



2005 Water Year  
LACKAWANNA RIVER BASIN  
01536000 Lackawanna River at Old Forge, PA

Latitude: 41° 21 ' 33"

Longitude: 075° 44 ' 41"

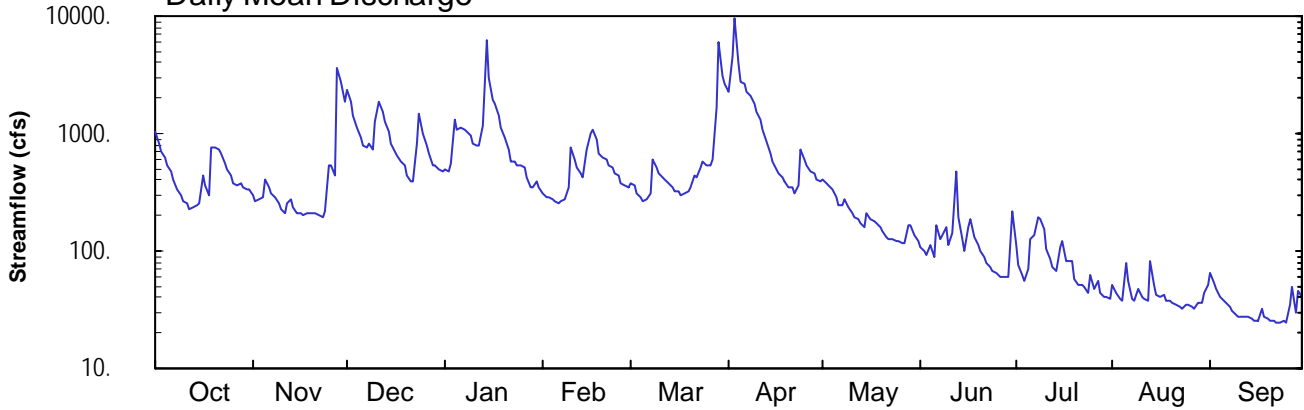
Hydrologic Unit Code: 02050107

Lackawanna County

Datum: 595.26 feet

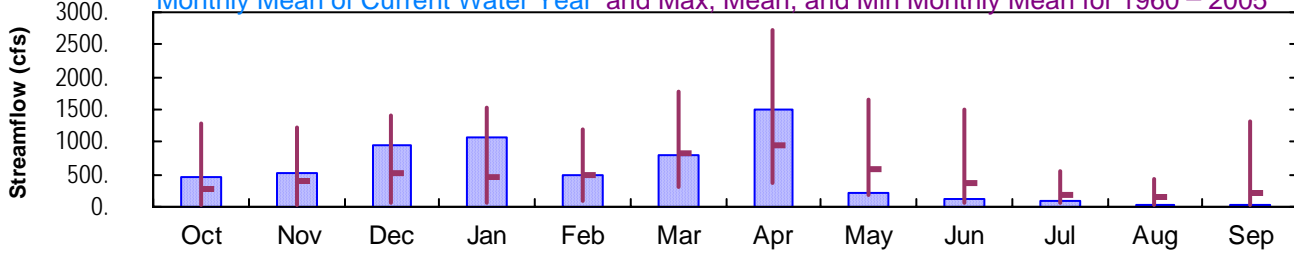
Drainage Area: 332. mi<sup>2</sup>

### Daily Mean Discharge

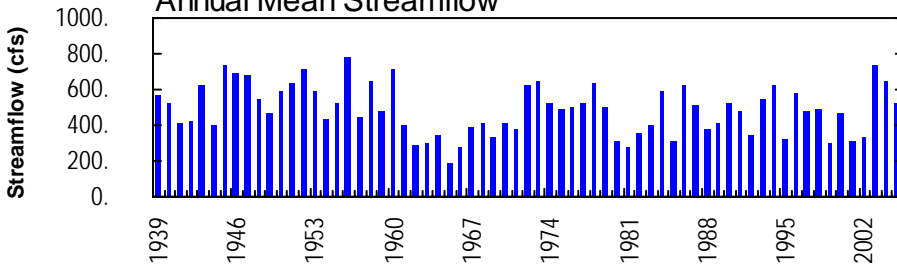


### Monthly Statistics

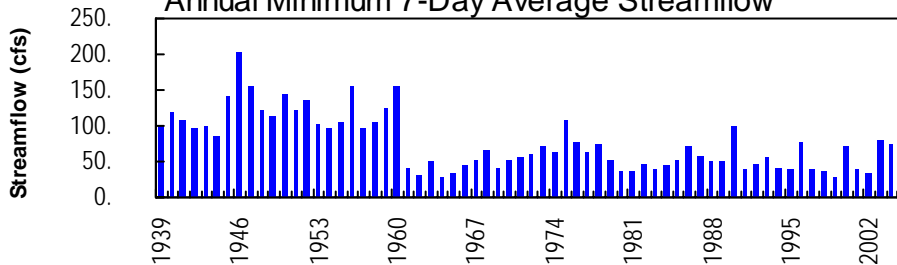
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1960 – 2005



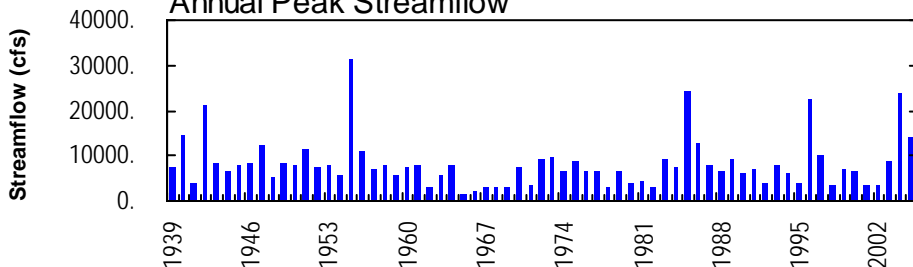
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



## LACKAWANNA RIVER BASIN

01536000 LACKAWANNA RIVER AT OLD FORGE, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 41°21'33", long 75°44'41", Lackawanna County, Hydrologic Unit 02050107, on right bank 100 ft downstream from bridge on SR 3017, 150 ft upstream from Delaware, Lackawanna, and Western Railroad bridge in Old Forge, and 0.5 mi upstream from St. Johns Creek.

**DRAINAGE AREA.**--332 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1938 to current year.

**REVISED RECORDS.**--WSP 1432: 1939(M), 1940, 1945. WDR PA-90-2: 1985(M).

**GAGE.**--Water-stage recorder. Datum of gage is 595.26 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1974, water-stage recorder at same site and datum. Oct. 1, 1974, to Aug. 17, 1975, nonrecording gage at site 150 ft upstream at different datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Flow regulated since December 1959 by Stillwater Dam (station 01534180) about 33 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline 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	1030	301	2340	502	313	377	2300	410	108	111	51	66
2	821	267	1880	469	292	363	4620	376	99	76	45	54
3	715	279	1420	560	283	314	9700	357	91	62	40	47
4	620	290	1120	1320	276	289	3980	332	113	56	37	41
5	526	406	919	1080	265	270	2810	283	89	71	78	37
6	480	343	779	1110	257	272	2630	247	165	127	55	36
7	406	315	751	1060	262	316	2310	249	129	138	40	34
8	330	290	816	1020	274	607	2070	276	135	193	38	31
9	294	260	731	980	343	519	1780	234	163	185	47	29
10	269	224	1250	839	769	460	1550	211	113	153	40	28
11	251	213	1890	779	613	425	1300	197	141	105	39	28
12	223	260	1550	797	520	407	1090	186	482	85	38	28
13	240	272	1280	1170	467	377	851	171	192	74	83	28
14	248	232	1040	6380	423	351	676	162	126	67	52	26
15	253	213	835	2930	735	326	573	208	99	110	43	26
16	446	213	712	1950	1010	319	502	190	161	121	41	26
17	367	204	654	1810	1100	303	456	179	189	84	42	32
18	303	212	579	1410	886	310	421	171	131	82	38	28
19	767	208	539	1110	686	327	385	161	110	82	38	27
20	770	212	445	934	618	352	353	150	98	58	37	26
21	738	214	392	723	596	447	343	133	88	52	35	26
22	681	205	395	e580	538	429	312	129	80	52	34	24
23	558	197	824	e570	514	510	369	126	74	50	33	25
24	497	214	1500	e530	453	569	722	123	68	44	35	25
25	439	545	992	546	434	537	603	120	64	61	34	25
26	375	526	781	525	384	534	546	115	61	48	33	35
27	358	443	668	e420	363	596	471	118	59	56	33	50
28	373	3600	539	e350	350	1650	451	163	60	44	36	29
29	350	2770	534	e350	---	5990	407	167	61	41	36	45
30	340	1880	501	386	---	3060	389	135	217	41	44	41
31	331	---	482	346	---	2640	---	121	---	39	51	---
TOTAL	14399	15808	29138	33536	14024	24246	44970	6200	3766	2568	1326	1003
MEAN	464	527	940	1082	501	782	1499	200	126	82.8	42.8	33.4
MAX	1030	3600	2340	6380	1100	5990	9700	410	482	193	83	66
MIN	223	197	392	346	257	270	312	115	59	39	33	24

e Estimated.

LACKAWANNA RIVER BASIN

01536000 LACKAWANNA RIVER AT OLD FORGE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	281	410	507	449	494	817	934	596	383	186	150	220
MAX (WY)	1276	1223	1414	1521	1198	1767	2712	1658	1498	566	432	1319
MIN (WY)	1978	1973	1997	1996	1981	1977	1993	1989	2003	1984	1994	2004
MIN (WY)	37.3	45.2	76.2	61.4	88.7	291	353	192	69.8	46.4	42.8	33.4
(WY)	1965	1965	1999	1981	1980	1981	1985	2001	1962	1965	2005	2005

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1960 - 2005

ANNUAL TOTAL	205118	190984	
ANNUAL MEAN	560	523	452
HIGHEST ANNUAL MEAN			731
LOWEST ANNUAL MEAN			194
HIGHEST DAILY MEAN	15000	Sep 18	9700
LOWEST DAILY MEAN	63	Jul 11	24
ANNUAL SEVEN-DAY MINIMUM	76	Jul 5	25
MAXIMUM PEAK FLOW			a14000
MAXIMUM PEAK STAGE			11.76
10 PERCENT EXCEEDS	1100		1100
50 PERCENT EXCEEDS	370		290
90 PERCENT EXCEEDS	137		38

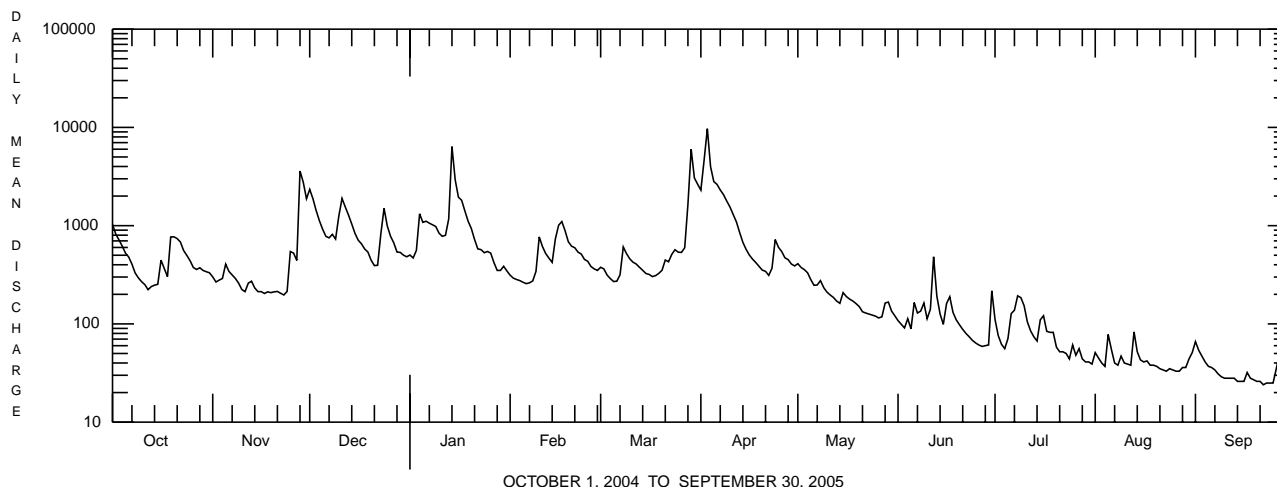
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1959, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	305	503	600	512	531	986	1195	814	454	360	303	229
MAX (WY)	1618	1199	1260	1047	1263	1652	2614	1750	866	1375	1448	778
MIN (WY)	1956	1956	1939	1949	1939	1945	1958	1947	1946	1947	1955	1945
MIN (WY)	106	122	169	166	160	526	368	262	188	125	130	116
(WY)	1942	1942	1942	1944	1940	1941	1946	1941	1955	1955	1954	1943

SUMMARY STATISTICS WATER YEARS 1939 - 1959

ANNUAL MEAN	566
HIGHEST ANNUAL MEAN	781
LOWEST ANNUAL MEAN	401
HIGHEST DAILY MEAN	14000
LOWEST DAILY MEAN	73
ANNUAL SEVEN-DAY MINIMUM	87
MAXIMUM PEAK FLOW	a31000
MAXIMUM PEAK STAGE	c20.05
INSTANTANEOUS LOW FLOW	54
ANNUAL RUNOFF (CFSM)	1.70
ANNUAL RUNOFF (INCHES)	23.16
10 PERCENT EXCEEDS	1200
50 PERCENT EXCEEDS	340
90 PERCENT EXCEEDS	138

- a From rating curve extended above 3,800 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 15.30 ft, 16.49 ft, and at peak flow.
- b At gage height 16.49 ft, from floodmark.
- c From floodmark.



OCTOBER 1, 2004 TO SEPTEMBER 30, 2005

## LACKAWANNA RIVER BASIN

01536000 LACKAWANNA RIVER AT OLD FORGE, 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)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, $\mu$ S/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, $\mu$ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)
NOV 2004 03...	1115	1028	9813	283	40	11.0	7.3	7.1	239	244	10.9	61	13.0
JAN 2005 10...	1620	1028	9813	832	40	12.8	7.1	7.4	227	211	4.2	47	11.8
MAR 07...	1700	1028	9813	347	40	13.8	7.9	7.6	355	342	6.1	65	16.0
MAY 16...	1520	1028	9813	192	40	12.0	9.0	8.4	299	302	16.9	79	16.7
JUL 28...	1530	1028	9813	46	40	9.6	8.1	8.2	444	441	26.0	120	22.0
SEP 14...	1600	1028	9813	29	40	9.8	8.7	8.2	522	530	24.4	120	23.3
Date	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat 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 as N mg/L (00610)	Nitrate water, unfltrd as N mg/L (00620)	Nitrite water, unfltrd as N mg/L (00615)	Ortho-phosphate, water, unfltrd mg/L (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, $\mu$ g/L (01105)
NOV 2004 03...	7.0	23	39.5	152	<2	.030	1.61	<.040	.22	.253	2.1	3.1	<200
JAN 2005 10...	4.2	18	24.7	172	6	.030	.73	.080	.06	.079	1.0	1.9	<200
MAR 07...	6.1	25	37.6	176	<2	.150	.97	.300	.20	.229	1.7	2.5	210
MAY 16...	8.9	29	55.3	194	<2	<.020	1.48	<.040	.24	.287	1.8	--	<200
JUL 28...	14.9	43	62.5	330	8	.100	5.66	.140	.79	.958	6.0	--	<200
SEP 14...	14.7	49	74.7	412	6	.030	7.86	<.040	1.92	2.00	8.4	--	<200
Date	Copper, water, unfltrd recoverable, $\mu$ g/L (01042)	Iron, water, unfltrd recoverable, $\mu$ g/L (01045)	Lead, water, unfltrd recoverable, $\mu$ g/L (01051)	Manganese, water, unfltrd recoverable, $\mu$ g/L (01055)	Nickel, water, unfltrd recoverable, $\mu$ g/L (01067)	Zinc, water, unfltrd recoverable, $\mu$ g/L (01092)							
NOV 2004 03...	<10	150	<1.0	70	<50	20							
JAN 2005 10...	<10	240	1.2	110	<50	30							
MAR 07...	<10	220	1.1	110	<50	20							
MAY 16...	<10	130	<1.0	70	<50	20							
JUL 28...	<10	210	1.2	50	<50	40							
SEP 14...	<10	160	<1.0	30	<50	30							

## LACKAWANNA RIVER BASIN

## 01536000 LACKAWANNA RIVER AT OLD FORGE, 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
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<i>Prostoma</i>	2
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<i>Ferrissia</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
<i>Crangonyx</i>	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	1
Heptageniidae	
<i>Stenonema</i>	1
Leptophlebiidae	
<i>Paraleptophlebia</i>	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	1
Hydropsychidae	
<i>Cheumatopsyche</i>	17
<i>Hydropsyche</i>	73
Coleoptera (BEETLES)	
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	28
Total Organisms	130
Total Taxa	13