

## CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 39°44'51", long 75°46'15", Chester County, Hydrologic Unit 02040205, on right bank 0.1 mi downstream from West Branch White Clay Creek, in the White Clay Creek State Preserve, and 1.5 mi northeast of Strickersville.

**DRAINAGE AREA.**--59.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--August 1996 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 120 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 telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 1,800 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)
Feb. 22	1815	2,830	8.82	Sept. 15	0930	*9,750	*14.28
Mar. 20	2145	1,860	7.55	Sept. 23	0900	2,790	8.87
June 20	1930	3,800	9.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	42	41	282	e50	78	89	64	99	68	40	49
2	11	35	39	192	e50	408	85	63	69	67	41	79
3	11	32	38	161	e50	368	80	60	60	100	42	56
4	11	30	e30	194	e80	126	77	59	347	77	50	106
5	12	29	e30	108	71	373	76	60	198	68	56	74
6	11	69	e40	100	58	782	72	63	101	66	60	53
7	11	39	e30	91	e50	223	82	61	288	65	43	48
8	10	33	e30	90	e45	253	100	65	190	61	48	45
9	11	31	e35	97	e40	414	127	67	115	57	79	42
10	18	30	e40	85	e40	174	102	68	90	59	416	40
11	336	32	e250	e70	e40	114	290	65	79	66	88	40
12	117	75	304	e65	e30	112	153	60	81	57	74	40
13	41	94	180	e65	e35	133	105	56	101	53	60	126
14	30	46	405	e50	e35	124	90	54	87	51	56	111
15	26	38	119	e50	e35	103	84	52	78	51	49	3100
16	119	68	87	e50	e30	103	81	61	67	50	62	234
17	82	283	71	e50	e30	140	74	69	62	46	81	114
18	38	203	64	e45	e80	106	74	58	170	46	55	140
19	30	81	63	e40	e75	90	76	55	93	50	49	588
20	28	63	189	e35	e75	458	74	51	1080	44	45	131
21	25	55	115	e30	e70	481	72	64	704	43	44	102
22	23	60	79	e35	1160	163	78	72	187	42	50	92
23	22	58	69	e25	1120	123	71	61	136	47	61	841
24	22	49	63	e30	409	109	66	76	109	52	43	172
25	23	46	315	e25	174	95	66	65	96	43	41	123
26	65	44	178	e25	114	96	125	344	88	40	41	109
27	35	59	104	e25	90	103	91	115	83	40	42	108
28	28	50	86	e25	84	88	73	89	77	40	41	172
29	32	45	80	e25	---	94	69	77	74	39	39	110
30	83	44	76	e25	---	131	66	66	72	37	103	96
31	68	---	79	e20	---	115	---	61	---	39	74	---
TOTAL	1391	1863	3329	2210	4220	6280	2768	2301	5081	1664	2073	7141
MEAN	44.9	62.1	107	71.3	151	203	92.3	74.2	169	53.7	66.9	238
MAX	336	283	405	282	1160	782	290	344	1080	100	416	3100
MIN	10	29	30	20	30	78	66	51	60	37	39	40
CFSM	0.76	1.05	1.81	1.20	2.55	3.42	1.56	1.25	2.86	0.91	1.13	4.02
IN.	0.87	1.17	2.09	1.39	2.65	3.95	1.74	1.45	3.19	1.05	1.30	4.49

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	52.7	55.3	89.1	82.8	95.4	132	90.1	68.9	66.3	36.4	42.1	89.0
MAX	143	119	246	134	151	203	126	90.3	169	59.3	96.2	238
(WY)	1997	1997	1997	1997	2003	2003	1997	1998	2003	2000	1996	2003
MIN	25.8	27.6	26.6	44.7	32.7	60.3	45.4	43.3	27.7	13.7	10.7	14.0
(WY)	1998	2002	1999	2002	2002	2002	2002	2002	1999	2002	2002	2002

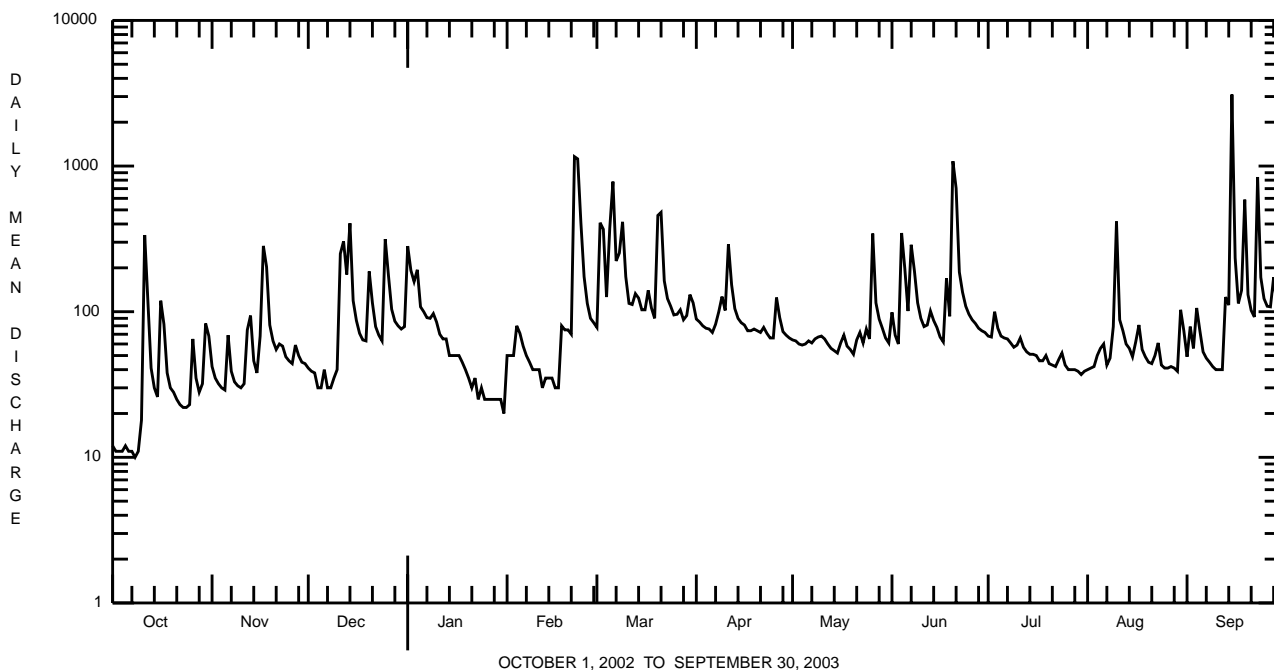
e Estimated.

CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	15560.0		40321			
ANNUAL MEAN	42.6		110		74.3	
HIGHEST ANNUAL MEAN					110	2003
LOWEST ANNUAL MEAN					31.8	2002
HIGHEST DAILY MEAN	405	Dec 14	3100	Sep 15	4930	Sep 16 1999
LOWEST DAILY MEAN	5.4	Aug 15	10	Oct 8	5.4	Aug 15 2002
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 10	11	Oct 2	6.1	Aug 10 2002
MAXIMUM PEAK FLOW			a9750	Sep 15	a14400	Sep 16 1999
MAXIMUM PEAK STAGE			14.28	Sep 15	b16.71	Sep 16 1999
INSTANTANEOUS LOW FLOW			10	Oct 4,6-9	5.0	Aug 15 2002
ANNUAL RUNOFF (CFSM)	0.72		1.87		1.26	
ANNUAL RUNOFF (INCHES)	9.78		25.34		17.06	
10 PERCENT EXCEEDS	77		188		126	
50 PERCENT EXCEEDS	33		67		48	
90 PERCENT EXCEEDS	9.5		30		22	

a From rating curve extended above 1,180 ft<sup>3</sup>/s on basis of runoff comparison with nearby station.  
 b From floodmark in gage.



## CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, 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 430-470.

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 2002 TO SEPTEMBER 2003

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd $\mu$ S/cm 25 degC (00095)	Temperature, water, unfltrd deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 2002 13...	1020	1028	9813	87	30	10.3	7.5	306	10.9	120	28.2	10.7	68
JAN 2003 13...	1050	1028	9813	E65	30	14.7	7.8	359	.0	140	34.2	13.3	72
MAR 27...	0910	1028	9813	105	30	13.2	7.9	279	8.5	110	26.5	9.7	53
MAY 27...	1000	1028	9813	114	30	10.7	7.5	257	12.2	93	22.9	8.7	56
JUL 07...	1030	1028	9813	68	30	9.1	8.0	311	20.7	120	29.3	11.5	71
SEP 08...	1100	1028	9813	46	30	10.6	8.0	350	16.9	130	30.8	11.9	85

Date	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water, unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover -able, $\mu$ g/L (01105)	Copper, water, unfltrd recover -able, $\mu$ g/L (01042)	Iron, water, unfltrd recover -able, $\mu$ g/L (01045)
NOV 2002 13...	34.4	242	2	.060	2.73	.040	--	.203	4.6	9.3	400	4.1	720
JAN 2003 13...	34.3	232	<2	<.020	4.79	<.010	--	.041	5.5	1.9	52	<4.0	180
MAR 27...	27.1	208	4	<.020	3.83	<.040	.03	.029	4.2	3.0	<200	<10	120
MAY 27...	24.2	212	12	.110	2.79	.080	.10	.140	3.8	6.6	500	<10	750
JUL 07...	26.1	230	4	<.020	4.13	<.040	.05	.062	4.4	2.7	<200	<10	150
SEP 08...	27.2	258	<2	<.020	4.33	<.040	.05	.068	4.4	2.5	<200	<10	80

Date	Lead, water, unfltrd recover -able, $\mu$ g/L (01051)	Manganese, water, unfltrd recover -able, $\mu$ g/L (01055)	Nickel, water, unfltrd recover -able, $\mu$ g/L (01067)	Zinc, water, unfltrd recover -able, $\mu$ g/L (01092)
NOV 2002 13...	2.1	40	<4.0	20
JAN 2003 13...	<1.0	40	<4.0	<5.0
MAR 27...	<1.0	20	<50	<10
MAY 27...	<1.0	50	<50	<10
JUL 07...	<1.0	20	<50	20
SEP 08...	<1.0	20	<50	150

## CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500  $\mu$ m. Samples represent counts per 100 (approximate) subsamples.

Date	08/28/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	7
Nematoda (NEMATODES)	5
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<u>Ferrissia</u> sp	2
Physidae	
<u>Physa</u> sp	7
Planorbidae	
<u>Gyraulus</u> sp	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Crustacea	
Ostracoda	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	2
Caenidae	
<u>Caenis</u> sp	3
Odonata	
Coenagrionidae (DAMSELFLIES)	
<u>Argia</u> sp	2
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Hydropsyche</u> sp	14
Hydroptilidae	
<u>Leucotrichia</u> sp	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	8
<u>Oulimnius</u> sp	2
<u>Stenelmis</u> sp	5
Hydrophilidae	
<u>Berosus</u> sp	3
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	1

## CHRISTINA RIVER BASIN

01478245 WHITE CLAY CREEK NEAR STRICKERSVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	08/28/02
Benthic Macroinvertebrate	Count
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	35
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	4
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	1
<u>Tipula</u> sp	1
Total Organisms	108