

## 01595200 STONY RIVER NEAR MOUNT STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", NAD 27, Grant County, Hydrologic Unit 02070002, on left bank 100 ft downstream from highway bridge on U.S. Highway 50, 1.0 mi west of Mount Storm, and at mile 6.4.

DRAINAGE AREA.--48.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,554.54 ft above NGVD 29.

REMARKS.--Water-discharge records good except those for periods of estimated daily discharges (ice effect, no gage-height record), which are poor. Flow regulated by Stony River Reservoir, 14.0 mi upstream from station until use of reservoir discontinued June 1987. Regulation since 1963 by Virginia Electric and Power Company dam (Mount Storm Lake), 4.0 mi upstream from station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 1,680 ft<sup>3</sup>/s, Mar. 29, gage height, 6.65 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	125	283	84	e20	e31	344	e250	21	11	9.8	14
2	57	93	274	88	e20	e30	426	e180	22	12	8.1	9.7
3	56	117	203	86	19	e34	425	138	24	11	8.3	7.5
4	42	254	157	123	19	e32	e400	101	20	25	7.8	5.6
5	22	335	100	240	19	e30	e280	80	19	63	6.6	4.7
6	21	234	39	322	20	69	222	71	20	25	5.4	5.1
7	20	156	53	252	29	e170	174	60	35	20	83	7.9
8	18	126	76	224	49	e250	153	57	34	347	77	8.1
9	17	75	98	190	161	e190	129	56	68	285	139	7.7
10	17	35	158	122	308	e160	128	54	61	160	88	7.1
11	19	33	188	112	232	122	126	64	58	90	30	3.9
12	20	68	181	215	147	111	126	77	37	56	22	3.0
13	17	76	161	188	117	101	85	77	21	22	18	6.4
14	17	96	138	234	186	93	e32	55	18	17	16	6.9
15	17	90	119	202	133	67	e29	53	20	16	13	5.9
16	18	76	101	170	149	31	e29	53	20	87	13	5.9
17	21	66	84	108	137	33	e45	39	23	64	12	3.3
18	15	81	76	61	135	36	44	25	20	50	12	2.7
19	23	86	72	52	111	64	23	28	20	82	11	2.5
20	41	89	52	e45	101	115	21	294	16	66	10	4.0
21	154	84	29	e38	116	123	25	323	14	53	39	6.7
22	92	82	34	e34	148	133	63	241	14	39	13	5.7
23	94	77	84	e26	147	375	115	158	13	33	11	5.5
24	110	88	77	e28	148	497	84	175	11	28	10	3.3
25	116	135	66	e31	124	417	69	221	9.7	27	9.5	2.5
26	100	138	69	e27	103	304	83	189	9.0	23	8.7	2.5
27	79	122	83	e25	66	244	69	137	8.1	15	12	6.2
28	72	146	77	e21	33	667	e130	113	50	15	33	6.6
29	115	147	67	e23	---	1,210	e240	95	95	13	13	7.0
30	264	135	71	e22	---	480	e370	56	23	12	10	5.6
31	189	---	78	e21	---	363	---	24	---	11	14	---
TOTAL	1,931	3,465	3,348	3,414	2,997	6,582	4,489	3,544	823.8	1,778	763.2	173.5
MEAN	62.3	116	108	110	107	212	150	114	27.5	57.4	24.6	5.78
MAX	264	335	283	322	308	1,210	426	323	95	347	139	14
MIN	15	33	29	21	19	30	21	24	8.1	11	5.4	2.5

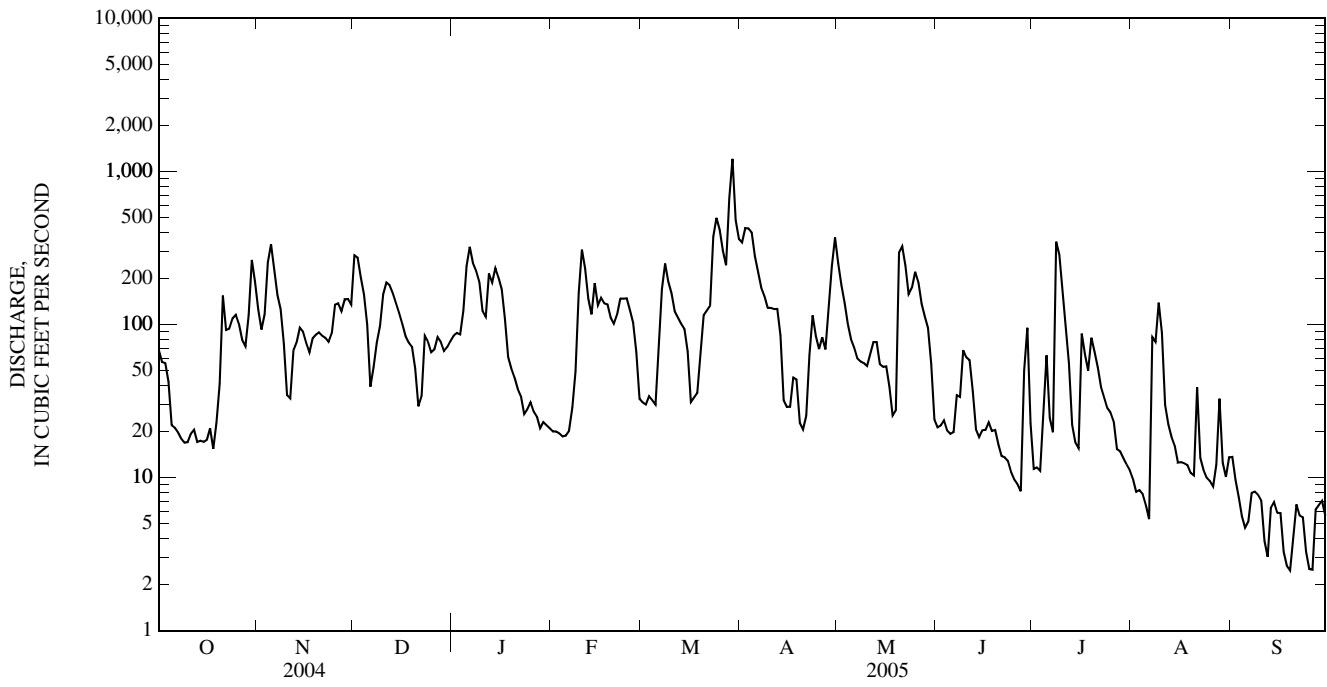
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY)

MEAN	45.6	86.9	105	112	140	221	160	122	69.4	48.2	35.4	42.8
MAX	234	669	301	267	361	537	371	271	237	205	200	314
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(1987)	(1988)	(1981)	(1978)	(1996)	(1996)
MIN	3.36	5.53	8.36	20.9	21.3	46.9	51.8	28.3	9.91	4.36	3.28	3.89
(WY)	(1992)	(1999)	(1999)	(1981)	(1978)	(1990)	(1995)	(1964)	(1964)	(1968)	(1999)	(1985)

01595200 STONY RIVER NEAR MOUNT STORM, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005	
ANNUAL TOTAL	43,486.7		33,308.5		98.8	
ANNUAL MEAN	119		91.3		166	
HIGHEST ANNUAL MEAN					42.0	
LOWEST ANNUAL MEAN					196	
HIGHEST DAILY MEAN	950	Mar 4	1,210	Mar 29	9,880	Nov 5, 1985
LOWEST DAILY MEAN	6.7	Sep 5	2.5	(a)	1.3	Aug 28, 1988
ANNUAL SEVEN-DAY MINIMUM	8.4	Sep 1	4.3	Sep 19	1.7	Aug 28, 1988
MAXIMUM PEAK FLOW			1,680	Mar 29	(b)14,000	Nov 5, 1985
MAXIMUM PEAK STAGE			6.65	Mar 29	(c)16.41	Nov 5, 1985
INSTANTANEOUS LOW FLOW			2.4	(d)	1.3	(f)
10 PERCENT EXCEEDS	275		223		232	
50 PERCENT EXCEEDS	80		61		49	
90 PERCENT EXCEEDS	16		9.3		8.4	

- a Sept. 19, 25, 26.
- b From rating curve extended above 7,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 19, 20, 25, 26.
- e Estimated.
- f Aug. 22, 23, 28, 29, 1988.



01595200 STONY RIVER NEAR MOUNT STORM, WV—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1961 to March 1974, September 1974 to September 1995, October 1996 to current year.

INSTRUMENTATION.--Temperature recorder (continuous ethyl alcohol-actuated thermograph) December 1961 to October 2001. Satellite telemetry installed Oct. 22, 2001.

REMARKS.--Upstream reservoir regulation defined on the discharge manuscript. No temperature record Mar. 7-10, Apr. 4, 5, 14-17, and Apr. 28 to May 2, due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.3°C, Aug. 3, 2002, Aug. 14, 2003; minimum, -0.5°C, Jan. 16-20, 1999.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.6°C, July 9; minimum, -0.1°C, Dec. 20, 21.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.9	16.0	11.4	10.1	3.0	2.8	13.9	---	18.2	25.2	24.2	21.0
2	19.6	17.4	12.7	10.6	1.9	1.2	11.8	---	15.3	25.2	25.1	21.7
3	18.9	16.4	11.5	11.7	2.9	1.7	9.5	13.4	14.5	23.0	25.8	20.8
4	18.1	13.9	10.3	12.4	4.2	3.3	---	14.8	18.6	24.4	26.1	19.8
5	15.8	14.6	10.3	12.5	3.4	5.5	---	15.5	22.0	22.6	24.0	19.1
6	13.4	15.1	7.2	13.5	3.8	7.0	14.8	14.9	22.8	23.7	23.3	19.7
7	13.9	15.0	8.7	11.7	4.9	---	13.6	13.7	22.4	21.0	23.7	19.3
8	14.5	13.9	8.3	11.2	3.8	---	13.1	16.8	21.4	25.7	19.2	19.3
9	15.0	10.4	8.9	11.3	7.5	---	14.7	18.3	20.4	27.6	20.7	20.1
10	15.3	7.6	11.1	10.1	8.8	---	16.4	19.6	21.4	27.2	24.0	20.4
11	13.4	9.0	11.0	10.1	8.0	6.1	16.4	20.2	20.5	26.2	23.3	20.1
12	12.6	8.4	9.8	12.3	7.9	5.9	13.1	17.8	23.0	25.9	24.4	20.3
13	11.9	7.1	9.4	13.9	8.3	6.9	14.1	19.3	23.1	24.4	25.4	20.4
14	12.8	9.1	6.9	13.1	7.5	7.1	---	20.3	24.7	22.7	24.1	18.5
15	12.5	10.2	5.9	10.0	7.3	6.8	---	19.4	21.7	23.3	23.8	20.7
16	10.5	9.8	6.7	9.5	9.3	5.4	---	16.4	19.6	21.6	22.3	21.4
17	9.1	10.9	6.3	7.1	6.5	6.6	---	18.2	18.9	21.2	23.9	22.1
18	9.3	12.9	6.7	1.3	5.7	7.2	15.5	18.9	18.9	22.4	22.0	19.8
19	10.8	13.8	6.1	1.1	5.8	6.8	16.7	17.2	18.0	21.4	22.0	20.2
20	10.6	14.1	2.2	2.0	6.5	6.3	18.3	16.4	18.4	24.0	24.5	18.7
21	13.1	13.6	1.8	2.6	7.8	7.9	14.8	21.0	20.7	23.9	22.5	20.2
22	13.5	13.6	3.8	2.9	10.2	10.4	14.2	20.5	20.4	22.8	21.5	19.9
23	14.0	13.2	5.7	1.7	8.5	8.3	14.0	19.4	22.8	23.7	20.2	20.0
24	15.0	12.9	2.8	2.1	7.1	9.6	10.8	16.4	23.2	21.9	21.0	18.9
25	16.8	12.5	2.4	3.4	7.7	10.6	9.4	16.9	24.4	23.8	20.6	20.9
26	16.6	10.9	3.5	4.6	6.3	10.1	12.8	20.8	25.2	25.1	18.2	19.4
27	15.6	11.2	2.9	2.6	6.0	10.2	12.0	20.4	25.2	25.4	17.6	19.2
28	14.7	10.2	4.6	2.0	3.8	9.0	---	18.1	21.9	22.0	21.0	18.0
29	15.9	11.8	5.5	4.3	---	11.5	---	19.0	26.7	22.3	19.3	16.9
30	18.7	12.4	7.4	5.7	---	13.5	---	16.7	27.0	24.0	19.8	14.7
31	18.1	---	9.0	5.3	---	14.1	---	18.4	---	24.3	20.5	---
MEAN	14.5	12.3	7.1	7.5	6.2	---	---	---	21.4	23.8	22.4	19.7
MAX	19.9	17.4	12.7	13.9	10.2	---	---	---	27.0	27.6	26.1	22.1
MIN	9.1	7.1	1.8	1.1	1.9	---	---	---	14.5	21.0	17.6	14.7

## 01595200 STONY RIVER NEAR MOUNT STORM, WV—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
 DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.6	15.1	9.1	8.9	0.5	0.7	10.6	---	12.3	20.4	18.5	17.3
2	18.3	14.1	10.2	8.8	0.4	0.6	9.2	---	13.6	19.8	18.8	16.9
3	17.2	13.8	9.4	10.5	1.5	0.6	7.8	10.3	13.2	18.6	19.1	15.7
4	15.6	12.2	9.0	11.4	1.3	0.6	---	10.0	13.5	18.6	19.2	14.4
5	11.7	13.0	6.9	10.8	0.4	3.3	---	9.2	15.1	18.6	19.6	14.1
6	9.3	13.7	6.0	10.9	0.4	3.6	10.9	11.0	16.7	19.9	20.2	13.7
7	9.3	13.4	7.0	10.5	1.4	---	11.8	10.1	17.1	18.3	18.2	13.3
8	10.0	10.3	6.7	9.9	3.0	---	10.7	10.1	17.6	16.7	18.0	13.1
9	11.2	6.4	6.2	9.9	3.3	---	8.7	11.0	17.3	25.0	17.7	14.2
10	12.2	4.8	8.9	7.7	6.5	---	9.9	12.7	17.1	23.9	20.3	14.9
11	10.0	6.5	9.0	7.7	6.7	4.4	10.9	14.3	17.2	22.3	19.7	14.6
12	8.5	6.8	8.8	8.6	6.4	3.9	10.0	15.8	18.7	22.3	19.5	13.9
13	9.3	5.7	6.7	11.8	6.2	4.4	10.4	14.2	19.1	20.8	20.2	14.3
14	11.1	5.5	5.4	9.0	6.6	4.0	---	15.4	19.7	20.8	20.4	14.7
15	10.5	7.4	4.6	8.8	4.7	3.4	---	15.9	19.2	19.8	20.4	15.3
16	7.6	8.4	4.4	7.1	5.1	2.1	---	13.7	16.4	19.0	20.4	16.7
17	6.4	8.9	4.8	0.8	4.8	2.8	---	12.7	14.9	18.5	18.6	17.8
18	5.7	10.5	4.1	0.2	4.0	2.3	10.1	11.5	13.8	19.6	17.5	16.5
19	9.0	12.9	2.2	0.2	3.7	2.5	10.4	13.8	15.2	20.0	19.0	14.5
20	9.9	13.2	-0.1	0.9	4.5	5.1	10.9	12.8	15.2	19.6	19.0	17.1
21	9.9	13.1	-0.1	0.9	6.1	6.0	12.4	16.4	14.5	19.9	19.6	15.8
22	12.7	12.8	1.8	0.6	7.4	4.9	11.6	17.7	16.5	20.6	17.9	14.6
23	13.2	12.3	1.9	0.3	7.1	5.7	10.8	16.4	15.1	19.9	15.9	16.3
24	12.8	12.5	0.5	0.3	5.7	7.8	5.3	15.6	16.4	18.3	16.1	17.2
25	14.2	8.7	0.2	1.2	5.6	9.5	4.6	15.7	17.2	20.2	15.2	16.4
26	13.8	8.6	1.2	2.6	5.1	9.4	7.6	16.3	17.6	19.3	16.3	17.9
27	14.5	10.2	2.0	0.3	3.8	8.7	9.6	16.8	17.9	21.2	16.6	15.8
28	13.9	9.4	1.8	0.3	0.8	6.5	---	15.8	18.0	19.4	16.9	12.7
29	13.3	9.5	4.2	1.9	---	7.7	---	14.7	20.4	17.7	17.3	13.0
30	13.8	11.2	5.2	4.3	---	10.5	---	14.6	21.3	19.1	17.8	10.0
31	16.0	---	6.7	2.2	---	11.4	---	12.3	---	18.8	18.7	---
MEAN	11.9	10.4	5.0	5.5	4.0	---	---	---	16.6	19.9	18.5	15.1
MAX	18.3	15.1	10.2	11.8	7.4	---	---	---	21.3	25.0	20.4	17.9
MIN	5.7	4.8	-0.1	0.2	0.4	---	---	---	12.3	16.7	15.2	10.0

## POTOMAC RIVER BASIN

## 01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

LOCATION.--Lat 39°26'35", long 78°49'20", NAD 27, Mineral County, Hydrologic Unit 02070002, on right bank 100 ft downstream from Hazel Run, 1.0 mi downstream from Cabin Run, 4.0 mi northeast of Headsville, 8.0 mi east of Keyser, and at mile 13.0.

DRAINAGE AREA.--211 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1938 to current year.

REVISED RECORDS.--WSP 951: 1939-40. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 624.90 ft above NGVD 29 (levels by U.S. Army Corps of Engineers). Prior to Oct. 11, 1946, nonrecording gage on bridge 1.0 mi upstream at datum 6.14 ft higher. Oct. 11-23, 1946, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. The flow from 115 mi<sup>2</sup> upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,887 acre-ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 4,150 ft<sup>3</sup>/s, Mar. 29, gage height, 9.83 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	196	458	75	95	165	735	137	107	17	21	21
2	228	169	501	72	84	160	1,050	130	92	16	19	19
3	174	144	417	68	77	150	1,070	119	87	15	18	16
4	128	164	347	64	78	148	745	107	82	15	16	13
5	94	299	300	143	78	175	627	98	75	15	15	12
6	73	266	267	476	77	248	591	90	68	18	14	11
7	59	227	261	416	76	543	578	86	66	18	14	10
8	51	193	277	416	83	648	566	83	62	115	40	9.2
9	45	159	281	405	100	591	471	78	89	98	50	8.7
10	42	131	561	346	125	501	395	75	103	68	68	8.4
11	38	108	607	312	120	415	340	89	83	48	60	7.9
12	36	139	541	463	110	363	295	101	68	37	45	7.2
13	35	236	430	456	103	314	263	91	62	61	34	7.0
14	34	233	349	971	132	277	229	80	57	118	29	6.8
15	34	205	294	690	205	240	198	76	48	182	25	6.9
16	36	179	254	601	219	211	167	70	43	227	21	7.0
17	34	158	222	504	212	189	143	65	38	321	20	7.5
18	31	158	196	361	194	170	126	58	34	293	18	7.2
19	33	162	175	305	170	154	115	55	32	209	18	7.0
20	37	189	146	278	156	143	106	182	29	158	18	7.5
21	72	192	153	243	157	133	100	318	27	111	17	7.5
22	131	181	117	205	153	124	105	272	29	83	15	7.3
23	116	167	124	189	138	343	169	245	31	65	14	6.8
24	108	216	138	192	130	670	180	430	27	51	14	7.5
25	127	488	113	166	132	596	161	480	24	43	13	7.5
26	126	390	105	148	133	544	144	352	22	36	13	7.2
27	111	313	92	146	136	462	128	273	20	31	16	7.0
28	97	331	88	130	151	1,400	114	224	19	28	19	6.5
29	90	318	84	116	---	3,410	103	187	18	26	18	6.4
30	179	294	75	102	---	1,580	111	156	17	24	19	6.5
31	222	---	75	108	---	975	---	131	---	22	20	---
TOTAL	2,916	6,605	8,048	9,167	3,624	16,042	10,125	4,938	1,559	2,569	741	270.5
MEAN	94.1	220	260	296	129	517	338	159	52.0	82.9	23.9	9.02
MAX	295	488	607	971	219	3,410	1,070	480	107	321	68	21
MIN	31	108	75	64	76	124	100	55	17	15	13	6.4
CFSM	0.45	1.04	1.23	1.40	0.61	2.45	1.60	0.75	0.25	0.39	0.11	0.04
IN.	0.51	1.16	1.42	1.62	0.64	2.83	1.79	0.87	0.27	0.45	0.13	0.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

MEAN	72.2	90.3	165	207	303	431	319	223	109	60.2	57.3	55.7
MAX	745	901	825	908	893	1,346	1,085	763	459	415	586	767
(WY)	(1943)	(1986)	(1973)	(1996)	(1994)	(1963)	(1993)	(1988)	(2003)	(1989)	(1996)	(1996)
MIN	2.24	4.39	9.70	18.1	22.2	58.3	54.1	21.2	8.38	3.14	5.20	2.80
(WY)	(1992)	(1992)	(1944)	(2002)	(2002)	(1990)	(1969)	(1969)	(1999)	(1999)	(1966)	(1991)

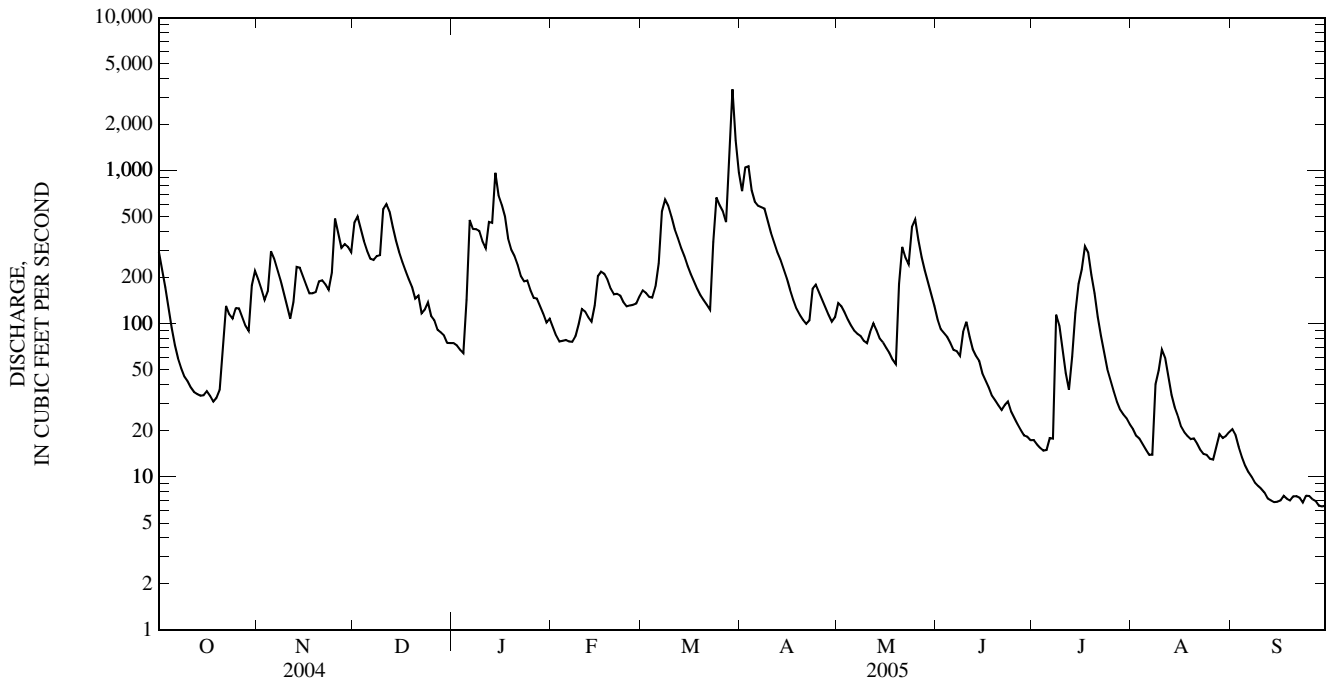
01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	78,485		66,604.5		174	
ANNUAL MEAN	214		182		387	
HIGHEST ANNUAL MEAN					35.1	
LOWEST ANNUAL MEAN					1969	
HIGHEST DAILY MEAN	1,680	Apr 14	3,410	Mar 29	11,100	Oct 15, 1942
LOWEST DAILY MEAN	12	(a)	6.4	Sep 29	0.48	Aug 23, 1999
ANNUAL SEVEN-DAY MINIMUM	13	Sep 1	6.9	Sep 24	0.87	Aug 17, 1999
MAXIMUM PEAK FLOW			4,150	Mar 29	(b)16,000	Aug 19, 1955
MAXIMUM PEAK STAGE			9.83	Mar 29	12.20	Aug 19, 1955
INSTANTANEOUS LOW FLOW			6.2	Sep 28	0.45	(c)
ANNUAL RUNOFF (CFSM)	1.02		0.865		0.824	
ANNUAL RUNOFF (INCHES)	13.84		11.74		11.19	
10 PERCENT EXCEEDS	553		430		450	
50 PERCENT EXCEEDS	128		115		61	
90 PERCENT EXCEEDS	25		15		10	

a Sept. 5, 6.

b From rating curve extended above 4,900 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

c Aug. 23, 24, 1999.



## 01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

LOCATION.--Lat 39°26'35", long 78°49'20", NAD 27, Mineral County, Hydrologic Unit 02070002, on right bank 100 ft downstream from Hazel Run, 1.0 mi downstream from Cabin Run, 4.0 mi northeast of Headsville, 8.0 mi east of Keyser, and at mile 13.0.

DRAINAGE AREA.--211 mi<sup>2</sup>.

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Bicarbonate, wat fltr incrm. titr., mg/L (00453)	Carbonate, wat fltr incrm. titr., mg/L (00452)
JUN 07...	1400	3.08	65	747	7.7	95	7.8	245	31.0	25.1	84	--	--
JUL 11...	1455	2.96	41	751	9.0	110	8.2	276	33.0	24.7	95	--	--
AUG 09...	1355	2.99	51	751	8.1	98	7.8	281	30.0	23.9	92	--	--
SEP 12...	1510	2.44	7.0	752	8.2	96	7.9	298	--	22.4	95	116	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 07...	<10	E.02	.46	E.005	.70	E.003	.015	3	.53
JUL 11...	<10	<.04	.07	<.008	.30	E.003	.020	5	.55
AUG 09...	<10	<.04	.27	E.005	.52	<.006	.017	8	1.1
SEP 12...	<10	<.04	E.04	<.008	.22	<.006	.015	4	.08

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

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## POTOMAC RIVER BASIN

01605002 PAINTER RUN NEAR FORT ASHBY, WV  
(Detention Reservoir)

LOCATION.--Lat 39°29'08", long 78°45'37", NAD 27, Mineral County, Hydrologic Unit 02070002.

DAM NAME.--Patterson Creek No. 46, (corrected).

SURFACE AREA.--14 acres (corrected).

DRAINAGE AREA.-- 1.76 mi<sup>2</sup> (corrected).

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 700.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 20.6 ft (Normal Storage = 215 acre-ft, corrected)

Top of Riser = 31.1 ft

Emergency Spillway = 38.7 ft

Top of Dam = 47.6 ft

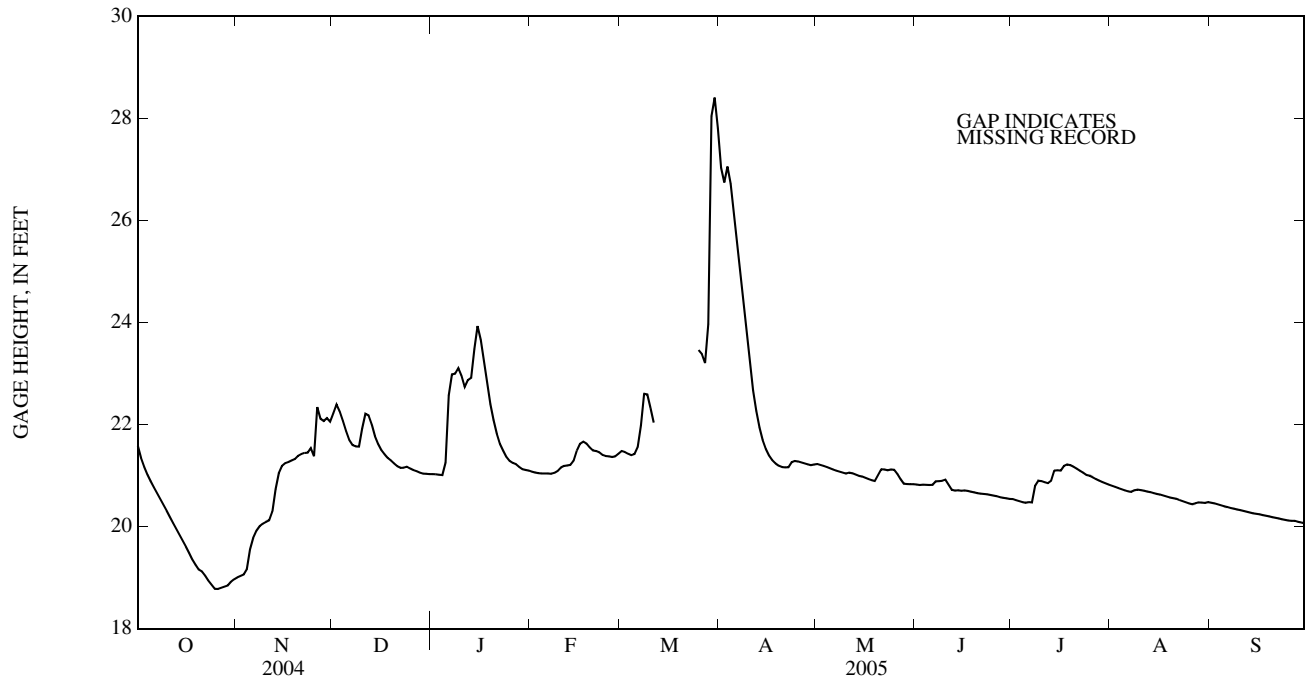
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 28.54 ft, Mar. 29, 2005; minimum gage height, 18.75 ft, Oct. 25, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.54 ft, Mar. 29; minimum gage height, 18.75 ft, Oct. 25.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.58	19.00	22.22	21.03	21.08	21.48	27.03	21.23	20.82	20.54	20.80	20.47
2	21.34	19.03	22.39	21.03	21.06	21.46	26.75	21.21	20.81	20.52	20.78	20.45
3	21.17	19.06	22.26	21.02	21.05	21.43	27.06	21.19	20.82	20.50	20.75	20.43
4	21.02	19.17	22.07	21.01	21.04	21.40	26.72	21.17	20.82	20.48	20.73	20.42
5	20.89	19.55	21.87	21.25	21.04	21.42	26.12	21.14	20.82	20.47	20.71	20.40
6	20.77	19.78	21.70	22.57	21.04	21.56	25.46	21.12	20.82	20.48	20.69	20.38
7	20.65	19.92	21.60	22.98	21.04	21.98	24.82	21.09	20.89	20.47	20.68	20.37
8	20.54	20.01	21.57	23.00	21.05	22.60	24.24	21.08	20.89	20.80	20.71	20.35
9	20.42	20.06	21.57	23.11	21.09	22.59	23.67	21.06	20.90	20.90	20.72	20.33
10	20.31	20.09	21.93	22.96	21.16	22.32	23.14	21.04	20.92	20.89	20.72	20.32
11	20.19	20.12	22.21	22.74	21.19	22.04	22.67	21.06	20.82	20.87	20.70	20.31
12	20.07	20.30	22.18	22.87	21.20	---	22.27	21.05	20.72	20.85	20.69	20.29
13	19.95	20.74	22.00	22.92	21.21	---	21.94	21.02	20.71	20.90	20.67	20.28
14	19.84	21.05	21.77	23.48	21.29	---	21.70	21.00	20.71	21.10	20.66	20.26
15	19.72	21.19	21.62	23.93	21.49	---	21.52	20.98	20.70	21.10	20.64	20.25
16	19.61	21.24	21.50	23.66	21.62	---	21.39	20.96	20.71	21.10	20.63	20.24
17	19.48	21.26	21.42	23.22	21.67	---	21.30	20.93	20.70	21.19	20.61	20.23
18	19.36	21.30	21.35	22.79	21.63	---	21.24	20.91	20.68	21.22	20.59	20.21
19	19.25	21.32	21.29	22.40	21.55	---	21.19	20.89	20.67	21.20	20.57	20.20
20	19.16	21.39	21.24	22.09	21.49	---	21.17	21.01	20.66	21.17	20.56	20.18
21	19.12	21.42	21.18	21.83	21.48	---	21.16	21.12	20.65	21.14	20.55	20.17
22	19.04	21.44	21.15	21.62	21.45	---	21.16	21.12	20.64	21.10	20.52	20.16
23	18.94	21.45	21.15	21.49	21.41	---	21.26	21.10	20.63	21.06	20.50	20.14
24	18.86	21.54	21.17	21.37	21.38	---	21.29	21.12	20.62	21.01	20.48	20.13
25	18.78	21.38	21.14	21.29	21.38	23.46	21.28	21.11	20.61	21.00	20.46	20.12
26	18.78	22.34	21.11	21.25	21.36	23.38	21.26	21.03	20.60	20.97	20.44	20.11
27	18.80	22.12	21.08	21.22	21.38	23.21	21.24	20.93	20.58	20.93	20.46	20.11
28	18.82	22.07	21.06	21.17	21.43	23.97	21.22	20.84	20.56	20.90	20.48	20.09
29	18.84	22.13	21.04	21.13	---	28.04	21.20	20.83	20.56	20.87	20.47	20.08
30	18.92	22.06	21.04	21.11	---	28.41	21.22	20.83	20.54	20.85	20.46	20.07
31	18.96	---	21.03	21.10	---	27.81	---	20.83	---	20.82	20.48	---
MEAN	19.78	20.78	21.55	22.09	21.30	---	22.79	21.03	20.72	20.88	20.61	20.25
MAX	21.58	22.34	22.39	23.93	21.67	---	27.06	21.23	20.92	21.22	20.80	20.47
MIN	18.78	19.00	21.03	21.01	21.04	---	21.16	20.83	20.54	20.47	20.44	20.07

01605002 PAINTER RUN NEAR FORT ASHBY, WV—Continued



## 01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

LOCATION.--Lat 38°38'08", long 79°20'17", NAD 27, Pendleton County, Hydrologic Unit 02070001, on left bank 0.5 mi southwest of Franklin, 2 mi upstream from Friends Run, 2.5 mi downstream from Thorn Creek, and at mile 112.5.

DRAINAGE AREA.--179 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1940 to September 1969, October 1976 to current year.

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,692.5 ft above NGVD 29 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for period of estimated daily discharge (ice effect), which is poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of about 13 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 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)
Mar 28	1400	*3,720	*5.77	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454	80	675	160	100	161	526	386	117	74	107	76
2	341	78	620	149	96	147	999	339	111	62	92	65
3	267	77	490	141	97	138	950	305	120	57	83	59
4	220	185	391	138	98	134	693	264	114	54	75	56
5	186	302	320	139	97	152	543	232	105	54	70	52
6	161	225	282	136	95	146	447	214	106	54	67	50
7	141	192	278	133	97	269	393	201	294	54	72	48
8	125	169	302	139	104	733	421	187	151	302	68	47
9	114	143	362	143	116	553	366	168	133	137	125	45
10	109	125	681	139	137	421	325	157	126	92	145	44
11	101	115	621	135	123	357	289	147	103	78	119	44
12	97	166	500	133	117	314	263	141	93	71	95	43
13	103	202	418	129	114	274	246	134	89	136	103	42
14	107	176	341	345	119	266	221	129	84	267	84	41
15	99	164	280	345	139	241	201	127	80	203	75	41
16	97	156	244	296	136	226	181	116	76	168	97	40
17	92	148	226	260	133	216	168	108	73	161	111	40
18	85	140	208	215	122	203	162	103	70	149	92	40
19	84	137	198	199	112	198	157	100	70	126	87	39
20	101	155	170	198	111	204	149	356	68	133	79	38
21	107	134	161	184	115	206	141	365	66	106	72	38
22	96	124	160	169	172	198	199	293	65	96	66	38
23	90	120	268	152	150	275	376	254	62	87	62	38
24	91	176	325	e130	151	650	337	262	59	77	60	38
25	93	434	257	148	148	522	305	239	57	73	56	38
26	88	347	227	138	150	427	264	214	56	70	54	39
27	85	288	206	139	145	372	237	190	54	66	66	40
28	87	372	181	111	159	1,700	215	170	56	71	84	38
29	87	321	178	106	---	1,580	200	157	79	181	68	37
30	85	286	171	110	---	907	355	143	68	189	61	36
31	83	---	166	104	---	659	---	134	---	131	89	---
TOTAL	4,076	5,737	9,907	5,163	3,453	12,849	10,329	6,335	2,805	3,579	2,584	1,330
MEAN	131	191	320	167	123	414	344	204	93.5	115	83.4	44.3
MAX	454	434	681	345	172	1,700	999	386	294	302	145	76
MIN	83	77	160	104	95	134	141	100	54	54	54	36
CFSM	0.73	1.07	1.79	0.93	0.69	2.32	1.92	1.14	0.52	0.64	0.47	0.25
IN.	0.85	1.19	2.06	1.07	0.72	2.67	2.15	1.32	0.58	0.74	0.54	0.28

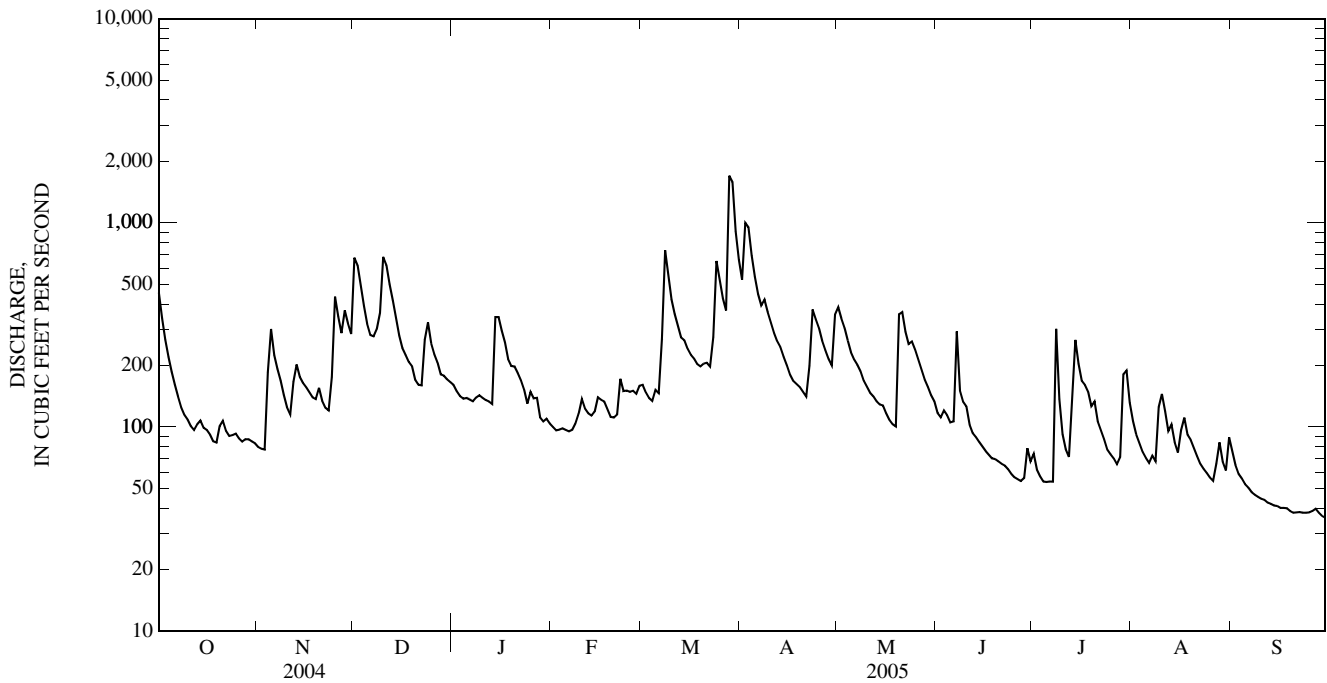
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	79.9	141	164	206	254	396	292	235	138	72.5	78.7	86.9
MAX	546	2,219	496	815	668	832	797	665	664	381	351	750
(WY)	(1977)	(1986)	(1997)	(1996)	(1998)	(1963)	(1987)	(1996)	(1940)	(1949)	(1984)	(1996)
MIN	20.0	25.5	23.5	32.5	45.6	80.8	90.2	59.3	33.7	27.8	23.3	21.4
(WY)	(1964)	(1966)	(1966)	(1981)	(2002)	(1981)	(1988)	(1941)	(1964)	(1964)	(1966)	(1963)

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	84,332		68,147		177	
ANNUAL MEAN	230		187		85.2	
HIGHEST ANNUAL MEAN					344	2003
LOWEST ANNUAL MEAN					85.2	1999
HIGHEST DAILY MEAN	2,360	Sep 28	1,700	Mar 28	25,000	Nov 4, 1985
LOWEST DAILY MEAN	41	(a)	36	Sep 30	14	(b)
ANNUAL SEVEN-DAY MINIMUM	43	Sep 1	38	Sep 24	14	Sep 6, 1966
MAXIMUM PEAK FLOW			3,720	Mar 28	(c)44,000	Nov 4, 1985
MAXIMUM PEAK STAGE			5.77	Mar 28	(d)22.58	Nov 4, 1985
INSTANTANEOUS LOW FLOW			36	(f)	13	Jan 17, 1966
ANNUAL RUNOFF (CFSM)	1.29		1.04		0.991	
ANNUAL RUNOFF (INCHES)	17.53		14.16		13.46	
10 PERCENT EXCEEDS	435		356		376	
50 PERCENT EXCEEDS	176		137		90	
90 PERCENT EXCEEDS	64		57		32	

- a Sept. 5, 6.
- b Sept. 7-12, 1966.
- c From rating curve extended above 15,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- d From floodmarks.
- e Estimated.
- f Sept. 29, 30.



## 01606000 NORTH FORK SOUTH BRANCH POTOMAC RIVER AT CABINS, WV

LOCATION.--Lat 38°59'04", long 79°14'02", NAD 27, Grant County, Hydrologic Unit 02070001, on right bank 10 ft upstream from bridge on County Route 28/11, 2 mi downstream from Jordan Run, 6 mi west of Petersburg, at Cabins, and at mile 2.9.

DRAINAGE AREA.--335 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1940 to September 1961, October 1961 to September 1978 (occasional discharge measurements and annual maximums only), October 1978 to September 1980, April 1998 to current year.

REVISED RECORDS.--WSP 1272: 1945.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,045.848 ft above NGVD 29.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge, 90,000 ft<sup>3</sup>/s, Nov. 5, 1985, from slope-area measurement. Estimated discharge, 80,000 ft<sup>3</sup>/s, Sept. 6, 1996, from modification of Nov. 5, 1985, slope-area measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 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)
Mar 24	0700	3,840	7.52	Mar 28	1800	*5,840	*8.51

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	867	373	1,170	259	171	388	1,200	1,260	271	46	187	94
2	610	322	1,530	241	162	346	1,810	1,050	242	41	150	87
3	465	294	1,140	226	165	309	2,200	815	244	41	116	65
4	362	536	807	244	168	283	1,660	617	233	39	90	51
5	285	1,360	604	375	163	329	1,310	488	201	166	77	43
6	233	1,000	493	477	162	316	1,030	410	177	157	78	39
7	204	739	480	506	182	689	832	360	189	88	406	36
8	179	565	556	555	242	2,310	941	324	169	1,690	245	33
9	161	441	589	594	388	1,620	931	277	156	669	395	31
10	151	368	1,240	565	610	1,040	807	255	210	329	484	29
11	140	320	1,250	502	558	787	684	321	180	219	320	27
12	129	368	1,020	470	497	649	590	261	150	180	241	26
13	125	574	820	435	437	533	513	230	127	228	198	24
14	153	530	653	872	431	479	425	209	124	291	175	22
15	146	491	524	1,150	564	443	353	238	104	277	143	20
16	135	452	434	973	603	427	296	227	90	387	126	20
17	145	407	403	786	638	402	262	200	87	806	168	19
18	133	379	357	597	553	379	238	187	79	587	152	19
19	125	314	334	555	450	408	223	176	72	462	130	18
20	139	310	275	487	417	528	207	1,140	65	454	124	18
21	198	289	246	404	392	581	192	1,760	60	350	106	18
22	199	269	270	352	537	564	210	1,130	56	305	97	17
23	187	258	381	e310	520	1,100	399	793	52	256	77	16
24	217	276	903	e250	517	3,370	501	1,040	47	204	64	17
25	296	509	716	287	485	2,130	489	1,090	42	167	57	17
26	257	622	575	271	434	1,410	488	893	38	144	52	17
27	239	582	465	248	392	1,150	487	691	35	121	80	17
28	245	741	358	e210	393	3,290	446	539	33	107	150	17
29	307	766	357	e190	---	4,530	395	433	77	167	123	17
30	557	684	309	203	---	2,490	751	365	60	253	85	17
31	448	---	279	187	---	1,650	---	317	---	235	81	---
TOTAL	8,037	15,139	19,538	13,781	11,231	34,930	20,870	18,096	3,670	9,466	4,977	891
MEAN	259	505	630	445	401	1,127	696	584	122	305	161	29.7
MAX	867	1,360	1,530	1,150	638	4,530	2,200	1,760	271	1,690	484	94
MIN	125	258	246	187	162	283	192	176	33	39	52	16
CFSM	0.77	1.51	1.88	1.33	1.20	3.36	2.08	1.74	0.37	0.91	0.48	0.09
IN.	0.89	1.68	2.17	1.53	1.25	3.88	2.32	2.01	0.41	1.05	0.55	0.10

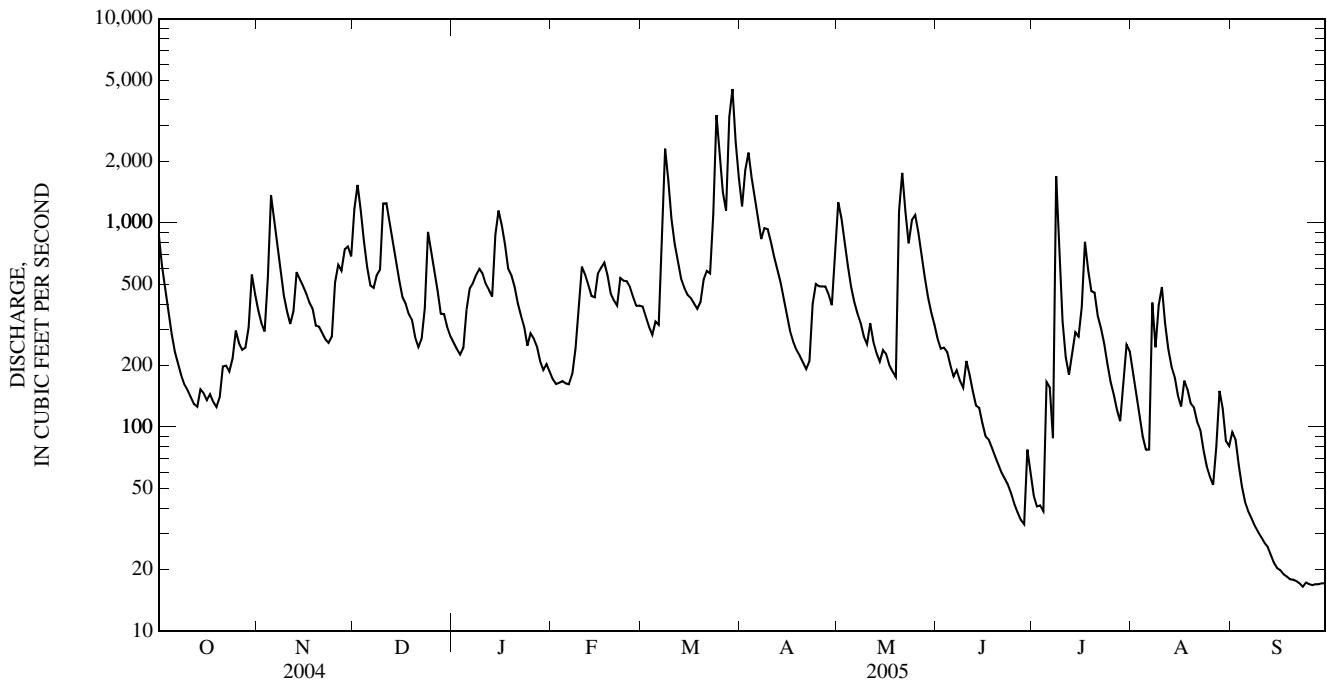
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	151	224	403	482	672	884	797	590	317	136	144	145
MAX	913	994	1,114	1,053	1,473	1,716	1,703	1,404	1,133	655	767	678
(WY)	(1980)	(2004)	(1949)	(1952)	(1961)	(2003)	(1958)	(2003)	(2003)	(1949)	(1955)	(1950)
MIN	7.08	16.2	30.2	116	142	418	229	134	55.6	16.9	12.0	6.83
(WY)	(1954)	(1954)	(1999)	(1956)	(1941)	(1959)	(1955)	(1941)	(1999)	(1999)	(1999)	(1953)

01606000 NORTH FORK SOUTH BRANCH POTOMAC RIVER AT CABINS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	204,636		160,626			
ANNUAL MEAN	559		440		409	
HIGHEST ANNUAL MEAN					814	2003
LOWEST ANNUAL MEAN					213	1959
HIGHEST DAILY MEAN	4,470	Apr 14	4,530	Mar 29	10,600	Aug 18, 1955
LOWEST DAILY MEAN	14	(a)	16	Sep 23	5.0	(b)
ANNUAL SEVEN-DAY MINIMUM	18	Aug 25	17	Sep 22	5.1	Sep 30, 1953
MAXIMUM PEAK FLOW			5,840	Mar 28	(c)90,000	Nov 5, 1985
MAXIMUM PEAK STAGE			8.51	Mar 28	(d)	Nov 5, 1985
INSTANTANEOUS LOW FLOW			16	(f)	5.0	(b)
ANNUAL RUNOFF (CFSM)	1.67		1.31		1.22	
ANNUAL RUNOFF (INCHES)	22.72		17.84		16.58	
10 PERCENT EXCEEDS	1,220		954		1,000	
50 PERCENT EXCEEDS	410		309		193	
90 PERCENT EXCEEDS	51		52		26	

- a Aug. 30, Sept. 5, 6.
- b Oct. 1-5, 9-11, 1953.
- c From slope-area measurement.
- d Not determined.
- e Estimated.
- f Sept. 22, 23, 25, 26, 27, 28, 29.



## 01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION.--Lat 38°59'28", long 79°10'34", NAD 27, Grant County, Hydrologic Unit 02070001, on right bank 1.1 mi downstream from North Fork South Branch Potomac River, 2.6 mi west of Petersburg, and at mile 74.7.

DRAINAGE AREA.--676 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 968.34 ft above NGVD 29. Prior to Dec. 4, 1928, nonrecording gage and June 1928 to Nov. 5, 1985, water-stage recorder at site 1,125 ft downstream at datum 6.34 ft lower. Nov. 5, 1985, to June 22, 1994, and October 23, 1996 to current year, water-stage recorder at present site and datum. June 22, 1994, to October 23, 1996, water-stage recorder at site 325 ft downstream at datum 2.34 ft lower.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft, from floodmarks at previous site and datum; discharge about 59,000 ft<sup>3</sup>/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 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)
Mar 28	2000	*12,700	*11.17	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,770	543	1,980	604	385	711	2,630	2,170	572	203	387	224
2	1,250	482	2,830	570	365	655	3,610	1,810	511	190	322	206
3	984	447	2,210	533	361	596	4,450	1,500	514	171	276	176
4	795	612	1,650	540	368	562	3,410	1,220	507	168	239	157
5	659	1,830	1,300	695	364	624	2,740	1,030	454	267	212	146
6	560	1,430	1,090	835	355	627	2,200	902	411	272	206	136
7	492	1,120	1,040	869	369	1,100	1,790	819	568	208	521	129
8	437	910	1,150	916	434	3,580	1,910	753	506	2,150	386	123
9	392	748	1,160	980	601	3,030	1,830	673	422	1,180	534	117
10	361	638	2,410	944	853	2,110	1,570	614	486	600	825	114
11	332	567	2,570	872	837	1,630	1,350	681	447	411	570	111
12	311	616	2,120	816	743	1,380	1,180	599	386	333	431	108
13	300	959	1,720	756	678	1,180	1,070	549	338	390	350	105
14	337	894	1,410	1,230	673	1,060	951	509	330	582	329	102
15	339	820	1,160	1,890	836	979	835	537	296	645	272	99
16	312	763	992	1,580	894	926	740	523	269	713	243	98
17	309	704	917	1,340	932	880	674	467	257	1,110	305	96
18	290	668	834	1,060	838	827	634	436	243	1,000	304	94
19	272	626	774	909	716	828	603	412	230	794	264	93
20	290	649	683	916	673	943	571	1,560	221	755	251	91
21	372	629	593	802	640	1,010	536	2,870	212	621	226	91
22	380	584	636	716	809	995	563	1,930	206	538	209	90
23	347	562	699	640	837	1,520	966	1,440	200	469	187	89
24	374	583	1,580	543	819	4,840	1,180	1,690	190	387	174	89
25	473	1,060	1,290	588	792	3,560	1,110	1,790	178	326	164	89
26	442	1,310	1,070	573	731	2,580	1,060	1,510	169	292	157	89
27	409	1,180	932	538	687	2,110	1,020	1,230	160	261	188	89
28	417	1,380	760	460	692	5,900	947	1,020	155	239	254	89
29	460	1,470	745	404	---	8,960	855	867	195	352	251	89
30	754	1,310	682	430	---	4,870	1,240	745	214	525	201	87
31	638	---	637	411	---	3,380	---	652	---	490	194	---
TOTAL	15,858	26,094	39,624	24,960	18,282	63,953	44,225	33,508	9,847	16,642	9,432	3,416
MEAN	512	870	1,278	805	653	2,063	1,474	1,081	328	537	304	114
MAX	1,770	1,830	2,830	1,890	932	8,960	4,450	2,870	572	2,150	825	224
MIN	272	447	593	404	355	562	536	412	155	168	157	87
CFSM	0.76	1.29	1.89	1.19	0.97	3.05	2.18	1.60	0.49	0.79	0.45	0.17
IN.	0.87	1.44	2.18	1.37	1.01	3.52	2.43	1.84	0.54	0.92	0.52	0.19

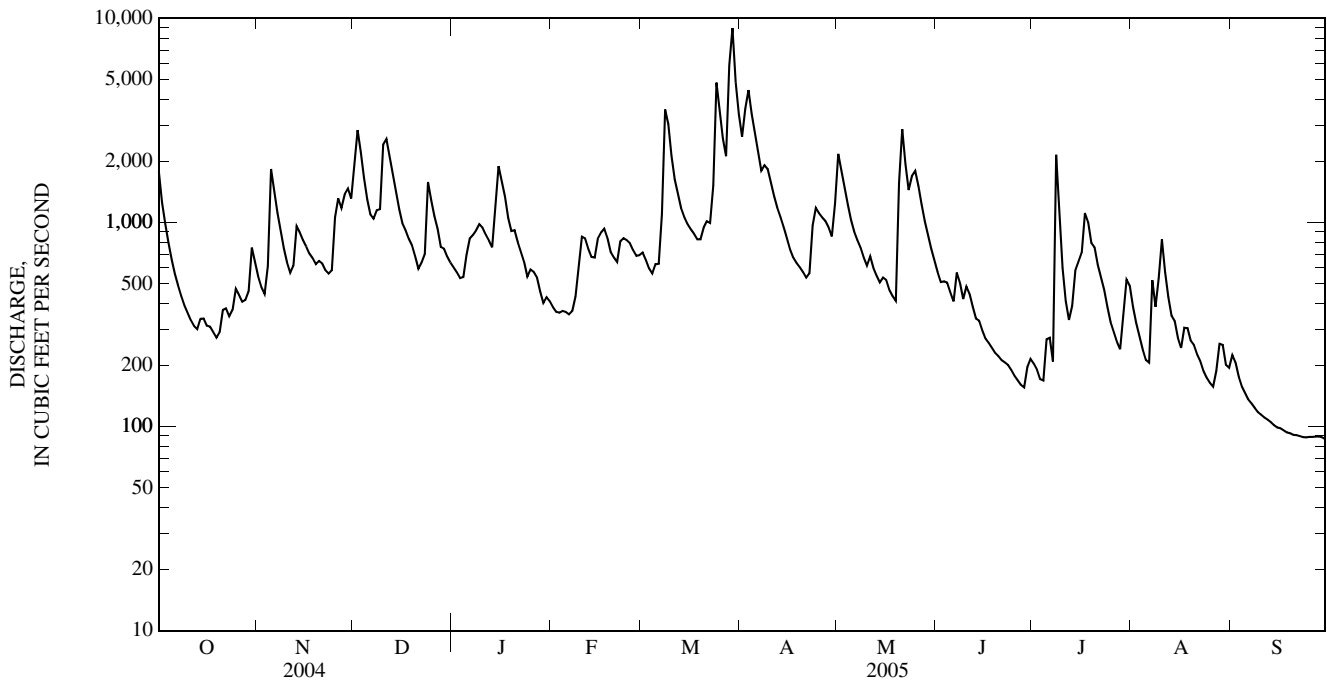
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

MEAN	325	509	722	920	1,157	1,657	1,296	1,036	550	296	287	282
MAX	1,863	5,569	2,511	3,386	3,519	4,090	2,888	3,546	2,196	1,479	1,601	2,968
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1936)	(1993)	(1996)	(2003)	(1949)	(1996)	(1996)
MIN	49.3	62.7	95.1	143	212	543	398	233	125	63.9	54.1	52.3
(WY)	(1931)	(1931)	(1966)	(1981)	(1934)	(1990)	(1986)	(1930)	(1999)	(1999)	(1930)	(1930)

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	365,208		305,841		751	
ANNUAL MEAN	998		838		1,619	
HIGHEST ANNUAL MEAN					1996	
LOWEST ANNUAL MEAN					365	
HIGHEST DAILY MEAN	8,650	Apr 14	8,960	Mar 29	77,000	Nov 5, 1985
LOWEST DAILY MEAN	97	Sep 5	87	Sep 30	43	(a)
ANNUAL SEVEN-DAY MINIMUM	106	Aug 31	89	Sep 24	44	Sep 6, 1966
MAXIMUM PEAK FLOW			12,700	Mar 28	(b)130,000	Nov 5, 1985
MAXIMUM PEAK STAGE			11.17	Mar 28	(c)25.40	Nov 5, 1985
INSTANTANEOUS LOW FLOW			87	(d)	42	(f)
ANNUAL RUNOFF (CFSM)	1.48		1.24		1.11	
ANNUAL RUNOFF (INCHES)	20.10		16.83		15.09	
10 PERCENT EXCEEDS	2,190		1,700		1,690	
50 PERCENT EXCEEDS	751		621		383	
90 PERCENT EXCEEDS	170		177		96	

- a Sept. 27-29, 1959, Sept. 11, 12, 1966.
- b From rating curve extended above 16,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks at former site at gage datum 962.00 ft.
- d Sept. 23, 24, 29, 30.
- f Sept. 28, 29, 1959, Sept. 11, 12, 1966.





## POTOMAC RIVER BASIN

01606900 SOUTH MILL CREEK NEAR MOZER, WV  
(Detention Reservoir)

LOCATION.--Lat 38°51'17", long 79°09'48", NAD 27, Grant County, Hydrologic Unit 02070001.

DAM NAME.--North and South Mill Creek No. 7.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--10.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2003 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,279.97 ft above NGVD 29, (corrected).

REMARKS.-- Normal Pool = 8.85 ft (Normal Storage = 840 acre-ft)

Top of Riser = 11.0 ft

Emergency Spillway = 31.8 ft

Top of Dam = 45.2 ft

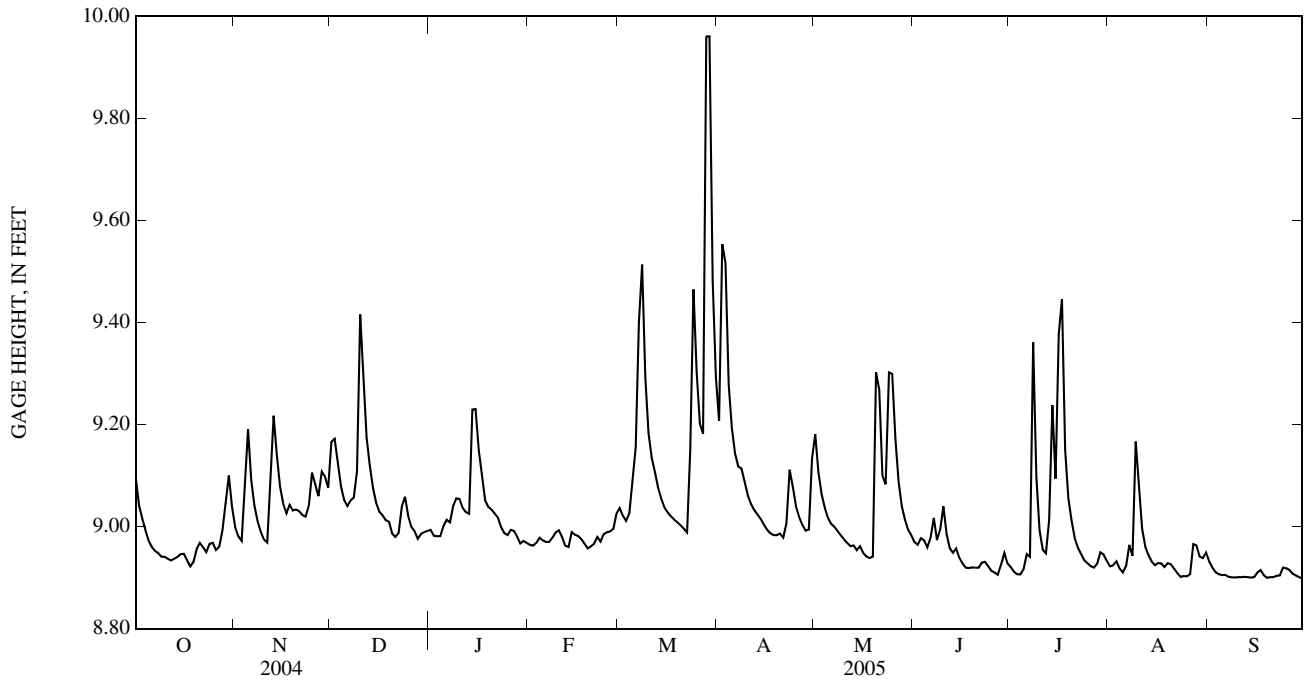
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.98 ft, Sept 28, 2004; minimum gage height, 8.89 ft, Aug. 27, 29, Sept. 4, 5, 2004, Sept. 19, 29, 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.71 ft, Mar. 28; minimum gage height, 8.89 ft, Sept. 19, 29, 30.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.09	9.00	9.17	8.99	8.96	9.04	9.21	9.18	8.97	8.92	8.92	8.93
2	9.04	8.98	9.17	8.98	8.96	9.02	9.55	9.11	8.96	8.91	8.92	8.92
3	9.02	8.97	9.12	8.98	8.97	9.01	9.52	9.06	8.98	8.91	8.93	8.91
4	8.99	9.10	9.08	8.98	8.98	9.03	9.28	9.04	8.97	8.91	8.92	8.91
5	8.97	9.19	9.05	9.00	8.97	9.09	9.19	9.02	8.96	8.92	8.91	8.90
6	8.96	9.09	9.04	9.01	8.97	9.16	9.14	9.01	8.98	8.95	8.92	8.91
7	8.95	9.04	9.05	9.01	8.97	9.40	9.12	9.00	9.02	8.94	8.96	8.90
8	8.95	9.01	9.06	9.04	8.98	9.51	9.11	8.99	8.97	9.36	8.94	8.90
9	8.94	8.99	9.11	9.06	8.99	9.29	9.09	8.98	8.99	9.10	9.17	8.90
10	8.94	8.97	9.42	9.05	8.99	9.18	9.06	8.98	9.04	8.99	9.08	8.90
11	8.94	8.97	9.28	9.04	8.98	9.13	9.04	8.97	8.99	8.95	9.00	8.90
12	8.93	9.08	9.17	9.03	8.96	9.11	9.03	8.96	8.96	8.95	8.96	8.90
13	8.94	9.22	9.12	9.03	8.96	9.08	9.02	8.96	8.95	9.01	8.94	8.90
14	8.94	9.14	9.08	9.23	8.99	9.05	9.02	8.95	8.96	9.24	8.93	8.90
15	8.95	9.08	9.05	9.23	8.98	9.04	9.00	8.96	8.94	9.09	8.92	8.90
16	8.95	9.04	9.03	9.15	8.98	9.03	8.99	8.95	8.93	9.38	8.93	8.91
17	8.93	9.03	9.02	9.10	8.98	9.02	8.99	8.94	8.92	9.45	8.93	8.91
18	8.92	9.04	9.01	9.05	8.97	9.01	8.98	8.94	8.92	9.15	8.92	8.90
19	8.93	9.03	9.01	9.04	8.96	9.01	8.98	8.94	8.92	9.06	8.93	8.90
20	8.96	9.03	8.99	9.03	8.96	9.00	8.99	9.30	8.92	9.01	8.93	8.90
21	8.97	9.03	8.98	9.03	8.97	9.00	8.98	9.27	8.92	8.98	8.92	8.90
22	8.96	9.02	8.99	9.02	8.98	8.99	9.01	9.10	8.93	8.96	8.91	8.90
23	8.95	9.02	9.04	9.00	8.97	9.15	9.11	9.08	8.93	8.95	8.90	8.90
24	8.97	9.04	9.06	8.99	8.98	9.46	9.08	9.30	8.92	8.93	8.90	8.92
25	8.97	9.11	9.02	8.98	8.99	9.30	9.04	9.30	8.91	8.93	8.90	8.92
26	8.95	9.08	9.00	8.99	8.99	9.20	9.02	9.17	8.91	8.92	8.91	8.91
27	8.96	9.06	8.99	8.99	9.00	9.18	9.00	9.09	8.91	8.92	8.97	8.91
28	8.99	9.11	8.98	8.98	9.03	9.96	8.99	9.04	8.93	8.93	8.96	8.90
29	9.04	9.10	8.99	8.97	---	9.96	8.99	9.01	8.95	8.95	8.94	8.90
30	9.10	9.08	8.99	8.97	---	9.48	9.13	8.99	8.93	8.95	8.94	8.90
31	9.04	---	8.99	8.97	---	9.29	---	8.98	---	8.93	8.95	---
MEAN	8.97	9.05	9.07	9.03	8.98	9.20	9.09	9.05	8.95	9.02	8.94	8.91
MAX	9.10	9.22	9.42	9.23	9.03	9.96	9.55	9.30	9.04	9.45	9.17	8.93
MIN	8.92	8.97	8.98	8.97	8.96	8.99	8.98	8.94	8.91	8.91	8.90	8.90

01606900 SOUTH MILL CREEK NEAR MOZER, WV—Continued



## POTOMAC RIVER BASIN

01607300 BRUSHY FORK NEAR SUGAR GROVE, WV  
(Detention Reservoir)

LOCATION.--Lat 38°27'59", long 79°19'08", NAD 83, Pendleton County, Hydrologic Unit 02070001.

DAM NAME.--South Fork No. 19.

SURFACE AREA.--26 acres.

DRAINAGE AREA.--15.2 mi<sup>2</sup>.

PERIOD OF RECORD.--June 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1952 ft above NGVD 29, (corrected).

REMARKS.-- Normal Pool = 46.50 ft (Normal Storage = 271 acre-ft)

Top of Riser = 50.00 ft

Emergency Spillway = 83.1 ft

Top of Dam = 101.00 ft

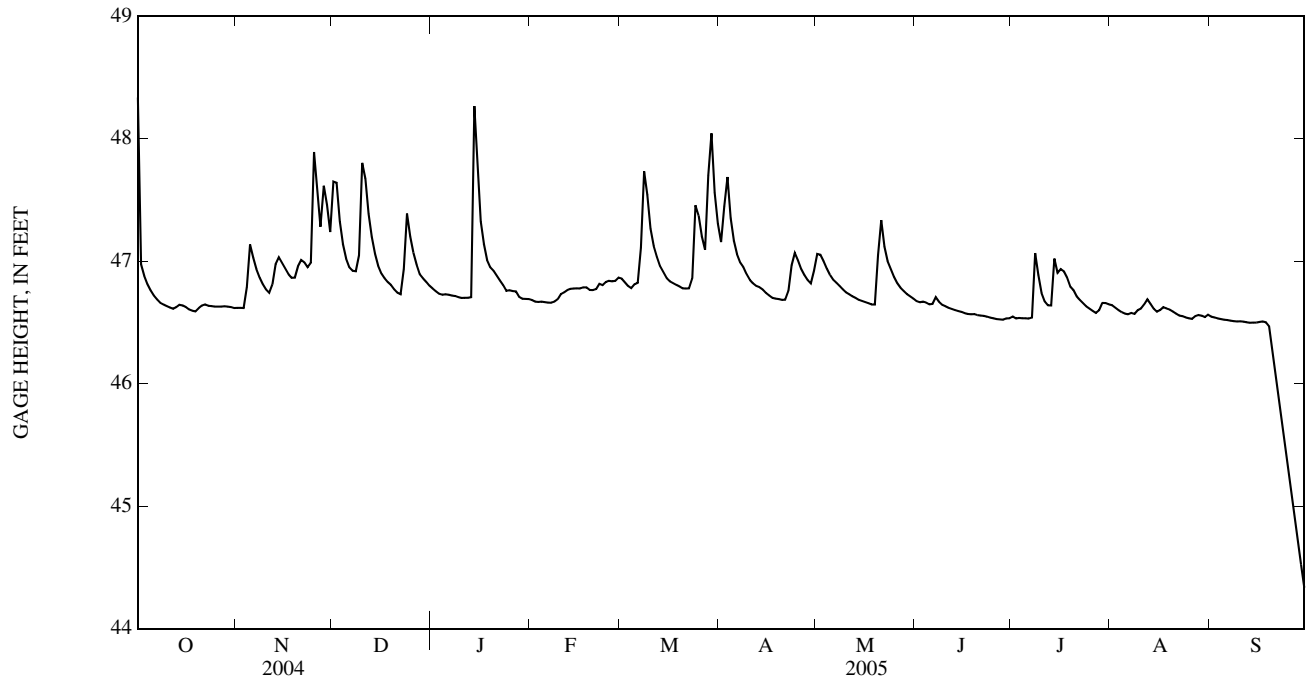
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.33 ft, Sept. 29, 2004; minimum gage height, 44.30 ft, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 52.28 ft, Oct. 1; minimum gage height, 44.30 ft, Sept. 30.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.34	46.62	47.65	46.78	46.68	46.86	47.16	47.06	46.67	46.55	46.64	46.55
2	46.97	46.62	47.64	46.76	46.67	46.83	47.45	47.05	46.67	46.53	46.62	46.54
3	46.88	46.62	47.33	46.73	46.67	46.80	47.69	47.00	46.67	46.54	46.60	46.53
4	46.81	46.79	47.14	46.73	46.67	46.78	47.35	46.94	46.66	46.53	46.58	46.53
5	46.76	47.14	47.02	46.73	46.67	46.81	47.17	46.89	46.65	46.53	46.57	46.52
6	46.72	47.03	46.95	46.73	46.66	46.82	47.06	46.85	46.65	46.53	46.57	46.52
7	46.69	46.94	46.92	46.72	46.66	47.11	46.99	46.82	46.71	46.54	46.58	46.52
8	46.66	46.87	46.92	46.72	46.67	47.73	46.95	46.80	46.67	47.07	46.57	46.51
9	46.65	46.81	47.05	46.71	46.69	47.54	46.89	46.77	46.64	46.89	46.60	46.51
10	46.63	46.77	47.80	46.70	46.73	47.27	46.85	46.75	46.63	46.74	46.61	46.51
11	46.62	46.74	47.67	46.70	46.75	47.12	46.82	46.73	46.62	46.67	46.65	46.51
12	46.61	46.81	47.39	46.70	46.76	47.04	46.80	46.71	46.61	46.64	46.69	46.50
13	46.62	46.98	47.20	46.71	46.78	46.96	46.79	46.70	46.60	46.64	46.65	46.50
14	46.65	47.03	47.06	48.27	46.78	46.91	46.77	46.69	46.59	47.02	46.61	46.50
15	46.64	46.99	46.96	47.75	46.78	46.86	46.74	46.68	46.59	46.91	46.59	46.50
16	46.63	46.94	46.90	47.33	46.78	46.84	46.72	46.67	46.58	46.94	46.60	46.51
17	46.61	46.90	46.86	47.14	46.79	46.82	46.70	46.66	46.57	46.92	46.62	46.51
18	46.60	46.86	46.83	47.01	46.79	46.81	46.69	46.65	46.57	46.87	46.61	46.50
19	46.59	46.87	46.81	46.95	46.77	46.79	46.69	46.65	46.57	46.79	46.60	46.47
20	46.62	46.96	46.77	46.92	46.76	46.78	46.69	47.05	46.56	46.76	46.59	46.30
21	46.64	47.01	46.74	46.88	46.77	46.78	46.69	47.34	46.56	46.71	46.57	46.10
22	46.65	46.99	46.73	46.84	46.82	46.78	46.76	47.12	46.55	46.68	46.56	45.91
23	46.64	46.95	46.94	46.80	46.80	46.86	46.97	47.00	46.55	46.66	46.55	45.72
24	46.63	46.99	47.39	46.76	46.83	47.46	47.07	46.94	46.54	46.63	46.54	45.53
25	46.63	47.89	47.20	46.76	46.84	47.37	47.01	46.87	46.53	46.61	46.54	45.33
26	46.63	47.62	47.07	46.76	46.84	47.20	46.94	46.82	46.53	46.59	46.53	45.13
27	46.63	47.28	46.97	46.75	46.84	47.09	46.89	46.78	46.53	46.58	46.55	44.93
28	46.63	47.62	46.89	46.71	46.87	47.70	46.85	46.76	46.52	46.60	46.56	44.73
29	46.63	47.46	46.86	46.69	---	48.04	46.82	46.73	46.53	46.66	46.56	44.52
30	46.63	47.24	46.83	46.69	---	47.56	46.92	46.71	46.54	46.66	46.54	44.33
31	46.62	---	46.80	46.69	---	47.31	---	46.70	---	46.65	46.56	---
MEAN	46.72	47.01	47.07	46.87	46.75	47.08	46.93	46.84	46.60	46.70	46.59	46.08
MAX	48.34	47.89	47.80	48.27	46.87	48.04	47.69	47.34	46.71	47.07	46.69	46.55
MIN	46.59	46.62	46.73	46.69	46.66	46.78	46.69	46.65	46.52	46.53	46.53	44.33

01607300 BRUSHY FORK NEAR SUGAR GROVE, WV—Continued



## 01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

LOCATION.--Lat 38°37'53", long 79°14'38", NAD 27, Pendleton County, Hydrologic Unit 02070001, on left bank 50 ft upstream from bridge on U.S. Highway 33, 0.1 mi upstream from Hawes Run, 0.4 mi north of Brandywine, 0.9 mi downstream from Broad Run, and at mile 44.9.

DRAINAGE AREA.--103 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1141: 1945(M), 1947(M). WDR WV-84-1: 1983. WDR WV-88-1: 1987. WDR WV-97-1: Drainage area, 1967(M), 1971-75(M), 1977-78(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,558.35 ft above NGVD 29. Prior to Sept. 24, 1956, nonrecording gage at highway bridge 50 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. The flow from 41.3 mi<sup>2</sup> upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 8,882 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharges for the November 1877 and 1896 peaks were about 40,000 ft<sup>3</sup>/s and 45,000 ft<sup>3</sup>/s, respectively; based on notes from local residents comparing these peaks to the 1949 peak.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 1,500 ft<sup>3</sup>/s, Mar. 28, gage height, 4.56 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	740	28	455	64	40	81	292	168	36	20	24	20
2	244	27	498	59	38	73	444	153	36	18	23	17
3	131	26	340	57	38	64	617	126	37	16	21	15
4	102	66	238	57	37	62	415	111	35	15	19	14
5	68	195	177	54	37	80	293	96	33	17	18	13
6	60	153	138	54	35	97	217	83	33	16	37	12
7	50	112	127	51	34	256	175	76	140	15	39	12
8	42	87	136	50	35	658	156	73	77	265	26	11
9	40	67	185	49	36	551	127	60	56	107	31	11
10	32	55	671	47	41	347	106	55	47	52	32	11
11	29	48	627	45	41	247	90	53	40	38	27	9.5
12	28	68	429	45	42	192	78	50	35	31	27	9.1
13	27	114	306	44	42	153	73	43	33	30	27	8.5
14	30	122	215	589	43	129	67	41	30	174	24	8.4
15	28	114	157	616	45	108	59	40	28	145	21	8.3
16	27	97	125	369	44	95	53	40	26	153	25	7.7
17	26	83	110	254	44	87	49	34	24	148	28	7.7
18	24	74	96	170	43	80	47	34	23	299	24	7.4
19	23	69	86	134	40	73	45	31	22	134	22	7.1
20	26	100	67	123	41	68	44	145	21	106	20	7.1
21	33	112	62	107	42	65	41	220	20	68	18	9.4
22	30	109	59	91	58	62	52	142	19	52	16	10
23	28	96	78	80	58	79	118	111	19	48	15	10
24	29	103	204	74	59	336	138	100	17	34	14	10
25	30	484	199	70	63	360	118	85	16	29	13	11
26	28	485	153	62	67	271	98	73	16	27	13	12
27	27	329	124	58	70	207	87	56	14	24	15	10
28	27	424	94	53	76	743	75	51	16	23	19	10
29	28	409	87	52	---	1,080	66	42	16	33	17	9.4
30	28	288	79	46	---	603	108	40	17	30	15	8.4
31	28	---	70	44	---	404	---	40	---	26	18	---
TOTAL	2,093	4,544	6,392	3,668	1,289	7,711	4,348	2,472	982	2,193	688	317.0
MEAN	67.5	151	206	118	46.0	249	145	79.7	32.7	70.7	22.2	10.6
MAX	740	485	671	616	76	1,080	617	220	140	299	39	20
MIN	23	26	59	44	34	62	41	31	14	15	13	7.1
CFSM	0.66	1.47	2.00	1.15	0.45	2.41	1.41	0.77	0.32	0.69	0.22	0.10
IN.	0.76	1.64	2.31	1.32	0.47	2.78	1.57	0.89	0.35	0.79	0.25	0.11

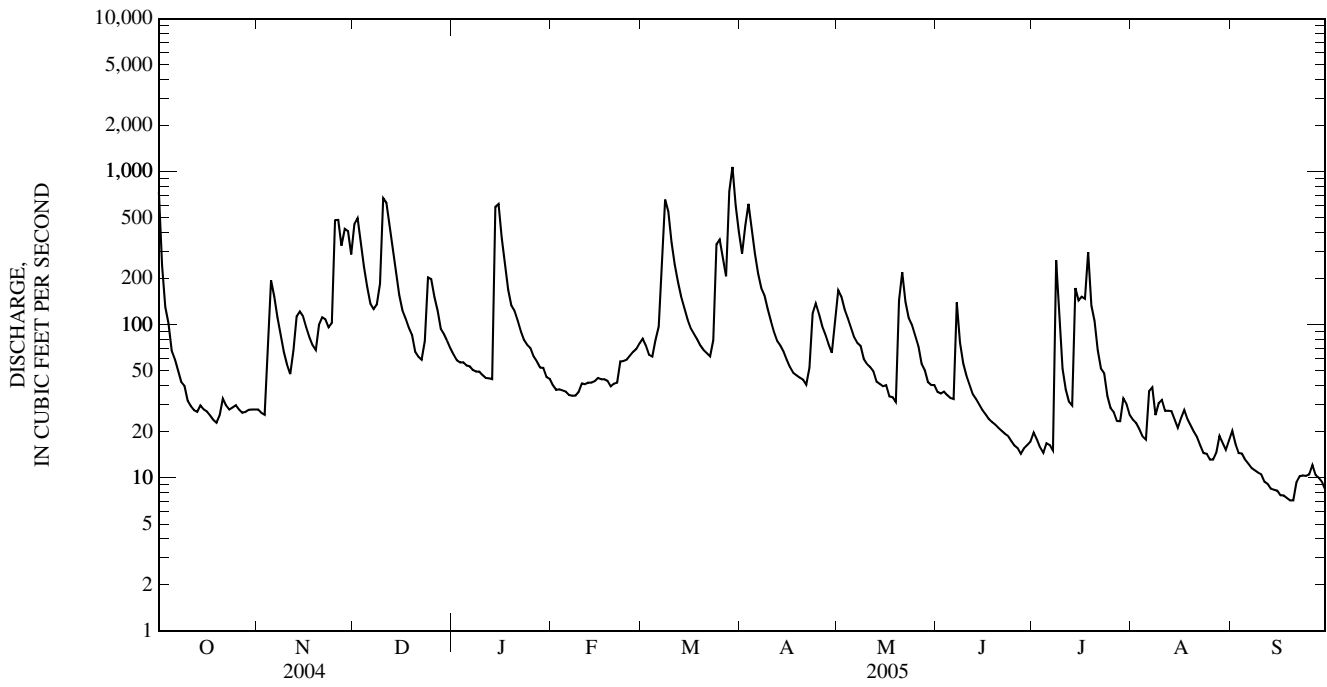
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)

	57.0	88.9	110	127	152	232	167	130	74.5	32.5	38.3	56.0
MEAN	57.0	88.9	110	127	152	232	167	130	74.5	32.5	38.3	56.0
MAX	340	965	473	519	681	588	583	324	570	220	301	568
(WY)	(1973)	(1986)	(1974)	(1996)	(1998)	(1994)	(1987)	(1960)	(1949)	(1949)	(1984)	(1996)
MIN	4.57	5.09	6.45	7.70	11.0	30.4	34.0	18.3	7.68	3.90	3.39	2.88
(WY)	(1964)	(1999)	(1956)	(1981)	(2002)	(1988)	(1981)	(1977)	(1977)	(1999)	(1957)	(1968)

01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1943 - 2005	
ANNUAL TOTAL	51,882.0		36,697.0		105	
ANNUAL MEAN	142		101		215	
HIGHEST ANNUAL MEAN					38.6 1981	
LOWEST ANNUAL MEAN					7,500 Nov 4, 1985	
HIGHEST DAILY MEAN	1,680	Sep 29	1,080	Mar 29		
LOWEST DAILY MEAN	6.8	(a)	7.1	(b)	0.20 Aug 13, 1999	
ANNUAL SEVEN-DAY MINIMUM	7.0	Aug 31	7.7	Sep 14	0.42 Aug 4, 1999	
MAXIMUM PEAK FLOW			1,500	Mar 28	(c)41,200 Jun 17, 1949	
MAXIMUM PEAK STAGE			4.56	Mar 28	(d)18.42 Nov 4, 1985	
INSTANTANEOUS LOW FLOW			6.9	(b)	0.17 Aug 13, 1999	
ANNUAL RUNOFF (CFSM)	1.38		0.976		1.02	
ANNUAL RUNOFF (INCHES)	18.74		13.25		13.88	
10 PERCENT EXCEEDS	328		250		226	
50 PERCENT EXCEEDS	72		51		40	
90 PERCENT EXCEEDS	14		15		7.4	

- a Sept. 2, 4-6.
- b Sept. 19, 20.
- c From rating curve extended above 5,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- d From floodmarks.



## 01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

LOCATION.--Lat 39°00'44", long 78°57'23", NAD 27, Hardy County, Hydrologic Unit 02070001, on right bank 0.2 mi downstream from Stony Creek, 3.5 mi south of Moorefield, and at mile 5.3.

DRAINAGE AREA.--277 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1928 to September 1935, August 1938 to current year.

REVISED RECORDS.--WSP 1141: 1933(M), 1940, 1942-43, 1945, 1948(M). WSP 1302: 1931(M), 1935(M). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 861.51 ft above sea level (U.S. Army Corps of Engineers datum). Prior to Mar. 11, 1940, nonrecording gage at Harness Ford Bridge 2.0 mi upstream at datum about 31 ft higher.

REMARKS.--Records good except those for period of estimated discharge (no gage-height record), which is poor. The flow from 92.7 mi<sup>2</sup> upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,870 acre-ft. Water-quality data furnished by Maryland USGS.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 3,530 ft<sup>3</sup>/s, Mar. 29, gage height, 6.29 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,140	99	551	156	132	167	756	279	127	41	53	35
2	695	93	799	145	124	172	862	305	113	42	48	33
3	375	87	675	133	115	168	1,330	294	109	39	46	32
4	272	101	532	127	110	167	1,000	269	107	36	41	29
5	222	245	421	130	106	175	736	241	99	33	37	26
6	183	341	340	128	102	207	576	217	89	34	40	25
7	154	304	297	128	96	364	472	200	89	37	164	24
8	133	259	277	134	91	e1,500	442	187	169	237	114	22
9	114	227	277	137	87	e1,100	403	170	130	386	181	21
10	102	197	753	139	91	e730	329	153	111	205	221	21
11	93	172	1,160	139	94	e560	287	140	151	135	128	20
12	85	169	948	136	95	462	261	134	134	104	92	20
13	80	256	709	134	95	372	237	122	106	93	77	19
14	79	312	546	374	100	305	219	112	94	94	70	18
15	77	310	421	1,170	103	264	200	109	83	219	61	18
16	77	290	334	800	105	235	177	102	75	248	54	20
17	73	264	285	618	106	216	158	93	66	331	53	20
18	68	245	255	527	106	202	148	87	57	367	54	19
19	66	224	229	441	106	189	137	82	53	323	53	17
20	64	215	209	396	106	175	134	219	51	229	48	17
21	70	234	180	356	110	166	128	514	48	179	43	17
22	70	245	165	313	115	156	129	395	47	138	38	17
23	71	241	162	292	130	190	196	314	45	112	35	16
24	71	234	196	276	127	464	280	440	42	89	32	18
25	73	337	275	259	127	715	287	466	39	76	30	20
26	74	656	273	234	127	616	262	365	36	66	29	18
27	72	587	249	215	136	506	236	279	34	59	37	19
28	72	531	225	191	147	1,160	216	232	33	53	38	18
29	75	693	193	171	---	3,020	197	200	38	56	33	18
30	119	590	182	156	---	1,670	206	172	46	66	34	18
31	110	---	169	151	---	1,040	---	146	---	62	35	---
TOTAL	5,029	8,758	12,287	8,706	3,089	17,433	11,001	7,038	2,421	4,189	2,019	635
MEAN	162	292	396	281	110	562	367	227	80.7	135	65.1	21.2
MAX	1,140	693	1,160	1,170	147	3,020	1,330	514	169	386	221	35
MIN	64	87	162	127	87	156	128	82	33	33	29	16
CFSM	0.59	1.05	1.43	1.01	0.40	2.03	1.32	0.82	0.29	0.49	0.24	0.08
IN.	0.68	1.18	1.65	1.17	0.41	2.34	1.48	0.95	0.33	0.56	0.27	0.09

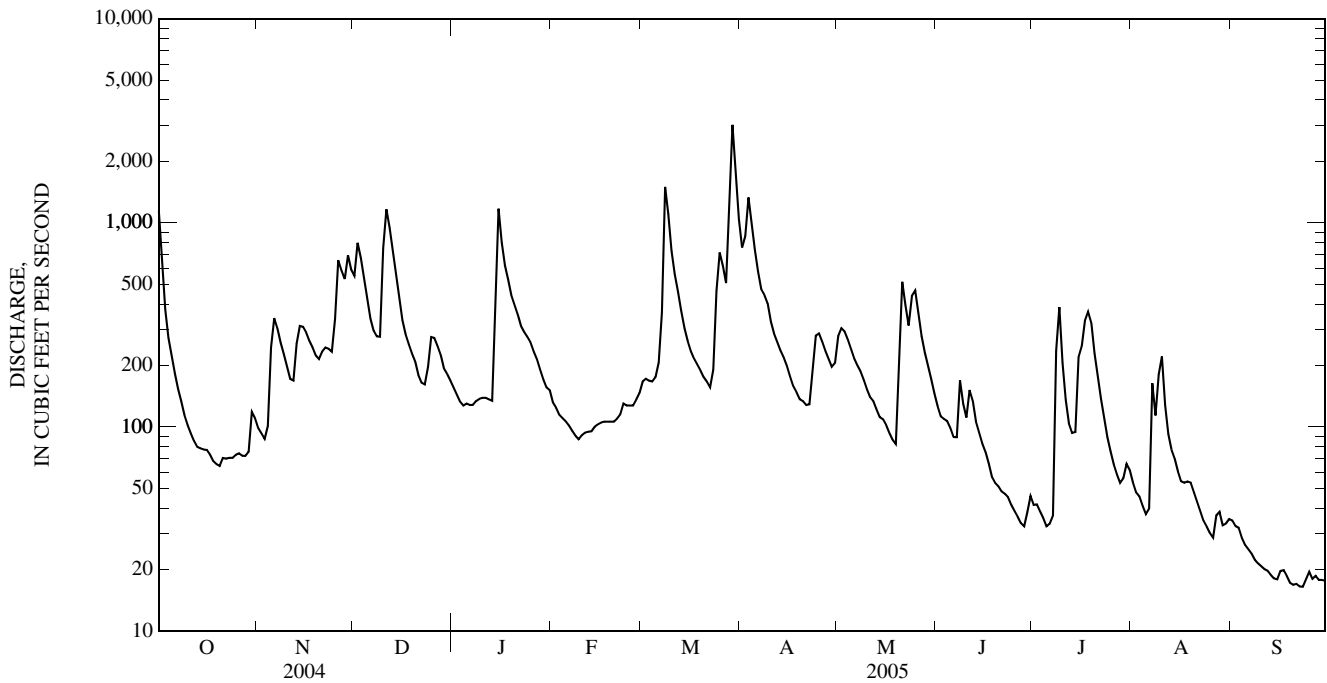
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

MEAN	126	183	214	263	334	496	415	330	172	84.7	105	109
MAX	776	2,951	879	1,267	1,591	1,327	1,787	946	1,071	510	801	1,340
(WY)	(1977)	(1986)	(1974)	(1996)	(1998)	(1993)	(1987)	(1988)	(1949)	(1949)	(1955)	(1996)
MIN	12.8	14.0	17.4	21.3	25.2	72.2	91.7	51.2	28.1	9.48	10.4	10.2
(WY)	(1992)	(1999)	(1966)	(1981)	(1934)	(1981)	(1981)	(1930)	(1977)	(1999)	(1965)	(1968)

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	107,280		82,605			
ANNUAL MEAN	293		226		235	
HIGHEST ANNUAL MEAN					526	2003
LOWEST ANNUAL MEAN					85.9	1934
HIGHEST DAILY MEAN	4,610	Sep 29	3,020	Mar 29	28,000	Nov 5, 1985
LOWEST DAILY MEAN	20	(a)	16	Sep 23	4.4	Sep 10, 1966
ANNUAL SEVEN-DAY MINIMUM	21	Sep 1	17	Sep 18	5.3	Sep 5, 1966
MAXIMUM PEAK FLOW			3,530	Mar 29	(b)110,000	Nov 5, 1985
MAXIMUM PEAK STAGE			6.29	Mar 29	(c)19.99	Nov 5, 1985
INSTANTANEOUS LOW FLOW			16	(d)	3.1	Aug 13, 1999
ANNUAL RUNOFF (CFSM)	1.06		0.817		0.849	
ANNUAL RUNOFF (INCHES)	14.41		11.09		11.54	
10 PERCENT EXCEEDS	588		519		522	
50 PERCENT EXCEEDS	202		138		98	
90 PERCENT EXCEEDS	44		34		21	

- a Sept. 4-6.
- b From rating curve extended above 39,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 22, 23, 24.
- e Estimated







01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	224	213	219	263	258	260
2	---	---	---	---	---	---	226	218	223	261	254	257
3	215	210	211	---	---	---	230	221	226	258	243	254
4	218	214	216	---	---	---	233	224	229	247	241	244
5	221	215	217	---	---	---	239	227	234	258	242	252
6	225	219	221	---	---	---	239	220	233	263	254	259
7	234	224	230	---	---	---	225	196	210	272	263	269
8	232	227	229	---	---	---	222	201	209	274	268	271
9	230	222	225	201	188	195	214	199	210	278	272	275
10	237	225	228	209	201	205	217	199	209	277	260	272
11	239	217	226	220	209	213	219	216	217	264	251	260
12	222	217	220	224	217	221	220	214	217	269	251	263
13	231	220	225	225	220	223	222	211	217	283	268	277
14	233	225	229	227	216	222	219	210	215	285	277	281
15	235	230	233	224	215	219	222	216	219	290	283	286
16	239	234	236	222	213	218	232	222	227	290	282	286
17	242	231	238	215	186	204	240	230	235	289	271	282
18	242	231	237	192	184	188	239	225	232	274	267	271
19	236	225	231	200	192	197	238	231	234	276	266	271
20	238	227	235	201	195	198	238	225	233	294	276	287
21	242	234	238	198	195	196	235	223	229	302	292	296
22	244	235	240	201	197	199	242	226	237	303	293	298
23	242	225	237	203	197	200	250	238	244	302	293	299
24	234	214	226	206	198	202	251	243	247	302	281	296
25	---	---	---	217	206	210	253	247	250	283	271	277
26	---	---	---	223	217	219	256	249	254	290	272	281
27	---	---	---	228	220	224	257	241	251	301	288	293
28	---	---	---	239	225	230	244	237	241	300	290	297
29	---	---	---	242	231	236	252	240	247	303	298	300
30	---	---	---	238	225	232	255	247	253	306	298	303
31	---	---	---	234	216	224	258	253	256	---	---	---
MONTH	---	---	---	---	---	---	258	196	231	306	241	277



01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	---	---	---	---	---	---	8.5	7.8	8.1	8.4	7.6	8.0
2	---	---	---	---	---	---	8.6	7.8	8.1	8.4	7.7	8.0
3	8.4	8.1	8.2	---	---	---	8.5	7.7	8.1	8.4	7.7	8.1
4	8.5	7.9	8.2	---	---	---	8.6	7.7	8.1	8.5	7.7	8.1
5	8.5	8.0	8.2	---	---	---	8.6	7.6	8.1	8.5	7.7	8.1
6	8.4	7.9	8.1	---	---	---	8.6	7.6	8.0	8.4	7.7	8.1
7	8.5	7.9	8.1	---	---	---	7.9	7.6	7.7	8.5	7.6	8.1
8	8.5	8.0	8.1	7.9	7.6	7.7	8.0	7.7	7.8	8.5	7.6	8.1
9	8.2	7.8	8.0	8.1	7.8	7.9	8.1	7.7	7.8	8.5	7.6	8.1
10	8.4	7.8	8.0	8.4	7.8	8.0	8.2	7.8	8.0	8.5	7.6	8.2
11	8.2	7.7	8.0	8.5	7.9	8.1	8.3	7.9	8.1	8.5	7.6	8.2
12	8.5	7.8	8.1	8.6	7.8	8.2	8.4	7.8	8.0	8.4	7.7	8.2
13	8.4	7.8	8.0	8.5	7.8	8.2	8.5	7.8	8.1	8.5	7.6	8.1
14	8.6	7.7	8.1	8.2	7.9	8.1	8.5	7.8	8.1	8.5	7.6	8.1
15	8.5	7.8	8.1	8.3	7.8	8.0	8.5	7.8	8.1	8.5	7.6	8.2
16	8.4	7.7	8.1	8.4	7.8	8.2	8.3	7.8	---	8.5	7.5	8.2
17	8.4	7.8	8.0	8.3	7.8	8.0	8.5	7.7	8.0	8.6	7.5	8.2
18	8.5	7.7	8.0	8.6	7.8	8.0	8.5	7.8	8.1	8.5	7.6	8.1
19	8.5	7.7	8.0	8.5	7.8	8.2	8.3	7.7	8.0	8.5	7.5	8.1
20	8.5	7.7	8.1	8.6	7.8	8.3	8.4	7.6	8.0	8.2	7.5	7.8
21	8.5	7.8	8.2	8.6	7.9	8.3	8.4	7.7	8.0	8.4	7.5	7.9
22	8.5	7.6	8.0	8.5	7.9	8.3	8.5	7.7	8.1	8.6	7.5	8.1
23	8.6	7.6	8.1	8.5	7.9	8.3	8.5	7.7	8.1	8.5	7.5	8.2
24	8.6	7.7	8.1	8.6	7.9	8.2	8.6	7.6	8.1	8.2	7.5	7.7
25	---	---	---	8.7	7.8	8.1	8.5	7.8	8.2	8.5	7.4	8.2
26	---	---	---	8.7	7.9	8.2	8.3	7.6	8.0	8.2	7.3	7.7
27	---	---	---	8.6	7.8	8.2	8.2	7.6	7.9	8.4	7.4	7.8
28	---	---	---	8.4	7.8	8.0	8.4	7.7	8.0	8.4	7.5	8.0
29	---	---	---	8.4	7.8	---	8.4	7.7	8.0	8.3	7.5	8.0
30	---	---	---	8.4	7.7	8.0	8.3	7.6	7.9	8.6	7.6	8.1
31	---	---	---	8.4	7.8	8.0	8.3	7.7	7.9	---	---	---
MAX	---	---	---	---	---	---	8.6	7.9	---	8.6	7.7	8.2
MIN	---	---	---	---	---	---	7.9	7.6	---	8.2	7.3	7.7



## 01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	28.1	24.5	26.2	26.0	22.8	24.4
2	---	---	---	---	---	---	28.9	24.7	26.8	26.5	22.4	24.4
3	17.2	16.6	16.9	---	---	---	29.5	25.2	27.4	25.3	22.0	23.9
4	20.8	16.4	18.4	---	---	---	29.8	25.6	27.7	25.4	21.4	23.5
5	24.4	20.0	22.0	---	---	---	29.1	26.0	27.7	24.1	20.8	22.7
6	25.7	22.3	24.0	---	---	---	28.8	26.2	27.5	24.7	20.4	22.6
7	26.4	22.7	24.5	---	---	---	26.3	23.9	25.2	25.0	20.4	22.7
8	26.4	23.3	24.9	24.1	20.0	21.7	25.5	24.2	24.8	24.9	20.3	22.7
9	25.4	23.8	24.7	22.9	19.6	21.2	24.5	23.1	23.8	24.8	20.8	22.9
10	26.3	22.8	24.5	24.7	21.5	23.1	25.4	23.0	24.1	25.5	21.8	23.7
11	26.4	23.9	25.2	26.7	23.1	24.7	26.2	24.3	25.3	25.3	21.5	23.5
12	26.8	24.0	25.5	28.2	24.5	26.2	28.2	25.1	26.6	25.4	21.0	23.3
13	27.3	24.4	25.9	26.8	24.7	25.7	29.4	26.1	27.8	25.6	21.3	23.6
14	28.7	24.7	26.6	25.6	24.4	24.9	29.7	26.8	28.2	25.6	21.7	23.7
15	27.2	25.1	26.2	25.7	23.5	24.6	28.7	26.5	27.7	26.5	22.7	24.9
16	25.8	23.7	24.6	26.6	24.4	25.3	27.7	26.2	26.9	25.9	23.6	25.0
17	24.3	21.7	23.1	25.5	24.3	24.9	28.3	24.5	26.4	25.7	23.4	24.6
18	24.6	20.5	22.6	25.2	23.0	24.1	27.1	24.5	26.0	24.6	22.3	23.5
19	23.2	20.7	22.1	25.4	24.0	24.8	26.1	24.3	25.2	24.7	21.2	23.0
20	22.3	20.1	21.2	26.4	24.0	25.2	29.1	24.6	26.6	24.2	22.3	22.9
21	24.0	19.7	22.0	26.3	24.5	25.4	29.4	26.4	27.9	24.1	20.8	22.6
22	23.7	20.7	22.2	27.0	24.8	25.9	28.4	25.4	26.9	24.0	20.6	22.5
23	25.5	20.8	23.2	27.7	24.9	26.2	27.1	23.6	25.6	24.6	21.7	23.2
24	27.6	22.1	24.9	26.9	24.2	25.6	27.0	23.3	25.2	23.8	21.9	22.5
25	28.2	23.6	26.1	29.0	24.6	26.5	26.3	22.9	24.8	24.1	21.3	22.8
26	28.2	22.4	25.7	29.5	25.4	27.4	25.3	22.6	23.5	23.8	22.2	22.7
27	27.9	18.6	23.7	29.1	26.4	27.8	23.5	22.2	22.6	23.2	21.2	22.3
28	28.6	21.0	24.4	27.8	25.0	26.0	25.4	21.6	23.3	22.1	19.0	20.9
29	29.3	20.6	25.8	26.9	23.7	25.4	25.7	23.4	24.5	21.5	19.3	20.3
30	---	---	---	27.6	24.3	25.8	25.3	24.1	24.8	19.3	16.3	18.1
31	---	---	---	27.3	24.6	25.9	26.2	24.2	25.1	---	---	---
MONTH	---	---	---	---	---	---	29.8	21.6	25.9	26.5	16.3	23.0

## 01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", NAD 27, Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.5.

DRAINAGE AREA.--1,486 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1894 to February 1896 (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to current year.

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 562.02 ft above NGVD 29. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8 to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good except those for periods of estimated daily discharges (sluggish intakes), which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft, from floodmarks, discharge, 140,000 ft<sup>3</sup>/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 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)
Mar 29	1130	*21,400	*14.99	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,140	1,080	2,500	1,030	701	1,120	4,740	1,990	1,080	e330	632	320
2	2,750	913	3,850	970	642	1,140	4,700	e2,900	964	e310	522	303
3	1,920	802	3,620	904	645	1,080	8,640	e2,400	861	e290	452	318
4	1,490	769	2,830	859	624	1,020	6,250	e2,000	838	e270	402	299
5	1,240	1,510	2,250	922	630	1,030	4,580	e1,700	833	e260	361	270
6	1,070	2,290	1,850	1,410	635	1,210	3,580	1,410	763	e380	328	246
7	932	1,860	1,670	1,500	619	1,760	2,930	1,300	688	e390	371	225
8	814	1,540	1,680	1,480	617	3,740	2,590	1,220	764	e310	797	213
9	723	1,310	1,720	1,600	681	5,610	2,680	1,160	855	2,760	652	204
10	652	1,140	3,060	1,560	895	3,900	2,340	1,080	714	1,450	1,070	194
11	597	1,020	4,660	1,470	1,120	2,890	2,060	996	779	943	1,160	183
12	553	999	3,980	1,450	1,090	2,380	1,890	1,020	770	671	841	179
13	519	1,340	3,110	1,420	1,030	2,000	1,780	937	683	562	649	173
14	499	1,630	2,540	2,210	991	1,710	e1,600	862	590	587	538	165
15	510	1,480	2,060	3,860	1,060	1,540	e1,400	817	543	958	483	160
16	542	1,370	1,730	3,390	1,200	1,420	e1,200	813	495	1,280	428	156
17	509	1,260	1,530	2,670	1,230	1,370	e1,100	796	454	1,350	390	154
18	482	1,200	1,420	2,100	1,260	1,280	e1,000	721	422	1,590	381	150
19	473	1,170	1,310	1,660	1,170	1,210	e920	675	e390	1,510	426	150
20	462	1,130	1,210	1,590	1,070	1,210	e870	743	e370	1,230	411	147
21	507	1,140	1,080	1,480	1,020	1,280	e830	3,730	e350	1,110	379	142
22	638	1,130	1,020	1,330	985	1,320	e800	3,150	e340	951	351	138
23	613	1,080	1,070	1,210	1,090	1,600	e870	2,300	e320	782	318	136
24	574	1,090	1,290	1,030	1,120	4,840	e1,200	2,530	e310	684	301	135
25	624	1,490	1,800	956	1,130	6,070	e1,700	3,140	e300	582	277	133
26	727	2,140	1,600	1,080	1,110	4,290	e1,600	2,680	e280	494	266	137
27	690	2,180	1,440	1,020	1,070	3,290	e1,500	2,150	e260	438	263	142
28	638	2,130	1,310	900	1,070	4,900	1,400	1,760	e250	399	275	135
29	651	2,520	1,150	745	---	19,000	1,330	1,490	e240	377	340	135
30	958	2,390	1,120	724	---	11,600	1,270	1,320	e290	379	372	137
31	1,340	---	1,080	728	---	6,760	---	1,190	---	601	357	---
TOTAL	28,837	43,103	62,540	45,258	26,505	103,570	69,350	50,980	16,796	24,228	14,793	5,579
MEAN	930	1,437	2,017	1,460	947	3,341	2,312	1,645	560	782	477	186
MAX	4,140	2,520	4,660	3,860	1,260	19,000	8,640	3,730	1,080	2,760	1,160	320
MIN	462	769	1,020	724	617	1,020	800	675	240	260	263	133
CFSM	0.63	0.97	1.36	0.98	0.64	2.25	1.56	1.11	0.38	0.53	0.32	0.13
IN.	0.72	1.08	1.57	1.13	0.66	2.59	1.74	1.28	0.42	0.61	0.37	0.14

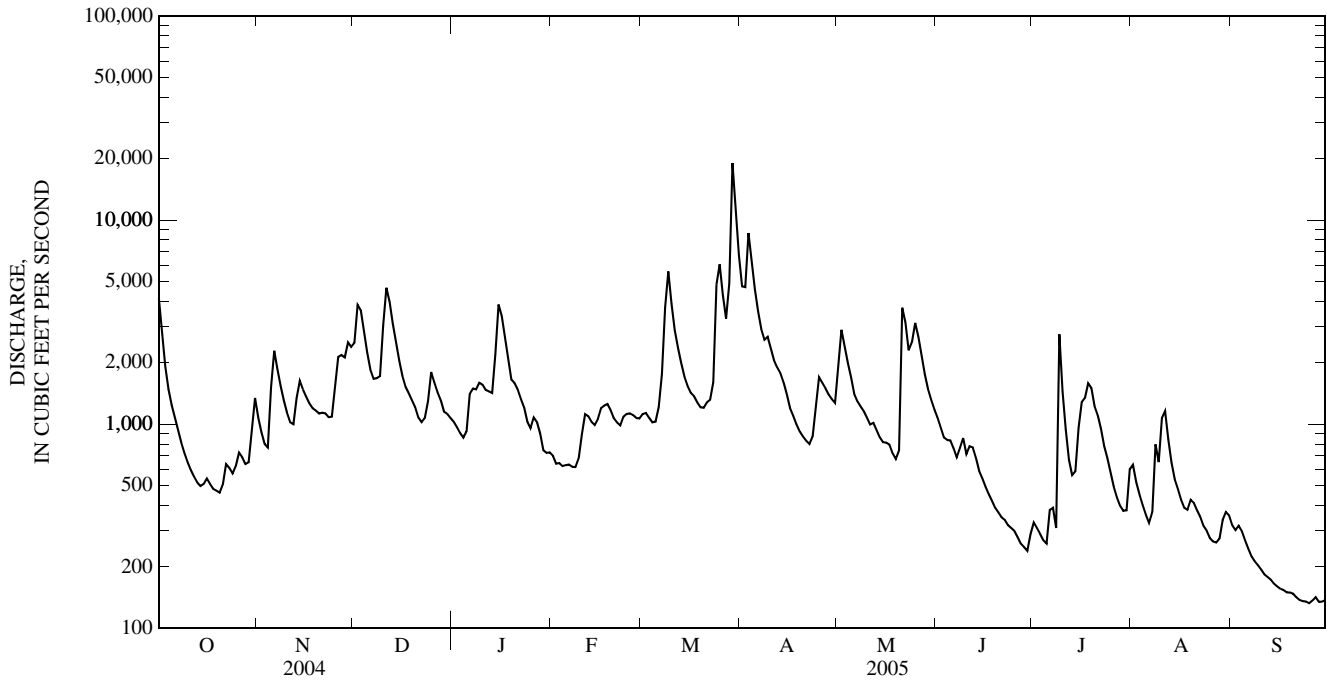
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2005, BY WATER YEAR (WY)

MEAN	620	891	1,260	1,618	2,040	3,025	2,404	1,843	1,042	531	542	517
MAX	4,629	12,850	5,000	6,928	6,474	10,490	6,421	5,785	5,231	2,638	3,923	6,538
(WY)	(1977)	(1986)	(1973)	(1996)	(1998)	(1936)	(1987)	(1996)	(1949)	(1949)	(1955)	(1996)
MIN	79.4	82.2	147	271	330	791	829	366	217	86.7	73.5	76.6
(WY)	(1931)	(1905)	(1966)	(1981)	(2002)	(1981)	(1976)	(1977)	(1999)	(1999)	(1930)	(1930)

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1899 - 2005	
ANNUAL TOTAL	638,694		491,539			
ANNUAL MEAN	1,745		1,347		1,358	
HIGHEST ANNUAL MEAN					2,975 1996	
LOWEST ANNUAL MEAN					566 1969	
HIGHEST DAILY MEAN	17,900	Apr 14	19,000	Mar 29	145,000	Nov 5, 1985
LOWEST DAILY MEAN	145	Sep 7	133	Sep 25	52	(a)
ANNUAL SEVEN-DAY MINIMUM	155	Sep 1	136	Sep 23	54	Sep 7, 1966
MAXIMUM PEAK FLOW			21,400	Mar 29	(b)240,000	Nov 5, 1985
MAXIMUM PEAK STAGE			14.99	Mar 29	(c)44.22	Nov 5, 1985
INSTANTANEOUS LOW FLOW			133	(d)	29	(f)
ANNUAL RUNOFF (CFSM)	1.17		0.906		0.914	
ANNUAL RUNOFF (INCHES)	15.99		12.31		12.41	
10 PERCENT EXCEEDS	3,460		2,680		3,060	
50 PERCENT EXCEEDS	1,340		1,030		665	
90 PERCENT EXCEEDS	316		286		153	

- a Sept. 11, 12, 1966.
- b From rating curve extended above 145,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 24, 25, 26, 28, 29.
- e Estimated
- f Jan. 28, 1956 (result of freeze-up), July 30, 1966 (result of temporary dam).





## 01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

LOCATION.--Lat 39°26'49", long 78°39'16", NAD 27, Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.5.

DRAINAGE AREA.--1,486 mi<sup>2</sup>.

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Carbonate, wat fltr incrm. titr., field, mg/L (00452)
JUN 08...	1100	2.27	680	750	7.6	95	8.1	223	E29.0	25.8	92	--	--
JUL 12...	1015	2.27	680	753	7.5	93	7.9	210	33.0	25.8	80	--	--
AUG 10...	1000	2.77	1,160	752	7.2	88	7.8	223	30.0	25.0	86	--	--
SEP 13...	1030	1.43	176	751	8.2	96	8.4	266	--	22.5	113	138	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, NA-MUG MF, water, col/100 mL (50278)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Total coliform, M-Endo, col/100 mL (31501)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 08...	<10	E.03	.38	.39	.008	.66	.031	.053	14	8	E8,200	3	5.5
JUL 12...	<10	<.04	--	.43	E.004	.72	.019	.058	10	20	230	8	15
AUG 10...	18	<.04	--	.36	E.005	.65	.043	.086	E18	E520	E1,120	17	53
SEP 13...	<10	<.04	--	<.06	<.008	.17	.082	.120	50	35	175	2	.95

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

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## 01610400 WAITES RUN NEAR WARDENSVILLE, WV

LOCATION.--Lat 39°02'33.8", long 78°35'54.0", Hardy County, Hydrologic Unit 02070003, on left bank at downstream side of bridge on Waites Run Road, 2.6 mi south of Wardensville, 4.3 mi upstream from mouth, and 8.2 mi east of Baker.

DRAINAGE AREA.--12.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1240.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice affect and EDL malfunction), which are poor. U.S. Geological Survey gage-height telemeter at station. Water-quality records are published by the Maryland Water Science Center.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 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 25	0745	*144	*4.38	No other peak greater than base discharge.			

Minimum discharge, 1.1 ft<sup>3</sup>/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	8.9	32	14	e9.0	9.9	41	17	14	2.8	3.7	2.4
2	34	8.6	27	13	e9.0	8.9	65	16	13	2.7	3.5	2.1
3	28	8.4	26	12	e9.0	e8.8	68	16	14	2.6	3.2	2.0
4	23	15	23	12	e9.0	e8.6	52	15	12	2.5	3.0	1.9
5	19	15	21	15	9.6	9.0	44	14	11	2.5	2.8	1.8
6	17	13	20	14	9.4	10	38	14	9.9	2.5	2.7	1.8
7	15	12	19	13	9.8	19	34	14	9.4	2.7	2.9	1.8
8	13	12	18	13	11	35	32	13	8.1	32	2.9	1.7
9	12	11	24	13	11	28	28	12	7.8	6.8	7.2	1.6
10	12	10	62	13	12	24	25	12	9.4	4.2	3.7	1.7
11	11	10	57	12	9.9	22	22	11	9.7	3.6	3.0	1.6
12	9.9	19	43	12	9.9	21	20	11	7.3	3.4	2.8	1.6
13	9.5	22	37	12	9.5	18	19	10	11	5.3	2.6	1.5
14	11	18	31	86	12	16	17	11	10	6.1	2.4	1.5
15	11	17	26	48	13	15	16	12	6.9	5.4	2.3	1.5
16	9.5	16	24	37	12	14	15	10	6.2	19	2.4	1.6
17	8.4	15	22	30	12	14	14	9.2	5.8	32	2.5	1.9
18	7.5	15	20	e24	11	13	14	8.6	5.4	18	2.2	1.6
19	7.7	15	19	e22	e11	13	13	8.3	5.3	17	2.5	1.5
20	8.9	15	e16	e19	10	13	13	46	5.0	14	2.4	1.5
21	13	14	e14	e18	11	12	13	30	4.5	14	2.1	1.5
22	9.4	13	15	e16	11	12	17	24	4.7	12	1.9	1.4
23	8.5	12	26	e15	9.9	23	26	32	4.3	9.2	1.9	1.4
24	9.7	14	23	e14	10	24	19	45	3.8	7.5	1.9	1.6
25	9.3	16	19	e13	9.9	e23	18	44	3.5	6.5	1.8	1.6
26	8.6	15	18	e12	9.4	e23	16	37	3.3	5.7	1.8	1.6
27	8.4	14	e16	e12	8.9	e28	16	30	3.1	5.0	3.7	1.5
28	8.4	35	e16	e11	9.6	e40	15	26	3.1	4.9	3.5	1.3
29	8.8	27	16	e10	---	77	14	22	3.2	5.0	2.5	1.5
30	11	25	15	e10	---	60	20	19	2.9	4.6	2.4	1.4
31	9.5	---	14	e9.5	---	48	---	17	---	4.1	3.2	---
TOTAL	415.0	460.9	759	574.5	288.8	690.2	764	606.1	217.6	263.6	87.4	49.4
MEAN	13.4	15.4	24.5	18.5	10.3	22.3	25.5	19.6	7.25	8.50	2.82	1.65
MAX	43	35	62	86	13	77	68	46	14	32	7.2	2.4
MIN	7.5	8.4	14	9.5	8.9	8.6	13	8.3	2.9	2.5	1.8	1.3
CFSM	1.06	1.22	1.94	1.47	0.82	1.77	2.02	1.55	0.58	0.67	0.22	0.13
IN.	1.23	1.36	2.24	1.70	0.85	2.04	2.26	1.79	0.64	0.78	0.26	0.15

e Estimated

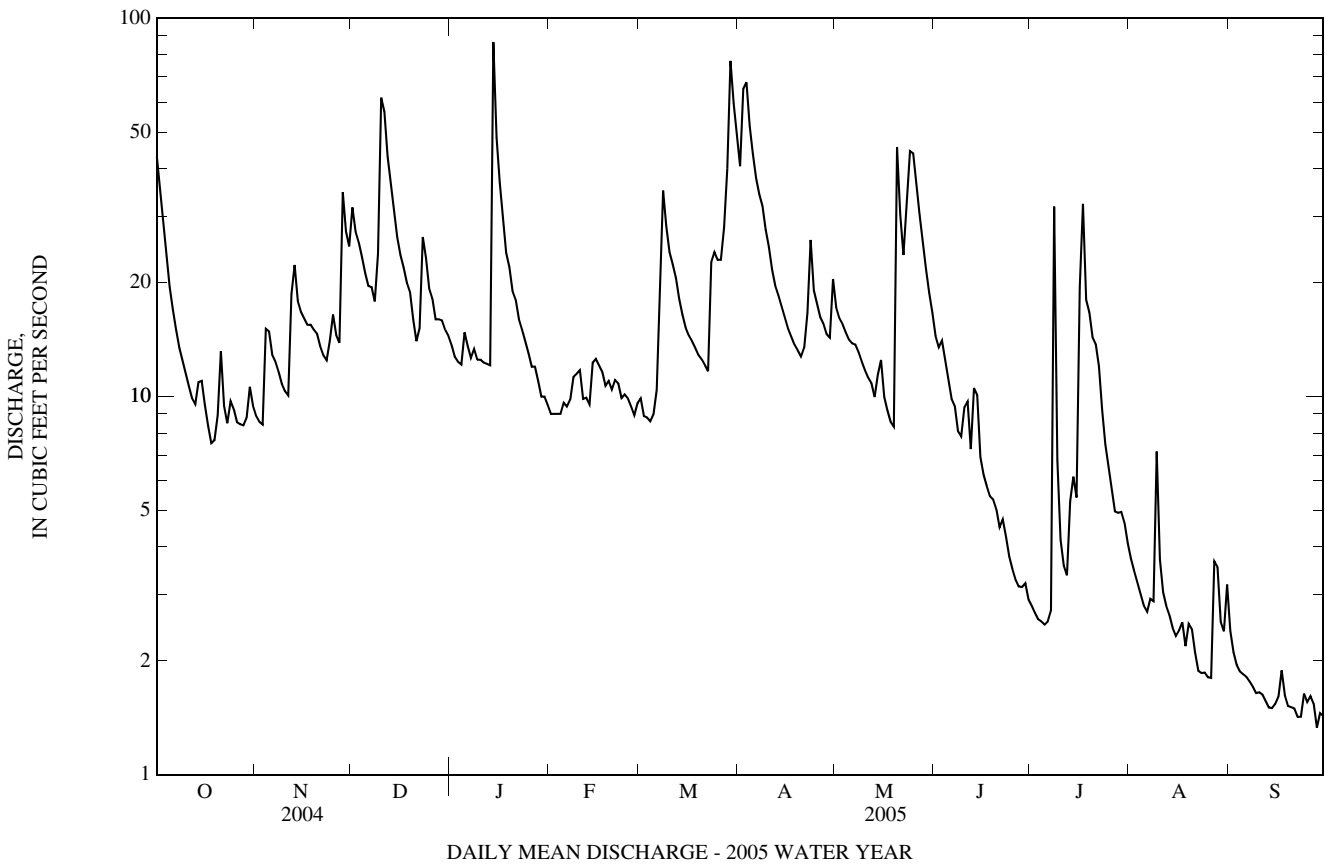
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	11.9	25.4	28.5	18.9	14.7	28.7	36.5	28.0	17.8	6.51	4.39	23.7
MAX	13.9	31.0	36.5	26.7	22.6	55.8	45.6	33.9	44.1	8.50	9.21	48.3
(WY)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2005)	(2003)	(2003)
MIN	8.43	15.4	24.4	11.3	3.79	13.0	25.5	19.6	7.25	3.43	2.27	1.65
(WY)	(2003)	(2005)	(2003)	(2004)	(2002)	(2002)	(2005)	(2005)	(2005)	(2004)	(2004)	(2005)

01610400 WAITES RUN NEAR WARDENSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	7,424.1		5,176.5		22.1	
ANNUAL MEAN	20.3		14.2		14.2	
HIGHEST ANNUAL MEAN					29.5	2003
LOWEST ANNUAL MEAN					14.2	2005
HIGHEST DAILY MEAN	249	Sep 8	86	Jan 14	679	Sep 19, 2003
LOWEST DAILY MEAN	1.2	(a)	1.3	Sep 28	(e)0.78	Sep 14, 2002
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 30	1.5	Sep 22	1.0	Sep 12, 2002
MAXIMUM PEAK FLOW			144	Jan 25	1,380	Sep 19, 2003
MAXIMUM PEAK STAGE			4.38	Jan 25	6.09	Sep 19, 2003
INSTANTANEOUS LOW FLOW			1.1	Sep 28		UNKNOWN
ANNUAL RUNOFF (CFSM)	1.61		1.13		1.75	
ANNUAL RUNOFF (INCHES)	21.92		15.28		23.84	
10 PERCENT EXCEEDS	38		28		46	
50 PERCENT EXCEEDS	15		12		14	
90 PERCENT EXCEEDS	2.3		2.3		2.8	

a Sept. 2, 4, 5  
 e Estimated  
 b From rating curve extended above 420 ft<sup>3</sup>/s.



## 01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

LOCATION.--Lat 39°34'56", long 78°18'36", NAD 27, Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi southwest of Great Cacapon, and at mile 6.1.

DRAINAGE AREA.--675 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1922 to September 1995, October 1996 to current year.

REVISED RECORDS.--WSP 800: 1924(M). WSP 921: Drainage area. WSP 951: 1936-37. WSP 1552: 1925-26(M), 1928-1929(M), 1932. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 456.78 ft above NGVD 29 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 10, 1933, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. High end of rating not confirmed above 3,000 ft<sup>3</sup>/s since cableway removed in July 1992.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1889 reached a stage of about 24.7 ft, from floodmarks, discharge, 57,500 ft<sup>3</sup>/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 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 15	0330	4,300	7.13	Mar 29	1330	*9,090	*10.21

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,740	323	1,300	411	393	415	2,000	608	443	129	103	98
2	1,220	335	1,480	403	367	431	1,830	750	388	165	102	92
3	902	296	1,300	383	358	417	2,810	663	352	153	106	86
4	715	284	1,110	362	346	380	2,470	630	334	136	102	83
5	587	373	931	378	356	381	1,900	579	330	127	95	81
6	492	743	797	506	363	451	1,590	525	319	130	91	78
7	425	640	714	636	354	600	1,350	486	325	171	99	75
8	377	533	715	638	355	1,160	1,290	463	300	243	125	72
9	338	454	708	671	383	1,840	1,250	442	264	1,040	123	71
10	307	388	1,250	677	449	1,550	1,030	414	246	627	110	71
11	278	347	3,130	654	478	1,230	894	381	224	360	212	71
12	256	363	2,230	640	430	1,030	799	355	284	239	270	68
13	241	631	1,730	617	386	884	726	336	282	184	192	67
14	232	969	1,380	1,530	389	754	670	318	289	164	148	67
15	232	796	1,090	3,430	430	647	617	310	244	225	142	67
16	242	674	881	2,130	528	572	561	300	204	317	120	71
17	239	596	756	1,670	522	525	511	299	181	365	106	73
18	221	538	694	1,270	503	497	476	274	165	568	97	73
19	207	505	634	896	465	471	456	252	154	374	96	75
20	201	503	565	937	413	445	442	262	148	268	92	69
21	223	503	462	873	419	422	430	1,250	144	233	92	70
22	279	464	485	715	431	400	445	1,540	144	213	91	73
23	284	431	500	593	426	499	531	1,040	157	176	86	70
24	265	425	577	516	410	1,730	813	1,260	144	175	83	68
25	254	533	676	541	399	1,880	748	1,890	138	163	78	67
26	255	752	526	641	391	1,550	657	1,610	133	146	75	67
27	261	810	429	605	384	1,300	604	1,240	129	133	76	67
28	251	947	403	507	387	1,730	552	926	124	121	81	67
29	234	1,610	443	447	---	8,280	512	731	123	113	88	70
30	227	1,380	446	423	---	5,240	496	609	121	109	91	71
31	252	---	425	403	---	2,750	---	514	---	105	97	---
TOTAL	12,237	18,146	28,767	25,103	11,515	40,461	29,460	21,257	6,833	7,672	3,469	2,198
MEAN	395	605	928	810	411	1,305	982	686	228	247	112	73.3
MAX	1,740	1,610	3,130	3,430	528	8,280	2,810	1,890	443	1,040	270	98
MIN	201	284	403	362	346	380	430	252	121	105	75	67
CFSM	0.58	0.90	1.37	1.20	0.61	1.93	1.45	1.02	0.34	0.37	0.17	0.11
IN.	0.67	1.00	1.59	1.38	0.63	2.23	1.62	1.17	0.38	0.42	0.19	0.12

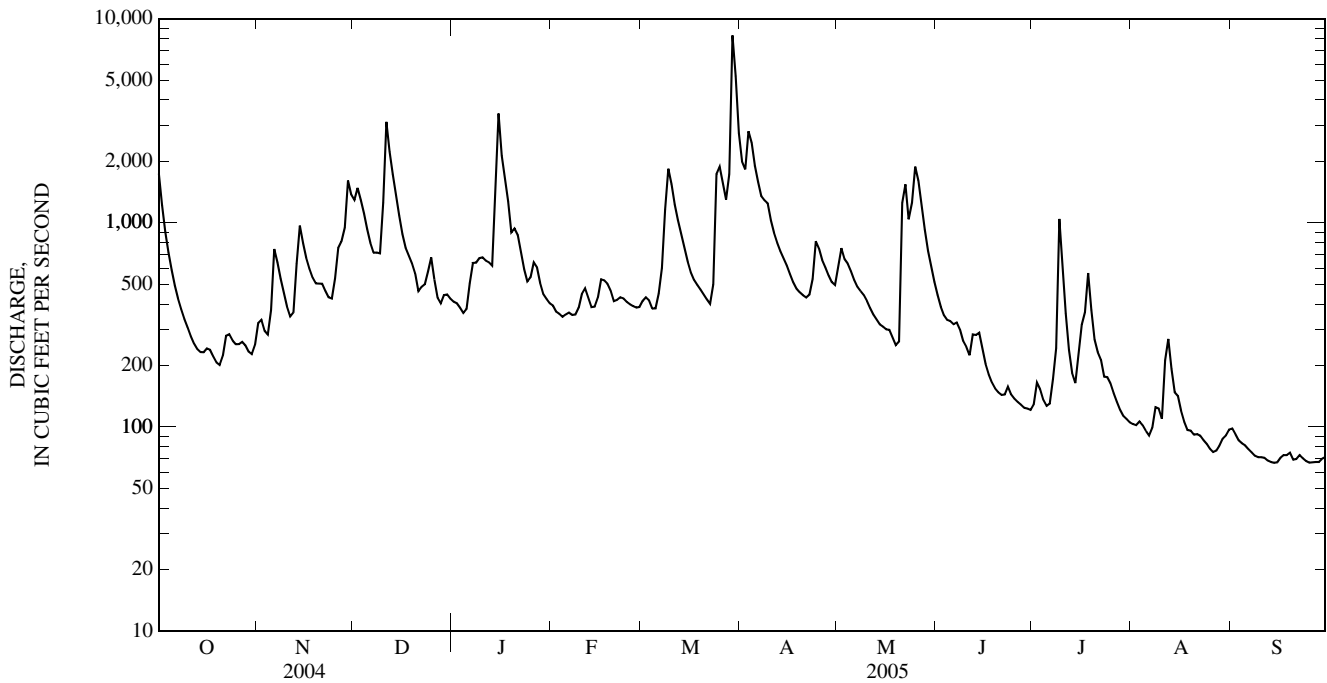
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2005, BY WATER YEAR (WY)

MEAN	326	381	534	638	885	1,286	1,130	864	439	195	232	203
MAX	2,976	2,577	2,121	1,751	3,234	5,708	2,976	3,565	3,525	936	2,791	1,698
(WY)	(1943)	(1986)	(1973)	(1998)	(1998)	(1936)	(1987)	(1924)	(1972)	(1972)	(1955)	(2003)
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	72.5	53.8	39.8	39.4
(WY)	(1931)	(1966)	(1966)	(1956)	(1934)	(1990)	(1947)	(1969)	(1999)	(1999)	(1966)	(1932)

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1923 - 2005	
ANNUAL TOTAL	320,830		207,118		594	
ANNUAL MEAN	877		567		1,192	
HIGHEST ANNUAL MEAN					180	
LOWEST ANNUAL MEAN					26	
HIGHEST DAILY MEAN	8,050	Apr 27	8,280	Mar 29	67,900	Mar 18, 1936
LOWEST DAILY MEAN	82	(a)	67	(b)	26	Sep 12, 1966
ANNUAL SEVEN-DAY MINIMUM	84	Sep 1	68	Sep 23	28	Sep 7, 1966
MAXIMUM PEAK FLOW			9,090	Mar 29	(c)87,600	Mar 18, 1936
MAXIMUM PEAK STAGE			10.21	Mar 29	30.10	Mar 18, 1936
INSTANTANEOUS LOW FLOW			66	(d)	26	(f)
ANNUAL RUNOFF (CFSM)	1.30		0.841		0.880	
ANNUAL RUNOFF (INCHES)	17.68		11.41		11.96	
10 PERCENT EXCEEDS	1,750		1,260		1,360	
50 PERCENT EXCEEDS	586		403		250	
90 PERCENT EXCEEDS	167		91		68	

- a Sept. 5-7.
- b Sept. 13-15, 25-28.
- c From rating curve extended above 52,000 ft<sup>3</sup>/s.
- d Sept. 14, 15, 16, 25, 26.
- f Sept. 11-13, 1966.



## 01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

LOCATION.--Lat 39°34'56", long 78°18'36", NAD 27, Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi southwest of Great Cacapon, and at mile 6.1.

DRAINAGE AREA.--675 mi<sup>2</sup>.

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Bicarbonate, wat fltr incrm. titr., mg/L (00453)	Carbonate, wat fltr incrm. titr., mg/L (00452)
JUN 08...	1615	1.95	292	751	8.6	110	8.5	136	35.0	27.0	50	--	--
JUL 12...	1535	1.79	226	753	8.4	108	8.0	134	E35.0	27.4	50	--	--
AUG 10...	1420	1.42	130	754	8.3	106	8.1	168	31.0	27.4	72	--	--
SEP 13...	1505	1.22	67	751	9.0	110	8.2	178	--	24.9	82	100	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 08...	<10	<.04	.12	<.008	.33	E.003	.016	3	2.4
JUL 12...	<10	<.04	.25	<.008	.60	E.003	.021	3	1.8
AUG 10...	<10	<.04	<.06	<.008	.22	<.006	.016	2	.70
SEP 13...	10	<.04	<.06	<.008	.18	<.006	.013	1	.18

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

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01613020 UNNAMED TRIBUTARY TO WARM SPRINGS RUN NEAR BERKELEY SPRINGS, WV  
(Detention Reservoir)

LOCATION.--Lat 39°36'21", long 78°13'45", NAD 83, Morgan County, Hydrologic Unit 02070004.

DAM NAME.--Warm Springs No. 3.

SURFACE AREA.--1 acre.

DRAINAGE AREA.--0.45 mi<sup>2</sup>, (corrected).

PERIOD OF RECORD.--September 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 689.05 ft above NGVD 29.

REMARKS.-- Normal Pool = 43.45 ft (Normal Storage = 6 acre-ft)

Top of Riser = 61.50 ft

Emergency Spillway = 63.55 ft

Top of Dam = 70.45 ft

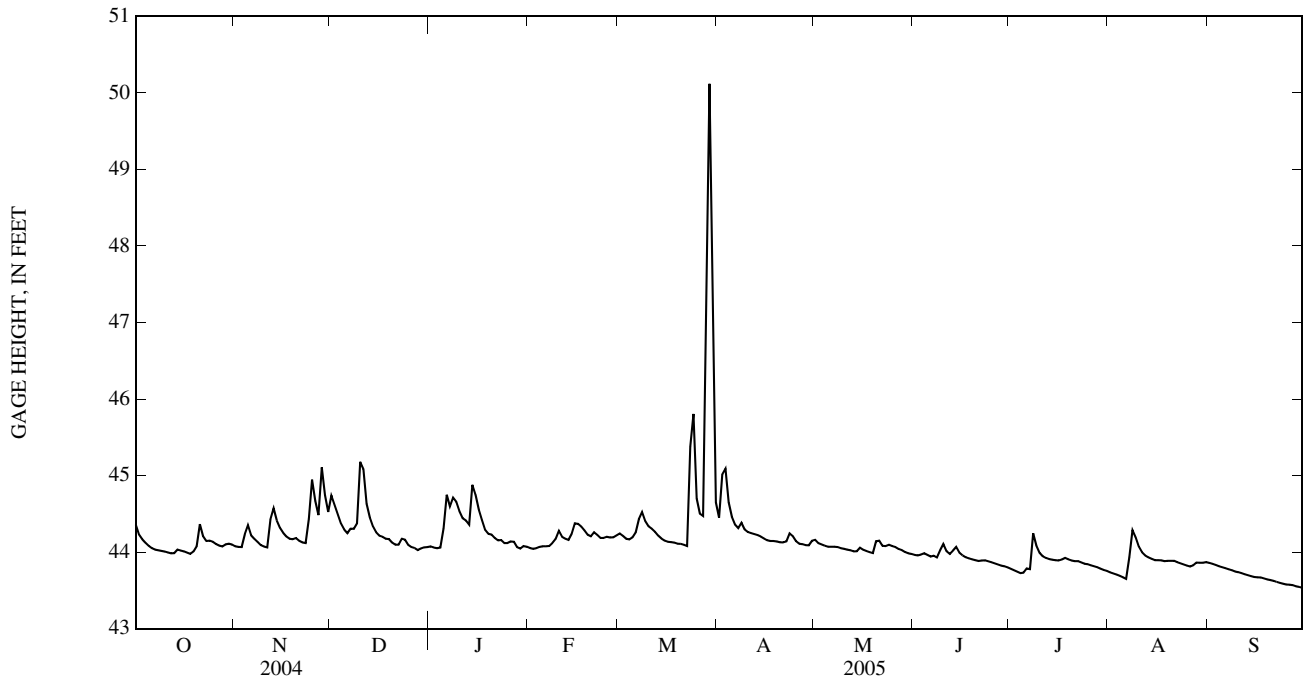
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 51.94 ft, Sept. 18, 2004; minimum gage height, 43.52 ft, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 50.81 ft, Mar. 29; minimum gage height, 43.52 ft, Sept. 30.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.36	44.08	44.74	44.07	44.05	44.24	44.45	44.16	43.96	43.78	43.74	43.86
2	44.23	44.07	44.62	44.06	44.04	44.21	45.02	44.12	43.96	43.76	43.72	43.85
3	44.17	44.07	44.50	44.05	44.05	44.17	45.09	44.10	43.97	43.74	43.71	43.83
4	44.12	44.23	44.37	44.06	44.07	44.17	44.65	44.08	43.99	43.73	43.69	43.82
5	44.08	44.35	44.30	44.31	44.08	44.19	44.46	44.07	43.96	43.73	43.67	43.80
6	44.05	44.22	44.25	44.75	44.08	44.26	44.36	44.07	43.94	43.79	43.65	43.79
7	44.03	44.17	44.31	44.59	44.08	44.43	44.32	44.07	43.95	43.78	43.93	43.78
8	44.02	44.13	44.30	44.71	44.12	44.52	44.38	44.07	43.93	44.25	44.29	43.76
9	44.02	44.09	44.37	44.66	44.17	44.40	44.30	44.05	44.02	44.09	44.19	43.75
10	44.01	44.07	45.18	44.53	44.28	44.34	44.26	44.04	44.11	43.99	44.07	43.74
11	43.99	44.06	45.09	44.44	44.20	44.31	44.25	44.03	44.01	43.95	44.00	43.73
12	43.98	44.43	44.63	44.41	44.18	44.27	44.23	44.02	43.98	43.92	43.95	43.71
13	43.99	44.57	44.46	44.36	44.16	44.22	44.22	44.01	44.02	43.91	43.93	43.70
14	44.03	44.41	44.34	44.88	44.24	44.18	44.20	44.01	44.07	43.90	43.91	43.68
15	44.02	44.32	44.26	44.75	44.38	44.15	44.18	44.06	43.99	43.89	43.90	43.68
16	44.01	44.25	44.22	44.56	44.37	44.13	44.16	44.03	43.96	43.89	43.90	43.67
17	43.99	44.20	44.20	44.42	44.33	44.13	44.15	44.01	43.93	43.90	43.89	43.67
18	43.98	44.18	44.18	44.29	44.28	44.12	44.15	44.00	43.92	43.92	43.88	43.66
19	44.01	44.17	44.17	44.24	44.23	44.11	44.14	43.99	43.90	43.91	43.89	43.64
20	44.08	44.18	44.12	44.23	44.21	44.11	44.13	44.14	43.89	43.89	43.89	43.64
21	44.37	44.15	44.10	44.18	44.26	44.09	44.13	44.15	43.88	43.88	43.89	43.62
22	44.21	44.13	44.10	44.15	44.23	44.08	44.14	44.08	43.89	43.88	43.87	43.61
23	44.15	44.12	44.17	44.16	44.19	45.38	44.24	44.08	43.89	43.87	43.85	43.60
24	44.15	44.43	44.16	44.12	44.19	45.81	44.21	44.10	43.88	43.85	43.84	43.59
25	44.14	44.95	44.10	44.12	44.20	44.70	44.14	44.08	43.87	43.84	43.82	43.58
26	44.11	44.67	44.07	44.14	44.19	44.50	44.11	44.07	43.85	43.83	43.81	43.57
27	44.09	44.48	44.05	44.14	44.19	44.47	44.10	44.04	43.84	43.81	43.83	43.57
28	44.08	45.11	44.03	44.06	44.22	46.30	44.09	44.03	43.82	43.80	43.86	43.55
29	44.10	44.74	44.05	44.04	---	50.12	44.09	44.00	43.82	43.78	43.86	43.55
30	44.11	44.52	44.06	44.08	---	46.50	44.15	43.98	43.80	43.77	43.86	43.53
31	44.10	---	44.07	44.07	---	44.65	---	43.98	---	43.75	43.87	---
MEAN	44.09	44.32	44.31	44.31	44.19	44.69	44.28	44.06	43.93	43.86	43.88	43.68
MAX	44.37	45.11	45.18	44.88	44.38	50.12	45.09	44.16	44.11	44.25	44.29	43.86
MIN	43.98	44.06	44.03	44.04	44.04	44.08	44.09	43.98	43.80	43.73	43.65	43.53

01613020 UNNAMED TRIBUTARY TO WARM SPRINGS RUN NEAR BERKELEY SPRINGS, WV—Continued



## 01614000 BACK CREEK NEAR JONES SPRINGS, WV

LOCATION.--Lat 39°30'43", long 78°02'15", NAD 27, Berkeley County, Hydrologic Unit 02070004, on left bank at downstream side of highway bridge, 1.3 mi southeast of Tomahawk, 3.5 mi northeast of village of Jones Springs, 9.0 mi upstream from Tilhance Creek, and at mile 11.6.

DRAINAGE AREA.--235 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1928 to September 1931 (published as near Hedgesville, measurements, daily mean discharges, and annual maximums), August 1938 to September 1975 (measurements, daily mean discharges, and annual maximums), October 1992 to September 1998 (occasional measurements and annual maximums), June 2004 to current year (measurements, daily mean discharges, annual maximums, and gage heights and discharges at one hour or less intervals).

REVISED RECORDS.--WSP 851: 1930 (M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 416.42 ft above mean sea level (from Corps of Engineers Bench Mark).

REMARKS.--No estimated daily discharges. Records fair.

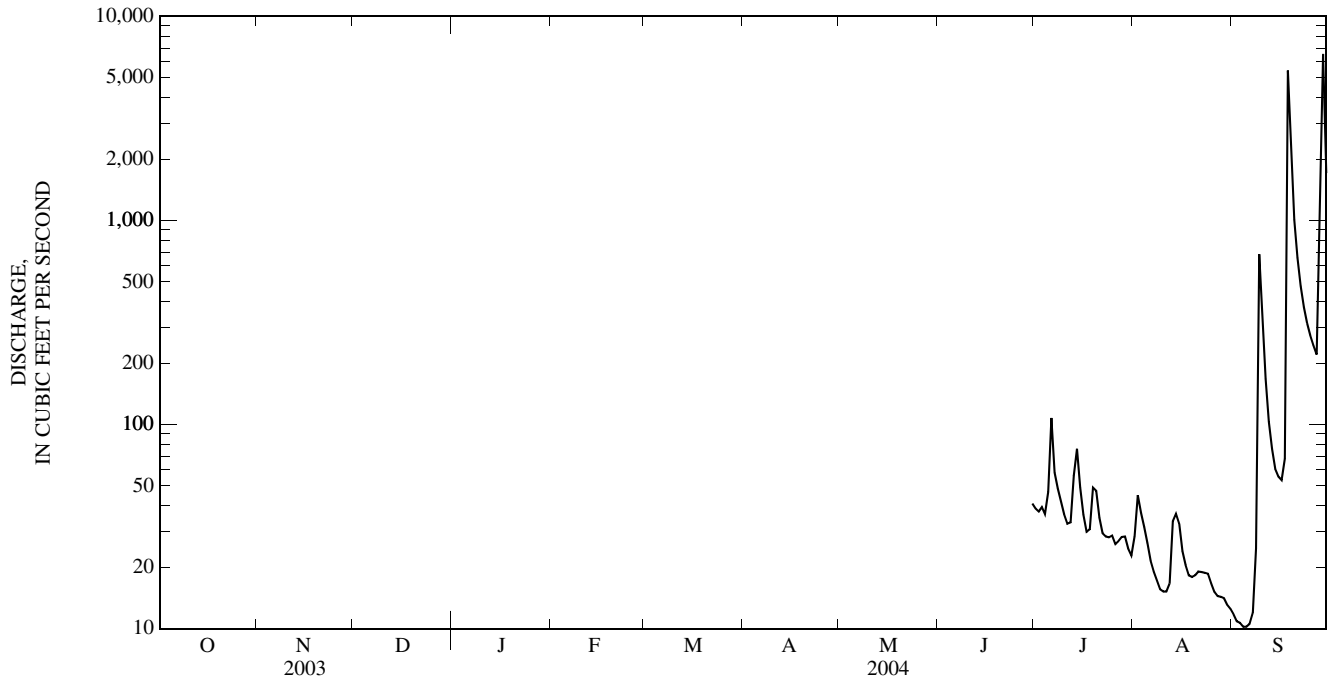
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 17 or 18, 1936, reached a stage of 25 ft, present datum, from floodmarks; discharge, 22,000 ft<sup>3</sup>/s.

EXTREMES FOR JUNE 30 TO SEPTEMBER 30, 2004, AND FOR 2004 WATER YEAR.--Maximum discharge, 9,460 ft<sup>3</sup>/s, Sept. 29, gage height, 15.77 ft; minimum, 10 ft<sup>3</sup>/s, Sept. 3, 4, 5, 6, gage height, 1.62 ft.

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	---	---	---	---	---	---	---	---	---	39	28	12
2	---	---	---	---	---	---	---	---	---	37	45	11
3	---	---	---	---	---	---	---	---	---	39	37	11
4	---	---	---	---	---	---	---	---	---	37	31	10
5	---	---	---	---	---	---	---	---	---	47	26	10
6	---	---	---	---	---	---	---	---	---	108	22	11
7	---	---	---	---	---	---	---	---	---	58	19	12
8	---	---	---	---	---	---	---	---	---	49	17	25
9	---	---	---	---	---	---	---	---	---	42	16	683
10	---	---	---	---	---	---	---	---	---	36	15	327
11	---	---	---	---	---	---	---	---	---	33	15	167
12	---	---	---	---	---	---	---	---	---	33	17	103
13	---	---	---	---	---	---	---	---	---	56	34	76
14	---	---	---	---	---	---	---	---	---	76	37	61
15	---	---	---	---	---	---	---	---	---	49	33	56
16	---	---	---	---	---	---	---	---	---	36	24	53
17	---	---	---	---	---	---	---	---	---	30	20	68
18	---	---	---	---	---	---	---	---	---	31	18	5,420
19	---	---	---	---	---	---	---	---	---	49	18	2,650
20	---	---	---	---	---	---	---	---	---	47	18	1,010
21	---	---	---	---	---	---	---	---	---	35	19	656
22	---	---	---	---	---	---	---	---	---	29	19	477
23	---	---	---	---	---	---	---	---	---	28	19	376
24	---	---	---	---	---	---	---	---	---	28	19	314
25	---	---	---	---	---	---	---	---	---	29	17	274
26	---	---	---	---	---	---	---	---	---	26	15	244
27	---	---	---	---	---	---	---	---	---	27	14	220
28	---	---	---	---	---	---	---	---	---	28	14	1,030
29	---	---	---	---	---	---	---	---	---	28	14	6,520
30	---	---	---	---	---	---	---	---	41	25	13	1,710
31	---	---	---	---	---	---	---	---	---	23	13	---
TOTAL	---	---	---	---	---	---	---	---	---	1,238	666	22,597
MEAN	---	---	---	---	---	---	---	---	---	39.9	21.5	753
MAX	---	---	---	---	---	---	---	---	---	108	45	6,520
MIN	---	---	---	---	---	---	---	---	---	23	13	10
CFSM	---	---	---	---	---	---	---	---	---	0.17	0.09	3.21
IN.	---	---	---	---	---	---	---	---	---	0.20	0.11	3.58

01614000 BACK CREEK NEAR JONES SPRINGS, WV—Continued



POTOMAC RIVER BASIN

01614000 BACK CREEK NEAR JONES SPRINGS, WV

LOCATION.--Lat 39°30'43", long 78°02'15", NAD 27, Berkeley County, Hydrologic Unit 02070004, on left bank at downstream side of highway bridge, 1.3 mi southeast of Tomahawk, 3.5 mi northeast of village of Jones Springs, 9.0 mi upstream from Tilhance Creek, and at mile 11.6.

DRAINAGE AREA.--235 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1928 to September 1931 (published as near Hedgesville, measurements, daily mean discharges, and annual maximums), August 1938 to September 1975 (measurements, daily mean discharges, and annual maximums), October 1992 to September 1998 (occasional measurements and annual maximums), June 2004 to current year (measurements, daily mean discharges, annual maximums, and gage heights and discharges at one hour or less intervals).

REVISED RECORDS.--WSP 851: 1930 (M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 416.42 ft above mean sea level (from Corps of Engineers Bench Mark).

REMARKS.--No estimated daily discharges. Records fair except those for period January through April (sluggish or plugged intakes), which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 17 or 18, 1936, reached a stage of 25 ft, present datum, from floodmarks; discharge, 22,000 ft<sup>3</sup>/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 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)
Mar 29	1300	*6,560	*12.76	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	926	95	643	152	196	152	1,100	168	67	19	16	13
2	613	86	670	142	183	153	1,190	158	60	17	16	12
3	443	78	544	131	186	140	1,730	146	58	16	15	11
4	333	77	445	123	172	136	1,260	137	63	15	14	9.7
5	251	195	371	124	168	149	981	127	64	16	13	9.0
6	194	195	322	180	162	181	835	115	58	20	13	8.4
7	167	159	306	207	154	263	742	111	58	31	13	7.8
8	148	131	338	224	152	364	685	109	68	102	28	7.5
9	132	107	318	264	166	381	597	101	55	192	30	7.5
10	122	89	1,230	251	186	330	504	93	52	103	37	7.7
11	109	80	1,950	239	181	297	439	86	47	64	28	7.5
12	99	98	1,070	227	158	267	386	81	46	47	23	7.1
13	89	376	735	210	146	228	335	74	45	45	20	6.6
14	89	353	532	1,010	144	193	292	71	59	45	17	6.6
15	102	270	408	1,510	197	163	243	71	63	75	14	6.6
16	100	219	341	961	222	143	200	70	47	54	13	6.6
17	89	187	310	741	225	130	170	66	38	54	13	7.2
18	75	166	286	549	210	121	141	60	33	60	12	7.0
19	67	151	265	495	184	109	126	55	31	56	13	19
20	65	148	230	432	170	96	119	75	29	42	14	15
21	124	136	213	381	170	88	113	303	29	34	14	12
22	164	122	189	350	166	79	113	187	29	30	14	10
23	158	110	192	351	147	227	173	139	28	33	13	9.4
24	154	123	300	315	131	1,070	204	150	29	28	12	9.1
25	157	275	262	321	132	901	172	183	28	25	10	9.5
26	152	314	219	290	131	709	152	160	25	24	9.5	9.8
27	138	287	212	280	128	594	140	134	23	22	10	9.3
28	126	633	187	257	135	1,340	131	106	21	19	13	8.4
29	114	806	182	225	---	5,330	123	94	20	17	15	10
30	108	590	164	228	---	2,450	130	84	21	16	17	11
31	104	---	155	202	---	1,480	---	74	---	16	16	---
TOTAL	5,712	6,656	13,589	11,372	4,702	18,264	13,526	3,588	1,294	1,337	505.5	281.3
MEAN	184	222	438	367	168	589	451	116	43.1	43.1	16.3	9.38
MAX	926	806	1,950	1,510	225	5,330	1,730	303	68	192	37	19
MIN	65	77	155	123	128	79	113	55	20	15	9.5	6.6
CFSM	0.78	0.94	1.87	1.56	0.71	2.51	1.92	0.49	0.18	0.18	0.07	0.04
IN.	0.90	1.05	2.15	1.80	0.74	2.89	2.14	0.57	0.20	0.21	0.08	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	98.0	125	214	235	343	448	350	231	154	62.5	61.0	80.3
MAX	1,218	588	817	793	849	1,003	835	580	1,100	371	657	753
(WY)	(1943)	(1971)	(1973)	(1968)	(1961)	(1963)	(1952)	(1972)	(1972)	(1949)	(1955)	(2004)
MIN	5.20	10.6	10.0	21.3	33.9	112	68.8	38.8	13.0	6.27	3.22	5.25
(WY)	(1964)	(1931)	(1966)	(1966)	(1931)	(1969)	(1947)	(1930)	(1969)	(1930)	(1930)	(1930)

01614000 BACK CREEK NEAR JONES SPRINGS, WV—Continued

SUMMARY STATISTICS

FOR 2005 WATER YEAR

WATER YEARS 1929 - 2005

ANNUAL TOTAL	80,826.8			
ANNUAL MEAN	221		198	
HIGHEST ANNUAL MEAN			382	1972
LOWEST ANNUAL MEAN			55.7	1969
HIGHEST DAILY MEAN	5,330	Mar 29	14,800	Oct 15, 1942
LOWEST DAILY MEAN	6.6	(a)	(b)1.1	
ANNUAL SEVEN-DAY MINIMUM	6.8	Sep 12	1.6	Aug 5, 1930
MAXIMUM PEAK FLOW	6,560	Mar 29	(c)22,400	Oct 15, 1942
MAXIMUM PEAK STAGE	12.76	Mar 29	(d)25.17	Oct 15, 1942
INSTANTANEOUS LOW FLOW	(f)6.4	Sep 14	0.90	(g)
ANNUAL RUNOFF (CFSM)	0.942		0.843	
ANNUAL RUNOFF (INCHES)	12.79		11.45	
10 PERCENT EXCEEDS	499		459	
50 PERCENT EXCEEDS	130		69	
90 PERCENT EXCEEDS	13		11	

a Sept. 13-16.

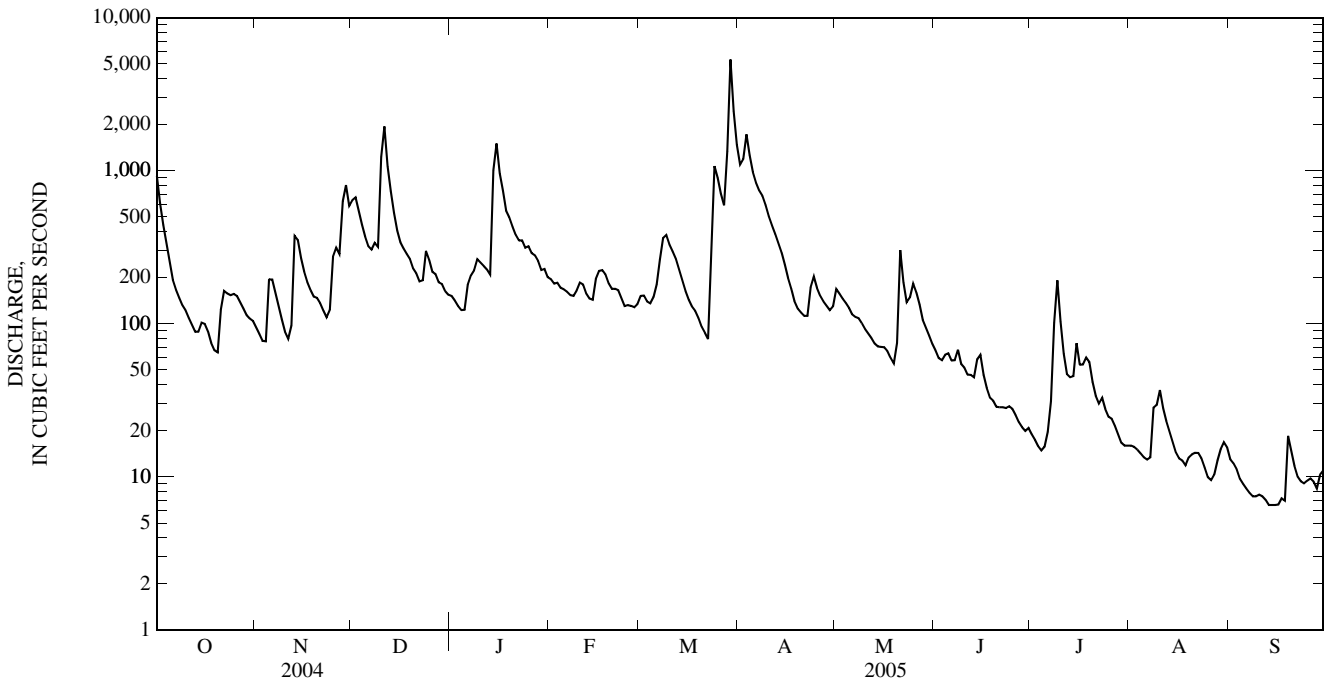
b Aug. 6, 7, 1930.

c From rating curve extended above 6,200 ft<sup>3</sup>/s on basis of current-meter measurement of 14,500 ft<sup>3</sup>/s made at Hedgesville.

d From floodmarks.

f Measured discharge 6.4 ft<sup>3</sup>/s, Sept. 14.

g Minimum observed Aug. 6, 1930.



POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV

LOCATION.--Lat 39°25'25", long 77°56'20", NAD 27, Berkeley County, Hydrologic Unit 02070004, on right bank 300 ft upstream from Evans Run, 2.3 mi upstream from Tuscarora Creek, 3.0 mi southeast of Martinsburg, and at mile 11.6.

DRAINAGE AREA.--273 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906, July 1947 to current year.

REVISED RECORDS.--WSP 1702: 1959. WDR WV-97-1: Drainage area, 1936(M), 1967(M), 1968(P), 1969(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 354.89 ft above NGVD 29. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947 to July 22, 1948, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. Some diurnal fluctuation at low flow caused by upstream mills in Virginia and since July 18, 1988, by wastewater treatment plant, 1,000 ft upstream from Opequon Creek near Berryville, Va (01615000); drainage area 57.4 mi<sup>2</sup>.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 17.5 ft, from information by local residents, estimated discharge, 19,100 ft<sup>3</sup>/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 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)
Dec 11	0030	2,170	9.25	Mar 29	1130	*5,030	*12.02
Mar 24	0400	2,120	9.15				

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	572	184	516	233	205	251	646	270	155	119	94	108
2	455	177	527	222	199	261	902	233	148	109	93	86
3	388	173	403	216	199	247	1,540	222	151	104	92	81
4	345	195	339	213	203	235	895	214	156	103	90	78
5	312	344	302	227	216	249	652	204	149	104	88	76
6	285	259	277	286	221	298	553	199	142	121	86	75
7	267	221	290	274	219	357	492	195	150	122	86	75
8	250	201	341	270	226	374	500	192	144	431	88	73
9	239	185	357	280	242	366	448	185	136	387	119	72
10	238	177	1,670	262	271	315	402	180	137	198	149	71
11	229	171	1,520	250	261	286	375	177	134	150	108	70
12	223	260	761	239	229	266	353	175	129	132	99	69
13	215	579	569	230	218	243	337	168	127	127	93	68
14	226	420	462	742	220	227	321	165	136	163	90	68
15	240	319	397	819	268	215	304	192	128	133	87	68
16	238	280	357	494	264	206	288	180	122	124	85	69
17	217	253	341	400	249	201	278	166	120	124	88	84
18	200	238	321	323	230	198	270	161	118	119	86	88
19	196	226	305	292	212	193	261	156	116	132	88	73
20	221	232	281	287	203	189	255	250	114	131	96	70
21	380	226	259	271	211	184	249	474	114	122	88	69
22	323	213	259	251	213	179	254	246	116	166	83	67
23	279	205	280	239	201	684	312	205	141	130	79	67
24	255	213	437	248	198	1,450	287	262	124	113	78	66
25	252	291	334	229	208	633	255	287	117	109	77	66
26	233	324	286	223	211	474	244	255	113	112	77	66
27	221	272	265	229	219	418	236	210	110	103	79	68
28	208	633	243	216	229	1,350	226	183	109	100	98	65
29	199	607	240	203	---	4,120	218	174	112	100	99	64
30	196	401	237	212	---	1,230	245	162	112	99	86	63
31	191	---	234	207	---	800	---	166	---	96	110	---
TOTAL	8,293	8,479	13,410	9,087	6,245	16,699	12,598	6,508	3,880	4,383	2,859	2,183
MEAN	268	283	433	293	223	539	420	210	129	141	92.2	72.8
MAX	572	633	1,670	819	271	4,120	1,540	474	156	431	149	108
MIN	191	171	234	203	198	179	218	156	109	96	77	63
CFSM	0.98	1.04	1.58	1.07	0.82	1.97	1.54	0.77	0.47	0.52	0.34	0.27
IN.	1.13	1.16	1.83	1.24	0.85	2.28	1.72	0.89	0.53	0.60	0.39	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

	152	179	251	284	346	455	381	280	221	143	137	141
MEAN	152	179	251	284	346	455	381	280	221	143	137	141
MAX	788	609	821	1,337	1,269	1,461	1,199	1,091	1,190	456	772	970
(WY)	(1977)	(1997)	(1973)	(1996)	(1998)	(1993)	(1984)	(1988)	(1972)	(1972)	(1996)	(1996)
MIN	30.5	35.1	33.7	39.6	49.9	97.2	97.8	86.0	62.3	49.4	36.6	35.2
(WY)	(1948)	(1966)	(1966)	(1966)	(2002)	(2002)	(1954)	(1969)	(1999)	(1966)	(1966)	(1947)

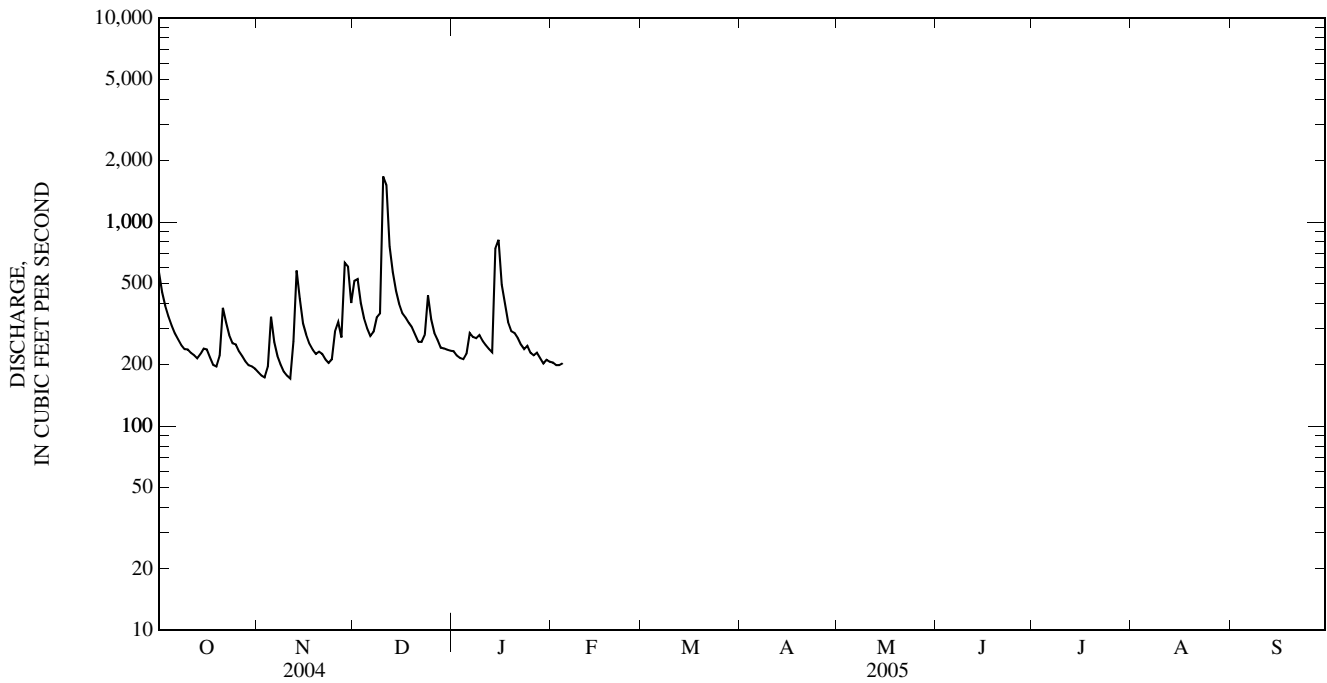
01616500 OPEQUON CREEK NEAR MARTINSBURG, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947 - 2005	
ANNUAL TOTAL	134,860		94,624			
ANNUAL MEAN	368		259		247	
HIGHEST ANNUAL MEAN					581 1996	
LOWEST ANNUAL MEAN					85.7 1954	
HIGHEST DAILY MEAN	5,690	Sep 29	4,120	Mar 29	(e)15,000	Jan 20, 1996
LOWEST DAILY MEAN	97	Sep 6	63	Sep 30	26	Oct 25, 1947
ANNUAL SEVEN-DAY MINIMUM	100	Sep 1	65	Sep 24	27	Sep 7, 1966
MAXIMUM PEAK FLOW			5,030	Mar 29	(a)23,400	Jan 20, 1996
MAXIMUM PEAK STAGE			12.02	Mar 29	18.76	Jan 20, 1996
INSTANTANEOUS LOW FLOW			62	(b)	25	Oct 25, 1947
ANNUAL RUNOFF (CFSM)	1.35		0.950		0.905	
ANNUAL RUNOFF (INCHES)	18.38		12.89		12.30	
10 PERCENT EXCEEDS	644		419		487	
50 PERCENT EXCEEDS	280		215		143	
90 PERCENT EXCEEDS	144		86		58	

a From rating curve extended above 7,100 ft<sup>3</sup>/s.

b Sept. 29, 30.

e Estimated.





## 01616500 OPEQUON CREEK NEAR MARTINSBURG, WV—Continued

LOCATION.--Lat 39°25'25", long 77°56'20", NAD 27, Berkeley County, Hydrologic Unit 02070004, on right bank 300 ft upstream from Evans Run, 2.3 mi upstream from Tuscarora Creek, 3.0 mi southeast of Martinsburg, and at mile 11.6.

DRAINAGE AREA.--273 mi<sup>2</sup>.

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Sample type	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO <sub>3</sub> (39086)		
Date		Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)	Data base number
JUN 09...	0915	Environmental	2.31	132	757	6.9	80	8.0	667	30.0	22.0	243		
JUL 13...	0920	Environmental	2.24	123	756	6.8	81	8.0	664	30.0	23.3	213		
AUG 11...	0949	Blank	--	--	--	--	--	--	--	--	--	--		
11...	0950	Environmental	2.13	109	757	6.9	81	8.1	598	31.0	22.8	202		
11...	0951	Replicate	--	--	--	--	--	--	--	--	--	--		
SEP 14...	0900	Environmental	1.78	67	755	7.9	86	8.0	772	--	18.8	312		
JUN 09...	--	--	26	.04	1.93	1.96	.037	2.33	.128	.186	29	10	01	
JUL 13...	--	--	28	.05	1.80	1.83	.022	2.22	.121	.183	19	6.3	01	
AUG 11...	--	--	--	<.04	--	<.06	<.008	<.06	<.006	<.004	--	--	98	
11...	--	--	23	.06	1.52	1.53	.011	2.04	.399	.49	23	6.8	01	
11...	--	--	--	.05	1.54	1.55	.011	1.96	.385	.46	--	--	98	
SEP 14...	380	<1	19	E.03	--	1.78	E.006	2.23	.295	.36	16	2.9	01	

Remark codes used in this table:

< -- Less than.

E -- Estimated.





