

## 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	41	232	e100	1000	190	824	1230	696	167	48	72
2	58	40	150	e97	1000	181	686	1250	507	150	132	77
3	51	45	134	102	824	223	636	1120	406	140	118	64
4	46	38	125	104	694	229	571	943	347	128	68	60
5	39	56	120	103	529	205	493	797	317	119	129	70
6	65	39	109	e95	441	191	443	640	731	109	96	56
7	46	38	95	e100	392	183	400	572	1660	104	72	51
8	41	39	93	114	356	177	368	520	1240	101	65	48
9	40	40	148	111	318	168	403	571	971	103	60	46
10	e42	39	121	118	319	259	546	519	721	121	55	44
11	47	38	106	141	1250	219	396	483	554	101	50	41
12	44	37	102	130	977	200	353	755	501	96	49	36
13	39	37	108	118	882	194	361	2360	453	91	47	36
14	36	36	133	110	609	189	494	2890	802	83	51	34
15	119	35	166	107	491	184	781	2130	1110	81	76	156
16	57	34	185	107	433	276	661	1470	1110	74	103	314
17	89	32	225	104	400	253	584	1230	883	68	53	101
18	56	32	710	100	352	238	531	2240	761	65	48	72
19	49	33	558	87	312	226	533	1790	687	210	49	62
20	45	75	542	89	295	290	557	1370	492	118	156	56
21	45	45	421	94	312	350	480	1200	401	74	64	51
22	48	36	315	102	310	395	442	1040	346	67	54	79
23	46	35	260	104	290	347	407	874	313	80	82	212
24	93	36	267	168	260	333	361	728	284	83	164	120
25	61	149	239	365	241	336	364	622	304	90	133	102
26	53	168	209	349	231	575	396	596	273	82	70	95
27	49	116	177	346	227	1750	350	504	357	73	61	496
28	47	103	165	368	212	1230	993	724	303	74	54	703
29	50	99	144	439	---	1070	1570	1110	221	71	128	270
30	45	153	e110	903	---	897	1250	800	188	60	93	187
31	42	---	e110	974	---	788	---	640	---	53	68	---
TOTAL	1656	1744	6579	6349	13957	12346	17234	33718	17939	3036	2496	3811
MEAN	53.42	58.13	212.2	204.8	498.5	398.3	574.5	1088	598.0	97.94	80.52	127.0
MAX	119	168	710	974	1250	1750	1570	2890	1660	210	164	703
MIN	36	32	93	87	212	168	350	483	188	53	47	34

e Estimated.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254.5	392.5	477.0	429.0	504.5	810.9	932.4	609.2	365.5	186.5	139.1	175.2
MAX (WY)	1276	1223	1414	1521	1198	1767	2712	1658	1488	566	432	978
MIN (WY)	1978	1973	1997	1996	1981	1977	1993	1989	1972	1984	1994	1987
MIN (WY)	37.3	45.2	76.2	61.4	88.7	291	353	192	69.8	46.4	45.4	37.8
(WY)	1965	1965	1999	1981	1980	1981	1985	2001	1962	1965	1999	1964

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1960 - 2002
ANNUAL TOTAL	103233	120865	
ANNUAL MEAN	283	331	439
HIGHEST ANNUAL MEAN			712 1960
LOWEST ANNUAL MEAN			194 1965
HIGHEST DAILY MEAN	2210	Apr 10	2890 May 14 10700 Jan 19 1996
LOWEST DAILY MEAN	32	Aug 26 <sup>a</sup>	32 Nov 17, 18 23 Sep 5 1999
ANNUAL SEVEN-DAY MINIMUM	34	Nov 13	34 Nov 13 27 Aug 30 1999
MAXIMUM PEAK FLOW			3690 May 13 <sup>b</sup> 24000 Sep 27 1985
MAXIMUM PEAK STAGE			6.23 May 13 <sup>c</sup> 16.49 Sep 27 1985
10 PERCENT EXCEEDS	739		844 1050
50 PERCENT EXCEEDS	143		164 240
90 PERCENT EXCEEDS	40		45 64

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

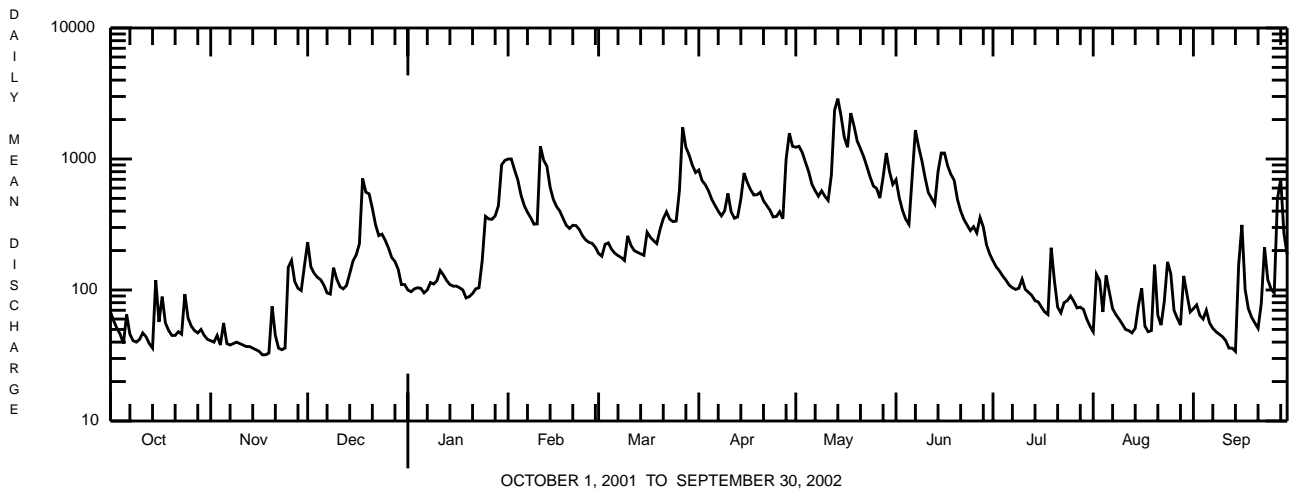
SUMMARY STATISTICS WATER YEARS 1939 - 1959

ANNUAL MEAN	566
HIGHEST ANNUAL MEAN	781 1956
LOWEST ANNUAL MEAN	401 1944
HIGHEST DAILY MEAN	14000 Aug 19 1955
LOWEST DAILY MEAN	73 Sep 26 1943
ANNUAL SEVEN-DAY MINIMUM	87 Oct 8 1943
MAXIMUM PEAK FLOW	<sup>b</sup> 31000 Aug 19 1955
MAXIMUM PEAK STAGE	<sup>c</sup> 20.05 Aug 19 1955
INSTANTANEOUS LOW FLOW	54 Sep 1, 2 1957
ANNUAL RUNOFF (CFSM)	1.70
ANNUAL RUNOFF (INCHES)	23.16
10 PERCENT EXCEEDS	1200
50 PERCENT EXCEEDS	340
90 PERCENT EXCEEDS	138

<sup>a</sup> Also Aug. 27, Sept. 23, Nov. 17, 18.

<sup>b</sup> 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.

<sup>c</sup> From floodmark.



OCTOBER 1, 2001 TO SEPTEMBER 30, 2002

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WATER-QUALITY RECORDS

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

REMARKS.--Other data for the Water-Quality Network can be found on pages 306-334.

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 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L) (00927)	ANC WATER UNFLTRD FET LAB (MG/L) (00417)	SULFATE DIS-SOLVED (MG/L) (00945)
APR 2002													
16...	0940	9813	652	40	10.3	7.3	198	14.4	45	10.9	4.3	16	24.9
JUN 19...	1000	9813	698	40	9.0	6.9	190	16.2	50	12.2	4.7	17	25.7
AUG 21...	1730	9813	60	40	8.9	7.8	391	25.6	90	20.3	9.6	40	54.1

Date	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA TOTAL (MG/L) (00610)	NITRO-GEN, NITRATE TOTAL (MG/L) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L) (00615)	NITRO-GEN, TOTAL (MG/L) (00600)	PHOS-PHORUS ORTHO TOTAL (MG/L) (70507)	PHOS-PHORUS TOTAL (MG/L) (00665)	CARBON, ORGANIC TOTAL (MG/L) (00680)	COPPER, TOTAL RECOV-ERABLE (µG/L) (01042)	IRON, TOTAL RECOV-ERABLE (µG/L) (01045)	LEAD, TOTAL RECOV-ERABLE (µG/L) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L) (01055)
APR 2002													
16...	116	28	.100	.55	<.040	.95	.06	.120	2.4	<10	520	2.5	110
JUN 19...	108	80	.080	.76	<.040	1.2	.22	.210	3.5	<10	3040	1.5	200
AUG 21...	294	8	.060	2.67	.160	3.3	.64	.750	5.6	<10	120	<1.0	30

Date	NICKEL, TOTAL RECOV-ERABLE (µG/L) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L) (01092)
APR 2002		
16...	<50	20
JUN 19...	<50	60
AUG 21...	<50	20