

CHRISTINA RIVER BASIN

01479678 UNNAMED TRIBUTARY TO WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA
(New Garden Township, Chester County, Spray Irrigation Project)

LOCATION.--Lat 39°50'56", long 75°43'41", Chester County, Hydrologic unit 02040205, on right bank 600 ft upstream of confluence with West Branch Red Clay Creek, downstream of pond (station 01479677), at Kennett Square Borough.

DRAINAGE AREA.--0.07 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above sea level, from topographic map.

REMARKS.--Records poor. Monthly water-quality samples were collected during the year. Other data for this project presented in tables on pages 323-333 and 412-428.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.031	.035	.043	.045	e.031	.045	e.060	e.080	.081	.080	.088	.108
2	.028	.081	.045	.047	e.028	.044	e.065	e.090	.077	.080	.078	.065
3	.030	.043	.045	.045	e.026	.045	e.067	e.080	.069	.178	.087	.064
4	.084	.034	.045	.231	e.029	.045	e.090	e.092	.075	.124	.079	.057
5	.212	.039	.045	.090	e.032	.045	e.062	e.093	.075	.086	.075	.055
6	.038	.042	.129	.059	e.035	.042	.047	e.094	.149	.082	.077	.061
7	.037	.043	.047	.058	e.038	.033	.045	e.084	.091	.089	.083	.057
8	.042	.032	.045	.056	e.034	.039	.064	e.082	.066	.079	.078	.057
9	.037	.030	.045	.053	e.037	.033	.230	e.080	.060	.085	.078	.055
10	.261	.032	.108	.126	e.040	.034	.105	e.130	.065	.082	.076	.051
11	.042	.030	.049	.057	.043	.048	.094	e.085	.056	.075	.071	.051
12	.029	.031	.045	.051	e.040	.062	.113	e.085	.061	.073	.071	.051
13	.031	.033	.112	.051	e.038	.039	.099	e.125	.068	.076	.071	.058
14	.034	.032	.568	.045	.114	.029	.103	e.095	.068	.095	.121	.052
15	.037	.030	.093	.045	.164	.033	.120	e.088	.071	.096	.084	.127
16	.026	.030	.056	.046	.366	.077	.192	e.094	.068	.113	.075	.065
17	.032	.030	.051	.045	.053	.209	.333	e.110	.061	.081	.071	.064
18	.035	.032	.050	e.040	.066	.044	.194	.093	.058	.067	.074	.064
19	.031	.036	.047	e.042	.746	.038	.132	.146	.058	.097	.075	.347
20	.149	.039	.081	e.040	.174	.033	.130	.129	.055	.076	.071	.071
21	.036	.045	.055	e.037	.053	1.3	.333	.118	.057	.064	.071	.046
22	.044	.042	.047	e.032	.047	1.4	.172	.125	.088	.063	.071	.040
23	.051	.048	.047	e.035	.045	.078	.088	.117	.061	.064	.071	.043
24	.045	.040	.045	e.038	.045	.054	.079	.124	.060	.072	.071	.045
25	.045	.075	.045	e.032	.045	.046	e.076	.078	.061	.068	.068	.144
26	.044	.187	.045	e.028	.045	.045	e.078	.072	.066	.196	.064	.291
27	.030	.321	.045	e.025	.045	.088	e.084	.080	.061	.102	.078	.057
28	.029	.050	.045	e.027	.049	e.190	e.080	.091	.553	.077	.087	.051
29	.026	.045	.045	e.028	.044	e.064	e.075	.082	.126	.078	.066	.049
30	.030	.046	.045	e.030	---	e.064	e.071	.077	.085	.075	.068	.047
31	.033	---	.046	e.031	---	e.064	---	.078	---	.090	.067	---
TOTAL	1.659	1.633	2.259	1.615	2.552	4.410	3.481	2.997	2.650	2.763	2.365	2.393
MEAN	.054	.054	.073	.052	.088	.14	.12	.097	.088	.089	.076	.080
MAX	.261	.321	.568	.231	.746	1.4	.333	.146	.553	.196	.121	.347
MIN	.026	.030	.043	.025	.026	.029	.045	.072	.055	.063	.064	.040
CFSM	.76	.78	1.04	.74	1.26	2.03	1.66	1.38	1.26	1.27	1.09	1.14
IN.	.88	.87	1.20	.86	1.36	2.34	1.85	1.59	1.41	1.47	1.26	1.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000
MEAN	.033	.032	.044	.054	.089	.14	.12	.048	.046	.037	.033	.10
MAX	.054	.055	.075	.054	.089	.14	.12	.096	.089	.090	.077	.22
(WY)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1999
MIN	.012	.009	.013	.054	.089	.14	.12	.019	.020	.010	.009	.008
(WY)	1999	1999	1999	2000	2000	2000	2000	1999	1999	1999	1998	1998

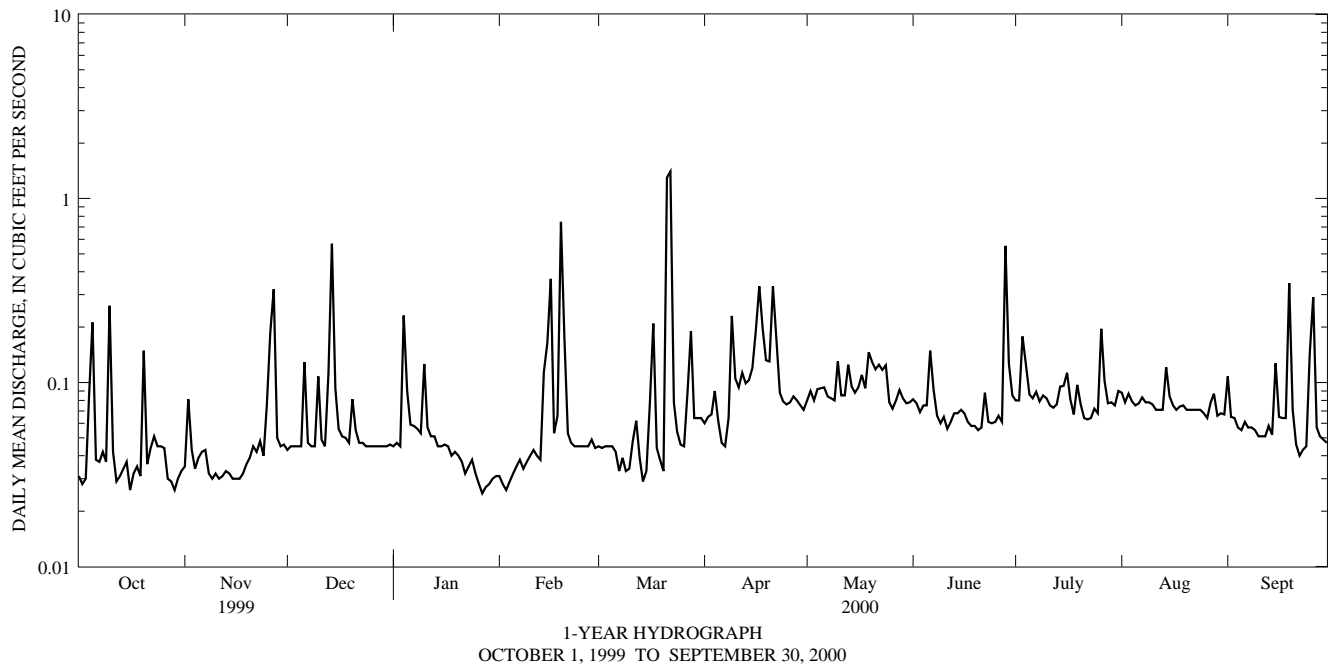
e Estimated.

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SUMMARY STATISTICS	FOR 2000 WATER YEAR		WATER YEARS 1998 - 2000	
ANNUAL TOTAL	30.777			
ANNUAL MEAN	.084		.085	
HIGHEST ANNUAL MEAN			.085	2000
LOWEST ANNUAL MEAN			.085	2000
HIGHEST DAILY MEAN	1.4	Mar 22	e 5.5	Sep 16 1999
LOWEST DAILY MEAN	e .025	Jan 27	a .000	Jul 26 1999
ANNUAL SEVEN-DAY MINIMUM	.03	Jan 26	a .00	Jul 12 1999
INSTANTANEOUS PEAK FLOW	8.8	Mar 21	27	Sep 16 1999
INSTANTANEOUS PEAK STAGE	1.46	Mar 21	b 1.82	Sep 16 1999
INSTANTANEOUS LOW FLOW	.02	Mar 14	a .00	Jul 19 1999
ANNUAL RUNOFF (CFSM)	1.20		1.21	
ANNUAL RUNOFF (INCHES)	16.36		16.43	
10 PERCENT EXCEEDS	.13		.09	
50 PERCENT EXCEEDS	.06		.03	
90 PERCENT EXCEEDS	.03		.01	

e Estimated.
a First occurrence.
b Maximum recorded.



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(New Garden Township, Chester County, Spray Irrigation Project)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 to current year.

WATER-QUALITY DATA, OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	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)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD IT FIELD (MG/L AS CACO3) (00419)
OCT 1999												
28...	1400	9813	1028	7.7	7.4	394	11.7	--	--	--	--	71
DEC												
01...	1400	9813	1028	11.2	7.4	383	3.9	--	--	--	--	70
JAN 2000												
03...	1300	9813	1028	10.4	7.2	392	8.6	48.2	11.5	3.8	7.7	62
FEB												
02...	1500	9813	1028	--	6.6	427	1.5	--	--	--	--	72
MAR												
08...	1400	9813	1028	10.0	6.3	387	14.4	--	--	--	--	58
APR												
03...	1400	9813	1028	10.0	6.5	331	13.8	--	--	--	--	60
MAY												
17...	1000	9813	1028	9.7	7.3	409	15.7	59.0	12.8	4.1	8.1	96
JUN												
28...	1400	9813	1028	5.9	6.3	437	22.5	--	--	--	--	99
JUL												
31...	1000	9813	1028	6.1	7.2	398	21.4	57.2	12.5	4.8	8.4	118
AUG												
31...	1000	9813	1028	5.3	7.5	425	21.2	--	--	--	--	103
SEP												
21...	1300	9813	1028	5.5	7.4	347	18.6	45.3	10.8	4.9	8.2	84
28...	1300	9813	1028	7.3	7.2	380	15.3	45.2	9.56	4.5	6.9	85

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00602)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1999												
28...	--	--	--	--	<.02	<.020	8.80	9.2	9.1	.050	.039	<.002
DEC												
01...	--	--	--	--	<.02	<.020	7.76	8.4	7.9	.040	.046	.027
JAN 2000												
03...	26.7	<.2	13.0	37.3	.02	.020	9.97	10	10	.050	.063	.028
FEB												
02...	--	--	--	--	<.02	<.020	13.6	16	15	.020	.056	<.010
MAR												
08...	--	--	--	--	.04	.040	11.5	12	11	.070	.087	.010
APR												
03...	--	--	--	--	<.02	.020	5.60	6.3	5.9	<.040	.026	.027
MAY												
17...	26.7	<.2	12.2	33.6	.03	.030	4.70	6.0	5.3	.070	.130	.128
JUN												
28...	--	--	--	--	.03	.030	5.60	6.6	6.4	<.040	.053	.036
JUL												
31...	33.2	<.2	10.6	27.0	.03	.030	4.10	5.9	4.6	<.040	.140	.083
AUG												
31...	--	--	--	--	<.02	<.020	4.89	5.8	5.5	<.040	.077	.045
SEP												
21...	32.3	<.2	9.1	31.5	<.02	<.020	5.40	8.8	--	<.040	.063	.079
28...	30.3	<.2	9.3	30.6	.03	.020	5.70	6.7	6.2	<.040	.057	.062

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01479678 UNNAMED TRIBUTARY TO WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA--Continued

WATER-QUALITY DATA, OCTOBER 1999 TO SEPTEMBER 2000

DATE	PHOS-	CARBON,	CARBON,	SOLIDS,	ALUM-	ANTI-	ARSENIC	BARIUM,	BORON,	BROMIDE	CADMIUM
	PHORUS TOTAL (MG/L AS P) (00665)	ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ORGANIC TOTAL (MG/L AS C) (00680)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	INUM, DIS- SOLVED (MG/L AS AL) (01106)	MONY, DIS- SOLVED (MG/L AS SB) (01095)	DIS- SOLVED (MG/L AS AS) (01000)	DIS- SOLVED (MG/L AS BA) (01005)	DIS- SOLVED (MG/L AS B) (01020)	DIS- SOLVED (MG/L AS BR) (71870)	DIS- SOLVED (MG/L AS CD) (01025)
OCT 1999											
28...	.060	--	--	--	--	--	--	--	--	--	--
DEC											
01...	.090	--	--	--	--	--	--	--	--	--	--
JAN 2000											
03...	.130	3.1	--	300	--	--	--	--	<200	.27	--
FEB											
02...	.130	--	--	--	--	--	--	--	--	--	--
MAR											
08...	.110	--	--	--	--	--	--	--	--	--	--
APR											
03...	.060	--	--	--	--	--	--	--	--	--	--
MAY											
17...	.150	4.6	--	274	16	--	--	--	<200	<.20	--
JUN											
28...	.110	--	--	--	--	--	--	--	--	--	--
JUL											
31...	.150	5.5	--	288	23	--	--	--	<200	<.20	--
AUG											
31...	.080	--	--	--	--	--	--	--	--	--	--
SEP											
21...	.110	3.8	3.8	336	21	<2	<4.0	70	<200	<.20	<.2
28...	.090	4.0	4.3	276	19	<2	<4.0	76	<200	<.20	<.2
DATE	CHRO-	COPPER,	IRON,	LEAD,	LITHIUM	MANGA-	MERCURY	NICKEL,	SELE-	STRON-	ZINC,
	MIUM, DIS- SOLVED (MG/L AS CR) (01030)	DIS- SOLVED (MG/L AS CU) (01040)	DIS- SOLVED (MG/L AS FE) (01046)	DIS- SOLVED (MG/L AS PB) (01049)	DIS- SOLVED (MG/L AS LI) (01130)	NESE, DIS- SOLVED (MG/L AS MN) (01056)	DIS- SOLVED (MG/L AS HG) (71890)	DIS- SOLVED (MG/L AS NI) (01065)	NIUM, DIS- SOLVED (MG/L AS SE) (01145)	TIUM, DIS- SOLVED (MG/L AS SR) (01080)	DIS- SOLVED (MG/L AS ZN) (01090)
OCT 1999											
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
JAN 2000											
03...	--	--	<20	--	--	38	--	--	--	--	<10
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
MAY											
17...	--	--	<20	--	--	33	--	--	--	--	<10
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
31...	--	--	<20	--	--	54	--	--	--	--	<10
AUG											
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
21...	<4.0	<4	40	<1	<25.0	59	<.2	<4	<7.0	159	<10
28...	<4.0	<4	<20	<1	<25.0	44	.4	<4	<7.0	138	<10