

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA

LOCATION.--Lat 40°37'40", long 80°20'16", Beaver County, Hydrologic Unit 05030101, on left bank at downstream side of highway bridge at Moffatts Mill, 1.4 mi downstream from Gums Run, 4 mi south of Vanport, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--September 1941 to current year. May 1915 to July 1932 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 719.16 ft above sea level (U.S. Army Corps of Engineers benchmark). May 27, 1915 to July 31, 1932, and Sept. 2 to Dec. 3, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Normally, no regulation from Raccoon Creek Lake. Diversion out of the basin from Cherry Valley and Service Creek Reservoirs upstream increased from an average of 4.0 ft³/s at the close of 1957 to 6.8 ft³/s for the present year; diversion began with 2.0 ft³/s for September 1957. Published records do not include diversion. Records of diversion furnished by Western Pennsylvania Water Company and Ambridge Water Authority. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1922, reached a stage of 9.80 ft, discharge, 10,000 ft³/s. Flood of Mar. 5, 1920, also reached a stage of 9.80 ft, backwater from ice.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 19	0300	*2,570	*a5.18	Jan. 23	0130	1,900	4.54

a Maximum gage height, 5.19 ft, Jan. 18 (backwater from ice).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	24	27	e40	176	263	103	171	87	36	35	10
2	14	24	26	e38	369	220	105	159	85	85	72	9.6
3	15	22	26	e40	368	210	104	149	97	87	36	9.6
4	35	21	25	e46	314	294	106	143	83	52	25	9.3
5	39	19	24	e60	275	262	122	138	72	36	21	8.8
6	27	20	23	e80	243	573	104	136	65	29	19	8.8
7	22	21	22	e78	238	910	102	130	61	26	16	8.8
8	169	22	24	e90	580	533	87	136	55	24	17	9.1
9	106	20	25	e100	437	449	515	155	49	21	17	22
10	51	30	23	e120	344	383	1280	132	45	22	16	14
11	37	103	22	e140	286	300	648	116	41	26	15	11
12	32	66	21	e170	266	288	468	109	38	22	14	10
13	27	41	20	e190	256	265	342	105	35	18	14	9.4
14	24	32	21	e210	206	255	276	194	32	16	14	9.0
15	19	29	22	e250	185	244	238	136	40	16	15	8.8
16	18	26	22	e250	183	239	285	107	42	16	15	8.8
17	18	25	21	e250	180	262	271	94	36	15	14	8.8
18	18	25	23	e700	170	331	252	101	33	14	13	9.5
19	23	23	25	1810	156	289	224	560	31	13	12	9.6
20	34	23	25	803	141	244	266	259	29	13	12	9.9
21	27	28	30	633	127	231	298	167	27	12	11	13
22	25	31	426	1110	109	216	705	138	25	12	11	14
23	25	26	200	1640	105	184	593	215	23	12	11	14
24	24	25	107	1340	116	172	597	233	22	12	11	12
25	21	22	88	728	111	158	451	378	22	12	12	11
26	20	27	e74	494	111	145	369	244	22	11	26	10
27	20	42	e62	382	107	135	305	180	21	10	30	9.9
28	20	37	e54	335	168	129	256	146	23	145	20	10
29	20	31	e50	271	---	122	222	122	24	340	19	10
30	20	28	e45	221	---	112	192	106	61	101	16	39
31	20	---	e43	188	---	104	---	94	---	47	12	---
TOTAL	985	913	1646	12807	6327	8522	9886	5253	1326	1301	591	347.7
MEAN	31.8	30.4	53.1	413	226	275	330	169	44.2	42.0	19.1	11.6
MAX	169	103	426	1810	580	910	1280	560	97	340	72	39
MIN	14	19	20	38	105	104	87	94	21	10	11	8.8
CFSM	.18	.17	.30	2.32	1.27	1.54	1.85	.95	.25	.24	.11	.07
IN.	.21	.19	.34	2.68	1.32	1.78	2.07	1.10	.28	.27	.12	.07

e Estimated.

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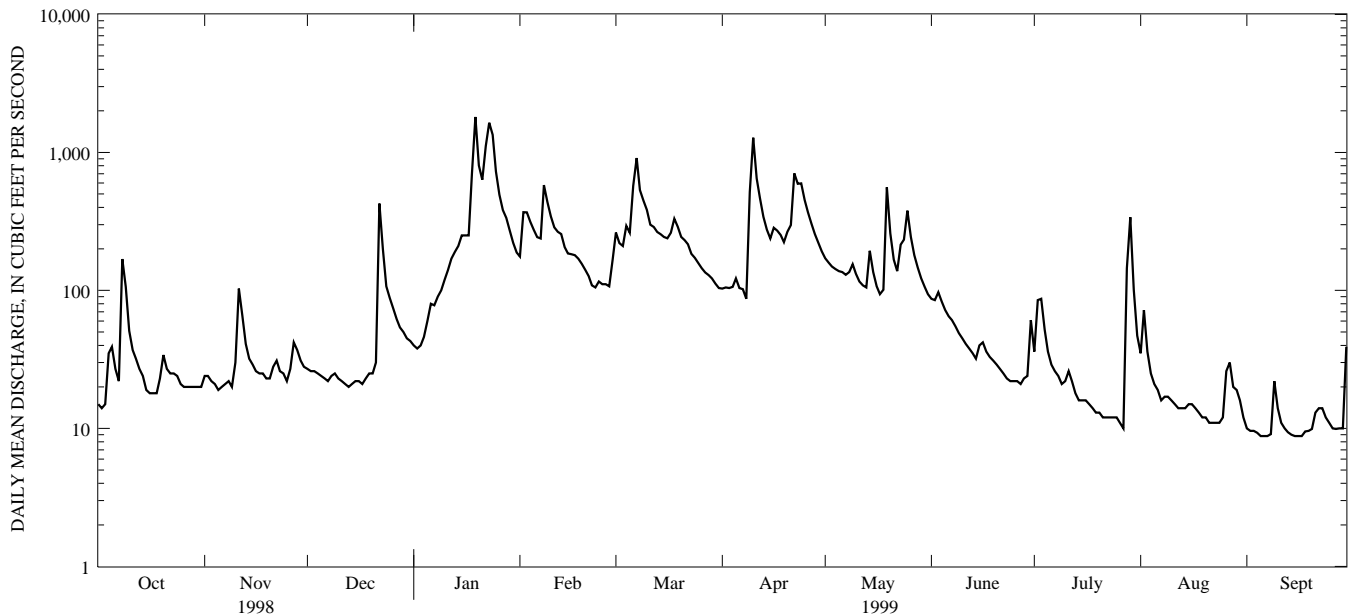
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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999, BY WATER YEAR (WY)

MEAN	63.2	112	193	254	320	409	342	263	142	86.1	68.9	54.8
MAX	359	764	717	737	788	1010	757	618	632	389	651	453
(WY)	1955	1986	1991	1952	1956	1945	1957	1983	1989	1990	1980	1975
MIN	7.98	14.8	15.1	34.5	47.7	56.3	94.7	65.6	26.3	15.6	10.2	9.73
(WY)	1964	1964	1964	1967	1964	1969	1946	1986	1988	1965	1965	1964

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1942 - 1999	
ANNUAL TOTAL	66616		49904.7			
ANNUAL MEAN	183		137		192	
HIGHEST ANNUAL MEAN					314	
LOWEST ANNUAL MEAN					90.9	
HIGHEST DAILY MEAN	2610	Jan 8	1810	Jan 19	6120	Jan 27 1952
LOWEST DAILY MEAN	14	Oct 2	8.8	Sep 5a	4.8	Sep 8 1945
ANNUAL SEVEN-DAY MINIMUM	16	Sep 14	9.1	Sep 13	5.6	Aug 20 1965
INSTANTANEOUS PEAK FLOW			2570	Jan 19	b8590	Jan 27 1952
INSTANTANEOUS PEAK STAGE			c5.18	Jan 19	9.71	Jan 27 1952
INSTANTANEOUS LOW FLOW			8.8	Sep 4d	4.5	Aug 24 1965
ANNUAL RUNOFF (CFSM)	1.03		.77		1.08	
ANNUAL RUNOFF (INCHES)	13.92		10.43		14.64	
10 PERCENT EXCEEDS	434		321		449	
50 PERCENT EXCEEDS	87		42		97	
90 PERCENT EXCEEDS	20		12		20	

- a Also Sept. 6, 7, 15-17.
- b From rating curve extended above 3,600 ft³/s.
- c Maximum gage height, 5.19 ft, Jan. 18 (backwater from ice).
- d Also Sept. 5-8, 14-17.



1-YEAR HYDROGRAPH
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999