	---	---	---	---	---	1.08	2.57	6.74	1.46	0.96
2	1.12	---	---	---	---	---	---	1.07	4.29	7.40	1.39	0.94
3	1.04	3.52	---	---	---	3.62	---	1.03	4.26	5.60	1.38	0.92
4	---	2.94	---	---	---	3.67	---	0.99	3.86	4.66	1.44	0.97
5	1.01	---	---	---	---	3.71	---	0.97	5.27	4.22	1.45	1.01
6	1.01	2.17	---	---	---	3.82	---	0.94	4.59	3.94	1.34	0.97
7	1.00	1.96	---	---	---	4.01	---	1.10	4.32	3.61	1.26	0.96
8	0.98	1.81	---	---	---	4.24	1.51	2.27	5.25	3.38	1.21	0.94
9	1.02	1.70	---	---	---	---	1.46	2.54	4.47	3.20	1.19	0.92
10	0.99	1.62	---	---	---	---	1.42	2.48	4.21	3.00	1.29	0.89
11	---	---	---	---	---	---	---	2.20	3.91	2.81	1.74	0.86
12	0.99	---	---	---	---	---	---	3.68	3.29	2.63	2.13	0.84
13	0.99	---	---	---	---	---	---	3.20	2.94	2.50	2.21	0.94
14	0.99	---	---	---	---	---	---	2.95	2.98	3.05	1.93	0.88
15	1.02	---	---	---	---	3.07	1.34	2.84	3.57	---	1.74	0.85
16	1.05	---	---	---	---	2.72	1.32	2.77	3.11	2.22	1.53	0.84
17	1.06	---	---	---	---	2.40	1.30	4.64	2.79	3.30	2.44	0.82
18	1.07	---	---	---	---	2.43	1.25	4.66	2.81	3.40	2.30	0.83
19	1.06	---	---	---	---	2.49	1.22	4.42	2.81	2.45	1.85	0.82
20	1.08	---	---	---	---	2.70	1.21	4.33	2.70	1.99	1.72	---
21	1.07	---	---	---	---	2.77	1.18	4.96	2.51	---	1.65	---
22	1.08	---	---	---	---	3.01	1.16	4.66	3.15	---	1.53	---
23	1.08	---	---	---	---	---	1.24	4.58	3.56	1.58	1.43	0.98
24	1.08	---	---	---	---	---	1.24	3.83	3.62	1.81	1.86	0.87
25	1.09	---	---	---	---	---	1.18	3.59	2.84	1.94	1.73	0.80
26	1.12	---	---	---	---	---	1.12	2.95	2.94	1.65	1.38	0.82
27	1.23	---	---	---	---	---	1.24	2.71	3.76	1.61	1.20	0.84
28	---	---	---	---	---	---	1.23	2.59	3.03	2.15	1.13	0.86
29	---	---	---	---	---	---	1.17	2.52	5.49	1.98	1.10	0.84
30	---	---	---	---	---	---	1.13	2.44	6.77	1.78	1.06	0.82
31	---	---	---	---	---	---	---	2.39	---	1.56	1.01	---
MEAN	---	---	---	---	---	---	---	2.82	3.72	---	1.55	---
MAX	---	---	---	---	---	---	---	4.96	6.77	---	2.44	---
MIN	---	---	---	---	---	---	---	0.94	2.51	---	1.01	---

06337000 LITTLE MISSOURI RIVER NEAR WATFORD CITY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
MAR													
30...	1315	434	--	8.2	6.8	616	612	9.0	6.5	17.1	6.80	6.40	5
AUG													
25...	1300	128	8.8	8.0	8.2	1,560	1,510	21.5	18.3	33.0	12.7	8.60	10

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
MAR													
30...	101	74	156	3.8	.17	7.92	150	381	454	289	<1	1.3	27.0
AUG													
25...	276	80	246	7.7	.36	7.33	531	1,020	354	<50	<1	8.3	38.6

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR													
30...	<1	80	<1	<1	8.0	740	1.32	30	8.50	<1	<1	<1.0	8.3
AUG													
25...	<1	250	<1	<1	9.5	20	<1	<10	5.95	31.7	<1	<1.0	2.6

Remark codes used in this table:
< -- Less than.

06338000 LAKE SAKAKAWEA NEAR RIVERDALE, ND

LOCATION.--Lat 47°30'10", long 101°25'50", in S$^1/_2$ sec.31, T.147 N., R.84 W., Mercer County, Hydrologic Unit 10110101, in control structure of Garrison Dam, 2.5 mi west of Riverdale, 14 mi upstream from Knife River, and at mile 1,389.9.

DRAINAGE AREA.--181,400 mi^2, approximately.

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1966, published as Garrison Reservoir near Riverdale.

REVISED RECORDS.--WSP 1559: 1957(M).

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth-fill dam; storage began in November 1953. Maximum capacity, 24,200,000 acre-ft below elevation 1,854.0 ft, top of 29-ft gates. Normal maximum, 22,700,000 acre-ft below elevation 1,850.0 ft, of which about 4,300,000 acre-ft is designated for flood control. Elevation of crest of spillway, 1,825.0 ft, surmounted by radial gates. Inactive storage, 5,000,000 acre-ft below elevation 1,775.0 ft. Dead storage, zero at elevation 1,672.0 ft. Snake Creek arm of the reservoir has connecting gate to main reservoir, with sill at elevation 1,810 ft. Figures herein represent total contents.

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers. Elevations are observed elevations at midnight on the last day of each month. Contents are computed based on reservoir inflow, reservoir outflow, evaporation, and rainfall; and are adjusted for wind effect.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 24,368,000 acre-ft, July 25, 1975, elevation, 1,854.6 ft; minimum since first reaching normal maximum level in July of 1969, 10,034,000 acre-ft, May 11, 2005, elevation, 1,805.8 ft, May 11, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,664,000 acre-ft, July 17, elevation, 1,817.7 ft; minimum contents, 10,034,000 acre-ft, May 11, elevation, 1,805.8 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,813.3	11,645,000	--
Oct. 31	1,813.0	11,589,000	-56,000
Nov. 30	1,812.3	11,422,000	-167,000
Dec. 31	1,810.0	10,936,000	-486,000
CAL YR 2004	--	--	-1,945,000
Jan. 31	1,808.4	10,574,000	-362,000
Feb. 28	1,808.2	10,538,000	-36,000
Mar. 31	1,808.7	10,632,000	+94,000
Apr. 30	1,806.6	10,189,000	-443,000
May 31	1,808.8	10,665,000	+476,000
June 30	1,814.9	12,026,000	+1,361,000
July 31	1,817.2	12,591,000	+565,000
Aug. 31	1,815.8	12,216,000	-375,000
Sept. 30	1,814.1	11,861,000	-355,000
WTR YR 2005	--	--	+216,000

06338490 MISSOURI RIVER AT GARRISON DAM, ND

LOCATION.--Lat 47°30'08", long 101°25'50", in S½ sec.31, T.147 N., R.84 W., Mercer County, Hydrologic Unit 10130101, in control structure of Garrison Dam, 2.5 mi west of Riverdale, 14 mi upstream from Knife River, and at mile 1,389.9.

DRAINAGE AREA.--181,400 mi^2, approximately.

WATER-DISCHARGE RECORDS

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

GAGE.--Flow meter and gate readings.

REMARKS.--Records good. Many diversions above station. Flow regulated by Garrison Dam. Prior to October 1969 records were obtained at a site 9.1 mi downstream. Discharges at the downstream site were generally about 7 percent greater than those furnished by the U.S. Army Corps of Engineers for the present site.

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,200	11,400	15,300	15,400	16,100	12,000	11,900	18,000	15,100	14,800	15,400	15,900
2	11,600	13,700	15,100	15,400	13,300	12,200	14,500	17,000	15,200	15,100	15,100	15,700
3	11,400	16,000	15,000	15,600	14,300	12,800	17,400	16,900	15,100	14,400	15,100	15,600
4	11,100	16,500	15,100	15,600	13,000	12,300	19,600	16,900	15,200	14,900	14,900	15,600
5	11,300	11,300	15,300	15,800	13,600	12,300	19,600	17,800	15,100	15,000	15,300	15,500
6	11,500	11,300	15,000	15,600	13,200	12,600	19,700	17,300	15,200	15,100	15,100	14,800
7	11,300	12,100	15,200	15,600	13,100	12,000	16,900	18,700	15,100	15,200	14,700	15,100
8	11,500	11,400	15,300	15,200	13,000	12,100	16,900	18,200	15,100	15,000	15,200	14,900
9	11,300	11,500	15,100	15,200	12,800	12,000	16,700	18,400	15,100	14,900	15,300	15,200
10	11,600	11,400	15,300	15,100	13,000	12,000	16,900	17,300	15,200	15,000	15,500	15,500
11	11,600	11,600	15,000	15,300	13,300	12,000	16,800	18,700	15,200	15,200	15,100	15,200
12	11,400	11,500	15,100	15,300	13,200	12,500	16,900	17,500	15,100	15,200	15,200	15,100
13	11,500	11,600	15,100	15,400	13,100	12,100	16,800	18,400	15,000	15,500	15,400	15,400
14	11,700	11,700	15,000	15,400	13,500	12,000	17,700	16,700	15,100	15,200	15,600	15,000
15	12,200	12,300	14,900	15,800	13,100	11,900	17,600	16,200	15,100	15,700	15,300	15,100
16	11,800	11,600	15,100	15,400	13,000	11,800	17,300	15,400	15,000	15,400	15,600	15,500
17	11,800	11,600	14,800	15,500	13,200	11,900	17,000	15,600	15,000	15,000	15,400	15,400
18	11,800	11,800	15,300	14,600	13,400	11,900	17,100	14,900	14,900	15,400	15,700	12,100
19	11,700	11,900	15,100	15,000	13,100	11,900	17,600	15,900	14,400	15,500	15,600	12,200
20	11,300	12,700	15,400	15,300	13,000	12,000	17,700	15,500	15,100	15,400	15,600	12,600
21	11,400	12,700	15,200	15,200	12,500	11,900	18,600	16,100	14,500	15,400	15,700	12,700
22	11,500	12,700	15,300	15,200	12,100	12,200	19,000	16,100	15,100	15,400	15,600	12,500
23	11,500	12,700	15,300	15,600	11,900	12,200	17,700	15,900	15,300	15,000	15,500	12,500
24	11,600	12,900	15,800	15,200	11,800	12,000	17,000	15,700	14,700	15,200	15,600	12,500
25	11,400	13,700	15,900	15,700	11,600	12,100	17,800	14,700	14,800	15,000	16,000	12,500
26	11,300	13,900	15,300	15,800	12,000	12,500	17,200	15,100	14,800	15,400	16,100	12,900
27	12,000	14,600	14,900	15,600	12,100	12,100	18,300	15,000	14,800	14,900	15,900	12,400
28	11,500	13,800	15,200	15,500	12,100	12,200	18,600	15,300	15,100	15,400	16,200	12,500
29	11,500	15,200	14,700	16,000	---	12,000	17,600	15,300	14,900	15,400	16,400	12,800
30	11,900	15,100	15,500	15,700	---	11,900	17,200	15,300	14,900	15,300	15,900	12,700
31	11,380	---	15,300	15,800	---	11,900	---	15,300	---	15,100	15,900	---
TOTAL	356,580	382,200	470,900	478,800	363,400	375,300	521,600	511,100	450,200	470,400	480,900	423,400
MEAN	11,500	12,740	15,190	15,450	12,980	12,110	17,390	16,490	15,010	15,170	15,510	14,110
MAX	12,200	16,500	15,900	16,000	16,100	12,800	19,700	18,700	15,300	15,700	16,400	15,900
MIN	10,200	11,300	14,700	14,600	11,600	11,800	11,900	14,700	14,400	14,400	14,700	12,100
AC-FT	707,300	758,100	934,000	949,700	720,800	744,400	1,035,000	1,014,000	893,000	933,000	953,900	839,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2005, BY WATER YEAR (WY)

MEAN	19,030	20,290	20,510	23,050	24,280	19,610	19,230	21,590	23,640	24,870	24,280	20,620
MAX	49,450	42,350	29,530	30,500	31,500	28,210	37,500	38,490	42,430	61,800	54,130	46,570
(WY)	(1998)	(1998)	(1970)	(1979)	(1976)	(1983)	(1972)	(1972)	(1997)	(1975)	(1975)	(1997)
MIN	9,945	10,110	12,900	13,070	12,980	10,370	10,280	10,560	11,080	13,220	13,960	10,990
(WY)	(1994)	(1993)	(2002)	(2002)	(2005)	(1993)	(1993)	(1986)	(1995)	(1995)	(2001)	(1990)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1970 - 2005	
ANNUAL TOTAL	6,069,330		5,284,780			
ANNUAL MEAN	16,580		14,480		21,740	
HIGHEST ANNUAL MEAN					33,000	1975
LOWEST ANNUAL MEAN					13,710	1993
HIGHEST DAILY MEAN	24,100	Feb 25	19,700	Apr 6	65,200	Jul 25, 1975
LOWEST DAILY MEAN	10,200	Oct 1	10,200	Oct 1	4,100	Mar 25, 1997
ANNUAL SEVEN-DAY MINIMUM	11,200	Oct 1	11,200	Oct 1	7,960	Mar 22, 1997
ANNUAL RUNOFF (AC-FT)	12,040,000		10,480,000		15,750,000	
10 PERCENT EXCEEDS	21,500		16,900		31,300	
50 PERCENT EXCEEDS	17,000		15,100		20,200	
90 PERCENT EXCEEDS	11,700		11,700		12,600	

06338490 MISSOURI RIVER AT GARRISON DAM, ND—Continued
(National Stream-Quality Accounting Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

REMARKS.--Quality assurance samples also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
OCT													
19...	1015	12,500	2.3	.071	.050	711	9.4	95	8.3	E8.0	578	653	4.0
MAR													
28...	1000	15,000	<2.0	.072	.050	703	14.0	110	8.0	8.4	602	651	10.0
MAY													
04...	1030	19,200	<2.0	.072	.050	715	11.3	94	7.9	8.2	588	648	9.5
JUN													
15...	0945	23,000	5.5	.065	.045	--	11.6	--	8.4	8.3	580	640	--
AUG													
31...	1030	15,800	3.2	.070	.049	709	6.3	69	8.0	8.3	653	681	17.5

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

Date	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
OCT													
19...	12.5	51.5	20.9	4.31	2	55.3	35	160@c	158	188	2	9.48	.6
MAR													
28...	2.0	53.3	21.4	4.10	2	57.8	36	164@c	157	188	2	9.28	.7
MAY													
04...	4.8	52.2	21.2	4.09	2	56.1	35	154@c	--	--	--	9.12	.6
JUN													
15...	11.0	54.7	21.6	3.95	2	54.7	34	165@c	158	189	2	9.27	.7
AUG													
31...	16.0	54.0	22.2	4.11	2	56.1	35	168@c	162	196	.0	9.98	.7

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

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Organic nitrogen, water, fltrd, mg/L (00607)
OCT													
19...	5.85	150	394	13,800	410	.20	.23	E.007n	.04	.044	.002	<.02	--
MAR													
28...	5.97	154	401	17,300	428	.31	.26	.017	.05	.057	.004	<.02	.29
MAY													
04...	5.93	148	391	20,900	402	.27	.17c	.015	.06	.064	.003	.03	.25
JUN													
15...	5.91	151	398	25,500	410	.34	.21	.010	--	.072	E.001n	<.02	.33
AUG													
31...	5.82	157	408	17,700	416	.38	.22	E.008n	--	.117	E.001n	.03	--

06338490 MISSOURI RIVER AT GARRISON DAM, ND—Continued

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

Date	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Arsenic water, fltrd, ug/L (01000)
OCT													
19...	--	<.006	E.003n	.007	.24	.27	.2	<.1	.2	2.8	.5	1.1	2.0
MAR													
28...	.24	<.006	E.003n	.008	.37	.31	.2	<.1	.2	2.7	.6	.9	2.1
MAY													
04...	.15	<.006	E.003n	<.004	.33	.23	.2	<.1	.2	2.9	.8	.7	2.0
JUN													
15...	.20	<.006	<.004	.011	.42	.28	.2	<.1	.2	4.5	.6	1.0	1.8
AUG													
31...	--	<.006	E.003n	.008	.50	.34	.2	<.1	.2	3.2	.4	.6	1.7

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

Date	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Lithium water, fltrd, ug/L (01130)	Selenium, water, fltrd, ug/L (01145)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atrazine, water, fltrd, ug/L (39632)
OCT													
19...	130	<6	48.6	1.0	488	1.2	--b	--b	--b	--b	--b	--b	--b
MAR													
28...	125	<6	48.2	1.0	541	2.4	<.006	<.006mc	<.006	<.005	<.005	97.8	<.007
MAY													
04...	126	<6	48.3	.9	503	1.4	<.006	<.006mc	<.006	<.005	<.005	82.4	E.003t
JUN													
15...	146	<6	60.2	.7	503	1.1	<.006	<.006mc	<.006	<.005	<.005	103	<.007
AUG													
31...	148	6	54.1	.7	517	1.0	<.006	<.006mc	<.006	<.005	<.005	80.5	<.007

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

Date	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)
OCT													
19...	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
MAR													
28...	<.050mc	<.010	<.004	<.041mc	<.020mc	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02
MAY													
04...	<.050mc	<.010	<.004	<.041mc	<.020mc	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02
JUN													
15...	<.050mc	<.010	<.004	<.041mc	<.020mc	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02mc
AUG													
31...	<.050mc	<.010	<.004	<.041mc	<.020mc	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02mc

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

Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)
OCT													
19...	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
MAR													
28...	<.004	<.009	<.005	<.029mc	<.013	<.024	<.016mc	<.003	<.004	<.035	<.027	<.015	<.006
MAY													
04...	<.004	<.009	<.005	<.029mc	<.013	<.024	<.016mc	<.003	<.004	<.035	<.027	<.015	E.003n
JUN													
15...	<.004	<.009	<.005	<.029mc	<.013	<.024	<.016mc	<.003	<.004	<.035	<.027	<.015	<.006
AUG													
31...	<.004	<.009	<.005	<.029mc	<.013	<.024	<.016mc	<.003	<.004	<.035	<.027	<.015	<.006

06338490 MISSOURI RIVER AT GARRISON DAM, ND—Continued

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

Date	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)
OCT													
19...	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b	--b
MAR													
28...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02
MAY													
04...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02
JUN													
15...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02
AUG													
31...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02

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

Date	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT										
19...	--b	--b	--b	--b	--b	--b	--b	--	--x	--
MAR										
28...	<.005	<.02	<.034mc	<.02	<.010	<.006	<.009	81	.0	.00
MAY										
04...	<.005	<.02	<.034mc	<.02	<.010	<.006	<.009	96	2	104
JUN										
15...	<.005	<.02	<.034mc	<.02	<.010	<.006	<.009	100	3	186
AUG										
31...	<.005	<.02	<.034mc	<.02	<.010	<.006	<.009	100	7	299

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL
t -- Below the long-term MDL

Null value qualifier codes used in this table:
b -- Sample broken/spilled in shipment
x -- Result failed quality assurance review

06338490 MISSOURI RIVER AT GARRISON DAM, ND—Continued

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

Date	Time	Sampling depth, meters (00098)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT						
19...	1034	1.0	9.4	8.3	653	12.7
19...	1035	1.0	9.4	8.3	653	12.7
19...	1036	1.0	9.5	8.3	654	12.7
MAR						
28...	1005	1.0	14.0	7.9	649	1.9
28...	1006	1.0	14.0	8.0	651	1.9
28...	1007	1.0	13.9	8.0	653	1.9
MAY						
04...	1031	1.0	11.6	7.9	647	4.8
04...	1032	1.0	11.2	7.9	648	4.8
04...	1033	1.0	11.2	7.9	648	4.8
JUN						
15...	0955	.20	11.5	8.4	640	10.9
15...	0956	.20	11.6	8.4	640	11.0
15...	0957	.20	11.7	8.4	640	11.0
AUG						
31...	1100	1.0	6.3	8.0	682	16.0
31...	1101	1.0	6.3	8.0	681	16.0
31...	1102	1.0	6.5	8.1	681	16.5

06339010 MISSOURI RIVER ABOVE STANTON, ND

LOCATION.--Lat 47°21'45", long 101°21'25", SE¼NE¼SE¼ sec.22, T.145 N., R.84 W., McLean County, Hydrologic Unit 10130101, on left bank 9 mi south of Riverdale and at mile 1,379.

DRAINAGE AREA.--181,400 mi^2, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage regulated completely by releases from Garrison Dam (station 06338490) 13 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 73.34 ft, Jan. 13, 2000; backwater from ice, may have been higher during subsequent period of missing winter record; minimum daily recorded, 62.07 ft, Sept. 18, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 69.16 ft, Jan. 14 and 16; minimum recorded, 62.29 ft, Oct. 1.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.98	---	63.76	---	65.50	63.45	63.37	64.57	64.05	64.07	64.11	64.22
2	63.41	---	64.07	---	64.38	63.44	63.88	64.54	64.11	64.08	64.08	64.18
3	63.27	---	64.09	---	64.14	63.51	64.33	64.31	64.05	64.02	64.11	64.06
4	63.32	---	64.03	---	63.87	63.53	64.93	64.45	64.01	64.04	64.02	64.29
5	63.34	---	63.39	---	63.81	63.57	64.94	64.57	64.03	64.01	64.08	64.02
6	63.40	---	63.94	---	64.08	63.51	64.94	64.48	64.12	64.05	64.11	64.19
7	63.36	---	63.78	---	64.22	63.47	64.66	64.92	64.07	64.09	63.94	64.07
8	63.42	---	64.00	---	63.89	63.42	64.25	64.46	64.09	64.14	64.09	64.05
9	63.33	---	63.91	---	63.70	63.45	64.40	64.70	64.08	64.05	64.11	64.02
10	63.40	63.24	63.71	---	63.75	63.40	64.39	64.70	64.12	64.09	64.17	64.12
11	63.36	63.29	64.02	68.48	63.65	63.41	64.41	64.59	64.10	64.10	64.06	64.13
12	63.36	63.24	63.94	68.31	63.76	63.49	64.45	64.56	64.06	64.02	64.10	63.95
13	63.40	63.40	---	---	63.71	63.48	64.41	64.45	64.04	64.13	64.11	64.20
14	63.45	63.32	---	---	63.66	63.48	64.46	64.52	64.04	64.10	64.21	64.01
15	63.30	63.42	64.17	68.34	63.77	63.37	64.66	64.41	64.04	64.22	64.11	64.17
16	63.47	63.50	63.96	---	63.73	63.36	64.31	64.17	64.04	64.11	64.20	64.13
17	63.41	63.28	63.88	68.37	63.69	63.39	64.48	64.14	64.04	64.03	64.12	64.12
18	63.46	63.44	---	68.21	63.64	63.34	64.45	64.07	64.04	64.14	64.16	63.63
19	63.40	63.34	---	67.97	63.75	63.45	64.59	64.13	63.93	64.15	64.20	63.47
20	63.29	63.50	---	67.75	63.73	63.52	64.49	64.18	64.01	64.11	64.17	63.60
21	63.30	63.59	---	67.60	63.62	63.38	64.76	64.43	63.98	64.12	64.21	63.53
22	63.29	63.55	---	67.39	63.47	63.47	64.63	64.20	64.01	64.11	64.21	63.53
23	63.32	63.50	---	67.55	63.38	63.46	64.60	64.23	64.02	64.05	64.20	63.53
24	63.31	63.51	---	67.51	63.44	63.42	64.57	64.16	64.09	64.08	64.23	63.55
25	63.37	63.69	---	67.40	63.34	63.38	64.48	63.94	63.96	64.06	64.17	63.51
26	63.27	63.89	---	67.14	63.43	63.59	64.49	64.03	64.00	64.09	64.08	63.58
27	63.36	63.85	---	66.95	63.49	63.42	64.52	64.05	64.00	64.11	64.44	63.50
28	63.40	63.38	---	66.89	63.38	63.58	64.69	64.03	64.06	64.02	64.32	63.49
29	63.35	63.71	---	66.93	---	63.40	64.68	64.08	64.07	64.12	64.23	63.56
30	63.25	63.85	---	66.23	---	63.41	64.44	64.09	64.00	64.07	64.18	63.43
31	63.41	---	---	65.63	---	63.40	---	64.09	---	64.08	64.29	---
MEAN	63.35	---	---	---	63.78	63.45	64.49	64.33	64.04	64.09	64.16	63.86
MAX	63.47	---	---	---	65.50	63.59	64.94	64.92	64.12	64.22	64.44	64.29
MIN	62.98	---	---	---	63.34	63.34	63.37	63.94	63.93	64.01	63.94	63.43

06339100 KNIFE RIVER AT MANNING, ND

LOCATION.--Lat 47°14'10", long 102°46'10", in SE¼NW¼ sec.6, T.143 N., R.95 W., Dunn County, Hydrologic Unit 10130201, on left bank 50 ft downstream from bridge on State Highway 22 and 0.4 mi north of Manning.

DRAINAGE AREA.--205 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,156.55 ft above National Geodetic Vertical Datum of 1929.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.43	2.4	0.41	e0.29	4.0	1.5	34	0.95	12	29	0.58	0.06
2	0.30	1.4	0.41	e0.33	3.9	1.5	24	1.0	14	40	0.46	0.06
3	0.22	1.2	0.42	e0.33	3.6	1.9	18	1.3	36	27	0.36	0.05
4	0.19	0.75	0.41	e0.36	e3.3	2.8	13	1.2	48	16	0.29	0.05
5	0.17	0.53	0.47	e0.35	e3.0	3.3	9.2	1.2	28	10	0.26	0.06
6	0.18	0.50	0.47	e0.33	e2.7	4.5	7.3	1.3	18	6.5	0.20	0.07
7	0.21	0.44	0.48	e0.35	e2.4	7.4	5.9	1.4	41	4.1	0.16	0.07
8	0.28	0.40	0.51	e0.38	e2.2	7.7	4.8	2.4	217	3.1	0.12	0.07
9	0.32	0.46	0.49	e0.39	e2.0	8.5	3.9	2.9	79	2.2	0.13	0.06
10	0.39	0.52	0.54	e0.38	1.8	8.1	2.8	5.1	55	1.6	0.27	0.06
11	0.54	0.48	e0.56	e0.34	1.7	7.1	2.6	5.4	38	1.1	0.42	0.11
12	0.58	0.44	0.59	e0.33	1.9	7.4	2.8	5.7	23	0.82	0.24	0.15
13	0.74	0.42	0.61	e0.28	2.1	4.6	2.4	6.8	15	0.84	0.16	0.13
14	0.80	0.43	0.54	e0.22	e2.2	5.1	2.1	7.9	10	0.76	0.12	0.05
15	0.73	0.46	0.54	e0.17	e2.1	3.7	1.8	11	7.3	0.70	0.09	0.03
16	0.76	e0.49	0.63	e0.19	e2.0	2.6	1.8	11	5.4	0.59	0.07	0.02
17	0.83	0.53	0.53	e0.17	1.9	2.2	1.7	12	4.3	0.88	0.08	0.02
18	0.85	0.54	0.61	e0.18	1.8	2.0	1.7	16	3.5	1.2	0.11	0.02
19	1.2	0.44	0.50	e0.19	1.6	1.8	1.8	66	4.3	1.1	0.11	0.03
20	1.3	0.44	0.57	e0.20	1.5	1.7	2.1	65	3.2	0.98	0.12	0.05
21	1.5	e0.42	e0.48	e0.22	1.4	1.6	2.2	61	3.6	0.96	0.10	0.05
22	1.9	e0.38	e0.26	e0.23	1.3	1.8	1.9	62	3.1	1.0	0.07	0.05
23	2.0	0.38	e0.19	e0.26	1.4	2.4	1.7	38	2.7	1.7	0.07	0.05
24	2.2	0.38	e0.20	e0.29	1.5	2.5	1.5	24	2.2	2.1	0.12	0.06
25	2.0	0.37	e0.26	e0.35	1.7	2.3	1.2	16	2.0	2.3	e0.09	0.06
26	1.9	e0.37	e0.28	e0.45	1.7	3.9	1.1	11	2.4	2.2	0.06	0.06
27	1.9	e0.36	e0.27	e0.60	1.7	22	0.93	7.1	2.8	2.1	0.04	0.08
28	2.1	e0.35	e0.31	e0.95	1.6	328	0.82	5.1	2.5	2.0	0.04	0.10
29	2.5	e0.37	e0.34	e1.5	---	315	0.71	4.7	7.5	1.6	0.04	0.10
30	2.9	e0.39	e0.33	e2.3	---	118	0.82	3.7	20	1.0	0.05	0.11
31	3.4	---	e0.31	e3.3	---	57	---	3.9	---	0.68	0.05	---
TOTAL	35.32	17.04	13.52	16.21	60.0	939.9	156.58	462.05	710.8	166.11	5.08	1.94
MEAN	1.14	0.57	0.44	0.52	2.14	30.3	5.22	14.9	23.7	5.36	0.16	0.06
MAX	3.4	2.4	0.63	3.3	4.0	328	34	66	217	40	0.58	0.15
MIN	0.17	0.35	0.19	0.17	1.3	1.5	0.71	0.95	2.0	0.59	0.04	0.02
AC-FT	70	34	27	32	119	1,860	311	916	1,410	329	10	3.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	3.70	1.84	1.33	2.93	15.3	87.5	45.8	15.0	16.6	11.4	2.68	3.80
MAX	54.1	8.43	3.39	30.5	89.5	399	485	104	91.5	100	32.6	68.5
(WY)	(1983)	(1999)	(1999)	(1974)	(1986)	(1972)	(1975)	(1970)	(1970)	(1997)	(1983)	(1978)
MIN	0.00	0.06	0.07	0.00	0.20	1.37	1.32	0.45	0.08	0.02	0.00	0.00
(WY)	(1991)	(1991)	(1991)	(1991)	(2001)	(1990)	(1990)	(1993)	(1992)	(1992)	(1988)	(1990)

06339100 KNIFE RIVER AT MANNING, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005	
ANNUAL TOTAL	3,418.67		2,584.55			
ANNUAL MEAN	9.34		7.08		17.4	
HIGHEST ANNUAL MEAN					48.1	1975
LOWEST ANNUAL MEAN					0.90	1990
HIGHEST DAILY MEAN	701	Mar 10	328	Mar 28	3,500	Mar 21, 1997
LOWEST DAILY MEAN	0.05	Aug 29	0.02	Sep 16	0.00	Sep 18, 1972
ANNUAL SEVEN-DAY MINIMUM	0.07	Aug 28	0.03	Sep 14	0.00	Aug 17, 1973
MAXIMUM PEAK FLOW			720	Mar 28	[a]3,800	Mar 18, 2003
MAXIMUM PEAK STAGE			11.37	Mar 28	[b]17.63	Mar 18, 2003
ANNUAL RUNOFF (AC-FT)	6,780		5,130		12,570	
10 PERCENT EXCEEDS	5.3		11		19	
50 PERCENT EXCEEDS	0.75		1.1		1.5	
90 PERCENT EXCEEDS	0.24		0.10		0.14	

a About
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.48	6.95	6.07	---	6.52	6.23	7.17	5.95	6.50	7.11	5.90	5.77
2	6.44	6.85	6.07	---	6.52	6.23	6.99	5.97	6.73	7.29	5.86	5.77
3	6.41	6.82	6.07	---	6.49	6.29	6.85	6.02	7.16	7.08	5.81	5.77
4	6.41	6.75	6.07	---	6.52	6.40	6.71	6.01	7.41	6.83	5.78	5.78
5	6.42	6.70	6.09	---	6.56	6.46	6.58	6.01	7.09	6.63	5.78	5.79
6	6.45	6.68	6.09	---	6.57	6.55	6.50	6.03	6.85	6.48	5.74	5.81
7	6.47	6.66	6.10	---	6.67	6.72	6.43	6.05	7.15	6.34	5.71	5.82
8	6.51	6.64	6.10	---	e6.55	6.74	6.37	6.20	8.66	6.26	5.68	5.82
9	6.52	6.67	6.09	---	6.39	6.77	6.31	6.24	7.74	6.18	5.68	5.82
10	6.55	6.70	6.11	---	6.28	6.75	6.21	6.41	7.49	6.11	5.80	5.82
11	6.59	6.68	e6.10	---	6.26	6.71	6.21	6.43	7.27	6.01	5.89	5.88
12	6.61	6.66	6.13	---	6.29	6.72	6.24	6.44	6.99	5.96	5.80	5.92
13	6.64	6.65	6.14	---	6.33	6.56	6.20	6.50	6.79	5.96	5.75	5.91
14	6.65	6.66	6.11	---	6.41	6.60	6.16	6.55	6.62	5.94	5.71	5.84
15	6.64	6.67	6.11	---	6.41	6.50	6.12	6.68	6.47	5.92	5.69	5.82
16	6.65	e6.68	6.14	---	6.34	6.39	6.11	6.67	6.36	5.88	5.67	5.82
17	6.66	6.70	6.10	---	6.29	6.33	6.10	6.71	6.28	5.97	5.69	5.83
18	6.66	6.70	6.13	5.89	6.27	6.31	6.10	6.81	6.21	6.04	5.72	5.83
19	6.72	6.66	6.09	5.96	6.25	6.28	6.12	7.59	6.28	6.03	5.73	5.85
20	6.74	6.66	6.11	6.00	6.23	6.26	6.16	7.61	6.18	6.00	5.75	5.88
21	6.76	6.52	e6.08	---	6.20	6.25	6.18	7.54	6.22	5.99	5.74	5.89
22	6.82	6.07	---	---	6.19	6.28	6.13	7.57	6.17	6.01	5.71	5.89
23	6.82	6.06	---	5.95	6.20	6.37	6.10	7.27	6.13	6.14	5.72	5.89
24	6.84	6.06	---	6.04	6.22	6.37	6.07	7.01	6.07	6.19	5.77	5.90
25	6.82	6.06	5.96	6.13	6.26	6.35	6.01	6.82	6.04	6.22	e5.78	5.89
26	6.82	6.08	5.97	6.29	6.25	6.45	5.98	6.63	6.09	6.20	5.73	5.90
27	6.81	6.09	5.97	6.33	6.26	6.99	5.94	6.46	6.14	6.20	5.71	5.91
28	6.83	6.11	5.99	6.50	6.24	9.24	5.91	6.34	6.11	6.18	5.71	5.93
29	6.87	6.13	6.01	6.83	---	9.20	5.88	6.31	6.47	6.12	5.72	5.93
30	6.95	6.12	6.04	6.82	---	8.02	5.91	6.23	6.88	6.01	5.75	5.94
31	7.01	---	6.05	6.60	---	7.48	---	6.25	---	5.92	5.75	---
MEAN	6.66	6.51	---	---	6.36	6.74	6.26	6.56	6.68	6.23	5.75	5.85
MAX	7.01	6.95	---	---	6.67	9.24	7.17	7.61	8.66	7.29	5.90	5.94
MIN	6.41	6.06	---	---	6.19	6.23	5.88	5.95	6.04	5.88	5.67	5.77

e Estimated

06339100 KNIFE RIVER AT MANNING, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
30...	1645	96	8.1	6.5	362	360	12.5	3.5	11.1	4.90	7.20	3	51.9
JUL													
29...	1130	1.4	8.5	8.6	1,510	1,520	26.0	20.0	33.9	19.2	9.10	10	288

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
30...	66	104	3.7	.12	7.74	61.7	205	54.8	322	<1	1.5	23.6	<1
JUL													
29...	78	437	11.7	.49	8.95	350	975	3.59	101	<1	6.2	73.5	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
30...	70	<1	<1	3.7	590	<1	100	4.95	<1	<1	<1.0	3.7
JUL												
29...	400	<1	1	5.8	250	<1	10	6.39	5.3	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

06339500 KNIFE RIVER NEAR GOLDEN VALLEY, ND

LOCATION.--Lat 47°09'16", long 102°03'34", in NW¼NW¼NW¼ sec.2, T.142 N., R.90 W., Mercer County, Hydrologic Unit 10130201, on right bank 6 ft downstream from highway bridge, 4.5 mi downstream from Elm Creek, and 9 mi south of Golden Valley.

DRAINAGE AREA.--1,230 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to November 1906, April 1907 to November 1915, April 1916 to October 1919, and October 1921 to September 1924 (published as "at Broncho" or "near Broncho"), and May 1943 to current year. Monthly discharge only for some periods published in WSP 1309.

REVISED RECORDS (WATER YEARS).--WSP 1006:0 Drainage area. WSP 1279: 1904, 1914-19(M), 1922-24(M), 1944.

GAGE.--Water-stage recorder. Datum of gage is 1,847.13 ft above National Geodetic Vertical Datum of 1929. See WSP 1729 or 1917 for history of changes prior to May 1, 1946.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	41	7.0	e2.6	e4.5	e8.8	293	8.6	26	652	6.3	1.2
2	2.9	56	6.9	e2.4	e5.0	e8.9	179	7.9	77	453	6.1	1.2
3	2.7	42	7.0	e2.3	e5.8	e9.7	118	7.7	207	314	6.0	1.3
4	2.7	36	7.0	e2.1	e8.0	e11	85	8.2	445	213	5.8	3.2
5	2.4	33	6.6	e2.0	e12	e12	63	7.3	227	192	5.6	1.7
6	2.4	27	6.4	e2.0	e11	e14	50	6.4	135	142	6.0	1.4
7	2.6	20	e6.4	e1.9	e10	e16	38	5.9	169	103	6.1	1.5
8	2.8	15	e6.3	e1.9	e9.4	e16	32	7.7	709	77	6.2	1.4
9	3.0	13	e6.3	e1.8	e8.6	e17	28	8.7	778	58	5.6	1.4
10	3.0	11	e6.5	e1.7	e8.1	e23	23	18	458	44	6.4	1.5
11	3.4	9.7	e6.6	e1.7	e8.4	e27	21	134	390	35	7.8	1.4
12	3.1	8.8	e6.5	e1.6	e8.6	e29	21	89	245	29	7.3	1.5
13	e3.1	8.1	e6.3	e1.6	e9.0	e25	19	64	171	24	6.4	1.8
14	4.3	7.6	e6.2	e1.5	e9.4	e23	18	50	130	21	5.9	1.8
15	e3.5	7.0	e6.3	e1.5	e9.8	e22	17	43	100	18	5.4	1.9
16	3.3	7.0	e6.5	e1.4	e9.3	e21	17	53	78	18	4.9	1.7
17	3.3	7.0	e6.3	e1.4	e9.0	e20	16	63	64	14	6.4	1.9
18	3.7	6.9	e6.0	e1.5	e8.7	e20	17	105	51	13	5.6	2.2
19	4.9	6.9	e5.7	e1.5	e8.4	e19	16	103	88	12	5.4	2.0
20	5.0	7.1	e5.0	e1.6	e8.0	e18	16	104	172	11	4.7	1.9
21	4.7	6.9	e4.3	e1.7	e8.2	e17	15	324	196	9.7	4.2	2.0
22	5.0	7.9	e3.8	e1.6	e8.3	e17	14	450	126	8.8	3.8	2.0
23	5.3	6.7	e3.3	e1.7	e8.4	e21	13	616	103	8.8	3.4	2.0
24	6.5	6.7	e3.0	e2.0	e8.4	e23	13	302	71	8.3	3.4	2.2
25	7.3	7.3	e3.1	e2.6	e8.5	e24	13	170	66	7.9	3.1	1.9
26	6.8	7.9	e3.1	e3.5	e8.5	e30	11	104	121	7.9	2.5	1.7
27	6.6	7.6	e3.2	e4.3	e8.6	e95	11	73	127	7.8	2.0	2.1
28	6.7	7.4	e3.3	e4.2	e8.7	185	10	54	107	7.6	1.8	2.1
29	10	7.3	e3.1	e4.1	---	183	9.5	41	628	7.4	1.6	2.3
30	17	7.2	e2.9	e4.0	---	263	9.0	33	725	7.2	1.4	2.6
31	21	---	e2.8	e4.1	---	468	---	27	---	6.8	1.3	---
TOTAL	162.0	443.0	163.7	69.8	238.6	1,686.4	1,205.5	3,088.4	6,990	2,531.2	148.4	54.8
MEAN	5.23	14.8	5.28	2.25	8.52	54.4	40.2	99.6	233	81.7	4.79	1.83
MAX	21	56	7.0	4.3	12	468	293	616	778	652	7.8	3.2
MIN	2.4	6.7	2.8	1.4	4.5	8.8	9.0	5.9	26	6.8	1.3	1.2
AC-FT	321	879	325	138	473	3,340	2,390	6,130	13,860	5,020	294	109

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	16.0	11.2	7.17	8.72	40.2	343	289	86.3	137	47.6	32.6	14.5
MAX	245	69.7	23.0	140	299	1,729	2,448	1,031	1,193	255	725	97.5
(WY)	(1983)	(1983)	(1983)	(1974)	(1982)	(1972)	(1952)	(1970)	(1914)	(1969)	(1918)	(1978)
MIN	0.46	1.93	0.52	0.03	0.00	2.30	6.98	1.42	1.03	1.91	0.28	0.12
(WY)	(1993)	(1962)	(1962)	(1962)	(1959)	(1964)	(1981)	(1923)	(1961)	(1992)	(1959)	(1992)

06339500 KNIFE RIVER NEAR GOLDEN VALLEY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	18,929.2		16,781.8			
ANNUAL MEAN	51.7		46.0		85.9	
HIGHEST ANNUAL MEAN					235	1982
LOWEST ANNUAL MEAN					5.38	1991
HIGHEST DAILY MEAN	2,660	Mar 11	778	Jun 9	10,300	Apr 17, 1950
LOWEST DAILY MEAN	1.8	Jul 27	1.2	Sep 1	0.00	Sep 6, 1905
ANNUAL SEVEN-DAY MINIMUM	2.1	Jul 26	1.4	Aug 28	0.00	Jan 22, 1959
MAXIMUM PEAK FLOW			1,060	Jun 8	[a]11,200	May 9, 1970
MAXIMUM PEAK STAGE			9.58	Jun 8	[b]26.70	Mar 26, 1943
ANNUAL RUNOFF (AC-FT)	37,550		33,290		62,240	
10 PERCENT EXCEEDS	57		123		115	
50 PERCENT EXCEEDS	6.3		7.9		10	
90 PERCENT EXCEEDS	2.9		1.9		2.1	

a Gage height, 25.84 ft
b From floodmark
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.92	4.85	4.16	4.10	4.17	4.25	6.72	4.13	4.68	7.87	4.04	3.76
2	3.92	5.08	4.15	4.10	4.18	4.25	6.07	4.11	5.37	7.16	4.03	3.76
3	3.90	4.89	4.16	4.11	4.22	4.27	5.63	4.10	6.33	6.61	4.03	3.76
4	3.90	4.81	4.16	4.10	4.27	4.31	5.33	4.12	7.40	6.11	4.02	3.90
5	3.88	4.76	4.14	4.08	4.67	4.36	5.10	4.09	6.44	6.00	4.02	3.80
6	3.88	4.64	4.13	4.06	4.63	4.43	4.94	4.05	5.88	5.68	4.03	3.78
7	3.89	4.51	4.16	4.04	4.55	4.52	4.77	4.03	6.10	5.39	4.03	3.78
8	3.91	4.41	4.15	4.04	4.49	4.50	4.67	4.10	8.29	5.16	4.03	3.77
9	3.92	4.36	4.16	4.06	---	4.57	4.59	4.14	8.39	4.97	4.02	3.78
10	3.92	4.31	4.16	4.07	---	4.72	4.51	4.33	7.17	4.80	4.04	3.78
11	3.96	4.25	4.17	4.07	---	4.78	4.47	5.76	6.92	4.66	4.10	3.78
12	3.93	4.22	4.16	4.08	---	4.86	4.46	5.37	6.28	4.57	4.08	3.80
13	3.93	4.20	4.15	4.09	---	4.72	4.43	5.11	5.87	4.48	4.04	3.84
14	4.01	4.18	4.13	e4.06	---	4.70	4.40	4.94	5.60	4.43	4.02	3.87
15	3.96	4.16	4.16	3.99	---	4.68	4.39	4.85	5.36	4.37	4.01	3.89
16	3.94	4.16	4.17	3.93	---	4.69	4.38	4.98	5.18	4.37	3.99	3.87
17	3.95	4.16	4.16	3.95	---	4.63	4.36	5.11	5.03	4.28	4.04	3.88
18	3.97	4.15	4.17	3.96	---	4.64	4.37	5.52	4.89	4.24	4.01	3.91
19	4.05	4.15	4.11	3.94	4.32	4.60	4.36	5.51	5.25	4.21	4.01	3.89
20	4.05	4.16	4.17	3.96	4.30	4.56	4.35	5.52	5.82	4.19	3.98	3.88
21	4.03	4.15	4.07	3.99	4.27	4.51	4.34	6.85	6.01	4.16	3.95	3.90
22	4.05	4.19	4.04	3.98	4.26	4.51	4.30	7.38	5.57	4.13	3.93	3.89
23	4.08	4.14	4.04	4.00	4.26	4.63	4.26	8.06	5.39	4.13	3.91	3.90
24	4.13	4.15	4.00	4.01	4.25	4.68	4.27	6.82	5.10	4.12	3.91	3.91
25	4.17	4.17	4.03	4.06	4.26	4.67	4.27	6.12	5.05	4.10	3.89	3.89
26	4.15	4.19	4.06	4.13	4.27	4.79	4.22	5.63	5.52	4.10	3.86	3.87
27	4.14	4.18	4.09	4.16	4.27	5.61	4.21	5.34	5.58	4.10	3.83	3.90
28	4.15	4.17	4.13	4.17	4.27	6.31	4.19	5.12	5.42	4.09	3.81	3.90
29	4.26	4.17	4.13	4.16	---	6.31	4.17	4.95	7.76	4.08	3.79	3.91
30	4.46	4.16	4.13	4.15	---	6.63	4.15	4.81	8.13	4.07	3.77	3.94
31	4.54	---	4.12	4.16	---	7.48	---	4.71	---	4.06	3.76	---
MEAN	4.03	4.34	4.13	4.06	---	4.88	4.62	5.15	6.06	4.80	3.97	3.85
MAX	4.54	5.08	4.17	4.17	---	7.48	6.72	8.06	8.39	7.87	4.10	3.94
MIN	3.88	4.14	4.00	3.93	---	4.25	4.15	4.03	4.68	4.06	3.76	3.76

e Estimated

06339500 KNIFE RIVER NEAR GOLDEN VALLEY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1964-65, 1972 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
31...	1215	482	8.4	7.6	1,370	1,390	7.0	1.5	25.0	17.2	8.30	9	238
AUG													
03...	1155	6.2	8.2	8.4	1,950	1,960	21.0	20.0	55.0	37.1	11.8	8	333

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
31...	78	288	4.4	.33	6.74	383	851	1,110	146	<1	1.6	30.1	<1
AUG													
03...	70	512	6.7	.43	10.5	548	1,300	21.8	<50	<1	4.0	95.9	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
31...	180	<1	<1	5.1	290	<1	30	6.07	<1	<1	<1.0	4.1
AUG												
03...	370	<1	<1	6.1	60	<1	70	6.96	5.3	<1	<1.0	1.2

Remark codes used in this table:
< -- Less than.

06340000 SPRING CREEK AT ZAP, ND

LOCATION.--Lat 47°17'10", long 101°55'31", in SE¼SE¼SW¼ sec.14, T.144 N., R.89 W., Mercer County, Hydrologic Unit 10130201, on left bank 250 ft downstream from Burlington Northern Railway bridge in Zap and 9 mi upstream from mouth.

DRAINAGE AREA.--549 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to September 1924, October 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,819.39 ft above National Geodetic Vertical Datum of 1929. Mar. 4 to Sept. 30, 1924, nonrecording gage at site 250 ft upstream at different datum. Oct. 1, 1945, to Sept. 30, 1947, nonrecording gage 250 ft upstream at datum 1.12 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow slightly regulated by Lake Ilo, 56 mi upstream, capacity 7,130 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known occurred in about 1902, from ice jam. Floods of February 1913 and March 1943 reached a stage of about 20 ft and 19.5 ft, respectively, from information by local residents.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	22	e7.8	e5.2	e5.1	e8.2	e121	9.1	18	303	8.6	4.6
2	5.9	21	e7.7	e5.1	e5.4	e8.3	e90	9.1	21	146	9.8	4.8
3	5.7	15	e7.6	e5.1	e5.8	e8.5	e70	9.2	23	129	10	4.7
4	5.3	14	e7.8	e5.0	e5.2	e9.0	e50	9.4	34	107	8.7	4.7
5	5.3	11	e7.7	e5.0	e5.0	e9.5	e36	9.4	49	73	8.0	5.1
6	5.5	9.5	e7.5	e4.9	e5.0	e11	e30	9.2	65	60	7.5	5.3
7	5.9	8.3	e7.4	e4.9	e5.2	e10	e25	9.3	64	48	7.2	5.5
8	6.9	8.0	e7.4	e4.8	e5.4	e9.5	e22	10	211	39	6.9	5.2
9	6.8	7.9	e7.3	e4.7	e5.6	e10	e20	14	176	30	28	5.1
10	7.1	7.9	e7.4	e4.6	e5.9	e12	e17	13	121	23	88	5.1
11	7.4	8.5	e7.5	e4.5	e6.3	e14	e16	12	82	18	114	5.3
12	6.0	7.6	e7.8	e4.4	e6.5	e13	e15	15	72	16	92	5.4
13	6.1	7.2	e7.6	e4.4	e6.7	e11	14	17	64	14	44	5.9
14	7.0	7.9	e7.4	e4.4	e7.2	e10	13	17	55	13	23	6.3
15	6.9	8.3	e7.5	e4.3	e7.9	e9.2	12	17	46	12	14	6.3
16	6.5	9.2	e7.8	e4.3	e7.4	e8.7	12	18	40	11	9.7	6.2
17	6.7	9.8	e7.6	e4.2	e7.2	e8.2	11	17	37	12	8.7	6.2
18	7.1	9.4	e7.4	e4.4	e7.1	e7.8	11	24	37	11	7.5	6.3
19	8.2	9.4	e7.1	e4.5	e7.0	e7.5	11	27	39	10	6.7	6.4
20	8.0	8.3	e6.7	e4.7	e6.9	e7.3	11	25	36	9.3	6.1	6.6
21	10	8.8	e6.0	e4.8	e7.1	e7.1	11	58	33	8.7	5.7	6.4
22	7.6	9.6	e5.6	e4.4	e7.2	e7.8	11	72	37	8.6	5.4	6.3
23	8.2	8.2	e5.0	e4.6	e7.4	e10	10	89	43	12	5.2	6.4
24	9.2	8.9	e4.7	e4.7	e7.5	e15	9.7	65	40	15	5.2	6.3
25	9.5	8.5	e4.8	e4.9	e7.8	e22	9.3	44	38	14	5.1	6.4
26	8.5	e8.4	e5.0	e5.2	e7.9	43	9.0	31	42	14	4.9	6.7
27	9.4	e8.3	e5.3	e5.5	e8.0	93	8.8	25	62	11	4.9	6.5
28	11	e8.2	e5.7	e5.2	e8.1	295	8.9	21	66	10	4.7	6.9
29	11	e8.0	e5.6	e5.0	---	413	9.0	19	120	9.6	4.7	4.3
30	19	e7.9	e5.4	e4.8	---	257	9.2	17	423	8.6	4.7	4.3
31	17	---	e5.3	e4.9	---	173	---	16	---	8.5	4.7	---
TOTAL	250.1	295.0	208.4	147.4	184.8	1,528.6	702.9	747.7	2,194	1,204.3	563.6	171.5
MEAN	8.07	9.83	6.72	4.75	6.60	49.3	23.4	24.1	73.1	38.8	18.2	5.72
MAX	19	22	7.8	5.5	8.1	413	121	89	423	303	114	6.9
MIN	5.3	7.2	4.7	4.2	5.0	7.1	8.8	9.1	18	8.5	4.7	4.3
AC-FT	496	585	413	292	367	3,030	1,390	1,480	4,350	2,390	1,120	340

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

MEAN	10.6	9.77	6.73	5.79	26.0	158	131	35.6	41.7	25.1	11.0	7.68
MAX	74.4	51.9	21.2	30.6	183	933	1,044	292	290	178	53.2	16.5
(WY)	(1983)	(1983)	(1973)	(1973)	(1996)	(1972)	(1952)	(1970)	(1971)	(1962)	(1990)	(1986)
MIN	1.76	2.88	0.80	0.00	0.00	3.39	9.41	5.77	3.10	1.84	0.96	1.10
(WY)	(1959)	(1962)	(1962)	(1959)	(1949)	(1949)	(1992)	(1992)	(1961)	(1961)	(1961)	(1958)

06340000 SPRING CREEK AT ZAP, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1924 - 2005	
ANNUAL TOTAL	5,573.3		8,198.3			
ANNUAL MEAN	15.2		22.5		39.1	
HIGHEST ANNUAL MEAN					99.5	1972
LOWEST ANNUAL MEAN					6.95	1961
HIGHEST DAILY MEAN	215	Mar 21	423	Jun 30	5,640	Apr 7, 1952
LOWEST DAILY MEAN	4.7	Dec 24	4.2	Jan 17	0.00	Jan 30, 1946
ANNUAL SEVEN-DAY MINIMUM	5.2	Dec 22	4.3	Jan 12	0.00	Jan 30, 1946
MAXIMUM PEAK FLOW			653	Jun 30	[a]6,130	Apr 7, 1952
MAXIMUM PEAK STAGE			8.97	Jun 30	20.70	Mar 15, 1972
ANNUAL RUNOFF (AC-FT)	11,050		16,260		28,320	
10 PERCENT EXCEEDS	19		48		50	
50 PERCENT EXCEEDS	7.4		8.4		8.9	
90 PERCENT EXCEEDS	5.9		5.0		3.0	

a Gage height, 20.03 ft
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.67	4.08	3.78	3.65	3.75	3.88	---	3.71	3.88	6.52	3.99	3.79
2	3.69	4.07	3.77	3.67	3.77	3.89	---	3.71	3.96	5.41	4.03	3.81
3	3.68	3.96	3.79	3.69	3.79	3.91	---	3.72	4.01	5.31	4.03	3.80
4	3.66	3.93	3.80	3.73	3.84	3.93	---	3.71	4.19	5.15	4.00	3.79
5	3.66	3.86	3.78	3.75	3.92	3.97	---	3.71	4.40	4.86	3.97	3.83
6	3.67	3.83	3.81	3.75	3.95	4.01	---	3.71	4.61	4.73	3.96	3.84
7	3.69	3.79	3.81	3.74	3.85	4.01	---	3.71	4.59	4.60	3.95	3.86
8	3.73	3.78	3.80	3.72	3.78	3.95	---	3.75	6.02	4.49	3.93	3.83
9	3.73	3.77	3.80	3.72	3.77	3.97	---	3.84	5.76	4.37	4.25	3.83
10	3.74	3.77	3.80	3.69	3.75	3.99	---	3.81	5.24	4.27	5.01	3.83
11	3.76	3.80	3.80	3.68	3.76	4.08	---	3.80	4.82	4.19	5.24	3.84
12	3.70	3.76	3.81	3.69	3.77	4.07	---	3.86	4.69	4.14	5.04	3.84
13	3.69	3.74	3.79	3.62	3.82	3.98	3.88	3.92	4.59	4.11	4.54	3.88
14	3.74	3.77	3.77	3.64	3.85	3.89	3.86	3.92	4.48	4.09	4.26	3.90
15	3.74	3.79	3.79	3.63	3.87	3.94	3.84	3.90	4.36	4.08	4.11	3.90
16	3.71	3.82	3.80	3.58	3.83	3.83	3.83	3.93	4.26	4.06	4.03	3.89
17	3.72	3.84	3.80	3.57	3.82	3.85	3.81	3.91	4.20	4.08	4.00	3.90
18	3.74	3.82	3.80	3.59	3.82	3.83	3.81	4.06	4.21	4.05	3.96	3.90
19	3.79	3.82	3.77	3.64	3.82	3.80	3.79	4.10	4.23	4.03	3.93	3.91
20	3.78	3.78	3.78	3.67	3.82	3.79	3.80	4.07	4.17	4.01	3.89	3.92
21	3.84	3.79	3.72	3.68	3.83	3.79	3.81	4.53	4.11	4.00	3.86	3.91
22	3.76	3.83	3.72	3.58	3.84	3.81	3.78	4.71	4.17	3.99	3.85	3.90
23	3.79	3.78	3.64	3.62	3.84	3.97	3.76	4.93	4.29	4.07	3.83	3.90
24	3.82	3.81	3.60	3.65	3.84	4.17	3.74	4.61	4.22	4.13	3.83	3.90
25	3.83	3.80	3.66	3.67	3.86	4.11	3.73	4.38	4.19	4.12	3.83	3.91
26	3.80	3.82	3.69	3.72	3.87	4.33	3.72	4.19	4.26	4.11	3.81	3.93
27	3.83	3.81	3.74	3.82	3.88	4.91	3.71	4.05	4.56	4.06	3.81	3.91
28	3.87	3.80	3.75	3.76	3.88	6.47	3.71	3.97	4.60	4.04	3.80	3.93
29	3.87	3.80	3.73	3.72	---	7.34	3.71	3.92	5.14	4.02	3.80	3.76
30	4.03	3.79	3.73	3.72	---	6.21	3.72	3.88	7.40	3.99	3.80	3.75
31	3.99	---	3.70	3.73	---	5.64	---	3.85	---	3.99	3.80	---
MEAN	3.77	3.83	3.76	3.68	3.83	4.30	---	4.00	4.59	4.36	4.07	3.86
MAX	4.03	4.08	3.81	3.82	3.95	7.34	---	4.93	7.40	6.52	5.24	3.93
MIN	3.66	3.74	3.60	3.57	3.75	3.79	---	3.71	3.88	3.99	3.80	3.75

06340000 SPRING CREEK AT ZAP, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-70, 1974 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
28...	1500	322	8.0	6.6	594	590	20.0	.5	27.3	16.0	10.4	2	65.1
AUG													
09...	1110	7.0	8.4	8.4	1,590	1,600	22.5	21.5	59.5	40.4	8.10	6	233

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
28...	49	132	3.5	.12	8.64	149	353	313	110	<1	1.1	33.1	<1
AUG													
09...	61	439	7.7	.42	10.9	439	1,050	20.2	<50	<1	6.1	91.1	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
28...	100	<1	<1	3.8	360	<1	130	3.82	<1	<1	<1.0	11.9
AUG												
09...	400	<1	11	3.5	60	<1	100	5.35	12.0	<1	<1.0	1.4

Remark codes used in this table:
< -- Less than.

06340500 KNIFE RIVER AT HAZEN, ND

LOCATION.--Lat 47°17'07", long 101°37'18", in SW¼SE¼SE¼ sec.18, T.144 N., R.86 W., Mercer County, Hydrologic Unit 10130201, on left bank at downstream side of highway bridge, 0.5 mi south of Hazen, and 3 mi upstream from Antelope Creek.

DRAINAGE AREA.--2,240 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to November 1928, June 1929 to September 1933, September 1937 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1146: 1943. WSP 1279: 1930-31, 1932-33(M). WSP 1917: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,712.35 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1947, nonrecording gages at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Slight regulation by Lake Ilo 81 mi upstream, capacity, 7,130 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, the floods of 1943 and 1950 were not exceeded during the period 1884 to 1942.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	48	e29	e21	e20	e25	551	32	59	1,460	27	e19
2	15	50	e29	e21	e22	e27	350	31	179	981	27	e19
3	15	69	e29	e20	e23	e30	221	31	212	688	26	e18
4	e15	61	e28	e20	e22	e35	152	31	218	491	26	e18
5	e15	52	e27	e18	e21	e40	119	30	480	327	26	e17
6	15	49	e28	e17	e21	e50	98	31	304	250	24	e17
7	15	44	e27	e17	e20	e70	84	30	262	193	24	e16
8	15	39	e27	e16	e20	e80	74	33	692	153	23	e40
9	15	35	e28	e15	e19	e90	64	34	1,300	135	24	77
10	16	32	e29	e15	e20	e95	58	36	1,020	107	40	33
11	16	31	e30	e15	e22	e90	51	36	625	83	93	21
12	16	32	e29	e14	e23	e85	54	73	483	70	111	18
13	16	35	e33	e14	e26	e80	54	104	325	57	85	e17
14	16	27	e35	e14	e25	e75	54	82	232	50	52	16
15	16	27	e32	e13	e24	e70	51	71	178	e46	38	16
16	17	26	e31	e13	e24	e68	49	65	142	43	31	16
17	18	30	e31	e12	e24	e65	46	63	120	38	29	15
18	19	29	e30	e13	e24	e63	44	79	104	36	28	15
19	20	29	e30	e14	e23	e59	42	123	102	33	30	16
20	e21	28	e29	e14	e23	e54	42	124	125	31	28	15
21	20	39	e29	e13	e23	e50	41	145	163	30	25	15
22	22	33	e28	e14	e24	e55	39	450	208	27	24	16
23	26	43	e27	e15	e25	e60	39	579	138	29	23	15
24	25	36	e27	e17	e26	e70	37	724	114	29	22	15
25	26	33	e26	e18	e26	e95	35	406	92	29	22	16
26	26	31	e25	e19	e25	e110	33	239	101	29	21	16
27	28	e31	e25	e20	e24	155	33	151	210	28	21	17
28	28	e30	e24	e20	e24	539	32	111	170	27	e20	e17
29	30	e30	e23	e20	---	835	32	88	315	27	e20	e16
30	39	e29	e22	e20	---	630	31	72	1,360	27	e20	e16
31	50	---	e21	e19	---	447	---	62	---	27	e19	---
TOTAL	647	1,108	868	511	643	4,297	2,610	4,166	10,033	5,581	1,029	598
MEAN	20.9	36.9	28.0	16.5	23.0	139	87.0	134	334	180	33.2	19.9
MAX	50	69	35	21	26	835	551	724	1,360	1,460	111	77
MIN	15	26	21	12	19	25	31	30	59	27	19	15
AC-FT	1,280	2,200	1,720	1,010	1,280	8,520	5,180	8,260	19,900	11,070	2,040	1,190

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

MEAN	38.3	32.2	22.8	20.1	93.0	691	488	159	221	116	47.9	33.6
MAX	365	223	83.1	145	927	3,228	4,293	1,530	1,041	979	215	143
(WY)	(1983)	(1983)	(1983)	(1974)	(1930)	(1943)	(1952)	(1970)	(1944)	(1938)	(1954)	(1978)
MIN	6.39	7.71	3.79	0.70	0.00	11.6	26.3	17.0	8.70	10.5	2.00	0.50
(WY)	(1962)	(1962)	(1962)	(1962)	(1962)	(1965)	(1981)	(1931)	(1961)	(1961)	(1933)	(1933)

06340500 KNIFE RIVER AT HAZEN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	43,100		32,091			
ANNUAL MEAN	118		87.9		164	
HIGHEST ANNUAL MEAN					441	1943
LOWEST ANNUAL MEAN					21.7	1991
HIGHEST DAILY MEAN	5,000	Mar 11	1,460	Jul 1	22,400	Mar 27, 1943
LOWEST DAILY MEAN	14	Jul 28	12	Jan 17	0.00	Jan 21, 1933
ANNUAL SEVEN-DAY MINIMUM	14	Jul 28	13	Jan 15	0.00	Jan 21, 1933
MAXIMUM PEAK FLOW			1,670	Jul 1	35,300	Jun 24, 1966
MAXIMUM PEAK STAGE			9.32	Jul 1	27.01	Jun 24, 1966
ANNUAL RUNOFF (AC-FT)	85,490		63,650		119,100	
10 PERCENT EXCEEDS	155		178		247	
50 PERCENT EXCEEDS	25		30		32	
90 PERCENT EXCEEDS	15		16		10	

e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.75	1.29	1.09	1.21	1.81	1.88	4.88	0.94	1.45	8.57	0.98	---
2	0.73	1.31	1.09	1.22	1.79	1.89	3.78	0.92	2.55	6.77	0.99	---
3	0.72	1.57	1.08	1.18	1.84	1.92	2.92	0.92	2.83	5.52	0.96	---
4	e0.72	1.48	1.07	1.21	1.88	1.99	2.40	0.92	2.89	4.59	0.94	---
5	e0.73	1.36	1.05	e1.25	1.93	2.05	2.10	0.92	4.50	3.66	0.95	---
6	0.72	1.30	1.06	---	1.90	2.10	1.89	0.92	3.50	3.17	0.91	---
7	0.74	1.23	1.10	---	1.86	2.19	1.73	0.91	3.25	2.76	0.90	---
8	0.74	1.16	1.08	---	1.86	2.24	1.61	0.96	5.57	2.46	0.89	---
9	0.74	1.09	1.08	e1.34	1.76	2.30	1.49	0.99	8.55	2.31	0.89	1.63
10	0.74	1.03	1.09	1.33	1.72	2.34	1.40	1.02	7.17	2.06	1.13	1.07
11	0.75	1.00	1.11	1.33	1.73	2.21	1.30	1.01	5.22	1.81	1.81	0.85
12	0.75	1.02	1.11	1.33	1.73	2.16	1.33	1.45	4.50	1.65	1.98	0.77
13	0.77	1.07	1.23	1.30	1.74	2.32	1.32	1.84	3.57	1.50	1.73	---
14	0.75	0.94	e1.29	1.23	1.80	2.19	1.32	1.61	2.93	1.40	1.34	0.73
15	0.75	0.94	1.17	1.26	1.85	2.05	1.26	1.50	2.53	e1.35	1.15	0.72
16	0.77	0.92	1.14	---	1.83	2.22	1.22	1.43	2.23	1.30	1.05	0.72
17	0.80	0.98	e1.15	---	1.78	2.07	1.18	1.40	2.00	1.23	1.00	0.71
18	0.82	0.98	e1.15	---	1.75	2.02	1.15	1.58	1.85	1.19	0.98	0.71
19	0.84	0.97	1.14	e1.31	1.76	1.83	1.12	2.02	1.84	1.13	1.02	0.71
20	e0.85	0.96	1.14	1.36	1.74	1.73	1.11	2.03	2.08	1.10	0.98	0.71
21	0.84	1.14	1.11	1.38	1.76	1.46	1.09	2.20	2.40	1.06	0.93	0.71
22	0.86	1.05	1.11	---	1.79	1.51	1.07	4.22	2.76	1.02	0.90	0.72
23	0.93	1.21	e1.14	---	1.80	1.51	1.06	4.87	2.24	1.04	0.88	0.71
24	0.92	1.09	---	e1.70	e1.82	1.65	1.03	5.63	2.04	1.05	0.86	0.71
25	0.94	1.05	---	e1.64	1.85	1.99	1.00	3.95	1.84	1.05	0.86	0.73
26	0.94	1.01	e1.23	1.65	1.87	2.07	0.97	2.91	1.95	1.04	0.84	0.74
27	0.96	1.11	1.20	1.80	1.91	2.45	0.96	2.29	2.85	1.01	0.83	0.74
28	0.96	1.26	1.22	2.02	1.87	4.74	0.95	1.95	2.58	1.00	e0.82	e0.74
29	1.01	1.13	1.22	1.99	---	6.16	0.94	1.74	3.47	1.00	---	---
30	1.16	1.10	1.22	1.99	---	5.24	0.94	1.57	8.23	0.98	---	---
31	1.33	---	1.23	1.91	---	4.34	---	1.47	---	0.98	---	---
MEAN	0.84	1.12	---	---	1.81	2.41	1.55	1.87	3.38	2.15	---	---
MAX	1.33	1.57	---	---	1.93	6.16	4.88	5.63	8.55	8.57	---	---
MIN	0.72	0.92	---	---	1.72	1.46	0.94	0.91	1.45	0.98	---	---

e Estimated

06340500 KNIFE RIVER AT HAZEN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1951, 1969 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
29...	1200	723	8.1	6.8	728	715	11.0	1.8	26.9	15.8	9.30	4	95.7
AUG													
09...	1545	24	8.4	8.4	1,570	1,580	26.5	24.0	60.9	38.0	9.30	6	236

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
29...	59	151	3.9	.13	8.59	193	437	868	125	<1	1.1	32.2	<1
AUG													
09...	61	458	7.3	.36	13.5	410	1,040	67.5	<50	<1	4.6	95.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
29...	100	<1	<1	3.6	260	<1	70	4.40	<1	<1	<1.0	4.7
AUG												
09...	320	<1	1	6.4	40	<1	20	6.69	9.5	<1	<1.0	2.1

Remark codes used in this table:
< -- Less than.

06340700 MISSOURI RIVER NEAR STANTON, ND

LOCATION.--Lat 47°17'14", long 101°20'23", in SW$^1/_4$ sec.16, T.144 N., R.84 W., Mercer County, Hydrologic Unit 10130101, on right bank 3 mi southeast of Stanton, 0.1 mi below Ft. Clark irrigation pumping station, 0.4 mi above the United Power Association power plant, and at mile 1,372.

DRAINAGE AREA.--182,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,650.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1964, at datum 50.00 ft lower.

REMARKS.--Stage regulated completely by releases from Garrison Dam (station 06338490) 18 mi upstream. Gage heights for Dec. 18, 20, 31, and Apr. 16 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 24.56 ft, Feb. 22, 1965; minimum daily recorded, 8.30 ft, Nov. 1, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 11.77 ft, May 7; minimum recorded, 7.77 ft, Oct. 1.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.46	8.81	9.82	---	---	8.88	9.00	10.32	9.78	10.00	9.79	9.90
2	8.90	8.91	9.79	---	---	8.96	9.50	10.47	9.81	9.92	9.77	9.91
3	8.74	9.88	9.78	---	---	9.20	10.08	10.09	9.80	9.84	9.77	9.75
4	8.85	10.07	9.84	---	---	9.38	10.84	10.23	9.74	9.79	9.65	10.03
5	8.80	9.37	9.91	---	---	---	10.86	10.37	9.76	9.72	9.72	9.68
6	8.90	8.85	9.89	---	---	---	10.87	10.37	9.98	9.75	9.79	9.94
7	8.88	8.79	9.79	---	---	---	10.64	10.88	9.87	9.79	9.60	9.73
8	8.96	9.01	9.93	---	9.72	8.97	9.98	10.29	9.89	9.87	9.76	9.71
9	8.87	8.81	9.83	---	9.44	8.99	10.16	10.59	9.96	9.77	9.78	9.67
10	8.90	8.73	9.80	---	9.24	8.87	10.15	10.64	10.06	9.81	9.86	9.78
11	8.90	8.86	9.90	---	9.31	8.95	10.23	10.46	9.94	9.78	9.73	9.83
12	8.86	8.77	9.73	---	9.38	9.05	10.25	10.50	9.87	9.69	9.76	9.60
13	8.93	8.92	9.75	---	9.28	9.05	10.23	10.25	9.85	9.82	9.79	9.84
14	8.99	8.84	9.72	---	9.12	9.09	10.25	10.49	9.78	9.79	9.94	9.63
15	8.75	8.93	9.89	---	9.22	8.89	10.49	10.30	9.77	9.91	9.79	9.86
16	9.04	9.10	9.78	---	8.64	8.91	10.04	9.90	9.79	9.81	9.91	9.81
17	8.96	8.76	9.72	---	8.55	9.03	---	9.91	9.76	9.63	9.82	9.79
18	9.14	9.02	9.73	---	8.53	8.94	---	9.80	9.74	9.82	9.81	9.32
19	8.91	8.83	---	---	8.49	8.98	---	9.87	9.62	9.83	9.91	8.92
20	8.82	9.02	9.72	---	8.50	9.16	10.35	9.96	9.66	9.80	9.85	9.07
21	8.80	9.15	---	---	8.55	9.00	10.76	10.25	9.70	9.80	9.91	9.04
22	8.79	9.11	---	---	8.57	8.99	10.40	9.95	9.70	9.80	9.94	9.04
23	8.80	9.13	---	---	8.57	9.05	10.53	10.10	9.69	9.73	9.89	9.05
24	8.81	9.25	---	---	8.60	9.03	10.43	10.00	9.83	9.74	9.94	9.11
25	8.95	9.27	10.08	---	8.77	8.94	10.27	9.75	9.63	9.73	9.80	9.01
26	8.80	9.58	9.97	---	8.79	9.17	10.37	9.77	9.73	9.75	9.60	9.06
27	8.93	9.59	9.84	---	8.90	8.98	10.30	9.76	9.70	9.80	10.20	9.01
28	8.92	9.50	9.87	---	8.85	9.31	10.59	9.73	9.84	9.67	10.03	9.00
29	8.92	9.60	9.60	---	---	9.07	10.50	9.82	9.83	9.80	9.90	9.06
30	8.71	9.85	9.83	---	---	9.11	10.25	9.79	9.73	9.71	9.93	8.90
31	8.96	---	9.92	---	---	9.03	---	9.83	---	9.75	10.01	---
MEAN	8.87	9.14	---	---	---	---	---	10.14	9.79	9.79	9.84	9.47
MAX	9.14	10.07	---	---	---	---	---	10.88	10.06	10.00	10.20	10.03
MIN	8.46	8.73	---	---	---	---	---	9.73	9.62	9.63	9.60	8.90

06340900 MISSOURI RIVER NEAR HENSLER, ND

LOCATION.--Lat 47°16'49", long 101°11'07", in SW¼ sec.22, T.144 N., R.83 W., McLean County, Hydrologic Unit 10130101, on left bank about 7.5 mi west of Washburn and at mile 1,362.

DRAINAGE AREA.--183,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,640.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1964, at datum 40 ft lower.

REMARKS.--Stage regulated by releases from Garrison Dam (station 06338490) 28 mi upstream. Gage heights for Nov. 10, Feb. 22, 23, 27, and Mar. 1 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 27.77 ft, Mar. 20, 1965; minimum daily recorded, 12.91 ft, Nov. 1, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 18.61 ft, Jan. 6; minimum recorded, 12.98 ft, Oct. 1.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.52	---	14.84	---	16.22	14.05	13.97	15.12	14.63	14.86	14.66	14.75
2	13.83	---	14.75	---	15.95	14.04	14.29	15.40	14.67	14.80	14.68	14.77
3	13.70	---	14.81	---	15.65	14.04	14.88	14.96	14.64	14.74	14.67	14.63
4	13.87	---	14.75	---	15.52	14.13	15.65	15.05	14.58	14.65	14.55	14.83
5	13.71	---	14.85	---	15.22	14.13	15.73	15.15	14.58	14.60	14.59	14.60
6	13.83	---	14.92	---	---	13.94	15.74	15.18	14.82	14.60	14.67	14.80
7	13.85	---	14.75	---	---	14.17	15.64	15.57	14.75	14.64	14.50	14.55
8	13.91	---	14.90	---	---	13.97	14.83	15.27	14.76	14.73	14.64	14.56
9	13.84	---	14.81	---	---	14.01	15.03	15.43	14.77	14.68	14.68	14.50
10	13.86	13.73	14.78	---	---	13.93	15.07	15.48	14.90	14.69	14.72	14.61
11	13.89	---	14.84	---	15.51	13.95	15.15	15.22	14.78	14.65	14.63	14.69
12	13.83	13.82	14.73	---	15.09	14.06	15.17	15.39	14.71	14.58	14.65	14.57
13	13.89	13.89	---	---	14.86	---	15.15	15.11	14.72	14.66	14.65	14.62
14	13.95	13.84	---	---	14.59	---	15.09	15.42	14.63	14.68	14.80	14.52
15	13.74	13.89	14.81	---	---	---	15.37	15.15	14.62	14.74	14.67	14.70
16	14.01	14.11	14.76	---	---	---	15.05	14.72	14.64	14.69	14.75	14.67
17	13.87	13.78	14.65	---	---	14.01	15.19	14.74	14.60	14.55	14.70	14.68
18	14.08	13.98	---	17.78	---	14.01	15.19	14.66	14.58	14.68	14.68	14.42
19	13.94	13.85	---	17.48	---	13.93	15.28	14.72	14.54	14.70	14.76	13.85
20	13.79	14.01	---	17.34	---	14.09	15.24	14.80	14.49	14.69	14.71	13.90
21	13.80	14.11	---	---	---	14.03	15.67	15.02	14.57	14.67	14.76	13.95
22	13.80	14.12	---	---	14.19	13.94	15.14	14.78	14.55	14.69	14.82	13.96
23	13.81	14.18	---	---	14.04	14.07	15.48	14.98	14.53	14.62	14.72	13.94
24	13.80	---	---	17.46	---	14.07	15.29	14.80	14.68	14.63	14.77	14.04
25	13.99	14.24	15.41	17.15	13.96	---	15.11	14.66	14.48	14.63	14.71	13.92
26	13.73	14.53	15.33	16.94	14.03	14.14	15.29	14.62	14.59	14.62	14.47	13.97
27	13.93	14.59	15.11	---	14.14	13.97	15.16	14.62	14.57	14.67	14.92	13.93
28	13.90	14.55	14.93	16.71	---	14.29	15.45	14.57	14.70	14.57	14.85	13.94
29	13.94	14.49	14.82	16.64	---	14.06	15.33	14.69	14.72	14.68	14.71	13.96
30	13.71	14.85	14.78	16.53	---	14.08	15.08	14.61	14.59	14.62	14.81	13.87
31	13.97	---	---	16.33	---	14.03	---	14.68	---	14.65	14.84	---
MEAN	13.85	---	---	---	---	---	15.19	14.99	14.65	14.67	14.70	14.36
MAX	14.08	---	---	---	---	---	15.74	15.57	14.90	14.86	14.92	14.83
MIN	13.52	---	---	---	---	---	13.97	14.57	14.48	14.55	14.47	13.85

06341000 MISSOURI RIVER AT WASHBURN, ND

LOCATION.--Lat 47°17'20", long 101°02'15", in SE$^1/_4$SW$^1/_4$ sec.14, T.144 N., R.82 W., McLean County, Hydrologic Unit 10130101, on left bank near municipal waterplant in Washburn and at mile 1,355.

DRAINAGE AREA.--184,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,640.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1964, at datum 40 ft lower.

REMARKS.--Stage regulated by releases from Garrison Dam (station 06338490) 35 mi upstream. Gage heights for Jan. 4, 12, 21, Apr. 19, and Sept. 21 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 22.76 ft, Jan. 11, 1964; minimum daily recorded, 8.66 ft, Nov. 2, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 15.25 ft, Jan. 4; minimum recorded, 8.57 ft, Oct. 1.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.00	9.07	10.07	12.70	12.59	9.31	9.26	10.41	10.07	10.27	10.03	10.18
2	9.25	9.09	9.95	14.66	12.16	9.26	9.47	10.71	10.11	10.24	10.06	10.18
3	9.16	9.79	10.04	---	11.48	9.26	10.04	10.31	10.06	10.20	10.04	10.08
4	9.32	10.25	9.92	15.10	11.15	9.34	10.75	10.36	10.03	10.08	9.95	10.19
5	9.17	10.08	10.05	---	10.55	9.33	10.91	10.42	10.01	10.04	9.98	10.07
6	9.29	9.23	10.13	---	10.94	9.19	10.94	10.49	10.21	10.05	10.05	10.20
7	9.34	9.12	9.97	15.03	12.56	9.36	10.90	10.75	10.18	10.09	9.91	9.96
8	9.35	9.30	10.11	14.90	13.02	9.19	10.18	10.68	10.18	10.15	10.00	9.99
9	9.35	9.16	10.02	14.78	13.07	9.25	10.34	10.72	10.18	10.12	10.05	9.93
10	9.33	9.06	10.00	---	12.95	9.11	10.35	10.77	10.32	10.10	10.09	10.04
11	9.37	9.19	10.06	---	12.50	9.16	10.38	10.46	10.22	10.06	10.02	10.10
12	9.32	9.15	9.89	14.66	11.15	9.26	10.41	10.74	10.13	10.00	10.03	10.04
13	9.35	9.20	9.93	---	10.42	9.25	10.42	10.49	10.14	10.06	10.03	10.00
14	9.42	9.17	9.99	---	9.98	9.34	10.42	10.77	10.07	10.09	10.14	9.97
15	9.24	9.19	10.00	---	10.07	9.13	10.62	10.50	10.05	10.11	10.07	10.08
16	9.47	9.39	10.01	---	10.08	9.14	10.38	10.14	10.07	10.11	10.11	10.07
17	9.36	9.12	9.90	---	10.35	9.19	10.47	10.12	10.06	10.01	10.09	10.07
18	9.56	9.25	9.96	---	10.12	9.22	10.45	10.07	10.03	10.04	10.09	9.94
19	9.48	9.18	10.05	14.21	10.08	9.13	10.50	10.11	10.02	10.09	10.13	9.36
20	9.31	9.28	9.99	14.05	10.66	9.29	10.54	10.20	9.93	10.09	10.10	9.35
21	9.35	9.39	10.18	14.01	10.15	9.29	10.91	10.37	10.02	10.06	10.14	9.49
22	9.30	9.39	10.65	---	9.74	9.17	10.40	10.22	9.99	10.08	10.21	9.53
23	9.32	9.45	10.40	13.93	9.42	9.29	10.79	10.39	9.98	10.04	10.14	9.54
24	9.29	9.43	10.87	13.97	9.43	9.25	10.60	10.22	10.10	10.03	10.15	9.58
25	9.47	9.50	11.51	13.83	9.26	9.21	10.39	10.14	9.93	10.01	10.16	9.51
26	9.23	9.72	11.66	13.66	9.27	9.36	10.59	10.05	10.02	10.01	9.98	9.56
27	9.43	9.81	11.73	13.53	9.31	9.24	10.46	10.06	10.02	10.06	10.22	9.51
28	9.39	9.80	11.00	13.41	9.17	9.47	10.72	10.00	10.09	9.97	10.25	9.53
29	9.39	9.72	10.51	13.33	---	9.35	10.66	10.10	10.16	10.06	10.11	9.55
30	9.23	10.05	10.21	13.19	---	9.35	10.38	10.04	10.02	10.04	10.25	9.53
31	9.34	---	10.54	12.90	---	9.31	---	10.11	---	10.03	10.23	---
MEAN	9.33	9.42	10.30	---	10.77	9.26	10.45	10.35	10.08	10.08	10.09	9.84
MAX	9.56	10.25	11.73	---	13.07	9.47	10.94	10.77	10.32	10.27	10.25	10.20
MIN	9.00	9.06	9.89	---	9.17	9.11	9.26	10.00	9.93	9.97	9.91	9.35

06342020 MISSOURI RIVER AT PRICE, ND

LOCATION.--Lat 47°04'47", long 100°55'55", in NW$^1/_4$ sec.34, T.142 N., R.81 W., Oliver County, Hydrologic Unit 10130101, on right bank 0.5 mi south of Price and at mile 1,338.

DRAINAGE AREA.--185,000 mi^2, approximately.

GAGE-HEIGHT RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,620.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1964, at datum 20 ft lower.

REMARKS.--Stage regulated by releases from Garrison Dam (station 06338490) 52 mi upstream. Gage height for Apr. 20 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 30.12 ft, Jan. 22, 1967; minimum daily recorded, 16.84 ft, Nov. 2, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 23.13 ft, Dec. 28; minimum recorded, 16.92 ft, Oct. 2.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.37	17.55	18.56	21.09	21.52	19.28	17.69	18.85	18.50	18.66	18.63	18.74
2	17.34	17.47	18.43	21.19	21.51	18.64	17.75	19.06	18.51	18.78	18.66	18.69
3	17.47	17.99	18.51	21.61	21.01	18.14	18.33	18.88	18.46	18.77	18.61	18.64
4	17.52	18.71	18.39	22.08	20.96	17.94	19.01	18.81	18.46	18.58	18.53	18.61
5	17.48	18.75	18.46	22.11	20.79	17.77	19.37	18.86	18.44	18.56	18.49	18.69
6	17.53	17.78	18.57	22.18	20.38	17.71	19.43	18.97	18.51	18.54	18.57	18.63
7	17.64	17.52	18.46	22.29	19.86	17.74	19.46	19.01	18.62	18.57	18.53	18.53
8	17.54	17.64	18.53	22.26	20.08	17.67	18.86	19.41	18.62	18.64	18.47	18.51
9	17.65	17.58	18.51	22.12	20.29	17.66	18.78	19.06	18.58	18.67	18.58	18.46
10	17.56	17.44	18.45	22.05	20.31	17.56	18.85	19.19	18.72	18.60	18.60	18.54
11	17.60	17.53	18.49	22.00	20.48	17.56	18.88	18.93	18.68	18.61	18.62	18.62
12	17.57	17.53	18.39	22.04	20.58	17.69	18.89	19.16	18.55	18.56	18.54	18.61
13	17.55	17.54	18.35	21.78	20.56	17.70	18.92	19.00	18.53	18.56	18.55	18.51
14	17.63	17.58	18.44	21.72	20.56	17.74	18.85	19.10	18.48	18.64	18.60	18.58
15	17.49	17.56	18.39	21.97	20.54	17.61	19.05	18.93	18.46	18.61	18.67	18.56
16	17.61	17.76	18.48	22.06	20.14	17.58	18.96	18.71	18.47	18.69	18.61	18.65
17	17.62	17.62	18.37	22.06	20.11	17.60	18.87	18.51	18.48	18.62	18.69	18.66
18	17.71	17.54	18.37	22.04	20.42	17.66	18.91	18.50	18.45	18.50	---	18.64
19	17.72	17.63	18.70	22.00	20.32	17.56	18.87	18.46	18.49	18.65	---	17.98
20	17.55	17.61	18.67	21.89	19.99	17.71	18.98	18.58	18.34	18.67	18.63	17.85
21	17.55	17.78	18.56	21.84	20.32	17.80	19.15	18.61	18.45	18.64	18.62	17.95
22	17.47	17.82	18.78	21.66	20.22	17.61	18.98	18.73	18.41	18.67	18.67	17.94
23	17.52	17.81	19.17	21.73	20.07	17.74	19.16	18.71	18.45	18.65	18.66	17.92
24	17.50	17.80	21.64	21.90	20.10	17.70	19.05	18.66	18.49	18.62	18.63	17.97
25	17.64	17.91	22.78	21.84	20.16	17.67	18.89	18.61	18.42	18.63	18.72	17.94
26	17.52	18.06	22.92	21.77	19.81	17.74	18.99	18.41	18.47	18.59	18.62	17.97
27	17.61	18.22	22.86	21.66	19.60	17.79	18.89	18.41	18.51	18.64	18.59	17.96
28	17.62	18.28	23.03	21.59	19.50	17.81	19.06	18.38	18.50	18.60	18.84	17.91
29	17.62	18.15	22.84	21.59	---	17.88	19.14	18.46	18.66	18.59	18.70	17.90
30	17.46	18.41	22.58	21.62	---	17.79	18.94	18.45	18.56	18.65	18.76	17.95
31	17.58	---	21.88	21.61	---	17.74	---	18.47	---	18.64	18.70	---
MEAN	17.56	17.82	19.57	21.85	20.36	17.80	18.90	18.77	18.51	18.63	---	18.34
MAX	17.72	18.75	23.03	22.29	21.52	19.28	19.46	19.41	18.72	18.78	---	18.74
MIN	17.34	17.44	18.35	21.09	19.50	17.56	17.69	18.38	18.34	18.50	---	17.85

06342260 SQUARE BUTTE CREEK BELOW CENTER, ND

LOCATION.--Lat 47°03'27", long 101°11'43", in SE$^1/_4$ sec.4, T.141 N., R.83 W., Oliver County, Hydrologic Unit 10130101, on right bank at southeast corner of farmyard and 6 mi southeast of Center.

DRAINAGE AREA.--146 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,865 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Nelson Lake 1.5 mi upstream beginning Aug. 24, 1967, capacity 5,000 acre-ft. The capacity of Nelson Lake was increased to 10,000 acre-ft in Aug. 1975.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.5	1.7	1.4	e1.0	e1.6	e1.3	1.3	1.2	2.2	1.9	1.3	1.8
2	e2.3	1.7	1.4	e1.0	e1.6	e1.4	1.3	1.1	1.9	1.7	1.5	1.6
3	e2.1	1.6	1.5	e1.0	e1.6	e1.4	1.2	0.99	1.8	1.7	1.5	1.9
4	e2.0	1.5	e1.4	e1.0	e1.5	e1.4	1.4	1.0	1.5	1.8	1.5	2.2
5	e1.8	1.5	e1.2	e1.0	e1.4	e1.3	1.5	0.95	1.9	1.5	1.3	e2.0
6	1.8	1.5	1.4	e1.0	e1.3	e1.4	1.3	0.94	2.0	1.4	1.4	e2.0
7	1.8	1.5	1.4	e1.1	e1.3	e1.4	1.2	1.7	2.4	1.6	1.4	e2.3
8	1.6	1.5	1.4	e1.1	e1.4	e1.3	1.1	2.9	2.8	1.5	1.5	e2.8
9	1.6	1.6	e1.3	e1.1	e1.4	e1.4	1.2	2.1	1.6	1.4	1.7	e3.2
10	1.6	e1.5	1.4	e1.1	e1.5	e1.3	1.3	1.7	1.4	1.4	1.9	3.1
11	1.8	1.6	1.4	e1.1	e1.5	e1.3	1.4	1.4	1.5	1.5	2.1	3.1
12	1.8	1.6	e1.4	e1.0	e1.5	e1.3	1.7	2.0	1.5	1.2	1.8	3.2
13	1.9	1.6	e1.2	e1.0	e1.4	e1.2	1.4	1.9	1.7	1.1	1.7	3.4
14	1.7	1.6	1.2	e1.0	e1.4	e1.1	1.1	1.6	1.7	1.0	1.8	4.0
15	1.7	1.5	1.3	e1.1	e1.3	e1.1	1.3	1.5	1.7	1.1	1.8	3.8
16	1.9	1.4	1.2	e1.3	e1.3	e1.0	1.2	1.6	1.8	1.2	1.6	3.7
17	2.0	1.5	1.3	e1.6	e1.3	e1.0	1.2	1.7	1.7	1.3	2.2	3.6
18	2.0	1.5	e1.2	e1.5	e1.3	e1.1	1.2	1.8	1.7	1.3	1.9	3.7
19	2.1	1.5	e1.1	e1.4	e1.3	e1.1	1.1	1.5	1.7	1.4	1.9	3.5
20	1.9	1.6	e1.0	e1.3	e1.4	e1.1	1.3	1.4	1.8	1.3	1.7	3.6
21	1.9	e1.5	e1.0	e1.3	e1.4	e1.1	1.2	1.7	2.1	1.1	1.8	3.6
22	1.9	1.5	e1.0	e1.5	e1.4	e1.1	1.1	1.5	2.0	1.4	2.1	3.9
23	1.9	e1.4	e1.0	e1.8	e1.4	e1.0	1.1	1.5	1.9	1.6	1.9	3.9
24	1.9	1.4	e1.0	e1.8	e1.4	e1.1	1.1	1.4	2.1	1.4	2.2	4.2
25	1.7	e1.4	e1.0	e1.7	e1.4	1.2	1.2	1.6	2.0	2.2	2.2	4.3
26	1.8	e1.3	e1.1	e1.7	e1.3	1.2	1.1	1.6	2.4	1.6	2.1	3.9
27	1.9	e1.4	e1.1	e1.6	e1.3	1.3	1.1	1.6	2.9	1.5	2.2	3.6
28	1.9	1.4	e1.1	e1.6	e1.3	1.3	1.1	1.7	2.0	1.5	2.3	3.4
29	2.1	1.4	e1.1	e1.6	---	1.4	1.2	1.9	3.1	1.4	2.3	3.2
30	2.0	1.4	e1.0	e1.6	---	1.4	1.3	1.9	2.7	1.4	2.2	3.2
31	1.9	---	e1.0	e1.6	---	1.3	---	2.1	---	1.3	2.1	---
TOTAL	58.8	45.1	37.5	40.5	39.2	38.3	37.2	49.48	59.5	44.7	56.9	95.7
MEAN	1.90	1.50	1.21	1.31	1.40	1.24	1.24	1.60	1.98	1.44	1.84	3.19
MAX	2.5	1.7	1.5	1.8	1.6	1.4	1.7	2.9	3.1	2.2	2.3	4.3
MIN	1.6	1.3	1.0	1.0	1.3	1.0	1.1	0.94	1.4	1.0	1.3	1.6
AC-FT	117	89	74	80	78	76	74	98	118	89	113	190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

MEAN	1.58	1.45	1.38	1.35	6.77	51.4	33.7	8.95	6.44	9.54	2.89	1.68
MAX	2.98	2.99	3.35	2.10	109	216	223	47.8	65.0	175	34.5	3.64
(WY)	(1981)	(1983)	(1978)	(2001)	(1996)	(1987)	(1969)	(1995)	(1966)	(1993)	(1993)	(1980)
MIN	0.24	0.19	0.21	0.20	0.09	1.24	1.00	0.79	0.57	0.71	0.83	0.35
(WY)	(1968)	(1968)	(1968)	(1968)	(1966)	(2005)	(1998)	(1989)	(1989)	(1989)	(1982)	(1967)

06342260 SQUARE BUTTE CREEK BELOW CENTER, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1965 - 2005	
ANNUAL TOTAL	950.80		602.88			
ANNUAL MEAN	2.60		1.65		10.6	
HIGHEST ANNUAL MEAN					30.0	1969
LOWEST ANNUAL MEAN					0.86	1968
HIGHEST DAILY MEAN	140	Mar 28	4.3	Sep 25	2,670	Jul 18, 1969
LOWEST DAILY MEAN	0.82	Aug 1	0.94	May 6	0.00	Feb 14, 1966
ANNUAL SEVEN-DAY MINIMUM	0.93	Aug 14	1.0	Dec 30	0.00	Feb 14, 1966
MAXIMUM PEAK FLOW			[a]5.0	Sep 14	9,700	Jun 24, 1966
MAXIMUM PEAK STAGE			[b]1.40	Jan 17	14.35	Jun 24, 1966
ANNUAL RUNOFF (AC-FT)	1,890		1,200		7,700	
10 PERCENT EXCEEDS	2.2		2.2		6.5	
50 PERCENT EXCEEDS	1.5		1.5		1.5	
90 PERCENT EXCEEDS	1.0		1.1		0.94	

a Gage height, 1.34 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.12	1.10	1.10	1.09	1.08	1.05	1.04	1.08	1.13	1.09	1.14
2	---	1.12	1.10	1.10	1.09	1.08	1.04	1.03	1.06	1.12	1.10	1.13
3	---	1.11	1.10	1.10	1.09	1.09	1.04	1.03	1.05	1.12	1.11	1.15
4	---	1.11	e1.11	1.10	1.09	1.08	1.05	1.03	1.03	1.12	1.11	1.17
5	---	1.11	e1.09	e1.10	1.09	1.08	1.05	1.02	1.06	1.10	1.10	1.16
6	1.13	1.11	1.10	e1.10	1.08	1.08	1.05	1.02	1.07	1.10	1.10	1.14
7	1.12	1.11	1.10	1.10	1.07	1.08	1.04	1.06	1.11	1.11	1.10	---
8	1.12	1.11	1.10	1.10	1.08	1.07	1.03	1.12	1.15	1.11	1.11	---
9	1.11	1.12	1.10	1.10	1.08	1.07	1.04	1.07	1.09	1.10	1.12	e1.23
10	1.12	1.13	1.10	1.10	1.08	1.07	1.04	1.05	1.07	1.10	1.13	1.23
11	1.13	1.11	1.10	1.10	1.09	1.07	1.05	1.03	1.08	1.11	1.14	1.24
12	1.13	1.11	e1.10	1.10	1.09	1.07	1.07	1.06	1.08	1.09	1.13	1.25
13	1.13	1.11	e1.09	e1.13	1.09	1.06	1.05	1.06	1.09	1.08	1.12	1.26
14	1.12	1.11	1.09	e1.19	1.09	1.06	1.04	1.04	1.09	1.08	1.12	1.29
15	1.12	1.11	1.09	e1.26	1.08	1.06	1.04	1.04	1.09	1.08	1.12	1.27
16	1.13	1.10	1.09	e1.33	1.08	1.05	1.04	1.04	1.09	1.09	1.11	1.28
17	1.14	1.11	1.09	e1.36	1.08	1.06	1.04	1.05	1.09	1.09	1.15	1.27
18	1.13	1.11	e1.09	1.30	1.08	1.06	1.04	1.05	1.09	1.10	1.13	1.28
19	1.14	1.11	e1.08	1.16	1.08	1.05	1.04	1.04	1.09	1.10	1.13	1.27
20	1.13	1.11	e1.10	1.12	1.09	1.05	1.05	1.03	1.10	1.09	1.12	1.27
21	1.13	e1.10	---	e1.12	1.09	1.04	1.04	1.05	1.11	1.08	1.13	1.28
22	1.13	1.11	e1.10	e1.16	1.09	1.05	1.04	1.04	1.11	1.10	1.14	1.30
23	1.13	e1.10	1.09	e1.12	1.09	1.05	1.04	1.04	1.10	1.11	1.13	1.30
24	1.13	1.10	1.11	1.12	1.09	1.06	1.03	1.03	1.11	1.10	1.15	1.32
25	1.12	1.11	1.10	1.13	1.09	1.04	1.04	1.04	1.10	1.15	1.15	1.32
26	1.12	1.11	1.09	1.11	1.09	1.04	1.04	1.04	1.13	1.11	1.15	1.30
27	1.13	1.11	1.10	1.09	1.09	1.04	1.03	1.04	1.17	1.11	1.16	1.29
28	1.13	1.10	1.10	1.10	1.08	1.05	1.03	1.05	1.13	1.11	1.16	1.29
29	1.14	1.10	1.09	1.09	---	1.05	1.04	1.06	1.19	1.10	1.16	1.28
30	1.14	1.10	1.10	1.09	---	1.05	1.04	1.06	1.18	1.10	1.16	1.27
31	1.13	---	1.09	1.09	---	1.05	---	1.07	---	1.09	1.15	---
MEAN	---	1.11	---	1.14	1.09	1.06	1.04	1.05	1.10	1.10	1.13	---
MAX	---	1.13	---	1.36	1.09	1.09	1.07	1.12	1.19	1.15	1.16	---
MIN	---	1.10	---	1.09	1.07	1.04	1.03	1.02	1.03	1.08	1.09	---

e Estimated

06342260 SQUARE BUTTE CREEK BELOW CENTER, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
15...	1230	1.4	8.3	7.9	1,690	1,690	10.0	10.3	89.9	44.7	9.00	5	238
AUG													
19...	1145	--	8.2	8.2	1,770	1,800	20.1	23.5	90.7	45.8	8.70	5	235

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
15...	55	422	19.4	.43	16.1	541	1,200	4.49	<50	<1	3.0	63.1	<1
AUG													
19...	54	433	19.0	.43	13.4	528	1,190	--	<50	<1	5.8	75.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
15...	550	<1	<1	2.7	30	<1	320	5.44	5.0	<1	<1.0	2.7
AUG												
19...	680	<1	14	5.5	40	<1	70	5.70	16.9	<1	<1.0	3.8

Remark codes used in this table:
< -- Less than.

06342450 BURNT CREEK NEAR BISMARCK, ND

LOCATION.--Lat 46°54'54", long 100°48'48", in SW¼NW¼SW¼ sec.29, T.140 N., R.80 W., Burleigh County, Hydrologic Unit 10130101, on right bank, upstream of county highway bridge, and 7 mi northwest of Bismarck.

DRAINAGE AREA.--108 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year (seasonal records only since 1982).

GAGE.--Water-stage recorder. Datum of gage is 1,690 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68 ft^3/s, June 30, gage height, 5.69 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e0.08	e0.10	7.4	1.5	0.65	41	e0.03	0.00
2	---	---	---	---	e0.10	e0.10	6.5	1.4	0.88	18	e0.00	0.00
3	---	---	---	---	e0.15	e0.13	7.2	1.4	1.6	15	0.00	0.00
4	---	---	---	---	e0.14	e0.20	8.6	1.2	2.7	15	0.00	0.00
5	---	---	---	---	e0.12	e0.17	7.4	0.84	2.3	11	0.00	0.00
6	---	---	---	---	e0.10	e0.14	5.5	0.76	1.9	e6.5	0.00	0.00
7	---	---	---	---	e0.09	e0.12	5.4	0.89	1.8	e4.4	0.00	0.00
8	---	---	---	---	e0.10	e0.13	7.0	1.7	7.3	e2.6	0.00	0.00
9	---	---	---	---	e0.11	e0.14	e5.7	24	31	e1.5	0.00	0.00
10	---	---	---	---	e0.12	e0.15	e4.6	25	18	e0.85	0.00	0.00
11	---	---	---	---	e0.15	e0.11	e3.7	14	9.3	e0.98	0.14	0.00
12	---	---	---	---	e0.16	e0.10	4.3	10	5.7	e0.75	e0.04	0.00
13	---	---	---	---	e0.14	e0.10	5.1	15	3.7	e2.8	0.00	0.00
14	---	---	---	---	e0.12	e0.10	e5.7	18	2.8	e2.5	0.00	0.00
15	---	---	---	---	e0.10	e0.10	5.0	13	1.9	e1.5	0.00	0.00
16	---	---	---	---	e0.09	e0.10	4.0	8.8	1.2	e1.0	0.00	0.00
17	---	---	---	---	e0.09	e0.11	3.4	7.1	0.85	e0.54	e0.00	0.00
18	---	---	---	---	e0.09	e0.13	e3.4	7.2	0.49	e0.42	e0.00	0.00
19	---	---	---	---	e0.09	e0.16	3.3	7.5	0.32	e0.20	0.00	0.00
20	---	---	---	---	e0.09	e0.20	2.3	7.3	0.26	0.22	0.00	0.00
21	---	---	---	---	e0.09	e0.25	2.5	5.8	0.22	0.20	0.00	0.00
22	---	---	---	---	e0.09	e0.35	3.0	4.7	0.17	0.18	0.00	0.00
23	---	---	---	---	e0.10	e0.81	2.8	4.1	0.17	0.17	0.00	0.00
24	---	---	---	---	e0.10	e3.0	2.5	2.9	0.08	0.16	0.00	0.00
25	---	---	---	---	e0.09	e9.0	2.2	2.0	0.06	0.21	0.00	0.00
26	---	---	---	---	e0.09	e16	2.0	1.3	0.10	0.19	0.00	0.00
27	---	---	---	---	e0.09	e13	1.7	0.96	0.16	0.16	0.00	0.00
28	---	---	---	---	e0.10	e12	1.5	0.92	0.11	0.16	0.00	0.00
29	---	---	---	---	---	e10	1.3	0.88	14	0.12	0.00	0.00
30	---	---	---	---	---	e10	1.4	0.81	54	e0.09	0.00	0.00
31	---	---	---	---	---	e8.5	---	0.69	---	e0.06	0.00	---
TOTAL	---	---	---	---	2.98	85.50	126.4	191.65	163.72	128.46	0.21	0.00
MEAN	---	---	---	---	0.11	2.76	4.21	6.18	5.46	4.14	0.01	0.00
MAX	---	---	---	---	0.16	16	8.6	25	54	41	0.14	0.00
MIN	---	---	---	---	0.08	0.10	1.3	0.69	0.06	0.06	0.00	0.00
AC-FT	---	---	---	---	5.9	170	251	380	325	255	0.4	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	0.31	0.26	0.10	0.05	11.8	42.8	29.3	4.93	3.13	3.63	1.18	0.37
MAX	1.97	1.19	0.66	0.45	87.2	170	256	15.0	17.2	72.0	18.1	4.80
(WY)	(1981)	(1981)	(1978)	(1979)	(2000)	(1987)	(1969)	(1995)	(2000)	(1993)	(1999)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1968)	(1968)	(1968)	(1968)	(1968)	(1990)	(1990)	(1990)	(1977)	(1973)	(1972)	(1970)

06342450 BURNT CREEK NEAR BISMARCK, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1968 - 2005	
ANNUAL MEAN	[a]7.57	
HIGHEST ANNUAL MEAN	[a]22.2	1969
LOWEST ANNUAL MEAN	[a]0.55	1977
HIGHEST DAILY MEAN	3,900	Apr 18, 1979
LOWEST DAILY MEAN	0.00	Oct 1, 1967
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1, 1967
MAXIMUM PEAK FLOW	[b]10,000	Apr 18, 1979
MAXIMUM PEAK STAGE	16.93	Apr 18, 1979
ANNUAL RUNOFF (AC-FT)	[a]5,490	
10 PERCENT EXCEEDS	6.0	
50 PERCENT EXCEEDS	0.03	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1968-81)
b From rating curve extended above 2,200 ft^3/s on basis of indirect measurement of peak flow at U.S. Highway 83
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2001 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.87	4.48	4.30	5.45	3.91	---
2	---	---	---	---	---	---	4.83	4.46	4.37	5.15	3.85	---
3	---	---	---	---	---	---	4.86	4.47	4.48	5.08	3.82	---
4	---	---	---	---	---	---	4.91	4.43	4.60	5.09	3.81	---
5	---	---	---	---	---	---	4.86	4.35	4.58	4.98	3.80	---
6	---	---	---	---	---	---	4.78	4.33	4.53	e4.83	3.77	---
7	---	---	---	---	---	---	4.77	4.37	4.52	e4.72	3.69	---
8	---	---	---	---	---	---	4.85	4.49	4.83	e4.59	3.58	---
9	---	---	---	---	---	---	e4.79	5.23	5.35	e4.46	3.55	---
10	---	---	---	---	---	---	e4.73	5.28	5.15	e4.36	3.63	---
11	---	---	---	---	---	---	e4.70	5.08	4.93	e4.39	4.01	---
12	---	---	---	---	---	---	4.77	4.97	4.79	e4.33	3.92	---
13	---	---	---	---	---	---	4.87	5.09	4.67	e4.59	3.82	---
14	---	---	---	---	---	---	e4.84	5.17	4.61	e4.58	3.80	---
15	---	---	---	---	---	---	4.75	5.03	4.52	e4.47	3.77	---
16	---	---	---	---	---	---	4.70	4.92	4.43	e4.40	3.69	---
17	---	---	---	---	---	---	4.66	4.85	4.36	e4.27	3.81	---
18	---	---	---	---	---	---	e4.66	4.86	4.24	e4.21	3.84	---
19	---	---	---	---	---	---	4.65	4.87	4.16	e4.07	3.81	---
20	---	---	---	---	---	---	4.57	4.86	4.11	4.08	3.78	---
21	---	---	---	---	---	---	4.59	4.80	4.09	4.07	3.68	---
22	---	---	---	---	---	---	4.63	4.74	4.04	4.05	3.56	---
23	---	---	---	---	---	---	4.61	4.71	4.03	4.04	---	---
24	---	---	---	---	---	---	5.04	4.59	4.62	3.94	4.04	---	---
25	---	---	---	---	---	---	5.19	4.56	4.54	3.91	4.08	---	---
26	---	---	---	---	---	---	5.35	4.54	4.45	3.96	4.06	---	---
27	---	---	---	---	---	---	5.11	4.50	4.39	4.03	4.04	---	---
28	---	---	---	---	---	---	5.08	4.47	4.38	3.98	4.03	---	---
29	---	---	---	---	---	---	5.02	4.46	4.37	4.59	3.99	---	---
30	---	---	---	---	---	---	5.00	4.47	4.35	5.57	3.96	---	---
31	---	---	---	---	---	---	4.92	---	4.31	---	3.95	---	---
MEAN	---	---	---	---	---	---	---	4.69	4.69	4.46	4.40	---	---
MAX	---	---	---	---	---	---	---	4.91	5.28	5.57	5.45	---	---
MIN	---	---	---	---	---	---	---	4.46	4.31	3.91	3.95	---	---

e Estimated

06342450 BURNT CREEK NEAR BISMARCK, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
14...	1035	7.9	8.3	7.3	999	1,010	10.1	8.4	61.4	48.2	7.90	2	98.0

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
14...	37	313	9.8	.24	6.64	261	676	14.6	<50	<1	1.7	44.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
14...	130	<1	<1	1.9	90	<1	20	3.43	<1	<1	<1.0	1.8

Remark codes used in this table:
< -- Less than.

06342500 MISSOURI RIVER AT BISMARCK, ND

LOCATION.--Lat 46°48'51", long 100°49'17", 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 National Geodetic Vertical Datum of 1929, revised. See WSP 1729 or 1917 for history of changes prior to Sept. 30, 1937.

REMARKS.--Records good except for estimated daily discharges, 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, 14.80 ft, Jan. 13, 1983, 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,300	11,900	15,500	e15,900	e16,400	e12,300	12,800	17,900	16,000	16,200	15,800	16,900
2	10,500	11,400	15,600	e15,900	e16,500	e12,300	12,600	18,000	16,100	17,100	15,800	16,700
3	11,600	11,700	e15,800	e16,000	e15,700	e12,300	13,800	18,700	16,000	17,400	16,000	16,500
4	e11,200	14,700	e15,600	e16,000	e14,200	e12,600	16,300	17,200	15,900	e17,100	15,900	16,100
5	e11,600	16,500	e15,600	e16,200	e14,200	e12,900	19,600	17,400	15,700	e16,400	15,500	16,500
6	11,300	14,900	e15,700	e16,300	e13,600	e12,600	20,600	17,700	15,600	16,200	15,500	16,300
7	11,600	11,900	15,800	e16,300	e13,800	14,000	20,700	17,900	16,700	16,200	15,800	16,400
8	11,700	11,400	15,400	e16,200	e13,500	13,900	19,800	20,100	17,200	16,400	15,300	15,600
9	11,700	11,900	15,700	e16,100	e13,400	13,300	17,000	19,300	16,700	16,700	15,600	15,600
10	11,600	11,400	15,400	e15,800	e13,300	13,400	17,300	19,300	16,800	16,600	15,900	15,400
11	11,700	11,100	15,300	e15,700	e13,200	12,800	17,600	19,200	17,300	16,700	16,500	15,800
12	11,700	11,600	15,700	e15,700	e13,400	e12,800	17,900	18,500	16,900	16,300	16,000	16,100
13	11,600	11,400	15,100	e15,800	e13,600	13,100	17,900	19,400	16,400	16,000	15,900	15,900
14	11,700	11,700	15,100	e15,900	e13,500	13,100	17,700	18,400	16,500	16,100	15,900	15,800
15	11,900	11,600	15,300	e16,000	e13,600	13,200	17,800	19,000	16,000	e16,300	16,400	15,700
16	11,400	11,800	15,400	e16,100	e13,700	12,500	18,700	17,900	15,900	16,200	16,100	15,900
17	12,100	12,300	e15,400	e16,200	e13,400	12,300	17,600	16,300	15,900	16,400	16,400	16,000
18	11,700	11,400	e15,000	e16,000	e13,400	12,500	17,900	16,300	15,900	15,900	16,300	16,000
19	12,400	11,800	15,000	e15,800	e13,600	12,500	17,800	15,900	15,900	15,800	16,200	14,800
20	12,000	11,700	e15,700	e15,300	e13,600	12,400	18,100	16,100	15,700	16,000	16,400	12,600
21	11,400	12,200	e15,800	e15,600	e13,400	12,800	18,300	16,500	15,400	16,000	16,300	12,700
22	11,500	12,600	e15,900	e15,800	e13,100	12,800	19,600	17,500	15,700	16,000	16,300	12,700
23	11,400	12,600	e15,800	e15,800	e12,700	12,600	18,300	16,800	15,700	16,100	16,600	12,700
24	11,500	12,700	e15,800	e15,900	e12,300	12,800	19,200	17,200	15,600	15,900	16,300	12,800
25	11,500	12,900	e16,000	e16,000	e12,100	12,700	18,400	16,700	16,000	16,100	16,400	13,000
26	11,900	13,200	e16,400	e16,000	e11,900	12,600	17,700	16,100	15,400	15,800	16,500	12,700
27	11,200	14,000	e16,300	e16,300	e11,900	13,200	18,300	15,800	16,300	15,700	15,800	12,900
28	11,800	14,400	e15,800	e16,300	e12,200	12,800	18,100	15,800	15,900	15,900	16,700	12,700
29	11,800	14,300	e15,600	e16,200	---	13,700	19,200	15,700	16,500	15,600	17,000	12,700
30	11,700	14,400	e15,500	e16,300	---	13,100	18,900	16,000	17,100	15,900	16,400	12,900
31	11,200	---	e15,500	e16,500	---	13,000	---	15,800	---	15,900	16,800	---
TOTAL	359,200	377,400	483,500	495,900	379,200	398,900	535,500	540,400	484,700	502,900	500,300	444,400
MEAN	11,590	12,580	15,600	16,000	13,540	12,870	17,850	17,430	16,160	16,220	16,140	14,810
MAX	12,400	16,500	16,400	16,500	16,500	14,000	20,700	20,100	17,300	17,400	17,000	16,900
MIN	10,500	11,100	15,000	15,300	11,900	12,300	12,600	15,700	15,400	15,600	15,300	12,600
AC-FT	712,500	748,600	959,000	983,600	752,100	791,200	1,062,000	1,072,000	961,400	997,500	992,300	881,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	20,750	20,870	20,510	22,520	24,600	22,170	21,100	22,460	24,050	24,950	24,730	21,840
MAX	48,180	43,240	31,690	32,350	34,840	34,370	40,370	42,030	43,540	64,610	57,010	45,060
(WY)	(1998)	(1998)	(1970)	(1969)	(1969)	(1972)	(1972)	(1972)	(1975)	(1975)	(1975)	(1997)
MIN	8,399	8,155	7,890	6,519	5,883	6,317	10,420	9,234	8,445	10,840	9,271	8,121
(WY)	(1963)	(1963)	(1955)	(1955)	(1956)	(1955)	(1993)	(1963)	(1960)	(1960)	(1962)	(1962)

06342500 MISSOURI RIVER AT BISMARCK, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1954 - 2005[a]	
ANNUAL TOTAL	6,253,400		5,502,300			
ANNUAL MEAN	17,090		15,070		22,540	
HIGHEST ANNUAL MEAN					35,630	1975
LOWEST ANNUAL MEAN					14,320	1960
HIGHEST DAILY MEAN	25,700	Feb 24	20,700	Apr 7	68,800	Jul 13, 1975
LOWEST DAILY MEAN	10,500	Oct 2	10,500	Oct 2	4,000	Mar 25, 1955
ANNUAL SEVEN-DAY MINIMUM	11,200	Sep 26	11,300	Oct 1	4,860	Mar 21, 1955
MAXIMUM PEAK FLOW			[b]21,400	May 8	[c]68,900	Jul 13, 1975
MAXIMUM PEAK STAGE			[d]10.63	Dec 26	[d]14.80	Jan 13, 1983
ANNUAL RUNOFF (AC-FT)	12,400,000		10,910,000		16,330,000	
10 PERCENT EXCEEDS	22,800		17,600		33,700	
50 PERCENT EXCEEDS	17,000		15,800		21,600	
90 PERCENT EXCEEDS	11,700		11,800		12,000	

a Since completion of Garrison Dam
b Gage height, 6.82 ft
c Gage height, 14.24 ft
d Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.47	4.47	5.44	8.56	8.83	e6.43	4.72	5.99	5.54	5.59	5.49	5.74
2	4.08	4.33	5.48	8.00	8.71	6.67	4.68	6.02	5.56	5.79	5.48	5.69
3	4.38	4.42	---	8.28	8.34	6.75	4.97	6.17	5.54	5.87	5.52	5.65
4	e4.28	5.25	---	8.89	7.93	6.96	5.60	5.83	5.50	---	5.49	5.56
5	e4.39	5.72	---	9.36	7.81	6.65	6.38	5.86	5.45	---	5.39	5.66
6	4.30	5.30	---	9.49	7.50	5.51	6.61	5.95	5.44	5.58	5.39	5.59
7	4.40	4.49	5.53	9.67	7.02	5.04	6.65	6.00	5.69	5.57	5.48	5.63
8	4.42	4.34	5.42	9.76	6.94	5.01	6.44	6.50	5.81	5.64	5.36	5.44
9	4.43	4.47	5.50	9.71	7.27	4.85	5.78	6.31	5.70	5.71	5.43	5.43
10	4.40	4.34	5.42	9.62	7.35	4.88	5.84	6.31	5.71	5.68	5.51	5.37
11	4.41	4.25	5.41	9.55	7.33	4.72	5.91	6.30	5.84	5.71	5.64	5.49
12	4.41	4.38	5.50	9.57	e7.39	e4.73	6.00	6.14	5.74	5.61	5.52	5.55
13	4.38	4.33	5.35	9.71	7.39	4.82	5.99	6.33	5.64	5.53	5.50	5.50
14	4.43	4.42	5.35	9.47	e7.27	4.81	5.94	6.12	5.64	5.55	5.50	5.48
15	4.49	4.38	5.39	9.64	7.16	4.84	5.97	6.25	5.54	---	5.62	5.45
16	4.32	4.44	5.44	9.89	7.09	4.65	6.17	5.99	5.51	5.58	5.56	5.51
17	4.53	4.60	e5.41	9.97	6.77	4.59	5.91	5.59	5.51	5.61	5.63	5.53
18	4.43	4.33	e5.33	9.92	7.03	4.65	5.98	5.61	5.50	5.51	5.61	5.54
19	4.62	4.46	5.33	9.85	7.37	4.65	5.96	5.50	5.51	5.47	5.59	5.24
20	4.51	4.41	e5.68	9.70	7.31	4.62	6.03	5.56	5.45	5.53	5.62	4.68
21	4.34	4.56	5.55	9.56	7.13	4.74	6.09	5.66	5.39	5.53	5.60	4.70
22	4.35	4.68	6.36	9.43	7.05	4.73	6.38	5.89	5.46	5.53	5.61	4.72
23	4.32	4.69	9.59	9.25	6.79	4.68	6.08	5.71	5.44	5.56	5.66	4.71
24	4.36	4.71	9.51	9.45	e6.51	4.73	6.28	5.83	5.43	5.51	5.61	4.73
25	4.35	4.75	9.82	9.53	6.56	4.71	6.11	5.71	5.52	5.54	5.64	4.78
26	4.48	4.84	10.55	9.39	6.62	4.69	5.95	5.55	5.37	5.48	5.65	4.72
27	4.27	5.07	10.50	9.18	6.53	4.84	6.09	5.48	5.60	5.47	5.49	4.76
28	4.46	5.17	10.39	9.16	6.64	4.73	6.05	5.47	5.50	5.52	5.70	4.70
29	4.45	5.15	10.33	9.06	---	4.95	6.29	5.44	5.66	5.43	5.78	4.71
30	4.43	5.17	9.99	9.03	---	4.81	6.23	5.52	5.79	5.50	5.64	4.76
31	4.27	---	9.53	8.97	---	4.78	---	5.47	---	5.51	5.71	---
MEAN	4.39	4.66	---	9.37	7.27	5.10	5.97	5.87	5.57	---	5.56	5.23
MAX	4.62	5.72	---	9.97	8.83	6.96	6.65	6.50	5.84	---	5.78	5.74
MIN	4.08	4.25	---	8.00	6.51	4.59	4.68	5.44	5.37	---	5.36	4.68

e Estimated

06342500 MISSOURI RIVER AT BISMARCK, ND—Continued

WATER-QUALITY RECORDS

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

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1245	20,600	8.6	7.1	655	660	17.0	7.2	48.8	19.2	3.90	2	55.7
AUG													
22...	1415	16,600	8.5	8.3	659	655	22.5	19.8	49.6	19.2	3.60	2	52.4

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	37	166	9.6	.60	5.07	154	393	22,100	<50	<1	1.7	54.3	<1
AUG													
22...	35	171	10.6	.64	4.88	166	405	18,400	<50	<1	2.0	59.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	110	<1	<1	2.5	10	<1	10	4.22	1.1	<1	<1.0	3.9
AUG												
22...	140	<1	3	2.0	40	<1	<10	2.81	2.9	<1	<1.0	1.1

Remark codes used in this table:
< -- Less than.

06343500 E.A. PATTERSON LAKE NEAR DICKINSON, ND

LOCATION.--Lat 46°52'11", long 102°49'37", in NE¼NW¼SW¼ sec.8, T.139 N., R.96 W., Stark County, Hydrologic Unit 10130202, at left edge of spillway and 2 mi southwest of Dickinson.

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

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1958, published as Dickinson Reservoir near Dickinson.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Jan. 4, 1961, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth-fill dam; storage began May 23, 1950; dam completed Aug. 9, 1950. Total capacity is 24,600 acre-ft at maximum pool, elevation, 2,428.9 ft. Dead storage is 1,000 acre-ft below lowest point of outlet, elevation, 2,404.0 ft. Conservation storage is 9,100 acre-ft between elevations 2,404.0 ft and 2,420.0 ft, crest of spillway. The crest of the spillway was raised 3.5 ft in 1981 from 2,416.5 ft. Figures given herein represent total contents based on capacity table dated 1991. The reservoir is for flood control, irrigation, and municipal supply.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation. Extremes are those observed.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,590 acre-ft, June 9, 1982, elevation, 2,421.13 ft; minimum since initial filling of reservoir, 2,080 acre-ft, Feb. 8, 1993, elevation, 2,408.08 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,280 acre-ft, June 29-30, elevation, 2,420.55 ft; minimum, 2,230 acre-ft, Sept. 30, elevation, 2,412.02 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,417.40	5,870	--
Oct. 31	2,417.66	6,110	+240
Nov 30	2,416.46	5,040	-1,070
Dec. 31	2,416.56	5,130	+90
CAL YR 2004	--	--	-1,210
Jan. 31	2,416.70	5,250	+120
Feb. 28	2,416.86	5,390	+140
Mar. 31	2,417.81	6,260	+870
Apr. 30	2,417.78	6,230	-30
May 31	2,419.74	8,300	+2,070
June 30	2,420.55	9,280	+980
July 31	2,414.97	3,910	-5,370
Aug. 31	2,414.25	3,430	-480
Sept. 30	2,412.02	2,230	-1,200
WTR YR 2005	--	--	-3,640

06343500 E.A. PATTERSON LAKE NEAR DICKINSON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1975, 1980 to current year.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	Color, water, fltrd, Pt-Co units (00080)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
OCT													
18...	1155	1.0	1.0	25	8.3	840	180	39.6	19.6	11.0	4	137	61
MAR													
01...	1250	1.2	.70	25	8.3	1,100	220	47.9	25.4	10.4	5	178	62
JUN													
24...	1115	1.1	.90	15	8.3	1,160	210	43.5	25.8	10.3	6	195	65
AUG													
24...	1145	1.0	.50	125d	8.2	1,030	200	41.3	22.5	11.2	5	162	63

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

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Boron, water, fltrd, ug/L (01020)
OCT													
18...	199@c	5.87	.3	8.9	258	601	613	.09	.10	E.004n	.05	.06	175
MAR													
01...	256@c	7.49	.3	5.7	326d	755	794	<.04	<.06	<.008	E.01n	E.04n	218
JUN													
24...	229@c	8.26	.3	7.5	383d	811	838	.12	E.05n	.009	.04	.08	275
AUG													
24...	220@c	6.36	.3	11.1	307d	696	725	E.04n	.17	E.006n	.11	.15	228

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

06343500 E.A. PATTERSON LAKE NEAR DICKINSON, ND—Continued

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

Date	Time	Reservoir depth, feet (72025)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
OCT													
18...	1145	18.7	--	.00	25.0	90	14	700	10.1	92	7.6	940	.5
18...	1146	--	--	.50	--	--	--	--	9.9	--	7.6	940	--
18...	1147	--	--	1.0	--	--	--	--	9.9	--	7.6	940	--
18...	1148	--	--	2.0	--	--	--	--	9.9	--	7.8	940	--
18...	1149	--	--	3.4	--	--	--	--	9.9	--	7.8	941	--
18...	1150	--	--	4.8	--	--	--	--	9.8	--	7.9	941	--
18...	1151	--	--	5.7	--	--	--	--	9.8	--	7.9	940	--
MAR													
01...	1240	17.7	.50	.60	78.7	--	<5.0	700	16.2	140	7.3	1,160	4.0
01...	1241	--	--	1.0	--	--	--	--	16.1	--	7.3	1,160	--
01...	1242	--	--	2.0	--	--	--	--	12.4	--	7.3	1,200	--
01...	1243	--	--	3.0	--	--	--	--	10.8	--	7.3	1,240	--
01...	1244	--	--	4.0	--	--	--	--	7.9	--	7.3	1,280	--
01...	1245	--	--	5.0	--	--	--	--	7.5	--	7.0	1,380	--
01...	1246	--	--	5.4	--	--	--	--	6.1	--	7.1	1,420	--
JUN													
24...	1105	23.6	--	.00	18.0	225	<5.0	699	7.0	91	7.6	1,250	22.0
24...	1106	--	--	.50	--	--	--	--	6.9	--	7.5	1,250	--
24...	1107	--	--	1.0	--	--	--	--	6.9	--	7.5	1,250	--
24...	1108	--	--	2.0	--	--	--	--	6.9	--	7.5	1,250	--
24...	1109	--	--	4.0	--	--	--	--	6.5	--	7.6	1,260	--
24...	1110	--	--	6.0	--	--	--	--	4.0	--	7.5	1,250	--
24...	1111	--	--	7.2	--	--	--	--	1.5	--	7.5	1,260	--
AUG													
24...	1136	13.1	--	.50	5.00	270	10	--	6.8	--	8.0	1,030	19.5
24...	1137	--	--	1.0	--	--	--	--	6.8	--	8.0	1,030	--
24...	1138	--	--	1.5	--	--	--	--	6.8	--	8.0	1,030	--
24...	1139	--	--	2.0	--	--	--	--	6.8	--	8.0	1,030	--
24...	1140	--	--	2.5	--	--	--	--	6.7	--	8.0	1,030	--
24...	1141	--	--	3.0	--	--	--	--	6.7	--	8.0	1,030	--
24...	1142	--	--	3.5	--	--	--	--	6.7	--	8.0	1,030	--
24...	1143	--	--	4.0	--	--	--	--	6.6	--	8.0	1,030	--

06343500 E.A. PATTERSON LAKE NEAR DICKINSON, ND—Continued

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

Date	Temperature, water, deg C (00010)
OCT	
18...	7.4
18...	7.4
18...	7.4
18...	7.4
18...	7.4
18...	7.4
18...	7.4
MAR	
01...	5.4
01...	5.5
01...	5.6
01...	5.3
01...	4.9
01...	4.3
01...	4.3
JUN	
24...	23.7
24...	23.8
24...	23.7
24...	23.7
24...	21.1
24...	19.7
24...	19.0
AUG	
24...	20.6
24...	20.6
24...	20.6
24...	20.6
24...	20.6
24...	20.6
24...	20.5
24...	20.4

Remark codes used in this table:
< -- Less than.

06344600 GREEN RIVER NEAR NEW HRADEC, ND

LOCATION.--Lat 47°01'40", long 103°03'10", on line between secs.13 and 14, T.141 N., R.98 W., Billings County, Hydrologic Unit 10130202, on left bank above county highway bridge and 8 mi west of New Hradec.

DRAINAGE AREA.--152 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	6.1	0.44	e0.10	1.6	0.46	15	0.61	e9.9	24	4.2	0.00
2	0.16	3.6	0.46	e0.10	2.6	0.51	11	0.62	e11	27	3.8	0.00
3	0.17	3.3	0.52	e0.10	2.7	0.75	7.7	0.61	e29	20	4.2	0.00
4	0.17	2.4	0.59	e0.09	2.6	1.0	5.6	0.57	e40	13	4.1	0.00
5	0.19	1.8	0.65	e0.09	e2.0	1.4	3.9	0.53	e20	7.5	3.8	0.00
6	0.20	1.3	0.51	e0.09	e0.95	2.2	2.9	0.50	e12	4.2	3.9	0.00
7	0.20	1.0	0.57	e0.09	e0.33	4.4	2.3	0.56	e28	2.6	3.7	0.00
8	0.18	0.84	0.58	e0.09	e0.48	5.9	1.6	1.1	e186	1.5	3.6	0.00
9	0.19	0.73	0.55	e0.08	0.33	5.3	1.5	1.3	81	0.99	3.5	0.00
10	0.19	0.67	0.56	e0.08	0.32	4.7	1.5	1.7	53	0.69	3.6	0.00
11	0.19	0.63	0.56	e0.07	0.38	4.0	1.5	1.7	30	0.43	3.0	0.00
12	0.21	0.59	e0.53	e0.07	0.50	3.4	1.4	1.7	19	0.26	3.1	0.00
13	0.26	0.58	e0.50	e0.06	0.92	2.1	1.3	2.0	14	0.22	2.7	0.00
14	0.28	0.60	e0.45	e0.05	1.0	2.3	1.2	2.0	11	0.20	1.8	0.00
15	0.27	0.60	e0.47	e0.04	1.2	1.8	1.0	2.9	8.5	0.13	1.2	0.00
16	0.28	0.60	e0.48	e0.04	1.1	1.4	0.88	2.3	8.2	0.11	0.82	0.00
17	0.28	0.57	e0.48	e0.03	0.96	1.0	0.88	2.4	7.7	0.14	0.82	0.00
18	0.31	0.57	e0.44	e0.07	0.67	0.82	0.81	5.8	5.1	0.12	0.69	0.00
19	0.41	0.56	e0.39	e0.05	0.48	0.59	0.91	11	3.6	0.12	0.49	0.00
20	0.40	0.54	e0.30	e0.04	0.36	0.70	1.2	13	2.8	0.13	0.38	0.00
21	0.43	0.51	e0.25	e0.03	0.35	0.93	1.3	47	3.1	0.14	0.31	0.00
22	0.54	0.52	e0.21	e0.07	0.33	1.7	1.4	36	3.1	0.16	0.24	0.00
23	0.62	0.53	e0.13	0.12	0.32	2.0	1.2	22	3.0	0.19	0.18	0.00
24	0.68	0.47	e0.13	0.39	0.38	2.1	1.0	13	2.3	0.26	0.11	0.00
25	0.67	0.46	e0.15	0.74	0.47	3.6	0.88	8.3	2.1	1.9	e0.06	0.00
26	0.59	0.56	e0.16	2.0	0.57	8.1	0.76	5.3	2.2	1.7	e0.03	0.00
27	0.56	0.62	e0.18	1.5	0.64	37	0.68	3.5	2.7	1.7	e0.01	0.00
28	0.50	0.55	e0.17	0.96	0.57	143	0.62	e3.0	2.4	1.8	e0.02	0.00
29	2.2	0.54	e0.14	0.52	---	98	0.59	e2.5	24	1.8	e0.01	0.00
30	2.7	0.48	e0.11	0.46	---	45	0.59	e1.7	23	2.0	0.00	0.00
31	7.7	---	e0.10	0.54	---	25	---	e2.0	---	3.4	0.00	---
TOTAL	21.89	32.82	11.76	8.76	25.11	411.16	73.10	197.20	647.7	118.39	54.37	0.00
MEAN	0.71	1.09	0.38	0.28	0.90	13.3	2.44	6.36	21.6	3.82	1.75	0.00
MAX	7.7	6.1	0.65	2.0	2.7	143	15	47	186	27	4.2	0.00
MIN	0.16	0.46	0.10	0.03	0.32	0.46	0.59	0.50	2.1	0.11	0.00	0.00
AC-FT	43	65	23	17	50	816	145	391	1,280	235	108	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2005, BY WATER YEAR (WY)

MEAN	2.92	1.66	0.96	1.26	8.06	63.6	37.1	16.2	19.0	11.4	3.37	1.57
MAX	47.7	10.6	3.40	14.3	67.4	323	314	141	101	123	29.5	21.1
(WY)	(1983)	(1999)	(1999)	(1974)	(1983)	(1972)	(1975)	(1970)	(1970)	(1964)	(1981)	(1986)
MIN	0.08	0.31	0.13	0.00	0.00	0.33	0.71	0.60	0.07	0.00	0.00	0.00
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(1964)	(1990)	(1992)	(1988)	(1988)	(1988)	(1994)

06344600 GREEN RIVER NEAR NEW HRADEC, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1964 - 2005	
ANNUAL TOTAL	2,946.93		1,602.26			
ANNUAL MEAN	8.05		4.39		13.9	
HIGHEST ANNUAL MEAN					35.9	1972
LOWEST ANNUAL MEAN					0.74	1992
HIGHEST DAILY MEAN	300	Mar 10	186	Jun 8	3,000	Mar 18, 2003
LOWEST DAILY MEAN	0.00	Jul 25	0.00	Aug 30	0.00	May 25, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 25	0.00	Aug 30	0.00	May 31, 1964
MAXIMUM PEAK FLOW			[e]230	Jun 8	[a]4,120	May 9, 1970
MAXIMUM PEAK STAGE			[b]7.98	Jun 8	[c]19.58	Mar 21, 1997
ANNUAL RUNOFF (AC-FT)	5,850		3,180		10,070	
10 PERCENT EXCEEDS	3.4		8.1		13	
50 PERCENT EXCEEDS	0.44		0.61		1.0	
90 PERCENT EXCEEDS	0.00		0.03		0.18	

a Gage height, 16.88 ft
b Observed, probably higher during period of no record, May 28 to June 8
c Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.80	6.46	5.91	5.85	6.19	5.99	6.80	6.04	---	6.92	6.61	5.84
2	5.80	6.33	5.92	5.84	6.31	6.01	6.69	6.05	---	6.95	6.59	5.81
3	5.81	6.31	5.95	5.83	6.32	6.06	6.59	6.04	---	6.84	6.61	5.79
4	5.81	6.24	5.97	5.82	6.31	6.12	6.51	6.03	---	6.74	6.61	5.77
5	5.82	6.17	5.99	5.79	6.31	6.19	6.42	6.02	---	6.66	6.59	5.75
6	5.83	6.12	5.94	5.83	6.23	6.28	6.35	6.01	---	6.59	6.59	5.72
7	5.84	6.06	5.96	5.79	6.08	6.44	6.29	6.03	---	6.52	6.59	5.70
8	5.82	6.03	5.96	5.78	6.00	6.52	6.22	6.15	---	6.46	6.58	5.69
9	5.83	6.01	5.95	e5.79	5.94	6.49	6.20	6.20	7.42	6.42	6.58	5.66
10	5.82	5.99	5.96	e5.81	5.94	6.46	6.20	6.24	7.22	6.39	6.58	5.63
11	5.82	5.98	5.96	5.84	5.96	6.42	6.20	6.23	7.00	6.35	6.56	5.61
12	5.84	5.97	5.97	5.86	6.00	6.38	6.20	6.25	6.85	6.30	6.56	5.59
13	5.88	5.97	5.94	e5.83	6.09	6.26	6.18	6.28	6.77	6.29	6.54	5.60
14	5.89	5.97	5.92	e5.76	6.13	6.29	6.17	6.27	6.71	6.28	6.48	5.58
15	5.88	5.97	5.92	e5.70	6.15	6.24	6.13	6.35	6.63	6.23	6.42	5.56
16	5.89	5.97	5.95	e5.71	6.14	6.18	6.10	6.30	6.62	6.21	6.38	5.55
17	5.89	5.96	5.93	5.80	6.11	6.12	6.10	6.30	6.60	6.23	6.38	5.53
18	5.90	5.96	5.96	5.84	6.05	6.09	6.10	6.50	6.50	6.22	6.36	5.52
19	5.94	5.96	5.89	5.88	6.00	6.04	6.12	6.65	6.41	6.22	6.32	5.58
20	5.94	5.95	5.94	5.81	5.95	6.06	6.18	6.71	6.35	6.23	6.29	5.64
21	5.95	5.94	5.89	5.78	5.95	6.11	6.20	7.15	6.38	6.23	6.25	5.68
22	5.98	5.94	5.79	5.65	5.94	6.21	6.21	7.05	6.38	6.25	6.21	5.72
23	6.01	5.95	5.72	5.77	5.93	6.25	6.18	6.89	6.37	6.27	6.16	5.76
24	6.02	5.92	5.72	5.95	5.96	6.26	6.14	6.75	6.30	6.30	6.11	5.81
25	6.02	5.92	5.77	6.06	5.99	6.40	6.11	6.62	6.28	6.47	---	5.87
26	6.00	5.96	5.82	6.26	6.02	6.60	6.08	6.51	6.28	6.47	---	5.90
27	5.99	5.98	5.87	6.19	6.04	7.00	6.06	6.40	6.34	6.47	---	5.94
28	5.97	5.95	5.87	6.11	6.02	7.90	6.05	---	6.40	6.48	---	5.97
29	6.17	5.95	5.88	6.01	---	7.57	6.04	---	6.90	6.48	---	5.99
30	6.27	5.93	5.90	5.99	---	7.17	6.04	---	6.90	6.50	5.91	6.01
31	6.53	---	5.89	6.01	---	6.95	---	---	---	6.57	5.88	---
MEAN	5.93	6.03	5.90	5.87	6.07	6.42	6.23	---	---	6.44	---	5.73
MAX	6.53	6.46	5.99	6.26	6.32	7.90	6.80	---	---	6.95	---	6.01
MIN	5.80	5.92	5.72	5.65	5.93	5.99	6.04	---	---	6.21	---	5.52

e Estimated

06344600 GREEN RIVER NEAR NEW HRADEC, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
21...	1200	1.3	--	8.3	6.7	702	707	18.1	11.0	33.7	17.3	6.80	3
AUG													
29...	1250	.01	699	8.8	8.6	1,070	1,080	27.0	19.9	35.2	23.4	7.30	5

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
21...	97.5	56	244	6.3	.24	5.32	130	440	1.57	<50	<1	1.4	61.5
AUG													
29...	170	66	389	7.5	.36	2.93	195	673	.02	<50	<1	6.0	100

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
21...	<1	200	<1	<1	3.8	90	<1	20	5.09	<1	<1	<1.0	16.2
AUG													
29...	<1	440	<1	<1	3.7	70	<1	30	5.72	8.0	<1	<1.0	2.2

Remark codes used in this table:
< -- Less than.

06345500 HEART RIVER NEAR RICHARDTON, ND

LOCATION.--Lat 46°44'44", long 102°18'30", in NE¼NW¼ sec.29, T.138 N., R.92 W., Stark County, Hydrologic Unit 10130202, on right bank 50 ft upstream from bridge on State Highway 8, 0.5 mi downstream from Plum Creek, and 9.5 mi south of Richardton.

DRAINAGE AREA.--1,240 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to September 1922, April 1943 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS (WATER YEARS).--WSP 1209: Drainage area. WSP 1239: 1906, 1918(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 2,153.67 ft above National Geodetic Vertical Datum of 1929. May 18, 1903, to Sept. 30, 1922, nonrecording gage at 3 sites in 1 mi reach below present site at different datums. Apr. 14, 1943, to July 7, 1947, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow is regulated by E.A. Patterson Lake (station 06343500), 85 river miles upstream, since 1950. Some diversions for irrigation and water supply at low flow.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 5, 1938, reached a stage of about 26 ft, from information by local residents, discharge, 16,000 ft^3/s; flood of Mar. 25, 1943, reached a stage of 24.2 ft from floodmarks, discharge, 11,700 ft^3/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	52	e20	e5.6	e16	10	165	13	21	1,400	33	4.8
2	10	30	e22	e5.8	e16	11	113	11	340	1,190	32	5.0
3	11	23	e23	e6.0	16	11	82	10	121	743	32	4.8
4	9.0	22	e24	e6.2	16	12	66	9.8	86	432	32	4.9
5	7.7	19	e24	e6.0	16	13	54	9.6	220	312	33	5.3
6	7.0	16	e22	e5.0	15	15	46	9.0	283	227	34	5.5
7	6.5	15	e20	e4.0	14	17	39	9.0	251	177	31	5.7
8	6.3	16	e18	e3.8	14	17	34	16	253	235	30	5.7
9	6.1	15	e19	e3.7	13	17	30	25	193	748	28	6.1
10	6.0	13	e20	e3.6	12	18	26	65	e223	594	34	6.4
11	6.2	12	e20	e3.0	12	15	24	47	e219	289	40	6.4
12	6.1	11	e19	e2.0	12	17	24	31	e166	162	70	6.2
13	7.0	11	e18	e1.5	13	12	23	28	e127	119	46	7.1
14	7.9	11	e18	e1.2	14	12	21	25	e111	89	36	19
15	7.5	35	e18	e1.1	14	14	19	25	e99	77	32	28
16	10	37	e18	e1.3	13	14	17	26	87	70	30	28
17	14	37	e18	e1.4	12	13	15	21	72	68	29	28
18	16	37	e17	e1.4	11	15	14	21	60	63	26	28
19	18	37	e17	e1.5	10	14	13	23	57	62	18	28
20	17	36	e15	e1.6	9.9	14	14	27	108	58	14	28
21	17	24	e12	e1.7	10	15	17	33	187	52	11	28
22	18	e22	e10	e2.0	10	16	25	24	216	45	9.9	27
23	20	e21	e8.0	e2.4	10	17	21	129	315	44	8.8	27
24	22	e20	e7.0	e3.0	10	17	18	155	264	44	7.9	27
25	25	e21	e5.4	e3.6	10	16	17	96	187	46	7.5	27
26	25	e22	e4.2	e5.0	10	13	15	61	140	44	6.8	27
27	22	e22	e4.0	e7.0	11	14	15	42	115	53	6.5	27
28	21	e21	e4.1	e8.8	9.7	23	14	32	134	45	6.2	26
29	24	e20	e4.2	e11	---	84	13	25	191	40	6.0	26
30	32	e20	e4.5	e13	---	87	13	21	585	38	5.7	26
31	50	---	e5.0	e15	---	127	---	20	---	34	5.1	---
TOTAL	466.3	698	458.4	138.2	349.6	710	1,007	1,089.4	5,431	7,600	741.4	528.9
MEAN	15.0	23.3	14.8	4.46	12.5	22.9	33.6	35.1	181	245	23.9	17.6
MAX	50	52	24	15	16	127	165	155	585	1,400	70	28
MIN	6.0	11	4.0	1.1	9.7	10	13	9.0	21	34	5.1	4.8
AC-FT	925	1,380	909	274	693	1,410	2,000	2,160	10,770	15,070	1,470	1,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

MEAN	16.9	13.9	9.17	8.80	44.1	378	310	99.0	162	69.7	29.7	12.0
MAX	240	114	52.5	112	643	2,125	2,160	1,318	1,225	584	401	86.4
(WY)	(1983)	(1983)	(1983)	(1973)	(1982)	(1945)	(1950)	(1970)	(1906)	(1969)	(1909)	(1986)
MIN	0.10	1.93	1.00	0.00	0.00	1.66	5.77	2.78	0.37	0.40	0.00	0.00
(WY)	(1961)	(1961)	(1920)	(1962)	(1950)	(1964)	(1905)	(1992)	(1961)	(1919)	(1991)	(1958)

06345500 HEART RIVER NEAR RICHARDTON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1903 - 2005	
ANNUAL TOTAL	26,510.8		19,218.2			
ANNUAL MEAN	72.4		52.7		96.9	
HIGHEST ANNUAL MEAN					316	1982
LOWEST ANNUAL MEAN					5.18	1961
HIGHEST DAILY MEAN	2,960	Mar 11	1,400	Jul 1	17,000	Apr 17, 1950
LOWEST DAILY MEAN	2.9	Jul 23	1.1	Jan 15	0.00	Jul 26, 1903
ANNUAL SEVEN-DAY MINIMUM	3.9	Jul 18	1.3	Jan 13	0.00	Jul 26, 1903
MAXIMUM PEAK FLOW			2,100	Jul 1	23,400	Apr 16, 1950
MAXIMUM PEAK STAGE			12.61	Jul 1	[a]28.05	Apr 16, 1950
ANNUAL RUNOFF (AC-FT)	52,580		38,120		70,180	
10 PERCENT EXCEEDS	59		120		125	
50 PERCENT EXCEEDS	15		18		12	
90 PERCENT EXCEEDS	6.2		5.7		2.0	

a From floodmark in gage well
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.88	5.46	5.48	---	4.84	4.70	6.32	4.75	4.95	11.20	5.02	4.53
2	4.88	5.21	5.44	---	4.83	4.70	5.96	4.70	7.06	10.82	5.01	4.53
3	4.88	5.12	5.35	---	4.83	4.70	5.70	4.68	6.02	9.30	5.01	4.53
4	4.84	5.10	5.28	---	4.84	4.72	5.53	4.67	5.73	8.00	5.01	4.53
5	4.81	5.05	5.21	4.75	4.84	4.75	5.40	4.66	6.54	7.36	5.02	4.54
6	4.79	4.99	5.34	4.75	4.81	4.82	5.30	4.65	7.11	6.84	5.04	4.55
7	4.77	4.97	5.35	4.69	4.77	4.85	5.22	4.65	6.95	6.48	4.99	4.56
8	4.77	4.99	5.34	4.68	4.77	4.85	5.14	4.83	6.96	6.72	4.99	4.56
9	4.76	4.97	5.33	4.68	4.76	4.85	5.08	5.00	6.57	9.35	4.95	4.57
10	4.76	4.94	5.33	4.69	4.74	4.88	5.02	5.52	---	8.72	5.03	4.58
11	4.76	4.91	5.33	4.69	4.73	4.82	4.99	5.31	---	7.22	5.10	4.58
12	4.76	4.89	5.32	4.68	4.74	4.87	4.98	5.10	---	6.33	5.38	4.57
13	4.79	4.89	5.31	4.74	4.76	4.73	4.96	5.06	---	5.82	5.16	4.59
14	4.82	4.90	5.29	4.78	4.78	4.73	4.93	5.01	---	5.54	5.06	4.81
15	4.81	5.29	5.34	4.72	4.78	4.78	4.90	5.01	---	5.44	5.01	4.96
16	4.87	5.30	5.34	4.57	4.76	4.77	4.84	5.03	5.74	5.39	4.98	4.96
17	4.96	5.31	5.33	4.49	4.74	4.75	4.80	4.94	5.60	5.37	4.97	4.96
18	5.00	5.31	5.33	4.51	4.72	4.81	4.76	4.95	5.48	5.33	4.93	4.96
19	5.02	5.31	5.27	4.56	4.69	4.78	4.73	4.98	5.44	5.31	4.82	4.96
20	5.01	5.29	5.35	4.59	4.68	4.78	4.76	5.05	5.91	5.28	4.74	4.96
21	5.01	5.12	5.24	4.63	4.68	4.80	4.84	5.15	6.54	5.23	4.69	4.96
22	5.02	5.37	5.26	4.67	4.69	4.82	5.00	5.00	6.75	5.16	4.66	4.95
23	5.06	5.21	5.26	4.67	4.69	4.85	4.94	6.03	7.33	5.15	4.64	4.94
24	5.10	5.39	5.23	4.76	4.69	4.86	4.87	6.30	7.05	5.15	4.62	4.95
25	5.14	5.48	5.24	4.79	4.69	4.82	4.84	5.81	6.54	5.16	4.61	4.95
26	5.15	5.48	5.26	4.84	4.70	4.75	4.81	5.48	6.17	5.15	4.59	4.95
27	5.09	5.33	5.28	4.85	4.71	4.77	4.79	5.26	5.97	5.23	4.58	4.95
28	5.09	5.36	5.30	4.90	4.68	4.98	4.77	5.12	6.12	5.16	4.57	4.94
29	5.13	5.46	---	4.91	---	5.69	4.76	5.02	6.57	5.10	4.57	4.93
30	5.24	5.48	---	4.88	---	5.74	4.75	4.94	8.40	5.08	4.56	4.93
31	5.43	---	---	4.85	---	6.02	---	4.93	---	5.04	4.54	---
MEAN	4.95	5.20	---	---	4.75	4.89	5.06	5.08	---	6.40	4.87	4.77
MAX	5.43	5.48	---	---	4.84	6.02	6.32	6.30	---	11.20	5.38	4.96
MIN	4.76	4.89	---	---	4.68	4.70	4.73	4.65	---	5.04	4.54	4.53

06345500 HEART RIVER NEAR RICHARDTON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1972 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
19...	1455	13	8.4	6.8	1,160	1,160	6.0	12.5	58.3	32.0	8.10	4	156
AUG													
04...	1630	31	8.7	8.6	1,190	1,180	22.5	24.5	39.4	29.6	11.4	5	172

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
19...	54	276	14.2	.31	3.63	359	795	28.2	<50	<1	1.5	41.6	<1
AUG													
04...	61	220	25.1	.38	<2.00	358	769	65.1	<50	<1	3.3	55.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
19...	260	<1	1	2.8	10	<1	30	5.31	<1	<1	<1.0	2.7
AUG												
04...	350	<1	<1	3.7	50	<1	10	6.52	2.2	<1	<1.0	2.1

Remark codes used in this table:
< -- Less than.

06345780 HEART RIVER ABOVE LAKE TSCHIDA NEAR GLEN ULLIN, ND

LOCATION.--Lat 46°39'25", Long 102°04'44", in SW¼NE¼NE¼ sec.30, T.137 N., R.90 W., Grant County, Hydrologic Unit 10130202, on right bank 100 ft downstream from bridge on county road and 16 mi south and 1 mi west of Hebron.

DRAINAGE AREA.--1,530 mi^2, approximately.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow is regulated by E.A. Patterson Lake (station 06343500) about 90 river mi upstream from station, and some diversions for irrigation and water supply at low flow.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	52	e23	e9.6	e16	e13	141	19	42	1,310	38	7.1
2	11	62	e24	e9.8	e17	e14	170	19	111	1,240	37	6.4
3	11	37	e23	e10	e16	e14	114	18	344	1,240	37	5.9
4	11	29	e26	e10	e16	e15	79	16	208	657	36	5.9
5	11	27	e26	e9.4	e16	e16	60	14	158	524	36	5.8
6	10	25	e24	e9.3	e16	e20	50	13	353	408	36	5.5
7	9.1	21	e23	e7.5	e14	e22	43	13	454	320	38	5.2
8	8.9	20	e21	e6.0	e13	e23	38	18	684	249	35	5.2
9	7.6	20	e20	e6.0	e13	e25	34	34	458	505	36	5.3
10	e7.4	20	e22	e5.2	e12	e29	29	41	345	754	42	5.0
11	e7.4	18	e23	e4.9	e12	25	27	94	363	532	44	4.8
12	e7.7	17	e21	e3.4	e12	e29	28	77	359	332	44	5.8
13	e7.9	16	e21	e2.8	e12	e29	27	56	274	209	68	7.0
14	e8.7	16	e22	e2.2	e13	e29	26	51	215	137	50	6.7
15	8.2	15	e21	e2.5	e14	e30	25	45	176	99	41	6.4
16	8.4	28	e21	e2.3	e13	e25	23	43	158	85	37	27
17	9.3	39	e21	e2.6	e12	e23	22	46	127	78	36	30
18	10	40	e20	e2.5	e11	e25	20	66	106	72	35	30
19	15	41	e19	e2.3	e10	e22	19	59	89	67	33	30
20	16	e38	e18	e2.6	e7.9	e20	19	50	87	64	28	30
21	17	e34	e16	e2.8	e8.6	e22	18	52	200	61	23	30
22	18	e26	e14	e2.8	e8.9	e23	19	60	294	56	20	30
23	19	e25	e11	e2.9	e8.6	e24	28	49	317	50	18	28
24	20	e24	e9.2	e2.6	e8.6	e23	32	210	423	49	16	28
25	21	e25	e7.7	e3.0	e10	e23	25	226	326	50	15	29
26	22	e25	e7.1	e4.0	e13	e26	22	145	249	48	13	29
27	26	e25	e6.5	e6.0	e12	e30	21	97	197	45	12	29
28	24	e25	e7.1	e8.0	e12	33	20	68	171	51	11	28
29	30	e24	e6.6	e10	---	57	19	52	205	46	10	28
30	33	e23	e8.0	e12	---	87	19	44	318	42	10	27
31	35	---	e9.4	e14	---	80	---	41	---	41	8.7	---
TOTAL	463.6	837	541.6	179.0	347.6	876	1,217	1,836	7,811	9,421	943.7	521.0
MEAN	15.0	27.9	17.5	5.77	12.4	28.3	40.6	59.2	260	304	30.4	17.4
MAX	35	62	26	14	17	87	170	226	684	1,310	68	30
MIN	7.4	15	6.5	2.2	7.9	13	18	13	42	41	8.7	4.8
AC-FT	920	1,660	1,070	355	689	1,740	2,410	3,640	15,490	18,690	1,870	1,030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

MEAN	21.5	22.2	14.6	10.2	37.0	388	124	77.6	119	83.6	46.6	13.7
MAX	104	95.3	57.7	25.2	205	1,587	582	391	394	304	252	44.2
(WY)	(1999)	(1999)	(1999)	(1996)	(1996)	(1997)	(1997)	(1995)	(2001)	(2005)	(1995)	(1995)
MIN	2.23	6.52	4.14	0.32	3.41	18.5	9.90	6.20	7.21	3.16	0.05	0.10
(WY)	(1992)	(1991)	(1993)	(1991)	(1989)	(1990)	(1992)	(1992)	(1992)	(1989)	(1991)	(1991)

06345780 HEART RIVER ABOVE LAKE TSCHIDA NEAR GLEN ULLIN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1988 - 2005	
ANNUAL TOTAL	31,936.7		24,994.5			
ANNUAL MEAN	87.3		68.5		80.9	
HIGHEST ANNUAL MEAN					229	1997
LOWEST ANNUAL MEAN					9.17	1992
HIGHEST DAILY MEAN	3,010	Mar 12	1,310	Jul 1	11,000	Mar 22, 1997
LOWEST DAILY MEAN	5.2	Jan 8	2.2	Jan 14	0.00	Sep 1, 1991
ANNUAL SEVEN-DAY MINIMUM	6.3	Jan 7	2.4	Jan 14	0.00	Aug 30, 1991
MAXIMUM PEAK FLOW			1,880	Jul 1	[a]11,500	Mar 22, 1997
MAXIMUM PEAK STAGE			10.39	Jul 1	[b]26.74	Mar 21, 1997
ANNUAL RUNOFF (AC-FT)	63,350		49,580		58,620	
10 PERCENT EXCEEDS	87		173		120	
50 PERCENT EXCEEDS	18		23		18	
90 PERCENT EXCEEDS	7.1		7.1		4.0	

a About
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.67	5.13	5.05	4.67	4.89	4.76	5.61	4.79	5.06	8.99	4.99	4.50
2	4.64	5.22	5.04	4.69	4.83	4.76	5.76	4.79	5.36	8.93	4.98	4.49
3	4.63	5.02	4.99	4.72	4.70	4.77	5.52	4.78	6.36	8.92	4.98	4.48
4	4.63	4.93	4.92	4.78	---	4.80	5.33	4.75	5.92	7.36	4.97	4.48
5	4.63	4.90	---	4.80	---	4.81	5.20	4.73	5.72	6.94	4.97	4.48
6	4.62	4.87	4.79	4.74	---	4.85	5.12	4.71	6.37	6.57	4.97	4.47
7	4.60	4.83	4.79	4.72	---	4.91	5.05	4.71	6.71	6.29	4.99	4.46
8	4.58	4.80	4.78	4.71	---	4.90	4.99	4.79	7.44	6.07	4.96	4.46
9	4.55	4.80	4.76	4.69	---	4.91	4.95	4.97	6.73	6.87	4.97	4.46
10	---	4.80	4.74	4.67	4.79	4.92	4.91	5.04	6.37	7.66	5.02	4.45
11	---	4.78	4.74	4.67	4.78	4.86	4.89	5.41	6.42	6.96	5.04	4.45
12	---	4.76	---	4.68	4.79	4.91	4.90	5.32	6.41	6.33	5.05	4.47
13	---	4.74	4.69	---	4.80	4.84	4.88	5.17	6.15	5.92	5.24	4.50
14	---	4.74	4.69	4.68	4.82	4.74	4.87	5.13	5.95	5.62	5.10	4.50
15	4.59	4.73	4.73	4.61	4.82	4.83	4.86	5.09	5.80	5.43	5.02	4.49
16	4.59	4.91	4.74	---	4.82	4.78	4.84	5.07	5.72	5.35	4.98	4.84
17	4.60	5.04	4.73	---	4.81	4.81	4.82	5.09	5.58	5.31	4.97	4.89
18	4.63	5.05	4.71	---	4.79	4.86	4.80	5.24	5.48	5.27	4.95	4.89
19	4.73	5.05	4.62	---	4.77	4.82	4.78	5.20	5.39	5.24	4.92	4.89
20	4.74	---	---	4.66	4.75	4.78	4.77	5.12	5.38	5.21	4.86	4.88
21	4.76	---	4.50	4.72	4.75	4.83	4.77	5.14	5.86	5.19	4.79	4.88
22	4.77	---	4.53	4.72	4.74	4.84	4.79	5.21	6.21	5.15	4.74	4.88
23	4.79	---	4.45	4.67	4.74	4.85	4.90	5.12	6.28	5.11	4.71	4.86
24	4.81	---	4.44	4.69	4.74	4.85	4.94	5.89	6.62	5.10	4.68	4.86
25	4.83	5.08	4.50	4.69	4.75	4.83	4.87	5.98	6.31	5.10	4.66	4.87
26	4.83	5.13	4.53	4.74	4.76	4.87	4.84	5.66	6.06	5.09	4.63	4.87
27	4.89	---	4.55	4.77	4.75	4.94	4.82	5.43	5.88	5.06	4.60	4.87
28	4.86	---	4.59	4.79	4.73	4.95	4.81	5.26	5.78	5.11	4.58	4.86
29	4.94	---	4.63	4.80	---	5.17	4.80	5.15	5.91	5.07	4.57	4.86
30	4.97	---	4.67	4.85	---	5.38	4.80	5.08	6.29	5.03	4.56	4.85
31	4.99	---	4.66	4.90	---	5.34	---	5.06	---	5.01	4.53	---
MEAN	---	---	---	---	---	4.89	4.97	5.13	6.05	6.04	4.87	4.67
MAX	---	---	---	---	---	5.38	5.76	5.98	7.44	8.99	5.24	4.89
MIN	---	---	---	---	---	4.74	4.77	4.71	5.06	5.01	4.53	4.45

06345780 HEART RIVER ABOVE LAKE TSCHIDA NEAR GLEN ULLIN, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
19...	1155	18	8.6	7.0	1,140	1,120	9.0	13.5	50.0	28.1	7.70	5	163
AUG													
05...	0930	36	8.6	8.5	1,280	1,260	19.0	20.5	47.9	33.9	11.5	6	210

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
19...	58	296	11.1	.38	4.60	316	756	37.3	54	<1	1.5	40.5	<1
AUG													
05...	62	259	21.3	.42	4.87	378	859	85.1	<50	<1	3.3	63.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
19...	270	<1	<1	2.8	110	<1	60	5.40	<1	<1	<1.0	2.0
AUG												
05...	350	<1	<1	3.7	50	<1	<10	6.51	4.1	<1	<1.0	1.6

Remark codes used in this table:
< -- Less than.

06346000 LAKE TSCHIDA NEAR GLEN ULLIN, ND

LOCATION.--Lat 46°35'43", long 101°48'34", in SW ¼ NE ¼ sec.13, T.136 N., R.89 W., Grant County, Hydrologic Unit 10130202, 10 mi upstream from Heart Butte Creek and 14 mi north of Elgin.

DRAINAGE AREA.--1,710 mi^2, approximately.

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--August 1949 to current year. Prior to October 1957, published as Heart Butte Reservoir near Glen Ullin.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earth-fill dam; storage began Sept. 29, 1949; dam completed Dec. 9, 1949. Total capacity is 430,000 acre-ft at maximum pool, elevation, 2,118.2 ft. Dead storage is 6,750 acre-ft below lowest point of outlet, elevation, 2,030.0 ft. Active conservation storage is 69,030 acre-ft between elevations 2,030.0 ft and 2,064.5 ft, crest of spillway. Figures given herein represent total contents based on capacity table dated August 1992.

Controlled releases are through 4 by 5 ft slide gate. The spillway is uncontrolled "glory hole" type and discharges through a conduit 14 ft in diameter. The reservoir is for flood control, irrigation, and incidental water supply.

COOPERATION.--Records furnished by U.S. Bureau of Reclamation. Extremes are those observed.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 174,000 acre-ft, Apr. 9, 1952, elevation, 2,086.23 ft; minimum since first reaching spillway level, 32,820 acre-ft, Oct. 25, 1991, elevation, 2,049.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 73,770 acre-ft, July 3, elevation, 2,066.46 ft; minimum, 56,240 acre-ft, Oct. 16, elevation, 2,061.04 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,061.18	56,670	--
Oct. 31	2,061.37	57,240	+570
Nov. 30	2,061.73	58,340	+1,100
Dec. 31	2,061.87	58,760	+420
CAL YR 2004	--	--	+2,600
Jan. 31	2,061.86	58,730	-30
Feb. 28	2,062.09	59,440	+710
Mar. 31	2,062.63	61,120	+1,680
Apr. 30	2,063.07	62,510	+1,390
May 31	2,063.96	65,370	+2,860
June 30	2,065.30	69,810	+4,440
July 31	2,064.11	65,860	-3,950
Aug. 31	2,062.49	60,690	-5,170
Sept. 30	2,061.42	57,390	-3,300
WTR YR 2005	--	--	+720

06346000 LAKE TSCHIDA NEAR GLEN ULLIN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1980 to current year.

REMARKS.--Quality assurance sample also collected at this location.

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

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	Color, water, fltrd, Pt-Co units (00080)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
OCT													
18...	1345	1.0	1.0	20	8.4	986	250	47.2	31.4	12.2	4	140	54
MAR													
01...	1445	1.3	.80	20	8.4	988	250	46.0	32.0	11.0	4	139	54
JUN													
24...	1330	1.1	.90	75d	8.5	1,080	280	50.7	36.8	11.3	4	163	55
AUG													
24...	1350	1.0	.50	25	8.6	1,150	270	50.7	34.2	11.9	4	163	56

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

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Boron, water, fltrd, ug/L (01020)
OCT													
18...	214@c	9.16	.3	3.6	306d	679	709	E.03n	.13	<.008	.02	E.03n	223
MAR													
01...	214@c	9.73	.3	.8	301d	668	695	<.04	.07	<.008	<.02	<.04	225
JUN													
24...	241@c	11.3	.3	1.5	349d	769	787	.04	.07	E.005n	<.02	<.04	262
AUG													
24...	244@c	10.3	.3	4.9	356d	779	815	.08	<.06	.010	E.01n	E.03n	255

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@-- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

06346000 LAKE TSCHIDA NEAR GLEN ULLIN, ND—Continued

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

Date	Time	Reservoir depth, feet (72025)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
OCT													
18...	1335	39.0	--	.00	30.0	120	16	691	9.8	97	8.3	1,050	4.5
18...	1336	--	--	.50	--	--	--	--	9.7	--	8.3	1,050	--
18...	1337	--	--	1.0	--	--	--	--	9.6	--	8.2	1,050	--
18...	1338	--	--	2.9	--	--	--	--	9.6	--	8.2	1,050	--
18...	1339	--	--	4.3	--	--	--	--	9.5	--	8.2	1,050	--
18...	1340	--	--	5.8	--	--	--	--	9.5	--	8.2	1,050	--
18...	1341	--	--	7.3	--	--	--	--	9.5	--	8.3	1,050	--
18...	1342	--	--	8.8	--	--	--	--	9.4	--	8.3	1,050	--
18...	1343	--	--	10.2	--	--	--	--	9.4	--	8.3	1,060	--
18...	1344	--	--	11.9	--	--	--	--	9.4	--	8.3	1,050	--
MAR													
01...	1431	45.9	.70	.70	165	--	<5.0	704	15.6	129	8.3	932	5.0
01...	1432	--	--	1.0	--	--	--	--	14.5	--	8.3	1,110	--
01...	1433	--	--	2.0	--	--	--	--	14.7	--	8.3	1,150	--
01...	1434	--	--	3.0	--	--	--	--	15.5	--	8.3	1,150	--
01...	1435	--	--	5.0	--	--	--	--	13.3	--	8.2	1,170	--
01...	1436	--	--	6.0	--	--	--	--	11.3	--	8.0	1,180	--
01...	1437	--	--	7.0	--	--	--	--	10.4	--	7.9	1,190	--
01...	1438	--	--	8.0	--	--	--	--	9.6	--	7.8	1,210	--
01...	1439	--	--	9.0	--	--	--	--	8.7	--	7.7	1,230	--
01...	1440	--	--	10.0	--	--	--	--	7.5	--	7.6	1,260	--
01...	1441	--	--	11.0	--	--	--	--	8.7	--	7.7	1,270	--
01...	1442	--	--	12.0	--	--	--	--	6.3	--	7.6	1,320	--
01...	1443	--	--	13.0	--	--	--	--	5.4	--	7.5	1,380	--
01...	1444	--	--	14.0	--	--	--	--	4.7	--	7.5	1,390	--
JUN													
24...	1315	48.5	--	.00	107	300	<5.0	709	8.5	108	7.8	1,180	26.0
24...	1316	--	--	.50	--	--	--	--	8.6	--	7.9	1,180	--
24...	1317	--	--	1.0	--	--	--	--	8.6	--	8.0	1,180	--
24...	1318	--	--	2.0	--	--	--	--	8.6	--	8.1	1,180	--
24...	1319	--	--	4.0	--	--	--	--	8.5	--	8.1	1,180	--
24...	1320	--	--	6.0	--	--	--	--	8.3	--	8.1	1,180	--
24...	1321	--	--	8.0	--	--	--	--	8.0	--	8.2	1,180	--
24...	1322	--	--	10.0	--	--	--	--	7.7	--	8.1	1,170	--
24...	1323	--	--	12.0	--	--	--	--	7.3	--	8.1	1,170	--
24...	1324	--	--	14.0	--	--	--	--	6.1	--	8.1	1,170	--
24...	1325	--	--	14.8	--	--	--	--	5.1	--	8.0	1,170	--
AUG													
24...	1333	43.6	--	.50	21.0	270	5.0	707	7.0	87	8.2	1,140	25.5
24...	1334	--	--	1.0	--	--	--	--	7.0	--	8.2	1,140	--
24...	1335	--	--	2.0	--	--	--	--	7.0	--	8.2	1,140	--
24...	1336	--	--	3.0	--	--	--	--	6.9	--	8.2	1,140	--
24...	1337	--	--	4.0	--	--	--	--	6.9	--	8.2	1,140	--
24...	1338	--	--	5.0	--	--	--	--	6.9	--	8.2	1,140	--
24...	1339	--	--	6.0	--	--	--	--	6.9	--	8.2	1,140	--
24...	1340	--	--	7.0	--	--	--	--	6.8	--	8.2	1,140	--
24...	1341	--	--	8.0	--	--	--	--	6.8	--	8.2	1,140	--
24...	1342	--	--	9.0	--	--	--	--	6.8	--	8.2	1,140	--
24...	1343	--	--	10.0	--	--	--	--	6.5	--	8.2	1,140	--
24...	1344	--	--	11.0	--	--	--	--	6.3	--	8.2	1,140	--
24...	1345	--	--	12.0	--	--	--	--	6.2	--	8.2	1,140	--
24...	1346	--	--	13.0	--	--	--	--	6.2	--	8.1	1,140	--

06346000 LAKE TSCHIDA NEAR GLEN ULLIN, ND—Continued

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

Date	Temperature, water, deg C (00010)
OCT	
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.7
18...	10.6
MAR	
01...	4.0
01...	5.1
01...	4.9
01...	4.6
01...	3.9
01...	3.2
01...	2.9
01...	2.6
01...	2.8
01...	3.0
01...	3.1
01...	3.2
01...	3.4
01...	3.6
JUN	
24...	23.4
24...	23.2
24...	23.0
24...	22.8
24...	22.7
24...	21.9
24...	19.4
24...	18.1
24...	17.1
24...	16.2
24...	15.7
AUG	
24...	21.6
24...	21.5
24...	21.4
24...	21.4
24...	21.2
24...	21.2
24...	21.2
24...	21.2
24...	21.1
24...	21.0
24...	20.9
24...	20.9
24...	20.9
24...	20.9

Remark codes used in this table:
< -- Less than.

06347000 ANTELOPE CREEK NEAR CARSON, ND

LOCATION.--Lat 46°32'43", long 101°38'42", in NE¼NE¼NW¼ sec.5, T.135 N., R.87 W., Grant County, Hydrologic Unit 10130203, on right bank 90 ft upstream from bridge on county road and 9 mi northwest of Carson.

DRAINAGE AREA.--221 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1948 to September 1975, February 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 23, 1958, wire weight gage at site 1 mi upstream and June 24, 1958, to Sept. 30, 1975, 1.15 mi upstream at datum 14 ft higher.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 201 ft^3/s, May. 8; gage height, 7.12 ft; minimum daily discharge, 0.04 ft^3/s, Sept. 1 and 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e0.14	e1.8	5.8	2.5	5.1	7.3	1.5	0.04
2	---	---	---	---	e0.16	e2.3	5.6	2.4	4.8	6.6	1.2	0.04
3	---	---	---	---	e0.15	e2.8	5.4	2.2	3.4	12	1.1	0.06
4	---	---	---	---	e0.13	e3.2	5.3	2.2	2.5	7.5	0.76	e0.08
5	---	---	---	---	e0.11	e3.6	4.9	2.0	2.3	5.0	0.48	0.10
6	---	---	---	---	e0.10	e4.0	4.6	e1.8	2.2	3.6	0.31	0.16
7	---	---	---	---	e0.09	e3.4	4.4	1.6	3.1	2.8	0.28	0.17
8	---	---	---	---	e0.09	e2.8	4.3	22	17	2.7	0.19	0.16
9	---	---	---	---	e0.10	e2.4	4.0	82	14	3.5	0.18	0.17
10	---	---	---	---	e0.15	e2.6	3.9	44	17	3.2	0.77	0.11
11	---	---	---	---	e0.20	e2.9	4.2	23	12	2.3	1.8	0.09
12	---	---	---	---	e0.21	e2.8	6.0	23	26	1.9	1.5	0.08
13	---	---	---	---	e0.20	e2.6	6.1	26	17	1.4	1.3	0.14
14	---	---	---	---	e0.19	e2.4	5.6	18	12	1.3	1.1	0.15
15	---	---	---	---	e0.17	e2.3	4.9	14	8.4	e1.1	1.0	0.17
16	---	---	---	---	e0.14	e2.2	4.5	11	7.0	0.86	0.86	0.22
17	---	---	---	---	e0.13	e2.2	4.5	8.8	5.9	0.65	0.59	0.18
18	---	---	---	---	e0.12	e2.3	4.7	32	4.1	0.55	0.88	0.18
19	---	---	---	---	e0.12	e2.3	4.3	17	3.4	0.45	1.0	0.20
20	---	---	---	---	e0.12	e2.4	4.4	15	3.7	0.32	1.2	0.22
21	---	---	---	---	e0.13	e2.5	4.5	21	2.6	0.25	1.1	0.23
22	---	---	---	---	e0.15	e2.7	4.1	14	2.0	0.43	0.90	0.22
23	---	---	---	---	e0.20	e2.8	3.6	11	1.7	0.62	0.70	0.18
24	---	---	---	---	e0.27	e3.1	3.4	8.2	2.5	0.81	0.22	0.16
25	---	---	---	---	e0.44	e3.4	3.0	5.9	6.5	1.3	0.22	0.18
26	---	---	---	---	e0.65	e3.8	2.8	4.6	7.9	e1.2	0.19	0.15
27	---	---	---	---	e0.90	e4.4	2.6	4.0	6.8	1.1	0.09	0.18
28	---	---	---	---	e1.2	e4.9	2.5	3.3	5.2	1.1	0.08	0.17
29	---	---	---	---	---	e7.4	2.4	2.9	5.9	4.6	0.07	0.16
30	---	---	---	---	---	e8.1	2.5	3.2	8.2	2.8	0.05	0.16
31	---	---	---	---	---	6.4	---	3.6	---	1.6	0.05	---
TOTAL	---	---	---	---	6.76	102.8	128.8	432.2	220.2	80.84	21.67	4.51
MEAN	---	---	---	---	0.24	3.32	4.29	13.9	7.34	2.61	0.70	0.15
MAX	---	---	---	---	1.2	8.1	6.1	82	26	12	1.8	0.23
MIN	---	---	---	---	0.09	1.8	2.4	1.6	1.7	0.25	0.05	0.04
AC-FT	---	---	---	---	13	204	255	857	437	160	43	8.9

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

MEAN	1.36	2.10	1.45	2.11	6.69	49.8	53.4	22.9	21.2	11.9	3.59	1.11
MAX	6.44	9.41	5.79	32.6	65.1	183	422	208	96.3	155	52.2	6.40
(WY)	(1973)	(1973)	(2000)	(1973)	(1999)	(1951)	(1950)	(1970)	(1971)	(1969)	(1952)	(1955)
MIN	0.00	0.32	0.15	0.00	0.00	1.48	2.00	1.56	1.84	0.00	0.00	0.00
(WY)	(1960)	(1960)	(1962)	(1950)	(1949)	(1965)	(1961)	(1961)	(1959)	(1961)	(1958)	(1948)

06347000 ANTELOPE CREEK NEAR CARSON, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1948 - 2005	
ANNUAL MEAN	[a]15.6	
HIGHEST ANNUAL MEAN	[a]47.1	1952
LOWEST ANNUAL MEAN	[a]2.78	1961
HIGHEST DAILY MEAN	4,400	Apr 17, 1950
LOWEST DAILY MEAN	0.00	Aug 24, 1948
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 24, 1948
MAXIMUM PEAK FLOW	[b]11,100	Apr 16, 1950
MAXIMUM PEAK STAGE	[c]17.95	Apr 16, 1950
ANNUAL RUNOFF (AC-FT)	[a]11,310	
10 PERCENT EXCEEDS	18	
50 PERCENT EXCEEDS	1.5	
90 PERCENT EXCEEDS	0.00	

a Based on complete water years only (1949-75, 2000)
b From rating curve extended above 1,000 ft^3/s on basis of slope-area measurement of peak flow
c From floodmark, site and datum then in use
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--February 2001 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.66	4.47	4.67	4.77	4.46	4.23
2	---	---	---	---	---	---	4.65	4.46	4.66	4.74	4.43	4.23
3	---	---	---	---	4.95	4.68	4.64	4.45	4.58	4.94	4.42	4.25
4	---	---	---	---	4.98	4.70	4.63	4.45	4.52	4.78	4.39	e4.26
5	---	---	---	---	5.03	4.71	4.61	4.43	4.51	4.67	4.34	4.27
6	---	---	---	---	4.98	4.76	4.60	e4.42	4.50	4.59	4.31	4.29
7	---	---	---	---	---	e4.76	4.59	4.42	4.56	4.54	4.30	4.29
8	---	---	---	---	---	4.69	4.58	4.78	5.07	4.54	4.27	4.29
9	---	---	---	---	---	4.60	4.57	6.24	5.00	4.58	4.27	4.30
10	---	---	---	---	---	4.61	4.56	5.79	5.07	4.57	4.37	4.28
11	---	---	---	---	---	4.68	4.58	5.40	4.92	4.51	4.49	4.27
12	---	---	---	---	---	4.62	4.67	5.35	5.28	4.48	4.48	4.26
13	---	---	---	---	---	4.67	4.67	5.39	5.07	4.43	4.46	4.29
14	---	---	---	---	---	4.65	4.65	5.19	4.94	4.42	4.44	4.30
15	---	---	---	---	---	4.65	4.61	5.04	4.81	e4.39	4.43	4.31
16	---	---	---	---	---	4.65	4.59	4.92	4.76	4.38	4.41	4.32
17	---	---	---	---	---	4.63	4.59	4.83	4.71	4.35	4.37	4.31
18	---	---	---	---	---	4.63	4.60	5.34	4.62	4.33	4.41	4.31
19	---	---	---	---	---	4.63	4.58	5.07	4.58	4.32	4.43	4.32
20	---	---	---	---	---	4.62	4.59	5.01	4.59	4.29	4.45	4.32
21	---	---	---	---	---	4.61	4.59	5.18	4.53	4.27	4.45	4.33
22	---	---	---	---	---	4.62	4.57	4.99	4.49	4.31	4.42	4.32
23	---	---	---	---	---	4.62	4.54	4.90	4.46	4.35	4.38	4.31
24	---	---	---	---	---	4.67	4.53	4.81	4.52	4.38	4.30	4.30
25	---	---	---	---	4.66	4.74	4.51	4.71	4.72	4.44	4.30	4.31
26	---	---	---	---	4.69	4.78	4.49	4.65	4.79	e4.43	4.29	4.31
27	---	---	---	---	4.69	4.77	4.48	4.61	4.75	4.42	4.26	4.32
28	---	---	---	---	---	4.74	4.47	4.58	4.68	4.42	4.26	4.32
29	---	---	---	---	---	4.79	4.47	4.55	4.71	4.66	4.25	4.31
30	---	---	---	---	---	4.75	4.47	4.57	4.81	4.56	4.23	4.31
31	---	---	---	---	---	4.69	---	4.59	---	4.47	4.24	---
MEAN	---	---	---	---	---	---	4.58	4.89	4.73	4.49	4.36	4.29
MAX	---	---	---	---	---	---	4.67	6.24	5.28	4.94	4.49	4.33
MIN	---	---	---	---	---	---	4.47	4.42	4.46	4.27	4.23	4.23

e Estimated

06347000 ANTELOPE CREEK NEAR CARSON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
07...	1010	4.4	--	8.6	7.4	651	621	16.2	9.6	49.0	29.3	4.50	1
JUN													
06...	1305	2.3	703	8.3	8.5	1,010	1,020	29.5	22.6	50.2	50.8	8.10	2

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

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
07...	44.9	28	247	3.7	.24	2.55	104	386	4.57	<50	<1	<1.0	73.4
JUN													
06...	88.5	36	279	5.9	.30	<2.00	279	652	4.04	<50	<1	1.4	82.9

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

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
07...	<1	70	<1	<1	1.1	40	<1	30	3.45	<1	<1	<1.0	2.3
JUN													
06...	<1	240	<1	3	2.4	<10	<1	10	6.03	1.5	<1	<1.0	<1

Remark codes used in this table:
< -- Less than.

06347500 BIG MUDDY CREEK NEAR ALMONT, ND

LOCATION.--Lat 46°41'40", long 101°28'01", in NE¼NE¼SE¼ sec.12, T.137 N., R.86 W., Morton County, Hydrologic Unit 10130203, on left bank 50 ft downstream from county highway bridge, 2 mi downstream from Hailstone Creek, 3 mi southeast of Almont, and 12 mi upstream from mouth.

DRAINAGE AREA.--456 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1970, October 1970 to September 1973 (annual maximum discharge), February 1991 to current year (seasonal records only since February 1991).

GAGE.--Water-stage recorder. Datum of gage is 1,864 ft above National Geodetic Vertical Datum of 1929, by barometer. Prior to Sept. 5, 1952, nonrecording gage at same site and datum.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 377 ft^3/s, June 9, gage height, 8.78 ft; minimum daily discharge, 0.69 ft^3/s, July 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e2.1	e2.1	12	3.1	1.6	3.7	2.2	1.5
2	---	---	---	---	e2.3	e2.2	11	3.2	1.9	5.2	2.2	1.5
3	---	---	---	---	e2.2	e2.3	12	3.7	1.3	101	2.4	1.4
4	---	---	---	---	e2.3	e2.5	9.7	4.4	1.3	279	2.1	1.7
5	---	---	---	---	e2.2	e2.7	8.3	4.2	1.3	147	2.0	1.4
6	---	---	---	---	e2.1	e2.9	6.8	4.0	2.1	36	1.8	1.5
7	---	---	---	---	e2.1	e3.0	5.6	4.2	2.7	18	1.8	1.3
8	---	---	---	---	e2.0	e3.0	6.5	5.0	62	11	2.0	1.3
9	---	---	---	---	e2.0	e3.0	5.7	6.2	291	7.1	2.3	1.6
10	---	---	---	---	e2.0	e3.0	4.7	5.8	267	5.7	2.5	1.4
11	---	---	---	---	e2.0	e2.9	5.2	5.2	114	4.1	3.5	1.5
12	---	---	---	---	e2.1	e2.8	5.9	5.8	53	2.7	4.4	1.8
13	---	---	---	---	e2.1	e2.6	5.5	7.9	36	2.1	3.1	2.1
14	---	---	---	---	e2.1	e2.4	5.5	7.7	27	1.6	3.3	2.3
15	---	---	---	---	e2.2	e2.2	5.1	6.1	22	1.2	2.6	2.3
16	---	---	---	---	e2.3	e2.1	4.4	4.7	18	0.69	2.0	1.9
17	---	---	---	---	e2.3	e2.0	3.9	4.4	14	0.79	2.4	1.7
18	---	---	---	---	e2.2	e2.0	3.9	9.0	11	0.81	1.7	1.6
19	---	---	---	---	e2.2	e2.0	4.3	20	8.2	0.92	1.5	2.3
20	---	---	---	---	e2.1	e2.1	4.2	13	6.3	1.1	1.5	2.3
21	---	---	---	---	e2.1	e2.2	3.8	19	5.5	1.3	1.5	2.0
22	---	---	---	---	e2.2	e2.3	3.5	15	4.5	1.4	1.5	1.7
23	---	---	---	---	e2.1	e2.5	3.0	8.6	3.6	1.4	1.3	1.4
24	---	---	---	---	e2.2	e4.0	3.7	6.3	2.9	1.7	1.2	1.4
25	---	---	---	---	e2.4	e7.0	3.9	4.0	2.5	2.1	1.1	2.0
26	---	---	---	---	e2.3	e9.0	3.5	3.1	2.6	2.4	1.2	1.9
27	---	---	---	---	e2.2	e12	3.2	2.3	1.9	2.5	1.4	1.5
28	---	---	---	---	e2.2	e15	2.8	1.9	1.5	2.8	1.5	1.2
29	---	---	---	---	---	e18	2.8	1.4	1.9	2.3	1.8	1.7
30	---	---	---	---	---	24	2.8	1.3	3.5	2.2	1.6	1.4
31	---	---	---	---	---	17	---	1.1	---	2.3	1.8	---
TOTAL	---	---	---	---	60.6	162.8	163.2	191.6	972.1	652.11	63.2	50.6
MEAN	---	---	---	---	2.16	5.25	5.44	6.18	32.4	21.0	2.04	1.69
MAX	---	---	---	---	2.4	24	12	20	291	279	4.4	2.3
MIN	---	---	---	---	2.0	2.0	2.8	1.1	1.3	0.69	1.1	1.2
AC-FT	---	---	---	---	120	323	324	380	1,930	1,290	125	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

MEAN	1.20	1.60	1.33	1.08	18.8	143	138	43.4	37.7	40.4	8.01	2.89
MAX	2.61	3.19	2.48	4.59	220	909	1,160	540	405	1,042	75.4	15.2
(WY)	(1952)	(1952)	(1952)	(1947)	(1995)	(1997)	(1950)	(1970)	(1966)	(1993)	(1998)	(1953)
MIN	0.39	0.58	0.35	0.06	0.00	0.73	1.48	1.01	0.43	0.04	0.12	0.35
(WY)	(1962)	(1961)	(1949)	(1949)	(1966)	(1965)	(1992)	(1961)	(1961)	(1961)	(1961)	(1991)

06347500 BIG MUDDY CREEK NEAR ALMONT, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1946 - 2005	
ANNUAL MEAN	[a]37.0	
HIGHEST ANNUAL MEAN	[a]112	1950
LOWEST ANNUAL MEAN	[a]1.41	1961
HIGHEST DAILY MEAN	15,000	Apr 17, 1950
LOWEST DAILY MEAN	0.00	Jan 28, 1946
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 28, 1946
MAXIMUM PEAK FLOW	[b]20,200	Apr 17, 1950
MAXIMUM PEAK STAGE	[c]30.99	Jul 23, 1993
ANNUAL RUNOFF (AC-FT)	[a]26,790	
10 PERCENT EXCEEDS	31	
50 PERCENT EXCEEDS	1.7	
90 PERCENT EXCEEDS	0.40	

a Based on complete water years only (1946-70)
b Gage height, 30.7 ft, from floodmark, from rating curve extended above 2,300 ft^3/s, on basis of slope-area measurement of peak flow
c Backwater from debris
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2000 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	4.29	4.03	3.78	3.89	2.94	3.50	3.63
2	---	---	---	---	---	4.29	3.97	3.81	3.93	3.04	3.50	3.64
3	---	---	---	---	---	4.31	4.01	3.86	3.86	4.93	3.52	3.63
4	---	---	---	---	4.36	4.33	3.92	3.93	3.86	7.73	3.55	3.66
5	---	---	---	---	4.35	4.35	3.86	3.93	3.85	5.97	3.56	3.64
6	---	---	---	---	4.33	4.38	3.79	3.94	3.95	4.08	3.60	3.65
7	---	---	---	---	4.30	4.46	3.73	3.97	3.98	3.57	3.62	3.63
8	---	---	---	---	4.27	4.43	3.77	4.03	5.17	3.32	3.64	3.64
9	---	---	---	---	4.28	4.40	3.73	4.12	8.00	3.15	3.67	3.68
10	---	---	---	---	4.28	4.39	3.67	4.12	7.57	3.07	3.69	3.65
11	---	---	---	---	4.29	4.37	3.70	4.10	5.52	2.97	3.76	3.67
12	---	---	---	---	4.31	4.37	3.74	4.15	4.48	2.86	3.82	3.71
13	---	---	---	---	4.32	e4.34	3.72	4.26	4.10	2.80	3.74	3.74
14	---	---	---	---	4.33	4.33	3.72	4.27	3.87	2.75	3.75	3.76
15	---	---	---	---	4.33	4.32	3.70	4.21	3.69	2.69	3.70	3.77
16	---	---	---	---	4.30	4.30	3.65	4.16	3.57	2.60	3.65	3.73
17	---	---	---	---	4.29	4.29	3.62	4.14	3.44	2.62	3.68	3.71
18	---	---	---	---	4.28	4.28	3.62	4.34	3.31	2.62	3.61	3.70
19	---	---	---	---	4.29	4.28	3.67	4.69	3.20	2.64	3.60	3.78
20	---	---	---	---	4.27	4.28	3.68	4.47	3.11	2.67	3.59	3.79
21	---	---	---	---	4.28	4.29	3.67	4.67	3.06	2.70	3.59	3.76
22	---	---	---	---	4.28	4.31	3.66	4.55	3.00	2.72	3.60	3.74
23	---	---	---	---	4.29	4.31	3.64	4.33	2.94	2.71	3.58	3.70
24	---	---	---	---	4.29	4.37	3.71	4.24	2.88	2.75	3.57	3.70
25	---	---	---	---	4.30	4.39	3.74	4.11	2.84	2.80	3.55	3.78
26	---	---	---	---	4.30	4.37	3.73	4.04	2.82	2.83	3.58	3.77
27	---	---	---	---	4.30	4.41	3.72	3.97	2.78	3.13	3.61	3.73
28	---	---	---	---	4.29	4.57	3.71	3.93	2.72	3.20	3.62	3.69
29	---	---	---	---	---	e4.60	3.72	3.87	2.78	3.37	3.66	3.75
30	---	---	---	---	---	4.43	3.74	3.85	2.92	3.46	3.65	3.73
31	---	---	---	---	---	4.21	---	3.83	---	3.51	3.67	---
MEAN	---	---	---	---	---	4.36	3.74	4.12	3.84	3.30	3.63	3.71
MAX	---	---	---	---	---	4.60	4.03	4.69	8.00	7.73	3.82	3.79
MIN	---	---	---	---	---	4.21	3.62	3.78	2.72	2.60	3.50	3.63

e Estimated

06347500 BIG MUDDY CREEK NEAR ALMONT, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
11...	1155	6.4	8.4	8.2	1,890	1,880	7.0	8.7	46.2	30.9	8.70	9	340
AUG													
18...	1230	1.7	8.4	8.6	1,830	1,850	24.5	23.8	35.4	25.3	8.20	11	344

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
11...	74	486	7.7	.57	7.64	507	1,230	21.4	<50	<1	3.1	41.0	<1
AUG													
18...	79	620	6.4	.91	8.81	388	1,180	5.40	<50	<1	14.4	57.4	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
11...	340	<1	2	5.8	60	<1	<10	6.22	<1	<1	<1.0	2.9
AUG												
18...	670	<1	22	7.7	60	<1	<10	4.71	6.5	<1	<1.0	1.7

Remark codes used in this table:
< -- Less than.

06348300 HEART RIVER AT STARK BRIDGE NEAR JUDSON, ND

LOCATION.--Lat 46°42'12", long 101°12'49", in SE¼SW¼SW¼ sec.6, T.137 N., R.83 W., Morton County, Hydrologic Unit 10130203, on right bank 50 ft upstream from county bridge and 9.5 mi southeast of Judson.

DRAINAGE AREA.--2,930 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1986 to September 1988 (annual maximum discharges only), October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Tschida (station 06346000) since 1949.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	25	e21	e9.8	e15	e21	56	15	e19	210	59	95
2	18	e24	e21	e9.8	e14	e22	46	14	e20	209	62	76
3	14	e23	e20	e9.8	e14	e23	41	13	e22	296	61	78
4	14	e24	e20	e9.8	e14	e24	34	14	27	598	69	81
5	17	25	e19	e9.8	e14	e24	34	13	29	1,100	61	77
6	18	24	e18	e9.5	e14	e23	33	10	24	1,010	57	80
7	17	22	e17	e9.5	e14	e22	29	9.0	28	1,080	47	81
8	17	21	e16	e9.5	e14	e21	27	10	53	1,160	37	82
9	16	20	e16	e9.5	e15	e20	24	e100	122	1,000	41	85
10	16	20	e15	e9.5	e15	e20	23	e180	369	882	55	86
11	16	e19	e15	e9.3	e15	e20	e24	103	505	823	106	80
12	17	e19	e14	e8.0	e15	e20	e45	66	375	747	118	63
13	16	e19	e13	e7.1	e14	e20	e37	62	301	345	105	68
14	17	e20	e12	e6.5	e14	e20	e30	51	284	241	95	68
15	17	e20	e12	e5.3	e14	e20	25	40	264	206	90	63
16	17	e18	e12	e4.7	e14	e20	27	e36	244	176	87	61
17	17	e18	e12	e4.8	e14	e22	25	e34	213	153	95	60
18	18	e17	e12	e5.1	e14	e29	22	e33	193	132	119	63
19	20	e16	e12	e5.5	e14	e40	20	e32	174	120	108	66
20	19	e18	e11	e6.1	e15	e50	20	36	161	95	85	64
21	19	e19	e10	e9.0	e15	e52	19	50	155	78	85	61
22	19	e20	e10	e9.3	e15	47	19	33	146	90	90	63
23	21	e21	e10	e9.5	e16	43	19	36	147	85	102	63
24	22	e22	e10	e9.8	e16	41	18	30	151	81	100	64
25	24	e22	e10	e9.9	e17	31	17	e25	162	94	94	66
26	23	e22	e10	e10	e18	35	17	e23	166	96	94	64
27	24	e24	e10	e11	e18	34	17	e21	189	99	88	65
28	24	e23	e10	e12	e19	30	16	e19	191	89	90	65
29	25	e24	e10	e13	---	32	16	e19	202	88	89	55
30	28	e23	e10	e14	---	36	16	e18	203	87	96	47
31	26	---	e9.9	e15	---	49	---	e18	---	76	98	---
TOTAL	595	632	417.9	281.4	420	911	796	1,163.0	5,139	11,546	2,583	2,090
MEAN	19.2	21.1	13.5	9.08	15.0	29.4	26.5	37.5	171	372	83.3	69.7
MAX	28	25	21	15	19	52	56	180	505	1,160	119	95
MIN	14	16	9.9	4.7	14	20	16	9.0	19	76	37	47
AC-FT	1,180	1,250	829	558	833	1,810	1,580	2,310	10,190	22,900	5,120	4,150

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

MEAN	57.5	42.7	31.3	23.5	86.1	667	345	178	141	230	134	64.8
MAX	254	131	94.9	59.0	578	3,050	2,468	800	484	1,479	674	192
(WY)	(1995)	(1999)	(1999)	(1996)	(1995)	(1997)	(1997)	(1995)	(2001)	(1993)	(1998)	(1995)
MIN	12.3	14.1	7.07	0.34	4.19	29.4	15.0	16.3	14.5	28.8	19.7	11.7
(WY)	(1993)	(1989)	(1991)	(1991)	(1993)	(2005)	(1990)	(1992)	(1990)	(1990)	(1992)	(1992)

06348300 HEART RIVER AT STARK BRIDGE NEAR JUDSON, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1989 - 2005	
ANNUAL TOTAL	59,648.7		26,574.3			
ANNUAL MEAN	163		72.8		168	
HIGHEST ANNUAL MEAN					569	1997
LOWEST ANNUAL MEAN					22.3	1990
HIGHEST DAILY MEAN	5,600	Mar 13	1,160	Jul 8	15,000	Mar 23, 1997
LOWEST DAILY MEAN	6.9	Jan 9	4.7	Jan 16	0.21	Jan 1, 1991
ANNUAL SEVEN-DAY MINIMUM	7.2	Jan 30	5.4	Jan 14	0.22	Dec 31, 1990
MAXIMUM PEAK FLOW			1,240	Jul 8	[a]18,000	Mar 23, 1997
MAXIMUM PEAK STAGE			6.41	Jul 8	[b]21.90	Mar 23, 1997
ANNUAL RUNOFF (AC-FT)	118,300		52,710		121,400	
10 PERCENT EXCEEDS	228		152		300	
50 PERCENT EXCEEDS	34		23		47	
90 PERCENT EXCEEDS	8.9		10		12	

a About
b Maximum recorded, backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.00	2.05	2.02	2.40	3.02	2.82	2.32	1.97	2.05	3.31	2.49	2.71
2	1.99	2.09	2.04	2.40	2.96	2.84	2.25	1.96	2.13	3.31	2.52	2.60
3	1.93	2.14	2.03	2.42	2.95	2.85	2.21	1.95	2.10	3.62	2.51	2.61
4	1.93	2.09	2.00	2.46	2.94	2.84	2.15	1.95	2.30	4.64	2.56	2.63
5	1.97	2.05	---	2.46	2.95	2.83	2.15	1.94	2.32	6.09	2.51	2.60
6	1.97	2.04	---	2.43	2.94	2.77	2.14	1.90	2.26	5.83	2.48	2.62
7	1.97	2.03	---	2.42	2.93	2.75	2.11	1.89	2.30	6.01	2.41	2.63
8	1.96	2.01	---	2.44	2.90	2.64	2.08	1.90	2.51	6.22	2.32	2.63
9	1.96	2.01	2.24	2.47	2.90	---	2.06	---	2.92	5.85	2.36	2.65
10	1.95	2.00	2.25	2.48	2.91	---	2.04	---	3.99	5.53	2.46	2.65
11	1.96	---	2.27	2.48	2.89	2.65	---	2.85	4.49	5.37	2.80	2.61
12	1.96	---	2.19	2.51	2.89	2.57	---	2.61	4.00	5.14	2.87	2.49
13	1.96	---	1.92	2.49	2.91	2.52	---	2.57	3.71	3.71	2.79	2.53
14	1.97	---	1.90	2.45	2.92	2.48	---	2.49	3.64	3.29	2.74	2.53
15	1.96	---	1.96	2.56	2.92	2.56	2.07	2.41	3.56	3.15	2.71	2.49
16	1.96	1.98	1.95	2.64	2.90	2.49	2.09	2.29	3.46	3.03	2.69	2.48
17	1.97	1.98	1.96	2.49	2.90	2.48	2.07	e2.20	3.32	2.94	2.73	2.47
18	1.98	---	1.95	2.33	2.91	2.47	2.04	e2.13	3.24	2.86	2.87	2.49
19	2.00	---	2.02	2.45	2.90	2.45	2.02	e2.21	3.14	2.81	2.81	2.52
20	1.99	1.97	2.28	2.52	2.87	2.42	2.02	2.37	3.08	2.70	2.68	2.50
21	1.99	2.00	2.22	2.52	2.88	2.35	2.01	2.48	3.05	2.62	2.66	2.48
22	1.99	2.04	2.28	2.59	2.88	2.28	2.00	2.35	3.00	2.70	2.70	2.49
23	2.02	2.22	2.23	2.61	2.85	2.25	2.00	2.37	3.00	2.67	2.77	2.49
24	2.03	2.07	2.29	2.62	2.84	2.23	2.00	2.32	3.02	2.65	2.76	2.49
25	2.04	---	2.37	2.62	2.84	2.15	1.99	2.20	3.08	2.73	2.72	2.50
26	2.04	2.03	2.38	2.60	2.84	2.18	1.98	2.11	3.10	2.74	2.72	2.49
27	2.04	---	2.39	2.66	2.82	2.18	1.98	2.04	3.21	2.76	2.69	2.50
28	2.04	---	2.37	2.80	2.79	2.14	1.98	1.98	3.22	2.70	2.70	2.50
29	2.06	2.05	2.43	2.93	---	2.16	1.97	1.94	3.28	2.69	2.69	2.43
30	2.09	2.04	2.42	3.06	---	2.19	1.97	1.95	3.28	2.69	2.72	2.37
31	2.07	---	2.47	3.04	---	2.27	---	1.93	---	2.62	2.74	---
MEAN	1.99	---	---	2.56	2.90	---	---	---	3.06	3.71	2.65	2.54
MAX	2.09	---	---	3.06	3.02	---	---	---	4.49	6.22	2.87	2.71
MIN	1.93	---	---	2.33	2.79	---	---	---	2.05	2.62	2.32	2.37

e Estimated

06348300 HEART RIVER AT STARK BRIDGE NEAR JUDSON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
11...	1330	23	8.6	8.3	1,450	1,450	10.0	7.2	48.8	35.1	6.50	6	238
AUG													
16...	1230	94	8.4	8.5	1,270	1,280	23.8	24.5	50.4	33.0	9.90	4	163

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
11...	65	412	8.6	.44	2.71	359	945	59.0	<50	<1	<1.0	36.4	<1
AUG													
16...	56	281	11.0	.35	4.11	383	820	210	<50	<1	1.5	65.8	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
11...	330	<1	1	4.2	20	<1	<10	4.54	<1	<1	<1.0	3.8
AUG												
16...	320	<1	6	4.4	60	<1	<10	4.21	2.5	<1	<1.0	1.4

Remark codes used in this table:
< -- Less than.

06348500 SWEETBRIAR CREEK NEAR JUDSON, ND

LOCATION.--Lat 46°51'04", long 101°15'10", in SW¼ sec.14, T.139 N., R.84 W., Morton County, Hydrologic Unit 10130203, on right bank 40 ft downstream from bridge on county highway, 2 mi northeast of Judson, and 16 mi upstream from mouth.

DRAINAGE AREA.--157 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1951 to September 1979, June 2002 to current year (seasonal records only).

REVISED RECORDS.--WSP 1439: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 1,886.42 ft above National Geodetic Vertical Datum of 1929. Prior to July 20, 1955, nonrecording gage 80 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Sweetbriar Reservoir 2 mi upstream since April 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 12.5 ft, Apr. 17, 1950, from floodmarks at present site, discharge, 5,910 ft^3/s from rating curve extended above 2,000 ft^3/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 9.5 ft^3/s, June 27, gage height, 1.81 ft; minimum daily discharge, 0.15 ft^3/s, Sept. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e5.8	e3.9	e6.8	5.3	3.5	4.1	2.9	0.88
2	---	---	---	---	e5.6	e4.0	6.9	e5.2	3.4	4.0	3.0	0.95
3	---	---	---	---	e5.6	e4.0	6.8	e5.6	3.3	4.1	2.7	0.88
4	---	---	---	---	e5.3	e3.9	6.5	5.5	3.2	3.8	2.7	0.80
5	---	---	---	---	e5.2	e3.8	6.5	5.7	3.2	4.0	2.5	0.69
6	---	---	---	---	e5.1	e3.7	6.5	5.5	3.1	4.1	2.5	0.69
7	---	---	---	---	e5.1	e3.7	6.7	5.8	1.6	4.1	2.3	0.71
8	---	---	---	---	e5.0	e3.7	6.8	6.3	1.8	4.1	2.1	0.76
9	---	---	---	---	e4.9	e3.7	6.8	5.4	1.1	4.1	2.2	0.72
10	---	---	---	---	e4.8	e3.7	6.8	4.6	0.84	3.8	2.4	0.60
11	---	---	---	---	e4.7	e3.7	6.9	4.1	0.74	3.9	3.0	0.50
12	---	---	---	---	e4.7	e3.5	6.9	4.8	0.70	4.3	2.4	0.53
13	---	---	---	---	e4.6	e3.4	6.6	4.0	0.83	3.8	2.5	0.55
14	---	---	---	---	e4.6	e3.4	6.7	3.6	0.88	3.3	2.4	0.47
15	---	---	---	---	e4.6	e3.4	6.3	3.7	4.2	3.2	2.3	0.48
16	---	---	---	---	e4.5	e3.4	6.3	3.7	4.6	2.8	2.1	0.36
17	---	---	---	---	e4.7	e3.5	6.2	3.7	4.6	2.7	2.4	0.33
18	---	---	---	---	e4.6	e3.3	6.2	3.7	4.7	2.8	2.0	0.37
19	---	---	---	---	e4.6	e3.2	6.1	3.6	4.7	2.9	2.0	0.40
20	---	---	---	---	e4.5	e3.3	6.4	3.6	4.7	3.1	2.0	0.41
21	---	---	---	---	e4.5	e3.6	6.1	3.6	4.7	3.3	1.9	0.35
22	---	---	---	---	e4.5	e4.0	6.0	3.5	4.6	3.3	1.8	0.33
23	---	---	---	---	e4.5	e4.3	e5.9	3.4	4.3	3.1	1.6	e0.15
24	---	---	---	---	e4.5	e4.4	5.8	3.4	4.2	3.3	1.5	0.34
25	---	---	---	---	e4.4	e4.7	5.8	3.4	4.3	3.3	1.3	0.37
26	---	---	---	---	e4.2	e5.2	5.7	3.3	4.6	3.2	1.3	0.34
27	---	---	---	---	e4.0	e5.6	5.6	3.3	5.1	3.1	1.4	0.36
28	---	---	---	---	e3.9	e6.1	5.5	3.3	4.2	3.2	1.4	0.39
29	---	---	---	---	---	e6.4	e5.3	3.4	4.4	3.1	1.1	0.42
30	---	---	---	---	---	e6.7	e5.3	3.5	4.0	3.1	1.2	0.49
31	---	---	---	---	---	e6.7	---	3.6	---	3.0	1.0	---
TOTAL	---	---	---	---	133.0	129.9	188.7	131.1	100.09	108.0	63.9	15.62
MEAN	---	---	---	---	4.75	4.19	6.29	4.23	3.34	3.48	2.06	0.52
MAX	---	---	---	---	5.8	6.7	6.9	6.3	5.1	4.3	3.0	0.95
MIN	---	---	---	---	3.9	3.2	5.3	3.3	0.70	2.7	1.0	0.15
AC-FT	---	---	---	---	264	258	374	260	199	214	127	31

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

MEAN	0.87	0.77	0.64	0.39	2.50	50.0	46.0	12.0	7.41	3.49	2.57	1.60
MAX	9.76	4.21	3.44	1.07	31.9	317	336	106	60.4	25.2	35.8	19.1
(WY)	(1978)	(1967)	(1967)	(1978)	(1954)	(1978)	(1952)	(1970)	(1953)	(1957)	(2003)	(1977)
MIN	0.09	0.28	0.22	0.05	0.00	0.42	0.66	0.42	0.21	0.15	0.00	0.02
(WY)	(1962)	(1974)	(1962)	(1962)	(1962)	(1969)	(1965)	(1977)	(1965)	(1961)	(1959)	(1959)

06348500 SWEETBRIAR CREEK NEAR JUDSON, ND—Continued

SUMMARY STATISTICS	WATER YEARS 1951 - 2005	
ANNUAL MEAN	[a]11.3	
HIGHEST ANNUAL MEAN	[a]33.9	1978
LOWEST ANNUAL MEAN	[a]0.41	1965
HIGHEST DAILY MEAN	2,930	Apr 7, 1969
LOWEST DAILY MEAN	0.00	Jan 28, 1954
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 15, 1956
MAXIMUM PEAK FLOW	4,200	Apr 7, 1969
MAXIMUM PEAK STAGE	11.28	Apr 7, 1969
ANNUAL RUNOFF (AC-FT)	[a]8,210	
10 PERCENT EXCEEDS	7.6	
50 PERCENT EXCEEDS	0.58	
90 PERCENT EXCEEDS	0.14	

a Based on complete water years only (1952-79)
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--June 2001 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.59	---	---	1.67	1.62	1.63	1.63	1.53
2	---	---	---	---	1.58	---	1.66	---	1.61	1.63	1.63	1.54
3	---	---	---	---	1.58	---	1.66	---	1.60	1.64	1.62	1.53
4	---	---	---	---	1.57	1.47	1.65	1.69	1.59	1.63	1.62	1.52
5	---	---	---	---	---	---	1.65	1.70	1.59	1.64	1.62	1.51
6	---	---	---	---	---	1.47	1.65	1.70	1.58	1.65	1.62	1.52
7	---	---	---	---	---	1.46	1.66	1.71	1.47	1.65	1.60	1.52
8	---	---	---	---	---	1.46	1.66	1.73	1.48	1.65	1.60	1.53
9	---	---	---	---	---	1.46	1.66	1.70	1.41	1.65	1.61	1.52
10	---	---	---	---	---	1.46	1.66	1.68	1.38	1.64	1.62	1.51
11	---	---	---	---	1.63	---	1.67	1.66	1.36	1.64	1.64	1.50
12	---	---	---	---	---	---	1.68	1.69	1.36	1.66	1.62	1.50
13	---	---	---	---	1.57	---	1.67	1.66	1.37	1.64	1.62	1.50
14	---	---	---	---	1.54	---	1.67	1.65	1.37	1.62	1.62	1.49
15	---	---	---	---	---	---	1.66	1.66	1.63	1.62	1.62	1.50
16	---	---	---	---	---	---	1.66	1.66	1.65	1.59	1.61	1.47
17	---	---	---	---	---	---	1.66	1.66	1.65	1.59	1.63	1.46
18	---	---	---	---	---	---	1.66	1.66	1.65	1.60	1.60	1.48
19	---	---	---	---	---	---	1.67	1.65	1.65	1.61	1.61	1.49
20	---	---	---	---	---	---	1.68	1.65	1.65	1.62	1.61	1.49
21	---	---	---	---	---	---	1.67	1.65	1.65	1.63	1.61	1.48
22	---	---	---	---	---	---	1.67	1.64	1.65	1.63	1.60	1.47
23	---	---	---	---	---	---	---	1.63	1.63	1.63	1.59	1.43
24	---	---	---	---	---	---	1.67	1.63	1.63	1.63	1.58	1.47
25	---	---	---	---	---	---	1.67	1.62	1.64	1.64	1.56	1.49
26	---	---	---	---	---	---	1.67	1.62	1.65	1.63	1.57	1.49
27	---	---	---	---	---	---	1.67	1.62	1.66	1.63	1.57	1.50
28	---	---	---	---	---	---	1.67	1.62	1.64	1.63	1.58	1.50
29	---	---	---	---	---	---	---	1.62	1.65	1.63	1.55	1.51
30	---	---	---	---	---	---	---	1.62	1.63	1.63	1.56	1.52
31	---	---	---	---	---	1.65	---	1.63	---	1.63	1.54	---
MEAN	---	---	---	---	---	---	---	---	1.57	1.63	1.60	1.50
MAX	---	---	---	---	---	---	---	---	1.66	1.66	1.64	1.54
MIN	---	---	---	---	---	---	---	---	1.36	1.59	1.54	1.43

06348500 SWEETBRIAR CREEK NEAR JUDSON, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
15...	1040	6.4	8.6	7.8	1,480	1,490	5.0	9.9	51.4	38.3	9.60	6	232
AUG													
18...	1400	1.7	8.7	8.8	1,620	1,640	24.0	24.0	38.1	35.8	9.60	7	266

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
15...	63	354	8.3	.32	2.11	506	1,060	18.3	<50	<1	1.8	38.3	<1
AUG													
18...	69	389	9.1	.36	6.47	475	1,070	5.02	<50	<1	14.0	36.3	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
15...	280	<1	<1	2.9	40	<1	110	4.04	<1	<1	<1.0	4.3
AUG												
18...	400	<1	12	5.3	50	<1	40	3.61	10.1	<1	<1.0	1.5

Remark codes used in this table:
< -- Less than.

06349000 HEART RIVER NEAR MANDAN, ND

LOCATION.--Lat 46°50'02", long 100°58'27", in NW¼NE¼ sec.25, T.139 N., R.82 W., Morton County, Hydrologic Unit 10130203, on left bank near downstream wingwall of bridge on county highway, 3 mi west of Mandan, and 4 mi downstream from Sweetbriar Creek.

DRAINAGE AREA.--3,310 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 1924, April 1928 to June 1933, August 1937 to current year. Published as "at Sunny" 1924, 1928-33.

REVISED RECORDS.--WSP 926: 1938. WSP 1209: Drainage area. WSP 1239: 1924, 1928-29, 1948.

GAGE.--Water-stage recorder. Datum of gage is 1,638.70 ft above National Geodetic Vertical Datum of 1929 and 1,623.03 ft above Burlington Northern Railway datum. See WSP 1729 or 1917 for history of changes prior to June 30, 1958.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Tschida (station 06346000), 105 mi upstream, since 1949. Some diversions above station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	27	e21	e13	e21	e25	51	31	28	224	77	94
2	21	25	e23	e13	e20	e27	59	31	31	232	69	88
3	21	24	e22	e13	e20	e28	56	30	40	248	69	74
4	21	27	e22	e13	e20	e30	51	29	37	350	65	73
5	20	28	e21	e13	e20	e30	48	28	39	778	62	79
6	20	26	e20	e13	e20	e30	43	26	47	1,270	56	81
7	21	25	e19	e13	e20	e30	43	26	46	1,130	53	83
8	21	24	e19	e13	e20	e30	41	31	64	1,350	50	85
9	21	24	e18	e13	e21	e30	39	65	101	1,340	51	85
10	20	23	e18	e13	e21	e29	38	148	157	1,170	54	84
11	20	e23	e18	e13	e21	e27	38	190	479	1,050	58	78
12	21	e22	e17	e13	e21	e26	44	117	611	1,010	97	82
13	21	e22	e17	e11	e20	e26	46	93	451	777	111	72
14	21	e22	e17	e9.9	e20	e26	47	83	363	303	99	71
15	21	e23	e17	e8.4	e20	e26	42	71	325	213	91	72
16	21	e23	e16	e6.6	e20	e26	40	62	297	182	88	66
17	21	e22	e16	e6.0	e20	e26	38	52	263	159	94	64
18	22	e22	e16	e5.9	e20	e27	37	47	220	132	101	64
19	22	e21	e16	e6.1	e20	e27	36	42	195	110	117	65
20	22	e22	e16	e6.8	e20	e32	35	43	168	104	112	67
21	22	e22	e15	e10	e21	e38	36	50	153	88	88	69
22	23	e22	e15	e11	e21	e44	35	60	140	87	87	67
23	23	e22	e14	e11	e21	e50	34	49	126	99	90	67
24	23	e23	e14	e11	e21	e56	33	49	119	87	104	68
25	24	e24	e14	e12	e21	e63	33	49	125	103	96	68
26	24	e24	e14	e14	e21	e72	33	41	142	101	84	66
27	24	e25	e14	e17	e22	e80	32	35	241	97	84	65
28	25	e25	e14	e20	e24	e71	32	31	272	103	82	64
29	26	e25	e14	e21	---	e60	32	29	245	97	87	66
30	26	e25	e14	e21	---	54	31	29	255	85	89	64
31	25	---	e14	e21	---	51	---	27	---	86	94	---
TOTAL	685	712	525	385.7	577	1,197	1,203	1,694	5,780	13,165	2,559	2,191
MEAN	22.1	23.7	16.9	12.4	20.6	38.6	40.1	54.6	193	425	82.5	73.0
MAX	26	28	23	21	24	80	59	190	611	1,350	117	94
MIN	20	21	14	5.9	20	25	31	26	28	85	50	64
AC-FT	1,360	1,410	1,040	765	1,140	2,370	2,390	3,360	11,460	26,110	5,080	4,350

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

MEAN	56.2	43.6	26.4	17.8	105	949	854	320	328	236	97.7	64.7
MAX	337	383	155	145	1,046	4,029	5,885	3,610	1,925	2,433	763	231
(WY)	(1995)	(1983)	(1983)	(1983)	(1930)	(1997)	(1950)	(1970)	(1941)	(1993)	(1998)	(1995)
MIN	5.41	6.95	0.21	0.00	0.00	0.28	25.2	18.5	23.4	11.3	3.65	1.43
(WY)	(1940)	(1938)	(1938)	(1938)	(1940)	(1965)	(1990)	(1992)	(1961)	(1990)	(1932)	(1932)

06349000 HEART RIVER NEAR MANDAN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1924 - 2005	
ANNUAL TOTAL	82,243.98		30,673.7			
ANNUAL MEAN	225		84.0		260	
HIGHEST ANNUAL MEAN					898	1982
LOWEST ANNUAL MEAN					19.2	1990
HIGHEST DAILY MEAN	6,030	Mar 14	1,350	Jul 8	28,400	Apr 18, 1950
LOWEST DAILY MEAN	0.88	Jul 18	5.9	Jan 18	0.00	Aug 20, 1929
ANNUAL SEVEN-DAY MINIMUM	7.8	Jan 9	7.1	Jan 14	0.00	Feb 1, 1930
MAXIMUM PEAK FLOW			1,460	Jul 8	[a]30,500	Apr 19, 1950
MAXIMUM PEAK STAGE			3.95	Jul 8	[b]25.75	Apr 4, 1952
ANNUAL RUNOFF (AC-FT)	163,100		60,840		188,400	
10 PERCENT EXCEEDS	429		141		411	
50 PERCENT EXCEEDS	30		31		50	
90 PERCENT EXCEEDS	9.2		15		6.0	

a About; gage height, 23.64 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.18	0.22	0.53	0.62	0.80	0.30	0.03	0.14	1.41	0.61	0.73
2	0.06	0.14	0.27	0.55	0.64	0.80	0.40	0.02	0.19	1.43	0.55	0.69
3	0.06	0.13	0.28	0.54	0.67	0.79	0.36	0.00	0.32	1.47	0.55	0.59
4	0.06	0.17	0.28	0.55	0.71	0.80	0.30	-0.01	0.28	1.74	0.51	0.58
5	0.03	0.20	0.29	0.49	0.85	0.79	0.26	-0.04	0.32	2.64	0.48	0.63
6	0.03	0.17	0.22	0.47	0.81	0.79	0.20	-0.06	0.41	3.61	0.43	0.64
7	0.04	0.14	0.29	0.48	0.80	0.81	0.19	-0.06	0.41	3.40	0.40	0.65
8	0.05	0.13	0.21	0.55	0.81	0.76	0.18	0.01	0.58	3.76	0.36	0.67
9	0.04	0.12	0.29	0.61	0.82	0.75	0.15	0.48	0.82	3.74	0.37	0.67
10	0.04	0.10	0.33	---	0.83	0.80	0.13	0.98	1.06	3.43	0.41	0.66
11	0.04	0.10	0.34	---	0.84	0.74	0.14	1.27	1.87	3.18	0.45	0.62
12	0.04	0.08	0.32	---	0.85	0.75	0.21	0.96	2.12	3.09	0.75	0.65
13	0.05	0.11	0.24	0.35	0.84	0.74	0.24	0.81	1.81	2.65	0.83	0.57
14	0.05	0.13	0.25	0.31	0.83	0.60	0.25	0.75	1.65	1.71	0.77	0.57
15	0.04	0.10	0.31	0.24	0.83	0.61	0.19	0.66	1.58	1.44	0.71	0.57
16	0.05	0.09	0.34	0.21	0.83	0.60	0.15	0.58	1.52	1.30	0.69	0.52
17	0.06	0.09	0.38	0.18	0.84	0.67	0.12	0.48	1.45	1.18	0.73	0.51
18	0.07	0.08	0.40	0.17	0.85	0.68	0.12	0.42	1.34	1.03	0.77	0.50
19	0.09	0.08	0.38	0.16	0.86	0.67	0.10	0.35	1.28	0.89	0.87	0.52
20	0.08	0.08	0.40	0.11	0.86	0.67	0.08	0.36	1.21	0.83	0.84	0.53
21	0.09	0.04	0.33	0.26	0.86	0.72	0.11	0.45	1.17	0.70	0.69	0.55
22	0.09	0.13	0.34	0.56	0.85	0.84	0.09	0.56	1.13	0.69	0.68	0.54
23	0.10	0.07	0.37	0.57	0.84	0.90	0.08	0.44	1.06	0.76	0.71	0.53
24	0.11	0.15	0.36	0.52	0.84	0.83	0.06	0.45	1.03	0.68	0.79	0.54
25	0.12	0.14	0.41	0.61	0.83	0.82	0.06	0.44	1.06	0.79	0.74	0.54
26	0.12	0.16	0.40	0.62	0.83	0.75	0.05	0.34	1.14	0.78	0.67	0.52
27	0.13	0.13	0.44	0.62	0.83	0.77	0.04	0.26	1.42	0.75	0.67	0.51
28	0.14	0.28	0.47	0.63	0.81	0.81	0.03	0.20	1.52	0.79	0.65	0.50
29	0.16	0.27	0.48	0.59	---	0.68	0.03	0.16	1.46	0.75	0.68	0.52
30	0.17	0.21	0.50	0.59	---	0.34	0.03	0.16	1.48	0.67	0.70	0.51
31	0.16	---	0.50	0.60	---	0.30	---	0.13	---	0.68	0.73	---
MEAN	0.08	0.13	0.34	---	0.81	0.72	0.15	0.37	1.09	1.68	0.64	0.58
MAX	0.17	0.28	0.50	---	0.86	0.90	0.40	1.27	2.12	3.76	0.87	0.73
MIN	0.03	0.04	0.21	---	0.62	0.30	0.03	-0.06	0.14	0.67	0.36	0.50

06349000 HEART RIVER NEAR MANDAN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-50, 1971-76, 1978 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
14...	1245	48	8.6	8.1	1,470	1,470	10.5	10.3	49.0	36.9	6.90	6	236
AUG													
22...	1100	87	8.3	8.5	1,300	1,310	21.0	19.1	48.5	33.5	9.90	5	169

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
14...	64	376	14.3	.42	<2.00	446	1,020	132	<50	<1	1.3	35.6	<1
AUG													
22...	57	282	12.0	.36	3.81	397	840	199	<50	<1	1.9	67.0	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
14...	310	<1	<1	3.2	30	<1	20	3.47	<1	<1	<1.0	2.0
AUG												
22...	350	<1	6	4.9	40	<1	<10	4.14	4.8	<1	<1.0	2.1

Remark codes used in this table:
< -- Less than.

06349500 APPLE CREEK NEAR MENOKEN, ND

LOCATION.--Lat 46°47'40", long 100°39'25", in NW¼NE¼ sec.9, T.138 N., R.79 W., Burleigh County, Hydrologic Unit 10130103, on left bank 75 ft downstream from bridge on county highway, 4 mi upstream from Hay Creek, 6.3 mi west of Menoken, and 6.4 mi east of Bismarck.

DRAINAGE AREA.--1,680 mi^2, approximately, of which about 500 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to June 1905, October 1945 to current year. Published as "near Bismarck" 1905.

REVISED RECORDS.--WSP 1209: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,638.61 ft above National Geodetic Vertical Datum of 1929. See WSP 1729 or 1917 for history of changes prior to Sept. 30, 1953.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	7.0	e4.7	e3.8	e3.5	e2.9	52	8.2	12	24	3.6	1.0
2	3.7	7.3	e4.6	e3.7	e3.6	e2.9	41	8.0	11	130	3.4	0.91
3	3.7	7.3	e4.5	e3.6	e3.7	e3.0	32	7.4	11	151	3.0	0.82
4	4.6	8.9	e4.5	e3.5	e3.7	e3.0	21	7.2	10	95	2.8	0.83
5	7.1	7.8	e4.5	e3.3	e3.7	e3.1	4.9	7.5	9.4	74	2.5	0.86
6	4.6	6.8	e4.4	e3.0	e3.6	e3.3	2.0	6.7	8.5	76	2.2	0.94
7	3.8	6.5	e4.4	e2.8	e3.5	e3.5	6.7	6.2	8.9	90	2.1	1.1
8	3.6	6.3	e4.5	e2.7	e3.5	e3.3	12	6.3	36	84	2.0	1.1
9	3.4	6.6	e4.5	e2.7	e3.5	e3.3	11	7.1	28	65	2.0	1.1
10	3.4	6.9	e4.5	e2.6	e3.4	e3.2	11	7.9	45	49	2.2	0.92
11	3.2	6.5	e4.4	e2.5	e3.4	e3.1	11	8.5	59	39	15	0.88
12	2.9	5.8	e4.4	e2.4	e3.4	e3.3	12	10	84	31	12	0.84
13	2.9	5.6	e4.4	e2.2	e3.5	e3.5	12	16	67	23	8.0	0.90
14	5.1	5.4	e4.4	e1.9	e3.4	e3.7	12	24	59	19	6.4	1.8
15	11	5.3	e4.4	e1.6	e3.4	e3.9	12	27	64	18	4.7	2.6
16	7.0	5.2	e4.4	e1.4	e3.4	e4.0	11	27	51	15	3.9	2.1
17	4.6	5.2	e4.3	e1.3	e3.3	e4.6	11	27	43	13	3.6	1.8
18	3.8	5.2	e4.3	e1.2	e3.1	5.2	11	39	37	10	3.9	1.7
19	15	5.4	e4.2	e1.2	e3.3	5.9	12	36	33	9.4	3.9	1.7
20	17	5.3	e4.1	e1.2	e3.3	6.6	12	33	30	8.5	3.7	1.6
21	7.2	5.2	e4.1	e1.4	e3.1	6.8	12	27	25	7.7	3.1	1.3
22	4.7	5.2	e4.0	e1.6	e3.0	7.1	12	23	22	7.8	2.7	1.4
23	3.9	5.1	e4.0	e2.5	e3.0	7.1	11	21	23	7.9	2.4	1.2
24	3.8	5.2	e3.9	e3.4	e3.0	7.5	10	21	20	7.0	2.1	1.2
25	3.9	4.9	e4.0	e3.6	e3.0	7.3	9.2	19	18	8.2	2.0	1.2
26	4.1	5.0	e4.0	e3.6	e3.0	7.2	8.6	17	17	7.3	1.9	1.6
27	4.6	5.3	e4.0	e3.6	e2.9	7.6	8.4	15	17	6.1	1.6	1.6
28	5.4	5.0	e4.0	e3.6	e2.9	11	8.5	14	15	5.3	1.5	1.1
29	6.3	4.9	e4.0	e3.6	---	24	8.5	14	17	4.6	1.4	0.99
30	6.9	e4.7	e3.9	e3.6	---	38	8.5	13	28	4.3	1.3	0.97
31	6.9	---	e3.8	e3.6	---	51	---	12	---	3.9	1.2	---
TOTAL	171.8	176.8	132.1	82.7	93.1	249.9	406.3	516.0	908.8	1,094.0	112.1	38.06
MEAN	5.54	5.89	4.26	2.67	3.33	8.06	13.5	16.6	30.3	35.3	3.62	1.27
MAX	17	8.9	4.7	3.8	3.7	51	52	39	84	151	15	2.6
MIN	2.9	4.7	3.8	1.2	2.9	2.9	2.0	6.2	8.5	3.9	1.2	0.82
AC-FT	341	351	262	164	185	496	806	1,020	1,800	2,170	222	75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

MEAN	6.34	5.20	3.76	2.35	12.5	113	197	78.3	43.2	29.3	16.9	8.80
MAX	67.6	40.1	30.8	15.2	316	557	1,606	1,038	346	372	292	130
(WY)	(2000)	(2000)	(1998)	(2000)	(2000)	(1987)	(1997)	(1950)	(1953)	(1993)	(1999)	(1999)
MIN	0.05	0.06	0.06	0.04	0.09	0.99	0.53	0.23	0.07	0.03	0.03	0.03
(WY)	(1991)	(1990)	(1992)	(1977)	(1975)	(1977)	(1990)	(1977)	(1977)	(1977)	(1991)	(1990)

06349500 APPLE CREEK NEAR MENOKEN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	3,977.5		3,981.66			
ANNUAL MEAN	10.9		10.9		43.0	
HIGHEST ANNUAL MEAN					268	1997
LOWEST ANNUAL MEAN					0.31	1990
HIGHEST DAILY MEAN	192	Mar 30	151	Jul 3	5,590	Apr 18, 1950
LOWEST DAILY MEAN	1.2	Aug 19	0.82	Sep 3	0.00	Aug 25, 1946
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 13	0.92	Sep 1	0.00	Aug 25, 1946
MAXIMUM PEAK FLOW			183	Jul 2	[a]6,750	Apr 18, 1950
MAXIMUM PEAK STAGE			6.38	Jul 2	17.46	Apr 19, 1979
ANNUAL RUNOFF (AC-FT)	7,890		7,900		31,180	
10 PERCENT EXCEEDS	17		27		75	
50 PERCENT EXCEEDS	4.9		4.6		2.6	
90 PERCENT EXCEEDS	2.0		1.6		0.15	

a Gage height, 17.07 ft
e Estimated

GAGE-HEIGHT RECORDS

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

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.36	4.59	4.47	---	4.27	4.26	5.52	4.58	4.63	4.96	4.32	3.97
2	4.35	4.61	4.47	---	4.28	4.27	5.40	4.57	4.58	5.95	4.30	3.93
3	4.35	4.61	4.45	---	4.29	4.27	5.27	4.54	4.57	6.18	4.27	3.90
4	4.41	4.67	4.46	---	4.30	4.28	5.02	4.53	4.55	5.80	4.25	3.90
5	4.59	4.63	4.47	---	4.31	4.30	4.41	4.55	4.51	5.64	4.21	3.91
6	4.48	4.58	4.48	---	4.30	4.32	4.16	4.51	4.48	5.67	4.19	3.94
7	4.42	4.57	4.48	---	4.29	4.35	4.49	4.49	4.49	5.77	4.18	3.99
8	4.41	4.56	4.49	---	4.29	4.34	4.71	4.49	5.14	5.72	4.17	3.99
9	4.40	4.57	4.49	---	4.28	4.33	4.70	4.53	5.03	5.57	4.16	3.98
10	4.39	4.59	4.49	---	4.28	4.33	4.68	4.56	5.28	5.42	4.18	3.94
11	4.38	4.57	4.48	---	4.28	4.33	4.67	4.59	5.43	5.30	4.74	3.92
12	4.34	4.53	4.45	---	4.28	4.35	4.73	4.66	5.63	5.19	4.73	3.91
13	4.35	4.52	4.45	4.32	4.28	4.37	4.71	4.86	5.50	5.04	4.56	3.93
14	4.46	4.51	4.45	4.32	4.29	4.39	4.71	5.08	5.44	4.95	4.48	4.09
15	4.76	4.51	4.44	---	4.30	4.41	4.71	5.15	5.48	4.93	4.38	4.19
16	4.60	4.50	4.44	---	4.29	4.42	4.70	5.15	5.36	4.86	4.31	4.13
17	4.47	4.50	4.43	---	4.29	4.43	4.68	5.15	5.27	4.78	4.29	4.10
18	4.42	4.50	4.43	---	4.28	4.46	4.69	5.21	5.18	4.69	4.31	4.09
19	4.72	4.51	4.43	4.26	4.28	4.50	4.72	5.16	5.13	4.65	4.31	4.08
20	4.90	4.50	4.42	4.28	4.27	4.54	4.73	5.12	5.07	4.61	4.29	4.06
21	4.60	4.50	4.41	4.27	4.27	4.55	4.72	5.01	4.96	4.57	4.25	4.03
22	4.48	4.50	4.40	4.27	4.27	4.57	4.71	4.94	4.92	4.58	4.20	4.03
23	4.42	4.49	4.40	4.25	4.27	4.57	4.68	4.90	4.93	4.59	4.16	4.01
24	4.41	4.50	4.40	4.26	4.26	4.59	4.65	4.90	4.86	4.54	4.13	4.00
25	4.42	4.48	4.39	4.27	4.27	4.58	4.62	4.85	4.82	4.59	4.12	4.01
26	4.44	4.49	4.39	4.28	4.27	4.57	4.59	4.79	4.78	4.56	4.11	4.07
27	4.47	4.51	4.39	4.26	4.27	4.59	4.58	4.73	4.79	4.50	4.07	4.07
28	4.52	4.49	4.39	4.25	4.26	4.73	4.59	4.69	4.71	4.44	4.05	3.97
29	4.56	4.48	4.38	4.26	---	5.12	4.59	4.68	4.79	4.41	4.04	3.96
30	4.59	4.47	---	4.26	---	5.36	4.59	4.67	5.02	4.38	4.02	3.96
31	4.59	---	---	4.26	---	5.52	---	4.63	---	4.35	4.01	---
MEAN	4.49	4.53	---	---	4.28	4.52	4.72	4.78	4.98	5.01	4.25	4.00
MAX	4.90	4.67	---	---	4.31	5.52	5.52	5.21	5.63	6.18	4.74	4.19
MIN	4.34	4.47	---	---	4.26	4.26	4.16	4.49	4.48	4.35	4.01	3.90

06349500 APPLE CREEK NEAR MENOKEN, ND—Continued

WATER-QUALITY RECORDS

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

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
20...	1215	11	8.1	7.9	822	840	15.0	12.0	39.1	25.7	9.10	3	104
AUG													
25...	1300	2.0	8.4	8.7	1,270	1,280	22.0	24.1	53.0	44.5	9.40	4	172

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

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
20...	51	252	13.6	.22	11.6	191	536	16.8	<50	<1	3.2	40.2	<1
AUG													
25...	53	465	17.0	.27	25.8	240	816	4.48	<50	<1	24.8	58.6	<1

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

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
20...	310	<1	<1	2.1	50	<1	310	3.65	1.1	<1	<1.0	1.1
AUG												
25...	700	<1	<1	3.1	60	<1	20	4.01	30.0	<1	<1.0	1.2

Remark codes used in this table:
< -- Less than.

06349580 HAY CREEK AT 43RD AVENUE NEAR BISMARCK, ND

LOCATION.--Lat 46°51'10", long 100°45'30", in NW¼NW¼NE¼ sec.22, T.139 N., R.80 W., Burleigh County, Hydrologic Unit 10130103, on left bank on downstream side of bridge on 43rd Avenue north of Bismarck and approximately 0.5 mi east of Highway 83.

DRAINAGE AREA.--20.74 mi^2 (approximately).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,730 ft from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 120 ft^3/s, Aug. 11, gage height, 7.32 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.05	e0.25	e0.10	0.67	1.4	0.00	0.00
2	---	---	---	---	---	e0.07	e0.15	e0.17	0.47	0.58	0.00	0.00
3	---	---	---	---	---	e0.06	e0.10	e0.10	0.25	8.6	0.00	0.00
4	---	---	---	---	---	e0.06	e0.09	e0.08	0.14	2.3	0.00	0.00
5	---	---	---	---	---	e0.07	e0.09	0.07	0.09	1.0	0.00	0.00
6	---	---	---	---	---	e0.07	e0.11	0.05	0.02	0.40	0.00	0.00
7	---	---	---	---	---	e0.06	e0.17	0.08	6.8	0.09	0.00	0.00
8	---	---	---	---	---	e0.04	e0.25	0.81	19	0.00	0.00	0.00
9	---	---	---	---	---	e0.06	e0.40	0.51	1.2	0.00	0.03	0.00
10	---	---	---	---	---	e0.05	e1.0	0.26	0.37	0.00	2.0	0.00
11	---	---	---	---	---	e0.06	e3.1	0.16	0.14	0.34	23	0.00
12	---	---	---	---	---	e0.06	e3.5	0.80	0.04	0.00	0.17	0.00
13	---	---	---	---	---	e0.04	e1.7	0.58	0.00	0.00	0.00	0.00
14	---	---	---	---	---	e0.07	e0.93	0.47	0.14	0.00	0.00	0.00
15	---	---	---	---	---	e0.05	e0.72	0.41	0.04	0.00	0.00	0.00
16	---	---	---	---	---	e0.07	e0.58	0.38	0.00	0.00	0.00	0.00
17	---	---	---	---	---	e0.07	e0.41	0.39	0.00	0.00	2.2	0.00
18	---	---	---	---	---	e0.05	e0.30	1.7	0.00	0.00	0.00	0.00
19	---	---	---	---	---	e0.04	e0.23	0.69	0.00	0.00	0.00	0.00
20	---	---	---	---	---	e0.06	e0.20	0.75	0.00	0.00	0.00	0.00
21	---	---	---	---	---	e0.03	e0.18	0.61	0.33	0.18	0.00	0.00
22	---	---	---	---	---	e0.07	e0.16	0.30	0.00	0.05	0.00	0.00
23	---	---	---	---	---	e0.5	e0.18	0.26	0.00	0.81	0.00	0.00
24	---	---	---	---	---	e2.5	e0.13	0.42	0.00	1.7	0.00	0.46
25	---	---	---	---	---	e4.5	e0.13	0.20	0.00	0.64	0.00	0.00
26	---	---	---	---	---	e4.1	e0.13	0.18	3.9	0.00	0.00	0.00
27	---	---	---	---	---	e4.0	e0.18	0.15	4.3	0.00	0.00	0.00
28	---	---	---	---	---	e2.9	e0.18	0.14	0.16	0.00	0.00	0.00
29	---	---	---	---	---	e1.5	e0.18	0.18	27	0.00	0.00	0.00
30	---	---	---	---	---	e0.75	e0.12	0.75	8.2	0.03	0.00	0.00
31	---	---	---	---	---	e0.50	---	0.65	---	0.00	0.00	---
TOTAL	---	---	---	---	---	22.51	15.85	12.40	73.26	18.12	27.40	0.46
MEAN	---	---	---	---	---	0.73	0.53	0.40	2.44	0.58	0.88	0.02
MAX	---	---	---	---	---	4.5	3.5	1.7	27	8.6	23	0.46
MIN	---	---	---	---	---	0.03	0.09	0.05	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	45	31	25	145	36	54	0.9

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

MEAN	---	---	---	---	---	1.12	0.22	0.56	1.11	0.34	0.59	0.01
MAX	---	---	---	---	---	1.59	0.53	1.18	2.44	0.76	1.47	0.04
(WY)	---	---	---	---	---	(2004)	(2005)	(2003)	(2005)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	0.73	0.05	0.09	0.00	0.00	0.00	0.00
(WY)	---	---	---	---	---	(2005)	(2004)	(2004)	(2002)	(2003)	(2003)	(2002)

SUMMARY STATISTICS	WATER YEARS 2002 - 2005	
HIGHEST DAILY MEAN	27	Aug 24, 2004
LOWEST DAILY MEAN	0.00	Jun 1, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 1, 2002
MAXIMUM PEAK FLOW	[a]120	Aug 11, 2005
MAXIMUM PEAK STAGE	7.51	Aug 23, 2004

a About; gage height, 7.32
e Estimated

06349580 HAY CREEK AT 43RD AVENUE NEAR BISMARCK, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2003 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	3.00	3.33	2.70	2.71
2	---	---	---	---	---	---	---	---	2.93	3.15	2.71	2.71
3	---	---	---	---	---	---	---	---	2.83	3.77	2.75	2.69
4	---	---	---	---	---	---	---	---	2.77	3.46	2.69	2.68
5	---	---	---	---	---	---	---	2.79	2.75	3.26	2.67	2.69
6	---	---	---	---	---	---	---	2.78	2.71	3.09	2.67	2.68
7	---	---	---	---	---	---	---	2.79	3.27	2.95	2.68	2.69
8	---	---	---	---	---	---	---	3.08	4.13	2.85	2.70	2.69
9	---	---	---	---	---	---	---	3.23	3.30	2.78	2.82	2.68
10	---	---	---	---	---	---	---	3.00	3.08	2.75	3.00	2.66
11	---	---	---	---	---	---	---	2.88	2.99	2.94	4.10	2.64
12	---	---	---	---	---	---	3.51	3.34	2.93	2.74	3.01	2.66
13	---	---	---	---	---	---	---	3.21	2.90	2.72	2.85	2.73
14	---	---	---	---	---	---	---	3.08	2.99	2.72	2.78	2.67
15	---	---	---	---	---	---	---	3.00	2.94	2.72	2.73	2.66
16	---	---	---	---	---	---	---	2.95	2.86	2.71	2.72	2.66
17	---	---	---	---	---	---	---	2.93	2.81	2.71	3.09	2.68
18	---	---	---	---	---	---	---	3.19	2.76	2.68	2.89	2.69
19	---	---	---	---	---	---	---	3.01	2.74	2.68	2.85	2.69
20	---	---	---	---	---	---	---	3.01	2.73	2.66	2.78	2.68
21	---	---	---	---	---	---	---	2.97	2.89	2.73	2.75	2.69
22	---	---	---	---	---	---	---	2.85	2.76	2.81	2.73	2.67
23	---	---	---	---	---	4.01	---	2.84	2.74	2.96	2.72	2.68
24	---	---	---	---	---	4.02	---	2.90	2.71	2.94	2.75	2.84
25	---	---	---	---	---	3.82	---	2.81	2.69	3.06	2.77	2.68
26	---	---	---	---	---	3.79	---	2.80	2.88	2.77	2.75	2.68
27	---	---	---	---	---	3.79	---	2.78	3.38	2.74	2.75	2.65
28	---	---	---	---	---	3.70	---	2.77	2.99	2.74	2.74	2.64
29	---	---	---	---	---	3.57	---	2.79	4.20	2.72	2.73	2.66
30	---	---	---	---	---	---	---	2.91	3.78	2.74	2.72	2.68
31	---	---	---	---	---	---	---	2.99	---	2.74	2.73	---
MEAN	---	---	---	---	---	---	---	---	3.01	2.89	2.82	2.68
MAX	---	---	---	---	---	---	---	---	4.20	3.77	4.10	2.84
MIN	---	---	---	---	---	---	---	---	2.69	2.66	2.67	2.64

06349590 HAY CREEK AT DIVIDE AVENUE IN BISMARCK, ND

LOCATION.--Lat 46°49'24", long 100°44'13", in SW¼SE¼SE¼ sec.26, T.139 N., R.80 W., Burleigh County, Hydrologic Unit 10130103, on left downstream side of walkway bridge and 300 ft downstream of Divide Avenue in east Bismarck.

DRAINAGE AREA.--29.9 mi^2 (approximately).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,670 ft from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft^3/s, Aug. 11, gage height, 7.30 ft; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.05	e0.16	e0.22	1.4	5.7	0.08	0.49
2	---	---	---	---	---	e0.07	e0.16	e0.25	0.84	2.2	0.03	0.36
3	---	---	---	---	---	e0.06	e0.16	e0.28	0.55	19	0.13	0.34
4	---	---	---	---	---	e0.05	e0.14	e0.34	0.31	7.4	0.11	0.40
5	---	---	---	---	---	e0.06	e0.16	0.35	0.20	3.1	0.01	0.36
6	---	---	---	---	---	e0.07	e0.20	0.34	0.07	1.3	e0.00	0.38
7	---	---	---	---	---	e0.06	e0.21	0.45	18	0.62	e0.00	0.34
8	---	---	---	---	---	e0.05	e0.28	2.3	73	0.29	e0.00	0.34
9	---	---	---	---	---	e0.06	e0.43	8.3	9.9	0.21	e0.20	0.41
10	---	---	---	---	---	e0.07	e0.78	2.6	2.9	0.14	6.1	0.39
11	---	---	---	---	---	e0.08	e2.4	1.6	1.2	2.0	101	0.24
12	---	---	---	---	---	e0.10	e9.3	12	0.75	0.43	4.3	0.22
13	---	---	---	---	---	e0.15	e1.7	7.1	0.56	0.10	0.64	0.69
14	---	---	---	---	---	e0.20	e0.99	2.8	1.5	0.01	0.32	0.50
15	---	---	---	---	---	e0.25	e0.76	1.9	0.76	0.00	0.12	0.17
16	---	---	---	---	---	e0.30	e0.55	1.2	0.47	0.00	0.07	0.19
17	---	---	---	---	---	e0.35	e0.40	1.0	0.40	0.00	9.8	0.16
18	---	---	---	---	---	e0.40	e0.31	5.6	0.24	e0.00	1.9	0.15
19	---	---	---	---	---	e0.56	e0.25	1.8	0.11	e0.00	0.92	0.17
20	---	---	---	---	---	e0.82	e0.21	2.7	0.05	e0.00	0.64	0.13
21	---	---	---	---	---	e1.1	e0.16	1.5	2.0	e5.0	0.57	0.10
22	---	---	---	---	---	e1.6	e0.16	0.97	1.0	1.3	0.66	0.05
23	---	---	---	---	---	e2.7	e0.16	0.55	0.25	3.3	0.74	0.06
24	---	---	---	---	---	e5.0	e0.15	0.95	0.01	5.9	0.88	4.3
25	---	---	---	---	---	e14	e0.12	0.77	0.00	8.6	0.85	0.56
26	---	---	---	---	---	e10	e0.14	0.35	5.7	1.1	0.85	0.20
27	---	---	---	---	---	e11	e0.16	0.24	30	0.20	0.72	0.16
28	---	---	---	---	---	e5.8	e0.14	0.20	1.1	0.05	0.71	0.06
29	---	---	---	---	---	e1.6	e0.12	0.24	78	0.02	0.61	0.03
30	---	---	---	---	---	e0.56	e0.14	0.53	39	0.00	0.56	0.06
31	---	---	---	---	---	e0.28	---	1.6	---	0.16	0.79	---
TOTAL	---	---	---	---	---	57.45	21.00	61.03	270.27	68.13	134.31	12.01
MEAN	---	---	---	---	---	1.85	0.70	1.97	9.01	2.20	4.33	0.40
MAX	---	---	---	---	---	14	9.3	12	78	19	101	4.3
MIN	---	---	---	---	---	0.05	0.12	0.20	0.00	0.00	0.00	0.03
AC-FT	---	---	---	---	---	114	42	121	536	135	266	24

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

MEAN	---	---	---	---	---	3.32	0.81	1.68	3.15	3.42	2.65	1.04
MAX	---	---	---	---	---	5.69	1.50	1.97	9.01	8.57	4.33	1.83
(WY)	---	---	---	---	---	(2004)	(2004)	(2005)	(2005)	(2002)	(2005)	(2004)
MIN	---	---	---	---	---	1.85	0.23	1.14	0.23	0.04	0.00	0.40
(WY)	---	---	---	---	---	(2005)	(2003)	(2004)	(2002)	(2003)	(2003)	(2005)

SUMMARY STATISTICS	WATER YEARS 2002 - 2005	
HIGHEST DAILY MEAN	170	Jul 9, 2002
LOWEST DAILY MEAN	0.00	Mar 1, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 1, 2003
MAXIMUM PEAK FLOW	280	Aug 11, 2005
MAXIMUM PEAK STAGE	7.30	Aug 11, 2005

e Estimated

06349590 HAY CREEK AT DIVIDE AVENUE IN BISMARCK, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--March 2003 to current year (seasonal records only).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	2.36	2.66	2.25	2.27
2	---	---	---	---	---	---	---	---	2.29	2.46	2.16	2.24
3	---	---	---	---	---	---	---	---	2.24	3.18	2.13	2.24
4	---	---	---	---	---	---	---	---	2.18	2.75	2.10	2.26
5	---	---	---	---	---	---	---	2.21	2.14	2.53	2.02	2.25
6	---	---	---	---	---	---	---	2.21	2.10	2.40	1.94	2.26
7	---	---	---	---	---	---	---	2.23	2.84	2.33	1.87	2.25
8	---	---	---	---	---	---	---	2.40	4.23	2.25	1.84	2.25
9	---	---	---	---	---	---	---	2.86	2.80	2.22	1.97	2.27
10	---	---	---	---	---	---	---	2.48	2.50	2.20	2.34	2.27
11	---	---	---	---	---	---	---	2.38	2.37	2.47	4.35	2.23
12	---	---	---	---	---	---	2.75	3.01	2.32	2.29	2.33	2.22
13	---	---	---	---	---	---	---	2.80	2.29	2.20	2.15	2.33
14	---	---	---	---	---	---	---	2.50	2.40	2.16	2.11	2.31
15	---	---	---	---	---	---	---	2.41	2.32	2.11	2.07	2.22
16	---	---	---	---	---	---	---	2.34	2.27	2.12	2.08	2.23
17	---	---	---	---	---	---	---	2.31	2.25	2.10	2.61	2.21
18	---	---	---	---	---	---	---	2.70	2.21	2.04	2.37	2.22
19	---	---	---	---	---	---	---	2.40	2.16	2.02	2.31	2.22
20	---	---	---	---	---	---	---	2.48	2.13	2.03	2.27	2.21
21	---	---	---	---	---	---	---	2.37	2.40	2.14	2.26	2.20
22	---	---	---	---	---	---	---	2.31	2.39	2.44	2.28	2.17
23	---	---	---	---	---	3.78	---	2.24	2.24	2.59	2.29	2.18
24	---	---	---	---	---	3.84	---	2.30	2.12	2.60	2.31	2.51
25	---	---	---	---	---	3.52	---	2.28	2.06	2.86	2.31	2.31
26	---	---	---	---	---	3.42	---	2.19	2.24	2.43	2.31	2.22
27	---	---	---	---	---	3.43	---	2.16	3.30	2.28	2.30	2.21
28	---	---	---	---	---	3.24	---	2.14	2.37	2.22	2.30	2.17
29	---	---	---	---	---	2.90	---	2.15	4.44	2.22	2.29	2.14
30	---	---	---	---	---	2.62	---	2.23	3.70	2.19	2.28	2.17
31	---	---	---	---	---	---	---	2.38	---	2.27	2.31	---
MEAN	---	---	---	---	---	---	---	---	2.52	2.35	2.27	2.24
MAX	---	---	---	---	---	---	---	---	4.44	3.18	4.35	2.51
MIN	---	---	---	---	---	---	---	---	2.06	2.02	1.84	2.14

06349600 HAY CREEK AT MAIN AVENUE IN BISMARCK, ND

LOCATION.--Lat 46°48'27", long 100°43'59", in NE¼NE¼NE¼ sec.2, T.138 N., R.80 W., Burleigh County, Hydrologic Unit 10130103, on left bank and 150 ft downstream from bridge on Main Avenue in Bismarck.

DRAINAGE AREA.--31.2 mi^2 (approximately).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,660 ft from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 237 ft^3/s, Aug. 11, gage height, 6.74 ft; minimum daily discharge, 0.14 ft^3/s, June 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e0.41	e0.61	e0.68	1.6	13	1.6	e1.1
2	---	---	---	---	---	e0.42	e0.56	e0.65	0.96	6.4	1.2	e0.85
3	---	---	---	---	---	e0.40	e0.59	e0.68	0.70	32	1.6	e0.70
4	---	---	---	---	---	e0.38	e0.61	e0.73	0.61	12	1.3	e0.69
5	---	---	---	---	---	e0.44	e0.64	e0.62	0.54	7.4	0.99	e0.64
6	---	---	---	---	---	e0.42	e0.64	e0.54	0.50	4.4	0.63	e0.62
7	---	---	---	---	---	e0.42	e0.64	3.1	29	2.6	0.86	e0.60
8	---	---	---	---	---	e0.42	e0.72	8.8	90	1.4	0.94	e0.58
9	---	---	---	---	---	e0.45	e0.89	15	13	0.93	2.0	e0.54
10	---	---	---	---	---	e0.42	e1.3	5.7	3.6	0.55	12	e0.50
11	---	---	---	---	---	e0.42	e5.3	3.7	2.0	6.9	106	e0.45
12	---	---	---	---	---	e0.46	e9.9	23	1.7	2.1	4.7	e0.40
13	---	---	---	---	---	e0.49	4.3	13	1.6	e0.72	0.93	e1.0
14	---	---	---	---	---	e0.58	e1.4	5.8	2.6	e0.66	0.46	1.5
15	---	---	---	---	---	e0.58	e1.1	4.3	e1.0	e0.47	e0.30	1.1
16	---	---	---	---	---	e0.61	e0.86	3.4	e0.70	e0.47	0.29	e0.70
17	---	---	---	---	---	e0.71	e0.78	3.0	e0.50	e0.40	13	e0.45
18	---	---	---	---	---	e0.83	e0.73	11	e0.40	e0.21	2.8	e0.30
19	---	---	---	---	---	e0.93	e0.68	2.5	e0.20	e0.21	1.2	e0.25
20	---	---	---	---	---	e1.3	e0.68	2.7	e0.14	e0.40	1.1	e0.20
21	---	---	---	---	---	e1.5	e0.62	e4.3	e4.0	9.4	e0.70	e0.15
22	---	---	---	---	---	e2.0	e0.52	e2.6	1.2	5.0	e0.90	e0.15
23	---	---	---	---	---	e3.1	e0.65	e1.8	e0.74	8.4	e0.80	e0.18
24	---	---	---	---	---	e7.8	e0.57	e2.3	e0.23	18	e1.0	e5.1
25	---	---	---	---	---	e17	e0.52	e1.4	e0.18	15	e0.95	1.5
26	---	---	---	---	---	e13	e0.52	e0.90	e11	2.9	e0.90	e1.0
27	---	---	---	---	---	e14	e0.62	0.51	33	0.61	e0.87	e0.70
28	---	---	---	---	---	e9.5	e0.65	0.47	5.5	e0.57	e0.80	e0.50
29	---	---	---	---	---	6.3	e0.57	e0.63	102	e0.75	e0.75	e0.35
30	---	---	---	---	---	e2.1	e0.60	0.99	53	e1.5	e0.94	e0.25
31	---	---	---	---	---	e0.79	---	5.6	---	e2.5	e1.4	---
TOTAL	---	---	---	---	---	88.18	38.77	130.40	362.20	157.85	163.91	23.05
MEAN	---	---	---	---	---	2.84	1.29	4.21	12.1	5.09	5.29	0.77
MAX	---	---	---	---	---	17	9.9	23	102	32	106	5.1
MIN	---	---	---	---	---	0.38	0.52	0.47	0.14	0.21	0.29	0.15
AC-FT	---	---	---	---	---	175	77	259	718	313	325	46

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

MEAN	---	---	---	---	---	6.15	2.32	4.39	7.29	6.67	3.90	2.00
MAX	---	---	---	---	---	9.15	4.20	6.17	12.1	16.8	6.10	3.44
(WY)	---	---	---	---	---	(2004)	(2004)	(2003)	(2005)	(2002)	(2004)	(2004)
MIN	---	---	---	---	---	2.84	1.29	2.79	1.40	0.51	0.00	0.77
(WY)	---	---	---	---	---	(2005)	(2005)	(2004)	(2003)	(2003)	(2003)	(2005)

SUMMARY STATISTICS	WATER YEARS 2002 - 2005	
HIGHEST DAILY MEAN	200	Jul 9, 2002
LOWEST DAILY MEAN	0.00	Mar 1, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 1, 2003
MAXIMUM PEAK FLOW	237	Aug 11, 2005
MAXIMUM PEAK STAGE	6.74	Aug 11, 2005

e Estimated

06349600 HAY CREEK AT MAIN AVENUE IN BISMARCK, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--July 2002 to current year (seasonal records only).

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.32	2.24	0.92	1.55	0.49	0.67
2	---	---	---	---	---	---	2.32	2.23	0.65	1.08	0.44	0.66
3	---	---	---	---	---	---	2.32	2.24	0.53	2.34	0.50	0.65
4	---	---	---	---	---	---	2.33	2.24	0.48	1.50	0.46	0.64
5	---	---	---	---	---	---	2.35	2.24	0.44	1.16	0.40	0.62
6	---	---	---	---	---	---	2.33	2.14	0.43	0.89	0.33	0.58
7	---	---	---	---	---	---	2.33	2.15	2.07	0.68	0.39	0.58
8	---	---	---	---	---	---	2.32	2.41	4.00	0.50	0.41	0.58
9	---	---	---	---	---	---	2.33	2.67	2.14	0.41	0.57	0.57
10	---	---	---	---	---	---	2.31	2.32	1.43	0.33	1.21	e0.55
11	---	---	---	---	---	---	e2.45	2.21	1.05	1.08	4.15	e0.51
12	---	---	---	---	---	---	e2.77	2.84	0.95	0.60	0.90	0.51
13	---	---	---	---	---	---	2.44	2.61	0.91	e0.36	0.43	0.59
14	---	---	---	---	---	---	2.33	2.34	1.05	e0.29	0.33	0.63
15	---	---	---	---	---	---	2.27	2.26	0.42	e0.25	0.30	0.57
16	---	---	---	---	---	---	2.25	2.21	0.29	e0.26	0.30	0.55
17	---	---	---	---	---	---	2.21	2.19	e0.26	e0.22	1.36	0.55
18	---	---	---	---	---	---	2.20	2.53	e0.25	e0.17	0.73	0.54
19	---	---	---	---	---	---	2.26	2.14	e0.23	e0.16	0.52	0.54
20	---	---	---	---	---	---	2.22	2.09	e0.23	0.28	0.48	0.52
21	---	---	---	---	---	---	2.23	---	1.06	0.76	0.37	0.60
22	---	---	---	---	---	---	2.24	---	0.70	0.88	e0.36	0.63
23	---	---	---	---	---	---	2.23	---	e0.41	1.15	0.36	0.64
24	---	---	---	---	---	---	2.24	---	e0.27	1.30	0.39	0.80
25	---	---	---	---	---	---	2.24	---	e0.18	1.58	0.43	0.65
26	---	---	---	---	---	---	2.23	---	0.67	0.67	0.43	0.76
27	---	---	---	---	---	---	2.22	0.43	2.36	0.32	0.47	0.90
28	---	---	---	---	---	---	2.22	0.42	1.00	e0.31	0.51	0.89
29	---	---	---	---	---	2.57	2.23	e0.50	4.03	e0.30	0.51	0.85
30	---	---	---	---	---	---	2.24	0.65	2.99	e0.35	0.62	1.02
31	---	---	---	---	---	---	---	1.41	---	e0.42	0.67	---
MEAN	---	---	---	---	---	---	2.30	---	1.08	0.71	0.64	0.65
MAX	---	---	---	---	---	---	2.77	---	4.03	2.34	4.15	1.02
MIN	---	---	---	---	---	---	2.20	---	0.18	0.16	0.30	0.51

e Estimated

06349700 MISSOURI RIVER NEAR SCHMIDT, ND

LOCATION.--Lat 46°39'22", long 100°44'18", in SW¼NE¼ sec.26, T.137 N., R.80 W., Morton County, Hydrologic Unit 10130102, on right bank 2 mi southeast of abandoned townsite of Schmidt, 13 mi southeast of Mandan, and at mile 1,298.

DRAINAGE AREA.--191,700 mi^2, approximately.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--September 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,600.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage regulated by releases from Garrison Dam (station 06338490) 91.1 mi upstream and by backwater from Lake Oahe. Gage heights for Jan. 7, 10, 12, 22, Feb. 8, and May 3 based on incomplete daily record.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height recorded, 23.56 ft, Dec. 9, 1976; minimum daily recorded, 7.92 ft, May 30, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 17.82 ft, Dec. 29; minimum recorded, 11.81 ft, Oct. 2.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.32	12.26	13.29	16.76	17.24	15.14	12.66	14.14	13.47	13.69	13.47	13.67
2	11.99	12.19	13.41	15.82	17.17	15.25	12.60	14.06	13.50	13.79	---	13.65
3	12.12	12.15	13.32	---	17.05	15.47	12.74	14.23	13.52	13.94	---	13.60
4	12.12	12.78	13.39	---	16.62	15.67	13.38	13.95	13.46	13.89	13.52	13.51
5	12.20	13.48	13.27	---	16.50	16.05	14.29	13.86	13.44	13.75	13.41	13.55
6	12.12	13.45	13.31	---	16.30	16.15	14.78	13.90	13.41	13.75	13.40	13.55
7	12.17	12.56	13.47	17.14	15.78	14.91	14.86	14.00	13.60	13.75	13.46	13.57
8	12.25	12.20	13.36	---	15.38	13.30	14.76	14.33	13.88	13.81	13.36	13.43
9	12.21	12.29	13.43	17.35	---	12.69	14.08	14.62	13.76	13.90	13.39	13.38
10	12.25	12.22	13.39	17.27	15.83	12.65	13.96	14.41	13.73	13.87	13.51	13.30
11	12.23	12.09	13.34	---	15.90	12.52	14.09	14.54	13.87	13.88	13.63	13.39
12	12.27	12.17	13.44	17.21	16.00	12.49	14.21	14.33	13.88	13.79	13.57	13.48
13	12.22	12.14	13.36	---	16.04	12.58	14.17	14.52	13.75	13.68	13.51	13.46
14	12.24	12.17	13.29	---	16.00	12.59	14.09	14.36	13.68	13.63	13.49	13.39
15	12.34	12.21	13.33	---	15.97	12.64	14.05	14.43	13.59	13.64	13.57	13.39
16	12.20	12.21	13.34	---	15.93	12.48	14.27	14.24	13.52	13.62	13.57	13.43
17	12.35	12.42	13.35	---	15.57	12.40	14.12	13.83	13.49	13.64	13.58	13.48
18	12.30	12.21	13.31	17.57	15.53	12.42	14.07	13.71	13.46	13.54	13.61	13.48
19	12.40	12.23	13.25	17.56	15.74	12.44	14.13	13.63	13.48	13.46	13.56	13.34
20	12.43	12.25	13.43	17.49	15.63	12.37	14.13	13.61	13.48	13.54	13.57	12.71
21	12.21	12.31	13.59	17.37	15.50	12.47	14.23	13.67	13.37	13.53	13.57	12.61
22	12.22	12.49	---	17.27	15.66	12.55	14.51	13.83	13.43	13.53	13.56	12.67
23	12.17	12.54	15.18	17.14	15.50	12.45	14.27	13.85	13.39	13.57	13.60	12.63
24	12.20	12.58	15.90	17.24	15.23	12.59	14.42	13.88	13.41	13.54	13.57	12.67
25	12.17	12.59	16.08	17.43	15.16	12.52	14.34	13.79	13.48	13.59	13.58	12.71
26	12.30	12.69	16.85	17.39	15.24	12.50	14.11	13.69	13.39	13.53	13.62	12.65
27	12.13	12.88	17.44	17.31	15.25	12.64	14.21	13.53	13.59	13.48	13.47	12.70
28	12.25	13.05	17.60	17.24	15.26	12.65	14.14	13.53	13.55	13.53	13.57	12.65
29	12.30	13.07	17.77	17.18	---	12.78	14.34	13.48	13.66	13.44	13.74	12.62
30	12.29	13.02	17.71	17.20	---	12.80	14.39	13.52	13.88	13.47	13.60	12.65
31	12.11	---	17.43	17.24	---	12.71	---	13.47	---	13.51	13.63	---
MEAN	12.23	12.50	---	---	---	13.25	14.08	13.97	13.57	13.65	---	13.18
MAX	12.43	13.48	---	---	---	16.15	14.86	14.62	13.88	13.94	---	13.67
MIN	11.99	12.09	---	---	---	12.37	12.60	13.47	13.37	13.44	---	12.61

06350000 CANNONBALL RIVER AT REGENT, ND

LOCATION.--Lat 46°25'36", long 102°33'05", in NE¼NE¼ sec.13, T.134 N., R.95 W., Hettinger County, Hydrologic Unit 10130204, on right bank 400 ft from bridge on county highway and 0.3 mi north of Regent.

DRAINAGE AREA.--580 mi^2, approximately.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2,422.90 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1914, 26.1 ft, Apr. 16, 1950, from floodmarks; discharge, 20,300 ft^3/s, on basis of slope-area measurement at site 4 mi downstream.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	4.8	3.4	e3.1	e4.0	e4.0	5.2	3.3	13	498	5.0	1.4
2	1.9	4.6	3.4	e3.0	e4.2	e3.9	5.5	3.2	13	563	4.5	1.2
3	1.9	4.8	3.6	e2.9	e4.0	e4.1	5.5	3.3	13	367	4.2	1.2
4	1.8	4.4	3.8	e2.8	e3.7	e4.3	5.4	3.3	13	187	4.2	1.3
5	1.9	3.9	3.7	e2.7	e3.2	e4.6	5.6	3.3	12	123	3.9	1.3
6	1.9	3.6	e3.6	e2.5	e2.8	e5.0	5.5	2.9	11	85	3.6	1.3
7	1.8	3.4	3.8	e2.5	e2.7	e5.5	5.3	3.0	16	64	3.6	1.4
8	1.8	3.5	3.9	e2.5	e2.8	e5.7	5.1	4.1	33	50	3.4	1.5
9	1.7	3.1	3.9	e2.5	e3.2	e5.5	5.1	4.6	20	42	3.6	1.5
10	1.9	3.0	3.8	e2.5	e3.7	e5.4	4.6	5.8	19	36	4.6	1.4
11	2.0	2.9	3.7	e2.4	e3.7	e5.3	4.7	5.3	18	31	5.2	1.5
12	2.1	2.8	3.5	e2.2	e4.0	e5.2	5.3	6.2	16	26	5.5	2.0
13	2.0	2.8	3.5	e2.0	e3.9	e5.2	5.0	7.2	15	22	5.2	2.1
14	1.9	2.9	3.3	e1.8	e3.9	e5.1	4.5	7.7	13	18	5.1	2.0
15	2.1	3.0	3.6	e1.6	e3.9	e5.0	4.4	6.6	12	15	4.8	1.9
16	2.4	3.1	3.9	e1.4	e3.9	e4.9	4.3	6.5	11	13	4.2	1.9
17	2.2	3.1	3.9	e1.3	e3.9	4.8	4.2	7.1	9.8	12	4.0	1.9
18	2.2	3.2	3.9	e1.4	e3.8	4.8	3.9	43	9.4	11	3.7	1.8
19	3.3	3.2	3.7	e1.8	e3.8	4.9	3.8	30	9.3	9.9	3.6	1.8
20	3.1	3.1	e3.3	e1.7	e3.8	5.6	4.0	27	8.6	9.0	3.3	1.6
21	3.0	3.0	3.0	e1.9	e3.8	5.7	4.6	26	8.7	8.2	3.3	1.6
22	3.4	e3.0	2.7	e2.1	e3.9	6.4	5.0	22	8.6	7.5	3.1	1.5
23	3.6	2.9	2.1	e2.3	e3.9	6.7	4.7	19	8.2	7.0	2.6	1.5
24	3.9	3.0	1.9	e2.5	e3.8	6.9	4.7	15	7.8	6.7	2.3	1.4
25	4.0	3.1	e2.2	e2.3	e3.9	6.2	5.0	13	8.1	8.1	2.3	1.5
26	3.9	e3.4	e2.4	e2.2	e4.0	6.0	4.5	13	7.8	7.7	2.0	1.5
27	3.9	e3.3	e2.6	e2.1	e4.0	6.6	4.0	13	8.8	7.6	1.7	1.4
28	3.9	e3.4	e2.9	e2.0	e4.0	6.7	3.7	12	9.9	7.1	1.7	1.4
29	4.7	e3.5	e3.2	e2.2	---	6.5	3.5	11	9.6	6.8	1.7	1.4
30	4.8	3.5	e3.2	e2.7	---	6.2	3.4	11	21	6.1	1.7	1.4
31	4.8	---	e3.1	e3.3	---	5.7	---	12	---	5.4	1.6	---
TOTAL	85.8	101.3	102.5	70.2	104.2	168.4	140.0	350.4	383.6	2,260.1	109.2	46.6
MEAN	2.77	3.38	3.31	2.26	3.72	5.43	4.67	11.3	12.8	72.9	3.52	1.55
MAX	4.8	4.8	3.9	3.3	4.2	6.9	5.6	43	33	563	5.5	2.1
MIN	1.7	2.8	1.9	1.3	2.7	3.9	3.4	2.9	7.8	5.4	1.6	1.2
AC-FT	170	201	203	139	207	334	278	695	761	4,480	217	92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

MEAN	8.48	5.80	4.10	4.79	22.1	137	111	59.1	73.8	26.4	16.3	4.86
MAX	124	51.6	15.7	63.2	393	963	1,128	523	512	331	299	20.4
(WY)	(1983)	(1983)	(1983)	(1973)	(1982)	(1978)	(1952)	(1972)	(1957)	(1969)	(1981)	(1986)
MIN	1.25	1.87	0.52	0.00	0.00	3.23	3.80	2.94	1.57	0.69	0.67	0.70
(WY)	(1961)	(1961)	(1951)	(1952)	(1959)	(1964)	(1961)	(1992)	(1990)	(2002)	(1959)	(1960)

06350000 CANNONBALL RIVER AT REGENT, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005	
ANNUAL TOTAL	9,269.97		3,922.3			
ANNUAL MEAN	25.3		10.7		39.5	
HIGHEST ANNUAL MEAN					168	1982
LOWEST ANNUAL MEAN					3.11	1992
HIGHEST DAILY MEAN	1,400	Mar 11	563	Jul 2	7,880	Mar 27, 1978
LOWEST DAILY MEAN	0.98	Jan 9	1.2	Sep 2	0.00	Dec 5, 1950
ANNUAL SEVEN-DAY MINIMUM	1.1	Jan 6	1.3	Sep 1	0.00	Dec 5, 1950
MAXIMUM PEAK FLOW			1,030	Jul 1	[a]10,000	Mar 27, 1978
MAXIMUM PEAK STAGE			8.28	Jul 1	[b]21.01	Mar 21, 1997
ANNUAL RUNOFF (AC-FT)	18,390		7,780		28,630	
10 PERCENT EXCEEDS	28		13		43	
50 PERCENT EXCEEDS	3.6		3.9		5.0	
90 PERCENT EXCEEDS	1.7		1.8		1.5	

a Gage height, 20.55 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.50	4.78	4.67	4.61	4.70	4.70	4.78	4.69	5.04	6.72	4.80	4.50
2	4.49	4.76	4.67	4.59	4.69	4.71	4.81	4.68	5.06	7.18	4.77	4.47
3	4.50	4.78	4.68	4.58	4.71	4.72	4.81	4.69	5.08	6.70	4.75	4.48
4	4.48	4.75	4.70	4.58	4.72	4.74	4.81	4.69	5.06	6.26	4.75	4.49
5	4.50	4.72	4.69	4.56	4.74	4.76	4.82	4.69	5.01	6.03	4.71	4.49
6	4.49	4.69	4.71	4.54	4.74	4.80	4.82	4.65	5.00	5.85	4.69	4.50
7	4.48	4.67	4.70	4.54	4.71	4.84	4.81	4.66	5.10	5.71	4.69	4.53
8	4.47	4.69	4.70	4.54	4.68	4.85	4.80	4.75	5.39	5.59	4.67	4.54
9	4.47	4.65	4.70	4.54	4.66	4.83	4.80	4.79	5.21	5.52	4.69	4.53
10	4.49	4.64	4.69	4.54	4.66	4.82	4.77	4.87	5.20	5.45	4.76	4.53
11	4.50	4.63	4.68	4.53	4.67	4.80	4.78	4.85	5.17	5.39	4.80	4.54
12	4.51	4.63	4.67	4.54	4.68	4.80	4.82	4.90	5.14	5.33	4.83	4.61
13	4.50	4.63	4.66	4.53	4.71	4.79	4.80	4.95	5.10	5.27	4.82	4.63
14	4.49	4.65	4.64	4.50	4.73	4.76	4.78	4.97	5.07	5.21	4.81	4.62
15	4.51	4.66	4.67	4.45	4.73	4.80	4.77	4.92	5.03	5.15	4.79	4.61
16	4.55	4.66	4.69	4.40	4.72	4.76	4.76	4.91	4.98	5.11	4.75	4.61
17	4.53	4.66	4.69	4.38	4.72	4.74	4.75	4.94	4.95	5.09	4.74	4.61
18	4.54	4.67	4.69	4.40	4.71	4.74	4.74	5.44	4.94	5.06	4.71	4.60
19	4.64	4.66	4.67	4.46	4.71	4.74	4.73	5.37	4.93	5.01	4.70	4.60
20	4.62	4.65	4.68	4.52	4.70	4.79	4.75	5.32	4.91	4.98	4.69	4.58
21	4.62	4.64	4.61	4.51	4.70	4.80	4.79	5.32	4.91	4.95	4.69	4.58
22	4.66	4.65	4.59	4.49	4.69	4.84	4.82	5.25	4.90	4.92	4.67	4.56
23	4.68	4.64	4.51	4.52	4.70	4.85	4.80	5.19	4.89	4.90	4.63	4.55
24	4.70	4.64	4.49	4.55	4.70	4.87	4.80	5.12	4.87	4.89	4.60	4.55
25	4.71	4.65	4.53	4.58	4.70	4.83	4.82	5.06	4.88	4.95	4.59	4.55
26	4.70	4.69	4.56	4.63	4.71	4.83	4.79	5.04	4.87	4.94	4.57	4.55
27	4.70	4.70	4.56	4.70	4.72	4.86	4.75	5.05	4.91	4.94	4.54	4.55
28	4.70	4.69	4.59	4.70	4.71	4.87	4.72	5.02	4.95	4.92	4.53	4.54
29	4.76	4.69	4.63	4.70	---	4.86	4.71	4.99	4.94	4.90	4.53	4.54
30	4.78	4.67	4.67	4.69	---	4.85	4.70	4.98	5.23	4.87	4.54	4.54
31	4.78	---	4.65	4.70	---	4.82	---	5.01	---	4.83	4.54	---
MEAN	4.58	4.68	4.65	4.55	4.70	4.80	4.78	4.96	5.02	5.37	4.69	4.55
MAX	4.78	4.78	4.71	4.70	4.74	4.87	4.82	5.44	5.39	7.18	4.83	4.63
MIN	4.47	4.63	4.49	4.38	4.66	4.70	4.70	4.65	4.87	4.83	4.53	4.47

06350000 CANNONBALL RIVER AT REGENT, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-66, 1971 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
19...	1800	4.0	8.5	7.7	1,960	1,920	7.0	13.0	72.1	49.6	6.70	7	319
AUG													
04...	1350	4.3	8.3	8.4	1,680	1,660	20.8	22.5	69.1	42.5	9.20	6	261

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
19...	64	376	11.9	.42	2.81	740	1,430	15.2	<50	<1	1.4	35.9	<1
AUG													
04...	61	384	8.5	.43	10.9	514	1,140	13.4	<50	<1	4.7	82.1	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
19...	430	<1	<1	4.1	50	<1	<10	3.93	<1	<1	<1.0	1.9
AUG												
04...	590	<1	<1	3.6	60	<1	40	6.16	4.2	<1	<1.0	1.3

Remark codes used in this table:
< -- Less than.

06351200 CANNONBALL RIVER NEAR RALEIGH, ND

LOCATION.--Lat 46°07'37", long 101°19'58", in SW¼SW¼NW¼ sec.33, T.131 N., R.85 W., Grant County, Hydrologic Unit 10130204, on left bank at upstream side of bridge on State Highway 31 and 20 miles south of Raleigh.

DRAINAGE AREA.--1,640 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for discharges under 2.0 ft^3/s and estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge about 15,000 ft^3/s, Mar. 20, 1997, gage height, 16 ft (from floodmark), was probably higher in 1950.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	11	9.6	e3.6	e4.3	e6.4	17	12	35	27	18	1.6
2	1.7	14	10	e3.6	e4.5	e8.0	17	11	28	25	18	1.6
3	1.8	15	9.7	e3.4	e4.5	e11	17	11	26	29	18	1.3
4	1.7	15	9.8	e3.4	e4.6	e14	16	11	25	28	16	1.1
5	2.3	12	e9.7	e3.3	e4.6	e18	16	11	24	24	16	1.0
6	2.2	12	e9.6	e3.1	e4.6	e16	16	11	23	255	14	1.0
7	2.3	12	9.2	e3.1	e4.5	e18	16	11	174	370	12	0.97
8	1.9	12	9.1	e3.0	e4.4	e21	16	12	397	256	12	0.85
9	1.7	12	e9.7	e2.8	e4.2	e23	15	15	137	193	19	0.83
10	1.3	11	e10	e2.8	e4.0	e26	15	19	74	161	91	0.76
11	1.3	11	e9.9	e2.8	e4.1	e25	16	26	51	133	98	0.61
12	3.1	15	e9.8	e2.8	e4.4	e24	21	76	78	105	17	0.51
13	7.5	e18	e9.7	e2.8	e4.5	e24	15	36	181	82	13	0.44
14	6.9	16	e9.6	e2.7	e4.5	e23	15	25	168	67	12	0.34
15	6.1	14	e9.5	e2.5	e4.5	e23	15	23	126	55	11	0.29
16	5.9	13	e9.0	e2.0	e4.4	e22	15	23	93	48	11	0.27
17	6.0	13	e8.7	e1.5	e4.4	e21	15	25	71	39	13	0.27
18	5.6	12	e8.0	e1.4	e4.4	e22	15	98	60	34	14	0.28
19	5.3	12	e7.3	e1.4	e4.4	e21	81	68	53	30	13	0.26
20	5.3	e12	e6.5	e1.9	e4.4	20	34	89	47	27	12	0.20
21	5.3	e11	e4.5	e2.5	e4.4	19	18	58	192	24	11	0.24
22	4.9	10	e3.3	e2.6	e4.3	19	16	81	59	22	9.5	0.22
23	6.4	e11	e3.1	e2.5	e4.3	20	15	72	45	20	7.8	0.17
24	5.7	e11	e3.0	e2.3	e4.3	21	14	56	39	19	6.3	0.28
25	5.5	10	e3.1	e2.3	e4.4	17	14	62	33	50	5.1	0.29
26	5.3	10	e3.0	e2.8	e4.5	15	14	57	29	24	4.5	0.28
27	5.1	e10	e3.2	e3.4	e4.7	14	13	47	26	20	3.7	0.23
28	5.4	e9.7	e3.4	e4.2	e5.6	13	13	39	24	22	3.1	0.15
29	17	9.6	e3.6	e4.4	---	14	13	34	25	28	2.6	0.10
30	31	10	e3.8	e4.3	---	16	12	31	27	22	2.2	0.08
31	9.7	---	e3.7	e4.3	---	17	---	31	---	20	1.7	---
TOTAL	173.3	364.3	222.1	89.5	124.7	571.4	545	1,181	2,370	2,259	505.5	16.52
MEAN	5.59	12.1	7.16	2.89	4.45	18.4	18.2	38.1	79.0	72.9	16.3	0.55
MAX	31	18	10	4.4	5.6	26	81	98	397	370	98	1.6
MIN	1.3	9.6	3.0	1.4	4.0	6.4	12	11	23	19	1.7	0.08
AC-FT	344	723	441	178	247	1,130	1,080	2,340	4,700	4,480	1,000	33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	5.31	9.31	7.36	5.29	6.08	363	83.3	28.6	39.4	51.3	22.9	2.57
MAX	13.5	14.0	13.2	12.1	12.3	853	254	38.1	86.9	154	93.5	10.8
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2005)	(2001)	(2001)	(2001)	(2001)
MIN	0.39	0.14	0.44	1.14	2.70	18.4	18.2	18.1	5.52	1.03	0.01	0.33
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2005)	(2005)	(2004)	(2002)	(2003)	(2003)	(2003)

06351200 CANNONBALL RIVER NEAR RALEIGH, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005	
ANNUAL TOTAL	26,451.24		8,422.32			
ANNUAL MEAN	72.3		23.1		33.7	
HIGHEST ANNUAL MEAN					70.3	2004
LOWEST ANNUAL MEAN					14.6	2002
HIGHEST DAILY MEAN	4,730	Mar 12	397	Jun 8	4,730	Mar 12, 2004
LOWEST DAILY MEAN	0.00	Sep 2	0.08	Sep 30	0.00	Sep 6, 2002
ANNUAL SEVEN-DAY MINIMUM	0.03	Aug 29	0.20	Sep 24	0.00	Sep 26, 2002
MAXIMUM PEAK FLOW			1,760	Jun 7	[a]6,500	Mar 12, 2004
MAXIMUM PEAK STAGE			7.22	Jun 7	[b]12.76	Mar 12, 2004
ANNUAL RUNOFF (AC-FT)	52,470		16,710		24,430	
10 PERCENT EXCEEDS	55		54		38	
50 PERCENT EXCEEDS	8.1		11		9.7	
90 PERCENT EXCEEDS	0.40		1.7		0.16	

a About
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--June 2001 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.64	2.87	2.80	3.15	3.31	3.33	2.83	2.73	3.03	2.94	2.80	2.52
2	2.62	2.92	2.81	---	3.39	3.31	2.83	2.72	2.95	2.90	2.81	2.52
3	2.62	2.93	2.80	---	3.45	3.29	2.83	2.71	2.92	2.96	2.80	2.50
4	2.61	2.93	2.80	---	3.50	3.28	2.82	2.72	2.91	2.96	2.77	2.48
5	2.65	2.89	3.14	---	3.47	3.24	2.82	2.72	2.90	2.90	2.77	2.47
6	2.64	2.88	2.82	---	3.43	3.17	2.81	2.72	2.89	4.05	2.73	2.47
7	2.64	2.88	2.79	---	3.38	3.11	2.82	2.71	3.37	4.75	2.69	2.47
8	2.62	2.88	2.78	---	3.48	3.11	2.82	2.73	4.64	4.35	2.68	2.46
9	2.60	2.87	2.82	3.11	3.35	3.09	2.80	2.80	3.80	4.08	2.82	2.45
10	2.57	2.85	2.84	---	3.37	3.06	2.79	2.84	3.41	3.94	3.35	2.45
11	2.57	2.86	2.97	---	3.44	3.19	2.81	2.96	3.22	3.79	3.49	2.43
12	2.65	2.92	2.91	3.09	3.43	3.00	2.90	3.34	3.44	3.63	2.79	2.42
13	2.84	---	2.83	---	3.39	3.23	2.81	3.07	4.00	3.48	2.74	2.41
14	2.82	2.93	2.90	---	3.37	3.11	2.80	2.94	3.97	3.36	2.72	2.40
15	2.80	2.90	2.80	---	3.34	2.96	2.80	2.90	3.75	3.25	2.70	2.40
16	2.79	2.88	2.77	---	3.33	2.99	2.79	2.89	3.55	3.18	2.70	2.40
17	2.79	2.87	---	---	3.34	2.98	2.79	2.91	3.39	3.09	2.75	2.40
18	2.78	2.85	---	---	3.34	2.94	2.80	3.52	3.30	3.02	2.79	2.40
19	2.77	2.86	2.78	---	---	2.94	3.33	3.34	3.24	2.98	2.77	2.39
20	2.76	---	2.72	---	3.47	2.88	3.05	3.52	3.18	2.94	2.76	2.39
21	2.76	---	---	---	3.38	2.86	2.85	3.28	3.89	2.89	2.76	2.38
22	2.74	2.82	---	---	3.32	2.87	2.82	3.45	3.29	2.86	2.73	2.38
23	2.78	---	---	---	3.35	2.88	2.80	3.40	3.16	2.84	2.69	2.38
24	2.76	---	---	---	3.35	2.90	2.78	3.26	3.09	2.82	2.66	2.39
25	2.75	2.81	---	3.35	3.38	2.83	2.79	3.32	3.02	3.15	2.63	2.39
26	2.74	2.82	---	3.56	3.33	2.79	2.78	3.27	2.97	2.89	2.62	2.39
27	2.73	---	---	3.37	3.33	2.78	2.77	3.18	2.93	2.84	2.59	2.38
28	2.74	---	---	3.26	---	2.77	2.75	3.09	2.90	2.86	2.58	2.37
29	2.87	2.80	---	3.26	---	2.78	2.75	3.03	2.91	2.95	2.56	2.37
30	3.10	2.81	3.10	3.27	---	2.81	2.74	2.99	2.93	2.86	2.55	2.37
31	2.85	---	3.12	3.28	---	2.84	---	2.99	---	2.83	2.52	---
MEAN	2.73	---	---	---	---	3.01	2.83	3.03	3.30	3.24	2.75	2.42
MAX	3.10	---	---	---	---	3.33	3.33	3.52	4.64	4.75	3.49	2.52
MIN	2.57	---	---	---	---	2.77	2.74	2.71	2.89	2.82	2.52	2.37

06351200 CANNONBALL RIVER NEAR RALEIGH, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
11...	1435	15	8.6	8.2	1,470	1,430	3.0	6.5	53.1	41.0	6.40	5	210
JUL													
27...	1230	20	8.5	8.6	1,310	1,290	23.2	22.3	53.5	35.9	10.9	5	178

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
11...	60	300	8.4	.33	<2.00	461	963	39.7	<50	<1	<1.0	26.2	<1
JUL													
27...	57	256	6.7	.30	9.92	418	857	46.8	<50	<1	3.3	115	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
11...	320	<1	1	5.0	30	<1	<10	4.65	<1	<1	<1.0	12.0
JUL												
27...	410	<1	<1	6.5	20	<1	<10	8.89	4.5	<1	<1.0	3.1

Remark codes used in this table:
< -- Less than.

06352000 CEDAR CREEK NEAR HAYNES, ND

LOCATION.--Lat 46°09'19", long 102°28'31", in W½ sec.20, T.131 N., R.94 W., Adams County, Hydrologic Unit 10130205, on left bank 30 ft downstream from bridge on State Highway 8 and 12.5 mi north of Haynes.

DRAINAGE AREA.--553 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,472.90 ft above National Geodetic Vertical Datum of 1929 (North Dakota Highway Department benchmark). Prior to May 20, 1951, nonrecording gage on former bridge 400 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1950, reached a stage of about 23 ft; discharge, 26,900 ft^3/s, by slope-area measurement at site 9 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.90	3.6	e1.3	e0.55	e1.5	e2.7	2.6	1.6	2.5	2.1	0.12	0.22
2	0.90	3.3	e1.3	e0.48	e1.7	e2.9	2.4	1.6	2.7	3.6	0.09	e0.23
3	1.0	2.5	e1.3	e0.40	e1.7	e3.1	2.1	1.6	2.2	12	0.09	0.13
4	1.0	2.3	e1.3	e0.34	e1.6	e3.7	2.3	1.4	1.5	9.7	0.07	0.18
5	0.92	2.2	e1.3	e0.30	e1.5	e4.2	2.1	1.4	1.5	8.4	0.07	0.28
6	0.61	1.5	e1.3	e0.29	e1.4	e4.2	2.3	1.4	1.2	8.2	0.06	0.38
7	0.57	1.1	e1.2	e0.26	e1.3	e4.1	2.3	1.5	2.7	40	0.06	0.40
8	0.64	1.3	e1.2	e0.26	e1.4	e4.0	2.0	2.2	3.4	29	0.06	0.29
9	0.75	1.1	e1.3	e0.25	e1.6	e3.9	1.9	1.4	16	24	0.06	0.30
10	0.62	1.1	e1.3	e0.23	e1.9	3.8	1.7	1.4	12	23	0.14	0.19
11	0.46	1.3	e1.3	e0.21	e2.4	3.6	1.8	1.4	5.7	20	e2.5	0.18
12	0.60	1.3	e1.2	e0.19	e2.6	3.5	2.2	2.1	3.9	16	e1.8	0.31
13	0.98	1.5	e1.3	e0.16	e2.8	3.3	2.6	2.7	4.4	14	e1.3	0.54
14	1.3	1.6	e1.4	e0.14	e2.8	3.2	3.0	3.7	5.1	10	e0.95	0.49
15	0.91	1.9	e1.3	e0.16	e2.6	2.9	2.2	3.3	4.0	8.0	e0.73	0.47
16	0.99	e1.7	e1.3	e0.38	e2.5	3.0	1.8	2.5	3.3	6.7	0.19	0.40
17	0.96	e1.7	e1.3	e0.52	e2.4	e2.7	1.9	2.5	2.7	5.5	0.19	0.40
18	1.1	e1.7	e1.2	e0.63	e2.3	2.8	1.8	6.5	2.1	3.8	0.36	0.43
19	1.2	e1.6	e1.1	e0.75	e2.2	2.9	1.8	9.1	1.8	2.9	0.44	0.48
20	1.2	e1.6	e1.1	e0.59	e2.2	2.8	1.8	7.9	1.5	2.2	0.30	0.41
21	1.5	e1.5	e0.98	e0.65	e2.1	2.7	2.3	9.5	1.6	2.0	0.39	0.43
22	2.7	e1.5	e0.91	e0.88	e2.1	3.0	2.4	7.4	1.4	1.4	0.32	0.43
23	1.6	e1.5	e0.94	e0.95	e2.2	3.1	3.1	4.9	1.2	0.73	0.13	0.49
24	1.6	e1.5	e1.1	e0.67	e2.2	3.1	2.4	4.1	0.93	0.53	0.08	0.40
25	2.1	e1.5	e1.2	e0.53	e2.3	2.9	2.0	3.8	0.78	0.68	0.18	0.36
26	1.8	e1.5	e1.3	e0.40	e2.4	3.1	1.7	4.7	0.71	0.85	0.23	0.36
27	1.7	e1.4	e1.4	e0.39	e2.5	3.2	1.5	3.8	0.99	0.24	0.22	0.35
28	1.7	e1.4	e1.4	e0.61	e2.6	3.0	1.7	3.2	1.0	0.18	0.24	0.29
29	2.6	e1.3	e1.2	e0.80	---	2.9	1.7	2.4	2.0	0.24	0.27	0.29
30	5.0	e1.3	e0.94	e1.1	---	3.1	1.7	2.2	2.6	0.25	e0.29	0.28
31	4.7	---	e0.73	e1.3	---	2.8	---	2.3	---	0.28	0.25	---
TOTAL	44.61	50.3	37.40	15.37	58.8	100.2	63.1	105.5	93.41	256.48	12.18	10.39
MEAN	1.44	1.68	1.21	0.50	2.10	3.23	2.10	3.40	3.11	8.27	0.39	0.35
MAX	5.0	3.6	1.4	1.3	2.8	4.2	3.1	9.5	16	40	2.5	0.54
MIN	0.46	1.1	0.73	0.14	1.3	2.7	1.5	1.4	0.71	0.18	0.06	0.13
AC-FT	88	100	74	30	117	199	125	209	185	509	24	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

MEAN	4.51	4.95	3.55	4.15	14.4	123	105	52.2	50.9	16.9	10.1	3.40
MAX	43.2	54.4	20.4	59.4	242	837	1,159	522	339	177	94.1	21.7
(WY)	(1983)	(1983)	(1983)	(1973)	(1982)	(1978)	(1952)	(1975)	(1964)	(1969)	(1981)	(1995)
MIN	0.25	0.60	0.22	0.00	0.00	1.05	1.58	1.66	0.77	0.00	0.00	0.00
(WY)	(1961)	(1962)	(1962)	(1962)	(1962)	(1964)	(1961)	(1961)	(1956)	(1961)	(1959)	(1960)

06352000 CEDAR CREEK NEAR HAYNES, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005	
ANNUAL TOTAL	12,717.10		847.74			
ANNUAL MEAN	34.7		2.32		32.8	
HIGHEST ANNUAL MEAN					122	1972
LOWEST ANNUAL MEAN					1.04	1961
HIGHEST DAILY MEAN	2,110	Mar 12	40	Jul 7	7,060	Apr 8, 1952
LOWEST DAILY MEAN	0.44	Aug 18	0.06	Aug 6	0.00	Jan 29, 1957
ANNUAL SEVEN-DAY MINIMUM	0.52	Aug 17	0.07	Aug 3	0.00	Jul 26, 1959
MAXIMUM PEAK FLOW			47	Jul 7	[a]7,870	Apr 7, 1952
MAXIMUM PEAK STAGE			4.35	Jul 7	[b]22.05	Mar 28, 1978
ANNUAL RUNOFF (AC-FT)	25,220		1,680		23,790	
10 PERCENT EXCEEDS	32		3.9		39	
50 PERCENT EXCEEDS	1.3		1.5		3.4	
90 PERCENT EXCEEDS	0.73		0.26		0.66	

a Gage height, 21.25 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1999 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.95	3.10	3.00	3.32	3.59	3.12	3.02	2.96	3.05	3.03	2.82	2.85
2	2.95	3.09	3.00	3.35	3.56	3.09	3.00	2.97	3.06	3.10	2.81	e2.86
3	2.96	3.05	3.01	3.39	3.52	3.10	2.98	2.96	3.03	3.43	2.81	2.82
4	2.96	3.04	3.02	3.50	3.47	3.11	3.00	2.95	2.99	3.33	2.80	2.85
5	2.95	3.03	3.12	3.52	3.42	3.13	2.99	2.96	2.99	3.29	2.80	2.87
6	2.93	2.99	3.01	3.55	3.38	3.13	3.00	2.95	2.98	3.27	2.79	2.88
7	2.93	2.97	3.03	3.57	3.28	3.13	3.00	2.96	3.06	4.19	2.78	2.88
8	2.94	2.98	3.02	3.58	3.21	3.11	2.98	3.01	3.09	3.85	2.78	2.87
9	2.95	2.97	3.02	3.57	3.17	3.09	2.97	2.97	3.53	3.68	2.79	2.87
10	2.94	2.97	3.05	3.61	3.16	3.08	2.96	2.96	3.44	3.64	2.83	2.85
11	2.91	2.98	3.01	3.61	3.31	3.07	2.97	2.96	3.19	3.55	---	2.84
12	2.93	2.98	3.10	3.70	3.33	3.06	2.99	3.00	3.11	3.43	---	2.87
13	2.97	2.99	3.05	3.85	3.25	3.05	3.02	3.04	3.14	3.35	---	2.90
14	2.99	3.00	3.02	3.86	3.24	3.04	3.03	3.09	3.16	3.25	---	2.90
15	2.96	3.02	3.03	3.87	3.18	3.03	2.99	3.07	3.12	3.18	---	2.90
16	2.97	2.99	3.03	3.74	3.16	3.04	2.97	3.03	3.09	3.15	2.84	2.89
17	2.97	2.99	3.03	3.58	3.15	3.15	2.97	3.03	3.06	3.11	2.85	2.89
18	2.98	2.99	3.03	3.67	3.14	3.03	2.97	3.21	3.02	3.06	2.88	2.89
19	2.98	3.01	3.05	3.75	3.14	3.03	2.97	3.31	3.01	3.02	2.88	2.90
20	2.98	2.99	3.06	3.61	3.13	3.03	2.97	3.27	2.99	2.99	2.87	2.89
21	3.00	2.99	3.12	3.71	3.11	3.02	3.00	3.33	2.99	2.99	2.88	2.89
22	3.07	3.00	3.13	3.72	3.12	3.03	3.00	3.25	2.98	2.96	2.87	2.89
23	3.00	3.07	3.21	3.75	3.10	3.04	3.05	3.15	2.97	2.92	2.83	2.90
24	3.01	2.99	3.19	3.89	3.11	3.04	3.01	3.11	2.95	2.90	2.81	2.89
25	3.03	3.00	3.04	3.84	3.11	3.03	2.98	3.10	2.94	2.90	2.84	2.88
26	3.01	3.01	3.08	3.74	3.11	3.04	2.97	3.14	2.93	2.92	2.86	2.88
27	3.00	3.08	3.08	3.78	3.11	3.04	2.96	3.10	2.96	2.85	2.85	2.88
28	3.00	3.01	3.08	3.71	3.12	3.04	2.97	3.07	2.96	2.84	2.86	2.87
29	3.05	3.01	3.08	3.66	---	3.03	2.97	3.04	3.02	2.85	2.87	2.87
30	3.16	3.00	3.10	3.65	---	3.04	2.97	3.02	3.05	2.86	e2.87	2.87
31	3.15	---	3.17	3.61	---	3.03	---	3.04	---	2.86	2.86	---
MEAN	2.99	3.01	3.06	3.65	3.24	3.06	2.99	3.06	3.06	3.19	---	2.88
MAX	3.16	3.10	3.21	3.89	3.59	3.15	3.05	3.33	3.53	4.19	---	2.90
MIN	2.91	2.97	3.00	3.32	3.10	3.02	2.96	2.95	2.93	2.84	---	2.82

e Estimated

06352000 CEDAR CREEK NEAR HAYNES, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1971 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
APR													
20...	1125	1.9	--	8.5	7.7	1,640	1,670	10.0	8.0	62.1	60.7	7.30	5
JUN													
06...	1540	1.2	691	9.1	8.9	1,820	1,880	29.5	24.3	37.2	72.1	7.60	6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
APR													
20...	247	56	394	11.0	.36	5.12	548	1,170	5.98	<50	<1	2.5	15.7
JUN													
06...	274	60	282	11.8	.32	<2.00	701	1,270	3.99	<50	<1	2.8	27.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR													
20...	<1	380	<1	<1	4.4	130	<1	80	3.47	<1	<1	<1.0	3.9
JUN													
06...	<1	460	<1	2	5.5	50	<1	<10	3.75	1.9	<1	<1.0	1.4

Remark codes used in this table:
< -- Less than.

06353000 CEDAR CREEK NEAR RALEIGH, ND

LOCATION.--Lat 46°05'30", long 101°20'00", in NE$^1/_4$SE$^1/_4$ sec.8, T.130 N., R.85 W., Grant County, Hydrologic Unit 10130205, on left bank at upstream side of bridge on N.D. Highway 31, 6 mi upstream from mouth, and 19 mi south of Raleigh.

DRAINAGE AREA.--1,750 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 1939, April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,881.23 ft above National Geodetic Vertical Datum of 1929. Prior to June 6, 1962, nonrecording gage at same site and datum, and June 6, 1962, to Sept. 7, 1972, at site 1 mi upstream at datum 9.58 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1950, about 18 ft, Apr. 18, 1950; discharge 45,000 ft^3/s, on basis of slope-area measurement 5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	25	e0.30	e0.11	e1.0	e2.9	7.7	2.2	14	11	2.6	0.05
2	e0.00	22	e0.28	e0.10	e1.3	e3.0	6.7	1.9	12	9.8	22	0.05
3	e0.00	19	e0.28	e0.11	e1.2	e3.3	6.5	1.6	10	9.9	25	0.04
4	e0.00	e17	e0.30	e0.07	e1.1	e3.6	5.8	1.2	8.3	7.8	9.4	0.04
5	e0.00	e16	e0.32	e0.05	e0.99	e4.0	5.4	1.0	7.0	6.9	5.2	0.04
6	e0.00	e13	e0.28	e0.05	e0.84	e4.7	5.2	1.2	6.1	5.5	3.2	0.02
7	e0.00	e12	e0.44	e0.11	e0.77	e5.8	5.0	1.5	e100	4.3	2.4	0.02
8	e0.00	e9.9	e0.41	e0.11	e0.77	e7.1	4.9	2.1	e1,300	3.9	1.5	0.01
9	e0.00	e8.5	e0.28	e0.11	e0.77	e8.5	4.3	2.8	370	3.6	2.2	0.01
10	e0.00	e7.2	e0.24	e0.11	e1.00	e7.8	3.4	4.2	126	2.9	21	0.01
11	e0.00	e5.9	e0.24	e0.11	e1.3	e7.3	4.1	2.7	57	2.1	95	0.00
12	e0.00	e4.8	e0.39	e0.05	e1.6	e7.1	9.2	32	99	1.9	37	0.00
13	e0.00	e3.9	e0.60	e0.00	e2.0	e6.9	6.4	36	92	1.8	20	0.00
14	e0.00	e3.0	e0.69	e0.00	e2.4	e6.9	5.2	24	210	1.5	14	0.00
15	e0.00	e2.0	e0.69	e0.00	e2.5	e6.7	4.2	24	67	1.4	9.4	0.00
16	e0.00	e1.1	e0.69	e0.00	e2.4	e6.5	3.4	19	31	1.4	6.5	0.00
17	e0.00	e0.75	e0.64	e0.00	e2.3	e6.4	3.1	14	18	1.0	5.3	0.00
18	e0.00	e0.45	e0.52	e0.17	e2.1	e6.6	3.0	287	12	0.91	4.0	0.00
19	e0.00	e0.35	e0.36	e0.41	e2.0	e7.0	13	177	8.8	0.92	3.8	0.00
20	0.00	e0.25	e0.28	e0.25	e2.0	e6.1	17	49	7.3	0.82	3.3	0.00
21	0.00	e0.29	e0.20	e0.21	e2.0	e6.3	9.0	26	398	0.70	1.9	0.00
22	0.00	e0.30	e0.13	e0.40	e2.0	e6.3	5.8	30	385	0.62	1.2	0.00
23	0.00	e0.26	e0.29	e0.54	e2.0	e6.6	6.4	27	146	0.51	0.83	0.00
24	0.00	e0.26	e0.44	e0.27	e2.2	e6.7	6.1	23	84	0.46	0.68	0.00
25	0.00	e0.28	e0.64	e0.10	e2.3	e7.4	5.8	19	46	24	0.61	0.00
26	0.00	e0.30	e0.62	e0.05	e2.4	e8.3	5.0	17	30	14	0.48	0.00
27	0.00	e0.28	e0.52	e0.05	e2.5	e9.7	4.0	14	22	5.1	0.37	0.00
28	0.00	e0.28	e0.39	e0.18	e2.7	e9.6	3.3	15	15	7.1	0.29	0.00
29	0.03	e0.28	e0.19	e0.34	---	9.8	3.4	16	14	5.0	0.27	0.00
30	26	e0.28	e0.07	e0.50	---	8.8	2.7	13	12	3.9	0.19	0.00
31	32	---	e0.11	e0.76	---	8.5	---	13	---	3.1	0.09	---
TOTAL	58.03	174.91	11.83	5.32	48.44	206.2	175.0	897.4	3,707.5	143.84	299.71	0.29
MEAN	1.87	5.83	0.38	0.17	1.73	6.65	5.83	28.9	124	4.64	9.67	0.01
MAX	32	25	0.69	0.76	2.7	9.8	17	287	1,300	24	95	0.05
MIN	0.00	0.25	0.07	0.00	0.77	2.9	2.7	1.0	6.1	0.46	0.09	0.00
AC-FT	115	347	23	11	96	409	347	1,780	7,350	285	594	0.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	10.2	9.21	6.71	10.3	40.9	372	241	158	92.5	66.1	20.4	7.88
MAX	66.4	48.8	31.3	217	664	2,368	1,526	1,043	605	545	96.9	76.5
(WY)	(1978)	(1983)	(1983)	(1973)	(1982)	(1997)	(1997)	(1975)	(1964)	(1993)	(1984)	(1995)
MIN	0.00	0.00	0.00	0.00	0.00	0.25	0.35	0.89	1.51	0.25	0.00	0.00
(WY)	(1965)	(1964)	(1964)	(1964)	(1964)	(1964)	(1991)	(1992)	(2004)	(1990)	(1974)	(1939)

06353000 CEDAR CREEK NEAR RALEIGH, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	17,792.88		5,728.47			
ANNUAL MEAN	48.6		15.7		87.8	
HIGHEST ANNUAL MEAN					369	1997
LOWEST ANNUAL MEAN					1.91	1991
HIGHEST DAILY MEAN	1,910	Mar 15	1,300	Jun 8	11,900	Mar 24, 1997
LOWEST DAILY MEAN	0.00	Jan 25	0.00	Oct 1	0.00	Aug 1, 1939
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 25	0.00	Oct 1	0.00	Aug 20, 1939
MAXIMUM PEAK FLOW			1,830	Jun 8	14,600	Mar 24, 1997
MAXIMUM PEAK STAGE			[a]5.74	Jun 8	[b]17.05	Mar 24, 1997
ANNUAL RUNOFF (AC-FT)	35,290		11,360		63,600	
10 PERCENT EXCEEDS	78		22		144	
50 PERCENT EXCEEDS	0.31		2.0		9.1	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Observed, may have been higher during period of no record, June 7-8
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.13	0.73	0.49	0.60	0.79	0.76	0.57	0.93	0.86	0.59	0.33
2	---	1.06	0.73	0.47	0.60	0.79	0.73	0.56	0.89	0.84	0.92	0.32
3	---	1.01	0.73	0.41	0.63	0.80	0.73	0.54	0.85	0.84	1.15	0.31
4	---	1.00	0.74	0.40	0.67	0.81	0.70	0.52	0.81	0.79	0.83	0.31
5	---	0.99	0.73	0.39	0.66	0.83	0.69	0.50	0.77	0.77	0.70	0.31
6	---	1.01	0.69	0.39	0.67	0.85	0.68	0.52	0.74	0.72	0.62	0.28
7	---	1.06	0.66	0.38	0.72	0.85	0.68	0.53	---	0.68	0.57	0.27
8	---	1.07	---	0.38	0.72	0.86	0.67	0.57	---	0.66	0.49	0.27
9	---	1.06	---	0.40	0.71	0.87	0.65	0.60	2.85	0.65	0.55	0.27
10	---	1.05	---	0.42	0.71	0.86	0.62	0.65	1.92	0.61	1.00	0.26
11	---	1.04	0.68	0.43	0.72	0.85	0.65	0.59	1.47	0.56	1.81	0.24
12	---	1.04	0.66	0.45	0.74	0.86	0.80	1.12	1.72	0.54	1.34	0.22
13	---	1.04	0.66	0.48	0.79	0.85	0.72	1.28	1.73	0.53	1.06	0.22
14	---	1.02	0.66	0.47	0.82	0.85	0.68	1.11	2.29	0.50	0.95	0.21
15	---	0.98	0.66	0.45	0.82	0.85	0.65	1.10	1.55	0.49	0.83	0.19
16	---	0.96	0.68	0.44	0.80	0.84	0.62	1.02	1.19	0.49	0.75	0.18
17	---	0.93	0.69	0.41	0.81	0.83	0.61	0.93	1.01	0.45	0.71	0.16
18	---	0.92	0.69	0.42	0.81	0.83	0.60	2.68	0.90	0.43	0.65	0.14
19	---	0.91	0.69	0.44	0.79	0.83	0.83	2.39	0.82	0.43	0.65	0.14
20	-0.38	0.90	0.68	0.45	0.80	0.82	0.97	1.49	0.78	0.42	0.63	0.12
21	-0.37	0.90	0.67	0.44	0.78	0.82	0.79	1.17	2.51	0.40	0.57	0.10
22	-0.35	0.89	0.64	0.42	0.78	0.84	0.70	1.23	2.87	0.39	0.52	0.08
23	-0.30	0.85	0.61	0.41	0.78	0.85	0.72	1.19	2.02	0.36	0.49	0.06
24	-0.26	0.82	0.60	0.46	0.77	0.87	0.71	1.11	1.67	0.35	0.48	0.05
25	-0.19	0.79	0.59	0.53	0.78	0.85	0.70	1.05	1.36	0.97	0.47	0.05
26	-0.14	0.80	0.61	0.62	0.78	0.83	0.68	0.99	1.17	0.92	0.45	0.04
27	-0.12	0.80	0.59	0.88	0.79	0.83	0.64	0.93	1.06	0.70	0.43	0.03
28	-0.10	0.76	0.58	0.90	0.77	0.82	0.62	0.96	0.96	0.77	0.42	-0.01
29	0.00	0.74	0.59	0.71	---	0.81	0.62	0.98	0.93	0.69	0.41	-0.01
30	1.09	0.73	0.59	0.64	---	0.79	0.59	0.92	0.90	0.65	0.39	-0.01
31	1.24	---	0.52	0.61	---	0.78	---	0.91	---	0.61	0.35	---
MEAN	---	0.94	---	0.49	0.74	0.83	0.69	0.99	---	0.62	0.70	0.17
MAX	---	1.13	---	0.90	0.82	0.87	0.97	2.68	---	0.97	1.81	0.33
MIN	---	0.73	---	0.38	0.60	0.78	0.59	0.50	---	0.35	0.35	-0.01

06353000 CEDAR CREEK NEAR RALEIGH, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
11...	1535	4.1	8.6	8.5	2,840	2,710	2.2	6.1	63.3	75.7	11.7	10	478
JUL													
27...	1350	3.6	8.1	8.2	931	928	26.6	23.5	20.2	8.30	8.10	8	165

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
11...	68	462	17.2	.66	<2.00	1,080	2,000	22.2	<50	<1	1.5	34.0	<1
JUL													
27...	79	229	5.3	.34	8.37	234	581	5.78	53	<1	3.7	43.9	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
11...	630	<1	2	10.4	40	<1	50	6.99	1.2	<1	<1.0	26.2
JUL												
27...	370	<1	1	11.6	50	<1	<10	10.3	5.6	<1	<1.0	1.4

Remark codes used in this table:
< -- Less than.

06354000 CANNONBALL RIVER AT BREIEN, ND

LOCATION.--Lat 46°22'34", long 100°56'04", in sec.36, T.134 N., R.82 W., Morton County, Hydrologic Unit 10130206, on left bank at downstream side of bridge on State Highway 6, 1,100 ft downstream from Dogtooth Creek, and 0.6 mi southeast of Breien.

DRAINAGE AREA.--4,100 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year.

REVISED RECORDS.--WSP 786: 1934. WSP 1146: 1943. WSP 1279: 1936-37(M), 1947(M). WSP 1509: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 1,673.54 ft above National Geodetic Vertical Datum of 1929. From June 12, 1973, to July 1, 1985, at site 450 ft downstream. Prior to June 12, 1973, at site 50 ft upstream at datum 3.00 ft higher. June 13, 1973, to April 8, 1980, at datum 2.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some storage in several small lakes above station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.5	e40	e13	e7.1	e6.8	e12	e27	16	65	54	25	3.0
2	e2.2	e43	e13	e6.9	e6.9	e16	e27	16	64	45	e22	3.2
3	e2.3	e36	e13	e6.6	e6.9	e20	e27	15	56	49	e20	3.1
4	e2.3	e29	e13	e6.3	e6.9	e23	e26	14	48	43	e29	2.9
5	e2.3	e25	e13	e6.0	e6.9	e27	e26	13	43	e42	35	2.9
6	e2.8	e20	e13	e5.8	e6.9	e32	e26	13	40	37	22	2.6
7	e3.1	e19	e12	e5.7	e6.9	e37	e25	12	142	136	18	2.4
8	e3.1	e19	e12	e5.6	e6.8	e43	e25	13	4,610	324	e16	2.3
9	e2.8	e19	e13	e5.5	e6.5	e49	e25	16	2,240	244	e14	2.1
10	e2.6	e16	e13	e5.4	e6.1	e56	e25	16	669	188	e40	1.7
11	e2.3	e15	e14	e5.2	e6.4	e50	e24	14	326	186	e120	1.2
12	e2.0	e15	e14	e5.0	e6.7	e46	e26	54	216	142	e357	1.2
13	e2.0	e15	e13	e4.8	e7.0	e40	29	109	321	118	e150	1.2
14	e4.0	e17	e13	e4.6	e7.0	e37	35	114	511	95	e71	e1.1
15	e8.5	e21	e13	e4.4	e7.0	e34	26	66	462	78	e43	e1.0
16	e8.0	e23	e12	e3.8	e7.0	e33	23	55	258	65	e32	0.96
17	e7.6	e19	e11	e3.4	e7.0	e33	22	49	174	54	29	0.83
18	e7.2	e16	e10	e3.3	e6.9	e33	20	57	e130	46	28	0.81
19	e7.0	e16	e9.5	e3.4	e6.9	e34	23	431	e105	e40	29	0.92
20	e6.9	e15	e9.0	e3.8	e6.9	e35	38	313	e88	e35	29	0.76
21	e6.7	e15	e8.0	e4.2	e6.9	e34	97	183	e77	e31	21	0.56
22	e6.5	e14	e7.4	e4.3	e6.9	e32	45	125	e497	28	18	0.54
23	e6.8	e14	e6.8	e4.3	e6.9	e31	32	110	392	27	16	0.62
24	e7.2	e14	e6.5	e4.4	e6.9	e31	26	125	200	23	14	0.59
25	e7.5	e13	e6.5	e5.0	e7.0	e32	22	102	152	35	13	0.61
26	e6.5	e13	e6.7	e5.5	e7.2	e27	18	95	135	e63	9.7	0.59
27	e6.8	e13	e6.9	e6.1	e8.0	e24	17	90	132	81	7.5	0.46
28	e6.1	e13	e7.1	e6.5	e10	e22	18	82	70	40	6.5	0.49
29	e5.8	e13	e7.4	e6.8	---	e21	18	74	61	31	6.1	0.57
30	e6.7	e13	e7.5	e6.8	---	e23	17	71	61	28	5.7	0.44
31	e20	---	e7.3	e6.8	---	e26	---	68	---	31	3.9	---
TOTAL	168.1	573	324.6	163.3	196.2	993	835	2,531	12,345	2,439	1,250.4	41.65
MEAN	5.42	19.1	10.5	5.27	7.01	32.0	27.8	81.6	412	78.7	40.3	1.39
MAX	20	43	14	7.1	10	56	97	431	4,610	324	357	3.2
MIN	2.0	13	6.5	3.3	6.1	12	17	12	40	23	3.9	0.44
AC-FT	333	1,140	644	324	389	1,970	1,660	5,020	24,490	4,840	2,480	83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2005, BY WATER YEAR (WY)

MEAN	33.7	28.2	17.1	15.6	73.7	881	819	333	362	192	65.9	31.8
MAX	281	238	98.8	342	1,058	5,428	10,070	2,399	2,384	1,409	459	267
(WY)	(1978)	(1983)	(1999)	(1973)	(1982)	(1997)	(1950)	(1975)	(1937)	(1969)	(1999)	(1977)
MIN	0.21	0.63	0.38	0.00	0.00	3.29	17.1	6.48	3.10	0.17	0.04	0.01
(WY)	(1961)	(1961)	(1935)	(1941)	(1935)	(1965)	(1961)	(1992)	(1936)	(1936)	(2003)	(1974)

06354000 CANNONBALL RIVER AT BREIEN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1934 - 2005	
ANNUAL TOTAL	53,131.96		21,860.25			
ANNUAL MEAN	145		59.9		238	
HIGHEST ANNUAL MEAN					994	1950
LOWEST ANNUAL MEAN					9.90	1961
HIGHEST DAILY MEAN	6,940	Mar 13	4,610	Jun 8	63,100	Apr 19, 1950
LOWEST DAILY MEAN	0.02	Sep 3	0.44	Sep 30	0.00	Jan 11, 1935
ANNUAL SEVEN-DAY MINIMUM	0.06	Aug 29	0.54	Sep 24	0.00	Jan 11, 1935
MAXIMUM PEAK FLOW			7,080	Jun 8	[a]94,800	Apr 19, 1950
MAXIMUM PEAK STAGE			10.97	Jun 8	[b]22.30	Apr 19, 1950
ANNUAL RUNOFF (AC-FT)	105,400		43,360		172,700	
10 PERCENT EXCEEDS	163		107		399	
50 PERCENT EXCEEDS	12		16		28	
90 PERCENT EXCEEDS	1.4		2.9		0.80	

a From rating curve extended above 16,000 ft^3/s on basis of indirect measurement of discharge
b From floodmark, site and datum then in use
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2.48	2.22	2.61	3.01	2.80	---	2.36	2.81	2.77	2.53	2.11
2	---	2.35	2.25	2.58	3.05	2.76	---	2.36	2.80	2.70	e2.49	2.11
3	---	2.34	2.30	2.50	---	---	---	2.35	2.73	2.73	e2.46	2.11
4	---	2.32	2.30	---	---	---	---	2.34	2.67	2.68	e2.56	2.10
5	---	2.36	2.41	---	---	3.21	---	2.31	2.61	e2.68	2.64	2.10
6	---	2.39	2.30	---	---	3.17	---	2.31	2.59	2.62	2.49	2.09
7	---	2.36	2.29	---	---	3.01	---	2.30	2.92	3.08	2.43	2.08
8	---	2.37	2.29	---	3.03	2.94	---	2.31	9.18	4.02	---	2.07
9	---	2.37	2.31	---	3.00	---	---	2.37	6.98	3.75	---	2.06
10	---	2.32	2.26	---	2.97	2.83	---	2.37	4.82	3.54	---	2.05
11	---	---	2.32	---	2.98	2.76	---	2.32	3.97	3.53	---	2.02
12	---	2.25	2.32	---	---	2.76	2.60	2.76	3.59	3.34	e4.17	2.02
13	---	2.26	2.34	---	---	2.79	2.54	3.20	3.91	3.21	e3.41	2.02
14	---	2.25	2.31	---	---	---	2.62	3.24	4.49	3.09	e2.96	e2.01
15	---	2.33	2.33	---	---	---	2.52	2.92	4.36	2.98	e2.73	e2.00
16	---	2.35	2.29	---	---	---	2.47	2.83	3.76	2.89	e2.61	2.00
17	---	2.31	2.33	2.53	2.92	---	2.45	2.77	3.43	2.81	2.58	1.99
18	---	2.28	2.27	---	2.88	---	2.43	2.84	e3.23	2.74	2.56	1.98
19	---	2.26	2.21	---	2.85	---	2.47	4.28	e3.09	e2.69	2.59	1.98
20	2.03	2.22	2.25	---	2.85	---	2.63	4.11	e2.99	e2.64	2.58	1.97
21	2.05	2.30	2.23	---	2.85	---	3.13	3.57	e2.92	e2.59	2.49	1.95
22	2.06	2.26	2.33	---	2.82	---	2.73	3.24	e4.15	2.56	2.44	1.95
23	---	2.31	2.42	---	2.81	---	2.59	3.14	4.17	2.54	2.41	1.96
24	2.18	2.29	2.30	---	2.84	---	2.52	3.25	3.56	2.50	2.38	1.96
25	---	2.30	2.30	---	2.80	---	2.45	3.09	3.35	2.62	2.34	1.96
26	2.19	2.28	2.33	2.63	2.80	---	2.40	3.04	3.24	e2.88	2.29	1.96
27	2.20	2.28	2.36	2.63	2.77	---	2.38	3.01	3.24	3.02	2.24	1.95
28	2.18	2.30	2.42	2.68	2.77	---	2.40	2.95	2.89	2.70	2.21	1.94
29	2.17	2.22	2.48	2.64	---	---	2.39	2.89	2.82	2.60	2.20	1.95
30	2.20	2.21	2.54	---	---	---	2.38	2.86	2.83	2.56	2.19	1.94
31	2.40	---	2.53	---	---	---	---	2.84	---	2.61	2.13	---
MEAN	---	---	2.33	---	---	---	---	2.86	3.67	2.89	---	2.01
MAX	---	---	2.54	---	---	---	---	4.28	9.18	4.02	---	2.11
MIN	---	---	2.21	---	---	---	---	2.30	2.59	2.50	---	1.94

e Estimated

06354000 CANNONBALL RIVER AT BREIEN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-50, 1971 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1455	25	8.6	8.3	1,820	1,770	20.0	16.2	50.8	44.0	7.90	7	288
JUL													
26...	1240	44	8.5	8.4	1,000	985	26.0	20.4	34.2	22.4	9.70	5	144

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	66	369	14.6	.46	<2.00	589	1,220	81.4	<50	<1	1.2	39.5	<1
JUL													
26...	62	246	6.7	.34	8.14	264	629	76.2	<50	<1	3.3	51.1	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	460	<1	<1	8.8	10	<1	10	6.11	1.0	<1	<1.0	41.1
JUL												
26...	510	<1	<1	5.7	30	<1	<10	6.80	3.5	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

06354580 BEAVER CREEK BELOW LINTON, ND

LOCATION.--Lat 46°16'07", long 100°15'05", in NW¼NW¼SW¼ sec.7, T.132 N., R.76 W., Emmons County, Hydrologic Unit 10130104, on left bank 25 ft upstream from bridge on county road, 0.7 mi west of Linton, and 0.5 mi downstream from Spring Creek.

DRAINAGE AREA.--765 mi^2, of which about 100 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year. Records for August 1949 to September 1989 at site 1.5 mi upstream published as "at Linton, ND" (station 06354500) are not equivalent because of difference in drainage area.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 1,690 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for discharges below 3.0 ft^3/s and for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	11	6.8	e4.5	e3.7	e3.5	47	18	18	34	78	12
2	2.3	13	6.7	e4.3	e4.0	e3.8	45	17	18	31	61	11
3	2.1	13	e6.6	e4.1	e4.2	e4.2	36	17	18	32	49	11
4	2.9	13	e6.6	e3.9	e3.7	e4.8	35	17	18	31	40	10
5	4.0	11	6.6	e3.8	e3.2	e5.5	31	17	17	29	33	10
6	3.5	10	6.7	e3.6	e3.0	e5.3	26	17	17	28	32	e9.1
7	3.9	9.7	6.7	e3.3	e3.2	e5.1	24	16	18	26	33	e7.3
8	3.5	9.4	e6.6	e3.1	e3.5	e4.8	21	18	33	23	31	6.2
9	4.4	9.2	e6.5	e2.9	e3.8	e4.6	20	18	326	22	29	7.6
10	5.0	8.8	e6.5	e2.8	e4.1	e5.0	20	18	565	20	27	9.4
11	5.7	8.5	e6.5	e2.7	e4.3	e4.8	20	18	307	19	29	9.5
12	4.9	8.2	e6.6	e2.6	e4.2	e4.7	22	19	245	18	34	8.8
13	5.6	7.9	6.6	e2.4	e4.1	e5.0	21	24	177	18	37	9.0
14	5.5	7.7	6.6	e2.3	e3.9	e5.5	21	25	140	17	46	8.7
15	5.5	7.7	6.6	e2.1	e3.7	e6.0	21	27	112	17	46	8.5
16	5.8	7.6	e6.5	e1.7	e3.5	e6.5	24	35	98	17	41	8.0
17	5.9	7.7	e6.4	e1.4	e3.4	e7.0	24	35	88	16	37	9.2
18	6.3	7.5	e6.4	e1.0	e3.2	e7.5	23	34	78	16	31	9.5
19	6.7	7.2	e6.3	e1.2	e3.3	e8.0	21	29	68	16	26	9.4
20	6.7	7.0	e6.1	e1.3	e3.3	e8.5	20	24	69	16	23	8.6
21	6.5	6.8	e5.9	e1.6	e3.3	e8.8	20	21	62	15	20	8.1
22	7.0	6.8	e5.5	e2.0	e3.3	e8.9	20	19	61	15	20	8.1
23	7.1	6.8	e5.2	e2.5	e3.5	e9.0	19	18	53	65	24	7.0
24	7.7	6.7	e4.9	e2.8	e3.4	e9.3	19	18	51	63	24	6.6
25	7.6	6.7	e4.8	e3.0	e3.3	e9.5	18	25	49	50	21	6.6
26	7.2	7.1	e4.8	e3.1	e3.3	e10	18	21	44	86	19	6.3
27	7.3	7.1	e4.8	e3.2	e3.3	e15	18	18	41	128	17	6.1
28	7.3	6.8	e4.8	e3.2	e3.3	22	18	18	36	135	16	5.6
29	7.9	6.7	e4.8	e3.2	---	33	18	18	37	159	15	4.6
30	8.4	6.8	e4.7	e3.3	---	38	18	17	37	142	14	4.7
31	10	---	e4.6	e3.5	---	44	---	18	---	102	13	---
TOTAL	176.6	253.4	185.7	86.4	100.0	317.6	708	654	2,901	1,406	966	246.5
MEAN	5.70	8.45	5.99	2.79	3.57	10.2	23.6	21.1	96.7	45.4	31.2	8.22
MAX	10	13	6.8	4.5	4.3	44	47	35	565	159	78	12
MIN	2.1	6.7	4.6	1.0	3.0	3.5	18	16	17	15	13	4.6
AC-FT	350	503	368	171	198	630	1,400	1,300	5,750	2,790	1,920	489

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2005, BY WATER YEAR (WY)

MEAN	11.5	12.4	9.63	6.46	33.0	204	216	66.5	53.0	61.9	28.6	14.2
MAX	26.5	35.3	34.6	15.9	206	693	1,840	231	194	330	174	73.8
(WY)	(2000)	(1999)	(1999)	(2000)	(1996)	(1997)	(1997)	(1999)	(1996)	(1993)	(1993)	(1999)
MIN	0.16	0.31	0.36	0.30	1.32	5.05	6.32	2.76	1.25	0.80	0.12	0.06
(WY)	(1991)	(1991)	(1991)	(1991)	(1991)	(1991)	(1991)	(1992)	(1992)	(1992)	(1990)	(1991)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1990 - 2005	
ANNUAL TOTAL	5,168.22		8,001.2			
ANNUAL MEAN	14.1		21.9		59.8	
HIGHEST ANNUAL MEAN					237	1997
LOWEST ANNUAL MEAN					4.76	1990
HIGHEST DAILY MEAN	276	Mar 10	565	Jun 10	6,080	Apr 2, 1997
LOWEST DAILY MEAN	0.23	Aug 21	1.0	Jan 18	0.00	Aug 12, 1990
ANNUAL SEVEN-DAY MINIMUM	0.26	Aug 19	1.5	Jan 16	0.00	Aug 12, 1990
MAXIMUM PEAK FLOW			719	Jun 10	6,780	Mar 31, 1997
MAXIMUM PEAK STAGE			8.03	Jun 10	15.34	Mar 31, 1997
ANNUAL RUNOFF (AC-FT)	10,250		15,870		43,300	
10 PERCENT EXCEEDS	27		41		110	
50 PERCENT EXCEEDS	6.6		9.0		12	
90 PERCENT EXCEEDS	2.2		3.3		1.1	

e Estimated

06354580 BEAVER CREEK BELOW LINTON, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.70	4.50	4.24	4.13	4.09	4.10	4.77	4.32	4.35	4.70	5.16	4.23
2	2.69	4.61	4.24	4.11	4.09	4.09	4.75	4.31	4.36	4.66	5.02	4.20
3	2.66	4.61	4.25	4.10	4.10	4.11	4.63	4.29	4.34	4.68	4.89	4.21
4	2.87	4.60	4.26	4.10	4.11	4.13	4.61	4.28	4.32	4.66	4.79	4.18
5	3.76	4.52	4.23	4.07	4.12	4.16	4.58	4.27	4.31	4.64	4.70	4.20
6	3.97	4.47	4.24	4.03	---	4.22	4.53	4.26	4.29	4.62	4.68	e4.11
7	4.01	4.45	4.24	4.01	---	4.23	4.51	4.26	4.33	4.57	4.70	e3.94
8	3.97	4.43	4.26	4.02	---	4.22	4.48	4.31	4.60	4.54	4.66	3.84
9	4.05	4.42	4.27	4.02	---	4.22	4.45	4.36	6.24	4.51	4.64	4.02
10	4.10	4.40	4.26	4.02	---	4.22	4.42	4.36	7.41	4.47	4.61	4.25
11	4.16	4.37	4.25	4.01	---	4.23	4.43	4.33	6.46	4.44	4.63	4.28
12	4.09	4.35	4.26	4.02	4.09	4.24	4.48	4.40	6.15	4.41	4.70	4.23
13	4.16	4.32	4.23	---	4.11	4.29	4.47	4.51	5.82	4.38	4.75	4.28
14	4.15	4.32	4.23	---	4.12	4.35	4.47	4.51	5.61	4.36	4.87	4.27
15	4.14	4.31	4.23	---	---	4.34	4.47	4.54	5.43	4.35	4.86	4.28
16	4.17	4.30	4.25	---	---	4.35	4.51	4.62	5.33	4.34	4.80	4.23
17	4.18	4.31	4.24	---	---	4.32	4.51	4.61	5.25	4.32	4.75	4.33
18	4.21	4.30	4.24	3.52	---	4.32	4.49	4.61	5.16	4.30	4.67	4.38
19	4.24	4.27	4.21	3.57	---	4.31	4.46	4.56	5.08	4.29	4.59	4.39
20	4.24	4.26	4.21	3.74	4.10	4.31	4.45	4.51	5.08	4.29	4.53	4.35
21	4.22	4.25	4.20	3.82	---	4.32	4.43	4.46	5.02	4.25	4.47	4.33
22	4.26	4.25	4.18	3.73	---	4.33	4.41	4.40	5.02	4.24	4.47	4.35
23	4.27	4.24	4.14	3.72	---	4.33	4.39	4.36	4.94	4.97	4.54	4.29
24	4.31	4.24	4.10	3.93	---	4.34	4.37	4.35	4.92	5.01	4.55	4.26
25	4.30	4.24	4.11	4.03	4.11	4.34	4.35	4.46	4.89	4.89	4.50	4.29
26	4.28	4.27	4.09	4.04	4.10	4.36	4.34	4.44	4.84	5.23	4.46	4.27
27	4.28	4.27	4.09	4.03	4.09	4.41	4.33	4.35	4.80	5.53	4.42	4.27
28	4.28	4.24	4.11	4.06	---	4.48	4.33	4.32	4.74	5.58	4.38	4.24
29	4.32	4.24	4.11	4.06	---	4.60	4.32	4.31	4.75	5.72	4.35	4.12
30	4.36	4.25	4.15	4.07	---	4.66	4.32	4.30	4.75	5.62	4.31	4.16
31	4.47	---	4.16	4.08	---	4.74	---	4.32	---	5.35	4.28	---
MEAN	4.00	4.35	4.20	---	---	4.31	4.47	4.40	5.09	4.71	4.64	4.23
MAX	4.47	4.61	4.27	---	---	4.74	4.77	4.62	7.41	5.72	5.16	4.39
MIN	2.66	4.24	4.09	---	---	4.09	4.32	4.26	4.29	4.24	4.28	3.84

e Estimated

06354580 BEAVER CREEK BELOW LINTON, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
13...	1300	21	8.4	7.5	990	990	--	10.6	63.2	34.8	11.2	3	105
AUG													
24...	1245	26	8.1	8.4	952	960	23.0	22.0	49.1	31.3	15.6	3	106

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
13...	42	310	10.9	.23	13.4	251	664	38.2	<50	<1	3.6	32.3	<1
AUG													
24...	46	319	11.7	.22	15.7	188	594	42.5	<50	<1	14.4	56.2	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
13...	230	<1	<1	5.8	30	<1	210	4.18	<1	<1	<1.0	4.0
AUG												
24...	400	<1	<1	2.9	60	<1	70	5.77	30.1	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

06439980 LAKE OAHE NEAR PIERRE, SD

LOCATION.--Lat 44°27'30", long 100°23'29", in NE$^1/_4$ 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.

MONTHEND-ELEVATION AND CONTENTS RECORDS

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. Elevations listed to National Geodetic Vertical Datum of 1929. 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, 10,102,000 acre-ft, Sept. 4, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,278,000 acre-ft, July 6; minimum contents, 10,267,000 acre-ft, Sept. 30.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,573.21	10,316,000	--
Oct. 31	1,574.77	10,608,000	+292,000
Nov. 30	1,576.00	10,866,000	+258,000
Dec. 31	1,575.78	10,824,000	-42,000
CAL YR 2004	--	--	-225,000
Jan. 31	1,575.21	10,715,000	-109,000
Feb. 28	1,576.22	10,924,000	+209,000
Mar. 31	1,574.40	10,568,000	-356,000
Apr. 30	1,574.73	10,608,000	+40,000
May 31	1,576.47	10,980,000	+372,000
June 30	1,577.58	11,214,000	+234,000
July 31	1,576.38	10,958,000	-256,000
Aug. 31	1,573.06	10,363,000	-595,000
Sept. 30	1,572.89	10,267,000	-96,000
WTR YR 2005	--	--	-49,000

NOTE.--Lake frozen over Jan. 16.

06468170 JAMES RIVER NEAR GRACE CITY, ND

LOCATION.--Lat 47°33'29", long 98°51'45", in NW¼NW¼NW¼ sec.17, T.147 N., R.64 W., Foster County, Hydrologic Unit 10160001, on left bank on upstream side of county highway bridge and 2.5 mi northwest of Grace City.

DRAINAGE AREA.--1,060 mi^2, approximately, of which about 650 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,457.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	e6.9	e1.0	e0.00	e0.82	47	12	35	88	66	4.3
2	12	16	e6.8	e0.80	e0.00	e0.80	48	12	30	110	59	5.2
3	11	18	e6.7	e0.60	e0.22	e0.78	46	12	29	111	50	5.7
4	12	15	e6.6	e0.48	e0.18	e0.80	42	12	27	117	41	5.4
5	12	13	e6.4	e0.35	e0.16	e1.2	39	11	24	123	37	4.7
6	12	11	e6.5	e0.30	e0.14	e1.6	35	12	22	129	33	4.0
7	13	11	e6.5	e0.29	e0.11	e2.2	32	13	22	134	31	4.0
8	12	11	e6.4	e0.28	e0.20	e2.0	32	13	28	150	26	3.9
9	14	9.8	e6.3	e0.28	e0.40	e1.8	26	21	27	168	24	4.7
10	13	8.8	e6.2	e0.27	e0.90	e1.6	24	23	31	221	22	4.8
11	12	9.4	e6.1	e0.25	e2.0	e1.5	25	24	33	290	22	4.1
12	12	9.2	e6.0	e0.15	e1.8	e1.4	28	25	37	349	21	3.7
13	11	9.2	e5.6	e0.09	e1.7	e1.3	30	21	37	403	21	3.5
14	11	9.0	e5.9	e0.03	e1.6	e1.2	32	21	41	443	18	3.4
15	9.3	8.8	e5.8	e0.02	e1.6	e1.2	25	23	45	469	15	3.0
16	10	8.8	e5.4	e0.01	e1.5	e1.2	25	25	48	471	14	3.0
17	11	8.7	e4.8	e0.00	e1.4	e1.2	26	33	47	449	13	2.7
18	11	8.5	e4.0	e0.00	e1.4	e1.2	23	38	43	418	12	2.7
19	12	8.4	e3.0	e0.00	e1.3	e1.3	24	40	38	392	12	2.5
20	12	7.7	e2.6	e0.00	e1.2	e1.4	23	38	36	353	11	2.3
21	13	8.1	e2.5	e0.00	e1.2	e1.4	21	33	33	316	11	2.1
22	12	7.9	e2.3	e0.00	e1.1	e1.3	20	24	30	280	10	1.9
23	12	e7.8	e2.1	e0.00	e1.0	e1.2	19	28	27	245	9.9	2.1
24	13	e7.7	e2.0	e0.00	e1.0	e1.3	17	26	25	213	9.2	1.9
25	13	e7.6	e2.0	e0.00	e0.98	e1.3	15	23	25	185	8.5	1.8
26	14	e7.4	e2.0	e0.00	e0.94	e1.7	15	25	25	161	8.3	1.6
27	14	e7.2	e2.0	e0.00	e0.90	e2.3	14	29	28	143	7.9	1.4
28	14	e7.2	e1.9	e0.00	e0.85	e3.2	13	33	34	124	7.4	1.1
29	14	e7.1	e1.8	e0.00	---	e4.5	13	34	38	109	7.1	1.1
30	13	e7.0	e1.5	e0.00	---	e12	13	33	47	92	6.9	1.1
31	14	---	e1.3	e0.00	---	32	---	33	---	77	5.4	---
TOTAL	379.3	288.3	135.9	5.20	25.78	88.70	792	750	992	7,333	639.6	93.7
MEAN	12.2	9.61	4.38	0.17	0.92	2.86	26.4	24.2	33.1	237	20.6	3.12
MAX	14	18	6.9	1.0	2.0	32	48	40	48	471	66	5.7
MIN	9.3	7.0	1.3	0.00	0.00	0.78	13	11	22	77	5.4	1.1
AC-FT	752	572	270	10	51	176	1,570	1,490	1,970	14,550	1,270	186

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	6.67	9.36	2.39	0.65	2.96	134	280	84.4	41.8	64.1	30.7	10.6
MAX	70.7	130	21.0	4.22	49.9	724	1,854	446	335	750	498	156
(WY)	(2001)	(2001)	(2001)	(1994)	(1981)	(1995)	(1997)	(1997)	(2000)	(2000)	(1993)	(2000)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.18	0.11	0.02	0.00	0.00
(WY)	(1977)	(1977)	(1977)	(1969)	(1969)	(1969)	(1977)	(1991)	(1973)	(1973)	(1988)	(1976)

06468170 JAMES RIVER NEAR GRACE CITY, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	35,565.68		11,523.48			
ANNUAL MEAN	97.2		31.6		56.0	
HIGHEST ANNUAL MEAN					200	1997
LOWEST ANNUAL MEAN					0.21	1977
HIGHEST DAILY MEAN	2,010	Mar 30	471	Jul 16	3,600	Apr 3, 1997
LOWEST DAILY MEAN	0.00	Jan 26	0.00	Jan 17	0.00	Jan 1, 1969
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 26	0.00	Jan 17	0.00	Jan 1, 1969
MAXIMUM PEAK FLOW			476	Jul 15	[a,b]4,000	Apr 3, 1997
MAXIMUM PEAK STAGE			7.38	Jul 15	[b]16.18	Mar 21, 1996
ANNUAL RUNOFF (AC-FT)	70,540		22,860		40,560	
10 PERCENT EXCEEDS	183		47		100	
50 PERCENT EXCEEDS	12		10		1.5	
90 PERCENT EXCEEDS	0.66		0.45		0.00	

a Gage height, 14.17 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.46	4.52	4.43	4.40	4.15	4.26	5.08	4.53	4.86	5.43	5.26	4.27
2	4.49	4.60	4.42	4.42	4.15	4.26	5.09	4.54	4.78	5.62	5.18	4.31
3	4.47	4.63	4.41	4.39	4.18	4.27	5.07	4.53	4.77	5.63	5.08	4.33
4	4.49	4.57	4.41	4.36	4.29	4.31	5.02	4.53	4.74	5.68	4.98	4.32
5	4.49	4.53	4.39	4.33	4.30	4.64	4.98	4.50	4.68	5.73	4.93	4.29
6	4.50	4.50	4.41	4.32	4.33	5.16	4.93	4.52	4.66	5.77	4.86	4.26
7	4.51	4.49	4.41	4.32	4.42	5.42	4.89	4.53	4.65	5.81	4.84	4.26
8	4.49	4.50	4.40	4.34	4.48	5.30	4.90	4.53	4.75	5.92	4.77	4.26
9	4.54	4.48	4.42	4.36	4.49	5.05	4.81	4.69	4.74	6.04	4.74	4.29
10	4.52	4.45	4.42	4.38	4.45	4.97	4.76	4.72	4.81	6.33	4.71	4.30
11	4.51	4.47	4.42	4.39	4.43	4.91	4.78	4.74	4.83	6.66	4.71	4.26
12	4.50	4.46	4.41	4.40	4.44	4.78	4.83	4.75	4.88	6.91	4.68	4.25
13	4.48	4.46	4.37	4.35	4.48	4.70	4.85	4.69	4.88	7.12	4.68	4.23
14	4.48	4.45	4.43	4.23	4.48	4.62	4.88	4.68	4.94	7.27	4.63	4.23
15	4.44	4.45	4.43	4.14	4.41	4.57	4.78	4.72	4.99	7.35	4.58	4.21
16	4.47	4.45	4.43	4.09	4.39	4.53	4.78	4.75	5.02	7.36	4.56	4.21
17	4.48	4.45	4.42	4.08	4.36	4.53	4.80	4.86	5.01	7.29	4.55	4.19
18	4.49	4.44	4.42	4.09	4.36	4.53	4.75	4.92	4.97	7.18	4.52	4.19
19	4.50	4.44	4.45	4.11	4.36	4.53	4.76	4.93	4.89	7.08	4.51	4.18
20	4.50	4.42	4.43	4.10	4.32	4.51	4.74	4.90	4.86	6.93	4.49	4.17
21	4.52	4.43	4.44	4.11	4.29	4.47	4.71	4.82	4.83	6.78	4.48	4.16
22	4.51	4.42	4.47	4.11	4.27	4.44	4.69	4.68	4.79	6.62	4.48	4.15
23	4.51	4.43	4.49	4.11	4.26	4.52	4.67	4.75	4.73	6.45	4.46	4.16
24	4.52	4.44	4.53	4.09	4.26	4.62	4.64	4.71	4.70	6.29	4.44	4.15
25	4.53	4.43	4.49	4.17	4.26	4.65	4.61	4.67	4.69	6.14	4.42	4.14
26	4.55	4.44	4.46	4.42	4.26	4.73	4.60	4.71	4.70	5.99	4.42	4.12
27	4.57	4.44	4.45	4.57	4.25	4.81	4.57	4.77	4.76	5.87	4.41	4.10
28	4.56	4.44	4.44	4.36	4.26	4.85	4.55	4.83	4.84	5.74	4.39	4.07
29	4.55	4.43	4.43	4.28	---	4.89	4.55	4.84	4.89	5.63	4.38	4.08
30	4.54	4.43	4.41	4.20	---	5.03	4.55	4.83	5.00	5.49	4.38	4.07
31	4.55	---	4.42	4.16	---	4.89	---	4.83	---	5.36	4.32	---
MEAN	4.51	4.47	4.43	4.26	4.33	4.70	4.79	4.71	4.82	6.31	4.64	4.21
MAX	4.57	4.63	4.53	4.57	4.49	5.42	5.09	4.93	5.02	7.36	5.26	4.33
MIN	4.44	4.42	4.37	4.08	4.15	4.26	4.55	4.50	4.65	5.36	4.32	4.07

06468170 JAMES RIVER NEAR GRACE CITY, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1050	40	8.4	7.1	777	774	9.0	7.0	44.4	33.4	11.2	2	62.7
AUG													
25...	1400	8.2	8.1	8.4	937	1,270	17.5	21.0	68.1	55.3	15.2	2	72.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	34	212	15.2	.12	5.01	171	467	50.3	<50	<1	2.2	34.8	<1
AUG													
25...	27	241	21.3	.18	32.9	242	621	14.4	<50	<1	10.8	93.4	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	70	<1	<1	1.9	40	<1	100	4.04	<1	<1	<1.0	2.2
AUG												
25...	160	<1	<1	2.6	60	<1	210	4.46	10.8	<1	<1.0	1.9

Remark codes used in this table:
< -- Less than.

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND

LOCATION.--Lat 47°23'59", long 98°47'50", in SW¼SW¼SW¼ sec.2, T.145 N., R.64 W., Foster County, Hydrologic Unit 10160001, on right bank 20 ft upstream from bridge.

DRAINAGE AREA.--1,200 mi^2, approximately, of which about 750 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	22	e12	e2.6	e1.7	e6.1	38	27	38	58	77	7.7
2	15	23	e12	e2.4	e1.9	e6.0	43	28	32	72	69	7.7
3	17	e20	e12	e2.2	e2.1	e5.9	51	24	41	95	64	7.6
4	17	e22	e12	e2.0	e2.0	e7.0	52	21	40	104	57	6.5
5	17	e23	e12	e1.9	e1.9	e9.0	53	21	38	108	52	6.7
6	44	23	e11	e1.9	e1.8	e11	51	21	35	108	47	7.1
7	172	24	e11	e1.8	e1.7	e12	46	17	36	108	46	6.6
8	62	20	e11	e1.8	e1.9	e12	39	26	43	124	42	6.1
9	37	e19	e11	e1.8	e3.0	e11	36	46	37	138	40	6.0
10	27	e21	e11	e1.8	e5.0	e10	38	47	43	137	37	7.2
11	28	e16	e10	e1.8	e7.3	e9.0	45	50	43	164	35	6.6
12	26	e15	e10	e1.8	e7.8	e8.0	49	39	52	212	34	7.2
13	26	e14	e10	e1.7	e7.7	e7.4	48	37	56	263	32	7.7
14	22	e15	e9.9	e1.6	e7.6	e7.0	43	46	61	329	30	6.8
15	22	e15	e9.8	e1.5	e7.5	e6.8	42	44	61	399	28	6.4
16	23	e16	e9.7	e1.5	e7.3	e7.2	44	42	60	433	28	6.0
17	19	e17	e9.5	e1.5	e7.2	e7.5	41	42	61	448	25	6.4
18	18	e16	e9.0	e1.6	e7.1	e7.7	48	43	57	448	25	6.5
19	17	e15	e8.0	e1.6	e7.0	e8.2	52	49	59	429	22	5.4
20	18	e16	e7.0	e1.6	e7.0	e8.6	42	54	61	399	20	4.4
21	19	e15	e5.5	e1.6	e6.9	e8.4	35	54	56	360	19	4.3
22	20	e13	e4.8	e1.5	e6.8	e8.0	42	43	50	308	16	4.2
23	29	e13	e4.3	e1.5	e6.7	e7.5	33	49	48	258	11	3.7
24	27	e13	e4.2	e1.6	e6.6	e7.8	29	41	46	223	9.3	4.4
25	26	e13	e4.1	e1.7	e6.5	e8.6	33	41	42	198	11	4.5
26	24	e12	e4.1	e1.6	e6.4	e9.7	36	37	45	171	13	4.1
27	25	e12	e4.0	e1.5	e6.3	e11	28	35	50	142	11	3.5
28	23	e12	e3.9	e1.5	e6.2	e13	25	38	51	126	11	3.0
29	28	e11	e3.7	e1.5	---	e17	25	41	50	109	9.6	3.1
30	36	e12	e3.3	e1.5	---	e22	26	42	52	95	8.6	2.7
31	22	---	e3.0	e1.6	---	e26	---	40	---	87	8.9	---
TOTAL	922	498	252.8	53.5	148.9	306.4	1,213	1,185	1,444	6,653	938.4	170.1
MEAN	29.7	16.6	8.15	1.73	5.32	9.88	40.4	38.2	48.1	215	30.3	5.67
MAX	172	24	12	2.6	7.8	26	53	54	61	448	77	7.7
MIN	15	11	3.0	1.5	1.7	5.9	25	17	32	58	8.6	2.7
AC-FT	1,830	988	501	106	295	608	2,410	2,350	2,860	13,200	1,860	337

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

MEAN	13.0	19.5	6.77	2.10	2.96	205	418	123	68.8	110	72.6	23.1
MAX	77.3	157	47.5	10.6	19.4	781	2,188	625	314	814	688	175
(WY)	(2001)	(2001)	(1995)	(1995)	(1998)	(1995)	(1997)	(1997)	(2004)	(2000)	(1993)	(2000)
MIN	0.00	0.00	0.00	0.00	0.00	0.21	2.59	2.24	0.08	0.00	0.00	0.00
(WY)	(1989)	(1989)	(1989)	(1989)	(1989)	(1990)	(1991)	(1991)	(1991)	(1991)	(1988)	(1988)

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1986 - 2005	
ANNUAL TOTAL	42,644.90		13,785.1			
ANNUAL MEAN	117		37.8		88.9	
HIGHEST ANNUAL MEAN					245	1997
LOWEST ANNUAL MEAN					0.52	1991
HIGHEST DAILY MEAN	2,240	Mar 30	448	Jul 17	4,400	Apr 5, 1997
LOWEST DAILY MEAN	0.00	Jan 29	1.5	Jan 15	0.00	Oct 1, 1985
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 29	1.6	Jan 14	0.00	Oct 1, 1985
MAXIMUM PEAK FLOW			451	Jul 17	4,700	Apr 5, 1997
MAXIMUM PEAK STAGE			5.89	Jul 17	[a,b]13.00	Apr 5, 1997
ANNUAL RUNOFF (AC-FT)	84,590		27,340		64,420	
10 PERCENT EXCEEDS	285		61		195	
50 PERCENT EXCEEDS	18		17		5.7	
90 PERCENT EXCEEDS	0.00		2.2		0.00	

a About
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.65	2.73	2.65	2.62	2.60	2.47	2.88	2.77	2.88	3.08	3.29	2.51
2	2.65	2.73	2.64	2.61	2.58	2.47	2.93	2.77	2.82	3.21	3.21	2.51
3	2.66	e2.70	2.64	e2.63	2.58	2.46	3.00	2.74	2.92	3.39	3.16	2.51
4	2.66	---	e2.65	e2.62	2.58	2.48	3.01	2.71	2.90	3.48	3.09	2.48
5	2.66	e2.74	---	e2.61	2.59	2.73	3.02	2.70	2.88	3.51	3.03	2.48
6	2.90	2.74	2.64	e2.58	2.82	3.22	3.00	2.70	2.85	3.52	2.97	2.48
7	3.94	2.74	e2.64	2.53	3.23	3.12	2.96	2.66	2.86	3.53	2.96	2.47
8	3.10	2.70	---	2.51	3.23	3.21	2.89	2.76	2.94	3.67	2.92	2.46
9	2.87	e2.69	---	2.49	2.87	3.02	2.86	2.96	2.88	3.79	2.90	2.46
10	2.77	e2.71	---	2.48	2.70	2.93	2.88	2.98	2.93	3.80	2.86	2.49
11	2.77	e2.67	e2.64	2.47	2.63	2.85	2.96	3.00	2.93	4.04	2.85	2.47
12	2.76	e2.65	e2.64	2.47	2.61	2.76	2.98	2.89	3.01	4.44	2.83	2.49
13	2.76	e2.65	---	e2.49	2.62	2.74	2.98	2.87	3.05	4.82	2.81	2.50
14	2.73	e2.65	---	e2.47	2.61	2.73	2.93	2.96	3.11	5.18	2.78	2.48
15	2.73	e2.65	2.61	e2.44	2.62	2.73	2.93	2.95	3.11	5.59	2.76	2.47
16	2.73	e2.66	2.59	e2.40	2.66	2.77	2.95	2.93	3.10	5.79	2.76	2.46
17	2.69	e2.67	2.59	e2.32	2.75	2.82	2.91	2.93	3.10	5.87	2.74	2.47
18	2.68	e2.66	2.59	2.26	2.90	2.87	2.98	2.93	3.07	5.87	2.74	2.47
19	2.67	e2.65	2.77	2.33	3.02	2.86	3.02	2.99	3.08	5.77	2.70	2.45
20	2.68	e2.66	2.60	2.36	3.01	2.81	2.92	3.04	3.11	5.59	2.68	2.42
21	2.69	e2.65	2.58	2.40	2.94	2.67	2.85	3.03	3.06	5.36	2.67	2.41
22	2.71	e2.63	2.68	2.60	2.76	2.61	2.93	2.93	3.00	5.07	2.64	2.40
23	2.78	e2.63	2.57	2.94	2.64	2.60	2.83	2.99	2.98	4.79	2.59	2.38
24	2.76	e2.64	2.63	2.96	2.58	2.61	2.79	2.92	2.96	4.54	2.56	2.41
25	2.75	---	2.52	2.80	2.55	2.69	2.83	2.91	2.93	4.35	2.59	2.42
26	2.75	---	2.53	2.70	2.52	2.74	2.86	2.87	2.95	4.12	2.61	2.40
27	2.75	e2.65	2.51	2.73	2.51	2.70	2.78	2.85	3.00	3.88	2.58	2.37
28	2.74	---	2.50	2.76	2.49	2.75	2.74	2.88	3.01	3.73	2.57	2.33
29	2.78	e2.68	2.50	2.71	---	2.82	2.75	2.92	2.99	3.59	2.56	2.33
30	2.86	e2.66	2.50	2.69	---	2.84	2.76	2.93	3.02	3.46	2.54	2.31
31	2.72	---	2.52	2.63	---	2.86	---	2.91	---	3.38	2.54	---
MEAN	2.79	---	---	2.57	2.72	2.77	2.90	2.88	2.98	4.33	2.79	2.44
MAX	3.94	---	---	2.96	3.23	3.22	3.02	3.04	3.11	5.87	3.29	2.51
MIN	2.65	---	---	2.26	2.49	2.46	2.74	2.66	2.82	3.08	2.54	2.31

e Estimated

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1985 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
OCT													
05...	1250	17	--	11.5	--	8.3	8.4	973	1,050	24.0	10.7	67.2	50.6
JAN													
20...	1100	1.6	--	9.7	--	7.6	7.8	2,340	2,450	-10.0	.0	185d	139d
MAR													
01...	1035	6.1	--	14.5	--	8.1	E7.8	1,390	1,450	.5	.4	101	70.0
APR													
26...	1010	38	716	10.0	83	8.7	8.2	912	947	7.0	4.5	64.2	43.6
MAY													
31...	1410	39	711	8.3	93	8.6	8.4	1,060	1,130	23.5	17.5	69.8	61.7
JUN													
21...	1205	56	723	4.6	58	8.5	8.4	1,140	1,180	24.5	24.0	73.9	72.9
JUL													
13...	1220	251	725	4.6	61	7.8	7.9	1,110	1,160	28.0	26.5	65.5	60.0
AUG													
22...	1510	15	724	8.5	101	8.2	8.7	1,180	1,200	23.5	21.0	80.7	63.3
SEP													
06...	1130	7.3	726	4.9	57	8.2	8.0	1,260	1,290	20.0	20.0	79.9	64.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)
OCT													
05...	11.3	2	99.1	36	348@c	16.5	.2	14.1	222	690	33.8	724	12
JAN													
20...	24.8d	3	235d	32	799@c	49.0d	.4	21.2d	604d	1,740	7.85	1,820	29
MAR													
01...	14.6	3	151	37	490@c	40.5	.3	14.4	293	979	16.8	1,020	13
APR													
26...	13.3	2	81.9	33	279@c	17.4	.2	7.35	196	592	63.6	626	20
MAY													
31...	15.0	2	105	34	361@c	20.9	.2	11.7	234	735	80.7	774	34
JUN													
21...	14.6	2	111	32	354@c	22.1	.2	12.5	289	810	125	828	33
JUL													
13...	14.0	2	116	37	328@c	13.7d	.2	24.6	305d	797	582	858	11
AUG													
22...	18.1	3	125	36	407@c	16.5	.2	32.3	265	847	34.9	885	67
SEP													
06...	17.4	2	121	35	430@c	17.4	.2	29.0	269	858	17.9	908	57c

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, fltrd, mg/L (00607)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, fltrd, mg/L (00602)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
OCT													
05...	1.4	--	E.03n	E.04n	.012	--	--	.15	.18	--	--	4.0	--
JAN													
20...	2.2	--	.29	.11	E.006n	1.9	--	.11	.15	--	2.3	3.5	--
MAR													
01...	1.2	--	.09	E.05n	<.008	1.1	--	.04	.06	--	--	1.4	--
APR													
26...	1.1n	1.6	<.04	<.06	<.008	--	--	.07	.10	.21	--	3.2	3
MAY													
31...	1.4	1.8	<.04	<.06	<.008	--	--	.12	.15	.28	--	4.2	3
JUN													
21...	1.7	2.3	.09	<.06	E.004n	1.6	2.2	.18	.23	.35	--	5.4	5
JUL													
13...	1.7	--	<.04	<.06	<.008	--	--	.40	.45	--	--	6.3	--
AUG													
22...	2.0	--	<.04	<.06	<.008	--	--	.50	.53	--	--	9.7	--
SEP													
06...	1.8	--	<.04	<.06	<.008	--	--	.45	.49	--	--	8.2	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)
OCT													
05...	167	10	71.3	E.01n	.4	--	--	--	--	--	--	--	--
JAN													
20...	263d	21d	155d	E.01n	1.1	--	--	--	--	--	--	--	--
MAR													
01...	206	38	179	E.01n	E.4n	--	--	--	--	--	--	--	--
APR													
26...	123	9	74.3	E.01n	.6	<3	--	--	--	--	--	--	--
MAY													
31...	136	8	52.6	.01	E.4n	<3	<.016	E.03n	<.02	<.03	<.08mc	.034	<.008
JUN													
21...	144	10	4.6	.01	.7	<3	<.016	E.39	<.02	E.03n	<.08mc	E.031n	<.008
JUL													
13...	157	20	17.4	.01	.4	--	--	--	--	--	--	--	--
AUG													
22...	177	12	30.0	--b	1.0	--	--	--	--	--	--	--	--
SEP													
06...	192	14	162	E.01n	E.2n	--	--	--	--	--	--	--	--

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Atra-zine, water, fltrd, ug/L (39632)	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.02mc	<.028	<.02	<.022	<.04mc	.012	<.02	<.022	<.02	.03	.040	<.02	<.016
JUN													
21...	<.20smc	<.028	<.02	<.022	<.04mc	E.074	<.02	<.022	<.02	<.04	<.042	<.02	<.016
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.02	<.032mc	<.04mc	<.04	<.02	<.01	<.03	<.04	<.03	<.04	<.01	<.01	<.02
JUN													
21...	<.02	<.032mc	<.04mc	<.04	<.02	<.01	<.03	<.04	<.03	<.04	<.01	<.01	<.02
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Linuron water fltrd 0.7u GF ug/L (38478)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metalaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metsulfuron, water, fltrd, ug/L (61697)	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.04	<.02	<.04mc	<.04	<.020	<.01	E.02n	<.01	<.01	<.010	<.020	<.03mc	<.04
JUN													
21...	<.04	<.02	<.04mc	<.04	<.020	<.01	E.16	<.01	<.01	<.010	<.020	<.03mc	<.04
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Propham water fltrd 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfometruron, water, fltrd, ug/L (50337)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (04032)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.01	<.04mc	<.02	<.01	<.03	<.03	<.030	<.01	<.008	<.02	<.038	<.026	<.016
JUN													
21...	<.01	<.04mc	<.02	<.01	<.03	<.03	<.030	<.01	<.008	<.02	<.038	<.026	<.016
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

06468250 JAMES RIVER ABOVE ARROWWOOD LAKE NEAR KENSAL, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT				
05...	--	100	69	3.2
JAN				
20...	--	63	223	.96
MAR				
01...	--	88	6	.10
APR				
26...	--	92	18	1.8
MAY				
31...	<.03	98	32	3.3
JUN				
21...	<.03	98	51	7.7
JUL				
13...	--	50	38	26
AUG				
22...	--	91	28	1.1
SEP				
06...	--	98	38	.75

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL
s -- Instrument sensitivity problem

Null value qualifier codes used in this table:
b -- Sample broken/spilled in shipment

06468500 JAMES RIVER NEAR PINGREE, ND

LOCATION.--Lat 47°08'30", long 98°47'00", in SW¼SW¼ sec.3, T.142 N., R.64 W., Stutsman County, Hydrologic Unit 10160001, on right bank 500 ft upstream from dam at outlet of DePuy Marsh, 6.5 mi southeast of Pingree, and 6.25 mi northeast of Buchanan.

DRAINAGE AREA.--1,670 mi^2, approximately, of which about 900 mi^2 is probably noncontributing.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-60, 1962, 1965, 1979-89, 1993 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
05...	1445	--	12.3	--	8.5	8.5	1,010	1,070	26.5	14.0	62.8	55.9	13.5
MAR													
31...	0800	--	14.4	--	--e	8.0	872	957	2.5	.5	53.5	48.0	11.4
APR													
26...	1245	716	9.8	91	8.7	8.4	1,000	1,040	8.5	9.0	61.4	49.6	13.2
MAY													
31...	1030	711	8.3	90	8.6	8.5	1,100	1,170	21.5	15.5	63.5	64.5	15.1
JUN													
21...	1400	--	8.7	--	8.8	8.6	1,140	1,210	29.0	25.0	48.9	63.5	14.1
JUL													
13...	0830	723	8.8	114	9.1	9.2	1,010	1,040	22.0	26.0	42.9	54.5	15.7
AUG													
22...	1640	723	14.5	169	9.4	9.6	1,070	1,120	19.5	20.0	31.9	59.1	16.7
SEP													
06...	1230	727	7.7	88	9.0	9.3	1,130	1,130	19.5	19.5	31.2	62.3	17.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
OCT													
05...	2	105	36	341@c	16.3	.2	15.4	250	725	753	30	1.4	--
MAR													
31...	2	82.9	34	266@c	20.3	.2	7.80	203	588	623	21	1.4	--
APR													
26...	2	96.3	36	301@c	22.1	.2	3.45	226	653	687	51	1.1	1.8
MAY													
31...	2	116	36	330@c	25.4	.2	6.04	278	768	799	50	1.4	1.9
JUN													
21...	3	126	41	294@c	28.2	.2	11.4	316	786	846	43	2.0	3.1
JUL													
13...	3	120	43	290@c	27.0	.2	11.0	260	707	770	21	2.3	--
AUG													
22...	3	143	48	257@c	22.1	.2	18.7	299	745	784	33	2.1	--
SEP													
06...	3	131	45	278@c	20.1	.2	18.9	298d	746	818	42c	2.5	--

06468500 JAMES RIVER NEAR PINGREE, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Total nitrogen, water, fltrd, mg/L (00602)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)
OCT 05...	.09	.10	.12	.011	1.3	--	1.6	.12	.15	--	4.2	--	170
MAR 31...	.25	--	E.04n	E.005n	1.2	--	--	.04	.08	--	1.9	--	105
APR 26...	<.04	--	<.06	<.008	--	--	--	.02	.05	.23	2.1	E2n	143
MAY 31...	.07	--	<.06	E.005n	1.3	1.8	--	.05	.10	.21	3.1	2	171
JUN 21...	.17	--	<.06	E.005n	1.8	2.9	--	.12	.18	.30	5.5	6	203
JUL 13...	E.03n	--	<.06	<.008	--	--	--	.47	.55	--	12.6	--	182
AUG 22...	<.04	--	<.06	<.008	--	--	--	<.02	.05	--	12.2	--	158
SEP 06...	<.04	--	<.06	<.008	--	--	--	<.02	.04	--	11.4	--	183

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	3-Ketocarbofuran, water, fltrd, ug/L (50295)
OCT 05...	E3n	75.3	<.01	.8	--	--	--	--	--	--	--	--	--
MAR 31...	36	313	E.01n	.6	--	--	--	--	--	--	--	--	--
APR 26...	E4n	46.8	E.01n	.8	<3	--	--	--	--	--	--	--	--
MAY 31...	7	228	E.01n	.8	<3	<.016	E.03n	<.02	E.02n	<.08mc	.044	<.008	<.02mc
JUN 21...	10	150	.01	.8	<3	<.016	.09	<.02	<.03	<.08mc	E.031n	<.008	<.20smc
JUL 13...	11	42.4	.01	.6	--	--	--	--	--	--	--	--	--
AUG 22...	<6	34.0	.01	.9	--	--	--	--	--	--	--	--	--
SEP 06...	E5n	17.1	.01	E.2n	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Atrazine, water, fltrd, ug/L (39632)	Bendiocarb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Caffeine, water, fltrd, ug/L (50305)	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Chlorambenmethyl ester, water, fltrd, ug/L (61188)
OCT 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 31...	<.028	<.02	<.022	<.04mc	.021	<.02	<.022	<.02	<.01	<.022	<.02	<.016	<.02
JUN 21...	<.028	<.02	<.022	<.04mc	.042	<.02	<.022	<.02	<.04	<.020	<.02	<.016	<.02
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

06468500 JAMES RIVER NEAR PINGREE, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.032mc	<.04mc	<.04	<.02	<.01	<.03	<.04	<.03	<.04	<.01	<.01	<.02	<.04
JUN													
21...	<.032mc	<.04mc	<.04	<.02	<.01	<.03	<.04	<.03	<.04	<.01	<.01	<.02	<.04
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Linuron water fltrd 0.7u GF ug/L (38478)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Metsul-furon, water, fltrd, ug/L (61697)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.02	<.04mc	<.04	<.020	<.01	E.01t	<.01	<.01	<.010	<.020	<.03mc	<.04	<.01
JUN													
21...	<.02	<.04mc	<.04	<.020	<.01	E.07	<.01	<.01	<.010	<.020	<.03mc	<.04	<.01
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)
OCT													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.04mc	<.02	<.01	<.03	<.03	<.030	<.01	<.008	<.02	<.038	<.026	<.016	<.03
JUN													
21...	<.04mc	<.02	<.01	<.03	<.03	<.030	<.01	<.008	<.02	<.038	<.026	<.016	<.03
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--

06468500 JAMES RIVER NEAR PINGREE, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)
OCT		
05...	99	61
MAR		
31...	94	17
APR		
26...	82	58
MAY		
31...	98	57
JUN		
21...	--	--
JUL		
13...	98	37
AUG		
22...	87	40
SEP		
06...	86	25

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL
s -- Instrument sensitivity problem
t -- Below the long-term MDL

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

06469000 JAMESTOWN RESERVOIR NEAR JAMESTOWN, ND

LOCATION.--Lat 46°55'50", long 98°42'23", in SE ¼NW ¼ sec.24, T.140 N., R.64 W., Stutsman County, Hydrologic Unit 10160001, on left bank in control house below Jamestown Dam on James River, 1.7 mi north of Jamestown Post Office, and 3.3 mi upstream from Pipestem Creek.

DRAINAGE AREA.--1,760 mi^2, approximately, of which about 1,010 mi^2 is probably noncontributing.

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--November 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is at sea level; gage readings have been converted to sea level. From June 22, 1959, to June 3, 1971, site was located 0.2 mi upstream at same datum. Prior to June 22, 1959, nonrecording gages at different locations. Water-stage recorder discontinued July 15, 1999.

REMARKS.--Reservoir is formed by earth-fill dam, completed Oct. 1, 1953. Closure made May 7, 1953, and filling of dead storage started. Gates initially closed Feb. 8, 1954. Usable capacity, 229,470 acre-ft between elevations 1,400 ft, sill of outlet, and 1,454 ft, crest of spillway. Dead storage below elevation 1,400 ft, 820 acre-ft. Maximum design pool, 389,000 acre-ft, elevation, 1,464.6 ft. Figures given herein represent total contents based on capacity table dated Oct. 1, 1965. Reservoir is used for flood control and municipal supply. Elevations are adjusted for wind effect.

COOPERATION.--Records furnished by the U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,900 acre-ft, May 2, 1997, elevation, 1,445.80 ft; minimum since initial filling of reservoir, 14,420 acre-ft, Mar. 1, 1993, elevation, 1,420.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,610 acre-ft, May 10, elevation, 1,432.30 ft; minimum, 25,570 acre-ft, Oct. 6, elevation, 1,428.11 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,428.41	26,140	--
Oct. 31	1,429.28	27,850	+1,710
Nov. 30	1,429.88	29,070	+1,220
Dec. 31	1,430.04	29,410	+340
CAL YR 2004	--	--	+1,520
Jan. 31	1,430.02	29,360	-50
Feb. 28	1,430.03	29,380	+20
Mar. 31	1,430.57	30,570	+1,190
Apr. 30	1,432.20	34,360	+3,790
May 31	1,431.11	31,770	-2,590
June 30	1,431.03	31,580	-190
July 31	1,430.66	30,760	-820
Aug. 31	1,431.19	31,960	+1,200
Sept. 30	1,429.90	29,110	-2,850
WTR YR 2005	--	--	+2,970

06469400 PIPESTEM CREEK NEAR PINGREE, ND

LOCATION.--Lat 47°10'03", long 98°58'07", in NE¼NE¼NW¼ sec.31, T.143 N., R.65 W., Stutsman County, Hydrologic Unit 10160002, on right bank on downstream side of State Highway 36 bridge and 3 mi west of Pingree.

DRAINAGE AREA.--700 mi^2, of which about 440 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.63 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e34	e18	e6.5	e1.0	e0.23	e0.20	26	12	20	44	17	0.69
2	e28	e17	e6.5	e0.85	e0.27	e0.28	29	10	21	43	14	0.66
3	e24	e13	e6.5	e0.60	e0.25	e0.45	32	9.2	20	44	12	0.64
4	e32	e14	e6.4	e0.50	e0.23	e0.70	34	9.2	17	40	9.6	0.57
5	e26	e13	e6.4	e0.35	e0.21	e1.1	34	9.6	15	40	7.8	0.61
6	e15	e13	e6.3	e0.28	e0.20	e1.0	33	7.9	11	41	8.2	0.64
7	e21	e11	e6.3	e0.24	e0.19	e0.92	31	8.1	11	38	7.0	0.63
8	e18	e9.8	e6.3	e0.22	e0.19	e0.84	29	10	25	44	6.4	0.64
9	e14	e10	e6.3	e0.21	e0.21	e0.88	31	22	35	48	5.5	0.76
10	e15	e9.1	e6.2	e0.20	e0.24	e0.92	30	23	44	57	4.3	0.82
11	e22	e9.8	e6.0	e0.20	e0.27	e0.88	31	26	44	69	4.5	0.76
12	e12	e9.1	e5.3	e0.20	e0.30	e0.84	33	24	48	75	4.2	0.64
13	e10	e9.8	e5.1	e0.20	e0.26	e0.82	34	28	54	75	3.3	0.64
14	9.4	e9.8	e5.4	e0.19	e0.22	e0.82	33	37	72	74	2.5	0.74
15	13	e9.1	e5.6	e0.18	e0.21	e0.83	35	43	e80	73	2.3	e0.63
16	9.7	e7.9	e5.6	e0.18	e0.20	e0.88	31	46	e88	67	2.1	e0.60
17	8.6	7.9	e5.4	e0.18	e0.19	e0.95	28	47	e89	64	2.1	0.62
18	9.0	7.7	e4.8	e0.18	e0.19	e1.0	29	47	86	57	2.9	0.59
19	11	7.4	e4.2	e0.19	e0.19	e1.1	29	47	87	51	3.1	0.60
20	12	7.7	e3.5	e0.19	e0.19	e1.2	25	44	84	47	2.5	0.60
21	9.8	6.3	e3.1	e0.19	e0.20	e1.3	25	42	82	41	2.1	0.68
22	14	6.9	e2.8	e0.19	e0.20	e1.2	23	38	80	39	1.6	0.77
23	14	e6.6	e2.5	e0.20	e0.21	e1.2	18	33	77	37	0.97	0.77
24	13	e6.3	e2.2	e0.22	e0.20	e1.7	19	34	68	36	0.79	0.79
25	13	e6.6	e2.0	e0.21	e0.20	e2.5	21	32	61	38	0.82	0.80
26	14	e6.5	e1.9	e0.20	e0.20	e3.5	15	29	57	36	0.94	0.68
27	13	e6.4	e1.8	e0.19	e0.20	e5.0	15	27	55	34	0.80	0.57
28	e13	e6.4	e1.8	e0.19	e0.20	e7.0	13	25	50	33	0.74	0.48
29	e16	e6.4	e1.8	e0.19	---	e10	13	24	49	29	0.71	0.54
30	e16	e6.4	e1.5	e0.20	---	e17	13	21	49	27	0.64	e0.57
31	e15	---	e1.3	e0.21	---	e24	---	19	---	23	0.81	---
TOTAL	494.5	278.9	137.3	8.53	6.05	91.01	792	834.0	1,579	1,464	132.22	19.73
MEAN	16.0	9.30	4.43	0.28	0.22	2.94	26.4	26.9	52.6	47.2	4.27	0.66
MAX	34	18	6.5	1.0	0.30	24	35	47	89	75	17	0.82
MIN	8.6	6.3	1.3	0.18	0.19	0.20	13	7.9	11	23	0.64	0.48
AC-FT	981	553	272	17	12	181	1,570	1,650	3,130	2,900	262	39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)

MEAN	9.09	9.07	4.14	1.05	5.33	130	177	58.0	35.8	48.7	22.5	14.0
MAX	133	86.9	29.1	9.72	45.9	572	1,300	414	252	389	190	153
(WY)	(1995)	(2001)	(1995)	(2000)	(1998)	(1995)	(1997)	(1999)	(2001)	(1993)	(1999)	(1994)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.04	0.02	0.00	0.00	0.00
(WY)	(1974)	(1977)	(1977)	(1974)	(1974)	(1991)	(1991)	(1977)	(1977)	(1985)	(1976)	(1976)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005	
ANNUAL TOTAL	10,801.42		5,837.24			
ANNUAL MEAN	29.5		16.0		43.0	
HIGHEST ANNUAL MEAN					149	1997
LOWEST ANNUAL MEAN					0.03	1977
HIGHEST DAILY MEAN	577	Apr 1	89	Jun 17	2,760	Apr 19, 1997
LOWEST DAILY MEAN	0.00	Feb 1	0.18	Jan 15	0.00	Oct 1, 1973
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 1	0.18	Jan 14	0.00	Oct 1, 1973
MAXIMUM PEAK FLOW			92	Jun 17	[a]3,400	Apr 19, 1997
MAXIMUM PEAK STAGE			5.88	Jun 17	11.70	Mar 17, 1995
ANNUAL RUNOFF (AC-FT)	21,420		11,580		31,160	
10 PERCENT EXCEEDS	60		44		86	
50 PERCENT EXCEEDS	9.1		7.0		2.3	
90 PERCENT EXCEEDS	0.01		0.21		0.00	

a Gage height, 11.37 ft
e Estimated

06469400 PIPESTEM CREEK NEAR PINGREE, ND—Continued

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--November 1999 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	5.18	5.00	4.90	4.75	4.74	5.29	5.17	5.25	5.40	5.17	4.93
2	---	5.21	5.00	4.88	4.77	4.75	5.33	5.14	5.25	5.39	5.15	4.93
3	5.32	5.15	5.00	4.87	4.84	4.75	5.36	5.13	5.25	5.41	5.12	4.92
4	---	5.13	5.01	4.87	4.89	4.79	5.38	5.13	5.22	5.36	5.09	4.90
5	---	5.11	5.01	4.86	4.91	4.87	5.38	5.14	5.21	5.37	5.07	4.91
6	5.26	5.12	5.00	4.86	4.97	5.25	5.36	5.11	5.15	5.37	5.07	4.92
7	---	5.11	5.00	4.85	4.95	5.19	5.35	5.11	5.16	5.34	5.05	4.92
8	---	5.09	5.00	4.85	4.87	5.21	5.33	5.14	5.29	5.40	5.04	4.92
9	---	5.10	5.00	4.85	4.83	5.14	5.34	5.26	5.37	5.44	5.02	4.96
10	---	5.11	4.99	4.85	4.82	5.06	5.34	5.27	5.45	5.53	4.99	5.00
11	5.30	5.16	4.99	4.85	4.82	5.01	5.35	5.30	5.44	5.65	4.99	5.01
12	5.27	5.11	e4.99	4.84	4.83	4.99	5.36	5.28	5.48	5.71	4.98	4.98
13	5.16	5.12	5.04	4.79	4.85	4.99	5.38	5.32	5.53	5.71	4.96	4.98
14	5.04	5.11	5.00	4.83	4.87	4.97	5.37	5.41	5.70	5.70	4.92	5.01
15	5.09	5.11	4.98	4.81	4.85	4.98	5.39	5.47	e5.77	5.69	4.92	e4.98
16	5.05	5.08	4.98	4.81	4.85	4.98	5.35	5.50	e5.85	5.63	4.90	e4.97
17	5.03	5.04	4.97	4.78	4.83	4.96	5.32	5.50	e5.85	5.60	4.91	4.97
18	5.04	5.04	4.98	4.78	4.82	4.96	5.33	5.50	5.82	5.53	4.94	4.97
19	5.07	5.03	5.07	4.79	4.81	4.99	5.33	5.50	5.83	5.47	4.95	4.97
20	5.07	5.04	4.99	4.75	4.80	5.01	5.29	5.47	5.80	5.44	4.93	4.97
21	5.05	5.01	4.95	4.76	4.78	5.04	5.29	5.45	5.78	5.39	4.92	4.99
22	5.11	5.02	4.92	4.73	4.77	5.04	5.27	5.42	5.76	5.37	4.88	5.01
23	5.11	e5.02	4.89	4.71	4.76	5.05	5.23	5.37	5.73	5.35	4.82	5.01
24	5.10	5.01	4.87	4.72	4.77	5.05	5.24	5.38	5.64	5.33	4.78	5.02
25	5.10	5.01	4.86	4.74	4.77	5.05	5.25	5.36	5.57	5.35	4.79	5.02
26	5.12	5.03	4.85	4.76	4.76	5.07	5.20	5.33	5.53	5.34	4.81	4.99
27	5.10	5.03	4.85	4.74	4.75	5.11	5.20	5.31	5.51	5.32	4.79	4.96
28	5.14	5.03	4.85	4.73	4.75	5.17	5.18	5.28	5.46	5.31	4.77	4.93
29	5.18	5.02	4.86	4.75	---	5.24	5.18	5.27	5.45	5.28	4.76	4.95
30	5.18	5.01	4.87	4.73	---	5.32	5.18	5.25	5.45	5.26	4.74	e4.96
31	5.15	---	---	4.74	---	5.31	---	5.24	---	5.22	4.84	---
MEAN	---	5.08	---	4.80	4.82	5.03	5.30	5.31	5.52	5.44	4.94	4.97
MAX	---	5.21	---	4.90	4.97	5.32	5.39	5.50	5.85	5.71	5.17	5.02
MIN	---	5.01	---	4.71	4.75	4.74	5.18	5.11	5.15	5.22	4.74	4.90

e Estimated

06469400 PIPESTEM CREEK NEAR PINGREE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAR													
31...	1250	24	8.5	7.2	773	912	9.0	5.5	40.5	22.1	7.50	3	94.4
AUG													
23...	1030	1.1	8.0	8.4	1,350	1,380	23.0	20.5	83.7	62.3	12.4	3	129

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
MAR													
31...	50	253	8.7	.12	17.9	136	463	30.8	<50	<1	1.7	37.9	<1
AUG													
23...	37	403	16.2	.19	21.7	350	896	2.80	<50	<1	16.4	67.3	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
MAR												
31...	200	<1	<1	1.5	160	<1	270	2.30	<1	<1	<1.0	2.3
AUG												
23...	180	<1	<1	2.5	70	<1	230	4.45	29.9	<1	<1.0	3.0

Remark codes used in this table:
< -- Less than.

06469820 PIPESTEM RESERVOIR NEAR JAMESTOWN, ND

LOCATION.--Lat 46°57'44", long 98°45'11", in NW ¼ NW ¼ sec.10, T.140 N., R.64 W., Stutsman County, Hydrologic Unit 10160002, on left bank in control house above Pipestem Dam, 2.5 mi northwest of Jamestown Post Office, and 3.5 mi upstream from James River.

DRAINAGE AREA.--1,010 mi^2, approximately, of which about 610 mi^2 is probably noncontributing.

MONTHEND-ELEVATION AND CONTENTS RECORDS

PERIOD OF RECORD.--March 1974 to current year. Prior to October 1991, records are available from the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth-fill dam; storage began in July 1973; dam completed in 1973. Total capacity is 147,000 acre-ft at maximum pool, elevation 1,496.3 ft. Figures given herein represent total contents based on capacity table for the 1990 survey. The reservoir is used for flood control, fish and wildlife, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation. Elevations affected by wind.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 103,820 acre-ft, May 10, 1997, elevation, 1,487.01 ft; minimum, 6,730 acre-ft, Feb. 17, 1993, elevation, 1,439.65 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,810 acre-ft, June 22, elevation, 1,454.80 ft; minimum, 10,070 acre-ft, Jan. 29 and Feb. 2-3, elevation, 1,442.63 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,443.24	10,630	--
Oct. 31	1,443.36	10,750	+120
Nov. 30	1,442.77	10,200	-550
Dec. 31	1,442.69	10,100	-100
CAL YR 2004	--	--	+390
Jan. 31	1,442.64	10,080	-20
Feb. 28	1,442.67	10,110	+30
Mar. 31	1,443.15	10,550	+440
Apr. 30	1,443.95	11,310	+760
May 31	1,445.88	13,350	+2,040
June 30	1,451.61	20,830	+7,480
July 31	1,450.55	19,290	-1,540
Aug. 31	1,443.53	10,910	-8,380
Sept. 30	1,442.66	10,100	-810
WTR YR 2005	--	--	-530

06470000 JAMES RIVER AT JAMESTOWN, ND

LOCATION.--Lat 46°53'23", long 98°40'54", in NW¼NE¼ sec.6, T.139 N., R.63 W., Stutsman County, Hydrologic Unit 10160003, on left bank 200 ft upstream from Interstate 94 bridge at southeast corner of Jamestown and 3 mi downstream from Pipestem Creek.

DRAINAGE AREA.--2,820 mi^2, approximately, of which about 1,650 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to September 1933, March to May 1935, September 1937 to September 1939, April 1943 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1938(M). WSP 1917: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,373.27 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1949, to Sept. 30, 1965, at former bridge 0.5 mi upstream at datum 2.00 ft higher. See WSP 1729 or 1917 for history of changes prior to Oct. 1, 1949.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Arrowwood, Jim, and Pipestem Lakes, and Jamestown Reservoir, combined capacity, 393,000 acre-ft. Regulation by Jamestown Reservoir (station 06469000) 6 mi upstream since 1953 and by Pipestem Lake, capacity 147,000 acre-ft, since 1973.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	40	15	e8.7	e5.5	e5.3	36	48	114	154	207	119
2	148	38	14	e8.5	e5.8	e5.4	34	48	103	151	186	80
3	143	38	14	e8.2	e5.4	e5.6	33	48	107	164	181	85
4	126	38	e14	e8.0	e5.1	e7.4	33	48	104	193	179	61
5	83	38	e14	e7.8	e4.9	e9.8	32	48	104	198	169	56
6	72	37	e14	e7.8	e4.8	e13	32	48	102	200	152	50
7	34	34	e14	e7.7	e4.7	e17	31	52	107	201	152	37
8	32	31	e15	e7.7	e4.8	e23	31	90	304	222	153	26
9	28	29	e15	e7.6	e5.0	e31	31	86	132	165	164	9.9
10	26	29	e14	e7.6	e5.3	e40	30	53	122	160	185	36
11	25	28	e14	e7.5	e5.8	51	40	83	160	161	189	32
12	25	26	e16	e7.4	e5.7	78	37	188	156	128	168	30
13	23	24	e15	e7.2	e5.5	61	33	198	174	70	166	29
14	24	23	e14	e7.0	e5.2	36	32	186	208	80	166	25
15	24	22	e13	e6.7	e5.2	31	31	183	214	135	165	70
16	22	22	e13	e6.5	e5.2	28	30	184	293	140	163	154
17	18	22	e13	e6.3	e5.2	25	30	192	291	140	208	154
18	18	22	e13	e6.1	e5.2	22	30	222	289	181	186	153
19	23	21	e12	e6.1	e5.2	20	29	222	290	309	194	152
20	8.8	21	e12	e5.8	e5.2	20	20	247	299	296	169	168
21	16	21	e11	e5.9	e5.2	16	16	246	268	294	166	218
22	20	19	e10	e6.0	e5.2	16	16	223	237	298	164	218
23	25	19	e9.8	e5.6	e5.3	17	15	187	209	298	163	216
24	26	17	e9.6	e5.2	e5.2	17	15	135	205	290	163	221
25	25	16	e9.2	e5.2	e5.2	21	15	124	212	306	164	216
26	24	16	e8.8	e5.1	e5.2	17	15	123	232	271	138	215
27	22	16	e8.6	e5.1	e5.2	19	15	121	218	247	64	213
28	23	14	e8.7	e5.1	e5.2	21	15	120	219	160	133	213
29	41	15	e8.8	e5.1	---	27	21	122	232	213	231	212
30	93	15	e9.0	e5.2	---	34	45	122	176	218	189	212
31	44	---	e8.9	e5.2	---	38	---	122	---	215	177	---
TOTAL	1,458.8	751	380.4	204.9	146.4	772.5	823	4,119	5,881	6,258	5,254	3,680.9
MEAN	47.1	25.0	12.3	6.61	5.23	24.9	27.4	133	196	202	169	123
MAX	197	40	16	8.7	5.8	78	45	247	304	309	231	221
MIN	8.8	14	8.6	5.1	4.7	5.3	15	48	102	70	64	9.9
AC-FT	2,890	1,490	755	406	290	1,530	1,630	8,170	11,660	12,410	10,420	7,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

MEAN	68.1	35.8	11.4	5.63	11.4	81.6	271	237	181	126	99.8	81.5
MAX	946	568	144	47.9	111	731	2,434	2,559	1,266	1,024	761	908
(WY)	(1994)	(2001)	(2001)	(1995)	(1930)	(1966)	(1950)	(1950)	(1997)	(1995)	(1995)	(1993)
MIN	0.29	0.35	0.66	0.29	0.60	1.74	1.00	1.06	1.27	0.67	0.23	0.20
(WY)	(1990)	(1939)	(1939)	(1991)	(1939)	(1944)	(1939)	(1939)	(1931)	(1933)	(1933)	(1933)

06470000 JAMES RIVER AT JAMESTOWN, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	67,050.6		29,729.9			
ANNUAL MEAN	183		81.5		101	
HIGHEST ANNUAL MEAN					521	1997
LOWEST ANNUAL MEAN					2.38	1938
HIGHEST DAILY MEAN	599	May 31	309	Jul 19	6,170	May 13, 1950
LOWEST DAILY MEAN	1.5	Jan 31	4.7	Feb 7	0.00	Jun 28, 1933
ANNUAL SEVEN-DAY MINIMUM	1.6	Jan 29	4.9	Feb 4	0.00	Oct 26, 1989
MAXIMUM PEAK FLOW			519	Jun 8	[a]6,390	May 13, 1950
MAXIMUM PEAK STAGE			6.53	Jun 8	16.94	Apr 11, 1969
ANNUAL RUNOFF (AC-FT)	133,000		58,970		73,190	
10 PERCENT EXCEEDS	468		214		308	
50 PERCENT EXCEEDS	100		32		9.5	
90 PERCENT EXCEEDS	2.5		5.6		1.4	

a Gage height, 15.82 ft; site and datum then in use
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.39	2.96	2.56	2.49	2.39	2.36	2.92	3.09	3.76	4.10	4.50	3.81
2	4.02	2.95	2.56	2.50	2.42	2.35	2.89	3.08	3.67	4.08	4.34	3.45
3	3.98	2.95	2.56	2.52	2.51	2.40	2.88	3.08	3.70	4.18	4.30	3.49
4	3.84	2.95	2.57	2.51	2.57	2.45	2.88	3.08	3.67	4.39	4.29	3.24
5	3.46	2.94	2.62	2.52	2.46	2.72	2.87	3.09	3.68	4.43	4.21	3.17
6	3.33	2.92	2.59	2.51	2.43	3.00	2.86	3.08	3.66	4.44	4.08	3.11
7	2.89	2.89	2.60	2.50	2.40	3.09	2.85	3.13	3.70	4.45	4.09	2.94
8	2.85	2.85	2.60	2.48	2.40	2.94	2.85	3.48	5.18	4.62	4.09	2.74
9	2.80	2.81	2.61	2.47	2.39	3.00	2.85	3.48	3.91	4.19	4.17	2.43
10	2.76	2.81	2.66	2.46	2.39	3.08	2.84	3.15	3.83	4.14	4.33	2.92
11	2.76	2.79	2.62	2.46	2.42	3.11	2.97	3.43	4.15	4.16	4.36	2.86
12	2.74	2.76	2.73	2.46	2.45	3.40	2.93	4.35	4.12	3.88	4.20	2.83
13	2.72	2.74	2.84	2.52	2.46	3.22	2.87	4.43	4.25	3.33	4.19	2.82
14	2.74	2.72	2.67	2.58	2.43	2.93	2.86	4.34	4.51	3.44	4.19	2.75
15	2.73	2.71	2.63	2.59	2.40	2.85	2.85	4.32	4.56	3.95	4.19	3.24
16	2.70	2.70	2.60	2.57	2.39	2.81	2.83	4.32	5.17	3.99	4.17	4.10
17	2.64	2.70	2.59	2.57	2.36	2.76	2.83	4.38	5.15	3.99	4.51	4.10
18	2.63	2.70	2.59	2.55	2.36	2.70	2.84	4.62	5.13	4.30	4.35	4.09
19	2.70	2.68	2.56	2.49	2.35	2.66	2.82	4.62	5.14	5.27	4.40	4.08
20	2.42	2.67	2.63	2.46	2.37	2.66	2.67	4.81	5.20	5.18	4.21	4.20
21	2.60	2.68	2.59	2.49	2.37	2.60	2.60	4.80	4.98	5.17	4.19	4.60
22	2.66	2.65	2.60	2.50	2.36	2.59	2.58	4.63	4.74	5.20	4.18	4.59
23	2.75	2.65	e2.63	2.49	2.36	2.61	2.57	4.35	4.52	5.20	4.18	4.58
24	2.77	2.61	---	2.47	2.36	2.62	2.57	3.94	4.49	5.14	4.17	4.62
25	2.75	2.59	---	2.49	2.36	2.67	2.57	3.85	4.54	5.25	4.18	4.58
26	2.73	2.60	e2.55	2.46	2.36	2.61	2.57	3.84	4.70	5.00	3.96	4.57
27	2.70	2.59	2.54	2.44	2.36	2.66	2.57	3.83	4.60	4.82	3.27	4.56
28	2.71	2.56	2.50	2.43	2.36	2.69	2.57	3.82	4.60	4.14	3.90	4.55
29	2.92	2.57	2.48	2.41	---	2.78	2.67	3.84	4.71	4.55	4.69	4.55
30	3.52	2.58	2.47	2.40	---	2.89	3.05	3.84	4.27	4.59	4.36	4.54
31	3.02	---	2.48	2.39	---	2.94	---	3.83	---	4.57	4.27	---
MEAN	2.98	2.74	---	2.49	2.40	2.78	2.78	3.87	4.41	4.46	4.21	3.74
MAX	4.39	2.96	---	2.59	2.57	3.40	3.05	4.81	5.20	5.27	4.69	4.62
MIN	2.42	2.56	---	2.39	2.35	2.35	2.57	3.08	3.66	3.33	3.27	2.43

e Estimated

06470000 JAMES RIVER AT JAMESTOWN, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-51, 1958 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
05...	1445	32	8.4	7.8	1,190	1,170	13.5	12.5	93.2	54.6	12.1	2	85.6
AUG													
25...	0950	164	8.2	8.6	1,240	1,270	15.0	20.5	83.8	61.2	12.8	2	98.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
05...	28	302	23.5	.17	8.39	318	771	67.8	<50	<1	2.4	61.7	<1
AUG													
25...	31	330	20.5	.19	2.81	355	831	369	<50	<1	10.8	90.3	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
05...	150	<1	<1	1.7	40	<1	640	7.15	1.2	<1	<1.0	1.7
AUG												
25...	160	<1	<1	1.9	40	<1	100	6.35	10.0	<1	<1.0	5.9

Remark codes used in this table:
< -- Less than.

06470500 JAMES RIVER AT LAMOURE, ND

LOCATION.--Lat 46°21'20", long 98°18'15", in NE¼NE¼ sec.11, T.133 N., R.61 W., LaMoure County, Hydrologic Unit 10160003, on left bank 80 ft downstream from bridge on State Highway 13, 0.5 mi west of LaMoure, and 12 mi upstream from Cottonwood Creek.

DRAINAGE AREA.--4,390 mi^2, approximately, of which about 2,600 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to July 1903 (gage-height record only), April 1950 to current year. Gage-height records for 1902-11 are contained in reports of the National Oceanic and Atmospheric Administration.

REVISED RECORDS.--WSP 1917: Drainage area.

GAGE.--Water-stage recorder and rubble-masonry control. Datum of gage is 1,290.00 ft above National Geodetic Vertical Datum of 1929. See WSP 1729 or 1917 for history of changes prior to Apr. 19, 1950.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Arrowwood, Jim, and Pipestem Lakes and Jamestown Reservoir, combined capacity, 393,000 acre-ft. Regulation by Jamestown Reservoir (station 06469000) 85 mi upstream since 1953 and by Pipestem Lake, capacity 147,000 acre-ft, since 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Prior to flood of Apr. 14, 1969, a long-time resident said that the flood of May 16, 1950, was the highest since 1881, with stage in either 1942 or 1943 being almost as high owing to large ice jam.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	167	57	e44	33	33	129	66	184	376	282	309
2	212	162	58	e43	34	33	128	59	194	367	283	279
3	237	143	58	e41	36	32	123	73	207	348	280	255
4	242	134	60	e41	39	34	123	86	224	338	257	216
5	218	129	61	e40	43	49	123	96	217	326	241	211
6	205	138	61	e39	46	78	111	88	199	320	240	211
7	186	132	62	e39	48	101	104	88	227	317	240	177
8	177	126	62	e39	49	109	e60	109	310	326	224	164
9	149	125	66	e39	48	123	e45	129	640	325	256	155
10	132	121	67	e38	43	138	e70	131	1,180	312	232	145
11	126	98	66	e37	39	140	96	161	1,270	294	235	145
12	117	95	69	e36	37	132	99	142	1,130	267	247	128
13	116	83	54	e36	42	121	96	154	969	253	257	135
14	97	81	57	e35	45	114	93	230	936	238	242	129
15	104	79	60	e35	43	107	113	279	974	207	235	132
16	79	82	61	e35	42	97	99	284	1,170	175	235	123
17	74	82	65	e33	42	89	91	274	1,340	190	232	121
18	70	76	66	e33	42	80	88	285	1,190	198	257	163
19	74	74	60	33	39	73	102	283	1,000	190	731	200
20	70	78	56	33	38	68	89	290	835	207	1,090	204
21	64	68	53	34	36	66	93	299	735	262	864	206
22	78	64	45	33	35	66	98	299	665	300	601	205
23	77	63	43	32	34	68	76	317	614	297	463	232
24	66	57	40	31	34	72	74	302	549	304	402	262
25	63	56	38	31	33	68	83	284	492	342	381	263
26	67	68	38	32	33	74	64	236	441	345	348	270
27	67	74	38	32	33	86	62	206	420	343	328	269
28	75	66	38	31	33	98	61	192	401	329	307	262
29	87	57	39	31	---	122	62	189	387	307	254	254
30	112	55	42	31	---	142	62	190	380	275	218	260
31	109	---	45	32	---	139	---	189	---	267	290	---
TOTAL	3,784	2,833	1,685	1,099	1,099	2,752	2,717	6,010	19,480	8,945	10,752	6,085
MEAN	122	94.4	54.4	35.5	39.2	88.8	90.6	194	649	289	347	203
MAX	242	167	69	44	49	142	129	317	1,340	376	1,090	309
MIN	63	55	38	31	33	32	45	59	184	175	218	121
AC-FT	7,510	5,620	3,340	2,180	2,180	5,460	5,390	11,920	38,640	17,740	21,330	12,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	110	67.4	27.9	16.7	21.5	189	432	352	286	225	153	124
MAX	1,008	574	168	75.1	135	1,202	3,209	3,114	1,399	1,165	894	939
(WY)	(1994)	(2001)	(2001)	(1995)	(2000)	(1966)	(1997)	(1950)	(2001)	(1995)	(1995)	(1993)
MIN	5.32	8.42	6.83	3.69	1.90	4.57	18.0	12.4	8.10	1.93	3.20	2.56
(WY)	(1991)	(1962)	(1989)	(1959)	(1959)	(1969)	(1991)	(1977)	(1973)	(1973)	(1961)	(1990)

06470500 JAMES RIVER AT LAMOURE, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1950 - 2005	
ANNUAL TOTAL	105,905		67,241			
ANNUAL MEAN	289		184		163	
HIGHEST ANNUAL MEAN					786	1997
LOWEST ANNUAL MEAN					11.7	1990
HIGHEST DAILY MEAN	1,690	Jun 3	1,340	Jun 17	6,420	Apr 14, 1969
LOWEST DAILY MEAN	10	Feb 1	31	Jan 24	0.00	Jul 15, 1973
ANNUAL SEVEN-DAY MINIMUM	10	Jan 30	31	Jan 24	0.01	Jul 17, 1973
MAXIMUM PEAK FLOW			1,370	Jun 17	6,800	Apr 14, 1969
MAXIMUM PEAK STAGE			9.96	Jun 17	16.17	Apr 14, 1969
ANNUAL RUNOFF (AC-FT)	210,100		133,400		118,200	
10 PERCENT EXCEEDS	656		340		477	
50 PERCENT EXCEEDS	210		113		33	
90 PERCENT EXCEEDS	18		37		7.7	

e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1999 to current year. Gage height records for 1902-11 are contained in reports of the National Oceanic and Atmospheric Administration.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.96	7.78	7.28	---	7.01	7.02	7.60	7.33	7.87	8.31	8.09	8.15
2	7.91	7.76	7.28	---	7.02	7.01	7.61	7.29	7.90	8.29	8.09	8.08
3	7.97	7.71	7.27	---	7.04	7.00	7.60	7.38	7.94	8.25	8.08	8.01
4	7.98	7.67	7.28	---	7.07	7.02	7.61	7.45	8.00	8.23	8.02	7.90
5	7.92	7.66	7.29	---	7.11	7.14	7.63	7.50	7.97	8.20	7.98	7.89
6	7.89	7.69	7.29	---	7.13	7.33	7.58	7.46	7.92	8.18	7.97	7.89
7	7.84	7.67	7.28	---	7.14	7.46	7.54	7.46	8.00	8.18	7.97	7.77
8	7.81	7.65	7.28	---	7.15	7.50	7.45	7.57	8.22	8.20	7.93	7.73
9	7.73	7.64	7.30	---	7.14	7.56	7.49	7.66	8.82	8.20	8.02	7.69
10	7.67	7.63	7.30	---	7.11	7.62	7.52	7.67	9.65	8.16	7.95	7.65
11	7.65	7.54	7.29	---	7.07	7.63	7.50	7.78	9.83	8.12	7.96	7.65
12	7.61	7.52	7.31	---	7.06	7.60	7.52	7.71	9.66	8.05	7.99	7.58
13	7.61	7.47	7.21	---	7.10	7.55	7.50	7.76	9.41	8.01	8.02	7.61
14	7.53	7.46	7.22	---	7.12	7.52	7.48	8.01	9.35	7.97	7.98	7.59
15	7.56	7.45	7.24	---	7.11	7.49	7.58	8.15	9.42	7.87	7.96	7.60
16	7.45	7.47	7.25	---	7.10	7.44	7.52	8.16	9.72	7.77	7.96	7.56
17	7.43	7.47	7.26	---	7.10	7.39	7.48	8.14	9.93	7.82	7.95	7.56
18	7.41	7.44	7.26	7.01	7.10	7.35	7.46	8.17	9.75	7.85	8.02	7.75
19	7.43	7.43	7.23	7.02	7.08	7.30	7.53	8.16	9.46	7.82	8.95	7.90
20	7.41	7.44	7.20	7.01	7.06	7.27	7.46	8.18	9.19	7.87	9.60	7.91
21	7.37	7.39	7.18	7.02	7.04	7.27	7.48	8.20	9.02	8.03	9.23	7.92
22	7.45	7.36	7.12	7.02	7.03	7.27	7.51	8.20	8.90	8.13	8.78	7.92
23	7.44	7.35	7.11	7.00	7.03	7.28	7.39	8.24	8.81	8.13	8.51	8.00
24	7.39	7.31	7.08	7.00	7.03	7.30	7.38	8.21	8.69	8.14	8.38	8.08
25	7.37	7.29	7.06	7.00	7.02	7.28	7.43	8.16	8.58	8.23	8.32	8.09
26	7.39	7.37	7.06	7.00	7.02	7.31	7.32	8.03	8.46	8.24	8.25	8.11
27	7.39	7.40	7.06	7.00	7.02	7.38	7.31	7.94	8.42	8.24	8.20	8.10
28	7.44	7.34	7.06	6.99	7.02	7.44	7.30	7.90	8.37	8.20	8.15	8.08
29	7.49	7.28	7.08	7.00	---	7.56	7.31	7.89	8.34	8.15	8.01	8.06
30	7.59	7.27	7.10	7.00	---	7.64	7.31	7.89	8.32	8.07	7.91	8.08
31	7.58	---	7.12	7.00	---	7.63	---	7.88	---	8.05	8.11	---
MEAN	7.60	7.50	7.20	---	7.07	7.37	7.48	7.86	8.80	8.10	8.20	7.86
MAX	7.98	7.78	7.31	---	7.15	7.64	7.63	8.24	9.93	8.31	9.60	8.15
MIN	7.37	7.27	7.06	---	7.01	7.00	7.30	7.29	7.87	7.77	7.91	7.56

06470500 JAMES RIVER AT LAMOURE, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1957 to current year.

REMARKS.--Quality assurance sample also collected at this location.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
07...	1055	63	9.4	8.9	792	784	16.0	11.0	66.0	29.7	13.8	1	55.3
AUG													
23...	1430	433	7.6	8.1	815	844	25.5	20.0	56.7	35.6	13.3	1	54.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
07...	28	221	27.7	.18	<2.00	167	493	83.3	<50	<1	2.7	27.7	<1
AUG													
23...	28	209	15.2	.14	16.5	209	512	616	<50	<1	12.2	66.6	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
07...	130	<1	<1	2.1	20	<1	230	5.15	1.1	<1	<1.0	1.5
AUG												
23...	120	<1	<1	2.3	50	<1	160	4.47	28.1	<1	<1.0	3.9

Remark codes used in this table:
< -- Less than.

06470800 BEAR CREEK NEAR OAKES, ND

LOCATION.--Lat 46°13'31", long 98°04'17", in NE¼NE¼ sec.28, T.132 N., R.59 W., Dickey County, Hydrologic Unit 10160003, on right bank 80 ft downstream from bridge on ND Highway 13, 6 mi north, and 1 mi east of Oakes.

DRAINAGE AREA.--357 mi^2, of which about 255 mi^2 is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,291.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1, 1975, reached a stage of 15.00 ft present datum, from floodmark, discharge 4,590 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.9	11	5.5	e0.98	e0.52	e0.38	e3.0	8.1	10	149	10	20
2	e1.3	7.7	5.0	e0.95	e0.55	e0.38	e3.5	7.8	10	134	9.9	19
3	e0.90	8.9	4.8	e0.92	e0.58	e0.43	4.1	7.4	11	134	9.5	23
4	e0.55	9.6	4.8	e0.90	e0.60	e0.48	8.5	6.8	12	118	10	26
5	e0.25	11	3.8	e0.88	e0.59	e0.80	11	6.5	14	107	9.1	23
6	e0.10	11	4.3	e0.87	e0.56	e1.6	11	6.0	14	102	7.4	23
7	0.11	8.9	4.1	e0.85	e0.53	e1.5	11	5.8	22	99	6.0	32
8	0.18	7.6	3.8	e0.81	e0.51	e1.4	9.2	6.8	47	123	4.6	31
9	0.17	6.9	3.5	e0.81	e0.50	e1.3	8.5	18	86	135	17	32
10	0.19	6.9	3.2	e0.81	e0.48	e1.2	8.3	19	69	110	35	35
11	0.24	6.8	3.4	e0.82	e0.45	e1.3	9.7	18	66	93	26	30
12	0.28	8.1	3.3	e0.80	e0.49	e1.2	12	17	75	77	30	29
13	0.37	15	2.2	e0.78	e0.55	e1.0	13	19	77	63	21	27
14	0.36	19	2.7	e0.77	e0.62	e0.95	14	21	134	54	17	27
15	0.58	17	2.6	e0.72	e0.55	e0.90	15	20	192	51	15	26
16	0.50	18	2.6	e0.62	e0.50	e0.92	13	19	164	44	14	23
17	0.51	18	2.4	e0.55	e0.46	e0.94	13	17	152	38	12	20
18	0.55	18	e2.4	e0.53	e0.42	e0.97	12	16	127	31	18	17
19	0.69	17	e1.7	e0.51	e0.40	e1.0	13	17	108	26	27	15
20	0.83	17	e1.4	e0.50	e0.39	e1.1	12	16	107	22	77	13
21	0.96	16	e1.2	e0.48	e0.39	e1.1	12	15	113	19	56	12
22	1.3	15	e1.1	e0.49	e0.38	e1.2	11	14	98	14	46	9.0
23	1.7	14	e0.95	e0.50	e0.38	e1.3	10	13	92	19	44	6.9
24	1.6	13	e0.98	e0.49	e0.38	e1.4	9.7	16	83	22	37	6.8
25	1.6	11	e1.0	e0.48	e0.38	e1.4	9.7	13	76	24	33	7.0
26	1.6	9.1	e1.0	e0.47	e0.38	e1.5	9.2	13	71	24	30	6.6
27	1.9	8.3	e1.0	e0.48	e0.38	e1.6	8.9	13	86	18	28	5.9
28	4.0	7.1	e1.1	e0.50	e0.38	e1.8	8.4	13	98	18	27	5.5
29	5.7	6.6	e1.1	e0.50	---	e2.0	8.2	13	120	17	25	4.4
30	21	6.0	e1.1	e0.50	---	e2.3	8.0	13	159	15	24	3.8
31	18	---	e1.0	e0.51	---	e2.6	---	12	---	12	23	---
TOTAL	69.92	349.5	79.03	20.78	13.30	37.95	299.9	420.2	2,493	1,912	748.5	558.9
MEAN	2.26	11.7	2.55	0.67	0.47	1.22	10.0	13.6	83.1	61.7	24.1	18.6
MAX	21	19	5.5	0.98	0.62	2.6	15	21	192	149	77	35
MIN	0.10	6.0	0.95	0.47	0.38	0.38	3.0	5.8	10	12	4.6	3.8
AC-FT	139	693	157	41	26	75	595	833	4,940	3,790	1,480	1,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)

MEAN	2.18	2.61	2.82	0.53	0.93	37.2	78.5	24.0	15.3	20.3	5.23	3.94
MAX	32.9	45.1	66.7	10.7	11.3	142	679	168	142	179	60.7	32.8
(WY)	(1999)	(1999)	(1999)	(1999)	(1998)	(1987)	(1997)	(1999)	(1998)	(1993)	(1993)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.00	0.00	0.00	0.00	0.00
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1981)	(1985)	(1981)	(1977)	(1977)	(1977)	(1977)

06470800 BEAR CREEK NEAR OAKES, ND—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1977 - 2005	
ANNUAL TOTAL	1,915.00		7,002.98			
ANNUAL MEAN	5.23		19.2		16.1	
HIGHEST ANNUAL MEAN					74.3	1997
LOWEST ANNUAL MEAN					0.04	1977
HIGHEST DAILY MEAN	47	Jun 1	192	Jun 15	1,490	Jun 28, 1998
LOWEST DAILY MEAN	0.00	Jan 26	0.10	Oct 6	0.00	Oct 1, 1976
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 26	0.18	Oct 5	0.00	Oct 1, 1976
MAXIMUM PEAK FLOW			201	Jun 15	[a]1,730	Jun 28, 1998
MAXIMUM PEAK STAGE			7.98	Jun 15	[b]13.24	Apr 3, 1997
ANNUAL RUNOFF (AC-FT)	3,800		13,890		11,700	
10 PERCENT EXCEEDS	15		59		34	
50 PERCENT EXCEEDS	3.0		8.2		0.32	
90 PERCENT EXCEEDS	0.04		0.50		0.00	

a Gage height, 11.75 ft
b Backwater from ice
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 2000 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.43	6.24	5.91	5.82	e5.77	6.34	6.58	6.31	7.68	6.39	6.63
2	---	6.33	6.22	e5.90	5.88	e5.74	6.32	6.56	6.29	7.58	6.38	6.61
3	---	6.37	6.21	e5.88	5.92	e5.69	6.34	6.54	6.33	7.58	6.37	6.68
4	---	6.39	6.21	e5.88	5.97	5.75	6.59	6.52	6.36	7.46	6.39	6.72
5	---	6.42	6.15	e5.86	6.05	6.20	6.68	6.50	6.41	7.37	6.35	6.68
6	---	6.43	6.18	e5.85	6.07	6.87	6.69	6.48	6.42	7.34	6.29	6.67
7	5.53	6.37	6.16	e5.84	e5.96	6.69	6.67	6.46	6.59	7.30	6.22	6.80
8	5.58	6.33	6.15	e5.83	e5.84	e6.65	6.62	6.51	6.89	7.49	6.15	6.78
9	5.57	6.30	6.13	5.84	e5.79	6.65	6.59	6.75	7.21	7.58	6.51	6.79
10	5.59	6.30	6.11	e5.84	5.76	e6.58	6.59	6.76	7.10	7.39	6.82	6.82
11	5.63	6.30	6.12	e5.83	5.75	6.55	6.64	6.71	7.08	7.25	6.72	6.78
12	5.66	6.34	6.11	5.85	5.76	6.49	6.71	6.71	7.14	7.16	6.77	6.76
13	5.70	6.53	6.02	e5.84	5.98	6.41	6.75	6.76	7.15	7.07	6.64	6.73
14	5.70	6.63	6.07	e5.82	6.56	e6.31	6.76	6.80	7.56	7.01	6.57	6.73
15	5.78	6.56	6.06	e5.80	6.44	e6.19	6.79	6.79	7.92	6.98	6.52	6.73
16	5.76	6.60	6.06	e5.78	6.25	e6.11	6.76	6.74	7.77	6.92	6.48	6.68
17	5.76	6.60	6.04	e5.76	e6.08	6.07	6.74	6.69	7.69	6.86	6.44	6.63
18	5.77	6.59	e6.04	5.77	e5.94	6.03	6.71	6.68	7.53	6.79	6.59	6.57
19	5.81	6.57	e5.97	5.78	e5.87	6.01	6.75	6.68	7.38	6.72	6.73	6.53
20	5.85	6.56	5.99	5.76	e5.87	5.99	6.73	6.67	7.37	6.67	7.15	6.47
21	5.87	6.54	e5.98	e5.76	e5.85	5.98	6.71	6.64	7.42	6.61	7.02	6.43
22	5.93	6.53	e5.94	e5.75	5.84	6.00	6.69	6.59	7.30	6.49	6.94	6.35
23	5.98	6.49	e5.91	5.75	e5.83	6.02	6.66	6.57	7.25	6.60	6.92	6.27
24	5.96	6.47	e5.88	5.74	e5.82	6.04	6.64	6.53	7.20	6.66	6.85	6.26
25	5.96	6.42	5.87	5.76	e5.82	6.04	6.64	6.41	7.15	6.69	6.81	6.27
26	5.96	6.38	5.88	5.78	e5.79	6.08	6.62	6.40	7.12	6.69	6.77	6.25
27	5.99	6.35	5.91	e5.75	5.80	6.15	6.61	6.40	7.22	6.60	6.75	6.22
28	6.16	6.31	5.93	5.75	e5.78	6.21	6.59	6.39	7.29	6.59	6.73	6.20
29	6.25	6.29	5.94	5.81	---	6.33	6.58	6.39	7.47	6.58	6.71	6.14
30	6.68	6.27	5.94	5.81	---	6.35	6.58	6.39	7.74	6.52	6.70	6.09
31	6.59	---	5.94	5.83	---	6.34	---	6.35	---	6.45	6.68	---
MEAN	---	6.43	6.04	5.81	5.93	6.20	6.64	6.58	7.12	6.99	6.62	6.54
MAX	---	6.63	6.24	5.91	6.56	6.87	6.79	6.80	7.92	7.68	7.15	6.82
MIN	---	6.27	5.87	5.74	5.75	5.69	6.32	6.35	6.29	6.45	6.15	6.09

e Estimated

06470800 BEAR CREEK NEAR OAKES, ND—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1400	12	8.8	7.3	746	747	16.0	12.0	48.6	31.8	11.5	1	51.3
AUG													
24...	1500	36	7.7	8.2	1,330	1,360	25.5	22.5	82.1	69.2	12.7	2	99.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	29	169	29.9	.19	5.24	169	446	14.1	<50	<1	2.4	27.1	<1
AUG													
24...	30	358	47.8	.23	29.9	346	875	88.5	<50	<1	12.0	70.3	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	110	<1	<1	1.5	50	<1	260	4.45	<1	<1	<1.0	2.9
AUG												
24...	200	<1	<1	2.0	60	<1	220	4.47	26.8	<1	<1.0	3.5

Remark codes used in this table:
< -- Less than.

06470830 JAMES RIVER AT OAKES, ND

LOCATION.--Lat 46°08'20", long 98°06'55", in NW¼NE¼NE¼ sec.30, T.131 N., R.59 W., Dickey County, Hydrologic Unit 10160003, on left bank 10 ft downstream from bridge 1.0 mi west of Oakes.

DRAINAGE AREA.--5,320 mi^2, of which about 3,300 mi^2 is probably noncontributing.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--August 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,200.00 ft above National Geodetic Vertical Datum of 1929. Flow regulated by Jamestown Reservoir (station 06469000).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 98.77 ft, Apr. 4, 1997; minimum, 88.11 ft, Sept. 4, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 93.94 ft, June 18; minimum recorded, 89.23 ft, Apr. 26.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90.49	90.11	e90.00	e90.09	---	---	e90.63	89.72	90.80	92.73	90.66	91.04
2	90.66	90.25	---	e90.09	---	---	90.70	89.65	90.90	92.62	90.66	90.93
3	e90.47	90.46	---	e90.06	---	---	90.54	89.82	90.81	92.47	90.61	90.95
4	90.48	90.25	---	90.02	---	---	90.50	89.98	90.66	92.27	90.60	e91.07
5	90.57	90.34	---	90.02	---	---	90.21	90.01	90.68	92.10	90.68	91.15
6	90.71	90.26	---	90.04	---	---	90.11	90.00	90.66	91.99	90.81	90.88
7	90.70	90.13	e89.98	90.13	---	---	90.33	90.31	90.69	91.85	90.60	90.79
8	90.35	90.14	89.98	90.13	---	---	90.67	90.31	91.37	91.73	90.56	90.77
9	90.39	90.19	89.97	e90.14	---	---	90.92	90.29	91.41	91.72	90.48	90.73
10	90.58	89.89	89.96	90.15	---	---	90.54	90.30	91.66	91.84	90.55	91.01
11	90.33	90.06	89.98	90.18	---	---	90.42	89.83	e92.16	91.79	90.63	90.71
12	90.23	90.08	89.92	90.21	---	---	90.41	90.12	e92.86	91.53	90.67	90.53
13	89.86	90.22	89.96	90.20	---	---	90.39	90.45	e92.94	91.37	90.64	90.45
14	90.08	90.25	89.96	e90.18	---	---	90.62	90.30	e93.35	91.27	90.74	90.46
15	89.79	90.14	89.95	90.18	---	---	90.48	90.48	e93.41	e91.02	90.75	90.44
16	89.82	90.13	89.97	e90.26	---	---	e90.43	90.64	e93.50	90.95	90.63	90.48
17	89.79	e90.09	89.99	e90.29	---	---	e90.45	90.84	e93.56	91.01	90.72	90.58
18	89.79	---	90.00	90.24	---	---	90.70	e91.11	93.76	90.73	90.68	90.35
19	90.07	---	89.99	90.37	---	---	90.13	e90.96	93.82	90.76	90.70	90.42
20	89.92	---	90.00	90.38	---	---	89.86	90.98	93.78	90.58	91.20	e90.47
21	90.28	---	90.02	e90.36	---	---	90.01	91.19	93.72	90.46	91.89	90.47
22	89.97	---	90.02	---	---	---	89.56	e91.05	93.66	90.41	92.09	90.44
23	89.80	---	90.02	---	---	---	89.78	e90.95	93.54	90.54	92.05	90.63
24	89.88	---	90.00	---	---	e90.76	89.97	90.81	93.28	90.66	91.98	90.53
25	89.96	---	89.99	---	---	90.75	89.57	90.80	93.09	90.64	91.80	e90.52
26	89.87	---	e90.01	---	---	90.73	89.35	90.84	92.91	90.76	91.65	90.63
27	89.98	---	e90.00	---	---	90.73	89.70	90.76	92.77	90.92	91.50	90.69
28	89.97	---	e90.02	---	---	90.75	89.82	90.66	92.54	90.86	91.38	90.43
29	89.81	---	e90.05	---	---	90.79	89.90	90.57	92.74	90.86	91.27	90.80
30	89.77	---	90.08	---	---	90.74	89.91	90.51	92.91	90.84	91.18	90.73
31	90.16	---	e90.10	---	---	90.71	---	90.57	---	90.75	91.12	---
MEAN	90.15	---	---	---	---	---	90.22	90.48	92.46	91.29	91.02	90.67
MAX	90.71	---	---	---	---	---	90.92	91.19	93.82	92.73	92.09	91.15
MIN	89.77	---	---	---	---	---	89.35	89.65	90.66	90.41	90.48	90.35

e Estimated

06470875 DAKOTA LAKE NEAR LUDDEN, ND

LOCATION.--Lat 45°56'52", long 98°10'29", in SE¼NE¼NE¼ 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.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--August 2002 to current year. (Formerly published as streamflow gage James River at Dakota Lake Dam near Ludden, ND).

GAGE.--Water-stage recorder. Datum of gage is 1,280.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Gage heights are affected by wind. Gage heights for Feb. 24, Mar. 2, 9, 10, 23, and 27 based on incomplete daily record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height, 17.86 ft, Apr. 6, 1997.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 12.89 ft, June 20, 2005 (affected by wind); minimum recorded, 8.63 ft, Sept. 20, 2004 (affected by wind).

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 12.89 ft, June 20 (affected by wind); minimum recorded, 9.02 ft, Oct. 21 (affected by wind).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.10	10.07	9.72	9.64	9.54	9.57	---	---	9.82	12.10	10.22	10.35
2	9.78	9.89	9.72	9.63	9.54	e9.57	---	---	9.95	11.90	10.16	10.31
3	9.94	9.82	9.70	9.63	9.55	---	---	---	10.20	11.84	10.26	10.33
4	9.75	10.11	9.74	9.64	9.57	---	---	---	10.24	11.70	10.18	10.22
5	9.66	9.97	9.76	9.63	9.59	---	---	---	10.22	11.53	10.03	10.15
6	9.76	10.05	9.73	9.62	9.61	---	---	---	10.23	11.36	9.92	10.37
7	9.94	10.05	9.74	9.61	9.62	---	9.95	---	10.28	11.21	10.11	10.24
8	10.23	9.94	9.74	9.60	9.62	---	9.87	---	10.09	11.16	10.08	10.19
9	10.00	9.89	9.76	9.59	9.61	e9.89	9.88	---	10.61	11.09	10.12	10.10
10	9.80	10.10	9.75	9.59	9.61	e9.90	10.08	---	10.75	10.93	10.08	9.74
11	10.12	9.79	9.73	9.56	9.60	---	10.11	---	11.13	11.03	10.12	10.13
12	10.10	9.80	9.89	9.56	9.61	---	10.10	---	11.43	11.01	10.15	10.20
13	10.13	9.62	9.88	9.55	9.62	---	10.06	---	11.85	10.82	10.16	10.06
14	9.62	9.63	9.89	9.54	9.65	---	9.98	---	12.26	10.63	10.06	9.94
15	9.94	9.80	9.90	9.54	9.68	---	9.99	---	12.33	10.59	10.09	9.94
16	9.72	9.80	9.85	9.53	9.69	---	9.98	---	12.37	10.30	10.14	9.84
17	9.69	9.88	9.85	9.52	9.69	---	9.98	---	12.41	10.18	9.97	9.82
18	9.61	9.90	9.88	9.51	9.68	---	9.94	---	12.35	10.28	10.18	10.02
19	9.43	9.87	9.88	9.51	9.67	---	---	---	12.51	9.91	10.27	9.91
20	9.62	9.88	9.86	9.51	9.67	---	---	---	12.74	10.13	10.32	9.94
21	9.21	9.71	9.85	9.52	9.64	---	---	---	12.75	10.10	10.73	10.05
22	9.70	9.72	9.76	9.52	9.62	---	---	---	12.60	10.09	10.99	10.05
23	9.92	9.85	9.70	9.51	9.62	e9.89	---	---	12.50	10.10	11.02	9.87
24	9.76	9.79	9.67	9.51	e9.60	9.90	---	10.38	12.50	10.15	10.89	10.09
25	9.62	9.78	9.66	9.52	9.59	9.89	---	10.38	12.34	10.35	10.94	10.14
26	9.68	9.77	9.66	9.52	9.58	9.89	---	10.36	12.22	10.30	10.84	10.10
27	9.56	9.76	9.64	9.52	9.58	e9.90	---	10.32	12.16	10.24	10.76	10.15
28	9.63	9.76	9.63	9.53	9.58	---	---	10.27	11.98	10.37	10.65	10.29
29	9.83	9.73	9.64	9.53	---	---	---	10.21	12.18	10.30	10.56	9.91
30	10.25	9.72	9.64	9.53	---	---	---	10.17	12.27	10.27	10.45	10.13
31	9.89	---	9.64	9.54	---	---	---	10.05	---	10.29	10.38	---
MEAN	9.81	9.85	9.76	9.56	9.62	---	---	---	11.58	10.72	10.35	10.09
MAX	10.25	10.11	9.90	9.64	9.69	---	---	---	12.75	12.10	11.02	10.37
MIN	9.21	9.62	9.63	9.51	9.54	---	---	---	9.82	9.91	9.92	9.74

e Estimated

06470878 JAMES RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 45°56'10", long 98°10'26", in SE¼SE¼ sec. 34, T.129 N., R.60 W., Dickey County, Hydrologic Unit 10160003, at bridge on North Dakota-South Dakota state line road 6.5 mi south and 1 mi west from Ludden.

DRAINAGE AREA.--5,480 mi^2, approximately, of which about 3,300 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to current year. October 1981 to September 2001 equivalent discharge site formerly published as James River at Dakota Lake Dam near Ludden. October 1981 to September 1999 (gage heights only).

GAGE.--Acoustic doppler velocity meter and water-stage recorder. Datum of gage is 1,200 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324	161	e85	e46	e37	30	201	e100	160	917	271	372
2	167	129	72	e42	50	33	179	e60	207	840	266	358
3	231	130	82	e51	40	30	188	e40	286	851	280	376
4	153	195	59	e39	48	45	178	e70	288	807	248	346
5	143	162	74	e37	50	52	218	e62	274	676	209	312
6	163	180	72	e35	49	112	174	e105	e283	625	181	383
7	199	e184	64	e33	51	190	109	e80	e310	579	221	306
8	253	162	77	e37	40	170	25	93	235	590	203	e279
9	169	135	57	e41	24	162	23	201	507	536	223	e246
10	132	202	38	e41	33	154	158	245	605	469	204	142
11	211	113	96	e39	35	153	204	318	815	581	219	249
12	185	116	33	e35	39	161	180	145	985	559	242	265
13	222	88	45	e43	41	148	159	132	e1,260	499	243	189
14	75	101	53	e33	57	140	49	258	e1,420	442	219	161
15	154	139	56	e40	59	138	136	185	e1,410	422	227	154
16	86	e146	56	e36	64	122	142	225	1,420	e296	230	141
17	e84	e153	61	e30	66	145	141	240	1,390	243	200	132
18	56	e130	54	e27	55	156	68	250	1,240	303	240	152
19	33	e110	59	e27	55	132	235	362	1,460	187	e300	149
20	69	e95	54	e32	64	118	184	340	1,620	232	330	e131
21	25	e90	61	e38	51	113	87	261	1,530	218	575	e132
22	117	e70	62	e32	41	114	219	402	e1,300	218	760	e186
23	138	e100	57	e28	36	117	41	375	e1,250	231	771	141
24	83	e80	43	e30	34	74	27	370	1,320	245	667	207
25	58	e70	44	e30	19	91	159	357	1,170	334	724	225
26	69	e74	47	e38	34	100	76	347	1,110	324	670	228
27	51	e100	49	e33	16	131	e50	332	1,100	315	623	248
28	76	e100	55	e29	34	124	e48	298	e993	354	e537	308
29	e117	e80	51	36	---	e120	e56	265	e1,010	342	e504	161
30	213	e80	48	44	---	139	e74	242	1,070	317	448	253
31	115	---	e47	33	---	180	---	210	---	306	389	---
TOTAL	4,171	3,675	1,811	1,115	1,222	3,694	3,788	6,970	28,028	13,858	11,424	6,932
MEAN	135	122	58.4	36.0	43.6	119	126	225	934	447	369	231
MAX	324	202	96	51	66	190	235	402	1,620	917	771	383
MIN	25	70	33	27	16	30	23	40	160	187	181	131
AC-FT	8,270	7,290	3,590	2,210	2,420	7,330	7,510	13,820	55,590	27,490	22,660	13,750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	192	136	63.4	28.6	30.2	314	773	587	500	402	305	242
MAX	867	613	239	77.1	88.1	853	4,617	2,316	1,447	1,181	1,143	1,003
(WY)	(1994)	(2001)	(2001)	(1995)	(2000)	(1995)	(1997)	(1997)	(1997)	(1995)	(1993)	(1999)
MIN	1.86	0.20	0.28	0.06	0.62	26.0	33.4	9.92	2.12	0.02	0.00	0.01
(WY)	(1989)	(1991)	(1991)	(1991)	(1989)	(1990)	(1990)	(1990)	(1988)	(1988)	(1988)	(1990)

06470878 JAMES RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	108,010		86,688			
ANNUAL MEAN	295		238		[a]299	
HIGHEST ANNUAL MEAN					[a]969	1997
LOWEST ANNUAL MEAN					[a]10.3	1990
HIGHEST DAILY MEAN	1,260	Jun 5	1,620	Jun 20	7,500	Apr 6, 1997
LOWEST DAILY MEAN	11	Feb 1	16	Feb 27	0.00	Oct 8, 1981
ANNUAL SEVEN-DAY MINIMUM	12	Jan 29	28	Feb 25	0.00	Jul 10, 1985
MAXIMUM PEAK FLOW			[b]2,050	Jun 20	7,500	Apr 6, 1997
MAXIMUM PEAK STAGE			92.49	Jun 21	[c]98.04	Apr 6, 1997
ANNUAL RUNOFF (AC-FT)	214,200		171,900		216,300	
10 PERCENT EXCEEDS	686		577		926	
50 PERCENT EXCEEDS	204		145		96	
90 PERCENT EXCEEDS	20		37		1.0	

a Historic discharge data, water years 1982-2003, from equivalent station, James River at Dakota Lake Dam near Ludden (06470875)
b Gage height, 92.37 ft
c From floodmark at present location
e Estimated

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--November 1981 to September 1999, October 2001 to current year.

REMARKS.--Gaps in record are result of equipment malfunctions and environmental factors such as ice damage to stage sensor.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88.82	88.13	---	88.12	88.13	88.14	88.82	88.50	89.23	91.90	89.01	89.57
2	88.62	88.18	88.15	---	88.14	88.15	88.98	88.52	89.19	91.62	88.89	89.48
3	88.58	88.25	88.14	---	88.14	88.17	88.87	88.56	89.23	91.51	88.89	89.47
4	88.49	88.29	88.06	---	88.14	88.10	88.91	88.62	89.21	91.50	88.87	89.45
5	88.44	88.30	88.09	87.98	88.13	88.11	88.80	88.58	89.18	91.34	88.75	89.40
6	88.45	88.30	88.13	87.97	88.16	88.18	88.81	88.54	---	91.18	88.67	89.43
7	88.46	88.31	88.11	87.93	88.20	88.41	88.86	88.75	---	91.01	88.67	89.31
8	88.52	88.26	88.11	87.91	88.20	88.58	89.09	88.67	89.35	90.94	88.66	---
9	88.43	88.21	88.03	87.90	88.21	88.70	89.08	88.78	89.69	90.85	88.68	---
10	88.41	88.25	88.04	87.92	88.20	88.56	88.83	89.02	89.87	90.66	88.68	89.09
11	88.35	88.17	88.10	---	88.17	88.61	88.90	89.10	90.22	90.72	88.76	89.03
12	88.32	88.15	87.82	87.92	88.16	88.70	88.93	88.96	90.77	90.71	88.86	89.02
13	88.35	88.27	88.00	87.89	88.12	88.84	88.94	89.03	---	90.53	88.89	88.89
14	88.03	88.19	88.04	87.78	88.18	88.85	89.17	89.15	---	90.33	88.86	88.79
15	87.92	88.15	88.12	87.74	88.24	88.78	88.95	89.09	---	90.20	88.86	88.70
16	87.86	88.15	88.12	87.69	88.28	88.77	88.92	89.15	92.01	---	88.90	88.68
17	87.72	---	88.11	87.64	88.29	88.70	89.00	89.22	92.05	89.62	88.89	88.66
18	87.63	---	88.14	87.62	88.29	88.60	89.14	89.23	91.91	89.64	88.93	88.60
19	87.70	---	88.12	87.71	88.26	88.56	88.90	89.39	92.08	89.47	---	88.51
20	87.65	---	87.98	87.74	88.31	88.52	88.82	89.45	92.39	89.26	89.38	---
21	87.85	---	88.17	---	88.29	88.45	88.75	89.42	92.45	89.13	89.84	---
22	87.66	---	88.12	87.79	88.25	88.39	88.75	89.53	---	88.98	90.34	---
23	87.79	---	88.08	87.78	88.29	88.38	88.66	89.52	---	88.92	90.52	88.48
24	87.75	---	88.04	87.86	88.30	88.14	88.75	89.51	92.20	88.96	90.41	88.53
25	87.73	---	88.09	87.99	88.26	88.27	88.56	89.53	92.09	89.10	90.39	88.62
26	87.68	---	88.10	88.17	88.23	88.36	88.48	89.54	91.89	89.19	90.34	88.62
27	87.71	---	88.15	88.19	88.25	88.50	88.59	89.49	91.85	89.15	90.21	88.66
28	87.69	---	88.13	88.13	88.18	88.45	88.62	89.42	---	89.23	---	88.80
29	87.55	---	88.09	88.14	---	---	88.59	89.32	---	89.21	---	88.71
30	88.17	---	87.93	88.14	---	88.41	88.55	89.24	91.92	89.13	89.77	88.68
31	88.07	---	---	88.13	---	88.67	---	89.20	---	89.10	89.65	---
MEAN	88.08	---	---	---	88.21	---	88.83	89.10	---	---	---	---
MAX	88.82	---	---	---	88.31	---	89.17	89.54	---	---	---	---
MIN	87.55	---	---	---	88.12	---	88.48	88.50	---	---	---	---

06470878 JAMES RIVER AT NORTH DAKOTA-SOUTH DAKOTA STATE LINE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2002 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR													
06...	1200	232	9.5	8.6	527	516	13.0	8.0	39.3	19.1	7.80	1	35.7
AUG													
24...	1130	582	8.0	8.6	1,240	969	20.0	21.5	63.1	41.0	14.2	3	129

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR													
06...	29	139	17.3	.12	<2.00	108	312	195	<50	<1	2.0	18.7	<1
AUG													
24...	45	403	19.2	.19	11.6	284	793	1,260	<50	<1	7.7	65.2	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR												
06...	80	<1	<1	1.4	<10	<1	90	3.36	<1	<1	<1.0	2.2
AUG												
24...	150	<1	<1	2.6	40	<1	50	5.00	8.8	<1	<1.0	2.8

Remark codes used in this table:
< -- Less than.

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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929, 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 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	5.7	4.3	e1.7	e1.7	e2.9	12	7.6	19	282	57	16
2	0.00	12	4.3	e1.6	e1.9	e3.5	12	7.1	20	312	43	15
3	0.00	18	4.3	e1.6	e2.1	e4.0	12	6.5	24	339	39	16
4	0.00	31	4.7	e1.6	e2.6	e6.0	11	5.9	24	265	30	23
5	0.00	42	4.5	e1.6	e3.2	e8.0	12	5.8	23	209	25	24
6	0.00	35	4.3	e1.6	e2.6	e8.2	12	5.3	21	167	22	18
7	0.00	28	4.0	e1.6	e2.2	e7.0	10	5.5	97	141	20	14
8	0.00	23	3.9	e1.5	e2.2	e8.7	8.6	6.4	307	120	18	14
9	0.00	19	4.1	e1.6	e2.4	e12	8.2	9.1	695	103	18	14
10	0.00	18	3.7	e1.5	e2.8	e17	8.6	11	3,550	87	16	12
11	0.00	14	3.5	e1.5	e3.0	e20	9.9	13	3,240	80	17	12
12	0.00	13	3.7	e1.4	e3.0	e28	10	14	2,250	76	18	14
13	0.00	11	3.2	e1.4	e3.0	e34	9.8	24	1,600	66	19	13
14	0.00	9.9	3.2	e1.3	e3.1	e28	8.7	50	1,410	59	20	12
15	0.00	9.4	3.4	e1.2	e3.1	e22	9.7	51	1,290	55	20	10
16	0.00	8.7	3.4	e1.1	e3.0	e20	10	44	1,270	49	19	9.3
17	0.00	8.1	3.4	e1.3	e3.0	e18	10	39	1,240	47	17	8.8
18	0.00	7.6	3.3	e1.4	e2.9	e17	9.8	39	960	43	34	9.4
19	0.00	7.2	2.9	e1.3	e2.8	16	13	40	672	38	39	8.9
20	0.00	6.9	e2.6	e1.4	e2.7	15	13	36	517	37	31	8.3
21	0.00	6.4	e2.5	e1.4	e2.6	15	12	33	531	32	22	7.8
22	0.00	6.2	e2.1	e1.4	e2.6	14	13	33	466	28	19	6.7
23	0.00	6.0	e1.9	e1.4	e2.5	13	12	30	424	35	18	5.8
24	0.00	5.8	e1.7	e1.3	e2.5	13	12	27	365	43	22	5.9
25	0.00	5.6	e1.7	e1.2	e2.4	12	13	25	309	73	34	6.2
26	0.00	5.4	e1.6	e1.1	e2.4	12	11	24	269	54	37	5.8
27	0.00	5.0	e1.5	e1.2	e2.4	11	9.5	22	256	60	32	5.6
28	0.00	4.8	e1.6	e1.4	e2.5	11	8.3	21	211	119	26	5.5
29	0.00	4.6	e1.6	e1.7	---	12	7.6	20	325	112	23	4.5
30	0.00	4.4	e1.7	e1.8	---	13	7.5	21	353	94	21	4.4
31	0.94	---	e1.8	e1.6	---	13	---	21	---	76	18	---
TOTAL	0.94	381.7	94.4	44.7	73.2	434.3	316.2	697.2	22,738	3,301	794	329.9
MEAN	0.03	12.7	3.05	1.44	2.61	14.0	10.5	22.5	758	106	25.6	11.0
MAX	0.94	42	4.7	1.8	3.2	34	13	51	3,550	339	57	24
MIN	0.00	4.4	1.5	1.1	1.7	2.9	7.5	5.3	19	28	16	4.4
AC-FT	1.9	757	187	89	145	861	627	1,380	45,100	6,550	1,570	654

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	2.90	2.25	2.02	0.39	1.00	83.1	109	39.6	34.0	30.9	6.49	3.64
MAX	68.8	50.1	68.1	6.61	12.0	419	840	418	758	446	142	91.1
(WY)	(1999)	(1999)	(1999)	(1999)	(1998)	(1966)	(1997)	(1999)	(2005)	(1962)	(1966)	(1999)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	4,366.24		29,205.54			
ANNUAL MEAN	11.9		80.0		[a]26.3	
HIGHEST ANNUAL MEAN					116	1997
LOWEST ANNUAL MEAN					[b]0.00	1959
HIGHEST DAILY MEAN	316	Mar 31	3,550	Jun 10	5,500	Apr 11, 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	[c]0.00	Oct 1, 1956
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1956
MAXIMUM PEAK FLOW			3,960	Jun 10	[d]5,930	Apr 11, 1969
MAXIMUM PEAK STAGE			14.05	Jun 10	[f]16.19	Mar 29, 1997
ANNUAL RUNOFF (AC-FT)	8,660		57,930		19,080	
10 PERCENT EXCEEDS	36		90		37	
50 PERCENT EXCEEDS	2.3		9.9		0.11	
90 PERCENT EXCEEDS	0.00		1.3		0.00	

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

As the number of streams on which streamflow information is likely to be desired far exceeds the number of streamflow-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than streamflow-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 flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in a table of annual maximum discharge and stage. Discharge measurements made at miscellaneous sites for both low flows and high flows are given in a second table.

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 for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage stations

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					RED RIVER OF THE NORTH BASIN						
05052500	Antelope Creek at Dwight, ND	Lat 46°18'41", Long 96°44'03", in NW$^1/_4$ sec.28, T.133 N., R.48 W., Richland County, Hydrologic Unit 09020105, at bridge on County Road 10, about 0.4 mi north and 0.1 mi east of Dwight.	294	900	2002	07-10-02	[3]27.54	[7]360	04-10-69	[17]43.90	9,000
					2001	04-07-01	39.73	4,100			
					2000	[14]07-07-00	[*,15]27.62	380			
					1999	03-16-99	31.69	[1]230			
					1998	05-17-98	[*]36.38	[*]2,500			
					1997	04-16-97	[*,4]38.30	3,500			
					1996	05-18-96	[*]35.13	[3]1,990			
					1995	03-16-95	[*]34.64	1,500			
					1975						
					1950-73						
					[#]1944-49						
05056017	Mauvais Coulee tributary above Brumba pool near Rock Lake, ND	Lat 48°43'29", Long 99°15'47", in NE$^1/_4$NE$^1/_4$SE$^1/_4$ sec.36, T.161 N., R.67 W., Towner County, Hydrologic Unit 09020201, on State Highway 281, 1 mi west and 4.8 mi south of Rock Lake.	7.1	1,500	2005	[14]03-31-05	43.72	[1]160	[14]03-29-04	[8]45.35	[1]400
					2004	[14]03-29-04	[8]45.35	[1]400	04-05-01	[8]45.69	([18])
					2003	[14]03-23-03	[8]42.30	[1]15			
					2002	06-09-02	43.07	[1]90			
					2001	[14]04-05-01	[8]45.69	[1]100			
					2000	03-27-00	42.56	([12])			
					2000	07-12-00	[16]41.73	[1]8.0			
					1999	03-28-99	46.76	([12])			
					1999	05-12-99	44.44	210			
					1998	03-31-98	43.79	[7]90			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
RED RIVER OF THE NORTH BASIN--Continued											
05056900	Sheyenne River tributary near Cooperstown, ND	Lat 47°27'25", long 98°00'25", in NW1/4NW1/4NW1/4 sec.24, T.146 N., R.58 W., Griggs County, Hydrologic Unit 09020203, on county highway, 1.4 mi north of State Highway 200 and 5 mi east of Cooperstown.	15.2	(**)	2005	06-03-05	1,293.26	430	04-69	1,297.80	1,000
					2004	03-28-04	**1,297.08	[1]920	03-66	1,297.81	(18)
					2003	05-05-03	**1,288.15	62			
					2002	[14]03-31-02	**,[15]1,288.91	[1]20			
					2001	04-07-01	**1,293.03	480			
					2000	06-14-00	**1,290.78	[1]60			
					2000	06-20-00	**1,291.11	(12)			
					1999	03-26-99	**1,291.63	[1]250			
					1999	04-06-99	**1,292.52	(12)			
					1998	03-26-98	**1,291.28	[7]43			
					1997	04-02-97	**1,292.88	[2]250			
					1996	04-10-96	**1,291.50	[1]120			
					1995	03-13-95	**1,293.80	385			
					1973	03-05-73	**1,291.50	5			
					1972	05-27-72	**1,293.35	360			
					1971	03-29-71	**1,293.72	250			
					1970	04-07-70	**1,295.10	700			
					1969	04-69	**1,297.80	1,000			
					1968	06-68	**1,291.68	190			
					1967	05-67	**1,295.20	650			
					1966	03-66	**1,297.81	(12)			
					1966	07-66	**1,292.77	375			
					1965	04-11-65	**1,295.90	700			
					1964	06-64	**1,294.35	354			
					1963	07-11-63	**1,291.95	140			
					1962	04-62	**1,293.94	350			
					1961	03-03-61	**1,291.66	35			
					1960	05-25-60	**1,295.14	445			
					1959	04-59	**1,290.49	49			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					RED RIVER OF THE NORTH BASIN--Continued						
05057100	Baldhill Creek near Binford, ND	Lat 47°33'30", long 98°22'39", in $SE^1/_4SW^1/_4SE^1/_4$ sec.12, T.147 N., R.61 W., Griggs County, Hydrologic Unit 09020203, approximately 1.5 mi west of Binford on County Highway.	12.2	1,465	2005	[14]03-10-05	[8]17.28	([12])	03-28-04	[19]20.00	[1]230
					2005	05-09-05	17.14	50			
					2004	03-28-04	[19]20	[1]230			
					2003	03-20-03	[8]17.00	[1]25			
					2003	[14]08-23-03	17.54	([12])			
					2002	[14]05-10-02	16.96	[1]20			
					2001	04-08-01	17.40	[1]30			
					2000	06-13-00	17.90	86			
					1999	03-29-99	18.58	140			
					1998	03-27-98	17.67	80			
					1997	04-02-97	17.83	90			
					1996	04-18-96	17.28	69			
05059678	Unnamed tributary south of Tower City, ND	Lat 46°53'28", long 97°41'40", in $SE^1/_4SW^1/_4$ sec.36, T.140 N., R.56 W., Barnes County, Hydrologic Unit 09020205, 2 mi southwest of Tower City.	([13])	1,128	2005	06-29-05	41.40	[1]85	[14]04-08-01	43.88	[1]400
					2004	[14]06-02-04	42.88	270			
					2003	05-19-03	41.11	65			
					2003	06-25-03	41.69	([12])			
					2002	[14]07-09-02	40.29	[1]40			
					2001	[14]04-08-01	43.88	[1]400			
					2000	[14]06-20-00	41.83	[*]120			
05060470	Rush River near Hunter, ND	Lat 47°09'07", long 97°20'22", in $SE^1/_4SW^1/_4SW^1/_4$ sec.36, T.143 N., R.53 W., Cass County, Hydrologic Unit 09020204, on county highway, 2 mi south and 5.75 mi west of Hunter.	22.1	1,027	2005	06-14-05	17.93	134	04-07-01	18.73	[1]250
					2004	03-28-04	18.40	[1]180			
					2003	06-25-03	18.65	80			
					2002	07-09-02	15.83	[1]20			
					2001	04-07-01	18.73	[1]250			
					2000	06-20-00	16.91	20			
					1999	03-21-99	17.76	([12])			
					1999	05-10-99	17.73	[*]130			
					1998	06-15-98	16.77	[*]70			
					1997	04-16-97	[1]18.40	220			
					1996	04-12-96	17.28	92			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
RED RIVER OF THE NORTH BASIN--Continued											
05065810	Middle Branch Goose River tributary near Pickert, ND	Lat 47°25'03", long 97°43'46", in $SE^1/_4SE^1/_4$ sec.36, T.146 N., R.56 W., Steele County, Hydrologic Unit 09020109, on county highway 11, 5 mi southeast of Pickert.	(13)	p1,168	2005	06-04-05	15 40.54	1,300	03-28-04	15 42.66	*2,700
					2004	03-28-04	15 42.66	*2,700			
					2003	05-05-03	35.58	135			
					2002	07-11-02	35.81	1 140			
					2001	04-07-01	36.98	310			
					2000	14 06-20-00	*,1 37.10	*,1 350			
					Peaks from location 2.3 miles upstream						
					1999	03-28-99	15.88	(12)			
					1999	03-29-99	14.76	1 80			
					1998	03-98	15.66	(9)			
					1997	03-31-97	15.35	2 60			
					1996	04-09-96	15.72	1 30			
05083580	Middle Branch Forest River tributary near Adams, ND	Lat 48°22'10", long 98°09'00", in $NW^1/_4NW^1/_4NE^1/_4$ sec.6, T.156 N., R.58 W., Walsh County, Hydrologic Unit 09020308, approximately 3 mi south and 3.4 mi west of Adams.	18.4	1,527	2005	06-30-05	43.85	1 200	03-30-04	8 43.21	*270
					2004	03-30-04	8 43.21	*270	06-30-05	8 43.85	(18)
					2003	03-17-03	41.29	1 30			
					2002	08-29-02	41.85	66			
					2001	04-06-01	8 43.04	1 50			
					2000	04-28-00	3 38.01	(9)			
					1999	03-28-99	42.56	(12)			
					1999	04-08-99	42.52	1 100			
05090025	Willow Creek near Hensel, ND	Lat 48°39'50", long 97°38'39", in $SE^1/_4NE^1/_4SE^1/_4$ sec.19, T.160 N., R.54 W., Pembina County, Hydrologic Unit 09020310, approximately 1.8 mi south and 1 mi east of Hensel.	26.5	890	2005	07-02-05	16.90	8 165	14 03-30-04	17.28	*450
					2004	14 03-30-04	17.28	*450			
					2003	03-30-03	14.15	*82			
					2002	14 06-10-02	16.11	*120			
					2001	14 04-07-01	15.66	1 20			
					2001	07-31-01	14.91	1 70			
					2000	04-27-00	3 13.10	<10			
					1999	03-29-99	15.85	*250			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
RED RIVER OF THE NORTH BASIN--Continued											
05099340	Unnamed tributary near Langdon, ND	Lat 48°41'46", long 98°28'13", in $SW^1/_4SW^1/_4NW^1/_4$ sec.12, T.160 N., R.61 W., Cavalier County, Hydrologic Unit 09020313, on county road, 4.25 mi south and 5 mi west of Langdon.	([13])	1,556	2005	06-29-05	21.13	175	04-97	[5]22.3	[1]370
					2004	04-07-04	[8]22.47	([12])	04-07-04	[8]22.47	([18])
					2004	04-08-04	[8]21.61	[1]200			
					2003	03-16-03	19.10	([12])			
					2003	03-31-03	17.72	*17			
					2002	[14]06-09-02	19.39	[1]100			
					2001	[14]04-08-01	21.06	*170			
					2000	08-29-00	[3]17.39	([12])			
					2000	([9])	([9])	<10			
					1999	03-28-99	20.11	*130			
					1998	03-28-98	21.48	*200			
					1997	04-97	*,[5]22.3	[1]370			
					1996	04-12-96	20.56	*150			
05100450	Tongue River near Osnabrock, ND	Lat 48°43'25", long 98°08'46", in $SE^1/_4NE^1/_4SE^1/_4$ sec.33, T.161 N., R.58 W., Cavalier County, Hydrologic Unit 09020313, approximately 3.5 mi north of Osnabrock.	([13])	1,585	2005	[14]06-30-05	16.07	160	07-09-02	17.17	[1]200
					2005	04-02-05	[8]17.18	([12])	[14]04-08-01	[8]18.51	([18])
					2004	04-06-04	[8]18.04	160			
					2003	05-19-03	15.00	45			
					2002	[14]07-09-02	17.17	[1]200			
					2001	[14]04-08-01	18.51	([12])			
					2001	[14]04-13-01	16.00	135			
					2000	02-28-00	14.02	<10			
					1999	03-30-99	16.08	145			
					1998	04-04-98	16.07	[1]150			
					1997	04-19-97	[8]17.15	([12])			
					1997	04-22-97	[8]16.13	[1]110			
					1996	04-18-96	15.90	123			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
RED RIVER OF THE NORTH BASIN--Continued											
05113520	Long Creek tributary near Crosby, ND	Lat 48°50'11", long 103°19'19", on north line sec.30, T.162 N., R.97 W., Divide County, Hydrologic Unit 09010001, 0.5 mi west of State Highway 42 and 5 mi south of Crosby.	0.40	2,006	2005	03-05-05	[8]4.77	([12])	06-69	7.15	65
					2005	06-08-05	4.76	26			
					2004	03-30-04	4.44	19			
					2003	03-16-03	[8]5.36	[1]30			
					2002	03-27-02	3.86	6.3			
					2001	03-20-01	4.96	30			
					2000	07-07-00	4.20	[1]14			
					1999	03-26-99	[8]6.17	[2]50			
					1998	03-27-98	4.80	26			
					1997	03-27-97	6.00	58			
					1996	02-09-96	4.29	16			
					1995	02-21-95	*,[1]4.30	*16			
					1960-73						
05116100	Souris River tributary near Burlington, ND	Lat 48°18'04", long 101°25'13", in $SW^1/_4$ sec.25, T.156 N., R.84 W., Ward County, Hydrologic Unit 09010001, at culvert on county highway, 1.8 mi north of Burlington.	0.13	1,590	2005	06-29-05	6.83	50	03-25-97	8.22	[1]67
					2004	([9])	*([10])	<2.0			
					2003	([9])	*([10])	*<2.0			
					2002	03-28-02	3.40	[1]0.5			
					2001	03-18-01	4.92	[1]20			
					2000	07-05-00	([10])	<2.0			
					1999	03-16-99	4.96	[1]20			
					1998	([9])	([10])	([9])			
					1997	03-25-97	8.22	[1]67			
					1996	03-15-96	4.76	18			
					1995	03-11-95	3.74	*5.5			
05116135	Tasker Coulee tributary near Kenaston, ND	Lat 48°37'59", long 102°07'30", in $NE^1/_4NE^1/_4$ sec.2, T.159 N., R.89 W., Ward County, Hydrologic Unit 09010002, at culvert on gravel road 1.5 mi northwest of Kenaston.	4.62	715	2005	03-28-05	[8]1,293.02	[1]60	04-10-96	1,295.70	450
					2004	06-10-04	1,291.89	40			
					2003	03-15-03	1,293.27	[1]100			
					2002	03-27-02	[1]1,291.36	[1]2			
					2001	03-18-01	([9])	<1			
					2000	05-12-00	([9])	[1]3			
					1999	07-15-99	([13])	([13])			
					1998	06-17-98	1,292.30	*120			
					1997	03-27-97	[2]1,295.00	440			
					1996	04-10-96	1,295.70	450			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
RED RIVER OF THE NORTH BASIN--Continued											
05119410	Bonnes Coulee near Velva, ND	Lat 48°03'30", long 100°57'00", in $NE^1/_4SW^1/_4$ sec.21, T.153 N., R.80 W., McHenry County, Hydrologic Unit 09010001, at culvert on U.S. Highway 52, 0.5 mi west of Velva.	53.0	[24]1,495	1965 1971-73 1976-77 1987-2005	06-30-05	6.22	115	07-27-93	[17]11.71	[1]1,000
05120180	Wintering River tributary near Kongsberg, ND	Lat 47°51'45", long 100°45'33", in $NE^1/_4NE^1/_4NE^1/_4$ sec.34, T.151 N., R.79 W., McHenry County, Hydrologic Unit 09010003, at culvert on gravel road 1 mi north and 1.9 mi east of Kongsberg.	1.54	1,729	2005 2005 2004 2003 2002 2001 2000 1999 1998	03-28-05 06-27-05 03-24-04 03-23-03 06-09-02 [14]03-29-01 08-03-00 06-14-99 07-05-98	[8]8.64 8.07 8.34 [22]8.41 9.48 8.60 9.01 11.18 10.42	([12]) 4 [*]9 [*,1]10 [*,1]47 [*,1]16 [*,1]30 [1]100 [1]80	06-14-99	11.18	[1]100
05123300	Oak Creek tributary near Bottineau, ND	Lat 48°49'14", long 100°24'38", in $SW^1/_4SW^1/_4SE^1/_4$ sec.29, T.162 N., R.75 W., Bottineau County, Hydrologic Unit 09010004, on State Highway 5, 1.5 mi east of Bottineau.	3.10	1,620	2005 2005 2004 2004 2003 2003 2002 2001 2000 1999 1999 1998 1997 1996 1995 1955 1959-73	03-28-05 06-29-05 03-31-04 06-16-04 03-23-03 05-09-03 06-09-02 03-07-01 [14]03-06-00 03-31-99 07-16-99 08-03-98 03-28-97 04-96 03-15-95	[8]11.79 11.00 9.62 [8]9.91 10.79 9.91 10.77 10.83 9.88 11.51 11.28 10.75 13.67 10.81 11.27	([12]) [1]220 [1]25 ([12]) ([12]) 100 190 [1]200 [1]100 ([12]) 245 110 510 [2]<10 [2]5	07-06-55	16.52	851

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					MISSOURI RIVER BASIN						
06332150	White Earth River tributary near White Earth, ND	Lat 48°19'55", long 102°45'10", in $S^1/_2$ sec.15, T.156 N., R.94 W., Mountrail County, Hydrologic Unit 10110101, at culvert on U.S. Highway 2, 3 mi south of White Earth.	0.32	2,050	2005	06-08-05	6.06	30	06-05-63	8.40	107
					2004	03-31-04	6.91	58			
					2003	08-09-03	6.44	[1]45			
					2002	06-22-02	7.03	[1]60			
					2001	[14]03-17-01	6.70	[1]55			
					2000	[14]06-13-00	6.00	[1]32			
					1999	03-18-99	7.79	([12])			
					1999	07-22-99	6.04	33			
					1998	03-06-98	6.71	37			
					1997	03-27-97	5.63	17			
					1996	05-17-96	7.30	55			
					1995	03-22-95	5.96	*27			
					1960-73						
06336300	Little Missouri River tributary near Medora, ND	Lat 46°57'05", long 103°30'20", in $SE^1/_4$ sec.11, T.140 N., R.102 W., Billings County, Hydrologic Unit 10110203, at Culvert on Theodore Roosevelt National Park highway, 3 mi north of Medora.	0.32	2,260	2005	([9])	([10])	[23]1	06-20-60	10.90	200
					2004	03-10-04	[8]3.75	<9			
					2003	03-17-03	3.62	[1]7			
					2002	03-27-02	3.00	[1]0.3			
					2001	[14]03-13-01	([9])	[1]5			
					2000	[14]02-22-00	2.88	[1]2.3			
					1999	02-24-99	3.49	*6.5			
					1998	03-26-98	3.31	*4.8			
					1997	*08-28-97	*4.34	*24			
					1996	03-12-96	3.85	12			
					1995	([9])	([9])	0			
					1955-73						
06337080	Cherry Creek tributary near Arnegard, ND	Lat 47°47'49", long 103°22'08", in $SE^1/_4SE^1/_4NE^1/_4$ sec.20, T.150 N., R.99 W., McKenzie County, Hydrologic Unit 10110205, at culverts 4 mi west and 0.5 mi south of Watford City.	*13.1	1,130	2005	03-27-05	996.63	[1]60	03-18-03	1,000.90	[1]400
					2004	03-28-04	996.17	41			
					2003	03-18-03	1,000.90	[1]400			
					2002	04-13-02	996.48	[1]60			
					2001	[14]03-13-01	998.38	*180			
					2000	([9])	([10])	0			
					1999	03-15-99	999.62	[1]285			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					MISSOURI RIVER BASIN--Continued						
06337900	Snake Creek tributary near Garrison, ND	Lat 47°37'56", long 101°21'06", on south line sec.14, T.148 N., R.84 W., McLean County, Hydrologic Unit 10110101, at culvert on county highway, 1 mi south of State Highway 37 and 3 mi southeast of Garrison.	1.22	1,864	2005	2005	([10])	[23]1.7	06-07-99	7.32	[1]150
					2004	03-19-04	[8]4.21	<10			
					2003	[14]03-23-03	3.99	30			
					2002	([9])	([9])	0			
					2001	03-13-01	4.56	[1]8			
					2000	[14]06-14-00	3.73	[1]28			
					1999	06-07-99	7.32	[1]150			
					1998	06-19-98	3.03	15			
					1997	07-11-97	4.33	45			
					1996	04-11-96	*3.61	*,[1]28			
					1995	02-22-95	*3.03	*,[1]12			
06339890	North Creek near Werner, ND	Lat 47°24'37", long 102°30'10", in $NE^1/_4SE^1/_4NE^1/_4$ sec.3, T.145 N., R.93 W., Dunn County, Hydrologic Unit 10130201, at box culverts 3.5 mi north and 5.5 mi east of Dunn Center.	17.6	1,077	2005	03-27-05	994.55	45	[14]03-13-01	996.31	[1]150
					2004	03-28-04	[8]992.04	<0.3			
					2003	03-15-03	[8]993.67	15			
					2002	03-27-02	994.56	57			
					2001	[14]03-13-01	996.31	[1]150			
					2000	[14]02-24-00	993.79	*25			
					1999	03-16-99	995.56	*100			
06343000	Heart River near South Heart, ND	Lat 46°51'56", long 102°56'53", in $NE^1/_4SE^1/_4SW^1/_4$ sec.8, T.139 N., R.97 W., Stark County, Hydrologic Unit 10130202, on left bank 1.7 mi downstream from North Creek, 2 mi east of South Heart, and 5.5 mi upstream from Edward Arthur Patterson Lake.	311	([13])	#1947-70 1971-73 #1978-84 1985-2005	07-01-05	8.48	594	05-09-70	22.77	8,080

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
MISSOURI RIVER BASIN--Continued											
06347090	Tavis Creek near Glen Ullin, ND	Lat 46°47'57", long 101°51'26", in $NW^1/_4SE^1/_4NW^1/_4$ sec.1, T.138 N., R.89 W., Morton County, Hydrologic Unit 10130203, at culvert on State Highway 49, 1.5 mi southwest of Glen Ullin.	[4]10	2,086	2005	[20]06-29-05	5.72	14	03-17-03	8.78	[*,1]60
					2004	03-19-04	[8]10.10	12	03-19-04	[8]10.10	([18])
					2004	03-25-04	7.01	[*]33			
					2003	03-17-03	8.78	[*,1]60			
					2002	[14]03-28-02	([9])	[1]15			
					2001	07-27-01	8.26	[*,1]51			
					2000	02-29-00	([9])	5.0			
06349083	Southeast Branch Little Heart River at St. Anthony, ND	Lat 46°37'12", long 100°54'12", in $SW^1/_4SW^1/_4$ sec.5, T.136 N., R.81 W., Morton County, Hydrologic Unit 10130102, at culvert on State Highway 6, 0.75 mi northwest of St. Anthony.	[4]40.2	80	2005	04-12-05	1,692.21	[21]0.5	03-22-01	1,693.43	400
					2004	03-09-04	[8]1,692.53	([12])	03-22-97	[6]1,693.5	([18])
					2004	03-10-04	[8]1,692.28	46			
					2003	[14]03-23-03	[1]1,691.90	[1]5			
					2002	[14]03-28-02	1,691.94	[1]50			
					2001	03-22-01	1,693.43	400			
					2000	02-26-00	1,692.51	254			
					1999	06-26-99	1,692.23	215			
					1998	08-22-98	1,692.69	[*]280			
					1997	03-22-97	[*,6]1,693.5	[7]388			
					1996	03-12-96	1,692.03	88			
06351630	Middle Fork Cedar Creek tributary near Amidon, ND	Lat 46°20'17", long 103°17'35", in $SW^1/_4SE^1/_4SW^1/_4$ sec.7, T.133 N., R.100 W., Slope County, Hydrologic Unit 10130205, at culvert 1 mi east and 10 mi south of Amidon.	1.70	2,963	2005	05-18-05	11.19	17	08-12-99	13.03	70
					2004	03-18-04	[8]15.40	([12])	03-18-04	[8]15.40	([18])
					2004	03-25-04	11.12	[1]14			
					2003	03-18-03	12.97	[1]60			
					2002	03-27-02	10.68	[1]3.7			
					2001	03-13-01	[8]15.19	[1]30			
					2000	09-22-00	10.81	7.0			
					1999	02-26-99	13.28	([12])			
					1999	08-12-99	13.03	70			
					1998	06-19-98	11.85	35			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					MISSOURI RIVER BASIN--Continued						
06352380	Timber Creek tributary near New Leipzig, ND	Lat 46°12'35", long 101°57'26", in $NW^1/_4SW^1/_4$ sec.33 T.132 N., R.90 W., Grant County, Hydrologic Unit 10130205, at culvert on State Highway 49, 11.75 mi south of New Leipzig.	[4]2.8	920	2005	([9])	([10])	[23]5	07-01-97	1,597.02	740
					2004	03-09-04	[8]1,594.38	[23]80			
					2003	([9])	([10])	0			
					2002	[14]03-28-02	1,593.03	[1]70			
					2001	[14]03-14-01	1,593.18	[1]80			
					2000	([9])	([10])	0			
					1999	02-10-99	1,593.31	[1]100			
					1998	08-22-98	1,593.12	150			
					1997	07-01-97	1,597.02	740			
					1996	03-12-96	1,592.56	[1]10			
06354450	Beaver Creek tributary near Linton, ND	Lat 46°14'48", long 100°04'47", in $SW^1/_4SE^1/_4SW^1/_4$ sec.16, T.132 N., R.75 W., Emmons County, Hydrologic Unit 10130104, at culverts on State Highway 13, 7.25 mi east of Linton.	4.07	1,807	2005	07-23-05	5.00	[1]9	07-04-99	6.44	*54
					2004	03-09-04	[8]6.37	([12])	[14]03-17-03	[8]7.60	([18])
					2004	03-11-04	5.15	*14			
					2003	[14]03-17-03	[8]7.60	[1]10			
					2002	[14]03-28-02	5.25	*5			
					2001	06-10-01	5.66	*31			
					2000	03-08-00	5.40	*6			
					1999	07-04-99	6.44	*54			
					1998	06-26-98	5.47	*23			
06469100	Pipestem Creek tributary near Heaton, ND	Lat 47°27'27", long 99°34'58", in $NE^1/_4NW^1/_4NW^1/_4$ sec.22, T.146 N., R.70 W., Wells County, Hydrologic Unit 10160002, at culverts on State Highway 52, 1.5 mi south and 1.8 mi west of Heaton.	3.59	1,708	2005	[14]06-30-05	7.67	81	06-14-00	12.05	780
					2004	03-24-04	8.79	[1]250			
					2003	03-16-03	8.18	([12])			
					2003	03-24-03	7.83	[1]50			
					2002	04-07-02	7.01	([12])			
					2002	04-12-02	6.46	22			
					2001	[14]06-13-01	7.91	148			
					2000	06-14-00	12.05	780			
					1999	03-19-99	9.01	([12])			
					1999	06-04-99	8.60	*250			
					1998	03-26-98	*,[11]7.30	*80			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
					MISSOURI RIVER BASIN--Continued						
06470200	Beaver Creek tributary near Eldridge, ND	Lat 46°52'15", long 98°55'30", on east line sec.7, T.139 N., R. 65 W., Stutsman County, Hydrologic Unit 10160003, at culvert on county highway, 4 mi southwest of Eldridge.	0.19	1,588	2005	06-08-05	2.62	12	1973	5.88	49
					2004	03-25-04	1.89	[1]4.0	08-31-97	6.06	([18])
					2003	05-13-03	1.94	[1]4.5			
					2002	04-10-02	([9])	[1]6.0			
					2001	[14]03-20-01	2.06	*5.5			
					2000	02-28-00	1.73	([12])			
					2000	[14]07-05-00	1.57	[1]1.25			
					1999	03-15-99	3.13	17.5			
					1998	03-28-98	2.57	*11.5			
					1997	08-31-97	[8]6.06	[1]40			
					1996	03-12-96	5.28	43			
					1995	03-17-95	3.22	20			
					1955-73						
06471100	Maple Creek tributary near Edgeley, ND	Lat 46°25'00", long 98°49'42", in $NE^1/_4SE^1/_4SE^1/_4$ sec.15, T.134 N., R.65 W., LaMoure County, Hydrologic Unit 10160004, at culvert on gravel road 10.25 mi northwest of Edgeley.	[4]5.25	585	2005	06-07-05	1,099.53	75	03-25-97	1,100.73	[1]400
					2004	03-15-04	1,098.53	52	03-27-98	1,101.11	([18])
					2003	[14]06-25-03	1,098.43	44			
					2002	04-06-02	1,097.59	6.2			
					2001	04-01-01	1,098.57	[1]20			
					2000	07-05-00	1,099.93	[1]220			
					1999	05-05-99	1,099.65	175			
					1998	03-27-98	1,101.11	[1]380			
					1997	03-25-97	1,100.73	[1]400			
					1996	03-12-96	1,099.31	*,[1]130			

Annual maximum discharge at crest-stage stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Datum	Water year	Water year maximum			Period of record maximum		
						Date	Gage height (feet)	Discharge (ft^3/s)	Date	Gage height (feet)	Discharge (ft^3/s)
MISSOURI RIVER BASIN--Continued											
06471150	South Fork Maple River tributary near Merricourt, ND	Lat 46°14'57", long 98°42'48", in $NE^1/_4NE^1/_4SW^1/_4$ sec.17, T.132 N., R.64 W., Dickey County, Hydrologic Unit 10160004, at culvert on gravel road 5.5 mi northeast of Merricourt.	[4]5.5	373	2005	06-07-05	[15]1,203.30	620	06-07-05	[15]1,203.30	620
					2004	[14]03-24-04	1,195.18	34			
					2003	[14]06-25-03	1,195.46	41			
					2002	04-06-02	1,193.48	[1]3.0			
					2001	06-09-01	1,194.60	22			
					2000	[14]02-25-00	1,193.72	[1]6.0			
					1999	05-10-99	1,199.56	[1]140			
					1998	06-27-98	1,195.50	43			
					1997	03-25-97	1,199.71	[1]160			
					1996	03-12-96	1,196.84	[*,1]80			

[#]Operated as a continuous-record gaging station.

[*]Revised from original publication values.

[**]Revised, all elevMations converted to sea level.

[1]Approximately.

[2]Estimated

[3]Observed, may have been higher.

[4]Observed on April 16, 1997, notedM as having been higher.

[5]Estimated, based on observation in July, 1997. A recorded peak of 22.0 feet was obtained from downstream side of culvert on April 19, 1997.

[6]Observed from measurement on March 22, 1997, probably higher during previous 3 days.

[7]Highest measured flow, may have been higher.

[8]Backwater.

[9]Unknown.

[10]Stage did not exceed lowest recording level of gage.

[11]From observed floodmark on March 27, 1998, may have been higher.

[12]Backwater, discharge at time of maximum gage height less than maximum discharge shown for the year.

[13]Not determined.

[14]On or about.

[15]From floodmark.

[16]New culvert installed and original benchmarks destroyed. Gage height may not correspond exactly with gage heights from previous years.

[17]Present datum.

[18]Discharge less than maximum discharge for period of record.

[19]Top of upstream culverts. Culverts noted as being submerged, may have been higher.

[20]Peak occurred sometime in June. June 29 is largest recorded precipitation event.

[21]Less than, backwater from beaver dam.

[22]Recorded, may have been higher.

[23]Less than, no flow observed during the year.

[24]Datum 5 feet higher prior to October 1, 2004.

[p]Present location, datum for site 2.3 miles upstream not determined.

Miscellaneous discharge measurement sites

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 2005

Station number	Station name	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		RED RIVER OF THE NORTH BASIN				
05052000	Wild Rice River near Mantador, ND	Lat 46°10'21", long 97°00'37", on south half of east line of sec.12, T.131 N., R.51 W., Richland County, at county highway bridge 1.5 miles west of Mantador.	1,340	1944-50, 1952-73, 1975	06-22-05	1,670
--	Souris River near Wintering River School	Lat 48°13'31", long 100°32'12", in $SW^1/_4SW^1/_4SW^1/_4$ sec.23, T.155 N., R.77 W., McHenry County, Hydrologic Unit 09010003, at bridge 9 mi southwest of Towner.	--	1997, 2002-2004	05-10-05	101
					07-22-05	355
					08-02-05	275
					08-16-05	196
					08-29-05	194
					09-12-05	78.5
					09-20-05	76.1
05121500	Souris River near Towner, ND	Lat 48°18", long 100°27', in $NE^1/_4$ sec.29, T.156 N., R.76 W., McHenry County, Hydrologic Unit 09010003, at old gaging station site, about 4 mi southwest of Towner.	13,090	1935-40, 2002-2004	05-10-05	249
					07-22-05	389
					08-02-05	277
					08-16-05	210
					08-29-05	198
					09-12-05	71.8
					09-20-05	69.6
--	Souris River at Cliff Hanretty farm near Towner, ND	Lat 48°23'27", long 100°23'45", in $NW^1/_4NW^1/_4SE^1/_4$ sec.19, T.157 N., R.75 W., McHenry County, Hydrologic Unit 09010003, at bridge about 3.5 mi north of Towner.	--	2002-2004	05-10-05	253
					07-22-05	414
					08-03-05	294
					08-16-05	207
					08-29-05	203
					09-12-05	76.6
					09-20-05	75.2
--	Outlet of Sharpe Lake	Lat 49°01'22", long 100°20'37", in $SE^1/_4NW^1/_4$ sec.27, T.1 N., R.22 E., Hydrologic Unit 09010004, downstream of Sharpe Lake outlet at bridge 20 mi southeast of Deloraine, Canada, on Highway 450.	--	--	07-21-05	89.0
					07-25-05	76.9
					07-28-05	65.5
					08-03-05	35.9
					08-08-05	[e]27.0
					08-15-05	17.1
--	Outlet of Dromore Lake	Lat 49°00'09", long 100°22'02", in $SW^1/_4NW^1/_4$ sec.33, T.1 N., R.22 E., Hydrologic Unit 09010004, at Lake Dromore outlet 22.5 mi southeast of Deloraine, Canada.	--	--	07-21-05	138
					07-25-05	102
					07-28-05	94.0
					08-08-05	28.7
					08-15-05	31.5
--	Outlet of School Section Lake	Lat 48°59'11", long 100°20'09", in $NE^1/_4SE^1/_4$ sec.35, T.164 N., R.75 W., Bottineau County, Hydrologic Unit 09010004, at two culverts 0.5 mi north of Lake Metigoshe State Park entrance.	--	--	08-03-05	97.6
					08-09-05	33.0
					08-10-05	26.7
					08-15-05	8.60
					08-17-05	4.67

Discharge measurements made at miscellaneous sites during water year 2005--Continued

Station number	Station name	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		RED RIVER OF THE NORTH BASIN—Continued				
05123100	Outlet of Lake Metigoshe	Lat 48°57'56", long 100°21'47", in $SE^1/_4SE^1/_4$ sec.3, T.163 N., R.75 W., Bottineau County, Hydrologic Unit 09010004, at outlet of Lake Metigoshe and 10 mi northeast of Bottineau.	59	1931-32 1953-87 1992-96	07-06-05 07-12-05 07-21-05 07-25-05 07-28-05 08-09-05 08-17-05 08-30-05	248 285 247 212 187 e134 43.9 22.2
--	Oak Creek about 1 mi south of Highway 43	Lat 48°55'42", long 100°22'52", in $SE^1/_4NE^1/_4$ sec.21, T.163 N., R.75 W., Bottineau County, Hydrologic Unit 09010004, at bridge about 6.5 mi northwest of Bottineau on Lake Road.	--	--	07-21-05 07-25-05 07-28-05 08-09-05 08-16-05 08-30-05 09-12-05	260 217 202 e132 73.7 e36 6.56
--	Oak Creek at Bottineau	Lat 48°50'06", long 100°26'20", in $NW^1/_4NE^1/_4$ sec.30, T.162 N., R.75 W., Bottineau County, Hydrologic Unit 09010004, at box culvert on north side of Bottineau.	--	--	07-06-05 07-21-05 07-25-05 07-29-05 08-09-05 08-16-05 08-30-05 09-12-05	330 261 210 231 e173 108 e35 13.2
--	Oak Creek 2 mi east of Gardena	Lat 48°42'16", long 100°27'00", in $SE^1/_4SE^1/_4$ sec.3, T.160 N., R.76 W., Bottineau County, Hydrologic Unit 09010004, at bridge 2 mi east of Gardena.	--	--	07-21-05 07-25-05 07-28-05 08-17-05 08-30-05 09-13-05	314 249 233 112 e29 15.0

e Estimated

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

05119410 BONNES COULEE NEAR VELVA, ND (LAT 48 03 30N LONG 100 57 00W)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR 13...	0840	4.9	8.4	7.9	1,920	1,940	8.5	10.0	102	55.3	11.2	5	271

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR 13...	54	404	15.3	.18	8.86	767	1,470	19.6	<50	<1	2.9	28.1	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR 13...	200	<1	<1	4.0	190	<1	110	5.99	1.3	<1	<1.0	4.3

Remark codes used in this table:
< -- Less than.

06343000 HEART RIVER NEAR SOUTH HEART, ND (LAT 46 51 56N LONG 102 56 53W)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
APR 21...	1345	4.3	8.4	7.5	2,080	2,040	18.1	11.0	46.0	27.0	7.40	11	393

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
APR 21...	78	429	15.3	.49	9.57	711	1,460	17.2	<50	<1	4.5	61.7	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Thallium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
APR 21...	430	<1	1	6.7	20	<1	20	4.54	<1	<1	<1.0	6.9

Remark codes used in this table:
< -- Less than.

480552098145300 McHUGH SLOUGH NEAR LAKOTA, ND

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
19...	0845	2.0	.50	8.3	1,480	390	54.7	60.8	27.7	4	175	47	407
FEB													
23...	0835	1.8	1.0	8.2	2,270	640	92.8	100	43.5	5	289	47	637
MAY													
24...	1000	2.5	1.0	8.6	1,480	380	54.4	59.5	27.6	4	174	48	426
SEP													
06...	1700	2.0	.50	8.9	1,550	340	32.2	63.2	31.6	5	209	54	380

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
OCT													
19...	53.5	.14	17.6	337	954	3.0	<.04	<.06	<.008	--	.02	.19	19.2d
FEB													
23...	81.6	.22	25.3	546	1,540	4.1	.18	E.05n	<.008	3.9	.08	.23	--
MAY													
24...	50.5	.14	16.7	338	961	2.5	<.04	<.06	<.008	--	<.02	.15	9.7d
SEP													
06...	58.7	.14	25.4	373	997	3.9	<.04	<.06	<.008	--	<.02	.29	E40.0d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)
OCT													
19...	<.1d	--	--	5.9	--	--	--	--	--	--	--	1.97	110
FEB													
23...	--	<50	<1	6.6	81.9	<1	80	<1	2	M	40	<1	--
MAY													
24...	<.1d	<50	<1	3.3	51.5	<1	90	<1	3	1.9	20	<1	--
SEP													
06...	1.4d	<50	<1	7.3	43.6	<1	140	<1	4	4.9	<10	<1	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront-ium, water, fltrd, ug/L (01080)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT									
19...	<10	<.20	2	--	7	--	370	--	--
FEB									
23...	260	--	--	4.65	2	<1	--	<1.0	3.2
MAY									
24...	<10	--	--	3.16	1	<1	--	<1.0	<1
SEP									
06...	<10	--	--	2.20	9	<1	--	<1.0	12.4

Remark codes used in this table:
< -- Less than.
E -- Estimated.
M -- Presence verified but not quantified.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

480552098145300 McHUGH SLOUGH NEAR LAKOTA, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
19...	0835	2.6	1,509.05	--	.00	16.2	210	10	714	4.9	39	8.6	1,480
19...	0836	--	--	--	1.0	--	--	--	--	5.0	--	8.6	1,480
19...	0837	--	--	--	2.0	--	--	--	--	5.0	--	8.6	1,480
19...	0838	--	--	--	2.6	--	--	--	--	5.0	--	8.6	1,480
FEB													
23...	0830	2.2	1,508.95	.70	.80	20.4	80	<5.0	728	8.4	62	--e	2,350
23...	0831	--	--	--	1.3	--	--	--	--	8.0	--	--e	2,330
23...	0832	--	--	--	1.8	--	--	--	--	4.6	--	--e	2,370
23...	0833	--	--	--	2.2	--	--	--	--	3.0	--	--e	2,370
MAY													
24...	0945	2.8	--	--	.70	12.0	210	10	720	8.2	89	8.1	1,530
24...	0946	--	--	--	1.2	--	--	--	--	7.8	--	8.2	1,530
24...	0947	--	--	--	1.7	--	--	--	--	7.7	--	8.2	1,530
24...	0948	--	--	--	2.0	--	--	--	--	7.7	--	8.2	1,530
24...	0949	--	--	--	2.5	--	--	--	--	7.7	--	8.3	1,530
24...	0950	--	--	--	2.8	--	--	--	--	7.6	--	8.3	1,530
SEP													
06...	1654	2.8	1,508.69	--	.00	8.00	30	13	725	10.5	119	8.8	1,510
06...	1655	--	--	--	1.0	--	--	--	--	10.3	--	8.8	1,510
06...	1656	--	--	--	1.5	--	--	--	--	10.3	--	8.7	1,510
06...	1657	--	--	--	2.0	--	--	--	--	10.2	--	8.8	1,510
06...	1658	--	--	--	2.5	--	--	--	--	10.1	--	8.7	1,510

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
19...	4.0	3.1
19...	--	3.1
19...	--	3.1
19...	--	3.1
FEB		
23...	<-5.0	.5
23...	--	1.2
23...	--	2.4
23...	--	2.8
MAY		
24...	14.5	16.5
24...	--	16.5
24...	--	16.5
24...	--	16.5
24...	--	16.5
24...	--	16.5
SEP		
06...	20.0	18.9
06...	--	18.9
06...	--	18.9
06...	--	18.9
06...	--	18.9

Remark codes used in this table:
< -- Less than.

Null value qualifier codes used in this table:
e -- Required equipment not functional/avail

480339098101300 LAKE LARETTA NEAR MICHIGAN, ND

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
18...	1550	7.0	1.0	8.8	2,350	540	62.7	93.5	37.0	6	335	55	364
FEB													
23...	0940	6.5	1.0	8.5	2,660	610	71.7	105	42.4	7	388	56	438
MAY													
24...	0915	6.0	1.0	8.7	2,380	530	61.4	90.5	36.3	6	324	55	383
SEP													
06...	1555	7.0	1.0	8.7	2,440	510	50.8	92.8	39.3	7	354	58	359

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
OCT													
18...	124	--	<2.00	746	1,620	2.2	E.04n	<.06	E.007n	--	.11	.21	E4.8d
FEB													
23...	139	.18	2.02	870	1,880	2.3	.18	E.05n	E.005n	2.1	.15	.21	--
MAY													
24...	120	.12	2.99	749	1,610	1.8	E.03n	E.03n	E.004n	--	E.01n	.20	<.1d
SEP													
06...	126	.14	<2.00	788	1,670	2.1	<.04	<.06	<.008	--	<.02	.14	E6.1d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll-ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)
OCT													
18...	<.1d	--	--	14.1	--	--	--	--	--	--	20	1.83	160
FEB													
23...	--	<50	<1	14.0	61.0	<1	930	<1	1	7.4	50	<1	--
MAY													
24...	<.1d	<50	<1	8.3	40.5	<1	160	<1	3	3.5	20	<1	--
SEP													
06...	<.1d	<50	<1	15.3	48.9	<1	190	<1	<1	4.8	90	<1	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Molyb-denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront-ium, water, fltrd, ug/L (01080)	Thall-ium, water, fltrd, ug/L (01057)	Zinc, water, fltrd, ug/L (01090)
OCT									
18...	<10	<.20	3	--	14	--	490	--	--
FEB									
23...	150	--	--	4.38	2	<1	--	<1.0	2.8
MAY									
24...	<10	--	--	3.78	3	<1	--	<1.0	1.4
SEP									
06...	<10	--	--	3.80	20	<1	--	<1.0	2.0

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

480339098101300 LAKE LARETTA NEAR MICHIGAN, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth of lake, maximum meters (85310)	Elevation, feet above NGVD (72020)	Ice thickness, meters (82131)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT													
18...	1535	7.5	--	--	.00	39.0	240	12	717	6.5	56	9.0	2,350
18...	1536	--	--	--	1.0	--	--	--	--	6.5	--	9.0	2,350
18...	1537	--	--	--	2.0	--	--	--	--	6.5	--	9.0	2,350
18...	1538	--	--	--	3.0	--	--	--	--	6.5	--	9.0	2,340
18...	1539	--	--	--	4.0	--	--	--	--	6.5	--	9.0	2,360
18...	1540	--	--	--	5.0	--	--	--	--	6.5	--	9.0	2,360
18...	1541	--	--	--	6.0	--	--	--	--	6.5	--	9.0	2,360
18...	1542	--	--	--	7.0	--	--	--	--	6.5	--	9.0	2,360
18...	1543	--	--	--	7.5	--	--	--	--	6.2	--	9.0	2,360
FEB													
23...	0930	7.4	--	.70	.80	107	110	5.0	728	8.8	65	8.5	2,730
23...	0931	--	--	--	1.8	--	--	--	--	8.6	--	8.5	2,730
23...	0932	--	--	--	2.8	--	--	--	--	8.6	--	8.5	2,720
23...	0933	--	--	--	3.8	--	--	--	--	8.3	--	8.5	2,700
23...	0934	--	--	--	4.9	--	--	--	--	6.7	--	8.5	2,690
23...	0935	--	--	--	5.8	--	--	--	--	5.8	--	8.4	2,710
23...	0936	--	--	--	6.8	--	--	--	--	4.3	--	8.4	2,740
23...	0937	--	--	--	7.4	--	--	--	--	.9	--	8.3	2,800
MAY													
24...	0900	6.8	--	--	.70	42.0	210	8.0	719	10.4	109	7.7	2,470
24...	0901	--	--	--	1.5	--	--	--	--	10.2	--	7.9	2,470
24...	0902	--	--	--	2.0	--	--	--	--	10.1	--	8.1	2,470
24...	0903	--	--	--	2.5	--	--	--	--	10.0	--	8.1	2,470
24...	0904	--	--	--	3.0	--	--	--	--	9.9	--	8.2	2,470
24...	0905	--	--	--	3.5	--	--	--	--	9.9	--	8.2	2,480
24...	0906	--	--	--	4.0	--	--	--	--	9.8	--	8.2	2,470
24...	0907	--	--	--	4.5	--	--	--	--	9.8	--	8.3	2,470
24...	0908	--	--	--	5.0	--	--	--	--	9.8	--	8.3	2,470
24...	0909	--	--	--	5.5	--	--	--	--	9.7	--	8.3	2,480
24...	0910	--	--	--	6.0	--	--	--	--	9.7	--	8.3	2,470
24...	0911	--	--	--	6.8	--	--	--	--	9.6	--	8.3	2,470
SEP													
06...	1545	8.0	1,447.84	--	.00	25.0	70	15	724	8.0	90	8.5	2,380
06...	1546	--	--	--	1.0	--	--	--	--	7.9	--	8.6	2,380
06...	1547	--	--	--	2.0	--	--	--	--	7.8	--	8.4	2,380
06...	1548	--	--	--	3.0	--	--	--	--	7.7	--	8.4	2,390
06...	1549	--	--	--	4.0	--	--	--	--	7.6	--	8.5	2,390
06...	1550	--	--	--	5.0	--	--	--	--	7.5	--	8.5	2,390
06...	1551	--	--	--	6.0	--	--	--	--	7.4	--	8.5	2,390
06...	1552	--	--	--	7.0	--	--	--	--	6.5	--	8.4	2,370
06...	1553	--	--	--	8.0	--	--	--	--	6.2	--	8.4	2,380

480339098101300 LAKE LARETTA NEAR MICHIGAN, ND—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT		
18...	5.0	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
18...	--	6.6
FEB		
23...	<-5.0	.6
23...	--	.6
23...	--	.7
23...	--	1.0
23...	--	1.7
23...	--	2.0
23...	--	2.6
23...	--	3.1
MAY		
24...	15.5	14.6
24...	--	14.6
24...	--	14.6
24...	--	14.5
24...	--	14.5
24...	--	14.5
24...	--	14.4
24...	--	14.4
24...	--	14.4
24...	--	14.4
24...	--	14.3
24...	--	14.3
SEP		
06...	20.5	18.3
06...	--	18.3
06...	--	18.3
06...	--	18.3
06...	--	18.3
06...	--	18.2
06...	--	18.2
06...	--	18.0
06...	--	17.9

Remark codes used in this table:
< -- Less than.

05055500 SHEYENNE RIVER AT SHEYENNE, ND

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN													
15...	0950	8.1	1,210	62.4	62.0	10.5	4	182	48	386@c	19.6	.2	25.2
AUG													
29...	1110	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
JUN													
15...	344d	939	972	2.1	.09	.12	.13	.015	2.0	2.3	.25	.43	--
AUG													
29...	--	--	--	--	--	--	--	--	--	--	--	--	2.3d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN			
15...	--	65	67.3
AUG			
29...	<.1d	--	--

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

474740098351500 SHEYENNE RIVER NO. 3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 15...	1230	8.1	1,170	69.2	60.7	9.81	3	164	45	409@c	17.7	.3	25.9
AUG 29...	0950	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
JUN 15...	300	896	915	2.0	.07	.31	.33	.023	1.9	2.3	.22	.38	--
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	3.3d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)
JUN 15...	--	36	69.5	<.016	.08	<.02	<.006	E.020mc	<.08mc	<.032	<.008	<.02mc	<.006
AUG 29...	<.1d	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)
JUN 15...	<.028	<.005	<.02	<.022	<.04mc	<.005	111	.040	<.050mc	<.02	<.010	<.022	<.02
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
JUN 15...	E.02	<.004	<.018	<.02	<.041mc	<.016	<.020mc	<.02	<.032mc	<.04mc	<.04	<.005	<.006
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

474740098351500 SHEYENNE RIVER NO. 3—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)
JUN 15...	<.02	<.018	<.01	<.03	<.003	<.012	<.005	<.04	<.03	<.009	<.04	<.01	<.02
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imazaquin, water, fltrd, ug/L (50356)
JUN 15...	<.01	<.004	<.009	<.005	<.02	<.029mc	<.013	<.024	<.016mc	<.04	<.02	<.003	<.04mc
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metalaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)
JUN 15...	E.01t	<.020	<.004	<.01	<.035	<.027	E.29	<.01	<.01	<.010	<.020	<.015	<.006
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chlorophenyl)-N'-methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
JUN 15...	<.006	<.03mc	<.003	<.04	<.007	<.01	<.04mc	<.02	<.01	<.03	<.003	<.010	<.004
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Simazine, water, fltrd, ug/L (04035)
JUN 15...	<.022	<.011	<.03	<.01	<.004	<.025	<.011	<.02	<.030	<.01	<.008	<.02	<.005
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	--

474740098351500 SHEYENNE RIVER NO. 3—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JUN									
15...	<.038	<.02	<.034mc	<.016	<.02	<.010	<.006	<.03	<.009
AUG									
29...	--	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
t -- Below the long-term MDL

474840098502700 WL506415B

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1315	8.7	3,620	30.4d	114d	52.4d	12	620d	69	657@c	670d	.1	13.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)
JUN 09...	454d	2,350	2,500	2.6	.12	.13	.15	.026	2.5	2.8	.19	.24	2.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	2.3	<18d	2.5d

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

474844098363800 BATTLE LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1040	8.9	346	18.3	31.6	7.70	.4	10.9	11	191@c	4.47	.2	22.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 02...	4.9	215	223	3.3	<.04	<.06	<.008	<.02	.16	80.8d	<.1d	13	18.3

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

474940098543300 150-065-12ADA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 26...	1200	8.2	583	89.2	23.9	7.39	.4	15.0	9	275@c	6.45	.3	24.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)
APR 26...	42.5	384	402	.99	.14	1.95	1.97	.022	.86	3.0	.20	.27	2.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 26...	3.8	6	58	E.02n	<.8	49	.16	233	.7

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

474951098545800 150-065-12ABA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 26...	1125	8.2	560	80.7	25.6	3.62	.5	20.5	13	283@c	4.88	.3	23.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 26...	40.6	369	386	.42	<.04	<.06	<.008	E.01n	.04	1.2	1.6	E1n	87

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 26...	<.04	<.8	24	.11	114	.7

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

474953098470600 WETLAND 14

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1435	9.0	3,610	38.5d	72.2d	71.2d	15	679d	75	597@c	342d	.2	13.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 08...	887d	2,460	2,570	2.3	E.02n	<.06	<.008	.10	.18	2.3d	<.1d	26d	21.7d

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

474956098390500 WETLAND 28

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1355	8.8	562	28.7	61.4	4.88	.4	15.3	9	337@c	2.27	.3	15.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 02...	.8	331	378	1.7	E.02n	<.06	<.008	<.02	.05	--r	--r	22	6.3

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

Null value qualifier codes used in this table:
r -- Sample ruined in preparation

474956099124200 150-067-10AAA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1020	7.9	616	71.6	27.9	5.65	.9	35.5	20	270@c	9.35	.2	18.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	68.8	400	419	.49	<.04	<.06	<.008	.04	.07	.8	1.9	<2	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	30	<.06	19.7	.4

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@-- Holding time exceeded
c -- See laboratory comment

474957098540500 150-064-07BABA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 26...	1440	7.6	542	80.4c	21.9	8.09c	.3	13.1	9	258@c	5.17	.3	23.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
APR 26...	38.6	351	385	3.5	.32	.69	E.006n	3.2	4.2	.23	.66	15.2	4.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 26...	7	69	.05	E.6n	28	.85	160c	.5

Remark codes used in this table:
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475001098450600 WETLAND 27

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1400	8.6	977	31.3	78.5	21.9	2	88.3	31	578@c	9.63	.2	22.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 08...	5.6	604	678	3.0	E.02n	<.06	<.008	<.02	.09	9.5d	<.1d	E4n	8.9

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475001098560300 SHEYENNE RIVER NO. 2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 15...	1030	8.1	1,230	67.3	63.3	10.4	4	178	47	396@c	18.1	.2	25.4
AUG 29...	1050	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
JUN 15...	346d	948	977	2.3	.09	.15	.17	.022	2.2	2.5	.24	.46	--
AUG 29...	--	--	--	--	--	--	--	--	--	--	--	--	3.4d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 15...	--	43	104
AUG 29...	<.1d	--	--

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475012098475200 HORSESHOE LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1320	9.1	4,090	26.3d	32.8d	75.5d	29	954d	87	766@c	325d	.3	22.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)
AUG 08...	1120d	3,020	3,100	3.3	.05	<.06	<.008	3.2	.04	.20	23.9d	<.1d	109d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Manganese, water, fltrd, ug/L (01056)
AUG 08...	16.1d

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@-- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475016098312900 150-061-06CBCB1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1340	8.2	935	71.3	73.3	14.2	.8	41.8	15	430@c	9.22	.3	17.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	110	595	666	2.6	E.03n	<.06	<.008	<.02	.19	10.6	23.7	E2n	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	17	<.06	98.5	.8

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475031098440500 WETLAND 25

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1440	8.3	355	41.9	19.8	4.12	.3	9.61	10	192@c	1.41	.2	16.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 02...	3.5	212	230	1.4	<.04	<.06	<.008	<.02	.11	9.2d	1.2d	13	3.2

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475034098505700 WL506404A

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1350	8.8	887	24.9	100	20.3	1	59.5	21	592@c	5.93	.3	6.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	4.7	577	631	2.3	E.03n	<.06	<.008	<.02	.05	6.2d	15.4d	E4n	3.4

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475110099061000 151-066-34CBCB

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1110	8.2	2,110	156d	148d	12.9d	3	192d	29	609@c	33.9d	.4	23.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	660d	1,590	1,720	1.7	E.02n	<.06	<.008	.17	.20	1.0	1.5	4	39

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	20d	E.05n	19.9d	1.7

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475126099072800 151-066-33BCBC

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 26...	1510	8.0	2,130	160d	150d	12.3d	3	184d	28	622@c	33.5d	.4	28.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 26...	669d	1,610	1,750	1.6	E.03n	E.04n	<.008	.09	.11	2.9	4.9	4	36

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 26...	<.04	<.8	55d	<.06	24.3d	1.7

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475147098374900 WETLAND B1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1310	9.4	2,210	21.3d	45.0d	50.4d	13	473d	77	929@c	31.0d	.2	25.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 02...	283d	1,490	1,590	5.5d	E.03n	<.06	<.008	.76	1.05	76.3d	9.6d	<18d	6.3d

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475159098415900 SHIN BONE LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1210	9.1	1,680	13.8	41.3	50.6d	11	349	74	807@c	142d	.2	11.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	29.9d	1,120	1,240	4.4	<.04	<.06	<.008	<.02	.24	75.2	82.6	12	5.8

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475234099013800 151-065-30ABBB

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1145	7.9	664	86.2	35.8	4.99	.5	23.6	12	277@c	6.38	.3	3.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	108	435	458	.63	<.04	<.06	<.008	<.02	<.04	1.2	.5	<2	29

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	11	<.06	4.1	.7

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@-- Holding time exceeded
c -- See laboratory comment

475237098374300 WETLAND 21

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1220	8.1	627	42.2	35.9	7.04	1	54.7	31	337@c	2.49	.3	25.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)
AUG 02...	13.0	383	425	2.0	.05	<.06	<.008	2.0	<.02	.09	4.8d	<.1d	62

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Manganese, water, fltrd, ug/L (01056)
AUG 02...	363

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@-- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475256098580200 151-065-22CAB

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1215	8.0	545	72.2c	26.0c	5.63c	.5	21.2c	14	287@c	5.07	.3	24.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	20.7	348	358	.41	E.02n	<.06	<.008	<.02	E.03n	.7	1.2	3	62

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	33c	<.06	117c	.5

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475258098454700 WETLAND B2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1040	8.8	740	24.4	47.1	15.5	2	79.8	39	388@c	10.7	.3	37.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 08...	30.0	478	507	2.0	<.04	<.06	<.008	<.02	.10	34.9d	<.1d	<6	3.0

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475325098341600 WETLAND 22

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 02...	1140	8.6	755	40.5	74.7	13.6	.5	22.5	10	376@c	4.70	.3	41.8d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 02...	58.3	482	537	3.2	<.04	<.06	<.008	<.02	.21	36.4d	8.2d	E6n	22.8

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475350098501300 WOOD LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1425	8.4	365	34.2	27.6	7.54	.3	10.6	10	203@c	3.80	.2	15.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	18.6	240	252	.76	<.04	<.06	<.008	<.02	E.03n	2.3	4.6	<6	2.0

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475406098442900 ELBOW LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1230	8.9	1,270	15.8	50.2	29.2	6	215	62	641@c	39.8	.3	21.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 08...	49.6	806	858	2.1	<.04	<.06	<.008	<.02	.06	27.5d	<.1d	E3n	1.7

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475410098442400 FREE PEOPLES LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
AUG 08...	1135	9.1	6,650	19.5d	72.4d	92.0d	35	1520d	88	1000@c	504d	.2	6.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
AUG 08...	2020d	4,840	4,930	2.7	<.04	<.06	<.008	<.02	.07	10.4d	<.1d	<30d	3.1d

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475420098391900 151-063-12DDD

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1415	8.0	589	53.8	36.4	6.94	.9	35.4	21	322@c	6.35	.3	2.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	17.8	352	394	1.2	E.02n	<.06	<.008	<.02	E.03n	2.1	2.6	E1n	61

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	33	<.06	22.9	E.3n

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475510098564000 151-065-11BAB

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1520	8.0	427	59.5c	16.0	5.13c	.5	16.9	14	225@c	4.10	.3	14.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	10.5	262	277	.51	<.04	<.06	<.008	<.02	E.03n	2.3	3.0	<2	43

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	29c	E.04n	41.4c	E.4n

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
n -- Below the LRL and above the LT-MDL

475540098492200 151-064-02BCC

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
APR 25...	1450	7.9	531	55.3	29.9	10.9	.7	25.1	17	273@c	6.19	.3	9.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)
APR 25...	26.9	328	352	.87	<.04	<.06	<.008	<.02	E.04n	3.4d	11.4d	4	57

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Iron, water, fltrd, ug/L (01046)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
APR 25...	<.04	<.8	32	<.06	18.9	.5

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475607098364600 EAST DEVILS LAKE NO. 7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
01...	1130	8.6	4,940	85.2d	208d	109d	12	902d	62	495@c	394d	.2	11.0
SEP													
02...	1015	8.8	4,240	86.5d	174d	88.6d	9	658d	58	452@c	321d	.2	3.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)
MAR													
01...	1880d	3,890	3,920	2.3	.10	.21	.29	.073	2.2	2.6	.24	.30	.3d
SEP													
02...	1530d	3,130	3,260	2.3	.04	--	<.06	<.008	2.2	--	.22	.31	E7.9d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)
MAR													
01...	<.1d	29d	2.2d	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.1d	<18d	3.0d	<.016	<.07	<.02	<.03	<.08mc	<.032	<.008	<.02mc	<.028	<.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Atra-zine, water, fltrd, ug/L (39632)	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.022	<.04mc	E.020	<.02	<.022	<.02	E.02	.062	<.02	<.016	<.02	<.032mc	<.04mc

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Imaza-quin, water, fltrd, ug/L (50356)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.04	<.02	<.01	<.03	<.04	<.03	<.04	<.01	<.01n	<.02n	<.04	<.02	<.04mc

475607098364600 EAST DEVILS LAKE NO. 7—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Linuron water fltrd 0.7u GF ug/L (38478)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metalaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Metsulfuron, water, fltrd, ug/L (61697)	N-(4-Chlorophenyl)-N'-methylurea, ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.04	<.020	<.01	E.03n	<.01	<.01	<.010	<.020	<.03mc	<.04	<.01	<.04mc	<.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Propham water fltrd 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfometruron, water, fltrd, ug/L (50337)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (04032)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
SEP											
02...	<.01	<.03	<.03	<.030	<.01	<.008	<.02	<.038	<.026n	<.016	<.03

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

475645098473000 SPRING LAKE

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1125	8.7	2,280	61.3dc	114dc	47.1dc	5	306dc	49	494@c	132d	.3	26.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	690d	1,680	1,780	1.9	<.04	<.06	<.008	.16	.23	7.5	9.2	<18dc	2.0dc

Remark codes used in this table:
< -- Less than.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded

475719098480900 BLACK TIGER BAY NO. 6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
01...	1250	8.6	3,190	85.8d	138d	70.1d	8	506d	56	451@c	225d	.2	.7
SEP													
02...	1115	8.8	2,960	83.8d	123d	61.0d	7	415d	53	412@c	202d	.2	.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
MAR													
01...	1110d	2,410	2,430	1.8	E.02n	<.06	<.008	.19	.26	2.3d	<.1d	E15nd	E1.1nd
SEP													
02...	980d	2,110	2,220	1.8	<.04	<.06	<.008	.19	.28	E6.4d	<.1d	E11nd	E1.6nd

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Atra-zine, water, fltrd, ug/L (39632)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.016	<.06	<.02	<.03	<.08mc	E.019n	<.008	<.02mc	<.028	<.02	<.022	<.04mc	E.020

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyclo-ate, water, fltrd, ug/L (04031)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.02	<.022	<.02	E.02	.043	<.02	<.016	<.02	<.032mc	<.04mc	<.04	<.02	<.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Linuron water fltrd 0.7u GF ug/L (38478)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.03	<.04	<.03	<.04	<.01	<.01n	<.02n	<.04	<.02	<.04mc	<.04	<.020	<.01

475719098480900 BLACK TIGER BAY NO. 6—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Metsul-furon, water, fltrd, ug/L (61697)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	E.02n	<.01	<.01	<.010	<.020	<.03mc	<.04	<.01	<.04mc	<.02	<.01	<.03	<.03

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)
MAR								
01...	--	--	--	--	--	--	--	--
SEP								
02...	<.030	<.01	<.008	<.02	<.038	<.026n	<.016	<.03

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

475817098480800 WL526423

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1025	8.6	6,230	135d	302d	104d	13	1170d	60	451@c	435d	.1	18.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)
JUN 09...	3060d	5,500	5,770	2.9	.18	.08	.10	.025	2.7	3.0	.12	.21	4.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	1.5	E17nd	388d

Remark codes used in this table:
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

475928099004400 WL526517

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
JUN 09...	1520	8.5	1,470	84.0	106	16.4	2	142	32	304@c	40.5	.3	19.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Pheo-phytin a, phyto-plank-ton, ug/L (62360)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 09...	545d	1,140	1,200	2.0	<.04	<.06	<.008	<.02	.10	8.2	15.8	E3n	1.4

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

480028099074500 WEST BAY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
02...	1015	8.6	2,210	89.3d	100d	47.0d	5	313d	49	403@c	133d	.2	5.9
SEP													
02...	1230	8.6	2,030	86.1d	90.1d	41.1d	5	251d	46	366@c	118d	.2	15.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)
MAR													
02...	690d	1,620	1,640	1.5	.05	<.06	<.008	1.5	.19	.24	1.6d	<.1d	22d
SEP													
02...	614d	1,440	1,500	1.7	<.04	<.06	<.008	--	.27	.35	E9.7d	<.1d	E9nd

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Mangan-ese, water, fltrd, ug/L (01056)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)
MAR													
02...	29.9d	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	3.4d	<.016	<.05	<.02	<.006	<.009mc	<.08mc	E.022n	<.008	<.02mc	<.006	<.028	<.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Butyl-ate, water, fltrd, ug/L (04028)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	<.02	<.022	<.04mc	<.005	93.7	.023	<.050mc	<.02	<.010	<.022	<.02	E.04	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
02...	E.046	<.02	<.041mc	<.016	<.020mc	<.02	<.032mc	<.04mc	<.04	<.005	<.006	<.02	<.018

480028099074500 WEST BAY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.01	<.03	<.003	<.012	<.005	<.04	<.03	<.009	<.04	<.01	<.02mc	<.01n	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.009	<.005	<.02n	<.029mc	<.013	<.024	<.016mc	<.04	<.02	<.003	<.04mc	<.04	<.020

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.004	<.01	<.035	<.027	E.02n	<.01	<.01	<.010	<.020	<.015	<.006	<.006	<.03mc

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.003	<.04	<.007	<.01	<.04mc	<.02	<.01	<.03	<.003	<.010	<.004	<.022	<.011

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propy-zamide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)
MAR 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.03	<.01	<.004	<.025	<.011	<.02	<.030	<.01	<.008	<.02	<.005	<.038	<.02

480028099074500 WEST BAY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbacil, water, fltrd, ug/L (04032)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
MAR							
02...	--	--	--	--	--	--	--
SEP							
02...	<.034mc	<.016	<.02	<.010	<.006	<.03	<.009

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

480106098595500 WEST BAY-FORT TOTTEN

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
02...	1100	8.6	2,220	86.2d	98.7d	48.0d	6	326d	51	388@c	137d	.2	.6
AUG													
07...	1500	--	--	--	--	--	--	--	--	--	--	--	--
09...	1100	8.8	2,130	79.3d	87.5d	41.4d	5	279d	50	352@c	125d	.2	4.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
MAR													
02...	702d	1,630	1,650	1.5	E.04n	<.06	<.008	.20	.26	.6d	<.1d	E17nd	8.1d
AUG													
07...	--	--	--	--	--	--	--	--	--	4.6d	<.1d	--	--
09...	632d	1,460	1,500	1.7	E.02n	<.06	<.008	.27	.34	--	--	<18d	4.0d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.016	E.08	<.02	<.006	E.006mc	<.08mc	E.018n	<.008	<.02mc	<.006	<.028	<.005	<.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.022	<.04mc	<.005	88.7	.022	<.050mc	<.02	<.010	<.022	<.02	.03	<.004	.026

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.02	<.041mc	<.016	<.020mc	<.02	<.032mc	<.04mc	<.04	<.005	<.006	<.02	<.018	<.01

480106098595500 WEST BAY-FORT TOTTEN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.03	<.003	<.012	<.005	<.04	<.03	<.009	<.04	<.01	<.02mc	<.02	<.004	<.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Lindane water, fltrd, ug/L (39341)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.005	<.02n	<.029mc	<.013	<.024	<.016mc	<.04	<.02	<.003	<.04mc	<.04	<.020	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.01	<.035	<.027	<.03	<.01	<.01	<.010	<.020	<.015	<.006	<.006	<.03mc	<.003

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur-azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.04	<.007	<.01	<.04mc	<.02	<.01	<.03	<.003	<.010	<.004	<.022	<.011	<.03

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Prome-ton, water, fltrd, ug/L (04037)	Propy-zamide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	Mn	<.004	<.025	<.011	<.02	<.030	<.01	<.008	<.02	<.005	<.038	<.02	<.034mc

480106098595500 WEST BAY-FORT TOTTEN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Terbacil, water, fltrd, ug/L (04032)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
MAR						
02...	--	--	--	--	--	--
AUG						
07...	--	--	--	--	--	--
09...	<.016	<.02	<.010	<.006	<.03	<.009

Remark codes used in this table:
< -- Less than.
E -- Estimated.
M -- Presence verified but not quantified.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

480112098545200 WEST BAY-CASINO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduct-ance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
01...	1000	8.6	2,250	84.5d	98.6d	48.2d	6	323d	51	391@c	139d	.2	.4
AUG													
07...	1600	--	--	--	--	--	--	--	--	--	--	--	--
09...	1230	8.8	2,130	82.7d	91.7d	42.7d	5	286d	49	353@c	124d	.2	5.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)
MAR													
01...	705d	1,630	1,650	1.4	E.04n	<.06	<.008	--	.21	.26	.4d	<.1d	E13nd
AUG													
07...	--	--	--	--	--	--	--	--	--	--	4.5d	<.1d	--
09...	628d	1,470	1,490	1.6	.06	<.06	E.006n	1.5	.28	.33	--	--	<18d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Mangan-ese, water, fltrd, ug/L (01056)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)
MAR													
01...	2.6d	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	4.4d	<.016	<.09	<.02	<.006	E.007mc	<.08mc	E.021n	<.008	<.02mc	<.006	<.028	<.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Butyl-ate, water, fltrd, ug/L (04028)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.02	<.022	<.04mc	<.005	91.3	.022	<.050mc	<.02	<.010	<.022	<.02	E.03	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	.028	<.02	<.041mc	<.016	<.020mc	<.02	<.032mc	<.04mc	<.04	<.005	<.006	<.02	<.018

480112098545200 WEST BAY-CASINO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.01	<.03	<.003	<.012	<.005	<.04	<.03	<.009	<.04	<.01	<.02mc	<.02	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.009	<.005	<.02n	<.029mc	<.013	<.024	<.016mc	<.04	<.02	<.003	<.04mc	<.04	<.020

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.004	<.01	<.035	<.027	<.03	<.01	<.01	<.010	<.020	<.015	<.006	<.006	<.03mc

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.003	<.04	<.007	<.01	<.04mc	<.02	<.01	<.03	<.003	<.010	<.004	<.022	<.011

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propy-zamide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.03	<.01	<.004	<.025	<.011	<.02	<.030	<.01	<.008	<.02	<.005	<.038	<.02

480112098545200 WEST BAY-CASINO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbacil, water, fltrd, ug/L (04032)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
MAR							
01...	--	--	--	--	--	--	--
AUG							
07...	--	--	--	--	--	--	--
09...	<.034mc	<.016	<.02	<.010	<.006	<.03	<.009

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

480153098500700 EAST BAY NO. 5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
01...	1350	8.6	2,930	98.5d	130d	64.7d	7	452d	53	471@c	196d	.2	.6
AUG													
07...	1700	--	--	--	--	--	--	--	--	--	--	--	--
09...	1530	8.8	2,900	81.3d	120d	58.5d	7	418d	54	391@c	190d	.2	1.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
MAR													
01...	991d	2,220	2,200	1.8	E.03n	<.06	<.008	.23	.29	.5d	<.1d	E15nd	1.9d
AUG													
07...	--	--	--	--	--	--	--	--	--	E5.5d	<.1d	--	--
09...	920d	2,020	2,090	2.0	E.03n	<.06	<.008	.21	.30	--	--	<18d	1.9d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.016	E.06	<.02	<.006	E.006mc	<.08mc	E.019n	<.008	<.02mc	<.006	<.028	<.005	<.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-HCH, water, fltrd, ug/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.022	<.04mc	<.005	90.0	.023	<.050mc	<.02	<.010	<.022	<.02	E.02	<.004	E.058

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.02	<.041mc	<.016	<.020mc	<.02	<.032mc	<.04mc	<.04	<.005	<.006	<.02	<.018	<.01

480153098500700 EAST BAY NO. 5—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Diel-drin, water, fltrd, ug/L (39381)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.03	<.003	<.012	<.005	<.04	<.03	<.009	<.04	<.01	<.02mc	<.02	<.004	<.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Lindane water, fltrd, ug/L (39341)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.005	<.02n	<.029mc	<.013	<.024	<.016mc	<.04	<.02	<.003	<.04mc	<.04	<.020	<.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.01	<.035	<.027	<.03	<.01	<.01	<.010	<.020	<.015	<.006	<.006	<.03mc	<.003

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur-azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.04	<.007	<.01	<.04mc	<.02	<.01	<.03	<.003	<.010	<.004	<.022	<.011	<.03

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Prome-ton, water, fltrd, ug/L (04037)	Propy-zamide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)
MAR													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	<.01	<.004	<.025	<.011	<.02	<.030	<.01	<.008	<.02	<.005	<.038	<.02	<.034mc

480153098500700 EAST BAY NO. 5—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Terbacil, water, fltrd, ug/L (04032)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Triclopyr, water, fltrd 0.7u GF ug/L (49235)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
MAR						
01...	--	--	--	--	--	--
AUG						
07...	--	--	--	--	--	--
09...	<.016	<.02	<.010	<.006	<.03	<.009

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

480349099111300 MINNEWAUKEN FLATS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
MAR													
02...	0910	8.5	2,240	80.9d	91.2d	42.8d	5	281d	49	416@c	136d	.2	6.5
SEP													
06...	1230	8.4	2,020	86.3d	89.2d	41.1d	5	255d	47	367@c	117d	.2	16.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
MAR													
02...	706d	1,600	1,690	1.6	E.03n	<.06	<.008	.18	.24	2.3d	<.1d	26d	6.1d
SEP													
06...	612d	1,440	1,480	1.6	<.04	<.06	<.008	.24	.34	E4.0d	<.1d	<18d	2.9d

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	Atra-zine, water, fltrd, ug/L (39632)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	<.016	<.04	<.02	<.03	<.08mc	<.032	<.008	<.02mc	<.028	<.02	<.022	<.04mc	E.019

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyclo-ate, water, fltrd, ug/L (04031)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	<.02	<.022	<.02	E.03	.078	<.02	<.016	<.02	<.032mc	<.04mc	<.04	<.02	<.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Linuron water fltrd 0.7u GF ug/L (38478)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	<.03	<.04	<.03	<.04	<.01	<.01n	<.02n	<.04	<.02	<.04mc	<.04	<.020	<.01

480349099111300 MINNEWAUKEN FLATS—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	Metsul-furon, water, fltrd, ug/L (61697)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
MAR													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
06...	E.02n	<.01	<.01	<.010	<.020	<.03mc	<.04	<.01	<.04mc	<.02	<.01	<.03	<.03

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, ug/L (04032)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)
MAR								
02...	--	--	--	--	--	--	--	--
SEP								
06...	<.030	<.01	<.008	<.02	<.038	<.026n	<.016	<.03

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
m -- Value is highly variable by this method
n -- Below the LRL and above the LT-MDL

473633101161400 LAKE SAKAKAWEA NEAR LAKE AUDUBON

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth to bottom of samplng intrval meters (82048)	Depth to top of samplng intrval meters (82047)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
OCT													
12...	1245	1.0	1.0	3.0	8.4	750	250	52.9	29.8	5.21	2	82.0	41
12...	1250	3.0	1.5	--	--	--	--	--	--	--	--	--	--
12...	1255	11.0	11.0	4.5	8.3	860	280	59.1	31.2	5.18	3	101	44
NOV													
08...	1135	1.0	1.0	3.5	8.3	700	240	53.4	25.6	4.87	2	76.2	40
08...	1140	3.0	1.5	--	--	--	--	--	--	--	--	--	--
08...	1145	11.0	11.0	5.4	8.2	702	240	53.9	25.8	4.84	2	76.9	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)
OCT													
12...	191@c	11.3	.7	4.2	210	511	524	.33	<.04	<.06	<.008	<.02	<.04
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	213@c	11.7	.7	5.2	247	588	584d	.32	E.03n	E.04n	<.008	<.02	<.04
NOV													
08...	184@c	10.5	.7	4.9	193	479	498	.24	<.04	E.04n	<.008	<.02	<.04
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	181@c	10.5	.7	5.0	194	480	503	.26	E.02n	E.04n	<.008	<.02	<.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
OCT					
12...	6.6	--	--	<6	6.2
12...	--	1.3d	.2d	--	--
12...	9.2	--	--	<6	65.7
NOV					
08...	7.2	--	--	E4n	17.6
08...	--	.6d	<.1d	--	--
08...	5.3	--	--	<6	20.8

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

473633101161400 LAKE SAKAKAWEA NEAR LAKE AUDUBON—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Depth of lake, maximum meters (85310)	Sampling depth, meters (00098)	Transparency Secchi disc, inches (00077)	Wind direction, clkwise from north, degrees (00036)	Wind speed, mph (00035)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
OCT													
12...	1235	11	.00	60.0	250	7.0	6.0	724	10.0	101	8.1	835	17.2
12...	1236	--	.50	--	--	--	5.6	--	9.9	--	8.1	833	--
12...	1237	--	1.0	--	--	--	6.1	--	9.9	--	8.2	833	--
12...	1238	--	2.7	--	--	--	5.3	--	9.9	--	8.2	834	--
12...	1239	--	4.2	--	--	--	5.4	--	9.8	--	8.2	834	--
12...	1240	--	5.9	--	--	--	5.8	--	9.7	--	8.2	833	--
12...	1241	--	7.7	--	--	--	6.2	--	9.6	--	8.2	848	--
12...	1242	--	9.5	--	--	--	6.0	--	9.5	--	8.2	861	--
12...	1243	--	11.0	--	--	--	8.2	--	8.9	--	8.0	930	--
12...	1244	--	11.3	--	--	--	9.2	--	8.8	--	8.0	940	--
NOV													
08...	1125	11	.00	62.0	130	10	5.0	718	11.2	96	7.9	775	7.0
08...	1126	--	.50	--	--	--	6.3	--	11.2	--	7.8	776	--
08...	1127	--	1.0	--	--	--	7.1	--	11.2	--	7.8	776	--
08...	1128	--	2.8	--	--	--	6.9	--	11.2	--	7.8	782	--
08...	1129	--	4.6	--	--	--	7.1	--	11.1	--	7.9	782	--
08...	1130	--	6.2	--	--	--	7.2	--	11.1	--	8.0	782	--
08...	1131	--	8.1	--	--	--	6.8	--	11.1	--	8.0	783	--
08...	1132	--	9.7	--	--	--	7.0	--	11.1	--	8.0	785	--
08...	1133	--	11.0	--	--	--	7.4	--	11.1	--	8.0	785	--
08...	1134	--	11.4	--	--	--	7.5	--	11.1	--	8.0	784	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Temperature, water, deg C (00010)
OCT	
12...	13.5
12...	13.4
12...	13.4
12...	13.4
12...	13.4
12...	13.4
12...	13.4
12...	13.3
12...	13.2
12...	13.1
NOV	
08...	5.9
08...	6.0
08...	5.9
08...	5.9
08...	5.9
08...	5.9
08...	5.9
08...	5.9
08...	5.9
08...	5.9

06337930 LAKE SAKAKAWEA IN SNAKE CREEK PUMPING PLANT

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Turbdty white light, det ang 90+/-30 degrees NTU (63675)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Baro-metric pres-sure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, uS/cm 25 degC (90095)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)
MAY													
26...	1030	5.0	--	--	7.5	7.8	2,600	2,700	10.7	110d	43.3d	8.49d	10
JUN													
08...	1350	4.8	3.9	700	7.5	7.5	2,610	2,640	9.2	113d	41.1d	7.67d	9
JUL													
14...	1030	6.7	8.4	711	8.6	7.8	2,270	2,610	11.4	107dc	36.5dc	7.68d	10
AUG													
30...	1105	6.0	5.2	--	8.3	7.6	2,230	2,390	11.9	94.8d	34.8d	6.87d	9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)
MAY													
26...	507d	70	644@c	--	19.8d	.4	19.1	798d	1,890	1,950	1.1	.81	--
JUN													
08...	460dc	68	--i	555@c	19.9d	.4	20.5	797d	1,790	1,950	1.2	.76	--
JUL													
14...	469d	71	571@c	--	19.4d	.4	20.9	746d	1,750	1,850	1.2	.84	--
AUG													
30...	393d	69	514@c	--	17.5d	.4	19.4	644d	1,520	1,630	.88	.56	.06

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, unfltrd mg/L (00605)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
MAY									
26...	<.06	<.008	.28	E.01n	E.03n	--	17.8	E14nd	526d
JUN									
08...	<.06	<.008	.47	<.02	E.04n	--	18.7	<18d	612
JUL									
14...	<.06	E.004n	.40	<.02	E.04n	--	8.8	E10nd	591d
AUG									
30...	.11	.052	.32	<.02	E.03n	.99	7.8	E10nd	395d

Remark codes used in this table:
< -- Less than.
E -- Estimated.

Value qualifier codes used in this table:
@ -- Holding time exceeded
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
n -- Below the LRL and above the LT-MDL

Null value qualifier codes used in this table:
i -- Required sample type not received

RED RIVER OF THE NORTH BASIN

484714097442301 ICELANDIC STATE PARK, ND
(National Trends Network precipitation-quality station)

LOCATION.--Lat 48°47'14", long 97°44'23", in $SW^1/_4NW^1/_4SW^1/_4$ sec. 10, T.161 N., R.55 W., Pembina County, Hydrologic Unit 09020313, at Icelandic State Park 5.6 mi west of Cavalier.

PERIOD OF RECORD.--October 1983 to current year (weekly composite).

INSTRUMENTATION.--The composite sample collector is an Aerochem Metrics[1] model 301 wet/dry precipitation collector mounted on ground surface. Precipitation quantity is determined by a Belfort[1] model 5-780 recording rain gage equipped with an event recorder and an Alter-type wind screen. The recording rain gage is installed 20 ft east of the sample collector with gage mouth and collector bucket elevations of 50.75 in above land surface.

REMARKS.--Data presented are provisional analyses by the Central Analytical Laboratory of the Illinois State Water Survey and have not completed quality-assurance review by the National Atmospheric Deposition Program. Analyses are determined from water taken from the sample collector.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Period of collection	Precip-itation total, in/wk (00046)	Collector efficiency, atm dep wet, percent (82284)	Specific conductance wat unf µS/cm 25 decC (00095)	Specific conductance wat unf lab µS/cm 25 decC (90095)	pH, water, unfiltrd field, std units (00400)	pH, water, unfiltrd lab, std units (00403)	Calcium, water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)
09/28 to 10/05	.09	122	--	9	--	6.9	.591	.153
10/05 to 10/12	.10	100	--	12	--	6.8	.624	.147
10/12 to 10/19	.99	97	5	5	7.0	6.0	.136	.020
10/19 to 10/26	.45	71	8	8	5.3	5.5	.166	.025
10/26 to 11/02	.15	60	--	13	--	6.3	.026	.006
11/02 to 11/09	b.00	--	--	--	--	--	--	--
11/09 to 11/16	.00	--	--	--	--	--	--	--
11/16 to 11/23	.09	89	8	8	5.8	6.5	.272	.052
11/23 to 11/30	b.02	<50	--	7	--	5.3	--	--
11/30 to 12/07	--	--	7	6	5.0	5.1	.066	.014
12/07 to 12/14	.03	67	--	a4	--	a5.3	a.070	a<.003
12/14 to 12/21	--	--	--	--	--	--	--	--
12/21 to 12/28	--	--	--	--	--	--	--	--
12/28 to 01/04	--	--	--	2	--	5.5	<.009	<.003
01/04 to 01/11	--	--	--	20	--	4.8	--	--
01/11 to 01/18	b--	--	--	--	--	--	--	--
01/18 to 01/25	--	--	--	8	--	5.0	.098	.016
01/25 to 02/01	b--	--	--	--	--	--	--	--
02/01 to 02/08	b--	--	--	--	--	--	--	--
02/08 to 02/15	b--	--	--	--	--	--	--	--
02/15 to 02/22	b.00	--	--	--	--	--	--	--
02/22 to 03/01	b.02	<50	--	23	--	4.7	--	--
03/01 to 03/08	.10	20	--	a7	--	a6.2	.350	.056
03/08 to 03/15	--	--	--	--	--	--	--	--
03/15 to 03/22	.00	--	--	--	--	--	--	--
03/22 to 03/29	.07	143	--	4	--	5.9	.080	.020
03/29 to 04/05	.00	--	--	--	--	--	--	--
04/05 to 04/12	.50	84	--	19	--	4.9	.118	.020
04/12 to 04/19	.60	98	--	10	--	5.1	.188	.020
04/19 to 04/26	b.05	<.01	--	--	--	--	--	--
04/26 to 05/03	.07	43	--	6	--	6.1	.292	.079
05/03 to 05/10	1.25	92	--	14	--	6.8	.315	.053
05/10 to 05/18	.77	106	--	10	--	6.3	.330	.033
05/18 to 05/24	.85	100	--	9	--	6.3	.213	.037
05/24 to 05/31	.22	100	--	5	--	6.2	.092	.023
05/31 to 06/07	1.16	97	--	8	--	6.1	.128	.025
06/07 to 06/14	2.12	98	--	5	--	5.4	.053	.011
06/14 to 06/21	1.22	100	--	4	--	5.4	.097	.016
06/21 to 06/28	3.21	101	--	6	--	6.0	.150	.027
06/28 to 07/05	1.69	97	--	6	--	5.2	.112	.019
07/05 to 07/12	1.20	102	--	8	--	6.0	.266	.053
07/12 to 07/19	.08	88	--	32	--	6.8	1.31	.197
07/19 to 07/26	<.01	>100	--	a26	--	a6.0	a1.45	a.327
07/26 to 08/02	.09	100	--	4	--	5.6	.146	.036
08/02 to 08/09	.10	120	--	17	--	7.0	.969	.258
08/09 to 08/16	.17	100	--	10	--	6.3	.537	.132
08/16 to 08/23	.58	105	--	7	--	6.2	.110	.022
08/23 to 08/30	b<.01	100	--	12	--	6.0	--	--
08/30 to 09/06	.00	--	--	--	--	--	--	--
09/06 to 09/13	<.01	>500	--	30	--	5.6	1.22	.154
09/13 to 09/20	.12	125	--	20	--	7.2	1.12	.240
09/20 to 09/27	.35	97	--	17	--	6.6	1.19	.324

RED RIVER OF THE NORTH BASIN

484714097442301 ICELANDIC STATE PARK, ND--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Period of collection	Sodium, water, fltrd, mg/L (00930)	Potasium, water, fltrd, mg/L (00935)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrate, water, fltrd, mg/L as N (00618)	Ammonia, water, fltrd, mg/L as N (00608)	Phosphorus, water, fltrd, mg/L (00666)
09/28 to 10/05	.015	.037	.95	.03	.199	.420	<.003
10/05 to 10/12	.099	.058	1.4	.07	.311	.480	<.003
10/12 to 10/19	.008	.011	.51	.02	.124	.260	<.003
10/19 to 10/26	.006	.009	.95	.02	.256	.400	<.003
10/26 to 11/02	.008	.011	.76	.05	.314	1.38	<.003
11/02 to 11/09	--	--	--	--	--	--	--
11/09 to 11/16	--	--	--	--	--	--	--
11/16 to 11/23	.020	.039	.88	.08	.230	.440	<.003
11/23 to 11/30	--	--	--	--	--	--	--
11/30 to 12/07	.006	.005	.24	.02	.232	.110	<.003
12/07 to 12/14	a.010	a.018	a.19	a.04	a.070	a.16	a<.003
12/14 to 12/21	--	--	--	--	--	--	--
12/21 to 12/28	--	--	--	--	--	--	--
12/28 to 01/04	<.003	<.003	.07	<.01	.031	.030	<.003
01/04 to 01/11	--	--	--	--	--	--	--
01/11 to 01/18	--	--	--	--	--	--	--
01/18 to 01/25	.026	.016	.34	.04	.080	<.020	<.003
01/25 to 02/01	--	--	--	--	--	--	--
02/01 to 02/08	--	--	--	--	--	--	--
02/08 to 02/15	--	--	--	--	--	--	--
02/15 to 02/22	--	--	--	--	--	--	--
02/22 to 03/01	--	--	--	--	--	--	--
03/01 to 03/08	a.196	a.023	a.70	a.17	a.219	a.280	a<.003
03/08 to 03/15	--	--	--	--	--	--	--
03/15 to 03/22	--	--	--	--	--	--	--
03/22 to 03/29	.019	<.003	.15	.03	.118	.200	<.003
03/29 to 04/05	--	--	--	--	--	--	--
04/05 to 04/12	.014	.018	2.8	.04	.408	.990	<.003
04/12 to 04/19	.026	.016	1.4	.05	.249	.460	<.003
04/19 to 04/26	--	--	--	--	--	--	--
04/26 to 05/03	.019	.013	1.0	.03	.044	.230	<.003
05/03 to 05/10	.025	.032	1.1	.05	.311	1.19	<.003
05/10 to 05/18	.012	.025	.88	.03	.315	.650	<.003
05/18 to 05/24	.026	.024	.71	.03	.381	.670	<.003
05/24 to 05/31	.010	.034	.35	.03	.082	.370	<.003
05/31 to 06/07	.015	.024	.79	.03	.241	.610	<.003
06/07 to 06/14	.008	.016	.33	.02	.136	.170	<.003
06/14 to 06/21	.015	.022	.32	.03	.073	.100	<.003
06/21 to 06/28	.018	.024	.64	.04	.162	.370	<.003
06/28 to 07/05	.011	.034	.45	.03	.176	.200	<.003
07/05 to 07/12	.015	.043	.71	.05	.261	.520	<.003
07/12 to 07/19	.094	.253	3.3	.24	1.12	2.11	<.003
07/19 to 07/26	a.071	a.123	a2.5	a.28	a1.01	a.870	a<.003
07/26 to 08/02	.032	.004	.26	.07	.064	.020	<.003
08/02 to 08/09	.022	.067	.82	.07	.386	.810	<.003
08/09 to 08/16	.019	.055	1.0	.05	.264	.540	<.003
08/16 to 08/23	.004	.022	2.4	.13	.676	.540	<.003
08/23 to 08/30	--	--	--	--	--	--	--
08/30 to 09/06	--	--	--	--	--	--	--
09/06 to 09/13	.104	.211	5.3	.19	.896	1.50	<.003
09/13 to 09/20	.044	.123	1.4	.06	.524	.670	<.003
09/20 to 09/27	.032	.088	1.4	.08	.519	.600	<.003

1 The use of brand names in this report is for identification purposes only and does not imply endorsemet by the U.S. Geological Survey.

a To provide for an adequate sample, low-volume samples were diluted to a final volume of 50 milliliters.

b Trace of water collected in field sampler.

< Less than.

> Greater than.

JAMES RIVER BASIN

470732099140204 WOODWORTH, ND
(National Trends Network precipitation-quality station)

LOCATION.--Lat 47°14'32", long 99°14'02", in $SE^1/_4SW^1/_4SW^1/_4$ sec.12, T.142 N., R.68 W., Stutsman County, Hydrologic Unit 10160002, at U.S. Fish and Wildlife Service Northern Prairie Wildlife Research Center, at Woodworth Experiment Station 2.8 mi east and 1 mi south of Woodworth.

PERIOD OF RECORD.--November 1983 to current year (weekly composite).

INSTRUMENTATION.--The composite sample collector is an Aerochem Metrics[1] model 301 wet/dry precipitation collector mounted on ground surface. Precipitation quantity is determined by a Belfort[1] model 5-780 recording rain gage equipped with an event recorder and an Alter-type wind screen. The recording rain gage is installed 17 ft east of the sample collector with gage mouth and collector bucket elevations of 50.75 in above land surface.

REMARKS.--The station is located 300 ft west of an event sample-collection station which was operated by the North Dakota State Health Department (station discontinued 1987). Continuously recording meteorological instrumentation for air temperature, wind speed, and wind direction were installed 9.8 ft above land surface at the event station. Data presented are provisional analyses by the Central Analytical Laboratory of the Illinois State Water Survey and have not completed quality-assurance review by the National Atmospheric Deposition Program. Analyses are determined from water taken from the sample collector.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Period of collection	Precip-itation total, in/wk (00046)	Collector efficiency, atm dep wet, percent (82284)	Specific conductance wat unf µS/cm 25 decC (00095)	Specific conductance wat unf lab µS/cm 25 decC (90095)	pH, water, unfiltrd field, std units (00400)	pH, water, unfiltrd lab, std units (00403)	Calcium, water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)
09/28 to 10/05	.23	104	11	9	5.8	6.8	.345	.069
10/05 to 10/12	.00	--	--	--	--	--	--	--
10/12 to 10/19	.65	86	13	9	6.1	6.6	.416	.072
10/19 to 10/26	.38	92	6	6	5.6	5.2	.049	.007
10/26 to 11/02	.22	14	--	12	--	6.8	.060	.010
11/02 to 11/09	b.00	--	--	--	--	--	--	--
11/09 to 11/16	.00	.00	--	--	--	--	--	--
11/16 to 11/23	b.01	<100	--	--	--	--	--	--
11/23 to 11/30	.07	57	--	7	--	6.6	.049	.008
11/30 to 12/07	.05	.00	--	--	--	--	--	--
12/07 to 12/14	.10	20	--	14	--	6.4	--	--
12/14 to 12/22	b.01	<100	--	--	--	--	--	--
12/22 to 12/28	b.00	--	--	--	--	--	--	--
12/28 to 01/04	b.05	<20	--	--	--	--	--	--
01/04 to 01/11	b.00	--	--	--	--	--	--	--
01/11 to 01/18	b.00	--	--	--	--	--	--	--
01/18 to 01/25	.23	--	--	9	--	6.8	.822	.165
01/25 to 02/01	b.00	--	--	--	--	--	--	--
02/01 to 02/08	b.00	--	--	--	--	--	--	--
02/08 to 02/15	b.00	--	--	--	--	--	--	--
02/15 to 02/22	b.01	<100	--	--	--	--	--	--
02/22 to 03/01	b.02	<50	--	--	--	--	--	--
03/01 to 03/08	b.00	--	--	--	--	--	--	--
03/08 to 03/15	b.03	<33	--	--	--	--	--	--
03/15 to 03/22	.00	--	--	--	--	--	--	--
03/22 to 03/29	.06	50	--	20	--	6.4	.231	.033
03/29 to 04/05	.00	--	--	--	--	--	--	--
04/05 to 04/12	.43	79	--	6	--	5.5	.074	.011
04/12 to 04/19	--	--	--	8	--	5.8	.084	.008
04/19 to 04/26	.00	--	--	--	--	--	--	--
04/26 to 05/03	.02	--	--	--	--	--	--	--
05/03 to 05/10	1.68	91	--	11	--	6.6	.124	.018
05/10 to 05/17	.50	114	--	6	--	5.1	.035	.009
05/17 to 05/24	--	--	--	4	--	6.0	.145	.023
05/24 to 05/31	.32	97	--	7	--	6.2	.107	.026
05/31 to 06/07	--	--	--	8	--	6.2	.176	.031
06/07 to 06/14	2.62	95	--	3	--	5.5	.033	.006
06/14 to 06/21	.35	74	--	6	--	5.8	.263	.044
06/21 to 06/28	.61	105	--	11	--	6.2	.196	.025
06/28 to 07/05	--	--	--	5	--	5.6	.085	.014
07/05 to 07/12	.58	86	--	8	--	6.1	.162	.026
07/12 to 07/19	.32	91	--	19	--	7.2	.661	.150
07/19 to 07/26	.95	95	--	10	--	6.5	.231	.047
07/26 to 08/02	.12	66	--	23	--	6.6	1.10	.177
08/02 to 08/09	.00	--	--	--	--	--	--	--
08/09 to 08/16	.32	106	--	12	--	7.1	.760	.219
08/16 to 08/23	.70	110	--	6	--	6.1	.095	.016
08/23 to 08/30	.10	130	--	13	--	6.4	.571	.118
08/30 to 09/06	.71	103	--	10	--	6.0	.287	.032
09/06 to 09/13	.43	107	--	8	--	5.8	.293	.047
09/13 to 09/20	b.02	<50	--	16	--	5.9	--	--
09/20 to 09/27	.23	87	--	8	--	6.2	.285	.043

JAMES RIVER BASIN

470732099140204 WOODWORTH, ND--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Period of collection	Sodium, water, fltrd, mg/L (00930)	Potasium, water, fltrd, mg/L (00935)	Sulfate, water, fltrd, mg/L (00945)	Choride, water, fltrd, mg/L (00940)	Nitrate, water, fltrd, mg/L as N (00618)	Ammonia, water, fltrd, mg/L as N (00608)	Phos-phorus, water, fltrd, mg/L (00666)
09/28 to 10/05	.017	.028	.99	.03	.254	.540	<.003
10/05 to 10/12	--	--	--	--	--	--	--
10/12 to 10/19	.023	.028	1.2	.03	.239	.570	<.003
10/19 to 10/26	.007	.007	.58	.02	.195	.260	<.003
10/26 to 11/02	.017	.020	.88	.04	.494	1.14	<.003
11/02 to 11/09	--	--	--	--	--	--	--
11/09 to 11/16	--	--	--	--	--	--	--
11/16 to 11/23	--	--	--	--	--	--	--
11/23 to 11/30	.008	.012	.63	.02	.270	.380	<.003
11/30 to 12/07	--	--	--	--	--	--	--
12/07 to 12/14	--	--	--	--	--	--	--
12/14 to 12/22	--	--	--	--	--	--	--
12/22 to 12/28	--	--	--	--	--	--	--
12/28 to 01/04	--	--	--	--	--	--	--
01/04 to 01/11	--	--	--	--	--	--	--
01/11 to 11/18	--	--	--	--	--	--	--
11/18 to 11/25	.056	.141	1.0	.06	.216	.180	<.003
11/25 to 02/01	--	--	--	--	--	--	--
02/01 to 02/08	--	--	--	--	--	--	--
02/08 to 02/15	--	--	--	--	--	--	--
02/15 to 02/22	--	--	--	--	--	--	--
02/22 to 03/01	--	--	--	--	--	--	--
03/01 to 03/08	--	--	--	--	--	--	--
03/08 to 03/15	--	--	--	--	--	--	--
03/15 to 03/22	--	--	--	--	--	--	--
03/22 to 03/29	.060	.020	2.1	.10	.908	1.74	<.003
03/29 to 04/05	--	--	--	--	--	--	--
04/05 to 04/12	.010	.007	.91	.02	.103	.290	<.003
04/12 to 04/19	.022	.009	.80	.05	.320	.660	<.003
04/19 to 04/26	--	--	--	--	--	--	--
04/26 to 05/03	--	--	--	--	--	--	--
05/03 to 05/10	.025	.016	.85	.03	.298	1.02	<.003
05/10 to 05/17	.027	.005	.52	.05	.090	.120	<.003
05/17 to 05/24	.017	.013	.32	.02	.150	.260	<.003
05/24 to 05/31	.019	.028	.49	.03	.174	.550	<.003
05/31 to 06/07	.024	.023	.66	.04	.274	.580	<.003
06/07 to 06/14	.009	.016	.20	.02	.092	.110	<.003
06/14 to 06/21	.050	.051	.51	.08	.189	.240	<.003
06/21 to 06/28	.034	.056	1.3	.08	.374	.870	<.003
06/28 to 07/05	.012	.023	.43	.03	.152	.260	<.003
07/05 to 07/12	.017	.050	.79	.05	.264	.600	<.003
07/12 to 07/19	.019	.058	1.7	.07	.374	1.30	<.003
07/19 to 07/26	.052	.042	.75	.06	.313	.650	<.003
07/26 to 08/02	.055	.140	1.8	.14	.857	1.43	<.003
08/02 to 08/09	--	--	--	--	--	--	--
08/09 to 08/16	.010	.065	.66	.05	.284	.540	<.003
08/16 to 08/23	.007	.017	.45	.11	.189	.420	<.003
08/23 to 08/30	.108	.102	1.8	.13	.432	.660	<.003
08/30 to 09/06	.040	.033	1.2	.06	.342	.610	<.003
09/06 to 09/13	.041	.028	.95	.06	.252	.320	<.003
09/13 to 09/20	--	--	--	--	--	--	--
09/20 to 09/27	.012	.031	.64	.03	.233	.460	<.003

1 The use of brand names in this report is for identification purposes only and does not imply endorsemet by the U.S. Geological Survey.

b Trace of water collected in field sampler.

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Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter (m)
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
	Area	
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
	Volume	
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic foot per second per day [(ft^3/s)/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.233×10^{3}	cubic meter (m^3)
	1.233×10^{-3}	cubic hectometer (hm^3)
	1.233×10^{-6}	cubic kilometer (km^3)
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second (m^3/s)
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton (short)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

°F = (1.8 x °C) + 32