

Water-Data Report 2010

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, non-recording 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.-- Records good, except those below 2,000 ft³/s, and those for estimated daily discharges, 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.

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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	8,940	23,700	13,000	28,700	49,000	e9,820	21,800	19,100	9,670	5,540	8,990	3,470
2	9,380	26,200	15,500	24,300	45,900	e10,100	20,300	17,600	10,900	5,030	7,490	3,720
3	9,430	23,700	17,800	21,500	42,200	10,100	18,400	17,100	11,000	4,690	6,490	4,200
4	11,600	21,400	22,200	18,400	33,800	9,840	16,000	17,000	9,830	3,950	5,910	3,860
5	9,560	19,500	25,400	16,400	28,100	9,470	15,100	16,300	13,100	3,810	5,080	3,750
6	10,700	18,000	25,500	16,100	21,100	9,280	13,500	15,400	16,800	3,670	5,170	3,620
7	9,050	17,000	24,400	14,900	17,700	9,250	12,300	14,600	21,600	4,100	4,420	3,560
8	8,970	16,300	22,100	14,100	e15,400	10,200	12,400	16,300	27,400	3,550	4,250	3,770
9	9,330	15,100	26,200	12,900	13,200	12,700	11,600	20,600	27,200	4,190	4,260	e4,110
10	11,300	14,800	32,100	9,650	12,600	17,000	11,400	19,100	31,800	5,500	4,680	4,230
11	10,600	12,700	36,500	8,210	12,000	24,500	11,500	18,100	31,400	4,820	4,770	4,250
12	11,300	10,000	35,000	10,100	12,300	44,300	10,800	21,400	27,800	5,080	5,620	4,600
13	11,200	11,600	31,300	9,380	11,700	60,300	10,200	42,700	21,300	5,170	6,140	4,400
14	9,960	11,600	31,100	10,500	10,200	66,400	9,310	41,000	15,100	5,400	5,970	4,270
15	8,900	10,300	34,600	11,800	8,640	62,800	8,460	44,400	11,500	4,320	5,330	4,240
16	8,920	9,780	36,700	12,300	10,400	58,300	7,870	40,500	9,780	5,540	4,150	4,470
17	9,250	9,520	36,200	11,900	8,630	62,300	8,090	35,000	8,380	5,210	4,880	5,230
18	11,700	8,870	33,000	16,900	9,130	60,000	8,230	32,400	7,740	5,310	4,430	5,190
19	14,000	9,020	29,700	22,000	8,980	54,500	7,910	32,600	7,680	5,170	3,640	5,350
20	13,400	10,700	25,400	24,800	8,450	52,500	7,720	33,600	7,470	6,210	3,670	6,230
21	12,600	15,000	22,900	23,800	e7,900	46,800	7,630	28,600	6,580	7,590	3,750	6,710
22	11,800	15,900	20,900	22,100	e7,980	45,600	7,150	24,500	7,050	6,910	3,950	5,380
23	12,000	15,400	19,400	21,500	e8,770	45,800	7,050	23,700	6,410	6,500	4,550	5,210
24	11,700	15,100	16,800	20,600	e8,880	42,800	7,460	23,400	6,700	6,780	5,720	4,640
25	14,900	14,300	14,800	43,700	e8,650	38,900	7,720	19,700	6,060	8,240	6,260	4,270
26	19,600	13,600	17,300	90,100	e8,710	35,900	10,900	17,100	5,550	10,100	5,980	4,260
27	19,800	11,800	28,900	65,900	9,630	32,800	20,300	14,300	5,280	12,800	5,370	4,250
28	18,100	11,200	34,800	62,800	e9,640	30,000	27,300	11,300	5,550	12,800	4,560	4,840
29	19,000	10,500	31,600	59,800	---	27,700	24,100	12,000	6,610	11,400	4,130	5,730
30	23,300	11,500	28,600	57,800	---	27,700	21,400	10,200	5,590	10,200	4,170	5,780
31	23,000	---	31,300	54,700	---	26,200	---	8,860	---	10,300	3,820	---
Total	393,290	434,090	821,000	837,640	449,590	1,053,860	383,900	708,460	388,830	199,880	157,600	137,590
Mean	12,690	14,470	26,480	27,020	16,060	34,000	12,800	22,850	12,960	6,448	5,084	4,586
Max	23,300	26,200	36,700	90,100	49,000	66,400	27,300	44,400	31,800	12,800	8,990	6,710
Min	8,900	8,870	13,000	8,210	7,900	9,250	7,050	8,860	5,280	3,550	3,640	3,470
Cfsm	1.11	1.27	2.32	2.37	1.41	2.98	1.12	2.00	1.14	0.57	0.45	0.40
In.	1.28	1.42	2.68	2.73	1.47	3.44	1.25	2.31	1.27	0.65	0.51	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10,020	16,630	24,580	25,280	26,950	37,950	34,530	22,560	14,420	9,206	7,134	7,621
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 2009		Water Year 2010		Water Years 1939 - 2010	
Annual total	6,837,690		5,965,730			
Annual mean	18,730		16,340		19,700	
Highest annual mean					30,090	2004
Lowest annual mean					12,680	1999
Highest daily mean	87,600	Feb 13	90,100	Jan 26	206,000	Dec 31, 1942
Lowest daily mean	4,370	Sep 26	3,470	Sep 1	949	Oct 26, 1963
Annual seven-day minimum	5,030	Sep 20	3,740	Sep 1	1,030	Oct 25, 1963
Maximum peak flow			96,400	Jan 26	^a 238,000	Dec 30, 1942
Maximum peak stage			18.03	Jan 26	^b 27.46	Dec 30, 1942
Instantaneous low flow			2,870	Aug 11 ^c	^d 895	Oct 22, 1963
Annual runoff (cfsm)	1.64		1.43		1.73	
Annual runoff (inches)	22.29		19.45		23.46	
10 percent exceeds	34,700		34,100		44,800	
50 percent exceeds	15,100		11,500		13,400	
90 percent exceeds	6,930		4,450		3,340	

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

^b Datum then in use.

^c Also Sep 2.

^d For water years 1939 to 1987.

