



Water-Data Report 2013

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. Funding for the operation of this station is provided by the U.S. Army Corps of Engineers, Pittsburgh District, the Pennsylvania Department of Environmental Protection, and the U.S. Geological Survey through the National Streamflow Information Program and Cooperative Water Program.

REMARKS.--Records good. No estimated daily discharges. 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 ft³/s, determined by U.S. Army Corps of Engineers.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7,280	41,300	7,700	21,000	63,400	26,600	24,600	16,500	24,300	41,300	6,640	11,300
2	7,630	45,900	6,990	18,600	58,500	26,300	28,200	14,600	21,400	50,100	6,040	11,100
3	6,220	46,200	7,440	16,700	56,500	21,800	28,800	13,000	19,700	50,000	6,310	9,590
4	5,060	43,400	9,870	14,800	52,200	19,600	25,300	11,900	19,700	41,800	5,520	9,540
5	5,170	41,200	12,900	14,200	47,800	18,400	23,600	11,000	14,800	34,100	5,130	9,130
6	4,950	37,700	19,300	13,600	43,300	17,000	21,700	10,500	13,500	28,000	5,300	8,000
7	4,710	33,900	19,000	13,200	39,900	16,100	20,100	9,880	15,800	22,000	4,710	6,750
8	4,540	31,200	21,900	13,200	36,200	15,300	18,400	9,260	24,400	18,400	6,300	6,020
9	4,640	27,100	24,700	12,900	34,100	14,600	18,300	8,630	25,200	14,100	10,700	5,780
10	5,080	22,100	28,200	13,500	29,100	12,800	19,800	9,990	22,800	15,600	9,790	5,950
11	4,790	18,800	50,600	15,500	25,300	13,700	35,500	11,900	19,700	26,100	9,510	6,460
12	4,530	17,600	50,400	25,100	26,900	20,200	65,400	13,400	19,300	25,900	8,770	6,580
13	4,520	18,300	43,700	44,500	28,500	37,900	78,700	17,900	21,700	21,800	8,210	6,990
14	3,910	17,900	38,800	52,300	27,100	39,400	68,600	15,300	25,900	18,400	7,880	6,450
15	3,920	17,500	34,000	51,700	24,300	37,500	57,900	13,800	32,000	14,800	8,210	5,850
16	4,080	16,700	28,600	48,800	21,900	34,000	50,300	12,900	28,100	10,700	6,970	5,670
17	4,910	14,900	27,900	47,100	18,400	29,800	45,800	12,000	23,100	9,630	6,060	5,360
18	4,800	12,600	39,500	44,100	15,600	27,700	42,600	11,300	21,400	8,800	5,220	5,240
19	6,210	11,900	46,500	40,400	15,800	26,600	38,200	9,880	19,900	8,750	5,060	5,120
20	6,140	11,700	47,900	37,100	16,300	25,400	33,700	9,510	17,100	8,160	4,690	5,120
21	6,280	11,300	57,700	34,000	16,100	22,400	29,900	8,540	13,900	8,300	3,970	5,520
22	6,490	10,500	61,400	28,200	14,400	20,500	26,600	7,640	12,700	8,250	4,150	6,740
23	6,400	9,820	55,400	20,900	14,700	18,000	24,400	7,240	9,770	9,260	4,390	8,260
24	6,730	9,440	47,300	16,000	12,700	14,600	20,500	7,890	9,030	9,310	3,930	9,660
25	6,580	9,310	41,300	14,400	12,400	14,600	19,600	7,300	8,470	10,300	4,280	9,050
26	6,100	8,890	36,800	14,700	12,200	16,200	20,900	7,240	11,600	11,000	4,570	7,440
27	5,550	8,680	32,500	12,600	15,800	16,500	19,700	7,110	12,200	9,570	4,870	6,350
28	6,180	9,280	28,800	11,900	22,800	16,900	18,200	7,150	47,400	10,500	14,400	6,830
29	8,560	8,950	25,500	15,400	---	18,500	17,500	7,310	53,500	10,900	18,700	5,020
30	40,400	8,490	22,700	23,400	---	18,900	17,800	16,700	45,100	9,190	16,400	5,180
31	43,600	---	21,600	57,600	---	20,400	---	25,000	---	7,650	13,100	---
Total	245,960	622,560	996,900	807,400	802,200	678,200	960,600	352,270	653,470	572,670	229,780	212,050
Mean	7,934	20,750	32,160	26,050	28,650	21,880	32,020	11,360	21,780	18,470	7,412	7,068
Max	43,600	46,200	61,400	57,600	63,400	39,400	78,700	25,000	53,500	50,100	18,700	11,300
Min	3,910	8,490	6,990	11,900	12,200	12,800	17,500	7,110	8,470	7,650	3,930	5,020
Cfsm	0.70	1.82	2.82	2.28	2.51	1.92	2.81	1.00	1.91	1.62	0.65	0.62
In.	0.80	2.03	3.25	2.63	2.62	2.21	3.13	1.15	2.13	1.87	0.75	0.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10,090	16,810	24,990	25,370	26,880	38,190	34,550	22,660	14,390	9,228	7,084	7,648
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)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1939 - 2013	
Annual total	6,320,610		7,134,060			
Annual mean	17,270		19,550		19,790	
Highest annual mean					30,090	2004
Lowest annual mean					12,680	1999
Highest daily mean	79,900	Jan 28	78,700	Apr 13	206,000	Dec 31, 1942
Lowest daily mean	3,210	Jul 15	3,910	Oct 14	949	Oct 26, 1963
Annual seven-day minimum	3,430	Jul 10	4,280	Aug 20	1,030	Oct 25, 1963
Maximum peak flow			80,300	Apr 13	^a 238,000 Dec 30, 1942	
Maximum peak stage			16.69	Apr 13	^b 27.46 Dec 30, 1942	
Annual runoff (cfsm)	1.51		1.71		1.73	
Annual runoff (inches)	20.61		23.26		23.56	
10 percent exceeds	41,300		43,300		45,000	
50 percent exceeds	10,600		15,300		13,400	
90 percent exceeds	4,120		5,540		3,410	

^a From rating curve extended above 172,000 ft³/s based on straight-line extension.

^b Datum then in use.

