

CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA

LOCATION.--Lat 40°01'38", long 75°50'43", Chester County, Hydrologic Unit 02040205, on right bank 15 ft upstream from SR 4005, 0.2 mi upstream of mouth, 0.6 mi downstream from Chambers Lake Reservoir, and 1.1 mi northwest of Wagontown.

DRAINAGE AREA.--4.55 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1995 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 510 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Chambers Lake Reservoir (station 01480399) 0.6 mi upstream. Satellite and landline telemetry at station.

REVISIONS.--The annual maximum (*) reported for water years 1996, 1997, and 1998 have been revised as shown in the following table.

Water Year	Date	Discharge ft ³ /s	Gage Height (ft)
1996	Jan. 19, 1996	*401	*4.99
1997	Oct. 19, 1996	*327	*4.64
1998	Apr. 2, 1998	*68	*3.13

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	2.1	2.5	3.1	1.6	1.5	13	4.6	3.1	1.5	1.5	2.5	e4.4
2	2.3	2.5	3.7	1.6	1.6	9.4	5.2	2.9	1.5	1.5	2.5	4.3
3	2.3	2.5	3.4	2.0	1.6	6.4	4.7	3.0	1.5	1.5	2.5	4.3
4	2.2	2.5	2.8	1.6	1.5	9.6	4.7	3.1	1.5	1.5	4.6	4.4
5	2.1	2.5	2.5	1.6	1.5	7.2	5.3	3.1	1.5	1.5	5.7	4.4
6	2.1	2.5	2.5	1.6	1.5	7.0	4.6	3.3	1.5	1.9	5.4	4.3
7	2.2	2.4	2.5	1.6	1.5	9.3	4.1	3.4	1.5	2.6	5.3	3.3
8	2.6	2.4	2.5	1.5	1.5	5.9	3.8	3.3	1.5	2.6	5.4	1.6
9	2.6	2.5	2.5	1.6	1.5	4.7	4.8	3.1	1.5	2.6	5.4	1.7
10	2.5	2.0	2.4	1.5	1.5	4.5	14	2.8	1.5	2.6	5.0	1.6
11	2.7	1.6	2.4	1.5	1.5	4.2	12	2.5	1.5	2.6	4.2	1.6
12	2.9	1.5	2.4	1.5	1.6	3.8	15	2.4	1.5	2.6	4.1	1.6
13	3.0	1.5	2.4	1.5	1.6	3.5	11	3.3	1.5	2.5	4.2	1.6
14	3.4	1.5	2.4	1.5	1.5	4.0	7.8	3.2	1.5	2.5	4.0	1.6
15	3.6	1.5	2.4	1.5	1.5	6.0	6.0	2.7	1.5	2.5	4.1	1.6
16	3.6	1.5	2.4	1.5	1.6	5.7	6.5	2.3	1.5	2.5	4.2	16
17	3.6	1.5	2.4	1.5	1.6	7.9	7.0	2.2	1.5	2.4	4.1	1.9
18	3.6	1.5	2.4	1.9	5.0	12	5.8	2.1	1.5	2.4	3.9	1.8
19	3.0	1.5	2.4	1.7	9.0	8.1	5.0	2.4	1.5	2.5	5.0	1.8
20	2.2	1.5	2.4	1.5	6.6	5.5	4.8	2.5	1.5	2.5	5.6	1.8
21	2.0	1.5	2.4	1.5	5.0	6.6	4.5	2.0	1.5	2.5	5.5	1.7
22	2.5	1.5	1.9	1.5	3.9	40	5.2	1.8	1.5	2.5	5.6	2.5
23	2.5	1.5	1.7	1.5	3.4	20	5.5	2.8	1.5	2.6	5.6	2.5
24	2.4	1.5	1.6	1.7	3.2	13	5.9	3.9	1.5	2.7	5.2	2.1
25	2.4	2.1	1.6	1.6	3.2	10	4.7	3.7	1.5	2.7	4.7	1.9
26	2.4	2.8	1.6	1.5	3.2	7.3	4.1	2.7	1.5	2.7	3.2	1.7
27	2.4	2.5	1.6	1.5	3.1	6.0	3.7	2.1	1.5	2.6	1.7	1.7
28	2.4	2.5	1.6	1.5	6.4	5.8	3.5	1.8	1.5	2.5	3.6	1.7
29	2.4	2.5	1.6	1.5	---	5.4	3.4	1.6	1.5	2.5	6.3	1.7
30	2.4	2.4	1.6	1.5	---	4.6	3.2	1.6	1.5	2.5	5.6	6.6
31	2.5	---	1.6	1.5	---	4.2	---	1.5	---	2.5	4.6	---
TOTAL	80.9	60.2	70.7	48.6	78.1	260.6	180.4	82.2	45.0	73.1	139.3	89.7
MEAN	2.61	2.01	2.28	1.57	2.79	8.41	6.01	2.65	1.50	2.36	4.49	2.99
MAX	3.6	2.8	3.7	2.0	9.0	40	15	3.9	1.5	2.7	6.3	16
MIN	2.0	1.5	1.6	1.5	1.5	3.5	3.2	1.5	1.5	1.5	1.7	1.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)

MEAN	6.57	4.36	9.03	7.15	7.45	11.8	10.4	5.60	3.88	2.73	2.74	2.89
MAX	19.2	11.3	30.3	16.2	9.94	15.7	17.1	8.99	10.4	6.23	4.49	6.19
(WY)	1997	1997	1997	1996	1997	1998	1998	1998	1996	1996	1999	1996
MIN	1.15	1.23	1.21	1.57	2.79	8.41	2.90	2.65	1.50	1.33	1.25	1.45
(WY)	1996	1996	1996	1999	1999	1999	1995	1999	1999	1995	1995	1995

e Estimated.

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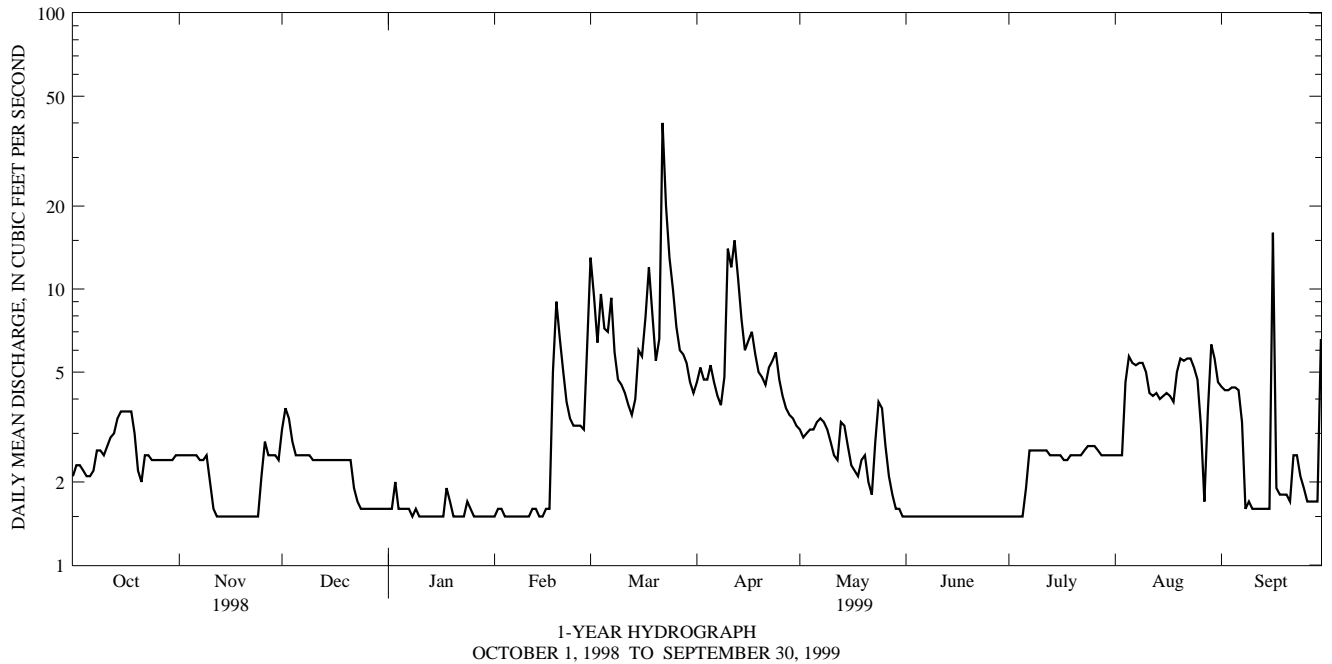
01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1995 - 1999	
ANNUAL TOTAL	2089.1		1208.8			
ANNUAL MEAN	5.72		3.31		6.60	
HIGHEST ANNUAL MEAN					9.52	
LOWEST ANNUAL MEAN					3.31	
HIGHEST DAILY MEAN	54	Apr 2	40	Mar 22	250	Oct 19 1996
LOWEST DAILY MEAN	1.5	Jan 1-7 ^a	1.5	Nov 12-24 ^b	.10	Feb 15 1995
ANNUAL SEVEN-DAY MINIMUM	1.5	Jan 1	1.5	Nov 12	.27	Apr 18 1995
INSTANTANEOUS PEAK FLOW			126	Sep 16	c401	Jan 19 1996
INSTANTANEOUS PEAK STAGE			3.50	Sep 16	4.99	Jan 19 1996
10 PERCENT EXCEEDS	15		5.7		14	
50 PERCENT EXCEEDS	2.4		2.5		2.9	
90 PERCENT EXCEEDS	1.6		1.5		1.3	

^a Also Jan. 10-14, 20-22, Nov. 13-24.

^b Also Jan. 8, 10-17, 20-23, Jan. 26-Feb. 1, 4-11, 14, 15, May 31, June 1-July 5.

^c From rating curve extended above 59 ft³/s.



CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1996 to current year.

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

REMARKS.--Interruptions in the record were due to malfunctions of the equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C, July 19, Aug. 1, 1996; minimum, 0.0°C, several days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 20.5°C, Oct. 1, but may have been higher during instrument malfunction Aug. 14 to Sept. 30; minimum, 0.5°C, Jan. 4-6, 8, 14.

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, µM-MF (COLS./ 100 ML) (31616)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)
MAR 1999										
22...	1605	1028	1028	40	12.9	7.1	123	6.0	K24	--
APR										
08...	1851	1028	1028	3.7	9.9	6.9	123	12.5	<3	--
MAY										
05...	0930	1028	1028	3.1	10.0	7.2	127	14.0	<3	K3
JUN										
03...	1205	1028	1028	1.6	8.4	7.0	135	13.0	K7	K1
SEP										
13...	0920	1028	1028	1.6	7.8	6.9	150	20.0	33	--

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01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	18.5	19.5	13.0	11.5	12.0	9.0	7.5	8.0	2.0	1.0	1.5
2	19.5	17.5	18.5	12.5	11.0	11.5	8.5	7.5	8.0	2.0	1.0	1.5
3	18.5	17.0	18.0	12.0	10.5	11.0	9.0	8.0	8.5	3.5	1.5	2.5
4	17.5	17.0	17.0	11.5	10.0	10.5	10.0	8.5	9.0	2.0	.5	1.0
5	18.0	16.5	17.0	11.0	9.5	10.0	9.5	8.5	9.0	1.5	.5	.5
6	17.5	16.0	17.0	10.0	9.0	9.5	10.0	8.5	9.0	2.0	.5	1.0
7	17.5	16.5	17.0	10.5	9.0	9.5	11.0	8.5	9.5	2.0	1.0	1.5
8	17.5	17.0	17.0	10.0	9.0	9.5	9.0	8.5	9.0	2.0	.5	1.5
9	17.0	16.5	17.0	10.0	8.5	9.5	9.0	8.0	8.5	3.0	1.5	2.5
10	17.0	16.0	16.5	10.0	8.5	9.5	9.0	8.0	8.5	2.5	1.5	1.5
11	17.5	16.0	16.5	10.5	9.0	10.0	9.0	7.5	8.0	2.0	1.0	1.5
12	17.0	16.0	16.5	10.0	8.5	9.0	8.5	7.5	8.0	4.0	1.5	2.5
13	17.0	16.0	16.5	10.0	8.5	9.0	8.0	7.5	7.5	4.0	2.5	3.0
14	16.5	15.5	16.0	10.5	8.0	9.0	7.5	6.5	7.0	2.5	.5	1.5
15	16.5	15.0	15.5	10.0	8.5	9.0	7.5	6.0	6.5	3.0	1.5	2.5
16	16.5	14.5	15.0	10.0	8.0	8.5	7.5	6.5	6.5	4.0	2.0	2.5
17	16.0	14.0	15.0	10.0	8.5	9.5	7.0	6.0	6.5	4.5	2.5	3.0
18	16.0	14.0	15.0	9.5	8.0	8.5	6.0	5.5	5.5	4.5	2.5	3.5
19	16.0	14.5	15.0	9.5	7.5	8.5	6.5	5.0	6.0	4.5	2.5	3.0
20	16.0	14.0	15.0	10.0	8.0	9.0	6.5	6.0	6.0	4.5	2.5	3.5
21	15.5	14.0	14.5	8.5	8.0	8.0	6.5	6.0	6.0	4.0	3.0	3.5
22	14.5	13.5	14.0	8.5	7.0	8.0	7.0	4.0	6.0	4.0	3.5	4.0
23	14.0	12.5	13.0	9.0	7.0	8.0	5.0	4.0	4.5	5.0	4.0	4.5
24	14.0	12.5	13.0	9.0	7.5	8.0	4.5	3.5	4.0	5.5	3.0	4.5
25	14.0	12.0	13.0	8.5	7.0	7.5	4.0	3.0	3.5	3.5	2.5	3.0
26	14.0	12.5	13.0	8.5	7.5	8.0	4.0	2.5	3.0	4.5	2.5	3.0
27	13.5	12.5	13.0	8.5	7.0	8.0	4.0	2.0	3.0	4.5	2.5	3.0
28	13.5	12.5	13.0	8.5	7.0	7.5	4.5	3.0	4.0	5.0	3.0	3.5
29	13.5	12.0	13.0	9.0	7.5	8.0	4.0	3.5	4.0	4.5	2.5	3.5
30	13.5	12.0	12.5	8.5	7.5	8.0	3.5	1.0	2.5	4.5	2.5	3.0
31	13.0	11.5	12.0	---	---	---	2.5	1.0	1.5	4.0	2.0	2.5
MONTH	20.5	11.5	15.3	13.0	7.0	9.1	11.0	1.0	6.3	5.5	.5	2.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.0	2.0	3.0	4.0	3.0	3.5	9.5	8.5	9.0	15.0	11.0	12.5
2	4.5	3.0	4.0	4.5	3.0	3.5	11.5	8.5	10.0	15.0	11.5	12.5
3	5.5	3.5	4.0	5.5	3.5	4.5	11.0	8.5	9.5	13.0	11.5	12.5
4	4.5	3.0	4.0	5.0	3.5	4.0	13.0	10.0	11.5	14.5	12.5	13.0
5	5.0	3.0	3.5	5.0	3.5	4.0	12.5	10.0	11.0	16.0	12.5	14.0
6	4.5	3.0	3.5	4.5	4.0	4.0	13.0	10.0	11.0	14.0	12.5	13.0
7	4.5	3.0	3.5	4.0	2.5	3.5	13.0	10.5	11.5	14.0	12.5	13.0
8	4.5	2.5	3.5	3.5	1.5	2.5	14.0	10.5	12.0	15.0	13.0	14.0
9	5.0	2.5	3.5	3.0	1.5	2.5	11.5	11.0	11.0	16.0	13.0	14.0
10	5.5	3.0	3.5	4.0	2.5	3.0	14.0	11.5	12.5	16.0	12.5	14.0
11	5.5	3.0	4.0	4.0	2.0	2.5	12.5	11.0	11.5	16.0	12.5	14.0
12	7.0	3.0	4.5	4.0	2.0	2.5	12.5	11.0	11.5	16.0	12.0	14.0
13	5.0	3.0	4.0	4.5	1.5	2.5	12.5	10.5	11.5	15.5	14.0	15.0
14	4.5	2.5	3.0	3.5	2.0	2.5	12.5	10.5	11.5	15.5	13.0	14.0
15	5.0	2.5	3.5	4.0	1.5	2.5	12.5	10.5	11.5	15.0	12.0	13.5
16	6.0	3.0	4.0	4.0	1.5	3.0	11.5	11.0	11.5	14.5	11.5	13.0
17	5.0	3.5	4.0	5.5	2.5	3.5	12.5	11.0	11.5	14.5	11.5	13.0
18	4.5	4.0	4.5	6.0	3.5	4.5	12.5	10.5	11.0	16.0	12.0	13.5
19	5.0	4.0	4.5	6.0	4.5	5.0	12.0	10.5	11.0	14.5	13.0	14.0
20	5.0	4.0	4.5	7.0	4.5	5.5	11.5	10.5	11.0	16.5	12.5	14.5
21	4.5	3.0	3.5	6.0	5.5	5.5	12.0	10.0	11.0	15.5	11.5	13.5
22	3.5	2.0	2.5	6.0	5.5	5.5	15.0	11.0	12.5	15.5	11.5	13.0
23	3.0	1.5	2.5	6.5	5.0	6.0	12.0	11.0	11.5	16.0	12.0	14.5
24	4.0	2.0	3.0	7.0	6.0	6.5	13.5	11.0	12.0	17.5	14.5	16.0
25	4.5	2.5	3.0	8.0	6.0	7.0	14.0	10.5	12.0	17.0	14.5	15.5
26	4.5	2.5	3.0	8.0	6.0	7.0	14.5	11.0	12.5	16.0	13.0	14.5
27	4.5	2.5	3.5	8.0	6.5	7.0	15.0	11.5	13.0	15.0	12.0	13.5
28	3.5	2.5	3.5	7.5	6.5	7.0	14.5	11.5	12.5	15.5	11.5	13.0
29	---	---	---	9.5	6.5	8.0	15.0	11.5	13.0	15.5	11.5	13.0
30	---	---	---	10.0	7.0	8.5	15.0	11.5	12.5	15.5	11.5	13.0
31	---	---	---	11.0	7.5	9.0	---	---	---	14.5	11.0	12.5
MONTH	7.0	1.5	3.6	11.0	1.5	4.7	15.0	8.5	11.5	17.5	11.0	13.6

