



Water-Data Report 2009

03049500 ALLEGHENY RIVER AT NATRONA, PA

Allegheny Basin
Lower Allegheny Subbasin

LOCATION.--Lat 40°36'55", long 79°43'07" referenced to North American Datum of 1927, Allegheny County, PA, Hydrologic Unit 05010009, on right bank 520 ft upstream from dam at lock 4 at Natrona, 5.8 mi downstream from Kiskiminetas River, at river mile 24.3.

DRAINAGE AREA.--11,410 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1435: 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 736.36 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr 14, 1940, nonrecording gage and Apr 15, 1940 to Oct 22, 1990, water-stage recorder at same site at datum 0.75 ft higher. Satellite telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District and the Pennsylvania Department of Environmental Protection.

REMARKS.--No estimated daily discharges. Records fair except those below 2,000 ft³/s, which are poor. Sharp rises and drops in discharge during periods of low flow may be caused by hydroelectric power production. Flow regulated since 1924 by Piney Reservoir, since May 1940 by Crooked Creek Lake, since December 1940 by Tionesta Lake (station 03019500), since June 1941 by Mahoning Creek Lake (station 03035500), since June 1942 by Loyalhanna Lake (station 03046500), since November 1949 by Chautauqua Lake, since November 1951 by Conemaugh River Lake, since June 1952 by East Branch Clarion River Lake (station 03027000), since October 1965 by Allegheny Reservoir (station 03012520), since July 1970 by Union City Reservoir (station 03021518), since January 1974 by Woodcock Creek Lake (station 03022550). Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar 18, 1936 reached a stage of 32.06 ft, discharge, 365,000 ft³/s, determined by U.S. Army Corps of Engineers.

0304950 ALLEGHENY RIVER AT NATRONA, PA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,750	7,560	13,100	55,300	9,510	42,300	20,700	13,600	20,900	8,960	25,800	12,600
2	4,340	7,470	15,000	47,800	10,300	36,200	19,700	19,000	19,800	7,470	25,400	10,700
3	4,480	7,920	17,200	39,500	9,880	29,500	22,400	23,600	19,100	10,400	24,800	8,370
4	5,370	6,510	16,300	32,900	9,860	24,600	37,300	23,300	18,100	13,400	23,200	6,550
5	7,000	6,670	15,800	27,900	8,760	23,200	42,600	21,400	14,100	16,900	19,500	6,880
6	6,950	6,020	15,900	26,100	9,610	21,100	38,300	18,600	11,600	15,900	13,500	5,000
7	6,190	5,740	15,700	27,300	8,910	19,300	35,100	22,000	10,900	13,900	11,900	5,070
8	7,010	5,530	12,700	30,500	12,800	22,400	32,800	22,100	8,800	11,600	9,970	5,930
9	6,210	5,120	12,900	28,300	19,100	56,100	30,300	22,800	7,780	9,070	9,460	5,640
10	5,150	5,150	13,700	27,400	26,300	76,800	28,400	22,800	6,700	7,830	8,810	4,920
11	4,980	5,210	28,600	22,800	35,000	62,900	26,200	20,800	6,120	7,320	13,900	5,150
12	4,550	5,070	42,500	20,100	72,000	63,200	24,600	18,700	6,510	6,690	27,800	5,280
13	4,540	5,420	44,500	16,800	87,600	61,400	23,000	17,000	8,550	8,180	31,500	4,470
14	4,650	5,340	40,600	14,800	64,100	57,500	20,200	15,900	8,740	8,550	26,300	5,040
15	4,640	5,780	31,800	12,100	62,600	51,100	19,000	14,100	6,960	8,350	23,400	5,230
16	4,220	6,990	26,500	11,700	63,200	45,400	18,900	12,900	6,270	6,970	19,400	5,290
17	4,510	11,000	33,800	9,400	60,400	39,700	20,100	14,100	6,170	6,420	18,400	5,620
18	4,590	13,100	38,700	10,200	56,400	33,600	19,000	14,100	7,510	6,010	16,300	5,530
19	5,660	11,700	47,800	10,500	57,600	30,200	16,100	13,300	10,700	5,240	16,100	5,310
20	5,690	11,100	57,900	11,700	54,800	28,400	15,600	12,200	13,100	5,270	17,500	4,660
21	5,150	10,800	52,900	11,600	46,000	23,800	16,800	11,100	22,300	5,450	18,500	5,020
22	4,570	10,400	53,000	12,200	37,700	19,700	19,600	9,560	31,100	6,480	23,300	5,270
23	4,620	10,100	46,800	11,500	28,600	17,700	20,800	8,630	25,300	10,400	18,400	5,770
24	4,330	9,300	41,700	12,200	23,800	16,500	20,000	7,930	20,600	13,700	15,100	5,250
25	5,280	12,300	52,900	9,460	20,800	14,400	17,900	7,390	16,400	17,200	13,900	4,850
26	5,500	15,500	59,000	8,170	19,200	15,300	16,600	7,420	15,000	17,600	11,800	4,370
27	5,990	17,400	56,900	9,940	18,600	16,100	15,600	7,390	12,500	13,800	8,510	5,690
28	6,780	15,700	62,900	9,340	35,700	17,500	13,900	8,830	10,100	12,000	8,250	6,970
29	7,150	14,700	69,000	10,700	---	17,000	12,400	10,300	9,630	12,600	8,800	9,670
30	6,790	13,700	66,900	9,440	---	19,400	14,200	20,600	8,150	16,100	9,190	8,860
31	6,990	---	61,700	8,980	---	21,900	---	21,700	---	23,100	12,100	---
Total	168,630	274,300	1,164,700	596,630	969,130	1,024,200	678,100	483,150	389,490	332,860	530,790	184,960
Mean	5,440	9,143	37,570	19,250	34,610	33,040	22,600	15,590	12,980	10,740	17,120	6,165
Max	7,150	17,400	69,000	55,300	87,600	76,800	42,600	23,600	31,100	23,100	31,500	12,600
Min	4,220	5,070	12,700	8,170	8,760	14,400	12,400	7,390	6,120	5,240	8,250	4,370
Cfsm	0.48	0.80	3.29	1.69	3.03	2.90	1.98	1.37	1.14	0.94	1.50	0.54
In.	0.55	0.89	3.80	1.95	3.16	3.34	2.21	1.58	1.27	1.09	1.73	0.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	9,980	16,660	24,550	25,260	27,100	38,010	34,840	22,550	14,440	9,245	7,163	7,664
Max	37,840	45,220	48,690	68,600	53,390	87,030	83,780	48,400	45,820	34,630	23,020	47,470
(WY)	(2007)	(1986)	(1978)	(1952)	(1976)	(1945)	(1940)	(1943)	(1989)	(1972)	(1956)	(2004)
Min	1,227	2,686	2,316	4,520	7,167	10,410	9,000	6,129	3,759	1,944	1,786	1,444
(WY)	(1964)	(1954)	(1961)	(1961)	(1963)	(1969)	(1946)	(1941)	(1991)	(1966)	(1962)	(1939)

03049500 ALLEGHENY RIVER AT NATRONA, PA—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1939 - 2009	
Annual total	7,551,390		6,796,940			
Annual mean	20,630		18,620		19,750	
Highest annual mean					30,090	2004
Lowest annual mean					12,680	1999
Highest daily mean	109,000	Feb 7	87,600	Feb 13	206,000	Dec 31, 1942
Lowest daily mean	3,060	Sep 8	4,220	Oct 16	949	Oct 26, 1963
Annual seven-day minimum	3,450	Sep 4	4,530	Oct 12	1,030	Oct 25, 1963
Maximum peak flow			98,100	Feb 13	^a 238,000	Dec 30, 1942
Maximum peak stage			18.18	Feb 13	^b 27.46	Dec 30, 1942
Instantaneous low flow					^c 895	Oct 22, 1963
Annual runoff (cfsm)	1.81		1.63		1.73	
Annual runoff (inches)	24.62		22.16		23.52	
10 percent exceeds	50,600		41,900		44,900	
50 percent exceeds	13,100		13,700		13,400	
90 percent exceeds	4,340		5,280		3,330	

^a From rating curve extended above 172,000 ft³/s.

^b Datum then in use.

^c For water years 1939 to 1987.

