03184000 GREENBRIER RIVER AT HILLDALE, WV

Kanawha Basin
Greenbrier Subbasin

LOCATION.--Lat 37°38′24″, long 80°48′19″ referenced to North American Datum of 1927, Summers County, WV, Hydrologic Unit 05050003, on left bank 100 ft downstream from State Highway 3 bridge at Hilldale, 0.1 mi upstream from Howard Creek, 0.9 mi upstream from Powley Creek, 5.0 mi southeast of Hinton, and at mile 5.5.

DRAINAGE AREA.--1,619 mi^2, includes that of Howard Creek.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1936 to current year (daily discharge and peaks).

REVISED RECORDS.--WSP 1435: 1955. WDR WV-82-1: Drainage area. WDR WV-97-1: 1937(P), 1938(M), 1939(P), 1940-42(M), 1953(M), 1955(M), 1960(M), 1962-64(M), 1967(P), 1969-70(M), 1972(P), 1974(M), 1977-78(P), 1984(M). WDR WV-2005-1: 2004(P).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,388.31 ft above NAVD 88 (1,388.84 ft above NGVD 29, corrected, levels by U.S. Army Corps of Engineers).

REMARKS.--Records are good except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.85 ft, from data furnished by U.S. Army Corps of Engineers, discharge, 60,800 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 24,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 17	0130	26,500	13.77
Jan 31	2100	*48,500	*19.45
May 9	0500	27,700	14.12

Minimum discharge, 198 ft^3/s, Oct. 29, Sept. 20.

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 03184000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/03184000.2013.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	332	330	284	1,370	29,200	2,070	4,060	1,470	671	638	712	2,120
2	405	397	273	1,210	11,300	2,070	5,930	1,340	598	549	765	1,400
3	531	600	260	1,140	6,900	1,850	5,550	1,230	555	518	756	1,050
4	1,100	721	246	1,060	5,140	1,610	4,430	e1,110	536	535	620	838
5	919	815	238	903	3,910	1,430	4,040	e1,020	542	664	518	748
6	736	882	249	764	3,340	1,670	5,030	e977	541	712	446	582
7	578	849	240	787	2,910	1,770	4,880	7,470	540	639	389	484
8	487	785	240	774	2,600	1,680	4,260	23,300	631	604	385	411
9	438	713	246	743	2,390	1,620	4,000	24,100	951	596	523	364
10	411	648	255	692	2,230	1,910	4,230	13,000	1,390	561	612	327
11	412	596	286	823	2,030	2,730	4,060	8,460	3,920	688	983	314
12	394	597	469	1,780	1,830	4,440	4,830	7,850	5,190	1,090	1,440	288
13	368	797	1,080	3,920	2,060	9,480	7,690	6,710	3,860	1,660	2,520	255
14	353	1,530	1,020	5,960	2,390	8,490	6,460	5,200	5,140	1,390	1,800	256
15	313	1,700	852	5,850	2,320	5,760	5,240	4,050	7,810	1,180	1,160	243
16	293	1,220	739	18,100	2,040	4,340	5,800	3,220	4,840	829	828	249
17	284	931	660	22,000	1,830	3,790	5,690	2,720	3,230	631	734	232
18	265	759	654	11,800	1,620	5,300	4,880	2,340	4,270	569	587	216
19	270	638	818	7,190	1,390	6,230	4,530	2,420	8,890	704	522	206
20	260	548	1,270	5,150	1,360	5,980	5,080	2,080	5,480	680	473	243
21	307	484	1,570	4,100	1,380	5,830	6,190	1,900	3,390	888	425	2,170
22	331	438	4,030	3,230	1,190	4,840	5,140	1,930	2,260	1,120	458	1,910
23	309	407	3,880	2,370	1,100	3,790	4,030	1,870	1,620	1,460	665	1,440
24	298	369	2,660	1,830	1,090	3,070	3,260	2,260	1,220	2,360	696	933
25	289	366	2,480	1,450	1,050	2,720	2,690	1,930	1,020	1,830	498	715
26	263	344	3,120	1,140	1,070	2,490	2,180	1,540	1,400	1,260	419	593
27	242	324	4,000	1,060	1,150	2,200	1,780	1,320	1,280	964	365	443
28	221	305	3,260	1,080	1,500	1,930	1,550	1,130	978	955	370	368
29	224	305	2,450	1,350	---	1,830	1,510	986	816	1,530	332	315
30	270	297	2,000	3,800	---	1,970	1,550	867	758	1,250	4,180	277
31	288	---	1,690	32,600	---	2,670	---	764	---	858	3,820	---
Total	12,191	19,695	41,519	146,026	98,320	107,560	130,550	136,564	74,327	29,912	29,001	19,990
Mean	393	656	1,339	4,711	3,511	3,470	4,352	4,405	2,478	965	936	666
Max	1,100	1,700	4,030	32,600	29,200	9,480	7,690	24,100	8,890	2,360	4,180	2,170
Min	221	297	238	692	1,050	1,430	1,510	764	536	518	332	206
Cfsm	0.24	0.41	0.83	2.91	2.17	2.14	2.69	2.72	1.53	0.60	0.58	0.41
In.	0.28	0.45	0.95	3.36	2.26	2.47	3.00	3.14	1.71	0.69	0.67	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	787	1,460	2,674	3,411	3,935	5,145	3,698	2,958	1,459	756	707	510
Max	5,112	7,111	7,866	9,208	9,096	12,910	9,535	6,673	6,592	3,372	3,800	3,173
(WY)	(1977)	(2004)	(1974)	(1996)	(1994)	(1963)	(1987)	(1989)	(2003)	(1972)	(1942)	(2003)
Min	46.4	76.8	260	302	731	1,091	901	586	219	84.4	72.1	59.6
(WY)	(1954)	(1954)	(1961)	(1981)	(2002)	(2006)	(1986)	(1941)	(1999)	(1999)	(1987)	(1946)

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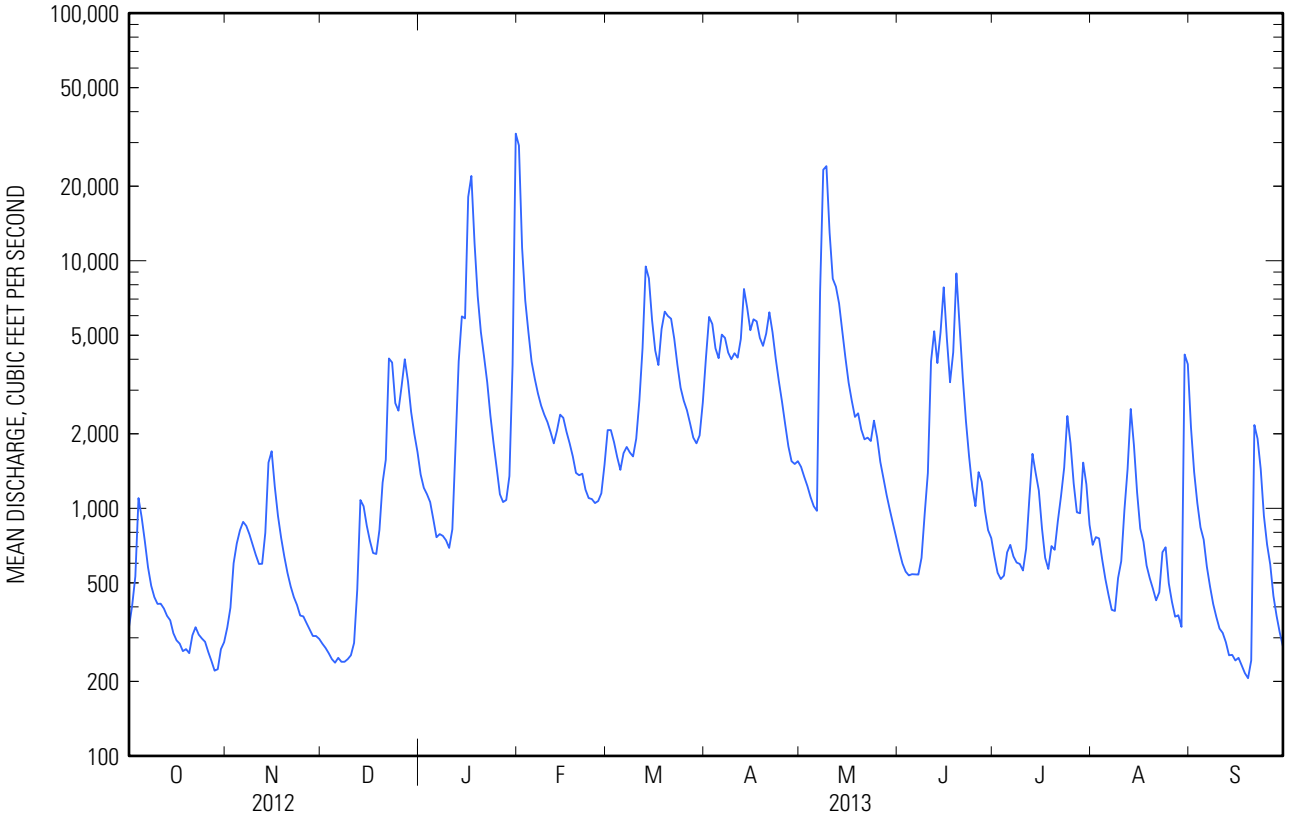
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1936 - 2013	
Annual total	701,693		845,655			
Annual mean	1,917		2,317		2,286	
Highest annual mean					4,360	2003
Lowest annual mean					1,189	1941
Highest daily mean	23,000	Mar 1	32,600	Jan 31	79,400	Jan 20, 1996
Lowest daily mean	86	Sep 5	206	Sep 19	39	Sep 19, 1946
Annual seven-day minimum	107	Aug 31	235	Sep 14	44	Oct 17, 1953
Maximum peak flow			48,500	Jan 31	[a]93,000	Jan 20, 1996
Maximum peak stage			19.45	Jan 31	26.88	Jan 20, 1996
Instantaneous low flow			198	Oct 29[b]	39	Sep 18, 1946[c]
Annual runoff (cfsm)	1.18		1.43		1.41	
Annual runoff (inches)	16.12		19.43		19.18	
10 percent exceeds	4,570		5,190		5,550	
50 percent exceeds	746		1,130		1,060	
90 percent exceeds	162		305		149	

[a] Highest since 1896.
[b] Also Sept. 20.
[c] Also Sept. 19, 20, 1946, Sept. 16, 1964.