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# FLOOD VOLUMES

## IN THE UPPER MISSISSIPPI RIVER BASIN

APRIL 1 THROUGH SEPTEMBER 30

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U.S. GEOLOGICAL SURVEY CIRCULAR 1120-H

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993

[$mi^2$, square mile; acre-ft, acre-feet; --, data unavailable]

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 1 | 05311000 | Minnesota River at Montevideo, Minn. | 6,180 | 4/6–13, 15–22<br>6/24–8/19 | 73 | 1,830,000 | 1910–17<br>1930–92 | 71 | 401,000 | 1986 | 1,761,000 | 543,000 |
| 2 | 05317000 | Cottonwood River near New Ulm, Minn. | 1,280 | 4/1–3<br>5/9–14<br>6/18–28<br>7/4–12 | 29 | 1,113,000 | 1912–13<br>1936–37<br>1939–92 | 58 | 148,000 | 1986 | 588,000 | 233,000 |
| 3 | 05320000 | Blue Earth River near Rapidan, Minn. | 2,430 | 6/19–22 | 4 | 2,720,000 | 1940–45<br>1950–92 | 49 | 486,000 | 1991 | 1,315,000 | 682,000 |
| 4 | 05325000 | Minnesota River at Mankato, Minn. | 14,900 | 4/1–12, 14–25<br>5/11–18<br>6/18–7/22<br>8/17–22 | 73 | 9,320,000 | 1905<br>1911–17<br>1930–92 | 71 | 1,606,000 | 1986 | 4,940,000 | 2,221,000 |
| 5 | 05330000 | Minnesota River near Jordan, Minn. | 16,200 | 4/1–5/30<br>6/3–9/9 | 159 | 10,672,000 | 1935–92 | 58 | 2,075,000 | 1986 | 5,766,000 | 2,779,000 |
| 6 | 05331000 | Mississippi River at St. Paul, Minn. | 36,800 | 6/23–7/19 | 27 | 17,569,000 | 1895,<br>1897<br>1901–92 | 94 | 5,520,000 | 1986 | 15,470,000 | 7,977,000 |
| 7 | 05360500 | Flambeau River near Bruce, Wis. | 1,860 | -- | -- | 931,000 | 1952–92 | 41 | 790,000 | 1968 | 1,226,000 | 1,314,000 |
| 8 | 05369500 | Chippewa River at Durand, Wis. | 9,010 | 6/20–25 | 6 | 4,596,000 | 1929–92 | 64 | 3,236,000 | 1943 | 5,633,000 | 5,537,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 9 | 05382000 | Black River near Galesville, Wis. | 2,080 | 4/1–3<br>6/11, 12, 19–25 | 12 | 1,950,000 | 1932–92 | 66 | 771,000 | 1938 | 51,468,000 | 1,268,000 |
| 10 | 05398000 | Wisconsin River at Rothschild, Wis. | 4,020 | -- | -- | 2,309,000 | 1945–92 | 48 | 1,451,000 | 1968 | 2,282,000 | 2,560,000 |
| 11 | 05407000 | Wisconsin River at Muscoda, Wis. | 10,400 | 6/24–28 | 5 | 6,742,000 | 1914–92 | 79 | 3,571,000 | 1973 | 5,832,000 | 6,285,000 |
| 12 | 05418500 | Maquoketa River near Maquoketa, Iowa. | 1,553 | 7/5–14<br>7/18–20 | 13 | 1,439,000 | 1914–92 | 79 | 394,000 | 1947 | 921,000 | 742,000 |
| 13 | 05420500 | Mississippi River at Clinton, Iowa. | 85,600 | 4/6–5/18<br>6/19–7/31 | 86 | 50,350,000 | 1874–92 | 119 | 22,200,000 | 1888 | 39,482,000 | 34,770,000 |
| 14 | 05422000 | Wapsipinicon River near Dewitt, Iowa. | 2,330 | 4/1–5/18<br>6/8–8/5<br>8/9–9/9<br>9/14–15, 25–29 | 146 | 3,010,000 | 1935–92 | 58 | 651,000 | 1947 | 1,410,000 | 1,129,000 |
| 15 | 05429500 | Yahara River near McFarland, Wis. | 1,564 | -- | -- | 171,000 | 1930–92 | 63 | 54,900 | 1933 | 108,200 | 112,000 |
| 16 | 05451500 | Iowa River at Marshalltown, Iowa. | 1,564 | 4/1–5/21<br>6/2–9/16<br>9/20–21, 25–27 | 163 | 2,076,000 | 1957–92 | 79 | 372,000 | 1983 | 952,000 | 602,000 |
| 17 | 05453100 | Iowa River at Marengo, Iowa. | 2,794 | 4/1–5/20<br>6/9–9/12<br>9/14–18, 25–30 | 157 | 4,205,000 | 1957–92 | 36 | 817,000 | 1983 | 1,773,000 | 1,333,000 |
| 18 | 05465000 | Cedar River near Conesville, Iowa. | 7,785 | 4/1–5/19<br>6/8–9/8<br>9/26–27 | 144 | 11,082,000 | 1940–92 | 53 | 2,140,000 | 1969 | 4,553,000 | 3,487,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 19 | 05465500 | Iowa River at Wapello, Iowa. | 12,499 | 4/1–5/21<br>6/8–9/22<br>9/25–30 | 164 | 17,707,000 | 1915–92 | 78 | 3,150,000 | 1969 | 7,160,000 | 6,257,000 |
| 20 | 05471500 | South Skunk River near Oskaloosa, Iowa. | 1,635 | 4/1–10, 19–23<br>5/2–16<br>6/4–5, 9–11<br>6/14–27<br>6/30–8/8<br>8/10–9/10<br>9/13–16, 25–30 | 131 | 2,289,000 | 1946–92 | 47 | 444,000 | 1990 | 1,034,000 | 708,000 |
| 21 | 05474000 | Skunk River at Augusta, Iowa. | 4,303 | 4/21–24<br>5/4–8<br>6/8–11, 2–27<br>7/1–2, 6–30<br>8/11–25, 9/6 | 60 | 5,570,000 | 1915–92 | 78 | 1,050,000 | 1973 | 2,903,000 | 1,782,000 |
| 22 | 05474500 | Mississippi River at Keokuk, Iowa. | 119,000 | 4/5–5/20<br>6/10–15<br>6/20–8/5<br>8/12–9/6 | 125 | 87,903,000 | 1879–92 | 114 | 29,000,000 | 1986 | 47,289,000 | 46,740,000 |
| 23 | 05474500 | Des Moines River at Humboldt, Iowa. | 2,256 | 4/1–5/29<br>5/31–8/7<br>8/16–21<br>8/31–9/4 | 139 | 2,567,000 | 1965–92 | 28 | 471,000 | 1984 | 1,324,000 | 671,000 |
| 24 | 05481300 | Des Moines River near Stratford, Iowa. | 5,452 | 4/1–5/24<br>6/2–8/4<br>8/15–26<br>8/29–9/5 | 138 | 6,381,000 | 1921–92 | 72 | 1,010,000 | 1984 | 3,359,000 | 1,470,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 25 | 05482500 | North Raccoon River near Jefferson, Iowa. | 1,619 | 4/1–11, 20–27<br>5/7–16<br>6/9, 14–23, 26<br>6/30–7/6<br>7/8–28<br>8/17–22<br>8/30–9/2 | 79 | 1,485,000 | 1941–92 | 52 | 368,000 | 1984 | 1,073,000 | 550,000 |
| 26 | 05484000 | South Raccoon River at Redfield, Iowa. | 994 | 7/8–14<br>8/12, 29–31 | 11 | 875,000 | 1941–92 | 52 | 220,000 | 1973 | 598,000 | 342,000 |
| 27 | 05484500 | Raccoon River at Van Meter, Iowa. | 3,441 | 5/10–16<br>6/19–21<br>7/1, 4–6, 8–23<br>7/25<br>8/11–12<br>8/18–19<br>8/29–9/1 | 39 | 3,172,000 | 1916–92 | 77 | 691,000 | 1973 | 2,056,000 | 1,054,000 |
| 28 | 05485500 | Des Moines River below the Raccoon River at Des Moines, Iowa. | 9,879 | 4/1–5/25<br>6/14–9/11<br>9/25–26 | 147 | 11,324,000 | 1978–92 | 15 | 3,000,000 | 1984 | 6,494,000 | 4,392,000 |
| 29 | 05490500 | Des Moines River at Keosauqua, Iowa. | 14,038 | 7/5–8/3 | 30 | 15,463,000 | 1970–92 | 23 | 3,750,000 | 1973 | 7,607,000 | 5,730,000 |
| 30 | 05570000 | Spoon River at Seville, Ill. | 1,636 | 4/16–19<br>7/24–31 | 12 | | 1914–92 | 79 | 421,000 | 1978 | 1,152,000 | 761,000 |
| 31 | 05586100 | Illinois River at Valley City, Ill. | 26,742 | 4/1–5/22<br>6/20–9/30 | 155 | 19,900,000 | 1939–92 | 54 | 8,760,000 | 1954 | 15,581,000 | 16,000,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | April–September | | | Annual runoff (acre-ft) |
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 32 | 06468170 | James River near Grace City, N. Dak. | 1,060 | 7/27–30 | 4 | 84,900 | 1969–92 | 24 | 14,800 | 1969 | 51,000 | 19,500 |
| 33 | 06478500 | James River near Scotland, S. Dak. | 20,653 | 5/9–18<br>6/23–8/27 | 76 | 1,302,000 | 1929–92 | 64 | 239,000 | 1962 | 1,405,000 | 300,000 |
| 34 | 06481000 | Big Sioux River near Dell Rapids, S. Dak. | 4,483 | 4/1–4<br>5/13<br>6/21–7/14<br>7/18 | 30 | 1,086,000 | 1949–92 | 44 | 171,000 | 1986 | 915,000 | 232,000 |
| 35 | 06483500 | Rock River near Rock Valley, Iowa. | 1,592 | 4/1–3, 9<br>5/8–12<br>5/30–6/5<br>6/7–10, 17–27<br>6/30–7/21<br>7/25–29<br>8/15–17, 30–31 | 63 | 1,567,000 | 1949–92 | 44 | 179,000 | 1984 | 897,000 | 273,000 |
| 36 | 06606600 | Little Sioux River at Correction-ville, Iowa. | 2,500 | 4/1–3<br>6/9–10, 14–25<br>7/2–7, 13–23 | 34 | 2,554,000 | 1919–92 | 74 | 392,000 | 1983 | 1,535,000 | 584,000 |
| 37 | 06800500 | Elkhorn River at Waterloo, Nebr. | 6,900 | -- | -- | 1,863,000 | 1929–92 | 64 | 537,000 | 1984 | 2,031,000 | 903,000 |
| 38 | 06803500 | Salt Creek at Lincoln, Nebr. | 684 | 7/24–25 | 2 | 378,000 | 1950–92 | 43 | 105,000 | 1984 | 356,000 | 164,000 |
| 39 | 06805500 | Platte River at Louisville, Nebr. | 85,800 | 7/23–26 | 4 | 6,654,000 | 1954–92 | 39 | 2,512,000 | 1984 | 7,704,000 | 4,731,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 40 | 06807000 | Missouri River at Nebraska City, Nebr. | 410,000 | 7/9–31 | 23 | 23,474,000 | 1967–92 | 26 | 15,600,000 | 1984 | 28,908,000 | 27,850,000 |
| 41 | 06808500 | West Nishnabotna River at Randolph, Iowa. | 1,326 | 7/1, 9–11<br>7/13–14<br>7/22–25<br>8/30–31 | 12 | 1,075,000 | 1949–92 | 44 | 268,000 | 1973 | 693,000 | 430,000 |
| 42 | 06810000 | Nishnabotna River above Hamburg, Iowa. | 2,806 | 4/1–2<br>5/8–19, 23–25<br>6/6–8, 14–16<br>6/18–22<br>6/24–8/21<br>8/29–9/10<br>9/22–29 | 108 | 2,794,000 | 1923–92 | 70 | 517,000 | 1947 | 1,517,000 | 822,000 |
| 43 | 06815000 | Big Nemaha River at Falls City, Nebr. | 1,340 | 4/1<br>5/8-9, 11<br>6/30<br>7/1–2, 5–10<br>7/18, 22–25 | 19 | 1,565,000 | 1945–92 | 48 | 286,000 | 1951 | 1,281,000 | 430,000 |
| 44 | 06817000 | Nodaway River at Clarinda, Iowa. | 762 | 6/30–7/1<br>7/8–11, 13–14<br>7/20–26<br>8/29–31<br>9/22, 25–26 | 21 | 869,000 | 1921–92 | 72 | 165,000 | 1982 | 440,000 | 259,000 |
| 45 | 06818000 | Missouri River at St. Joseph, Mo. | 420,300 | 4/1–5<br>5/9–18<br>6/15, 19–21<br>6/25–8/7<br>8/31–9/3<br>9/23, 24 | 38 | 34,474,000 | 1921–92 | 64 | 19,916,000 | 1984 | 17,445,000 | 29,770,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | |
| | | | | | | | | | | Year | Runoff (acre-ft) |
| 46 | 06820500 | Platte River near Agency, Mo. | 1,760 | 4/1–4<br>5/8–12<br>6/7, 8, 15–16<br>7/2–17, 22–29<br>9/22–27 | 43 | 2,011,000 | 1933–92 | 60 | 425,000 | 1982 | 618,000 | 672,000 |
| 47 | 06853020 | Republican River at Guide Rock, Nebr. | 22,090 | 7/18–28 | 11 | 277,000 | 1951–92 | 42 | 142,000 | 1951 | 940,000 | 215,000 |
| 48 | 06879100 | Kansas River at Fort Riley, Kans. | 44,870 | 7/18–30 | 13 | 7,174,000 | 1964–92 | 29 | 977,000 | 1987 | 3,103,000 | 1,764,000 |
| 49 | 06891000 | Kansas River at LeCompton, Kans. | 58,460 | 7/18–8/7 | 21 | 16,538,000 | 1937–92 | 56 | 3,383,000 | 1951 | 17,527,000 | 5,028,000 |
| 50 | 06893000 | Missouri River at Kansas City, Mo. | 485,200 | 5/10–13<br>7/3<br>7/6–8/6 | 37 | 54,674,000 | 1898–92 | 95 | 24,076,000 | 1951 | 26,193,000 | 36,235,000 |
| 51 | 06897500 | Grand River near Gallatin, Mo. | 2,250 | 4/1–2, 8–10<br>5/7–13<br>6/6–9, 14–15<br>7/1–17, 21–28<br>9/22–27 | 49 | 1,502,000 | 1922–92 | 71 | 524,000 | 1947 | 899,000 | 844,000 |
| 52 | 06898000 | Thompson River at Davis City, Iowa. | 701 | 7/1, 5–8<br>7/10–11, 22<br>7/24-26, 8/21 | 12 | 790,000 | 1921–92 | 58 | 171,000 | 1947 | 470,000 | 278,000 |
| 53 | 06899500 | Thompson River at Trenton, Mo. | 1,670 | 7/5-8, 11–12<br>7/23–25 | 9 | 1,933,000 | 1922–23<br>1929–92 | 66 | 429,000 | 1947 | 713,000 | 710,000 |

**Table 1.** Summary of flow volumes at selected streamflow-gaging stations in the upper Mississippi River Basin, April 1 through September 30, 1993—Continued

| Site number (fig. 4) | Station number | Station name | Drainage area ($mi^2$) | April–September 1993 | | | Period of record | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date(s) | Number of days | Runoff (acre-ft) | Years | Number of years | April–September | | | Annual runoff (acre-ft) |
| | | | | | | | | | Mean runoff (acre-ft) | Previous maximum | | |
| | | | | | | | | | | Year | Runoff (acre-ft) | |
| 54 | 06902000 | Grand River near Sumner, Mo. | 6,880 | 4/1–3, 8–11<br>4/13–18, 20–21<br>5/3–14<br>6/6–11, 14–16<br>7/1–8/3<br>9/14–16, 20–30 | 84 | 9,589,000 | 1924–92 | 69 | 1,683,000 | 1947 | 2,979,000 | 2,836,000 |
| 55 | 06904500 | Chariton River at Novinger, Mo. | 1,370 | 7/8–13<br>7/22–25 | 10 | 1,468,000 | 1931–52<br>1955–92 | 60 | 355,000 | 1973 | 529,000 | 611,000 |
| 56 | 06905500 | Chariton River near Prairie Hill, Mo. | 1,870 | 7/1–2, 7–15<br>7/23–28<br>8/13<br>9/15, 23, 26 | 22 | 2,077,000 | 1929–92 | 64 | 511,000 | 1973 | 846,000 | 867,000 |
| 57 | 06909000 | Missouri River at Booneville, Mo. | 501,700 | 4/1–7, 14–18<br>5/4-5, 8–18<br>6/6–11<br>7/1–8/19<br>8/23, 24<br>9/3–5, 14–17<br>9/20–30 | 101 | 74,060,000 | 1926–92 | 67 | 28,530,000 | 1951 | 31,358,000 | 43,554,000 |
| 58 | 06934500 | Missouri River at Hermann, Mo. | 524,200 | 4/2–8, 14–23<br>5/5–21<br>6/6–12, 25–26<br>7/1–8/25<br>9/14–30 | 116 | 90,700,000 | 1897–92 | 96 | 35,706,000 | 1951 | 40,656,000 | 55,587,000 |
| 59 | 07010000 | Mississippi River at St. Louis, Mo. | 697,000 | 4/5, 7–8<br>4/11–5/24<br>6/26–9/30 | 144 | 216,807,000 | 1862–92 | 131 | 79,173,000 | 1951 | 74,411,000 | 131,692,000 |
| 60 | 07022000 | Mississippi River at Thebes, Ill. | 713,200 | 4/1–5/27<br>6/2–9/30 | 152 | 220,307,000 | 1933–92 | 60 | 81,001,000 | 1951 | 77,296,000 | 143,348,000 |

**Table 2.** Magnitude and frequency of the highest daily mean discharges from 3, 7, and 30 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin

[$ft^3/s$, cubic feet per second; recurrence interval, rounded to nearest 5 years for 20- to 50-year recurrence intervals and to nearest 10 years for 55- to 100-year recurrence intervals; >, greater than]

| Site number (fig. 4) | Station number | Station name | 3-day values | | | 7-day values | | | 30-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 1 | 05311000 | Minnesota River at Montevideo, Minn. | 10,900 | 10 | 33,000 | 10,200 | 10 | 27,900 | 8,520 | 15 | 14,000 |
| 2 | 05317000 | Cottonwood River near New Ulm, Minn. | 19,700 | 60 | 24,400 | 15,100 | 70 | 18,400 | 7,450 | >100 | 7,110 |
| 3 | 05320000 | Blue Earth River near Rapidan, Minn. | 18,800 | 16 | 40,300 | 17,000 | 17 | 37,800 | 12,300 | 40 | 13,600 |
| 4 | 05325000 | Minnesota River at Mankato, Minn. | 72,100 | 35 | 92,200 | 67,300 | 30 | 86,100 | 46,800 | 60 | 45,000 |
| 5 | 05330000 | Minnesota River near Jordan, Minn. | 89,300 | 80 | 111,000 | 83,600 | 80 | 100,000 | 56,100 | >100 | 48,700 |
| 6 | 05331000 | Mississippi River at St. Paul, Minn. | 103,000 | 30 | 169,000 | 98,800 | 25 | 162,000 | 85,000 | 50 | 101,000 |
| 7 | 05360500 | Flambeau River near Bruce, Wis. | 13,300 | 13 | 15,700 | 10,000 | 7 | 13,700 | 4,870 | 3 | 8,290 |
| 8 | 05369500 | Chippewa River at Durand, Wis. | 74,700 | 20 | 104,000 | 54,400 | 14 | 78,600 | 24,600 | 5 | 38,300 |
| 9 | 05382000 | Black River near Galesville, Wis. | 44,400 | >100 | 51,000 | 29,800 | 80 | 34,800 | 12,000 | 80 | 12,200 |
| 10 | 05398000 | Wisconsin River at Rothschild, Wis. | 36,400 | 18 | 42,500 | 25,900 | 13 | 31,200 | 12,000 | 7 | 15,300 |
| 11 | 05407000 | Wisconsin River at Muscoda, Wis. | 57,800 | 16 | 75,300 | 50,000 | 16 | 64,500 | 30,500 | 15 | 38,100 |
| 12 | 05418500 | Maquoketa River near Maquoketa, Iowa. | 20,400 | 15 | 22,900 | 17,600 | >100 | 14,800 | 9,200 | >100 | 6,810 |
| 13 | 05420500 | Mississippi River at Clinton, Iowa. | 235,000 | 25 | 304,000 | 233,000 | 30 | 296,000 | 208,000 | 65 | 224,000 |

**Table 2.** Magnitude and frequency of the highest daily mean discharges from 3, 7, and 30 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 3-day values | | | 7-day values | | | 30-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 14 | 05422000 | Wapsipinicon River near DeWitt, Iowa. | 20,000 | 25 | 21,500 | 19,600 | 70 | 17,200 | 14,600 | >100 | 11,000 |
| 15 | 05429500 | Yahara River near McFarland, Wis. | 670 | 30 | 842 | 648 | 25 | 825 | 588 | 45 | 719 |
| 16 | 05451500 | Iowa River at Marshalltown, Iowa. | 16,000 | 20 | 33,100 | 13,700 | 100 | 21,900 | 8,970 | >100 | 8,280 |
| 17 | 05453100 | Iowa River at Marengo, Iowa. | 32,600 | >100 | 23,000 | 28,300 | >100 | 19,500 | 20,200 | >100 | 11,600 |
| 18 | 05465500 | Cedar River near Conesville, Iowa. | 63,900 | 40 | 63,700 | 52,400 | 50 | 54,700 | 43,300 | >100 | 34,100 |
| 19 | 05465500 | Iowa River at Wapello, Iowa. | 99,800 | >100 | 80,700 | 93,600 | >100 | 64,300 | 80,800 | >100 | 49,000 |
| 20 | 05471500 | South Skunk River near Oskaloosa, Iowa. | 19,200 | >100 | 16,400 | 17,100 | >100 | 13,400 | 11,900 | >100 | 9,300 |
| 21 | 05474000 | Skunk River at Augusta, Iowa. | 43,800 | >100 | 57,300 | 36,900 | >100 | 39,900 | 27,200 | >100 | 21,000 |
| 22 | 05474500 | Mississippi River at Keokuk, Iowa. | 425,000 | >100 | 341,000 | 419,000 | >100 | 323,000 | 388,000 | >100 | 266,000 |
| 23 | 05474500 | Des Moines River at Humboldt, Iowa. | 16,200 | 60 | 17,300 | 15,200 | 55 | 15,600 | 12,400 | >100 | 8,620 |
| 24 | 054813000 | Des Moines River near Stratford, Iowa. | 38,200 | 25 | 51,700 | 35,900 | 40 | 43,600 | 28,400 | >100 | 21,900 |
| 25 | 05482500 | North Raccoon River near Jefferson, Iowa. | 14,700 | 13 | 17,900 | 12,900 | 20 | 13,500 | 7,760 | 45 | 8,020 |
| 26 | 05484000 | South Raccoon River at Redfield, Iowa. | 23,400 | >100 | 15,100 | 15,400 | >100 | 10,000 | 5,740 | >100 | 5,030 |

**Table 2.** Magnitude and frequency of the highest daily mean discharges from 3, 7, and 30 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 3-day values | | | 7-day values | | | 30-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 27 | 05484500 | Raccoon River at Van Meter, Iowa. | 47,800 | >100 | 32,400 | 35,100 | >100 | 28,600 | 17,700 | >100 | 14,000 |
| 28 | 05485500 | Des Moines River below Raccoon River at Des Moines, Iowa. | 101,000 | >100 | 55,400 | 87,800 | >100 | 54,300 | 56,900 | >100 | 37,300 |
| 29 | 05490500 | Des Moines River at Keosauqua, Iowa. | 107,000 | >100 | 50,300 | 105,000 | >100 | 40,700 | 89,600 | >100 | 36,400 |
| 30 | 05570000 | Spoon River at Seville, Ill. | 27,600 | 60 | 27,600 | 21,400 | 90 | 19,500 | 9,230 | 90 | 8,740 |
| 31 | 05586100 | Illinois River at Valley City, Ill. | 86,900 | 5 | 122,000 | 84,800 | 5 | 121,000 | 73,000 | 6 | 98,800 |
| 32 | 06468170 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

**Table 2.** Magnitude and frequency of the highest daily mean discharges from 3, 7, and 30 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 3-day values | | | 7-day values | | | 30-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 53 | 06899500 | Thompson River at Trenton, Mo. | 46,300 | 80 | 53,200 | 37,700 | >100 | 30,800 | 19,400 | >100 | 16,900 |
| 54 | 06902000 | Grand River near Sumner, Mo. | 157,000 | >100 | 147,000 | 145,000 | >100 | 98,200 | 89,900 | >100 | 68,800 |
| 55 | 06904500 | Chariton River at Novinger, Mo. | 19,400 | 35 | 19,400 | 17,600 | 50 | 16,200 | 10,100 | 100 | 9,800 |
| 56 | 06905500 | Chariton River near Prairie Hill, Mo. | 29,200 | 100 | 27,800 | 27,000 | >100 | 19,800 | 16,400 | >100 | 15,000 |
| 57 | 06909000 | Missouri River at Booneville, Mo. | 696,000 | >100 | 321,000 | 609,000 | >100 | 299,000 | 415,000 | >100 | 229,000 |
| 58 | 06934500 | Missouri River at Hermann, Mo. | 703,000 | >100 | 498,000 | 622,000 | >100 | 443,000 | 434,000 | >100 | 341,000 |
| 59 | 07010000 | Mississippi River at St. Louis, Mo. | 1,033,000 | >100 | 843,000 | 1,001,000 | >100 | 820,000 | 904,000 | >100 | 698,000 |
| 60 | 07022000 | Mississippi River at Thebes, Ill. | 969,000 | >100 | 868,000 | 948,000 | >100 | 847,000 | 888,000 | >100 | 743,000 |

**Table 3.** Magnitude and frequency of the highest daily mean discharges for 60, 90, and 120 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin

[$ft^3/s$, cubic feet per second; recurrence interval, rounded to nearest 5 years for 20- to 50-year recurrence intervals and to nearest 10 years for 55- to 100-year recurrence intervals; >, greater than]

| Site number (fig. 4) | Station number | Station name | 60-day values | | | 90-day values | | | 120-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 1 | 05311000 | Minnesota River at Montevideo, Minn. | 7,910 | 25 | 9,790 | 6,430 | 30 | 7,610 | 5,730 | 50 | 6,240 |
| 2 | 05317000 | Cottonwood River near New Ulm, Minn. | 5,160 | >100 | 4,030 | 4,430 | >100 | 2,910 | 3,990 | >100 | 2,450 |
| 3 | 05320000 | Blue Earth River near Rapidan, Minn. | 10,200 | >100 | 8,540 | 9,160 | >100 | 6,550 | 9,110 | >100 | 5,390 |
| 4 | 05325000 | Minnesota River at Mankato, Minn. | 35,300 | >100 | 30,000 | 30,600 | >100 | 22,900 | 30,000 | >100 | 19,900 |
| 5 | 05330000 | Minnesota River near Jordan, Minn. | 41,300 | >100 | 32,600 | 35,800 | >100 | 24,800 | 34,200 | >100 | 21,500 |
| 6 | 05331000 | Mississippi River at St. Paul, Minn. | 65,400 | 45 | 72,600 | 58,300 | 60 | 60,100 | 55,900 | 90 | 51,700 |
| 7 | 05360500 | Flambeau River near Bruce, Wis. | 3,920 | 4 | 6,040 | 3,720 | 5 | 5,220 | 3,270 | 5 | 4,290 |
| 8 | 05369500 | Chippewa River at Durand, Wis. | 19,200 | 6 | 25,700 | 18,200 | 11 | 23,300 | 16,100 | 14 | 20,600 |
| 9 | 05382000 | Black River near Galesville, Wis. | 8,020 | >100 | 7,360 | 8,170 | >100 | 5,750 | 6,960 | >100 | 4,700 |
| 10 | 05398000 | Wisconsin River at Rothschild, Wis. | 9,910 | 12 | 11,600 | 9,380 | 40 | 9,260 | 7,930 | 40 | 7,570 |
| 11 | 05407000 | Wisconsin River at Muscoda, Wis. | 25,000 | 40 | 30,700 | 25,400 | >100 | 25,700 | 23,300 | >100 | 21,100 |
| 12 | 05418500 | Maquoketa River near Maquoketa, Iowa. | 6,480 | >100 | 4,810 | 5,300 | >100 | 4,090 | 4,720 | >100 | 3,770 |
| 13 | 05420500 | Mississippi River at Clinton, Iowa. | 173,000 | 80 | 191,000 | 161,000 | >100 | 164,000 | 159,000 | >100 | 142,000 |

**Table 3.** Magnitude and frequency of the highest daily mean discharges for 60, 90, and 120 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 60-day values | | | 90-day values | | | 120-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 14 | 05422000 | Wapsipinicon River near DeWitt, Iowa. | 11,700 | >100 | 7,460 | 10,400 | >100 | 6,660 | 8,900 | >100 | 6,030 |
| 15 | 05429500 | Yahara River near McFarland, Wis. | 526 | 80 | 501 | 474 | >100 | 459 | 483 | >100 | 401 |
| 16 | 05451500 | Iowa River at Marshalltown, Iowa. | 8,050 | >100 | 5,820 | 7,540 | >100 | 5,130 | 6,480 | >100 | 4,400 |
| 17 | 05453100 | Iowa River at Marengo, Iowa. | 17,900 | >100 | 9,900 | 15,600 | >100 | 8,800 | 13,200 | >100 | 7,670 |
| 18 | 05465500 | Cedar River near Conesville, Iowa. | 38,700 | >100 | 23,200 | 36,100 | >100 | 20,300 | 32,400 | >100 | 17,800 |
| 19 | 05465500 | Iowa River at Wapello, Iowa. | 71,100 | >100 | 33,800 | 61,900 | >100 | 31,000 | 54,000 | >100 | 27,900 |
| 20 | 05471500 | South Skunk River near Oskaloosa, Iowa. | 9,920 | >100 | 6,380 | 8,720 | >100 | 4,970 | 7,500 | >100 | 4,190 |
| 21 | 05474000 | Skunk River at Augusta, Iowa. | 23,000 | >100 | 16,100 | 20,000 | >100 | 14,200 | 17,500 | >100 | 12,100 |
| 22 | 05474500 | Mississippi River at Keokuk, Iowa. | 313,000 | >100 | 240,000 | 280,000 | >100 | 223,000 | 269,000 | >100 | 200,000 |
| 23 | 05474500 | Des Moines River at Humboldt, Iowa. | 10,400 | >100 | 5,810 | 9,090 | >100 | 6,100 | 8,800 | >100 | 5,400 |
| 24 | 054813000 | Des Moines River near Stratford, Iowa. | 24,600 | >100 | 17,000 | 21,000 | >100 | 16,000 | 21,200 | >100 | 14,000 |
| 25 | 05482500 | North Raccoon River near Jefferson, Iowa. | 5,630 | 50 | 5,960 | 5,030 | 60 | 5,460 | 5,010 | >100 | 4,680 |
| 26 | 05484000 | South Raccoon River at Redfield, Iowa. | 4,180 | >100 | 3,010 | 3,470 | >100 | 2,390 | 3,020 | >100 | 2,300 |

**Table 3.** Magnitude and frequency of the highest daily mean discharges for 60, 90, and 120 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 60-day values | | | 90-day values | | | 120-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 27 | 05484500 | Raccoon River at Van Meter, Iowa. | 12,600 | >100 | 10,700 | 11,100 | >100 | 9,840 | 10,200 | >100 | 8,340 |
| 28 | 05485500 | Des Moines River below the Raccoon River at Des Moines, Iowa. | 43,300 | 60 | 30,300 | 37,500 | 35 | 29,000 | 35,100 | 40 | 26,100 |
| 29 | 05490500 | Des Moines River at Keosauqua, Iowa. | 67,700 | >100 | 31,000 | 57,200 | >100 | 27,600 | 50,400 | >100 | 26,300 |
| 30 | 05570000 | Spoon River at Seville, Ill. | 6,460 | >100 | 5,780 | 5,420 | >100 | 4,940 | 4,600 | >100 | 4,460 |
| 31 | 05586100 | Illinois River at Valley City, Ill. | 66,300 | 8 | 90,700 | 58,300 | 8 | 77,300 | 57,300 | 14 | 65,900 |
| 32 | 06468170 | James River near Grace City, N. Dak. | 565 | 17 | 416 | 394 | 16 | 282 | 299 | 15 | 213 |
| 33 | 06478500 | James River near Scotland, S. Dak. | 6,630 | 35 | 7,740 | 5,300 | 30 | 6,420 | 4,500 | 30 | 5,430 |
| 34 | 06481000 | Big Sioux River near Dell Rapids, S. Dak. | 4,690 | 40 | 4,770 | 3,900 | 45 | 3,920 | 3,760 | 60 | 3,270 |
| 35 | 06483500 | Rock River near Rock Valley, Iowa. | 8,070 | >100 | 4,600 | 6,550 | >100 | 4,600 | 5,620 | >100 | 4,030 |
| 36 | 06606600 | Little Sioux River at Correctionville, Iowa. | 11,000 | >100 | 8,090 | 9,020 | >100 | 6,830 | 8,630 | >100 | 6,480 |
| 37 | 06800500 | Elkhorn River at Waterloo, Nebr. | 8,130 | 35 | 9,960 | 6,680 | 25 | 10,200 | 6,200 | 30 | 8,690 |
| 38 | 06803500 | Salt Creek at Lincoln, Nebr. | 2,170 | 45 | 2,000 | 1,610 | 40 | 1,720 | 1,360 | 40 | 1,470 |

**Table 3.** Magnitude and frequency of the highest daily mean discharges for 60, 90, and 120 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site numbe (fig. 4) | Station number | Station name | 60-day values | | | 90-day values | | | 120-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 39 | 06805500 | Platte River at Louisville, Nebr. | 28,800 | 30 | 39,100 | 23,600 | 20 | 37,000 | 21,600 | 25 | 32,600 |
| 40 | 06807000 | Missouri River at Nebraska City, Nebr. | 92,800 | 45 | 101,000 | 80,800 | 20 | 100,000 | 73,400 | 16 | 92,700 |
| 41 | 06808500 | West Nishnabotna River at Randolph, Iowa. | 4,760 | >100 | 3,500 | 4,020 | >100 | 3,010 | 3,650 | >100 | 2,710 |
| 42 | 06810000 | Nishnabotna River above Hamburg, Iowa. | 12,800 | >100 | 9,860 | 11,000 | >100 | 7,350 | 9,670 | >100 | 6,050 |
| 43 | 06815000 | Big Nemaha River at Falls City, Nebr. | 8,950 | >100 | 6,330 | 7,260 | >100 | 5,380 | 6,080 | >100 | 4,440 |
| 44 | 06817000 | Nodaway River at Clarinda, Iowa. | 4,140 | >100 | 2,700 | 3,480 | >100 | 2,140 | 2,990 | >100 | 2,060 |
| 45 | 06818000 | Missouri River at St. Joseph, Mo. | 145,000 | >100 | 126,000 | 123,000 | 90 | 124,000 | 109,000 | 80 | 115,000 |
| 46 | 06820500 | Platte River near Agency, Mo. | 12,700 | >100 | 7,470 | 9,660 | >100 | 6,070 | 8,080 | >100 | 5,760 |
| 47 | 06853020 | Republican River at Guide Rock, Nebr. | 1,610 | 9 | 4,140 | 1,360 | 9 | 3,540 | 1,050 | 8 | 3,540 |
| 48 | 06879100 | Kansas River at Fort Riley, Kans. | 33,400 | >100 | 21,800 | 27,800 | >100 | 17,900 | 23,700 | >100 | 15,100 |
| 49 | 06891000 | Kansas River at LeCompton, Kans. | 75,100 | >100 | 101,000 | 62,100 | >100 | 76,000 | 53,300 | >100 | 65,200 |
| 50 | 06893000 | Missouri River at Kansas City, Mo. | 224,000 | >100 | 157,000 | 187,000 | >100 | 157,000 | 170,000 | >100 | 149,000 |
| 51 | 06897500 | Grand River near Gallatin, Mo. | 19,800 | >100 | 12,300 | 14,600 | >100 | 9,730 | 12,200 | >100 | 7,680 |

*U.S. G.P.O. 1995-380-070:85

**Table 3.** Magnitude and frequency of the highest daily mean discharges for 60, 90, and 120 consecutive days at selected streamflow-gaging stations in the upper Mississippi River Basin—Continued

| Site number (fig. 4) | Station number | Station name | 60-day values | | | 90-day values | | | 120-day values | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) | 1993 ($ft^3/s$) | Recurrence interval for 1993 (years) | Previous maximum for period of record ($ft^3/s$) |
| 52 | 06898000 | Thompson River at Davis City, Iowa. | 4,340 | >100 | 2,800 | 3,290 | >100 | 2,530 | 2,760 | >100 | 2,110 |
| 53 | 06899500 | Thompson River at Trenton, Mo. | 11,100 | >100 | 8,970 | 8,580 | >100 | 7,630 | 7,210 | >100 | 6,200 |
| 54 | 06902000 | Grand River near Sumner, Mo. | 52,600 | >100 | 38,800 | 39,500 | >100 | 31,800 | 33,500 | >100 | 25,900 |
| 55 | 06904500 | Chariton River at Novinger, Mo. | 6,470 | 50 | 5,820 | 5,380 | 60 | 5,250 | 4,660 | >100 | 4,440 |
| 56 | 06905500 | Chariton River near Prairie Hill, Mo. | 9,940 | 80 | 9,390 | 8,330 | 80 | 8,110 | 6,820 | 80 | 6,900 |
| 57 | 06909000 | Missouri River at Booneville, Mo. | 305,000 | >100 | 203,000 | 256,000 | >100 | 182,000 | 227,000 | >100 | 176,000 |
| 58 | 06934500 | Missouri River at Hermann, Mo. | 349,000 | >100 | 309,000 | 312,000 | >100 | 268,000 | 279,000 | >100 | 237,000 |
| 59 | 07010000 | Mississippi River at St. Louis, Mo. | 766,000 | >100 | 671,000 | 687,000 | >100 | 615,000 | 630,000 | >100 | 548,000 |
| 60 | 07022000 | Mississippi River at Thebes, Ill. | 776,000 | >100 | 717,000 | 697,000 | >100 | 664,000 | 639,000 | >100 | 595,000 |