

**CHRISTINA RIVER BASIN**

**01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA**

**LOCATION.**--Lat 39°59'08", long 75°49'40", Chester County, Hydrologic Unit 02040205, on right bank at city limits of Coatesville, 1,200 ft upstream from bridge on old Lincoln Highway, and 0.6 mi downstream from Rock Run.

**DRAINAGE AREA.**--45.8 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--October 1943 to December 1951, January 1970 to current year.

**GAGE.**--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 306.05 ft above sea level. Sept. 10, 1943, to Dec. 31, 1951, nonrecording gage at site 1,100 ft downstream at different datum. Satellite and landline telemetry at station.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Diversion from Rock Run Reservoir (station 01480465) 2.6 mi upstream, capacity, 982 acre-ft, for municipal supply of city of Coatesville.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Aug. 9, 1942, reached a stage of 12.3 ft, site and datum then in use, discharge, 8,600 ft<sup>3</sup>/s, by slope-area measurement.

**COOPERATION.**--Records of diversion provided by city of Coatesville.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 700 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)
Dec. 17	1100	*1,930	*6.69	June 23	0630	833	5.53

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	21	26	e25	139	48	107	46	44	24	14	12
2	28	20	23	e24	86	46	86	44	75	23	13	11
3	27	20	21	e24	62	45	74	43	52	22	12	10
4	66	20	20	e24	47	48	67	41	44	23	31	15
5	166	20	20	e23	86	60	63	43	40	27	18	15
6	54	19	20	e24	91	54	64	39	38	25	15	12
7	42	19	19	e24	78	55	65	38	37	22	14	11
8	34	22	19	e28	71	74	61	38	35	21	13	10
9	31	20	19	e27	83	85	63	39	33	22	12	9.7
10	30	41	18	e27	351	66	78	38	31	29	15	11
11	29	31	19	27	84	55	77	37	31	46	27	12
12	27	22	21	e27	56	51	103	36	31	25	63	11
13	27	21	18	26	55	168	73	34	29	21	210	9.9
14	26	27	108	26	59	93	60	32	29	19	32	10
15	24	29	62	e45	66	64	57	32	29	18	22	9.6
16	24	22	40	e46	63	74	106	32	37	18	18	8.8
17	26	21	940	38	111	118	92	32	45	18	17	8.7
18	39	20	185	35	56	75	119	34	33	20	16	9.0
19	44	19	70	216	49	58	97	35	29	19	15	9.6
20	29	18	54	317	48	54	67	33	27	18	20	15
21	26	20	45	e89	49	142	63	54	27	16	17	34
22	25	19	e37	53	43	203	61	121	28	16	14	15
23	24	18	e31	45	e45	84	57	93	256	15	14	11
24	24	17	e30	45	44	66	55	52	53	16	14	13
25	24	18	e28	41	51	59	52	43	36	15	13	122
26	23	67	e27	e34	105	57	50	132	31	16	12	27
27	23	49	e26	e32	59	53	50	238	28	15	12	17
28	22	31	e27	e33	52	52	49	80	26	15	12	15
29	21	28	e24	e29	---	53	46	54	25	14	12	14
30	20	30	e24	e155	---	418	46	46	24	15	12	12
31	21	---	e24	264	---	155	---	42	---	15	12	---
TOTAL	1055	749	2045	1873	2189	2733	2108	1701	1283	628	741	500.3
MEAN	34.0	25.0	66.0	60.4	78.2	88.2	70.3	54.9	42.8	20.3	23.9	16.7
MAX	166	67	940	317	351	418	119	238	256	46	210	122
MIN	20	17	18	23	43	45	46	32	24	14	12	8.7
(†)	1.0	0.9	2.4	4.6	6.4	6.2	6.1	3.6	1.6	0.7	0.6	1.0

**STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)**

MEAN	37.9	55.2	69.3	78.7	85.8	97.7	87.5	72.5	59.5	48.5	31.8	37.4
MAX	149	114	227	262	179	275	197	159	236	176	82.9	136
(WY)	1997	1973	1997	1979	1971	1994	1983	1989	1972	1984	1971	1979
MIN	11.8	14.9	16.8	15.5	30.1	33.3	28.9	29.6	17.5	9.80	9.31	10.1
(WY)	1987	1982	1999	1981	1992	1985	1985	1999	1999	1999	1995	1986

† Diversion for municipal supply, equivalent in cubic feet per second (includes change in contents from Rock Run Reservoir).

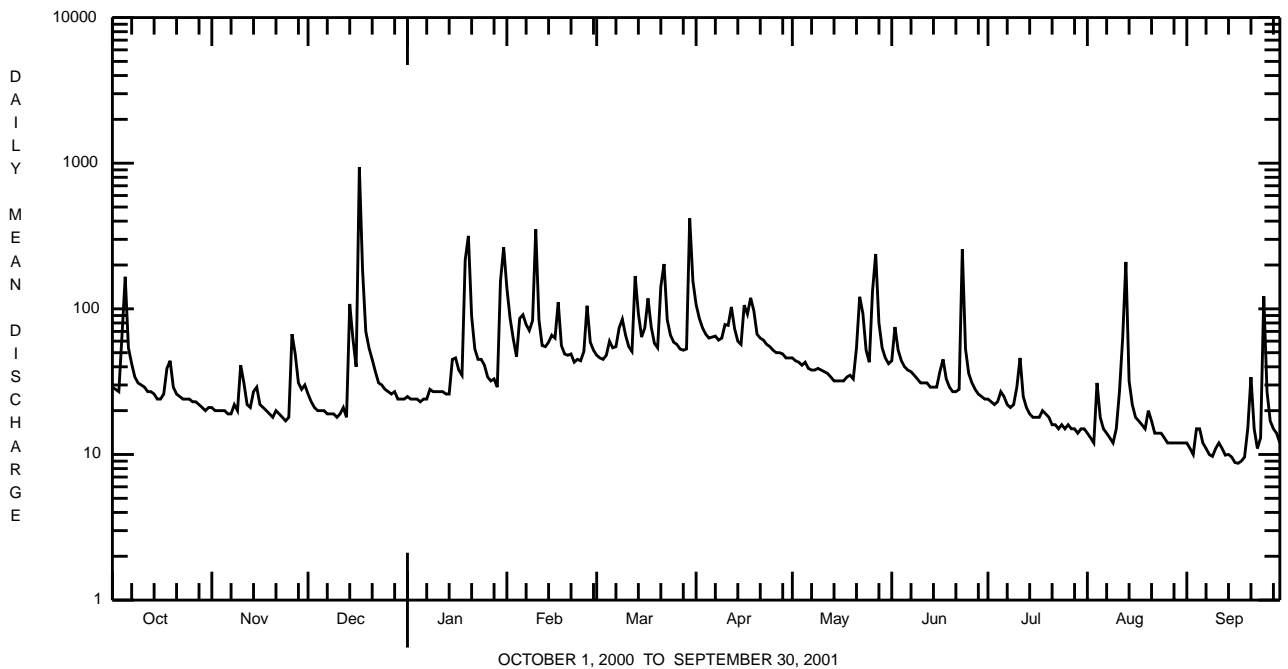
e Estimated.

CHRISTINA RIVER BASIN

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	21803		17669.3			
ANNUAL MEAN	59.6		48.4		63.5	
HIGHEST ANNUAL MEAN					98.6	1979
LOWEST ANNUAL MEAN					28.1	1981
HIGHEST DAILY MEAN	1750	Mar 22	940	Dec 17	3400	Jun 22 1972
LOWEST DAILY MEAN	17	Nov 24	8.7	Sep 17	4.6	Sep 10 1944
ANNUAL SEVEN-DAY MINIMUM	18	Aug 21	9.4	Sep 13	5.8	Sep 10 1995
MAXIMUM PEAK FLOW			1930	Dec 17	a8100	Jun 29 1973
MAXIMUM PEAK STAGE			6.69	Dec 17	10.08	Jun 29 1973
10 PERCENT EXCEEDS	100		86		111	
50 PERCENT EXCEEDS	36		31		42	
90 PERCENT EXCEEDS	20		14		15	

a From rating curve extended above 7,800 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.92 ft.



## CHRISTINA RIVER BASIN

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE, PA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1970-72, 1995 to current year.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January 1995 to current year.

INSTRUMENTATION.--Temperature probe interfaced with a data collection platform.

REMARKS.--Water temperature records rated fair.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 29.0°C, July 6, 1999; minimum, 0.0°C, many days during winters.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.5°C, July 25; minimum 0.0°C, many days during winter.

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	11.5	13.0	9.5	7.0	8.5	5.0	4.0	4.5	.5	.0	.0
2	15.5	12.5	14.0	9.5	6.5	8.0	4.0	2.0	3.0	.5	.0	.0
3	17.0	13.5	15.0	10.5	7.0	8.5	2.0	.5	1.0	.5	.0	.0
4	17.5	14.5	16.0	11.0	9.5	10.5	1.0	.0	.5	.0	.0	.0
5	17.0	16.5	16.5	10.5	8.5	9.0	1.5	.0	1.0	.0	.0	.0
6	18.0	16.5	17.0	8.5	6.5	7.5	1.5	.0	.5	.0	.0	.0
7	16.5	13.5	15.0	8.0	5.5	7.0	1.0	.0	.5	.0	.0	.0
8	13.5	11.0	11.5	10.0	7.5	8.5	2.0	.5	1.0	.5	.0	.0
9	11.0	9.0	9.5	11.5	9.5	10.5	2.0	.5	1.5	.5	.0	.0
10	9.5	8.0	9.0	12.5	11.5	12.0	1.5	.0	1.0	.5	.0	.0
11	11.0	8.0	9.5	11.5	10.5	11.0	4.0	1.5	2.5	.5	.0	.5
12	12.0	9.0	10.5	10.5	8.5	9.5	4.5	2.5	4.0	.5	.0	.5
13	12.5	9.5	11.0	10.0	8.5	9.5	2.5	.5	1.0	.5	.0	.0
14	13.5	11.0	12.5	9.5	8.0	9.0	3.0	1.0	2.0	.5	.0	.5
15	14.5	11.5	13.0	8.0	6.0	7.0	3.0	2.5	2.5	.5	.5	.5
16	14.0	13.0	13.5	6.5	4.5	6.0	4.0	2.0	2.5	1.0	.5	.5
17	14.0	13.5	14.0	7.0	6.0	6.5	10.0	4.0	8.0	2.0	.5	1.0
18	14.0	13.5	13.5	6.0	4.5	5.0	7.5	2.5	4.5	1.5	.5	1.0
19	14.0	12.0	13.0	5.0	3.5	4.5	2.5	2.0	2.5	1.5	1.0	1.5
20	13.0	10.0	11.5	3.5	1.5	3.0	2.5	.5	1.0	1.5	.5	1.0
21	14.0	10.5	12.0	3.5	2.0	2.5	.5	.0	.5	.5	.0	.0
22	13.5	11.5	12.5	2.0	.5	1.0	1.5	.0	.5	.0	.0	.0
23	12.0	9.0	10.5	1.0	.0	.5	.5	.0	.5	.5	.0	.0
24	12.5	9.5	11.0	1.0	.0	.5	.5	.0	.5	.0	.0	.0
25	14.0	11.0	12.5	2.0	.0	1.0	.5	.0	.5	.5	.0	.0
26	14.0	12.0	13.0	6.5	2.0	4.5	.5	.0	.5	.5	.0	.0
27	14.0	11.5	13.0	7.0	5.0	6.0	.5	.0	.5	1.0	.0	.5
28	14.0	11.0	13.0	7.5	6.0	7.0	.5	.0	.0	1.0	.0	.5
29	11.0	8.5	9.5	6.5	4.5	5.5	.5	.0	.0	1.0	.0	.5
30	9.0	7.0	8.0	6.0	5.0	5.5	.0	.0	.0	1.5	.5	1.0
31	9.5	7.0	8.0	---	---	---	.5	.0	.0	2.5	.5	1.5
MONTH	18.0	7.0	12.3	12.5	.0	6.5	10.0	.0	1.6	2.5	.0	.4

