

CHRISTINA RIVER BASIN

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA

LOCATION.--Lat 40°02'05", long 75°42'32", Chester County, Hydrologic Unit 02040205, on right bank 20 ft downstream from bridge on Dowlin Forge Road, 200 ft east of State Highway 282, 0.4 mi downstream from Shamona Creek, 1.5 mi downstream from Marsh Creek, 2.0 mi upstream from Beaver Creek, and 2.2 mi north of Downingtown.

DRAINAGE AREA.--60.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948-57. October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above sea level, from topographic map. Prior to July 30, 1966, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) 1.9 mi upstream. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	35	36	e50	44	148	74	45	44	24	15	18
2	26	34	35	e80	151	79	78	44	42	31	15	18
3	26	35	35	457	140	67	73	43	42	33	15	18
4	37	37	35	133	126	123	73	45	40	23	15	17
5	34	37	35	107	116	82	79	45	32	22	15	38
6	31	37	35	e94	80	79	72	43	30	23	15	59
7	31	37	34	e90	54	89	69	44	29	21	15	27
8	105	37	36	e86	72	64	67	50	27	18	16	19
9	87	37	42	e130	69	60	93	54	26	19	16	15
10	183	37	36	e120	58	61	246	52	25	21	16	43
11	55	46	33	e48	53	58	162	50	25	21	16	16
12	43	53	32	e46	58	55	209	48	25	20	16	15
13	38	47	32	58	95	53	159	52	31	21	15	22
14	36	45	31	54	64	56	142	49	37	20	35	21
15	33	43	31	e140	56	70	119	46	34	20	24	22
16	32	43	31	127	55	79	81	44	28	20	20	1870
17	37	42	29	126	54	116	85	43	27	18	18	622
18	34	42	26	432	190	113	73	45	31	18	18	394
19	33	42	26	281	101	74	74	58	28	22	17	186
20	32	42	26	145	73	65	90	57	25	29	17	202
21	33	43	26	130	63	118	90	51	25	22	21	144
22	31	43	28	142	56	511	101	49	27	25	21	159
23	33	42	29	138	51	195	100	64	36	24	19	128
24	33	42	29	333	52	167	103	121	33	21	18	176
25	31	41	27	176	52	140	90	119	31	21	17	210
26	32	79	25	137	53	81	84	93	29	20	82	205
27	32	52	27	122	51	77	72	67	27	19	58	124
28	32	41	28	116	96	80	61	43	25	16	14	60
29	35	39	30	109	---	78	52	43	26	16	15	51
30	37	37	32	81	---	73	49	47	25	16	19	133
31	35	---	28	46	---	69	---	46	---	16	19	---
TOTAL	1319	1267	965	4334	2183	3180	2920	1700	912	660	652	5032
MEAN	42.5	42.2	31.1	140	78.0	103	97.3	54.8	30.4	21.3	21.0	168
MAX	183	79	42	457	190	511	246	121	44	33	82	1870
MIN	22	34	25	46	44	53	49	43	25	16	14	15

e Estimated.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.0	75.5	112	124	113	140	133	107	71.1	67.3	43.7	56.7
MAX	199	169	385	361	242	380	365	246	181	257	90.9	191
(WY)	1997	1997	1997	1979	1979	1994	1983	1989	1982	1984	1989	1979
MIN	23.2	25.2	23.5	17.5	47.8	35.7	28.9	49.2	29.6	21.3	18.8	17.1
(WY)	1981	1982	1981	1981	1992	1985	1985	1976	1985	1999	1981	1980

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1974 - 1999

ANNUAL TOTAL	32095			25124			91.8					
ANNUAL MEAN	87.9			68.8			39.3					
HIGHEST ANNUAL MEAN							150					
LOWEST ANNUAL MEAN							1981					
HIGHEST DAILY MEAN	679			Apr 2			1870			Sep 16		
LOWEST DAILY MEAN	20			Sep 4,5			14			Aug 28		
ANNUAL SEVEN-DAY MINIMUM	23			Aug 31			15			Aug 1		
INSTANTANEOUS PEAK FLOW							a5410			Sep 16		
INSTANTANEOUS PEAK STAGE							9.59			Sep 16		
INSTANTANEOUS LOW FLOW							11			Aug 28b		
10 PERCENT EXCEEDS	181						131			177		
50 PERCENT EXCEEDS	56						43			58		
90 PERCENT EXCEEDS	29						19			26		

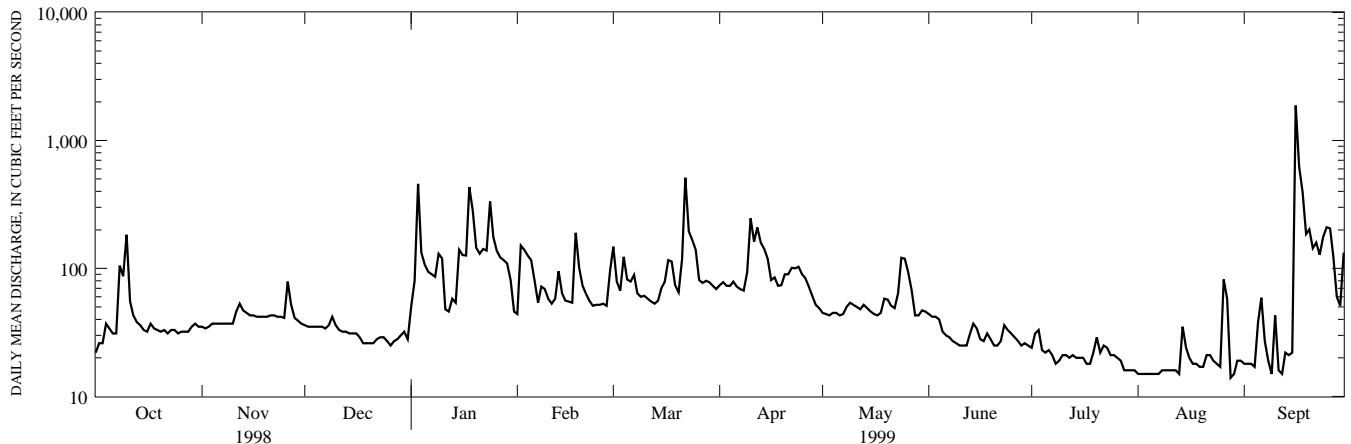
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.3	76.4	92.0	81.4	139	129	123	98.8	99.8	63.1	56.5	45.2
MAX	120	168	245	168	286	195	238	144	306	128	147	148
(WY)	1972	1973	1973	1973	1971	1972	1973	1973	1972	1972	1971	1971
MIN	24.8	27.6	32.0	33.3	51.6	70.0	64.3	43.2	30.3	18.3	15.3	20.1
(WY)	1970	1966	1966	1969	1969	1969	1969	1969	1966	1966	1966	1970

SUMMARY STATISTICS WATER YEARS 1966 - 1973

ANNUAL TOTAL ANNUAL MEAN	87.0	
HIGHEST ANNUAL MEAN	139	1973
LOWEST ANNUAL MEAN	51.6	1969
HIGHEST DAILY MEAN	3220	Jun 22 1972
LOWEST DAILY MEAN	7.2	Sep 12 1966
ANNUAL SEVEN DAY MINIMUM	8.0	Sep 7 1966
INSTANTANEOUS PEAK FLOW	a8070	Jun 22 1972
INSTANTANEOUS PEAK STAGE	c12.06	Jun 22 1972
INSTANTANEOUS LOW FLOW	7.2	Sep 2,3,11-13,1966
ANNUAL RUNOFF (CFSM)	1.44	
ANNUAL RUNOFF (INCHES)	19.51	
10 PERCENT EXCEEDS	163	
50 PERCENT EXCEEDS	56	
90 PERCENT EXCEEDS	23	

- a From rating curve extended above 5,000 ft³/s.
- b Also Sept. 12.
- c From floodmark.



1-YEAR HYDROGRAPH
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-1996, 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	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)	COLI- FORM, FECAL, 0.45 µM-MF (COLS./ 100 ML) (31616)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)
MAR 1999 31...	0805	1028	1028	69	12.3	6.6	212	6.5	100	--
MAY 04...	0919	1028	1028	45	11.1	7.5	218	13.0	160	170
JUN 02...	1240	1028	1028	42	9.0	7.8	206	22.0	110	100
AUG 26...	1146	1028	1028	94	--	--	181	18.5	9800	>4000
SEP 16...	0807	1028	1028	203	--	--	--	18.0	16000	4400