

NESHAMINY CREEK BASIN

01464720 NORTH BRANCH NESHAMINY CREEK AT CHALFONT, PA

LOCATION.--Lat 40°17'17", long 75°12'15", Bucks County, Hydrologic Unit 02040201, on right bank 250 ft upstream from Route 202 bridge in Chalfont, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--31.5 mi².

PERIOD OF RECORD.--December 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 250 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and those greater than 1,550 ft³/s, which are poor. Diversion for municipal supply by Forest Park Water Company upstream of gage. Flow regulated by Lake Galena (Peace Valley Reservoir) 1.8 mi upstream, drainage area 15.8 mi², normal pool capacity 6,539 ac-ft. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Forest Park Water Company.

REVISIONS.--The annual maximum (*) reported for water years 1993-1998 have been revised as shown in the following table. They supersede previously published figures.

Water Year	Date	Discharge ft ³ /s	Gage Height (ft)
1993	Aug. 17, 1993	*3,250	*8.83
1994	Dec. 5, 1993	*2,130	*7.72
1995	July 17, 1995	*609	*5.41
1996	Jan. 19, 1996	*3,490	*9.04
1997	Oct. 19, 1996	*5,230	*10.33
1998	May 8, 1998	*729	*5.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.2	6.9	6.0	13	46	22	13	11	7.8	7.6	8.0
2	7.0	7.7	5.8	5.1	46	25	22	12	11	8.2	8.2	7.5
3	6.8	7.1	6.5	128	37	23	20	13	10	8.2	6.0	6.9
4	8.2	6.3	6.8	52	29	64	20	12	9.3	7.9	6.5	7.1
5	6.9	6.8	7.0	e21	24	29	18	12	9.9	7.9	5.9	8.3
6	6.9	6.5	7.4	13	22	32	17	12	10	7.3	6.7	8.1
7	7.5	7.2	6.1	11	20	43	16	14	9.2	8.3	7.1	13
8	24	7.4	5.5	8.2	24	25	15	16	8.7	9.2	7.0	9.6
9	18	6.1	5.4	20	22	23	25	18	8.4	8.0	9.4	15
10	42	6.0	5.2	24	19	21	53	13	9.6	8.3	8.3	77
11	15	6.7	5.2	12	17	19	33	12	8.8	6.7	10	19
12	9.2	7.5	4.7	10	20	17	36	13	8.5	8.1	7.8	11
13	8.0	6.4	5.0	13	32	15	24	12	8.7	7.7	7.4	7.6
14	7.7	5.6	5.0	9.5	22	17	20	12	9.1	6.9	30	7.8
15	7.0	6.3	5.2	110	18	24	18	11	8.9	7.6	7.9	10
16	6.8	7.3	4.5	57	17	32	26	10	8.5	7.6	8.9	2090
17	6.8	6.7	5.4	37	16	43	32	11	7.4	9.5	7.3	1610
18	6.5	4.8	5.0	234	100	39	22	12	7.4	7.9	7.6	1260
19	8.4	6.2	5.1	111	48	26	17	19	6.7	7.2	8.4	390
20	8.1	7.6	5.8	35	30	22	18	19	8.6	7.3	8.4	92
21	11	7.5	5.1	31	23	144	18	13	7.4	7.5	7.6	56
22	7.6	6.8	5.7	36	20	525	17	12	6.3	6.7	6.3	46
23	7.9	6.0	5.5	36	16	135	22	13	7.5	6.8	6.4	e34
24	7.5	6.2	5.4	127	16	85	28	28	7.3	7.6	6.3	e21
25	7.8	6.9	5.4	70	15	59	20	22	7.9	6.5	6.4	14
26	7.6	9.0	5.2	46	15	42	18	13	8.3	6.8	35	13
27	7.2	17	5.7	42	14	33	16	12	8.5	8.3	37	12
28	7.7	11	5.4	29	21	30	15	11	9.8	6.3	14	11
29	7.6	6.9	5.8	18	---	25	14	11	9.6	6.4	8.7	e13
30	6.2	7.3	5.3	19	---	22	13	10	8.0	8.5	7.4	25
31	6.3	---	4.9	18	---	21	---	10	---	8.0	7.2	---
TOTAL	301.7	217.0	172.9	1388.8	716	1706	655	421	260.3	237.0	318.7	5902.9
MEAN	9.73	7.23	5.58	44.8	25.6	55.0	21.8	13.6	8.68	7.65	10.3	197
MAX	42	17	7.4	234	100	525	53	28	11	9.5	37	2090
MIN	6.2	4.8	4.5	5.1	13	15	13	10	6.3	6.3	5.9	6.9
(†)	21.5	20.8	20.6	20.6	20.8	20.4	20.1	21.8	26.0	27.2	23.8	21.8
(≠)	-12.0	-25.5	-20.2	+41.3	+2.2	+17.2	+0.1	-1.2	-2.4	-2.5	+4.6	-0.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1999, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	34.7	35.7	74.3	76.5	39.4	87.8	55.3	32.8	20.3
MAX	131	108	236	209	74.6	222	121	136	41.5
(WY)	1997	1996	1997	1996	1998	1994	1996	1998	1996
MIN	7.20	7.23	5.58	44.8	14.2	33.2	11.8	11.1	5.92
(WY)	1992	1999	1999	1999	1992	1997	1995	1995	1999

† Diversion by Forest Park Water Company, equivalent in cubic feet per second.

≠ Change in contents, equivalent in cubic feet per second, in Lake Galena.

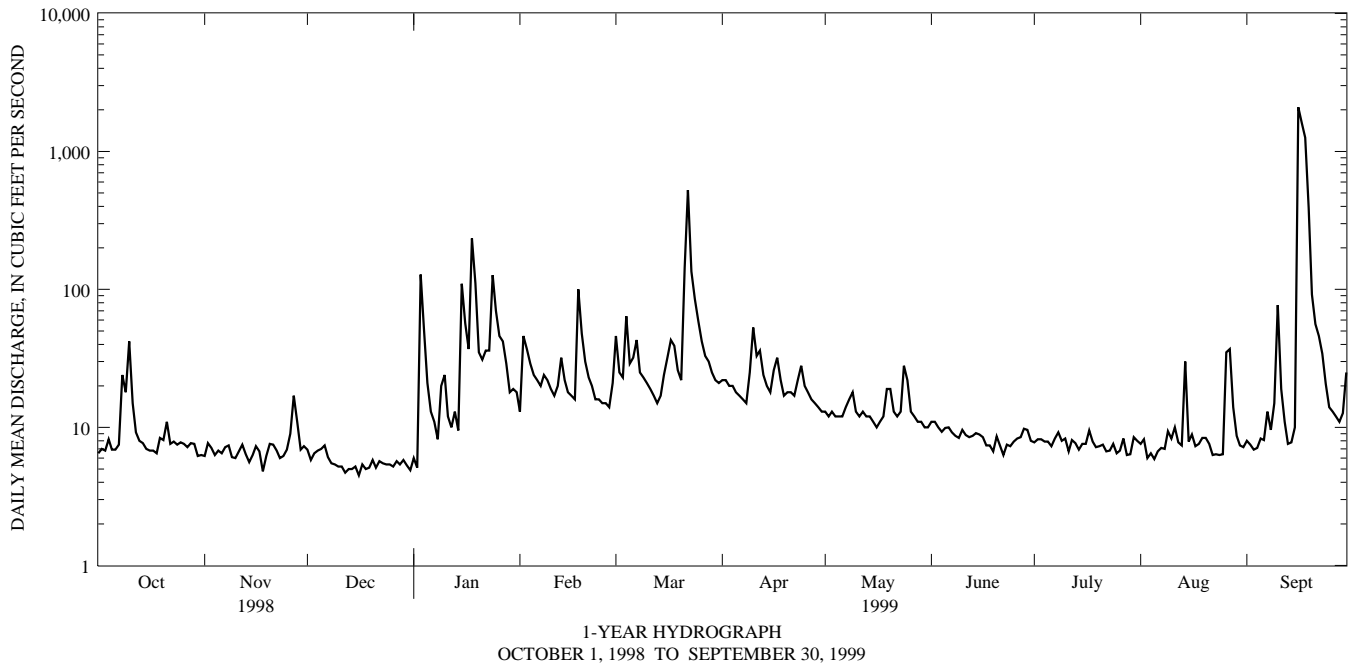
e Estimated.

NESHAMINY CREEK BASIN

01464720 NORTH BRANCH NESHAMINY CREEK AT CHALFONT, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1991 - 1999	
ANNUAL TOTAL	15368.4		12297.3			
ANNUAL MEAN	42.1		33.7		45.1	
HIGHEST ANNUAL MEAN					67.0	1996
LOWEST ANNUAL MEAN					18.6	1995
HIGHEST DAILY MEAN	712	May 9	2090	Sep 16	2090	Sep 16 1999
LOWEST DAILY MEAN	4.5	Dec 16	4.5	Dec 16	2.3	Aug 18 1991
ANNUAL SEVEN-DAY MINIMUM	5.0	Dec 10	5.0	Dec 10	3.0	Aug 12 1991
INSTANTANEOUS PEAK FLOW			a6990	Sep 16	a6990	Sep 16 1999
INSTANTANEOUS PEAK STAGE			11.36	Sep 16	11.36	Sep 16 1999
INSTANTANEOUS LOW FLOW			b2.1	Jan 2	b2.1	Jan 2 1999
10 PERCENT EXCEEDS	101		37		90	
50 PERCENT EXCEEDS	15		10		17	
90 PERCENT EXCEEDS	6.1		6.2		5.9	

a From rating curve extended above 1,550 ft³/s on basis of velocity-area study of peak flow at gage height 11.36 ft.
 b Result of freeze-up.



1-YEAR HYDROGRAPH
 OCTOBER 1, 1998 TO SEPTEMBER 30, 1999