Water-Data Report 2008

# 07047950 L'ANGUILLE RIVER AT PALESTINE, AR

St. Francis Basin
L'Anguille Subbasin

LOCATION.--Lat 34°58'21", long 90°53'07" referenced to North American Datum of 1983, in NW ¼ SW ¼ sec.10, T.4 N., R.2 E., St Francis County, AR, Hydrologic Unit 08020205, at bridge on U.S. Hwy 70 1.0 mi east of Palestine, and at mile 33.6.

DRAINAGE AREA.--786 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--Apr 1949 to current year. Oct 1965 to Sep 1977, and Oct 1997 to current year in reports of the U.S. Geological Survey. Apr 1949 to Dec 1963 in reports of Mississippi River Commission. Jan 1964 to date in reports of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 166.68 ft above NGVD of 1929. Prior to Nov 1, 1949, nonrecording gage.

REMARKS.--Water-discharge records fair except discharges below 50 $ft^3/s$ and estimated daily discharges, which are poor. No estimated daily discharges. The stage-discharge relation affected by backwater during high stages of Mississippi River. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1933, 39.7 ft Feb 13, 1937, at present site and datum, from records of U.S. Army Corps of Engineers (backwater from Mississippi River).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,440 $ft^3/s$, Apr 24, gage height, 25.80 ft; minimum discharge, 5.2 $ft^3/s$, Sep 30, gage height, 12.58 ft.

**07047950 L'ANGUILLE RIVER AT PALESTINE, AR—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**
**DAILY MEAN VALUES**
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 177 | 1,660 | 1,000 | 1,780 | 267 | 1,180 | 3,010 | 1,150 | 89 | 9.9 | 304 | 742 |
| 2 | 138 | 1,530 | 981 | 1,690 | 418 | 1,090 | 2,720 | 1,000 | 86 | 12 | 250 | 687 |
| 3 | 108 | 1,380 | 928 | 1,600 | 459 | 1,120 | 2,500 | 917 | 65 | 15 | 206 | 655 |
| 4 | 87 | 1,230 | 859 | 1,510 | 454 | 1,620 | e2,770 | 886 | 50 | 17 | 171 | 722 |
| 5 | 70 | 1,080 | 789 | 1,420 | 465 | 1,950 | e3,600 | 918 | 38 | 20 | 135 | 751 |
| 6 | 56 | 1,010 | 712 | 1,310 | 706 | 2,250 | e3,740 | 935 | 29 | 20 | 104 | 753 |
| 7 | 46 | 947 | 624 | 1,200 | 882 | 2,580 | e3,490 | 888 | 23 | 36 | 90 | 764 |
| 8 | 41 | 867 | 543 | 1,090 | 972 | 2,910 | e3,210 | 797 | 17 | e56 | 114 | 783 |
| 9 | 37 | 744 | 460 | 1,030 | 1,060 | 3,090 | e3,250 | 725 | 14 | e58 | 136 | 797 |
| 10 | 32 | 571 | 382 | 992 | 1,110 | 3,070 | e3,550 | 715 | 12 | 59 | 148 | 793 |
| 11 | 29 | 396 | 314 | 968 | 1,090 | 2,900 | e3,790 | 983 | 9.7 | 51 | 179 | 779 |
| 12 | 26 | 265 | 281 | 939 | 1,060 | 2,680 | e3,730 | 992 | 8.4 | 32 | 242 | 750 |
| 13 | 25 | 183 | 812 | 892 | 1,060 | 2,480 | e3,490 | 929 | 7.5 | 25 | 278 | 698 |
| 14 | 28 | 127 | 1,200 | 809 | 1,070 | 2,390 | e3,210 | 853 | 7.0 | 29 | 291 | 625 |
| 15 | 54 | 87 | 1,550 | 689 | 1,130 | 2,410 | e2,990 | 756 | 8.4 | 58 | 294 | 538 |
| 16 | 81 | 64 | 2,030 | 542 | 1,220 | 2,600 | e2,840 | 670 | 10 | 96 | 365 | 447 |
| 17 | 98 | 51 | 2,450 | 409 | 1,330 | 2,840 | e2,770 | 569 | 9.2 | 137 | 307 | 364 |
| 18 | 379 | 43 | 2,710 | 306 | 1,370 | 2,940 | 3,360 | 450 | 9.6 | 152 | 216 | 291 |
| 19 | 720 | 36 | 2,950 | 241 | 1,350 | 3,050 | 4,150 | 356 | 10 | 147 | 168 | 235 |
| 20 | 850 | 27 | 3,300 | 195 | 1,340 | 3,240 | 5,090 | 288 | 13 | 124 | 168 | 195 |
| 21 | 975 | 26 | 3,820 | 164 | 1,320 | 3,310 | 6,120 | 234 | 17 | 96 | 210 | 165 |
| 22 | 1,210 | 52 | 3,790 | 145 | 1,370 | 3,440 | 7,040 | 195 | 19 | 80 | 239 | 141 |
| 23 | 1,600 | 159 | 3,560 | 134 | 1,410 | 3,540 | 7,770 | 157 | 25 | 71 | 264 | 110 |
| 24 | 1,830 | 152 | 3,360 | 121 | 1,430 | 3,560 | 8,180 | 130 | 27 | 61 | 370 | 84 |
| 25 | 1,990 | 146 | 3,140 | 107 | 1,440 | 3,460 | 6,940 | 113 | 26 | 53 | 494 | 62 |
| 26 | 2,140 | 399 | 2,860 | 93 | 1,430 | 3,290 | 5,220 | 96 | 22 | 47 | 618 | 43 |
| 27 | 2,170 | 700 | 2,580 | 83 | 1,400 | 3,130 | 3,670 | 83 | 17 | 77 | 706 | 30 |
| 28 | 2,100 | 831 | 2,350 | 76 | 1,340 | 2,900 | 2,530 | 60 | 14 | 205 | 750 | 19 |
| 29 | 1,990 | 926 | 2,160 | 75 | 1,270 | 2,810 | 1,800 | 43 | 12 | 277 | 773 | 12 |
| 30 | 1,880 | 990 | 2,000 | 95 | --- | 2,970 | 1,410 | 43 | 10 | 301 | 775 | 7.1 |
| 31 | 1,770 | --- | 1,870 | 129 | --- | 3,130 | --- | 70 | --- | 293 | 766 | --- |
| Total | 22,737 | 16,679 | 56,365 | 20,834 | 31,223 | 83,930 | 117,940 | 17,001 | 704.8 | 2,714.9 | 10,131 | 13,042.1 |
| Mean | 733 | 556 | 1,818 | 672 | 1,077 | 2,707 | 3,931 | 548 | 23.5 | 87.6 | 327 | 435 |
| Max | 2,170 | 1,660 | 3,820 | 1,780 | 1,440 | 3,560 | 8,180 | 1,150 | 89 | 301 | 775 | 797 |
| Min | 25 | 26 | 281 | 75 | 267 | 1,090 | 1,410 | 43 | 7.0 | 9.9 | 90 | 7.1 |
| Ac-ft | 45,100 | 33,080 | 111,800 | 41,320 | 61,930 | 166,500 | 233,900 | 33,720 | 1,400 | 5,390 | 20,090 | 25,870 |
| Cfsm | 0.93 | 0.71 | 2.31 | 0.86 | 1.37 | 3.44 | 5.00 | 0.70 | 0.03 | 0.11 | 0.42 | 0.55 |
| In. | 1.08 | 0.79 | 2.67 | 0.99 | 1.48 | 3.97 | 5.58 | 0.80 | 0.03 | 0.13 | 0.48 | 0.62 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2008, BY WATER YEAR (WY)**

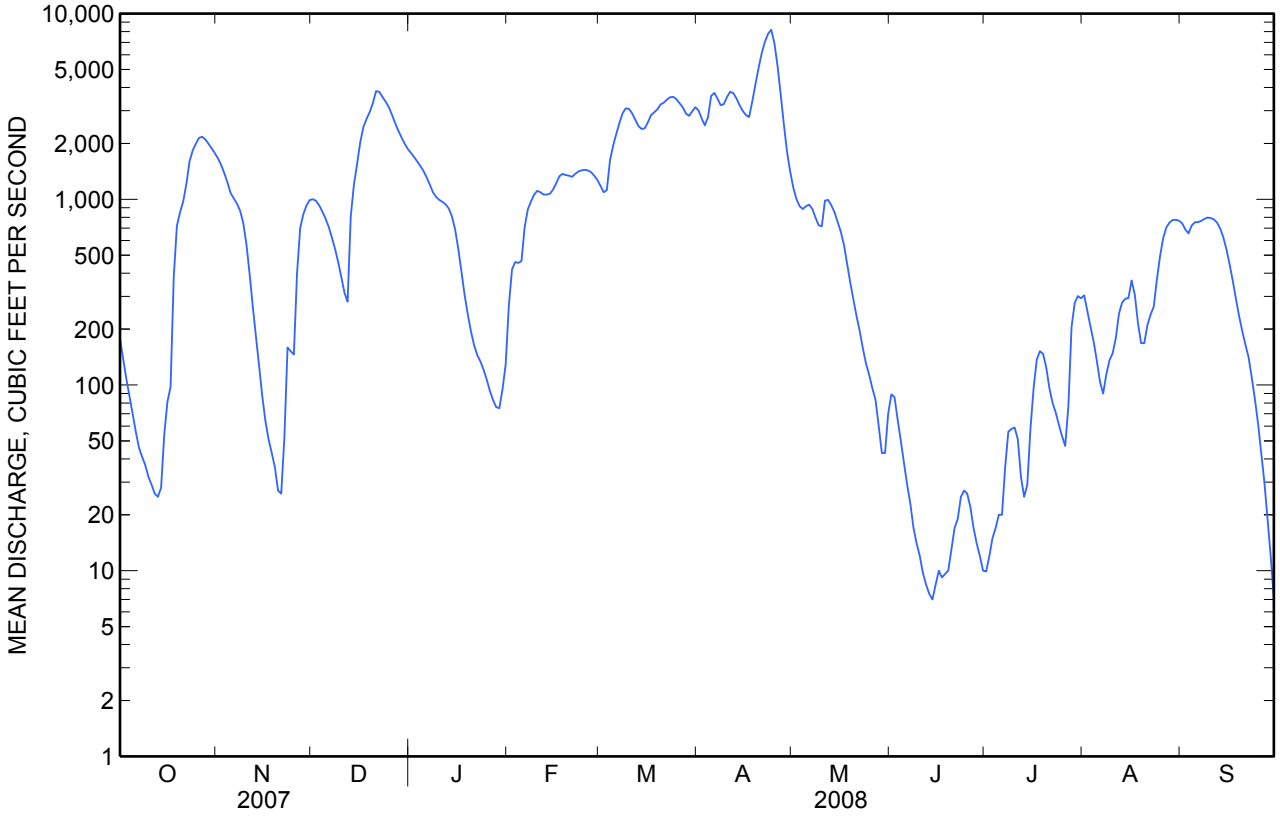
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 340 | 626 | 1,371 | 1,556 | 2,195 | 2,005 | 1,633 | 1,424 | 574 | 395 | 418 | 573 |
| Max | 1,670 | 5,578 | 7,477 | 6,531 | 7,854 | 5,720 | 4,938 | 6,587 | 3,919 | 1,636 | 1,713 | 2,130 |
| (WY) | (1950) | (1958) | (2002) | (1950) | (1950) | (1975) | (1973) | (1953) | (1974) | (1967) | (1966) | (1950) |
| Min | 1.97 | 0.00 | 2.19 | 34.5 | 136 | 313 | 147 | 44.9 | 23.5 | 0.06 | 19.0 | 66.7 |
| (WY) | (1964) | (1955) | (2006) | (1963) | (1963) | (2007) | (2003) | (1959) | (2008) | (1954) | (1954) | (1954) |

**07047950 L'ANGUILLE RIVER AT PALESTINE, AR—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2007 | | Water Year 2008 | | Water Years 1949 - 2008 | |
|---|---|---|---|---|---|---|
| **Annual total** | 288,120.91 | | 393,301.8 | | | |
| **Annual mean** | 789 | | 1,075 | | 1,086 | |
| **Highest annual mean** | | | | | 2,592 | 1950 |
| **Lowest annual mean** | | | | | 359 | 2006 |
| **Highest daily mean** | 6,750 | Jan 17 | 8,180 | Apr 24 | [b]22,400 | Dec 18, 2001 |
| **Lowest daily mean** | 0.08 | Jun 15 | 7.0 | Jun 14 | 0.00 | Jun 27, 1952 |
| **Annual seven-day minimum** | 0.85 | Jun 10 | 8.6 | Jun 12 | 0.00 | Jul 21, 1952 |
| **Maximum peak flow** | | | 8,440 | Apr 24 | [a,b]23,000 | Dec 19, 2001 |
| **Maximum peak stage** | | | 27.99 | Apr 11 | [b]30.92 | Feb 3, 1950 |
| **Instantaneous low flow** | | | 5.2 | Sep 30 | [c]0.00 | Jan 1, 1950 [c] |
| **Annual runoff (ac-ft)** | 571,500 | | 780,100 | | 786,600 | |
| **Annual runoff (cfsm)** | 1.00 | | 1.37 | | 1.38 | |
| **Annual runoff (inches)** | 13.64 | | 18.61 | | 18.77 | |
| **10 percent exceeds** | 2,190 | | 3,080 | | 2,790 | |
| **50 percent exceeds** | 316 | | 678 | | 457 | |
| **90 percent exceeds** | 33 | | 27 | | 31 | |

[a] Estimated

[b] Backwater from Mississippi River

[c] Occurred on several days