



2004 Water Year CHRISTINA RIVER BASIN

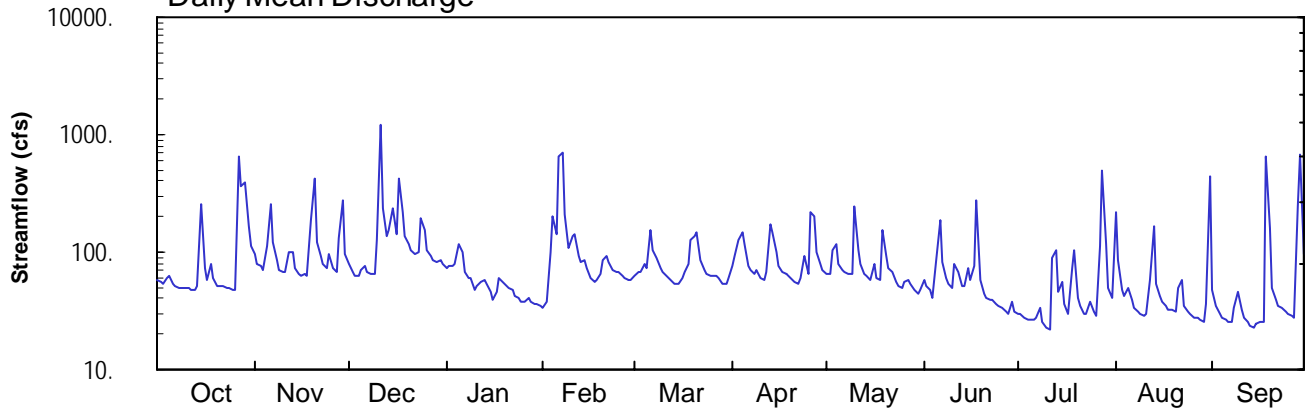
01480500 West Branch Brandywine Creek at Coatesville, PA

Latitude: 39° 59' 08"
Chester County

Longitude: 075° 49' 40"
Datum: 306.05 feet

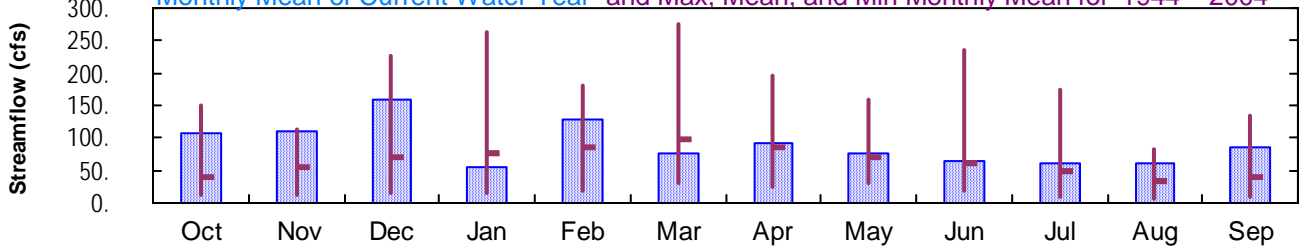
Hydrologic Unit Code: 02040205
Drainage Area: 45.8 mi²

Daily Mean Discharge

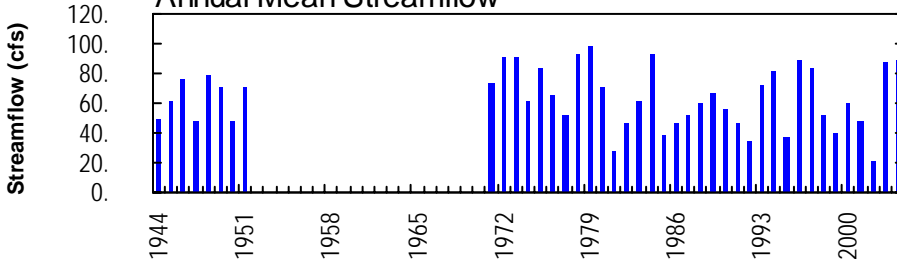


Monthly Statistics

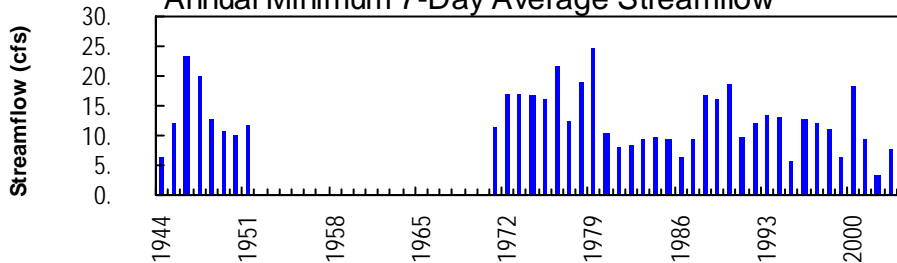
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1944 – 2004



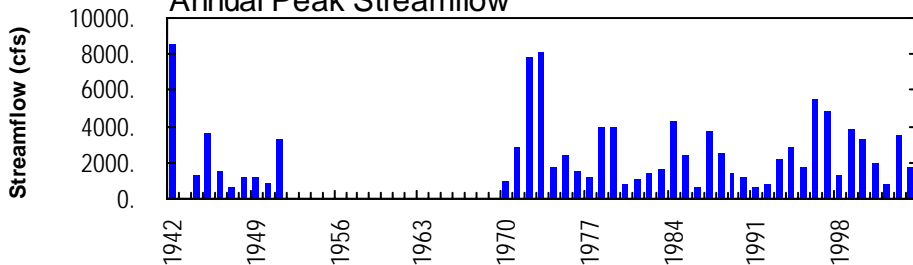
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



01480500-WB Brandywine Creek at Coatesville

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 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder , crest-stage gage, and V-notch sharp-crested weir. Datum of gage is 306.05 ft above National Geodetic Vertical Datum of 1929. 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 ft³/s, by slope-area measurement.

COOPERATION.--Records of diversion provided by the Pennsylvania American Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Oct. 27	1800	1,130	5.89	July 28	0830	1,010	5.75
Nov. 20	0300	809	5.50	Aug. 31	1000	1,690	6.46
Dec. 11	1230	*1,710	*6.48	Sept. 18	1930	1,460	6.24
Dec. 17	1730	734	5.40	Sept. 29	0000	1,370	6.15
Feb. 6	2100	1,660	6.44				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	95	79	74	e34	62	75	65	57	30	217	48
2	57	80	69	75	e37	68	91	65	51	30	85	35
3	53	76	63	76	e100	69	126	105	48	28	48	30
4	60	71	62	79	e200	80	147	118	42	26	42	28
5	63	111	71	117	142	74	118	78	84	26	50	27
6	53	252	76	100	653	154	76	69	187	26	39	26
7	51	120	69	69	693	103	69	67	82	28	34	26
8	50	87	66	61	210	91	66	64	60	34	31	33
9	50	71	64	61	106	72	70	64	53	26	29	45
10	50	66	128	e47	134	66	61	248	50	23	28	32
11	50	66	1220	e52	143	64	58	105	78	22	30	28
12	48	101	239	e56	94	61	67	78	67	89	58	25
13	47	100	137	e57	83	55	170	66	51	105	168	24
14	52	72	154	e54	85	53	148	62	51	45	53	23
15	258	65	233	e45	72	53	101	57	75	57	42	25
16	74	63	143	e39	60	59	75	78	59	36	38	25
17	59	64	430	e46	56	67	67	60	75	30	34	25
18	79	62	219	e60	58	79	65	57	275	72	32	655
19	60	190	136	e55	65	125	62	155	58	105	32	162
20	52	418	116	e51	85	139	57	92	44	41	31	49
21	51	121	102	e49	93	150	56	74	40	35	50	39
22	51	91	98	e48	84	86	55	66	38	30	57	35
23	49	78	98	e42	70	70	59	56	40	29	34	e33
24	50	74	191	e40	68	65	91	52	37	38	31	e31
25	47	95	155	e38	67	64	65	49	35	31	29	e30
26	48	74	106	e38	63	63	215	56	34	28	28	e29
27	646	68	93	e40	60	62	198	59	31	113	28	28
28	356	130	85	e38	57	59	98	54	29	486	26	245
29	398	271	84	e36	58	54	78	48	38	118	25	681
30	168	97	85	e36	---	53	69	43	31	49	37	94
31	110	---	78	e35	---	61	---	47	---	40	440	---
TOTAL	3299	3329	4949	1714	3730	2381	2753	2357	1900	1876	1906	2616
MEAN	106	111	160	55.3	129	76.8	91.8	76.0	63.3	60.5	61.5	87.2
MAX	646	418	1220	117	693	154	215	248	275	486	440	681
MIN	47	62	62	35	34	53	55	43	29	22	25	23
(†)	6.6	6.5	6.5	6.2	6.5	5.9	6.0	6.3	6.2	6.3	6.5	6.2

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

MEAN	38.7	55.2	70.5	76.9	85.5	97.2	85.8	71.7	62.4	47.7	32.6	40.0
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	11.2	11.1	14.4	15.5	19.6	31.3	25.4	29.6	17.5	9.62	5.43	8.06
(WY)	2002	2002	2002	1981	2002	2002	2002	1999	1999	2002	2002	2002

† 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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	38514		32810			
ANNUAL MEAN	106		89.6		63.7	
HIGHEST ANNUAL MEAN					98.6	
LOWEST ANNUAL MEAN					20.7	
HIGHEST DAILY MEAN	1430	Jun 21	1220	Dec 11	3400	Jun 22 1972
LOWEST DAILY MEAN	e 15	Feb 16	22	Jul 11	3.0	Aug 23 2002
ANNUAL SEVEN-DAY MINIMUM	a 23	Feb 11	25	Sep 11	3.2	Aug 17 2002
MAXIMUM PEAK FLOW			1710	Dec 11	b 8100	Jun 29 1973
MAXIMUM PEAK STAGE			6.48	Dec 11	10.08	Jun 29 1973
10 PERCENT EXCEEDS	206		154		113	
50 PERCENT EXCEEDS	63		62		42	
90 PERCENT EXCEEDS	30		30		15	

a Computed using estimated daily discharges.

b From rating curve extended above 7,800 ft³/s on basis of slope-area measurement at gage height 9.92 ft.

e Estimated.

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 good.

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, 25.5°C, July 31, Aug. 3, 4; minimum 0.0°C, many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	13.0	13.5	14.0	11.0	12.5	7.5	5.5	6.5	5.0	3.0	4.0
2	13.5	11.5	12.5	15.0	12.5	13.5	5.5	3.0	4.5	6.0	4.0	5.0
3	12.5	10.0	11.5	15.5	13.0	14.0	3.5	2.0	3.0	7.5	5.5	6.5
4	12.5	10.0	11.5	16.0	13.0	14.5	4.0	1.5	3.0	8.0	7.0	7.5
5	13.0	10.0	11.5	15.5	14.5	15.0	4.0	1.5	3.0	7.0	6.0	6.5
6	13.0	10.0	11.5	15.5	14.5	15.0	3.0	0.5	1.5	6.0	2.5	4.5
7	12.5	9.5	11.0	14.5	12.0	13.5	2.0	1.0	1.5	2.5	0.5	1.0
8	14.5	11.5	12.5	12.0	8.5	10.5	2.5	0.5	1.5	1.0	0.0	0.5
9	15.5	12.5	14.0	8.5	6.5	7.5	3.5	1.0	2.5	2.0	0.0	1.0
10	15.5	14.0	14.5	7.5	5.0	6.5	4.5	3.0	4.0	0.0	0.0	0.0
11	16.0	14.0	15.0	8.5	5.5	7.0	7.5	3.5	6.0	0.0	0.0	0.0
12	16.0	13.5	15.0	11.0	8.5	10.0	6.0	4.0	5.0	1.0	0.0	0.5
13	15.5	14.0	15.0	11.0	7.5	9.5	4.0	3.0	3.5	2.0	0.5	1.5
14	14.5	12.5	13.5	7.5	6.0	7.0	3.5	2.5	3.5	1.0	0.0	0.5
15	15.0	12.5	14.0	8.5	7.0	7.5	4.0	2.5	3.0	0.5	0.0	0.0
16	13.5	11.0	12.5	9.0	6.5	8.0	4.5	2.5	3.5	0.5	0.0	0.0
17	13.0	12.0	12.5	10.5	9.0	9.5	4.5	3.5	4.0	0.5	0.0	0.0
18	12.5	10.5	11.5	10.0	8.0	9.0	3.5	2.5	3.0	0.5	0.0	0.5
19	13.0	11.0	11.5	13.5	10.0	11.5	3.5	2.0	3.0	1.0	0.0	0.5
20	12.0	9.5	11.0	12.0	9.0	11.0	3.5	2.0	3.0	1.0	0.0	0.5
21	14.0	11.0	12.5	10.5	8.0	9.0	3.5	2.0	2.5	0.5	0.0	0.0
22	13.5	10.5	12.5	10.5	8.0	9.0	4.5	2.0	3.5	1.0	0.0	0.5
23	10.5	8.5	9.5	10.5	8.0	9.0	6.0	4.0	5.0	0.5	0.0	0.0
24	9.0	6.5	8.0	11.5	9.0	10.0	7.5	5.5	6.5	0.0	0.0	0.0
25	10.0	6.5	8.5	10.0	7.0	8.0	6.5	4.0	5.0	0.0	0.0	0.0
26	13.0	10.0	11.5	7.5	5.5	6.5	4.5	3.0	3.5	0.0	0.0	0.0
27	14.5	13.0	14.0	8.5	6.0	7.5	4.5	3.0	3.5	0.0	0.0	0.0
28	13.0	11.0	12.0	10.5	8.5	9.5	4.5	2.0	3.5	0.5	0.0	0.0
29	12.0	11.0	11.5	9.5	6.0	8.0	5.0	2.5	3.5	0.5	0.0	0.0
30	12.0	10.0	11.0	7.5	6.0	6.5	6.0	3.5	5.0	0.5	0.0	0.0
31	12.5	9.5	11.0	---	---	---	5.5	3.5	4.5	0.0	0.0	0.0
MONTH	16.0	6.5	12.2	16.0	5.0	9.8	7.5	0.5	3.7	8.0	0.0	1.3

