

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 sea level, from topographic map.

REVISED RECORDS.--WRD 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)
Jan. 23	1000	*185	*1.86	(No peaks above base discharge.)			

**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	1.2	.73	.96	e1.9	2.5	4.6	3.7	2.5	2.6	1.0	.94	.36
2	1.2	.72	.74	e2.0	6.4	e3.5	3.7	2.4	3.7	1.0	.53	.35
3	1.4	.71	.66	e1.9	6.6	e7.0	3.1	2.3	5.7	1.3	.49	.34
4	1.5	.71	.70	e1.6	4.6	e8.0	8.2	2.3	3.1	1.2	.47	.33
5	1.3	.87	1.4	e1.7	3.6	e4.0	8.2	2.2	2.1	.97	.64	.33
6	1.3	.87	1.1	e2.1	3.0	e3.3	4.3	2.3	1.7	.94	.54	.33
7	2.8	.94	.92	e2.0	2.7	e4.5	3.2	2.5	1.5	.93	.51	.33
8	4.9	1.3	.67	e1.8	2.6	e4.7	2.7	2.5	1.4	.85	.60	.33
9	2.0	1.0	.46	e1.6	2.9	e2.7	16	3.9	1.4	1.1	.49	.45
10	1.2	1.8	.43	e1.6	2.8	e3.2	12	2.8	1.4	1.0	.48	.29
11	1.0	2.9	.41	e1.4	2.4	e3.6	13	2.4	1.3	.73	.48	.24
12	1.0	.81	.39	e1.3	4.6	e2.7	9.6	e2.2	1.2	.66	.44	.23
13	1.1	.57	.40	e1.4	4.6	e2.0	5.7	e2.0	1.2	.64	.42	.34
14	1.8	.39	.40	e1.6	3.8	e1.9	3.8	e1.9	1.4	.62	.46	.42
15	1.1	.40	.41	e1.9	3.2	e1.9	2.7	e1.6	1.2	.59	.48	.34
16	.74	.38	.67	e2.2	5.4	e3.1	7.4	e1.5	1.1	.57	.35	.38
17	.69	.45	e.92	e2.6	8.3	e6.0	14	e1.4	1.1	.53	.33	.37
18	.70	.42	e1.4	e3.6	4.7	e8.5	11	e2.3	1.1	.52	.33	.41
19	.99	.52	e2.2	e8.0	3.1	5.6	6.1	e3.7	1.1	.52	.36	.54
20	1.1	.82	e3.0	e6.0	2.4	4.0	4.7	e3.5	1.0	.51	.63	1.7
21	1.0	1.1	e3.4	e5.2	3.9	3.6	3.5	e2.8	.99	.50	.49	1.3
22	1.1	1.0	e4.7	20	5.7	3.2	4.0	2.5	.98	.57	.42	.58
23	.93	.84	e3.9	124	18	3.5	8.9	2.3	.93	.51	.37	.44
24	.69	.69	e3.0	32	5.4	3.8	7.6	8.3	.96	.48	.44	.73
25	.69	.67	e2.4	10	1.5	3.0	4.6	13	1.7	.46	1.1	.56
26	.97	2.1	e1.9	6.6	1.5	2.4	3.9	9.8	1.0	.41	1.2	.46
27	1.1	.95	e1.7	5.7	1.8	2.3	3.1	5.6	1.2	.42	.81	.40
28	.79	.65	e1.4	7.1	5.1	2.2	3.0	3.3	1.5	.41	.48	.46
29	.73	.67	e1.6	4.8	---	2.1	2.8	2.4	1.4	.75	.40	7.8
30	.69	.65	e1.8	3.1	---	2.0	2.7	2.0	1.1	.50	.38	12
31	.71	---	e2.1	3.1	---	2.0	---	1.9	---	.85	.37	---
TOTAL	38.42	26.63	46.14	269.8	123.1	114.9	187.2	102.1	48.06	22.04	16.43	33.14
MEAN	1.24	.89	1.49	8.70	4.40	3.71	6.24	3.29	1.60	.71	.53	1.10
MAX	4.9	2.9	4.7	124	18	8.5	16	13	5.7	1.3	1.2	12
MIN	.69	.38	.39	1.3	1.5	1.9	2.7	1.4	.93	.41	.33	.23
CFSM	.28	.20	.33	1.96	.99	.83	1.40	.74	.36	.16	.12	.25
IN.	.32	.22	.39	2.26	1.03	.96	1.56	.85	.40	.18	.14	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

MEAN	5.42	7.66	9.15	9.44	8.61	10.4	12.1	6.31	4.02	2.14	3.62	3.81
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	.89	1.49	3.13	2.21	3.71	6.24	1.56	.86	.71	.49	.75
(WY)	1999	1999	1999	1987	1987	1999	1999	1991	1991	1999	1991	1995

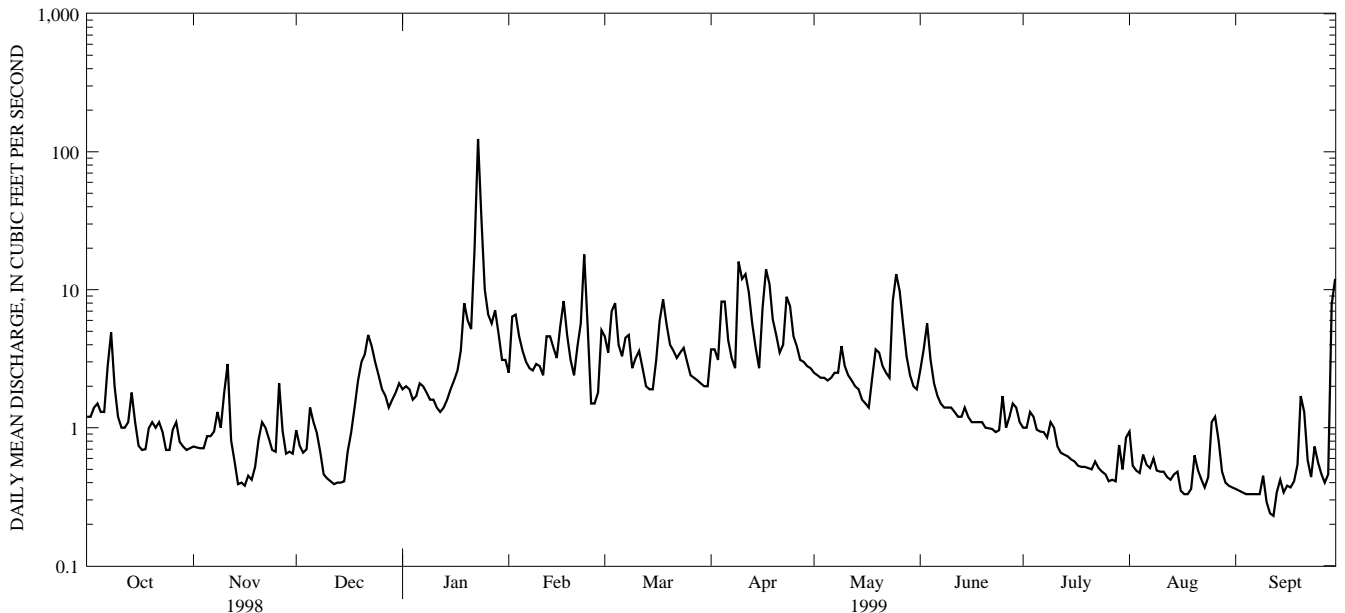
e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL TOTAL	1782.36		1027.96		6.91	
ANNUAL MEAN	4.88		2.82		9.84	
HIGHEST ANNUAL MEAN					2.82	
LOWEST ANNUAL MEAN					1999	
HIGHEST DAILY MEAN	123	Jan 8	124	Jan 23	405	Aug 2 1987
LOWEST DAILY MEAN	.38	Nov 16	.23	Sep 12	.14	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	.41	Dec 9	.31	Sep 6	.16	Aug 1 1991
INSTANTANEOUS PEAK FLOW			a185	Jan 23	a708	Jun 13 1994
INSTANTANEOUS PEAK STAGE			1.86	Jan 23	b3.36	Jun 13 1994
INSTANTANEOUS LOW FLOW			.23	Sep 10-13	.19	Jul 11 1986
ANNUAL RUNOFF (CFSM)	1.10		.63		1.55	
ANNUAL RUNOFF (INCHES)	14.90		8.59		21.10	
10 PERCENT EXCEEDS	10		5.7		14	
50 PERCENT EXCEEDS	1.9		1.4		3.3	
90 PERCENT EXCEEDS	.69		.42		.90	

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



1-YEAR HYDROGRAPH
 OCTOBER 1, 1998 TO SEPTEMBER 30, 1999