

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°59'55", long 75°08'35", Monroe County, Hydrologic Unit 02040104, on left bank at end of township route 646 at Minisink Hills, 500 ft upstream from Marshall Creek, 0.8 mi upstream from mouth, and 3.0 mi southeast of East Stroudsburg.

DRAINAGE AREA.--259 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1950 to current year.

REVISED RECORDS.--WSP 1232: 1951(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 301.84 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1955, water-stage recorder, and Aug. 23 to Nov. 24, 1955, nonrecording gage at site about 1,300 ft upstream at datum 2.19 ft higher. Nov. 25, 1955, to July 24, 1956, nonrecording gage at site 40 ft upstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Oct. 12	0345	7,060	7.34	June 13	0230	5,860	6.76
Oct. 16	2145	4,570	6.07	June 21	2345	8,610	8.00
Mar. 21	0245	7,440	7.52	Sept. 15	1630	6,270	6.96
June 1	1300	4,600	6.09	Sept. 23	1100	*10,400	*8.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	505	564	1030	303	434	1350	395	3050	602	199	302
2	115	475	505	2790	304	554	1400	388	2200	541	383	490
3	104	445	472	1760	296	655	1250	368	1440	494	322	526
4	109	419	427	1440	399	510	1080	345	1770	452	666	569
5	137	401	432	1170	428	512	1130	332	1390	418	1410	442
6	131	572	442	1030	331	621	1010	338	1090	382	1520	326
7	111	514	404	899	e310	532	895	331	1690	374	814	281
8	100	443	400	828	e280	506	871	362	2200	390	633	254
9	94	415	372	832	284	536	857	354	1540	341	518	236
10	99	400	350	828	288	514	896	334	1210	330	629	220
11	2030	410	433	717	e260	460	955	321	994	346	724	208
12	4960	459	1440	641	e240	464	955	356	1510	329	830	197
13	2070	688	997	591	e220	509	823	320	3930	292	598	223
14	1170	550	1940	545	e230	511	749	298	2220	269	496	340
15	779	502	1850	514	e230	523	707	286	1650	255	427	2740
16	1910	570	1490	477	e220	794	670	276	1240	242	409	2180
17	2630	2320	1150	471	235	1560	622	271	1000	228	460	1050
18	1440	2410	928	e380	303	2570	598	261	1100	222	372	752
19	1020	1650	844	e380	325	2690	579	252	958	249	330	908
20	829	1310	1480	e360	291	2590	542	239	1230	219	300	742
21	686	1110	1500	e340	e260	5640	513	275	5480	225	280	599
22	591	1150	1150	e320	386	4440	517	277	6830	631	266	527
23	526	1130	990	e310	914	3280	491	261	4320	415	252	5120
24	474	893	867	e320	738	2350	456	330	2840	387	232	3310
25	448	793	891	e330	585	1830	426	363	1940	295	221	1990
26	1050	722	870	347	507	1560	492	910	1410	248	212	1440
27	824	713	748	322	477	1430	550	806	1100	224	209	1150
28	654	647	690	292	454	1140	455	623	885	237	198	2220
29	582	597	654	324	---	1650	433	554	761	217	189	1580
30	564	582	612	310	---	2110	418	490	674	196	225	1150
31	556	---	604	296	---	1610	---	490	---	178	214	---
TOTAL	26923	23795	26496	21194	10098	45085	22690	11806	59652	10228	14538	32072
MEAN	868	793	855	684	361	1454	756	381	1988	330	469	1069
MAX	4960	2410	1940	2790	914	5640	1400	910	6830	631	1520	5120
MIN	94	400	350	292	220	434	418	239	674	178	189	197
CFSM	3.35	3.06	3.30	2.64	1.39	5.62	2.92	1.47	7.68	1.27	1.81	4.13
IN.	3.87	3.42	3.81	3.04	1.45	6.48	3.26	1.70	8.57	1.47	2.09	4.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	318	537	722	620	657	985	978	697	451	254	240	250
MAX	1560	1634	2321	2051	1498	2108	2293	1619	1988	923	2505	1649
(WY)	1956	1973	1997	1996	1951	1977	1983	1989	2003	1969	1955	1987
MIN	54.4	68.1	83.4	50.6	196	387	312	268	119	58.1	46.4	40.8
(WY)	1964	1965	1981	1981	1980	1985	1985	1962	1962	1999	1957	1964

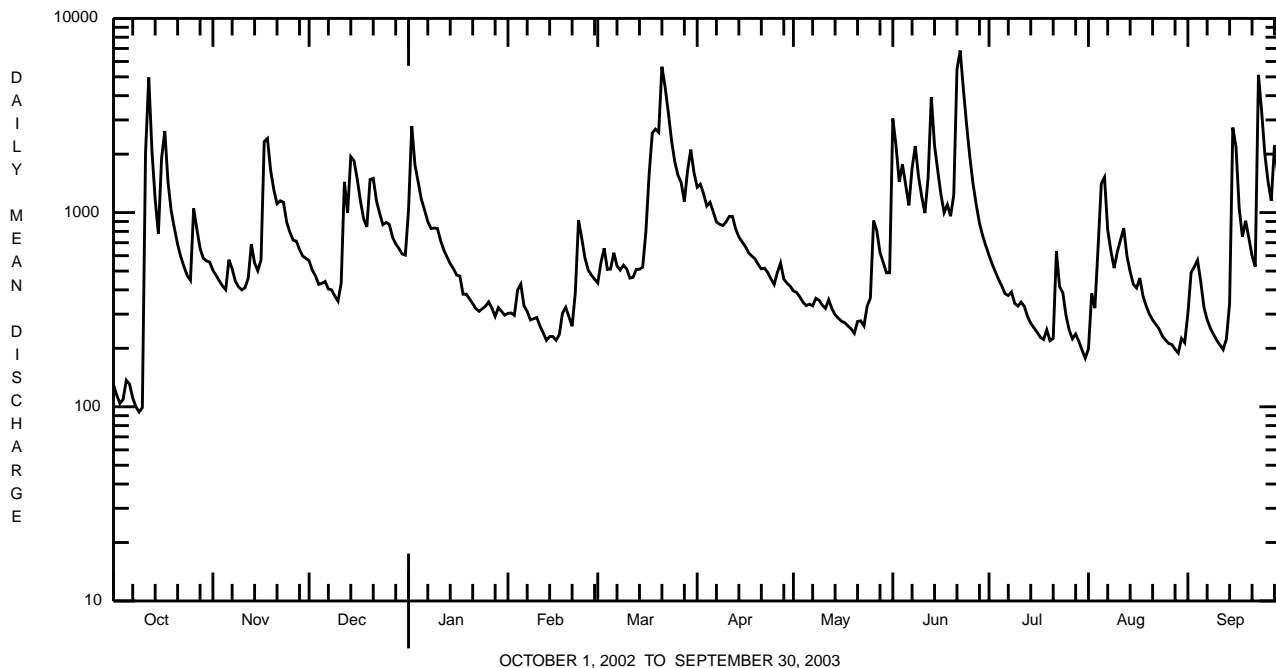
e Estimated.

BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	187734		304577			
ANNUAL MEAN	514		834		558	
HIGHEST ANNUAL MEAN					957	
LOWEST ANNUAL MEAN					238	
HIGHEST DAILY MEAN	4960	Oct 12	6830	Jun 22	30500	Aug 19 1955
LOWEST DAILY MEAN	48	Sep 13	94	Oct 9	30	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	54	Sep 8	112	Oct 4	33	Sep 6 1964
MAXIMUM PEAK FLOW			a10400	Sep 23	a68800	Aug 19 1955
MAXIMUM PEAK STAGE			8.64	Sep 23	b27.00	Aug 19 1955
INSTANTANEOUS LOW FLOW					29	Sep 27 1964
ANNUAL RUNOFF (CFSM)	1.99		3.22		2.16	
ANNUAL RUNOFF (INCHES)	26.96		43.75		29.29	
10 PERCENT EXCEEDS	1140		1760		1200	
50 PERCENT EXCEEDS	384		518		349	
90 PERCENT EXCEEDS	82		236		93	

a From rating curve extended above 10,100 ft³/s on basis of slope-area measurement of peak flow.
 b From floodmark, at site about 1,300 ft upstream at datum 2.19 ft higher.



BRODHEAD CREEK BASIN

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

REMARKS.--Other data for the Water-Quality Network can be found on pages 430-470.

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 2002 TO SEPTEMBER 2003

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)	Specific conductance, wat unfltrd, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd, mg/L as CaCO3 (00900)	Calcium, water, unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 2002 07...	0800	1028	9813	528	40	12.4	7.4	129	6.9	38	12.0	2.0	20
JAN 2003 06...	1500	1028	9813	1000	40	13.3	7.0	162	3.6	39	12.2	2.0	17
MAR 04...	1410	1028	9813	504	40	14.9	7.6	203	1.9	49	15.3	2.6	22
MAY 06...	1620	1028	9813	340	40	12.5	8.6	168	11.3	45	14.0	2.4	26
JUL 01...	1520	1028	9813	606	40	11.2	7.7	140	19.0	40	12.6	2.1	24
SEP 09...	1240	1028	9813	237	40	10.6	8.0	184	18.1	51	16.4	2.4	33

Date	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105 deg. C, sus-pended, mg/L (00515)	Residue total at 105 deg. C, mg/L (00530)	Ammonia water, unfltrd, mg/L as N (00610)	Nitrate water, unfltrd, mg/L as N (00620)	Nitrite water, unfltrd, mg/L as N (00615)	Ortho-phosphate, water, unfltrd, mg/L as P (70507)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)	Organic carbon, water, unfltrd, mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)
NOV 2002 07...	12.9	110	6	.130	.38	<.040	.01	.019	.75	2.6	<200	<10	80
JAN 2003 06...	11.5	136	4	<.020	.52	<.040	.01	.022	.56	2.0	<200	<10	60
MAR 04...	13.4	120	<2	.080	.66	<.040	.02	.030	.87	1.8	<200	<10	90
MAY 06...	11.9	64	52	.070	.38	<.040	.04	.053	.72	2.0	<200	<10	90
JUL 01...	10.9	110	2	.030	.41	<.040	.02	.030	.48	1.9	<200	10	90
SEP 09...	14.4	144	8	.070	.58	<.040	.06	.082	.88	2.2	<200	<10	110

Date	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
NOV 2002 07...	<1.0	10	<50	<10
JAN 2003 06...	<1.0	20	<50	20
MAR 04...	<1.0	30	<50	<10
MAY 06...	<1.0	20	<50	<10
JUL 01...	<1.0	20	<50	120
SEP 09...	<1.0	20	<50	10

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BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500 μ m. Samples represent counts per 100 (approximate) subsamples.

Date	8/5/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Nemertea (PROBOSAS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<u>Prostoma</u> sp	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
<u>Crangonyx</u> sp	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Acentrella</u> sp	8
<u>Baetis</u> sp	5
Ephemerellidae	
<u>Eurylophella</u> sp	2
<u>Serratella</u> sp	9
Heptageniidae	
<u>Stenonema</u> sp	7
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Cheumatopsyche</u> sp	12
<u>Hydropsyche</u> sp	11
Hydroptilidae	
<u>Leucotrichia</u> sp	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	1
<u>Oulimnius</u> sp	5
<u>Stenelmis</u> sp	5
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	50
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	1
Simuliidae (BLACK FLIES)	
<u>Simulium</u> sp	16
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	1
Total Organisms	141