Water-Data Report 2013

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 annual maxima).

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

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 624.79 ft above NAVD 88 (GPS levels). 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, 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, 4,770 ft^3/s, Oct. 30, gage height, 10.02 ft; minimum discharge, 6.6 ft^3/s, Oct. 1, gage height, 2.65 ft.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 01604500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/01604500.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.1	666	21	215	771	206	328	76	23	380	22	70
2	8.1	560	20	236	570	177	294	64	21	337	21	61
3	10	483	20	237	501	152	263	55	21	230	20	74
4	9.8	415	20	217	432	128	232	49	20	154	20	59
5	8.9	347	20	191	378	107	210	43	18	103	19	48
6	8.4	267	19	179	330	120	182	39	21	68	18	39
7	9.9	188	19	195	281	142	156	46	28	54	18	33
8	8.0	128	19	218	245	211	137	888	32	50	38	28
9	8.6	87	22	219	218	297	119	908	27	43	67	25
10	9.3	63	37	284	180	389	103	661	33	39	62	23
11	9.2	51	65	350	167	417	89	587	41	37	50	21
12	9.2	45	67	378	154	438	427	531	35	66	38	23
13	9.2	43	59	364	145	408	522	457	38	132	54	28
14	9.0	39	50	340	148	365	412	396	105	134	157	29
15	8.6	35	45	397	133	325	343	346	107	96	93	26
16	8.8	33	42	1,120	120	290	286	292	85	67	59	24
17	8.7	30	40	831	106	249	251	236	69	48	43	23
18	9.0	28	43	654	88	223	204	187	54	38	37	21
19	11	27	44	556	84	298	202	151	46	31	40	20
20	11	26	45	499	78	471	370	124	38	39	38	19
21	11	25	267	439	67	406	300	100	30	41	32	19
22	11	24	343	377	59	349	243	82	25	105	29	22
23	10	23	281	e310	55	296	208	73	20	236	31	22
24	10	23	219	255	53	250	182	62	14	142	351	21
25	10	22	181	e200	49	246	160	50	11	90	193	19
26	11	22	192	e160	51	244	126	42	10	61	134	18
27	11	23	213	130	152	341	103	37	17	44	97	17
28	14	23	205	113	217	395	93	36	31	39	102	16
29	75	22	217	143	---	364	95	32	37	33	142	16
30	2,580	22	229	229	---	326	87	28	37	28	120	15
31	944	---	218	1,360	---	313	---	25	---	24	91	---
Total	3,868.8	3,790	3,282	11,396	5,832	8,943	6,727	6,703	1,094	2,989	2,236	879
Mean	125	126	106	368	208	288	224	216	36.5	96.4	72.1	29.3
Max	2,580	666	343	1,360	771	471	522	908	107	380	351	74
Min	7.1	22	19	113	49	107	87	25	10	24	18	15
Cfsm	0.56	0.57	0.48	1.66	0.94	1.31	1.01	0.98	0.17	0.44	0.33	0.13
In.	0.65	0.64	0.55	1.92	0.98	1.51	1.13	1.13	0.18	0.50	0.38	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	71.5	90.6	167	211	292	429	318	234	109	57.7	53.7	54.3
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	14.4	22.2	54.1	54.1	21.2	8.38	3.14	5.20	2.80
(WY)	(1992)	(1992)	(1944)	(2011)	(2002)	(2006)	(1969)	(1969)	(1999)	(1999)	(1966)	(1991)

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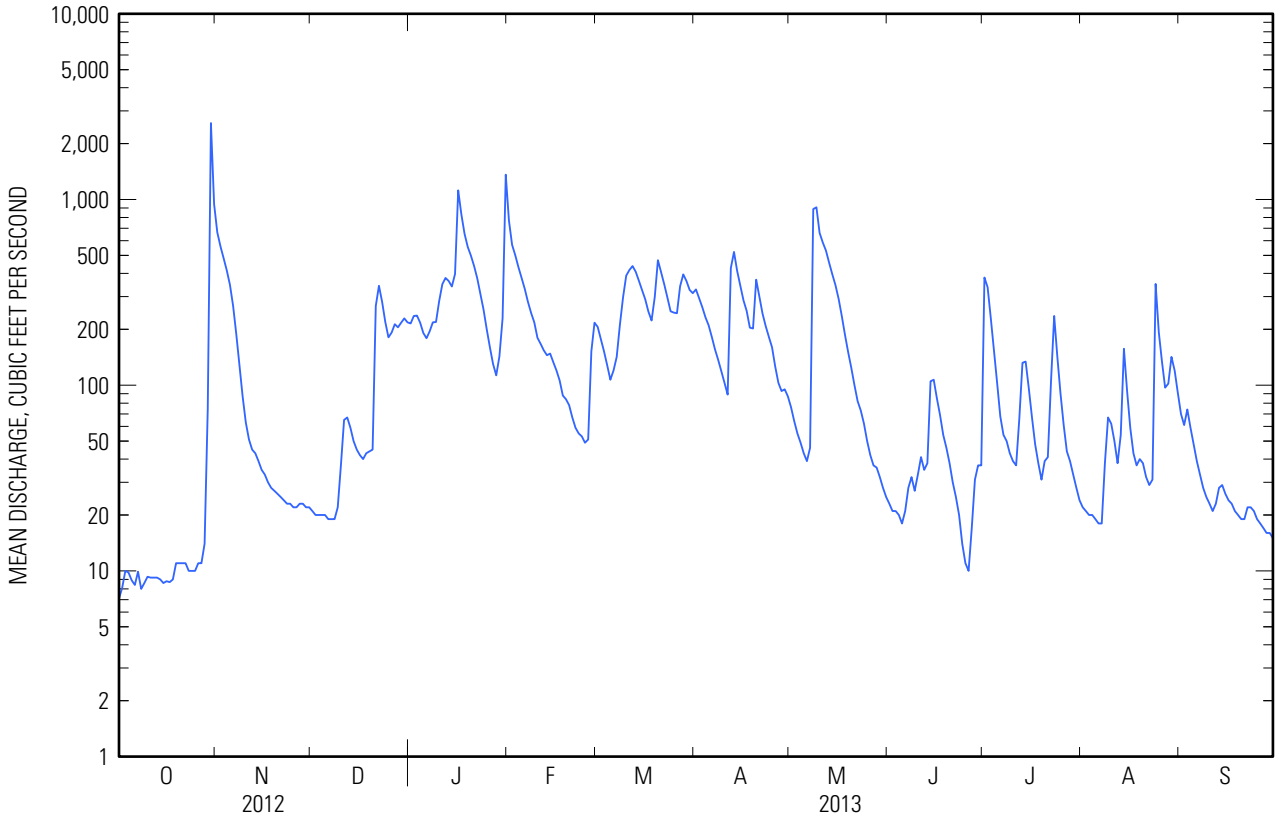
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1938 - 2013	
Annual total	49,645.5		57,739.8			
Annual mean	136		158		173	
Highest annual mean					387	1996
Lowest annual mean					35.1	1969
Highest daily mean	2,580	Oct 30	2,580	Oct 30	11,100	Oct 15, 1942
Lowest daily mean	3.8	Jul 7	7.1	Oct 1	0.48	Aug 23, 1999
Annual seven-day minimum	4.5	Jul 3	8.9	Oct 1	0.87	Aug 17, 1999
Maximum peak flow			4,770	Oct 30	[a]16,000	Aug 18, 1955
Maximum peak stage			10.02	Oct 30	12.20	Aug 18, 1955
Instantaneous low flow			6.6	Oct 1	0.45	Aug 23, 1999[b]
Annual runoff (cfsm)	0.614		0.716		0.785	
Annual runoff (inches)	8.36		9.72		10.66	
10 percent exceeds	357		379		449	
50 percent exceeds	45		68		61	
90 percent exceeds	8.6		18		10	

[a] From rating curve extended above 4,900 ft³/s on basis of contracted-opening measurement of peak flow.
[b] Also Aug. 24, 1999.



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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 2012 TO SEPTEMBER 2013

Part 1 of 4

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)
10-16-2012	**1315**	Regular	742	19.0	8.3	8.4	84	7.7	344	14.6
10-31-2012	**1625**	Regular	730	7.5	813	10.2	92	7.5	176	8.7
11-05-2012	**1645**	Regular	745	5.0	336	11.3	97	7.6	205	7.7
12-10-2012	**1625**	Regular	733	11.0	38	11.7	102	8.0	310	7.8
12-13-2012	**1434**	Blank	--	--	--	--	--	--	--	--
12-13-2012	**1435**	Regular	753	9.5	58	13.8	104	8.0	308	3.1
01-14-2013	**1735**	Regular	749	9.0	330	12.5	105	7.6	204	7.2
01-31-2013	**1555**	Regular	738	2.5	1,290	11.7	96	7.5	137	5.4
01-31-2013	**1556**	Replicate	--	--	--	--	--	--	--	--
02-11-2013	**1710**	Regular	736	15.5	168	12.6	106	7.8	210	6.4
03-12-2013	**0845**	Regular	737	8.0	421	11.1	94	7.5	190	7.2
04-15-2013	**1700**	Regular	746	19.0	334	10.3	101	7.7	184	13.8
04-15-2013	**1701**	Replicate	746	19.0	--	--	--	--	--	--
05-14-2013	**0855**	Regular	748	9.0	405	10.4	96	7.7	190	11.1
06-10-2013	**1645**	Regular	739	22.5	40	8.6	102	7.8	280	22.3
06-14-2013	**0800**	Regular	740	18.0	108	7.4	83	7.6	298	19.9
07-15-2013	**1535**	Regular	752	30.0	94	9.2	117	8.0	316	27.0
08-12-2013	**1645**	Regular	744	28.0	37	9.2	117	8.1	326	26.1
09-12-2013	**1220**	Regular	745	27.5	23	7.7	94	7.8	346	24.3

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 2 of 4

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Turbidity, water, unfiltered, monochrome near infrared LED light, 780-900 nm, detection angle 90 +/- 2.5 degrees, FNU (63680)	Gage height, ft (00065)	Suspended solids, water, unfiltered, mg/L (00530)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Ammonia, water, filtered, mg/L as NH4 (71846)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrate, water, filtered, mg/L (71851)
10-16-2012	**1315**	--	2.72	< 15	--	< .013	< .010	< .040	< .177
10-31-2012	**1625**	--	5.36	43	--	.029	.022	1.04	4.57
11-05-2012	**1645**	--	3.99	< 15	--	.016	.013	.982	4.33
12-10-2012	**1625**	--	3.00	< 15	.50	< .013	< .010	.275	1.21
12-13-2012	**1434**	--	--	--	--	< .013	< .010	< .040	< .177
12-13-2012	**1435**	--	3.19	< 15	.20	< .013	< .010	.371	1.64
01-14-2013	**1735**	--	4.03	< 15	.31	< .013	< .010	.555	2.45
01-31-2013	**1555**	77	6.69	75	2.76	.021	.016	.744	3.28
01-31-2013	**1556**	--	--	86	3.20	.022	.017	.750	3.31
02-11-2013	**1710**	6.2	3.88	< 15	.35	< .013	< .010	.668	2.95
03-12-2013	**0845**	11	4.52	< 15	.59	< .013	< .010	.499	2.20
04-15-2013	**1700**	13	4.31	< 15	.71	< .013	< .010	.392	1.71
04-15-2013	**1701**	--	4.31	< 15	.83	< .013	< .010	.395	1.74
05-14-2013	**0855**	10	4.47	< 15	.76	< .013	< .010	.401	1.77
06-10-2013	**1645**	6.5	3.34	< 15	.38	.026	.020	.161	.704
06-14-2013	**0800**	6.1	3.56	< 15	.46	.032	.025	.237	1.03
07-15-2013	**1535**	2.2	3.37	< 15	.23	< .013	< .010	.188	.818
08-12-2013	**1645**	--	3.00	< 15	.32	.019	.014	.093	.401
09-12-2013	**1220**	1.8	2.88	< 15	.26	.026	.020	.073	.316

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 3 of 4

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Nitrate, water, filtered, mg/L as N (00618)	Nitrite, water, filtered, mg/L (71856)	Nitrite, water, filtered, mg/L as N (00613)	Organic nitrogen, water, filtered, mg/L (00607)	Organic nitrogen, water, unfiltered, mg/L (00605)	Orthophosphate, water, filtered, mg/L (00660)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)
10-16-2012	**1315**	< .040	< .003	< .001	--	< .10	0.013	0.004	--	--
10-31-2012	**1625**	1.03	.017	.005	--	.50	.054	.018	--	--
11-05-2012	**1645**	.979	.012	.004	--	.30	.025	.008	--	--
12-10-2012	**1625**	.273	.005	.002	< .11	< .18	< .012	< .004	.064	.003
12-13-2012	**1434**	< .040	< .003	< .001	--	< .05	< .012	< .004	--	--
12-13-2012	**1435**	.369	.004	.001	< .10	< .15	< .012	< .004	.028	.004
01-14-2013	**1735**	.553	.007	.002	< .17	< .11	< .012	< .004	.043	.003
01-31-2013	**1555**	.742	.008	.003	.33	.53	.043	.014	.355	.024
01-31-2013	**1556**	.747	.010	.003	.32	.51	.043	.014	.360	.023
02-11-2013	**1710**	.665	.008	.003	< .15	< .14	< .012	< .004	.055	.004
03-12-2013	**0845**	.497	.005	.002	< .17	< .16	< .012	< .004	.088	.005
04-15-2013	**1700**	.387	.016	.005	< .22	< .31	< .012	< .004	.112	.004
04-15-2013	**1701**	.393	.008	.002	< .19	< .22	< .012	< .004	.106	.005
05-14-2013	**0855**	.399	.007	.002	< .29	< .25	.015	.005	.091	.008
06-10-2013	**1645**	.159	.006	.002	.16	.19	.021	.007	.037	.010
06-14-2013	**0800**	.234	.010	.003	.13	.20	.013	.004	.065	.008
07-15-2013	**1535**	.185	.010	.003	< .01	< .25	< .012	< .004	.035	.007
08-12-2013	**1645**	.091	.008	.002	.19	.19	.016	.005	.051	.009
09-12-2013	**1220**	.071	.005	.001	.19	.10	.016	.005	.036	.009

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 4 of 4

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, analytically determined, mg/L (62854)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Total nitrogen, water, unfiltered, mg/L (00600)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concen-tration, mg/L (80154)
10-16-2012	**1315**	0.011	--	0.10	--	--	1
10-31-2012	**1625**	.117	--	1.57	--	99	55
11-05-2012	**1645**	.052	--	1.29	--	--	20
12-10-2012	**1625**	< .01	.38	.45	.45	89	8
12-13-2012	**1434**	< .004	--	< .05	--	--	--
12-13-2012	**1435**	< .01	.47	.52	.49	--	1
01-14-2013	**1735**	.02	.73	.67	.77	--	4
01-31-2013	**1555**	.10	1.09	1.29	1.4	96	90
01-31-2013	**1556**	.10	1.08	1.28	1.4	94	91
02-11-2013	**1710**	< .01	.82	.80	.88	--	5
03-12-2013	**0845**	< .01	.67	.66	.75	--	11
04-15-2013	**1700**	.02	.61	.70	.72	--	23
04-15-2013	**1701**	.02	.59	.61	.70	--	24
05-14-2013	**0855**	.02	.69	.66	.78	--	12
06-10-2013	**1645**	.01	.34	.38	.38	100	5
06-14-2013	**0800**	.02	.39	.46	.45	--	6
07-15-2013	**1535**	.01	.20	.44	.24	--	2
08-12-2013	**1645**	< .01	.30	.30	.35	--	3
09-12-2013	**1220**	.02	.28	.20	.32	--	3