

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.

REVISED RECORDS.--WDR PA-99-1: 1996-98 (M).

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.

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	5.0	1.8	3.5	3.5	3.8	11	8.9	6.7	e3.7	6.1	2.6	1.7
2	3.4	4.3	3.0	3.4	3.5	9.3	8.6	7.8	e3.5	4.3	2.5	1.7
3	2.7	11	2.9	3.5	3.3	7.1	8.6	7.2	3.6	3.7	2.7	1.7
4	3.4	6.0	2.8	5.2	3.3	6.1	14	6.5	3.3	3.9	7.6	1.7
5	7.8	3.9	2.7	11	3.4	5.7	13	6.3	3.2	3.4	4.9	1.7
6	5.2	3.2	9.6	7.2	3.2	5.2	9.6	6.4	5.3	2.7	3.6	1.7
7	3.5	2.8	11	5.5	3.1	4.9	8.4	5.8	5.7	2.4	3.4	1.7
8	2.8	2.3	6.4	4.3	3.2	4.9	8.0	5.3	4.5	1.9	2.4	3.8
9	2.3	2.1	4.5	4.0	3.1	4.8	15	4.8	3.9	1.8	2.2	6.7
10	8.7	2.1	5.3	5.9	3.2	4.6	14	5.9	3.5	2.5	1.9	6.7
11	10	1.9	6.3	9.3	4.0	5.4	10	9.0	3.2	2.3	1.7	6.2
12	5.5	1.8	4.6	6.5	5.3	11	9.1	6.1	3.1	2.0	1.7	6.2
13	3.8	1.8	4.6	5.3	4.7	8.7	7.9	5.4	4.8	1.8	1.6	4.9
14	3.3	1.9	15	4.5	7.6	6.4	7.2	7.6	4.5	1.8	1.7	1.6
15	2.3	1.9	19	3.5	11	5.3	7.3	5.1	4.3	2.5	1.6	1.6
16	2.0	1.8	12	3.6	9.7	5.2	8.3	4.1	4.4	3.1	1.7	1.5
17	2.1	1.6	8.2	3.4	11	13	13	3.9	4.0	2.8	1.6	1.6
18	3.2	1.5	6.1	3.0	9.8	10	17	3.8	5.3	2.6	1.6	1.6
19	2.5	e1.7	5.0	2.9	16	7.5	12	6.2	20	2.5	1.6	1.6
20	3.3	e1.6	5.5	3.5	16	6.1	9.8	11	11	2.9	1.6	1.6
21	3.9	e1.9	8.4	3.7	12	29	19	12	6.8	2.5	1.6	1.6
22	3.4	e1.7	6.5	3.4	9.9	183	30	13	16	2.2	1.6	1.6
23	4.0	1.6	5.3	3.2	11	56	17	18	10	1.9	1.6	1.6
24	3.2	1.9	4.5	3.2	16	25	13	18	6.3	1.8	1.7	1.6
25	2.5	2.2	3.9	4.5	19	16	10	13	4.6	1.8	1.6	1.7
26	2.2	3.9	3.7	4.4	19	13	9.1	8.5	3.8	3.8	1.6	3.8
27	2.0	21	3.7	3.7	14	11	8.4	6.7	3.5	6.6	1.7	5.7
28	1.9	12	3.5	3.3	23	23	7.9	6.4	6.0	5.0	1.6	4.2
29	1.8	6.8	3.5	3.1	15	16	7.3	5.6	12	4.0	1.7	3.2
30	1.8	4.4	3.4	3.2	---	12	7.2	4.7	9.5	3.3	1.7	2.3
31	1.8	---	3.5	4.2	---	10	---	4.3	---	2.9	1.7	---
TOTAL	111.3	114.4	187.9	138.9	267.1	536.2	338.6	235.1	183.3	92.8	68.3	84.8
MEAN	3.59	3.81	6.06	4.48	9.21	17.3	11.3	7.58	6.11	2.99	2.20	2.83
MAX	10	21	19	11	23	183	30	18	20	6.6	7.6	6.7
MIN	1.8	1.5	2.7	2.9	3.1	4.6	7.2	3.8	3.1	1.8	1.6	1.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	5.97	4.25	8.44	6.62	7.75	12.7	10.5	5.93	4.25	2.77	2.65	2.88
MAX	19.2	11.3	30.3	16.2	9.94	17.3	17.1	8.99	10.4	6.23	4.49	6.19
(WY)	1997	1997	1997	1996	1997	2000	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

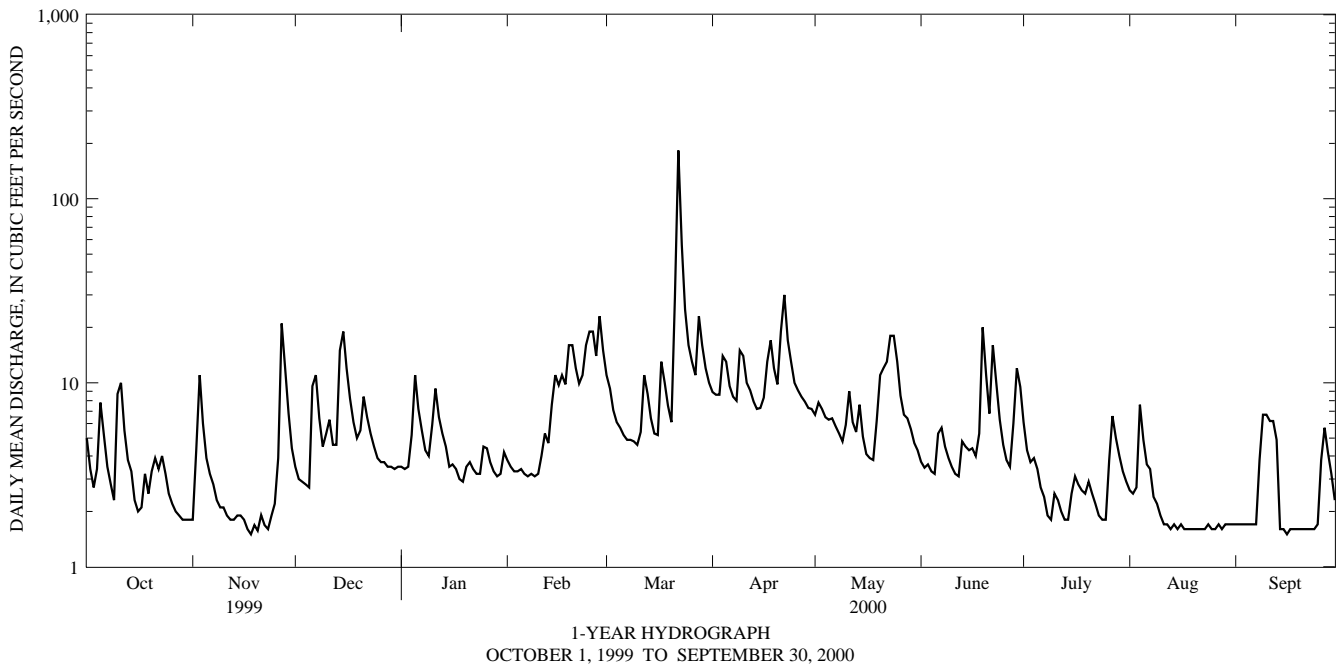
e Estimated.

CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	1410.6		2358.7			
ANNUAL MEAN	3.86		6.44		6.57	
HIGHEST ANNUAL MEAN					9.52	
LOWEST ANNUAL MEAN					3.31	
HIGHEST DAILY MEAN	40	Mar 22	183	Mar 22	250	Oct 19 1996
LOWEST DAILY MEAN	1.5	Jan 8 ^a	1.5	Nov 18, Sep 16	.10	Feb 15 1995
ANNUAL SEVEN-DAY MINIMUM	1.5	Jan 10	1.6	Sep 14	.27	Apr 18 1995
INSTANTANEOUS PEAK FLOW			b302	Mar 22	b401	Jan 19 1996
INSTANTANEOUS PEAK STAGE			4.51	Mar 22	4.99	Jan 19 1996
10 PERCENT EXCEEDS	6.7		12		13	
50 PERCENT EXCEEDS	2.7		4.1		3.3	
90 PERCENT EXCEEDS	1.5		1.7		1.3	

a Also Jan. 10-17, 20-23, 26-31, Feb. 1, 4-11, 14, 15, May 31, June 1-July 5.
 b From rating curve extended above 230 ft³/s based on a slope-conveyance calculation.



CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1996 to current year.

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

REMARKS.--Water temperature records rated good. 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, 24.0°C, June 20, 29; minimum, 0.0°C, Jan. 17, 18, 25.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.0	16.5	18.0	14.5	10.5	12.5	7.0	6.0	6.5	3.5	2.5	3.0
2	20.0	16.0	18.0	14.0	11.0	13.0	6.5	5.5	6.0	4.5	3.0	3.5
3	19.5	16.0	17.5	14.5	10.0	13.0	7.5	5.5	6.5	4.5	3.5	4.0
4	19.0	15.5	17.5	13.5	10.0	12.0	8.0	6.0	7.0	5.5	4.0	5.0
5	18.5	15.0	17.5	14.0	9.5	11.5	8.0	6.5	7.0	4.5	4.0	4.0
6	18.0	15.5	17.0	14.0	9.5	12.0	8.0	7.0	7.5	4.5	3.5	4.0
7	17.5	14.0	16.0	12.0	9.0	11.0	8.0	7.0	7.5	4.5	3.5	3.5
8	17.0	13.5	15.5	12.5	8.5	10.5	7.5	6.5	7.0	4.0	3.0	3.5
9	17.0	14.0	16.0	12.5	8.5	10.5	7.5	6.5	6.5	4.0	3.5	4.0
10	18.0	15.0	16.5	13.0	8.5	11.0	7.0	6.0	6.5	4.5	4.0	4.0
11	18.5	15.5	17.0	12.0	7.5	10.0	6.5	5.5	6.0	4.5	3.5	4.0
12	18.0	14.5	16.5	12.0	7.5	10.0	6.5	5.5	5.5	4.0	3.0	3.5
13	18.0	14.5	16.0	12.5	8.0	10.5	6.0	5.5	5.5	4.5	2.5	3.5
14	17.0	14.0	15.5	13.0	8.0	10.5	6.0	5.5	5.5	2.5	1.0	1.5
15	16.5	12.5	14.5	11.0	8.0	10.0	6.0	5.5	5.5	2.5	1.0	1.5
16	17.0	13.0	15.0	10.0	7.0	8.5	6.0	5.0	5.5	3.0	1.0	2.0
17	17.0	13.5	15.0	8.5	7.0	7.5	5.5	5.0	5.0	1.0	.0	.5
18	17.0	13.5	15.0	9.0	7.0	7.5	5.5	5.0	5.0	.5	.0	.5
19	16.0	12.5	14.0	---	---	---	5.0	4.5	5.0	1.5	.5	1.0
20	16.0	13.0	14.0	---	---	---	5.5	5.0	5.0	1.5	1.0	1.0
21	16.0	12.5	14.0	---	---	---	5.5	4.5	5.0	1.0	.5	1.0
22	15.5	12.0	14.0	---	---	---	4.5	4.0	4.5	1.5	.5	1.0
23	14.5	11.5	13.5	9.5	8.5	9.0	4.5	3.5	4.0	1.5	1.0	1.5
24	14.5	11.5	13.0	10.0	9.0	9.5	3.5	2.5	3.0	2.5	1.5	1.5
25	14.5	10.5	12.5	10.0	9.0	9.5	2.5	1.5	2.0	1.5	.0	1.0
26	14.5	10.5	12.5	10.5	9.0	9.5	2.5	2.0	2.0	2.0	1.0	1.5
27	14.0	10.0	12.0	11.0	10.5	11.0	2.5	1.5	2.0	1.5	1.0	1.0
28	14.0	10.0	12.0	10.5	9.0	10.0	2.5	1.5	2.0	2.0	1.0	1.5
29	14.0	10.0	12.0	9.5	8.5	9.0	2.5	1.5	2.0	2.5	1.0	1.5
30	14.0	10.5	12.0	8.5	7.0	8.0	3.5	2.0	2.5	2.5	.5	1.5
31	14.5	11.0	12.5	---	---	---	3.5	2.5	3.0	2.0	1.5	1.5
MONTH	20.0	10.0	14.9	14.5	7.0	10.3	8.0	1.5	5.0	5.5	.0	2.3

CHRISTINA RIVER BASIN

01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103)	SAM- PLING DEPTH (FEET) (00003)
SEP 2000					
14...	1300	--	--	0	--
14...	1301	1.5	18.5	6	.5
14...	1303	1.5	18.5	8	.5
14...	1306	1.5	18.5	10	.5
14...	1309	1.5	18.5	12	.5
14...	1310	1.5	18.5	14	.5
14...	1311	1.5	18.5	16	.5
14...	1312	1.5	18.5	18	.5
14...	1314	1.5	18.5	20	.5
14...	1315	--	--	23	--