



# 2004 Water Year BUFFALO CREEK BASIN

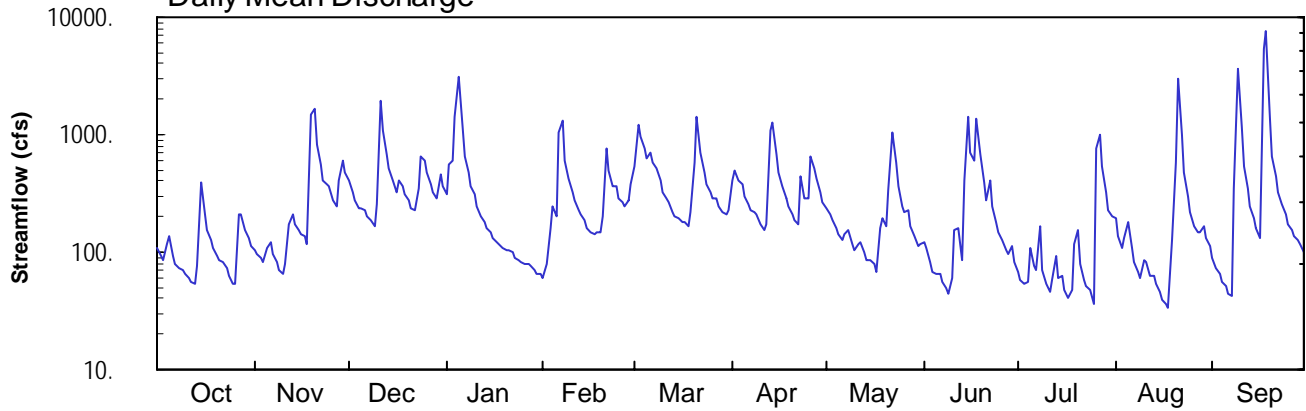
## 03049000 Buffalo Creek near Freeport, PA

Latitude: 40° 42' 57"  
Butler County

Longitude: 079° 41' 59"  
Datum: 792.00 feet

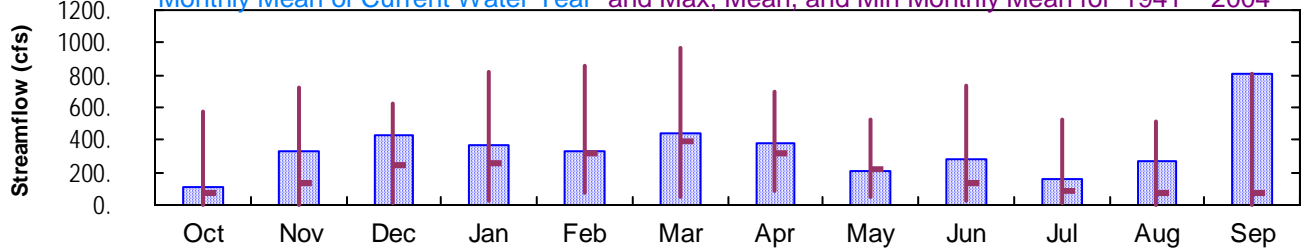
Hydrologic Unit Code: 05010009  
Drainage Area: 137. mi<sup>2</sup>

### Daily Mean Discharge

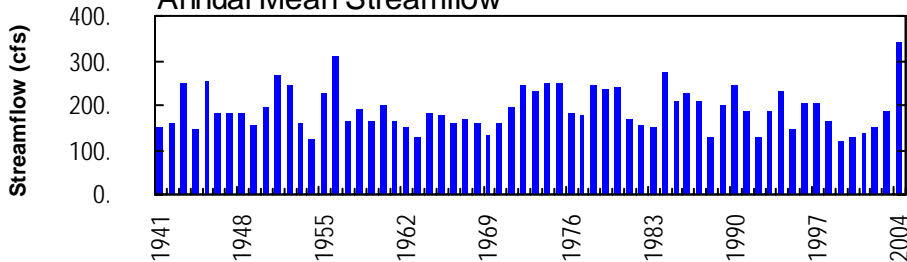


### Monthly Statistics

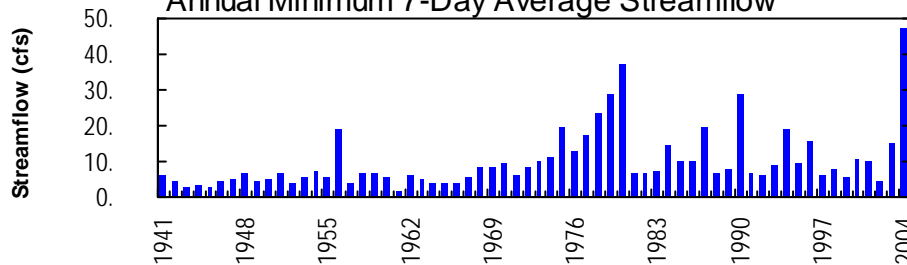
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1941 – 2004



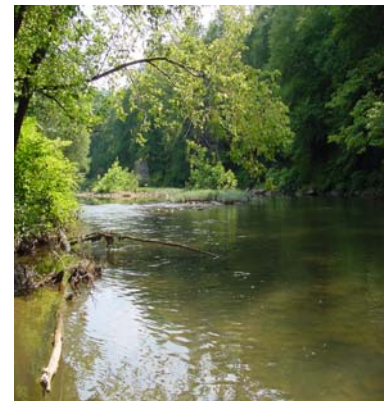
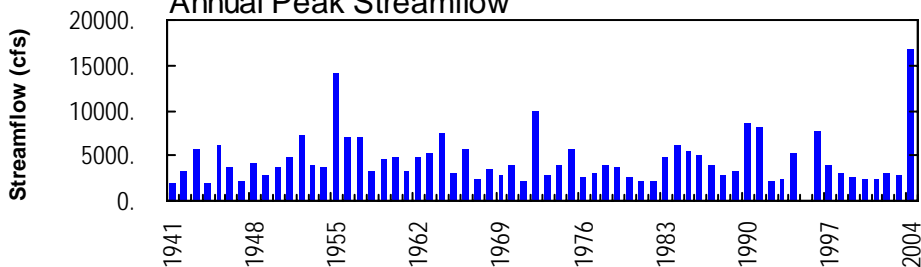
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



**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 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 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)
Nov. 19	1915	3,170	6.08	Apr. 13	2015	2,060	4.92
Dec. 11	0445	2,510	5.35	June 15	0730	2,540	5.41
Jan. 5	0500	4,210	7.15	Aug. 21	1045	3,910	6.74
Feb. 6	----	--	Ice jam	Sept. 9	1215	4,800	7.48
Mar. 21	0045	2,080	4.94	Sept. 17	Unknown	*16,700	*a15.28

a From floodmarks.

**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	107	103	407	313	e60	528	401	239	123	67	193	88
2	94	98	326	562	e80	1220	496	212	108	58	134	74
3	85	90	271	604	e160	963	411	188	83	53	107	65
4	117	82	237	1420	e250	753	375	159	68	55	130	56
5	139	107	235	3130	e200	625	297	144	64	110	180	51
6	93	123	229	1190	e1050	699	253	128	66	77	106	44
7	80	96	198	662	1310	569	230	140	56	70	82	42
8	73	81	190	468	595	511	220	153	49	165	69	343
9	70	70	165	362	422	403	212	118	45	72	59	3690
10	66	65	256	e310	325	327	174	106	60	53	86	1190
11	61	79	1970	e250	272	283	156	118	155	46	84	544
12	55	171	1060	e205	230	267	175	120	159	57	63	345
13	53	208	664	e180	209	221	1060	100	87	94	62	249
14	77	172	507	e160	187	198	1280	85	411	61	53	194
15	395	152	403	e145	e160	193	690	84	1410	63	46	158
16	206	143	327	e130	e145	180	474	79	705	48	39	133
17	154	135	411	e120	e140	177	362	69	593	41	36	e5360
18	125	118	356	e115	e145	168	290	158	1360	47	33	7580
19	108	1500	307	e110	147	220	244	195	666	116	128	1350
20	92	1640	273	e105	199	583	214	163	399	155	571	652
21	85	832	236	e105	757	1410	189	332	276	80	3040	434
22	82	553	224	e100	492	702	169	1030	409	57	998	320
23	73	409	346	e88	366	480	433	590	246	52	473	250
24	62	371	650	e84	358	375	284	358	181	48	304	206
25	54	361	611	e82	292	327	291	246	149	37	217	176
26	53	279	482	e80	265	288	651	216	127	766	165	151
27	213	245	384	e78	242	284	523	228	103	982	147	134
28	207	413	322	e75	275	248	420	169	97	529	149	129
29	156	604	288	e70	371	219	321	135	112	328	168	117
30	132	480	450	e65	---	207	268	113	81	226	130	101
31	111	---	359	e65	---	223	---	119	---	200	114	---
TOTAL	3478	9780	13144	11433	9704	13851	11563	6294	8448	4813	8166	24226
MEAN	112	326	424	369	335	447	385	203	282	155	263	808
MAX	395	1640	1970	3130	1310	1410	1280	1030	1410	982	3040	7580
MIN	53	65	165	65	60	168	156	69	45	37	33	42
CFM	0.82	2.38	3.09	2.69	2.44	3.26	2.81	1.48	2.06	1.13	1.92	5.89
IN.	0.94	2.66	3.57	3.10	2.63	3.76	3.14	1.71	2.29	1.31	2.22	6.58

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)**

MEAN	69.2	136	241	256	313	398	315	218	137	83.1	67.4	69.5
MAX	571	720	625	821	861	964	704	525	732	522	511	808
(WY)	1955	1986	1991	1952	1956	1945	1957	1952	1972	1990	1984	2004
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.

**BUFFALO CREEK BASIN**

**03049000 BUFFALO CREEK NEAR FREEPORT, PA--Continued**

<b>SUMMARY STATISTICS</b>	<b>FOR 2003 CALENDAR YEAR</b>		<b>FOR 2004 WATER YEAR</b>		<b>WATER YEARS 1941 - 2004</b>	
ANNUAL TOTAL	87114		124900			
ANNUAL MEAN	239		341		191	
HIGHEST ANNUAL MEAN					341	
LOWEST ANNUAL MEAN					122	
HIGHEST DAILY MEAN	1970	Dec 11	7580	Sep 18	7710	Jun 23 1972
LOWEST DAILY MEAN	13	Aug 25	33	Aug 18	1.3	Oct 16 1960
ANNUAL SEVEN-DAY MINIMUM	17	Aug 19	47	Aug 12	1.7	Oct 13 1960
MAXIMUM PEAK FLOW			<b>b</b> 16700	Sep 17	<b>b</b> 16700	Sep 17 2004
MAXIMUM PEAK STAGE			<b>a</b> 15.28	Sep 17	<b>a</b> 15.28	Sep 17 2004
INSTANTANEOUS LOW FLOW					1.3	Oct 16 1960 <sup>c</sup>
ANNUAL RUNOFF (CFSM)	1.74		2.49		1.40	
ANNUAL RUNOFF (INCHES)	23.65		33.91		18.98	
10 PERCENT EXCEEDS	486		655		455	
50 PERCENT EXCEEDS	154		184		95	
90 PERCENT EXCEEDS	55		63		12	

**a** From floodmarks.

**b** From rating curve extended above 7,800 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 13.60 ft.

**c** Also Sept. 15, 2002, minimum observed.