



2004 Water Year LEHIGH RIVER BASIN

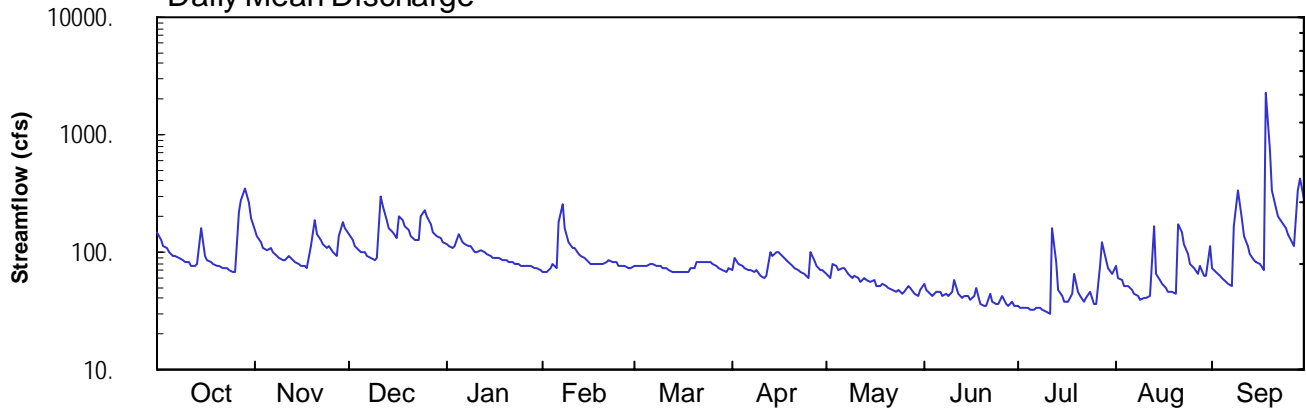
01452500 Monocacy Creek at Bethlehem, PA

Latitude: 40° 38' 28"
Northampton County

Longitude: 075° 22' 47"
Datum: 247.24 feet

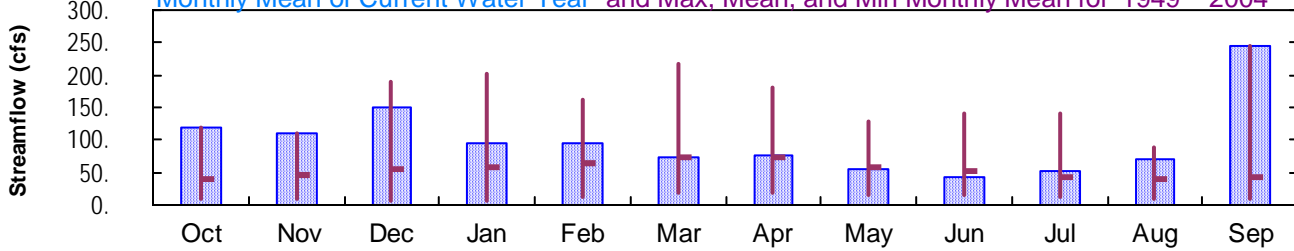
Hydrologic Unit Code: 02040106
Drainage Area: 44.5 mi²

Daily Mean Discharge

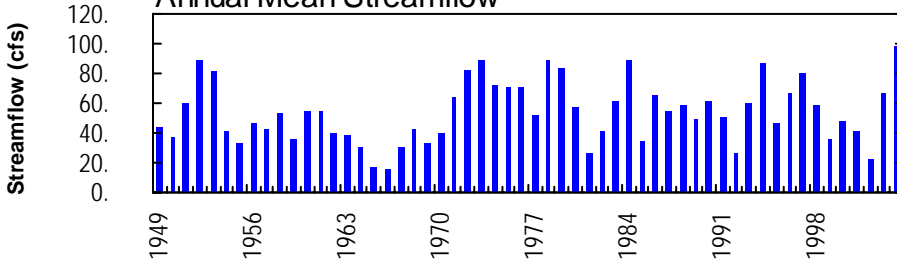


Monthly Statistics

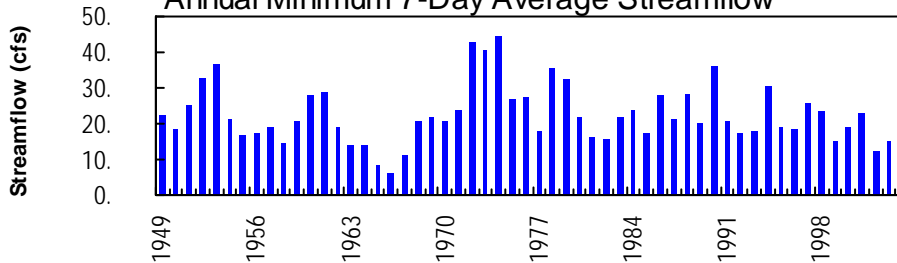
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1949 – 2004



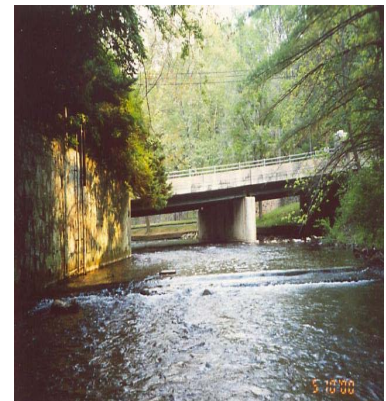
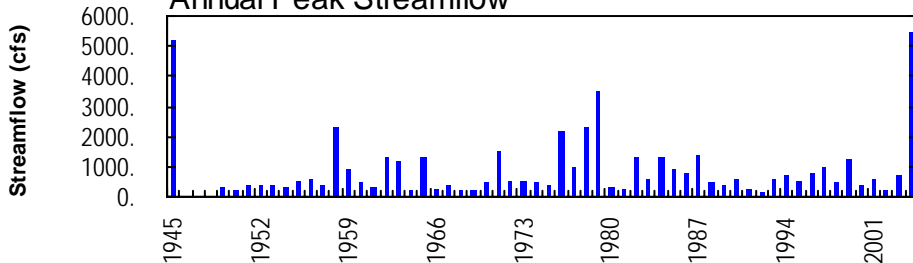
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



LEHIGH RIVER BASIN

01452500 MONOCACY CREEK AT BETHLEHEM, PA

LOCATION.--Lat 40°38'28", long 75°22'47", Northampton County, Hydrologic Unit 02040106, on right bank 40 ft downstream from highway bridge at entrance to Monocacy Park at Bethlehem, and 2.1 mi upstream from mouth.

DRAINAGE AREA.--44.5 mi².

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since July 17, 1969. Datum of gage is 247.24 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to May 15, 1962, nonrecording gage at site 40 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Some regulation at low flow since April 1954 by mill upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1945, reached a stage of 9.74 ft, from floodmarks, discharge, about 5,200 ft³/s, by slope-area measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Oct. 27	1845	404	3.66	Aug. 13	0615	433	3.73
Oct. 29	1015	437	3.74	Aug. 21	1530	353	3.52
Dec. 11	1930	433	3.73	Sept. 8	2030	626	4.17
Feb. 7	0000	372	3.57	Sept. 18	1400	*5,470	*9.85
July 12	1630	463	3.80	Sept. 28	2200	735	4.32

**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	146	156	143	115	69	75	71	65	53	34	75	74
2	127	134	125	111	68	76	88	61	48	33	60	67
3	112	120	113	110	73	76	78	78	45	34	57	63
4	110	109	104	115	79	76	77	76	42	33	52	59
5	99	103	100	142	74	76	73	70	47	33	51	57
6	93	108	101	123	182	80	71	75	46	32	47	53
7	91	98	94	117	259	79	69	73	43	33	45	51
8	88	91	89	114	162	78	69	64	43	33	42	164
9	85	88	86	111	122	76	69	61	43	32	40	338
10	82	87	90	100	109	74	63	62	46	31	41	192
11	81	86	299	100	106	72	60	61	58	30	41	138
12	77	91	248	104	98	72	62	56	45	158	42	113
13	75	85	187	100	92	69	101	60	42	81	167	97
14	80	81	159	95	90	67	92	57	42	47	65	84
15	158	79	149	94	85	67	102	55	42	43	57	82
16	91	77	130	88	80	68	98	57	39	38	53	78
17	86	76	203	89	79	69	93	52	43	37	49	70
18	83	74	186	90	78	68	87	51	50	43	46	2290
19	79	114	166	87	79	73	81	53	36	66	45	736
20	76	188	151	84	79	73	76	52	35	46	44	339
21	75	144	138	81	82	82	73	50	35	42	173	235
22	75	128	129	82	85	83	72	48	44	38	150	199
23	72	116	125	79	82	83	69	46	37	41	117	178
24	70	109	205	79	81	82	65	47	37	45	94	161
25	68	112	230	75	77	82	60	44	36	37	81	140
26	68	99	200	76	76	79	98	45	42	36	73	120
27	219	92	170	76	75	77	86	51	36	77	65	111
28	281	135	149	76	74	74	75	50	35	121	75	339
29	349	178	138	74	74	71	70	44	38	87	62	430
30	265	159	131	72	---	68	70	42	35	72	63	285
31	196	---	121	70	---	72	---	47	---	64	112	---
TOTAL	3657	3317	4659	2929	2769	2317	2318	1753	1263	1577	2184	7343
MEAN	118	111	150	94.5	95.5	74.7	77.3	56.5	42.1	50.9	70.5	245
MAX	349	188	299	142	259	83	102	78	58	158	173	2290
MIN	68	74	86	70	68	67	60	42	35	30	40	51
CFSM	2.65	2.48	3.38	2.12	2.15	1.68	1.74	1.27	0.95	1.14	1.58	5.50
IN.	3.06	2.77	3.89	2.45	2.31	1.94	1.94	1.47	1.06	1.32	1.83	6.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

MEAN	39.8	45.7	55.8	58.0	64.1	74.5	73.4	58.2	52.0	44.1	40.9	43.5
MAX	118	111	191	201	163	216	181	129	142	141	88.2	245
(WY)	2004	2004	1997	1979	1979	1994	1994	1984	1972	1984	1984	2004
MIN	8.90	10.0	6.88	7.14	13.6	19.8	18.6	16.2	15.0	11.6	10.6	9.51
(WY)	1966	1966	1966	1966	2002	2002	1966	1965	1965	1966	1965	1965

LEHIGH RIVER BASIN

01452500 MONOCACY CREEK AT BETHLEHEM, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1949 - 2004	
ANNUAL TOTAL	32653		36086			
ANNUAL MEAN	89.5		98.6		54.1	
HIGHEST ANNUAL MEAN					98.6	
LOWEST ANNUAL MEAN					15.5	
HIGHEST DAILY MEAN	354	Jun 21	2290	Sep 18	2290	Sep 18 2004
LOWEST DAILY MEAN	27	Feb 17	30	Jul 11	5.2	Jan 1 1966
ANNUAL SEVEN-DAY MINIMUM	28	Feb 15	32	Jul 5	5.9	Dec 27 1965
MAXIMUM PEAK FLOW			a5470	Sep 18	a5470	Sep 18 2004
MAXIMUM PEAK STAGE			9.85	Sep 18	9.85	Sep 18 2004
INSTANTANEOUS LOW FLOW			29	Jul 11,12	3.0	Jan 9 1966
ANNUAL RUNOFF (CFSM)	2.01		2.22		1.22	
ANNUAL RUNOFF (INCHES)	27.30		30.17		16.52	
10 PERCENT EXCEEDS	160		159		98	
50 PERCENT EXCEEDS	78		77		42	
90 PERCENT EXCEEDS	37		42		21	

a From rating curve extended above 440 ft³/s on basis of slope-area measurement at gage heights 5.47 and 9.74.