

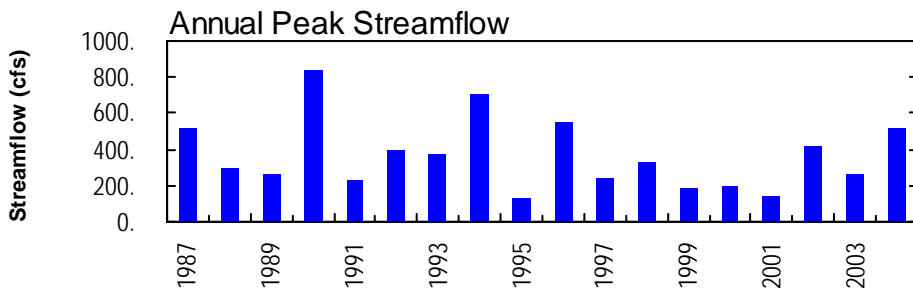
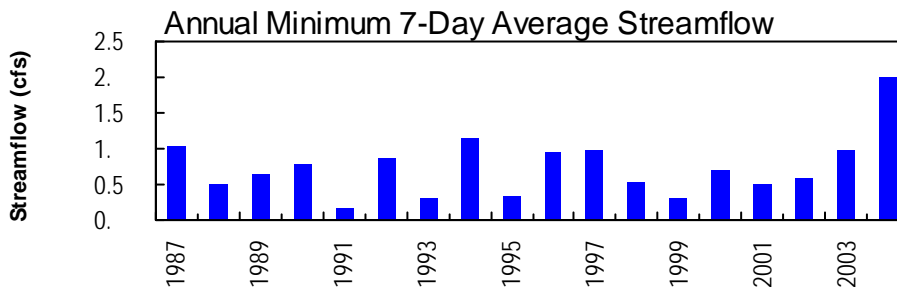
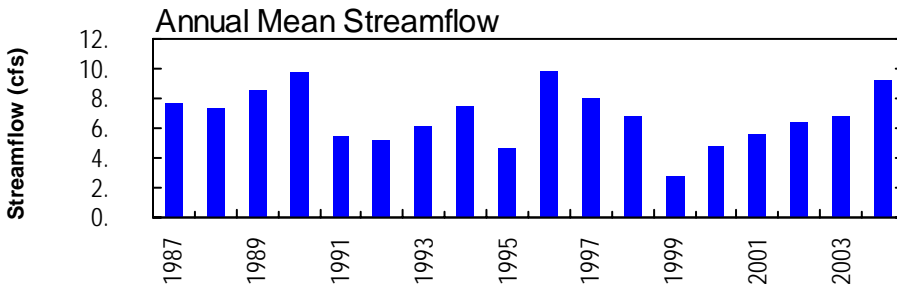
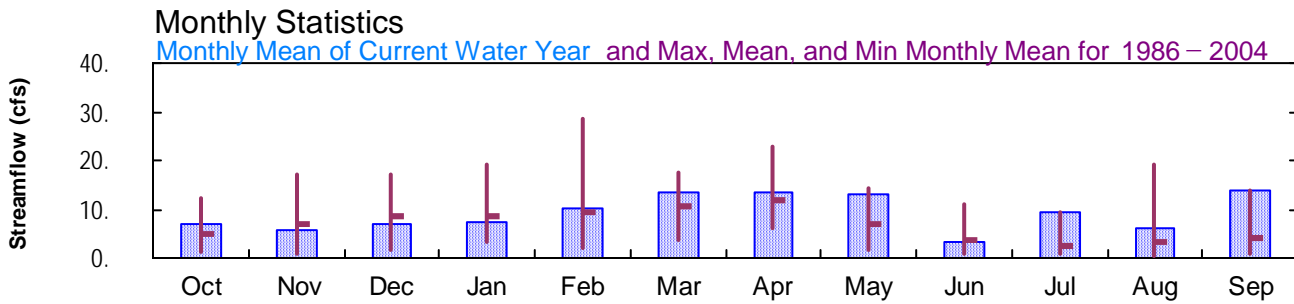
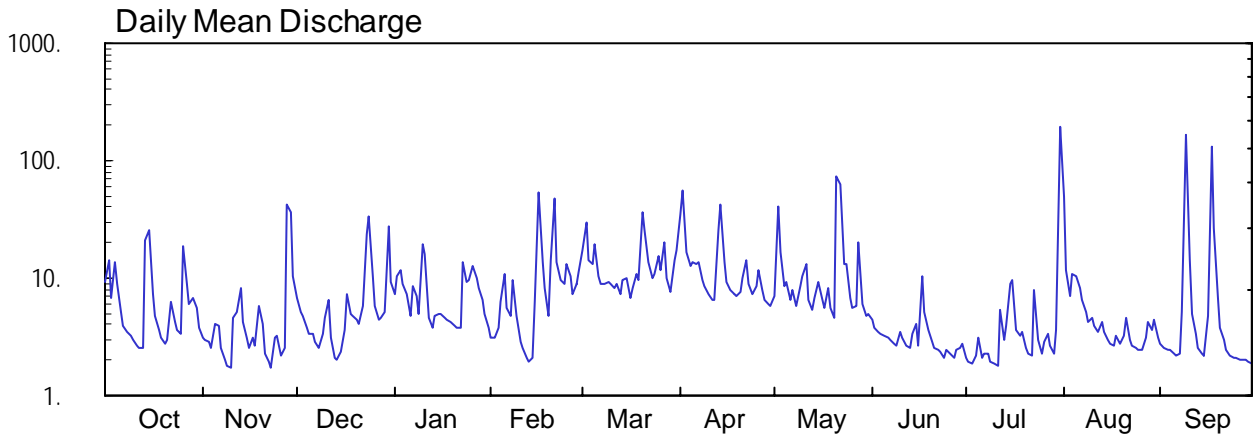


2004 Water Year  
STREAMS TRIBUTARY TO LAKE ERIE  
04213075 Brandy Run near Girard, PA

Latitude: 41° 59' 31"  
Erie County

Longitude: 080° 17' 29"  
Datum: 800 feet

Hydrologic Unit Code: 04120101  
Drainage Area: 4.45 mi<sup>2</sup>



**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 mi<sup>2</sup>.

**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 fair 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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)		
May	21	2115	385	2.40	Sept.	9	0415	*520	*2.79
July	31	2045	481	2.68	Sept.	17	1000	395	2.43

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	3.1	6.7	7.2	e3.1	17	36	7.0	4.4	2.1	49	2.7
2	14	2.9	5.2	e11	e3.0	30	56	41	3.7	2.0	12	2.6
3	6.8	2.9	4.8	e12	e3.8	14	16	16	3.5	1.9	7.2	2.5
4	14	2.5	3.7	e9.0	e6.2	13	13	8.7	3.4	2.1	11	2.4
5	8.9	4.1	3.3	e7.4	e11	19	14	9.3	3.3	3.1	11	2.3
6	5.1	3.9	3.4	e4.7	e5.7	11	13	6.6	3.1	2.1	8.1	2.2
7	3.9	2.6	2.9	e8.6	e4.8	8.8	13	7.8	2.9	2.3	6.4	2.3
8	3.5	2.0	2.6	e7.0	e9.7	8.9	9.8	5.8	2.7	2.3	5.1	5.2
9	3.2	1.8	3.4	e5.0	e4.8	9.3	8.4	8.7	2.7	2.0	4.2	167
10	2.9	1.7	4.7	e20	e2.8	8.8	7.2	11	3.5	1.9	4.6	14
11	2.7	4.5	6.6	e16	e2.5	8.1	6.6	13	3.1	1.8	4.0	5.0
12	2.5	5.2	3.1	e4.5	e2.1	8.7	6.6	6.4	2.7	5.4	3.4	3.3
13	2.5	8.3	2.1	e3.8	e2.0	7.4	26	5.3	2.5	3.0	4.3	2.5
14	21	4.2	2.0	e4.8	e2.1	9.6	43	6.9	3.4	4.0	3.5	2.3
15	25	3.1	2.3	e5.0	e6.4	9.8	14	9.3	4.1	9.0	3.0	2.1
16	7.4	2.6	3.6	e4.9	53	6.9	9.2	6.5	2.7	9.5	2.8	4.9
17	4.7	3.1	7.4	e4.6	14	8.1	7.9	5.6	10	3.7	2.7	132
18	3.6	2.7	4.9	e4.4	8.1	11	7.3	8.4	5.1	3.3	3.2	27
19	3.0	5.8	4.8	e4.2	4.8	9.5	7.0	5.5	3.6	3.5	2.7	6.8
20	2.8	4.1	4.4	e4.0	14	37	7.8	4.5	2.9	2.6	3.2	3.8
21	3.0	2.3	4.1	e3.7	47	25	9.9	74	2.6	2.2	4.5	2.9
22	6.3	2.0	5.9	e3.8	14	14	14	63	2.4	2.2	3.0	2.4
23	4.3	1.7	24	e13	9.8	9.9	8.8	13	2.3	7.9	2.7	2.2
24	3.6	3.1	33	e9.1	8.9	11	7.4	13	2.1	3.0	2.6	2.1
25	3.3	3.3	10	e9.6	13	15	8.5	6.7	2.4	2.3	2.5	2.1
26	18	2.1	5.9	e13	10	12	12	5.5	2.3	2.9	2.4	2.0
27	9.0	2.6	4.4	e10	7.2	20	7.8	5.9	2.1	3.3	3.1	2.0
28	6.1	42	4.6	e8.2	8.9	9.9	6.6	21	2.4	2.7	4.3	2.0
29	6.8	36	5.1	e6.5	11	7.6	5.9	6.0	2.6	2.3	3.7	1.9
30	5.7	11	28	e5.0	---	14	5.7	4.7	2.7	3.7	4.4	1.9
31	3.7	---	9.2	e3.8	---	17	---	5.0	---	194	3.1	---
TOTAL	216.7	177.2	216.1	233.8	293.7	411.3	408.4	411.1	97.2	294.1	187.7	414.4
MEAN	6.99	5.91	6.97	7.54	10.1	13.3	13.6	13.3	3.24	9.49	6.05	13.8
MAX	25	42	33	20	53	37	56	74	10	194	49	167
MIN	2.5	1.7	2.0	3.7	2.0	6.9	5.7	4.5	2.1	1.8	2.4	1.9
CFSM	1.57	1.33	1.57	1.69	2.28	2.98	3.06	2.98	0.73	2.13	1.36	3.10
IN.	1.81	1.48	1.81	1.95	2.46	3.44	3.41	3.44	0.81	2.46	1.57	3.46

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)**

MEAN	4.94	7.12	8.39	8.70	9.30	10.6	11.7	6.98	3.84	2.52	3.46	4.12
MAX	12.1	17.2	17.0	19.2	28.7	17.6	22.8	14.4	10.9	9.49	19.1	13.8
(WY)	1988	1993	1998	1998	1990	1989	1996	1989	2004	1987	2004	
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.

**STREAMS TRIBUTARY TO LAKE ERIE**

**04213075 BRANDY RUN NEAR GIRARD, PA--Continued**

<b>SUMMARY STATISTICS</b>	<b>FOR 2003 CALENDAR YEAR</b>		<b>FOR 2004 WATER YEAR</b>		<b>WATER YEARS 1986 - 2004</b>	
ANNUAL TOTAL	2587.94		3361.7			
ANNUAL MEAN	7.09		9.18		6.81	
HIGHEST ANNUAL MEAN					9.84	
LOWEST ANNUAL MEAN					2.82	
HIGHEST DAILY MEAN	62	Apr 5 <sup>a</sup>	194	Jul 31	405	Aug 2 1987
LOWEST DAILY MEAN	0.92	Jul 20	1.7	Nov 10,23	0.14	Aug 3 1991
ANNUAL SEVEN-DAY MINIMUM	0.97	Jun 27	2.0	Sep 24	0.16	Aug 1 1991
MAXIMUM PEAK FLOW			b520	Sep 9	b708	Jun 13 1994
MAXIMUM PEAK STAGE			2.79	Sep 9	c3.36	Jun 13 1994
INSTANTANEOUS LOW FLOW			1.5	Nov 23,24	0.19	Jun 11 1986
ANNUAL RUNOFF (CFSM)	1.59		2.06		1.53	
ANNUAL RUNOFF (INCHES)	21.63		28.10		20.81	
10 PERCENT EXCEEDS	16		14		14	
50 PERCENT EXCEEDS	4.1		4.9		3.4	
90 PERCENT EXCEEDS	1.4		2.3		0.95	

**a** Also Sept. 29.

**b** From rating curve extended above 160 ft<sup>3</sup>/s.

**c** Maximum gage height, 4.55 ft., Dec. 19, 1989 (backwater from ice).