



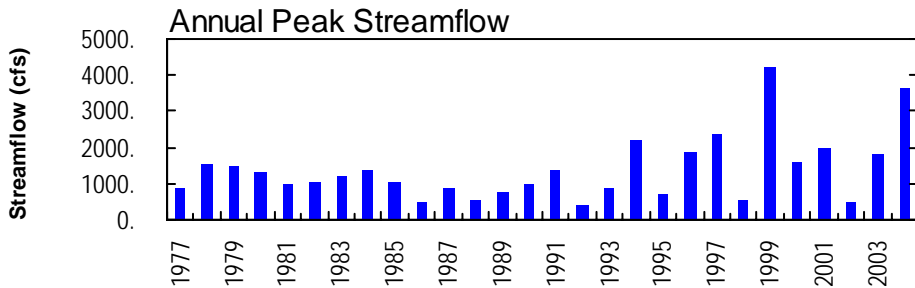
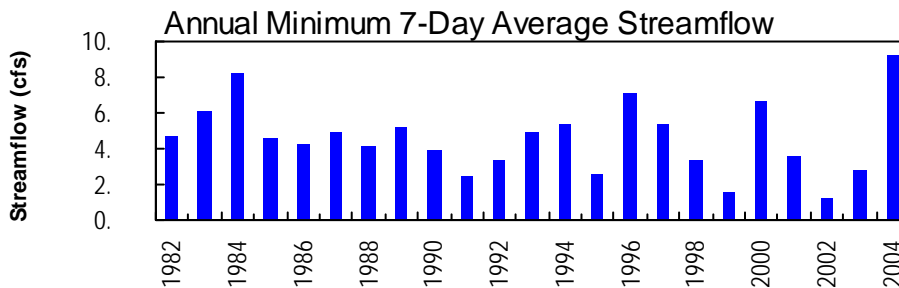
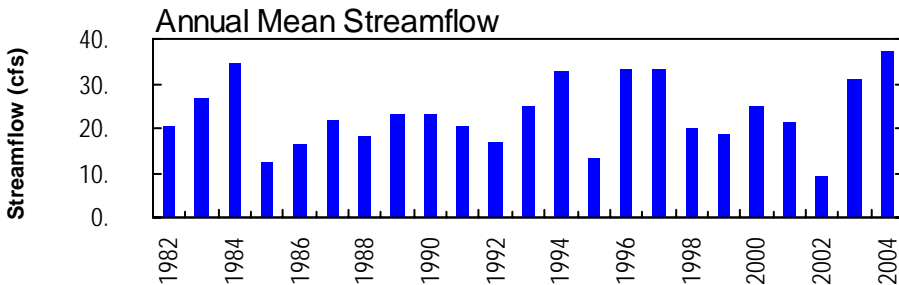
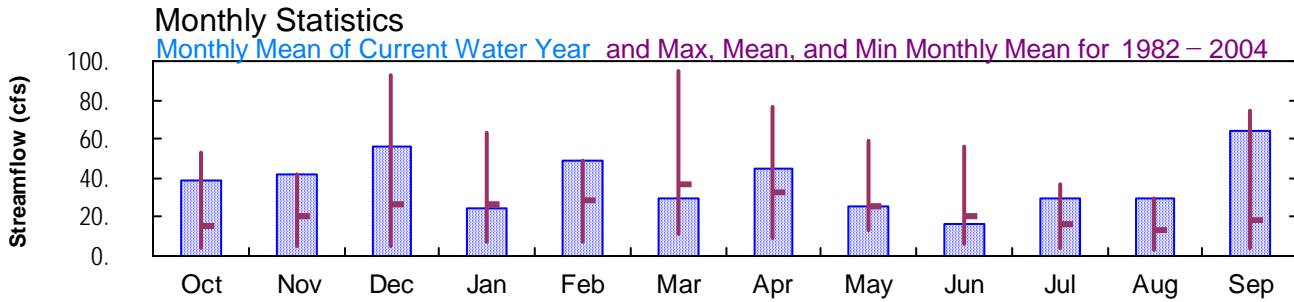
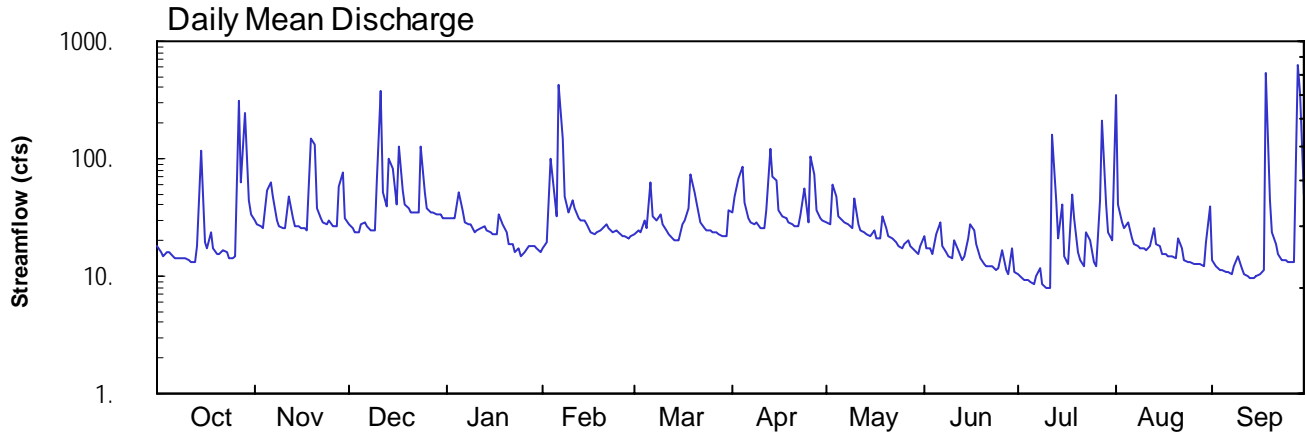
2004 Water Year CRUM CREEK BASIN

01475850 Crum Creek near Newtown Square, PA

Latitude: 39° 58' 35"
Delaware County

Longitude: 075° 26' 13"
Datum: 207.75 feet

Hydrologic Unit Code: 02040202
Drainage Area: 15.8 mi²



01475850-Crum Creek near Newtown Square

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA

LOCATION.--Lat 39°58'35", long 75°26'13", Delaware County, Hydrologic Unit 02040202, at Castle Rock bridge on State Highway 3, 0.6 mi upstream from Preston Run, 0.8 mi upstream from Springton Reservoir, and 2.0 mi west of Newtown Square.

DRAINAGE AREA.--15.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to current year. Occasional low-flow measurements, water years 1932, 1949, 1970-1977, and annual maximum 1977-1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 207.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Oct. 27	1600	621	5.69	July 28	0115	849	6.42
Nov. 19	2115	815	6.32	Aug. 1	1145	1,610	8.28
Dec. 11	0800	910	6.60	Sept. 18	1400	1,660	8.38
Feb. 6	1515	1,320	7.65	Sept. 28	2130	*3,610	*11.20

**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	e18	30	28	31	e17	22	35	28	22	10	353	14
2	e16	28	26	31	19	25	48	28	17	10	41	12
3	15	27	24	31	101	24	69	61	17	9.3	28	11
4	16	25	24	31	71	30	87	47	15	9.2	26	11
5	16	54	27	51	32	26	43	32	23	9.0	29	11
6	15	63	28	36	429	61	31	30	29	8.7	21	11
7	14	48	26	29	147	32	29	29	18	10	19	11
8	14	30	25	27	48	30	27	28	16	12	18	12
9	14	27	25	27	35	33	29	26	15	8.7	17	15
10	14	25	65	23	44	27	25	46	14	8.1	17	12
11	14	25	370	24	37	25	25	28	20	8.0	17	10
12	13	48	51	26	31	23	36	25	16	162	18	9.9
13	13	30	39	26	30	21	123	23	14	44	25	9.6
14	18	26	102	24	30	20	72	22	15	21	18	9.5
15	116	26	83	23	28	20	65	22	21	40	18	9.9
16	19	26	41	22	23	27	36	24	27	15	15	11
17	17	26	125	23	23	30	32	21	24	13	15	11
18	23	25	54	33	24	37	31	21	19	50	15	537
19	17	146	40	28	25	72	29	32	14	31	15	45
20	15	132	37	23	25	52	28	26	13	16	14	23
21	15	37	35	e19	28	42	27	22	12	13	21	18
22	16	31	34	e19	26	29	27	21	12	12	17	15
23	16	28	34	e16	24	25	34	19	12	23	14	14
24	14	28	124	e17	24	24	57	18	11	20	13	14
25	14	30	51	e15	24	25	29	17	11	13	13	13
26	15	27	38	e16	22	24	102	19	17	12	13	13
27	307	26	36	e18	22	24	73	20	11	44	13	13
28	63	59	34	e18	21	22	37	18	10	211	12	624
29	245	76	34	e18	21	22	32	16	17	41	12	357
30	44	31	33	e17	---	22	30	16	11	24	20	49
31	34	---	31	e16	---	36	---	18	---	20	40	---
TOTAL	1200	1240	1724	758	1431	932	1348	803	493	928.0	927	1925.9
MEAN	38.7	41.3	55.6	24.5	49.3	30.1	44.9	25.9	16.4	29.9	29.9	64.2
MAX	307	146	370	51	429	72	123	61	29	211	353	624
MIN	13	25	24	15	17	20	25	16	10	8.0	12	9.5
CFSM	2.45	2.62	3.52	1.55	3.12	1.90	2.84	1.64	1.04	1.89	1.89	4.06
IN.	2.83	2.92	4.06	1.78	3.37	2.19	3.17	1.89	1.16	2.18	2.18	4.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	15.4	20.9	26.9	26.3	28.5	37.2	32.6	25.3	19.9	16.0	13.1	18.0												
MAX	53.4	41.3	92.6	63.0	49.3	95.0	76.8	58.9	55.8	36.2	29.9	74.6												
(WY)	1997	2004	1997	1996	2004	1994	1983	1984	2003	1989	2004	1999												
MIN	3.87	5.02	4.63	7.45	7.13	11.7	9.45	13.2	5.85	4.02	2.82	4.53												
(WY)	2002	2002	1999	1985	2002	1985	1985	1999	1985	1999	2002	1998												

e Estimated.

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004	
ANNUAL TOTAL	13136.5		13709.9			
ANNUAL MEAN	36.0		37.5		23.3	
HIGHEST ANNUAL MEAN					37.5	
LOWEST ANNUAL MEAN					9.24	
HIGHEST DAILY MEAN	473	Jun 20	624	Sep 28	1610	Sep 16 1999
LOWEST DAILY MEAN	8.5	Feb 16	8.0	Jul 11	0.64	Aug 8 1991
ANNUAL SEVEN-DAY MINIMUM	9.8	Feb 15	9.2	Jul 5	1.2	Aug 16 2002
MAXIMUM PEAK FLOW			a3610	Sep 28	a4250	Sep 16 1999
MAXIMUM PEAK STAGE			11.20	Sep 28	b11.99	Sep 16 1999
ANNUAL RUNOFF (CFSM)	2.28		2.37		1.47	
ANNUAL RUNOFF (INCHES)	30.93		32.28		20.04	
10 PERCENT EXCEEDS	63		55		39	
50 PERCENT EXCEEDS	22		24		15	
90 PERCENT EXCEEDS	13		12		5.7	

- a** From rating curve extended above 1,300 ft³/s on basis of slope-area measurement at peak flow at gage height 11.99 ft.
- b** From outside floodmark.

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975, 1999 to current year.

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)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 06...	1300	1028	80020	15	12.4	7.2	7.9	234	250	11.0	19.3	9.60	2.25
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + Nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)	
OCT 06...		11.8	60	28.8	17.1	13.7	<.04	1.95	E.007	<.02	23	64	

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m².

Date	Count
10/06/03	
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	44
Nemertea (PROBOSAS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<i>Prostoma</i>	47
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	21
Planorbidae	
<i>Gyraulus</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	8
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	39
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	29
<i>Acentrella</i>	1
Ephemerellidae	
<i>Eurylophella</i>	1
<i>Serratella</i>	14
Heptageniidae	
<i>Stenonema</i>	40
Isonychiidae	
<i>Isonychia</i>	55
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Aeshnidae (DAMSELFLIES)	
<i>Boyeria</i>	1
Gomphidae (DRAGONFLIES)	3
Plecoptera (STONEFLIES)	
Capniidae	1
Perlidae	
<i>Acroneuria</i>	8
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Corydalus</i>	1

CRUM CREEK BASIN

01475850 CRUM CREEK NEAR NEWTOWN SQUARE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/06/03
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	170
<i>Hydropsyche</i>	310
Hydroptilidae	
<i>Leucotrichia</i>	1
Philopotamidae	
<i>Chimarra</i>	78
<i>Wormaldia</i>	3
Psychomyiidae	
<i>Psychomyia</i>	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	45
<i>Oulimnius</i>	26
<i>Stenelmis</i>	63
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
	167
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	3
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	130
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	9
<i>Dicranota</i>	2
Total organisms	
	1327
Total number of taxa	
	32