

CHRISTINA RIVER BASIN

01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA
(Pennsylvania Water-Quality Network Station)

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. 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 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
June 19	2145	*981	*5.84	(No peaks above base discharge.)			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	12	15	24	15	30	25	17	17	7.8	17
2	13	15	12	14	21	16	19	39	15	17	7.7	14
3	12	14	12	13	18	133	19	26	15	17	8.2	11
4	12	12	12	12	17	24	18	20	14	15	7.9	9.3
5	12	13	12	12	16	18	17	19	14	14	9.3	8.4
6	15	13	12	29	16	16	16	18	50	13	9.4	8.0
7	12	12	12	40	16	15	14	18	49	13	6.4	7.8
8	11	12	15	22	16	15	15	18	18	13	6.1	7.9
9	12	12	20	18	16	14	16	19	14	13	5.1	7.8
10	13	12	12	20	16	20	17	19	14	15	5.0	8.0
11	13	11	17	78	19	16	17	17	13	12	5.2	7.7
12	14	11	17	30	16	16	19	19	14	12	5.1	11
13	15	11	17	21	16	27	18	42	18	11	5.0	10
14	14	12	23	18	15	27	17	30	58	15	4.7	7.1
15	23	12	20	18	16	24	18	20	31	15	6.9	7.9
16	15	12	17	17	16	24	16	18	28	13	5.1	14
17	16	11	18	16	15	24	16	17	20	11	11	8.1
18	15	11	33	15	15	52	17	135	15	9.9	16	7.5
19	15	11	20	15	15	24	22	35	140	9.7	5.0	6.7
20	15	13	18	17	16	111	28	25	69	10	6.2	7.3
21	14	12	18	16	22	43	15	22	22	8.7	5.7	5.5
22	15	11	17	17	16	25	24	20	16	9.1	6.0	5.0
23	16	11	16	19	15	20	18	19	14	8.7	6.4	5.9
24	16	11	34	59	15	20	17	19	32	13	10	6.0
25	16	30	19	32	15	19	24	19	43	9.8	10	6.0
26	14	31	17	19	15	20	24	18	22	8.9	4.6	19
27	13	17	17	17	16	79	20	19	29	9.9	5.1	66
28	13	16	17	17	15	25	86	20	35	9.8	11	39
29	13	15	17	16	---	21	31	18	20	11	131	12
30	14	13	16	16	---	19	24	18	17	8.0	29	12
31	14	---	16	28	---	22	---	17	---	10	10	---
TOTAL	438	411	535	696	464	944	652	788	876	372.5	371.9	362.9
MEAN	14.1	13.7	17.3	22.5	16.6	30.5	21.7	25.4	29.2	12.0	12.0	12.1
MAX	23	31	34	78	24	133	86	135	140	17	131	66
MIN	11	11	12	12	15	14	14	17	13	8.0	4.6	5.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

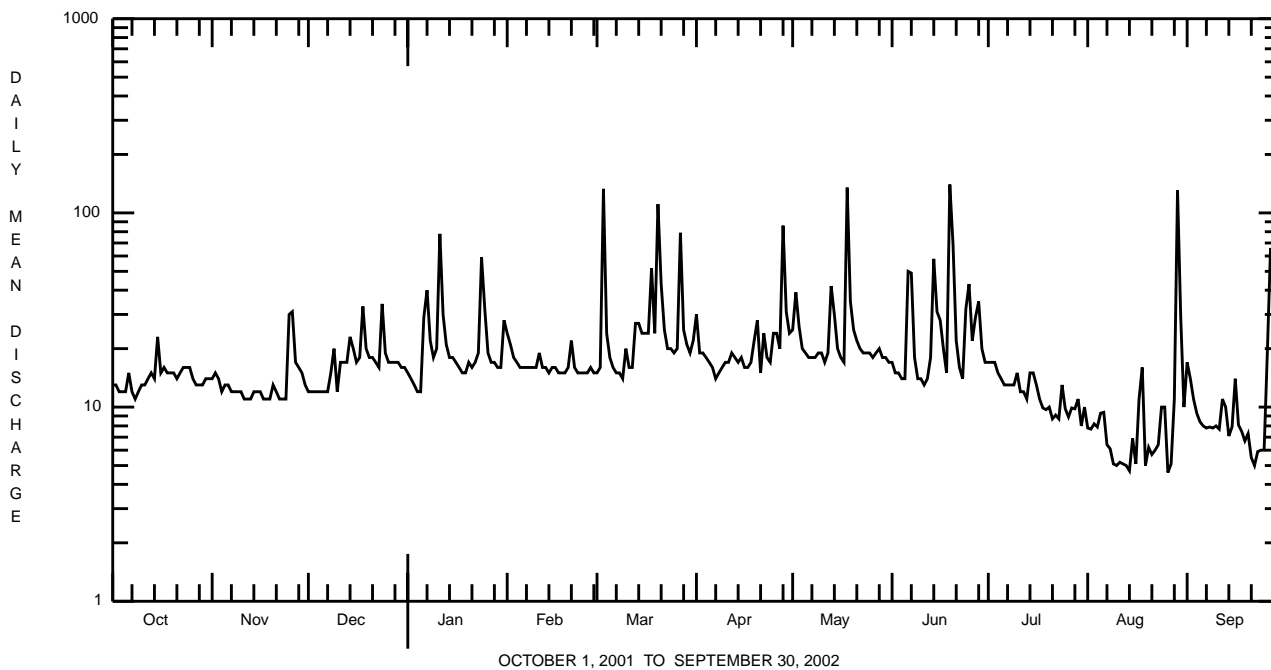
MEAN	26.6	31.0	40.3	48.0	42.7	60.1	45.6	40.5	32.6	26.7	21.5	29.2
MAX	75.5	61.3	128	96.1	81.2	116	85.5	79.2	57.3	94.5	55.2	89.4
(WY)	1997	1997	1997	1996	1994	1994	1993	1989	1996	1989	1996	1999
MIN	10.8	10.9	12.9	22.0	16.6	30.5	21.7	21.7	16.0	12.0	5.84	8.83
(WY)	1995	1999	1999	1992	2002	2002	2002	1999	1995	1995	1995	1995

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	11193.4		6911.3			
ANNUAL MEAN	30.7		18.9		37.2	
HIGHEST ANNUAL MEAN					52.0	1997
LOWEST ANNUAL MEAN					18.9	2002
HIGHEST DAILY MEAN	454	Mar 30	140	Jun 19	1820	Sep 16 1999
LOWEST DAILY MEAN	8.9	Aug 9	4.6	Aug 26	0.86	Sep 3 1995
ANNUAL SEVEN-DAY MINIMUM	11	Aug 3	5.2	Aug 8	1.1	Sep 2 1995
MAXIMUM PEAK FLOW			981	Jun 19	a4680	Sep 16 1999
MAXIMUM PEAK STAGE			5.84	Jun 19	10.04	Sep 16 1999
10 PERCENT EXCEEDS	54		29		59	
50 PERCENT EXCEEDS	20		16		26	
90 PERCENT EXCEEDS	12		8.0		12	

a From rating curve extended above 2,100 ft³/s.



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01479820 RED CLAY CREEK NEAR KENNETT SQUARE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 410-425.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING METHOD, CODES (82398)	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)	HARD- NESS TOTAL (MG/L) AS CACO3 (00900)	CALCIUM RECOV- ERABLE (MG/L) AS CA (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L) AS MG (00927)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)
APR 2002 24...	1340	9813	17	30	12.7	8.2	403	13.0	170	40.5	16.3	90	37.6
JUN 25...	1420	9813	31	30	9.0	7.9	310	23.0	120	28.3	11.1	70	23.9
AUG 28...	1115	9813	8.3	30	8.9	8.0	476	21.4	170	40.7	17.3	112	39.0
Date	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L) (00515)	RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N (00610)	NITRO- GEN, NITRATE TOTAL (MG/L) AS N (00620)	NITRO- GEN, NITRITE TOTAL (MG/L) AS N (00615)	NITRO- GEN, TOTAL (MG/L) AS N (00600)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	CARBON, ORGANIC DIS- SOLVED TOTAL (MG/L) AS C (00681)	CARBON, ORGANIC TOTAL (MG/L) AS C (00680)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
APR 2002 24...	37.8	312	28	.040	4.79	.050	5.2	.309	.350	3.1	3.3	1.1	<10
JUN 25...	30.2	246	18	.170	2.70	.040	3.3	.174	.250	7.5	6.8	2.0	28
AUG 28...	40.5	710	12	<.020	4.56	<.010	5.1	.645	.670	3.4	3.6	.5	<10
Date	FECAL COLI- FORM, MFC MF, WATER (COL/ 100 ML) (31616)	ARSENIC DIS- SOLVED (µG/L) AS AS (01000)	ARSENIC TOTAL (µG/L) AS AS (01002)	CADMIUM DIS- SOLVED (µG/L) AS CD (01025)	CADMIUM WATER UNFLTRD TOTAL (µG/L) AS CD (01027)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (µG/L) AS CR (01032)	CHRO- MIUM, TOTAL RECOV- ERABLE (µG/L) AS CR (01034)	COPPER, DIS- SOLVED (µG/L) AS CU (01040)	COPPER, TOTAL RECOV- ERABLE (µG/L) AS CU (01042)	IRON, DIS- SOLVED (µG/L) AS FE (01046)	IRON, TOTAL RECOV- ERABLE (µG/L) AS FE (01045)	LEAD, DIS- SOLVED (µG/L) AS PB (01049)	LEAD, TOTAL RECOV- ERABLE (µG/L) AS PB (01051)
APR 2002 24...	180	<4.0	<4	<.20	<.2	<1	<4	<4	<4	50	170	<1.0	<1.0
JUN 25...	20000	<4.0	<4	<.20	<.2	<1	<4	<4	7.3	80	1420	<1.0	2.5
AUG 28...	1000	<4.0	<4	<.20	<.2	<1	<4	<4	<4	30	150	<1.0	<1.0
Date	MANGA- NESE, DIS- SOLVED (µG/L) AS MN (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L) AS MN (01055)	MERCURY DIS- SOLVED (µG/L) AS HG (71890)	MERCURY TOTAL RECOV- ERABLE (µG/L) AS HG (71900)	NICKEL, DIS- SOLVED (µG/L) AS NI (01065)	NICKEL, TOTAL RECOV- ERABLE (µG/L) AS NI (01067)	SELE- NIUM, DIS- SOLVED (µG/L) AS SE (01145)	SILVER, DIS- SOLVED (µG/L) AS AG (01075)	SILVER, TOTAL RECOV- ERABLE (µG/L) AS AG (01077)	ZINC, DIS- SOLVED (µG/L) AS ZN (01090)	ZINC, TOTAL RECOV- ERABLE (µG/L) AS ZN (01092)		
APR 2002 24...	20	30	<.20	<.2	<4.0	<4.0	<7	<.4	<.40	7.0	9.7		
JUN 25...	30	60	<.20	<.2	<4.0	<4.0	<7	<.4	<.40	5.0	10		
AUG 28...	20	30	<.20	<.2	<4.0	<4.0	<7	<.4	<.40	10	10		