

**BUFFALO CREEK BASIN**

**03049000 BUFFALO CREEK NEAR FREEPORT, PA**

**LOCATION.**--Lat 40°42'57", long 79°41'59", Butler County, Hydrologic Unit 05010009, on right bank 0.6 mi upstream from Little Buffalo Creek, 1.6 mi downstream of bridge on SR 3023, and 3 mi north of Freeport.

**DRAINAGE AREA.**--137 mi<sup>2</sup>.

**PERIOD OF RECORD.**--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1305.

**GAGE.**--Water-stage recorder. Elevation of gage is 792 ft above sea level, by barometer. Prior to July 19, 1962, nonrecording gage at same site and datum.

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

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 2,000 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)
Apr. 4	0600	*2,500	*5.34	No other peak greater than base discharge.			

**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	30	9.1	40	e44	e40	368	115	112	79	28	107	20
2	16	49	40	e45	e39	338	110	172	67	24	58	19
3	10	325	37	e54	e39	270	361	126	78	24	33	19
4	11	96	34	557	e39	233	1990	108	55	70	26	17
5	12	50	33	446	e40	209	1130	103	51	38	22	15
6	11	35	46	283	e40	177	710	102	97	27	155	14
7	10	28	52	220	e39	154	489	88	97	24	522	13
8	9.5	24	39	171	e38	144	764	80	59	20	201	12
9	9.4	22	34	146	e38	134	851	76	48	18	102	12
10	12	20	42	151	e50	123	645	73	42	18	66	13
11	20	19	81	164	e100	114	486	70	37	20	45	15
12	19	19	58	128	433	206	399	62	34	21	38	16
13	15	17	54	115	310	165	315	65	46	16	32	62
14	24	17	586	e82	1380	144	274	74	40	16	27	31
15	35	17	662	e76	784	135	245	53	39	23	25	23
16	19	16	356	e70	482	142	219	47	46	122	22	29
17	13	16	235	e63	354	452	436	45	47	42	20	31
18	11	15	172	e60	338	328	351	47	48	28	20	22
19	11	14	132	e56	537	288	293	125	66	23	21	19
20	12	14	124	e54	376	253	261	106	43	21	19	17
21	12	15	135	e50	308	500	363	70	44	21	16	30
22	13	16	100	e46	340	515	334	60	61	18	14	34
23	12	15	e76	e43	503	418	301	59	41	16	14	24
24	13	14	e70	e40	573	349	269	168	32	16	274	200
25	14	14	e66	e38	554	301	239	103	29	15	58	88
26	14	220	e60	e37	438	258	207	71	27	15	32	125
27	13	285	e56	e36	386	228	180	63	55	14	29	133
28	11	126	e51	e36	553	218	161	102	66	13	42	75
29	11	77	e49	e36	405	187	143	231	33	16	30	55
30	9.1	55	e47	e36	---	152	126	122	36	42	25	44
31	8.2	---	e46	e39	---	131	---	88	---	39	22	---
TOTAL	440.2	1659.1	3613	3422	9556	7634	12767	2871	1543	848	2117	1227
MEAN	14.2	55.3	117	110	330	246	426	92.6	51.4	27.4	68.3	40.9
MAX	35	325	662	557	1380	515	1990	231	97	122	522	200
MIN	8.2	9.1	33	36	38	114	110	45	27	13	14	12
CFSM	.10	.40	.85	.81	2.41	1.80	3.11	.68	.38	.20	.50	.30
IN.	.12	.45	.98	.93	2.59	2.07	3.47	.78	.42	.23	.57	.33

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2000, BY WATER YEAR (WY)**

MEAN	69.8	137	240	258	317	400	317	219	133	81.4	64.5	54.9
MAX	571	720	625	821	861	964	704	525	732	522	511	287
(WY)	1955	1986	1991	1952	1956	1945	1957	1952	1972	1990	1984	1975
MIN	3.63	5.61	7.15	29.3	70.7	49.2	84.9	44.7	20.8	7.75	4.92	5.82
(WY)	1961	1961	1961	1977	1993	1969	1946	1941	1991	1966	1957	1946

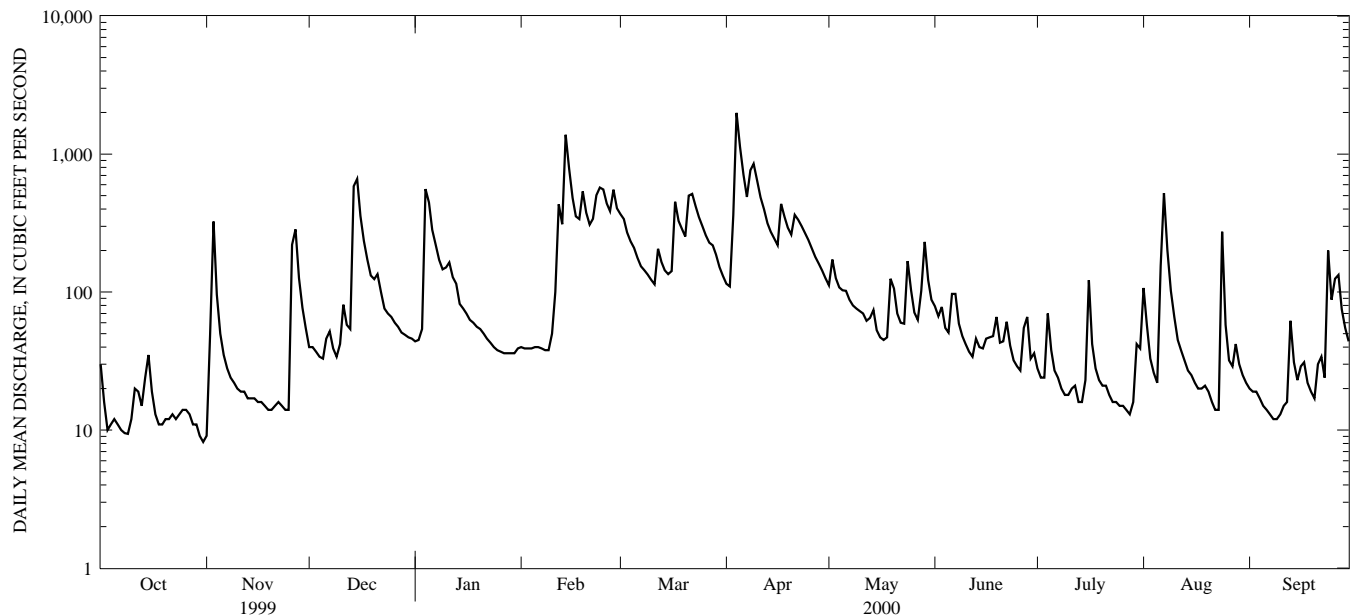
e Estimated.

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03049000 BUFFALO CREEK NEAR FREEPORT, PA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1941 - 2000	
ANNUAL TOTAL	47717.3		47697.3			
ANNUAL MEAN	131		130		190	
HIGHEST ANNUAL MEAN					312	1956
LOWEST ANNUAL MEAN					122	1999
HIGHEST DAILY MEAN	2210	Jan 24	1990	Apr 4	7710	Jun 23 1972
LOWEST DAILY MEAN	4.8	Sep 15,19	8.2	Oct 31	1.3	Oct 16 1960
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 14	10	Oct 3	1.7	Oct 13 1960
INSTANTANEOUS PEAK FLOW			2500	Apr 4	a14000	Oct 15 1954
INSTANTANEOUS PEAK STAGE			5.34	Apr 4	b13.60	Oct 15 1954
INSTANTANEOUS LOW FLOW			7.7	Oct 31c	d1.3	Oct 16 1960
ANNUAL RUNOFF (CFSM)	.95		.95		1.39	
ANNUAL RUNOFF (INCHES)	12.96		12.95		18.89	
10 PERCENT EXCEEDS	349		355		455	
50 PERCENT EXCEEDS	47		50		94	
90 PERCENT EXCEEDS	9.2		14		12	

- a From rating curve extended above 4,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- b From floodmarks.
- c Also Nov. 2.
- d Minimum observed.



1-YEAR HYDROGRAPH  
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000