

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA

LOCATION.--Lat 41°59'31", long 80°17'29", Erie County, Hydrologic Unit 04120101, on left bank 100 ft upstream from highway bridge on Tannery Road, 0.5 mi upstream from mouth, and 1.8 mi southeast of Girard.

DRAINAGE AREA.--4.45 mi².

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REVISED RECORDS.--WDR PA-94-3: 1987-89 (M).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Feb. 1	0445	*423	*2.51	Apr. 14	1430	262	2.05

**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	1.9	2.6	6.6	e2.1	132	4.3	9.8	6.4	3.9	1.2	0.78	0.78
2	1.9	2.9	3.2	e2.3	20	5.3	9.0	8.2	3.4	1.2	0.73	0.78
3	2.0	3.3	2.4	e2.3	10	7.0	41	6.1	3.2	1.2	0.70	0.80
4	2.3	2.9	2.1	e2.3	9.7	8.0	9.7	4.8	3.8	1.1	0.67	0.85
5	3.0	2.7	2.0	e2.4	23	26	7.5	4.4	5.9	1.1	0.71	0.84
6	6.6	2.7	1.9	e2.6	5.8	10	7.2	4.2	5.5	1.1	0.64	0.86
7	3.2	5.1	1.8	e2.8	5.9	14	6.6	4.5	4.0	1.0	0.63	0.76
8	2.6	5.2	1.7	e3.0	6.3	14	6.8	4.7	3.3	1.0	0.60	0.70
9	2.3	3.2	1.7	e3.3	6.2	11	13	8.1	3.0	2.5	0.58	0.72
10	2.0	2.6	1.5	e3.9	6.2	11	8.8	6.7	2.8	1.6	0.57	0.72
11	2.0	2.5	1.3	e4.2	8.6	7.7	6.5	4.7	2.8	1.2	0.54	0.63
12	2.9	2.6	1.3	e4.2	6.9	9.5	5.6	58	2.9	1.1	0.57	0.65
13	4.7	2.3	1.6	e4.2	6.0	8.5	25	80	2.4	1.0	0.59	0.71
14	4.3	2.3	5.1	e4.6	15	6.2	62	51	3.9	1.0	0.55	2.6
15	6.5	2.7	11	e4.9	5.7	5.5	22	13	5.5	0.95	0.64	14
16	6.0	2.7	3.8	e5.2	11	9.5	9.3	14	8.0	1.0	0.66	5.8
17	5.9	2.5	13	e5.1	10	6.1	7.2	52	3.6	1.0	0.66	1.9
18	3.2	2.2	19	5.7	9.1	5.3	5.9	16	2.6	0.88	0.64	1.3
19	2.7	2.8	7.0	e6.1	5.9	4.4	5.4	9.0	2.2	0.91	0.62	1.2
20	2.5	3.9	6.5	e5.7	12	11	8.2	7.1	2.0	0.92	0.71	1.1
21	3.1	2.3	4.6	5.2	18	9.1	6.5	6.1	1.7	0.88	0.79	1.6
22	5.4	2.1	3.2	5.5	11	6.4	7.2	5.3	1.7	0.99	0.80	1.1
23	4.1	2.0	9.7	e6.1	7.0	8.2	6.7	4.8	1.6	2.4	1.1	1.1
24	4.5	2.1	8.4	28	5.7	8.8	5.1	4.6	1.5	1.1	1.2	1.1
25	7.7	3.7	4.6	12	5.0	7.7	5.5	5.0	1.4	0.84	1.0	1.1
26	7.8	2.9	e3.4	7.6	6.2	13	4.5	9.5	1.5	0.78	0.92	1.1
27	9.9	2.6	e2.9	6.4	5.7	24	3.9	5.0	2.2	0.76	0.91	12
28	5.1	2.8	2.1	6.0	4.8	22	14	4.4	1.5	1.8	0.91	5.3
29	3.5	7.3	e2.2	5.9	---	29	15	4.3	1.4	1.8	0.88	2.0
30	2.9	14	e2.2	34	---	39	8.2	4.6	1.3	1.5	0.86	1.4
31	2.6	---	e2.2	56	---	10	---	5.0	---	0.88	0.81	---
TOTAL	125.1	101.5	140.0	249.6	378.7	361.5	353.1	421.5	90.5	36.69	22.97	65.50
MEAN	4.04	3.38	4.52	8.05	13.5	11.7	11.8	13.6	3.02	1.18	0.74	2.18
MAX	9.9	14	19	56	132	39	62	80	8.0	2.5	1.2	14
MIN	1.9	2.0	1.3	2.1	4.8	4.3	3.9	4.2	1.3	0.76	0.54	0.63
CFSM	0.91	0.76	1.01	1.81	3.04	2.62	2.64	3.06	0.68	0.27	0.17	0.49
IN.	1.05	0.85	1.17	2.09	3.17	3.02	2.95	3.52	0.76	0.31	0.19	0.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)

MEAN	4.93	7.30	8.51	8.86	9.24	10.1	11.8	6.63	3.87	2.10	3.29	3.39
MAX	12.1	17.2	17.0	19.2	28.7	17.6	22.8	14.4	10.9	6.13	19.1	11.1
(WY)	1988	1993	1998	1998	1990	1989	1996	1989	1994	1992	1987	1992
MIN	1.24	0.89	1.49	3.13	2.21	3.71	6.24	1.56	0.86	0.71	0.49	0.75
(WY)	1999	1999	1999	1987	1987	1999	1999	1991	1991	1999	1991	1995

e Estimated.

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04213075 BRANDY RUN NEAR GIRARD, PA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1986 - 2002	
ANNUAL TOTAL	1798.60		2346.66			
ANNUAL MEAN	4.93		6.43		6.67	
HIGHEST ANNUAL MEAN					9.84 1996	
LOWEST ANNUAL MEAN					2.82 1999	
HIGHEST DAILY MEAN	55	Feb 9	132	Feb 1	405	Aug 2 1987
LOWEST DAILY MEAN	0.42	Sep 19	0.54	Aug 11	0.14	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	0.49	Sep 17	0.57	Aug 8	0.16	Aug 1 1991
MAXIMUM PEAK FLOW			423	Feb 1	a708	Jun 13 1994
MAXIMUM PEAK STAGE			2.51	Feb 1	b3.36	Jun 13 1994
INSTANTANEOUS LOW FLOW			0.40	Aug 11	0.19	Jul 11 1986
ANNUAL RUNOFF (CFSM)	1.11		1.44		1.50	
ANNUAL RUNOFF (INCHES)	15.04		19.62		20.36	
10 PERCENT EXCEEDS	11		12		13	
50 PERCENT EXCEEDS	3.2		3.8		3.3	
90 PERCENT EXCEEDS	0.77		0.84		0.90	

a From rating curve extended above 140 ft³/s.
 b Maximum gage height, 4.55 ft., Dec. 19, 1989 (backwater from ice).

