

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected.

#### Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge and gage height for each water year are given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. Stations that are noted with "METWARN" are part of a flood-warning system for Rapid City and surrounding area and are equipped with real-time satellite data-collection platforms. METWARN stations are operated from April 1 to September 30.

**Annual maximum discharge at crest-stage partial-record stations**

| Station no.                  | Station name                                                  | Location                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drainage area (mi <sup>2</sup> ) | Period of record  | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                   |                                 |
|------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------|-------------------------|-------------------|---------------------------------|--------------------------|-------------------|---------------------------------|
|                              |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                   | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) |
| RED RIVER OF THE NORTH BASIN |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                   |                         |                   |                                 |                          |                   |                                 |
| 05051650                     | La Belle Creek near Veblen, SD                                | Lat 45° 53'33", long 97° 21'40", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.1, T.128 N., R.54 W., Marshall County, Hydrologic Unit 09020105, on downstream left wingwall on county bridge, 3.0 mi west of Veblen on State Highway 25, 2.0 mi north, and 0.5 mi west. Elevation of gage is 1,330 ft above NGVD of 1929, from topographic map.                                                | 8.74                             | 1988-99‡, 2001-03 | 6-24-03                 | 6.65              | 175                             | 4- 1-97<br>5-18-96       | 12.57<br>7.34     | ( <sup>a</sup> )<br>664         |
| GRAND-MOREAU RIVER BASIN     |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                   |                         |                   |                                 |                          |                   |                                 |
| 06357620                     | Willow Creek near Keldron, SD                                 | Lat 45° 50'00", long 101° 52'02", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.27, T.22 N., R.18 E., Corson County, Hydrologic Unit 10130303, on left downstream bank at bridge, 0.1 mi west of Corson County Road 33, 0.8 mi upstream of West Branch Willow Creek confluence, and 8.0 mi south-southwest of Keldron. Elevation of gage is 2,355 ft above NGVD of 1929, from topographic map. | 30.0                             | 1999-2003         | 3-18-03                 | <sup>a</sup> 4.59 | 20                              | 7- 7-98                  | <sup>b</sup> 13.5 | ( <sup>c</sup> )                |
| MISSOURI-OAHE RIVER BASIN    |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                   |                         |                   |                                 |                          |                   |                                 |
| 06361045                     | Unnamed tributary Swift Bird Bay, Lake Oahe, near LaPlant, SD | Lat 45° 08'38", long 100° 23'35", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.25, T.14 N., R.30 E., Dewey County, Hydrologic Unit 10130105, on left bank at downstream side of county road, 12.6 mi southeast of LaPlant, 25.6 mi southeast of Whitehorse, and 42.4 mi northeast of Eagle Butte. Elevation of gage is 1,660 ft above NGVD of 1929, from topographic map.                     | 8.99                             | 1999-2003         | 5- 4-03                 | 7.63              | <sup>d</sup> 140                | 5- 5-99                  | 9.09              | 405                             |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.          | Station name                                      | Location                                                                                                                                                                                                                                                                                                                                                                                                           | Drainage area (mi <sup>2</sup> ) | Period of record    | Water year 2003 maximum |                     |                                 | Period of Record Maximum |                    |                                 |
|----------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------|-------------------------|---------------------|---------------------------------|--------------------------|--------------------|---------------------------------|
|                      |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |                     | Date                    | Gage height (ft)    | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s) |
| CHEYENNE RIVER BASIN |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |                     |                         |                     |                                 |                          |                    |                                 |
| 06394300             | Redbird Canyon near Newcastle, WY                 | Lat 43° 46'34", long 104° 01'37", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.20, T.3 N., R.1 E., Custer County, Hydrologic Unit 10120107, 4.1 mi south of Fanny Peak, 9.6 mi east of Newcastle, and 21.0 mi west of Custer. Elevation of gage is 3,580 ft above NGVD of 1929, from topographic map.                                                       | 62.1                             | 1999-2003           | 5- 1-03                 | 29.11               | 106                             | 7- 7-01                  | 30.20              | 1,140                           |
| 06394450             | Pass Creek near Dewey, SD                         | Lat 43° 33'05", long 103° 56'15", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.12, T.6 S., R.1 E., Custer County, Hydrologic Unit 10120107, in centerline of Pass Creek 7.0 mi east of Dewey on County Road 769 and 140 ft south of road. Elevation of gage is 3,870 ft above NGVD of 1929, from topographic map.                                           | 35.9                             | 1999-2003           | 8-17-03                 | 15.49               | 579                             | <sup>(c)</sup>           | <sup>f</sup> 18.05 | 1,430                           |
| 06402470             | Beaver Creek above Buffalo Gap, SD                | Lat 43° 31'20", long 103° 21'23", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.13, T.6 S., R.6 E., Custer County, Hydrologic Unit 10120109, on right side of flume approximately 1.0 mi downstream from commercial fish hatchery and approximately 4.0 mi northeast of Buffalo Gap. Elevation of gage is 3,772 ft above NGVD of 1929, from topographic map. | 111                              | 1991-97‡, 1999-2003 | 5- 9-03                 | 11.10               | 9.9                             | 6-19-99                  | 13.50              | 120                             |
| 06402995             | French Creek above Stockade Lake, near Custer, SD | Lat 43° 46'10", long 103° 32'10", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.21, T.3 S., R.5 E., Custer County, Hydrologic Unit 10120109, on right bank 0.3 mi above Stockade Lake, 0.4 mi below mouth of Willow Creek, and 2.5 mi east of Custer on Highway 16A. Elevation of gage is 5,190 ft above NGVD of 1929, from topographic map.                 | 68.7                             | 1991-97‡, 1998-2003 | 3-14-03                 | <sup>a,g</sup> 5.36 | <sup>g</sup> 38                 | 8- 7-99                  | 8.87               | 1,070                           |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                     | Station name                          | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Drainage area (mi <sup>2</sup> ) | Period of record                 | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                    |                                 |
|---------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------|-------------------|---------------------------------|--------------------------|--------------------|---------------------------------|
|                                 |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                  | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s) |
| CHEYENNE RIVER BASIN--Continued |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                  |                         |                   |                                 |                          |                    |                                 |
| 06403810                        | Battle Creek above Keystone, SD       | Lat 43° 54'17", long 103° 27'48", in SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.1, T.2 S., R.5 E., Pennington County, Hydrologic Unit 10120109, on right bank 15 ft downstream from concrete culvert along Pennington County Highway 323 about 3.0 mi west of Keystone. Elevation of gage is 4,600 ft above NGVD of 1929, from topographic map. METWARN station.                                                 | 6.8                              | 1998-2003                        | 5- 8-03                 | 5.00              | 5.9                             | 6-18-99                  | 8.48               | <sup>h</sup> 1,140              |
| 06403850                        | Grizzly Bear Creek near Keystone, SD  | Lat 43° 52'41", long 103° 26'14", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.17, T.2 S., R.6 E., Pennington County, Hydrologic Unit 10120109, on down-stream right wingwall of Highway 16A bridge, and 1.2 mi southwest of Keystone. Elevation of gage is 4,510 ft above NGVD of 1929, from topographic map. METWARN station.                                                                                 | 4.52                             | 1998-2003                        | 6- 9-03                 | <sup>g</sup> 2.59 | <sup>g</sup> 1.2                | 7-11-01                  | 5.60               | 713                             |
| 06404800                        | Grace Coolidge Creek near Hayward, SD | Lat 43° 48'07", long 103° 26'03" in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.8, T.3 S., R.6 E., Custer County, Hydrologic Unit 10120109, in Custer State Park, at right downstream side of bridge, near intersection of State Highway 87 and CSP 753, approximately 1.0 mi upstream from Center Lake, and 7.0 mi southwest of Hayward. Elevation of gage is 4,780 ft above NGVD of 1929, from topographic map. | 7.48                             | 1989-98 <sup>‡</sup> , 1999-2003 | 5-21-03                 | <sup>g</sup> 4.50 | 4.3                             | 5- 8-95                  | 7.57               | 337                             |
| 06405800                        | Bear Gulch near Hayward, SD           | Lat 43° 47'31", long 103° 20'49", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.13, T.3 S., R.6 E., Custer County, Hydrologic Unit 10120109, in Custer State Park, on right bank 3.5 mi upstream from mouth, 2.1 mi north from inter-section of Alt. 16 and Highway 36, and 5.5 mi south of Hayward. Elevation of gage is 4,110 ft above NGVD of 1929, from topographic map.                                     | 4.23                             | 1989-98 <sup>‡</sup> , 1999-2003 | <sup>e</sup> 5- 1-03    | 6.31              | 31                              | 9- 7-89                  | <sup>f</sup> 10.68 | <sup>h</sup> 1,250              |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                     | Station name                                            | Location                                                                                                                                                                                                                                                                                                                                                                                                                    | Drainage area (mi <sup>2</sup> ) | Period of record | Water year 2003 maximum |                  |                                 | Period of Record Maximum |                  |                                 |
|---------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|-------------------------|------------------|---------------------------------|--------------------------|------------------|---------------------------------|
|                                 |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                  | Date                    | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| CHEYENNE RIVER BASIN--Continued |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                  |                         |                  |                                 |                          |                  |                                 |
| 06406700                        | Spring Creek at Oreville, near Hill City, SD            | Lat 43° 51'58", long 103° 37'24", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.22, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on left bank 75 ft downstream from Tenderfoot Creek, near U.S. Highway 16/ Alt 85, and about 5.5 mi southwest of Hill City. Elevation of gage is 5,355 ft above NGVD of 1929, from topographic map. METWARN station. | 42.3                             | 1998-2003        | 6-15-03                 | 4.70             | 32                              | 6-18-98                  | 8.23             | 430                             |
| 06406740                        | Sunday Gulch below Johnson Canyon, near Hill City, SD   | Lat 43° 52'10", long 103° 34'55", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.13, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on left bank along State Highway 87/89 about 0.5 mi downstream from Johnson Canyon and 4.0 mi south of Hill City. Elevation of gage is 5,410 ft above NGVD of 1929, from topographic map. METWARN station.           | 4.85                             | 1998-2003        | 5- 3-03                 | 4.35             | 12                              | 6-18-98                  | 5.89             | 91                              |
| 06406760                        | Reno Gulch near Hill City, SD                           | Lat 43° 54'35", long 103° 36'43", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.2, T.2 S., R.4 E., Pennington County, Hydrologic Unit 10120109, on right bank 0.8 mi upstream from Spring Creek, and about 2.0 mi southwest of Hill City. Elevation of gage is 5,350 ft above NGVD of 1929, from topographic map. METWARN station.                                    | 3.96                             | 1998-2003        | 5- 2-03                 | 4.25             | 8.5                             | 6-18-98                  | 5.84             | 99                              |
| 06411900                        | Rapid Creek above Johnson Siding, below Pactola Dam, SD | Lat 44° 04'56", long 103° 26'32", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.6, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left downstream wingwall about 2.0 mi east of Pactola Dam. Elevation of gage is 4,305 ft above NGVD of 1929, from topographic map. METWARN station.                                                                | 332                              | 1998-2003        | 6-19-03<br>7-24-03      | 3.64<br>3.77     | 130<br>( <sup>1</sup> )         | 6-24-98                  | 4.62             | 638                             |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                     | Station name                                           | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Drainage area (mi <sup>2</sup> ) | Period of record    | Water year 2003 maximum     |                  |                                 | Period of Record Maximum |                  |                                 |
|---------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------|-----------------------------|------------------|---------------------------------|--------------------------|------------------|---------------------------------|
|                                 |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                     | Date                        | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| CHEYENNE RIVER BASIN--Continued |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                     |                             |                  |                                 |                          |                  |                                 |
| 06412000                        | Rapid Creek at Big Bend, near Rapid City, SD           | Lat 44° 03'18", long 103° 25'00", in NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.8, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on right upstream wingwall of bridge about 3.0 mi from Pactola Dam, and 9.0 mi west of Rapid City. Elevation of gage is 4,110 ft above NGVD of 1929, from topographic map. METWARN station.                                                          | 338                              | 1998-2003           | ( <sup>c</sup> )<br>6-19-03 | 5.22<br>4.47     | ( <sup>a</sup> )<br>109         | 6-17-99                  | 6.50             | 555                             |
| 06412200                        | Rapid Creek above Victoria Creek, near Rapid City, SD  | Lat 44° 02'48", long 103° 21'06", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.13, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank 0.5 mi above Victoria Creek, and 3.0 mi west of Canyon Lake. Elevation of gage is 3,570 ft above NGVD of 1929, from topographic map. METWARN station.                                                                                                                 | 355                              | 1989-97‡, 1998-2003 | 6-20-03                     | 5.99             | 138                             | 6- 2-97                  | 8.38             | 1,180                           |
| 06412220                        | Victoria Creek above Victoria Dam, near Rapid City, SD | Lat 44° 01'47", long 103° 26'06", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.19, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank about 3.5 mi upstream of Victoria Dam and 7.0 mi southwest of Rapid City. Elevation of gage is 4,630 ft above NGVD of 1929, from topographic map. METWARN station.                                                                                                    | 2.25                             | 1998-2003           | 6-20-03                     | 3.78             | .81                             | 6-15-99                  | 4.45             | 14                              |
| 06412250                        | Victoria Creek below Victoria Dam, near Rapid City, SD | Lat 44° 01'05", long 103° 23'07", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.27, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, along right bank upstream of culverts 1,000 ft downstream from Victoria Dam, and about 3.5 mi southwest of Rapid City on National Forest Service Road 159. Elevation of gage is 4,160 ft above NGVD of 1929, from topographic map. METWARN station. | 4.56                             | 1998-2003           | 5- 1-03                     | 4.07             | 3.4                             | 6-15-99                  | 6.20             | 73                              |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                     | Station name                                    | Location                                                                                                                                                                                                                                                                                                                                                                                                                                    | Drainage area (mi <sup>2</sup> ) | Period of record        | Water year 2003 maximum |                  |                                 | Period of Record Maximum |                   |                                 |
|---------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------|-------------------------|------------------|---------------------------------|--------------------------|-------------------|---------------------------------|
|                                 |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                         | Date                    | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) |
| CHEYENNE RIVER BASIN--Continued |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                         |                         |                  |                                 |                          |                   |                                 |
| 06412580                        | Wild Irishman Gulch near Rapid City, SD         | Lat 44° 04'52", long 103° 21'54", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.2, T.1 N., R.6 E., Pennington County, Hydrologic Unit 10120110, on left bank about 3.0 mi west of Rapid City on Pennington County Highway 246 (Schroeder Road). Elevation of gage is 4,055 ft above NGVD of 1929, from topographic map. METWARN station.                                              | 3.22                             | 1998-2003               | 2003                    | --               | ( <sup>j</sup> )                | 1998-2003                | --                | ( <sup>j</sup> )                |
| 06413620                        | South Canyon near Rapid City, SD                | Lat 44° 05'34", long 103° 19'37" in NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.31, T.2 N., R.7 E., Pennington County, Hydrologic Unit 10120110, along left bank downstream of concrete culvert at the intersection of CR 234 (Nemo Road) and Echo Drive in the northwest side of Rapid City. Elevation of gage is 3,710 ft above NGVD of 1929, from topographic map. METWARN station. | 2.90                             | 1998-2003               | 2003                    | --               | ( <sup>j</sup> )                | 7-15-01                  | 4.64              | 18                              |
| 06416000                        | Rapid Creek below Hawthorn Ditch, at Rapid City | Lat 44° 04'03", long 103° 10'50", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.8, T.1 N., R.8 E., Pennington County, Hydrologic Unit 10120110, 1.5 mi down-stream from diversion to Hawthorn Ditch and 1.0 mi upstream from diversion to Murphy Ditch. Datum of gage is 3,124.18 ft above NGVD of 1929. METWARN station.                                                                                            | 418                              | 1947-54, 1982±, 2000-03 | 9-10-03                 | 11.54            | 304                             | 5-23-52                  | <sup>k</sup> 9.19 | 2,130                           |
| 06421800                        | Lindsey Draw near Farmingdale, SD               | Lat 43° 54'27", long 102° 51'31", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.1, T.2 S., R.10 E., Pennington County, Hydrologic Unit 10120110, on left down-stream side of County Road C459, 2.0 mi southwest of the confluence of Lindsey Draw and Rapid Creek, and 4.2 mi south-southeast of Farmingdale. Elevation of gage is 2,755 ft above NGVD of 1929, from topographic map. | 12.8                             | 1998-03                 | 5- 1-03                 | 2.34             | ( <sup>c</sup> )                | 6-17-98                  | 7.90              | ( <sup>c</sup> )                |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.               | Station name                             | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Drainage area (mi <sup>2</sup> ) | Period of record                 | Water year 2003 maximum |                                          |                                      | Period of Record Maximum |                             |                                     |
|---------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------|------------------------------------------|--------------------------------------|--------------------------|-----------------------------|-------------------------------------|
|                           |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                  | Date                    | Gage height (ft)                         | Dis-charge (ft <sup>3</sup> /s)      | Date                     | Gage height (ft)            | Dis-charge (ft <sup>3</sup> /s)     |
| BELLE FOURCHE RIVER BASIN |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                                  |                         |                                          |                                      |                          |                             |                                     |
| 06430898                  | Squaw Creek near Spearfish, SD           | Lat 44° 24'04", long 103° 53'35", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.17, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 200 ft upstream from mouth and 8.0 mi south of Spearfish. Elevation of gage is 4,480 ft above NGVD of 1929, from topographic map.                                                                                                                                                                                                                                                 | 6.95                             | 1989-98 <sup>‡</sup> , 1999-2003 | 1-30-03<br>4-14-03      | 5.52<br>4.68                             | (a)<br>9.0                           | 5- 8-95                  | 9.47                        | 860                                 |
| 06432020                  | Spearfish Creek below Spearfish, SD      | Lat 44° 34'48", long 103° 53'37", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.8, T.7 N., R.2 E., Lawrence County, Hydrologic Unit 10120203, on right bank 2.3 mi above mouth and 5.0 mi north of Spearfish. Elevation of gage is 3,280 ft above NGVD of 1929 from topographic map.                                                                                                                                                                                                                            | 204                              | 1989-98 <sup>‡</sup> , 1999-2003 | 6- 8-03                 | 5.23                                     | 214                                  | 5- 9-95                  | 7.37                        | 1,590                               |
| 06432172                  | False Bottom Creek near Central City, SD | Lat 44° 23'28", long 103° 47'58", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.18, T.5 N., R.3 E., Lawrence County, Hydrologic Unit 10120203, at bridge, 0.5 mi upstream from Maitland, 0.8 mi upstream from Paradise Gulch, and 2.0 mi north-west of Central City. Ele-vation of gage is 4,950 ft above NGVD of 1929, from topographic map. Gage operated as a mis-cellaneous surface-water discharge and miscellaneous surface-water-quality site August 1988 to August 1999. | 3.79                             | 2001-03                          | 12-11-02<br>5-19-03     | <sup>§</sup> 11.02<br><sup>§</sup> 10.95 | ( <sup>a</sup> )<br><sup>§</sup> 7.8 | 1-28-02<br>4- 7-01       | <sup>§</sup> 11.30<br>10.98 | ( <sup>a</sup> )<br><sup>d</sup> 11 |
| 06436156                  | Whitetail Creek at Lead, SD              | Lat 44° 20'36", long 103° 45'57", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.4, T.4 N., R.3 E., Lawrence County, Hydrologic Unit 10120202, on right bank 0.5 mi upstream from confluence of White-wood Creek and 0.2 mi upstream from Kirk Power Plant. Elevation of gage is 5,080 ft above NGVD of 1929, from topographic map.                                                                                                                                                                              | 6.15                             | 1989-98 <sup>‡</sup> , 1999-2003 | 5- 5-03                 | <sup>§</sup> 1.42                        | <sup>§</sup> 13                      | 5- 8-95                  | 6.67                        | 507                                 |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                          | Station name                      | Location                                                                                                                                                                                                                                                                                                                                                                                        | Drainage area (mi <sup>2</sup> ) | Period of record                          | Water year 2003 maximum   |                   |                                 | Period of Record Maximum |                    |                                  |
|--------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------|---------------------------|-------------------|---------------------------------|--------------------------|--------------------|----------------------------------|
|                                      |                                   |                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                           | Date                      | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s)  |
| BELLE FOURCHE RIVER BASIN--Continued |                                   |                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                           |                           |                   |                                 |                          |                    |                                  |
| 06437200                             | Bear Butte Creek near Galena, SD  | Lat 44° 23'48", long 103° 34'36", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.13, T.5 N., R.4 E., Lawrence County, Hydrologic Unit 10120202, on right downstream bridge wingwall along U.S. Highway Alt. 14 about 4.5 mi west of Sturgis. Elevation of gage is 3,770 ft above NGVD of 1929, from topographic map. METWARN station.      | 51.8                             | 1998-2003                                 | <sup>(c)</sup><br>5-15-03 | 5.15<br>3.93      | <sup>(a)</sup><br>10            | 6-18-98                  | 5.72               | 541                              |
| 06437500                             | Bear Butte Creek near Sturgis, SD | Lat 44° 28'53", long 103° 16'31", in NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.16, T.6 N., R.7 E., Meade County, Hydrologic Unit 10120202, on left bank 0.8 mi downstream from Spring Creek, 12.5 mi northeast of Sturgis, and 13.4 mi upstream from mouth. Datum of gage is 2,779.91 ft above NGVD of 1929.                                                            | 192                              | 1946-62, 1962-72 <sup>±</sup> , 1990-2003 | 3-11-03                   | <sup>g</sup> 2.58 | <sup>d</sup> 1.0                | 6-16-62                  | <sup>f</sup> 12.45 | 12,700                           |
| 06437650                             | Elm Creek near Fairpoint, SD      | Lat 44° 46'59", long 103° 03'43", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.31, T.10 N., R.9 E., Butte County, Hydrologic Unit 10120202, at bridge on old Highway 212 (Killdeer Road) and 19.5 mi east of Newell. Elevation of gage is 2,820 ft above NGVD of 1929, from topographic map.                                             | 8.8                              | 1999-2003                                 | 3-17-03                   | 5.88              | 172                             | 6- 6-99                  | 7.10               | 680                              |
| CHEYENNE RIVER BASIN                 |                                   |                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                           |                           |                   |                                 |                          |                    |                                  |
| 06438800                             | Elm Creek near Red Owl, SD        | Lat 44° 45'04", long 102° 26'55", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.8, T.9 N., R.14 E., Meade County, Hydrologic Unit 10120113, on Fox Ridge Road, 6.2 mi northeast of Red Owl and 1.2 mi southwest of the confluence of Elm Creek and Sulphur Creek. Elevation of gage is 2,455 ft above NGVD of 1929, from topographic map. | 15.0                             | 1999-2003                                 | 2-17-03                   | <sup>a</sup> 2.21 | <sup>(c)</sup>                  | 7- 7-00<br>3- 9-01       | 5.16<br>12.30      | <sup>(c)</sup><br><sup>(a)</sup> |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                       | Station name                                      | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Drainage area (mi <sup>2</sup> ) | Period of record | Water year 2003 maximum |                  |                                 | Period of Record Maximum |                    |                                 |
|-----------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|-------------------------|------------------|---------------------------------|--------------------------|--------------------|---------------------------------|
|                                   |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                  | Date                    | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s) |
| MISSOURI-OAHE RIVER BASIN         |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                  |                         |                  |                                 |                          |                    |                                 |
| 06439770                          | Unnamed tributary Stone Lake near Lebanon, SD     | Lat 44° 55'35", long 99° 44'48", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.27, T.117 N., R.74 W., Potter County, Hydrologic Unit 10130106, on right bank at downstream side of county road, 5.6 mi upstream from Stone Lake, 10.3 mi south-southeast of Lebanon, 11.7 mi southeast of Gettysburg, and 22.2 mi northeast of Onida. Elevation of gage is 1,875 ft above NGVD of 1929, from topographic map. | 12.4                             | 1999-2003        | 2003                    | --               | ( <sup>j</sup> )                | 9- 3-99                  | 7.01               | ( <sup>c</sup> )                |
| 06439960                          | Chantier Creek near Hayes, SD                     | Lat 44° 31'20", long 100° 42'13", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.35, T.7 N., R.28 E., Stanley County, Hydrologic Unit 10130105, at bridge on State Highway 1806, 1.7 mi upstream from mouth, 18.0 mi northeast of Hayes, and 23.0 mi northwest of Pierre. Elevation of gage is 1,670 ft above NGVD of 1929, from topographic map.                                                              | 21.5                             | 1990-2003        | 5- 8-03                 | 1.73             | 209                             | 6- 7-93                  | <sup>f</sup> 14.81 | <sup>l</sup> 8,000              |
| MISSOURI-FORT RANDALL RIVER BASIN |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |                  |                         |                  |                                 |                          |                    |                                 |
| 06440300                          | Unnamed tributary Cottonwood Creek near Quinn, SD | Lat 43° 57'39", long 102° 08'17", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.18, T.1 S., R.17 E., Pennington County, Hydrologic Unit 10140102, on left downstream wingwall of bridge, located 0.5 mi west of Quinn on Highway 14, and 1.8 mi south on county road T152. Elevation of gage is 2,600 ft above NGVD of 1929, from topographic map.                                                            | 9.56                             | 1999-2003        | 2-19-03                 | 9.58             | 65                              | 4-21-00                  | 11.96              | 171                             |
| 06440850                          | Medicine Creek near Phillip, SD                   | Lat 44° 03'17", long 101° 29'12", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.8, T.1 N., R.22 E., Haakon County, Hydrologic Unit 10140102, at bridge on county highway, 1.3 mi upstream from mouth, and 9.0 mi east of Philip. Prior to October 1998, datum 2.00 ft lower. Elevation of gage is 2,040 ft above NGVD of 1929, from topographic map.                                                          | 56.5                             | 1989-2003        | 2003                    | --               | ( <sup>j</sup> )                | 6- 6-99                  | 11.27              | 450                             |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                                  | Station name                   | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                | Drainage area (mi <sup>2</sup> ) | Period of record                        | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                    |                                 |
|----------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------|-------------------------|-------------------|---------------------------------|--------------------------|--------------------|---------------------------------|
|                                              |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                                         | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s) |
| MISSOURI-FORT RANDALL RIVER BASIN--Continued |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                                         |                         |                   |                                 |                          |                    |                                 |
| 06441100                                     | Plum Creek near Hayes, SD      | Lat 44° 20'41", long 101° 07'40", in SW <sup>1</sup> / <sub>4</sub> sec.32, T.5 N., R.25 E., Stanley County, Hydrologic Unit 10140102, at bridge on U.S. Highway 14 and State Highway 63, 7.0 mi southwest of Hayes. Elevation of gage is 2,034 ft above NGVD of 1929, from topographic map.                                                                                                                                                            | 24.5                             | 1989-2003                               | 5-17-03                 | 3.18              | 148                             | 5- 9-95                  | 6.74               | 936                             |
| 06441110                                     | Plum Creek below Hayes, SD     | Lat 44° 12'38", long 100° 43'34", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.23, T.3 N., R.28 E., Stanley County, Hydrologic Unit 10140102, on left bank at downstream side of county bridge, 0.3 mi upstream from mouth, 3.0 mi southwest of Wendte, 18.5 mi southeast of Hayes, and 21.2 mi southwest of Ft. Pierre. Elevation of gage is 1,612 ft above NGVD of 1929, from topographic map. | 252                              | 1989-95 <sup>‡</sup> , 1998-2003        | 5- 8-03                 | 12.49             | 754                             | 5-30-91                  | <sup>f</sup> 23.74 | <sup>h</sup> 13,500             |
| 06442150                                     | Cedar Creek near Kennebec, SD  | Lat 44° 08'27", long 99° 56'37", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.22, T.108 N., R.76 W., Lyman County, Hydrologic Unit 10140101, on left bank about 0.6 mi upstream from Highway 1806 bridge, 19.5 mi northwest of Kennebec, and 20 mi northwest of Lower Brule. Elevation of gage is 1,440 ft above NGVD of 1929, from topographic map.                                             | 140                              | 2002-03                                 | 5- 8-03                 | 9.27              | ( <sup>c</sup> )                | 5- 8-03                  | 9.27               | ( <sup>c</sup> )                |
| 06442500                                     | Medicine Creek at Kennebec, SD | Lat 43° 54'17", long 99° 52'35", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.18, T.105 N., R.75 W., Lyman County, Hydrologic Unit 10140104, on downstream side of bridge, 0.5 mi west of Kennebec, and 0.5 mi downstream from small right-bank tributary. Datum of gage is 1,659.64 ft above NGVD of 1929.                                                                                                                     | 464                              | 1955-90 <sup>‡</sup> , 1991-97, 2001-03 | 5- 9-03                 | <sup>f</sup> 3.72 | 151                             | 6-4-97                   | 19.28              | 16,600                          |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                                  | Station name                                         | Location                                                                                                                                                                                                                                                                                                                                                                                                             | Drainage area (mi <sup>2</sup> ) | Period of record            | Water year 2003 maximum |                  |                                 | Period of Record Maximum |                   |                                 |
|----------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------|-------------------------|------------------|---------------------------------|--------------------------|-------------------|---------------------------------|
|                                              |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                             | Date                    | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) |
| MISSOURI-FORT RANDALL RIVER BASIN--Continued |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                             |                         |                  |                                 |                          |                   |                                 |
| 06442670                                     | Counselor Creek near Lower Brule, SD                 | Lat 44° 01'34", long 99° 31'00", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.31, T.107 N., R.72 W., Lyman County, Hydrologic Unit 10140101, on left bank 1,260 ft upstream from highway BIA 10 bridge, 4.4 mi southeast of Lower Brule, and 11.0 mi northeast of Reliance. Elevation of gage is 1,440 ft above NGVD of 1929, from topographic map.           | 32.8                             | 2002-03                     | <sup>e</sup> 6-24-03    | 10.40            | ( <sup>c</sup> )                | <sup>e</sup> 6-24-03     | 10.40             | ( <sup>c</sup> )                |
| WHITE RIVER BASIN                            |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                             |                         |                  |                                 |                          |                   |                                 |
| 06445980                                     | White Clay Creek near Oglala, SD                     | Lat 43° 08'46", long 102° 40'58", in NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.30, T.37 N., R.45 W., Shannon County, Hydrologic Unit 10140201, on left bank at downstream side of bridge on U.S. Highway 18, 4.3 mi southeast of Oglala, 5.5 mi upstream from Oglala Dam, and 11 mi northwest of Pine Ridge. Datum of gage is 3,001.54 ft above NGVD of 1929. | 340                              | 1966-81‡, 1988-99‡, 2000-03 | <sup>e</sup> 6-18-03    | 10.38            | 170                             | 3-11-66<br>6-16-67       | 15.02<br>14.74    | ( <sup>a</sup> )<br>659         |
| 06446100                                     | Wounded Knee Creek at Wounded Knee, SD               | Lat 43° 08'38", long 102° 21'28", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.36, T.37 N., R.43 W., Shannon County, Hydrologic Unit 10140201, on left bank at upstream end of culvert on Tribal Road 27 in Wounded Knee, and above the confluence of Spring Creek. Elevation of gage is 3,200 ft above NGVD of 1929, from topographic map.                                                  | 82.5                             | 1993-97‡, 1998-2003         | <sup>e</sup> 6-18-03    | 5.74             | 46                              | 6- 3-97                  | <sup>f</sup> 9.13 | 321                             |
| 06447050                                     | Unnamed tributary Buzzard Creek near Long Valley, SD | Lat 43° 27'42", long 101° 25'59", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.2, T.40 N., R.35 W., Jackson County, Hydrologic Unit 10140202, on left bank, 22 ft northwest from downstream end of culvert on county road, 3.1 mi east of Long Valley, and 11.5 mi west of Norris. Elevation of gage is 2,575 ft above NGVD of 1929, from topographic map.    | 9.26                             | 1999-2003                   | 5- 1-03                 | 3.62             | 1.0                             | 4-19-00                  | 4.88              | 46                              |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                       | Station name                                        | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Drainage area (mi <sup>2</sup> ) | Period of record | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                   |                                 |
|-----------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|-------------------------|-------------------|---------------------------------|--------------------------|-------------------|---------------------------------|
|                                   |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |                  | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) |
| WHITE RIVER BASIN--Continued      |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |                  |                         |                   |                                 |                          |                   |                                 |
| 06451600                          | Unnamed tributary White Thunder Creek near Wood, SD | Lat 43° 37'23", long 100° 30'33", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.14, T.42 N., R.27 W., Mellette County, Hydrologic Unit 10140204, on right bank 300 ft downstream from road culvert on county road, 9.9 mi north of Wood, and 2.5 mi upstream from confluence with White Thunder Creek. Datum of gage is 1,958.75 ft above NGVD of 1929.                                                 | 13.0                             | 1998-2003        | 7- 5-03                 | 6.01              | .06                             | 7-30-98                  | <sup>f</sup> 9.44 | ( <sup>c</sup> )                |
| 06451650                          | Williams Creek near Vivian, SD                      | Lat 43° 43'33", long 100° 17'50", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.16, T.103 N., R.79 W., Lyman County, Hydrologic Unit 10140204, on right bank at downstream side of Highway 53 bridge, approximately 2.0 mi upstream of confluence with White River, 13.2 mi south of Interstate 90 and Highway 53 intersection. Elevation of gage is 1,700 ft above NGVD of 1929, from topographic map. | 48.8                             | 1999-2003        | 5- 4-03                 | 9.08              | 1,730                           | 9- 4-99                  | <sup>f</sup> 9.64 | <sup>h</sup> 1,980              |
| MISSOURI-FORT RANDALL RIVER BASIN |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |                  |                         |                   |                                 |                          |                   |                                 |
| 06452275                          | Snake Creek near Bijou Hills, SD                    | Lat 43° 29'58", long 99° 07'13", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.10, T.100 N., R.70 W., Charles Mix County, Hydrologic Unit 10140101, at downstream side of State Highway 50, 3.3 mi upstream from Academy Lake, 3.5 mi northwest of Academy, and 16.5 mi northwest of Platte. Elevation of gage is 1,690 ft above NGVD of 1929, from topographic map.                                    | 23.8                             | 1999-2003        | 5- 9-03                 | <sup>f</sup> 4.77 | 24                              | 5- 5-99                  | 8.31              | 830                             |
| 06452290                          | East Fork Platte Creek near Aurora Center, SD       | Lat 43° 33'36", long 98° 36'58", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.9, T.101 N., R.65 W., Aurora County, Hydrologic Unit 10140101, on left bank at downstream end of culvert on county road, 1.2 mi west and 2.2 mi north of Aurora Center, and 0.6 mi upstream of Laffey Lake. Elevation of gage is 1,605 ft above NGVD of 1929, from topographic map.                                      | 20.8                             | 1999-2003        | 2003                    | --                | ( <sup>j</sup> )                | 7- 4-99<br>3-21-01       | 6.06<br>6.45      | 323<br>( <sup>a</sup> )         |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                          | Station name                     | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Drainage area (mi <sup>2</sup> ) | Period of record | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                  |                                 |
|--------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------|-------------------------|-------------------|---------------------------------|--------------------------|------------------|---------------------------------|
|                                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                  | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft) | Dis-charge (ft <sup>3</sup> /s) |
| NIOBRARA RIVER BASIN                 |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                  |                         |                   |                                 |                          |                  |                                 |
| 06463900                             | Antelope Creek near Mission, SD  | Lat 43° 16'26", long 100° 40'56", in SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.7, T.38 N., R.28 W., Todd County, Hydrologic Unit 10150006, at culvert on county road, 2.0 mi south of Mission on State Highway 83 and then 1.6 mi west. Elevation of gage is 2,595 ft above NGVD of 1929, from topographic map.                                                                                                                                   | 71.3                             | 1999-2003        | 3-14-03                 | <sup>a</sup> 3.65 | 20                              | 2-18-97<br>7- 3-98       | 7.40<br>6.96     | ( <sup>a</sup> )<br>88          |
| 06464120                             | Sand Creek near Olsonville, SD   | Lat 43° 01'03", long 100° 24'46", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.8, T.35 N., R.26 W., Todd County, Hydrologic Unit 10150006, on left bank 40 ft downstream of county road culvert, approximately 23.5 mi upstream from confluence with Keya Paha River, 2.5 mi southeast of Littleburg, and 12.2 mi southeast of Olsonville. Elevation of gage is 2,575 ft above NGVD of 1929, from topographic map. | 11.0                             | 1999-2003        | 6-25-03                 | 7.26              | 51                              | <sup>e</sup> 4-25-01     | 8.16             | <sup>m</sup> 250                |
| MISSOURI-LEWIS AND CLARK RIVER BASIN |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                  |                         |                   |                                 |                          |                  |                                 |
| 06466715                             | Snatch Creek near Tabor, SD      | Lat 42° 54'30", long 97° 46'33", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.35, T.94 N., R.59 W., Bon Homme County, Hydrologic Unit 10170101, at upstream pier (revised) of highway bridge, 5.0 mi southwest of Tabor and 2.0 mi upstream from mouth. Elevation of gage is 1,330 ft above NGVD of 1929, from topographic map.                                                                                    | 44                               | 1993-2003        | <sup>e</sup> 3-16-03    | <sup>n</sup> 3.48 | 10                              | 5-30-95                  | 10.58            | 1,660                           |
| JAMES RIVER BASIN                    |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                  |                         |                   |                                 |                          |                  |                                 |
| 06472050                             | Antelope Creek near Langford, SD | Lat 45° 34'22", long 97° 50'10", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.7, T.124 N., R.58 W., Day County, Hydrologic Unit 10160005, on right downstream wingwall of box culvert, 2.0 mi south of Langford or 5.0 mi north of Pierpont. Elevation of gage is 1,390 ft above NGVD of 1929, from topographic map.                                                                                               | 25.4 (revised)                   | 1999-2003        | 6-25-03                 | 7.62              | ( <sup>c</sup> )                | 6-25-03                  | 7.62             | ( <sup>c</sup> )                |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                  | Station name                           | Location                                                                                                                                                                                                                                                                                                                                                                                                   | Drainage area (mi <sup>2</sup> ) | Period of record                                                 | Water year 2003 maximum |                     |                                 | Period of Record Maximum |                           |                                 |
|------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------|-------------------------|---------------------|---------------------------------|--------------------------|---------------------------|---------------------------------|
|                              |                                        |                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                                  | Date                    | Gage height (ft)    | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)          | Dis-charge (ft <sup>3</sup> /s) |
| JAMES RIVER BASIN--Continued |                                        |                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                                  |                         |                     |                                 |                          |                           |                                 |
| 06473020                     | Howard tributary near Leola, SD        | Lat 45° 37'48", long 98° 55'52", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.21, T.125 N., R.67 W., McPherson County, Hydrologic Unit 10160008, on left bank 20 ft downstream from State Highway 45, 6.3 mi south of Leola, and 4.8 mi upstream of Compton Lake. Elevation of gage is 1,520 ft above NGVD of 1929, from topographic map.           | 45.2                             | 1999-2003                                                        | <sup>e</sup> 5- 9-03    | <sup>f,n</sup> 1.28 | <sup>d</sup> 2.0                | 5-10-99                  | 3.57                      | 290                             |
| 06473300                     | Preachers Run tributary at Ipswich, SD | Lat 45° 27'08", long 99° 01'45", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.22, T.123 N., R.68 W., Edmunds County, Hydrologic Unit 10160008, on right bank 15 ft downstream from double-corrugated culvert on county highway, 0.3 mi north of U.S. Highway 12 at Ipswich. Elevation of gage is 1,530 ft above NGVD of 1929, from topographic map. | 7.88                             | 1971-80, 1999-2003                                               | 5- 9-03                 | 2.47                | 8.2                             | 3-24-78<br>4- 7-01       | <sup>k</sup> 7.42<br>3.42 | <sup>(a)</sup><br>95            |
| 06474000                     | Turtle Creek near Tulare, SD           | Lat 44° 44'06", long 98° 35'09", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.25, T.115 N., R.65 W., Spink County, Hydrologic Unit 10160009, on right bank 200 ft upstream from highway bridge, 3.9 mi west of Tulare, and 8.9 mi downstream from Wolf Creek. Elevation of gage is 1,300 ft above NGVD of 1929, by barometer.                                                      | 1,124                            | 1954-56, 1966-81 <sup>‡</sup> , 1985-89 <sup>‡</sup> , 1990-2003 | <sup>(c)</sup>          | <sup>(a)</sup>      | <sup>d</sup> <10                | 3-26-97<br>3-28-97       | 19.32<br>18.80            | <sup>(a)</sup><br>13,500        |
| 06475600                     | Turton tributary south near Turton, SD | Lat 45° 03'07", long 97° 59'38", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.12, T.118 N., R.60 W., Spink County, Hydrologic Unit 10160006, on right downstream wing-wall of highway bridge, 10.0 mi north of southwest corner of Raymond, then 2.5 mi west. Elevation of gage is 1,400 ft above NGVD of 1929, from topographic map.               | 19.7                             | 1999-2003                                                        | 3-18-03                 | <sup>a</sup> 4.85   | <sup>d</sup> 10                 | 4- 7-01                  | 5.59                      | <sup>(c)</sup>                  |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                  | Station name                              | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Drainage area (mi <sup>2</sup> ) | Period of record                          | Water year 2003 maximum |                     |                                 | Period of Record Maximum |                                        |                                    |
|------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------|-------------------------|---------------------|---------------------------------|--------------------------|----------------------------------------|------------------------------------|
|                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                                           | Date                    | Gage height (ft)    | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)                       | Dis-charge (ft <sup>3</sup> /s)    |
| JAMES RIVER BASIN--Continued |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                                           |                         |                     |                                 |                          |                                        |                                    |
| 06475850                     | Foster Creek tributary near Carpenter, SD | Lat 44° 37'56", long 98° 03'42", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.5, T.113 N., R.60 W., Beadle County, Hydrologic Unit 10160006, on left downstream concrete culvert apron, 7.7 mi east from junction of State Highways 37 and 28. Elevation of gage is 1,325 ft above NGVD of 1929, from topographic map.                                                                                                                                                                    | 4.93                             | 1971-80, 1999-2003                        | 3-14-03                 | <sup>a</sup> 2.60   | 3.0                             | 3-12-77<br>4- 7-01       | <sup>k</sup> 5.41<br><sup>§</sup> 4.56 | <sup>(a)</sup><br><sup>§</sup> 210 |
| 06477150                     | Rock Creek near Fulton, SD                | Lat 43° 45'30", long 97° 54'32", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.4, T.103 N., R.59 W., Hanson County, Hydrologic Unit 10160011, on right downstream wingwall of highway bridge, 4.8 mi northwest of Fulton, and 9.3 mi upstream from mouth. Elevation of gage is 1,240 ft above NGVD of 1929, from topographic map. Prior to August 1989 at site 0.16 mi upstream from present location and different datum. From August 1989 to August 1995 at site 0.16 mi upstream from present location and same datum. | 240                              | 1967-72 <sup>‡</sup> , 1973-79, 1989-2003 | 3-16-03                 | <sup>f</sup> 3.02   | 1.5                             | 3-29-97                  | 13.74                                  | 3,120                              |
| 06478052                     | Enemy Creek near Mitchell, SD             | Lat 43° 38'33", long 97° 59'09", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.13, T.102 N., R.60 W., Davison County, Hydrologic Unit 10160011, at right downstream wingwall of highway bridge, 7.3 mi upstream from mouth, and 4.5 mi southeast of Mitchell. Elevation of gage is 1,280 ft above NGVD of 1929, from topographic map.                                                                                                                                                                                     | 163                              | 1976-87 <sup>‡</sup> , 1989-2003          | 4-16-03                 | 5.52                | 5.0                             | 6-22-84                  | 15.15                                  | 4,280                              |
| 06478390                     | Wolf Creek near Clayton, SD               | Lat 43° 22'18", long 97° 36'12", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.29, T.99 N., R.57 W., Hutchinson County, Hydrologic Unit 10160011, at left downstream pier on highway bridge, 4.1 mi upstream from mouth, and 5.6 mi southeast of Clayton. Elevation of gage is 1,210 ft above NGVD of 1929, from topographic map.                                                                                                                                                                                         | 396                              | 1976-88 <sup>‡</sup> , 1989-2003          | <sup>e</sup> 2-20-03    | <sup>a,f</sup> 4.71 | <sup>d</sup> 40                 | 6-21-84                  | 18.01                                  | 6,520                              |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                          | Station name                                         | Location                                                                                                                                                                                                                                                                                                                                                                                                                                         | Drainage area (mi <sup>2</sup> ) | Period of record    | Water year 2003 maximum                                       |                   |                                 | Period of Record Maximum |                    |                                 |
|--------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------|---------------------------------------------------------------|-------------------|---------------------------------|--------------------------|--------------------|---------------------------------|
|                                      |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                     | Date                                                          | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)   | Dis-charge (ft <sup>3</sup> /s) |
| JAMES RIVER BASIN--Continued         |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                     |                                                               |                   |                                 |                          |                    |                                 |
| 06478513                             | James River near Yankton, SD                         | Lat 42° 59'45", long 97° 22'10", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.5, T.94 N., R.55 W., Yankton County, Hydrologic Unit 10160011, at highway bridge 3.9 mi upstream from Beaver Creek, 17.2 mi upstream from mouth, and 9.0 mi northeast of Yankton. Datum of gage is 1,153.38 ft above NGVD of 1929.                                                                                                         | 20,942<br>4,148 NC               | 1981-95‡, 1996-2003 | 7-10-03                                                       | 7.54              | 1,860                           | 6-23-84<br>4- 9-97       | 24.34<br>22.94     | 26,400<br>28,800                |
| MISSOURI-LEWIS AND CLARK RIVER BASIN |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                     |                                                               |                   |                                 |                          |                    |                                 |
| 06479000                             | Vermillion River near Wakonda, SD                    | Lat 42° 59'27", long 96° 57'49", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.2, T.94 N.,R.52 W., Clay County, Hydrologic Unit 10170102, at right downstream wingwall of State Highway 19, 4.3 mi downstream from Frog Creek, 7.4 mi southeast of Wakonda, and 29.6 mi upstream from mouth. Datum of gage is 1,150.9 ft above NGVD of 1929 (levels by Corps of Engineers).                                               | 2,170<br>494 NC                  | 1946-83‡, 1984-2003 | 7- 6-03                                                       | 16.12             | 3,200                           | 6-23-84                  | <sup>f</sup> 17.62 | 17,000                          |
| WAUBAY LAKES CHAIN CLOSED BASIN      |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                     |                                                               |                   |                                 |                          |                    |                                 |
| 06479158                             | Unnamed tributary Blue Dog Lake near Ortle, SD       | Lat 45° 21'02", long 97° 08'39", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.15, T.122 N.,R.52 W., Roberts County, Hydrologic Unit 10160010, on right downstream bridge wingwall, about 6.5 mi upstream from Blue Dog Lake or 2.5 mi east of Ortle and then 1.5 mi north. Elevation of gage is 1,890 ft above NGVD of 1929, from topographic map.                                        | 11.8                             | 1999-2003           | 3-17-03                                                       | <sup>a</sup> 4.76 | 40                              | 4-10-01                  | 5.42               | <sup>d</sup> 140                |
| BIG SIOUX RIVER BASIN                |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                     |                                                               |                   |                                 |                          |                    |                                 |
| 06479452                             | Big Sioux River at Lake Kampeska, near Watertown, SD | Lat 44° 56'56", long 97° 09'38", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.11, T.117 N., R.53 W., Codington County, Hydrologic Unit 10170202, about 6.6 mi northwest of Watertown and about 1.8 mi upstream from inlet/outlet to Lake Kampeska. Elevation of gage is 1,720 ft above NGVD of 1929, from topographic map. High flow site only to determine timing of Lake Kampeska peak. | ( <sup>c</sup> )                 | 2002-03             | Big Sioux River did not reach minimum recordable gage height. |                   |                                 |                          |                    |                                 |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                      | Station name                                       | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Drainage area (mi <sup>2</sup> ) | Period of record                 | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                                          |                                        |
|----------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------|-------------------|---------------------------------|--------------------------|------------------------------------------|----------------------------------------|
|                                  |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                  | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)                         | Dis-charge (ft <sup>3</sup> /s)        |
| BIG SIOUX RIVER BASIN--Continued |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                  |                         |                   |                                 |                          |                                          |                                        |
| 06479490                         | Mud Creek near Rauville, SD                        | Lat 45° 00'29", long 97° 06'21", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.19, T.118 N., R.52 W., Codington County, Hydrologic Unit 10170202, at left downstream end of bridge, 7.6 mi upstream of Big Sioux River, and 2.2 mi north of Rauville. Prior to Oct. 1, 1999, at site 0.2 mi downstream at same datum. Datum of gage is 1,757.11 ft above NGVD of 1929.                                                                                | 28.9                             | 1998-2003                        | 3-16-03                 | <sup>a</sup> 8.96 | 10                              | 4- 7-01                  | <sup>a</sup> 10.38                       | 850                                    |
| 06479498                         | South Branch tributary Mud Creek near Rauville, SD | Lat 44° 57'12", long 97° 06'23", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.7, T.117 N., R.52 W., Codington County, Hydrologic Unit 10170202, on right bank 40 ft north of right edge of wingwall, 4.3 mi north from junction of U.S. Highways 81 and 212 or by driving south 1.9 mi on U.S. Highway 81 from the town of Rauville. Datum of gage is 1,735.43 ft above NGVD of 1929.                                                                | 15.1                             | 2000-03                          | 3-15-03                 | <sup>a</sup> 3.90 | 5.0                             | 4- 7-01                  | <sup>a</sup> 5.50                        | <sup>d</sup> 180                       |
| 06479512                         | Big Sioux River at Broadway, near Watertown, SD    | Lat 44° 53'22", long 97° 07'07", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.6, T.116 N., R.52 W., Codington County, Hydrologic Unit 10170202, on right downstream bank at bridge on Broadway Street, 0.1 mi south of the intersection with U.S. Highway 212, 0.3 mi downstream from the confluence of Big Sioux River and Pelican Lake outflow (low flow), and 1.7 mi upstream from Willow Creek. Datum of gage is 1,701.41 ft above NGVD of 1929. | ( <sup>c</sup> )                 | 1997, 2000-03                    | 3-17-03                 | 7.64              | 195                             | 4- 6-97<br>4-12-97       | <sup>g</sup> 13.67<br><sup>a</sup> 13.53 | ( <sup>a</sup> )<br><sup>g</sup> 2,760 |
| 06479640                         | Hidewood Creek near Estelline, SD                  | Lat 44° 36'42", long 96° 54'17", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.12, T.113 N., R.51 W., Hamlin County, Hydrologic Unit 10170202, at left upstream wingwall, 2.7 mi north of Estelline, 2.8 mi southeast of Dempster, and 4.7 mi upstream from mouth. Elevation of gage is 1,665 ft above NGVD of 1929, by barometer.                                                                                                                                                   | 164                              | 1969-85 <sup>‡</sup> , 1990-2003 | 3-16-03                 | <sup>a</sup> 4.37 | 140                             | 6-16-92                  | <sup>f</sup> 13.10                       | <sup>h</sup> 17,300                    |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                      | Station name                                        | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Drainage area (mi <sup>2</sup> ) | Period of record    | Water year 2003 maximum |                   |                                 | Period of Record Maximum |                             |                                 |
|----------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------|-------------------------|-------------------|---------------------------------|--------------------------|-----------------------------|---------------------------------|
|                                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                     | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                     | Gage height (ft)            | Dis-charge (ft <sup>3</sup> /s) |
| BIG SIOUX RIVER BASIN--Continued |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                     |                         |                   |                                 |                          |                             |                                 |
| 06479980                         | Medary Creek near Brookings, SD                     | Lat 44° 13'27", long 96° 46'02", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.25, T.109 N., R.50 W., Brookings County, Hydrologic Unit 10170202, on right downstream wingwall of county bridge, 5.1 mi downstream from Deer Creek, 4.2 mi upstream from mouth, and 6.1 mi southeast of Brookings. Prior to October 1995, 400 ft downstream at same datum. Datum of gage is 1,570.20 ft above NGVD of 1929. | 200                              | 1981-90‡, 1991-2003 | 3-17-03                 | <sup>a</sup> 6.87 | 350                             | 7- 4-93<br>3-28-97       | 11.78<br><sup>a</sup> 13.02 | 3,710<br>3,500                  |
| 06480650                         | Flandreau Creek above Flandreau, SD                 | Lat 44° 03'45", long 96° 29'15", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.20, T.107 N., R.47 W., Moody County, Hydrologic Unit 10170203, on right bank at county highway bridge 5.9 mi upstream from mouth, and 5.2 mi east of Flandreau. Elevation of gage is 1,555 ft above NGVD of 1929, from topographic map.                                                                                      | 100                              | 1982-91‡, 1992-2003 | 4-18-03                 | 5.37              | 150                             | 6-20-84<br>3-28-97       | 11.02<br><sup>a</sup> 11.40 | 2,650<br>1,800                  |
| 06481400                         | Big Sioux River below diversion, at Sioux Falls, SD | Lat 43° 34'23", long 96° 45'50", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.7, T.101 N., R.49 W., Minnehaha County, Hydrologic Unit 10170203, on right bank at downstream side of walkway bridge, about 3.4 mi upstream from confluence with Skunk Creek and in the city of Sioux Falls. Elevation of gage is 1,410 ft above NGVD of 1929, from topographic map.                                         | (to be determined)               | 2002-03             | 5-14-03                 | 5.49              | ( <sup>c</sup> )                | 5-14-03                  | 5.49                        | ( <sup>c</sup> )                |
| 06481493                         | Skunk Creek near Hartford, SD                       | Lat 43° 38'09", long 96° 54'00", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.13, T.102 N., R.51 W., Minnehaha County, Hydrologic Unit 10170203, on left downstream end of bridge between 465 and 466 Ave., 2.3 mi northeast of Hartford, and about 3 mi downstream from confluence of West Branch Skunk Creek. Elevation of gage is 1,480 ft above NGVD of 1929, from topographic map.                    | 514                              | 2002-03             | 6-26-03                 | 7.51              | <sup>d</sup> 500                | 6-26-03                  | 7.51                        | <sup>d</sup> 500                |

## Annual maximum discharge at crest-stage partial-record stations

| Station no.                      | Station name                      | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Drainage area (mi <sup>2</sup> ) | Period of record                 | Water year 2003 maximum |                   |                                 | Period of Record Maximum        |                             |                                        |
|----------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------|-------------------|---------------------------------|---------------------------------|-----------------------------|----------------------------------------|
|                                  |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                                  | Date                    | Gage height (ft)  | Dis-charge (ft <sup>3</sup> /s) | Date                            | Gage height (ft)            | Dis-charge (ft <sup>3</sup> /s)        |
| BIG SIOUX RIVER BASIN--Continued |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                                  |                         |                   |                                 |                                 |                             |                                        |
| 06481497                         | Willow Creek near Crooks, SD      | Lat 43° 37'51", long 96° 49'37", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.22, T.102 N., R.50 W., Minnehaha County, Hydrologic Unit 10170203, on left downstream end of bridge 2.2 mi southwest from Crooks or 0.2 mi east from the intersection of 259 St. and 469 Ave. Elevation of gage is 1,480 ft above NGVD of 1929, from topographic map.                                                                                                   | 30.0                             | 2002-03                          | 6-25-03                 | <sup>i</sup> 8.67 | 90                              | 6-25-03                         | <sup>i</sup> 8.67           | 90                                     |
| 06482010                         | Silver Creek near Sioux Falls, SD | Lat 43° 36'08", long 96° 43'53", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.29, T.102 N., R.49 W., Minnehaha County, Hydrologic Unit 10170203, on left bank at downstream side of highway bridge, about 0.3 mi upstream from confluence with Big Sioux River, and in the city of Sioux Falls. Elevation of gage is 1,420 ft above NGVD of 1929, from topographic map. Only peak stage determined due to back-water conditions from Big Sioux River. | (c)                              | 2002-03                          | 3-20-03                 | 1.90              | ( <sup>a</sup> )                | <sup>o</sup> 5-13-02            | 2.27                        | --                                     |
| 06482848                         | Beaver Creek at Canton, SD        | Lat 43° 17'12", long 96° 35'46", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.23, T.98 N., R.49 W., Lincoln County, Hydrologic Unit 10170203, on left bank about 1,000 ft downstream from county highway bridge, 1.0 mi southwest of Canton, and 2.2 mi upstream from mouth. Elevation of gage is 1,225 ft above NGVD of 1929, from topographic map.                                                                                                  | 124                              | 1983-89 <sup>‡</sup> , 1990-2003 | 6-25-03                 | 6.75              | 858                             | <sup>f</sup> 6- 7-93<br>6-20-83 | <sup>f</sup> 12.93<br>14.61 | <sup>d</sup> 3,680<br>( <sup>p</sup> ) |

‡ Operated as a continuous-record gaging station.

a Backwater from ice.

b From local observer.

c To be determined.

d Estimated.

e Month or date of occurrence is unknown or not exact.

f From floodmark.

g Observed and/or measured.

h Discharge determined by indirect measurement of peak flow.

i Backwater from debris, beaver dam, and/or tributary inflow.

j No evidence of flow for year or designated period.

k At different datum and/or site.

l Discharge determined by slope-area indirect measurement; peak resulted from stock dam failure.

m From significant rating curve extension.

n Less than indicated value and/or below minimum recordable.

o Partial record year.

p Backwater from Big Sioux River.

## DAILY PRECIPITATION STATIONS

409

## CHEYENNE RIVER BASIN

435827104032500 PRECIP AT LITTLE BEAR RUN NEAR NEWCASTLE, WY

LOCATION.--Lat 43° 58' 27", long 104° 03' 25", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.10, T.46 N., R.61 W., Weston County, Hydrologic Unit 10120107, 1.2 mi northwest of Moon, 3.2 mi south-southeast of Four Corners, and 4.2 mi northeast of Newcastle.

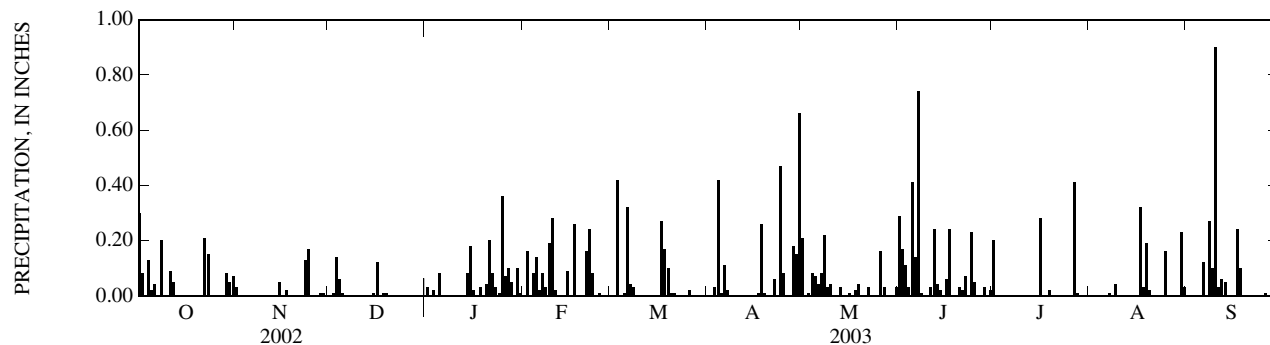
PERIOD OF RECORD.--September 1991 to current year.

INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 6,250 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for Dec. 30 to Feb. 26 and July 1 to Aug. 1, which are poor.

PRECIPITATION, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

| DAY    | OCT  | NOV         | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|--------|------|-------------|------|------|------|------|------|------|------|------|------|------|
| 1      | 0.30 | 0.03        | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.21 | 0.29 | 0.20 | 0.00 | 0.00 |
| 2      | 0.08 | 0.00        | 0.01 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 |
| 3      | 0.00 | 0.00        | 0.14 | 0.02 | 0.00 | 0.42 | 0.03 | 0.01 | 0.11 | 0.00 | 0.00 | 0.00 |
| 4      | 0.13 | 0.00        | 0.06 | 0.00 | 0.08 | 0.00 | 0.42 | 0.08 | 0.03 | 0.00 | 0.00 | 0.00 |
| 5      | 0.02 | 0.00        | 0.01 | 0.08 | 0.14 | 0.01 | 0.01 | 0.07 | 0.41 | 0.00 | 0.00 | 0.00 |
| 6      | 0.04 | 0.00        | 0.00 | 0.00 | 0.02 | 0.32 | 0.11 | 0.04 | 0.14 | 0.00 | 0.00 | 0.12 |
| 7      | 0.00 | 0.00        | 0.00 | 0.00 | 0.08 | 0.04 | 0.02 | 0.08 | 0.74 | 0.00 | 0.01 | 0.00 |
| 8      | 0.20 | 0.00        | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.22 | 0.01 | 0.00 | 0.00 | 0.27 |
| 9      | 0.00 | 0.00        | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.04 | 0.10 |
| 10     | 0.00 | 0.00        | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.90 |
| 11     | 0.09 | 0.00        | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.03 |
| 12     | 0.05 | 0.00        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | 0.00 | 0.06 |
| 13     | 0.00 | 0.00        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.04 | 0.00 | 0.00 | 0.05 |
| 14     | 0.00 | 0.00        | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 15     | 0.00 | 0.05        | 0.01 | 0.18 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16     | 0.00 | 0.00        | 0.12 | 0.02 | 0.00 | 0.00 | 0.00 | 0.01 | 0.06 | 0.28 | 0.00 | 0.00 |
| 17     | 0.00 | 0.02        | 0.00 | 0.00 | 0.26 | 0.27 | 0.01 | 0.00 | 0.24 | 0.00 | 0.32 | 0.24 |
| 18     | 0.00 | 0.00        | 0.01 | 0.03 | 0.00 | 0.17 | 0.26 | 0.02 | 0.00 | 0.00 | 0.03 | 0.10 |
| 19     | 0.00 | 0.00        | 0.01 | 0.00 | 0.00 | 0.10 | 0.01 | 0.04 | 0.00 | 0.02 | 0.19 | 0.00 |
| 20     | 0.00 | 0.00        | 0.00 | 0.04 | 0.00 | 0.01 | 0.00 | 0.00 | 0.03 | 0.00 | 0.02 | 0.00 |
| 21     | 0.00 | 0.00        | 0.00 | 0.20 | 0.16 | 0.01 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 22     | 0.21 | 0.00        | 0.00 | 0.08 | 0.24 | 0.00 | 0.06 | 0.03 | 0.07 | 0.00 | 0.00 | 0.00 |
| 23     | 0.15 | 0.13        | 0.00 | 0.03 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24     | 0.00 | 0.17        | 0.00 | 0.01 | 0.00 | 0.00 | 0.47 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 |
| 25     | 0.00 | 0.00        | 0.00 | 0.36 | 0.01 | 0.00 | 0.08 | 0.00 | 0.05 | 0.00 | 0.16 | 0.00 |
| 26     | 0.00 | 0.00        | 0.00 | 0.07 | 0.00 | 0.02 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.01 |
| 27     | 0.00 | 0.00        | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.41 | 0.00 | 0.00 |
| 28     | 0.00 | 0.01        | 0.00 | 0.05 | 0.00 | 0.00 | 0.18 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 |
| 29     | 0.08 | 0.01        | 0.00 | 0.00 | ---  | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30     | 0.05 | 0.00        | 0.00 | 0.10 | ---  | 0.00 | 0.66 | 0.00 | 0.02 | 0.00 | 0.23 | 0.00 |
| 31     | 0.07 | ---         | 0.00 | 0.01 | ---  | 0.00 | ---  | 0.03 | ---  | 0.00 | 0.03 | ---  |
| TOTAL  | 1.47 | 0.42        | 0.37 | 1.49 | 1.84 | 1.40 | 2.47 | 1.13 | 2.98 | 0.92 | 1.03 | 1.88 |
| CAL YR | 2002 | TOTAL 19.69 |      |      |      |      |      |      |      |      |      |      |
| WTR YR | 2003 | TOTAL 17.40 |      |      |      |      |      |      |      |      |      |      |



## DAILY PRECIPITATION STATIONS

## CHEYENNE RIVER BASIN

434002103214500 PRECIP AT RACETRACK BUTTE NEAR FAIRBURN, SD

LOCATION.--Lat 43° 40'02", long 103° 21'45", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.26, T.4 S., R.6 E., Custer County, Hydrologic Unit 10120109, 100 ft east of Wildlife Loop Road CSP #1, 0.8 mi southeast of Racetrack Butte, and 7.0 mi west of Fairburn.

PERIOD OF RECORD.--October 1983 to current year. Published as Custer State Park from October 1983 to September 1987, and as Precip at Custer State Park at Racetrack Butte, near Fairburn, SD, from October 1987 to September 1989.

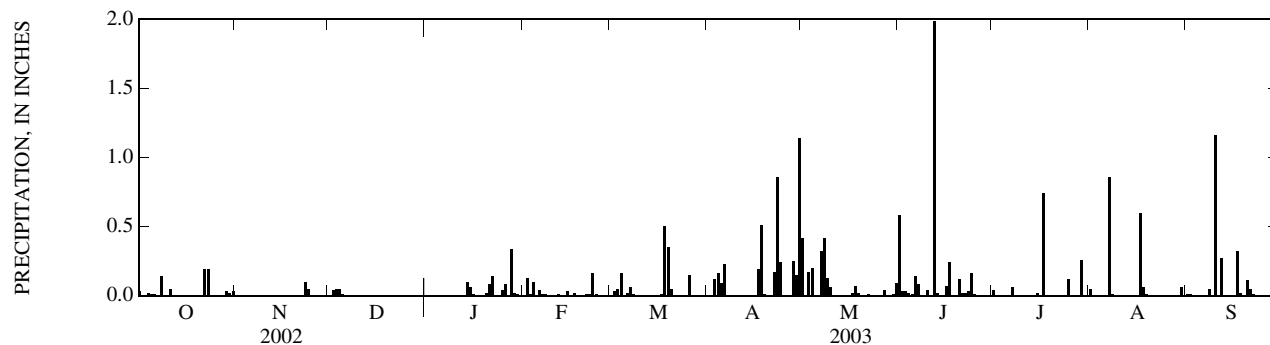
INSTRUMENTATION.--Precipitation recorder with shielded 8.0-in. orifice and 12-in. capacity. Elevation of gage is 3,970 ft above NGVD of 1929, from topographic map.

AVERAGE ANNUAL PRECIPITATION.--20 years, 18.84 in.

REMARKS.--Records fair.

PRECIPITATION, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

| DAY    | OCT  | NOV   | DEC   | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|--------|------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1      | 0.03 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 | 0.58 | 0.04 | 0.05 | 0.01 |
| 2      | 0.00 | 0.00  | 0.04  | 0.00 | 0.13 | 0.03 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.01 |
| 3      | 0.00 | 0.00  | 0.05  | 0.00 | 0.01 | 0.05 | 0.12 | 0.17 | 0.03 | 0.00 | 0.00 | 0.00 |
| 4      | 0.02 | 0.00  | 0.05  | 0.00 | 0.10 | 0.16 | 0.16 | 0.20 | 0.02 | 0.00 | 0.00 | 0.00 |
| 5      | 0.01 | 0.00  | 0.01  | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| 6      | 0.01 | 0.00  | 0.00  | 0.00 | 0.04 | 0.02 | 0.23 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 |
| 7      | 0.00 | 0.00  | 0.00  | 0.00 | 0.01 | 0.06 | 0.00 | 0.32 | 0.08 | 0.06 | 0.86 | 0.00 |
| 8      | 0.14 | 0.00  | 0.00  | 0.00 | 0.01 | 0.01 | 0.00 | 0.42 | 0.00 | 0.00 | 0.01 | 0.05 |
| 9      | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.04 | 0.00 | 0.00 | 1.16 |
| 11     | 0.05 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12     | 0.00 | 0.00  | 0.00  | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 1.99 | 0.00 | 0.00 | 0.27 |
| 13     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 14     | 0.00 | 0.00  | 0.00  | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15     | 0.00 | 0.00  | 0.00  | 0.06 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| 16     | 0.00 | 0.00  | 0.00  | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 |
| 17     | 0.00 | 0.00  | 0.00  | 0.00 | 0.02 | 0.01 | 0.19 | 0.02 | 0.24 | 0.74 | 0.60 | 0.32 |
| 18     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 | 0.50 | 0.51 | 0.07 | 0.00 | 0.00 | 0.06 | 0.02 |
| 19     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00 | 0.35 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 |
| 20     | 0.00 | 0.00  | 0.00  | 0.02 | 0.00 | 0.05 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.11 |
| 21     | 0.00 | 0.00  | 0.00  | 0.08 | 0.01 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 |
| 22     | 0.19 | 0.00  | 0.00  | 0.14 | 0.01 | 0.00 | 0.17 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 |
| 23     | 0.19 | 0.10  | 0.00  | 0.00 | 0.16 | 0.00 | 0.86 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| 24     | 0.00 | 0.05  | 0.00  | 0.00 | 0.01 | 0.00 | 0.24 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 |
| 25     | 0.00 | 0.00  | 0.00  | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.12 | 0.00 | 0.00 |
| 26     | 0.00 | 0.00  | 0.00  | 0.08 | 0.00 | 0.15 | 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 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28     | 0.00 | 0.00  | 0.00  | 0.34 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29     | 0.03 | 0.00  | 0.00  | 0.02 | ---  | 0.00 | 0.15 | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 |
| 30     | 0.02 | 0.00  | 0.00  | 0.01 | ---  | 0.00 | 1.14 | 0.01 | 0.00 | 0.00 | 0.06 | 0.00 |
| 31     | 0.03 | ---   | 0.00  | 0.00 | ---  | 0.00 | ---  | 0.09 | ---  | 0.00 | 0.00 | ---  |
| TOTAL  | 0.72 | 0.15  | 0.15  | 0.90 | 0.55 | 1.39 | 4.12 | 1.98 | 3.61 | 1.24 | 1.65 | 2.01 |
| CAL YR | 2002 | TOTAL | 15.10 |      |      |      |      |      |      |      |      |      |
| WTR YR | 2003 | TOTAL | 18.47 |      |      |      |      |      |      |      |      |      |



MISCELLANEOUS WATER QUALITY DATA

411

00430061 HURON WELL FIELD  
(National Trends Network Acid Precipitation Station)

LOCATION.--Lat 44° 21'18", long 98° 17'38", 3.0 mi west of the City of Huron at the City of Huron Municipal Well Field.

PRECIPITATION RECORDS

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

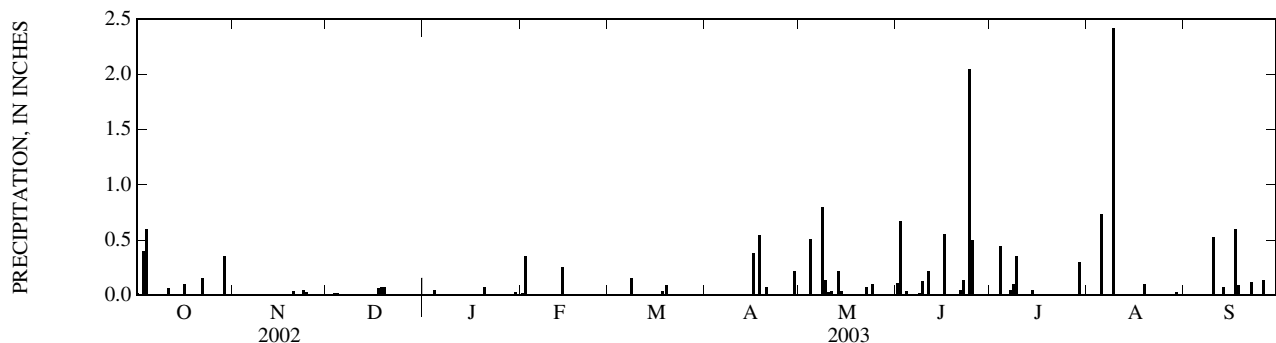
INSTRUMENTATION.--The sample collector is a straight-sided polyethylene bucket that is triggered into opening and closing by a precipitation switch, and a shielded weighing-type precipitation recorder. Installation and equipment conforms to guidelines set by National Atmospheric Deposition Program.

REMARKS.--Records good. Field measurements are taken as part of the National Atmospheric Deposition Program and National Trends Network (NADP/NTN).

PRECIPITATION, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

| DAY    | OCT   | NOV         | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |
|--------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1      | 0.02  | 0.00        | 0.00  | <0.01 | 0.02  | 0.00  | 0.00  | 0.00  | 0.11  | 0.00  | 0.00  | 0.00 |
| 2      | 0.01  | 0.00        | 0.00  | 0.00  | 0.35  | 0.00  | 0.00  | 0.00  | 0.67  | 0.00  | 0.00  | 0.00 |
| 3      | 0.40  | 0.00        | 0.02  | 0.00  | 0.00  | 0.00  | <0.01 | <0.01 | <0.01 | <0.01 | 0.00  | 0.00 |
| 4      | 0.60  | 0.00        | 0.02  | 0.05  | 0.00  | 0.00  | 0.00  | 0.51  | 0.04  | 0.44  | 0.00  | 0.00 |
| 5      | <0.01 | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.01  | 0.00  | 0.01  | 0.73  | 0.00 |
| 6      | <0.01 | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | <0.01 | <0.01 | 0.00  | <0.01 | 0.00 |
| 7      | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.01  | 0.00  | 0.00  | 0.05  | 0.00  | 0.00 |
| 8      | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.15  | 0.00  | 0.80  | 0.02  | 0.10  | 0.00  | 0.00 |
| 9      | <0.01 | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.14  | 0.13  | 0.35  | 2.42  | 0.00 |
| 10     | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.03  | 0.00  | 0.00  | 0.00  | 0.53 |
| 11     | 0.06  | 0.00        | 0.00  | 0.00  | <0.01 | 0.00  | 0.00  | 0.04  | 0.22  | 0.00  | <0.01 | 0.00 |
| 12     | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | <0.01 | 0.00  | 0.00  | 0.00 |
| 13     | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.22  | 0.00  | 0.00  | 0.00  | 0.07 |
| 14     | 0.00  | 0.00        | 0.00  | 0.00  | 0.25  | 0.00  | 0.00  | 0.04  | 0.00  | 0.05  | 0.00  | 0.00 |
| 15     | 0.00  | 0.00        | 0.00  | <0.01 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
| 16     | 0.10  | 0.00        | <0.01 | 0.00  | 0.00  | 0.00  | 0.38  | 0.00  | 0.55  | <0.01 | 0.00  | 0.00 |
| 17     | <0.01 | 0.00        | 0.06  | 0.00  | <0.01 | <0.01 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.60 |
| 18     | 0.00  | 0.00        | 0.07  | 0.00  | 0.00  | 0.04  | 0.54  | <0.01 | 0.00  | 0.00  | 0.00  | 0.09 |
| 19     | 0.00  | 0.00        | 0.07  | 0.00  | 0.00  | 0.09  | 0.01  | <0.01 | 0.00  | 0.00  | 0.10  | 0.00 |
| 20     | <0.01 | 0.04        | 0.00  | 0.07  | 0.00  | 0.00  | 0.07  | <0.01 | 0.00  | 0.00  | 0.00  | 0.00 |
| 21     | 0.00  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.05  | 0.01  | 0.00  | 0.00 |
| 22     | 0.15  | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.07  | 0.14  | 0.00  | 0.00  | 0.12 |
| 23     | 0.00  | 0.05        | 0.00  | 0.00  | 0.00  | 0.00  | <0.01 | 0.01  | <0.01 | 0.00  | 0.00  | 0.00 |
| 24     | 0.00  | 0.03        | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.10  | 2.05  | 0.00  | <0.01 | 0.00 |
| 25     | 0.00  | 0.00        | 0.00  | <0.01 | 0.00  | 0.00  | 0.00  | 0.00  | 0.50  | <0.01 | <0.01 | 0.00 |
| 26     | <0.01 | 0.00        | 0.00  | 0.00  | 0.00  | 0.00  | <0.01 | 0.00  | 0.00  | <0.01 | 0.00  | 0.14 |
| 27     | 0.01  | 0.00        | 0.00  | <0.01 | 0.00  | 0.00  | 0.00  | <0.01 | 0.00  | <0.01 | 0.00  | 0.00 |
| 28     | <0.01 | 0.00        | 0.00  | <0.01 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
| 29     | 0.35  | 0.00        | 0.00  | 0.01  | ---   | 0.00  | 0.22  | 0.01  | 0.00  | 0.30  | 0.03  | 0.00 |
| 30     | 0.00  | 0.00        | 0.00  | 0.03  | ---   | 0.00  | <0.01 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 |
| 31     | 0.00  | ---         | <0.01 | 0.00  | ---   | <0.01 | ---   | <0.01 | ---   | 0.00  | 0.00  | ---  |
| TOTAL  | 1.77  | 0.12        | 0.26  | 0.21  | 0.64  | 0.30  | 1.27  | 2.05  | 4.52  | 1.36  | 3.32  | 1.55 |
| CAL YR | 2002  | TOTAL 13.49 |       |       |       |       |       |       |       |       |       |      |
| WTR YR | 2003  | TOTAL 17.37 |       |       |       |       |       |       |       |       |       |      |

< Actual value is known to be less than the value shown



## MISCELLANEOUS WATER QUALITY DATA

00430061 HURON WELL FIELD—Continued  
(National Trends Network Acid Precipitation Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1983 to current year (weekly composite).

REMARKS.--Field measurements are taken and samples collected on a weekly basis as part of the National Atmospheric Deposition Program (NADP) and National Trends Network. Precipitation water-quality laboratory analyses are performed by the Central Analytical Laboratory (CAL), Illinois State Water Survey, Champaign, Illinois. The records of precipitation and precipitation water-quality presented below are from the National Atmospheric Deposition Program (NRSP-3)/National Trends Network (2003), NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820. These records were retrieved from the Internet on Mar. 5, 2004, at <http://nadp.sws.uiuc.edu/nadpdata>; the data were not reviewed for accuracy or consistency by the South Dakota District of the USGS.

## WATER QUALITY DATA

| Date                    | Precipitation total for defined period, inches (00193) | Atm dep wet, liters (83177) | Specif. conductance, wet dep unfltrd field, uS/cm (83154) | Specif. conductance, wet dep unfltrd lab, uS/cm (83156) | pH, wet atm dep unfltrd field, std units (83106) | pH, wet atm dep unfltrd lab, std units (83107) | Calcium wet atm dep fltrd, mg/L (82932) | Magnesium, wet atm dep fltrd, mg/L (83002) | Sodium, wet atm dep fltrd, mg/L (83138) | Potassium, wet atm dep fltrd, mg/L (83120) | Sulfate wet atm dep fltrd, mg/L (83160) | Chloride, wet atm dep fltrd, mg/L (82944) | Ammonia wet atm dep fltrd, mg/L as NH4 (83047) | Nitrate wet atm dep fltrd, mg/L (83071) |
|-------------------------|--------------------------------------------------------|-----------------------------|-----------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------|------------------------------------------------|-----------------------------------------|--------------------------------------------|-----------------------------------------|--------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------------------|-----------------------------------------|
| OCT 2002                |                                                        |                             |                                                           |                                                         |                                                  |                                                |                                         |                                            |                                         |                                            |                                         |                                           |                                                |                                         |
| 01-08                   | 1.03                                                   | 1.780                       | 4.6                                                       | 3.9                                                     | 5.40                                             | 5.6                                            | 0.07                                    | 0.01                                       | 0.01                                    | <0.003                                     | 0.27                                    | 0.02                                      | 0.200                                          | 0.51                                    |
| OCT 08-15               | 0.06                                                   | 0.078                       | --                                                        | 20.1                                                    | --                                               | 5.3                                            | 0.57                                    | 0.11                                       | 0.07                                    | 0.03                                       | 1.74                                    | 0.15                                      | 1.17                                           | 4.65                                    |
| OCT 15-22               | 0.25                                                   | 0.302                       | 6.0                                                       | 6.9                                                     | 5.32                                             | 5.8                                            | 0.20                                    | 0.04                                       | 0.04                                    | <0.003                                     | 0.57                                    | 0.03                                      | 0.290                                          | 0.91                                    |
| OCT 22-29               | 0.26                                                   | 0.324                       | 14.5                                                      | 15.0                                                    | 4.75                                             | 4.9                                            | 0.07                                    | 0.01                                       | 0.01                                    | 0.01                                       | 1.23                                    | 0.04                                      | 0.780                                          | 2.22                                    |
| OCT 29-NOV 05           | 0.10                                                   | 0.006                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| NOV 05-12               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| NOV 12-19               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| NOV 19-26               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| NOV 26-DEC 03           | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| DEC 03-10               | 0.04                                                   | 0.060                       | --                                                        | 4.8                                                     | --                                               | 5.5                                            | 0.33                                    | 0.07                                       | 0.05                                    | <0.003                                     | 0.17                                    | 0.10                                      | <0.020                                         | 1.12                                    |
| DEC 10-17               | --                                                     | 0.007                       | --                                                        | 11.2                                                    | --                                               | 6.2                                            | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| DEC 17-24               | 0.20                                                   | 0.173                       | 19.8                                                      | 18.8                                                    | 5.10                                             | 5.3                                            | 0.21                                    | 0.03                                       | 0.04                                    | 0.02                                       | 2.14                                    | 0.06                                      | 1.57                                           | 4.10                                    |
| DEC 24-31               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| DEC 31 2002-JAN 07 2003 | 0.05                                                   | 0.054                       | --                                                        | 8.1                                                     | --                                               | 6.6                                            | 0.35                                    | 0.06                                       | 0.04                                    | 0.03                                       | 0.34                                    | 0.06                                      | 0.700                                          | 0.84                                    |
| JAN 07-14               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| JAN 21-28               | --                                                     | 0.004                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| JAN 28-FEB 04           | 0.41                                                   | 0.436                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| FEB 04-11               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| FEB 11-18               | 0.25                                                   | 0.158                       | 14.3                                                      | 13.6                                                    | 5.15                                             | 5.2                                            | 0.21                                    | 0.03                                       | 0.04                                    | <0.003                                     | 1.33                                    | 0.08                                      | 0.980                                          | 2.74                                    |
| FEB 18-25               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| FEB 25-MAR 04           | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| MAR 04-11               | 0.15                                                   | 0.007                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| MAR 11-18               | 0.04                                                   | 0.070                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| MAR 18-25               | 0.09                                                   | 0.156                       | 59.8                                                      | 54.3                                                    | 4.18                                             | 4.3                                            | 0.38                                    | 0.05                                       | 0.07                                    | 0.03                                       | 7.06                                    | 0.24                                      | 3.44                                           | 7.06                                    |
| MAR 25-APR 01           | --                                                     | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| APR 01-08               | 0.01                                                   | 0.015                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| APR 08-15               | 0.00                                                   | 0.000                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| APR 15-22               | 1.00                                                   | 1.667                       | 5.7                                                       | 7.1                                                     | 5.97                                             | 6.3                                            | 0.23                                    | 0.02                                       | 0.03                                    | 0.01                                       | 0.48                                    | 0.04                                      | 0.650                                          | 0.79                                    |
| APR 22-29               | --                                                     | 0.317                       | --                                                        | --                                                      | --                                               | --                                             | --                                      | --                                         | --                                      | --                                         | --                                      | --                                        | --                                             | --                                      |
| APR 29-MAY 06           | 0.58                                                   | 1.011                       | 11.0                                                      | 11.7                                                    | 6.42                                             | 6.5                                            | 0.45                                    | 0.07                                       | 0.03                                    | 0.01                                       | 1.22                                    | 0.06                                      | 0.990                                          | 1.72                                    |
| MAY 06-13               | 1.03                                                   | 1.707                       | 8.1                                                       | 8.6                                                     | 5.89                                             | 6.2                                            | 0.27                                    | 0.04                                       | 0.04                                    | 0.01                                       | 0.88                                    | 0.08                                      | 0.730                                          | 1.05                                    |

## 00430061 HURON WELL FIELD—Continued

## WATER QUALITY DATA

| Date              | Precipitation<br>total<br>for<br>defined<br>period,<br>inches<br>(00193) | Atm dep<br>wet,<br>liters<br>(83177) | Specif.<br>conduc-<br>tance,<br>wet dep<br>unfltrd<br>field,<br>uS/cm<br>(83154) | Specif.<br>conduc-<br>tance,<br>wet dep<br>unfltrd<br>lab,<br>uS/cm<br>(83156) | pH,<br>wet<br>atm dep<br>unfltrd<br>field,<br>std<br>units<br>(83106) | pH<br>wet<br>atm dep<br>unfltrd<br>lab,<br>std<br>units<br>(83107) | Calcium<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(82932) | Magnes-<br>ium,<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(83002) | Sodium,<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(83138) | Potas-<br>sium,<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(83120) | Sulfate<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(83160) | Chlor-<br>ide,<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(82944) | Ammonia<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>as NH4<br>(83047) | Nitrate<br>wet<br>atm dep<br>fltrd,<br>mg/L<br>(83071) |
|-------------------|--------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|
| MAY 13-20         | 0.24                                                                     | 0.386                                | 18.5                                                                             | 21.0                                                                           | 6.57                                                                  | 6.7                                                                | 0.40                                                   | 0.04                                                           | 0.04                                                   | 0.02                                                           | 1.77                                                   | 0.08                                                          | 2.26                                                             | 2.73                                                   |
| MAY 20-27         | 0.18                                                                     | 0.330                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |
| MAY 27-<br>JUN 03 | 0.79                                                                     | 1.321                                | 13.1                                                                             | 13.2                                                                           | 6.01                                                                  | 6.5                                                                | 0.41                                                   | 0.04                                                           | 0.01                                                   | 0.04                                                           | 1.03                                                   | 0.04                                                          | 1.32                                                             | 1.75                                                   |
| JUN 03-10         | 0.19                                                                     | 0.342                                | 15.0                                                                             | 15.7                                                                           | 5.69                                                                  | 6.6                                                                | 0.18                                                   | 0.03                                                           | 0.01                                                   | 0.03                                                           | 1.30                                                   | 0.06                                                          | 1.82                                                             | 2.21                                                   |
| JUN 10-17         | 0.77                                                                     | 1.289                                | 9.9                                                                              | 10.8                                                                           | 6.24                                                                  | 6.6                                                                | 0.24                                                   | 0.03                                                           | 0.01                                                   | 0.03                                                           | 0.73                                                   | 0.06                                                          | 1.20                                                             | 1.57                                                   |
| JUN 17-24         | 0.59                                                                     | 0.914                                | 8.7                                                                              | 9.7                                                                            | 6.12                                                                  | 6.2                                                                | 0.28                                                   | 0.03                                                           | 0.04                                                   | 0.06                                                           | 0.75                                                   | 0.08                                                          | 0.910                                                            | 1.20                                                   |
| JUN 24-<br>JUL 01 | 2.15                                                                     | 3.306                                | 8.6                                                                              | 7.0                                                                            | 6.21                                                                  | 6.3                                                                | 0.19                                                   | 0.02                                                           | 0.04                                                   | 0.02                                                           | 0.44                                                   | 0.04                                                          | 0.620                                                            | 0.69                                                   |
| JUL 01-08         | 0.60                                                                     | 1.003                                | 12.3                                                                             | 12.7                                                                           | 5.92                                                                  | 6.5                                                                | 0.39                                                   | 0.07                                                           | 0.04                                                   | 0.05                                                           | 1.05                                                   | 0.12                                                          | 1.18                                                             | 2.23                                                   |
| JUL 08-15         | 0.40                                                                     | 0.668                                | 11.4                                                                             | 12.0                                                                           | 5.80                                                                  | 6.3                                                                | 0.46                                                   | 0.05                                                           | 0.07                                                   | 0.06                                                           | 1.00                                                   | 0.12                                                          | 1.00                                                             | 2.28                                                   |
| JUL 15-22         | 0.01                                                                     | 0.009                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |
| JUL 22-29         | --                                                                       | 0.005                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |
| JUL 29-<br>AUG 05 | 1.03                                                                     | 1.783                                | 8.5                                                                              | 9.0                                                                            | 5.92                                                                  | 6.2                                                                | 0.30                                                   | 0.06                                                           | 0.02                                                   | 0.04                                                           | 0.71                                                   | 0.05                                                          | 0.790                                                            | 1.53                                                   |
| AUG 05-12         | 2.42                                                                     | 4.027                                | 5.3                                                                              | 5.7                                                                            | 5.88                                                                  | 6.1                                                                | 0.19                                                   | 0.03                                                           | M                                                      | 0.01                                                           | 0.57                                                   | 0.02                                                          | 0.470                                                            | 0.83                                                   |
| AUG 12-19         | 0.00                                                                     | 0.000                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |
| AUG 19-26         | --                                                                       | 0.175                                | 16.5                                                                             | 17.8                                                                           | 5.93                                                                  | 6.4                                                                | 0.68                                                   | 0.11                                                           | 0.06                                                   | 0.10                                                           | 1.25                                                   | 0.13                                                          | 1.44                                                             | 3.72                                                   |
| AUG 26-<br>SEP 02 | 0.03                                                                     | 0.054                                | --                                                                               | 15.2                                                                           | --                                                                    | 6.6                                                                | 0.99                                                   | 0.22                                                           | 0.13                                                   | 0.09                                                           | 1.13                                                   | 0.10                                                          | 0.800                                                            | 1.76                                                   |
| SEP 02-09         | 0.00                                                                     | 0.000                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |
| SEP 09-16         | 0.60                                                                     | 0.993                                | 6.4                                                                              | 6.7                                                                            | 5.84                                                                  | 6.0                                                                | 0.17                                                   | 0.02                                                           | 0.02                                                   | 0.03                                                           | 0.79                                                   | 0.04                                                          | 0.570                                                            | 0.96                                                   |
| SEP 16-23         | 0.81                                                                     | 1.427                                | 8.0                                                                              | 8.9                                                                            | 6.27                                                                  | 6.4                                                                | 0.43                                                   | 0.04                                                           | 0.02                                                   | 0.07                                                           | 1.02                                                   | 0.03                                                          | 0.680                                                            | 1.00                                                   |
| SEP 23-30         | 0.14                                                                     | 0.195                                | 7.3                                                                              | 8.4                                                                            | 6.12                                                                  | 6.3                                                                | 0.42                                                   | 0.11                                                           | 0.35                                                   | 0.07                                                           | 1.07                                                   | 0.05                                                          | 0.350                                                            | 0.46                                                   |
| SEP 30-<br>OCT 07 | 0.00                                                                     | 0.000                                | --                                                                               | --                                                                             | --                                                                    | --                                                                 | --                                                     | --                                                             | --                                                     | --                                                             | --                                                     | --                                                            | --                                                               | --                                                     |

&lt; Less than.

M Presence verified, not quantified.

The following water-quality data are for a sewage lagoon and a reservoir at EROS Data Center, and private wells downgradient of EROS Data Center near Garretson, South Dakota. Water samples are routinely collected one time per year as part of a monitoring program with the EROS Data Center.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Station Name   | Station number  | Date     | Time | Specif.<br>conduc-<br>tance,<br>wat unf<br>uS/cm<br>25 deg C<br>(00095) | pH,<br>water,<br>unfltrd<br>field,<br>std<br>units<br>(00400) | Temper-<br>ature,<br>air,<br>deg C<br>(00020) | Temper-<br>ature,<br>water,<br>deg C<br>(00010) | Tur-<br>bidity,<br>NTU<br>(00076) | Baro-<br>metric<br>pres-<br>sure,<br>mm Hg<br>(00025) |
|----------------|-----------------|----------|------|-------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------------------------|
| LAGOON 1       | 434415096371501 | 05-22-03 | 0940 | 1340                                                                    | 5.4                                                           | 15.0                                          | 16.8                                            | --                                | 725                                                   |
| EROS LAKE      | 434405096365501 | 05-22-03 | 1140 | 719                                                                     | 8.3                                                           | 17.0                                          | 16.3                                            | 1.0                               | 725                                                   |
| 103N48W 5CACA2 | 434508096372701 | 05-21-03 | 1515 | 922                                                                     | 6.7                                                           | 19.0                                          | 9.2                                             | --                                | 727                                                   |
| 103N48W 9CCDA  | 434400096362201 | 05-21-03 | 1330 | 1190                                                                    | 6.8                                                           | 19.0                                          | 9.3                                             | --                                | 730                                                   |
| 103N48W17ACCC2 | 434332096371501 | 05-21-03 | 1130 | 854                                                                     | 6.6                                                           | 16.0                                          | 9.7                                             | --                                | 730                                                   |

| Station Name   | Date     | Dis-<br>solved<br>oxygen,<br>mg/L<br>(00300) | Dis-<br>solved<br>oxygen,<br>percent<br>of sat-<br>uration<br>(00301) | BOD,<br>water,<br>unfltrd<br>5 day,<br>20 deg C<br>mg/L<br>(00310) | COD,<br>high<br>level,<br>water,<br>unfltrd<br>mg/L<br>(00340) | Residue<br>on<br>evap.<br>at<br>180 deg C<br>wat flt<br>mg/L<br>(70300) | Ammonia<br>water,<br>fltrd,<br>mg/L<br>as N<br>(00608) | Nitrite<br>water,<br>fltrd,<br>mg/L<br>as N<br>(00613) | Nitrite<br>+<br>nitrate<br>water<br>fltrd,<br>mg/L<br>as N<br>(00631) | Nitrate<br>water,<br>fltrd,<br>mg/L<br>as N<br>(00618) | Ortho-<br>phos-<br>phate,<br>water,<br>fltrd,<br>mg/L<br>as P<br>(00671) |
|----------------|----------|----------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------|
| LAGOON 1       | 05-22-03 | 7.6                                          | 83                                                                    | 78.0                                                               | 190                                                            | 913                                                                     | 9.79                                                   | 2.12                                                   | 26.6                                                                  | 24.5                                                   | 2.49                                                                     |
| EROS LAKE      | 05-22-03 | 12.0                                         | 129                                                                   | --                                                                 | 30                                                             | 454                                                                     | <.04                                                   | <.008                                                  | <.06                                                                  | --                                                     | .06                                                                      |
| 103N48W 5CACA2 | 05-21-03 | .4                                           | 4                                                                     | --                                                                 | <10                                                            | 664                                                                     | E.02                                                   | <.008                                                  | .11                                                                   | --                                                     | E.01                                                                     |
| 103N48W 9CCDA  | 05-21-03 | --                                           | --                                                                    | --                                                                 | <10                                                            | 721                                                                     | <.04                                                   | <.008                                                  | 26.5                                                                  | --                                                     | .02                                                                      |
| 103N48W17ACCC2 | 05-21-03 | .2                                           | 2                                                                     | --                                                                 | <10                                                            | 580                                                                     | .17                                                    | <.008                                                  | <.06                                                                  | --                                                     | <.02                                                                     |

| Station Name   | Date     | Alum-<br>inum,<br>water,<br>unfltrd<br>recover-<br>able,<br>ug/L<br>(01105) | Boron,<br>water,<br>unfltrd<br>recover-<br>able,<br>ug/L<br>(01022) | Bromide<br>water,<br>fltrd,<br>mg/L<br>(71870) | Chrom-<br>ium,<br>water,<br>fltrd,<br>ug/L<br>(01030) | Cyanide<br>water<br>unfltrd<br>mg/L<br>(00720) | Iodide<br>water,<br>fltrd,<br>mg/L<br>(71865) | Iron,<br>water,<br>unfltrd<br>recover-<br>able,<br>ug/L<br>(01045) | Silver,<br>water,<br>unfltrd<br>recover-<br>able,<br>ug/L<br>(01077) | Silver,<br>water,<br>fltrd,<br>ug/L<br>(01075) | Zinc,<br>water,<br>unfltrd<br>recover-<br>able,<br>ug/L<br>(01092) |
|----------------|----------|-----------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------|
| LAGOON 1       | 05-22-03 | 1050                                                                        | 508                                                                 | 7.73                                           | 3.7                                                   | .18                                            | .096                                          | 6260                                                               | 882                                                                  | .8                                             | 190                                                                |
| EROS LAKE      | 05-22-03 | 7                                                                           | 234                                                                 | 2.66                                           | <.8                                                   | M                                              | .043                                          | 40                                                                 | <.3                                                                  | <.3                                            | 2                                                                  |
| 103N48W 5CACA2 | 05-21-03 | 3                                                                           | 184                                                                 | .04                                            | <.8                                                   | <.01                                           | .004                                          | 320                                                                | <.3                                                                  | <.3                                            | 43                                                                 |
| 103N48W 9CCDA  | 05-21-03 | 7                                                                           | 57                                                                  | .18                                            | E.8                                                   | <.01                                           | .007                                          | 100                                                                | <.3                                                                  | <.3                                            | 27                                                                 |
| 103N48W17ACCC2 | 05-21-03 | <2                                                                          | 270                                                                 | .06                                            | <.8                                                   | <.01                                           | .008                                          | 340                                                                | <.3                                                                  | <.3                                            | 12                                                                 |

< Less than.

E Estimated value.

M Presence verified, not quantified.

430419098401600 LAKE FRANCIS CASE NEAR LAKE ANDES, SD

LOCATION.--Lat 43° 04'14", long 98° 40'16", in SE<sup>1</sup>/<sub>4</sub> sec.5, T.95 N., R.66 E., Charles Mix County, Hydrologic Unit 10140101, about 6 mi west of Ft. Randall Dam.

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date               | Time | Specif.<br>conduc-<br>tance,<br>wat unf<br>uS/cm<br>(00095) | pH,<br>water,<br>unfltrd<br>field,<br>std<br>units<br>(00400) | Temper-<br>ature,<br>air,<br>deg C<br>(00020) | Temper-<br>ature,<br>water,<br>deg C<br>(00010) | Baro-<br>metric<br>pres-<br>sure,<br>mm Hg<br>(00025) | Dis-<br>solved<br>oxygen,<br>mg/L<br>(00300) | Dis-<br>solved<br>oxygen,<br>percent<br>of sat-<br>uration<br>(00301) | Hard-<br>ness,<br>water,<br>unfltrd<br>mg/L as<br>CaCO3<br>(00900) | Noncarb<br>hard-<br>ness,<br>wat flt<br>field,<br>mg/L as<br>CaCO3<br>(00904) | Alka-<br>linity,<br>wat flt<br>inc tit<br>field,<br>mg/L as<br>CaCO3<br>(39086) | ANC,<br>wat unf<br>fixed<br>end pt,<br>lab,<br>mg/L as<br>CaCO3<br>(90410) |
|--------------------|------|-------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| NOV                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 04... | 1530 | 765                                                         | 8.3                                                           | 8.5                                           | 9.3                                             | 726                                                   | 10.6                                         | 97                                                                    | 230                                                                | 64                                                                            | 168                                                                             | 175                                                                        |
| <sup>b</sup> 04... | 1550 | --                                                          | --                                                            | --                                            | --                                              | --                                                    | --                                           | --                                                                    | 230                                                                | 62                                                                            | 169                                                                             | 176                                                                        |
| FEB                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 24... | 1550 | 772                                                         | 8.0                                                           | -10.5                                         | 1.6                                             | 731                                                   | 14.1                                         | 105                                                                   | 240                                                                | 66                                                                            | 176                                                                             | 196                                                                        |
| <sup>b</sup> 24... | 1610 | --                                                          | --                                                            | --                                            | --                                              | --                                                    | --                                           | --                                                                    | 250                                                                | 67                                                                            | 177                                                                             | 206                                                                        |
| APR                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 21... | 1330 | 770                                                         | 8.2                                                           | 20.0                                          | 5.8                                             | 732                                                   | 15.5                                         | 129                                                                   | 240                                                                | 78                                                                            | 167                                                                             | 179                                                                        |
| <sup>b</sup> 21... | 1350 | 755                                                         | 8.2                                                           | --                                            | 5.8                                             | 732                                                   | 15.5                                         | 124                                                                   | 250                                                                | --                                                                            | --                                                                              | 179                                                                        |
| JUN                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 10... | 1110 | 758                                                         | 8.1                                                           | 19.1                                          | 16.7                                            | 724                                                   | 9.4                                          | 102                                                                   | 240                                                                | 75                                                                            | 164                                                                             | 174                                                                        |
| <sup>b</sup> 10... | 1130 | --                                                          | --                                                            | --                                            | --                                              | --                                                    | --                                           | --                                                                    | 240                                                                | --                                                                            | --                                                                              | 173                                                                        |
| JUL                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 21... | 1520 | 774                                                         | 8.3                                                           | 27.0                                          | 23.5                                            | 726                                                   | 7.7                                          | 95                                                                    | 230                                                                | 67                                                                            | 161                                                                             | 168                                                                        |
| <sup>b</sup> 21... | 1530 | --                                                          | --                                                            | --                                            | --                                              | --                                                    | --                                           | --                                                                    | 230                                                                | --                                                                            | --                                                                              | 182                                                                        |
| SEP                |      |                                                             |                                                               |                                               |                                                 |                                                       |                                              |                                                                       |                                                                    |                                                                               |                                                                                 |                                                                            |
| <sup>a</sup> 23... | 1210 | 732                                                         | 8.5                                                           | 26.0                                          | 20.6                                            | 724                                                   | 8.4                                          | 99                                                                    | 230                                                                | 70                                                                            | 160                                                                             | 162                                                                        |
| <sup>b</sup> 23... | 1220 | 732                                                         | 8.5                                                           | 26.0                                          | 20.6                                            | 724                                                   | 8.4                                          | 99                                                                    | 230                                                                | 71                                                                            | --                                                                              | 164                                                                        |

| Date               | Chloro-<br>phyll a<br>phyto-<br>plank-<br>ton,<br>fluoro,<br>ug/L<br>(70953) | Pheo-<br>phytin<br>a,<br>phyto-<br>plank-<br>ton,<br>ug/L<br>(62360) | Calcium<br>water,<br>fltrd,<br>mg/L<br>(00915) | Magnes-<br>ium,<br>water,<br>fltrd,<br>mg/L<br>(00925) | Sodium,<br>water,<br>fltrd,<br>mg/L<br>(00930) | Sodium,<br>percent<br>(00932) | Sodium<br>adsorp-<br>tion<br>ratio<br>(00931) | Potas-<br>sium,<br>water,<br>fltrd,<br>mg/L<br>(00935) | Bicar-<br>bonate,<br>wat flt<br>incrm.<br>titr.,<br>field,<br>mg/L<br>(00453) | Carbon-<br>ate,<br>wat flt<br>incrm.<br>titr.,<br>field,<br>mg/L<br>(00452) | Sulfate<br>water,<br>fltrd,<br>mg/L<br>(00945) | Chlor-<br>ide,<br>water,<br>fltrd,<br>mg/L<br>(00940) |
|--------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------|------------------------------------------------|-------------------------------|-----------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|
| NOV                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 04... | --                                                                           | --                                                                   | 54.7                                           | 23.1                                                   | 76.8                                           | 41                            | 2                                             | 4.65                                                   | 192                                                                           | 6                                                                           | 206                                            | 10.0                                                  |
| <sup>b</sup> 04... | --                                                                           | --                                                                   | 54.8                                           | 23.1                                                   | 76.7                                           | 41                            | 2                                             | 4.78                                                   | 194                                                                           | 6                                                                           | 207                                            | 9.93                                                  |
| FEB                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 24... | --                                                                           | --                                                                   | 58.3                                           | 23.3                                                   | 70.7                                           | 38                            | 2                                             | 4.66                                                   | 205                                                                           | 5                                                                           | 209                                            | 9.54                                                  |
| <sup>b</sup> 24... | --                                                                           | --                                                                   | 59.0                                           | 23.7                                                   | 74.3                                           | 39                            | 2                                             | 4.60                                                   | 210                                                                           | 3                                                                           | 211                                            | 9.61                                                  |
| APR                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 21... | 1.6                                                                          | 0.5                                                                  | 58.4                                           | 23.9                                                   | 71.6                                           | 38                            | 2                                             | 5.23                                                   | 203                                                                           | --                                                                          | 203                                            | 9.76                                                  |
| <sup>b</sup> 21... | --                                                                           | --                                                                   | 58.8                                           | 23.9                                                   | 75.0                                           | 39                            | 2                                             | 5.18                                                   | --                                                                            | --                                                                          | 203                                            | 9.59                                                  |
| JUN                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 10... | 0.8                                                                          | 0.2                                                                  | 57.7                                           | 22.9                                                   | 76.8                                           | 41                            | 2                                             | 4.96                                                   | 200                                                                           | --                                                                          | 198                                            | 10.2                                                  |
| <sup>b</sup> 10... | --                                                                           | --                                                                   | 57.7                                           | 22.6                                                   | 75.4                                           | 40                            | 2                                             | 4.70                                                   | --                                                                            | --                                                                          | 198                                            | 10.3                                                  |
| JUL                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 21... | 1.3                                                                          | 0.4                                                                  | 53.9                                           | 22.8                                                   | 76.5                                           | 41                            | 2                                             | 5.18                                                   | 197                                                                           | --                                                                          | 208                                            | 11.6                                                  |
| <sup>b</sup> 21... | --                                                                           | --                                                                   | 54.6                                           | 22.8                                                   | 77.1                                           | 41                            | 2                                             | 5.22                                                   | --                                                                            | --                                                                          | 209                                            | 11.2                                                  |
| SEP                |                                                                              |                                                                      |                                                |                                                        |                                                |                               |                                               |                                                        |                                                                               |                                                                             |                                                |                                                       |
| <sup>a</sup> 23... | 1.4                                                                          | 1.1                                                                  | 52.9                                           | 23.7                                                   | 71.6                                           | 40                            | 2                                             | 5.01                                                   | 185                                                                           | 5                                                                           | 196                                            | 11.4                                                  |
| <sup>b</sup> 23... | --                                                                           | --                                                                   | 53.2                                           | 23.7                                                   | 71.6                                           | 40                            | 2                                             | 4.97                                                   | 185                                                                           | 5                                                                           | 195                                            | 11.3                                                  |

## MISCELLANEOUS WATER QUALITY DATA

430419098401600 LAKE FRANCIS CASE NEAR LAKE ANDES, SD—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date               | Fluoride, water, fltrd, mg/L (00950) | Silica, water, fltrd, mg/L (00955)   | Residue water, fltrd, sum of constituents mg/L (70301) | Residue on evap. at 180 deg C wat flt mg/L (70300) | Ammonia water, fltrd, mg/L as N (00608) | Ammonia + org-N, water, unfltrd mg/L as N (00625) | Ammonia + org-N, water, fltrd, mg/L as N (00623) | Nitrite water, fltrd, mg/L as N (00613) | Nitrite + nitrate water, fltrd, mg/L as N (00631) | Phosphorus, water, unfltrd mg/L (00665) | Phosphorus, water, fltrd, mg/L (00666) | Ortho-phosphate, water, fltrd, mg/L as P (00671) |
|--------------------|--------------------------------------|--------------------------------------|--------------------------------------------------------|----------------------------------------------------|-----------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------------|---------------------------------------------------|-----------------------------------------|----------------------------------------|--------------------------------------------------|
| NOV                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 04... | 0.6                                  | 5.8                                  | 482                                                    | 498                                                | <0.04                                   | 0.26                                              | 0.17                                             | <0.008                                  | E.04                                              | <0.04                                   | <0.04                                  | <0.02                                            |
| <sup>b</sup> 04... | 0.6                                  | 5.8                                  | 484                                                    | 496                                                | <0.04                                   | 0.20                                              | 0.17                                             | <0.008                                  | E.03                                              | <0.04                                   | <0.04                                  | <0.02                                            |
| FEB                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 24... | 0.52                                 | 5.7                                  | 488                                                    | 515                                                | <0.04                                   | 0.20                                              | 0.22                                             | <0.008                                  | <0.06                                             | <0.04                                   | <0.04                                  | <0.02                                            |
| <sup>b</sup> 24... | 0.53                                 | 5.6                                  | 495                                                    | 520                                                | <0.04                                   | 0.28                                              | 0.23                                             | <0.008                                  | <0.06                                             | 0.06                                    | <0.04                                  | <0.02                                            |
| APR                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 21... | 0.56                                 | 5.5                                  | 478                                                    | 503                                                | E.009                                   | 0.22                                              | 0.21                                             | <0.008                                  | <0.06                                             | 0.004                                   | E.003                                  | <0.007                                           |
| <sup>b</sup> 21... | 0.56                                 | 5.5                                  | 489                                                    | 507                                                | E.010                                   | 0.22                                              | 0.21                                             | <0.008                                  | <0.06                                             | 0.006                                   | E.003                                  | <0.007                                           |
| JUN                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 10... | 0.6                                  | 4.7                                  | 474                                                    | 485                                                | 0.021                                   | 0.26                                              | 0.20                                             | E.004                                   | <0.06                                             | 0.009                                   | <0.004                                 | <0.007                                           |
| <sup>b</sup> 10... | 0.6                                  | 4.6                                  | 478                                                    | 488                                                | 0.021                                   | 0.27                                              | 0.21                                             | E.004                                   | <0.06                                             | 0.009                                   | <0.004                                 | <0.007                                           |
| JUL                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 21... | 0.6                                  | 4.3                                  | 480                                                    | 502                                                | <0.015                                  | 0.16                                              | 0.20                                             | <0.008                                  | <0.06                                             | 0.005                                   | E.004                                  | <0.007                                           |
| <sup>b</sup> 21... | 0.6                                  | 4.3                                  | 494                                                    | 496                                                | E.014                                   | 0.83                                              | 0.21                                             | <0.008                                  | <0.06                                             | 0.159                                   | 0.007                                  | <0.007                                           |
| SEP                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 23... | 0.6                                  | 5.7                                  | 463                                                    | 479                                                | <0.015                                  | 0.19                                              | 0.21                                             | <0.008                                  | <0.06                                             | 0.007                                   | E.003                                  | <0.007                                           |
| <sup>b</sup> 23... | 0.6                                  | 5.5                                  | 462                                                    | 476                                                | <0.015                                  | 0.19                                              | 0.24                                             | <0.008                                  | <0.06                                             | 0.007                                   | E.003                                  | <0.007                                           |
| 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)   | Cadmium water, fltrd, ug/L (01025)                | Chromium, water, fltrd, ug/L (01030)             | Cobalt water, fltrd, ug/L (01035)       | Copper, water, fltrd, ug/L (01040)                | Lead, water, fltrd, ug/L (01049)        | Manganese, water, fltrd, ug/L (01056)  | Molybdenum, water, fltrd, ug/L (01060)           |
| NOV                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 04... | M                                    | 0.53                                 | 2                                                      | 34                                                 | <0.06                                   | E.02                                              | <0.8                                             | 0.155                                   | 2.6                                               | <0.08                                   | 0.6                                    | 3.5                                              |
| <sup>b</sup> 04... | <2                                   | 0.54                                 | E2                                                     | 34                                                 | <0.06                                   | E.02                                              | <0.8                                             | 0.151                                   | 2.5                                               | <0.08                                   | 0.7                                    | 3.5                                              |
| FEB                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 24... | M                                    | 0.46                                 | E2                                                     | 36                                                 | <0.06                                   | E.03                                              | <0.8                                             | 0.261                                   | 2.4                                               | E.07                                    | 8.6                                    | 3.3                                              |
| <sup>b</sup> 24... | <2                                   | 0.48                                 | E1                                                     | 38                                                 | <0.06                                   | <0.04                                             | <0.8                                             | 0.306                                   | 2.0                                               | <0.08                                   | 51.7                                   | 3.4                                              |
| APR                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 21... | <2                                   | 0.38                                 | E1                                                     | 33                                                 | <0.06                                   | <0.04                                             | <0.8                                             | 0.179                                   | 1.9                                               | <0.08                                   | 0.2                                    | 3.1                                              |
| <sup>b</sup> 21... | M                                    | 0.37                                 | E2                                                     | 32                                                 | <0.06                                   | <0.04                                             | <0.8                                             | 0.175                                   | 2.0                                               | <0.08                                   | 0.2                                    | 3.1                                              |
| JUN                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 10... | E1                                   | 0.35                                 | E1                                                     | 33                                                 | <0.06                                   | E.03                                              | <0.8                                             | 0.223                                   | 2.6                                               | <0.08                                   | 1.3                                    | 3.4                                              |
| <sup>b</sup> 10... | E1                                   | 0.35                                 | E1                                                     | 34                                                 | <0.06                                   | E.03                                              | <0.8                                             | 0.217                                   | 2.6                                               | <0.08                                   | 1.3                                    | 3.4                                              |
| JUL                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 21... | E1                                   | 0.43                                 | E1                                                     | 32                                                 | <0.06                                   | <0.04                                             | <0.8                                             | 0.171                                   | 1.7                                               | <0.08                                   | 0.6                                    | 3.4                                              |
| <sup>b</sup> 21... | M                                    | 0.51                                 | 2                                                      | 34                                                 | <0.06                                   | <0.04                                             | <0.8                                             | 0.295                                   | 1.4                                               | <0.08                                   | 107                                    | 3.5                                              |
| SEP                |                                      |                                      |                                                        |                                                    |                                         |                                                   |                                                  |                                         |                                                   |                                         |                                        |                                                  |
| <sup>a</sup> 23... | <2                                   | 0.57                                 | <2                                                     | 36                                                 | <0.06                                   | E.02                                              | <0.8                                             | 0.154                                   | 1.8                                               | <0.08                                   | 0.2                                    | 4.1                                              |
| <sup>b</sup> 23... | M                                    | 0.52                                 | <2                                                     | 37                                                 | <0.06                                   | E.02                                              | <0.8                                             | 0.158                                   | 1.8                                               | <0.08                                   | 0.2                                    | 4.1                                              |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible]

430419098401600 LAKE FRANCIS CASE NEAR LAKE ANDES, SD—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible][illegible]

## MISCELLANEOUS WATER QUALITY DATA

419

430419098401600 LAKE FRANCIS CASE NEAR LAKE ANDES, SD—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date                    | Pron-<br>amide,<br>water,<br>fltrd<br>0.7u GF<br>(82676) | Propa-<br>chlor,<br>water,<br>fltrd,<br>ug/L<br>(04024) | Pro-<br>panil,<br>water,<br>fltrd<br>0.7u GF<br>(82679) | Propar-<br>gite,<br>water,<br>fltrd<br>0.7u GF<br>(82685) | Sima-<br>zine,<br>water,<br>fltrd,<br>ug/L<br>(04035) | Tebu-<br>thiuron<br>water<br>fltrd<br>0.7u GF<br>(82670) | Terba-<br>cil,<br>water,<br>fltrd<br>0.7u GF<br>(82665) | Terbu-<br>fos,<br>water,<br>fltrd<br>0.7u GF<br>(82675) | Thio-<br>bencarb<br>water<br>fltrd<br>0.7u GF<br>(82681) | Tri-<br>allate,<br>water,<br>fltrd<br>0.7u GF<br>(82678) | Tri-<br>flur-<br>alin,<br>water,<br>fltrd<br>0.7u GF<br>(82661) |
|-------------------------|----------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------|
| NOV<br>a04...<br>b04... | --                                                       | --                                                      | --                                                      | --                                                        | --                                                    | --                                                       | --                                                      | --                                                      | --                                                       | --                                                       | --                                                              |
| FEB<br>a24...<br>b24... | --                                                       | --                                                      | --                                                      | --                                                        | --                                                    | --                                                       | --                                                      | --                                                      | --                                                       | --                                                       | --                                                              |
| APR<br>a21...<br>b21... | <0.004                                                   | <0.010                                                  | <0.011                                                  | <0.02                                                     | <0.005                                                | <0.02                                                    | <0.034                                                  | <0.02                                                   | <0.005                                                   | <0.002                                                   | <0.009                                                          |
| JUN<br>a10...<br>b10... | <0.004                                                   | <0.010                                                  | <0.011                                                  | <0.02                                                     | <0.005                                                | <0.02                                                    | <0.034                                                  | <0.02                                                   | <0.005                                                   | <0.002                                                   | <0.009                                                          |
| JUL<br>a21...<br>b21... | --                                                       | --                                                      | --                                                      | --                                                        | --                                                    | --                                                       | --                                                      | --                                                      | --                                                       | --                                                       | --                                                              |
| SEP<br>a23...<br>b23... | --                                                       | --                                                      | --                                                      | --                                                        | --                                                    | --                                                       | --                                                      | --                                                      | --                                                       | --                                                       | --                                                              |

| Date          | Time | Calcium<br>water,<br>fltrd,<br>mg/L<br>(00915) | Magnes-<br>ium,<br>water,<br>fltrd,<br>mg/L<br>(00925) | Sodium,<br>water,<br>fltrd,<br>mg/L<br>(00930) | Potas-<br>sium,<br>water,<br>fltrd,<br>mg/L<br>(00935) | Sulfate<br>water,<br>fltrd,<br>mg/L<br>(00945) | Chlor-<br>ide,<br>water,<br>fltrd,<br>mg/L<br>(00940) | Fluor-<br>ide,<br>water,<br>fltrd,<br>mg/L<br>(00950) | Silica,<br>water,<br>fltrd,<br>mg/L<br>(00955) | Arsenic<br>water,<br>fltrd,<br>ug/L<br>(01000) | Boron,<br>water,<br>fltrd,<br>ug/L<br>(01020) |
|---------------|------|------------------------------------------------|--------------------------------------------------------|------------------------------------------------|--------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|
| SEP<br>c23... | 1205 | E.01                                           | <0.008                                                 | <0.10                                          | <0.008                                                 | <0.01                                          | 0.05                                                  | <0.01                                                 | E.01                                           | <0.3                                           | <7                                            |

| Date          | Iron,<br>water,<br>fltrd,<br>ug/L<br>(01046) | Lithium<br>water,<br>fltrd,<br>ug/L<br>(01130) | Selen-<br>ium,<br>water,<br>fltrd,<br>ug/L<br>(01145) | Stront-<br>ium,<br>water,<br>fltrd,<br>ug/L<br>(01080) | Vanad-<br>ium,<br>water,<br>fltrd,<br>ug/L<br>(01085) |
|---------------|----------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| SEP<br>c23... | <8                                           | <0.5                                           | <0.5                                                  | <0.20                                                  | <0.1                                                  |

&lt; Less than.

a Depth-integrated water sample representing total water column.

b Single discrete water sample collected about 1 meter above the reservoir bottom.

c Field blank sample collected for quality-control purposes.

E Estimated value.

M Presence verified, not quantified.

The following water-quality data were collected as part of a Total Maximum Daily Load (TMDL) study on the lower Big Sioux River and are presented in downstream order.

433421096355900 BIG SIOUX RIVER NEAR BRANDON, SD

LOCATION.--Lat 43° 34'21", long 96° 35'59", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.9, T.101 N., R.49 W., Minnehaha County, Hydrologic Unit 10170203, on downstream side of bridge on East Maple Street, 3.6 mi upstream from Split Rock Creek, 2.1 mi southeast of Brandon, and 155.7 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date  | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR   |      |                                      |                                   |                                 |                                             |                                                     |                                |                                                 |                                    |
| 24... | 1315 | 542                                  | 8.2                               | 19.0                            | 7.6                                         | 493                                                 | 10.8                           | 96                                              | 727                                |
| 24... | 1325 | 542                                  | 8.2                               | 19.0                            | 7.6                                         | 493                                                 | 10.8                           | 96                                              | 727                                |
| APR   |      |                                      |                                   |                                 |                                             |                                                     |                                |                                                 |                                    |
| 21... | 1405 | 855                                  | 9.7                               | 16.0                            | 8.5                                         | 1,030                                               | 12.8                           | 118                                             | 728                                |
| JUN   |      |                                      |                                   |                                 |                                             |                                                     |                                |                                                 |                                    |
| 24... | 1220 | 160                                  | 23.8                              | 30.0                            | 8.3                                         | 1,070                                               | 8.4                            | 106                                             | 724                                |
| JUL   |      |                                      |                                   |                                 |                                             |                                                     |                                |                                                 |                                    |
| 14... | 1200 | 205                                  | 24.5                              | 31.0                            | 8.5                                         | 1,140                                               | 14.7                           | 186                                             | 726                                |
| SEP   |      |                                      |                                   |                                 |                                             |                                                     |                                |                                                 |                                    |
| 02... | 1330 | 34                                   | 23.1                              | 29.0                            | 8.3                                         | 1,430                                               | 11.4                           | 139                                             | 730                                |
| 10... | 1330 | 1,360                                | 18.6                              | 21.0                            | 7.0                                         | 334                                                 | 7.0                            | 79                                              | 726                                |

## MISCELLANEOUS WATER QUALITY DATA

421

432309096311600 BIG SIOUX RIVER AT KLONDIKE, IA

LOCATION.--Lat 43° 23'09", long 96° 31'16", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.21, T.99 N., R.48 W., Lyon County, Hydrologic Unit 10170203, on upstream side of bridge on Lincoln County Highway 116, 7.8 mi downstream from Nine Mile Creek, at southeast edge of Klondike, and 133.4 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 24... | 1700 | 698                                  | 8.7                               | 13.0                            | 7.6                                         | 531                                                 | 9.6                            | 87                                              | 726                                |
| APR 22... | 1000 | 1,660                                | 9.7                               | 6.0                             | 8.3                                         | 921                                                 | 10.2                           | 94                                              | 731                                |
| JUN 24... | 1640 | 449                                  | 25.9                              | 32.0                            | 8.4                                         | 868                                                 | 9.3                            | 121                                             | 724                                |
| JUL 14... | 1730 | 365                                  | 25.9                              | 32.5                            | 8.6                                         | 971                                                 | 17.0                           | 220                                             | 727                                |
| SEP 02... | 1630 | 57                                   | 24.5                              | 31.0                            | 9.1                                         | 1,180                                               | 18.1                           | 228                                             | 730                                |
| SEP 11... | 0830 | 1,080                                | 18.5                              | 14.0                            | 6.8                                         | 343                                                 | 6.0                            | 67                                              | 729                                |

## MISCELLANEOUS WATER QUALITY DATA

431824096313700 BIG SIOUX RIVER NEAR CANTON, SD

LOCATION.--Lat 43° 18'24", long 96° 31'37", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.16, T.98 N., R.48 W., Lincoln County, Hydrologic Unit 10170203, on downstream side of bridge on U.S. Highway 18, 3.9 mi upstream from Canton, 3.3 mi east of Canton, and 124.9 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 25... | 1030 | 653                                  | 6.8                               | 10.0                            | 7.7                                         | 563                                                 | 10.5                           | 90                                              | 724                                |
| APR 22... | 1330 | 1,600                                | 10.7                              | 17.0                            | 8.4                                         | 920                                                 | 10.9                           | 103                                             | 730                                |
| JUN 25... | 1030 | 470                                  | 24.3                              | 19.0                            | 8.4                                         | 918                                                 | 7.2                            | 90                                              | 725                                |
| JUL 15... | 1000 | 322                                  | 24.4                              | 25.0                            | 8.3                                         | 917                                                 | 10.5                           | 132                                             | 731                                |
| SEP 03... | 1000 | 66                                   | 19.1                              | 20.0                            | 8.6                                         | 1,210                                               | 10.5                           | 118                                             | 735                                |
| 11...     | 1200 | 1,220                                | 18.3                              | 14.0                            | 7.5                                         | 367                                                 | 7.0                            | 78                                              | 730                                |

## 431324096292300 BIG SIOUX RIVER AT FAIRVIEW, SD

LOCATION.--Lat 43° 13'24", long 96° 29'23", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.15, T.97 N., R.48 W., Lincoln County, Hydrologic Unit 10170203, on upstream side of bridge on county highway 143, 10.0 mi upstream from Hudson, 0.1 mi north of Fairview, and 107.0 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 25... | 1325 | 751                                  | 8.6                               | 16.0                            | 7.8                                         | 574                                                 | 10.9                           | 98                                              | 729                                |
| APR 22... | 1730 | 1,790                                | 12.0                              | 20.0                            | 8.3                                         | 924                                                 | 10.7                           | 104                                             | 732                                |
| JUN 25... | 1430 | 730                                  | 23.3                              | 16.0                            | 8.3                                         | 902                                                 | 6.6                            | 82                                              | 727                                |
| JUL 15... | 1400 | 396                                  | 27.8                              | 32.0                            | 8.9                                         | 879                                                 | 20.7                           | 275                                             | 733                                |
| SEP 03... | 1300 | 79                                   | 23.4                              | 23.0                            | 9.1                                         | 1,110                                               | 21.1                           | 257                                             | 738                                |
| SEP 11... | 1600 | 1,270                                | 18.6                              | 15.0                            | 7.5                                         | 1,050                                               | 5.1                            | 57                                              | 730                                |

## MISCELLANEOUS WATER QUALITY DATA

430801096263400 BIG SIOUX RIVER AT HUDSON, SD

LOCATION.--Lat 43° 08' 01", long 96° 26' 34", in NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec. 18, T. 96 N., R. 47 W., Lincoln County, Hydrologic Unit 10170203, on upstream side of bridge on county highway 143, 4.8 mi upstream from Rock River, IA, 0.5 mi west of Hudson, and 97.0 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 25... | 1400 | 706                                  | 10.0                              | 16.0                            | 7.8                                         | 565                                                 | 11.3                           | 105                                             | 729                                |
| APR 23... | 1000 | 1,700                                | 11.5                              | 15.0                            | 8.3                                         | 946                                                 | 9.7                            | 93                                              | 730                                |
| JUN 25... | 1745 | 717                                  | 23.3                              | 16.5                            | 8.5                                         | 845                                                 | 7.9                            | 97                                              | 731                                |
| JUL 15... | 1700 | 448                                  | 29.0                              | 32.0                            | 8.9                                         | 848                                                 | 22.5                           | 304                                             | 737                                |
| SEP 03... | 1600 | 78                                   | 25.1                              | 26.5                            | 9.2                                         | 1,060                                               | 19.1                           | 241                                             | 735                                |
| 12...     | 0930 | 1,040                                | 16.9                              | 9.0                             | 7.2                                         | 524                                                 | 5.8                            | 63                                              | 728                                |

MISCELLANEOUS WATER QUALITY DATA

425

425953096295900 BIG SIOUX RIVER AT HAWARDEN, IA

LOCATION.--Lat 42° 59'53", long 96° 29'59", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.34, T.95 N., R.48 W., Sioux County, Hydrologic Unit 10170203, on downstream side of bridge on Union County Highway 13, 9.0 mi downstream from Rock River, at east edge of Hawarden, and 83.2 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 26... | 1015 | 1,010                                | 8.0                               | 11.0                            | 7.9                                         | 626                                                 | 10.6                           | 95                                              | 722                                |
| APR 23... | 1330 | 2,540                                | 12.3                              | 18.0                            | 8.3                                         | 925                                                 | 9.6                            | 94                                              | 729                                |
| JUN 26... | 1030 | 1,800                                | 19.7                              | 17.5                            | 8.2                                         | 830                                                 | 7.5                            | 85                                              | 734                                |
| JUL 16... | 1030 | 886                                  | 25.2                              | 24.0                            | 8.1                                         | 867                                                 | 7.4                            | 93                                              | 736                                |
| SEP 04... | 1300 | 131                                  | 20.1                              | 28.0                            | 8.8                                         | 956                                                 | 15.1                           | 172                                             | 740                                |
| 12...     | 1200 | 1,440                                | 17.0                              | 20.0                            | 7.5                                         | 836                                                 | 4.4                            | 48                                              | 729                                |

## MISCELLANEOUS WATER QUALITY DATA

424543096375700 BIG SIOUX RIVER NEAR RICHLAND, SD

LOCATION.--Lat 42° 45' 43", long 96° 37' 57", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.28, T.92 N., R.49 W., Union County, Hydrologic Unit 10170203, on downstream side of bridge on SD Highway 50, 0.5 mi upstream from Richland Creek, 1.0 mi east of Richland, and 49.0 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples were available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 26... | 1530 | 1,160                                | 9.3                               | 14.0                            | 8.0                                         | 607                                                 | 10.3                           | 95                                              | 722                                |
| APR 24... | 1100 | 2,490                                | 12.6                              | 11.0                            | 8.3                                         | 882                                                 | 9.1                            | 90                                              | 725                                |
| JUN 26... | 1745 | 1,780                                | 22.0                              | 26.0                            | 8.0                                         | 733                                                 | 6.5                            | 77                                              | 734                                |
| JUL 16... | 1730 | 988                                  | 27.7                              | 32.0                            | 8.4                                         | 846                                                 | 12.7                           | 168                                             | 736                                |
| SEP 04... | 1600 | --                                   | 23.6                              | 30.0                            | 9.2                                         | 772                                                 | 16.3                           | 199                                             | 740                                |
| 12...     | 1730 | 893                                  | 19.4                              | 26.0                            | 8.0                                         | 767                                                 | 9.0                            | 103                                             | 729                                |

423735096305400 BIG SIOUX RIVER NEAR BROKEN KETTLE, IA

LOCATION.--Lat 42° 37' 35", long 96° 30' 54", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.9, T.90 N., R.48 W., Plymouth County, Hydrologic Unit 10170203, on downstream side of bridge on Union County Highway 7, 0.1 mi downstream from Broken Kettle Creek, 0.9 mi southwest of Broken Kettle, and 16.8 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 27... | 1110 | 1,120                                | 8.3                               | 1.0                             | 7.9                                         | 622                                                 | 9.8                            | 88                                              | 720                                |
| APR 24... | 1430 | 2,600                                | 12.5                              | 13.0                            | 8.3                                         | 872                                                 | 8.8                            | 87                                              | 725                                |
| JUN 27... | 1045 | 2,360                                | 20.8                              | 20.0                            | 7.7                                         | 737                                                 | 5.6                            | 66                                              | 733                                |
| JUL 17... | 0930 | 1,260                                | 26.2                              | 26.0                            | 8.1                                         | 873                                                 | 7.6                            | 98                                              | 735                                |
| SEP 05... | 1200 | 208                                  | 22.0                              | 22.0                            | 8.2                                         | 833                                                 | 8.7                            | 103                                             | 740                                |
| 13...     | 0945 | 1,290                                | 18.2                              | 15.0                            | 7.3                                         | 733                                                 | 6.2                            | 69                                              | 733                                |

## MISCELLANEOUS WATER QUALITY DATA

423128096284700 BIG SIOUX RIVER AT NORTH SIOUX CITY, SD

LOCATION.--Lat 42° 31' 28", long 96° 28' 47", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.14, T.89 N., R.48 W., Union County, Hydrologic Unit 10170203, on downstream side of bridge on Military Road (old SD Highway 77) between the cities of Riverside, IA, and North Sioux City, and 5.0 mi upstream from mouth.

PERIOD OF RECORD.--March to September 2003.

REMARKS.--In addition to the water-quality data presented in the table below, water-quality samples were collected at this station as part of a Total Maximum Daily Load (TMDL) study. Analytical results for the TMDL samples are available from the South Dakota Department of Environment and Natural Resources.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Temperature, air, deg C (00020) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf uS/cm 25 degC (00095) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | Barometric pressure, mm Hg (00025) |
|-----------|------|--------------------------------------|-----------------------------------|---------------------------------|---------------------------------------------|-----------------------------------------------------|--------------------------------|-------------------------------------------------|------------------------------------|
| MAR 27... | 1530 | 1,260                                | 8.3                               | 0.0                             | 7.9                                         | 632                                                 | 9.9                            | 89                                              | 722                                |
| APR 25... | 1000 | 2,590                                | 12.0                              | 11.0                            | 8.3                                         | 887                                                 | 8.7                            | 84                                              | 728                                |
| JUN 27... | 1400 | 2,350                                | 21.8                              | 32.0                            | 7.6                                         | 723                                                 | 5.3                            | 63                                              | 732                                |
| JUL 17... | 1230 | 1,260                                | 26.3                              | 31.0                            | 8.2                                         | 910                                                 | 8.7                            | 112                                             | 736                                |
| SEP 05... | 1000 | 206                                  | 21.6                              | 19.8                            | 7.7                                         | 843                                                 | 6.4                            | 76                                              | 737                                |
| SEP 13... | 1300 | 1,240                                | 18.1                              | 20.0                            | 7.4                                         | 696                                                 | 6.3                            | 69                                              | 733                                |

The following discharge measurements were made at current streamflow and crest-stage partial-record stations. Sites are listed in downstream order.

## WATER QUALITY DATA

| Date                                                                                  | Time | Instantaneous discharge, cfs (00061) | Specif. conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------|------|--------------------------------------|-----------------------------------------------------|---------------------------------|-----------------------------------|
| 05051650 LA BELLE CR NEAR VEBLEN, SD (LAT 45 53 33N LONG 097 21 40W)                  |      |                                      |                                                     |                                 |                                   |
| JUN 2003                                                                              |      |                                      |                                                     |                                 |                                   |
| 24...                                                                                 | 1740 | 51                                   | 520                                                 | 24.0                            | 22.5                              |
| 05289985 BIG COULEE CR NEAR PEEVER, SD (LAT 45 29 14N LONG 096 57 26W)                |      |                                      |                                                     |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                     |                                 |                                   |
| 01...                                                                                 | 1355 | .01                                  | 1400                                                | 14.0                            | 12.0                              |
| NOV                                                                                   |      |                                      |                                                     |                                 |                                   |
| 13...                                                                                 | 1235 | .61                                  | 1460                                                | 4.0                             | 1.0                               |
| JAN 2003                                                                              |      |                                      |                                                     |                                 |                                   |
| 08...                                                                                 | 1200 | .68                                  | 1480                                                | 9.0                             | 0.0                               |
| MAR                                                                                   |      |                                      |                                                     |                                 |                                   |
| 10...                                                                                 | 1635 | .05                                  | 1670                                                | -6.0                            | 0.5                               |
| 19...                                                                                 | 1510 | 12                                   | 763                                                 | 5.0                             | 1.0                               |
| APR                                                                                   |      |                                      |                                                     |                                 |                                   |
| 28...                                                                                 | 1455 | 1.6                                  | 1430                                                | 16.0                            | 12.0                              |
| JUN                                                                                   |      |                                      |                                                     |                                 |                                   |
| 09...                                                                                 | 1710 | 5.3                                  | 1440                                                | 19.0                            | 17.0                              |
| 24...                                                                                 | 1440 | 201                                  | 414                                                 | 25.0                            | 22.0                              |
| JUL                                                                                   |      |                                      |                                                     |                                 |                                   |
| 07...                                                                                 | 1330 | .38                                  | 1440                                                | 23.0                            | 22.5                              |
| 05292704 NORTH FORK YELLOW BANK RIVER NEAR ODESSA, MN (LAT 45 11 21N LONG 096 24 54W) |      |                                      |                                                     |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                     |                                 |                                   |
| 02...                                                                                 | 0815 | .79                                  | 967                                                 | 4.0                             | 9.0                               |
| NOV                                                                                   |      |                                      |                                                     |                                 |                                   |
| 13...                                                                                 | 1500 | 3.9                                  | 1030                                                | 9.0                             | 0.5                               |
| JAN 2003                                                                              |      |                                      |                                                     |                                 |                                   |
| 08...                                                                                 | 1420 | 4.2                                  | 1130                                                | 11.0                            | 0.0                               |
| MAR                                                                                   |      |                                      |                                                     |                                 |                                   |
| 19...                                                                                 | 1125 | 59                                   | 447                                                 | 7.0                             | 2.0                               |
| APR                                                                                   |      |                                      |                                                     |                                 |                                   |
| 28...                                                                                 | 1725 | 13                                   | 1060                                                | 15.0                            | 17.0                              |
| JUN                                                                                   |      |                                      |                                                     |                                 |                                   |
| 10...                                                                                 | 0920 | 8.6                                  | 940                                                 | 17.0                            | 18.0                              |
| JUL                                                                                   |      |                                      |                                                     |                                 |                                   |
| 08...                                                                                 | 0800 | .49                                  | 933                                                 | 19.5                            | 21.0                              |
| AUG                                                                                   |      |                                      |                                                     |                                 |                                   |
| 26...                                                                                 | 1010 | .02                                  | 1080                                                | 32.5                            | 24.0                              |
| 13...                                                                                 | 1235 | --                                   | --                                                  | 2.0                             | --                                |
| 06334500 LITTLE MISSOURI R AT CAMP CROOK, SD (LAT 45 32 49N LONG 103 58 23W)          |      |                                      |                                                     |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                     |                                 |                                   |
| 07...                                                                                 | 0830 | 1.4                                  | 1750                                                | 10.5                            | 8.0                               |
| NOV                                                                                   |      |                                      |                                                     |                                 |                                   |
| 25...                                                                                 | 0830 | 2.3                                  | 1690                                                | -9.0                            | 0.0                               |
| JAN 2003                                                                              |      |                                      |                                                     |                                 |                                   |
| 07...                                                                                 | 0900 | 3.7                                  | 1760                                                | 4.0                             | 0.5                               |
| FEB                                                                                   |      |                                      |                                                     |                                 |                                   |
| 20...                                                                                 | 0830 | 4.2                                  | 1680                                                | -1.0                            | 0.0                               |
| APR                                                                                   |      |                                      |                                                     |                                 |                                   |
| 01...                                                                                 | 0910 | 33                                   | 966                                                 | 14.0                            | 8.0                               |
| MAY                                                                                   |      |                                      |                                                     |                                 |                                   |
| 14...                                                                                 | 0900 | 13                                   | 1730                                                | 10.0                            | 11.5                              |
| JUN                                                                                   |      |                                      |                                                     |                                 |                                   |
| 10...                                                                                 | 0900 | --                                   | 1750                                                | 12.0                            | 16.0                              |
| 26...                                                                                 | 1130 | 12                                   | 1680                                                | 19.0                            | 16.5                              |
| AUG                                                                                   |      |                                      |                                                     |                                 |                                   |
| 13...                                                                                 | 0935 | .55                                  | 2040                                                | --                              | 21.0                              |

## WATER QUALITY DATA

| Date                                                                             | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06354882 OAK CR NEAR WAKPALA, SD (LAT 45 42 43N LONG 100 33 32W)                 |      |                                      |                                                      |                                 |                                   |
| JAN 2003                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                            | 1435 | 1.4                                  | 1380                                                 | 13.0                            | 0.0                               |
| MAR                                                                              |      |                                      |                                                      |                                 |                                   |
| 24...                                                                            | 1625 | 5.4                                  | 392                                                  | 10.0                            | 0.0                               |
| APR                                                                              |      |                                      |                                                      |                                 |                                   |
| 10...                                                                            | 1600 | .92                                  | 576                                                  | 18.5                            | 13.5                              |
| MAY                                                                              |      |                                      |                                                      |                                 |                                   |
| 28...                                                                            | 0750 | .10                                  | 934                                                  | 16.0                            | 18.5                              |
| 06355500 NORTH FORK GRAND R NEAR WHITE BUTTE, SD (LAT 45 48 08N LONG 102 21 43W) |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                         |      |                                      |                                                      |                                 |                                   |
| 25...                                                                            | 1200 | 1.2                                  | 6040                                                 | -1.0                            | 0.0                               |
| JAN 2003                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                            | 1200 | 2.1                                  | 5780                                                 | 9.0                             | 0.5                               |
| FEB                                                                              |      |                                      |                                                      |                                 |                                   |
| 20...                                                                            | 1230 | 3.1                                  | 4240                                                 | 9.0                             | 0.0                               |
| APR                                                                              |      |                                      |                                                      |                                 |                                   |
| 01...                                                                            | 1215 | 15                                   | 1790                                                 | 11.5                            | 11.0                              |
| MAY                                                                              |      |                                      |                                                      |                                 |                                   |
| 14...                                                                            | 1335 | 14                                   | 2940                                                 | 22.0                            | 16.5                              |
| JUN                                                                              |      |                                      |                                                      |                                 |                                   |
| 10...                                                                            | 1410 | --                                   | 3490                                                 | 17.5                            | 16.0                              |
| 25...                                                                            | 1630 | 2.9                                  | 3730                                                 | 19.0                            | 17.5                              |
| SEP                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                            | 1035 | --                                   | 1280                                                 | 6.0                             | 10.5                              |
| 06356500 SOUTH FORK GRAND R NEAR CASH, SD (LAT 45 38 56N LONG 102 38 27W)        |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                         |      |                                      |                                                      |                                 |                                   |
| 31...                                                                            | 1330 | 24                                   | 1470                                                 | 23.0                            | 14.0                              |
| MAY                                                                              |      |                                      |                                                      |                                 |                                   |
| 14...                                                                            | 1200 | 28                                   | 959                                                  | 20.0                            | 14.0                              |
| JUN                                                                              |      |                                      |                                                      |                                 |                                   |
| 10...                                                                            | 1135 | --                                   | 2270                                                 | 14.0                            | 15.0                              |
| 26...                                                                            | 0915 | 16                                   | 2030                                                 | 13.0                            | 14.0                              |
| AUG                                                                              |      |                                      |                                                      |                                 |                                   |
| 13...                                                                            | 1230 | 3.0                                  | 356                                                  | 34.0                            | 22.5                              |
| 06357800 GRAND R AT LITTLE EAGLE, SD (LAT 45 39 28N LONG 100 49 04W)             |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                         |      |                                      |                                                      |                                 |                                   |
| 01...                                                                            | 1305 | 19                                   | 2430                                                 | 8.0                             | 11.5                              |
| NOV                                                                              |      |                                      |                                                      |                                 |                                   |
| 12...                                                                            | 1225 | 30                                   | 2020                                                 | 7.5                             | 1.5                               |
| JAN 2003                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                            | 1200 | 11                                   | 2900                                                 | 11.5                            | 0.0                               |
| FEB                                                                              |      |                                      |                                                      |                                 |                                   |
| 24...                                                                            | 1620 | 1.5                                  | 1790                                                 | -16.0                           | 0.0                               |
| MAR                                                                              |      |                                      |                                                      |                                 |                                   |
| 25...                                                                            | 0830 | 273                                  | 583                                                  | 6.0                             | 1.5                               |
| APR                                                                              |      |                                      |                                                      |                                 |                                   |
| 10...                                                                            | 1330 | 48                                   | 1660                                                 | 18.0                            | 15.0                              |
| MAY                                                                              |      |                                      |                                                      |                                 |                                   |
| 28...                                                                            | 1410 | 36                                   | 2000                                                 | 22.5                            | 26.0                              |
| JUL                                                                              |      |                                      |                                                      |                                 |                                   |
| 29...                                                                            | 1400 | 14                                   | 2510                                                 | 31.0                            | 27.0                              |
| SEP                                                                              |      |                                      |                                                      |                                 |                                   |
| 09...                                                                            | 1230 | 7.9                                  | 3080                                                 | 29.0                            | 24.5                              |

## WATER QUALITY DATA

| Date                                                                       | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06359500 MOREAU R NEAR FAITH, SD (LAT 45 11 52N LONG 102 09 22W)           |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                   |      |                                      |                                                      |                                 |                                   |
| 07...                                                                      | 1450 | 2.6                                  | 1860                                                 | 22.0                            | 13.0                              |
| NOV 25...                                                                  | 1530 | 8.5                                  | 2560                                                 | -4.0                            | 0.0                               |
| JAN 2003                                                                   |      |                                      |                                                      |                                 |                                   |
| 07...                                                                      | 1430 | 7.4                                  | 3080                                                 | 15.0                            | 1.0                               |
| FEB 20...                                                                  | 1630 | 34                                   | 1240                                                 | 5.0                             | 0.0                               |
| MAR 18...                                                                  | 1500 | 736                                  | 455                                                  | 2.0                             | 2.0                               |
| 20...                                                                      | 1355 | --                                   | 545                                                  | 9.0                             | 2.0                               |
| APR 01...                                                                  | 1630 | 32                                   | 1470                                                 | 13.0                            | 13.0                              |
| MAY 14...                                                                  | 1730 | 47                                   | 1050                                                 | 18.0                            | 19.0                              |
| JUN 11...                                                                  | 1210 | --                                   | 2390                                                 | 21.0                            | 19.0                              |
| 25...                                                                      | 1245 | 72                                   | 1120                                                 | 16.5                            | 14.0                              |
| 06360500 MOREAU R NEAR WHITEHORSE, SD (LAT 45 15 21N LONG 100 50 33W)      |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                   |      |                                      |                                                      |                                 |                                   |
| 12...                                                                      | 1005 | .01                                  | 3660                                                 | 7.5                             | 2.5                               |
| JAN 2003                                                                   |      |                                      |                                                      |                                 |                                   |
| 03...                                                                      | 1330 | .06                                  | 6480                                                 | 13.0                            | 0.0                               |
| FEB 24...                                                                  | 1155 | .82                                  | 1410                                                 | -13.0                           | 0.0                               |
| MAR 24...                                                                  | 1305 | 770                                  | 656                                                  | 13.5                            | 6.0                               |
| APR 10...                                                                  | 1015 | 30                                   | 1990                                                 | 14.0                            | 12.0                              |
| MAY 27...                                                                  | 1415 | 16                                   | 1540                                                 | 21.0                            | 23.0                              |
| JUL 29...                                                                  | 1010 | .96                                  | 2140                                                 | 29.0                            | 25.0                              |
| 06394300 REDBIRD CANYON NEAR NEWCASTLE, WY (LAT 43 46 34N LONG 104 01 37W) |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                      | 0945 | 1.5                                  | 104                                                  | 8.0                             | 2.5                               |
| 06394450 PASS CREEK NEAR DEWEY, SD (LAT 43 33 05N LONG 103 56 15W)         |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                      | 1000 | --                                   | 2780                                                 | 15.0                            | 8.0                               |
| 06395000 CHEYENNE R AT EDMONT, SD (LAT 43 18 20N LONG 103 49 14W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                   |      |                                      |                                                      |                                 |                                   |
| 07...                                                                      | 0950 | 2.1                                  | 5110                                                 | 16.0                            | 7.5                               |
| DEC 02...                                                                  | 1050 | 22                                   | 4000                                                 | 5.0                             | 0.0                               |
| JAN 2003                                                                   |      |                                      |                                                      |                                 |                                   |
| 21...                                                                      | 1115 | 15                                   | 3120                                                 | -5.0                            | 0.0                               |
| MAR 17...                                                                  | 1445 | 979                                  | --                                                   | 10.0                            | --                                |
| APR 14...                                                                  | 0910 | 26                                   | 4490                                                 | 23.0                            | 11.0                              |
| MAY 19...                                                                  | 0950 | 23                                   | 5960                                                 | 18.0                            | 11.5                              |
| JUL 14...                                                                  | 1030 | 8.7                                  | 3900                                                 | 25.0                            | 24.5                              |
| AUG 06...                                                                  | 1130 | .15                                  | 3850                                                 | 25.5                            | 25.5                              |
| SEP 04...                                                                  | 1015 | .74                                  | 5870                                                 | 22.0                            | 21.0                              |

## WATER QUALITY DATA

| Date                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06400000 HAT CR NEAR EDMONT, SD (LAT 43 14 24N LONG 103 35 16W)             |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 07...                                                                       | 1230 | .41                                  | 2990                                                 | 20.0                            | 13.0                              |
| DEC                                                                         |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1225 | 2.1                                  | 1750                                                 | 7.0                             | 1.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1330 | .52                                  | 4290                                                 | -5.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1335 | 6.1                                  | 1120                                                 | 13.0                            | 4.5                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 1145 | 2.4                                  | 1710                                                 | 15.0                            | 15.5                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 30...                                                                       | 0945 | 3.3                                  | 2090                                                 | 23.0                            | 21.5                              |
| 06400875 HORSEHEAD CR AT OELRICHS, SD (LAT 43 11 17N LONG 103 13 34W)       |      |                                      |                                                      |                                 |                                   |
| DEC 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1335 | --                                   | 4290                                                 | 14.0                            | 2.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 23...                                                                       | 1105 | .18                                  | 4850                                                 | -9.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 1250 | .11                                  | 2010                                                 | 9.0                             | 1.5                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 09...                                                                       | 0946 | 17                                   | 4000                                                 | 13.0                            | 11.5                              |
| 19...                                                                       | 1335 | 2.6                                  | 1530                                                 | 16.0                            | 16.5                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1430 | 20                                   | 878                                                  | 13.0                            | 18.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 1400 | --                                   | 1500                                                 | 26.0                            | 20.0                              |
| 06401500 CHEYENNE R BELOW ANGOSTURA DAM, SD (LAT 43 20 42N LONG 103 26 12W) |      |                                      |                                                      |                                 |                                   |
| DEC 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 1145 | .78                                  | 2080                                                 | 19.0                            | 4.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 0840 | --                                   | 2470                                                 | -3.0                            | 2.0                               |
| FEB                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 0930 | .53                                  | 2580                                                 | -3.0                            | 1.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 1425 | .64                                  | 2420                                                 | 9.0                             | 6.0                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 20...                                                                       | 1510 | .76                                  | 2580                                                 | 25.0                            | 19.5                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 16...                                                                       | 1230 | .69                                  | 2220                                                 | 32.0                            | 29.0                              |
| SEP                                                                         |      |                                      |                                                      |                                 |                                   |
| 03...                                                                       | 1300 | .58                                  | 2520                                                 | 28.0                            | 22.0                              |
| 06402000 FALL R AT HOT SPRINGS, SD (LAT 43 25 50N LONG 103 28 33W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 0830 | 26                                   | 1280                                                 | 13.0                            | 23.0                              |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 0900 | --                                   | 1240                                                 | -2.0                            | 20.0                              |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 20...                                                                       | 1210 | --                                   | 1210                                                 | 12.0                            | 23.5                              |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1315 | --                                   | 1240                                                 | 25.0                            | 26.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 16...                                                                       | 1345 | --                                   | 1240                                                 | 33.0                            | 28.0                              |
| SEP                                                                         |      |                                      |                                                      |                                 |                                   |
| 03...                                                                       | 1345 | --                                   | 1220                                                 | 28.0                            | 21.0                              |

## WATER QUALITY DATA

| Date | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------|------|--------------------------------------|------------------------------------------------|---------------------------------|-----------------------------------|
|------|------|--------------------------------------|------------------------------------------------|---------------------------------|-----------------------------------|

## 06402470 BEAVER CREEK ABOVE BUFFALO GAP, SD (LAT 43 31 20N LONG 103 21 23W)

|          |      |     |      |      |      |
|----------|------|-----|------|------|------|
| OCT 2002 |      |     |      |      |      |
| 04...    | 1015 | 9.3 | 1960 | 10.0 | 15.0 |
| 04...    | 1130 | 9.4 | 1960 | 10.0 | 15.0 |
| MAR 2003 |      |     |      |      |      |
| 20...    | 1130 | --  | 2400 | 16.0 | 15.0 |
| MAY      |      |     |      |      |      |
| 09...    | 1200 | --  | 2400 | 15.0 | 15.0 |
| JUL      |      |     |      |      |      |
| 17...    | 1215 | --  | 2380 | 35.0 | 20.5 |

## 06402500 BEAVER CR NEAR BUFFALO GAP, SD (LAT 43 28 00N LONG 103 18 20W)

|          |      |     |      |       |      |
|----------|------|-----|------|-------|------|
| OCT 2002 |      |     |      |       |      |
| 04...    | 0820 | 4.5 | 2580 | 8.0   | 9.5  |
| DEC      |      |     |      |       |      |
| 05...    | 0930 | 8.9 | 1950 | -15.0 | 0.0  |
| JAN 2003 |      |     |      |       |      |
| 24...    | 1045 | 12  | 3420 | 3.0   | 0.0  |
| MAR      |      |     |      |       |      |
| 24...    | 0800 | 9.2 | 2510 | 8.0   | 8.5  |
| MAY      |      |     |      |       |      |
| 12...    | 0915 | 6.1 | 2570 | 15.0  | 10.5 |
| JUL      |      |     |      |       |      |
| 17...    | 1340 | 1.7 | 2520 | 38.0  | 27.5 |
| SEP      |      |     |      |       |      |
| 08...    | 1230 | 3.3 | 2530 | 27.0  | 20.0 |

## 06402995 FRENCH CREEK ABOVE STOCKADE LAKE NEAR CUSTER, SD (LAT 43 46 10N LONG 103 32 10W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 02...    | 0835 | .96 | 625 | 2.0  | 5.5  |
| MAR 2003 |      |     |     |      |      |
| 14...    | 0945 | 38  | 265 | 3.5  | 0.0  |
| MAY      |      |     |     |      |      |
| 21...    | 1130 | --  | 364 | 18.0 | 10.0 |
| JUL      |      |     |     |      |      |
| 17...    | 0900 | --  | 574 | 34.0 | 20.0 |

## 06403300 FRENCH CR ABOVE FAIRBURN, SD (LAT 43 43 02N LONG 103 22 03W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 03...    | 0935 | 1.8 | 308 | 8.0  | 8.0  |
| DEC      |      |     |     |      |      |
| 04...    | 1010 | 2.1 | 324 | -7.0 | 0.0  |
| JAN 2003 |      |     |     |      |      |
| 17...    | 1005 | 1.7 | 327 | -5.0 | 0.0  |
| MAR      |      |     |     |      |      |
| 20...    | 0840 | 31  | 312 | 4.0  | 3.0  |
| MAY      |      |     |     |      |      |
| 21...    | 0830 | 9.8 | 322 | 13.0 | 10.0 |
| JUL      |      |     |     |      |      |
| 16...    | 0900 | 1.4 | 331 | 21.0 | 20.0 |
| SEP      |      |     |     |      |      |
| 09...    | 1030 | .88 | 315 | 22.0 | 17.0 |

## WATER QUALITY DATA

| Date                                                                           | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|--------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06403700 CHEYENNE RIVER AT REDSHIRT, SD (LAT 43 40 23N LONG 102 53 36W)        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 01...                                                                          | 0825 | 81                                   | 2230                                                 | 11.0                            | 14.0                              |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 06...                                                                          | 1030 | 42                                   | 2850                                                 | 0.0                             | 0.0                               |
| JAN 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1030 | 96                                   | 2570                                                 | -4.0                            | 0.0                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 13...                                                                          | 0950 | 81                                   | 2250                                                 | 15.0                            | 0.0                               |
| 25...                                                                          | 0755 | 75                                   | 2560                                                 | 5.0                             | 5.5                               |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 15...                                                                          | 0815 | 77                                   | 2600                                                 | 14.0                            | 15.0                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 01...                                                                          | 1045 | 47                                   | 2460                                                 | 30.0                            | 25.5                              |
| 31...                                                                          | 1145 | 42                                   | 2650                                                 | 30.0                            | 24.0                              |
| SEP                                                                            |      |                                      |                                                      |                                 |                                   |
| 02...                                                                          | 1445 | 71                                   | 2690                                                 | 32.0                            | 22.0                              |
| 06403810 BATTLE CR ABOVE KEYSTONE, SD (LAT 43 54 17N LONG 103 27 48W)          |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 18...                                                                          | 0830 | --                                   | 555                                                  | -2.0                            | 3.5                               |
| JUN 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 09...                                                                          | 0935 | .40                                  | 496                                                  | 23.0                            | 10.5                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 15...                                                                          | 1330 | --                                   | 596                                                  | 31.0                            | 20.5                              |
| 06403850 GRIZZLY BEAR CREEK NEAR KEYSTONE, SD (LAT 43 52 41N LONG 103 26 14W)  |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 18...                                                                          | 0925 | --                                   | 95                                                   | --                              | 0.5                               |
| APR 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 01...                                                                          | 1415 | --                                   | 75                                                   | 24.0                            | 7.5                               |
| JUN                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                          | 1045 | 1.1                                  | 101                                                  | 23.0                            | 13.5                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 15...                                                                          | 1305 | --                                   | 147                                                  | 31.0                            | 24.0                              |
| 06404000 BATTLE CR NEAR KEYSTONE, SD (LAT 43 52 21N LONG 103 20 10W)           |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 01...                                                                          | 1255 | 1.0                                  | 370                                                  | 12.0                            | 11.5                              |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                          | 1220 | .72                                  | 464                                                  | 10.0                            | 0.0                               |
| JAN 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1245 | .17                                  | 566                                                  | 4.0                             | 0.0                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1255 | 6.9                                  | 331                                                  | 17.0                            | 1.5                               |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 02...                                                                          | 1015 | 58                                   | 163                                                  | 13.0                            | 6.5                               |
| 22...                                                                          | 0950 | 12                                   | 251                                                  | 30.0                            | 12.0                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 10...                                                                          | 1155 | .94                                  | 385                                                  | 27.0                            | 21.0                              |
| 06404800 GRACE COOLIDGE CREEK NEAR HAYWARD, SD (LAT 43 48 07N LONG 103 26 03W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 02...                                                                          | 1100 | .43                                  | 94                                                   | 4.0                             | 5.5                               |
| MAR 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 0845 | --                                   | 85                                                   | 15.0                            | 0.5                               |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 21...                                                                          | 1100 | --                                   | 73                                                   | 20.0                            | 8.5                               |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 17...                                                                          | 1020 | --                                   | 98                                                   | 32.0                            | 17.5                              |

## WATER QUALITY DATA

| Date                                                                                   | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06404998 GRACE COOLIDGE CR NR GAME LODGE NR CUSTER, SD (LAT 43 45 40N LONG 103 21 49W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                               |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                  | 1210 | 1.4                                  | 247                                                  | 12.0                            | 9.5                               |
| DEC                                                                                    |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                  | 1245 | 1.4                                  | 235                                                  | -6.0                            | 0.0                               |
| JAN 2003                                                                               |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                  | 1050 | 1.3                                  | 241                                                  | -3.0                            | 0.0                               |
| MAR                                                                                    |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                  | 1135 | 1.9                                  | 219                                                  | 20.0                            | 5.0                               |
| MAY                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 1320 | 13                                   | 193                                                  | 24.0                            | 13.5                              |
| JUL                                                                                    |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                  | 0750 | 1.4                                  | 240                                                  | 20.0                            | 18.0                              |
| SEP                                                                                    |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                  | 0830 | .61                                  | 296                                                  | 21.0                            | 16.0                              |
| 06405800 BEAR GULCH NEAR HAYWARD, SD (LAT 43 47 31N LONG 103 20 49W)                   |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                               |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                  | 1020 | --                                   | 116                                                  | 22.0                            | 10.0                              |
| 06406000 BATTLE CR AT HERMOSA, SD (LAT 43 49 41N LONG 103 11 44W)                      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                               |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                  | 1135 | 9.4                                  | 555                                                  | 9.0                             | 12.0                              |
| DEC                                                                                    |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                  | 1033 | 8.8                                  | 553                                                  | 8.0                             | 0.5                               |
| JAN 2003                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 1125 | 9.0                                  | 564                                                  | -8.0                            | 0.0                               |
| MAR                                                                                    |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                  | 1305 | 8.4                                  | 540                                                  | 21.0                            | 7.0                               |
| MAY                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 1150 | 23                                   | 432                                                  | 21.0                            | 14.5                              |
| JUL                                                                                    |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                  | 1015 | 13                                   | 485                                                  | 26.0                            | 18.5                              |
| SEP                                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                  | 1200 | 7.6                                  | 533                                                  | 28.0                            | 18.0                              |
| 06406500 BATTLE CR BELOW HERMOSA, SD (LAT 43 43 30N LONG 102 54 15W)                   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                               |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                  | 0950 | 5.9                                  | 596                                                  | 10.0                            | 12.5                              |
| DEC                                                                                    |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                  | 0840 | 7.9                                  | 778                                                  | 4.0                             | 0.0                               |
| JAN 2003                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 0925 | 7.8                                  | 783                                                  | -5.0                            | 0.0                               |
| MAR                                                                                    |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                  | 1135 | 14                                   | 622                                                  | 21.0                            | 0.5                               |
| 25...                                                                                  | 0920 | 8.6                                  | 722                                                  | 11.0                            | 6.0                               |
| MAY                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 0945 | 26                                   | 514                                                  | 17.0                            | 15.0                              |
| JUL                                                                                    |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                  | 0820 | 9.2                                  | 576                                                  | 31.0                            | 20.0                              |
| SEP                                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                  | 1330 | 3.6                                  | 686                                                  | 30.0                            | 20.0                              |
| 06406700 SPRING CR AT OREVILLE, NR HILL CITY, SD (LAT 43 51 58N LONG 103 37 24W)       |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 0805 | --                                   | 365                                                  | 3.0                             | 1.0                               |
| NOV                                                                                    |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                  | 1220 | --                                   | 405                                                  | 7.5                             | 0.5                               |
| APR 2003                                                                               |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                  | 1130 | --                                   | 302                                                  | 20.0                            | 1.5                               |
| JUN                                                                                    |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                  | 1320 | --                                   | 345                                                  | 18.0                            | 11.0                              |
| 09...                                                                                  | 1330 | 4.8                                  | 340                                                  | 19.0                            | 11.5                              |
| JUL                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                  | 1205 | --                                   | 378                                                  | 27.0                            | 17.5                              |

## WATER QUALITY DATA

| Date                                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06406740 SUNDAY GULCH BL JOHNSON CANYON NR HILL CITY, SD (LAT 43 52 10N LONG 103 34 55W)    |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                       | 0830 | --                                   | 98                                                   | 3.5                             | 2.5                               |
| NOV                                                                                         |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                       | 1105 | --                                   | 94                                                   | 7.0                             | 0.5                               |
| APR 2003                                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                       | 1305 | --                                   | 73                                                   | 20.5                            | 4.5                               |
| JUN                                                                                         |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                       | 1205 | 1.1                                  | 86                                                   | 24.0                            | 13.5                              |
| JUL                                                                                         |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                       | 1230 | --                                   | 99                                                   | 27.5                            | 21.0                              |
| SEP                                                                                         |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                       | 2003 | --                                   | 106                                                  | --                              | 15.5                              |
| 06406760 RENO GULCH NEAR HILL CITY, SD (LAT 43 54 35N LONG 103 36 43W)                      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                       | 0855 | --                                   | 374                                                  | 6.0                             | 2.5                               |
| NOV                                                                                         |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                       | 1240 | --                                   | 365                                                  | --                              | 1.0                               |
| APR 2003                                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                       | 1330 | --                                   | 326                                                  | 21.0                            | 3.5                               |
| JUN                                                                                         |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                       | 1350 | .20                                  | 380                                                  | 23.0                            | 12.0                              |
| JUL                                                                                         |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                       | 1140 | --                                   | 317                                                  | 29.0                            | 15.0                              |
| SEP                                                                                         |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                       | 1255 | --                                   | 327                                                  | 18.0                            | 8.5                               |
| 06406920 SPRING CREEK ABOVE SHERIDAN LAKE NEAR KEYSTONE, SD (LAT 43 57 39N LONG 103 29 18W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                    |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                       | 1300 | 5.3                                  | 420                                                  | 12.0                            | 9.0                               |
| NOV                                                                                         |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                       | 1315 | 4.8                                  | 407                                                  | 8.5                             | 1.5                               |
| JAN 2003                                                                                    |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                       | 1200 | 1.0                                  | 541                                                  | 3.0                             | 0.0                               |
| FEB                                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                       | 1255 | 2.6                                  | 499                                                  | 2.0                             | 0.0                               |
| MAR                                                                                         |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                       | 1245 | 8.9                                  | 277                                                  | 8.0                             | 2.0                               |
| APR                                                                                         |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                       | 1310 | --                                   | 357                                                  | 23.0                            | 8.0                               |
| MAY                                                                                         |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                       | 1155 | 50                                   | 263                                                  | 10.0                            | 9.5                               |
| JUN                                                                                         |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                       | 1015 | 18                                   | 317                                                  | 21.0                            | 17.0                              |
| AUG                                                                                         |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                       | 1330 | 7.4                                  | 356                                                  | 30.0                            | 23.5                              |
| 06407500 SPRING CR NEAR KEYSTONE, SD (LAT 43 58 45N LONG 103 20 25W)                        |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                       | 1315 | 4.1                                  | 335                                                  | 7.0                             | 4.0                               |
| 06408500 SPRING CR NEAR HERMOSA, SD (LAT 43 56 31N LONG 103 09 32W)                         |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                       | 1510 | .58                                  | 2180                                                 | 11.0                            | 12.0                              |
| NOV                                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                       | 1430 | .66                                  | 1260                                                 | 8.0                             | 5.0                               |
| JAN 2003                                                                                    |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                       | 0855 | .65                                  | 1190                                                 | 1.0                             | 0.5                               |
| FEB                                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                       | 0915 | .80                                  | 1140                                                 | 3.0                             | 2.0                               |
| MAR                                                                                         |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                       | 0945 | .61                                  | 1240                                                 | 8.0                             | 6.0                               |
| MAY                                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                       | 0835 | .65                                  | 1230                                                 | 7.0                             | 9.5                               |
| JUN                                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                       | 1400 | .25                                  | 1210                                                 | 28.0                            | 24.0                              |

## WATER QUALITY DATA

| Date | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|

## 06408700 RHOADS FORK NEAR ROCHFORD, SD (LAT 44 08 12N LONG 103 51 29W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 09...    | 1609 | 5.6 | 470 | 18.0 | 10.0 |
| NOV      |      |     |     |      |      |
| 08...    | 1401 | 5.4 | 470 | 8.0  | 6.0  |
| DEC      |      |     |     |      |      |
| 06...    | 1252 | 5.1 | 469 | 1.0  | 4.0  |
| APR 2003 |      |     |     |      |      |
| 14...    | 1639 | 5.2 | 457 | 19.5 | 11.0 |
| JUN      |      |     |     |      |      |
| 13...    | 1110 | 5.0 | 458 | 27.0 | 9.5  |
| AUG      |      |     |     |      |      |
| 06...    | 1015 | 4.5 | 463 | 27.5 | 10.0 |

## 06409000 CASTLE CR ABOVE DEERFIELD RES NEAR HILL CITY, SD (LAT 44 00 49N LONG 103 49 48W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 01...    | 1305 | 14  | 459 | 4.0  | 4.5  |
| NOV      |      |     |     |      |      |
| 26...    | 0955 | 6.3 | 53  | 5.0  | 0.0  |
| JAN 2003 |      |     |     |      |      |
| 27...    | 1110 | 9.4 | 474 | --   | 1.5  |
| APR      |      |     |     |      |      |
| 03...    | 1345 | 23  | 358 | 5.0  | 5.5  |
| MAY      |      |     |     |      |      |
| 29...    | 1200 | 14  | 451 | 28.0 | 14.5 |
| JUL      |      |     |     |      |      |
| 15...    | 0855 | 10  | 474 | 17.0 | 11.0 |

## 06410000 CASTLE CR BELOW DEERFIELD DAM, SD (LAT 44 01 45N LONG 103 46 53W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 01...    | 1105 | 3.7 | 410 | 3.0  | 7.5  |
| APR 2003 |      |     |     |      |      |
| 02...    | 1300 | 9.6 | 424 | 20.0 | 5.0  |
| MAY      |      |     |     |      |      |
| 29...    | 1030 | 16  | 386 | 27.0 | 8.5  |
| JUL      |      |     |     |      |      |
| 15...    | 1030 | 12  | 402 | 23.0 | 11.0 |

## 06410500 RAPID CR ABOVE PACTOLA RES AT SILVER CITY, SD (LAT 44 05 05N LONG 103 34 48W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| OCT 2002 |      |     |     |      |      |
| 03...    | 0900 | 30  | 421 | 1.0  | 4.5  |
| NOV      |      |     |     |      |      |
| 18...    | 1000 | 18  | 414 | -1.5 | 0.0  |
| JAN 2003 |      |     |     |      |      |
| 03...    | 1000 | 25  | 435 | -2.0 | 0.0  |
| FEB      |      |     |     |      |      |
| 14...    | 0900 | 29  | 434 | -2.0 | 0.0  |
| MAR      |      |     |     |      |      |
| 25...    | 0845 | 39  | 345 | -2.0 | 0.0  |
| 27...    | 1306 | --  | 369 | 2.0  | 2.0  |
| MAY      |      |     |     |      |      |
| 05...    | 0905 | 135 | 325 | 7.0  | 5.0  |
| JUN      |      |     |     |      |      |
| 13...    | 1405 | 59  | 361 | 21.0 | 14.0 |
| AUG      |      |     |     |      |      |
| 06...    | 1310 | 26  | 385 | 31.0 | 18.5 |

## WATER QUALITY DATA

| Date | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|

## 06411500 RAPID CR BELOW PACTOLA DAM, SD (LAT 44 04 36N LONG 103 28 54W)

|          |      |     |     |      |     |
|----------|------|-----|-----|------|-----|
| OCT 2002 |      |     |     |      |     |
| 03...    | 1030 | 22  | 390 | 5.5  | 7.5 |
| NOV      |      |     |     |      |     |
| 18...    | 1130 | 22  | 388 | 7.0  | 7.0 |
| JAN 2003 |      |     |     |      |     |
| 03...    | 1255 | 21  | 386 | 13.0 | 4.0 |
| FEB      |      |     |     |      |     |
| 14...    | 1110 | 22  | 408 | 1.0  | 3.0 |
| MAR      |      |     |     |      |     |
| 25...    | 1125 | 20  | 406 | 5.0  | 4.0 |
| MAY      |      |     |     |      |     |
| 05...    | 1035 | 21  | 396 | 13.0 | 6.0 |
| JUN      |      |     |     |      |     |
| 20...    | 0830 | 107 | 392 | 21.0 | 9.0 |
| JUL      |      |     |     |      |     |
| 03...    | 0750 | --  | 388 | 23.0 | 6.5 |
| 22...    | 0800 | --  | 389 | 13.5 | 6.5 |
| 23...    | 1015 | --  | 388 | --   | 7.5 |
| AUG      |      |     |     |      |     |
| 06...    | 1450 | 88  | 388 | 29.0 | 8.5 |

## 06411900 RAPID CR ABV JOHNSON SIDING BLW PACTOLA DAM, SD (LAT 44 04 55N LONG 103 27 32W)

|          |      |    |     |      |      |
|----------|------|----|-----|------|------|
| OCT 2002 |      |    |     |      |      |
| 16...    | 1350 | -- | 382 | 8.0  | 7.0  |
| NOV      |      |    |     |      |      |
| 19...    | 1035 | -- | 386 | 10.0 | 4.5  |
| MAY 2003 |      |    |     |      |      |
| 20...    | 0925 | 54 | 380 | 8.5  | 5.0  |
| JUL      |      |    |     |      |      |
| 10...    | 1200 | -- | 388 | 25.0 | 12.0 |

## 06412000 RAPID CR AT BIG BEND NR RAPID CITY, SD (LAT 44 03 18N LONG 103 25 00W)

|          |      |    |     |      |      |
|----------|------|----|-----|------|------|
| OCT 2002 |      |    |     |      |      |
| 16...    | 1410 | -- | 391 | 8.5  | 6.5  |
| NOV      |      |    |     |      |      |
| 19...    | 1100 | -- | 393 | 11.5 | 3.5  |
| MAY 2003 |      |    |     |      |      |
| 20...    | 1040 | 48 | 388 | 8.0  | 6.5  |
| JUL      |      |    |     |      |      |
| 10...    | 1130 | -- | 393 | 25.5 | 14.0 |
| SEP      |      |    |     |      |      |
| 09...    | 1020 | -- | 390 | 22.0 | 10.5 |
| 12...    | 0830 | -- | 395 | 16.0 | 9.5  |

## 06412220 VICTORIA CR ABOVE VICTORIA DAM NR RAPID CITY, SD (LAT 44 01 47N LONG 103 26 06W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| MAY 2003 |      |     |     |      |      |
| 02...    | 1100 | .44 | 208 | 10.0 | 7.0  |
| JUL      |      |     |     |      |      |
| 16...    | 1010 | --  | 295 | 35.0 | 18.0 |
| SEP      |      |     |     |      |      |
| 26...    | 1150 | --  | 300 | 14.5 | 12.5 |

## 06412250 VICTORIA CR BELOW VICTORIA DAM NR RAPID CITY, SD (LAT 44 01 05N LONG 103 23 07W)

|          |      |     |     |      |      |
|----------|------|-----|-----|------|------|
| MAY 2003 |      |     |     |      |      |
| 02...    | 0945 | 2.7 | 194 | 10.5 | 7.0  |
| JUL      |      |     |     |      |      |
| 16...    | 1045 | --  | 273 | 35.0 | 24.0 |

## WATER QUALITY DATA

| Date                                                                                    | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06412500 RAPID CR ABOVE CANYON LAKE NEAR RAPID CITY, SD (LAT 44 03 10N LONG 103 18 41W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                   | 1010 | 14                                   | 390                                                  | 18.5                            | 9.0                               |
| DEC                                                                                     |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                   | 1050 | 17                                   | 380                                                  | 7.0                             | 1.0                               |
| JAN 2003                                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                   | 1330 | 16                                   | 402                                                  | 13.5                            | 0.5                               |
| MAR                                                                                     |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                   | 1350 | 19                                   | 370                                                  | 20.0                            | 2.5                               |
| MAY                                                                                     |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                   | 1025 | 62                                   | 386                                                  | 27.5                            | 12.5                              |
| JUL                                                                                     |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                   | 1030 | 55                                   | 387                                                  | 27.0                            | 15.0                              |
| 28...                                                                                   | 1452 | 93                                   | 364                                                  | 32.0                            | 16.0                              |
| SEP                                                                                     |      |                                      |                                                      |                                 |                                   |
| 30...                                                                                   | 1030 | --                                   | 390                                                  | --                              | 11.0                              |
| 06412810 CLEGHORN SPRINGS AT RAPID CITY, SD (LAT 44 03 32N LONG 103 17 49W)             |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                   | 1347 | --                                   | 381                                                  | 17.5                            | 11.5                              |
| JAN 2003                                                                                |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                   | 1326 | --                                   | 383                                                  | 19.0                            | 11.5                              |
| APR                                                                                     |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                   | 1420 | --                                   | 383                                                  | 17.5                            | 13.0                              |
| AUG                                                                                     |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                   | 1240 | --                                   | 385                                                  | --                              | 13.5                              |
| 06413720 RAPID CREEK AT WTP AT RAPID CITY, SD (LAT 44 04 33N LONG 103 15 21W)           |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                   | 1402 | --                                   | 47                                                   | 23.0                            | 15.5                              |
| 08...                                                                                   | 1030 | 37                                   | 499                                                  | 11.0                            | 11.0                              |
| JUN                                                                                     |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                   | 0830 | 115                                  | 411                                                  | 15.0                            | 14.5                              |
| JUL                                                                                     |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                   | 1345 | 62                                   | 407                                                  | 32.0                            | 21.0                              |
| AUG                                                                                     |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                   | 1525 | 64                                   | 407                                                  | 33.0                            | 21.0                              |
| SEP                                                                                     |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                   | 0930 | 46                                   | --                                                   | 20.0                            | 16.0                              |
| 19...                                                                                   | 1345 | 29                                   | 485                                                  | 21.0                            | 14.0                              |
| 30...                                                                                   | 1145 | 29                                   | 500                                                  | 14.0                            | 10.5                              |
| 06414000 RAPID CR AT RAPID CITY, SD (LAT 44 05 09N LONG 103 14 31W)                     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                   | 1130 | 42                                   | 573                                                  | 3.0                             | 11.0                              |
| NOV                                                                                     |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                   | 1145 | 37                                   | 587                                                  | 8.0                             | 7.0                               |
| JAN 2003                                                                                |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                   | 1220 | 33                                   | 584                                                  | 6.0                             | 3.0                               |
| FEB                                                                                     |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                   | 1330 | 38                                   | 578                                                  | 7.0                             | 4.5                               |
| MAR                                                                                     |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                   | 1230 | 38                                   | 604                                                  | 12.0                            | 7.0                               |
| MAY                                                                                     |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                   | 1200 | 60                                   | 610                                                  | 13.0                            | 10.0                              |
| 16...                                                                                   | 1155 | --                                   | 617                                                  | 27.0                            | 16.0                              |
| JUN                                                                                     |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                   | 1300 | 89                                   | 460                                                  | 30.0                            | --                                |
| AUG                                                                                     |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                   | 1355 | 66                                   | 455                                                  | 35.0                            | 20.5                              |
| 26...                                                                                   | 1252 | --                                   | 426                                                  | 31.0                            | 19.0                              |
| SEP                                                                                     |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                   | 0752 | --                                   | 469                                                  | 20.0                            | 16.0                              |
| 15...                                                                                   | 0910 | --                                   | 523                                                  | 15.5                            | 12.0                              |
| 19...                                                                                   | 1130 | --                                   | 576                                                  | 14.0                            | 12.5                              |
| 22...                                                                                   | 1200 | --                                   | 574                                                  | 15.0                            | 13.0                              |

## WATER QUALITY DATA

| Date                                                                                       | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|--------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06416000 RAPID CR BELOW HAWTHORN DITCH AT RAPID CITY, SD (LAT 44 04 03N LONG 103 10 50W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                      | 1320 | 33                                   | 664                                                  | 17.5                            | 9.0                               |
| NOV                                                                                        |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                      | 1225 | --                                   | 648                                                  | 8.0                             | 7.0                               |
| MAR 2003                                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                      | 0935 | --                                   | 845                                                  | 10.0                            | 8.0                               |
| MAY                                                                                        |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                      | 1220 | 76                                   | --                                                   | 27.5                            | 15.0                              |
| JUL                                                                                        |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                      | 1120 | --                                   | 468                                                  | 34.0                            | 21.0                              |
| SEP                                                                                        |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                      | 0930 | --                                   | 285                                                  | --                              | 16.5                              |
| 06418900 RAPID CR BL SEWAGE TREATMENT PL NR RAPID CITY, SD (LAT 44 01 24N LONG 103 05 43W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 0830 | 46                                   | 883                                                  | 3.5                             | 11.0                              |
| NOV                                                                                        |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                      | 0830 | 50                                   | 927                                                  | 4.0                             | 7.0                               |
| JAN 2003                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 0820 | 41                                   | 846                                                  | -8.0                            | 2.0                               |
| FEB                                                                                        |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                      | 0840 | 46                                   | 1010                                                 | 3.0                             | 3.0                               |
| MAR                                                                                        |      |                                      |                                                      |                                 |                                   |
| 24...                                                                                      | 1400 | 60                                   | 969                                                  | 15.0                            | 10.5                              |
| MAY                                                                                        |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 0820 | 85                                   | 974                                                  | 7.0                             | 9.5                               |
| JUN                                                                                        |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                      | 1120 | 77                                   | 781                                                  | 24.0                            | 18.5                              |
| 12...                                                                                      | 1215 | 67                                   | 781                                                  | 24.0                            | 18.5                              |
| 12...                                                                                      | 1000 | --                                   | 833                                                  | 23.5                            | 17.5                              |
| 18...                                                                                      | 0900 | 67                                   | 811                                                  | 20.0                            | 18.5                              |
| AUG                                                                                        |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                      | 1145 | 76                                   | 743                                                  | 33.0                            | 22.5                              |
| SEP                                                                                        |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                      | 1330 | 40                                   | 908                                                  | 38.0                            | 21.0                              |
| 23...                                                                                      | 0915 | 31                                   | 1030                                                 | 14.0                            | 15.5                              |
| 06421500 RAPID CR NEAR FARMINGDALE, SD (LAT 43 56 31N LONG 102 51 12W)                     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 1000 | 43                                   | 1010                                                 | 4.5                             | 10.0                              |
| NOV                                                                                        |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                      | 1015 | 53                                   | 949                                                  | 6.5                             | 4.5                               |
| JAN 2003                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 1040 | 47                                   | 893                                                  | 2.0                             | 0.0                               |
| FEB                                                                                        |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                      | 1210 | 51                                   | 996                                                  | 5.0                             | 0.0                               |
| MAR                                                                                        |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                      | 1400 | 167                                  | 1220                                                 | 3.0                             | 2.5                               |
| APR                                                                                        |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                      | 1300 | --                                   | 982                                                  | 14.5                            | 11.0                              |
| MAY                                                                                        |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 0955 | 174                                  | 841                                                  | 8.0                             | 9.5                               |
| JUN                                                                                        |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                      | 1100 | 92                                   | 796                                                  | 28.5                            | 19.0                              |
| AUG                                                                                        |      |                                      |                                                      |                                 |                                   |
| 05...                                                                                      | 1005 | 14                                   | 848                                                  | 32.0                            | 24.0                              |
| 28...                                                                                      | 1040 | --                                   | 888                                                  | 27.0                            | 22.5                              |
| 06421800 LINDSEY DRAW NEAR FARMINGDALE, SD (LAT 43 54 27N LONG 102 51 31W)                 |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                      | 1025 | --                                   | 1000                                                 | 12.0                            | 12.0                              |

## WATER QUALITY DATA

| Date                                                                   | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06423500 CHEYENNE RIVER NEAR WASTA, SD (LAT 44 04 52N LONG 102 24 03W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                               |      |                                      |                                                      |                                 |                                   |
| 10...                                                                  | 1000 | 123                                  | 1810                                                 | 10.0                            | 11.5                              |
| NOV                                                                    |      |                                      |                                                      |                                 |                                   |
| 12...                                                                  | 1220 | 142                                  | 1800                                                 | 10.0                            | 5.5                               |
| DEC                                                                    |      |                                      |                                                      |                                 |                                   |
| 06...                                                                  | 1030 | 58                                   | 2160                                                 | 5.0                             | 0.5                               |
| JAN 2003                                                               |      |                                      |                                                      |                                 |                                   |
| 24...                                                                  | 1105 | 100                                  | 1870                                                 | -1.0                            | 0.5                               |
| MAR                                                                    |      |                                      |                                                      |                                 |                                   |
| 19...                                                                  | 1240 | 1630                                 | 714                                                  | 3.5                             | 3.5                               |
| MAY                                                                    |      |                                      |                                                      |                                 |                                   |
| 12...                                                                  | 1000 | 474                                  | 590                                                  | 16.0                            | 11.5                              |
| JUL                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                  | 1030 | 124                                  | 1240                                                 | 34.0                            | 26.0                              |
| AUG                                                                    |      |                                      |                                                      |                                 |                                   |
| 11...                                                                  | 1055 | 124                                  | 1850                                                 | 28.0                            | 22.5                              |
| 06424000 ELK CR NEAR ROUBAIX, SD (LAT 44 17 41N LONG 103 35 47W)       |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                               |      |                                      |                                                      |                                 |                                   |
| 08...                                                                  | 1140 | 1.9                                  | 370                                                  | 5.0                             | 6.0                               |
| DEC                                                                    |      |                                      |                                                      |                                 |                                   |
| 12...                                                                  | 1220 | 1.4                                  | 402                                                  | 4.0                             | 0.0                               |
| FEB 2003                                                               |      |                                      |                                                      |                                 |                                   |
| 14...                                                                  | 1120 | 2.2                                  | 379                                                  | -2.5                            | 0.0                               |
| MAR                                                                    |      |                                      |                                                      |                                 |                                   |
| 17...                                                                  | 1330 | --                                   | 182                                                  | 6.5                             | 0.0                               |
| 24...                                                                  | 1410 | 10                                   | 234                                                  | --                              | 2.0                               |
| MAY                                                                    |      |                                      |                                                      |                                 |                                   |
| 28...                                                                  | 1135 | 12                                   | 287                                                  | 24.0                            | 17.0                              |
| JUL                                                                    |      |                                      |                                                      |                                 |                                   |
| 14...                                                                  | 1420 | 4.1                                  | 323                                                  | 27.0                            | 21.0                              |
| 06425100 ELK CR NR RAPID CITY, SD (LAT 44 14 25N LONG 103 09 03W)      |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                               |      |                                      |                                                      |                                 |                                   |
| 13...                                                                  | 1430 | 1.3                                  | 1440                                                 | 14.5                            | 7.0                               |
| JAN 2003                                                               |      |                                      |                                                      |                                 |                                   |
| 02...                                                                  | 1400 | 1.7                                  | 1590                                                 | 9.0                             | 0.5                               |
| FEB                                                                    |      |                                      |                                                      |                                 |                                   |
| 18...                                                                  | 1415 | 4.0                                  | 1370                                                 | 8.0                             | 2.0                               |
| MAR                                                                    |      |                                      |                                                      |                                 |                                   |
| 26...                                                                  | 0815 | 3.7                                  | 1250                                                 | 9.0                             | 6.5                               |
| MAY                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                  | 1400 | 20                                   | 1500                                                 | 14.0                            | 13.0                              |
| JUN                                                                    |      |                                      |                                                      |                                 |                                   |
| 19...                                                                  | 1230 | --                                   | 1550                                                 | 29.0                            | --                                |
| 06425500 ELK CR NEAR ELM SPRINGS, SD (LAT 44 14 54N LONG 102 30 10W)   |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                               |      |                                      |                                                      |                                 |                                   |
| 18...                                                                  | 0900 | 9.6                                  | 1640                                                 | 8.0                             | 0.0                               |
| MAR                                                                    |      |                                      |                                                      |                                 |                                   |
| 18...                                                                  | 1120 | 3.0                                  | 3550                                                 | 4.5                             | 4.0                               |
| APR                                                                    |      |                                      |                                                      |                                 |                                   |
| 29...                                                                  | 1100 | .36                                  | 5160                                                 | 8.0                             | 9.0                               |
| JUN                                                                    |      |                                      |                                                      |                                 |                                   |
| 03...                                                                  | 1052 | --                                   | 4220                                                 | 21.0                            | 18.5                              |
| 19...                                                                  | 0835 | --                                   | 5980                                                 | 23.0                            | 18.5                              |
| 25...                                                                  | 0605 | --                                   | 3890                                                 | 9.0                             | 12.0                              |

## WATER QUALITY DATA

| Date                                                                                  | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06428500 BELLE FOURCHE R AT WY-SD STATE LINE (LAT 44 44 59N LONG 104 02 49W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                 | 1010 | 25                                   | 2060                                                 | --                              | 9.0                               |
| NOV                                                                                   |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                 | 1020 | 24                                   | 2110                                                 | 13.5                            | 1.0                               |
| DEC                                                                                   |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                 | 1250 | 14                                   | 2390                                                 | 6.0                             | 0.0                               |
| JAN 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 28...                                                                                 | 1055 | 10                                   | 2420                                                 | 5.5                             | 0.0                               |
| MAR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                 | 1245 | 14                                   | 1280                                                 | 16.0                            | 0.0                               |
| 16...                                                                                 | 1345 | 923                                  | 273                                                  | 21.0                            | 3.5                               |
| 21...                                                                                 | 1035 | 343                                  | 392                                                  | 10.0                            | 3.0                               |
| MAY                                                                                   |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                 | 0940 | 44                                   | 1960                                                 | 10.0                            | 9.5                               |
| JUN                                                                                   |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                 | 0945 | 52                                   | 1610                                                 | 25.0                            | 21.0                              |
| JUL                                                                                   |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                 | 0850 | 89                                   | 1700                                                 | 27.0                            | 22.5                              |
| AUG                                                                                   |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                 | 1020 | 83                                   | 1740                                                 | 31.5                            | 21.0                              |
| 06429997 MURRAY DITCH AB HEADGATE AT WY-SD STATE LINE (LAT 44 34 35N LONG 104 03 20W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                 | 1200 | 16                                   | 1480                                                 | 11.5                            | 12.0                              |
| MAY 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                 | 1110 | 13                                   | 1390                                                 | 17.0                            | 14.0                              |
| JUN                                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                 | 1235 | 4.2                                  | 1330                                                 | 27.0                            | 21.0                              |
| JUL                                                                                   |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                 | 1130 | 20                                   | 1600                                                 | 30.0                            | 17.0                              |
| AUG                                                                                   |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                 | 1300 | 7.7                                  | 1450                                                 | 31.5                            | 20.0                              |
| 06430500 REDWATER CR AT WY-SD STATE LINE (LAT 44 34 26N LONG 104 02 54W)              |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                 | 1300 | 15                                   | 1630                                                 | 17.0                            | 12.0                              |
| 23...                                                                                 | 1035 | 33                                   | 1550                                                 | 1.0                             | 4.0                               |
| NOV                                                                                   |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                 | 1150 | 36                                   | 1520                                                 | 5.0                             | 4.0                               |
| DEC                                                                                   |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                 | 1110 | 33                                   | 1550                                                 | 8.5                             | 5.0                               |
| JAN 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                 | 1135 | 32                                   | 1510                                                 | 1.0                             | 1.5                               |
| MAR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                 | 1105 | 47                                   | 1200                                                 | 20.0                            | 8.5                               |
| APR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                 | 1215 | 35                                   | 1220                                                 | 24.0                            | 13.5                              |
| JUN                                                                                   |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                 | 1135 | 33                                   | 1400                                                 | 24.0                            | 18.0                              |
| JUL                                                                                   |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                 | 1015 | 11                                   | 1720                                                 | 25.0                            | 18.0                              |
| AUG                                                                                   |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                 | 1130 | 20                                   | 1580                                                 | 28.5                            | 19.5                              |

## WATER QUALITY DATA

| Date                                                                          | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06430532 CROW CREEK NEAR BEULAH, WY (LAT 44 34 14N LONG 104 00 19W)           |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 01...                                                                         | 1035 | 31                                   | 1260                                                 | 9.0                             | 11.5                              |
| NOV                                                                           |      |                                      |                                                      |                                 |                                   |
| 04...                                                                         | 1020 | 33                                   | 1270                                                 | 0.5                             | 8.0                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 10...                                                                         | 0950 | 34                                   | 1260                                                 | 4.0                             | 8.0                               |
| JAN 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 17...                                                                         | 1005 | 34                                   | 1280                                                 | -3.5                            | 8.0                               |
| MAR                                                                           |      |                                      |                                                      |                                 |                                   |
| 14...                                                                         | 0950 | 37                                   | 1000                                                 | 17.5                            | 10.0                              |
| APR                                                                           |      |                                      |                                                      |                                 |                                   |
| 23...                                                                         | 1100 | 36                                   | 1050                                                 | 21.0                            | 12.5                              |
| JUN                                                                           |      |                                      |                                                      |                                 |                                   |
| 17...                                                                         | 1020 | 35                                   | 1290                                                 | 26.0                            | 13.5                              |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 23...                                                                         | 0820 | 30                                   | 1320                                                 | 17.0                            | 12.5                              |
| AUG                                                                           |      |                                      |                                                      |                                 |                                   |
| 25...                                                                         | 0935 | 32                                   | 1290                                                 | 26.0                            | 13.0                              |
| 06430770 SPEARFISH CREEK NEAR LEAD, SD (LAT 44 17 56N LONG 103 52 02W)        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 02...                                                                         | 1205 | 30                                   | 458                                                  | 3.0                             | 5.0                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 04...                                                                         | 1050 | 28                                   | 541                                                  | -4.5                            | 2.0                               |
| JAN 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 28...                                                                         | 1215 | 27                                   | 426                                                  | 2.0                             | 2.5                               |
| 29...                                                                         | 0930 | --                                   | 454                                                  | -5.0                            | 2.0                               |
| APR                                                                           |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1135 | 30                                   | 450                                                  | 7.0                             | 4.0                               |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 21...                                                                         | 0955 | 33                                   | 449                                                  | 16.5                            | 5.5                               |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 1400 | 31                                   | 428                                                  | 22.0                            | 13.0                              |
| 06430800 ANNIE CREEK NEAR LEAD, SD (LAT 44 19 37N LONG 103 53 38W)            |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 02...                                                                         | 1240 | --                                   | 565                                                  | 4.0                             | 5.0                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 04...                                                                         | 1135 | --                                   | 80                                                   | -4.0                            | 0.0                               |
| APR 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1300 | --                                   | 381                                                  | 10.0                            | 1.0                               |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 15...                                                                         | 1225 | 6.2                                  | 188                                                  | 22.5                            | 7.0                               |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 1245 | --                                   | 461                                                  | 27.0                            | 14.0                              |
| 06430850 LITTLE SPEARFISH CREEK NEAR LEAD, SD (LAT 44 20 58N LONG 103 56 08W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 03...                                                                         | 0955 | 16                                   | 486                                                  | --                              | 6.5                               |
| 07...                                                                         | 1045 | --                                   | 480                                                  | 17.5                            | 7.5                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 1130 | 17                                   | 476                                                  | 2.0                             | 5.0                               |
| JAN 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 29...                                                                         | 1245 | 16                                   | 438                                                  | 7.5                             | 5.5                               |
| APR                                                                           |      |                                      |                                                      |                                 |                                   |
| 14...                                                                         | 1230 | 14                                   | 460                                                  | 22.0                            | 9.5                               |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 21...                                                                         | 1110 | 15                                   | 344                                                  | 15.0                            | 7.5                               |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 1211 | 15                                   | 469                                                  | 23.0                            | 11.0                              |
| AUG                                                                           |      |                                      |                                                      |                                 |                                   |
| 27...                                                                         | 1230 | 12                                   | 464                                                  | 36.0                            | 12.0                              |

## WATER QUALITY DATA

| Date                                                                         | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06430898 SQUAW CREEK NEAR SPEARFISH, SD (LAT 44 24 04N LONG 103 53 35W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 03...                                                                        | 1100 | --                                   | 351                                                  | 6.5                             | 6.5                               |
| DEC                                                                          |      |                                      |                                                      |                                 |                                   |
| 04...                                                                        | 1205 | --                                   | 342                                                  | -5.0                            | 0.0                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 30...                                                                        | 1000 | --                                   | 205                                                  | 3.5                             | 0.5                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                        | 1425 | --                                   | 155                                                  | 23.0                            | 7.0                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 21...                                                                        | 1215 | 7.7                                  | 340                                                  | 14.0                            | 7.0                               |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 1050 | --                                   | 304                                                  | 23.5                            | 14.0                              |
| 06430900 SPEARFISH CREEK ABOVE SPEARFISH, SD (LAT 44 24 06N LONG 103 53 40W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 03...                                                                        | 1200 | 59                                   | 451                                                  | 7.5                             | 6.5                               |
| DEC                                                                          |      |                                      |                                                      |                                 |                                   |
| 04...                                                                        | 1315 | 56                                   | 445                                                  | -5.0                            | 2.0                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 29...                                                                        | 1310 | 55                                   | 446                                                  | 3.5                             | 3.0                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                        | 1410 | 75                                   | 364                                                  | 23.0                            | 7.5                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 21...                                                                        | 1315 | 74                                   | 420                                                  | 15.0                            | 7.5                               |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 1030 | 61                                   | 426                                                  | 25.0                            | 9.5                               |
| 06431500 SPEARFISH CR AT SPEARFISH, SD (LAT 44 28 57N LONG 103 51 40W)       |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 07...                                                                        | 0925 | 52                                   | 449                                                  | 13.5                            | 6.5                               |
| DEC                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 1310 | 54                                   | 456                                                  | 5.0                             | 3.0                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 30...                                                                        | 1200 | 51                                   | 446                                                  | 6.0                             | 2.5                               |
| MAR                                                                          |      |                                      |                                                      |                                 |                                   |
| 07...                                                                        | 1230 | --                                   | 431                                                  | 5.5                             | 3.0                               |
| 21...                                                                        | 1250 | 58                                   | 430                                                  | 17.0                            | 4.0                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 22...                                                                        | 1025 | 73                                   | 414                                                  | 18.0                            | 8.0                               |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 0900 | 56                                   | 429                                                  | 27.0                            | 14.0                              |
| 06432020 SPEARFISH CREEK BELOW SPEARFISH, SD (LAT 44 34 48N LONG 103 53 37W) |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 12...                                                                        | 1430 | --                                   | 412                                                  | 14.0                            | 8.5                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                        | 1200 | 84                                   | 391                                                  | 21.0                            | 10.0                              |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 22...                                                                        | 1345 | --                                   | 708                                                  | 28.0                            | 19.0                              |
| 06432172 FALSE BOTTOM CREEK NR CENTRAL CITY (LAT 44 23 28N LONG 103 47 58W)  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 07...                                                                        | 1220 | .33                                  | 376                                                  | 15.0                            | 7.0                               |
| DEC                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 0950 | .23                                  | 356                                                  | 6.0                             | 0.0                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 28...                                                                        | 0905 | .23                                  | 344                                                  | 5.0                             | 0.0                               |
| MAR                                                                          |      |                                      |                                                      |                                 |                                   |
| 24...                                                                        | 1000 | 1.6                                  | 195                                                  | 1.0                             | 1.0                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 19...                                                                        | 1040 | 7.8                                  | 135                                                  | 1.0                             | 5.0                               |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                        | 1100 | 1.2                                  | 305                                                  | 26.0                            | 16.0                              |
| SEP                                                                          |      |                                      |                                                      |                                 |                                   |
| 26...                                                                        | 0905 | --                                   | 357                                                  | 11.0                            | 8.0                               |

## WATER QUALITY DATA

| Date | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
|------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|

## 06433000 REDWATER RIVER ABOVE BELLE FOURCHE, SD (LAT 44 40 02N LONG 103 50 20W)

|           |      |     |      |      |      |
|-----------|------|-----|------|------|------|
| OCT 2002  |      |     |      |      |      |
| 03...     | 1155 | 129 | 1060 | 13.0 | 8.5  |
| NOV 07... | 1100 | 168 | 1140 | 16.0 | 5.5  |
| DEC 10... | 1250 | 155 | 1100 | 6.5  | 3.0  |
| JAN 2003  |      |     |      |      |      |
| 17...     | 1330 | 162 | 1140 | -2.0 | 0.5  |
| 24...     | 1200 | --  | 1130 | 5.0  | 0.0  |
| MAR 13... | 1325 | 159 | 819  | 18.5 | 7.5  |
| MAY 02... | 1135 | 176 | 1080 | 17.0 | 10.0 |
| JUN 16... | 1205 | 183 | 944  | 29.0 | 18.5 |
| JUL 10... | 1155 | 30  | 1130 | 26.0 | 20.0 |
| 22...     | 1245 | 12  | 1360 | 29.5 | 24.0 |
| AUG 27... | 1155 | 32  | 1250 | 37.5 | 21.0 |

## 06434505 INLET CANAL ABOVE BELLE FOURCHE RESERVOIR, SD (LAT 44 42 05N LONG 103 44 00W)

|           |      |     |      |      |      |
|-----------|------|-----|------|------|------|
| OCT 2002  |      |     |      |      |      |
| 03...     | 0940 | 135 | 1270 | 5.0  | 7.5  |
| NOV 07... | 0920 | 188 | 1300 | 16.0 | 4.0  |
| DEC 12... | 1005 | 161 | 1240 | 0.0  | 0.5  |
| JAN 2003  |      |     |      |      |      |
| 30...     | 0950 | 159 | 1300 | 6.0  | 2.0  |
| MAR 13... | 1020 | 171 | 1000 | 6.0  | 5.5  |
| 20...     | 0940 | 879 | 410  | 6.0  | 2.0  |
| MAY 08... | 0950 | 228 | 1330 | 9.0  | 11.0 |

## 06436000 BELLE FOURCHE R NEAR FRUITDALE, SD (LAT 44 41 27N LONG 103 44 14W)

|           |      |     |      |      |      |
|-----------|------|-----|------|------|------|
| DEC 2002  |      |     |      |      |      |
| 09...     | 1120 | 8.1 | 1930 | 7.0  | 1.5  |
| JAN 2003  |      |     |      |      |      |
| 28...     | 1245 | 9.0 | 1780 | 6.0  | 0.5  |
| MAR 13... | 1200 | 6.7 | 1050 | 11.0 | 1.0  |
| 21...     | 1255 | 5.5 | 874  | 12.0 | 8.0  |
| MAY 08... | 1125 | 3.3 | 2030 | 8.0  | 12.0 |
| JUN 12... | 0955 | 8.4 | 1560 | 22.0 | 19.0 |
| JUL 22... | 1115 | 17  | 1830 | 27.0 | 24.5 |
| AUG 29... | 1020 | 17  | 1830 | 14.5 | 21.0 |

## 06436156 WHITETAIL CREEK AT LEAD, SD (LAT 44 20 36N LONG 103 45 57W)

|           |      |    |     |      |      |
|-----------|------|----|-----|------|------|
| OCT 2002  |      |    |     |      |      |
| 02...     | 1025 | -- | 735 | 2.0  | 5.5  |
| DEC 04... | 0930 | -- | 236 | -4.5 | 0.0  |
| JAN 2003  |      |    |     |      |      |
| 28...     | 1030 | -- | 617 | 6.5  | 1.0  |
| MAR 24... | 1045 | -- | 735 | 6.0  | 3.0  |
| MAY 15... | 1105 | 13 | 419 | 30.0 | 8.0  |
| JUL 14... | 1155 | -- | 554 | 29.0 | 17.0 |
| SEP 26... | 0955 | -- | 666 | 11.5 | 8.5  |

## WATER QUALITY DATA

| Date                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06436180 WHITEWOOD CR ABOVE WHITEWOOD, SD (LAT 44 26 32N LONG 103 37 44W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 0915 | 12                                   | 926                                                  | 3.0                             | 6.0                               |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1010 | 11                                   | 1360                                                 | 9.5                             | 0.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 27...                                                                       | 1210 | 16                                   | 1450                                                 | 7.0                             | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1110 | 42                                   | 440                                                  | 7.0                             | 3.5                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 22...                                                                       | 0900 | 26                                   | 533                                                  | 15.0                            | 7.0                               |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 0850 | 43                                   | 601                                                  | 21.0                            | 13.5                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 0755 | 10                                   | 995                                                  | 25.0                            | 19.5                              |
| 06436190 WHITEWOOD CREEK NEAR WHITEWOOD, SD (LAT 44 32 30N LONG 103 34 16W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1055 | 11                                   | 1480                                                 | 6.5                             | 8.0                               |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1140 | 8.9                                  | 1440                                                 | 12.0                            | 5.0                               |
| DEC                                                                         |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 0925 | 7.7                                  | 1390                                                 | 6.0                             | 1.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1215 | 6.5                                  | 1480                                                 | -7.0                            | 0.5                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 0945 | 42                                   | 520                                                  | 8.5                             | 4.5                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 22...                                                                       | 1025 | 29                                   | 706                                                  | 15.5                            | 9.0                               |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 1250 | 64                                   | 614                                                  | 25.5                            | 16.5                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 0930 | 7.7                                  | 1130                                                 | 28.0                            | 20.0                              |
| AUG                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 0905 | 6.2                                  | 1230                                                 | 22.5                            | 17.5                              |
| 06436198 WHITEWOOD CR ABOVE VALE, SD (LAT 44 37 04N LONG 103 28 52W)        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1240 | 9.1                                  | 1500                                                 | 9.5                             | 8.5                               |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1310 | 8.4                                  | 1500                                                 | 13.5                            | 5.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1050 | 9.0                                  | 1590                                                 | -8.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 0820 | 57                                   | 570                                                  | 9.5                             | 4.5                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 01...                                                                       | 0939 | 40                                   | 1150                                                 | 18.0                            | 8.0                               |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 1115 | 71                                   | 665                                                  | 24.0                            | 15.5                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1130 | 4.3                                  | 1160                                                 | 40.0                            | 24.5                              |
| AUG                                                                         |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1040 | --                                   | 1310                                                 | 26.0                            | 20.5                              |
| 15...                                                                       | 1140 | .60                                  | 1360                                                 | 27.5                            | 22.0                              |
| 26...                                                                       | 0925 | --                                   | 1420                                                 | 20.0                            | 20.0                              |

## WATER QUALITY DATA

| Date                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06436760 HORSE CR ABOVE VALE, SD (LAT 44 39 08N LONG 103 21 59W)            |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 04...                                                                       | 1240 | 4.3                                  | 3180                                                 | 13.0                            | 10.0                              |
| 23...                                                                       | 1300 | 3.5                                  | 3930                                                 | 1.5                             | 2.0                               |
| DEC                                                                         |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 1055 | 2.0                                  | 5280                                                 | 4.0                             | 0.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 0915 | 2.0                                  | 6190                                                 | -7.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 1335 | 2.1                                  | 3080                                                 | --                              | --                                |
| 19...                                                                       | 1455 | 39                                   | 1560                                                 | 3.5                             | 0.5                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1205 | 1.6                                  | 3510                                                 | 20.0                            | 11.5                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 12...                                                                       | 1250 | 11                                   | 3420                                                 | 28.0                            | 21.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1315 | 46                                   | 1950                                                 | 34.0                            | 26.5                              |
| AUG                                                                         |      |                                      |                                                      |                                 |                                   |
| 26...                                                                       | 1040 | 44                                   | 1850                                                 | 28.0                            | 21.5                              |
| 06437000 BELLE FOURCHE R NEAR STURGIS, SD (LAT 44 30 47N LONG 103 08 11W)   |      |                                      |                                                      |                                 |                                   |
| DEC 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 1015 | 32                                   | 2710                                                 | -2.5                            | 0.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1030 | 25                                   | 2880                                                 | -2.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 11...                                                                       | 1100 | 25                                   | 1730                                                 | 7.0                             | 0.0                               |
| 17...                                                                       | 1255 | 243                                  | 986                                                  | 8.5                             | 1.0                               |
| 20...                                                                       | 1240 | 470                                  | 878                                                  | 11.0                            | 3.5                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1020 | 47                                   | 1630                                                 | 14.5                            | 10.5                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 0915 | 136                                  | 1410                                                 | 21.5                            | 19.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1340 | 180                                  | 1740                                                 | 35.0                            | 29.0                              |
| AUG                                                                         |      |                                      |                                                      |                                 |                                   |
| 26...                                                                       | 1305 | 196                                  | 1800                                                 | 32.5                            | 24.5                              |
| 06437020 BEAR BUTTE CREEK NEAR DEADWOOD, SD (LAT 44 20 08N LONG 103 38 06W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 08...                                                                       | 1010 | .83                                  | 526                                                  | 4.5                             | 6.0                               |
| DEC                                                                         |      |                                      |                                                      |                                 |                                   |
| 12...                                                                       | 1110 | .56                                  | 547                                                  | -5.0                            | 0.0                               |
| FEB 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 0955 | .78                                  | 454                                                  | -2.0                            | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1300 | --                                   | 236                                                  | 3.0                             | 0.0                               |
| 24...                                                                       | 1300 | 7.2                                  | 298                                                  | 7.0                             | 1.0                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 29...                                                                       | 1425 | 8.4                                  | 252                                                  | 29.0                            | 21.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 1310 | 1.7                                  | 349                                                  | 22.0                            | 17.0                              |
| 06437200 BEAR BUTTE CR NEAR GALENA, SD (LAT 44 23 48N LONG 103 34 36W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 0825 | --                                   | 1430                                                 | 2.0                             | 6.0                               |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 26...                                                                       | 1230 | --                                   | 1150                                                 | --                              | 0.0                               |
| MAR 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 17...                                                                       | 1110 | --                                   | 418                                                  | 5.0                             | 1.5                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 19...                                                                       | 1230 | 6.9                                  | 360                                                  | 2.0                             | 10.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 0842 | --                                   | 1280                                                 | 23.5                            | 15.0                              |
| 06437500 BEAR BUTTE CR NEAR STURGIS, SD (LAT 44 28 53N LONG 103 16 31W)     |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1430 | --                                   | 2260                                                 | 43.0                            | 28.0                              |

## WATER QUALITY DATA

| Date                                                                              | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06438000 BELLE FOURCHE RIVER NEAR ELM SPRINGS, SD (LAT 44 22 11N LONG 102 33 56W) |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                             | 1150 | 45                                   | 2400                                                 | 9.0                             | 3.0                               |
| JAN 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 1200 | 39                                   | 2820                                                 | 13.0                            | 1.0                               |
| FEB                                                                               |      |                                      |                                                      |                                 |                                   |
| 18...                                                                             | 1120 | 60                                   | 2270                                                 | 9.0                             | 0.0                               |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 19...                                                                             | 1110 | 4360                                 | 1050                                                 | 3.0                             | 3.0                               |
| MAY                                                                               |      |                                      |                                                      |                                 |                                   |
| 06...                                                                             | 1035 | 136                                  | 1700                                                 | 11.0                            | 11.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 03...                                                                             | 1009 | --                                   | 1680                                                 | 21.5                            | 18.5                              |
| 12...                                                                             | 0805 | --                                   | 2080                                                 | 19.0                            | 18.5                              |
| 19...                                                                             | 1010 | 107                                  | 1610                                                 | 21.0                            | --                                |
| AUG                                                                               |      |                                      |                                                      |                                 |                                   |
| 12...                                                                             | 1155 | 162                                  | 1800                                                 | 33.5                            | 23.0                              |
| 06438500 CHEYENNE R NEAR PLAINVIEW, SD (LAT 44 31 54N LONG 101 55 47W)            |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                          |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 0915 | 186                                  | 2230                                                 | 10.0                            | 10.5                              |
| NOV                                                                               |      |                                      |                                                      |                                 |                                   |
| 26...                                                                             | 0935 | 58                                   | 2530                                                 | -4.0                            | 0.0                               |
| JAN 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 0930 | 171                                  | 2140                                                 | 9.0                             | 0.5                               |
| FEB                                                                               |      |                                      |                                                      |                                 |                                   |
| 21...                                                                             | 1000 | --                                   | 1240                                                 | -1.0                            | 0.0                               |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 20...                                                                             | 1030 | 4490                                 | 1110                                                 | 3.0                             | 3.0                               |
| MAY                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                             | 0945 | 333                                  | 1830                                                 | 16.0                            | 14.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 25...                                                                             | 0935 | 306                                  | 1570                                                 | 13.0                            | 14.0                              |
| AUG                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                             | 1040 | 180                                  | 2050                                                 | 33.0                            | 23.5                              |
| 06438800 ELM CREEK NEAR RED OWL, SD (LAT 44 45 04N LONG 102 26 55W)               |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 21...                                                                             | 1100 | --                                   | 1140                                                 | -1.5                            | 0.0                               |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 20...                                                                             | 1620 | 2.9                                  | 1230                                                 | 11.0                            | 2.0                               |
| MAY                                                                               |      |                                      |                                                      |                                 |                                   |
| 06...                                                                             | 1130 | --                                   | 2610                                                 | 11.0                            | 12.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 12...                                                                             | 0720 | --                                   | 3660                                                 | 25.0                            | 16.0                              |
| 06439000 CHERRY CR NEAR PLAINVIEW, SD (LAT 44 44 35N LONG 102 03 11W)             |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 20...                                                                             | 1235 | 61                                   | 433                                                  | 10.0                            | 1.5                               |
| MAY                                                                               |      |                                      |                                                      |                                 |                                   |
| 15...                                                                             | 0725 | .05                                  | 3590                                                 | 9.0                             | 14.0                              |
| 06439960 CHANTIER CREEK NEAR HAYES, SD (LAT 44 31 20N LONG 100 42 13W)            |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 19...                                                                             | 0950 | 2.6                                  | 1380                                                 | 5.0                             | 0.0                               |
| MAY                                                                               |      |                                      |                                                      |                                 |                                   |
| 05...                                                                             | 1445 | 8.0                                  | 2950                                                 | 9.5                             | 12.0                              |

## WATER QUALITY DATA

| Date                                                                                  | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06440200 SOUTH FORK BAD R NEAR COTTONWOOD, SD (LAT 43 53 08N LONG 101 46 00W)         |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                              |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                 | 1100 | 1.2                                  | 535                                                  | 15.5                            | 5.5                               |
| FEB 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                 | 1310 | 23                                   | 335                                                  | -5.5                            | 0.5                               |
| MAY                                                                                   |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                 | 1430 | 10                                   | 390                                                  | 21.0                            | 14.5                              |
| 06440300 UNNAMED TRIB COTTONWOOD CREEK NEAR QUINN, SD (LAT 43 57 39N LONG 102 08 17W) |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                 | 1300 | .05                                  | 481                                                  | 18.0                            | 17.0                              |
| 06441000 BAD R NEAR MIDLAND, SD (LAT 44 04 01N LONG 101 09 36W)                       |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                 | 1415 | 76                                   | 725                                                  | 12.0                            | 0.5                               |
| 06442150 CEDAR CREEK NEAR KENNEBEC, SD (LAT 44 08 27N LONG 099 56 37W)                |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                 | 1330 | 38                                   | 644                                                  | 1.0                             | 0.0                               |
| APR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                 | 1210 | 16                                   | 1990                                                 | 14.5                            | 13.5                              |
| 06442500 MEDICINE CR AT KENNEBEC, SD (LAT 43 54 17N LONG 099 52 35W)                  |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                 | 1600 | 118                                  | 2520                                                 | 11.5                            | 14.0                              |
| 06442670 COUNSELOR CREEK NEAR LOWER BRULE, SD (LAT 44 01 34N LONG 099 31 00W)         |      |                                      |                                                      |                                 |                                   |
| FEB 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                 | 1610 | 24                                   | 624                                                  | 2.0                             | 0.0                               |
| APR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                 | 1455 | 1.3                                  | 4040                                                 | 19.0                            | 18.0                              |
| 06442718 CAMPBELL C NR LEE'S CORNER (LAT 44 04 39N LONG 099 22 51W)                   |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                 | 1050 | .29                                  | 2860                                                 | 11.0                            | 3.0                               |
| APR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 29...                                                                                 | 1015 | .25                                  | 2560                                                 | 8.5                             | 10.0                              |
| JUN                                                                                   |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                 | 1455 | .06                                  | 3490                                                 | 15.0                            | 19.0                              |
| 06445685 WHITE R NR NE-SD STATE LINE (LAT 43 00 47N LONG 102 50 07W)                  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                              |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                 | 0825 | 2.0                                  | 694                                                  | 9.0                             | 10.0                              |
| DEC                                                                                   |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                 | 0900 | 11                                   | 910                                                  | 0.0                             | 0.0                               |
| JAN 2003                                                                              |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                 | 1015 | 4.9                                  | 939                                                  | -10.0                           | 0.0                               |
| MAR                                                                                   |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                 | 1021 | 44                                   | 1020                                                 | 4.0                             | 3.0                               |
| MAY                                                                                   |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                 | 0830 | 44                                   | 615                                                  | 14.0                            | 11.0                              |
| JUL                                                                                   |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                 | 0840 | 3.9                                  | 742                                                  | 24.0                            | 22.0                              |

## WATER QUALITY DATA

| Date                                                                            | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06445980 WHITE CLAY CR NEAR OGLALA, SD (LAT 43 08 46N LONG 102 40 58W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                        |      |                                      |                                                      |                                 |                                   |
| 08...                                                                           | 1245 | 14                                   | 455                                                  | 12.0                            | 10.0                              |
| MAR 2003                                                                        |      |                                      |                                                      |                                 |                                   |
| 19...                                                                           | 0745 | --                                   | 468                                                  | 8.0                             | 4.0                               |
| MAY                                                                             |      |                                      |                                                      |                                 |                                   |
| 20...                                                                           | 1125 | --                                   | 525                                                  | 17.0                            | 11.0                              |
| JUL                                                                             |      |                                      |                                                      |                                 |                                   |
| 15...                                                                           | 1115 | --                                   | 535                                                  | 30.0                            | 21.0                              |
| 06446000 WHITE R NEAR OGLALA, SD (LAT 43 15 17N LONG 102 49 29W)                |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                        |      |                                      |                                                      |                                 |                                   |
| 08...                                                                           | 1330 | --                                   | 908                                                  | 18.0                            | 11.5                              |
| DEC                                                                             |      |                                      |                                                      |                                 |                                   |
| 03...                                                                           | 1220 | 8.9                                  | 1080                                                 | 1.0                             | 0.0                               |
| JAN 2003                                                                        |      |                                      |                                                      |                                 |                                   |
| 22...                                                                           | 1410 | 6.8                                  | 1040                                                 | -13.0                           | 0.0                               |
| MAR                                                                             |      |                                      |                                                      |                                 |                                   |
| 19...                                                                           | 1030 | 117                                  | 434                                                  | 3.0                             | 1.0                               |
| MAY                                                                             |      |                                      |                                                      |                                 |                                   |
| 20...                                                                           | 1305 | 52                                   | 896                                                  | 20.0                            | 14.0                              |
| JUL                                                                             |      |                                      |                                                      |                                 |                                   |
| 15...                                                                           | 1305 | 5.7                                  | 748                                                  | 35.0                            | 30.0                              |
| 06446100 WOUNDED KNEE CREEK AT WOUNDED KNEE, SD (LAT 43 08 38N LONG 102 21 28W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                        |      |                                      |                                                      |                                 |                                   |
| 08...                                                                           | 1035 | 2.2                                  | 379                                                  | 18.0                            | 9.0                               |
| MAR 2003                                                                        |      |                                      |                                                      |                                 |                                   |
| 18...                                                                           | 1210 | --                                   | 353                                                  | 10.0                            | 6.0                               |
| MAY                                                                             |      |                                      |                                                      |                                 |                                   |
| 20...                                                                           | 1000 | --                                   | 434                                                  | 15.0                            | 10.0                              |
| JUL                                                                             |      |                                      |                                                      |                                 |                                   |
| 15...                                                                           | 1030 | --                                   | 412                                                  | 30.0                            | 18.0                              |
| 06446500 WHITE R NEAR INTERIOR, SD (LAT 43 41 38N LONG 101 55 56W)              |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                        |      |                                      |                                                      |                                 |                                   |
| 09...                                                                           | 1510 | 10                                   | 756                                                  | 22.0                            | 20.0                              |
| 24...                                                                           | 1300 | 13                                   | 694                                                  | 3.0                             | 3.5                               |
| NOV                                                                             |      |                                      |                                                      |                                 |                                   |
| 14...                                                                           | 0900 | 23                                   | 552                                                  | 8.5                             | 3.0                               |
| DEC                                                                             |      |                                      |                                                      |                                 |                                   |
| 11...                                                                           | 1250 | 13                                   | 1080                                                 | 17.0                            | 0.0                               |
| FEB 2003                                                                        |      |                                      |                                                      |                                 |                                   |
| 19...                                                                           | 1130 | 523                                  | 345                                                  | 15.5                            | 0.5                               |
| MAR                                                                             |      |                                      |                                                      |                                 |                                   |
| 20...                                                                           | 1100 | 1200                                 | 420                                                  | 12.5                            | 5.0                               |
| MAY                                                                             |      |                                      |                                                      |                                 |                                   |
| 15...                                                                           | 1000 | 179                                  | 728                                                  | 19.0                            | 16.0                              |
| JUN                                                                             |      |                                      |                                                      |                                 |                                   |
| 05...                                                                           | 1240 | 113                                  | 498                                                  | 18.0                            | 19.0                              |
| JUL                                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                           | 0945 | 29                                   | 254                                                  | 30.5                            | 24.5                              |
| AUG                                                                             |      |                                      |                                                      |                                 |                                   |
| 12...                                                                           | 1010 | 54                                   | 526                                                  | 28.0                            | 20.0                              |

## WATER QUALITY DATA

| Date                                                                           | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|--------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06446700 BEAR IN THE LODGE CR NEAR WANBLEE, SD (LAT 43 32 05N LONG 101 47 30W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 09...                                                                          | 1250 | 5.0                                  | 490                                                  | 20.0                            | 10.5                              |
| NOV                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1025 | 9.7                                  | 521                                                  | 12.0                            | 3.5                               |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                          | 1110 | 9.8                                  | 562                                                  | 12.0                            | 1.0                               |
| FEB 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 12...                                                                          | 1015 | 11                                   | 557                                                  | 1.0                             | 1.0                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 25...                                                                          | 1105 | 20                                   | 546                                                  | --                              | 7.5                               |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 05...                                                                          | 1100 | 29                                   | 564                                                  | 16.0                            | 14.5                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 10...                                                                          | 1115 | 4.2                                  | 482                                                  | 34.0                            | 23.0                              |
| AUG                                                                            |      |                                      |                                                      |                                 |                                   |
| 12...                                                                          | 1155 | .99                                  | 569                                                  | 32.0                            | 23.5                              |
| 06447000 WHITE R NEAR KADOKA, SD (LAT 43 45 09N LONG 101 31 28W)               |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 02...                                                                          | 1310 | 18                                   | 664                                                  | 10.0                            | 10.5                              |
| NOV                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1205 | 44                                   | 514                                                  | 13.0                            | 6.0                               |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 05...                                                                          | 1345 | 19                                   | 844                                                  | 0.0                             | 0.5                               |
| JAN 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 28...                                                                          | 1400 | 22                                   | 899                                                  | 5.0                             | 0.5                               |
| FEB                                                                            |      |                                      |                                                      |                                 |                                   |
| 21...                                                                          | 1130 | 321                                  | 344                                                  | -2.0                            | 0.5                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1335 | --                                   | 381                                                  | --                              | 2.5                               |
| 24...                                                                          | 1415 | 198                                  | 494                                                  | 14.0                            | 10.5                              |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1345 | 273                                  | 590                                                  | 22.0                            | 18.5                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                          | 1325 | 36                                   | 470                                                  | --                              | 25.5                              |
| AUG                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                          | 1305 | 24                                   | 579                                                  | 35.0                            | 24.5                              |
| 06447230 BLACK PIPE CREEK NR BELVIDERE, SD (LAT 43 45 28N LONG 101 13 40W)     |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 13...                                                                          | 1410 | 1.2                                  | 585                                                  | 16.0                            | 10.5                              |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 05...                                                                          | 1130 | .39                                  | 1150                                                 | -3.0                            | 0.0                               |
| JAN 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 07...                                                                          | 1040 | 1.9                                  | 704                                                  | 12.0                            | 0.5                               |
| 28...                                                                          | 1105 | 1.6                                  | 414                                                  | 5.0                             | 0.5                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 24...                                                                          | 1240 | 12                                   | 553                                                  | 13.0                            | 11.5                              |
| MAY                                                                            |      |                                      |                                                      |                                 |                                   |
| 13...                                                                          | 1225 | 8.8                                  | 626                                                  | 22.0                            | 20.0                              |
| JUL                                                                            |      |                                      |                                                      |                                 |                                   |
| 02...                                                                          | 1150 | 2.9                                  | 521                                                  | 31.0                            | 29.5                              |
| 06447450 WHITE RIVER NEAR WHITE RIVER, SD (LAT 43 42 50N LONG 100 41 05W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                       |      |                                      |                                                      |                                 |                                   |
| 07...                                                                          | 1230 | 18                                   | 912                                                  | 20.0                            | 11.5                              |
| NOV                                                                            |      |                                      |                                                      |                                 |                                   |
| 15...                                                                          | 1100 | 74                                   | 531                                                  | 6.0                             | 4.0                               |
| DEC                                                                            |      |                                      |                                                      |                                 |                                   |
| 23...                                                                          | 1140 | 42                                   | 1130                                                 | -1.0                            | 0.0                               |
| FEB 2003                                                                       |      |                                      |                                                      |                                 |                                   |
| 10...                                                                          | 1300 | 61                                   | 576                                                  | -4.0                            | 0.0                               |
| MAR                                                                            |      |                                      |                                                      |                                 |                                   |
| 20...                                                                          | 1430 | 2710                                 | 550                                                  | 15.0                            | 5.5                               |
| 26...                                                                          | 1420 | 259                                  | --                                                   | 19.0                            | 9.5                               |

## WATER QUALITY DATA

| Date                                                                                | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06447450 WHITE RIVER NEAR WHITE RIVER, SD (LAT 43 42 50N LONG 100 41 05W)—Continued |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 13...                                                                               | 0810 | 920                                  | 490                                                  | 20.0                            | 14.5                              |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 11...                                                                               | 1100 | 128                                  | 431                                                  | --                              | 24.0                              |
| AUG                                                                                 |      |                                      |                                                      |                                 |                                   |
| 14...                                                                               | 0945 | 68                                   | 2230                                                 | 27.0                            | 20.0                              |
| 06447500 LITTLE WHITE R NEAR MARTIN, SD (LAT 43 10 00N LONG 101 37 47W)             |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                               | 0835 | 11                                   | 218                                                  | 10.0                            | 8.0                               |
| DEC                                                                                 |      |                                      |                                                      |                                 |                                   |
| 10...                                                                               | 1510 | 13                                   | 258                                                  | 9.5                             | 0.5                               |
| FEB 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 12...                                                                               | 0820 | 16                                   | 65                                                   | -6.5                            | 0.0                               |
| MAR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 25...                                                                               | 1555 | 32                                   | 361                                                  | 12.0                            | 11.0                              |
| MAY                                                                                 |      |                                      |                                                      |                                 |                                   |
| 06...                                                                               | 0640 | 37                                   | 361                                                  | 2.5                             | 11.0                              |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 17...                                                                               | 1300 | 5.9                                  | 262                                                  | 39.0                            | 29.0                              |
| AUG                                                                                 |      |                                      |                                                      |                                 |                                   |
| 12...                                                                               | 1605 | 4.7                                  | 248                                                  | 32.0                            | 28.0                              |
| 06448000 LAKE CR ABOVE REFUGE NEAR TUTHILL, SD (LAT 43 05 07N LONG 101 36 04W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                               | 0950 | 22                                   | 114                                                  | 16.0                            | 10.0                              |
| DEC                                                                                 |      |                                      |                                                      |                                 |                                   |
| 10...                                                                               | 1405 | 24                                   | 121                                                  | 12.0                            | 4.0                               |
| FEB 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                               | 1515 | 25                                   | 122                                                  | -1.0                            | 1.5                               |
| MAR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 25...                                                                               | 1445 | 28                                   | 125                                                  | --                              | 11.5                              |
| MAY                                                                                 |      |                                      |                                                      |                                 |                                   |
| 06...                                                                               | 0740 | 26                                   | 128                                                  | 10.0                            | 9.0                               |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 17...                                                                               | 1200 | 17                                   | 111                                                  | 36.0                            | 26.5                              |
| AUG                                                                                 |      |                                      |                                                      |                                 |                                   |
| 13...                                                                               | 0805 | 18                                   | 106                                                  | 19.5                            | 17.5                              |
| 06449000 LAKE CR BELOW REFUGE NEAR TUTHILL, SD (LAT 43 08 49N LONG 101 30 51W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                               | 1050 | .16                                  | 401                                                  | 16.0                            | 12.0                              |
| DEC                                                                                 |      |                                      |                                                      |                                 |                                   |
| 10...                                                                               | 1300 | 14                                   | 444                                                  | 15.0                            | 3.0                               |
| FEB 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                               | 1405 | 39                                   | 260                                                  | 0.0                             | 3.5                               |
| MAR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 25...                                                                               | 1340 | 35                                   | 202                                                  | 14.0                            | 11.0                              |
| MAY                                                                                 |      |                                      |                                                      |                                 |                                   |
| 05...                                                                               | 1320 | 37                                   | 264                                                  | 14.0                            | 14.5                              |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 17...                                                                               | 1040 | .36                                  | 474                                                  | 34.0                            | 25.0                              |
| AUG                                                                                 |      |                                      |                                                      |                                 |                                   |
| 12...                                                                               | 1437 | 5.1                                  | 396                                                  | 34.5                            | 28.5                              |
| SEP                                                                                 |      |                                      |                                                      |                                 |                                   |
| 19...                                                                               | 1215 | 1.8                                  | 415                                                  | --                              | 13.5                              |

## WATER QUALITY DATA

| Date                                                                          | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06449100 LITTLE WHITE R NEAR VETAL, SD (LAT 43 06 03N LONG 101 13 49W)        |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 04...                                                                         | 1015 | 40                                   | 287                                                  | 8.0                             | 6.5                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 10...                                                                         | 1130 | 39                                   | 310                                                  | 9.0                             | 1.5                               |
| FEB 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 1210 | 82                                   | 279                                                  | 5.0                             | 1.0                               |
| MAR                                                                           |      |                                      |                                                      |                                 |                                   |
| 26...                                                                         | 0850 | 111                                  | 241                                                  | 10.0                            | 8.5                               |
| APR                                                                           |      |                                      |                                                      |                                 |                                   |
| 22...                                                                         | 1510 | 88                                   | 298                                                  | 21.0                            | 15.5                              |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 06...                                                                         | 0920 | 90                                   | 319                                                  | 16.0                            | 11.5                              |
| JUN                                                                           |      |                                      |                                                      |                                 |                                   |
| 17...                                                                         | 0835 | 54                                   | 280                                                  | 20.0                            | 17.0                              |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 0835 | 37                                   | 362                                                  | 25.0                            | 18.0                              |
| AUG                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 0945 | 24                                   | 281                                                  | 22.5                            | 20.0                              |
| SEP                                                                           |      |                                      |                                                      |                                 |                                   |
| 22...                                                                         | 1010 | 21                                   | 315                                                  | 15.0                            | 12.5                              |
| 06449500 LITTLE WHITE R NEAR ROSEBUD, SD (LAT 43 19 32N LONG 100 53 00W)      |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 04...                                                                         | 1245 | 100                                  | 284                                                  | 9.0                             | 2.5                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 23...                                                                         | 1520 | 95                                   | 323                                                  | 2.0                             | 0.5                               |
| FEB 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 11...                                                                         | 0915 | 184                                  | 292                                                  | 2.0                             | 0.5                               |
| MAR                                                                           |      |                                      |                                                      |                                 |                                   |
| 26...                                                                         | 1350 | 186                                  | 266                                                  | --                              | 13.0                              |
| APR                                                                           |      |                                      |                                                      |                                 |                                   |
| 21...                                                                         | 1110 | 178                                  | 296                                                  | 18.5                            | 10.5                              |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 06...                                                                         | 1410 | 180                                  | 315                                                  | 18.0                            | 17.0                              |
| JUN                                                                           |      |                                      |                                                      |                                 |                                   |
| 18...                                                                         | 1430 | 109                                  | 326                                                  | 29.0                            | 23.5                              |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1215 | 114                                  | 256                                                  | 28.5                            | 23.5                              |
| AUG                                                                           |      |                                      |                                                      |                                 |                                   |
| 12...                                                                         | 1135 | 60                                   | 301                                                  | 29.0                            | 24.0                              |
| 13...                                                                         | 1131 | --                                   | 301                                                  | 31.5                            | 23.5                              |
| SEP                                                                           |      |                                      |                                                      |                                 |                                   |
| 22...                                                                         | 1350 | 67                                   | 294                                                  | 20.0                            | 16.5                              |
| 06450500 LITTLE WHITE R BELOW WHITE RIVER, SD (LAT 43 36 05N LONG 100 44 58W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                      |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1350 | 54                                   | 316                                                  | 10.5                            | 11.5                              |
| NOV                                                                           |      |                                      |                                                      |                                 |                                   |
| 15...                                                                         | 1230 | 103                                  | 299                                                  | 7.0                             | 6.0                               |
| DEC                                                                           |      |                                      |                                                      |                                 |                                   |
| 23...                                                                         | 1320 | 67                                   | 362                                                  | 0.0                             | 1.0                               |
| FEB 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 10...                                                                         | 1520 | 158                                  | 326                                                  | -5.0                            | 0.0                               |
| MAR                                                                           |      |                                      |                                                      |                                 |                                   |
| 26...                                                                         | 1635 | 185                                  | 256                                                  | 12.5                            | 12.0                              |
| MAY                                                                           |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1200 | 182                                  | 353                                                  | 11.0                            | 14.5                              |
| JUL                                                                           |      |                                      |                                                      |                                 |                                   |
| 10...                                                                         | 1410 | 89                                   | 330                                                  | --                              | 24.5                              |
| AUG                                                                           |      |                                      |                                                      |                                 |                                   |
| 14...                                                                         | 0805 | 51                                   | 316                                                  | 22.5                            | 19.5                              |
| 06451650 WILLIAMS CREEK NEAR VIVIAN, SD (LAT 43 43 33N LONG 100 17 50W)       |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                      |      |                                      |                                                      |                                 |                                   |
| 08...                                                                         | 1100 | 2.1                                  | 1610                                                 | 12.0                            | 13.5                              |
| 09...                                                                         | 1330 | 58                                   | 682                                                  | 14.5                            | 11.5                              |

## WATER QUALITY DATA

| Date                                                                    | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06452320 PLATTE CREEK NEAR PLATTE, SD (LAT 43 19 38N LONG 098 58 13W)   |      |                                      |                                                      |                                 |                                   |
| JAN 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 09...                                                                   | 1555 | .63                                  | 3470                                                 | -1.5                            | 1.5                               |
| MAR 20...                                                               | 1000 | 1.6                                  | 1890                                                 | 7.0                             | 4.0                               |
| MAY 02...                                                               | 1430 | 3.9                                  | 2250                                                 | 13.5                            | 15.0                              |
| JUN 19...                                                               | 1310 | .08                                  | 2810                                                 | 21.0                            | 24.5                              |
| 06453255 CHOTEAU CR NR AVON, SD (LAT 42 55 24N LONG 098 06 21W)         |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 10...                                                                   | 1005 | 1.1                                  | 1690                                                 | 15.0                            | 11.0                              |
| NOV 07...                                                               | 0945 | 1.5                                  | 1680                                                 | 13.0                            | 5.5                               |
| JAN 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 09...                                                                   | 0950 | 1.4                                  | 1670                                                 | -.5                             | 1.0                               |
| FEB 27...                                                               | 1310 | 2.9                                  | 1680                                                 | 4.0                             | 1.0                               |
| MAR 19...                                                               | 1525 | 3.2                                  | 1620                                                 | 7.0                             | 7.5                               |
| MAY 02...                                                               | 0905 | 2.7                                  | 1620                                                 | 9.5                             | 11.5                              |
| JUN 13...                                                               | 0950 | 1.1                                  | 1850                                                 | 24.0                            | 21.5                              |
| JUL 07...                                                               | 1730 | 23                                   | 1460                                                 | 23.0                            | 24.0                              |
| 08...                                                                   | 1000 | 54                                   | 1960                                                 | 21.0                            | 22.5                              |
| AUG 14...                                                               | 1705 | 1.1                                  | 1640                                                 | 26.0                            | 28.0                              |
| 06463900 ANTELOPE CR NEAR MISSION, SD (LAT 43 16 26N LONG 100 40 56W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 08...                                                                   | 1200 | 4.0                                  | 383                                                  | 10.0                            | 10.5                              |
| MAR 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 26...                                                                   | 1825 | 5.1                                  | 440                                                  | 8.5                             | 11.0                              |
| 06464100 KEYA PAHA R NEAR KEYAPAHA, SD (LAT 43 07 45N LONG 100 06 24W)  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 08...                                                                   | 1005 | 14                                   | --                                                   | 11.0                            | --                                |
| NOV 05...                                                               | 1300 | 22                                   | 435                                                  | 7.0                             | 4.0                               |
| JAN 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 10...                                                                   | 1200 | 14                                   | 512                                                  | -5.5                            | 0.0                               |
| MAR 27...                                                               | 1115 | 53                                   | 493                                                  | 1.0                             | 4.0                               |
| MAY 07...                                                               | 1540 | 70                                   | 462                                                  | 23.0                            | 20.0                              |
| JUN 18...                                                               | 0935 | 20                                   | 462                                                  | 23.5                            | 20.0                              |
| AUG 13...                                                               | 1905 | 8.6                                  | 405                                                  | 27.0                            | 26.0                              |
| 06464120 SAND CREEK NEAR OLSONVILLE, SD (LAT 43 01 03N LONG 100 24 46W) |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                   | 1845 | .16                                  | 569                                                  | -1.5                            | 3.0                               |

## WATER QUALITY DATA

| Date                                                                 | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06464500 KEYA PAHA R AT WEWELA, SD (LAT 43 01 44N LONG 099 46 49W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                             |      |                                      |                                                      |                                 |                                   |
| 08...                                                                | 0845 | 28                                   | 414                                                  | 9.5                             | 10.5                              |
| NOV                                                                  |      |                                      |                                                      |                                 |                                   |
| 05...                                                                | 1135 | 57                                   | 424                                                  | 5.0                             | 1.5                               |
| JAN 2003                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                | 1050 | 46                                   | 465                                                  | -10.0                           | 0.0                               |
| FEB                                                                  |      |                                      |                                                      |                                 |                                   |
| 28...                                                                | 1015 | 52                                   | 498                                                  | 3.0                             | 0.0                               |
| MAR                                                                  |      |                                      |                                                      |                                 |                                   |
| 27...                                                                | 1440 | 88                                   | 485                                                  | 2.0                             | 5.5                               |
| MAY                                                                  |      |                                      |                                                      |                                 |                                   |
| 07...                                                                | 1310 | 195                                  | 463                                                  | 23.0                            | 17.5                              |
| JUN                                                                  |      |                                      |                                                      |                                 |                                   |
| 18...                                                                | 1250 | 39                                   | 427                                                  | 29.0                            | 25.5                              |
| AUG                                                                  |      |                                      |                                                      |                                 |                                   |
| 14...                                                                | 0830 | 12                                   | 446                                                  | 20.0                            | 19.5                              |
| 06471000 JAMES R AT COLUMBIA, SD (LAT 45 36 13N LONG 098 18 36W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                | 0850 | 29                                   | 1280                                                 | 8.0                             | 8.5                               |
| NOV                                                                  |      |                                      |                                                      |                                 |                                   |
| 13...                                                                | 0944 | 68                                   | 1270                                                 | 1.0                             | 0.0                               |
| MAY 2003                                                             |      |                                      |                                                      |                                 |                                   |
| 28...                                                                | 1020 | 391                                  | 1070                                                 | 23.5                            | 17.0                              |
| JUN                                                                  |      |                                      |                                                      |                                 |                                   |
| 24...                                                                | 1750 | 474                                  | 1230                                                 | 23.5                            | 24.5                              |
| JUL                                                                  |      |                                      |                                                      |                                 |                                   |
| 31...                                                                | 0945 | 151                                  | 1250                                                 | 21.5                            | 22.0                              |
| 06471065 ELM RIVER NEAR FREDERICK (LAT 45 50 15N LONG 098 42 06W)    |      |                                      |                                                      |                                 |                                   |
| APR 2003                                                             |      |                                      |                                                      |                                 |                                   |
| 09...                                                                | 1530 | 4.6                                  | 1640                                                 | --                              | --                                |
| 06471200 MAPLE R AT ND-SD STATE LINE (LAT 45 56 20N LONG 098 27 08W) |      |                                      |                                                      |                                 |                                   |
| APR 2003                                                             |      |                                      |                                                      |                                 |                                   |
| 09...                                                                | 1720 | .36                                  | 1280                                                 | --                              | --                                |
| MAY                                                                  |      |                                      |                                                      |                                 |                                   |
| 28...                                                                | 1250 | 53                                   | 1440                                                 | 26.5                            | 19.5                              |
| JUL                                                                  |      |                                      |                                                      |                                 |                                   |
| 31...                                                                | 1205 | 3.6                                  | 1580                                                 | 24.0                            | 22.5                              |
| 06471500 ELM R AT WESTPORT, SD (LAT 45 39 22N LONG 098 29 48W)       |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                | 1330 | 2.0                                  | 1940                                                 | 17.5                            | 11.5                              |
| NOV                                                                  |      |                                      |                                                      |                                 |                                   |
| 13...                                                                | 1350 | 3.2                                  | 2000                                                 | 15.5                            | 5.5                               |
| JAN 2003                                                             |      |                                      |                                                      |                                 |                                   |
| 16...                                                                | 1220 | 4.5                                  | --                                                   | -7.0                            | 0.5                               |
| FEB                                                                  |      |                                      |                                                      |                                 |                                   |
| 25...                                                                | 1350 | .74                                  | 1720                                                 | -4.0                            | 0.0                               |
| MAR                                                                  |      |                                      |                                                      |                                 |                                   |
| 13...                                                                | 1125 | .46                                  | 2740                                                 | -1.5                            | 0.0                               |
| APR                                                                  |      |                                      |                                                      |                                 |                                   |
| 10...                                                                | 1350 | 3.9                                  | 1800                                                 | --                              | --                                |
| MAY                                                                  |      |                                      |                                                      |                                 |                                   |
| 27...                                                                | 1620 | 80                                   | 1730                                                 | 23.5                            | 20.0                              |
| JUL                                                                  |      |                                      |                                                      |                                 |                                   |
| 31...                                                                | 1410 | 4.8                                  | 1600                                                 | 27.0                            | 26.5                              |
| SEP                                                                  |      |                                      |                                                      |                                 |                                   |
| 09...                                                                | 1330 | .05                                  | 1780                                                 | 23.0                            | 23.5                              |

## WATER QUALITY DATA

| Date                                                                    | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06471770 MOCCASIN CREEK AT ABERDEEN, SD (LAT 45 28 13N LONG 098 27 13W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 10...                                                                   | 1530 | .02                                  | 1800                                                 | 20.5                            | 15.0                              |
| NOV                                                                     |      |                                      |                                                      |                                 |                                   |
| 14...                                                                   | 0815 | .05                                  | 2150                                                 | -4.5                            | 4.5                               |
| JAN 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 16...                                                                   | 1705 | .01                                  | 2360                                                 | -7.0                            | 2.5                               |
| MAY                                                                     |      |                                      |                                                      |                                 |                                   |
| 29...                                                                   | 1005 | 1.2                                  | 2890                                                 | 19.5                            | 17.5                              |
| JUN                                                                     |      |                                      |                                                      |                                 |                                   |
| 25...                                                                   | 0805 | 7.4                                  | 1930                                                 | 13.0                            | 18.0                              |
| 06471800 FOOT CREEK NEAR ABERDEEN, SD (LAT 45 31 08N LONG 098 34 37W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 11...                                                                   | 0950 | .33                                  | 1710                                                 | 15.5                            | 12.5                              |
| NOV                                                                     |      |                                      |                                                      |                                 |                                   |
| 13...                                                                   | 1515 | .36                                  | 1720                                                 | 12.5                            | 6.5                               |
| JAN 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 17...                                                                   | 1015 | .04                                  | 2720                                                 | -12.0                           | 0.0                               |
| APR                                                                     |      |                                      |                                                      |                                 |                                   |
| 09...                                                                   | 1330 | .30                                  | 1550                                                 | 18.0                            | 9.5                               |
| MAY                                                                     |      |                                      |                                                      |                                 |                                   |
| 29...                                                                   | 1545 | .38                                  | 2010                                                 | 27.0                            | 20.5                              |
| JUN                                                                     |      |                                      |                                                      |                                 |                                   |
| 24...                                                                   | 1500 | 8.8                                  | 1240                                                 | 23.5                            | 23.5                              |
| JUL                                                                     |      |                                      |                                                      |                                 |                                   |
| 30...                                                                   | 1640 | .20                                  | 2050                                                 | 31.5                            | 27.0                              |
| 06472000 JAMES R NEAR STRATFORD, SD (LAT 45 14 30N LONG 098 23 28W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 09...                                                                   | 1545 | 35                                   | 1320                                                 | 15.0                            | 10.0                              |
| NOV                                                                     |      |                                      |                                                      |                                 |                                   |
| 14...                                                                   | 1112 | 92                                   | 1340                                                 | -1.5                            | 2.5                               |
| FEB 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 26...                                                                   | 1015 | 1.2                                  | 2870                                                 | -1.0                            | 0.0                               |
| MAR                                                                     |      |                                      |                                                      |                                 |                                   |
| 13...                                                                   | 1510 | .62                                  | 3370                                                 | 2.0                             | 0.0                               |
| APR                                                                     |      |                                      |                                                      |                                 |                                   |
| 10...                                                                   | 0935 | 15                                   | 1600                                                 | --                              | --                                |
| MAY                                                                     |      |                                      |                                                      |                                 |                                   |
| 30...                                                                   | 1130 | 430                                  | 1330                                                 | 20.0                            | 20.0                              |
| JUN                                                                     |      |                                      |                                                      |                                 |                                   |
| 25...                                                                   | 1055 | 607                                  | 1320                                                 | 14.0                            | 21.0                              |
| JUL                                                                     |      |                                      |                                                      |                                 |                                   |
| 29...                                                                   | 1745 | 288                                  | 1420                                                 | 22.0                            | 25.5                              |
| JAN                                                                     |      |                                      |                                                      |                                 |                                   |
| 15...                                                                   | 1535 | 24                                   | 1210                                                 | -10.5                           | 0.0                               |
| 06473000 JAMES R AT ASHTON, SD (LAT 44 59 54N LONG 098 28 50W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                |      |                                      |                                                      |                                 |                                   |
| 09...                                                                   | 1310 | 28                                   | 1410                                                 | 12.5                            | 9.0                               |
| 28...                                                                   | 1351 | 100                                  | 1360                                                 | 4.5                             | 3.5                               |
| NOV                                                                     |      |                                      |                                                      |                                 |                                   |
| 12...                                                                   | 1700 | 101                                  | 1280                                                 | 1.5                             | 2.5                               |
| FEB 2003                                                                |      |                                      |                                                      |                                 |                                   |
| 06...                                                                   | 1330 | 6.2                                  | 2760                                                 | -18.0                           | 0.0                               |
| APR                                                                     |      |                                      |                                                      |                                 |                                   |
| 10...                                                                   | 1740 | 20                                   | 1560                                                 | --                              | --                                |
| JUN                                                                     |      |                                      |                                                      |                                 |                                   |
| 02...                                                                   | 1640 | 465                                  | 1360                                                 | 15.5                            | 17.0                              |
| 25...                                                                   | 1315 | 579                                  | 1200                                                 | 17.0                            | 21.0                              |
| AUG                                                                     |      |                                      |                                                      |                                 |                                   |
| 14...                                                                   | 1315 | 179                                  | 1380                                                 | 31.0                            | 27.0                              |
| MAR                                                                     |      |                                      |                                                      |                                 |                                   |
| 14...                                                                   | 0945 | 1.5                                  | --                                                   | --                              | --                                |

## WATER QUALITY DATA

| Date                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06473300 PREACHERS RUN TRIB AT IPSWICH, SD (LAT 45 27 08N LONG 099 01 45W)  |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 24...                                                                       | 1140 | .71                                  | 1570                                                 | 24.5                            | 19.5                              |
| 06474000 TURTLE CR NEAR TULARE, SD (LAT 44 44 06N LONG 098 35 09W)          |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 25...                                                                       | 1445 | 1.4                                  | --                                                   | --                              | --                                |
| 06475000 JAMES R NEAR REDFIELD, SD (LAT 44 54 38N LONG 098 28 18W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 09...                                                                       | 1100 | 27                                   | 1490                                                 | 7.5                             | 8.0                               |
| NOV 12...                                                                   | 1453 | 102                                  | 1340                                                 | 8.0                             | 3.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 15...                                                                       | 1135 | 27                                   | 1380                                                 | -11.5                           | 0.0                               |
| APR 11...                                                                   | 0945 | 22                                   | 1760                                                 | --                              | --                                |
| JUN 02...                                                                   | 1250 | 490                                  | 1390                                                 | 15.0                            | 17.0                              |
| JUL 29...                                                                   | 1420 | 471                                  | 1460                                                 | 34.5                            | 27.0                              |
| MAR 14...                                                                   | 1240 | 5.0                                  | --                                                   | --                              | --                                |
| 06476000 JAMES R AT HURON, SD (LAT 44 21 49N LONG 098 11 56W)               |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 07...                                                                       | 1600 | 120                                  | 1720                                                 | 22.0                            | 17.0                              |
| JUN 18...                                                                   | 1545 | 513                                  | 1380                                                 | 27.5                            | 25.5                              |
| SEP 30...                                                                   | 1355 | 30                                   | 1650                                                 | 13.0                            | 13.0                              |
| 06477000 JAMES R NEAR FORESTBURG, SD (LAT 43 58 26N LONG 098 04 14W)        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 08...                                                                       | 1500 | 49                                   | 1530                                                 | 13.0                            | 12.0                              |
| NOV 15...                                                                   | 1036 | 103                                  | 1590                                                 | -.5                             | 2.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 1540 | 46                                   | 1230                                                 | -7.0                            | 0.5                               |
| FEB 26...                                                                   | 1535 | 40                                   | 1840                                                 | 3.0                             | 0.5                               |
| MAR 17...                                                                   | 1455 | 109                                  | 1370                                                 | 20.5                            | 0.5                               |
| APR 30...                                                                   | 1135 | 84                                   | 1540                                                 | 14.0                            | 12.0                              |
| JUL 03...                                                                   | 0945 | 685                                  | 1500                                                 | 27.5                            | 27.0                              |
| AUG 21...                                                                   | 1045 | 146                                  | 1500                                                 | 22.0                            | 24.0                              |
| 06477500 FIRESTEEL CR NEAR MOUNT VERNON, SD (LAT 43 46 30N LONG 098 14 33W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 08...                                                                       | 1200 | .10                                  | 1650                                                 | 13.5                            | 12.5                              |
| NOV 14...                                                                   | 1600 | .03                                  | 1870                                                 | 0.5                             | 4.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1300 | .15                                  | 1790                                                 | -1.0                            | 1.5                               |
| MAR 17...                                                                   | 1740 | 6.2                                  | 780                                                  | 17.0                            | 2.0                               |
| APR 29...                                                                   | 1650 | .18                                  | 1230                                                 | 9.5                             | 13.0                              |
| JUN 12...                                                                   | 1425 | .15                                  | 2480                                                 | 24.5                            | 27.0                              |
| AUG 22...                                                                   | 0945 | .05                                  | 2310                                                 | 20.0                            | 22.0                              |

## WATER QUALITY DATA

| Date                                                                                | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06478000 JAMES R NEAR MITCHELL, SD (LAT 43 39 32N LONG 097 55 08W)                  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 07...                                                                               | 1500 | 69                                   | 1510                                                 | 21.5                            | 12.0                              |
| NOV                                                                                 |      |                                      |                                                      |                                 |                                   |
| 05...                                                                               | 0930 | 91                                   | 1630                                                 | 2.5                             | 2.5                               |
| JAN 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 14...                                                                               | 1130 | 43                                   | 1690                                                 | -6.0                            | 0.5                               |
| APR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                               | 1630 | 32                                   | 1330                                                 | 2.5                             | 10.0                              |
| JUN                                                                                 |      |                                      |                                                      |                                 |                                   |
| 27...                                                                               | 1035 | 790                                  | 1350                                                 | 28.0                            | 22.0                              |
| 06478500 JAMES R NEAR SCOTLAND, SD (LAT 43 11 09N LONG 097 38 07W)                  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                               | 1325 | 131                                  | 1810                                                 | 14.0                            | 12.5                              |
| NOV                                                                                 |      |                                      |                                                      |                                 |                                   |
| 05...                                                                               | 1345 | 102                                  | 1800                                                 | 2.0                             | 3.0                               |
| JAN 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 08...                                                                               | 1620 | 117                                  | 2130                                                 | 6.5                             | 0.5                               |
| FEB                                                                                 |      |                                      |                                                      |                                 |                                   |
| 27...                                                                               | 1725 | 128                                  | 1810                                                 | 3.5                             | 0.5                               |
| APR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                               | 1310 | 73                                   | 1560                                                 | 4.0                             | 11.5                              |
| MAY                                                                                 |      |                                      |                                                      |                                 |                                   |
| 01...                                                                               | 1115 | 139                                  | 1630                                                 | 9.0                             | 12.0                              |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 02...                                                                               | 1445 | 651                                  | 1470                                                 | 36.0                            | 28.0                              |
| AUG                                                                                 |      |                                      |                                                      |                                 |                                   |
| 20...                                                                               | 1140 | 193                                  | 1520                                                 | 30.0                            | 28.0                              |
| 06478513 JAMES RIVER NR YANKTON, SD (LAT 42 59 45N LONG 097 22 10W)                 |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 18...                                                                               | 1630 | 303                                  | 1460                                                 | 13.0                            | 5.5                               |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 02...                                                                               | 1000 | 779                                  | 1500                                                 | 30.5                            | 26.5                              |
| 06478540 LITTLE VERMILLION R NEAR SALEM, SD (LAT 43 47 39N LONG 097 22 02W)         |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 12...                                                                               | 1055 | .45                                  | 1620                                                 | 6.0                             | 1.0                               |
| DEC                                                                                 |      |                                      |                                                      |                                 |                                   |
| 23...                                                                               | 1205 | .02                                  | 2490                                                 | -5.0                            | 0.5                               |
| MAR 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 18...                                                                               | 1410 | 4.0                                  | 578                                                  | 11.0                            | 5.0                               |
| APR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 22...                                                                               | 1110 | 6.4                                  | 1920                                                 | 15.0                            | 10.0                              |
| JUN                                                                                 |      |                                      |                                                      |                                 |                                   |
| 02...                                                                               | 1120 | .06                                  | --                                                   | 15.0                            | 15.0                              |
| 26...                                                                               | 1050 | 24                                   | 688                                                  | 15.0                            | 17.0                              |
| JUL                                                                                 |      |                                      |                                                      |                                 |                                   |
| 17...                                                                               | 1550 | 2.3                                  | 1500                                                 | 26.0                            | 26.0                              |
| 06478600 EAST FORK VERMILLION RIVER NEAR PARKER, SD (LAT 43 26 43N LONG 097 06 34W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                            |      |                                      |                                                      |                                 |                                   |
| 03...                                                                               | 0850 | 6.7                                  | 1770                                                 | 8.0                             | 9.0                               |
| NOV                                                                                 |      |                                      |                                                      |                                 |                                   |
| 12...                                                                               | 1500 | 17                                   | 1590                                                 | 11.0                            | 6.0                               |
| JAN 2003                                                                            |      |                                      |                                                      |                                 |                                   |
| 03...                                                                               | 1010 | 12                                   | 1850                                                 | -2.0                            | 0.0                               |
| MAR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 11...                                                                               | 1625 | 11                                   | 1920                                                 | 10.0                            | 0.0                               |
| 18...                                                                               | 1740 | 93                                   | 1500                                                 | 9.0                             | 9.0                               |
| APR                                                                                 |      |                                      |                                                      |                                 |                                   |
| 25...                                                                               | 1430 | 64                                   | 1420                                                 | 20.0                            | 15.0                              |

## WATER QUALITY DATA

| Date                                                                                          | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06478600 EAST FORK VERMILLION RIVER NEAR PARKER, SD (LAT 43 26 43N LONG 097 06 34W)—Continued |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                      |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                         | 1710 | 12                                   | 1810                                                 | 15.5                            | 16.0                              |
| 25...                                                                                         | 1155 | 2590                                 | 794                                                  | 14.5                            | 20.5                              |
| 27...                                                                                         | 0945 | 894                                  | 938                                                  | 26.0                            | 20.0                              |
| JUL                                                                                           |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                         | 0900 | 49                                   | 1270                                                 | 23.0                            | 22.0                              |
| AUG                                                                                           |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                         | 1520 | 11                                   | 1840                                                 | 36.0                            | 30.0                              |
| 06478690 WEST FORK VERMILLION R NEAR PARKER, SD (LAT 43 24 55N LONG 097 12 18W)               |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                      |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                         | 1650 | 1.1                                  | 1720                                                 | 7.0                             | 11.0                              |
| NOV                                                                                           |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                         | 1300 | 5.0                                  | 1930                                                 | 11.0                            | 4.0                               |
| JAN 2003                                                                                      |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                         | 1200 | 2.1                                  | 2570                                                 | 3.0                             | 0.0                               |
| MAR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                         | 1400 | .86                                  | 2030                                                 | 10.0                            | 0.0                               |
| 18...                                                                                         | 1615 | 23                                   | 786                                                  | 12.0                            | 3.0                               |
| APR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 25...                                                                                         | 1615 | 26                                   | 2240                                                 | 22.0                            | 16.0                              |
| JUN                                                                                           |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                         | 1435 | 3.4                                  | 2310                                                 | 13.0                            | 15.0                              |
| 25...                                                                                         | 1635 | 1080                                 | 468                                                  | 16.0                            | 19.5                              |
| 26...                                                                                         | 1125 | 1690                                 | 553                                                  | 19.0                            | 17.5                              |
| 30...                                                                                         | 1445 | 133                                  | 1000                                                 | 25.0                            | 24.0                              |
| JUL                                                                                           |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                         | 1100 | 35                                   | 1250                                                 | 31.0                            | 25.0                              |
| AUG                                                                                           |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                         | 1205 | 1.0                                  | 1780                                                 | 24.0                            | 23.0                              |
| 06479010 VERMILLION RIVER NR VERMILLION, SD (LAT 42 49 02N LONG 096 55 26W)                   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                      |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                         | 1600 | 47                                   | 1390                                                 | 12.5                            | 13.5                              |
| NOV                                                                                           |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                         | 1450 | 50                                   | 1560                                                 | 8.0                             | 5.0                               |
| JAN 2003                                                                                      |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                         | 1525 | 34                                   | 1770                                                 | 1.0                             | 1.0                               |
| MAR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                         | 1010 | 32                                   | 1660                                                 | 8.0                             | 0.0                               |
| APR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 24...                                                                                         | 1715 | 228                                  | 1720                                                 | 9.0                             | 11.0                              |
| JUN                                                                                           |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                         | 1130 | 94                                   | 1770                                                 | 20.5                            | 17.0                              |
| 27...                                                                                         | 1550 | 2060                                 | 611                                                  | 34.0                            | 21.0                              |
| JUL                                                                                           |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                         | 1535 | 918                                  | 1030                                                 | 34.0                            | 26.0                              |
| 06479159 BLUE DOG LAKE INFLOW (OWENS CR) NR WAUBAY, SD (LAT 45 20 48N LONG 097 15 07W)        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                      |      |                                      |                                                      |                                 |                                   |
| 01...                                                                                         | 1535 | 5.4                                  | 569                                                  | 9.0                             | 14.0                              |
| JAN 2003                                                                                      |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                         | 1030 | 7.4                                  | 558                                                  | 0.0                             | 0.0                               |
| MAR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                         | 1250 | 4.0                                  | 536                                                  | -4.0                            | 0.5                               |
| 17...                                                                                         | 1150 | 49                                   | 284                                                  | 11.0                            | 1.0                               |
| APR                                                                                           |      |                                      |                                                      |                                 |                                   |
| 29...                                                                                         | 0845 | 9.7                                  | 558                                                  | 8.0                             | 10.0                              |
| JUN                                                                                           |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                         | 1200 | 21                                   | 550                                                  | 15.5                            | 14.5                              |
| 24...                                                                                         | 1235 | 105                                  | 370                                                  | 23.5                            | 20.0                              |
| JUL                                                                                           |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                         | 1530 | 7.5                                  | 583                                                  | 21.5                            | 24.0                              |

## WATER QUALITY DATA

| Date                                                                              | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06479215 BIG SIOUX RIVER NR FLORENCE, SD (LAT 45 10 51N LONG 097 11 09W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                             | 1005 | .26                                  | 718                                                  | 4.0                             | 6.0                               |
| NOV                                                                               |      |                                      |                                                      |                                 |                                   |
| 14...                                                                             | 0855 | .52                                  | 681                                                  | -2.0                            | 0.0                               |
| JAN 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 1610 | .43                                  | 802                                                  | 3.0                             | 0.0                               |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 11...                                                                             | 1450 | .12                                  | 704                                                  | -4.0                            | 0.5                               |
| 20...                                                                             | 0945 | 37                                   | 325                                                  | 2.0                             | 0.0                               |
| APR                                                                               |      |                                      |                                                      |                                 |                                   |
| 29...                                                                             | 1145 | 9.4                                  | 644                                                  | 5.0                             | 11.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 10...                                                                             | 1640 | 4.9                                  | 559                                                  | 20.0                            | 18.0                              |
| JUL                                                                               |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 1040 | 1.1                                  | 576                                                  | 23.0                            | 19.0                              |
| AUG                                                                               |      |                                      |                                                      |                                 |                                   |
| 26...                                                                             | 1520 | .06                                  | 764                                                  | 31.0                            | 28.0                              |
| 06479438 BIG SIOUX R NEAR WATERTOWN, SD (LAT 45 00 22N LONG 097 09 53W)           |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                             | 1405 | .43                                  | 676                                                  | 10.0                            | 10.0                              |
| NOV                                                                               |      |                                      |                                                      |                                 |                                   |
| 14...                                                                             | 1030 | 2.7                                  | 635                                                  | 0.0                             | 0.0                               |
| JAN 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 09...                                                                             | 1035 | .53                                  | 818                                                  | 0.0                             | -6.0                              |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 20...                                                                             | 1215 | 124                                  | 303                                                  | 6.0                             | 1.0                               |
| APR                                                                               |      |                                      |                                                      |                                 |                                   |
| 03...                                                                             | 1215 | 15                                   | 590                                                  | -3.0                            | 0.0                               |
| 29...                                                                             | 1500 | 21                                   | 675                                                  | 6.0                             | 11.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 11...                                                                             | 1220 | 15                                   | 660                                                  | 21.0                            | 19.0                              |
| JUL                                                                               |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 1320 | 3.3                                  | 545                                                  | 23.5                            | 24.5                              |
| 06479500 BIG SIOUX R AT WATERTOWN, SD (LAT 44 56 33N LONG 097 08 45W)             |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                             | 1600 | .80                                  | 672                                                  | 9.0                             | 9.0                               |
| NOV                                                                               |      |                                      |                                                      |                                 |                                   |
| 14...                                                                             | 1145 | 2.6                                  | 702                                                  | -3.0                            | 0.0                               |
| JAN 2003                                                                          |      |                                      |                                                      |                                 |                                   |
| 09...                                                                             | 1220 | 1.4                                  | 739                                                  | -6.0                            | 0.0                               |
| MAR                                                                               |      |                                      |                                                      |                                 |                                   |
| 17...                                                                             | 1655 | 186                                  | 258                                                  | 6.0                             | 1.0                               |
| APR                                                                               |      |                                      |                                                      |                                 |                                   |
| 03...                                                                             | 1025 | 5.3                                  | 692                                                  | -4.0                            | 0.0                               |
| 29...                                                                             | 1645 | 8.7                                  | 736                                                  | 6.0                             | 10.0                              |
| JUN                                                                               |      |                                      |                                                      |                                 |                                   |
| 11...                                                                             | 0900 | 10                                   | 722                                                  | 16.0                            | 18.0                              |
| JUL                                                                               |      |                                      |                                                      |                                 |                                   |
| 08...                                                                             | 1445 | 4.9                                  | 539                                                  | 25.0                            | 27.0                              |
| AUG                                                                               |      |                                      |                                                      |                                 |                                   |
| 18...                                                                             | 1045 | .45                                  | 616                                                  | 26.5                            | 25.0                              |
| 06479512 BIG SIOUX R AT BROADWAY AT WATERTOWN, SD (LAT 44 53 22N LONG 097 07 07W) |      |                                      |                                                      |                                 |                                   |
| AUG                                                                               |      |                                      |                                                      |                                 |                                   |
| 18...                                                                             | 1245 | .46                                  | 822                                                  | 30.5                            | 24.0                              |

## WATER QUALITY DATA

| Date                                                                         | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06479520 BIG SIOUX RIVER BELOW WATERTOWN, SD (LAT 44 50 52N LONG 097 02 57W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1815 | 7.9                                  | 1080                                                 | 6.0                             | 9.0                               |
| NOV                                                                          |      |                                      |                                                      |                                 |                                   |
| 13...                                                                        | 0940 | 9.5                                  | 1070                                                 | 0.5                             | 1.5                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 06...                                                                        | 1405 | 7.2                                  | 1230                                                 | -3.0                            | 0.0                               |
| MAR                                                                          |      |                                      |                                                      |                                 |                                   |
| 12...                                                                        | 1755 | 3.3                                  | 1190                                                 | 0.0                             | 0.5                               |
| 20...                                                                        | 1600 | 172                                  | 347                                                  | 5.0                             | 3.0                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1545 | 20                                   | 840                                                  | 6.0                             | 6.0                               |
| 30...                                                                        | 0935 | 27                                   | 916                                                  | 9.5                             | 8.5                               |
| JUN                                                                          |      |                                      |                                                      |                                 |                                   |
| 11...                                                                        | 1800 | 23                                   | 926                                                  | 19.5                            | 24.0                              |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 09...                                                                        | 0930 | 12                                   | 931                                                  | 20.5                            | 20.5                              |
| AUG                                                                          |      |                                      |                                                      |                                 |                                   |
| 20...                                                                        | 0925 | 6.9                                  | 1130                                                 | 23.5                            | 22.0                              |
| 06479525 BIG SIOUX R NEAR CASTLEWOOD, SD (LAT 44 43 54N LONG 097 02 39W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1100 | 12                                   | 1040                                                 | 4.0                             | 7.0                               |
| NOV                                                                          |      |                                      |                                                      |                                 |                                   |
| 13...                                                                        | 1115 | 14                                   | 1050                                                 | 1.0                             | 1.5                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 06...                                                                        | 1210 | 9.9                                  | 1160                                                 | -3.5                            | 0.0                               |
| MAR                                                                          |      |                                      |                                                      |                                 |                                   |
| 13...                                                                        | 1020 | 3.5                                  | 1230                                                 | 0.0                             | 0.0                               |
| 18...                                                                        | 1155 | 316                                  | 331                                                  | 5.0                             | 1.5                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1340 | 31                                   | 851                                                  | 7.0                             | 6.0                               |
| 30...                                                                        | 1050 | 39                                   | 950                                                  | 9.0                             | 9.0                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 29...                                                                        | 1300 | 25                                   | 930                                                  | 21.0                            | 20.0                              |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 09...                                                                        | 1150 | 18                                   | 862                                                  | 23.0                            | 24.0                              |
| 06479640 HIDEWOOD CR NEAR ESTELLINE, SD (LAT 44 36 42N LONG 096 54 17W)      |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 18...                                                                        | 1345 | 70                                   | 347                                                  | 5.0                             | 1.0                               |
| 06479770 BIG SIOUX RIVER NEAR BRUCE, SD (LAT 44 28 04N LONG 096 53 14W)      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                     |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1620 | 19                                   | 837                                                  | 6.0                             | 9.0                               |
| NOV                                                                          |      |                                      |                                                      |                                 |                                   |
| 14...                                                                        | 0935 | 28                                   | 945                                                  | -2.0                            | 1.0                               |
| JAN 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 07...                                                                        | 1135 | 16                                   | 1060                                                 | 6.5                             | 0.0                               |
| MAR                                                                          |      |                                      |                                                      |                                 |                                   |
| 13...                                                                        | 1340 | 4.1                                  | 983                                                  | 1.0                             | 0.0                               |
| 17...                                                                        | 1155 | 797                                  | 327                                                  | 14.0                            | 2.0                               |
| APR                                                                          |      |                                      |                                                      |                                 |                                   |
| 02...                                                                        | 1040 | 59                                   | 788                                                  | 6.0                             | 5.0                               |
| 21...                                                                        | 1055 | 97                                   | 813                                                  | 12.0                            | 7.0                               |
| MAY                                                                          |      |                                      |                                                      |                                 |                                   |
| 29...                                                                        | 1550 | 42                                   | 838                                                  | 27.0                            | 20.0                              |
| JUL                                                                          |      |                                      |                                                      |                                 |                                   |
| 10...                                                                        | 1450 | 31                                   | 718                                                  | 23.5                            | 25.5                              |
| 06479980 MEDARY CR NEAR BROOKINGS, SD (LAT 44 13 27N LONG 096 46 02W)        |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                     |      |                                      |                                                      |                                 |                                   |
| 17...                                                                        | 1510 | 345                                  | 309                                                  | 17.0                            | 2.5                               |

## WATER QUALITY DATA

| Date                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 06480000 BIG SIOUX RIVER NEAR BROOKINGS, SD (LAT 44 10 48N LONG 096 44 55W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 03...                                                                       | 0925 | 30                                   | 989                                                  | 6.0                             | 8.0                               |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 1150 | 54                                   | 1000                                                 | 0.0                             | 1.0                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 08...                                                                       | 1030 | 34                                   | 1000                                                 | 6.5                             | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 1120 | 10                                   | 1210                                                 | 9.0                             | 0.0                               |
| 21...                                                                       | 0925 | 500                                  | 411                                                  | 8.5                             | 2.0                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 21...                                                                       | 1410 | 250                                  | 1050                                                 | 13.0                            | 9.0                               |
| MAY                                                                         |      |                                      |                                                      |                                 |                                   |
| 30...                                                                       | 0920 | 99                                   | 893                                                  | 19.0                            | 17.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 10...                                                                       | 1140 | 63                                   | 810                                                  | 20.0                            | 23.5                              |
| 06481000 BIG SIOUX R NEAR DELL RAPIDS, SD (LAT 43 47 25N LONG 096 44 42W)   |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                       | 1245 | 54                                   | 772                                                  | 17.0                            | 17.0                              |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 1345 | 92                                   | 900                                                  | 12.0                            | 3.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1230 | 48                                   | 1090                                                 | 0.0                             | 0.0                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 13...                                                                       | 1555 | 19                                   | 1190                                                 | 3.0                             | 0.0                               |
| 21...                                                                       | 1200 | 978                                  | 352                                                  | 6.0                             | 1.0                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 22...                                                                       | 1625 | 525                                  | 908                                                  | 22.0                            | 12.0                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 06...                                                                       | 1025 | 143                                  | 861                                                  | 14.0                            | 16.5                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 15...                                                                       | 1650 | 66                                   | 828                                                  | 28.0                            | 30.0                              |
| 06481480 SKUNK CR NR CHESTER, SD (LAT 43 50 53N LONG 096 50 10W)            |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                    |      |                                      |                                                      |                                 |                                   |
| 01...                                                                       | 1440 | .53                                  | 893                                                  | 16.0                            | 16.0                              |
| NOV                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                       | 0750 | .93                                  | 1130                                                 | 0.0                             | 2.5                               |
| JAN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 02...                                                                       | 1015 | .87                                  | 1180                                                 | -4.0                            | 0.5                               |
| MAR                                                                         |      |                                      |                                                      |                                 |                                   |
| 10...                                                                       | 1550 | .13                                  | 1070                                                 | -5.0                            | 0.0                               |
| APR                                                                         |      |                                      |                                                      |                                 |                                   |
| 22...                                                                       | 1355 | 31                                   | 1500                                                 | 21.0                            | 15.0                              |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 03...                                                                       | 1220 | 1.0                                  | 1070                                                 | 16.0                            | 14.5                              |
| 26...                                                                       | 1330 | 44                                   | 957                                                  | 22.0                            | 20.0                              |
| JUL                                                                         |      |                                      |                                                      |                                 |                                   |
| 15...                                                                       | 1230 | 14                                   | 1210                                                 | 28.0                            | 25.0                              |
| 06481493 SKUNK CREEK NEAR HARTFORD, SD (LAT 43 38 09N LONG 096 54 00W)      |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 18...                                                                       | 1125 | 50                                   | 535                                                  | 10.0                            | 1.0                               |
| JUN                                                                         |      |                                      |                                                      |                                 |                                   |
| 25...                                                                       | 1620 | 340                                  | 575                                                  | 15.0                            | 19.0                              |
| 06481497 WILLOW CREEK NEAR CROOKS, SD (LAT 43 37 51N LONG 096 49 37W)       |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                    |      |                                      |                                                      |                                 |                                   |
| 25...                                                                       | 1345 | 66                                   | 354                                                  | 18.0                            | 19.5                              |

## WATER QUALITY DATA

| Date                                                                                       | Time | Instantaneous<br>dis-charge,<br>cfs<br>(00061) | Specif.<br>conductance,<br>wat unf<br>uS/cm<br>25 deg C<br>(00095) | Temperature,<br>air,<br>deg C<br>(00020) | Temperature,<br>water,<br>deg C<br>(00010) |
|--------------------------------------------------------------------------------------------|------|------------------------------------------------|--------------------------------------------------------------------|------------------------------------------|--------------------------------------------|
| 06482020 BIG SIOUX R AT NORTH CLIFF AVE AT SIOUX FALLS, SD (LAT 43 34 01N LONG 096 42 39W) |      |                                                |                                                                    |                                          |                                            |
| OCT 2002                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 02...                                                                                      | 1115 | 79                                             | 797                                                                | 6.0                                      | 13.0                                       |
| NOV                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 13...                                                                                      | 0920 | 122                                            | 1090                                                               | 2.0                                      | 3.0                                        |
| JAN 2003                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 02...                                                                                      | 1640 | 63                                             | 1450                                                               | -4.0                                     | 1.0                                        |
| MAR                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 12...                                                                                      | 1130 | 41                                             | 2450                                                               | 1.0                                      | 1.5                                        |
| APR                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 23...                                                                                      | 1255 | 656                                            | 1040                                                               | 16.0                                     | 11.0                                       |
| JUN                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 05...                                                                                      | 1750 | 178                                            | 1020                                                               | 23.0                                     | 24.0                                       |
| JUL                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 17...                                                                                      | 1000 | 102                                            | 1190                                                               | 25.0                                     | 24.0                                       |
| 06482610 SPLIT ROCK CR AT CORSON, SD (LAT 43 36 59N LONG 096 33 54W)                       |      |                                                |                                                                    |                                          |                                            |
| OCT 2002                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 02...                                                                                      | 1320 | 22                                             | 582                                                                | 7.0                                      | 13.0                                       |
| NOV                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 13...                                                                                      | 1115 | 74                                             | 826                                                                | 6.0                                      | 3.0                                        |
| JAN 2003                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 02...                                                                                      | 1500 | 35                                             | 821                                                                | -3.0                                     | 0.0                                        |
| MAR                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 12...                                                                                      | 1430 | 23                                             | 691                                                                | 0.5                                      | 0.0                                        |
| APR                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 23...                                                                                      | 1625 | 519                                            | 773                                                                | 19.0                                     | 13.0                                       |
| JUN                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 05...                                                                                      | 1615 | 98                                             | 873                                                                | 21.0                                     | 21.0                                       |
| JUL                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 17...                                                                                      | 0805 | 58                                             | 780                                                                | 25.0                                     | 24.0                                       |
| 06485500 BIG SIOUX R AT AKRON IA (LAT 42 50 14N LONG 096 33 41W)                           |      |                                                |                                                                    |                                          |                                            |
| OCT 2002                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 08...                                                                                      | 1140 | 873                                            | 700                                                                | 21.5                                     | 12.5                                       |
| NOV                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 06...                                                                                      | 1115 | 699                                            | 1030                                                               | 9.5                                      | 4.5                                        |
| FEB 2003                                                                                   |      |                                                |                                                                    |                                          |                                            |
| 20...                                                                                      | 1345 | 187                                            | 998                                                                | 8.0                                      | 0.0                                        |
| JUN                                                                                        |      |                                                |                                                                    |                                          |                                            |
| 04...                                                                                      | 1740 | 1060                                           | 825                                                                | 17.0                                     | 20.5                                       |

The following miscellaneous discharge measurements are listed in downstream order.

## WATER QUALITY DATA

| Date                                                                                              | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 452745096562200 NO NAME CREEK EMAP SITE NEAR WILMOT, SD (LAT 45 27 45N LONG 096 56 22W)           |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>01...                                                                                 | 1400 | --                                   | 1210                                                 | 33.0                            | 21.0                              |
| 05299700 COBB CREEK NEAR GARY, SD (LAT 44 44 22N LONG 096 27 26W)                                 |      |                                      |                                                      |                                 |                                   |
| OCT 2002<br>02...                                                                                 | 1400 | 2.6                                  | 819                                                  | 6.0                             | 9.5                               |
| NOV<br>13...                                                                                      | 1235 | --                                   | --                                                   | 2.0                             | --                                |
| 453350101552700 BLACKHORSE BUTTE CR EMAP REFERENCE SITE NR MEADOW (LAT 45 33 50N LONG 101 55 27W) |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>22...                                                                                 | 1400 | --                                   | 1010                                                 | --                              | 23.0                              |
| 454738101115400 STINK CREEK EMAP SITE NEAR BULLHEAD, SD (LAT 45 47 38N LONG 101 11 54W)           |      |                                      |                                                      |                                 |                                   |
| JUN 2003<br>05...                                                                                 | 1400 | --                                   | 748                                                  | 11.0                            | 17.0                              |
| 451832102413200 ANTELOPE CREEK EMAP SITE NEAR DATE, SD (LAT 45 18 32N LONG 102 41 32W)            |      |                                      |                                                      |                                 |                                   |
| JUN 2003<br>03...                                                                                 | 1430 | .50                                  | 1540                                                 | 14.0                            | 20.5                              |
| 451200101302500 MOREAU RIVER EMAP SITE NR DEWEY CO. LINE (LAT 45 12 00N LONG 101 30 25W)          |      |                                      |                                                      |                                 |                                   |
| JUN 2003<br>04...                                                                                 | 1400 | 5.3                                  | 1460                                                 | 11.0                            | 21.0                              |
| 455120100125100 SPRING CREEK EMAP SITE NEAR POLLOCK, SD (LAT 45 51 20N LONG 100 12 51W)           |      |                                      |                                                      |                                 |                                   |
| JUN 2003<br>25...                                                                                 | 1400 | --                                   | 1390                                                 | 16.0                            | 20.0                              |
| 430803103375200 HAT CREEK EMAP SITE NEAR RUMFORD, SD (LAT 43 08 03N LONG 103 37 52W)              |      |                                      |                                                      |                                 |                                   |
| JUN 2003<br>10...                                                                                 | 1510 | 2.2                                  | 1160                                                 | 21.0                            | 18.5                              |
| AUG<br>13...                                                                                      | 1315 | .00                                  | 2840                                                 | 38.0                            | 25.0                              |
| 433608103303600 BEAVER CREEK 1/4 MI. S. OF COREY RANCH (LAT 43 36 08N LONG 103 30 36W)            |      |                                      |                                                      |                                 |                                   |
| OCT 2002<br>10...                                                                                 | 0815 | .63                                  | 535                                                  | 0.0                             | 5.0                               |
| NOV<br>26...                                                                                      | 0900 | .55                                  | 575                                                  | 0.0                             | 0.5                               |
| JAN 2003<br>13...                                                                                 | 1110 | .64                                  | 517                                                  | 14.0                            | 1.0                               |
| MAR<br>12...                                                                                      | 0955 | .65                                  | 487                                                  | 11.0                            | 2.0                               |
| MAY<br>13...                                                                                      | 1335 | .75                                  | 504                                                  | 25.0                            | 15.5                              |
| JUL<br>08...                                                                                      | 1345 | .57                                  | 524                                                  | 33.0                            | 21.0                              |
| SEP<br>03...                                                                                      | 1410 | .44                                  | 494                                                  | 26.0                            | 16.5                              |

## WATER QUALITY DATA

| Date                                                                                                 | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 433444103295200 COLD SPRING CR @ 0.1 M W OF PARK BOUNDARY ON HWY 385 (LAT 43 34 44N LONG 103 29 52W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                                | 0915 | .13                                  | 654                                                  | 10.0                            | 6.5                               |
| NOV 26...                                                                                            | 1020 | .12                                  | 663                                                  | -5.0                            | 0.5                               |
| MAR 2003                                                                                             |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                | 1055 | .19                                  | 588                                                  | 15.0                            | 3.0                               |
| MAY 13...                                                                                            | 1415 | .24                                  | 607                                                  | 21.0                            | 13.5                              |
| JUL 08...                                                                                            | 1430 | .20                                  | 624                                                  | 38.0                            | 20.0                              |
| SEP 03...                                                                                            | 1320 | .08                                  | 607                                                  | 22.0                            | 14.5                              |
| 433451103284000 COLD SPRING CR @ 200 FT ABV CONFLUENCE OF BEAVER CR (LAT 43 34 51N LONG 103 28 40W)  |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                                | 1020 | .13                                  | 592                                                  | 14.0                            | 7.5                               |
| NOV 26...                                                                                            | 1135 | .11                                  | 581                                                  | -5.0                            | 3.5                               |
| JAN 2003                                                                                             |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                                | 1245 | .22                                  | 574                                                  | 11.0                            | 6.0                               |
| MAR 12...                                                                                            | 1250 | .16                                  | 548                                                  | 18.0                            | 8.0                               |
| MAY 14...                                                                                            | 0820 | .41                                  | 593                                                  | 17.0                            | 6.5                               |
| 433459103280800 BEAVER CREEK SITE C, WIND CAVE NATIONAL PARK, SD (LAT 43 34 59N LONG 103 28 08W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                                | 1240 | .61                                  | 516                                                  | 17.0                            | 9.5                               |
| MAY 2003                                                                                             |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                                | 1210 | 1.1                                  | 507                                                  | 20.0                            | 15.0                              |
| JUL 09...                                                                                            | 0940 | .48                                  | 537                                                  | 28.0                            | 16.0                              |
| SEP 03...                                                                                            | 1110 | .41                                  | 493                                                  | 20.0                            | 14.5                              |
| 433504103274500 BEAVER CREEK EMAP SITE NR NORBECK LAKE (LAT 43 35 04N LONG 103 27 45W)               |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                             |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                                | 1030 | .76                                  | 517                                                  | 21.0                            | 14.5                              |
| 433506103273500 BEAVER CREEK SITE D, WIND CAVE NATIONAL PARK, SD (LAT 43 35 06N LONG 103 27 35W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                             |      |                                      |                                                      |                                 |                                   |
| 10...                                                                                                | 1325 | .53                                  | 513                                                  | 20.0                            | 8.5                               |
| MAY 2003                                                                                             |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                                | 1120 | .89                                  | 502                                                  | 25.0                            | 12.5                              |
| JUL 09...                                                                                            | 0845 | .44                                  | 537                                                  | 25.0                            | 15.5                              |
| SEP 03...                                                                                            | 1000 | .35                                  | 492                                                  | 20.0                            | 12.5                              |

## MISCELLANEOUS DISCHARGE MEASUREMENTS

## WATER QUALITY DATA

| Date                                                                                               | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 433745103261900 HIGHLAND CR ABV MADISON OUTCROP NR PRINGLE, SD (LAT 43 37 45N LONG 103 26 19W)     |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                           |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                              | 0820 | 1.1                                  | 315                                                  | 20.0                            | 7.5                               |
| NOV 25...                                                                                          | 0900 | 1.1                                  | 296                                                  | -1.0                            | 2.0                               |
| JAN 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                              | 0930 | .95                                  | 300                                                  | 13.0                            | 5.0                               |
| MAR 12...                                                                                          | 0830 | .97                                  | 305                                                  | 14.0                            | 5.5                               |
| JUL 08...                                                                                          | 0940 | .89                                  | 294                                                  | 20.0                            | 15.0                              |
| SEP 02...                                                                                          | 0910 | .86                                  | 302                                                  | 30.0                            | 12.5                              |
| 433706103260400 HIGHLAND CREEK SITE B, WIND CAVE NATIONAL PARK, SD (LAT 43 37 06N LONG 103 26 04W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                           |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                              | 1000 | .75                                  | 313                                                  | 15.0                            | 7.0                               |
| NOV 25...                                                                                          | 1035 | .40                                  | 316                                                  | 0.0                             | 0.0                               |
| MAY 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                              | 1230 | .40                                  | 272                                                  | 19.0                            | 17.5                              |
| JUL 08...                                                                                          | 1105 | .27                                  | 291                                                  | 28.0                            | 20.0                              |
| SEP 02...                                                                                          | 1025 | .35                                  | 301                                                  | 25.0                            | 14.5                              |
| 433654103254800 HIGHLAND CREEK SITE C, WIND CAVE NATIONAL PARK, SD (LAT 43 36 54N LONG 103 25 48W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                           |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                              | 1105 | .82                                  | 305                                                  | 15.0                            | 11.5                              |
| NOV 25...                                                                                          | 1130 | .61                                  | 311                                                  | 3.0                             | 0.5                               |
| MAY 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                              | 1140 | .37                                  | 273                                                  | 15.0                            | 20.0                              |
| JUL 08...                                                                                          | 1150 | .23                                  | 275                                                  | 25.0                            | 28.0                              |
| SEP 02...                                                                                          | 1130 | .33                                  | 290                                                  | 19.0                            | 22.0                              |
| 433639103254000 HIGHLAND CREEK SITE D, WIND CAVE NATIONAL PARK, SD (LAT 43 36 39N LONG 103 25 40W) |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                           |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                              | 1220 | .56                                  | 302                                                  | 22.0                            | 10.5                              |
| MAY 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                              | 1100 | .35                                  | 276                                                  | 16.0                            | 15.5                              |
| JUL 08...                                                                                          | 1220 | .13                                  | 194                                                  | 28.0                            | 21.0                              |
| SEP 02...                                                                                          | 1230 | .22                                  | 268                                                  | 28.0                            | 20.5                              |
| 435914103192900 SPRING CR NR KEYSTONE BLW ROCKERVILLE 1, SD (LAT 43 59 14N LONG 103 19 29W)        |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                              | 1230 | 39                                   | --                                                   | --                              | --                                |
| 28...                                                                                              | 1410 | 23                                   | --                                                   | --                              | --                                |
| 435918103192200 SPRING CR NR KEYSTONE BELOW ROCKERVILLE 2, SD (LAT 43 59 18N LONG 103 19 22W)      |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                           |      |                                      |                                                      |                                 |                                   |
| 28...                                                                                              | 1616 | 8.7                                  | --                                                   | --                              | --                                |

## WATER QUALITY DATA

| Date                                                                                                | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 435930103181000 SPRING CR (MADISON/MINNELUSA CONTACT) NR RAPID CITY (LAT 43 59 30N LONG 103 18 10W) |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                               | 1405 | 13                                   | --                                                   | --                              | --                                |
| 440230103515600 CASTLE CREEK EMAP REFERENCE SITE NR DEERFIELD LAKE (LAT 44 02 30N LONG 103 51 56W)  |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                               | 1320 | --                                   | 446                                                  | 21.0                            | 16.0                              |
| 06413650 LIME CREEK AT MOUTH AT RAPID CITY, SD (LAT 44 04 30N LONG 103 16 00W)                      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                            |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                               | 1105 | 1.4                                  | 1090                                                 | 13.5                            | 8.5                               |
| 435238102244600 DRY CREEK ABV SO. FK. SAGE CR NR WALL, SD (LAT 43 52 38N LONG 102 24 46W)           |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                               | 0940 | .00                                  | --                                                   | --                              | --                                |
| JUL                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                               | 0900 | .00                                  | --                                                   | --                              | --                                |
| AUG                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                               | 0915 | .00                                  | --                                                   | --                              | --                                |
| 435319102254400 SPRING COMPLEX 1, BLW QUINN TABLE NR WALL, SD (LAT 43 53 19N LONG 102 25 44W)       |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                               | 1235 | .00                                  | --                                                   | 27.0                            | --                                |
| JUL                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                               | 1035 | .00                                  | --                                                   | --                              | --                                |
| AUG                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                               | 1025 | .00                                  | --                                                   | 32.0                            | --                                |
| SEP                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                               | 1140 | .00                                  | --                                                   | --                              | --                                |
| 435321102254500 SPRING COMPLEX 2, BLW QUINN TABLE NR WALL, SD (LAT 43 53 21N LONG 102 25 45W)       |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                               | 1240 | .01                                  | 983                                                  | 27.5                            | 13.0                              |
| AUG                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                               | 1020 | .00                                  | 966                                                  | 32.0                            | 13.5                              |
| SEP                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                               | 1135 | .01                                  | 981                                                  | 21.5                            | 12.9                              |
| 435326102254600 CCC SPRING BELOW QUINN TABLE NR WALL, SD (LAT 43 53 26N LONG 102 25 46W)            |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                               | 0945 | .02                                  | 929                                                  | 29.0                            | 15.7                              |
| AUG                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                               | 0950 | .04                                  | 926                                                  | 24.0                            | 15.9                              |
| SEP                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                               | 1100 | .03                                  | 932                                                  | 23.0                            | 13.8                              |
| 435324102254000 SPRING COMPLEX 3, BLW QUINN TABLE NR WALL, SD (LAT 43 53 24N LONG 102 25 40W)       |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                            |      |                                      |                                                      |                                 |                                   |
| 26...                                                                                               | 1245 | .00                                  | 907                                                  | 27.5                            | 14.0                              |
| JUL                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 15...                                                                                               | 1010 | .02                                  | 909                                                  | 30.5                            | 12.2                              |
| AUG                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                               | 1010 | .00                                  | 928                                                  | 32.0                            | 16.6                              |
| SEP                                                                                                 |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                               | 1120 | .02                                  | 926                                                  | 25.0                            | 16.4                              |

## MISCELLANEOUS DISCHARGE MEASUREMENTS

## WATER QUALITY DATA

| Date                                                                                                        | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 435311102245400 CCC SPRING TRIB ABV SO. FK. SAGE CR NR WALL, SD (LAT 43 53 11N LONG 102 24 54W)             |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                       | 0915 | .03                                  | 2040                                                 | 25.5                            | 15.0                              |
| AUG 21...                                                                                                   | 0900 | .00                                  | --                                                   | 22.0                            | 17.0                              |
| SEP 03...                                                                                                   | 1250 | .00                                  | --                                                   | --                              | --                                |
| 435338102252500 SEEP 1 CCC SPRING BLW QUINN TABLE NR WALL, SD (LAT 43 53 38N LONG 102 25 25W)               |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 30...                                                                                                       | 1115 | .00                                  | --                                                   | --                              | --                                |
| JUL 15...                                                                                                   | 1055 | .00                                  | --                                                   | --                              | --                                |
| AUG 20...                                                                                                   | 1120 | .00                                  | --                                                   | 34.5                            | --                                |
| 435346102252000 SEEP 2 CCC SPRING BLW QUINN TABLE NR WALL, SD (LAT 43 53 46N LONG 102 25 20W)               |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 30...                                                                                                       | 1110 | .00                                  | --                                                   | 31.0                            | --                                |
| JUL 15...                                                                                                   | 1100 | .00                                  | --                                                   | --                              | --                                |
| AUG 20...                                                                                                   | 1125 | .00                                  | --                                                   | 34.5                            | --                                |
| 435409102241400 SAGE CR BLW SO. FK. SAGE NR WALL, SD (LAT 43 54 09N LONG 102 24 14W)                        |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                       | 1050 | .22                                  | 680                                                  | 28.0                            | 21.0                              |
| JUL 16...                                                                                                   | 0945 | .00                                  | --                                                   | --                              | --                                |
| AUG 21...                                                                                                   | 1005 | .00                                  | --                                                   | --                              | --                                |
| 435429102242100 UNNAMED TRIB ABV SAGE CREEK (SOUTH) NR WALL, SD (LAT 43 54 29N LONG 102 24 21W)             |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                       | 1115 | .00                                  | --                                                   | --                              | --                                |
| JUL 16...                                                                                                   | 1005 | .00                                  | --                                                   | --                              | --                                |
| AUG 21...                                                                                                   | 1010 | .00                                  | --                                                   | --                              | --                                |
| 435433102250900 SPRING TRIB ABV SAGE CREEK (NORTH) NR WALL, SD (LAT 43 54 33N LONG 102 25 09W)              |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                       | 1140 | .01                                  | 3610                                                 | --                              | 18.1                              |
| AUG 21...                                                                                                   | 1030 | .00                                  | --                                                   | --                              | --                                |
| 435500102250000 UNNAMED TRIB ABV SAGE CR NR NORTH PARK BOUNDARY NR WALL, SD (LAT 43 55 00N LONG 102 25 00W) |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                                       | 1035 | .00                                  | 17700                                                | 32.5                            | 19.5                              |
| AUG 21...                                                                                                   | 1042 | .00                                  | --                                                   | --                              | --                                |
| 435459102250200 SAGE CR NR NORTH PARK BOUNDARY NR WALL, SD (LAT 43 54 59N LONG 102 25 02W)                  |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                                    |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                                       | 1045 | .00                                  | --                                                   | --                              | --                                |
| AUG 21...                                                                                                   | 1045 | .00                                  | --                                                   | --                              | --                                |

## WATER QUALITY DATA

| Date                                                                                                    | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 444332103581200 BELLE FOURCHE R EMAP SITE ABV BELLE FOURCHE, SD (LAT 44 43 32N LONG 103 58 12W)         |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                   | 1430 | 72                                   | 1690                                                 | 24.0                            | 17.0                              |
| 06430950 SPEARFISH CR BL ROBISON GULCH NR SPEARFISH (LAT 44 26 14N LONG 103 52 32W)                     |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 20...                                                                                                   | 1530 | 6.4                                  | --                                                   | --                              | --                                |
| 25...                                                                                                   | 1650 | 6.6                                  | --                                                   | --                              | --                                |
| MAY                                                                                                     |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                                   | 1500 | 5.7                                  | --                                                   | --                              | --                                |
| 443856103541400 HAY CREEK EMAP SITE NR BELLE FOURCHE (LAT 44 38 56N LONG 103 54 14W)                    |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                                   | 0935 | .14                                  | 3320                                                 | 15.0                            | 15.5                              |
| 06434500 INLET CANAL NEAR BELLE FOURCHE (LAT 44 42 14N LONG 103 49 23W)                                 |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                   | 1346 | --                                   | 854                                                  | 15.0                            | 6.0                               |
| JUL                                                                                                     |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                                   | 1118 | 79                                   | 1680                                                 | 30.0                            | 22.5                              |
| 441716103472700 WHITEWOOD CREEK EMAP SITE NEAR ENGLEWOOD, SD (LAT 44 17 16N LONG 103 47 27W)            |      |                                      |                                                      |                                 |                                   |
| MAY 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                                   | 0925 | 3.9                                  | 409                                                  | 4.0                             | 7.5                               |
| JUL                                                                                                     |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                                   | 1400 | --                                   | 409                                                  | 7.6                             | 7.6                               |
| 443942103172800 WILLOW CREEK NEAR VALE, SD (LAT 44 39 42N LONG 103 17 28W)                              |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                                |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                                   | 0910 | .27                                  | 7900                                                 | -3.5                            | 2.0                               |
| 443619103155800 NINEMILE CREEK NEAR VALE, SD (LAT 44 36 19N LONG 103 15 58W)                            |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                                |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                                   | 1030 | .90                                  | 2030                                                 | -1.0                            | 2.0                               |
| 441927103390300 BEAR BUTTE CR ABOVE STRAWBERRY CR NR GALENA, SD (LAT 44 19 27N LONG 103 39 03W)         |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                   | 1240 | 3.9                                  | --                                                   | 23.0                            | 16.0                              |
| 441935103402900 STRAWBERRY CR NR ANCHOR HILL NR GALENA, SD (LAT 44 19 35N LONG 103 40 29W)              |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                   | 1510 | .14                                  | --                                                   | 19.0                            | 14.0                              |
| 441932103400000 STRAWBERRY CR ABOVE BOOMER GULCH NR GALENA, SD (LAT 44 19 32N LONG 103 40 00W)          |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                   | 1420 | .52                                  | --                                                   | 17.0                            | 14.0                              |
| 441926103390600 STRAWBERRY CR NR CONFLUENCE BEAR BUTTE CR NR GALENA, SD (LAT 44 19 26N LONG 103 39 06W) |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                                   | 1330 | .75                                  | --                                                   | 19.0                            | 13.0                              |

## MISCELLANEOUS DISCHARGE MEASUREMENTS

## WATER QUALITY DATA

| Date                                                                                            | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 441930103390800 BEAR BUTTE CR BELOW STRAWBERRY CR NR GALENA, SD (LAT 44 19 30N LONG 103 39 08W) |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                           | 1130 | 5.3                                  | --                                                   | 21.0                            | 11.0                              |
| 441941103383700 BEAR BUTTE CR BELOW RUBY GULCH NR GALENA, SD (LAT 44 19 41N LONG 103 38 37W)    |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 27...                                                                                           | 0930 | 5.3                                  | --                                                   | 21.0                            | 11.0                              |
| 06437400 BEAR BUTTE CREEK AT STURGIS, SD (LAT 44 24 44N LONG 103 29 10W)                        |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                        |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                           | 1430 | 1.1                                  | 1310                                                 | 12.5                            | 11.5                              |
| JUL 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 24...                                                                                           | 1500 | --                                   | 1360                                                 | 40.0                            | 25.0                              |
| 442252102574800 BELLE FOURCHE RIVER ABOVE HEREFORD, SD (LAT 44 22 52N LONG 102 57 48W)          |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                        |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                           | 1015 | 64                                   | 2180                                                 | 9.0                             | 8.5                               |
| 23...                                                                                           | 1150 | --                                   | 2030                                                 | 2.0                             | 3.5                               |
| NOV                                                                                             |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                           | 1045 | 41                                   | 2500                                                 | 10.0                            | 1.5                               |
| 22...                                                                                           | 0746 | --                                   | 2500                                                 | 1.0                             | 4.5                               |
| 06437600 BELLE FOURCHE R NEAR HEREFORD, SD (LAT 44 21 02N LONG 102 50 17W)                      |      |                                      |                                                      |                                 |                                   |
| OCT 2002                                                                                        |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                           | 1145 | 61                                   | 2110                                                 | 12.0                            | 9.0                               |
| NOV                                                                                             |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                           | 1220 | 39                                   | --                                                   | 13.0                            | 3.0                               |
| 22...                                                                                           | 0920 | --                                   | 2480                                                 | 7.0                             | 4.5                               |
| 434149102094500 WHITE RIVER EMAP SITE NR JACKSON COUNTY LINE (LAT 43 41 49N LONG 102 09 45W)    |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                           | 1500 | 75                                   | 616                                                  | 28.0                            | 25.0                              |
| 433229101431000 EAGLE NEST CREEK EMAP SITE NR WANBLEE (LAT 43 32 29N LONG 101 43 10W)           |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                           | 1025 | .32                                  | 593                                                  | 24.0                            | 20.0                              |
| 16...                                                                                           | 1400 | --                                   | 593                                                  | 24.0                            | 20.0                              |
| 433801101272300 PASS CREEK EMAP REFERENCE SITE NEAR HWY 44 (LAT 43 38 01N LONG 101 27 23W)      |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                           | 1300 | 3.3                                  | 446                                                  | 22.0                            | 25.5                              |
| 433006101120000 BLACKPIPE CREEK EMAP REFERENCE SITE NR HWY 63 (LAT 43 30 06N LONG 101 12 00W)   |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                           | 1345 | 2.0                                  | 414                                                  | 23.0                            | 21.0                              |
| 10...                                                                                           | 1400 | --                                   | 414                                                  | 23.0                            | 21.0                              |
| 434601100500500 WHITE RIVER EMAP SITE NR OKATON, SD (LAT 43 46 01N LONG 100 50 05W)             |      |                                      |                                                      |                                 |                                   |
| AUG 2003                                                                                        |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                           | 1400 | --                                   | 2420                                                 | 35.0                            | 27.0                              |

## WATER QUALITY DATA

| Date                                                                                                     | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|----------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 430445101395900 LAKE CREEK EMAP REFERENCE SITE NR LACREEK NATL W. REFUGE (LAT 43 04 45N LONG 101 39 59W) |      |                                      |                                                      |                                 |                                   |
| AUG 2003<br>04...                                                                                        | 1015 | 8.6                                  | 115                                                  | 34.0                            | 22.0                              |
| 430647101062100 COFFEE CREEK ABOVE SPRING CREEK, SD (LAT 43 06 47N LONG 101 06 21W)                      |      |                                      |                                                      |                                 |                                   |
| NOV 2002<br>06...                                                                                        | 0815 | 4.9                                  | 270                                                  | 12.0                            | 6.0                               |
| 430610101044300 SPRING CREEK (NR SPRING CR) NEAR ST. FRANCIS, SD (LAT 43 06 10N LONG 101 04 43W)         |      |                                      |                                                      |                                 |                                   |
| NOV 2002<br>06...                                                                                        | 0930 | 4.2                                  | 202                                                  | 5.0                             | 6.0                               |
| APR 2003<br>22...                                                                                        | 0720 | 16                                   | 302                                                  | 8.0                             | 10.5                              |
| MAY<br>07...                                                                                             | 0725 | 25                                   | 318                                                  | 8.0                             | 12.0                              |
| JUN<br>17...                                                                                             | 1050 | 6.0                                  | 255                                                  | 28.0                            | 19.0                              |
| JUL<br>09...                                                                                             | 0735 | 7.6                                  | 262                                                  | 21.0                            | 17.5                              |
| AUG<br>11...                                                                                             | 1200 | 3.9                                  | 182                                                  | 29.0                            | 20.5                              |
| SEP<br>03...                                                                                             | 0850 | 3.8                                  | 209                                                  | 16.0                            | 12.5                              |
| 23...                                                                                                    | 0800 | 3.6                                  | 214                                                  | 9.0                             | 9.5                               |
| 430724101010200 SAWMILL CANYON NEAR SPRING CREEK, SD (LAT 43 07 24N LONG 101 01 02W)                     |      |                                      |                                                      |                                 |                                   |
| NOV 2002<br>06...                                                                                        | 1030 | 1.3                                  | 302                                                  | 12.0                            | 5.5                               |
| MAR 2003<br>14...                                                                                        | 0700 | --                                   | 305                                                  | 0.0                             | 5.0                               |
| APR<br>22...                                                                                             | 0800 | 1.3                                  | 310                                                  | 9.0                             | 9.0                               |
| MAY<br>07...                                                                                             | 0815 | 1.4                                  | 292                                                  | 11.0                            | 9.0                               |
| JUN<br>17...                                                                                             | 1155 | 1.1                                  | 315                                                  | 28.0                            | 19.5                              |
| JUL<br>09...                                                                                             | 0845 | 1.4                                  | 318                                                  | 23.0                            | 16.5                              |
| AUG<br>11...                                                                                             | 1320 | .96                                  | 243                                                  | 29.0                            | 22.0                              |
| SEP<br>03...                                                                                             | 1000 | .93                                  | 211                                                  | 20.0                            | 13.0                              |
| 23...                                                                                                    | 0845 | 1.1                                  | 291                                                  | 11.0                            | 8.5                               |
| 430939101003500 LITTLE WHITE RIVER, VALANDRA BRIDGE NR SPRING CREEK, SD (LAT 43 09 39N LONG 101 00 35W)  |      |                                      |                                                      |                                 |                                   |
| NOV 2002<br>07...                                                                                        | 1045 | 75                                   | 261                                                  | 11.0                            | 5.5                               |
| APR 2003<br>22...                                                                                        | 0900 | 136                                  | 279                                                  | 12.0                            | 11.0                              |
| MAY<br>07...                                                                                             | 0900 | 143                                  | 301                                                  | 13.0                            | 12.5                              |
| JUN<br>17...                                                                                             | 1400 | 107                                  | 307                                                  | 30.0                            | 24.0                              |
| JUL<br>09...                                                                                             | 1145 | 72                                   | 318                                                  | 28.5                            | 24.5                              |
| AUG<br>11...                                                                                             | 1415 | 53                                   | 250                                                  | 31.0                            | 28.5                              |
| 26...                                                                                                    | 1330 | --                                   | 260                                                  | 31.0                            | 27.8                              |
| SEP<br>23...                                                                                             | 1010 | 57                                   | 277                                                  | 16.0                            | 12.5                              |

## MISCELLANEOUS DISCHARGE MEASUREMENTS

## WATER QUALITY DATA

| Date                                                                                           | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 431146100574900 OMAHA CREEK NEAR ROSEBUD, SD (LAT 43 11 46N LONG 100 57 49W)                   |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                       |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                          | 1120 | 1.2                                  | 396                                                  | 12.0                            | 3.5                               |
| MAR 2003                                                                                       |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                          | 1610 | --                                   | 275                                                  | 22.0                            | 7.0                               |
| APR                                                                                            |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                          | 0945 | 1.1                                  | 399                                                  | 12.0                            | 8.5                               |
| MAY                                                                                            |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                          | 0945 | 1.2                                  | 391                                                  | 20.0                            | 10.0                              |
| JUN                                                                                            |      |                                      |                                                      |                                 |                                   |
| 17...                                                                                          | 1430 | .92                                  | 400                                                  | 31.0                            | 20.0                              |
| JUL                                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                          | 1045 | 1.3                                  | 415                                                  | 28.0                            | 19.0                              |
| AUG                                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                          | 1455 | .54                                  | 339                                                  | 30.0                            | 22.0                              |
| SEP                                                                                            |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                          | 1335 | .59                                  | 388                                                  | 27.0                            | 17.0                              |
| 23...                                                                                          | 1105 | .87                                  | 403                                                  | 20.0                            | 11.0                              |
| 431205100580200 BEADS CREEK NR ROSEBUD, SD (LAT 43 12 05N LONG 100 58 02W)                     |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                       |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                          | 1155 | 2.1                                  | 308                                                  | 16.0                            | 5.0                               |
| 431312100573600 UNNAMED TRIB CRAZY HORSE CANYON NR ROSEBUD, SD (LAT 43 13 12N LONG 100 57 36W) |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                       |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                          | 1230 | .36                                  | 405                                                  | 11.0                            | 2.0                               |
| 431343100571700 SOUTH FORK IRONWOOD CREEK NEAR ROSEBUD, SD (LAT 43 13 43N LONG 100 57 17W)     |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                       |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                          | 1305 | 1.9                                  | 301                                                  | 13.0                            | 6.0                               |
| MAR 2003                                                                                       |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                          | 1530 | --                                   | 235                                                  | 23.0                            | 5.0                               |
| APR                                                                                            |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                          | 1020 | 2.2                                  | 309                                                  | 15.0                            | 10.0                              |
| MAY                                                                                            |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                          | 1040 | 2.1                                  | 312                                                  | 18.0                            | 13.0                              |
| JUN                                                                                            |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                          | 0755 | 1.7                                  | 302                                                  | 11.0                            | 14.0                              |
| JUL                                                                                            |      |                                      |                                                      |                                 |                                   |
| 09...                                                                                          | 1015 | 1.9                                  | 296                                                  | 27.0                            | 19.5                              |
| AUG                                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                          | 1520 | 1.2                                  | 276                                                  | 30.0                            | 25.5                              |
| SEP                                                                                            |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                          | 1425 | 1.0                                  | 314                                                  | 28.0                            | 19.5                              |
| 23...                                                                                          | 1205 | 1.7                                  | 309                                                  | 26.0                            | 14.5                              |
| 06449300 LITTLE WHITE R ABV ROSEBUD, SD (LAT 43 15 47N LONG 100 55 02W)                        |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                       |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                          | 0935 | 96                                   | 271                                                  | 10.0                            | 3.5                               |
| MAR 2003                                                                                       |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                          | 1455 | --                                   | 253                                                  | -1.0                            | 10.0                              |
| APR                                                                                            |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                          | 1400 | 150                                  | 286                                                  | 19.0                            | 13.5                              |
| MAY                                                                                            |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                          | 1100 | 180                                  | 309                                                  | 21.5                            | 14.5                              |
| JUN                                                                                            |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                          | 0900 | 100                                  | 314                                                  | 20.0                            | 19.0                              |
| JUL                                                                                            |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                          | 1705 | 93                                   | 318                                                  | 34.0                            | 29.0                              |
| AUG                                                                                            |      |                                      |                                                      |                                 |                                   |
| 11...                                                                                          | 1615 | 55                                   | 256                                                  | 30.0                            | 29.5                              |
| SEP                                                                                            |      |                                      |                                                      |                                 |                                   |
| 23...                                                                                          | 1330 | 60                                   | 287                                                  | 31.0                            | 17.5                              |

## WATER QUALITY DATA

| Date                                                                                                             | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|------------------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 431310100501600 EAST TRIB ROSEBUD CREEK NR ROSEBUD, SD (LAT 43 13 10N LONG 100 50 16W)                           |      |                                      |                                                      |                                 |                                   |
| AUG 2003                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                            | 0650 | 3.0                                  | 335                                                  | 21.5                            | 15.1                              |
| 06449400 ROSEBUD CR AT ROSEBUD, SD (LAT 43 14 14N LONG 100 51 26W)                                               |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                                            | 1310 | 11                                   | 336                                                  | 18.0                            | 6.0                               |
| MAR 2003                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 14...                                                                                                            | 0955 | --                                   | 337                                                  | --                              | 6.5                               |
| APR                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                                            | 1310 | 10                                   | 338                                                  | 19.5                            | 13.0                              |
| MAY                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                                            | 1215 | 11                                   | 345                                                  | 17.0                            | 16.0                              |
| JUN                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                                            | 1020 | 9.8                                  | 350                                                  | 27.0                            | 19.0                              |
| JUL                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                            | 1610 | 9.8                                  | 337                                                  | 31.0                            | 24.5                              |
| AUG                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                            | 0815 | 5.9                                  | 330                                                  | 19.5                            | 21.0                              |
| SEP                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 03...                                                                                                            | 1525 | 7.3                                  | 328                                                  | 28.0                            | 20.5                              |
| 22...                                                                                                            | 1455 | 7.7                                  | 340                                                  | 20.0                            | 15.0                              |
| 431600100433600 ROSEBUD CREEK AT LITTLE WHITE RIVER CONFLUENCE BELOW ROSEBUD, SD (LAT 43 16 00N LONG 100 43 36W) |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                                            | 0820 | 11                                   | 353                                                  | 7.0                             | 3.0                               |
| APR 2003                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 22...                                                                                                            | 1310 | 10                                   | 339                                                  | 19.0                            | 15.5                              |
| MAY                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                            | 0935 | 10                                   | 365                                                  | 15.0                            | 13.5                              |
| JUN                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                                            | 1210 | 10                                   | 350                                                  | 28.0                            | 20.5                              |
| JUL                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                            | 1500 | 11                                   | 338                                                  | 30.0                            | 28.0                              |
| 431823100523400 WIGWAM CREEK NEAR SOLDIER CREEK, SD (LAT 43 18 23N LONG 100 52 34W)                              |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                                            | 1420 | .18                                  | 532                                                  | 8.0                             | 4.0                               |
| 431552100473600 SOLDIER CREEK ABV SWIFT BEAR LAKE NR ROSEBUD, SD (LAT 43 15 52N LONG 100 47 36W)                 |      |                                      |                                                      |                                 |                                   |
| AUG 2003                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                            | 1030 | .37                                  | 325                                                  | 26.0                            | 22.6                              |
| 431911100525200 SOLDIER CREEK NR ROSEBUD, SD (LAT 43 19 11N LONG 100 52 52W)                                     |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                                            | 1355 | 3.9                                  | 380                                                  | 8.0                             | 0.0                               |
| APR 2003                                                                                                         |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                                            | 1155 | 7.1                                  | 381                                                  | 19.0                            | 9.5                               |
| MAY                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                                            | 1315 | 4.7                                  | 394                                                  | 15.0                            | 15.0                              |
| JUN                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 18...                                                                                                            | 1330 | 1.8                                  | 352                                                  | 28.0                            | 20.0                              |
| JUL                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                            | 1310 | 3.1                                  | 305                                                  | 29.0                            | 22.5                              |
| AUG                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                            | 1100 | .00                                  | --                                                   | 28.5                            | --                                |
| SEP                                                                                                              |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                                            | 1000 | .00                                  | --                                                   | 29.0                            | --                                |
| 23...                                                                                                            | 1420 | .00                                  | --                                                   | --                              | --                                |

## MISCELLANEOUS DISCHARGE MEASUREMENTS

## WATER QUALITY DATA

| Date                                                                                                            | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|-----------------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 432136100520700 LITTLE WHITE RIVER NR TODD/MELLETT COUNTY LINE, SD (LAT 43 21 36N LONG 100 52 07W)              |      |                                      |                                                      |                                 |                                   |
| NOV 2002                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                                           | 1210 | 108                                  | 286                                                  | 20.0                            | 6.0                               |
| APR 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                                           | 1000 | 187                                  | 293                                                  | 16.0                            | 9.5                               |
| MAY                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                                           | 1520 | 196                                  | 312                                                  | 18.0                            | 17.5                              |
| JUN                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                                           | 0750 | 97                                   | 286                                                  | 20.0                            | 18.0                              |
| JUL                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                           | 1105 | 123                                  | 265                                                  | 27.5                            | 22.5                              |
| AUG                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                           | 1230 | 61                                   | 308                                                  | 33.0                            | 26.0                              |
| 26...                                                                                                           | 1000 | --                                   | 246                                                  | 34.0                            | 25.6                              |
| SEP                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                                           | 1050 | 59                                   | 282                                                  | 29.0                            | 19.0                              |
| 22...                                                                                                           | 1220 | 69                                   | 296                                                  | 17.0                            | 16.5                              |
| 432358100502600 CUT MEAT CR NR CONFLUENCE LITTLE WHITE RIVER BLW SOLDIER CR, SD (LAT 43 23 58N LONG 100 50 26W) |      |                                      |                                                      |                                 |                                   |
| MAR 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 13...                                                                                                           | 1135 | --                                   | 425                                                  | 21.5                            | 1.0                               |
| APR                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 21...                                                                                                           | 0850 | 6.9                                  | 498                                                  | 14.5                            | 8.0                               |
| MAY                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 07...                                                                                                           | 1240 | 7.7                                  | 524                                                  | 16.0                            | 16.0                              |
| JUN                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 19...                                                                                                           | 0925 | .55                                  | 326                                                  | 24.0                            | 23.5                              |
| JUL                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 08...                                                                                                           | 1005 | .83                                  | 542                                                  | 24.0                            | 21.0                              |
| AUG                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                           | 1250 | .00                                  | --                                                   | 33.0                            | --                                |
| SEP                                                                                                             |      |                                      |                                                      |                                 |                                   |
| 04...                                                                                                           | 1130 | .00                                  | --                                                   | 29.0                            | --                                |
| 23...                                                                                                           | 1500 | .00                                  | --                                                   | --                              | --                                |
| 432446098524100 PLATTE CREEK EMAP SITE ABOVE PLATTE, SD (LAT 43 24 46N LONG 098 52 41W)                         |      |                                      |                                                      |                                 |                                   |
| JUN 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 24...                                                                                                           | 1400 | --                                   | 2010                                                 | 24.0                            | 23.0                              |
| 431130100191000 KEYA PAHA R EMAP REFERENCE SITE NR HIDDEN TIMBER, SD (LAT 43 11 30N LONG 100 19 10W)            |      |                                      |                                                      |                                 |                                   |
| AUG 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 06...                                                                                                           | 1100 | 6.7                                  | 425                                                  | 25.0                            | 25.0                              |
| 430707100060700 SAND CREEK EMAP SITE BELOW KEYAPAHA, SD (LAT 43 07 07N LONG 100 06 07W)                         |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 02...                                                                                                           | 1400 | --                                   | 489                                                  | 23.0                            | 22.0                              |
| 430258099105200 PONCA CREEK EMAP SITE NR HERRICK, SD (LAT 43 02 58N LONG 099 10 52W)                            |      |                                      |                                                      |                                 |                                   |
| AUG 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 12...                                                                                                           | 1400 | --                                   | 909                                                  | 26.0                            | 25.0                              |
| 454002098311100 ELM CREEK EMAP REFERENCE SITE NEAR WESTPORT, SD (LAT 45 40 02N LONG 098 31 11W)                 |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 29...                                                                                                           | 1500 | 6.5                                  | 1590                                                 | 24.0                            | 25.0                              |
| 444313098374300 TURTLE CREEK EMAP REFERENCE SITE NR CONFLUENCE @ WOLF CR (LAT 44 43 13N LONG 098 37 43W)        |      |                                      |                                                      |                                 |                                   |
| JUL 2003                                                                                                        |      |                                      |                                                      |                                 |                                   |
| 16...                                                                                                           | 1245 | .33                                  | 1130                                                 | 23.5                            | 26.0                              |

## WATER QUALITY DATA

| Date                                                                                                    | Time | Instantaneous discharge, cfs (00061) | Specific conductance, wat unf uS/cm 25 deg C (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) |
|---------------------------------------------------------------------------------------------------------|------|--------------------------------------|------------------------------------------------------|---------------------------------|-----------------------------------|
| 441552098115500 CAIN CREEK EMAP REFERENCE SITE NR CONFLUENCE @ JAMES R (LAT 44 15 52N LONG 098 11 55W)  |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>15...                                                                                       | 1400 | --                                   | 2180                                                 | 21.0                            | 27.0                              |
| 433743098021700 ENEMY CREEK EMAP REFERENCE SITE BELOW MITCHELL, SD (LAT 43 37 43N LONG 098 02 17W)      |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>17...                                                                                       | 1400 | --                                   | 2550                                                 | 29.0                            | 27.0                              |
| 432301097361700 WOLF CREEK EMAP REFERENCE SITE NEAR WOLF CREEK COLONY (LAT 43 23 01N LONG 097 36 17W)   |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>30...                                                                                       | 1245 | 8.6                                  | 2260                                                 | 30.0                            | 26.0                              |
| 06478535 EAST FORK VERMILLION RIVER NEAR RAMONA, SD (LAT 44 06 35N LONG 097 23 13W)                     |      |                                      |                                                      |                                 |                                   |
| OCT 2002<br>01...                                                                                       | 0930 | 2.8                                  | 1520                                                 | 13.0                            | 12.0                              |
| 431530097142800 TURKEY RIDGE CR EMAP REFERENCE SITE NR TURKEY RIDGE, SD (LAT 43 15 30N LONG 097 14 28W) |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>31...                                                                                       | 1230 | 2.4                                  | 1920                                                 | 33.0                            | 23.0                              |
| 452055097123200 OWENS CREEK EMAP REFERENCE SITE NEAR ORTLEY, SD (LAT 45 20 55N LONG 097 12 32W)         |      |                                      |                                                      |                                 |                                   |
| JUL 2003<br>24...                                                                                       | 1315 | 3.0                                  | 458                                                  | 26.0                            | 18.5                              |
| 06479167 LITTLE RUSH LAKE OUTFLOW NR WAUBAY, SD (LAT 45 19 18N LONG 097 19 37W)                         |      |                                      |                                                      |                                 |                                   |
| OCT 2002<br>01...                                                                                       | 1645 | 17                                   | 1340                                                 | 9.0                             | 14.0                              |
| APR 2003<br>29...                                                                                       | 1010 | 7.8                                  | 1020                                                 | 5.0                             | 11.0                              |
| JUL<br>07...                                                                                            | 1650 | 8.8                                  | 904                                                  | 27.0                            | 26.0                              |
| 433541096355800 BIG SIOUX RIVER AT BRANDON, SD (LAT 43 35 41N LONG 096 35 58W)                          |      |                                      |                                                      |                                 |                                   |
| JAN 2003<br>23...                                                                                       | 1125 | 37                                   | 1750                                                 | -21.0                           | 0.0                               |

The ground-water observation well network in South Dakota is used to monitor quantitative and at times qualitative changes in the glacial and bedrock aquifers. Federal, state, and local agencies monitor approximately 2,000 wells throughout the state. These wells are a sample of the South Dakota observation well network. All measurements are in feet above or below land-surface datum.

## BEADLE COUNTY

442254098174501.

LOCATION.--Lat 44° 22'54", long 98° 17'45", in SE  $\frac{1}{4}$  NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.32, T.111 N., R.62 W., Hydrologic Unit 1016006, 4 mi west and 1 mi north of Huron.  
Owner: South Dakota Department of Environment and Natural Resources (SDDENR). SDDENR identifier BD-79C.

AQUIFER.--Warren.

WELL CHARACTERISTICS.-- Drilled observation water well, diameter 2 in., depth 110 ft, cased to 105 ft, finished with well point and 10 ft of slotted casing.

INSTRUMENTATION.--No instrumentation. Periodic measurements made approximately every 6 weeks.

DATUM.--Elevation of land-surface datum is 1,309.00 ft above NGVD of 1929. Measuring point: Top of casing, 2.9 ft above land-surface datum.

PERIOD OF RECORD.--June 26, 1979, to Apr. 30, 2000, data collected and reported by SDDENR, periodic measurements by USGS May 1, 2000, to present.

EXTREMES FOR PERIOD OF RECORD.--Maximum water level, 45.10 ft below land-surface datum, Aug. 18, 1988; minimum water level, 9.80 ft below land-surface datum, Aug. 26, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| DATE    | WATER<br>LEVEL | DATE    | WATER<br>LEVEL | DATE    | WATER<br>LEVEL |
|---------|----------------|---------|----------------|---------|----------------|
| Oct. 7  | 28.15          | Jan. 7  | 24.85          | Apr. 22 | 23.94          |
| Nov. 14 | 26.40          | Mar. 13 | 24.38          | June 9  | 24.31          |

## GRANT COUNTY

451848096363501.

LOCATION.--Lat 45° 18'48", long 96° 36'35", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.6, T.121 N., R.47 W., Hydrologic Unit 07020001, 6 mi north and 1.0 mi east of Milbank. Owner: South Dakota Department of Environment and Natural Resources (SDDENR). SDDENR identifier GT-79E.

AQUIFER.--Veblen.

WELL CHARACTERISTICS.-- Drilled observation water well, diameter 2 in., depth 132 ft, cased to 123 ft, open hole 123 to 128 ft.

INSTRUMENTATION.--No instrumentation. Periodic measurements made approximately every 6 weeks.

DATUM.--Elevation of land-surface datum is 1,104.00 ft above NGVD of 1929. Measuring point: Top of casing, 2.8 ft above land-surface datum.

PERIOD OF RECORD.--Oct. 25, 1979, to Apr. 19, 2000, data collected and reported by SDDENR, periodic measurements by USGS Apr. 20, 2000, to present.

EXTREMES FOR PERIOD OF RECORD.--Maximum water level, 38.4 ft below land-surface datum, Oct. 4 and Nov. 8, 1983; minimum water level, 19.2 ft below land-surface datum, Apr. 29, 1997.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| DATE    | WATER<br>LEVEL | DATE    | WATER<br>LEVEL | DATE   | WATER<br>LEVEL |
|---------|----------------|---------|----------------|--------|----------------|
| Oct. 1  | 29.65          | Mar. 10 | 30.75          | June 9 | 31.10          |
| Nov. 13 | 29.86          | Apr. 28 | 31.01          | July 8 | 31.37          |
| Jan. 8  | 30.25          |         |                |        |                |

## MEADE COUNTY

441759103261202.

LOCATION.--Lat 44° 17' 59", long 103° 26' 12", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.19, T.4 N., R.6 E., Hydrologic Unit 10120111, at Interstate 90 Tilford exit.  
 Owner: South Dakota Department of Environment and Natural Resources (SDDENR). SDDENR identifier MD90A.

AQUIFER.--Madison Formation.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in, depth 840 ft, 750 ft of 5-in steel casing. Open hole from 750 to 840 ft.

INSTRUMENTATION.--Oct. 1 to Dec. 27, 2002, non-submersible transducer and satellite data-collection platform. Dec. 27, 2002, to Sept. 30, 2003, submersible transducer and satellite data-collection platform.

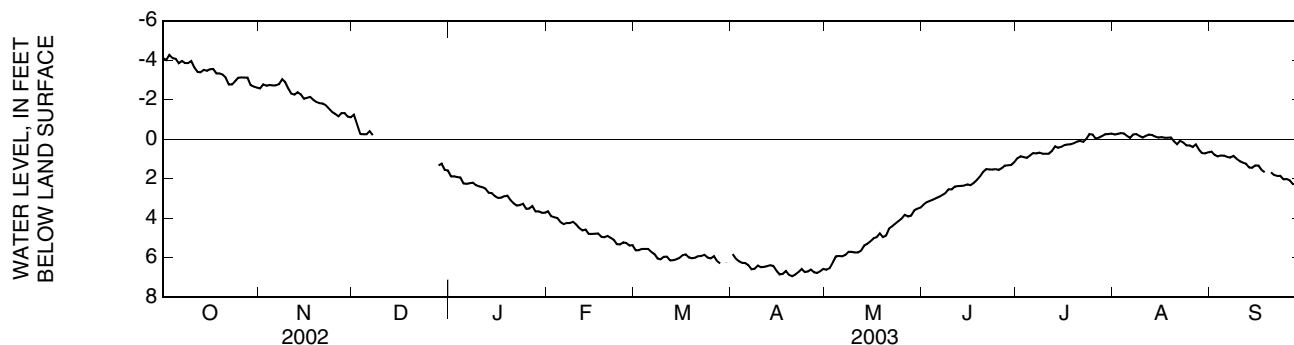
DATUM.--Measuring point Oct. 1, 2002, to Dec. 27, 2002, -4.1 ft where reference gage was mounted. Dec. 27, 2002, to Sept. 30, 2003, -4.0 ft at red dot on well fittings. Elevation of land-surface datum is 3,639.1 ft above NGVD of 1988.

PERIOD OF RECORD.--July 1991 to September 1998 published in Black Hills Hydrology Study, Open-File Reports 94-319, 96-399, and 00-70, October 2002 to September 30, 2003. Records from October 1998 to September 2002 are unpublished and available in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum water level, -34.34 ft above land-surface datum, June 15, 1997; minimum water level, 54.96 ft below land-surface datum, Mar. 31, Apr. 1, 3, 7, 1993.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MAXIMUM VALUES

| DAY | OCT   | NOV   | DEC   | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG   | SEP  |
|-----|-------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| 1   | -4.11 | -2.57 | -1.24 | 1.89 | 3.66 | 5.64 | 5.82 | 6.62 | 3.32 | 0.97  | -0.23 | 0.63 |
| 2   | -4.00 | -2.77 | -0.76 | 1.88 | 3.91 | 5.63 | 6.06 | 6.53 | 3.20 | 0.87  | -0.27 | 0.80 |
| 3   | -4.27 | -2.71 | -0.26 | 1.92 | 3.96 | 5.56 | 6.19 | 6.25 | 3.13 | 0.91  | -0.31 | 0.88 |
| 4   | -4.11 | -2.75 | -0.25 | 1.94 | 4.00 | 5.56 | 6.27 | 5.94 | 3.07 | 0.95  | -0.29 | 0.83 |
| 5   | -4.07 | -2.72 | -0.25 | 2.25 | 4.20 | 5.56 | 6.28 | 5.92 | 2.99 | 0.84  | -0.16 | 0.84 |
| 6   | -3.85 | -2.72 | -0.40 | 2.26 | 4.31 | 5.72 | 6.38 | 5.94 | 2.92 | 0.71  | -0.06 | 0.90 |
| 7   | -3.96 | -2.78 | -0.20 | 2.23 | 4.25 | 5.82 | 6.59 | 5.87 | 2.82 | 0.72  | -0.24 | 0.93 |
| 8   | -3.86 | -3.03 | ---   | 2.21 | 4.25 | 6.05 | 6.57 | 5.71 | 2.73 | 0.68  | -0.26 | 0.85 |
| 9   | -3.86 | -2.89 | ---   | 2.34 | 4.19 | 6.09 | 6.41 | 5.71 | 2.54 | 0.74  | -0.16 | 0.99 |
| 10  | -3.96 | -2.56 | ---   | 2.39 | 4.32 | 5.96 | 6.49 | 5.74 | 2.55 | 0.74  | -0.08 | 1.11 |
| 11  | -3.63 | -2.30 | ---   | 2.43 | 4.51 | 5.95 | 6.47 | 5.74 | 2.40 | 0.74  | -0.16 | 1.19 |
| 12  | -3.41 | -2.25 | ---   | 2.51 | 4.62 | 6.15 | 6.44 | 5.65 | 2.38 | 0.60  | -0.23 | 1.24 |
| 13  | -3.39 | -2.37 | ---   | 2.72 | 4.58 | 6.13 | 6.39 | 5.39 | 2.37 | 0.37  | -0.21 | 1.44 |
| 14  | -3.51 | -2.27 | ---   | 2.73 | 4.80 | 6.09 | 6.42 | 5.31 | 2.35 | 0.44  | -0.13 | 1.45 |
| 15  | -3.46 | -2.05 | ---   | 2.89 | 4.80 | 6.02 | 6.67 | 5.18 | 2.30 | 0.39  | -0.08 | 1.33 |
| 16  | -3.54 | -2.09 | ---   | 2.98 | 4.79 | 5.89 | 6.85 | 5.03 | 2.33 | 0.30  | -0.10 | 1.34 |
| 17  | -3.56 | -2.14 | ---   | 2.97 | 4.78 | 5.84 | 6.83 | 4.97 | 2.22 | 0.27  | -0.07 | 1.57 |
| 18  | -3.33 | -1.99 | ---   | 2.90 | 4.95 | 5.99 | 6.68 | 4.78 | 2.08 | 0.26  | -0.07 | 1.67 |
| 19  | -3.33 | -1.88 | ---   | 2.86 | 4.97 | 6.03 | 6.88 | 4.96 | 1.90 | 0.21  | -0.09 | ---  |
| 20  | -3.27 | -1.82 | ---   | 3.08 | 4.91 | 6.01 | 6.95 | 4.89 | 1.66 | 0.12  | 0.11  | 1.69 |
| 21  | -3.13 | -1.81 | ---   | 3.25 | 5.00 | 5.93 | 6.87 | 4.53 | 1.52 | 0.09  | 0.26  | 1.82 |
| 22  | -2.77 | -1.72 | ---   | 3.37 | 5.10 | 5.92 | 6.74 | 4.41 | 1.53 | 0.14  | 0.08  | 1.87 |
| 23  | -2.77 | -1.55 | ---   | 3.34 | 5.32 | 5.86 | 6.58 | 4.28 | 1.54 | -0.02 | 0.17  | 1.86 |
| 24  | -2.93 | -1.38 | ---   | 3.28 | 5.34 | 6.00 | 6.73 | 4.15 | 1.52 | -0.26 | 0.32  | 2.04 |
| 25  | -3.11 | -1.28 | ---   | 3.53 | 5.23 | 6.04 | 6.71 | 4.03 | 1.56 | -0.23 | 0.32  | 2.02 |
| 26  | -3.13 | -1.16 | ---   | 3.52 | 5.26 | 5.93 | 6.61 | 3.84 | 1.48 | -0.02 | 0.40  | 2.09 |
| 27  | -3.12 | -1.32 | ---   | 3.39 | 5.39 | 6.17 | 6.75 | 3.92 | 1.34 | -0.07 | 0.27  | 2.27 |
| 28  | -3.12 | -1.32 | 1.33  | 3.67 | 5.37 | 6.30 | 6.78 | 3.88 | 1.32 | -0.15 | 0.54  | 2.29 |
| 29  | -2.73 | -1.14 | 1.24  | 3.66 | ---  | ---  | 6.69 | 3.61 | 1.31 | -0.25 | 0.71  | 2.40 |
| 30  | -2.66 | -1.11 | 1.56  | 3.73 | ---  | 6.27 | 6.58 | 3.53 | 1.16 | -0.26 | 0.72  | 2.45 |
| 31  | -2.61 | ---   | 1.58  | 3.73 | ---  | ---  | ---  | 3.47 | ---  | -0.28 | 0.67  | ---  |
| MAX | -2.61 | -1.11 | ---   | 3.73 | 5.39 | ---  | 6.95 | 6.62 | 3.32 | 0.97  | 0.72  | ---  |



## MINNEHAHA COUNTY

434330096434801.

LOCATION.--Lat 43° 43'30", long 96° 43'48", SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.16, T.103 N., R.49 W., Hydrologic Unit 10170203, 2.5 mi south of Baltic. Owner: South Dakota Department of Environment and Natural Resources (SDDENR). SDDENR identifier MA-80G.

AQUIFER.--Big Sioux.

WELL CHARACTERISTICS.-- Drilled observation water well, diameter 2 in., depth 36 ft, cased to 24 ft, finished with 5 ft of schedule 80 PVC screen from 24 to 29 ft.

INSTRUMENTATION.--No instrumentation. Periodic measurements made by USGS approximately every 6 weeks.

DATUM.--Elevation of land-surface datum is 1,453 ft above NGVD of 1929. Measuring point: Top of casing, 2.1 ft above land-surface datum.

PERIOD OF RECORD.--Oct. 22, 1980, to Apr. 25, 2000, data collected and reported by SDDENR, periodic measurements by USGS Apr. 26, 2000, to present.

EXTREMES FOR PERIOD OF RECORD.--Maximum water level, 10.0 ft below land-surface datum, Apr. 10, 1990; minimum water level, 0.22 ft below land-surface datum, July 8, 1993.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| DATE    | WATER<br>LEVEL | DATE    | WATER<br>LEVEL | DATE    | WATER<br>LEVEL |
|---------|----------------|---------|----------------|---------|----------------|
| Oct. 1  | 7.80           | Mar. 12 | 8.03           | June 6  | 5.19           |
| Nov. 13 | 6.65           | Apr. 22 | 5.60           | July 15 | 5.05           |
| Jan. 2  | 7.07           |         |                |         |                |

## SHANNON COUNTY

430027102311801.

LOCATION.--Lat 43°00'27", long 102°31'18", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.17, T.35 N., R.44 W., Hydrologic Unit 10140201, 2.0 mi southeast of Pine Ridge.  
Owner: Oglala Sioux Tribe.

AQUIFER.--Arikaree.

WELL CHARACTERISTICS.--Drilled artesian production well, diameter 16 in, depth 180 ft, slotted from 60 to 180 ft. Inside is a 12-in steel liner from -2.00 to 60 ft with a 12-in diameter wire-wrapped screen from 60 to 140 ft. Annular space is filled with Luther Mattox Type C well gravel.

INSTRUMENTATION.--Digital water-level recorder collects hourly values.

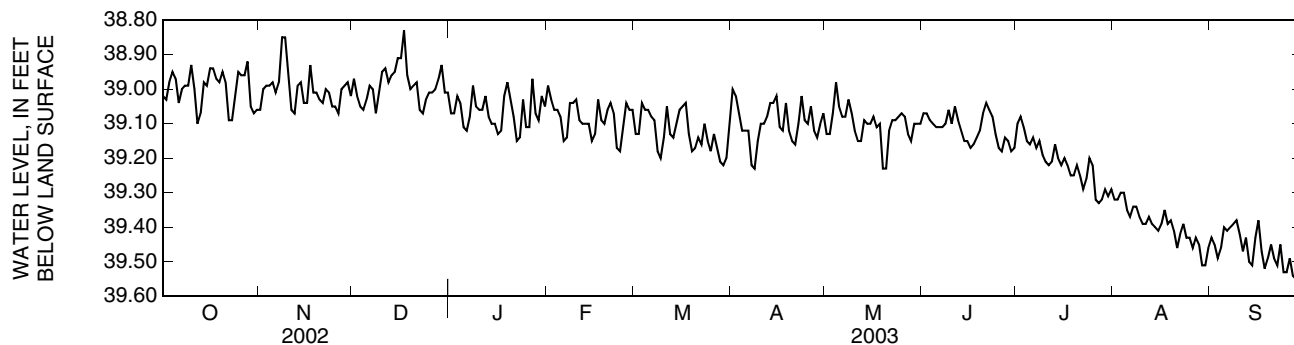
DATUM.--Elevation of land-surface datum is 3,296 ft above NGVD of 1929. Measuring point: Top of steel casing 2.00 ft above land-surface datum.

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

EXTREMES.--June 9, 1989, to current year: Maximum water level, 43.13 ft below land-surface datum, Dec. 23, 1992; minimum water level, 37.75 ft below land-surface datum, Apr. 6, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MAXIMUM VALUES

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 39.02 | 39.06 | 38.97 | 39.07 | 38.99 | 39.13 | 39.00 | 39.13 | 39.07 | 39.10 | 39.32 | 39.43 |
| 2   | 39.03 | 39.00 | 39.02 | 39.07 | 39.03 | 39.13 | 39.02 | 39.13 | 39.07 | 39.08 | 39.32 | 39.45 |
| 3   | 38.98 | 38.99 | 39.05 | 39.02 | 39.06 | 39.04 | 39.07 | 39.07 | 39.09 | 39.11 | 39.30 | 39.49 |
| 4   | 38.95 | 38.99 | 39.06 | 39.04 | 39.06 | 39.06 | 39.12 | 38.98 | 39.10 | 39.15 | 39.30 | 39.46 |
| 5   | 38.97 | 38.98 | 39.03 | 39.11 | 39.08 | 39.06 | 39.12 | 39.05 | 39.11 | 39.16 | 39.35 | 39.40 |
| 6   | 39.04 | 39.01 | 38.99 | 39.12 | 39.15 | 39.08 | 39.12 | 39.08 | 39.11 | 39.14 | 39.37 | 39.41 |
| 7   | 39.00 | 38.98 | 39.00 | 39.08 | 39.14 | 39.09 | 39.22 | 39.08 | 39.11 | 39.17 | 39.34 | 39.40 |
| 8   | 38.99 | 38.85 | 39.07 | 38.99 | 39.04 | 39.18 | 39.23 | 39.03 | 39.10 | 39.15 | 39.34 | 39.39 |
| 9   | 38.99 | 38.85 | 39.01 | 39.05 | 39.04 | 39.20 | 39.15 | 39.07 | 39.06 | 39.19 | 39.37 | 39.38 |
| 10  | 38.93 | 38.96 | 38.95 | 39.06 | 39.03 | 39.14 | 39.10 | 39.12 | 39.10 | 39.21 | 39.39 | 39.42 |
| 11  | 39.00 | 39.06 | 38.94 | 39.06 | 39.09 | 39.05 | 39.10 | 39.15 | 39.05 | 39.22 | 39.39 | 39.47 |
| 12  | 39.10 | 39.07 | 38.98 | 39.02 | 39.10 | 39.13 | 39.08 | 39.15 | 39.09 | 39.21 | 39.37 | 39.43 |
| 13  | 39.07 | 38.99 | 38.96 | 39.08 | 39.10 | 39.14 | 39.04 | 39.09 | 39.12 | 39.16 | 39.39 | 39.50 |
| 14  | 38.98 | 38.98 | 38.95 | 39.10 | 39.10 | 39.10 | 39.04 | 39.10 | 39.15 | 39.20 | 39.40 | 39.51 |
| 15  | 38.99 | 39.04 | 38.91 | 39.10 | 39.15 | 39.06 | 39.02 | 39.10 | 39.15 | 39.22 | 39.41 | 39.43 |
| 16  | 38.94 | 39.04 | 38.91 | 39.13 | 39.13 | 39.05 | 39.11 | 39.08 | 39.17 | 39.20 | 39.39 | 39.38 |
| 17  | 38.94 | 38.93 | 38.83 | 39.12 | 39.03 | 39.04 | 39.12 | 39.11 | 39.16 | 39.22 | 39.35 | 39.47 |
| 18  | 38.97 | 39.01 | 38.96 | 39.02 | 39.09 | 39.13 | 39.04 | 39.10 | 39.14 | 39.25 | 39.39 | 39.52 |
| 19  | 38.98 | 39.01 | 39.00 | 38.98 | 39.10 | 39.18 | 39.12 | 39.23 | 39.12 | 39.25 | 39.38 | 39.49 |
| 20  | 38.95 | 39.03 | 38.99 | 39.03 | 39.06 | 39.17 | 39.15 | 39.23 | 39.07 | 39.22 | 39.41 | 39.45 |
| 21  | 38.98 | 39.04 | 38.98 | 39.08 | 39.04 | 39.14 | 39.16 | 39.12 | 39.04 | 39.25 | 39.46 | 39.49 |
| 22  | 39.09 | 39.00 | 39.06 | 39.15 | 39.07 | 39.16 | 39.10 | 39.09 | 39.06 | 39.29 | 39.42 | 39.51 |
| 23  | 39.09 | 39.01 | 39.07 | 39.14 | 39.17 | 39.10 | 39.02 | 39.09 | 39.08 | 39.26 | 39.39 | 39.45 |
| 24  | 39.02 | 39.05 | 39.03 | 39.03 | 39.18 | 39.15 | 39.09 | 39.08 | 39.13 | 39.20 | 39.43 | 39.53 |
| 25  | 38.95 | 39.05 | 39.01 | 39.11 | 39.11 | 39.18 | 39.10 | 39.07 | 39.17 | 39.22 | 39.43 | 39.53 |
| 26  | 38.96 | 39.07 | 39.01 | 39.11 | 39.04 | 39.13 | 39.05 | 39.08 | 39.18 | 39.32 | 39.46 | 39.49 |
| 27  | 38.96 | 39.00 | 39.00 | 38.97 | 39.06 | 39.17 | 39.12 | 39.13 | 39.14 | 39.33 | 39.43 | 39.54 |
| 28  | 38.92 | 38.99 | 38.97 | 39.07 | 39.06 | 39.21 | 39.14 | 39.15 | 39.15 | 39.32 | 39.45 | 39.55 |
| 29  | 39.05 | 38.98 | 38.93 | 39.09 | ---   | 39.22 | 39.10 | 39.10 | 39.18 | 39.29 | 39.51 | 39.55 |
| 30  | 39.07 | 39.02 | 39.01 | 39.02 | ---   | 39.20 | 39.07 | 39.10 | 39.17 | 39.31 | 39.51 | 39.56 |
| 31  | 39.06 | ---   | 39.01 | 39.05 | ---   | 39.09 | ---   | 39.10 | ---   | 39.29 | 39.46 | ---   |
| MAX | 39.10 | 39.07 | 39.07 | 39.15 | 39.18 | 39.22 | 39.23 | 39.23 | 39.18 | 39.33 | 39.51 | 39.56 |



## SHANNON COUNTY—Continued

430027102311806.

LOCATION.--Lat 43°00'27", long 102°31'18", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.17, T.35 N., R.44 W., Hydrologic Unit 10140201, 2.5 mi southeast of Pine Ridge.  
 Owner: Oglala Sioux Tribe.

AQUIFER.--Arikaree.

WELL CHARACTERISTICS.--Drilled artesian production well, diameter 12 in., depth 835 ft, 12-in steel casing from 0 to 505 ft. Alternating 8-in screen and casing from 505 to 835 ft.

INSTRUMENTATION.--Digital water-level recorder collects hourly values.

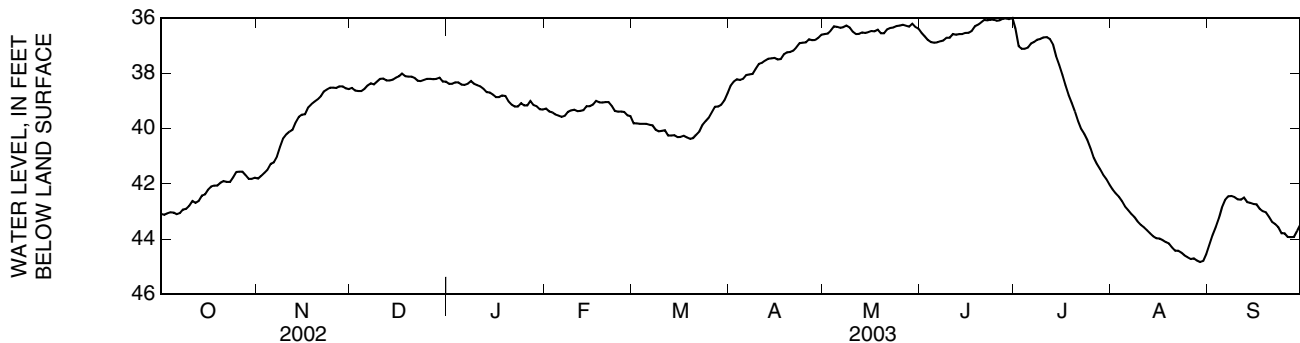
DATUM.--Elevation of land-surface datum is 3,296 ft above NGVD of 1929. Measuring point: Top of steel casing 2.09 ft above land-surface datum.

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

EXTREMES.--June 9, 1989, to current year: Maximum water level, 46.53 ft below land-surface datum, Aug. 15, 2000; minimum water level, 34.18 ft below land-surface datum, Feb. 25, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MAXIMUM VALUES

| DAY | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 43.09 | 41.81 | 38.53 | 38.38 | 39.28 | 39.81 | 38.45 | 36.58 | 36.53 | 36.39 | 42.20 | 44.20 |
| 2   | 43.12 | 41.71 | 38.62 | 38.38 | 39.38 | 39.81 | 38.30 | 36.56 | 36.66 | 37.02 | 42.34 | 43.86 |
| 3   | 43.07 | 41.60 | 38.64 | 38.33 | 39.41 | 39.83 | 38.22 | 36.45 | 36.79 | 37.11 | 42.46 | 43.57 |
| 4   | 43.03 | 41.49 | 38.64 | 38.33 | 39.49 | 39.83 | 38.24 | 36.30 | 36.87 | 37.11 | 42.62 | 43.24 |
| 5   | 43.04 | 41.28 | 38.56 | 38.41 | 39.53 | 39.83 | 38.20 | 36.32 | 36.89 | 37.07 | 42.82 | 42.85 |
| 6   | 43.10 | 41.23 | 38.44 | 38.42 | 39.58 | 39.86 | 38.06 | 36.35 | 36.88 | 36.92 | 42.95 | 42.58 |
| 7   | 43.06 | 41.02 | 38.36 | 38.38 | 39.54 | 39.88 | 38.04 | 36.33 | 36.84 | 36.86 | 43.09 | 42.45 |
| 8   | 42.93 | 40.66 | 38.40 | 38.28 | 39.40 | 40.04 | 38.02 | 36.27 | 36.81 | 36.78 | 43.20 | 42.44 |
| 9   | 42.90 | 40.36 | 38.30 | 38.38 | 39.34 | 40.10 | 37.83 | 36.34 | 36.71 | 36.75 | 43.36 | 42.48 |
| 10  | 42.79 | 40.21 | 38.20 | 38.43 | 39.32 | 40.08 | 37.66 | 36.49 | 36.71 | 36.70 | 43.48 | 42.56 |
| 11  | 42.62 | 40.11 | 38.19 | 38.47 | 39.37 | 40.06 | 37.62 | 36.58 | 36.58 | 36.69 | 43.57 | 42.57 |
| 12  | 42.69 | 40.04 | 38.26 | 38.56 | 39.36 | 40.25 | 37.54 | 36.57 | 36.60 | 36.76 | 43.68 | 42.50 |
| 13  | 42.62 | 39.78 | 38.26 | 38.68 | 39.33 | 40.25 | 37.47 | 36.52 | 36.58 | 36.96 | 43.79 | 42.66 |
| 14  | 42.43 | 39.58 | 38.23 | 38.69 | 39.19 | 40.24 | 37.46 | 36.54 | 36.58 | 37.38 | 43.90 | 42.69 |
| 15  | 42.39 | 39.50 | 38.16 | 38.77 | 39.19 | 40.31 | 37.44 | 36.51 | 36.54 | 37.70 | 43.97 | 42.73 |
| 16  | 42.21 | 39.48 | 38.11 | 38.86 | 39.13 | 40.30 | 37.50 | 36.47 | 36.53 | 38.06 | 43.98 | 42.74 |
| 17  | 42.10 | 39.23 | 38.01 | 38.86 | 39.00 | 40.26 | 37.48 | 36.48 | 36.47 | 38.43 | 44.04 | 42.90 |
| 18  | 42.06 | 39.12 | 38.10 | 38.80 | 39.05 | 40.32 | 37.31 | 36.42 | 36.30 | 38.79 | 44.11 | 42.99 |
| 19  | 42.06 | 39.03 | 38.12 | 38.82 | 39.06 | 40.37 | 37.24 | 36.55 | 36.24 | 39.07 | 44.16 | 43.03 |
| 20  | 41.96 | 38.95 | 38.12 | 39.01 | 39.04 | 40.34 | 37.23 | 36.55 | 36.16 | 39.38 | 44.30 | 43.20 |
| 21  | 41.90 | 38.83 | 38.17 | 39.13 | 39.04 | 40.22 | 37.18 | 36.41 | 36.07 | 39.72 | 44.42 | 43.38 |
| 22  | 41.93 | 38.66 | 38.27 | 39.20 | 39.18 | 40.10 | 37.06 | 36.36 | 36.08 | 40.01 | 44.42 | 43.46 |
| 23  | 41.93 | 38.58 | 38.28 | 39.20 | 39.36 | 39.87 | 36.91 | 36.34 | 36.06 | 40.20 | 44.49 | 43.57 |
| 24  | 41.77 | 38.52 | 38.24 | 39.08 | 39.39 | 39.73 | 36.89 | 36.29 | 36.06 | 40.42 | 44.59 | 43.79 |
| 25  | 41.57 | 38.52 | 38.20 | 39.16 | 39.38 | 39.61 | 36.88 | 36.27 | 36.10 | 40.72 | 44.66 | 43.79 |
| 26  | 41.56 | 38.53 | 38.20 | 39.16 | 39.40 | 39.40 | 36.77 | 36.24 | 36.08 | 41.05 | 44.72 | 43.92 |
| 27  | 41.56 | 38.47 | 38.21 | 39.00 | 39.52 | 39.21 | 36.80 | 36.28 | 36.02 | 41.28 | 44.70 | 43.93 |
| 28  | 41.68 | 38.47 | 38.20 | 39.15 | 39.55 | 39.20 | 36.79 | 36.31 | 36.01 | 41.46 | 44.78 | 43.92 |
| 29  | 41.82 | 38.54 | 38.16 | 39.19 | ---   | 39.13 | 36.71 | 36.20 | 36.04 | 41.67 | 44.83 | 43.70 |
| 30  | 41.82 | 38.57 | 38.30 | 39.30 | ---   | 38.98 | 36.60 | 36.32 | 36.00 | 41.82 | 44.79 | 43.49 |
| 31  | 41.78 | ---   | 38.30 | 39.31 | ---   | 38.72 | ---   | 36.38 | ---   | 42.02 | 44.54 | ---   |
| MAX | 43.12 | 41.81 | 38.64 | 39.31 | 39.58 | 40.37 | 38.45 | 36.58 | 36.89 | 42.02 | 44.83 | 44.20 |





# INDEX

483

|                                            | Page         |                                            | Page         |
|--------------------------------------------|--------------|--------------------------------------------|--------------|
| <b>A</b>                                   |              | Bear Gulch near Hayward                    | 392, 435     |
| Aberdeen, Foot Creek near                  | 302–303, 456 | Bear in the Lodge Creek near Wanblee       | 228–229, 451 |
| Moccasin Creek at                          | 300–301, 456 | Beaver Creek, 1/4 mi south of Corey Ranch  | 464          |
| Acid neutralizing capacity, definition of  | 23           | above Buffalo Gap                          | 391, 433     |
| Acre-foot, definition of                   | 23           | at Canton (Big Sioux River Basin)          | 408          |
| Adenosine triphosphate, definition of      | 23           | at Mallo Camp, near Four Corners, WY       | 66–68        |
| Adjusted discharge, definition of          | 23           | EMAP site near Norbeck Lake                | 465          |
| Akron, IA, Big Sioux River at              | 384–386, 463 | near Buffalo Gap                           | 86–87, 433   |
| Algae, Blue-green, definition of           | 24           | near Pringle                               | 84–85        |
| Fire, definition of                        | 26           | site C, Wind Cave National Park            | 465          |
| Green, definition of                       | 26           | site D, Wind Cave National Park            | 465          |
| Algal growth potential, definition of      | 23           | Bed material, definition of                | 23           |
| Alkalinity, definition of                  | 23           | Bedload, definition of                     | 23           |
| Angostura Dam, Cheyenne River below        | 80–81, 432   | Bedload discharge, definition of           | 23           |
| Angostura Reservoir near Hot Springs       | 78           | Belle Fourche, Hay Creek EMAP site near    | 469          |
| Annie Creek near Lead                      | 158–159, 443 | Inlet Canal near                           | 469          |
| Annual runoff, definition of               | 23           | Redwater River above                       | 166–167, 445 |
| Annual 7-day minimum, definition of        | 23           | Belle Fourche Reservoir, Inlet Canal above | 168–169, 445 |
| Antelope Creek, EMAP site near Date        | 464          | near Belle Fourche                         | 170          |
| near Langford (James River Basin)          | 402          | Belle Fourche River, above Hereford        | 470          |
| near Mission (Niobrara River Basin)        | 402, 454     | at Wyoming-South Dakota State line         | 144–145, 442 |
| Aquifer, Confined, definition of           | 24           | near Sturgis                               | 186–187, 447 |
| Unconfined, definition of                  | 33           | EMAP site above Belle Fourche              | 469          |
| Water-table, definition of                 | 34           | near Elm Springs                           | 190–191, 448 |
| Aroclor, definition of                     | 23           | near Fruitdale                             | 172–173, 445 |
| Artificial substrate, definition of        | 23           | near Hereford                              | 470          |
| Ash mass, definition of                    | 23           | Belvidere, Black Pipe Creek near           | 232–233, 451 |
| Ashton, James River at                     | 306–307, 456 | Benthic organisms, definition of           | 23           |
| Aspect, definition of                      | 23           | Beulah, WY, Crow Creek near                | 154–155, 443 |
| Aurora Center, East Fork Platte Creek near | 401          | Sand Creek near Ranch A, near              | 148–149      |
| Avon, Choteau Creek near                   | 264–265, 454 | Big Coulee Creek near Peever               | 42–43, 429   |
| <b>B</b>                                   |              | Big Sioux River, at Akron, IA              | 384–386, 463 |
| Bacteria, definition of                    | 23           | at Brandon                                 | 475          |
| Enterococcus, definition of                | 25           | at Broadway, at Watertown                  | 406, 460     |
| <i>Escherichia coli</i> , definition of    | 26           | at Fairview                                | 423          |
| Fecal coliform, definition of              | 26           | at Hawarden, IA                            | 425          |
| Fecal streptococcal, definition of         | 26           | at Hudson                                  | 424          |
| Total coliform, definition of              | 33           | at Klondike, IA                            | 421          |
| Bad River, near Fort Pierre                | 204–208      | at Lake Kampeska, near Watertown           | 405          |
| near Midland                               | 202, 449     | at North Cliff Avenue, at Sioux Falls      | 368–378, 463 |
| Bankfull stage, definition of              | 23           | at North Sioux City                        | 428          |
| Base discharge, definition of              | 23           | at Watertown                               | 340–341, 460 |
| Base flow, definition of                   | 23           | below diversion, at Sioux Falls            | 407          |
| Battle Creek, above Keystone               | 392, 434     | below Watertown                            | 344–345, 461 |
| at Hermosa                                 | 96–97, 435   | near Brandon                               | 420          |
| below Hermosa                              | 98–99, 435   | near Broken Kettle, IA                     | 427          |
| near Keystone                              | 92–93, 434   | near Brookings                             | 350–360, 462 |
| Beadle County, ground-water levels in      | 476          | near Bruce                                 | 348–349, 461 |
| Beads Creek near Rosebud                   | 472          | near Canton                                | 422          |
| Bear Butte Creek, above Strawberry Creek,  |              | near Castlewood                            | 346–347, 461 |
| near Galena                                | 469          | near Dell Rapids                           | 362–363, 462 |
| at Sturgis                                 | 470          | near Florence                              | 334–335, 460 |
| below Ruby Gulch, near Galena              | 470          | near Richland                              | 426          |
| below Strawberry Creek, near Galena        | 470          | near Watertown                             | 336–337, 460 |
| near Deadwood                              | 188–189, 447 | Big Stone City, Whetstone River near       | 44–45        |
| near Galena                                | 397, 447     | Bijou Hills, Snake Creek near              | 401          |
| near Sturgis                               | 397, 447     |                                            |              |

|                                                                            | Page         |                                                                                    | Page         |
|----------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------|--------------|
| Biochemical oxygen demand,<br>definition of . . . . .                      | 24           | Cheyenne River, at Edgemont . . . . .                                              | 72–73, 431   |
| Biomass, definition of . . . . .                                           | 24           | at Redshirt . . . . .                                                              | 90–91, 434   |
| Biomass pigment ratio, definition of . . . . .                             | 24           | below Angostura Dam . . . . .                                                      | 80–81, 432   |
| Bismarck, ND, Missouri River at . . . . .                                  | 50–51        | near Plainview . . . . .                                                           | 192–193, 448 |
| Black Pipe Creek, near Belvidere . . . . .                                 | 232–233, 451 | near Wasta . . . . .                                                               | 134–135, 441 |
| Blackhorse Butte Creek EMAP reference<br>site near Meadow . . . . .        | 464          | Choteau Creek near Avon . . . . .                                                  | 264–265, 454 |
| Blackpipe Creek EMAP reference site<br>near Highway 63 . . . . .           | 470          | Clayton, Wolf Creek near . . . . .                                                 | 404          |
| Blue Dog Lake inflow (Owens Creek)<br>near Waubay . . . . .                | 332–333, 459 | Cleghorn Springs at Rapid City . . . . .                                           | 122–123, 439 |
| Blue-green algae, definition of . . . . .                                  | 24           | <i>Clostridium perfringens</i> , definition of . . . . .                           | 24           |
| Bois de Sioux River near White Rock . . . . .                              | 40–41        | Cobb Creek near Gary . . . . .                                                     | 464          |
| Bottom material, definition of . . . . .                                   | 24           | Coffee Creek above Spring Creek . . . . .                                          | 471          |
| Boxelder Creek, near Nemo . . . . .                                        | 130–131      | Cold Spring Creek, at 0.1 mi west of park<br>boundary on Hwy 385 . . . . .         | 465          |
| near Rapid City . . . . .                                                  | 132–133      | at 200 ft above confluence of Beaver Creek. . .                                    | 465          |
| Brandon, Big Sioux River at . . . . .                                      | 475          | Cold Springs Creek at Buckhorn, WY . . . . .                                       | 146–147      |
| Big Sioux River near . . . . .                                             | 420          | Coliphages, definition of . . . . .                                                | 24           |
| Broken Kettle, IA, Big Sioux River near . . . . .                          | 427          | Color unit, definition of . . . . .                                                | 24           |
| Brookings, Big Sioux River near . . . . .                                  | 350–360, 462 | Columbia, James River at . . . . .                                                 | 290–291, 455 |
| Medary Creek near . . . . .                                                | 407, 461     | Conductivity, definition of . . . . .                                              | 31           |
| Bruce, Big Sioux River near . . . . .                                      | 348–349, 461 | Confined aquifer, definition of . . . . .                                          | 24           |
| Buckhorn, WY, Cold Springs Creek at . . . . .                              | 146–147      | Contents, definition of . . . . .                                                  | 24           |
| Buffalo Gap, Beaver Creek above . . . . .                                  | 391, 433     | Continuous-record station, definition of . . . . .                                 | 24           |
| Beaver Creek near . . . . .                                                | 86–87, 433   | Control, definition of . . . . .                                                   | 24           |
| Bulk electrical conductivity, definition of . . . . .                      | 24           | Control structure, definition of . . . . .                                         | 24           |
| Bullhead, Stink Creek EMAP site near . . . . .                             | 464          | Cooperation . . . . .                                                              | 1            |
| <b>C</b>                                                                   |              | Corey Ranch, Beaver Creek 1/4 mi south of . . . . .                                | 464          |
| Cain Creek EMAP reference site near<br>confluence at James River . . . . . | 475          | Corson, Split Rock Creek at . . . . .                                              | 380–381, 463 |
| Camp Crook, Little Missouri River at . . . . .                             | 48–49, 429   | Cottonwood, South Fork Bad River near . . . . .                                    | 200–201, 449 |
| Campbell Creek near Lee's Corner . . . . .                                 | 218–219, 449 | Counselor Creek near Lower Brule . . . . .                                         | 400, 449     |
| Canadian Geodetic Vertical Datum 1928,<br>definition of . . . . .          | 24           | Crooks, Willow Creek near . . . . .                                                | 408, 462     |
| Canton, Beaver Creek at . . . . .                                          | 408          | Crow Creek near Beulah, WY . . . . .                                               | 154–155, 443 |
| Big Sioux River near . . . . .                                             | 422          | Cubic foot per second, definition of . . . . .                                     | 24           |
| Carpenter, Foster Creek tributary near . . . . .                           | 404          | Cubic foot per second-day, definition of . . . . .                                 | 24           |
| Cash, South Fork Grand River near . . . . .                                | 56–57, 430   | Cubic foot per second per square mile,<br>definition of . . . . .                  | 25           |
| Castle Creek, above Deerfield Reservoir,<br>near Hill City . . . . .       | 108–109, 437 | Custer, French Creek above Stockade Lake near . . .                                | 391, 433     |
| below Deerfield Dam . . . . .                                              | 112–113, 437 | Grace Coolidge Creek near Game<br>Lodge, near . . . . .                            | 94–95, 435   |
| EMAP reference site near Deerfield Lake . . . .                            | 467          | Cut Meat Creek near confluence Little White<br>River below Soldier Creek . . . . . | 474          |
| Castlewood, Big Sioux River near . . . . .                                 | 346–347, 461 | <b>D</b>                                                                           |              |
| CCC Spring, below Quinn Table, near Wall . . . . .                         | 467          | Daily mean suspended-sediment concentration,<br>definition of . . . . .            | 25           |
| tributary above South Fork Sage<br>Creek, near Wall . . . . .              | 468          | Daily record station, definition of . . . . .                                      | 25           |
| Cedar Creek near Kennebec . . . . .                                        | 399, 449     | Data collection platform, definition of . . . . .                                  | 25           |
| Cell volume, definition of . . . . .                                       | 24           | Data logger, definition of . . . . .                                               | 25           |
| Cells/volume, definition of . . . . .                                      | 24           | Date, Antelope Creek EMAP site near . . . . .                                      | 464          |
| Central City, False Bottom Creek near . . . . .                            | 396, 444     | Datum, definition of . . . . .                                                     | 25           |
| Cfs-day, definition of . . . . .                                           | 24           | Deadwood, Bear Butte Creek near . . . . .                                          | 188–189, 447 |
| Chamberlain, Lake Francis Case (American<br>Creek Bay) at . . . . .        | 220–221      | Deerfield Dam, Castle Creek below . . . . .                                        | 112–113, 437 |
| Channel bars, definition of . . . . .                                      | 24           | Deerfield Lake, Castle Creek EMAP<br>reference site near . . . . .                 | 467          |
| Chantier Creek near Hayes . . . . .                                        | 398, 448     | Deerfield Reservoir near Hill City . . . . .                                       | 110          |
| Chemical oxygen demand, definition of . . . . .                            | 24           | Definition of terms . . . . .                                                      | 22–34        |
| Cherry Creek near Plainview . . . . .                                      | 194–195, 448 | Dell Rapids, Big Sioux River near . . . . .                                        | 362–363, 462 |
| Chester, Skunk Creek near . . . . .                                        | 364–365, 462 | Dewey County line, Moreau River<br>EMAP site near . . . . .                        | 464          |
|                                                                            |              | Dewey, Pass Creek near . . . . .                                                   | 391, 431     |
|                                                                            |              | Diatoms, definition of . . . . .                                                   | 25           |

|                                                                     | Page                |                                                                          | Page         |
|---------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------|--------------|
| Diel, definition of . . . . .                                       | 25                  | Fire algae, definition of . . . . .                                      | 26           |
| Discharge, definition of . . . . .                                  | 25                  | Firesteel Creek, near Mount Vernon . . . . .                             | 314–315, 457 |
| Discontinued surface-water stations . . . . .                       | xii–xxii            | Flandreau Creek above Flandreau . . . . .                                | 407          |
| Dissolved, definition of . . . . .                                  | 25                  | Florence, Big Sioux River near . . . . .                                 | 334–335, 460 |
| Dissolved oxygen, definition of . . . . .                           | 25                  | Flow, definition of . . . . .                                            | 25           |
| Dissolved solids concentration, definition of . . . . .             | 25                  | Flow-duration percentiles, definition of . . . . .                       | 26           |
| Diversity index, definition of . . . . .                            | 25                  | Foot Creek near Aberdeen . . . . .                                       | 302–303, 456 |
| Drainage area, definition of . . . . .                              | 25                  | Forestburg, James River near . . . . .                                   | 312–313, 457 |
| Drainage basin, definition of . . . . .                             | 25                  | Fort Pierre, Bad River near . . . . .                                    | 204–208      |
| Dry Creek above South Fork Sage Creek,<br>near Wall . . . . .       | 467                 | Fort Randall Dam, Missouri River at . . . . .                            | 258–260      |
| Dry mass, definition of . . . . .                                   | 25                  | Fort Thompson, Lake Sharpe near . . . . .                                | 216          |
| Dry weight, definition of . . . . .                                 | 25                  | Foster Creek tributary near Carpenter . . . . .                          | 404          |
| <b>E</b>                                                            |                     | Four Corners, WY, Beaver Creek at Mallo<br>Camp, near . . . . .          | 66–68        |
| Eagle Nest Creek EMAP site near Wanblee . . . . .                   | 470                 | Frederick, Elm River near . . . . .                                      | 292–293, 455 |
| East Fork Platte Creek near Aurora Center . . . . .                 | 401                 | French Creek, above Fairburn . . . . .                                   | 88–89, 433   |
| East Fork Vermillion River, near Parker . . . . .                   | 326–327,<br>458–459 | above Stockade Lake, near Custer . . . . .                               | 391, 433     |
| near Ramona . . . . .                                               | 475                 | Fruitdale, Belle Fourche River near . . . . .                            | 172–173, 445 |
| East tributary Rosebud Creek near Rosebud . . . . .                 | 473                 | Fulton, Rock Creek near . . . . .                                        | 404          |
| Edgemont, Cheyenne River at . . . . .                               | 72–73, 431          | <b>G</b>                                                                 |              |
| Hat Creek near . . . . .                                            | 74–75, 432          | Gage datum, definition of . . . . .                                      | 26           |
| Elk Creek, near Elm Springs . . . . .                               | 140–141, 441        | Gage height, definition of . . . . .                                     | 26           |
| near Rapid City . . . . .                                           | 138–139, 441        | Gage values, definition of . . . . .                                     | 26           |
| near Roubaix . . . . .                                              | 136–137, 441        | Gaging station, definition of . . . . .                                  | 26           |
| Elm Creek, EMAP reference site near Westport . . . . .              | 474                 | Galena, Bear Butte Creek, above Strawberry<br>Creek, near . . . . .      | 469          |
| near Fairpoint . . . . .                                            | 397                 | below Ruby Gulch, near . . . . .                                         | 470          |
| near Red Owl . . . . .                                              | 397, 448            | below Strawberry Creek, near . . . . .                                   | 470          |
| Elm River, at Westport . . . . .                                    | 296–297, 455        | Bear Butte Creek near . . . . .                                          | 397, 447     |
| near Frederick . . . . .                                            | 292–293, 455        | Strawberry Creek, above Boomer Gulch, near . . . . .                     | 469          |
| near Ordway . . . . .                                               | 298–299             | near Anchor Hill, near . . . . .                                         | 469          |
| Elm Springs, Belle Fourche River near . . . . .                     | 190–191, 448        | near confluence, Bear Butte Creek, near . . . . .                        | 469          |
| Elk Creek near . . . . .                                            | 140–141, 441        | Gary, Cobb Creek near . . . . .                                          | 464          |
| Embeddedness, definition of . . . . .                               | 25                  | Gas chromatography/flame ionization detector,<br>definition of . . . . . | 26           |
| Enemy Creek, EMAP reference site<br>below Mitchell . . . . .        | 475                 | Gayville, Missouri River near . . . . .                                  | 322–323      |
| near Mitchell . . . . .                                             | 404                 | Geomorphic channel units, definition of . . . . .                        | 26           |
| Englewood, Whitewood Creek EMAP site near . . . . .                 | 469                 | Grace Coolidge Creek, near Game Lodge,<br>near Custer . . . . .          | 94–95, 435   |
| Enterococcus bacteria, definition of . . . . .                      | 25                  | near Hayward . . . . .                                                   | 392, 434     |
| EPT Index, definition of . . . . .                                  | 26                  | Grant County, ground-water levels in . . . . .                           | 477          |
| EROS, miscellaneous water quality at . . . . .                      | 414                 | Grand River at Little Eagle . . . . .                                    | 60–61, 430   |
| <i>Escherichia coli</i> ( <i>E. coli</i> ), definition of . . . . . | 26                  | Green algae, definition of . . . . .                                     | 26           |
| Estelline, Hidewood Creek near . . . . .                            | 406, 461            | Greenwood, Missouri River below . . . . .                                | 262–263      |
| Estimated (E) value, definition of . . . . .                        | 26                  | Grizzly Bear Creek near Keystone . . . . .                               | 392, 434     |
| Euglenoids, definition of . . . . .                                 | 26                  | Ground-water level records . . . . .                                     | 476–481      |
| Extractable organic halides, definition of . . . . .                | 26                  |                                                                          |              |
| <b>F</b>                                                            |                     | <b>H</b>                                                                 |              |
| Fairburn, French Creek above . . . . .                              | 88–89, 433          | Habitat, definition of . . . . .                                         | 27           |
| Precip at Racetrack Butte near . . . . .                            | 410                 | Habitat quality index, definition of . . . . .                           | 27           |
| Fairpoint, Elm Creek near . . . . .                                 | 397                 | Hardness, definition of . . . . .                                        | 27           |
| Fairview, Big Sioux River at . . . . .                              | 423                 | Hartford, Skunk Creek near . . . . .                                     | 407, 462     |
| Faith, Moreau River near . . . . .                                  | 62–63, 431          | Hat Creek, EMAP site near Rumford . . . . .                              | 464          |
| Fall River at Hot Springs . . . . .                                 | 82–83, 432          | near Edgemont . . . . .                                                  | 74–75, 432   |
| False Bottom Creek near Central City . . . . .                      | 396, 444            | Hawarden, IA, Big Sioux River at . . . . .                               | 425          |
| Farmingdale, Lindsey Draw near . . . . .                            | 395, 440            | Hay Creek EMAP site near Belle Fourche . . . . .                         | 469          |
| Rapid Creek near . . . . .                                          | 128–129, 440        | Hayes, Chantier Creek near . . . . .                                     | 398, 448     |
| Fecal coliform bacteria, definition of . . . . .                    | 26                  | Plum Creek below . . . . .                                               | 399          |
| Fecal streptococcal bacteria, definition of . . . . .               | 26                  | Plum Creek near . . . . .                                                | 399          |

|                                                      | Page         |                                                      | Page         |
|------------------------------------------------------|--------------|------------------------------------------------------|--------------|
| Hayward, Bear Gulch near . . . . .                   | 392, 435     | James River, near Redfield . . . . .                 | 308–309, 457 |
| Grace Coolidge Creek near . . . . .                  | 392, 434     | near Scotland . . . . .                              | 320–321, 458 |
| Hereford, Belle Fourche River above . . . . .        | 470          | near Stratford . . . . .                             | 304–305, 456 |
| Belle Fourche River near . . . . .                   | 470          | near Yankton . . . . .                               | 405, 458     |
| Hermosa, Battle Creek at . . . . .                   | 96–97, 435   | <b>K</b>                                             |              |
| Battle Creek below . . . . .                         | 98–99, 435   | Kadoka, White River near . . . . .                   | 230–231, 451 |
| Spring Creek near . . . . .                          | 104–105, 436 | Keldron, Willow Creek near . . . . .                 | 390          |
| Herrick, Ponca Creek EMAP site near . . . . .        | 474          | Kennebec, Cedar Creek near . . . . .                 | 399, 449     |
| Hidden Timber, Keya Paha River EMAP                  |              | Medicine Creek at . . . . .                          | 399, 449     |
| reference site near . . . . .                        | 474          | Keya Paha River, at Wewela . . . . .                 | 272–273, 455 |
| Hidewood Creek near Estelline . . . . .              | 406, 461     | near Keyapaha . . . . .                              | 270–271, 454 |
| High tide, definition of . . . . .                   | 27           | EMAP reference site near Hidden Timber . . . . .     | 474          |
| Highland Creek, above Madison outcrop,               |              | Keyapaha, Sand Creek EMAP site below . . . . .       | 474          |
| near Pringle . . . . .                               | 466          | Keyhole Reservoir near Moorcroft, WY . . . . .       | 142          |
| site B, Wind Cave National Park . . . . .            | 466          | Keystone, Battle Creek above . . . . .               | 392, 434     |
| site C, Wind Cave National Park . . . . .            | 466          | Battle Creek near . . . . .                          | 92–93, 434   |
| site D, Wind Cave National Park . . . . .            | 466          | Grizzly Bear Creek near . . . . .                    | 392, 434     |
| Hill City, Castle Creek above Deerfield              |              | Spring Creek above Sheridan Lake, near . . . . .     | 100–101, 436 |
| Reservoir, near . . . . .                            | 108–109, 437 | Spring Creek near . . . . .                          | 102–103, 436 |
| Deerfield Reservoir near . . . . .                   | 110          | Klondike, IA, Big Sioux River near . . . . .         | 421          |
| Reno Gulch near . . . . .                            | 393, 436     | <b>L</b>                                             |              |
| Spring Creek at Oreville, near . . . . .             | 393, 435     | LaBelle Creek near Veblen . . . . .                  | 390, 429     |
| Sunday Gulch below Johnson Canyon, near . . . . .    | 393, 436     | Laboratory reporting level, definition of . . . . .  | 27           |
| Hilsenhoff's Biotic Index, definition of . . . . .   | 27           | LaCreek National Wildlife Refuge, Lake Creek         |              |
| Horizontal datum, definition of . . . . .            | 27           | EMAP reference site near . . . . .                   | 471          |
| Horse Creek above Vale . . . . .                     | 184–185, 447 | Lake Andes, Lake Francis Case near . . . . .         | 415–419      |
| Horsehead Creek at Oelrichs . . . . .                | 76–77, 432   | Lake Creek, above refuge, near Tuthill . . . . .     | 238–239, 452 |
| Hot Springs, Fall River at . . . . .                 | 82–83, 432   | below refuge, near Tuthill . . . . .                 | 240–241, 452 |
| Angostura Reservoir near . . . . .                   | 78           | EMAP reference site near LaCreek National            |              |
| Howard tributary near Leola . . . . .                | 403          | Wildlife Refuge . . . . .                            | 471          |
| Hudson, Big Sioux River near . . . . .               | 424          | Lake Francis Case, at Pickstown . . . . .            | 256          |
| Huron Well Field, Miscellaneous water                |              | near Lake Andes . . . . .                            | 415–419      |
| quality data at . . . . .                            | 411–413      | Lake Francis Case (American Creek Bay)               |              |
| Huron, James River at . . . . .                      | 310–311, 457 | at Chamberlain . . . . .                             | 220–221      |
| Hydrologic index stations, definition of . . . . .   | 27           | Lake Kampeska at Water Treatment Plant,              |              |
| Hydrologic unit, definition of . . . . .             | 27           | at Watertown . . . . .                               | 338–339      |
| <b>I</b>                                             |              | Lake Oahe near Pierre . . . . .                      | 196          |
| Inch, definition of . . . . .                        | 27           | Lake Sharpe near Fort Thompson . . . . .             | 216          |
| Inlet Canal, above Belle Fourche Reservoir . . . . . | 168–169, 445 | Lakes and reservoirs                                 |              |
| near Belle Fourche . . . . .                         | 469          | Angostura Reservoir near Hot Springs . . . . .       | 78           |
| Instantaneous discharge, definition of . . . . .     | 27           | Belle Fourche Reservoir near Belle Fourche . . . . . | 170          |
| Interior, White River near . . . . .                 | 226–227, 450 | Deerfield Reservoir near Hill City . . . . .         | 110          |
| International Boundary Commission Survey             |              | Keyhole Reservoir near Moorcroft, WY . . . . .       | 142          |
| Datum, definition of . . . . .                       | 27           | Lake Francis Case, at Pickstown . . . . .            | 256          |
| Introduction . . . . .                               | 1            | near Lake Andes . . . . .                            | 415–419      |
| Ipswich, Preachers Run tributary at . . . . .        | 403, 457     | Lake Francis Case (American Creek Bay)               |              |
| Island, definition of . . . . .                      | 27           | at Chamberlain . . . . .                             | 220–221      |
| <b>J</b>                                             |              | Lake Oahe near Pierre . . . . .                      | 196          |
| Jackson County line, White River                     |              | Lake Sharpe near Fort Thompson . . . . .             | 216          |
| EMAP site near . . . . .                             | 470          | Lewis and Clark Lake near Yankton . . . . .          | 276          |
| James River, at Ashton . . . . .                     | 306–307, 456 | Pactola Reservoir near Silver City . . . . .         | 116          |
| at Columbia . . . . .                                | 290–291, 455 | Shadehill Reservoir at Shadehill . . . . .           | 58           |
| at Huron . . . . .                                   | 310–311, 457 | Land-surface datum, definition of . . . . .          | 27           |
| at North Dakota-South Dakota State line . . . . .    | 288–289      | Langford, Antelope Creek near . . . . .              | 402          |
| Cain Creek EMAP reference site                       |              | LaPlant, Unnamed tributary Swift Bird Bay,           |              |
| near confluence, at . . . . .                        | 475          | Lake Oahe, near . . . . .                            | 390          |
| near Forestburg . . . . .                            | 312–313, 457 | Latent heat flux, definition of . . . . .            | 27           |
| near Mitchell . . . . .                              | 316–318, 458 |                                                      |              |

|                                                           | Page         |                                                         | Page         |
|-----------------------------------------------------------|--------------|---------------------------------------------------------|--------------|
| Lead, Annie Creek near . . . . .                          | 158–159, 443 | Microsiemens per centimeter, definition of . . . . .    | 28           |
| Little Spearfish Creek near . . . . .                     | 160–161, 443 | Midland, Bad River near. . . . .                        | 202, 449     |
| Spearfish Creek near. . . . .                             | 156–157, 443 | Milligrams per liter, definition of . . . . .           | 28           |
| Whitetail Creek at . . . . .                              | 396, 445     | Minimum reporting level, definition of . . . . .        | 28           |
| Lebanon, Unnamed tributary Stone Lake near . . . . .      | 398          | Minnehaha County, ground-water levels in . . . . .      | 479          |
| Lee's Corner, Campbell Creek near . . . . .               | 218–219, 449 | quality of surface and ground water in . . . . .        | 414          |
| Leola, Howard tributary near . . . . .                    | 403          | Miscellaneous, discharge measurements . . . . .         | 464–475      |
| Lewis and Clark Lake, at Springfield . . . . .            | 274–275      | water quality data . . . . .                            | 411–428      |
| near Yankton. . . . .                                     | 276          | temperature measurements and field                      |              |
| Light-attenuation coefficient, definition of . . . . .    | 27           | determinations . . . . .                                | 429–463      |
| Lime Creek at mouth, at Rapid City . . . . .              | 467          | Miscellaneous site, definition of . . . . .             | 28           |
| Lindsey Draw near Farmingdale. . . . .                    | 395, 440     | Mission, Antelope Creek near . . . . .                  | 402, 454     |
| Lipid, definition of . . . . .                            | 27           | Missouri River, at Bismarck, ND . . . . .               | 50–51        |
| Little Eagle, Grand River at . . . . .                    | 60–61, 430   | at Farm Island, near Pierre . . . . .                   | 214–215      |
| Little Missouri River at Camp Crook . . . . .             | 48–49, 429   | at Fort Randall Dam . . . . .                           | 258–260      |
| Little Rush Lake outflow near Waubay . . . . .            | 475          | at LaFramboise Island, at Pierre . . . . .              | 210–211      |
| Little Spearfish Creek, near Lead . . . . .               | 160–161, 443 | at Pierre. . . . .                                      | 198–199      |
| Little Vermillion River, near Salem . . . . .             | 324–325, 458 | at Sioux City, IA . . . . .                             | 388–389      |
| Little White River, above Rosebud. . . . .                | 472          | at Yankton. . . . .                                     | 278–287      |
| below White River . . . . .                               | 246–247, 453 | below Choteau Creek, near Verdel, NE . . . . .          | 266–269      |
| near Martin . . . . .                                     | 236–237, 452 | below Greenwood . . . . .                               | 262–263      |
| near Rosebud. . . . .                                     | 244–245, 453 | below La Framboise Island, at Pierre . . . . .          | 212–213      |
| near Todd/Mellette County line . . . . .                  | 474          | near Gayville. . . . .                                  | 322–323      |
| near Vetel . . . . .                                      | 242–243, 453 | Mitchell, Enemy Creek near. . . . .                     | 404          |
| Valandra bridge, near Spring Creek . . . . .              | 471          | Enemy Creek EMAP reference site below . . . . .         | 475          |
| Long Valley, Unnamed tributary                            |              | James River near. . . . .                               | 316–318, 458 |
| Buzzard Creek near . . . . .                              | 400          | Moccasin Creek at Aberdeen . . . . .                    | 300–301, 456 |
| Long-term method detection level, definition of . . . . . | 27           | Moorcroft, WY, Keyhole Reservoir near . . . . .         | 142          |
| Low flow, 7-day, 10-year, definition of . . . . .         | 31           | Moreau River, EMAP site near Dewey                      |              |
| Low tide, definition of . . . . .                         | 27           | County line . . . . .                                   | 464          |
| Lower Brule, Counselor Creek near . . . . .               | 400, 449     | near Faith . . . . .                                    | 62–63, 431   |
|                                                           |              | near Whitehorse . . . . .                               | 64–65, 431   |
| <b>M</b>                                                  |              | Most probable number, definition of . . . . .           | 28           |
| Macrophytes, definition of . . . . .                      | 27           | Mount Vernon, Firesteel Creek near . . . . .            | 314–315, 457 |
| Maple River at North Dakota-South                         |              | Mud Creek near Rauville . . . . .                       | 406          |
| Dakota State line. . . . .                                | 294–295, 455 | Mud Lake above White Rock Dam                           |              |
| Martin, Little White River near . . . . .                 | 236–237, 452 | near White Rock . . . . .                               | 38–39        |
| Meade County, ground-water levels in. . . . .             | 478          | Multiple-plate samplers, definition of . . . . .        | 28           |
| Meadow, Blackhorse Butte Creek EMAP                       |              | Murray Ditch above headgate at Wyoming-South            |              |
| reference site near . . . . .                             | 464          | Dakota State line. . . . .                              | 150–151, 442 |
| Mean concentration of suspended sediment,                 |              | <b>N</b>                                                |              |
| definition of. . . . .                                    | 27           | Nanograms per liter, definition of . . . . .            | 28           |
| Mean discharge, definition of . . . . .                   | 28           | National Geodetic Vertical Datum of 1929,               |              |
| Mean high tide, definition of . . . . .                   | 28           | definition of . . . . .                                 | 28           |
| Mean low tide, definition of . . . . .                    | 28           | Natural substrate, definition of . . . . .              | 28           |
| Mean sea level, definition of . . . . .                   | 28           | Nebraska-South Dakota State line,                       |              |
| Measuring point, definition of . . . . .                  | 28           | White River near. . . . .                               | 222–223, 449 |
| Medary Creek near Brookings . . . . .                     | 407, 461     | Nekton, definition of. . . . .                          | 28           |
| Medicine Creek, at Kennebec . . . . .                     | 399, 449     | Nemo, Boxelder Creek near . . . . .                     | 130–131      |
| near Phillip . . . . .                                    | 398          | Nephelometric turbidity unit, definition of. . . . .    | 28           |
| Megahertz, definition of . . . . .                        | 28           | Newcastle, WY, Precip at Little Bear Run near . . . . . | 409          |
| Membrane filter, definition of . . . . .                  | 28           | Redbird Canyon near . . . . .                           | 391, 431     |
| Metamorphic stage, definition of . . . . .                | 28           | Stockade Beaver Creek near. . . . .                     | 70–71        |
| Method detection limit, definition of . . . . .           | 28           | Ninemile Creek near Vale . . . . .                      | 469          |
| Method of Cubatures, definition of. . . . .               | 28           | No Name Creek EMAP site near Wilmot. . . . .            | 464          |
| Methylene blue active substances, definition of. . . . .  | 28           | Norbeck Lake, Beaver Creek EMAP site near . . . . .     | 465          |
| Micrograms per gram, definition of . . . . .              | 28           | North American, Datum of 1927, definition of . . . . .  | 29           |
| Micrograms per kilogram, definition of . . . . .          | 28           | Datum of 1983, definition of . . . . .                  | 29           |
| Micrograms per liter, definition of . . . . .             | 28           | Vertical Datum of 1988, definition of . . . . .         | 29           |

|                                                           | Page             |                                                         | Page         |
|-----------------------------------------------------------|------------------|---------------------------------------------------------|--------------|
| North Dakota-South Dakota State line,                     |                  | Pierre, Lake Oahe near . . . . .                        | 196          |
| James River at . . . . .                                  | 288–289          | Missouri River, at . . . . .                            | 198–199      |
| Maple River at . . . . .                                  | 294–295, 455     | at Farm Island, near . . . . .                          | 214–215      |
| North Fork Grand River near White Butte . . . . .         | 54–55, 430       | at LaFramboise Island, at . . . . .                     | 210–211      |
| North Fork Yellow Bank River near Odessa, MN . . . . .    | 46–47, 429       | below La Framboise Island, at . . . . .                 | 212–213      |
| North Sioux City, Big Sioux River at . . . . .            | 428              | Plainview, Cherry Creek near . . . . .                  | 194–195, 448 |
| <b>O</b>                                                  |                  | Cheyenne River near . . . . .                           | 192–193, 448 |
| Oacoma, White River near . . . . .                        | 248–252          | Plankton, definition of . . . . .                       | 30           |
| Oak Creek near Wakpala . . . . .                          | 52–53, 430       | Platte Creek, EMAP site above Platte . . . . .          | 474          |
| Odessa, MN, North Fork Yellow Bank River near . . . . .   | 46–47, 429       | near Platte . . . . .                                   | 254–255, 454 |
| Oelrichs, Horsehead Creek at . . . . .                    | 76–77, 432       | Plum Creek, below Hayes . . . . .                       | 399          |
| Oglala, White Clay Creek near . . . . .                   | 400, 450         | near Hayes . . . . .                                    | 399          |
| White River near . . . . .                                | 224–225, 450     | Pollock, Spring Creek EMAP site near . . . . .          | 464          |
| Okaton, White River EMAP site near . . . . .              | 470              | Polychlorinated biphenyls, definition of . . . . .      | 30           |
| Olsonville, Sand Creek near . . . . .                     | 402, 454         | Polychlorinated naphthalenes, definition of . . . . .   | 30           |
| Omaha Creek near Rosebud . . . . .                        | 472              | Ponca Creek EMAP site near Herrick . . . . .            | 474          |
| Open interval, definition of . . . . .                    | 29               | Pool, definition of . . . . .                           | 30           |
| Ordway, Elm River near . . . . .                          | 298–299          | Preachers Run tributary at Ipswich . . . . .            | 403, 457     |
| Organic carbon, definition of . . . . .                   | 29               | Precip at, Little Bear Run near Newcastle, WY . . . . . | 409          |
| Organic mass, definition of . . . . .                     | 29               | Racetrack Butte near Fairburn . . . . .                 | 410          |
| Organism count, Area, definition of . . . . .             | 29               | Primary productivity, definition of . . . . .           | 30           |
| Total, definition of . . . . .                            | 33               | Carbon method, definition of . . . . .                  | 30           |
| Volume, definition of . . . . .                           | 29               | Oxygen method, definition of . . . . .                  | 30           |
| Organochlorine compounds, definition of . . . . .         | 29               | Pringle, Beaver Creek near . . . . .                    | 84–85        |
| Ortley, Owens Creek EMAP reference site near . . . . .    | 475              | Highland Creek above Madison                            |              |
| Unnamed tributary Blue Dog Lake near . . . . .            | 405              | outcrop, near . . . . .                                 | 466          |
| Owens Creek EMAP reference site near Ortley . . . . .     | 475              | <b>Q</b>                                                |              |
| <b>P</b>                                                  |                  | Quinn, Unnamed tributary Cottonwood                     |              |
| Pactola Dam, Rapid Creek below . . . . .                  | 118–119, 438     | Creek near . . . . .                                    | 398, 449     |
| Rapid Creek above Johnson Siding, below . . . . .         | 393, 438         | <b>R</b>                                                |              |
| Pactola Reservoir near Silver City . . . . .              | 116              | Radioisotopes, definition of . . . . .                  | 30           |
| Parameter code, definition of . . . . .                   | 29               | Ramona, East Fork Vermillion River near . . . . .       | 475          |
| Parker, East Fork Vermillion River near . . . . .         | 326–327, 458–459 | Rapid City, Boxelder Creek near . . . . .               | 132–133      |
| West Fork Vermillion River near . . . . .                 | 328–329, 459     | Cleghorn Springs at . . . . .                           | 122–123, 439 |
| Partial-record station, definition of . . . . .           | 29               | Elk Creek near . . . . .                                | 138–139, 441 |
| Partial-record stations . . . . .                         | 390–408          | Lime Creek at mouth, at . . . . .                       | 467          |
| Particle size, definition of . . . . .                    | 29               | Rapid Creek, at . . . . .                               | 124–125, 439 |
| classification, definition of . . . . .                   | 29               | above Canyon Lake, near . . . . .                       | 120–121, 439 |
| Pass Creek, EMAP reference site near Highway 44 . . . . . | 470              | at Big Bend, near . . . . .                             | 394, 438     |
| near Dewey . . . . .                                      | 391, 431         | at water treatment plant, at . . . . .                  | 439          |
| Peak flow, definition of . . . . .                        | 29               | below Hawthorn Ditch, at . . . . .                      | 395, 440     |
| Peak stage, definition of . . . . .                       | 29               | below sewage treatment plant, near . . . . .            | 126–127, 440 |
| Peever, Big Coulee Creek near . . . . .                   | 42–43, 429       | above Victoria Creek, near . . . . .                    | 394          |
| Percent composition, definition of . . . . .              | 29               | Spring Creek (Madison/Minnelusa                         |              |
| Percent of total, definition of . . . . .                 | 29               | contact) near . . . . .                                 | 467          |
| Percent shading, definition of . . . . .                  | 29               | South Canyon near . . . . .                             | 395          |
| Periodic-record station, definition of . . . . .          | 29               | Victoria Creek above Victoria Dam, near . . . . .       | 394, 438     |
| Periphyton, definition of . . . . .                       | 29               | Victoria Creek below Victoria Dam, near . . . . .       | 394, 438     |
| Pesticides, definition of . . . . .                       | 29               | Wild Irishman Gulch near . . . . .                      | 395          |
| pH, definition of . . . . .                               | 30               | Rapid Creek, above Canyon Lake,                         |              |
| Phillip, Medicine Creek near . . . . .                    | 398              | near Rapid City . . . . .                               | 120–121, 439 |
| Phytoplankton, definition of . . . . .                    | 30               | above Johnson Siding, below Pactola Dam . . . . .       | 393, 438     |
| Pickstown, Lake Francis Case at . . . . .                 | 256              | above Pactola Reservoir, at Silver City . . . . .       | 114–115, 437 |
| Picocurie, definition of . . . . .                        | 30               | above Victoria Creek, near Rapid City . . . . .         | 394          |
|                                                           |                  | at Big Bend, near Rapid City . . . . .                  | 394, 438     |
|                                                           |                  | at Rapid City . . . . .                                 | 124–125, 439 |
|                                                           |                  | at water treatment plant, at Rapid City . . . . .       | 439          |
|                                                           |                  | below Hawthorn Ditch, at Rapid City . . . . .           | 395, 440     |

|                                                            | Page         |                                                          | Page         |
|------------------------------------------------------------|--------------|----------------------------------------------------------|--------------|
| Rapid Creek, below Pactola Dam . . . . .                   | 118–119, 438 | Sediment, definition of . . . . .                        | 31           |
| below sewage treatment plant,                              |              | Seep 1 CCC Spring below Quinn Table,                     |              |
| near Rapid City . . . . .                                  | 126–127, 440 | near Wall . . . . .                                      | 468          |
| near Farmingdale . . . . .                                 | 128–129, 440 | Seep 2 CCC Spring below Quinn Table,                     |              |
| Rauville, Mud Creek near . . . . .                         | 406          | near Wall . . . . .                                      | 468          |
| South Branch tributary Mud Creek near . . . . .            | 406          | Sensible heat flux, definition of . . . . .              | 31           |
| Reach, definition of . . . . .                             | 30           | Seven-day, 10-year low flow, definition of . . . . .     | 31           |
| Recoverable from bed (bottom) material,                    |              | Shadehill Reservoir at Shadehill . . . . .               | 58           |
| definition of . . . . .                                    | 30           | Shannon County, ground-water levels in . . . . .         | 480–481      |
| Recurrence interval, definition of . . . . .               | 30           | Shelves, definition of . . . . .                         | 31           |
| Red Owl, Elm Creek near . . . . .                          | 397, 448     | Silver City, Rapid Creek above Pactola                   |              |
| Redbird Canyon near Newcastle, WY . . . . .                | 391, 431     | Reservoir, at . . . . .                                  | 114–115, 437 |
| Redfield, James River near . . . . .                       | 308–309, 457 | Pactola Reservoir near . . . . .                         | 116          |
| Redshirt, Cheyenne River at . . . . .                      | 90–91, 434   | Silver Creek near Sioux Falls . . . . .                  | 408          |
| Redwater Creek at Wyoming-South                            |              | Sioux City, IA, Missouri River at . . . . .              | 388–389      |
| Dakota State line . . . . .                                | 152–153, 442 | Sioux Falls, Big Sioux River at North                    |              |
| Redwater River above Belle Fourche . . . . .               | 166–167, 445 | Cliff Avenue, at . . . . .                               | 368–378, 463 |
| Reno Gulch near Hill City . . . . .                        | 393, 436     | Big Sioux River below diversion, at . . . . .            | 407          |
| Replicate samples, definition of . . . . .                 | 31           | Silver Creek near . . . . .                              | 408          |
| Return period, definition of . . . . .                     | 31           | Skunk Creek, at Sioux Falls . . . . .                    | 366–367      |
| Rhoads Fork near Rochford . . . . .                        | 106–107, 437 | near Chester . . . . .                                   | 364–365, 462 |
| Richland, Big Sioux River near . . . . .                   | 426          | near Hartford . . . . .                                  | 407, 462     |
| Riffle, definition of . . . . .                            | 31           | Snake Creek near Bijou Hills . . . . .                   | 401          |
| River mileage, definition of . . . . .                     | 31           | Snatch Creek near Tabor . . . . .                        | 402          |
| Rochford, Rhoads Fork near . . . . .                       | 106–107, 437 | Sodium adsorption ratio, definition of . . . . .         | 31           |
| Rock Creek near Fulton . . . . .                           | 404          | Soil heat flux, definition of . . . . .                  | 31           |
| Rock River near Rock Valley, IA . . . . .                  | 382–383      | Soil-water content, definition of . . . . .              | 31           |
| Rockerville 1, Spring Creek near Keystone, below . . . . . | 466          | Soldier Creek, above Swift Bear Lake,                    |              |
| Rockerville 2, Spring Creek near Keystone, below . . . . . | 466          | near Rosebud . . . . .                                   | 473          |
| Rosebud, Beads Creek near . . . . .                        | 472          | near Rosebud . . . . .                                   | 473          |
| East tributary Rosebud Creek near . . . . .                | 473          | Cut Meat Creek near confluence Little                    |              |
| Little White River above . . . . .                         | 472          | White River below . . . . .                              | 474          |
| Little White River near . . . . .                          | 244–245, 453 | Wigwam Creek near . . . . .                              | 473          |
| Omaha Creek near . . . . .                                 | 472          | South Branch tributary Mud Creek                         |              |
| Rosebud Creek at Little White River                        |              | near Rauville . . . . .                                  | 406          |
| confluence below . . . . .                                 | 473          | South Canyon near Rapid City . . . . .                   | 395          |
| Soldier Creek above Swift Bear Lake, near . . . . .        | 473          | South Fork Bad River near Cottonwood . . . . .           | 200–201, 449 |
| Soldier Creek near . . . . .                               | 473          | South Fork Grand River near Cash . . . . .               | 56–57, 430   |
| South Fork Ironwood Creek near . . . . .                   | 472          | South Fork Ironwood Creek near Rosebud . . . . .         | 472          |
| Unnamed tributary Crazy Horse Canyon near . . . . .        | 472          | Spearfish, Squaw Creek near . . . . .                    | 396, 444     |
| Rosebud Creek, at Little White River confluence            |              | Spearfish Creek, above Spearfish . . . . .               | 162–163, 444 |
| below Rosebud . . . . .                                    | 473          | at Spearfish . . . . .                                   | 164–165, 444 |
| at Rosebud . . . . .                                       | 473          | below Robison Gulch, near Spearfish . . . . .            | 469          |
| Roubaix, Elk Creek near . . . . .                          | 136–137, 441 | below Spearfish . . . . .                                | 396, 444     |
| Rumford, Hat Creek EMAP site near . . . . .                | 464          | near Lead . . . . .                                      | 156–157, 443 |
| Run, definition of . . . . .                               | 31           | Specific electrical conductance (conductivity),          |              |
| Runoff, definition of . . . . .                            | 31           | definition of . . . . .                                  | 31           |
| <b>S</b>                                                   |              |                                                          |              |
| Sage Creek, below South Fork Sage, near Wall . . . . .     | 468          | Split Rock Creek at Corson . . . . .                     | 380–381, 463 |
| near north park boundary, near Wall . . . . .              | 468          | Spring complex 1, below Quinn Table, near Wall . . . . . | 467          |
| Salem, Little Vermillion River near . . . . .              | 324–325, 458 | Spring complex 2, below Quinn Table, near Wall . . . . . | 467          |
| Sand Creek (tributary to Belle Fourche River)              |              | Spring complex 3, below Quinn Table, near Wall . . . . . | 467          |
| near Ranch A, near Beulah, WY . . . . .                    | 148–149      | Spring Creek, above Sheridan Lake,                       |              |
| Sand Creek, EMAP site below Keyapaha . . . . .             | 474          | near Keystone . . . . .                                  | 100–101, 436 |
| near Olsonville . . . . .                                  | 402, 454     | at Oreville, near Hill City . . . . .                    | 393, 435     |
| Sawmill Canyon near Spring Creek . . . . .                 | 471          | EMAP site near Pollock . . . . .                         | 464          |
| Scotland, James River near . . . . .                       | 320–321, 458 | near Hermosa . . . . .                                   | 104–105, 436 |
| Screened interval, definition of . . . . .                 | 29           | near Keystone . . . . .                                  | 102–103, 436 |
| Sea level, definition of . . . . .                         | 31           | (near Spring Creek) near St. Francis . . . . .           | 471          |
|                                                            |              | near Keystone, below Rockerville 1 . . . . .             | 466          |
|                                                            |              | near Keystone, below Rockerville 2 . . . . .             | 466          |

|                                            | Page         |                                              | Page         |
|--------------------------------------------|--------------|----------------------------------------------|--------------|
| Spring Creek, Coffee Creek above           | 471          | Tons per day, definition of                  | 32           |
| Little White River, Valandra bridge, near  | 471          | Total, definition of                         | 32           |
| Sawmill Canyon near                        | 471          | coliform bacteria, definition of             | 33           |
| Spring Creek (Madison/Minnelusa contact)   |              | discharge, definition of                     | 33           |
| near Rapid City                            | 467          | in bottom material, definition of            | 33           |
| Spring tributary above Sage Creek (north), |              | length, definition of                        | 33           |
| near Wall                                  | 468          | load, definition of                          | 33           |
| Springfield, Lewis and Clark Lake at       | 274–275      | organism count, definition of                | 33           |
| Squaw Creek near Spearfish                 | 396, 444     | recoverable, definition of                   | 33           |
| St. Francis, Spring Creek (near Spring     |              | sediment discharge, definition of            | 33           |
| Creek) near                                | 471          | sediment load, definition of                 | 33           |
| Stable isotope ratio, definition of        | 31           | Transect, definition of                      | 33           |
| Stage, definition of                       | 31           | Tulare, Turtle Creek near                    | 403, 457     |
| Stage-discharge relation, definition of    | 31           | Turbidity, definition of                     | 33           |
| Stink Creek EMAP site near Bullhead        | 464          | Turkey Ridge Creek EMAP reference site       |              |
| Stockade Beaver Creek near Newcastle, WY   | 70–71        | near Turkey Ridge                            | 475          |
| Stratford, James River near                | 304–305, 456 | Turtle Creek, EMAP reference site near       |              |
| Strawberry Creek, above Boomer Gulch,      |              | confluence, at Wolf Creek                    | 474          |
| near Galena                                | 469          | near Tulare                                  | 403, 457     |
| near Anchor Hill, near Galena              | 469          | Turton tributary south near Turton           | 403          |
| near confluence, Bear Butte Creek,         |              | Tuthill, Lake Creek above refuge, near       | 238–239, 452 |
| near Galena                                | 469          | Lake Creek below refuge, near                | 240–241, 452 |
| Streamflow, definition of                  | 31           |                                              |              |
| Sturgis, Bear Butte Creek at               | 470          | <b>U</b>                                     |              |
| Bear Butte Creek near                      | 397, 447     | Ultraviolet (UV) absorbance (absorption),    |              |
| Belle Fourche River near                   | 186–187, 447 | definition of                                | 33           |
| Substrate, definition of                   | 31           | Unconfined aquifer, definition of            | 33           |
| Artificial, definition of                  | 23           | Unnamed tributary, above Sage Creek (South), |              |
| Natural, definition of                     | 28           | near Wall                                    | 468          |
| Substrate embeddedness class,              |              | above Sage Creek, near north park            |              |
| definition of                              | 31           | boundary, near Wall                          | 468          |
| Summary of hydrologic conditions           | 1            | Blue Dog Lake near Ortle                     | 405          |
| Sunday Gulch below Johnson Canyon,         |              | Buzzard Creek near Long Valley               | 400          |
| near Hill City                             | 393, 436     | Cottonwood Creek near Quinn                  | 398, 449     |
| Surface area of a lake, definition of      | 31           | Crazy Horse Canyon near Rosebud              | 472          |
| Surficial bed material, definition of      | 31           | Stone Lake near Lebanon                      | 398          |
| Surrogate, definition of                   | 31           | Swift Bird Bay, Lake Oahe, near LaPlant      | 390          |
| Suspended, definition of                   | 32           | White Thunder Creek near Wood                | 401          |
| Recoverable, definition of                 | 32           |                                              |              |
| Total, definition of                       | 32           | <b>V</b>                                     |              |
| Suspended sediment, definition of          | 32           | Vale, Horse Creek above                      | 184–185, 447 |
| Suspended-sediment, concentration,         |              | Ninemile Creek near                          | 469          |
| definition of                              | 32           | Whitewood Creek above                        | 180–183, 446 |
| discharge, definition of                   | 32           | Veblen, LaBelle Creek near                   | 390, 429     |
| load, definition of                        | 32           | Verdel, NE, Missouri River below Choteau     |              |
| Suspended solids, total residue at 105 °C  |              | Creek, near                                  | 266–269      |
| concentration, definition of               | 32           | Vermillion River, near Vermillion            | 330–331, 459 |
| Synoptic studies, definition of            | 32           | near Wakonda                                 | 405          |
|                                            |              | Vertical datum, definition of                | 33           |
| <b>T</b>                                   |              | Vetal, Little White River near               | 242–243, 453 |
| Tabor, Snatch Creek near                   | 402          | Victoria Creek, above Victoria Dam,          |              |
| Taxa (Species) richness, definition of     | 32           | near Rapid City                              | 394, 438     |
| Taxonomy, definition of                    | 32           | below Victoria Dam, near Rapid City          | 394, 438     |
| Terms, definition of                       | 22–34        | Vivian, Williams Creek near                  | 401, 453     |
| Thalweg, definition of                     | 32           | Volatile mass, definition of                 | 29           |
| Thermograph, definition of                 | 32           | Volatile organic compounds, definition of    | 33           |
| Time-weighted average, definition of       | 32           |                                              |              |
| Todd/Mellette County line, Little White    |              | <b>W</b>                                     |              |
| River near                                 | 474          | Wakonda, Vermillion River near               | 405          |
| Tons per acre-foot, definition of          | 32           | Wakpala, Oak Creek near                      | 52–53, 430   |

|                                                     | Page         |                                                     | Page             |
|-----------------------------------------------------|--------------|-----------------------------------------------------|------------------|
| Wall, CCC Spring, below Quinn Table, near . . . . . | 467          | White River, near Nebraska-South                    |                  |
| tributary above South Fork                          |              | Dakota State line. . . . .                          | 222–223, 449     |
| Sage Creek, near . . . . .                          | 468          | near Oacoma. . . . .                                | 248–252          |
| Dry Creek above South Fork Sage Creek near .        | 467          | near Oglala . . . . .                               | 224–225, 450     |
| Sage Creek, below South Fork Sage, near . . .       | 468          | near White River. . . . .                           | 234–235, 451–452 |
| near north park boundary, near. . . . .             | 468          | White River, Little White River below. . . . .      | 246–247, 453     |
| Seep 1 CCC Spring below Quinn Table, near .         | 468          | White Rock, Bois de Sioux River near. . . . .       | 40–41            |
| Seep 2 CCC Spring below Quinn Table, near .         | 468          | Mud Lake above White Rock Dam near . . . . .        | 38–39            |
| Spring complex 1, below Quinn Table, near . .       | 467          | Whitehorse, Moreau River near . . . . .             | 64–65, 431       |
| Spring complex 2, below Quinn Table, near . .       | 467          | Whitetail Creek at Lead . . . . .                   | 396, 445         |
| Spring complex 3, below Quinn Table, near . .       | 467          | Whitewood Creek, above Vale. . . . .                | 180–183, 446     |
| Spring tributary above Sage Creek                   |              | above Whitewood. . . . .                            | 174–177, 446     |
| (north), near . . . . .                             | 468          | EMAP site near Englewood . . . . .                  | 469              |
| Unnamed tributary, above Sage Creek,                |              | near Whitewood . . . . .                            | 178–179, 446     |
| near north park boundary, near. . . . .             | 468          | Wigwam Creek near Soldier Creek . . . . .           | 473              |
| above Sage Creek (South), near . . . . .            | 468          | Wild Irishman Gulch near Rapid City . . . . .       | 395              |
| Wanblee, Bear in the Lodge Creek near . . . . .     | 228–229, 451 | Williams Creek near Vivian . . . . .                | 401, 453         |
| Eagle Nest Creek EMAP site near . . . . .           | 470          | Willow Creek, near Watertown . . . . .              | 342–343          |
| Wasta, Cheyenne River near. . . . .                 | 134–135, 441 | near Crooks. . . . .                                | 408, 462         |
| Water table, definition of . . . . .                | 33           | near Keldron . . . . .                              | 390              |
| Water-table aquifer, definition of . . . . .        | 34           | near Vale. . . . .                                  | 469              |
| Water year, definition of. . . . .                  | 34           | Wilmot, No Name Creek EMAP site near . . . . .      | 464              |
| Watershed, definition of . . . . .                  | 34           | Wind Cave National Park, Beaver Creek site C. . . . | 465              |
| Watertown, Big Sioux River, at . . . . .            | 340–341, 460 | Beaver Creek site D . . . . .                       | 465              |
| at Broadway, at. . . . .                            | 406, 460     | Highland Creek site B. . . . .                      | 466              |
| at Lake Kampeska, near . . . . .                    | 405          | Highland Creek site C. . . . .                      | 466              |
| Big Sioux River below . . . . .                     | 344–345, 461 | Highland Creek site D . . . . .                     | 466              |
| Big Sioux River near. . . . .                       | 336–337, 460 | Wolf Creek, EMAP reference site near                |                  |
| Lake Kampeska at Water Treatment Plant, at .        | 338–339      | Wolf Creek Colony. . . . .                          | 475              |
| Willow Creek near . . . . .                         | 342–343      | near Clayton . . . . .                              | 404              |
| Waubay, Blue Dog Lake inflow (Owens                 |              | Wolf Creek, Turtle Creek EMAP reference site        |                  |
| Creek) near . . . . .                               | 332–333, 459 | near confluence, at . . . . .                       | 474              |
| Little Rush Lake outflow near . . . . .             | 475          | Wood, Unnamed tributary White Thunder               |                  |
| WDR, definition of. . . . .                         | 34           | Creek near. . . . .                                 | 401              |
| Weighted average, definition of . . . . .           | 34           | Wounded Knee Creek at Wounded Knee. . . . .         | 400, 450         |
| Wesport, Elm Creek EMAP reference site near . . .   | 474          | WSP, definition of . . . . .                        | 34               |
| West Fork Vermillion River near Parker . . . . .    | 328–329, 459 | Wyoming-South Dakota State line, Belle              |                  |
| Westport, Elm River at . . . . .                    | 296–297, 455 | Fourche River at . . . . .                          | 144–145, 442     |
| Wet mass, definition of. . . . .                    | 34           | Murray Ditch above headgate at. . . . .             | 150–151, 442     |
| Wet weight, definition of . . . . .                 | 34           | Redwater Creek at. . . . .                          | 152–153, 442     |
| Wewela, Keya Paha River at . . . . .                | 272–273, 455 | <b>Y</b>                                            |                  |
| Whetstone River near Big Stone City. . . . .        | 44–45        | Yankton, Missouri River at. . . . .                 | 278–287          |
| White Butte, North Fork Grand River near . . . . .  | 54–55, 430   | James River near. . . . .                           | 405, 458         |
| White Clay Creek near Oglala . . . . .              | 400, 450     | Lewis and Clark Lake near. . . . .                  | 276              |
| White River, EMAP site, near Jackson                |              | <b>Z</b>                                            |                  |
| County line . . . . .                               | 470          | Zooplankton, definition of . . . . .                | 34               |
| near Okaton. . . . .                                | 470          |                                                     |                  |
| near Interior. . . . .                              | 226–227, 450 |                                                     |                  |
| near Kadoka . . . . .                               | 230–231, 451 |                                                     |                  |

## Conversion Factors

| Multiply                                                  | By                     | To obtain                                       |
|-----------------------------------------------------------|------------------------|-------------------------------------------------|
| <b>Length</b>                                             |                        |                                                 |
| inch (in.)                                                | $2.54 \times 10^1$     | millimeter (mm)                                 |
|                                                           | $2.54 \times 10^{-2}$  | meter                                           |
| foot (ft)                                                 | $3.048 \times 10^{-1}$ | meter (m)                                       |
| mile (mi)                                                 | $1.609 \times 10^0$    | kilometer (km)                                  |
| <b>Area</b>                                               |                        |                                                 |
| acre                                                      | $4.047 \times 10^3$    | square meter (m <sup>2</sup> )                  |
|                                                           | $4.047 \times 10^{-1}$ | square hectometer (hm <sup>2</sup> )            |
|                                                           | $4.047 \times 10^{-3}$ | square kilometer (km <sup>2</sup> )             |
| square mile (mi <sup>2</sup> )                            | $2.590 \times 10^0$    | square kilometer (km <sup>2</sup> )             |
| <b>Volume</b>                                             |                        |                                                 |
| gallon (gal)                                              | $3.785 \times 10^0$    | liter (L)                                       |
|                                                           | $3.785 \times 10^{-3}$ | cubic meter (m <sup>3</sup> )                   |
|                                                           | $3.785 \times 10^0$    | cubic decimeter (dm <sup>3</sup> )              |
| million gallons (Mgal)                                    | $3.785 \times 10^3$    | cubic meter (m <sup>3</sup> )                   |
|                                                           | $3.785 \times 10^{-3}$ | cubic hectometer (hm <sup>3</sup> )             |
| cubic foot (ft <sup>3</sup> )                             | $2.832 \times 10^{-2}$ | cubic meter (m <sup>3</sup> )                   |
|                                                           | $2.832 \times 10^1$    | cubic decimeter (dm <sup>3</sup> )              |
| cubic-foot-per-second-per-day<br>[(ft <sup>3</sup> /s/d)] | $2.447 \times 10^3$    | cubic meter (m <sup>3</sup> )                   |
|                                                           | $2.447 \times 10^{-3}$ | cubic hectometer (hm <sup>3</sup> )             |
| acre-foot (acre-ft)                                       | $1.223 \times 10^3$    | cubic meter (m <sup>3</sup> )                   |
|                                                           | $1.223 \times 10^{-3}$ | cubic hectometer (hm <sup>3</sup> )             |
|                                                           | $1.223 \times 10^{-6}$ | cubic kilometer (km <sup>3</sup> )              |
| <b>Flow rate</b>                                          |                        |                                                 |
| cubic foot per second (ft <sup>3</sup> /s)                | $2.832 \times 10^1$    | liter (L/s)                                     |
|                                                           | $2.832 \times 10^{-2}$ | cubic meter per second (m <sup>3</sup> /s)      |
|                                                           | $2.832 \times 10^1$    | cubic decimeter per second (dm <sup>3</sup> /s) |
| gallon per minute (gal/min)                               | $6.309 \times 10^{-2}$ | liter per second (L/s)                          |
|                                                           | $6.309 \times 10^{-5}$ | cubic meter per second (m <sup>3</sup> /s)      |
|                                                           | $6.309 \times 10^{-2}$ | cubic decimeter per second (dm <sup>3</sup> /s) |
| million gallons per day (Mgal/d)                          | $4.381 \times 10^{-2}$ | cubic meter per second                          |
|                                                           | $4.381 \times 10^1$    | cubic decimeter per second (dm <sup>3</sup> /s) |
| <b>Mass</b>                                               |                        |                                                 |
| ton, short (2,000 lb)                                     | $9.072 \times 10^{-1}$ | megagram (Mg) or metric ton                     |

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$