

## CHRISTINA RIVER BASIN

## 01480685 MARSH CREEK NEAR DOWNINGTOWN, PA

**LOCATION.**--Lat 40°03'19", long 75°43'00", Chester County, Hydrologic Unit 02040205, on left bank 1,000 ft downstream from Marsh Creek Dam, 0.2 mi upstream from mouth, and 3.0 mi north of Downingtown.

**DRAINAGE AREA.**--20.3 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--June 1973 to current year.

**GAGE.**--Water-stage recorder and concrete control. Elevation of gage is 280 ft above sea level, from topographic map.

**REMARKS.**--No estimated daily discharges. Records good. Flow completely regulated since November 1973 by Marsh Creek Reservoir (station 01480684). Several measurements of water temperature were made during the year. Satellite telemetry at station.

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	9.7	12	13	44	14	16	20	4.8	16	8.9	8.1	9.7
2	9.7	12	13	64	15	16	22	4.8	15	10	8.1	9.7
3	9.7	12	13	52	46	16	22	4.8	14	9.8	8.1	9.7
4	11	12	13	45	67	15	22	4.8	13	7.7	8.1	9.2
5	11	12	13	66	67	15	21	5.1	7.8	9.4	8.2	8.7
6	11	12	13	66	35	15	22	4.2	7.8	11	8.6	4.3
7	11	12	13	66	15	15	22	6.3	7.1	9.1	8.6	.20
8	9.6	12	13	66	15	15	22	11	6.4	7.8	8.6	.35
9	1.8	12	13	66	15	16	23	13	6.1	9.7	8.6	2.2
10	3.7	12	13	47	15	16	49	13	5.4	10	9.4	7.3
11	3.7	12	13	13	15	16	56	13	5.4	9.4	9.0	.21
12	6.4	14	13	13	15	16	70	11	5.4	9.3	8.8	5.0
13	7.2	14	13	13	15	16	77	9.7	5.8	9.8	8.7	11
14	7.9	14	13	13	15	16	74	9.7	6.7	9.3	9.2	11
15	7.5	13	13	13	15	18	55	9.7	7.1	9.8	9.3	11
16	9.5	13	13	22	15	20	16	9.7	7.1	10	9.3	16
17	13	13	12	35	15	21	16	9.2	7.1	9.4	9.1	44
18	12	13	9.9	50	16	17	16	13	7.0	9.0	9.1	84
19	11	13	11	66	16	16	22	18	6.8	8.9	9.1	115
20	11	13	11	66	16	16	40	18	6.6	8.5	8.8	138
21	11	13	11	66	16	17	40	18	6.6	9.3	8.7	79
22	11	13	12	66	15	53	40	18	8.3	10	9.1	77
23	12	13	12	66	15	81	40	18	16	9.8	9.1	75
24	11	13	12	66	15	81	40	29	14	9.7	9.1	132
25	11	13	12	66	15	64	40	61	12	9.7	9.0	167
26	11	13	12	66	16	20	37	51	11	9.7	5.2	167
27	11	13	12	66	16	20	26	31	10	9.1	.26	88
28	11	13	12	66	16	21	17	12	9.9	8.1	.68	31
29	12	13	12	66	---	21	8.6	14	10	8.1	5.8	22
30	12	13	12	41	---	21	7.5	17	9.5	8.1	10	9.4
31	12	---	12	14	---	20	---	17	---	8.1	10	---
TOTAL	302.4	382	382.9	1535	581	746	983.1	478.8	270.9	286.5	251.74	1343.96
MEAN	9.75	12.7	12.4	49.5	20.8	24.1	32.8	15.4	9.03	9.24	8.12	44.8
MAX	13	14	13	66	67	81	77	61	16	11	10	167
MIN	1.8	12	9.9	13	14	15	7.5	4.2	5.4	7.7	.26	.20
(†)	+3.4	-6.6	-5.5	-5.5	+6.8	+15.6	0	+2.4	-3.2	-7.3	-5.5	+16.0

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1999, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	19.9	23.1	43.1	43.5	34.4	39.4	42.9	34.3	23.3	21.5	14.4	16.9															
MAX	59.5	60.0	148	128	72.4	119	140	83.4	71.2	81.6	31.4	54.3															
(WY)	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MIN	3.39	3.50	3.01	7.30	.86	.83	.84	.72	4.06	5.18	6.42	6.47															
(WY)	1981	1979	1974	1981	1989	1974	1974	1974	1976	1983	1981	1981															

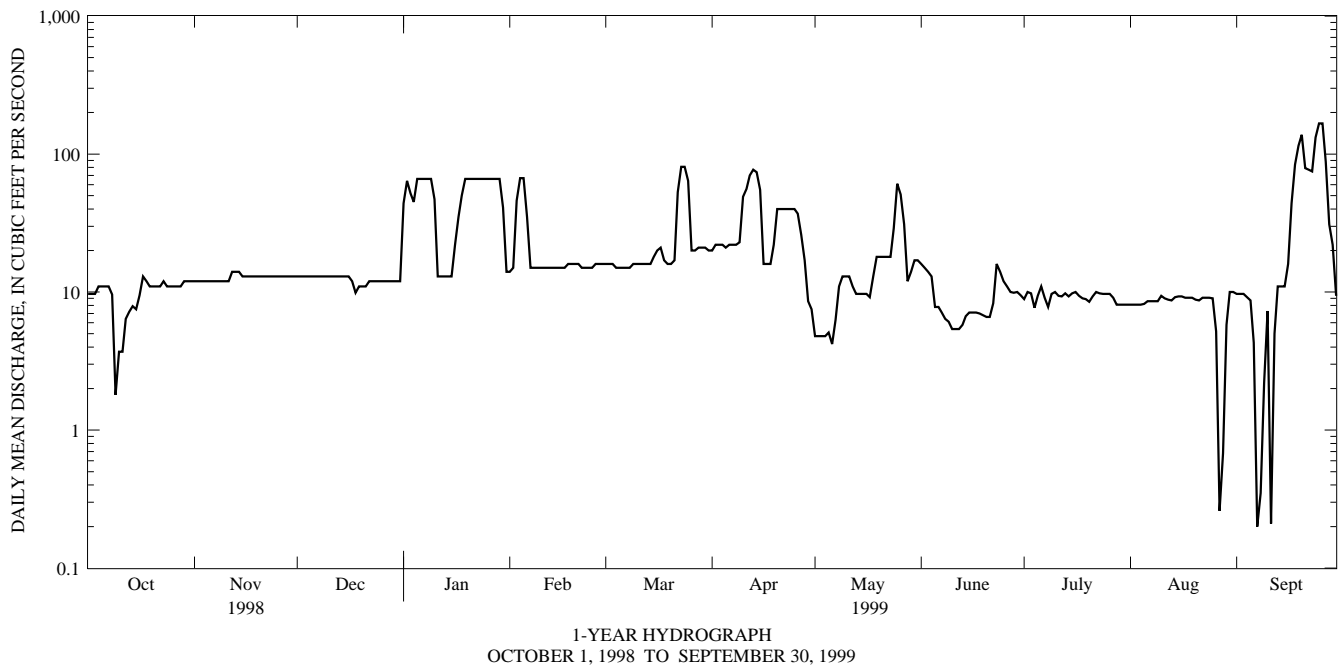
† Change in contents from Marsh Creek Reservoir, equivalent in cubic feet per second.

CHRISTINA RIVER BASIN

01480685 MARSH CREEK NEAR DOWNINGTOWN, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR			FOR 1999 WATER YEAR			WATER YEARS 1973 - 1999		
ANNUAL TOTAL	10087.2			7544.30					
ANNUAL MEAN	27.6			20.7			29.6		
HIGHEST ANNUAL MEAN							52.9		
LOWEST ANNUAL MEAN							11.6		
HIGHEST DAILY MEAN	208	Apr	3	167	Sep	25	462	Jun	18 1982
LOWEST DAILY MEAN	1.8	Oct	9	.20	Sep	7	.20	Sep	7 1999
ANNUAL SEVEN-DAY MINIMUM	5.5	Oct	9	2.8	Sep	6	.40	Feb	27 1980
INSTANTANEOUS PEAK FLOW				173	Sep	19	a560	Dec	14 1983
INSTANTANEOUS PEAK STAGE				2.88	Sep	19	3.70	Dec	14 1983
10 PERCENT EXCEEDS	63			58			66		
50 PERCENT EXCEEDS	13			13			15		
90 PERCENT EXCEEDS	9.7			7.2			5.9		

a From rating curve extended above 300 ft<sup>3</sup>/s.



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01480685 MARSH CREEK NEAR DOWNINGTOWN, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1982 to March 1983, July 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, µM-MF (COLS./ 100 ML) (31616)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)
MAY 1999										
04...	1115	1028	1028	4.8	10.2	7.2	197	13.5	67	75
JUL										
20...	1230	1028	1028	7.8	7.5	7.0	200	9.5	K40	--
AUG										
03...	1010	1028	1028	8.1	7.6	6.4	203	10.0	K81	--
SEP										
16...	0825	1028	1028	1.2	--	--	281	12.0	2200	2400