

Water-Data Report 2013

07260500 PETIT JEAN RIVER AT DANVILLE, AR

Lower Arkansas-Fourche La Fave Basin
Petit Jean Subbasin

LOCATION.--Lat 35°03'31", long 93°23'44" referenced to North American Datum of 1983, in NW ¼ SE ¼ sec.25, T.5 N., R.23 W., Yell County, AR, Hydrologic Unit 11110204, on right bank 125 ft upstream of bridge on State Hwy 10 at Danville, 0.3 mi upstream from old Chicago Rock Island and Pacific Railroad Co. Bridge, 0.5 mi upstream from Spring Creek, 0.6 mi downstream from Dutch Creek, and at river mile 48.8.

DRAINAGE AREA.--764 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jun 1916 to current year. Prior to Oct 1965, published as "Petit Jean Creek at Danville".

REVISED RECORDS.--WDR Arkansas 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 303.33 ft above NGVD of 1929. Jun 1916 to 1934, nonrecording gage on railroad bridge 0.3 mi downstream at datum 0.25 ft higher. Aug 1934 to Jul 1939, nonrecording gage at present site and datum. Since Jun 1954, auxiliary water-stage recorder 2.2 mi downstream.

REMARKS.--Water-discharge records good except estimated daily discharges, which are poor. Flow regulated since Mar 1947 by Blue Mountain Lake, 25.6 mi upstream, capacity 257,900 acre-ft. As of Jul 1986, flow from 51.6 mi² upstream from this station is controlled by three floodwater-detention reservoirs that have a total combined capacity of 23,737 acre-ft below the spillway crests, of which 16,361 acre-ft is flood-detention capacity 4,500 acre-ft is water-supply storage, and 2,876 acre-ft is sediment-storage capacity. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,940 ft³/s, Jan. 13, gage height, 21.90 ft; minimum discharge, 1.4 ft³/s, on several days, gage height, 9.43 ft.

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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 | 2.0 | 15 | 6.6 | 77 | 1,100 | 1,040 | 2,700 | 875 | 1,640 | 33 | 53 | 14 |
| 2 | 1.7 | 12 | 7.9 | 114 | 979 | 975 | 2,180 | 521 | 2,410 | 30 | 51 | 13 |
| 3 | 2.5 | 12 | 6.6 | 111 | 916 | 934 | 3,080 | 513 | 2,240 | 26 | 50 | 12 |
| 4 | 2.1 | 14 | 8.9 | 86 | 875 | 879 | 3,250 | 611 | 1,480 | 28 | 59 | 10 |
| 5 | 1.5 | 13 | 8.7 | 66 | 852 | 400 | 2,830 | 582 | 1,770 | 24 | 89 | 8.1 |
| 6 | 1.4 | 13 | 11 | 54 | 815 | 250 | 2,460 | 522 | 2,020 | 23 | 56 | 7.1 |
| 7 | 1.5 | 12 | 14 | 42 | 774 | 218 | 2,300 | 608 | 2,060 | 24 | 50 | 7.0 |
| 8 | 1.5 | 11 | 16 | 34 | 617 | 201 | 2,120 | 599 | 2,120 | 22 | 48 | 8.1 |
| 9 | 1.5 | 9.8 | 14 | 46 | 560 | 175 | 2,120 | 572 | 2,150 | 23 | 51 | 8.6 |
| 10 | 1.5 | 9.5 | 9.8 | 141 | 708 | 1,110 | 2,230 | 549 | 2,120 | 20 | 52 | 9.2 |
| 11 | 1.4 | 16 | 5.5 | 342 | 902 | 2,840 | 2,580 | 392 | 2,070 | 25 | 54 | 12 |
| 12 | 1.5 | 32 | 2.4 | 1,010 | 879 | 2,610 | 2,360 | 346 | 2,000 | 23 | 57 | 15 |
| 13 | 2.6 | 44 | 2.2 | 4,460 | 884 | 2,240 | 2,230 | 333 | 1,570 | 21 | 59 | 16 |
| 14 | 49 | 47 | 2.6 | 3,570 | 896 | 1,980 | 2,170 | 324 | 948 | 27 | 59 | 17 |
| 15 | 327 | 37 | 3.0 | 2,210 | 877 | 1,990 | 2,110 | 307 | 853 | 34 | 55 | 16 |
| 16 | 159 | 33 | 3.3 | 629 | 823 | 1,990 | 2,150 | 297 | 833 | 30 | 49 | 7.9 |
| 17 | 100 | 31 | 4.0 | 310 | 775 | 1,920 | 2,220 | 160 | 866 | 27 | 61 | 4.5 |
| 18 | 91 | 32 | 3.8 | 220 | 749 | 1,850 | 2,270 | 102 | 873 | 25 | 80 | 3.0 |
| 19 | 70 | 35 | 4.6 | 169 | 729 | 1,770 | 2,250 | 97 | 813 | 23 | 79 | 1.9 |
| 20 | 59 | 34 | 4.9 | 129 | 701 | 1,330 | 2,010 | 89 | 773 | 34 | 78 | 8.9 |
| 21 | 54 | 35 | 3.4 | 98 | 804 | 911 | 1,850 | 350 | 511 | 37 | 77 | 50 |
| 22 | 66 | 20 | 3.5 | 81 | 1,780 | 996 | 1,760 | 1,420 | 189 | 25 | 76 | 47 |
| 23 | 109 | 6.6 | 4.3 | 69 | 1,710 | 870 | 1,970 | 1,380 | 103 | 25 | 76 | 43 |
| 24 | 85 | 4.4 | 5.3 | 61 | 1,430 | 913 | 2,110 | 1,010 | 96 | 62 | 74 | 42 |
| 25 | 60 | 5.1 | 7.7 | 54 | 1,220 | 930 | 2,100 | 952 | 91 | 336 | 73 | 39 |
| 26 | 50 | 6.2 | 8.7 | 47 | 1,390 | 1,100 | 1,590 | 895 | 87 | 406 | 72 | 38 |
| 27 | 54 | 6.3 | 9.3 | 41 | 1,340 | 1,180 | 958 | 845 | 85 | 290 | 70 | 38 |
| 28 | 54 | 6.0 | 13 | 38 | 1,120 | 1,150 | 1,080 | 778 | 78 | 191 | 70 | 46 |
| 29 | 45 | 6.0 | 19 | 45 | --- | 1,120 | 1,030 | 318 | 52 | 187 | 52 | 53 |
| 30 | 36 | 5.9 | 21 | 1,100 | --- | 1,390 | 950 | 210 | 38 | 183 | 20 | 41 |
| 31 | 23 | --- | 22 | 1,490 | --- | 2,650 | --- | 575 | --- | 104 | 15 | --- |
| Mean | 48.8 | 18.8 | 8.29 | 547 | 972 | 1,287 | 2,101 | 553 | 1,098 | 76.4 | 60.2 | 21.2 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2013, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|-----|-----|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|
| Mean | 212 | 596 | 1,208 | 1,155 | 1,328 | 1,439 | 1,384 | 1,376 | 736 | 306 | 156 | 155 |

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SUMMARY STATISTICS

| | Calendar Year 2012 | | Water Year 2013 | | Water Years 1947 - 2013 | |
|---------------------------------|--------------------|--------|-----------------|--------------------|---------------------------------|--------------------------|
| Annual mean | 653 | | 560 | | ^a 824 | |
| Highest daily mean | 4,760 | Mar 22 | 4,460 | Jan 13 | 26,400 | Dec 3, 1982 |
| Lowest daily mean | 0.58 | Aug 9 | 1.4 | Oct 6 | 0.00 | Aug 11, 1956 |
| Annual seven-day minimum | 1.1 | Aug 5 | 1.5 | Oct 5 | 0.01 | Oct 24, 1999 |
| Maximum peak flow | | | 4,940 | Jan 13 | ^b 47,500 Dec 3, 1982 | |
| Maximum peak stage | | | 21.90 | Jan 13 | ^c 29.36 Dec 3, 1982 | |
| Instantaneous low flow | | | 1.4 | Oct 5 ^d | 0.00 | Jan 1, 1982 ^d |
| 10 percent exceeds | 2,450 | | 2,010 | | 2,510 | |
| 50 percent exceeds | 48 | | 78 | | 174 | |
| 90 percent exceeds | 1.6 | | 6.3 | | 9.5 | |

^a Prior to regulation, water years 1917 to 1946, 845 ft³/s

^b Maximum discharge for period of record, 70,800 ft³/s Apr 17, 1939

^c Maximum gage height for period of record, 31.82 ft Apr 17, 1939

^d Occurred on several days

