

01553500 WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA

West Branch Susquehanna Basin
Lower West Branch Susquehanna Subbasin

LOCATION.--Lat 40°58'03", long 76°52'36" referenced to North American Datum of 1927, Northumberland County, PA, Hydrologic Unit 02050206, at downstream side of left abutment of Market Street bridge on State Highway 45 at Lewisburg, 0.2 mi downstream from Buffalo Creek, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--6,847 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to current year. September 1913 to August 1923 (gage heights only), are contained in reports of Water Supply Commission of Pennsylvania and Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 428.20 ft above National Geodetic Vertical Datum of 1929. Sep 21, 1913, to Aug 31, 1923, Dec 7, 1939, to Jul 2, 1940, and Oct 20, 1987, to Sep 30, 1988, nonrecording gage at same site and datum. Since Oct 1, 1942, water-stage recorder for Susquehanna River at Sunbury (station 01553990) used as an auxiliary gage. Satellite and landline telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey National Streamflow Information Program in cooperation with the Pennsylvania Department of Environmental Protection.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 6 flood-control reservoirs, which have a combined capacity of 440,200 acre-ft. Daily discharges determined from slope-adjusted computation using auxiliary gage (01553990) when auxiliary gage exceeds 8.00 ft, gage datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar 19, 1936, reached a stage of 32.1 ft, from floodmarks (backwater from Susquehanna River), discharge, 287,000 ft³/s from slope-area measurement at Watsontown, 8.0 mi upstream.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|---------|---------|---------|---------|---------|-----------|-----------|---------|---------|--------|---------|---------|
| 1 | 30,100 | 4,990 | 44,200 | 4,640 | e3,340 | 49,700 | 16,400 | 50,900 | 19,500 | 2,860 | 1,460 | 3,630 |
| 2 | 35,300 | 4,550 | 134,000 | 4,650 | e3,290 | 61,000 | 16,100 | 43,200 | 15,700 | 2,590 | 1,500 | 3,220 |
| 3 | 20,500 | 4,180 | 96,600 | 4,700 | e3,290 | 45,500 | 15,600 | 36,200 | 13,000 | 2,770 | 1,610 | 2,870 |
| 4 | 12,400 | 4,000 | 60,200 | 4,820 | e3,450 | 35,300 | 15,000 | 43,700 | 11,100 | 2,650 | 1,580 | 2,750 |
| 5 | 8,710 | 4,510 | 46,800 | 4,830 | e3,920 | 29,700 | 25,000 | 40,400 | 9,990 | 2,530 | 1,520 | 5,440 |
| 6 | 8,300 | 4,860 | 38,500 | e4,800 | e4,490 | 37,800 | 60,600 | 33,100 | 9,100 | 2,330 | 1,790 | 9,800 |
| 7 | 9,890 | 4,630 | 31,600 | e4,560 | e4,750 | 78,500 | 61,900 | 26,900 | 8,050 | 2,120 | 4,030 | 47,800 |
| 8 | 10,500 | 4,220 | 25,100 | e4,120 | e4,490 | 63,200 | 52,700 | 22,400 | 7,210 | 1,990 | 3,400 | 153,000 |
| 9 | 9,330 | 3,940 | 19,800 | e4,270 | e4,560 | 50,000 | 45,600 | 19,100 | 6,610 | 2,160 | 3,330 | 62,600 |
| 10 | 8,010 | 3,740 | 16,400 | e3,790 | e4,240 | 45,800 | 44,600 | 16,600 | 6,120 | 1,900 | 3,220 | 32,600 |
| 11 | 6,770 | 3,590 | 13,600 | e3,500 | e3,890 | 109,000 | 40,800 | 14,500 | 6,100 | 1,810 | 2,670 | 24,800 |
| 12 | 6,260 | 3,430 | 12,500 | e3,610 | e3,640 | 95,500 | 35,300 | 12,800 | 6,910 | 1,760 | 2,320 | 28,000 |
| 13 | 6,960 | 3,280 | 16,400 | e3,650 | e3,640 | 67,300 | 34,100 | 11,600 | 7,520 | 1,690 | 2,050 | 24,200 |
| 14 | 6,000 | 3,120 | 17,300 | e3,430 | e3,640 | 54,100 | 34,000 | 10,700 | 5,950 | 1,630 | 2,080 | 20,100 |
| 15 | 5,380 | 3,080 | 16,000 | e3,460 | e4,260 | 45,100 | 33,000 | 10,300 | 5,120 | 1,550 | 4,030 | 16,700 |
| 16 | 4,910 | 3,300 | 14,300 | e3,540 | e4,770 | 37,400 | 31,000 | 11,900 | 4,650 | 1,500 | 3,750 | 13,500 |
| 17 | 4,480 | 8,360 | e12,400 | e3,500 | 5,130 | 34,800 | 66,200 | 15,700 | 4,730 | 1,410 | 3,910 | 10,600 |
| 18 | 4,090 | 15,300 | 11,500 | e3,500 | 6,170 | 34,500 | 55,900 | 17,000 | 4,400 | 1,390 | 3,640 | 9,120 |
| 19 | 3,770 | 16,300 | e10,400 | 3,710 | 14,500 | 41,900 | 48,500 | 27,700 | 4,300 | 1,450 | 3,000 | 7,630 |
| 20 | 3,530 | 14,700 | 9,730 | 3,590 | 33,300 | 46,300 | 41,100 | 56,600 | 4,300 | 1,530 | 2,750 | 6,840 |
| 21 | 3,300 | 12,400 | e9,000 | e3,570 | 28,500 | 39,400 | 36,700 | 55,700 | 3,990 | 1,570 | 2,710 | 6,660 |
| 22 | 3,110 | 10,800 | 8,300 | e3,860 | 22,100 | 40,100 | 32,100 | 44,300 | 3,750 | 1,480 | 2,320 | 6,450 |
| 23 | 2,930 | 9,660 | 7,590 | e3,320 | 18,300 | 40,500 | 29,900 | 35,200 | 4,160 | 1,340 | 2,190 | 6,580 |
| 24 | 2,850 | 8,750 | 7,260 | e2,890 | 15,800 | 40,800 | 35,300 | 31,400 | 4,470 | 1,250 | 2,090 | 8,270 |
| 25 | 2,770 | 8,020 | 6,760 | e2,940 | 16,500 | 37,700 | 39,300 | 27,100 | 4,150 | 1,520 | 2,720 | 8,530 |
| 26 | 2,680 | 9,800 | 6,190 | e3,020 | 20,000 | 33,300 | 48,100 | 23,300 | 3,380 | 1,670 | 2,780 | 8,180 |
| 27 | 3,050 | 15,800 | e5,700 | e3,240 | 23,400 | 28,600 | 78,100 | 24,100 | 3,280 | 1,530 | 2,930 | 10,000 |
| 28 | 4,730 | 21,300 | 5,070 | e3,450 | 26,200 | 23,700 | 91,100 | 31,300 | 3,340 | 1,410 | 4,350 | 29,900 |
| 29 | 5,970 | 17,600 | 5,030 | e3,610 | --- | 20,500 | 99,500 | 32,000 | 3,250 | 1,490 | 17,000 | 53,700 |
| 30 | 5,760 | 14,900 | 4,740 | e3,660 | --- | 18,100 | 66,800 | 27,300 | 3,050 | 1,540 | 7,300 | 50,300 |
| 31 | 5,430 | --- | 4,710 | e3,500 | --- | 16,900 | --- | 24,100 | --- | 1,470 | 4,720 | --- |
| Total | 247,770 | 247,110 | 717,680 | 117,730 | 293,560 | 1,402,000 | 1,330,300 | 877,100 | 197,180 | 55,890 | 104,750 | 673,770 |
| Mean | 7,993 | 8,237 | 23,150 | 3,798 | 10,480 | 45,230 | 44,340 | 28,290 | 6,573 | 1,803 | 3,379 | 22,460 |
| Max | 35,300 | 21,300 | 134,000 | 4,830 | 33,300 | 109,000 | 99,500 | 56,600 | 19,500 | 2,860 | 17,000 | 153,000 |
| Min | 2,680 | 3,080 | 4,710 | 2,890 | 3,290 | 16,900 | 15,000 | 10,300 | 3,050 | 1,250 | 1,460 | 2,750 |
| Cfsm | 1.17 | 1.20 | 3.38 | 0.55 | 1.53 | 6.61 | 6.48 | 4.13 | 0.96 | 0.26 | 0.49 | 3.28 |
| In. | 1.35 | 1.34 | 3.90 | 0.64 | 1.59 | 7.62 | 7.23 | 4.77 | 1.07 | 0.30 | 0.57 | 3.66 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2011, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 5,410 | 9,127 | 12,080 | 11,850 | 12,710 | 22,110 | 21,890 | 14,630 | 8,646 | 4,692 | 3,680 | 4,391 |
| Max | 24,900 | 32,000 | 28,230 | 30,740 | 33,010 | 49,200 | 62,990 | 28,750 | 46,900 | 20,120 | 18,700 | 34,920 |
| (WY) | (1991) | (1951) | (1973) | (1952) | (1981) | (1945) | (1993) | (1978) | (1972) | (1972) | (1994) | (2004) |
| Min | 659 | 762 | 1,727 | 1,752 | 2,914 | 6,169 | 5,822 | 3,353 | 1,807 | 1,032 | 983 | 601 |
| (WY) | (1964) | (1965) | (1961) | (1981) | (1940) | (1969) | (1946) | (1941) | (1999) | (1965) | (1966) | (1964) |

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SUMMARY STATISTICS

| | Calendar Year 2010 | | Water Year 2011 | | Water Years 1940 - 2011 | |
|---------------------------------|--------------------|--------|----------------------|--------|-------------------------|--------------|
| Annual total | 3,600,223 | | 6,264,840 | | | |
| Annual mean | 9,864 | | 17,160 | | 10,920 | |
| Highest annual mean | | | | | 17,760 | 2004 |
| Lowest annual mean | | | | | 6,158 | 1965 |
| Highest daily mean | 134,000 | Dec 2 | 153,000 | Sep 8 | 285,000 | Jun 24, 1972 |
| Lowest daily mean | 888 | Sep 17 | 1,250 | Jul 24 | 417 | Nov 16, 1964 |
| Annual seven-day minimum | 914 | Sep 11 | 1,430 | Jul 18 | 511 | Sep 15, 1964 |
| Maximum peak flow | | | ^a 168,000 | Sep 8 | ^b 300,000 | Jun 24, 1972 |
| Maximum peak stage | | | ^c 25.91 | Sep 8 | ^d 34.23 | Jun 24, 1972 |
| Instantaneous low flow | | | 1,220 | Jul 24 | 390 | Nov 16, 1964 |
| Annual runoff (cfsm) | 1.44 | | 2.51 | | 1.59 | |
| Annual runoff (inches) | 19.56 | | 34.04 | | 21.67 | |
| 10 percent exceeds | 20,100 | | 45,300 | | 24,800 | |
| 50 percent exceeds | 5,660 | | 6,960 | | 6,480 | |
| 90 percent exceeds | 1,520 | | 2,320 | | 1,500 | |

^a At gage height 25.74 ft.

^b About.

^c Backwater from Susquehanna River, discharge 166,000 cfs.

^d From floodmarks.

