

Water-Data Report 2010

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 at 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. 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. 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 and the Luzerne County Flood Protection Authority.

REMARKS.--Records fair 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)
Jan 27	0100	*122,000	*22.83
Mar 15	0345	92,200	18.89

Minimum discharge, 1,360 ft³/s, Sept. 27, gage height, -0.20 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6,330	27,700	10,600	12,300	17,500	5,960	57,900	13,300	3,800	3,790	2,450	4,130
2	6,630	21,700	10,800	11,900	14,200	6,130	48,700	11,600	3,780	3,840	2,250	3,700
3	6,090	18,400	11,500	e11,600	13,800	6,090	39,800	10,300	3,620	3,620	2,060	3,350
4	5,640	15,900	12,200	e9,720	13,200	6,070	32,300	9,720	3,610	3,260	2,030	2,960
5	5,630	13,900	12,400	e7,300	e11,700	6,000	26,300	9,190	3,670	2,940	1,940	2,660
6	5,710	12,500	12,500	e7,500	e10,500	5,890	22,400	8,860	3,700	2,710	1,810	2,480
7	5,400	11,400	11,500	e7,700	e9,500	5,900	19,800	8,330	4,040	2,520	1,690	2,340
8	4,900	10,600	10,500	e8,500	e8,900	6,460	17,800	8,970	10,500	2,350	1,620	2,240
9	4,560	10,100	10,500	e7,800	e8,400	8,640	17,000	9,730	10,000	2,180	1,590	2,090
10	5,030	9,460	12,100	e6,600	e8,000	13,000	17,800	10,000	8,930	2,150	1,680	1,990
11	5,450	8,750	13,700	e5,800	e7,800	18,200	16,900	9,850	8,200	2,120	1,790	1,910
12	5,240	8,090	13,200	e5,500	e7,500	30,200	15,100	10,000	8,520	2,190	1,750	1,870
13	4,950	7,610	11,600	e5,300	e7,300	49,700	13,400	11,200	7,910	2,580	2,180	1,820
14	4,670	7,210	12,700	e5,700	e7,000	74,700	12,100	15,900	8,030	2,650	2,130	1,820
15	4,410	6,880	14,700	e6,100	6,750	86,200	10,800	14,500	8,290	2,550	2,030	1,770
16	4,430	6,510	19,800	e6,500	6,470	66,000	9,820	14,300	7,860	2,260	2,090	1,740
17	4,590	6,180	21,700	e6,900	6,340	55,600	9,820	13,000	7,060	2,410	1,990	1,690
18	4,790	5,860	18,500	e8,400	6,200	45,800	9,790	11,300	6,210	2,390	2,170	1,680
19	4,820	5,590	15,000	e14,000	6,000	37,100	11,100	10,200	5,960	2,090	2,140	1,690
20	4,750	6,930	12,900	19,100	5,780	32,200	10,900	10,900	5,650	1,980	1,900	1,650
21	4,610	9,730	11,200	15,800	5,670	28,700	9,960	10,700	5,360	1,880	1,910	1,650
22	4,440	12,700	11,500	13,200	5,560	26,600	9,170	9,170	4,740	1,910	2,390	1,650
23	4,140	12,300	10,400	10,800	5,460	29,800	8,480	8,010	4,380	2,090	3,480	1,630
24	5,780	10,600	9,460	10,000	5,430	43,100	7,840	7,110	4,160	2,480	4,000	1,580
25	18,800	9,380	8,330	25,800	5,510	50,100	7,860	6,500	3,910	e3,000	7,200	1,520
26	20,600	8,810	8,840	112,000	5,640	45,700	8,750	5,970	3,580	e3,400	13,900	1,450
27	21,100	8,730	11,100	106,000	5,620	41,800	11,900	5,460	3,470	3,860	11,500	1,390
28	20,000	9,630	22,700	67,300	5,380	35,200	19,700	5,120	3,620	4,460	8,880	1,430
29	35,100	10,200	21,400	47,100	---	32,200	20,400	4,780	3,490	4,070	7,160	1,460
30	45,100	10,500	17,400	32,500	---	33,400	16,100	4,320	3,330	3,290	5,780	2,700
31	36,600	---	14,600	23,400	---	48,800	---	3,950	---	2,760	4,800	---
Total	320,290	323,850	415,330	638,120	227,110	981,240	539,690	292,240	169,380	85,780	110,290	62,040
Mean	10,330	10,800	13,400	20,580	8,111	31,650	17,990	9,427	5,646	2,767	3,558	2,068
Max	45,100	27,700	22,700	112,000	17,500	86,200	57,900	15,900	10,500	4,460	13,900	4,130
Min	4,140	5,590	8,330	5,300	5,380	5,890	7,840	3,950	3,330	1,880	1,590	1,390
Cfsm	1.04	1.08	1.35	2.07	0.81	3.18	1.81	0.95	0.57	0.28	0.36	0.21
In.	1.20	1.21	1.55	2.38	0.85	3.66	2.02	1.09	0.63	0.32	0.41	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7,186	11,490	14,520	14,500	14,900	30,350	30,900	16,230	9,378	5,594	4,184	4,620
Max	39,860	32,130	44,610	40,740	43,030	80,560	100,000	39,590	54,330	29,010	19,560	37,600
(WY)	(1978)	(1928)	(1997)	(1996)	(1976)	(1936)	(1993)	(1943)	(1972)	(1902)	(1994)	(2004)
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 2009		Water Year 2010		Water Years 1899 - 2010	
Annual total	4,564,620		4,165,360			
Annual mean	12,510		11,410		13,660	
Highest annual mean					21,990	
Lowest annual mean					6,186	
Highest daily mean	75,500	Mar 10	112,000	Jan 26	329,000	Jun 24, 1972
Lowest daily mean	2,240	Sep 26	1,390	Sep 27	532	Sep 27, 1964
Annual seven-day minimum	2,470	Sep 21	1,490	Sep 23	546	Sep 21, 1964
Maximum peak flow			122,000	Jan 27	^a 345,000	Jun 24, 1972
Maximum peak stage			22.83	Jan 27	^b 40.91	Jun 24, 1972
Instantaneous low flow			1,360	Sep 27	528	Sep 27, 1964
Annual runoff (cfs)	1.26		1.15		1.37	
Annual runoff (inches)	17.05		15.56		18.63	
10 percent exceeds	22,700		23,000		32,500	
50 percent exceeds	9,780		7,500		7,400	
90 percent exceeds	4,510		2,050		1,700	

^a From slope-area measurement of peak flow near West Pittston and adjusted for flow from intervening area.

^b From floodmark.

