

07289000 MISSISSIPPI RIVER AT VICKSBURG, MS

Lower Mississippi-Natchez Basin
Lower Mississippi-Natchez Subbasin

LOCATION.--Lat 32°18'54", long 90°54'21" referenced to North American Datum of 1983, in SW ¼ sec.32, T.16 N., R.3 E., Warren County, MS, Hydrologic Unit 08060100, Washington Meridian.

DRAINAGE AREA.--1,144,500 mi² of which 4,000 mi² probably is noncontributing, The 4,000 mi² probably not contribution is in the Great Divide basin in Southern Wyoming.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: January 1928 through September 1999, January 2008 to current year. Prior to July 1931, monthly discharges only, published in WSP 1311. October 1999 to January 2008 in U.S. Army Corps of Engineers publications.

Gage Heights: April 1930 - September 2001 in reports of the U.S. Geological Survey. Since December 1871, referred to canal gages (above 30.0 ft or 9.14 m only, since December 1949), September 1934 to December 1964, referred to bridge gage, in reports of Mississippi River Commission. January 1937 to December 1964 referred to bridge gage, January 1968 to December 1976, referred to gage 1.1 miles upstream and January 1977 to September 1986 referred to gage at mile 435.3 (corrected), in reports of the U.S. Army Corps of Engineers. Since May 1873, in reports of the National Weather Service.

Extreme of Stage, intermittently 1828 to 1871, and since 1871, extremes of discharge for various years 1858 to 1926 and since 1926, annual mean discharges since 1871, and records of daily discharge 1828 to 1964 are available in reports of the Mississippi River Commission. Since January 1947 daily discharge in reports of the U.S. Army Corps of Engineers. Prior to 1968, published as Mississippi River near Vicksburg.

REVISED RECORDS.--WRD Miss. 1975: Drainage area.

GAGE.--Water stage recorder operated by the U.S. Army Corps of Engineers. Datum of gage is 46.22 feet above sea level (U.S. Army Corps of Engineers benchmark) or 46.16 ft. above mean gulf level. The U.S. Geological Survey operated a water-stage recorder over the cavity in the fourth pier from the left bank at a combined highway and railway bridge of Vicksburg Bridge Commission of Warren County, at southern city limits of Vicksburg, 1.5 miles downstream from the Yazoo River diversion canal, and at mile 435.7 (corrected), operated until January 1977. Gages used by Mississippi River Commission: Dec. 10, 1871, to Sept. 30, 1929, nonrecording gage at the mouth of the Yazoo diversion canal, 1.5 mi upstream from the bridge gage, since October 1929, nonrecording gage on Yazoo diversion canal, 1600 ft upstream from the mouth. Gage used by National Weather Service, May 18, 1873, to Oct. 29, 1919, nonrecording gage 0.5 mi upstream from the bridge gage, Oct. 30, 1919, to Nov. 30, 1922, nonrecording gage at mouth of Yazoo Canal, Dec. 1, 1922, to Aug. 31, 1934, nonrecording gage on Yazoo diversion canal, Sept. 1, 1934, to Dec. 31, 1962, nonrecording gage at bridge, Jan. 1, 1963, to Dec. 31, 1967, water-stage recorder on left bank near downstream side of bridge, Jan. 1, 1968, to Dec. 31, 1976, on left bank at site 1.1 mi upstream, and since Jan. 1, 1977, on left bank at downstream side of Interstate 20 bridge. All gages at same datum, but readings differ due to slope of water surface between them.

COOPERATION.--Stage record and some streamflow measurements furnished by U.S. Army Corps of Engineers.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by many reservoirs and navigation dams. U.S. Army Corps of Engineers stage sensor and telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1871, 58.4 ft U.S. Army Corps of Engineers gage on Yazoo diversion canal, approximately 56.0 ft, May 4, 1927 (U.S. Geological survey gage).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190,000 ft³/s, Dec. 23, gage height, 39.05 ft; minimum discharge, 191,000 ft³/s, Aug. 28,29, gage height, -1.01 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
 [$\times 10^6$, million]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------|-----------|-----------|-----------|
| 1 | 385,000 | 357,000 | 795,000 | 1,070,000 | 948,000 | 564,000 | 1,000,000 | 471,000 | 405,000 | 274,000 | 218,000 | 205,000 |
| 2 | 401,000 | 356,000 | 816,000 | 1,060,000 | 957,000 | 554,000 | 980,000 | 453,000 | 385,000 | 275,000 | 219,000 | 211,000 |
| 3 | 415,000 | 352,000 | 836,000 | 1,050,000 | 968,000 | 552,000 | 951,000 | 443,000 | 366,000 | 274,000 | 228,000 | 212,000 |
| 4 | 422,000 | 349,000 | 860,000 | 1,030,000 | 987,000 | 547,000 | 914,000 | 450,000 | 347,000 | 267,000 | 245,000 | 210,000 |
| 5 | 422,000 | 351,000 | 895,000 | 1,020,000 | 1,000,000 | 543,000 | 866,000 | 472,000 | 335,000 | 263,000 | 257,000 | 213,000 |
| 6 | 415,000 | 353,000 | 936,000 | 1,000,000 | 1,020,000 | 542,000 | 823,000 | 505,000 | 334,000 | 261,000 | 263,000 | 216,000 |
| 7 | 405,000 | 357,000 | 987,000 | 988,000 | 1,030,000 | 546,000 | 787,000 | 545,000 | 343,000 | 260,000 | 261,000 | 221,000 |
| 8 | 392,000 | 358,000 | 1,030,000 | 973,000 | 1,050,000 | 552,000 | 749,000 | 586,000 | 349,000 | 262,000 | 249,000 | 226,000 |
| 9 | 380,000 | 360,000 | 1,070,000 | 961,000 | 1,050,000 | 586,000 | 713,000 | 616,000 | 346,000 | 266,000 | 234,000 | 231,000 |
| 10 | 372,000 | 365,000 | 1,100,000 | 939,000 | 1,060,000 | 652,000 | 682,000 | 636,000 | 342,000 | 270,000 | 225,000 | 233,000 |
| 11 | 367,000 | 382,000 | 1,120,000 | 911,000 | 1,060,000 | 722,000 | 661,000 | 649,000 | 340,000 | 275,000 | 221,000 | 234,000 |
| 12 | 364,000 | 381,000 | 1,130,000 | 877,000 | 1,060,000 | 793,000 | 647,000 | 671,000 | 342,000 | 278,000 | 215,000 | 232,000 |
| 13 | 358,000 | 364,000 | 1,140,000 | 836,000 | 1,050,000 | 862,000 | 629,000 | 700,000 | 349,000 | 282,000 | 209,000 | 230,000 |
| 14 | 349,000 | 345,000 | 1,150,000 | 788,000 | 1,020,000 | 924,000 | 609,000 | 722,000 | 357,000 | 286,000 | 209,000 | 229,000 |
| 15 | 335,000 | 328,000 | 1,160,000 | 741,000 | 983,000 | 961,000 | 586,000 | 725,000 | 355,000 | 288,000 | 211,000 | 227,000 |
| 16 | 322,000 | 319,000 | 1,170,000 | 692,000 | 950,000 | 975,000 | 564,000 | 719,000 | 348,000 | 289,000 | 212,000 | 226,000 |
| 17 | 309,000 | 326,000 | 1,170,000 | 658,000 | 908,000 | 982,000 | 546,000 | 712,000 | 340,000 | 288,000 | 214,000 | 227,000 |
| 18 | 296,000 | 339,000 | 1,180,000 | 638,000 | 861,000 | 987,000 | 533,000 | 708,000 | 333,000 | 282,000 | 213,000 | 226,000 |
| 19 | 285,000 | 351,000 | 1,180,000 | 629,000 | 816,000 | 988,000 | 520,000 | 700,000 | 326,000 | 275,000 | 213,000 | 225,000 |
| 20 | 276,000 | 368,000 | 1,180,000 | 639,000 | 774,000 | 984,000 | 508,000 | 682,000 | 318,000 | 261,000 | 212,000 | 224,000 |
| 21 | 271,000 | 383,000 | 1,180,000 | 656,000 | 728,000 | 980,000 | 496,000 | 668,000 | 313,000 | 248,000 | 213,000 | 219,000 |
| 22 | 273,000 | 408,000 | 1,180,000 | 673,000 | 684,000 | 980,000 | 499,000 | 649,000 | 308,000 | 240,000 | 210,000 | 213,000 |
| 23 | 280,000 | 463,000 | 1,190,000 | 698,000 | 651,000 | 984,000 | 515,000 | 623,000 | 303,000 | 235,000 | 207,000 | 204,000 |
| 24 | 288,000 | 536,000 | 1,180,000 | 710,000 | 635,000 | 996,000 | 531,000 | 590,000 | 301,000 | 230,000 | 204,000 | 201,000 |
| 25 | 295,000 | 608,000 | 1,170,000 | 726,000 | 625,000 | 1,010,000 | 539,000 | 565,000 | 299,000 | 228,000 | 203,000 | 203,000 |
| 26 | 300,000 | 661,000 | 1,170,000 | 757,000 | 613,000 | 1,020,000 | 537,000 | 543,000 | 297,000 | 229,000 | 199,000 | 214,000 |
| 27 | 308,000 | 699,000 | 1,150,000 | 797,000 | 603,000 | 1,030,000 | 532,000 | 519,000 | 294,000 | 229,000 | 195,000 | 226,000 |
| 28 | 321,000 | 733,000 | 1,140,000 | 845,000 | 589,000 | 1,030,000 | 525,000 | 498,000 | 287,000 | 229,000 | 191,000 | 234,000 |
| 29 | 337,000 | 759,000 | 1,120,000 | 894,000 | 573,000 | 1,020,000 | 509,000 | 471,000 | 279,000 | 229,000 | 191,000 | 238,000 |
| 30 | 349,000 | 782,000 | 1,100,000 | 925,000 | --- | 1,020,000 | 490,000 | 445,000 | 273,000 | 225,000 | 195,000 | 241,000 |
| 31 | 355,000 | --- | 1,090,000 | 939,000 | --- | 1,020,000 | --- | 425,000 | --- | 222,000 | 200,000 | --- |
| Total | 10.64 $\times 10^6$ | 13.09 $\times 10^6$ | 33.57 $\times 10^6$ | 26.12 $\times 10^6$ | 25.25 $\times 10^6$ | 25.90 $\times 10^6$ | 19.44 $\times 10^6$ | 18.16 $\times 10^6$ | 9,914,000 | 8,020,000 | 6,736,000 | 6,651,000 |
| Mean | 343,500 | 436,400 | 1,083,000 | 842,600 | 870,800 | 835,700 | 648,000 | 585,800 | 330,500 | 258,700 | 217,300 | 221,700 |
| Max | 422,000 | 782,000 | 1,190,000 | 1,070,000 | 1,060,000 | 1,030,000 | 1,000,000 | 725,000 | 405,000 | 289,000 | 263,000 | 241,000 |
| Min | 271,000 | 319,000 | 795,000 | 629,000 | 573,000 | 542,000 | 490,000 | 425,000 | 273,000 | 222,000 | 191,000 | 201,000 |
| Cfsm | 0.30 | 0.38 | 0.95 | 0.74 | 0.76 | 0.73 | 0.57 | 0.51 | 0.29 | 0.23 | 0.19 | 0.19 |
| In. | 0.35 | 0.43 | 1.10 | 0.85 | 0.82 | 0.84 | 0.63 | 0.59 | 0.32 | 0.26 | 0.22 | 0.22 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2012, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|---------|
| Mean | 384,000 | 447,600 | 625,100 | 733,000 | 810,900 | 932,000 | 981,200 | 993,500 | 831,700 | 616,200 | 468,900 | 352,600 |
| Max | 760,000 | 1,047,000 | 1,083,000 | 1,511,000 | 1,301,000 | 1,466,000 | 1,731,000 | 1,997,000 | 1,201,000 | 907,600 | 1,027,000 | 708,800 |
| (WY) | (1994) | (2010) | (2012) | (1991) | (2005) | (1997) | (2008) | (2011) | (2011) | (2008) | (1993) | (1993) |
| Min | 221,000 | 211,800 | 312,800 | 308,300 | 303,700 | 611,200 | 555,300 | 457,000 | 330,500 | 258,700 | 217,300 | 221,700 |
| (WY) | (2000) | (2000) | (2000) | (2000) | (2000) | (2006) | (1995) | (2000) | (2012) | (2012) | (2012) | (2012) |

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SUMMARY STATISTICS

| | Calendar Year 2011 | | Water Year 2012 | | Water Years 1990 - 2012 | |
|---------------------------------|--------------------|--------|-----------------|---------------------|-------------------------|--------------|
| Annual total | 306,447,000 | | 203,517,000 | | | |
| Annual mean | 839,600 | | 556,100 | | 671,500 | |
| Highest annual mean | | | | | 886,500 | 1993 |
| Lowest annual mean | | | | | 416,800 | 2000 |
| Highest daily mean | 2,310,000 | May 17 | 1,190,000 | Dec 23 | 2,310,000 | May 17, 2011 |
| Lowest daily mean | 271,000 | Oct 21 | 191,000 | Aug 28 ^a | 150,000 | Oct 31, 2000 |
| Annual seven-day minimum | 281,000 | Oct 19 | 196,000 | Aug 25 | 168,000 | Oct 26, 2000 |
| Maximum peak flow | | | | | 2,080,000 | Feb 17, 1937 |
| Maximum peak stage | | | | | 53.20 | Feb 21, 1937 |
| Instantaneous low flow | | | | | 100,000 | Nov 1, 1939 |
| Annual runoff (cfsm) | 0.736 | | 0.488 | | 0.589 | |
| Annual runoff (inches) | 10.00 | | 6.64 | | 8.00 | |
| 10 percent exceeds | 1,520,000 | | 1,030,000 | | 1,150,000 | |
| 50 percent exceeds | 677,000 | | 472,000 | | 595,000 | |
| 90 percent exceeds | 341,000 | | 222,000 | | 282,000 | |

^a Also August 29.

