

Water-Data Report 2012

**03320000 GREEN RIVER AT LOCK 2 AT CALHOUN, KY**

Green Basin  
Lower Green Subbasin

LOCATION.--Lat 37°32'02", long 87°15'50" referenced to North American Datum of 1927, McLean County, KY, Hydrologic Unit 05110005, 870 feet upstream from Lock and Dam 2, on right bank 0.2 miles downstream from bridge on State Highway 81 at Calhoun, 0.2 miles upstream from Long Falls Creek, and at mile 63.3.

DRAINAGE AREA.--7,566 mi<sup>2</sup> of which 1,534 mi<sup>2</sup> probably is noncontributing, directly to surface runoff. Determined from 1:24,000 scale maps using FIARBC procedures.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--March 1930 to current year. Prior to October 1958, published as "at Livermore".

REVISED RECORDS.--WSP 1385: 1939. WDR KY-82-1: Drainage area.

GAGE.--Water-stage recorder with telemetry. Datum of gage is 353.95 feet above NGVD of 1929. Auxiliary water-stage recorder at Livermore, 8.0 miles upstream at datum 360.11 feet above NGVD of 1929. Base gages used were: Livermore gage, March 22, 1930 to September 30, 1940 (nonrecording prior to September 1, 1939), and October 1, 1942 to September 30, 1947; water-stage recorder at State Highway 81 bridge, 0.2 mile upstream from present base gage, October 1, 1940 to September 30, 1942, and October 1, 1947 to September 30, 1958, at datum 1.35 feet higher than present base gage. Auxiliary gages were: Lock 2 upper nonrecording gage, October 1, 1932 to September 30, 1939, at datum 1.35 feet higher than present base gage; recorder at State Highway 81, October 1, 1939 to September 30, 1940, and October 1, 1942 to September 30, 1947; and Livermore gage, October 1, 1941 to September 30, 1942 and after September 30, 1947. No auxiliary used prior to October 1, 1932 and October 1, 1940 to September 30, 1941.

COOPERATION.--U.S. Army Corps of Engineers, Louisville District.

REMARKS.--Records good except for those estimated and for discharges less than 2,000 ft<sup>3</sup>/s, which are poor. Flow regulated by Rough River Lake beginning October 1959, Nolin Lake beginning March 1963, Barren River Lake beginning March 1964, and Green River Lake beginning February 1969.

## 03320000 GREEN RIVER AT LOCK 2 AT CALHOUN, KY—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**  
**DAILY MEAN VALUES**  
[e, estimated]

| Day          | Oct     | Nov     | Dec     | Jan     | Feb     | Mar     | Apr    | May     | Jun    | Jul    | Aug    | Sep    |
|--------------|---------|---------|---------|---------|---------|---------|--------|---------|--------|--------|--------|--------|
| 1            | 4,110   | 4,850   | 42,200  | 28,800  | 29,400  | 10,900  | 4,230  | 1,660   | 2,320  | 365    | 835    | 357    |
| 2            | 3,890   | 4,830   | 42,500  | 27,200  | 26,900  | 16,700  | 3,950  | 1,660   | 1,960  | 362    | 765    | 314    |
| 3            | 3,280   | 4,820   | 35,800  | 22,100  | 25,200  | 18,100  | 3,610  | 1,940   | 1,630  | 431    | 1,530  | 426    |
| 4            | 2,500   | 4,840   | 21,600  | 17,500  | 24,100  | 16,600  | 3,360  | 2,200   | 1,440  | 515    | 1,220  | 571    |
| 5            | 1,880   | 4,950   | 30,000  | 13,800  | 21,600  | 15,500  | 3,170  | 2,650   | 1,320  | 544    | 1,040  | 708    |
| 6            | 1,500   | 4,950   | 40,000  | 10,500  | 18,500  | 15,100  | 3,310  | 3,270   | 1,190  | 521    | 1,230  | 990    |
| 7            | 1,290   | 4,920   | 42,700  | 8,910   | 16,500  | 15,500  | 3,490  | 3,810   | 1,160  | 454    | 1,580  | 1,240  |
| 8            | 1,220   | 4,980   | 43,700  | 8,380   | 14,500  | 15,300  | 3,130  | 4,580   | 1,080  | 405    | 2,110  | 2,040  |
| 9            | 1,120   | 4,960   | 41,900  | 8,140   | 12,900  | 27,100  | 2,700  | 4,290   | 1,010  | 381    | 3,310  | 2,340  |
| 10           | 1,090   | 4,950   | 36,400  | 7,990   | 12,100  | 33,700  | 2,420  | 3,610   | 940    | 373    | 3,700  | 2,120  |
| 11           | 1,180   | 4,960   | 30,000  | 8,100   | 10,700  | e34,200 | 2,360  | 2,790   | 881    | 365    | 3,390  | 1,990  |
| 12           | 1,620   | 4,900   | 27,600  | 11,500  | 8,670   | e32,800 | 2,310  | 2,190   | 851    | 380    | 2,400  | 1,830  |
| 13           | 2,250   | 4,860   | 28,200  | 16,300  | 7,330   | e31,100 | 2,220  | 2,020   | 836    | 386    | 1,650  | 1,590  |
| 14           | 2,560   | 4,850   | 28,000  | 20,800  | 6,830   | e26,000 | 2,110  | 2,390   | 834    | 457    | 1,190  | 1,440  |
| 15           | 2,070   | 4,990   | 27,300  | 20,300  | 6,770   | e21,400 | 2,020  | 5,730   | 833    | 556    | 954    | 1,610  |
| 16           | 2,150   | 6,300   | 26,200  | 19,200  | 6,450   | e20,800 | 1,860  | 11,200  | 821    | 553    | 814    | 1,600  |
| 17           | 2,810   | 11,300  | 26,200  | 17,600  | 6,290   | e20,800 | 1,850  | 10,000  | 763    | 595    | 1,090  | 1,290  |
| 18           | 3,740   | 13,400  | 25,800  | 17,400  | 6,350   | e20,200 | 1,770  | 8,380   | 749    | 663    | 1,010  | 961    |
| 19           | 4,070   | 13,800  | 24,200  | 16,600  | 6,280   | e18,000 | 1,710  | 7,940   | 715    | 781    | 1,020  | 852    |
| 20           | 4,170   | 14,000  | 22,200  | 14,900  | 6,200   | 16,900  | 1,590  | 7,660   | 671    | 742    | 1,160  | 837    |
| 21           | 4,150   | 19,500  | 22,300  | 13,700  | 6,420   | 14,200  | 1,610  | 6,750   | 615    | 941    | 1,050  | 1,000  |
| 22           | 4,340   | 26,300  | 21,900  | 15,100  | 6,350   | 11,200  | 1,730  | 5,290   | 595    | 1,390  | 908    | 1,280  |
| 23           | 4,750   | 28,200  | 21,800  | 22,200  | 6,030   | 8,770   | 1,830  | 4,210   | 548    | 1,690  | 771    | 1,400  |
| 24           | 4,850   | 27,400  | 21,300  | 31,700  | 5,850   | 7,360   | 1,890  | 3,160   | 520    | 1,510  | 687    | 1,300  |
| 25           | 4,870   | 24,800  | 21,800  | 34,100  | 5,840   | 6,710   | 1,820  | 2,380   | 515    | 1,260  | 617    | 1,160  |
| 26           | 4,940   | 22,700  | 21,300  | 33,700  | 5,820   | 6,510   | 1,670  | 1,940   | 501    | 983    | 551    | 1,070  |
| 27           | 5,140   | 22,400  | 21,500  | e35,100 | 5,330   | 6,050   | 1,610  | 1,620   | 450    | 913    | 528    | 1,160  |
| 28           | 5,080   | 31,800  | 24,000  | e37,300 | 5,190   | 5,420   | 1,670  | 1,440   | 419    | 736    | 520    | 1,170  |
| 29           | 4,930   | 37,300  | 27,000  | e38,200 | 5,740   | 4,970   | 2,080  | 1,800   | 387    | 648    | 454    | 1,460  |
| 30           | 4,900   | 39,400  | 28,700  | e39,000 | ---     | 4,600   | 1,940  | 2,040   | 399    | 710    | 400    | 1,770  |
| 31           | 4,860   | ---     | 28,200  | 29,100  | ---     | 4,370   | ---    | 2,080   | ---    | 792    | 389    | ---    |
| <b>Total</b> | 101,310 | 412,210 | 902,300 | 645,220 | 326,140 | 506,860 | 71,020 | 122,680 | 26,953 | 21,402 | 38,873 | 37,876 |
| <b>Mean</b>  | 3,268   | 13,740  | 29,110  | 20,810  | 11,250  | 16,350  | 2,367  | 3,957   | 898    | 690    | 1,254  | 1,263  |
| <b>Max</b>   | 5,140   | 39,400  | 43,700  | 39,000  | 29,400  | 34,200  | 4,230  | 11,200  | 2,320  | 1,690  | 3,700  | 2,340  |
| <b>Min</b>   | 1,090   | 4,820   | 21,300  | 7,990   | 5,190   | 4,370   | 1,590  | 1,440   | 387    | 362    | 389    | 314    |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2012, BY WATER YEAR (WY)**

|             | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Mean</b> | 5,712  | 10,300 | 16,420 | 18,200 | 20,910 | 19,080 | 15,280 | 14,370 | 8,527  | 4,290  | 2,747  | 4,144  |
| <b>Max</b>  | 19,100 | 22,770 | 46,530 | 41,100 | 52,100 | 53,330 | 42,430 | 50,460 | 23,850 | 12,260 | 8,763  | 27,360 |
| <b>(WY)</b> | (1980) | (1980) | (1979) | (1974) | (1989) | (1997) | (1979) | (1983) | (1981) | (1989) | (1971) | (1979) |
| <b>Min</b>  | 1,875  | 2,737  | 2,496  | 1,223  | 7,116  | 7,430  | 2,260  | 1,706  | 541    | 690    | 362    | 354    |
| <b>(WY)</b> | (2000) | (2000) | (1981) | (1981) | (1977) | (2006) | (1986) | (1988) | (1988) | (2012) | (1999) | (1999) |

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SUMMARY STATISTICS

|                                 | Calendar Year 2011 |        | Water Year 2012 |       | Water Years 1970 - 2012 |              |
|---------------------------------|--------------------|--------|-----------------|-------|-------------------------|--------------|
| <b>Annual total</b>             | 6,242,918          |        | 3,212,844       |       |                         |              |
| <b>Annual mean</b>              | 17,100             |        | 8,778           |       | 11,620                  |              |
| <b>Highest annual mean</b>      |                    |        |                 |       | 22,070 1979             |              |
| <b>Lowest annual mean</b>       |                    |        |                 |       | 5,345 2000              |              |
| <b>Highest daily mean</b>       | 76,000             | May 4  | 43,700          | Dec 8 | 85,200                  | Mar 7, 1997  |
| <b>Lowest daily mean</b>        | 520                | Sep 3  | 314             | Sep 2 | 162                     | Sep 6, 1999  |
| <b>Annual seven-day minimum</b> | 561                | Aug 31 | 392             | Jul 7 | 186                     | Sep 5, 1999  |
| <b>Maximum peak flow</b>        |                    |        | 44,200          | Dec 8 | 208,000                 | Jan 27, 1937 |
| <b>Maximum peak stage</b>       |                    |        | 25.74           | Dec 9 | 42.40                   | Jan 30, 1937 |
| <b>Instantaneous low flow</b>   |                    |        |                 |       | 107                     | Sep 14, 1999 |
| <b>10 percent exceeds</b>       | 42,000             |        | 27,100          |       | 29,100                  |              |
| <b>50 percent exceeds</b>       | 10,700             |        | 3,660           |       | 7,080                   |              |
| <b>90 percent exceeds</b>       | 1,410              |        | 609             |       | 1,340                   |              |

