Water-Data Report 2010

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

MASSACHUSETTS-RHODE ISLAND COASTAL BASIN
BLACKSTONE RIVER SUBBASIN

LOCATION.--Lat 42°00′22″, long 71°30′13″ referenced to North American Datum of 1927, Providence County, Hydrologic Unit 01090003, on right bank 50 ft upstream from Peters River pressure conduit at Woonsocket. Records include flow of Peters River.

DRAINAGE AREA.--416 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: February 1929 to current year. Water-quality records: Water years 1952-53, 1957-58, 1962-67.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M). WSP 871: 1938. WSP 1051: 1931.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 107.42 ft above National Geodetic Vertical Datum of 1929.

COOPERATION.--Ocean State Power.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Flow regulated by powerplants, by West Hill Reservoir since May 1961, and by other reservoirs upstream. Extremes and figures of daily discharge include flow diverted from Nashua River basin and, at times since January 1966, from Quabbin Reservoir for supply of Worcester, MA, and, prior to July 1964, flow diverted around station in Hamlet Trench.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2010: U.S. Geological Survey Water-Data Report WDR-US-2010, site 01112500, accessed at http://wdr.water.usgs.gov/wy2010/pdfs/01112500.2010.pdf

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES
[e, estimated]

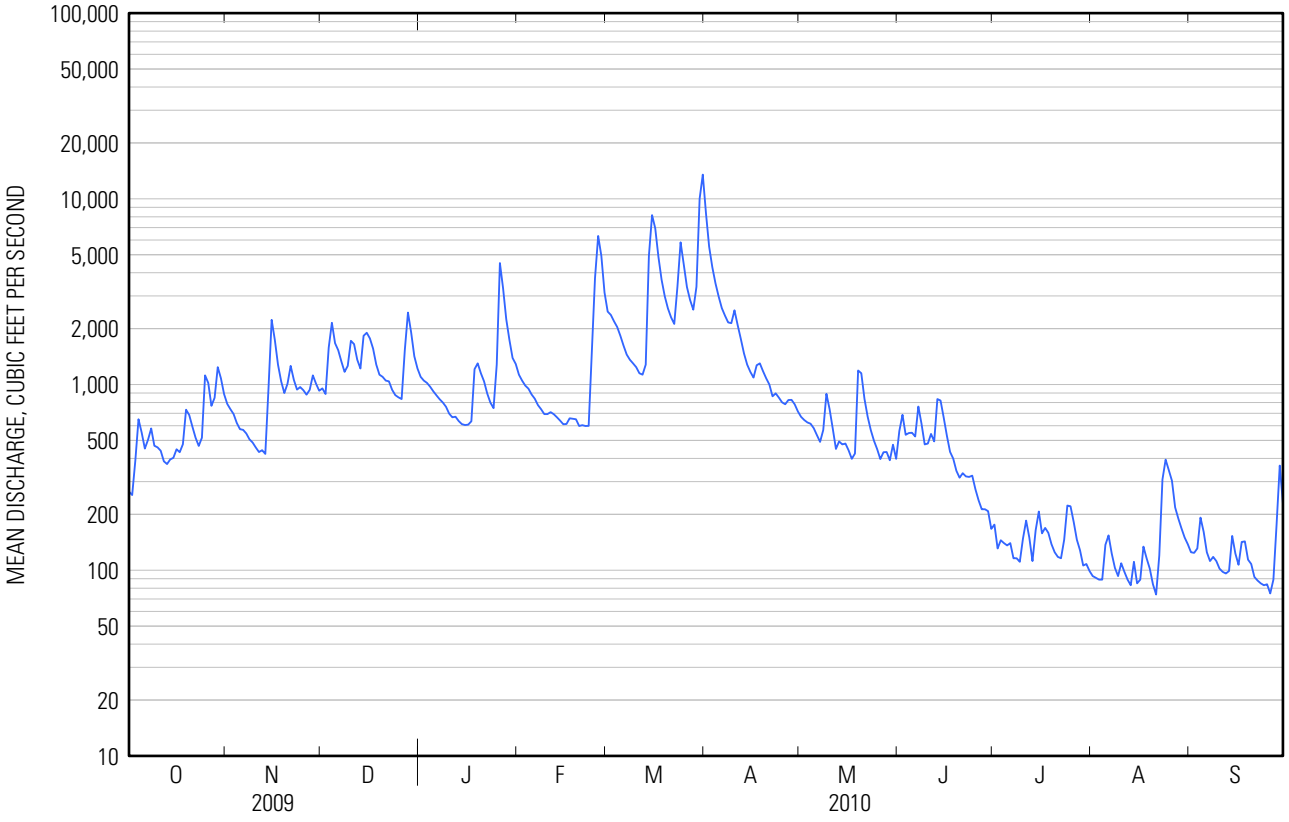
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	265	786	953	1,100	1,130	2,470	8,380	670	562	176	93	125
2	254	736	889	1,050	1,050	2,370	5,530	644	687	131	91	124
3	390	693	1,580	1,020	987	2,190	4,290	625	536	145	89	131
4	650	621	2,150	973	950	2,040	3,510	615	548	140	89	192
5	551	575	1,670	919	884	1,830	2,980	582	550	136	137	161
6	452	570	1,530	874	839	1,620	2,580	534	525	140	154	125
7	504	545	1,330	833	775	1,450	2,350	491	761	116	123	112
8	580	507	1,170	800	736	1,360	2,160	569	614	116	103	118
9	468	487	1,260	759	693	1,300	2,140	891	476	111	93	112
10	459	458	1,720	697	693	1,240	2,510	737	481	148	109	102
11	440	433	1,650	666	710	1,150	2,090	579	542	185	98	98
12	386	443	1,360	671	692	1,130	1,760	450	494	150	89	96
13	373	423	1,220	636	666	1,280	1,470	494	835	112	83	99
14	395	950	1,830	612	639	4,930	1,280	476	820	164	111	153
15	403	2,230	1,900	605	611	8,170	1,170	481	663	207	85	123
16	448	1,740	1,770	608	613	6,940	1,090	442	530	158	89	107
17	432	1,280	1,560	634	658	4,880	1,270	398	434	169	134	142
18	477	1,040	1,280	1,210	654	3,670	1,300	425	399	159	116	143
19	732	900	1,130	1,300	650	2,990	1,180	1,190	343	138	102	114
20	685	1,010	1,100	1,150	598	2,570	1,080	1,150	315	125	84	108
21	593	1,260	1,050	1,040	604	2,300	1,000	838	333	118	74	92
22	517	1,060	1,040	895	598	2,120	864	672	320	116	120	88
23	467	939	937	799	599	3,360	896	568	318	146	308	85
24	517	969	877	746	1,500	5,830	850	498	323	223	394	83
25	1,120	932	e853	1,280	3,740	4,430	802	449	273	221	346	84
26	1,020	882	e835	4,510	6,310	3,350	783	397	238	182	303	75
27	768	936	1,530	3,300	4,930	2,850	825	432	213	146	218	89
28	848	1,120	2,440	2,250	3,130	2,530	827	433	213	128	190	176
29	1,240	1,010	1,910	1,740	---	3,360	782	391	208	106	168	366
30	1,080	926	1,420	1,390	---	10,000	716	474	167	108	150	230
31	887	---	1,220	1,290	---	13,500	---	398	---	99	138	---
Total	18,401	26,461	43,164	36,357	36,639	109,210	58,465	17,993	13,721	4,519	4,481	3,853
Mean	594	882	1,392	1,173	1,309	3,523	1,949	580	457	146	145	128
Max	1,240	2,230	2,440	4,510	6,310	13,500	8,380	1,190	835	223	394	366
Min	254	423	835	605	598	1,130	716	391	167	99	74	75
Cfsm	1.43	2.12	3.35	2.82	3.15	8.47	4.68	1.40	1.10	0.35	0.35	0.31
In.	1.65	2.37	3.86	3.25	3.28	9.77	5.23	1.61	1.23	0.40	0.40	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	456	670	900	979	1,024	1,521	1,453	894	642	346	305	321
Max	2,651	2,233	2,371	3,167	2,560	4,063	3,643	1,779	2,826	2,453	2,704	1,980
(WY)	(2006)	(1956)	(1997)	(1979)	(2008)	(1936)	(1987)	(1972)	(1982)	(1938)	(1955)	(1954)
Min	123	127	186	183	262	570	461	303	136	120	71.5	103
(WY)	(1998)	(1932)	(1966)	(1981)	(1980)	(2006)	(2006)	(1930)	(1999)	(1999)	(1999)	(2007)

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1929 - 2010	
Annual total	330,566		373,264			
Annual mean	906		1,023		791	
Highest annual mean					1,249	2006
Lowest annual mean					345	1966
Highest daily mean	4,310	Jul 25	13,500	Mar 31	25,900	Aug 20, 1955
Lowest daily mean	143	Sep 26	74	Aug 21	[a]21	Aug 11, 1934
Annual seven-day minimum	160	Sep 21	85	Sep 21	55	Aug 30, 1999
Maximum peak flow			14,900	Mar 31	[b]32,900	Aug 19, 1955
Maximum peak stage			14.50	Mar 31	[c]21.80	Aug 19, 1955
Instantaneous low flow			44	Sep 2		
Annual runoff (cfsm)	2.18		2.46		1.90	
Annual runoff (inches)	29.56		33.38		25.84	
10 percent exceeds	1,650		2,210		1,700	
50 percent exceeds	830		639		545	
90 percent exceeds	270		113		161	

[a] Flow diverted around station in Hamlet Trench not included.
[b] From rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow (may be affected by failure of Horseshoe Dam on Mill River but effect appears to be minimal).
[c] From floodmarks.