Water-Data Report 2008

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

Potomac Basin
North Branch Potomac Subbasin

LOCATION.--Lat 39°26′35″, long 78°49′20″ referenced to North American Datum of 1927, Mineral County, WV, 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.--221 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1938 to current year (daily discharge and peaks).

REVISED RECORDS.--WSP 951: 1939-40. WDR-US-2007: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 624.26 ft above NAVD 88 (VERTCON conversion of 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.--Water-discharge records good except those for periods of estimated daily discharges (no gage-height record), which are poor. Since 1963, the flow from 115 mi^2 upstream from the station is partially controlled, but not diverted, by several floodwater detention reservoirs with the total combined detention capacity of 19,887 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,810 ft^3/s, Mar. 5, gage height, 10.30 ft; minimum discharge, 3.8 ft^3/s, Oct. 14, 15, gage height, 2.36 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12	22	9.0	201	108	224	127	497	224	48	19	31
2	10	17	9.2	174	218	208	115	438	184	43	e29	24
3	9.1	14	36	147	273	189	115	389	151	37	e42	19
4	8.5	12	30	122	281	343	133	356	e350	54	e33	16
5	7.9	11	34	106	294	3,420	128	299	e460	140	e25	13
6	7.8	12	35	94	346	1,320	134	249	372	152	e21	12
7	7.5	10	29	95	417	828	158	210	310	139	e18	12
8	6.9	10	29	92	381	743	163	185	263	110	e16	12
9	6.3	9.5	53	84	340	644	163	191	222	88	e15	15
10	6.7	9.6	221	77	303	567	139	422	184	69	e14	15
11	7.1	9.7	202	503	254	513	127	605	152	55	e13	12
12	7.8	13	158	586	223	467	214	2,060	120	45	e12	13
13	12	11	201	443	209	420	230	1,590	93	47	12	18
14	6.4	11	308	383	206	374	213	990	e84	53	13	17
15	5.2	13	248	328	218	350	187	743	e90	38	12	15
16	6.3	15	347	276	244	324	162	1,260	e140	31	14	13
17	6.7	13	459	235	254	286	141	1,380	e214	26	13	12
18	8.4	13	357	205	268	272	123	908	192	23	12	10
19	9.9	12	294	189	253	525	108	713	164	22	10	9.4
20	16	11	241	162	225	733	258	805	138	20	9.0	8.8
21	10	11	189	130	211	558	703	896	109	22	8.0	8.6
22	7.7	10	151	113	190	484	667	715	94	39	7.5	8.1
23	7.0	9.6	130	119	185	428	574	579	109	75	6.9	7.8
24	11	9.3	132	105	183	375	500	507	83	88	6.5	7.7
25	34	8.9	132	90	187	326	432	452	66	53	6.1	7.1
26	49	9.0	121	85	206	283	397	401	55	38	6.0	8.4
27	93	10	109	72	251	251	412	382	49	30	6.0	13
28	84	10	100	65	248	226	549	331	45	25	37	86
29	56	9.6	173	65	226	194	745	277	46	22	77	116
30	38	9.3	214	82	---	165	574	227	46	20	63	76
31	28	---	217	86	---	141	---	229	---	20	44	---
Total	586.2	345.5	4,968.2	5,514	7,202	16,181	8,691	19,286	4,809	1,672	620.0	635.9
Mean	18.9	11.5	160	178	248	522	290	622	160	53.9	20.0	21.2
Max	93	22	459	586	417	3,420	745	2,060	460	152	77	116
Min	5.2	8.9	9.0	65	108	141	108	185	45	20	6.0	7.1
Cfsm	0.09	0.05	0.73	0.80	1.12	2.36	1.31	2.82	0.73	0.24	0.09	0.10
In.	0.10	0.06	0.84	0.93	1.21	2.72	1.46	3.25	0.81	0.28	0.10	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	70.7	90.1	163	207	298	429	318	226	108	59.3	55.7	54.1
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	54.1	54.1	21.2	8.38	3.14	5.20	2.80
(WY)	(1992)	(1992)	(1944)	(2002)	(2002)	(2006)	(1969)	(1969)	(1999)	(1999)	(1966)	(1991)

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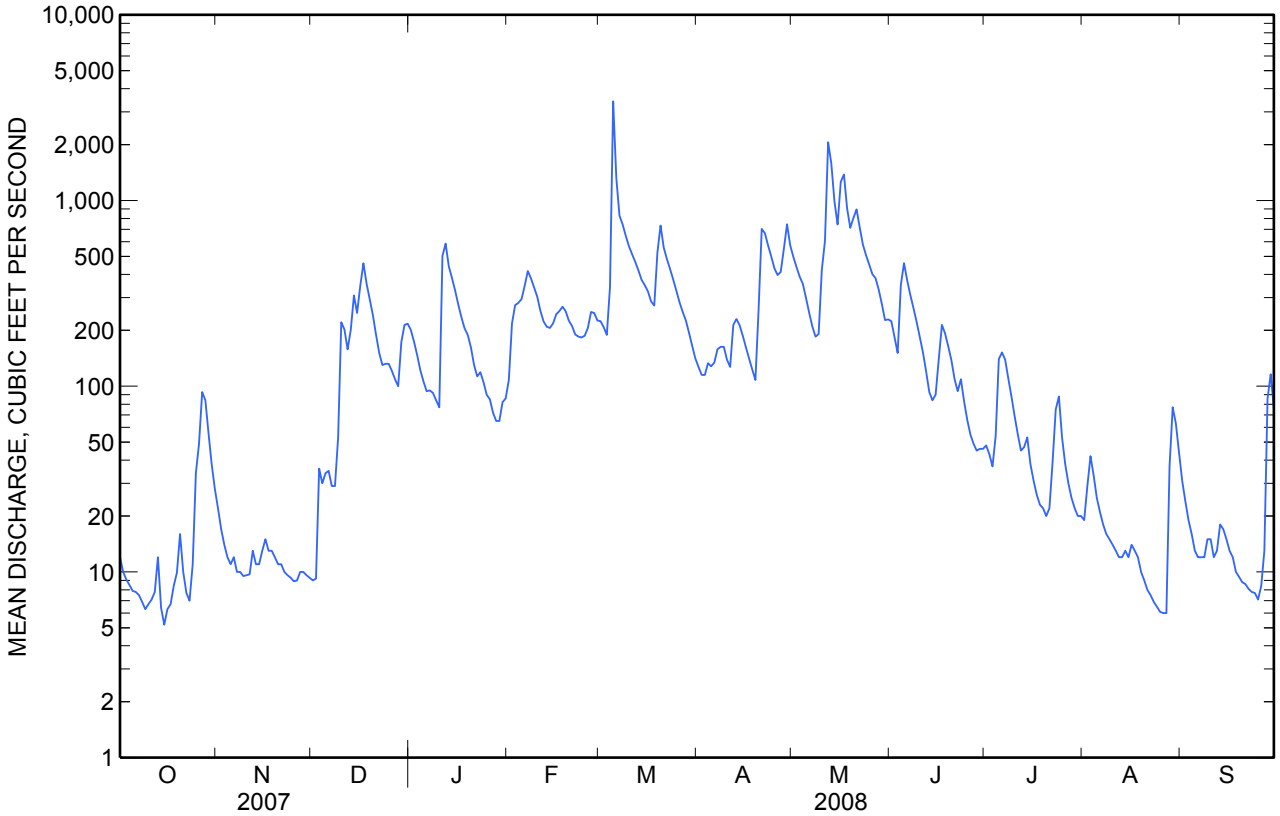
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1938 - 2008	
Annual total	46,771.3		70,510.8			
Annual mean	128		193		173	
Highest annual mean					387	1996
Lowest annual mean					35.1	1969
Highest daily mean	2,300	Apr 15	3,420	Mar 5	11,100	Oct 15, 1942
Lowest daily mean	5.2	Sep 27[a]	5.2	Oct 15	0.48	Aug 23, 1999
Annual seven-day minimum	5.9	Sep 22	6.7	Aug 21	0.87	Aug 17, 1999
Maximum peak flow			5,810	Mar 5	[b]16,000	Aug 18, 1955
Maximum peak stage			10.30	Mar 5	12.20	Aug 18, 1955
Instantaneous low flow			3.8	Oct 14	0.45	Aug 23, 1999[c]
Annual runoff (cfsm)	0.580		0.872		0.781	
Annual runoff (inches)	7.87		11.87		10.61	
10 percent exceeds	397		462		447	
50 percent exceeds	32		107		61	
90 percent exceeds	7.9		9.3		10	

[a] Also Oct. 15.

[b] From rating curve extended above 4,900 ft³/s on basis of contracted-opening measurement of peak flow.

[c] Also Aug. 24.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2005 to current year.

COOPERATION.--This site is sampled as part of the Chesapeake Bay Program's Non-Tidal Monitoring Network in cooperation with the West Virginia Department of Environmental Protection, Division of Water and Waste Management.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 2

[Remark codes: <, less than; E, estimated.]

Date	Time	Sample Type	Gage height, feet (00065)	Instantaneous discharge, ft3/s (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 unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Residue total non-filterable, mg/L (00530)
Oct											
17...	1435	Environmental	2.49	6.8	--	8.9	--	7.7	311	15.5	<10
17...	*1436*	*Replicate*	--	--	--	--	--	--	--	--	--
Nov											
06...	0845	Environmental	2.75	12	739	11.0	97	7.8	311	8.6	<10
Dec											
11...	0910	Environmental	3.79	208	750	11.7	96	7.6	242	6.3	15
20...	1350	Environmental	3.73	236	--	13.0	--	7.6	207	3.3	<10
Jan											
17...	1015	Environmental	3.73	236	749	13.3	99	7.5	187	2.3	<10
Feb											
04...	1500	Environmental	3.88	285	745	13.9	111	7.7	191	4.7	<10
12...	0940	Environmental	3.70	224	--	14.7	--	7.3	171	.0	<10
Mar											
06...	1335	Environmental	6.39	1,230	746	12.4	104	7.5	134	6.9	80
12...	0925	Environmental	4.50	466	736	12.9	106	7.4	155	5.4	14
Apr											
15...	0935	Environmental	3.70	189	748	10.8	97	7.7	199	9.6	<10
May											
14...	1410	Environmental	5.71	943	743	10.2	99	7.5	155	12.9	16
22...	0955	Environmental	5.17	734	736	10.2	97	7.5	161	11.6	<10
Jun											
17...	1005	Environmental	3.81	227	741	8.6	96	7.6	209	19.2	52
Jul											
15...	0925	Environmental	3.04	37	748	6.8	81	7.6	282	23.3	<10
15...	*0926*	*Blank*	--	--	--	--	--	--	--	--	*<10*
Aug											
12...	1000	Environmental	2.75	13	743	7.3	84	7.8	294	20.8	<10
28...	1730	Environmental	3.22	63	--	8.0	--	7.7	277	19.0	10
29...	0830	Environmental	3.32	82	744	7.8	86	7.7	283	18.9	<10
Sep											
08...	1755	Environmental	2.72	12	750	9.1	110	8.0	304	24.0	<10

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 2
[Remark codes: <, less than; E, estimated.]

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L as P (00665)	Enterococci, mEI MF, water, col/100 mL (90909)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
Oct											
17...	<.020	<.04	--	<.002	.10	<.006	.015	11	19	<.5	--
17...	*E.011*	*<.04*	--	*<.002*	*.10*	*<.006*	*.017*	--	--	--	--
Nov											
06...	<.020	.06	E.06	E.001	.21	E.004	E.007	--	32	2	.06
Dec											
11...	<.020	.63	.63	.003	.95	.006	.027	1,970	590	12	6.7
20...	E.013	.88	.88	.003	1.08	E.005	.013	E77	E67	3	1.9
Jan											
17...	<.020	.74	.74	.003	.96	E.004	.015	63	54	5	3.2
Feb											
04...	<.020	.51	.51	.002	.71	E.004	.013	59	--	4	3.1
12...	<.020	.60	E.60	E.002	.73	E.004	.011	20	--	5	3.0
Mar											
06...	E.015	.93	.92	.004	1.56	E.006	.123	1,200	630	104	345
12...	<.020	.80	E.80	E.002	1.10	E.004	.036	120	65	22	28
Apr											
15...	<.020	.19	E.19	E.001	.40	<.006	.011	23	60	2	1.0
May											
14...	<.020	.52	E.52	E.002	.86	.009	.032	270	160	15	38
22...	<.020	.42	.42	.003	.68	.007	.022	106	170	10	20
Jun											
17...	E.010	.46	.46	.006	.97	.007	.068	54	12	56	34
Jul											
15...	.030	.27	.26	.004	.53	.010	.021	25	32	4	.40
15...	*<.020*	*<.04*	--	*<.002*	*<.06*	*<.006*	*<.008*	--	--	--	--
Aug											
12...	<.020	.05	--	<.002	.23	.010	.015	--	--	2	.07
28...	E.014	.12	.12	.003	.37	.009	.030	--	--	11	1.9
29...	.021	.24	.23	.003	.51	.010	.026	--	--	5	1.1
Sep											
08...	E.014	.04	E.04	E.001	.21	E.006	.013	--	--	1	.03