

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 mi².

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 National Geodetic Vertical Datum of 1929, 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 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Dec. 17	2000	2,170	4.96	June 6	1830	2,130	4.91
Mar. 26	2130	*3,020	*5.91				

**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	14	24	299	e72	564	151	302	198	132	34	23	10
2	14	24	197	e70	411	153	255	376	92	30	18	9.6
3	12	60	144	70	324	361	239	319	73	e31	17	8.7
4	12	51	114	67	281	307	205	245	68	e28	22	8.1
5	11	35	93	69	234	277	175	207	75	e26	20	7.1
6	12	30	79	65	216	242	159	175	1040	e17	21	6.3
7	12	27	78	73	175	220	141	161	1150	e14	21	7.8
8	11	25	68	69	160	192	136	152	546	e15	14	6.3
9	12	27	83	64	137	171	143	182	345	17	11	5.9
10	11	27	70	76	133	162	164	152	247	31	8.8	4.9
11	11	23	61	111	318	134	126	e110	191	25	7.4	3.4
12	13	21	53	124	238	128	114	e147	156	18	9.9	4.2
13	17	19	69	110	214	122	249	e605	135	16	13	3.7
14	21	18	95	91	179	114	523	e931	219	16	12	3.1
15	23	18	103	83	172	103	1340	579	215	14	12	4.5
16	28	18	84	79	163	204	759	e473	203	14	8.9	11
17	23	18	949	76	155	169	511	e360	149	13	7.5	37
18	23	17	1610	72	124	165	373	e756	115	13	7.3	20
19	19	17	735	61	118	153	300	e658	91	12	17	15
20	16	39	451	84	123	304	252	e442	73	14	14	14
21	15	41	308	92	248	425	214	358	60	15	8.3	15
22	14	29	232	84	253	349	193	280	52	12	6.1	15
23	15	24	e182	77	225	296	161	228	46	13	12	15
24	411	23	e172	215	206	260	136	193	41	15	47	14
25	160	83	e132	324	195	266	124	172	38	13	62	13
26	76	147	e108	243	197	1220	111	146	35	13	35	15
27	51	110	e83	207	194	1600	93	120	82	15	21	69
28	44	139	e75	179	169	803	134	181	106	19	16	161
29	33	183	e72	160	---	546	303	157	71	21	13	39
30	28	251	e76	429	---	489	197	116	41	29	11	23
31	25	---	e72	658	---	353	---	107	---	27	11	---
TOTAL	1187	1568	6947	4254	6126	10439	8132	9286	5887	590	527.2	569.6
MEAN	38.3	52.3	224	137	219	337	271	300	196	19.0	17.0	19.0
MAX	411	251	1610	658	564	1600	1340	931	1150	34	62	161
MIN	11	17	53	61	118	103	93	107	35	12	6.1	3.1
CFSM	0.28	0.38	1.64	1.00	1.60	2.46	1.98	2.19	1.43	0.14	0.12	0.14
IN.	0.32	0.43	1.89	1.16	1.66	2.83	2.21	2.52	1.60	0.16	0.14	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

MEAN	69.1	134	240	254	315	398	317	219	133	80.5	63.0	53.8
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	51232.6		55512.8			
ANNUAL MEAN	140		152		189	
HIGHEST ANNUAL MEAN					312	1956
LOWEST ANNUAL MEAN					122	1999
HIGHEST DAILY MEAN	1650	Mar 22	1610	Dec 18	7710	Jun 23 1972
LOWEST DAILY MEAN	8.6	Sep 12	3.1	Sep 14	1.3	Oct 16 1960
ANNUAL SEVEN-DAY MINIMUM	9.7	Sep 7	4.2	Sep 9	1.7	Oct 13 1960
MAXIMUM PEAK FLOW			3020	Mar 26	a14000	Oct 15 1954
MAXIMUM PEAK STAGE			5.91	Mar 26	b13.60	Oct 15 1954
INSTANTANEOUS LOW FLOW			1.3	Sep 15	1.3	Oct 16 1960c
ANNUAL RUNOFF (CFSM)	1.02		1.11		1.38	
ANNUAL RUNOFF (INCHES)	13.91		15.07		18.74	
10 PERCENT EXCEEDS	377		347		452	
50 PERCENT EXCEEDS	63		82		92	
90 PERCENT EXCEEDS	13		12		12	

- a From rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow.
- b From floodmarks.
- c Also Sept. 15, 2002, minimum observed.

