



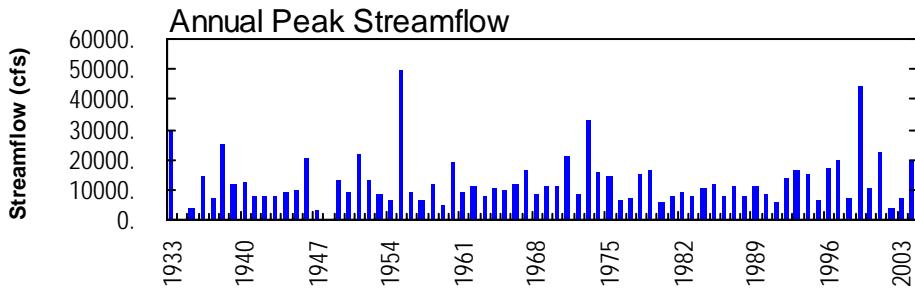
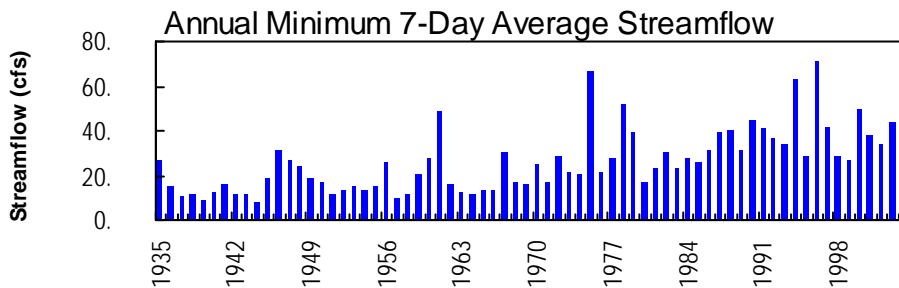
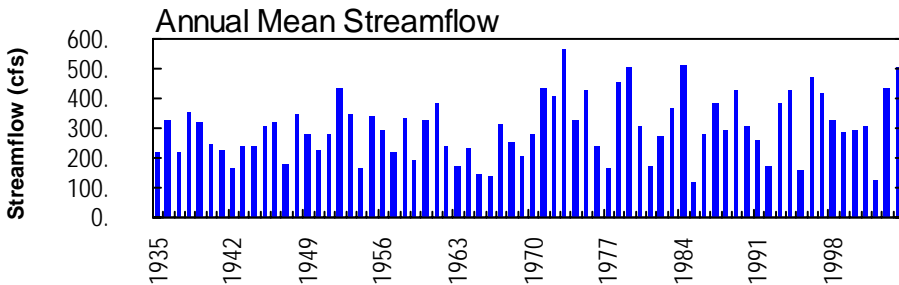
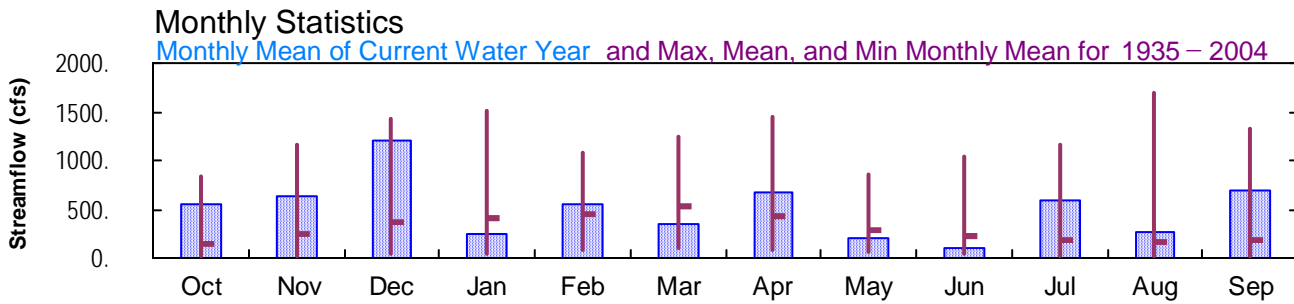
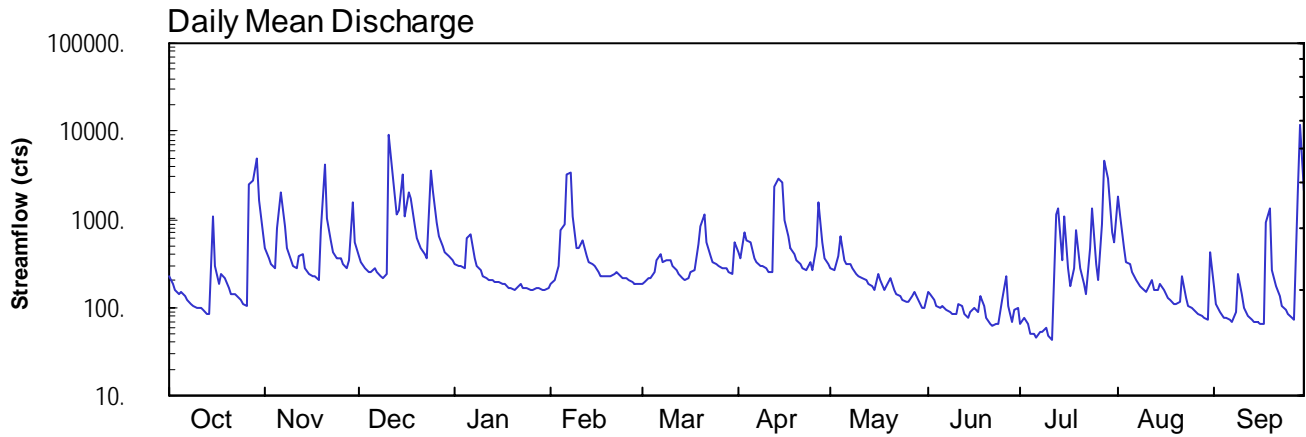
# 2004 Water Year NESHAMINY CREEK BASIN

## 01465500 Neshaminy Creek near Langhorne, PA

Latitude: 40° 10' 26"  
Bucks County

Longitude: 074° 57' 26"  
Datum: 40.57 feet

Hydrologic Unit Code: 02040201  
Drainage Area: 210. mi<sup>2</sup>



01465500--Neshaminy Creek near Langhorne

**NESHAMINY CREEK BASIN**

**01465500 NESHAMINY CREEK NEAR LANGHORNE, PA  
(Pennsylvania Water-Quality Network Station)**

**LOCATION.**--Lat 40°10'26", long 74°57'26", Bucks County, Hydrologic Unit 02040201, on left bank at bridge on State Highway 213, 0.3 mi downstream from Mill Creek, and 1.7 mi west of Langhorne.

**DRAINAGE AREA.**--210 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--October 1934 to current year.

**REVISED RECORDS.**--WSP 1332: 1949. WSP 1432: 1936-37. WDR PA-83-1: 1982(P).

**GAGE.**--Water-stage recorder. Datum of gage is 40.57 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Some regulation at low flow by mills above station. Flow regulated by upstream reservoirs on Little Neshaminy Creek, Robin Run, Pine Run, North Branch Neshaminy Creek, and Core Creek (combined flood control capacity, about 9,560 acre-ft). Occasional regulation by Springfield Lake, capacity, 2,000 acre-ft, completed in 1934; no significant regulation except during period May 1934 to January 1944, when the lake was filling, and in September 1949, July 1954, July through October 1957, and September, October 1961. Interceptor sewer installed along left bank during May and June 1966. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Aug. 23, 1933 reached a stage of 17.3 ft, from floodmark, discharge, about 30,000 ft<sup>3</sup>/s, from rating curve extended as explained in footnotes on next page.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 4,500 ft<sup>3</sup>/s and maximum(\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Oct. 27	2330	6,010	8.36	Feb. 6	2100	7,930	9.76
Oct. 29	1200	7,240	9.31	Apr. 13	2300	6,240	8.56
Nov. 20	0430	6,780	9.00	July 28	0830	6,530	8.80
Dec. 11	1730	16,800	14.04	Aug. 1	1630	4,790	7.30
Dec. 15	0030	5,380	7.82	Sept. 29	0630	*19,900	*15.21
Dec. 24	1500	6,560	8.82				

**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	222	472	389	314	e180	186	426	282	151	66	1860	174
2	186	365	326	296	e200	198	361	263	140	76	1090	109
3	158	312	280	289	e300	219	707	372	122	66	460	89
4	141	276	252	278	e750	221	572	645	103	50	333	77
5	146	774	255	604	e900	250	543	341	99	49	312	76
6	134	2070	273	687	3190	343	363	306	101	46	249	72
7	121	849	249	356	3410	402	322	305	96	53	200	69
8	110	465	229	290	1090	323	299	284	91	54	176	90
9	104	345	218	e260	475	352	301	240	84	57	166	237
10	101	302	237	e230	468	346	275	226	84	47	151	146
11	97	277	9310	e210	577	301	252	214	112	42	169	99
12	92	380	3090	e200	379	270	257	201	104	1110	208	80
13	86	401	1110	e200	326	237	2370	188	86	1350	156	72
14	84	285	1280	e190	314	214	2870	179	76	343	158	68
15	1060	245	3180	e190	297	208	2620	159	88	1100	181	67
16	300	229	1070	e180	253	214	985	234	101	277	155	66
17	186	221	2000	e180	232	253	641	206	88	174	130	66
18	242	208	1750	e170	224	269	483	159	136	281	119	921
19	211	752	839	e170	222	516	392	175	105	740	112	1330
20	163	4200	603	e160	229	849	346	214	78	275	109	272
21	144	1020	464	e170	234	1110	308	161	65	184	117	175
22	139	574	398	e180	248	543	284	146	62	139	230	134
23	133	415	369	e170	224	375	272	132	64	467	130	106
24	120	355	3640	e170	215	329	320	122	63	1320	105	92
25	108	361	2150	e160	218	305	264	116	119	310	97	83
26	104	315	901	e160	208	294	493	114	231	204	89	77
27	2510	280	636	e170	194	284	1520	137	104	878	83	71
28	2730	338	493	e170	186	282	558	150	70	4530	79	1970
29	4840	1570	418	e160	182	252	367	120	92	2870	77	11900
30	1680	562	383	e160	---	234	313	98	99	721	73	2150
31	729	---	343	e170	---	562	---	100	---	564	426	---
TOTAL	17181	19218	37135	7294	15925	10741	20084	6589	3014	18443	8000	20938
MEAN	554	641	1198	235	549	346	669	213	100	595	258	698
MAX	4840	4200	9310	687	3410	1110	2870	645	231	4530	1860	11900
MIN	84	208	218	160	180	186	252	98	62	42	73	66

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2004, BY WATER YEAR (WY)**

MEAN	137	244	374	405	455	539	434	287	218	189	170	174
MAX	840	1170	1424	1509	1074	1246	1455	862	1049	1161	1694	1330
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	2003	1938	1955	1999
MIN	13.8	23.2	34.3	47.2	75.9	105	89.8	54.5	33.7	21.8	15.1	15.4
(WY)	1958	1937	1966	1981	2002	1985	1985	1963	1965	1957	1966	1951

e Estimated.

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1935 - 2004	
ANNUAL TOTAL	198181		184562			
ANNUAL MEAN	543		504		301	
HIGHEST ANNUAL MEAN					565	
LOWEST ANNUAL MEAN					121	
HIGHEST DAILY MEAN	9310	Dec 11	11900	Sep 29	27300	Aug 19 1955
LOWEST DAILY MEAN	<b>e</b> 65	Feb 16	42	Jul 11	2.9	Sep 8 1957
ANNUAL SEVEN-DAY MINIMUM	<b>a</b> 70	Feb 13	50	Jul 5	8.2	Aug 26 1944
MAXIMUM PEAK FLOW			<b>b</b> 19900	Sep 29	<b>b</b> 49300	Aug 19 1955
MAXIMUM PEAK STAGE			15.21	Sep 29	<b>c</b> 22.84	Aug 19 1955
INSTANTANEOUS LOW FLOW			40	Jul 12	1.9	Sep 8 1957
10 PERCENT EXCEEDS	1240		1080		585	
50 PERCENT EXCEEDS	252		233		140	
90 PERCENT EXCEEDS	99		84		33	

**a** Computed using estimated daily discharges.

**b** From rating curve extended above 6,720 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow at gage height 22.84 ft.

**c** From floodmark.

**e** Estimated.

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued  
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

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 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)
OCT 2003 06...	1430	1028	9813	136	12.1	8.2	8.2	446	450	13.1	130	33.4	12.2
DEC 04...	1130	1028	9813	254	14.3	7.7	7.9	343	366	2.2	110	26.9	10.5
FEB 2004 25...	0940	1028	9813	221	16.7	8.9	8.7	467	471	2.4	120	30.4	11.1
APR 19...	1030	1028	9813	393	11.6	8.8	8.3	386	376	15.6	110	26.7	9.6
JUN 28...	1030	1028	9813	71	9.4	7.8	7.6	506	516	21.9	130	31.4	12.9
AUG 23...	1140	1028	9813	127	9.3	7.8	7.6	418	429	21.8	120	29.8	10.7

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat fltrd, mg/L (00515)	Residue total at 105 deg. C, suspended, 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)
OCT 2003 06...	87	35.3	318	4	<.020	2.74	<.200	.16	.160	3.1	3.3	<200	<10
DEC 04...	72	31.4	254	<2	<.020	3.00	<.040	.08	.106	3.3	3.0	<200	<10
FEB 2004 25...	71	31.5	288	2	<.020	2.29	<.200	.02	.043	2.7	3.3	<200	<10
APR 19...	62	27.3	236	8	.050	1.66	<.040	.05	.084	2.1	3.5	<200	<10
JUN 28...	80	38.7	374	4	.040	2.18	.040	.24	.267	2.6	4.5	210	<10
AUG 23...	72	30.6	284	4	.020	1.99	<.200	.14	.175	2.4	4.5	<200	<10

Date	Iron, water, unfltrd recover -able, µg/L (01045)	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)
OCT 2003 06...	140	<1.0	20	<50	10
DEC 04...	240	<1.0	20	<50	170
FEB 2004 25...	130	<1.0	30	<50	<10
APR 19...	210	<1.0	40	<50	<10
JUN 28...	400	<1.0	90	<50	10
AUG 23...	200	<1.0	50	<50	<10

NESHAMINY CREEK BASIN

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	09/10/03
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	19
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoploneurata	
Tetrastemmatidae	
<i>Prostoma</i>	1
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	60
Heptageniidae	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Glossosoma</i>	3
Hydropsychidae	
<i>Cheumatopsyche</i>	4
<i>Hydropsyche</i>	13
<i>Potamyia</i>	1
Lepidostomatidae	
<i>Lepidostoma</i>	1
Philopotamidae	
<i>Chimarra</i>	146
Coleoptera (BEETLES)	
Elmidae (RIFPLE BEETLES)	
<i>Optioservus</i>	4
<i>Stenelmis</i>	45
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	12
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	1
Total Organisms	321
Total Taxa	17