

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, 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 505.81 ft above North American Vertical Datum of 1988.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Chambers Lake (station 01480399) 0.6 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	3.0	1.3	2.9	3.1	3.3	1.4	1.4	1.4	1.5	1.1	4.8
2	3.3	2.8	1.3	2.9	3.1	3.3	1.4	1.5	1.4	1.4	1.1	4.6
3	3.4	2.7	1.6	2.8	3.1	3.4	1.4	1.5	1.4	1.4	1.1	4.6
4	3.3	2.7	2.2	3.0	3.1	3.3	1.4	1.4	1.4	1.4	1.2	4.6
5	3.3	2.7	3.0	3.0	3.2	3.3	1.4	1.4	1.4	1.4	2.2	4.6
6	3.3	2.7	3.0	3.1	3.3	3.3	1.5	1.4	6.3	1.4	3.0	4.6
7	3.3	2.7	3.1	3.1	3.2	3.3	1.4	1.4	27	1.4	3.0	4.6
8	3.1	2.4	2.6	3.1	3.1	2.7	1.4	1.4	11	1.4	2.9	4.6
9	3.1	1.8	1.9	3.0	3.1	1.2	1.5	1.4	5.0	1.4	2.8	4.6
10	3.0	2.4	3.2	3.0	3.1	1.3	1.5	1.4	3.3	1.4	2.8	4.6
11	2.9	2.4	3.1	3.1	3.1	1.3	1.4	1.4	2.7	1.4	2.9	4.6
12	2.8	2.4	3.1	3.1	3.2	1.3	1.5	1.4	2.3	1.4	3.1	5.9
13	2.8	2.4	3.1	3.1	3.2	1.3	1.4	4.9	1.9	1.4	3.4	5.7
14	2.9	2.3	3.1	3.1	3.3	1.3	1.4	23	7.1	1.5	3.4	4.7
15	3.5	2.2	3.1	3.1	3.2	1.3	1.4	11	8.8	1.4	3.2	5.3
16	3.5	2.3	3.1	3.1	3.3	1.3	1.4	5.4	6.2	1.3	3.3	5.2
17	3.5	2.4	3.1	3.1	3.3	1.4	1.3	3.8	3.9	1.3	3.3	4.8
18	3.2	2.5	3.1	3.1	3.2	1.4	1.3	11	3.1	1.3	3.3	5.1
19	3.1	1.8	3.1	3.1	3.2	1.4	1.3	10	3.0	1.3	3.2	4.9
20	3.1	1.2	3.0	3.0	3.2	1.6	1.3	5.5	2.5	1.3	3.1	4.9
21	3.1	1.3	2.9	3.0	3.2	1.5	1.3	3.7	2.1	1.3	3.1	3.9
22	3.1	1.2	2.9	3.1	3.2	1.4	1.4	3.1	1.8	1.4	3.0	4.0
23	3.1	1.2	2.9	3.1	3.3	1.4	1.4	2.8	1.6	1.4	3.1	4.0
24	3.0	1.2	3.0	3.3	3.3	1.4	1.4	2.6	1.5	1.4	3.1	3.9
25	3.0	1.2	3.0	3.1	3.2	1.4	1.4	2.3	1.5	1.4	3.0	3.9
26	3.0	1.3	3.0	3.1	3.2	1.4	1.4	2.2	1.4	1.4	3.0	4.1
27	3.0	1.3	3.0	3.1	3.3	1.5	1.4	2.4	1.4	1.4	3.0	3.6
28	3.0	1.3	3.0	3.1	3.3	1.4	1.5	4.3	1.5	1.4	3.1	1.6
29	3.0	1.3	3.0	3.1	---	1.4	1.4	5.3	1.5	1.4	3.6	1.2
30	3.0	1.7	3.0	3.1	---	1.4	1.4	3.6	1.5	1.2	4.6	1.3
31	3.0	---	3.0	3.1	---	1.4	---	1.4	---	1.1	4.6	---
TOTAL	97.0	60.8	86.8	95.0	89.6	57.6	42.0	125.3	116.9	42.5	90.6	128.8
MEAN	3.129	2.027	2.800	3.065	3.200	1.858	1.400	4.042	3.897	1.371	2.923	4.293
MAX	3.5	3.0	3.2	3.3	3.3	3.4	1.5	23	27	1.5	4.6	5.9
MIN	2.8	1.2	1.3	2.8	3.1	1.2	1.3	1.4	1.4	1.1	1.1	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	5.243	3.616	7.519	6.000	7.441	11.16	9.185	5.694	4.014	2.433	2.540	2.963				
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	1.86	1.40	2.65	1.50	1.33	1.25	1.45				
(WY)	1996	1996	1996	1999	1999	2002	2002	1999	1999	1995	1995	1995				

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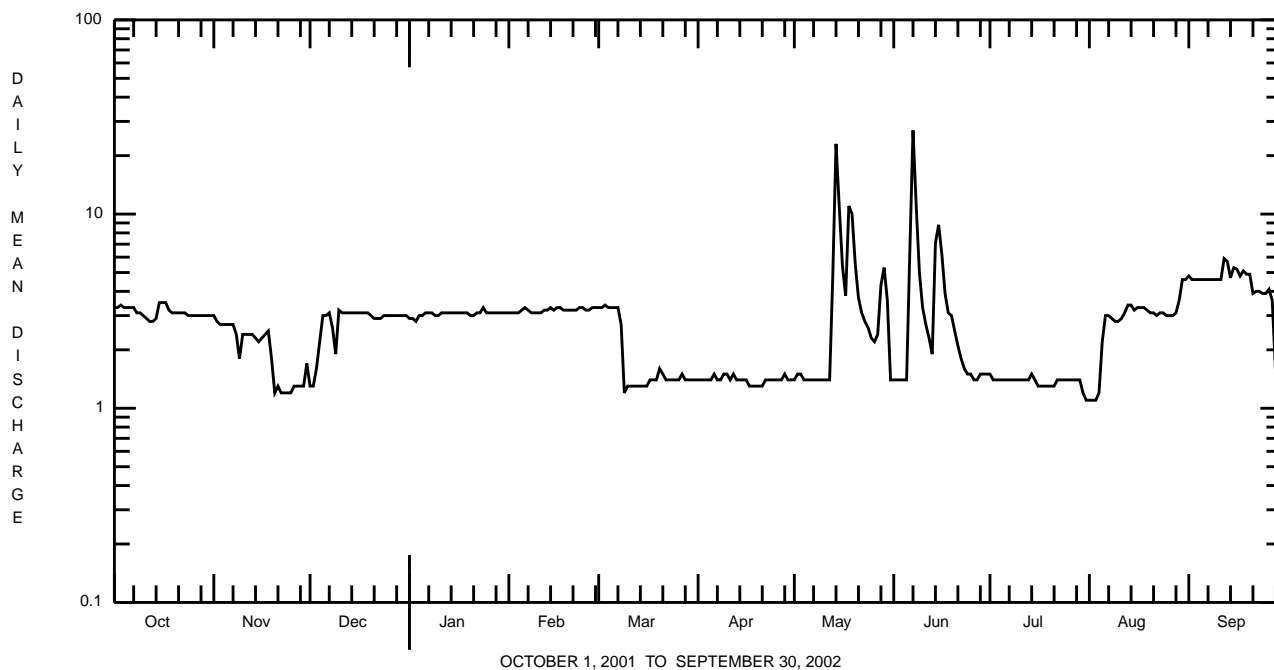
01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1995 - 2002	
ANNUAL TOTAL	1735.9		1032.9			
ANNUAL MEAN	4.76		2.83		5.85	
HIGHEST ANNUAL MEAN					9.52	1997
LOWEST ANNUAL MEAN					2.83	2002
HIGHEST DAILY MEAN	41	Mar 30	27	Jun 7	250	Oct 19 1996
LOWEST DAILY MEAN	1.2	Nov 20 ^a	1.1	Jul 31 ^b	0.10	Feb 15 1995
ANNUAL SEVEN-DAY MINIMUM	1.2	Nov 20	1.2	Jul 29	0.27	Apr 18 1995
MAXIMUM PEAK FLOW			43	Jun 7	c401	Jan 19 1996
MAXIMUM PEAK STAGE			2.93	Jun 7	4.99	Jan 19 1996
10 PERCENT EXCEEDS	11		4.6		12	
50 PERCENT EXCEEDS	3.0		3.0		3.1	
90 PERCENT EXCEEDS	1.5		1.3		1.5	

^a Also Nov. 22-25.

^b Also Aug. 1-3.

^c From rating curve extended above 230 ft³/s based on a slope-conveyance calculation.



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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.

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, 25.0°C, Aug. 17, 18; minimum, 1.0°C, Jan. 1, 2.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.5	17.0	17.0	13.0	11.5	12.0	11.0	8.5	9.5	1.5	1.0	1.0
2	18.5	16.5	17.5	14.0	12.0	12.5	9.5	8.0	9.0	2.0	1.0	1.0
3	19.0	17.0	17.5	14.0	12.5	13.0	10.0	8.0	8.5	2.5	1.5	2.0
4	19.0	17.0	17.5	13.5	12.0	12.5	10.5	8.0	9.0	3.0	2.0	2.0
5	18.5	17.0	17.5	13.0	11.5	12.0	11.0	9.5	10.0	3.0	2.0	2.5
6	18.5	16.5	17.5	12.0	11.0	11.5	11.5	10.0	10.5	3.0	1.5	2.5
7	17.5	16.0	16.5	12.0	10.5	11.0	11.0	10.0	10.5	3.0	2.0	2.5
8	16.5	15.0	15.5	12.0	10.5	11.0	10.0	9.0	9.5	3.0	1.5	2.0
9	16.0	14.5	15.0	11.5	9.5	10.5	10.0	8.5	9.0	3.0	2.0	2.5
10	16.0	14.0	15.0	11.5	10.0	10.5	9.5	8.5	9.0	3.5	2.0	2.5
11	16.5	15.0	15.5	11.0	9.5	10.0	9.5	8.5	9.0	3.5	2.5	3.0
12	16.5	15.0	15.5	10.5	9.0	9.5	9.0	8.0	8.5	3.5	2.0	2.5
13	16.5	15.5	16.0	10.5	8.5	9.5	9.5	8.5	9.0	3.5	2.5	2.5
14	16.5	15.5	16.0	10.5	8.5	9.0	9.5	9.0	9.0	3.5	2.0	2.5
15	17.0	15.5	16.0	11.0	9.0	10.0	9.5	8.0	8.5	3.5	2.5	3.0
16	16.5	15.0	15.5	11.5	9.0	10.0	8.5	7.5	8.0	3.5	2.5	3.0
17	16.0	14.0	15.0	10.5	9.0	9.5	8.5	8.0	8.0	4.0	2.5	3.0
18	15.0	14.0	14.5	10.5	9.0	9.5	8.5	7.5	8.0	3.0	2.0	2.5
19	15.0	13.5	14.0	11.0	9.0	9.5	8.0	7.5	7.5	2.5	1.5	2.0
20	15.5	13.5	14.5	10.0	8.0	9.5	7.5	6.5	7.0	3.0	2.0	2.5
21	15.5	14.0	14.5	9.5	7.5	8.5	6.5	5.5	6.0	3.5	2.0	2.5
22	16.0	14.5	15.0	10.0	7.5	8.5	6.0	5.5	5.5	3.5	2.5	3.0
23	15.5	14.0	15.0	10.0	7.5	8.5	6.5	5.0	5.5	3.5	2.5	3.0
24	16.5	15.0	15.0	10.5	7.5	9.0	6.0	5.0	5.5	4.0	3.0	3.5
25	16.5	14.5	15.5	10.5	9.5	10.0	5.0	4.5	5.0	4.0	2.5	3.5
26	15.5	13.5	14.5	10.5	8.5	9.5	5.0	4.0	4.5	4.0	2.5	3.0
27	14.0	13.0	13.5	10.5	8.0	9.0	4.5	3.5	4.0	4.5	2.5	3.5
28	13.5	12.0	12.5	11.0	9.0	9.5	4.5	3.0	3.5	5.0	3.0	3.5
29	13.0	11.5	12.0	10.0	9.5	9.5	4.5	2.5	3.5	6.0	3.5	4.5
30	13.0	11.5	12.5	10.5	9.5	10.5	2.5	2.0	2.5	5.5	4.5	5.0
31	12.5	11.5	12.0	---	---	---	2.0	1.5	1.5	5.0	4.5	5.0
MONTH	19.0	11.5	15.2	14.0	7.5	10.2	11.5	1.5	7.2	6.0	1.0	2.8

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01480400 BIRCH RUN NEAR WAGONTOWN, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM- PLING DEPTH (FEET) (00003)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
APR 2002					
23...	1558	1.4	--	--	0
23...	1559	--	.50	11.2	2
23...	1600	--	1.00	11.3	4
23...	1601	--	1.00	11.3	5
23...	1602	--	1.00	11.2	6
23...	1603	--	1.00	11.1	7
23...	1604	--	1.00	11.1	8
23...	1605	--	1.00	11.0	9
23...	1606	--	1.00	11.0	10
23...	1607	--	1.00	11.0	11
23...	1608	--	1.00	11.0	12
23...	1609	--	1.00	11.1	13
23...	1610	--	1.00	11.2	14
23...	1611	--	1.00	11.2	15
23...	1612	--	1.00	11.2	16
23...	1613	--	1.00	11.2	17
23...	1614	--	--	--	18