

## CHRISTINA RIVER BASIN

## 01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA

**LOCATION.**--Lat 39°49'00", long 75°41'31", Chester County, Hydrologic Unit 02040205, on left bank along SR 82 (Creek Road), and 3.0 mi south of the intersection of SR 82 and U.S. Highway 1 at Kennett Square.

**DRAINAGE AREA.**--28.3 mi<sup>2</sup>.

**PERIOD OF RECORD.**--January 1988 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 200 ft above sea level, from topographic map.

**REMARKS.**--Records poor. Some regulation upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 1,000 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)
Jan. 18	----	Unknown	Ice jam	Sept. 16	1745	*4,680	*10.04
Mar. 21	2300	1,420	6.47				

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	12	e9.9	9.7	e12	17	72	36	20	18	16	5.2	5.5
2	9.8	e9.8	9.5	e10	89	39	35	19	18	49	5.1	5.0
3	8.0	e9.5	9.9	e200	42	35	30	20	20	69	6.3	5.1
4	21	e9.5	11	e40	27	51	31	21	17	17	7.5	6.2
5	16	e9.5	18	e20	23	36	38	20	16	13	8.4	41
6	14	e9.5	13	e15	20	e38	29	20	16	11	7.0	30
7	13	e9.2	13	e14	22	43	29	21	16	9.8	6.1	25
8	33	e9.1	16	e14	43	e31	27	20	16	8.9	6.4	10
9	63	e9.5	22	e25	28	e28	53	18	15	9.4	5.9	7.8
10	60	e9.5	14	e30	23	e29	103	17	16	9.5	4.2	21
11	17	e14	13	e16	21	23	73	17	16	9.9	3.7	8.7
12	13	e13	13	e15	30	22	81	17	15	9.1	3.1	7.4
13	e12	e11	13	e30	57	21	41	54	20	11	3.6	6.9
14	15	e10	13	e40	26	25	34	21	27	10	5.2	7.4
15	11	e10	13	e195	23	56	40	17	21	10	5.3	14
16	e11	e10	e12	e70	22	56	46	16	15	9.7	5.7	1820
17	e11	e9.7	e12	e50	22	57	37	16	16	9.4	5.6	149
18	11	e10	e12	e300	110	44	29	16	18	9.1	4.6	40
19	10	e9.5	e12	95	42	32	27	29	15	7.9	3.9	31
20	10	9.4	e12	48	30	29	28	20	16	11	12	28
21	8.8	11	e12	40	25	200	26	16	21	9.5	8.9	78
22	e9.0	e10	e12	40	e23	356	39	15	17	9.3	5.1	84
23	e10	e10	e12	40	e22	62	42	19	15	8.4	3.6	35
24	e10	e10	13	172	e22	49	42	47	14	8.1	3.0	26
25	e10	e10	12	62	e22	41	29	34	14	8.2	2.4	22
26	e10	31	12	41	e22	36	27	24	13	7.3	82	19
27	e10	13	e12	32	e21	34	24	22	14	7.3	120	18
28	e10	11	e12	28	e49	37	23	21	15	7.3	20	18
29	e9.9	9.9	e14	24	---	34	21	19	15	6.4	8.7	17
30	e9.9	9.3	e15	20	---	31	21	18	15	6.5	5.7	95
31	e9.9	---	e13	18	---	31	---	18	---	6.0	5.5	---
TOTAL	478.3	326.8	400.1	1756	923	1678	1141	672	500	394.0	379.7	2681.0
MEAN	15.4	10.9	12.9	56.6	33.0	54.1	38.0	21.7	16.7	12.7	12.2	89.4
MAX	63	31	22	300	110	356	103	54	27	69	120	1820
MIN	8.0	9.1	9.5	10	17	21	21	15	13	6.0	2.4	5.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	28.7	33.5	40.7	51.6	43.8	59.1	46.9	42.5	32.1	28.7	22.8	31.1
MAX	75.5	61.3	128	96.1	81.2	116	85.5	79.2	57.3	94.5	55.2	89.4
(WY)	1997	1997	1997	1996	1994	1994	1993	1989	1996	1989	1996	1999
MIN	10.8	10.9	12.9	22.0	24.9	34.0	24.9	21.7	16.0	12.0	5.84	8.83
(WY)	1995	1999	1999	1992	1995	1990	1992	1999	1995	1995	1995	1995

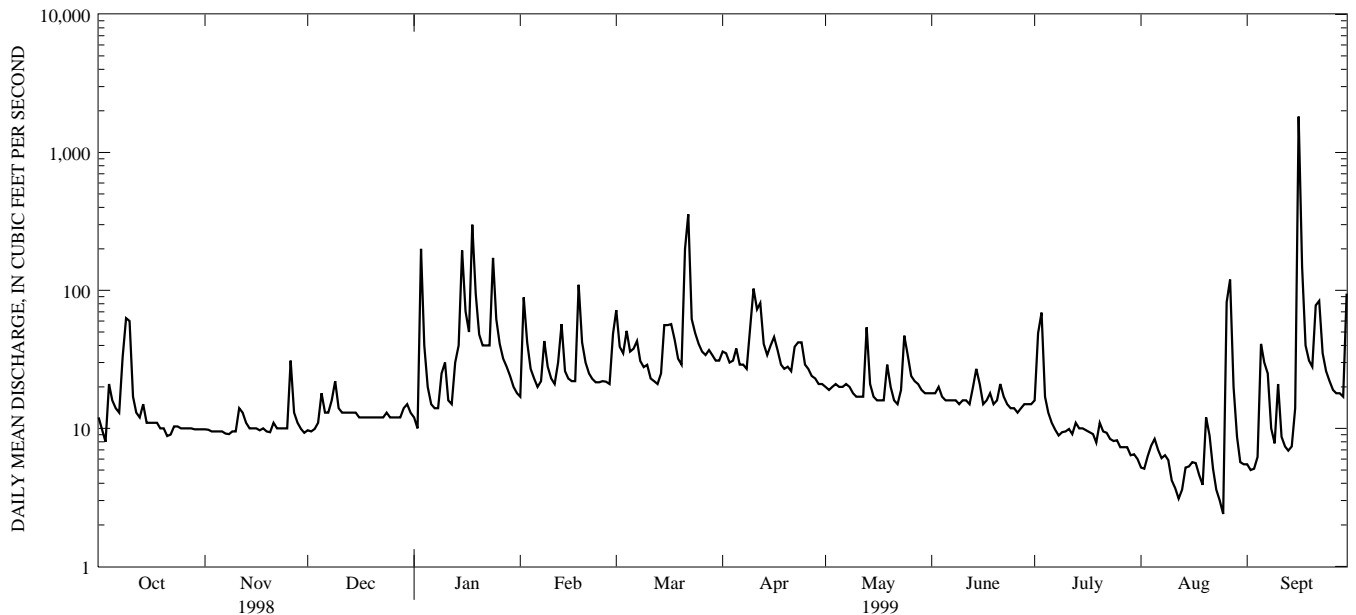
e Estimated.

CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	10652.2		11329.9		38.7	
ANNUAL MEAN	29.2		31.0		52.0	
HIGHEST ANNUAL MEAN					21.4	
LOWEST ANNUAL MEAN					1995	
HIGHEST DAILY MEAN	262	Jan 23	1820	Sep 16	1820	Sep 16 1999
LOWEST DAILY MEAN	6.7	Sep 29	2.4	Aug 25	.86	Sep 3 1995
ANNUAL SEVEN-DAY MINIMUM	8.4	Sep 24	4.4	Aug 10	1.1	Sep 2 1995
INSTANTANEOUS PEAK FLOW			a4680	Sep 16	a4680	Sep 16 1999
INSTANTANEOUS PEAK STAGE			10.04	Sep 16	10.04	Sep 16 1999
10 PERCENT EXCEEDS	51		49		60	
50 PERCENT EXCEEDS	22		16		27	
90 PERCENT EXCEEDS	9.9		7.5		12	

a From rating curve extended above 2,100 ft<sup>3</sup>/s.



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