



2004 Water Year LEHIGH RIVER BASIN

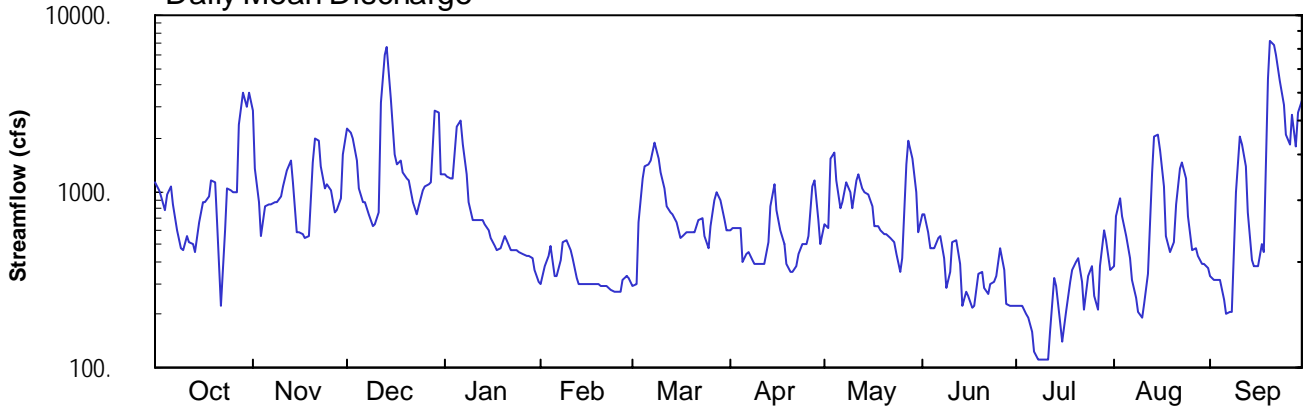
01447800 Lehigh R bl Francis E Walter Res nr White Haven PA

Latitude: 41°06'17"
Luzerne County

Longitude: 075°43'57"
Datum: 1212.95 feet

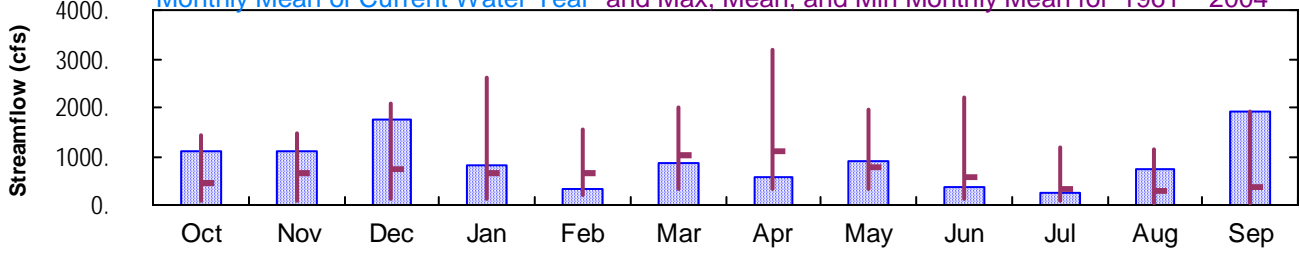
Hydrologic Unit Code: 02040106
Drainage Area: 290. mi²

Daily Mean Discharge

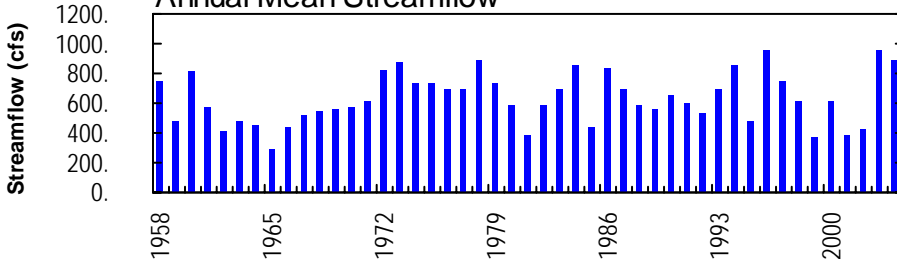


Monthly Statistics

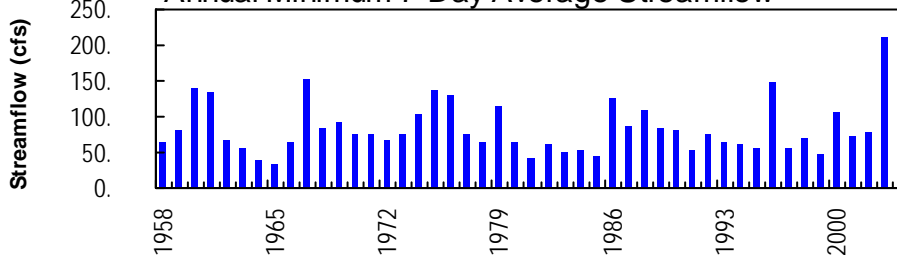
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1961 – 2004



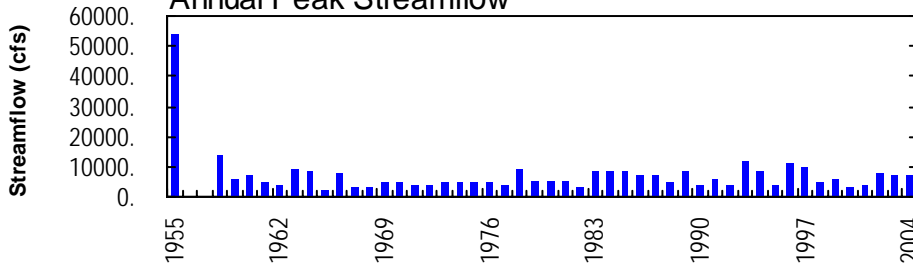
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER RESERVOIR NEAR WHITE HAVEN, PA

LOCATION.--Lat 41°06'17", long 75°43'57", Luzerne County, Hydrologic Unit 02040106, on right bank 0.7 mi downstream from Francis E. Walter Reservoir, 2.0 mi upstream from Fawn Run, and 4.0 mi northeast of White Haven.

DRAINAGE AREA.--290 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1962 published as "*below Bear Creek Reservoir*", October 1962 to September 1971 published as "*below Francis E. Walter Reservoir*."

GAGE.--Water-stage recorder. Datum of gage is 1,212.95 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since February 1961 by Francis E. Walter Reservoir (station 01447780) 0.7 mi upstream. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1955 reached a discharge of 54,200 ft³/s based on slope-area measurement at site 4.9 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	2850	2250	1240	e300	288	600	655	747	223	382	328
2	1020	1340	2150	1220	e380	298	612	625	743	224	725	314
3	941	859	2000	1190	427	662	618	1520	589	223	916	314
4	787	558	1490	1180	492	1170	611	1650	471	203	722	314
5	971	824	1030	2330	331	1370	394	1140	471	190	551	241
6	1060	840	858	2540	334	1430	444	803	543	160	420	203
7	848	855	856	1850	405	1510	448	872	558	124	316	205
8	607	863	747	1250	e510	1900	412	1140	420	110	246	207
9	483	866	642	856	e530	1530	390	992	285	110	206	994
10	468	936	646	682	460	1270	389	810	350	110	193	2050
11	554	1060	756	682	419	1040	385	1160	513	110	228	1820
12	519	1310	3170	688	e320	818	382	1250	527	161	338	1390
13	499	1490	6000	694	297	755	509	1030	388	319	1290	757
14	454	1110	6590	651	300	749	825	993	227	288	2020	412
15	661	593	3340	e600	e300	660	1100	952	268	178	2080	377
16	858	593	1610	e540	e300	544	778	823	256	139	1700	380
17	865	565	1420	494	e300	559	600	639	218	208	1070	497
18	940	547	1480	466	300	593	508	640	223	307	551	453
19	1140	550	1290	474	295	593	383	610	341	357	449	4330
20	1130	1480	1180	552	293	589	345	570	351	398	515	7060
21	666	2010	1150	532	293	589	350	567	287	418	842	6850
22	226	1930	873	461	293	678	378	544	263	309	1350	5930
23	597	1380	748	e460	278	704	445	519	299	214	1440	4230
24	1050	1030	817	e460	270	558	503	439	305	333	1180	3080
25	1020	1110	1010	e450	e270	471	498	345	328	381	721	2110
26	994	1000	1080	e440	e270	633	556	423	480	255	468	1850
27	994	767	1110	e430	315	898	1060	1420	354	211	471	2750
28	2400	785	1120	428	332	998	1170	1930	231	377	432	1780
29	3610	912	2850	e420	325	894	680	1540	223	602	389	2810
30	3020	1620	2780	e360	---	677	506	988	223	527	385	3260
31	3660	---	1260	e310	---	595	---	592	---	355	364	---
TOTAL	34162	32633	54303	24930	9939	26023	16879	28181	11482	8124	22960	57296
MEAN	1102	1088	1752	804	343	839	563	909	383	262	741	1910
MAX	3660	2850	6590	2540	530	1900	1170	1930	747	602	2080	7060
MIN	226	547	642	310	270	288	345	345	218	110	193	203

e Estimated.

LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER RESERVOIR NEAR WHITE HAVEN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	456	645	720	643	635	1013	1101	771	561	342	277	383
MAX (WY)	1435	1488	2079	2596	1542	2018	3198	1968	2218	1165	1153	1910
MIN (WY)	1978	1986	1997	1996	1981	1977	1993	1989	2003	1973	1969	2004
MIN (WY)	68.5	68.1	142	131	197	326	341	311	135	66.1	55.9	43.2
(WY)	1964	1965	1999	1981	1980	1981	1966	2001	1962	1999	1999	1964

SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 1961 - 2004

ANNUAL TOTAL		388319		326912								
ANNUAL MEAN		1064		893					628			
HIGHEST ANNUAL MEAN									957			2003
LOWEST ANNUAL MEAN									289			1965
HIGHEST DAILY MEAN				6820	Jun 24		7060	Sep 20	11000		Jan 29	1996
LOWEST DAILY MEAN				197	Jun 8		110	Jul 8-11	22		Jul 20	1965 ^a
ANNUAL SEVEN-DAY MINIMUM				228	Jul 15		126	Jul 6	33		Jul 19	1965
MAXIMUM PEAK FLOW							7480	Dec 13	11700		Apr 13	1993
MAXIMUM PEAK STAGE							7.58	Dec 13		8.86	Apr 13	1993
INSTANTANEOUS LOW FLOW										b1.3	Nov 14	1961
10 PERCENT EXCEEDS				2270			1790		1330			
50 PERCENT EXCEEDS				716			593		417			
90 PERCENT EXCEEDS				322			269		109			

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1960, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	378	571	1002	692	678	790	1886	909	425	245	190	371
MAX (WY)	502	854	1504	778	1039	926	2536	1134	521	339	270	744
(WY)	1960	1960	1958	1960	1960	1958	1958	1958	1960	1960	1960	1960
MIN (WY)	173	347	371	549	467	610	1262	520	310	195	129	135
(WY)	1958	1958	1959	1959	1959	1960	1959	1959	1959	1959	1959	1959

SUMMARY STATISTICS WATER YEARS 1958 - 1960

ANNUAL TOTAL ANNUAL MEAN	676											
HIGHEST ANNUAL MEAN	807					1960						
LOWEST ANNUAL MEAN	478					1959						
HIGHEST DAILY MEAN	10700				Dec 21	1957						
LOWEST DAILY MEAN	50				Oct 4	1957						
ANNUAL SEVEN DAY MINIMUM	63				Oct 1	1957						
MAXIMUM PEAK FLOW	c13800				Dec 21	1957						
MAXIMUM PEAK STAGE	9.85				Dec 21	1957						
ANNUAL RUNOFF (CFSM)	2.33											
ANNUAL RUNOFF (INCHES)	31.69											
10 PERCENT EXCEEDS	1390											
50 PERCENT EXCEEDS	440											
90 PERCENT EXCEEDS	141											

a Also July 22, 23, 1965.

b Result of shutoff at reservoir.

c From rating curve extended above 6,100 ft³/s.

LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER RESERVOIR NEAR WHITE HAVEN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to 1982.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Water year 1988 September 30, 2004. (discontinued)

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.5°C, July 21, 1988; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.5°C, July 10, 11; minimum, 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	13.0	13.5	10.0	9.0	9.5	5.5	5.0	5.0	2.5	2.5	2.5
2	13.0	12.0	12.5	10.5	10.0	10.5	5.0	4.0	4.5	2.5	2.5	2.5
3	12.0	10.5	11.0	11.0	10.5	11.0	4.0	2.0	3.0	3.0	2.5	2.5
4	11.0	10.5	10.5	11.5	10.5	11.0	2.5	1.5	2.0	3.5	3.0	3.0
5	10.5	10.0	10.0	11.5	11.0	11.5	1.5	1.0	1.5	4.5	3.5	4.0
6	10.0	9.5	10.0	12.0	11.5	12.0	1.5	1.0	1.0	3.5	2.5	3.0
7	10.0	8.5	9.5	12.0	11.0	11.5	1.0	0.5	0.5	2.5	1.0	1.5
8	10.5	9.5	10.0	11.5	10.0	11.0	0.5	0.5	0.5	1.0	0.5	0.5
9	10.5	10.0	10.5	10.0	8.0	9.0	0.5	0.5	0.5	0.5	0.5	0.5
10	11.5	10.0	11.0	8.0	7.0	7.5	1.5	0.5	1.0	0.5	0.0	0.5
11	12.0	11.0	12.0	7.0	6.5	7.0	4.0	1.5	3.0	0.5	0.0	0.5
12	13.0	12.0	12.5	7.5	6.5	7.0	4.0	3.0	3.5	0.5	0.0	0.5
13	13.5	12.5	13.0	8.0	7.0	7.5	3.0	2.5	2.5	0.5	0.0	0.0
14	13.0	12.5	13.0	7.5	5.0	6.5	2.5	1.5	2.0	0.0	0.0	0.0
15	12.5	12.0	12.5	5.5	4.5	5.0	1.5	0.5	1.0	0.0	0.0	0.0
16	12.0	11.0	11.5	4.5	4.0	4.5	1.5	0.5	1.0	0.5	0.0	0.0
17	11.0	10.5	11.0	5.0	4.0	4.5	2.0	1.5	1.5	0.5	0.0	0.0
18	10.5	10.0	10.5	5.5	5.0	5.0	2.0	1.5	1.5	0.0	0.0	0.0
19	10.5	10.0	10.5	8.0	5.0	6.0	1.5	1.0	1.5	0.5	0.0	0.0
20	10.0	9.5	10.0	8.5	7.5	8.0	1.5	1.0	1.5	0.5	0.0	0.0
21	10.5	9.5	10.0	7.5	6.5	7.0	1.5	0.5	1.0	0.5	0.0	0.0
22	9.5	9.0	9.5	7.0	6.5	6.5	1.0	0.5	1.0	0.0	0.0	0.0
23	10.0	9.0	9.5	7.0	6.0	6.5	2.5	1.0	2.0	0.0	0.0	0.0
24	9.5	8.0	9.0	7.0	6.5	6.5	3.0	2.5	3.0	0.5	0.0	0.0
25	8.5	8.0	8.0	7.0	6.0	6.5	3.0	3.0	3.0	0.0	0.0	0.0
26	8.5	8.0	8.0	6.0	5.0	5.5	3.0	2.5	2.5	0.0	0.0	0.0
27	9.5	8.5	9.0	5.5	5.0	5.0	2.5	2.0	2.5	0.0	0.0	0.0
28	10.0	9.5	9.5	5.5	5.0	5.5	2.5	2.0	2.5	0.0	0.0	0.0
29	9.5	9.5	9.5	6.5	5.5	6.0	2.0	2.0	2.0	0.5	0.0	0.0
30	9.5	9.0	9.0	6.0	5.5	5.5	2.0	2.0	2.0	0.5	0.0	0.0
31	9.0	8.5	9.0	---	---	---	2.5	2.0	2.5	0.5	0.0	0.0
MONTH	14.5	8.0	10.5	12.0	4.0	7.5	5.5	0.5	2.0	4.5	0.0	0.7

LEHIGH RIVER BASIN

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER RESERVOIR NEAR WHITE HAVEN, PA--Continued

CROSS-SECTION ANALYSES, OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
JUL 2004					
	01...	1156	231	--	7
	01...	1157	--	1.00	40
	01...	1158	--	1.00	82
	01...	1159	--	1.00	140
	01...	1200	--	--	171