



2005 Water Year CHRISTINA RIVER BASIN

01480300 West Branch Brandywine Creek near Honey Brook, PA

Latitude: 40° 04 ' 22"

Longitude: 075° 51 ' 40"

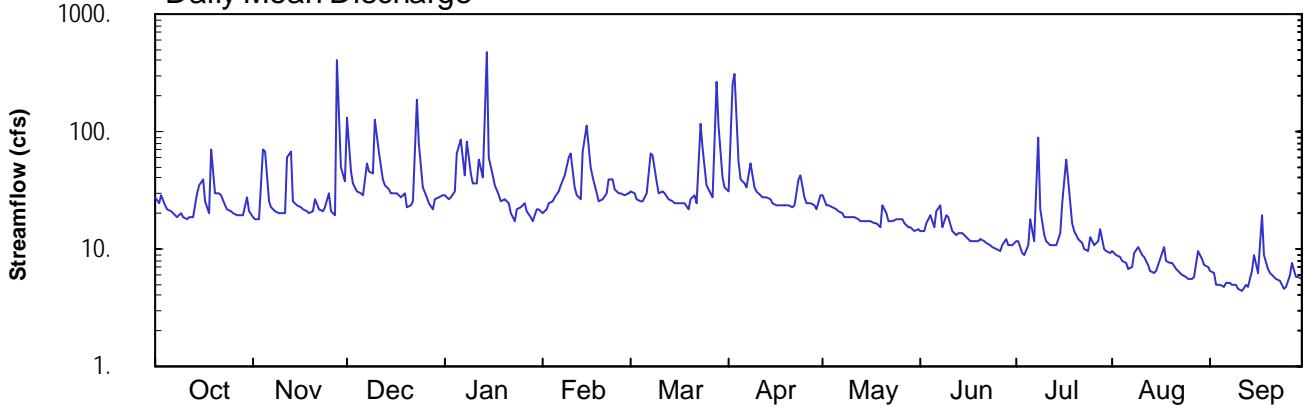
Hydrologic Unit Code: 02040205

Chester County

Datum: 591.20 feet

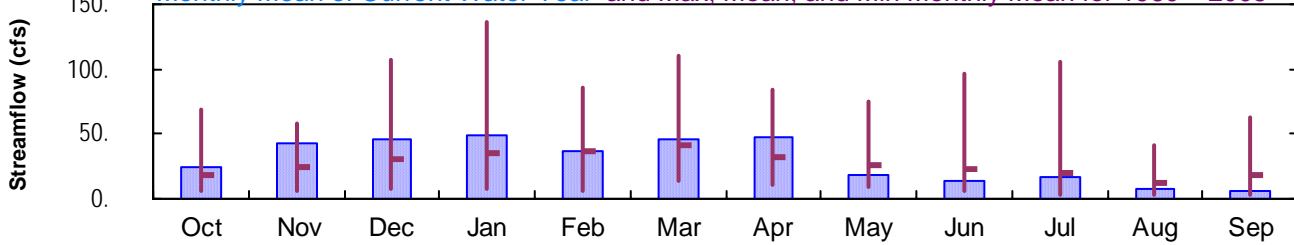
Drainage Area: 18.7 mi²

Daily Mean Discharge

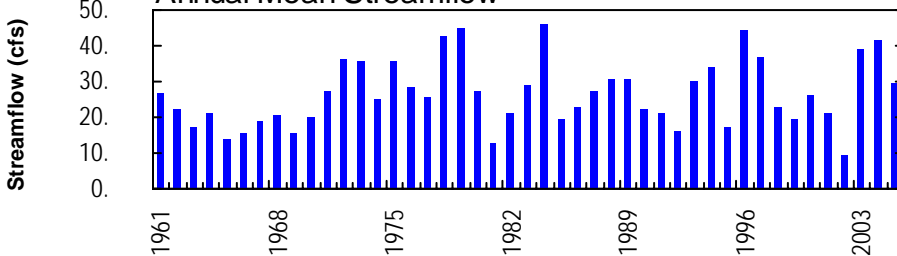


Monthly Statistics

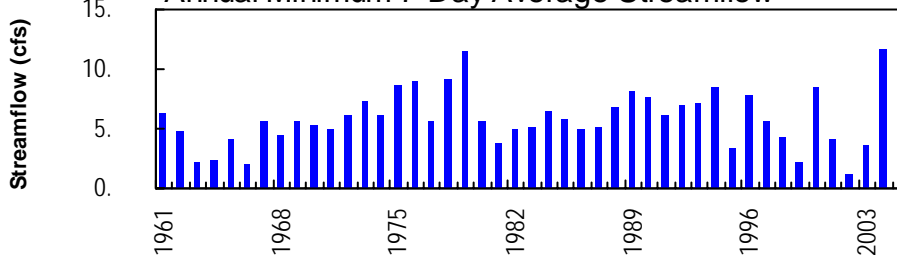
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1960 – 2005



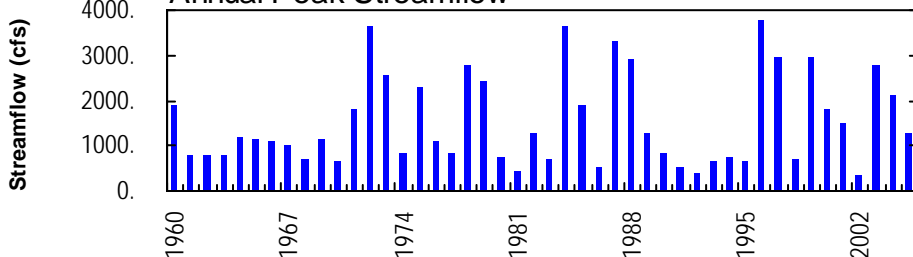
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA

LOCATION.--Lat 40°04'22", long 75°51'40", Chester County, Hydrologic Unit 02040205, on right bank 100 ft upstream from bridge on SR 4007 at Birdell, 0.4 mi downstream from Two Log Run, and 3.0 mi southeast of Honey Brook.

DRAINAGE AREA.--18.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1960 to current year.

REVISED RECORDS.--WDR PA-73-1: 1972(P). WDR PA-99-1: 1972, 1973, 1975, 1976, 1978, 1979, 1982, 1984, 1985, 1987-89, 1996, 1997 (P).

GAGE.--Water-stage recorder and crest-stage gage. Prior to July 1990, water-stage recorder at site 130 ft downstream on right bank at same datum. Datum of gage is 591.20 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except those for period Oct. 1 to Nov. 27, those less than 10 ft³/s, and those for estimated daily discharges, which are poor. Some regulation at low flow by pumpage from the Northwestern Chester County Wastewater Treatment plant. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 28	0930	1,210	7.36	Mar. 28	1945	930	6.85
Dec. 23	2015	740	6.44	Apr. 2	2100	794	6.56
Jan. 14	1230	*1,280	*7.47				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	19	133	29	e20	31	31	29	14	12	9.6	6.6
2	24	18	45	26	e22	29	257	24	14	12	9.0	6.2
3	28	18	36	28	25	26	305	24	16	9.4	8.4	5.0
4	23	71	31	31	26	26	56	22	19	8.9	7.9	4.9
5	22	67	29	65	28	26	40	21	15	11	7.6	4.7
6	21	25	29	84	31	29	36	21	21	18	6.8	5.2
7	20	23	54	42	35	64	33	20	24	12	7.1	5.1
8	19	21	45	83	42	64	53	19	15	88	9.1	5.0
9	20	20	44	44	60	37	34	19	19	22	10	5.0
10	19	20	128	36	65	30	30	18	19	13	9.0	4.5
11	18	21	67	36	34	31	29	18	14	12	8.5	4.3
12	18	59	39	59	28	30	28	18	13	11	7.3	4.9
13	18	68	35	41	27	27	28	17	13	11	6.5	4.8
14	30	26	32	476	67	26	27	17	14	11	6.3	6.6
15	34	23	30	61	112	24	25	17	13	14	6.5	8.8
16	39	23	29	42	49	24	24	17	12	24	8.1	6.3
17	26	22	30	35	40	24	24	16	12	59	10	19
18	20	21	28	e29	30	24	24	16	11	39	8.0	8.8
19	70	20	29	e26	25	22	24	16	12	17	7.5	6.7
20	29	21	23	e27	26	26	23	23	12	14	7.7	6.2
21	29	27	24	e25	30	29	23	20	12	12	6.7	5.9
22	28	21	26	e20	39	25	24	17	11	11	6.4	5.6
23	24	21	189	e17	39	115	39	18	11	10	5.9	5.4
24	22	23	78	e22	32	74	43	18	11	9.7	5.7	4.6
25	21	30	33	e23	30	35	27	18	10	13	5.5	4.8
26	20	21	27	e25	29	30	24	18	9.6	11	5.6	6.0
27	20	19	24	e21	29	28	25	17	11	12	5.7	7.6
28	19	412	e22	e19	29	264	23	15	12	15	9.5	5.7
29	19	50	27	e17	---	115	22	15	11	10	8.4	5.8
30	28	37	28	e22	---	41	29	14	11	9.5	7.3	5.6
31	21	---	29	e22	---	34	---	15	---	9.1	7.0	---
TOTAL	776	1267	1423	1533	1049	1410	1410	577	411.6	540.6	234.6	185.6
MEAN	25.0	42.2	45.9	49.5	37.5	45.5	47.0	18.6	13.7	17.4	7.57	6.19
MAX	70	412	189	476	112	264	305	29	24	88	10	19
MIN	18	18	22	17	20	22	22	14	9.6	8.9	5.5	4.3
CFSM	1.34	2.26	2.45	2.64	2.00	2.43	2.51	1.00	0.73	0.93	0.40	0.33
IN.	1.54	2.52	2.83	3.05	2.09	2.80	2.80	1.15	0.82	1.08	0.47	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	17.6	25.1	30.3	34.8	37.3	41.6	32.7	25.4	23.7	20.2	12.9	18.1
MAX	68.5	58.6	107	136	85.1	110	83.8	74.6	96.6	106	41.8	63.1
(WY)	1997	1973	1997	1996	1979	1994	1983	1989	1972	1984	2004	1960
MIN	5.74	6.59	7.65	7.03	6.55	14.1	11.0	8.84	6.46	3.79	2.34	3.62
(WY)	1965	2002	1999	1981	2002	2002	2002	1963	1963	1963	2002	1964

e Estimated.

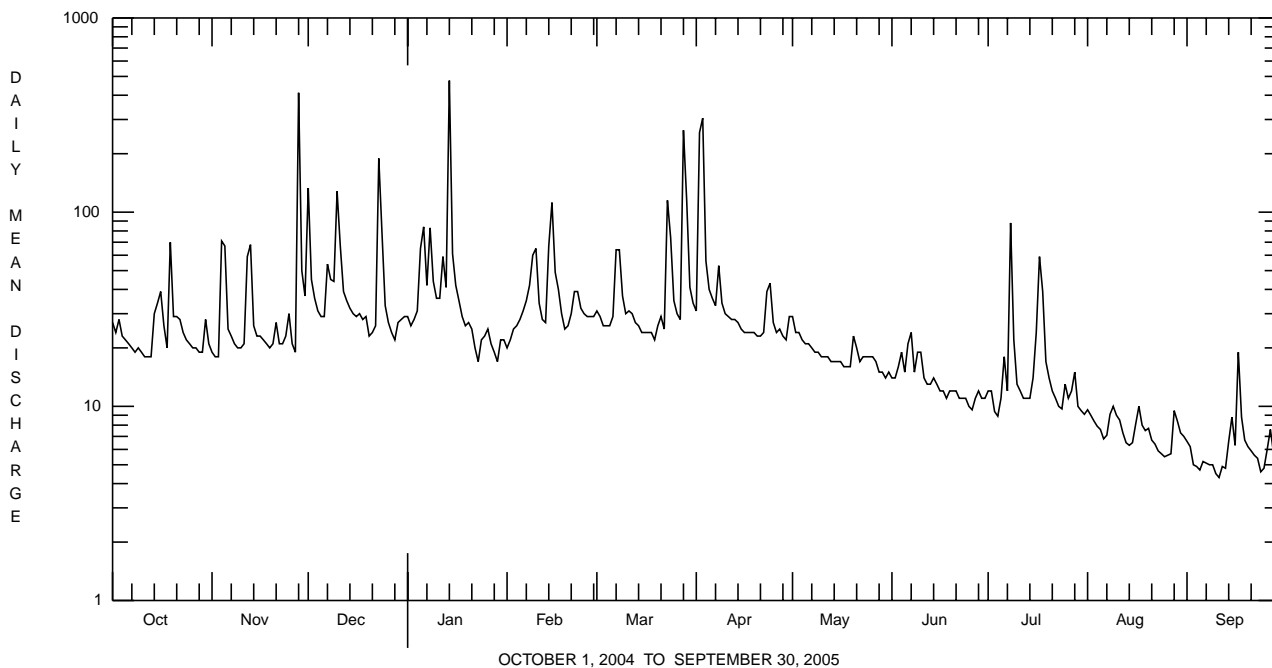
CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	13634.8		10817.4			
ANNUAL MEAN	37.3		29.6		26.5	
HIGHEST ANNUAL MEAN					46.3	1984
LOWEST ANNUAL MEAN					9.24	2002
HIGHEST DAILY MEAN	512	Sep 18	476	Jan 14	1400	Jun 22 1972
LOWEST DAILY MEAN	9.8	Jul 11	4.3	Sep 11	1.0	Aug 21 2002
ANNUAL SEVEN-DAY MINIMUM	12	Jul 5	4.8	Sep 7	1.2	Aug 16 2002
MAXIMUM PEAK FLOW			a1280	Jan 14	a3800	Jan 19 1996
MAXIMUM PEAK STAGE			7.47	Jan 14	11.62	Jan 19 1996
INSTANTANEOUS LOW FLOW			4.1	Sep 8-14	0.83	Aug 14 2002 ^b
ANNUAL RUNOFF (CFSM)	1.99		1.58		1.42	
ANNUAL RUNOFF (INCHES)	27.12		21.52		19.27	
10 PERCENT EXCEEDS	56		47		42	
50 PERCENT EXCEEDS	23		22		15	
90 PERCENT EXCEEDS	16		6.8		6.7	

a From rating curve extended above 1,000 ft³/s on basis of runoff comparison with nearby stations.

b Also Aug. 19, 20, 2002.



CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduc- tance, wat unf lab, µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	
OCT 2004 21...	0900	1028	80020	33	9.9	6.9	7.1	287	268	11.0	27.9	10.7	5.25	
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 2004 21...	10.6	66	81	20.2	E.1	16.9	22.5	E.02	5.15	.025	.06	20	115	

CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATESREMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m².

Date	10/21/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	7
Nematoda (NEMATODES)	35
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<i>Prostoma</i>	7
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	2
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
<i>Corbicula fluminea</i>	35
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Tubificidae	4
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	52
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	10
Ephemerellidae	
<i>Serratella</i>	2
Heptageniidae	
<i>Stenonema</i>	16
Isonychiidae	
<i>Isonychia</i>	3
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	8
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Corydalus</i>	1

CHRISTINA RIVER BASIN

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/21/04
Benthic macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Glossosoma</i>	1
Hydropsychidae	
<i>Cheumatopsyche</i>	50
<i>Hydropsyche</i>	411
Hydroptilidae	
<i>Hydroptila</i>	4
<i>Leucotrichia</i>	7
Philopotamidae	
<i>Chimarra</i>	19
Uenoidae	
<i>Neophylax</i>	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Ancyronyx</i>	5
<i>Optioservus</i>	46
<i>Oulimnius</i>	7
<i>Stenelmis</i>	388
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
	476
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	17
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	34
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	85
<i>Hexatoma</i>	1
<i>Tipula</i>	1
Total organisms	1736
Total number of taxa	31