

**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. Satellite telemetry at station.

**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)
Jan. 31	0915	2,310	5.13	Mar. 22	0030	2,140	4.93
July 1	1945	*2,320	*5.14				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	25	90	e60	694	79	163	128	98	685	14	171
2	35	24	74	e56	472	e78	150	116	296	618	13	36
3	33	23	63	e52	334	e75	132	103	366	251	34	21
4	30	23	99	e48	269	e74	122	91	247	178	20	16
5	42	23	84	e52	240	e74	108	83	181	171	16	14
6	426	22	52	e55	233	e70	151	73	143	116	14	13
7	192	22	53	e52	226	e74	411	64	131	80	12	12
8	120	22	55	e48	220	e76	349	60	101	87	11	11
9	93	22	47	e46	392	e76	366	72	79	80	11	10
10	81	50	37	e46	560	e78	715	59	65	53	13	9.1
11	67	77	54	e46	373	e81	558	63	56	46	20	8.7
12	51	51	345	e46	284	e86	441	137	53	38	13	8.6
13	44	41	304	e46	249	e400	338	94	44	32	11	8.8
14	39	38	352	e46	237	670	275	64	38	29	11	18
15	37	35	265	e52	418	468	291	58	33	27	10	25
16	37	32	432	e62	349	384	1140	53	31	24	9.7	13
17	36	31	1260	e65	330	543	905	49	32	21	13	10
18	43	29	696	e64	266	418	659	47	27	20	13	9.2
19	38	27	443	e59	260	340	480	45	23	19	12	9.5
20	33	26	343	e60	221	288	445	41	24	18	16	19
21	30	e22	e250	e66	200	605	581	40	39	16	15	29
22	28	e18	e220	e65	142	1650	460	168	221	14	13	17
23	27	e17	e190	e64	172	879	398	247	105	14	12	14
24	26	e17	e160	e64	137	585	343	108	74	17	12	19
25	31	e18	e140	e64	126	417	281	114	49	44	11	75
26	31	e30	e120	e60	127	326	237	165	38	26	11	35
27	28	70	e105	e56	101	262	215	113	32	21	18	22
28	33	74	e94	e54	92	224	187	143	86	17	16	19
29	35	60	e80	e50	---	204	156	105	40	15	46	19
30	28	86	e70	e180	---	202	140	85	32	14	21	16
31	26	---	e62	1200	---	185	---	65	---	14	43	---
TOTAL	1838	1055	6639	2984	7724	9971	11197	2853	2784	2805	504.7	707.9
MEAN	59.3	35.2	214	96.3	276	322	373	92.0	92.8	90.5	16.3	23.6
MAX	426	86	1260	1200	694	1650	1140	247	366	685	46	171
MIN	26	17	37	46	92	70	108	40	23	14	9.7	8.6
CFSM	.43	.26	1.56	.70	2.01	2.35	2.72	.67	.68	.66	.12	.17
IN.	.50	.29	1.80	.81	2.10	2.71	3.04	.77	.76	.76	.14	.19

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)**

MEAN	69.7	135	240	256	316	399	318	217	132	81.5	63.7	54.4
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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SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1941 - 2001	
ANNUAL TOTAL	51517		51062.6			
ANNUAL MEAN	141		140		190	
HIGHEST ANNUAL MEAN					312	1956
LOWEST ANNUAL MEAN					122	1999
HIGHEST DAILY MEAN	1990	Apr 4	1650	Mar 22	7710	Jun 23 1972
LOWEST DAILY MEAN	12	Sep 8,9	8.6	Sep 12	1.3	Oct 16 1960
ANNUAL SEVEN-DAY MINIMUM	13	Sep 5	9.7	Sep 7	1.7	Oct 13 1960
MAXIMUM PEAK FLOW			2320	Jul 1	<b>a</b> 14000	Oct 15 1954
MAXIMUM PEAK STAGE			5.14	Jul 1	<b>b</b> 13.60	Oct 15 1954
INSTANTANEOUS LOW FLOW			8.0	Sep 11	<b>c</b> 1.3	Oct 16 1960
ANNUAL RUNOFF (CFSM)	1.03		1.02		1.38	
ANNUAL RUNOFF (INCHES)	13.99		13.87		18.80	
10 PERCENT EXCEEDS	364		377		455	
50 PERCENT EXCEEDS	58		60		93	
90 PERCENT EXCEEDS	20		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** Minimum observed.

