



2004 Water Year LEHIGH RIVER BASIN

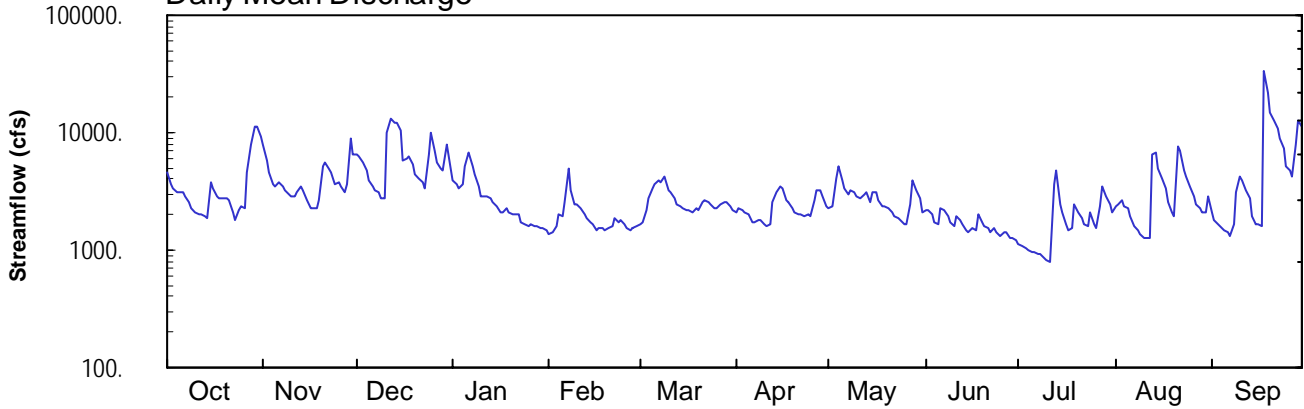
01453000 Lehigh River at Bethlehem, PA

Latitude: 40° 36' 55"
Lehigh County

Longitude: 075° 22' 45"
Datum: 210.94 feet

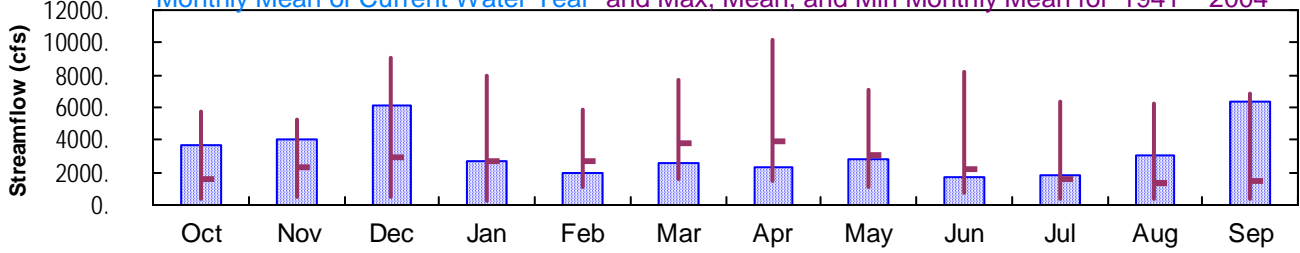
Hydrologic Unit Code: 02040106
Drainage Area: 1279. mi²

Daily Mean Discharge

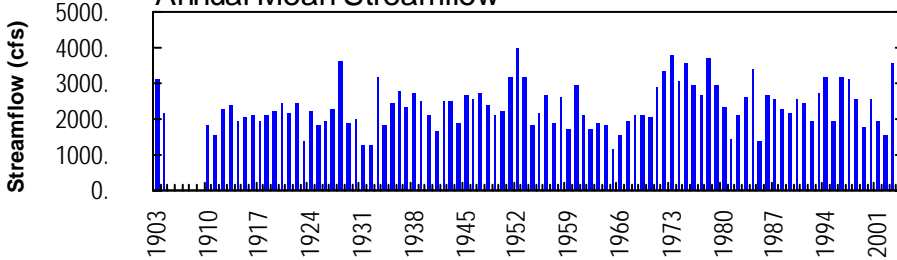


Monthly Statistics

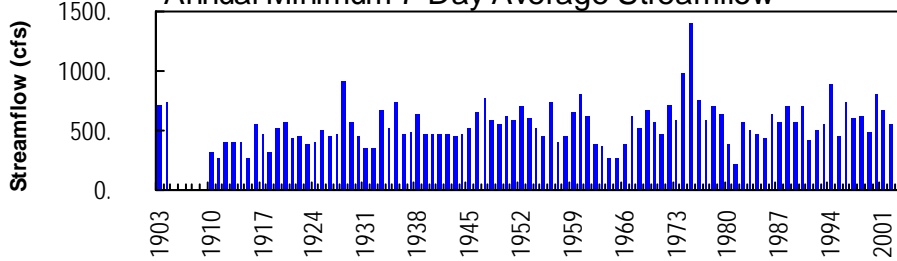
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1941 – 2004



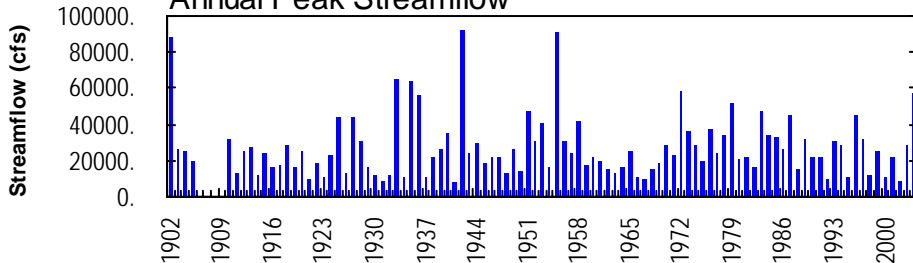
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, Hydrologic Unit 02040106, on left bank 110 ft upstream from bridge on New Street at Bethlehem, and 1,800 ft upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi² (includes that of Monocacy Creek). At site used prior to Oct. 1, 1928, 1,229 mi².

PERIOD OF RECORD.--October 1902 to January 1905, May 1909 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at South Bethlehem" prior to October 1913.

REVISED RECORDS.--WSP 261: 1903-5. WSP 321: 1910-11. WSP 1051: Drainage area. WSP 1141: 1929-34(M). WSP 1302: 1914(M), 1916(M), 1918, 1921, 1927-28. WSP 1432: 1903, 1919(M), 1920-21, 1929, 1933.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 210.94 ft above National Geodetic Vertical Datum of 1929. Prior to October 1928, nonrecording gage at New Street bridge 120 ft downstream at same datum. Oct. 1, 1928, to Sept. 30, 1962, water-stage recorder at site 4,250 ft downstream at datum 2.49 ft lower. Oct. 1, 1963, to Dec. 14, 1975, water-stage recorder at site 40 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Wild Creek Reservoir (station 01449700) since January 1941, Penn Forest Reservoir (station 01449400) since October 1958, Francis E. Walter Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1902 reached a stage of 24.9 ft, from floodmark, present site and datum, discharge, about 88,000 ft³/s.

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	4500	7970	6600	3860	1390	1680	2110	2260	2180	1110	2330	2080
2	3690	5700	6330	3630	1410	1760	2240	2350	2220	1100	2480	1810
3	3310	4530	5550	3400	1580	2170	2150	4150	2010	1040	2600	1630
4	3140	3660	4730	3610	2030	2720	2090	5160	1740	994	2390	1550
5	3060	3430	3850	5140	1960	3290	2020	3950	1670	966	2250	1490
6	3040	3840	3480	6710	2590	3600	1730	3420	2290	946	1930	1400
7	2900	3510	3230	5250	4950	3880	1740	3040	2150	933	1630	1310
8	2530	3210	3050	4450	3270	3840	1780	3180	1960	907	1470	1630
9	2240	3030	2780	3480	2490	4200	1810	3110	1700	842	1340	3040
10	2080	2920	2720	e2850	2450	3250	1670	2840	1580	813	1260	4210
11	2030	2910	10000	e2820	2270	3090	1590	2790	1960	794	1250	3850
12	2020	3080	13200	2910	1980	2750	1640	2940	1810	3640	1290	3280
13	1930	3440	12400	2800	1850	2490	2540	3040	1670	4770	6620	2800
14	1880	3270	12000	2590	1750	2360	3140	2590	1500	2480	6720	1940
15	3700	2610	10400	e2370	1670	2300	3450	3090	1420	2120	4980	1660
16	3360	2270	5720	e2100	1460	2210	3300	3110	1520	1650	4070	1640
17	2840	2230	6070	2100	1510	2160	2690	2680	1470	1480	3350	1620
18	2760	2260	6340	2230	1550	2140	2530	2320	1990	1570	2560	e33500
19	2770	2630	5300	2080	1490	2240	2310	2370	1700	2410	2090	21400
20	2740	5120	4460	1990	1520	2200	2110	2270	1610	2110	1970	15000
21	2640	5510	4040	2030	1590	2560	2050	2110	1510	1840	7530	12400
22	2100	5030	3760	2050	1880	2610	1980	1960	1410	1680	7020	10900
23	1790	4580	3310	1720	1750	2520	1980	1870	1560	1580	4850	8990
24	2140	3650	6500	1660	1770	2450	2030	1810	1420	2080	4180	7450
25	2330	3740	9880	1600	1650	2300	1970	1690	1340	1630	3460	5190
26	2280	3510	6930	1640	1530	2300	2700	1630	1430	1540	2860	4730
27	4650	3120	5630	1570	1500	2430	3250	2460	1450	2320	2440	4180
28	8030	3690	4900	1580	1520	2600	3240	3910	1270	3510	2230	7820
29	11400	8900	4700	1560	1590	2520	2910	3180	1250	2850	2110	12600
30	11500	6520	8010	1530	---	2360	2340	2750	1220	2430	2120	11200
31	9350	---	4930	1460	---	2160	---	2120	---	2080	2860	---
TOTAL	114730	119870	190800	84770	55950	81140	69090	86150	50010	56215	96240	192300
MEAN	3701	3996	6155	2735	1929	2617	2303	2779	1667	1813	3105	6410
MAX	11500	8900	13200	6710	4950	4200	3450	5160	2290	4770	7530	33500
MIN	1790	2230	2720	1460	1390	1680	1590	1630	1220	794	1250	1310
CFSM	2.89	3.12	4.81	2.14	1.51	2.05	1.80	2.17	1.30	1.42	2.43	5.01
IN.	3.34	3.49	5.55	2.47	1.63	2.36	2.01	2.51	1.45	1.64	2.80	5.59

e Estimated.

LEHIGH RIVER BASIN

01453000 LEHIGH RIVER AT BETHLEHEM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1616	2324	2932	2663	2736	3841	3862	3039	2166	1611	1366	1492
MAX (WY)	5778	5294	9067	7898	5820	7708	10180	7041	8199	6362	6192	6907
MIN (WY)	1956	1952	1997	1979	1951	1977	1993	1989	2003	1945	1955	1987
MIN (WY)	406	474	514	286	1132	1632	1428	1053	681	366	405	334
MIN (WY)	1964	1965	1981	1981	1980	1981	1985	1941	1965	1965	1964	1964

SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 1941 - 2004

ANNUAL TOTAL	1433330	1197265	
ANNUAL MEAN	3927	3271	2469
HIGHEST ANNUAL MEAN			3973
LOWEST ANNUAL MEAN			1165
HIGHEST DAILY MEAN	22900	Jun 21	e33500 Sep 18
LOWEST DAILY MEAN	e900	Feb 17	794 Jul 11
ANNUAL SEVEN-DAY MINIMUM	a1090	Feb 11	886 Jul 5
MAXIMUM PEAK FLOW			56700 Sep 18
MAXIMUM PEAK STAGE			19.70 Sep 18
ANNUAL RUNOFF (CFSM)	3.07		2.56
ANNUAL RUNOFF (INCHES)	41.69		26.23
10 PERCENT EXCEEDS	8190		5710
50 PERCENT EXCEEDS	2880		2420
90 PERCENT EXCEEDS	1440		1500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903-1904, 1909-1940, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1532	1827	2184	2346	2430	4134	3815	2280	1753	1530	1239	1214
MAX (WY)	4808	5660	5287	5287	5913	11920	7547	3681	4255	5182	4599	6407
MIN (WY)	1903	1927	1939	1915	1915	1936	1940	1924	1928	1935	1933	1933
MIN (WY)	308	370	470	677	668	1887	1499	1020	832	572	428	374
MIN (WY)	1911	1910	1931	1925	1934	1911	1915	1926	1921	1912	1910	1932

SUMMARY STATISTICS WATER YEARS 1903 - 1904 1909 - 1940

ANNUAL MEAN	2189
HIGHEST ANNUAL MEAN	3600
LOWEST ANNUAL MEAN	1262
HIGHEST DAILY MEAN	47900
LOWEST DAILY MEAN	160
ANNUAL SEVEN-DAY MINIMUM	260
MAXIMUM PEAK FLOW	64800
MAXIMUM PEAK STAGE	18.70
INSTANTANEOUS LOW FLOW	160
ANNUAL RUNOFF (CFSM)	1.71
ANNUAL RUNOFF (INCHES)	23.25
10 PERCENT EXCEEDS	4420
50 PERCENT EXCEEDS	1500
90 PERCENT EXCEEDS	548

- a Computed using estimated daily discharges.
- b From rating curve extended above 58,000 ft³/s on basis of slope-area measurement at gage height, 20.02 ft at present site and datum.
- c From floodmark, present site and datum.
- e Estimated.