Water-Data Report 2013

# 03282000 KENTUCKY RIVER AT LOCK 14 AT HEIDELBERG, KY

Kentucky Basin
Upper Kentucky Subbasin

LOCATION.--Lat 37°33′19″, long 83°46′06″ referenced to North American Datum of 1927, Lee County, KY, Hydrologic Unit 05100204, on right bank 200 feet upstream from Lock 14 at Heidelberg, 0.3 miles upstream from Sturgeon Creek, 5.0 miles downstream from Beattyville and at mile 249.2.

DRAINAGE AREA.--2,657 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1925 to September 1931, December 1936 to February 1937, July 1938 to current year. Gage-height records collected in this vicinity since 1902 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 1385: 1926-27, 1928(M), 1929, 1931(M), 1937, 1939(M), drainage area.

GAGE.--Water-stage recorder with telemetry. Datum of gage is 625.77 feet above NGVD of 1929, 625.70 feet above Ohio River Datum, 626.66 feet above Kentucky River Datum. Prior to September 2, 1939, nonrecording gage at Lock 14 at same datum.

COOPERATION.--U.S. Army Corps of Engineers, Louisville District and Kentucky River Authority.

REMARKS.--Records good except for those estimated and for discharges less than 150 $ft^3/s$ which are poor. Flow regulated by Buckhorn Lake beginning December 1960 (station 03280800), and by Carr Fork Lake beginning January 1976 (station 03277446). Small diversions by City of Lexington waterworks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,000 $ft^3/s$, January 17, gage height, 20.20 feet.



Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 03282000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/03282000.2013.pdf

**03282000 KENTUCKY RIVER AT LOCK 14 AT HEIDELBERG, KY—Continued**

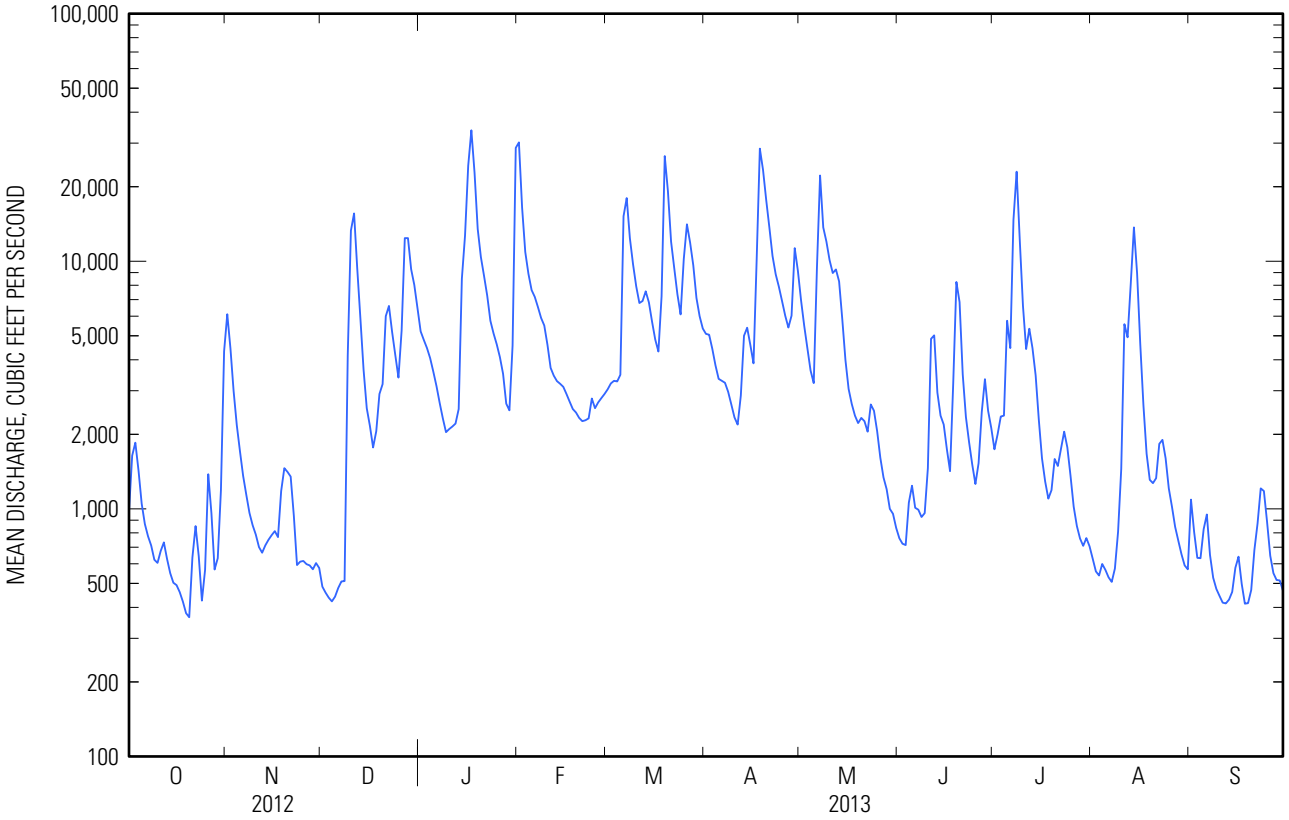
**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**
**DAILY MEAN VALUES**

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 977 | 6,110 | 485 | 5,210 | 30,200 | 3,040 | 5,090 | 6,950 | 761 | 1,740 | 629 | 1,090 |
| 2 | 1,640 | 4,450 | 459 | 4,810 | 16,500 | 3,210 | 5,050 | 5,480 | 723 | 2,000 | 559 | 805 |
| 3 | 1,850 | 2,990 | 438 | 4,460 | 10,900 | 3,290 | 4,430 | 4,450 | 714 | 2,360 | 538 | 634 |
| 4 | 1,430 | 2,180 | 423 | 4,060 | 8,900 | 3,270 | 3,800 | 3,620 | 1,060 | 2,380 | 599 | 632 |
| 5 | 1,050 | 1,710 | 442 | 3,580 | 7,650 | 3,480 | 3,350 | 3,220 | 1,240 | 5,750 | 567 | 828 |
| 6 | 869 | 1,360 | 479 | 3,130 | 7,180 | 15,200 | 3,290 | 9,340 | 1,010 | 4,460 | 529 | 949 |
| 7 | 775 | 1,140 | 509 | 2,680 | 6,530 | 18,000 | 3,230 | 22,200 | 992 | 14,700 | 507 | 651 |
| 8 | 711 | 963 | 511 | 2,320 | 5,900 | 12,400 | 2,970 | 13,700 | 927 | 23,000 | 574 | 527 |
| 9 | 623 | 859 | 4,160 | 2,040 | 5,500 | 9,720 | 2,640 | 12,000 | 961 | 12,100 | 808 | 475 |
| 10 | 605 | 787 | 13,300 | 2,100 | 4,600 | 7,920 | 2,340 | 10,100 | 1,460 | 6,600 | 1,450 | 445 |
| 11 | 676 | 701 | 15,600 | 2,150 | 3,710 | 6,780 | 2,190 | 8,960 | 4,860 | 4,420 | 5,570 | 418 |
| 12 | 732 | 665 | 9,340 | 2,210 | 3,450 | 6,910 | 2,870 | 9,270 | 5,020 | 5,340 | 4,930 | 415 |
| 13 | 628 | 712 | 5,860 | 2,530 | 3,280 | 7,560 | 5,000 | 8,290 | 2,950 | 4,460 | 8,110 | 430 |
| 14 | 550 | 750 | 3,640 | 8,500 | 3,200 | 6,820 | 5,390 | 5,840 | 2,380 | 3,460 | 13,700 | 462 |
| 15 | 503 | 783 | 2,550 | 12,700 | 3,110 | 5,700 | 4,590 | 3,990 | 2,190 | 2,290 | 8,940 | 578 |
| 16 | 492 | 813 | 2,160 | 24,300 | 2,910 | 4,830 | 3,870 | 3,050 | 1,740 | 1,600 | 4,630 | 641 |
| 17 | 461 | 769 | 1,770 | 33,800 | 2,710 | 4,320 | 10,200 | 2,650 | 1,420 | 1,290 | 2,620 | 498 |
| 18 | 422 | 1,180 | 2,060 | 22,800 | 2,530 | 7,220 | 28,500 | 2,380 | 3,220 | 1,100 | 1,670 | 414 |
| 19 | 379 | 1,460 | 2,910 | 13,500 | 2,450 | 26,600 | 23,400 | 2,220 | 8,250 | 1,190 | 1,310 | 416 |
| 20 | 365 | 1,410 | 3,190 | 10,400 | 2,330 | 19,200 | 17,700 | 2,330 | 6,840 | 1,590 | 1,270 | 470 |
| 21 | 636 | 1,350 | 6,000 | 8,720 | 2,260 | 12,000 | 13,700 | 2,260 | 3,490 | 1,490 | 1,330 | 682 |
| 22 | 852 | 937 | 6,600 | 7,260 | 2,280 | 9,370 | 10,500 | 2,050 | 2,350 | 1,750 | 1,830 | 873 |
| 23 | 644 | 593 | 5,180 | 5,750 | 2,320 | 7,350 | 8,860 | 2,640 | 1,860 | 2,050 | 1,900 | 1,210 |
| 24 | 426 | 612 | 4,180 | 5,110 | 2,790 | 6,100 | 7,890 | 2,490 | 1,510 | 1,770 | 1,600 | 1,180 |
| 25 | 567 | 616 | 3,390 | 4,620 | 2,550 | 10,200 | 6,910 | 2,060 | 1,260 | 1,360 | 1,210 | 886 |
| 26 | 1,380 | 598 | 5,250 | 4,100 | 2,690 | 14,100 | 6,030 | 1,610 | 1,530 | 1,020 | 1,020 | 647 |
| 27 | 961 | 591 | 12,400 | 3,510 | 2,800 | 11,900 | 5,400 | 1,340 | 2,460 | 853 | 846 | 550 |
| 28 | 569 | 570 | 12,400 | 2,660 | 2,910 | 9,630 | 6,030 | 1,200 | 3,340 | 759 | 744 | 516 |
| 29 | 632 | 604 | 9,290 | 2,500 | --- | 7,110 | 11,300 | 1,000 | 2,490 | 709 | 656 | 514 |
| 30 | 1,190 | 577 | 8,020 | 4,570 | --- | 6,000 | 9,150 | 955 | 2,120 | 762 | 591 | 468 |
| 31 | 4,330 | --- | 6,470 | 28,700 | --- | 5,350 | --- | 838 | --- | 706 | 570 | --- |
| Total | 27,925 | 38,840 | 149,466 | 244,780 | 154,140 | 274,580 | 225,670 | 158,483 | 71,128 | 115,059 | 71,807 | 19,304 |
| Mean | 901 | 1,295 | 4,821 | 7,896 | 5,505 | 8,857 | 7,522 | 5,112 | 2,371 | 3,712 | 2,316 | 643 |
| Max | 4,330 | 6,110 | 15,600 | 33,800 | 30,200 | 26,600 | 28,500 | 22,200 | 8,250 | 23,000 | 13,700 | 1,210 |
| Min | 365 | 570 | 423 | 2,040 | 2,260 | 3,040 | 2,190 | 838 | 714 | 706 | 507 | 414 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2013, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 1,241 | 2,537 | 4,677 | 5,820 | 6,672 | 7,267 | 6,307 | 4,955 | 2,682 | 1,317 | 1,031 | 967 |
| Max | 10,380 | 7,006 | 14,850 | 14,010 | 17,660 | 18,260 | 15,260 | 16,010 | 10,630 | 3,712 | 3,006 | 6,864 |
| (WY) | (1990) | (1978) | (1991) | (1994) | (2003) | (1994) | (1998) | (1984) | (2003) | (2013) | (1977) | (2004) |
| Min | 232 | 263 | 582 | 362 | 1,406 | 1,791 | 855 | 910 | 247 | 206 | 154 | 70.1 |
| (WY) | (2000) | (2002) | (1981) | (1981) | (2007) | (1988) | (1986) | (1986) | (1988) | (1988) | (1988) | (1999) |

**03282000 KENTUCKY RIVER AT LOCK 14 AT HEIDELBERG, KY—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2012 | | Water Year 2013 | | Water Years 1977 - 2013 | |
|---|---|---|---|---|---|---|
| **Annual total** | 1,211,608 | | 1,551,182 | | | |
| **Annual mean** | 3,310 | | 4,250 | | 3,775 | |
| **Highest annual mean** | | | | | 6,973 | 1994 |
| **Lowest annual mean** | | | | | 1,461 | 1988 |
| **Highest daily mean** | 21,800 | Jan 22 | 33,800 | Jan 17 | 85,900 | May 8, 1984 |
| **Lowest daily mean** | 202 | Jul 1 | 365 | Oct 20 | 45 | Jul 10, 1988 |
| **Annual seven-day minimum** | 221 | Jun 27 | 453 | Oct 14 | 51 | Sep 11, 1999 |
| **Maximum peak flow** | | | 36,000 | Jan 17 | 120,000 | Feb 4, 1939 |
| **Maximum peak stage** | | | 20.20 | Jan 17 | 35.60 | Feb 4, 1939 |
| **Instantaneous low flow** | | | | | 4.0 | Oct 20, 1930 |
| **10 percent exceeds** | 9,170 | | 10,200 | | 9,410 | |
| **50 percent exceeds** | 1,400 | | 2,360 | | 1,650 | |
| **90 percent exceeds** | 353 | | 567 | | 284 | |