



2005 Water Year  
LEHIGH RIVER BASIN  
01454700 Lehigh River at Glendon, PA

Latitude: 40° 40' 09"

Longitude: 075° 14' 12"

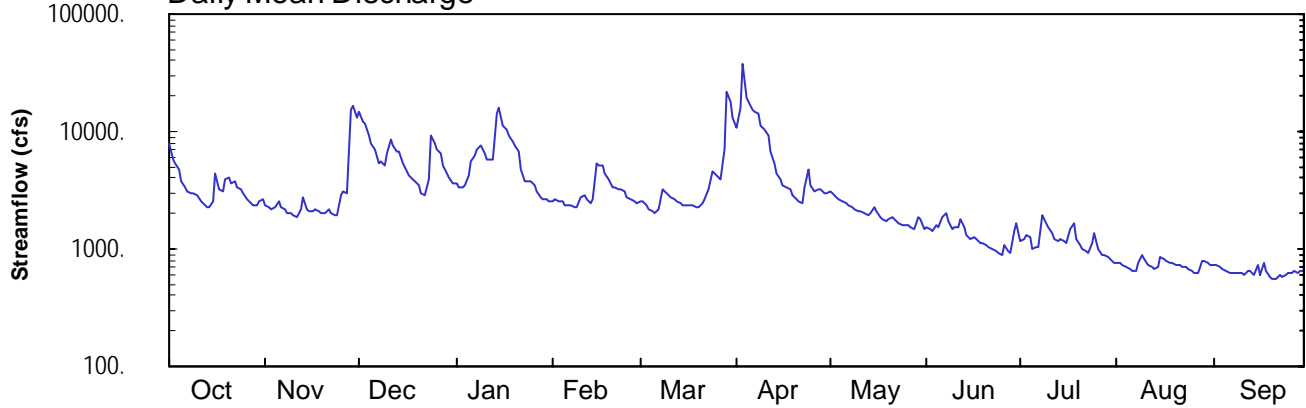
Hydrologic Unit Code: 02040106

Northampton County

Datum: 164.30 feet

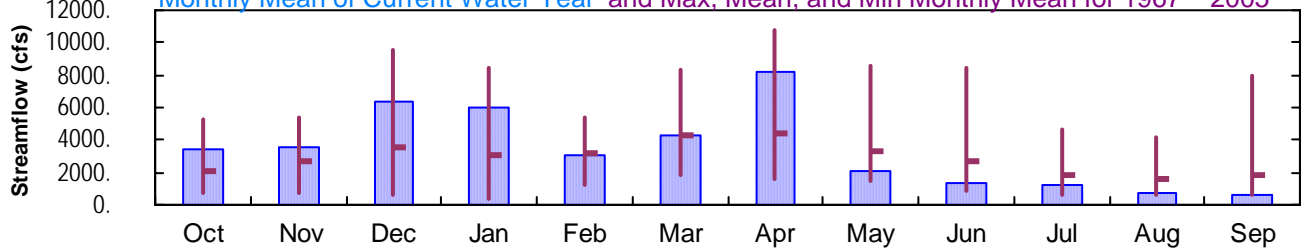
Drainage Area: 1359. mi<sup>2</sup>

### Daily Mean Discharge

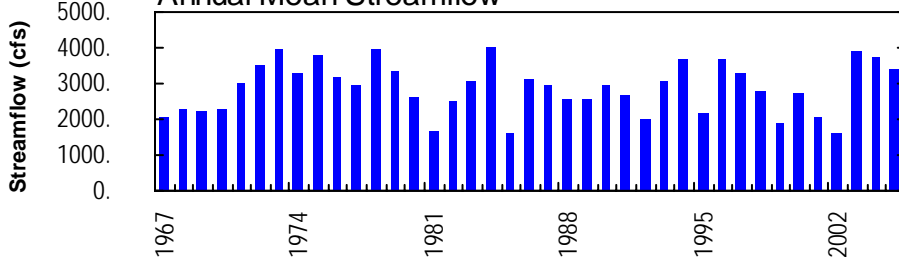


### Monthly Statistics

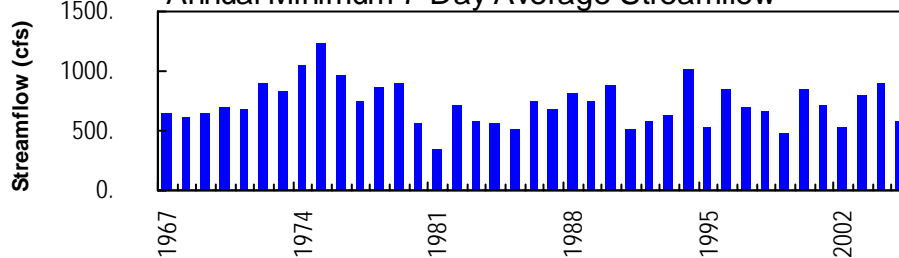
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1967 – 2005



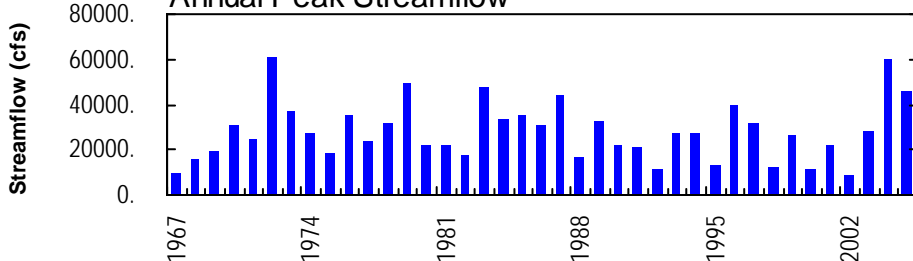
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



## LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 40°40'09", long 75°14'12", Northampton County, Hydrologic Unit 02040106, on right bank 140 ft upstream from highway bridge in Hugh Moore Parkway at Glendon, 2.3 mi upstream from mouth, and 2.0 mi southwest of Easton.

**DRAINAGE AREA.**--1,359 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1966 to current year.

**REVISED RECORDS.**--WDR PA-72-1: 1971(M).

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 164.30 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Flow regulated by Francis E. Walter Reservoir (station 01447780), Penn Forest Reservoir (station 01449400), Wild Creek Reservoir (station 01449700), and since February 1971, by Beltzville Lake (station 01449790) about 60 mi upstream. Flows above 10,000 ft<sup>3</sup>/s may be affected by backwater from the Delaware River. Several measurements of water temperature were made during the year. 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	8020	2350	14700	3560	e2600	2530	10700	3160	1510	1150	752	732
2	5800	2240	12000	3410	e2650	2530	15900	2940	1470	1230	753	726
3	5270	2190	11600	3300	e2550	2380	e38000	2800	1440	1330	735	691
4	4670	2230	9310	3520	2500	2170	e19200	2630	1580	1270	701	667
5	3770	2560	7900	4300	2400	2090	e17800	2560	1520	998	673	646
6	3290	2300	6970	5640	2380	2060	e15400	2410	1830	1040	661	615
7	3100	2150	5400	6240	2370	2140	e14600	2340	1980	1030	663	616
8	3030	2050	5520	6970	2240	3200	14400	2280	1700	1940	775	636
9	2970	1980	5180	7730	2300	3090	11100	2170	1480	1780	887	632
10	2830	1940	6630	6510	2710	2890	10200	2110	1510	1520	831	627
11	2560	1880	8650	5760	2880	2810	9150	2060	1520	1340	740	613
12	2420	2190	7660	5780	2650	2680	6870	2010	1770	1210	695	640
13	2230	2750	6840	5700	2490	2600	5370	1960	1550	1190	671	641
14	2290	2220	6670	14300	2600	2500	4430	2030	1320	1200	692	603
15	2580	2090	5400	16100	5420	2360	3880	2310	1240	1150	859	735
16	4340	2130	4580	11400	5130	2350	3420	2120	1260	1110	817	612
17	3280	2150	4240	10400	5210	2360	3330	1880	1220	1460	779	765
18	3110	2110	3950	9210	4470	2350	3180	1790	1140	1660	750	658
19	3850	2060	3780	e8200	3860	2290	2870	1720	1110	1210	753	584
20	4140	2020	e3500	e7600	3410	2300	2650	1790	1070	1080	736	559
21	3650	2150	e3000	e6800	3390	2430	2520	1860	1030	1000	732	561
22	3790	2030	2910	e4800	3280	2690	2410	1740	983	965	715	591
23	3380	1920	3850	e3800	3190	3250	3390	1680	949	921	694	584
24	3210	1950	9170	e3700	3040	4540	4810	1610	926	1110	668	594
25	2960	2840	8010	e3700	2800	4440	3480	1610	881	1350	647	622
26	2650	3150	7080	e3500	2630	4100	3090	1590	1090	982	638	624
27	2460	2980	6410	e3100	2560	3900	3190	1530	953	880	633	652
28	2390	15300	5120	e2800	2500	6970	3240	1500	933	888	791	635
29	2340	16800	4460	e2700	---	21500	3020	1860	1420	869	804	647
30	2600	13200	4000	e2650	---	17700	3000	1800	1640	820	770	642
31	2600	---	3680	e2600	---	13100	---	1490	---	767	725	---
TOTAL	105580	105910	198170	185780	86210	134300	244600	63340	40025	36450	22740	19150
MEAN	3406	3530	6393	5993	3079	4332	8153	2043	1334	1176	734	638
MAX	8020	16800	14700	16100	5420	21500	38000	3160	1980	1940	887	765
MIN	2230	1880	2910	2600	2240	2060	2410	1490	881	767	633	559
CFM	2.51	2.60	4.70	4.41	2.27	3.19	6.00	1.50	0.98	0.87	0.54	0.47
IN.	2.89	2.90	5.42	5.09	2.36	3.68	6.70	1.73	1.10	1.00	0.62	0.52

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	2041	2697	3538	3118	3147	4269	4443	3340	2636	1817	1538	1845
MAX	5272	5438	9593	8414	5385	8344	10810	8542	8502	4641	4179	7920
(WY)	1977	1971	1997	1996	1976	1977	1993	1989	2003	1984	1969	1987
MIN	771	704	633	405	1278	1805	1639	1502	906	630	607	638
(WY)	1981	2002	1981	1981	1980	1981	1985	1995	1999	1999	1999	2005

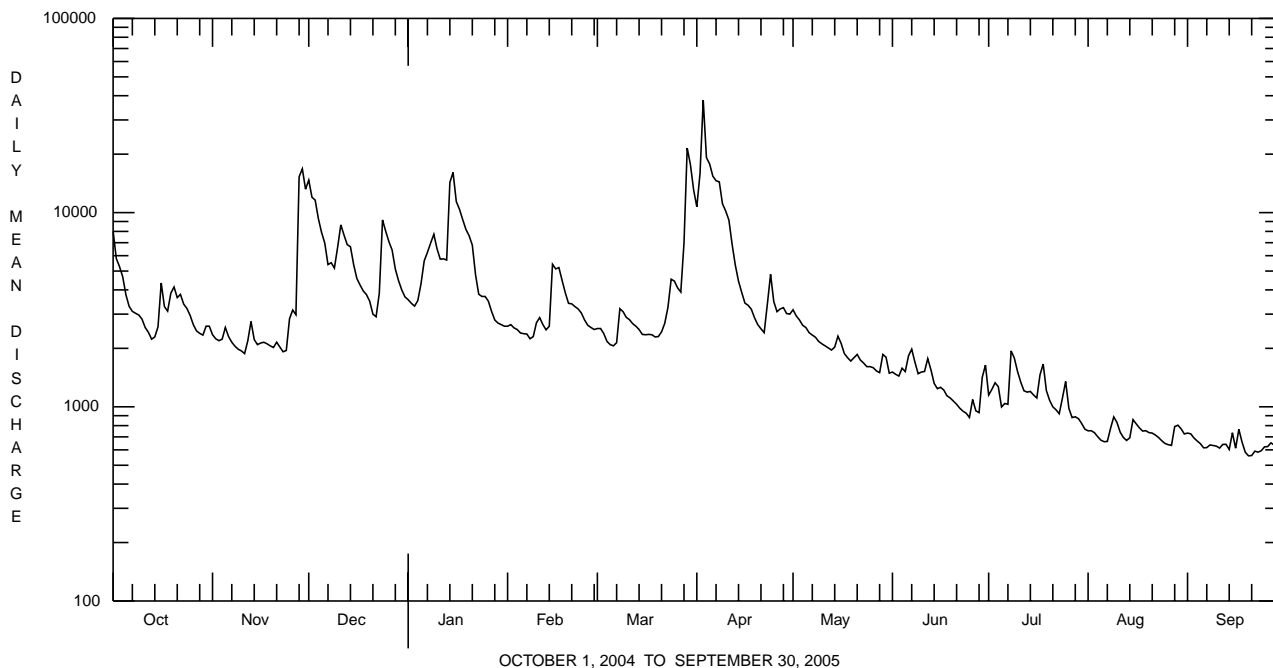
e Estimated.

LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1967 - 2005	
ANNUAL TOTAL	1290242		1242255			
ANNUAL MEAN	3525		3403		2867	
HIGHEST ANNUAL MEAN					3997	
LOWEST ANNUAL MEAN					1594	
HIGHEST DAILY MEAN	e32000	Sep 18	e38000	Apr 3	44300	Jun 23 1972
LOWEST DAILY MEAN	795	Jul 11	559	Sep 20	330	Jan 31 1981 <sup>a</sup>
ANNUAL SEVEN-DAY MINIMUM	899	Jul 5	585	Sep 19	349	Jan 26 1981
MAXIMUM PEAK FLOW			be45500	Apr 3	b60600	Jun 23 1972 <sup>c</sup>
MAXIMUM PEAK STAGE			d27.86	Apr 3	27.86	Apr 3 2005
ANNUAL RUNOFF (CFSM)	2.59		2.50		2.11	
ANNUAL RUNOFF (INCHES)	35.32		34.00		28.66	
10 PERCENT EXCEEDS	6160		7010		5650	
50 PERCENT EXCEEDS	2620		2360		2090	
90 PERCENT EXCEEDS	1690		695		860	

- a Also Feb. 1, 1981.
- b From rating curve extended above 36,000 ft<sup>3</sup>/s.
- c Gage height 24.86 ft.
- d From floodmarks; backwater from Delaware River.
- e Estimated.



## LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, 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 unfltrd lab, 25 degC $\mu$ S/cm (90095)	Specif. conductance, wat unfltrd lab, 25 degC $\mu$ S/cm (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
NOV 2004 04...	1000	1028	9813	2060	11.6	7.7	7.8	276	272	10.8	95	23	9.2
JAN 2005 04...	1030	1028	9813	3430	13.3	7.6	7.8	236	237	6.5	77	19	7.3
MAR 31...	0950	1028	9813	13200	12.6	7.3	7.0	139	135	6.1	41	11	3.4
MAY 26...	1020	1028	9813	1590	10.7	7.8	8.0	330	322	13.2	120	30	12
JUL 20...	0950	1028	9813	1070	16.8	7.9	8.1	328	343	25.6	120	28	11
SEP 22...	1420	1028	9813	594	9.3	8.1	8.3	430	436	21.8	150	34	15

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat fltrd 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)	Total nitrogen, water, unfltrd mg/L (00600)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, mg/L (01105)
NOV 2004 04...	64	<.2	27	150	<2.0	.170	2.0	.070	2.6	.15	.20	2.6	<200
JAN 2005 04...	50	<.2	22	130	6.0	.150	1.9	<.040	2.2	.07	.09	1.9	<200
MAR 31...	21	<.2	13	74	230	.060	1.2	<.040	1.4	.03	.04	--	490
MAY 26...	82	<.2	36	230	<2.0	.170	2.5	<.040	2.9	.13	.14	--	<200
JUL 20...	84	<.2	34	190	<2.0	.050	2.1	.060	2.4	.14	.16	--	<200
SEP 22...	115	<.2	39	310	26	.050	3.2	.060	3.4	.34	.39	--	<200

Date	Copper, water, unfltrd recover-able, $\mu$ g/L (01042)	Cyanide amenable to chlorination wat unfltrd mg/L (00722)	Iron, water, unfltrd recover-able, $\mu$ g/L (01045)	Lead, water, unfltrd recover-able, $\mu$ g/L (01051)	Manganese, water, unfltrd recover-able, $\mu$ g/L (01055)	Nickel, water, unfltrd recover-able, $\mu$ g/L (01067)	Zinc, water, unfltrd recover-able, $\mu$ g/L (01092)	Phenolic compounds, water, unfltrd $\mu$ g/L (32730)
NOV 2004 04...	<10	<1.00	90	<1.0	20	<50	45	<5
JAN 2005 04...	<10	<1.00	150	<1.0	40	<50	66	<5
MAR 31...	<10	<1.00	730	2.1	100	<50	58	<5
MAY 26...	<10	<1.00	60	<1.0	30	<50	37	--
JUL 20...	<10	<1.00	140	<1.0	30	<50	21	<5
SEP 22...	<10	<1.00	60	<1.0	30	<50	12	<5

## LEHIGH RIVER BASIN

## 01454700 LEHIGH RIVER AT GLENDON, 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	10/13/04
Benthic macroinvertebrate	Count
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	3
Tubificida	
Enchytraeidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus	3
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
Caecidotea	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	5
Ephemerellidae	
Eurylophella	1
Serratella	1
Heptageniidae	4
Epeorus	2
Plecoptera (STONEFLIES)	
Taeniopterygidae	
Taeniopteryx	3
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Protoptila	1
Hydropsychidae	
Cheumatopsyche	3
Hydropsyche	30
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralidae	
Petrophila	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Oulimnius	1
Stenelmis	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
	35
Empididae (DANCE FLIES)	
Hemerodromia	1
Simuliidae (BLACK FLIES)	
Simulium	2
Total Organisms	101
Total Taxa	20