



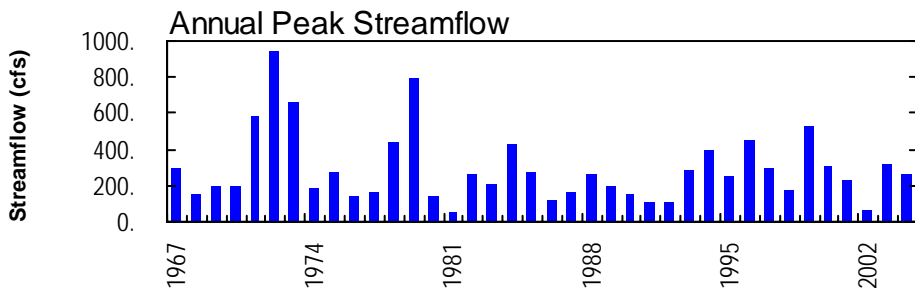
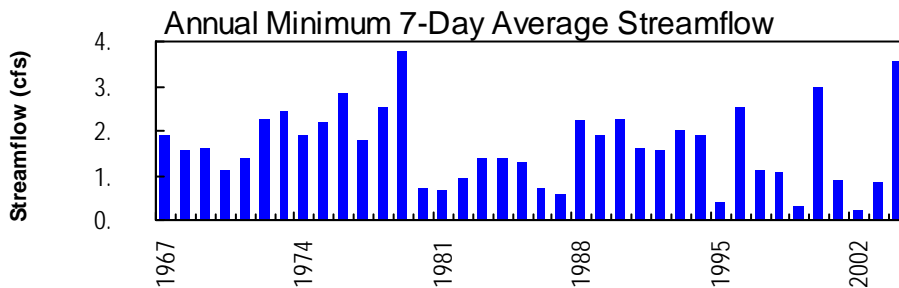
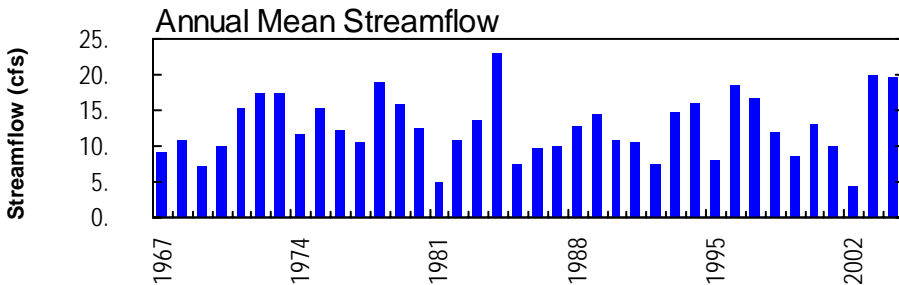
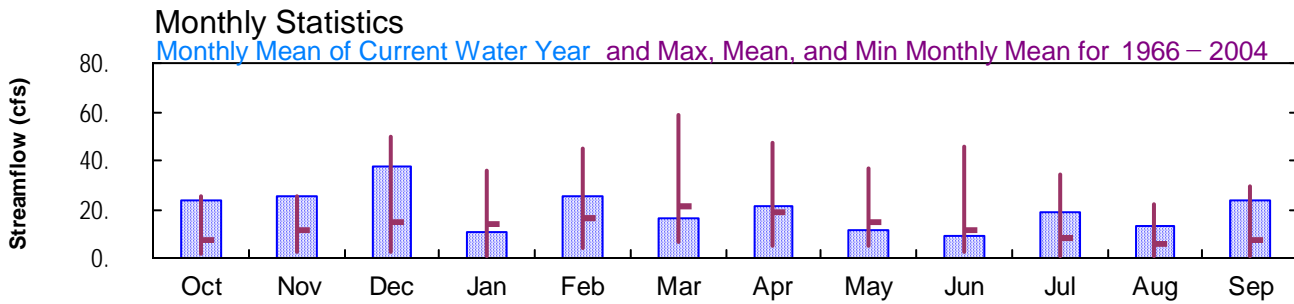
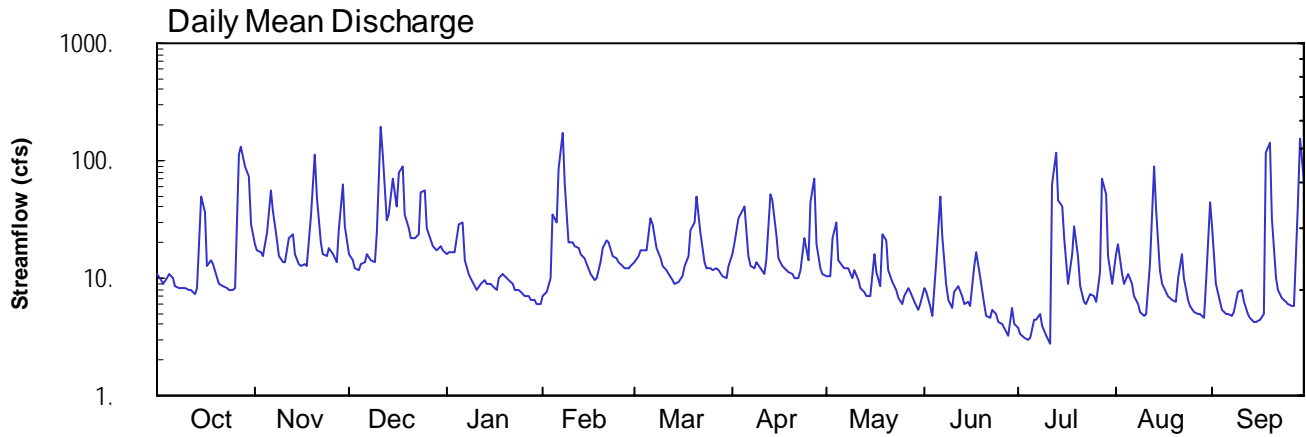
2004 Water Year  
CHRISTINA RIVER BASIN

01480675 Marsh Creek near Glenmoore, PA

Latitude: 40° 05 ' 52"  
Chester County

Longitude: 075° 44 ' 31"  
Datum: 450 feet

Hydrologic Unit Code: 02040205  
Drainage Area: 8.57 mi<sup>2</sup>



01480675-Marsh Creek near Glenmoore

**CHRISTINA RIVER BASIN**

**01480675 MARSH CREEK NEAR GLENMOORE, PA**

**LOCATION.**--Lat 40°05'52", long 75°44'31", Chester County, Hydrologic Unit 02040205, on left bank 200 ft north of Pennsylvania Turnpike, 1.2 mi downstream from Lyons Run, 1.8 mi upstream from Black Horse Creek, and 3.0 mi northeast of Glenmoore.

**DRAINAGE AREA.**--8.57 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--July 1966 to current year.

**REVISED RECORDS.**--WDR PA-74-1: 1967(M), 1971-72(P) WDR PA-93-1: 1992.

**GAGE.**--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 130 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	2000	177	2.45	Aug. 13	0330	142	2.33
Dec. 11	1545	*265	*2.74	Sept. 18	1430	207	2.55
Feb. 6	2345	252	2.70	Sept. 28	2330	195	2.51
July 12	2100	163	2.40				

**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	11	20	16	16	e7.0	14	16	10	8.4	3.7	16	27
2	9.6	17	14	16	e7.5	15	20	10	7.6	3.4	19	8.9
3	8.8	16	12	17	e10	17	33	22	5.8	3.2	11	6.3
4	10	16	12	17	e35	18	38	29	4.9	3.0	8.9	5.4
5	11	25	13	29	e30	17	41	14	13	3.1	11	5.0
6	9.9	57	14	30	e85	33	15	12	49	4.4	8.8	4.9
7	8.6	37	16	14	e170	28	13	12	23	4.3	7.1	4.7
8	8.2	21	14	11	e65	18	12	12	8.7	5.0	6.0	5.2
9	8.2	15	14	e10	e20	15	14	10	6.4	3.9	5.2	7.5
10	8.2	14	25	e8.5	e20	13	12	12	5.5	3.3	4.8	7.8
11	8.0	14	194	e8.0	e19	12	11	9.8	7.5	2.8	4.9	6.2
12	7.8	21	109	e9.0	e18	11	14	8.3	8.5	62	13	5.0
13	7.4	23	32	e9.5	e16	9.6	52	7.6	7.0	117	90	4.6
14	8.1	16	35	e9.0	e15	9.0	46	7.1	6.0	45	39	4.3
15	50	13	70	e9.0	e13	9.4	23	7.0	6.1	41	12	4.2
16	36	13	41	e8.5	e11	11	15	16	5.7	22	8.7	4.5
17	13	13	79	e8.0	e9.5	12	13	11	13	8.9	7.8	5.0
18	14	13	90	e10	e10	15	12	8.4	17	16	6.9	116
19	13	33	35	e11	14	26	11	24	9.9	27	6.5	143
20	10	111	26	e10	18	30	11	21	6.1	15	6.2	33
21	8.8	47	22	e9.5	21	49	10	12	4.7	8.5	e10	10
22	8.6	20	22	e9.0	20	24	10	9.3	4.6	6.3	e16	8.0
23	8.3	16	23	e8.0	16	14	12	7.8	5.4	6.0	e10	6.8
24	7.9	15	53	e8.0	15	12	22	6.8	4.9	7.3	6.6	6.2
25	7.8	18	56	e7.5	14	12	14	6.0	4.3	7.2	5.8	6.1
26	8.3	16	26	e7.0	13	12	44	7.2	4.1	6.3	5.1	5.9
27	111	14	21	e7.0	12	12	70	8.1	3.5	11	5.0	5.8
28	133	25	19	e6.5	12	11	19	7.6	3.2	70	4.9	41
29	87	62	17	e6.5	13	10	12	6.4	5.6	52	4.7	154
30	72	27	19	e6.0	---	9.8	11	5.5	4.1	15	8.8	68
31	29	---	17	e6.0	---	13	---	6.1	---	8.9	45	---
TOTAL	742.5	768	1156	341.5	729.0	511.8	646	346.0	263.5	592.5	414.7	720.3
MEAN	24.0	25.6	37.3	11.0	25.1	16.5	21.5	11.2	8.78	19.1	13.4	24.0
MAX	133	111	194	30	170	49	70	29	49	117	90	154
MIN	7.4	13	12	6.0	7.0	9.0	10	5.5	3.2	2.8	4.7	4.2
CFSM	2.79	2.99	4.35	1.29	2.93	1.93	2.51	1.30	1.02	2.23	1.56	2.80
IN.	3.22	3.33	5.02	1.48	3.16	2.22	2.80	1.50	1.14	2.57	1.80	3.13

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)**

MEAN	7.60	11.1	14.7	14.1	16.7	21.3	19.0	14.9	11.4	8.51	5.92	7.53
MAX	25.3	25.6	49.9	35.9	44.8	58.4	47.4	36.7	46.0	34.0	22.1	29.2
(WY)	1997	2004	1997	1978	1971	1994	1983	1989	2003	1984	1971	2003
MIN	1.71	2.45	2.07	1.19	3.75	6.58	4.84	4.97	2.30	0.83	0.58	0.88
(WY)	2002	2002	1981	1981	2002	1981	1985	1969	1999	2002	2002	1980

e Estimated.

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	8558.0		7231.8			
ANNUAL MEAN	23.4		19.8		12.7	
HIGHEST ANNUAL MEAN					23.2	
LOWEST ANNUAL MEAN					4.37	
HIGHEST DAILY MEAN	252	Jun 21	194	Dec 11	444	Jun 22 1972
LOWEST DAILY MEAN	e2.0	Feb 17	2.8	Jul 11	0.21	Aug 20 2002
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 25	3.6	Jun 30	0.24	Aug 16 2002
MAXIMUM PEAK FLOW			265	Dec 11	a946	Jun 22 1972
MAXIMUM PEAK STAGE			2.74	Dec 11	4.68	Jun 22 1972
INSTANTANEOUS LOW FLOW			2.6	Jul 5,11,12	0.21	Aug 6 1999b
ANNUAL RUNOFF (CFSM)	2.74		2.31		1.48	
ANNUAL RUNOFF (INCHES)	37.15		31.39		20.15	
10 PERCENT EXCEEDS	54		42		25	
50 PERCENT EXCEEDS	14		12		7.7	
90 PERCENT EXCEEDS	5.0		5.2		2.1	

a From rating curve extended above 903 ft<sup>3</sup>/s based on straight-line extension.

b Also Aug. 19-22, 2002.

e Estimated.

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

PERIOD OF RECORD.--October 2003 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)
NOV 18...	1200	1028	80020	13	11.7	7.3	7.5	177	186	7.7	12.9	5.05	2.38
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)	
NOV 18...		11.5	29	22.2	15.9	12.3	.06	1.28	.017	E.01	22	253	

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, 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 m<sup>2</sup>.

Date	11/18/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nemertea (PROBOSAS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
Prostoma	13
Mollusca	
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	8
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	5
Crustacea	
Copepoda	1
Podocopa	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	4
Ephemerellidae	
Dannella	11
Ephemerella	14
Eurylophella	6
Serratella	166
Heptageniidae	
Stenacron	3
Stenonema	21
Leptophlebiidae	
Paraleptophlebia	46
Odonata	
Gomphidae (DRAGONFLIES)	4
Plecoptera (STONEFLIES)	
Capniidae	
Allocapnia	181
Chloroperlidae	
Sweltsa	2
Peltoperlidae	
Peltoperla	1
Perlidae	
Acroneuria	27
Paragnetina	30
Taeniopterygidae	
Strophopteryx	240
Taeniopteryx	118

CHRISTINA RIVER BASIN

01480675 MARSH CREEK NEAR GLENMOORE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	11/18/03
Benthic Macroinvertebrate	Count
Hemiptera	
Veliidae	
<i>Rhagovelia</i>	1
Megaloptera	
Sialidae	
<i>Sialis</i>	1
Trichoptera (CADDISFLIES)	
Apataniidae	
<i>Apatania</i>	3
Brachycentridae	
<i>Micrasema</i>	3
Hydropsychidae	
<i>Cheumatopsyche</i>	14
<i>Diplectrona</i>	63
<i>Hydropsyche</i>	140
Philopotamidae	
<i>Chimarra</i>	61
<i>Dolophilodes</i>	9
Polycentropodidae	
<i>Polycentropus</i>	2
Psychomyiidae	
<i>Lype</i>	3
<i>Psychomyia</i>	2
Rhyacophilidae	
<i>Rhyacophila</i>	10
Uenoidae	
<i>Neophylax</i>	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Ancyronyx</i>	1
<i>Dubiraphia</i>	2
<i>Macronychus</i>	4
<i>Optioservus</i>	13
<i>Oulimnius</i>	15
<i>Promoresia</i>	13
<i>Stenelmis</i>	48
Psephenidae (WATER PENNIES)	
<i>Ectopria</i>	1
<i>Psephenus</i>	8
Ptilodactylidae	
<i>Anchytarsus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	67
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	2
Simuliidae (BLACK FLIES)	
<i>Prosimulium</i>	273
<i>Simulium</i>	10
Tipulidae (CRANE FLIES)	
<i>Dicranota</i>	7
<i>Hexatoma</i>	1
<i>Tipula</i>	4
Total Organisms	1690
Total Taxa	54