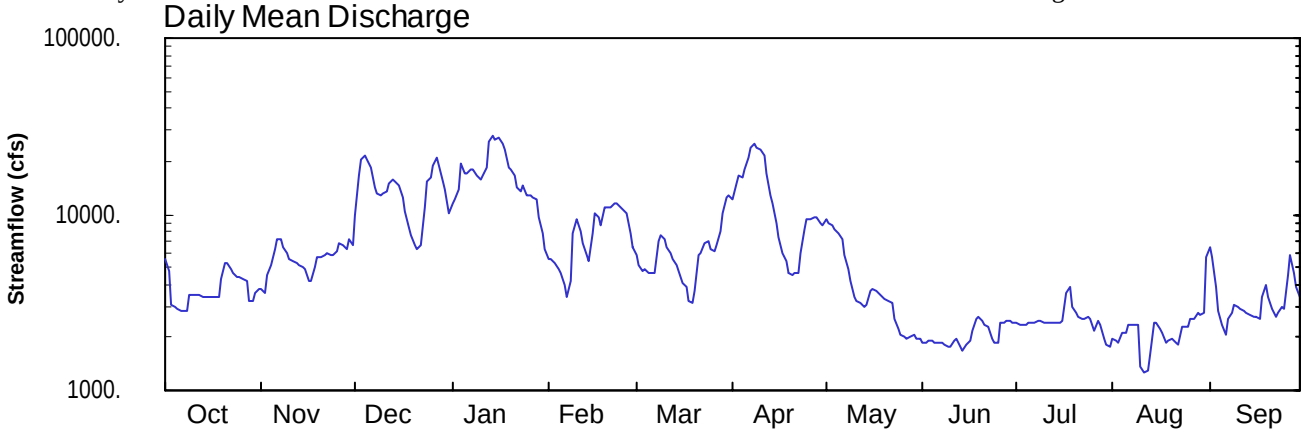
2005 Water Year
BROKENSTRAW CREEK BASIN
03016000 Allegheny River at West Hickory, PA

Latitude: 41° 34 ' 15" Longitude: 079° 24 ' 29" Hydrologic Unit Code: 05010003

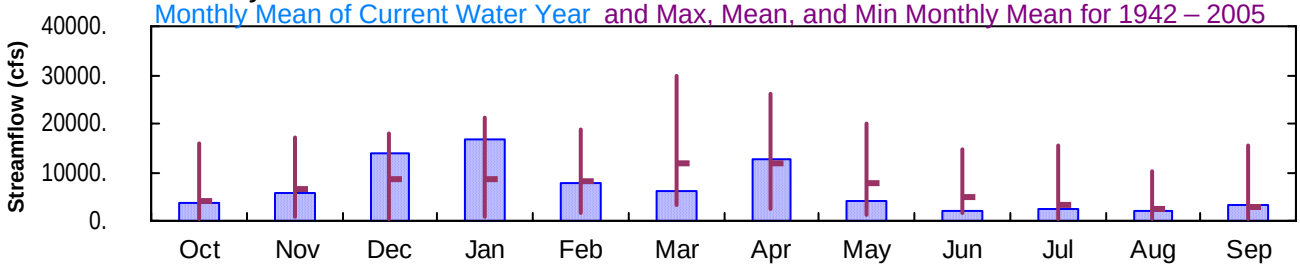
Forest County Datum: 1059.90 feet Drainage Area: 3660. mi²

Daily Mean Discharge

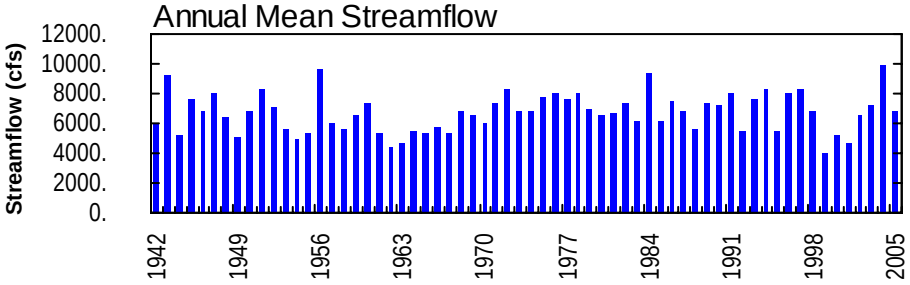


Monthly Statistics

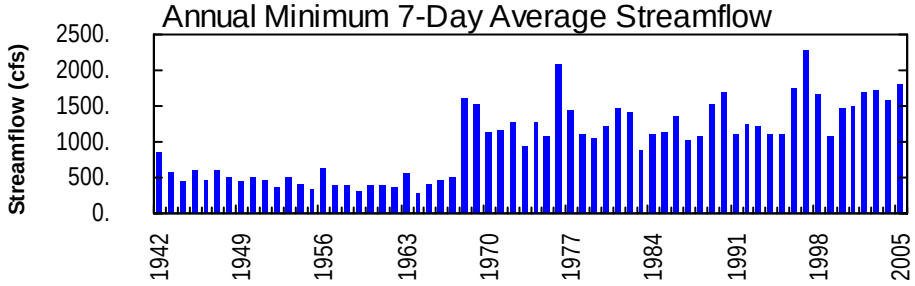
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1942 – 2005



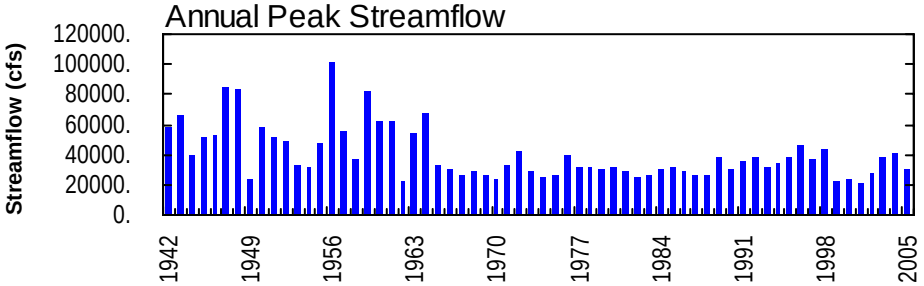
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°34'15", long 79°24'29", Forest County, Hydrologic Unit 05010003, on right bank at downstream side of bridge on State Highway 127 at West Hickory, 0.6 mi upstream from Siggins Run, 0.8 mi downstream from East Hickory Creek, at mile 158.9.

DRAINAGE AREA.--3,660 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WDR PA-96-3: 1995(M).

GAGE.--Water-stage recorder. Datum of gage is 1,059.90 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1941, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since November 1949 by Chautauqua Lake (station 03013946), since October 1965 by Allegheny Reservoir (station 03012520) 39 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5590	3720	9950	11600	5630	5820	12300	9260	1890	2410	1950	6460
2	4820	3570	16700	12200	5530	5100	15100	8800	1860	2390	1910	5720
3	3090	4530	20300	13900	5310	4820	16400	8560	1890	2350	1870	3870
4	2980	5160	21300	19500	4830	4840	16200	8290	1910	2340	2100	2870
5	2910	6330	20200	17100	4680	4680	18100	7880	1850	2410	2110	2350
6	2860	7160	18500	17100	3970	4620	21100	7280	1880	2440	2380	2090
7	2830	7140	14400	18100	3380	4680	24200	5870	1880	2440	2390	2520
8	2830	6500	13000	18100	4210	6960	25300	4870	1800	2470	2360	2760
9	3490	6000	12900	16400	7880	7540	24200	4180	1780	2480	2330	3030
10	3500	5610	13000	15900	9340	7150	23200	3420	1770	2450	1380	2960
11	3480	5430	13500	16700	8120	6490	21800	3240	1920	2430	1260	2890
12	3440	5320	14900	18600	6950	5990	17100	3140	1960	2430	1290	2800
13	3410	5180	15900	26000	5930	5530	12700	3010	1790	2440	1620	2750
14	3380	5060	15300	28100	5480	5110	11400	3080	1700	2450	2430	2700
15	3430	4890	14500	26900	7890	4760	8920	3670	1830	2450	2400	2620
16	3440	4170	12600	27400	10000	4070	7350	3780	1930	2490	2230	2590
17	3390	4140	10500	25500	9640	3910	5980	3680	2150	3540	2140	2530
18	3420	4960	8360	23200	8570	3240	5450	3540	2570	3860	1870	3430
19	4290	5710	7630	18500	10900	3150	4630	3390	2610	2970	1910	3990
20	5240	5760	6690	18100	11000	3690	4510	3310	2460	2760	1990	3390
21	5260	5940	6270	16500	10800	5900	4680	3260	2350	2630	1850	2910
22	4950	6000	6710	14100	11500	6010	4690	3140	2280	2550	1820	2620
23	4610	5900	11100	13300	11500	6820	6010	2530	1940	2560	2310	2770
24	4420	5800	15300	14400	10800	6970	8300	2230	1880	2640	2330	2980
25	4380	6210	16200	12900	10600	6320	9370	2090	1860	2560	2280	2890
26	4330	6850	18700	12800	10100	6200	9380	2000	2420	2180	2530	4530
27	4170	6680	21200	12500	7780	6710	9530	1950	2440	2520	2540	5870
28	3230	6280	18900	12000	6550	8080	9560	2000	2490	2380	2770	4670
29	3260	7170	15400	9550	---	10000	8850	2050	2450	1950	2710	3920
30	3570	6710	13700	7820	---	12600	8680	1980	2440	1840	2760	3440
31	3800	---	10100	6360	---	12800	---	1940	---	1760	5750	---
TOTAL	117800	169880	433710	521130	218870	190560	374990	127420	61980	77570	69570	100920
MEAN	3800	5663	13990	16810	7817	6147	12500	4110	2066	2502	2244	3364
MAX	5590	7170	21300	28100	11500	12800	25300	9260	2610	3860	5750	6460
MIN	2830	3570	6270	6360	3380	3150	4510	1940	1700	1760	1260	2090
CFSM	1.04	1.55	3.82	4.59	2.14	1.68	3.42	1.12	0.56	0.68	0.61	0.92
IN.	1.20	1.73	4.41	5.30	2.22	1.94	3.81	1.30	0.63	0.79	0.71	1.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

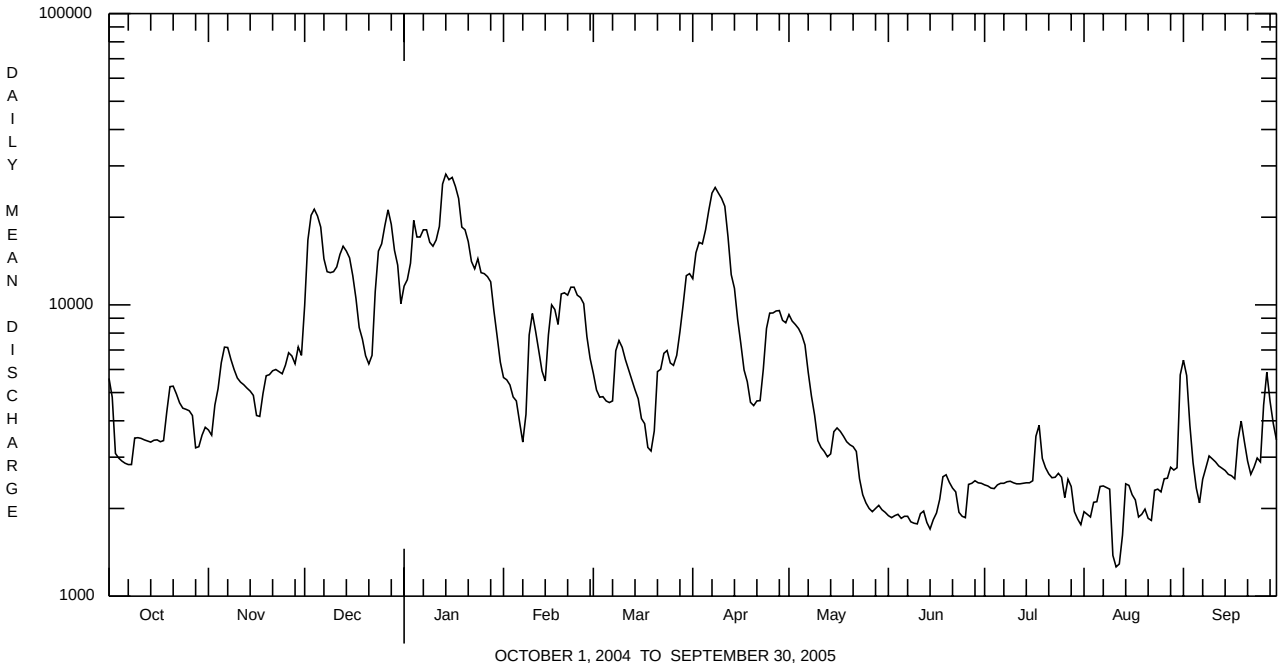
MEAN	4095	6518	8702	8585	8083	11830	11750	7612	4780	3130	2424	2947
MAX	15890	17070	17950	21260	18970	29740	25970	20020	14730	15430	10160	15690
(WY)	1991	1993	1978	1952	1990	1945	1947	1943	1989	1972	1977	2004
MIN	324	659	581	844	1725	3378	2255	1333	1430	597	490	449
(WY)	1964	1961	1961	1961	1963	1969	1946	1985	1949	1955	1954	1955

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	3255710		2464400			
ANNUAL MEAN	8895		6752		6697	
HIGHEST ANNUAL MEAN					9859	2004
LOWEST ANNUAL MEAN					3963	1999
HIGHEST DAILY MEAN	30100	Sep 9	28100	Jan 14	90800	Mar 8 1956
LOWEST DAILY MEAN	1510	Jul 4	1260	Aug 11	272	Oct 15 1963
ANNUAL SEVEN-DAY MINIMUM	1590	Jul 2	1800	Aug 10	276	Oct 14 1963
MAXIMUM PEAK FLOW			30200	Jan 14	**a**101000	Mar 8 1956
MAXIMUM PEAK STAGE			9.54	Jan 14	**b**17.20	Mar 8 1956
ANNUAL RUNOFF (CFSM)	2.43		1.84		1.83	
ANNUAL RUNOFF (INCHES)	33.09		25.05		24.86	
10 PERCENT EXCEEDS	18900		16000		15500	
50 PERCENT EXCEEDS	6360		4670		4370	
90 PERCENT EXCEEDS	2620		1990		1150	

a From rating curve extended above 99,300 ft^3/s.
b Maximum gage height, 17.83 ft., Jan. 25, 1964 (backwater from ice).



03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
NOV 2004													
17...	1210	1028	9813	4130	10.9	8.0	7.6	180	184	8.5	62	18.9	3.6
JAN 2005													
12...	1320	1028	9813	17400	13.5	7.1	7.6	128	133	3.5	42	12.6	2.5
MAR													
22...	1200	1028	9813	6000	14.0	7.5	7.4	188	195	3.5	61	18.8	3.5
MAY													
24...	0845	1028	9813	2200	9.8	7.4	8.0	194	199	14.0	64	19.9	3.5
JUL													
25...	1110	1028	9813	2600	10.1	7.9	8.0	148	154	24.0	48	14.1	3.2
SEP													
06...	1310	1028	9813	2100	11.2	7.7	8.2	171	178	22.0	61	18.5	3.6

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, unfltrd recoverable, µg/L (01042)
NOV 2004													
17...	48	9.2	120	2	.020	.30	<.040	.01	.026	.47	2.6	<200	<10
JAN 2005													
12...	32	9.4	110	4	.030	.48	<.040	.03	.025	.51	2.2	330	<10
MAR													
22...	45	10.5	120	8	.030	.65	<.040	.03	.026	.82	2.7	350	<10
MAY													
24...	48	10.5	114	4	<.020	.28	<.040	.01	.014	.49	--	<200	<10
JUL													
25...	40	9.3	122	14	<.020	.26	<.040	.02	.025	.36	--	200	<10
SEP													
06...	44	13.8	116	2	.030	.26	<.040	.02	.038	.53	--	<200	<10

Date	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, unfltrd recoverable, µg/L (01092)
NOV 2004					
17...	190	15.8	20	<50	90
JAN 2005					
12...	550	3.7	50	<50	<10
MAR					
22...	560	<1.0	50	<50	<10
MAY					
24...	110	<1.0	30	<50	<10
JUL					
25...	290	<1.0	50	<50	<10
SEP					
06...	320	<1.0	60	<50	<10

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	08/11/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	3
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Hydrobiidae	
Amnicola	4
Physidae	
Physa	4
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	48
Tubificida	
Tubificidae	3
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	3
Plauditus	5
Ephemerellidae	
Serratella	1
Heptageniidae	
Stenonema	16
Isonychiidae	
Isonychia	19
Plecoptera (STONEFLIES)	
Perlidae	
Acroneuria	2
Pteronarcyidae	
Pteronarcys	1

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/11/04
Benthic macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Brachycentridae	
Brachycentrus	5
Glossosomatidae	
Protoptila	2
Helicopsychidae	
Helicopsyche	1
Hydropsychidae	
Cheumatopsyche	5
Hydropsyche	4
Leptoceridae	
Oecetis	1
Limnephilidae	
Pycnopsyche	1
Psychomyiidae	
Psychomyia	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	3
Stenelmis	6
Psephenidae (WATER PENNIES)	
Psephenus	11
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	42
Tipulidae (CRANE FLIES)	
Antocha	2
Total Organisms	197
Total Taxa	27