

Water-Data Report 2011

**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 mi<sup>2</sup>.

**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 National Streamflow Information Program in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District and the Pennsylvania Department of Environmental Protection.

REMARKS.--Records good, except those below 2,000 ft<sup>3</sup>/s, and those for estimated daily discharges, which are poor. Sharp rises and drops in discharge during periods of low flow are caused by hydroelectric power production upstream. 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 ft<sup>3</sup>/s, determined by U.S. Army Corps of Engineers.

## 03049500 ALLEGHENY RIVER AT NATRONA, PA—Continued

**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	6,570	10,500	e87,400	12,800	8,460	112,000	21,400	43,900	35,300	6,110	4,090	5,250
2	9,650	10,000	e97,300	30,900	10,500	76,800	19,800	29,400	30,000	5,460	3,940	6,210
3	11,100	9,150	61,500	43,000	13,100	74,100	19,100	26,700	27,400	4,890	4,520	5,950
4	9,380	8,110	56,700	38,500	15,300	73,400	18,600	40,600	21,100	4,420	4,630	5,730
5	9,430	9,100	59,900	35,100	16,600	66,600	37,900	45,900	16,000	4,090	4,740	5,740
6	9,560	8,280	61,700	31,000	16,200	106,000	69,600	45,400	13,800	3,590	4,470	6,050
7	9,840	8,910	58,600	28,800	13,800	120,000	68,200	45,100	13,000	5,310	4,850	7,770
8	11,600	9,690	55,700	24,700	14,000	83,000	74,900	43,500	10,800	5,640	5,460	7,340
9	11,300	9,610	49,600	21,700	11,300	81,900	81,000	40,900	11,500	5,570	6,100	12,200
10	9,840	9,220	43,300	19,900	11,000	85,800	74,300	38,900	10,400	5,210	6,550	17,700
11	8,780	8,110	38,400	18,100	10,400	127,000	66,200	36,700	9,940	4,790	6,740	22,800
12	8,020	7,040	36,900	18,300	10,600	119,000	60,800	34,400	8,940	4,850	6,440	23,400
13	7,460	6,620	38,300	16,700	10,100	111,000	70,200	33,900	7,980	4,910	5,700	22,100
14	6,680	6,460	41,200	14,500	11,200	110,000	74,500	33,400	7,520	4,110	5,750	20,400
15	6,480	6,350	38,700	13,500	11,200	102,000	64,000	42,500	6,500	3,490	6,340	18,800
16	6,200	6,500	35,800	11,100	13,300	93,800	56,400	68,200	7,070	3,280	6,380	14,300
17	5,940	6,860	33,000	9,470	15,600	91,200	64,700	58,700	6,620	3,710	5,810	14,500
18	5,920	9,990	30,900	10,800	20,700	86,600	61,400	52,900	6,450	4,050	5,550	10,300
19	6,010	14,000	28,800	11,500	45,800	83,500	63,000	57,100	6,250	4,400	4,950	11,100
20	5,570	18,800	27,200	11,400	57,600	76,900	68,900	55,400	5,970	4,080	5,010	11,100
21	4,980	18,300	26,900	10,600	49,800	68,500	69,300	56,100	5,880	3,800	4,680	10,500
22	4,880	15,800	22,900	8,710	45,100	69,100	64,500	51,600	6,530	4,470	5,820	12,500
23	5,050	14,800	19,400	8,060	39,500	64,900	62,200	48,000	7,760	4,980	5,250	12,900
24	5,530	16,700	16,500	5,700	38,100	63,300	78,000	44,800	7,980	3,960	5,040	13,000
25	6,430	19,100	15,100	6,260	38,100	67,200	76,600	45,000	10,300	4,890	5,410	12,900
26	6,400	26,300	12,700	7,250	36,400	63,900	84,700	45,100	11,400	5,840	5,640	13,100
27	8,030	42,900	11,700	8,040	29,700	56,700	83,500	48,200	10,100	4,790	5,760	12,500
28	10,900	37,000	10,300	8,150	48,600	52,200	71,800	46,700	9,210	5,130	5,870	12,300
29	13,400	31,600	10,000	8,110	---	43,800	66,900	49,000	7,690	6,520	5,260	11,600
30	12,300	30,400	9,970	7,620	---	32,700	62,800	45,300	6,790	6,470	4,450	12,100
31	11,100	---	10,700	7,380	---	25,300	---	40,400	---	5,020	4,120	---
<b>Total</b>	254,330	436,200	1,147,070	507,650	662,060	2,488,200	1,855,200	1,393,700	346,180	147,830	165,320	372,140
<b>Mean</b>	8,204	14,540	37,000	16,380	23,640	80,260	61,840	44,960	11,540	4,769	5,333	12,400
<b>Max</b>	13,400	42,900	97,300	43,000	57,600	127,000	84,700	68,200	35,300	6,520	6,740	23,400
<b>Min</b>	4,880	6,350	9,970	5,700	8,460	25,300	18,600	26,700	5,880	3,280	3,940	5,250
<b>Cfsm</b>	0.72	1.27	3.24	1.44	2.07	7.03	5.42	3.94	1.01	0.42	0.47	1.09
<b>In.</b>	0.83	1.42	3.74	1.66	2.16	8.11	6.05	4.54	1.13	0.48	0.54	1.21

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	9,993	16,600	24,750	25,160	26,910	38,530	34,900	22,860	14,380	9,145	7,109	7,687
<b>Max</b>	37,840	45,220	48,690	68,600	53,390	87,030	83,780	48,400	45,820	34,630	23,020	47,470
<b>(WY)</b>	(2007)	(1986)	(1978)	(1952)	(1976)	(1945)	(1940)	(1943)	(1989)	(1972)	(1956)	(2004)
<b>Min</b>	1,227	2,686	2,316	4,520	7,167	10,410	9,000	6,129	3,759	1,944	1,786	1,444
<b>(WY)</b>	(1964)	(1954)	(1961)	(1961)	(1963)	(1969)	(1946)	(1941)	(1991)	(1966)	(1962)	(1939)

03049500 ALLEGHENY RIVER AT NATRONA, PA—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1939 - 2011	
<b>Annual total</b>	6,154,950		9,775,880			
<b>Annual mean</b>	16,860		26,780		19,800	
<b>Highest annual mean</b>					30,090	2004
<b>Lowest annual mean</b>					12,680	1999
<b>Highest daily mean</b>	<sup>a</sup> 97,300	Dec 2	127,000	Mar 11	206,000	Dec 31, 1942
<b>Lowest daily mean</b>	3,470	Sep 1	3,280	Jul 16	949	Oct 26, 1963
<b>Annual seven-day minimum</b>	3,740	Sep 1	3,830	Jul 15	1,030	Oct 25, 1963
<b>Maximum peak flow</b>			146,000	Mar 7	<sup>b</sup> 238,000	Dec 30, 1942
<b>Maximum peak stage</b>			20.58	Mar 7	<sup>c</sup> 27.46	Dec 30, 1942
<b>Instantaneous low flow</b>			2,760	Jul 15		
<b>Annual runoff (cfsm)</b>	1.48		2.35		1.74	
<b>Annual runoff (inches)</b>	20.07		31.87		23.58	
<b>10 percent exceeds</b>	41,600		68,300		45,100	
<b>50 percent exceeds</b>	10,100		12,800		13,400	
<b>90 percent exceeds</b>	4,450		5,050		3,370	

<sup>a</sup> Estimated.

<sup>b</sup> From rating curve extended above 172,000 ft<sup>3</sup>/s.

<sup>c</sup> Datum then in use.

