



Water-Data Report 2013

01536500 SUSQUEHANNA RIVER AT WILKES-BARRE, PA

Upper Susquehanna Basin
Upper Susquehanna-Lackawanna Subbasin

LOCATION.--Lat 41°15'03", long 75°52'52" referenced to North American Datum of 1927, Luzerne County, PA, Hydrologic Unit 02050107, on left bank on downstream side of North Street bridge in Wilkes-Barre, and 1.8 mi upstream from Toby Creek.

DRAINAGE AREA.--9,960 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1899 to current year. Gage-height records collected at same site since November 1890 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 109: 1900-1905. WSP 351: Drainage area. WSP 781: 1902(M). WSP 1302: 1916. WSP 1432: 1901-5, 1907, 1909, 1913, 1937(M). WDR PA-86-2: 1960(M), 1964(M), 1975(M), 1979(M). WDR PA-89-2: 1964(P). WDR PA-90-2: 1988(M) 1989(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 510.86 ft above North American Vertical Datum of 1988. See WSP 1722 for history of changes prior to Mar. 23, 1949. May 23, 1949 to Sept. 30, 1996, at site 800 ft downstream. From Oct 1, 1996 to Oct 6, 2011, at site 5 ft downstream. Satellite and landline telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey. Funding for this station is provided by the Pennsylvania Department of Environmental Protection, the Luzerne County Flood Protection Authority and the U.S. Geological Survey through the National Streamflow Information Program.

REMARKS.--Records for water years 2011 and 2012 are included in this report. Water year 2011 records publication was delayed due to difficulties determining a peak discharge for the September 2011 flood. Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 8 flood-control reservoirs, which have a combined capacity of 368,800 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1899, 33.1 ft, Mar. 18, 1865, from floodmarks, discharge, about 232,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 82,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 1	1030	*80,200	*16.77
(No peaks greater than base discharge.)			

Minimum discharge, 2,300 ft³/s, Oct. 18, gage height, 0.42 ft.

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,330	26,600	4,760	14,800	76,900	13,700	12,800	11,900	21,500	37,000	7,680	6,150
2	3,960	22,400	4,640	14,000	58,200	14,900	e16,700	11,300	19,300	49,300	6,620	5,920
3	3,960	17,800	4,540	12,700	42,800	13,200	e20,300	10,500	14,200	57,900	6,010	6,460
4	3,920	14,800	4,510	12,700	30,500	11,600	e18,300	9,460	11,600	46,000	5,830	14,200
5	3,770	13,000	4,640	11,800	23,400	10,300	16,000	8,600	10,600	37,900	5,970	17,300
6	3,540	11,500	5,100	11,300	19,600	9,410	14,300	7,870	9,800	29,000	5,450	13,400
7	3,320	10,100	5,780	11,300	17,000	8,880	e13,500	7,280	8,530	21,800	4,790	9,960
8	3,190	8,990	7,020	11,000	14,900	8,570	12,900	6,930	7,930	18,700	4,370	7,820
9	3,050	8,370	8,380	10,700	13,800	8,340	12,500	7,050	10,200	18,300	4,610	6,220
10	2,960	7,640	9,700	10,300	12,000	8,250	12,900	7,310	12,300	19,200	14,900	5,500
11	2,870	7,030	10,900	10,000	11,900	8,840	16,800	7,910	12,200	18,100	30,300	5,390
12	2,810	6,560	17,100	11,000	11,600	13,500	34,800	9,830	11,200	14,900	20,300	6,300
13	2,760	6,870	19,300	17,000	11,300	42,900	43,800	10,500	16,800	13,200	14,800	8,150
14	2,720	8,020	16,600	35,400	11,400	60,700	47,000	10,000	23,600	11,400	13,300	10,600
15	2,670	9,680	14,100	48,400	11,300	50,800	39,400	8,970	30,800	9,850	11,400	10,800
16	2,560	10,100	12,300	44,100	11,400	37,500	31,600	7,890	34,700	8,670	12,300	9,220
17	2,380	9,680	11,300	35,300	11,100	27,800	27,300	7,050	29,700	7,760	10,200	7,920
18	2,310	8,450	13,500	28,200	9,870	22,500	28,000	6,490	21,900	7,000	8,200	6,810
19	4,370	7,650	35,800	23,100	8,860	19,000	25,800	6,080	16,700	6,280	6,960	5,900
20	6,490	e7,090	39,300	20,000	8,350	17,700	27,200	5,670	14,100	5,700	6,090	5,360
21	6,310	6,720	43,600	18,300	7,740	17,100	32,400	5,350	12,200	5,230	5,420	4,990
22	7,980	6,390	67,200	16,900	7,240	15,700	30,100	5,090	10,500	4,880	5,070	5,190
23	9,200	6,080	57,100	13,800	7,170	14,100	25,100	5,030	9,160	4,820	4,610	4,940
24	8,220	5,890	42,000	11,000	6,940	12,900	21,100	5,720	8,270	5,530	4,300	6,070
25	8,650	5,630	31,200	e9,220	6,910	12,200	18,600	9,840	8,350	16,800	4,080	6,420
26	9,600	5,430	25,100	e8,910	6,780	11,800	17,900	11,500	7,550	15,000	3,810	5,490
27	8,640	5,310	22,000	e9,320	7,000	11,700	17,000	10,400	7,550	10,300	3,860	4,770
28	7,650	5,200	19,400	e9,830	9,760	11,700	15,200	11,300	17,800	8,460	3,730	4,340
29	7,400	5,040	17,700	e10,700	---	11,900	13,500	13,600	27,800	7,810	4,750	4,010
30	14,700	4,880	16,700	e16,000	---	12,200	12,500	13,300	36,800	7,990	6,720	3,740
31	31,300	---	15,500	e35,800	---	12,300	---	16,300	---	8,750	6,470	---
Total	187,590	278,900	606,770	552,880	475,720	551,990	675,300	276,020	483,640	533,530	252,900	219,340
Mean	6,051	9,297	19,570	17,830	16,990	17,810	22,510	8,904	16,120	17,210	8,158	7,311
Max	31,300	26,600	67,200	48,400	76,900	60,700	47,000	16,300	36,800	57,900	30,300	17,300
Min	2,310	4,880	4,510	8,910	6,780	8,250	12,500	5,030	7,550	4,820	3,730	3,740
Cfsm	0.61	0.93	1.97	1.79	1.71	1.79	2.26	0.89	1.62	1.73	0.82	0.73
In.	0.70	1.04	2.27	2.06	1.78	2.06	2.52	1.03	1.81	1.99	0.94	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7,473	11,560	14,710	14,500	14,870	30,400	30,890	16,350	9,445	5,661	4,238	5,053
Max	39,860	32,130	44,610	40,740	43,030	80,560	100,000	39,590	54,330	29,010	19,560	53,420
(WY)	(1978)	(1928)	(1997)	(1996)	(1976)	(1936)	(1993)	(1943)	(1972)	(1902)	(1994)	(2011)
Min	705	724	1,357	1,386	2,710	10,250	6,918	3,388	2,137	1,086	853	637
(WY)	(1965)	(1965)	(1909)	(1931)	(1920)	(1965)	(1946)	(1903)	(1999)	(1962)	(1964)	(1964)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1899 - 2013	
Annual total	3,788,980		5,094,580			
Annual mean	10,350		13,960		13,770	
Highest annual mean					26,430 2011	
Lowest annual mean					6,186 1965	
Highest daily mean	67,200	Dec 22	76,900	Feb 1	329,000	Jun 24, 1972
Lowest daily mean	1,530	Jul 16	2,310	Oct 18	532	Sep 27, 1964
Annual seven-day minimum	1,600	Jul 13	2,600	Oct 12	546	Sep 21, 1964
Maximum peak flow			80,200	Feb 1	a,b345,000 Jun 24, 1972	
Maximum peak stage			16.77	Feb 1	c42.66 Sep 9, 2011	
Instantaneous low flow			2,300	Oct 18	528	Sep 27, 1964
Annual runoff (cfsm)	1.04		1.40		1.38	
Annual runoff (inches)	14.15		19.03		18.78	
10 percent exceeds	22,100		30,200		32,600	
50 percent exceeds	8,010		10,500		7,500	
90 percent exceeds	2,200		4,770		1,730	

^a From slope-area measurement of peak flow at gage height 40.91 ft near West Pittston and adjusted for flow from intervening area.

^b At gage height 40.91 ft from floodmark.

^c From outside floodmark.

