

POTOMAC RIVER BASIN

01633000 NORTH FORK SHENANDOAH RIVER AT MOUNT JACKSON, VA

LOCATION.--Lat 38°44'43", long 78°38'21", Shenandoah County, Hydrologic Unit 02070006, on right bank at upstream side of bridge on State Highway 698 at Mount Jackson and 0.4 mi downstream from Mill Creek.

DRAINAGE AREA.--506 mi².

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WSP 1382: 1945, 1948-50(M), 1951-53(P), 1954(M). WSP 2103: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 838.55 ft above sea level. Prior to Jul. 1, 1976, nonrecording gage, and Jul. 1, 1976, to Oct. 23, 1981, water-stage recorder, at site 400 ft upstream at same datum.

REMARKS.--Records good except for period with backwater from beaver dam, Oct. 24 to Nov. 10, which is fair. Some diversion during low flow for irrigation at points upstream from station. Virginia Department of Emergency Services gage-height radio transmitter at station. Maximum discharge, 103,000 ft³/s, Sep. 6, 1996, from rating curve extended above 19,000 ft³/s on basis of peak runoff for stations at Cootes Store and near Strasburg. Minimum gage height, 1.70 ft, Aug. 12-13, 1999. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1942 reached a stage of 20.2 ft, from floodmarks, discharge, about 80,000 ft³/s, from rating curve extended above 18,000 ft³/s on basis of peak runoff for flood in October, 1942 for stations at Cootes Store and near Strasburg.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 6	2300	*4,260	*7.95	No peak greater than base discharge.			

Minimum discharge, 1.5 ft³/s, Aug 12-13.

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	36	e34	32	32	149	105	233	107	65	12	9.3	31
2	35	e35	32	35	150	92	233	104	62	13	9.0	27
3	34	e37	31	56	142	94	216	101	56	22	7.2	23
4	39	e40	33	74	128	138	203	98	49	17	6.0	23
5	41	e37	34	57	117	122	194	95	46	13	5.0	72
6	43	e35	34	49	109	111	183	92	44	10	4.1	2410
7	40	e35	34	46	105	110	171	92	42	7.6	3.1	2630
8	48	e35	40	47	104	112	160	196	38	7.4	2.4	1010
9	50	e36	60	75	97	137	159	326	34	8.3	3.2	517
10	45	e37	57	190	92	156	171	220	30	6.6	4.3	366
11	40	33	45	98	88	146	160	173	26	6.1	2.9	260
12	39	34	40	141	86	143	160	144	27	5.7	2.2	196
13	38	33	44	323	85	157	148	126	30	7.8	1.8	157
14	37	34	52	212	81	199	140	134	30	8.2	5.5	132
15	36	34	49	193	78	278	138	214	27	6.9	7.8	127
16	37	34	43	233	75	343	142	198	24	7.7	5.1	431
17	37	32	41	198	73	778	135	171	28	6.8	5.6	369
18	37	33	39	179	123	2170	129	152	35	6.4	3.6	247
19	35	33	38	219	186	1720	124	137	31	5.3	3.6	208
20	36	34	38	194	186	971	122	123	27	4.5	64	185
21	34	35	37	185	169	744	120	113	28	15	54	499
22	34	35	38	491	151	1020	121	109	29	12	56	575
23	37	35	36	409	139	832	118	143	23	8.5	29	421
24	e36	34	37	995	132	673	129	167	18	5.4	21	314
25	e38	34	37	906	124	551	125	138	17	5.7	22	249
26	e39	34	36	530	117	457	121	116	15	5.4	91	207
27	e36	34	33	366	108	395	117	102	14	5.0	107	178
28	e33	34	36	286	106	348	116	93	14	9.1	91	206
29	e33	32	37	233	---	306	114	84	12	9.3	65	195
30	e35	32	36	193	---	271	110	77	12	7.7	46	1470
31	e33	---	35	166	---	242	---	71	---	7.3	35	---
TOTAL	1171	1034	1214	7411	3300	13921	4512	4216	933	272.7	772.7	13735
MEAN	37.8	34.5	39.2	239	118	449	150	136	31.1	8.80	24.9	458
MAX	50	40	60	995	186	2170	233	326	65	22	107	2630
MIN	33	32	31	32	73	92	110	71	12	4.5	1.8	23
CFSM	.07	.07	.08	.47	.23	.89	.30	.27	.06	.02	.05	.90
IN.	.09	.08	.09	.54	.24	1.02	.33	.31	.07	.02	.06	1.01

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	235	290	378	493	587	844	636	519	303	166	217	221
MAX	1580	2371	1272	2283	2445	2387	2193	1418	1483	834	1403	2804
(WY)	1980	1986	1973	1996	1998	1994	1987	1988	1972	1949	1955	1996
MIN	22.2	26.3	22.7	30.1	62.7	119	79.2	84.3	31.1	8.80	19.9	26.2
(WY)	1987	1966	1966	1966	1959	1981	1981	1969	1999	1999	1964	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1944 - 1999
ANNUAL TOTAL	234502	52492.4	
ANNUAL MEAN	642	144	407
HIGHEST ANNUAL MEAN			935 1996
LOWEST ANNUAL MEAN			136 1981
HIGHEST DAILY MEAN	8590 Feb 18	2630 Sep 7	32200 Sep 6 1996
LOWEST DAILY MEAN	31 Dec 3	1.8 Aug 13	1.8 Aug 13 1999
ANNUAL SEVEN-DAY MINIMUM	32 aNov 28	2.8 Aug 7	2.8 Aug 7 1999
INSTANTANEOUS PEAK FLOW		4260 Sep 6	103000 Sep 6 1996
INSTANTANEOUS PEAK STAGE		7.95 Sep 6	22.17 Sep 6 1996
INSTANTANEOUS LOW FLOW		1.5 bAug 12	1.5 bAug 12 1999
ANNUAL RUNOFF (CFSM)	1.27	.28	.80
ANNUAL RUNOFF (INCHES)	17.24	3.86	10.92
10 PERCENT EXCEEDS	1840	274	864
50 PERCENT EXCEEDS	165	56	188
90 PERCENT EXCEEDS	35	8.3	44

a Also Nov 29, 1998.
 b Also Aug 13, 1998.
 e Estimated.

