

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.

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 poor. 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 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	43	106	55	e40	131	163	88	50	80	46	38
2	63	71	103	55	e38	104	155	94	48	71	51	33
3	70	131	102	56	e38	96	144	88	44	66	56	49
4	80	61	100	68	e38	81	172	85	46	70	231	55
5	123	57	100	127	e38	63	134	83	58	62	72	32
6	82	62	206	82	e38	60	120	85	108	55	59	29
7	74	53	143	77	e40	58	113	76	87	51	56	27
8	62	46	114	74	e38	59	111	55	73	45	49	27
9	39	44	108	73	e40	59	190	53	67	42	48	26
10	160	43	125	98	e42	58	140	74	63	53	44	26
11	93	42	135	117	e48	92	117	90	60	45	43	27
12	63	39	111	85	e50	166	122	67	61	40	72	26
13	69	38	93	80	e45	124	136	69	137	38	53	99
14	76	38	216	71	e85	117	132	123	88	40	60	41
15	74	35	174	69	109	108	119	114	81	45	58	119
16	90	34	139	61	93	104	110	108	80	44	47	52
17	89	34	123	e36	107	208	126	99	72	42	41	42
18	71	33	116	e32	79	107	159	71	116	40	39	37
19	50	33	112	e36	173	71	116	121	556	42	40	76
20	62	34	121	e35	129	64	107	194	146	47	35	85
21	65	35	134	e31	99	448	241	150	120	38	32	49
22	53	35	89	e31	88	1290	236	176	285	35	30	40
23	60	36	75	e35	113	569	163	225	140	33	30	38
24	54	42	53	e37	154	351	160	225	112	32	32	38
25	50	40	45	e35	178	259	153	168	96	35	30	47
26	46	79	48	e35	174	278	137	153	87	78	27	338
27	45	328	47	e33	130	259	104	143	85	79	29	123
28	45	151	45	e30	262	326	102	141	102	53	33	102
29	44	127	44	e35	162	177	98	107	119	46	29	103
30	43	114	43	e40	---	157	92	54	105	43	34	88
31	42	---	49	e42	---	152	---	52	---	46	47	---
TOTAL	2097	1958	3219	1771	2668	6196	4172	3431	3292	1536	1553	1912
MEAN	67.6	65.3	104	57.1	92.0	200	139	111	110	49.5	50.1	63.7
MAX	160	328	216	127	262	1290	241	225	556	80	231	338
MIN	39	33	43	30	38	58	92	52	44	32	27	26

e Estimated.

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01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2000, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.2	75.2	112	122	112	142	133	107	72.6	66.6	43.9	56.9
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 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1974 - 2000

ANNUAL TOTAL		28847		33805								
ANNUAL MEAN		79.0		92.4					91.9			
HIGHEST ANNUAL MEAN									150			1984
LOWEST ANNUAL MEAN									39.3			1981
HIGHEST DAILY MEAN				1870	Sep 16		1290	Mar 22	2020		Jan 26	1978
LOWEST DAILY MEAN				14	Aug 28		26	Sep 9,10,12	11		Sep 18	1992
ANNUAL SEVEN-DAY MINIMUM				15	Aug 1		27	Sep 6	12		Sep 2	1995
INSTANTANEOUS PEAK FLOW							2550	Mar 22	a5410		Sep 16	1999
INSTANTANEOUS PEAK STAGE							6.64	Mar 22	9.59		Sep 16	1999
INSTANTANEOUS LOW FLOW							b20	Jan 25	11		Sep 18	1992
10 PERCENT EXCEEDS				140			160		176			
50 PERCENT EXCEEDS				54			70		59			
90 PERCENT EXCEEDS				19			35		26			

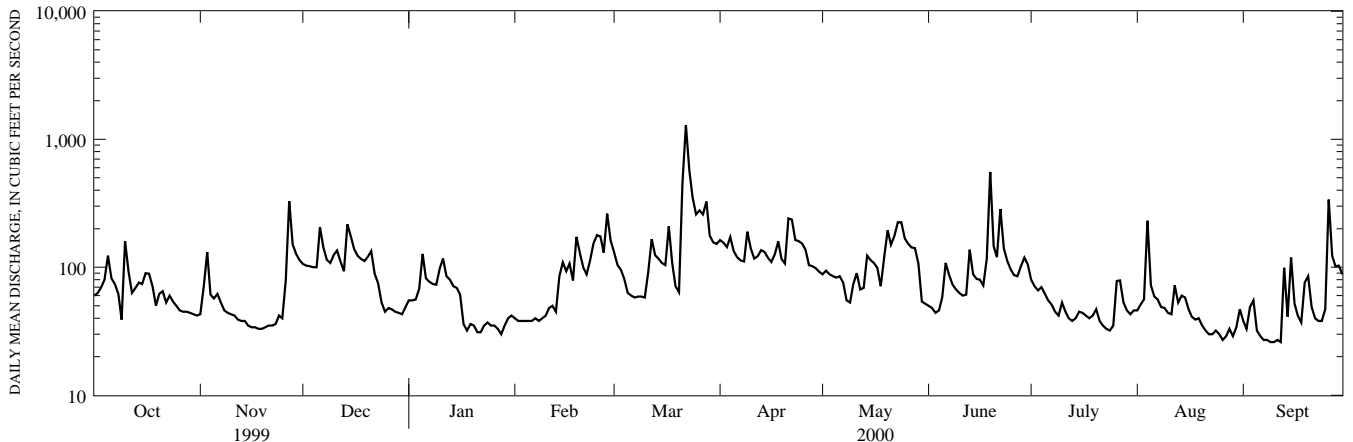
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	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 Result of freeze-up.
- c From floodmark.



1-YEAR HYDROGRAPH
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000