Water-Data Report 2011

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.Actual GPS Coordinants: Lat 42′00′385″, Long 71′30′190″

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 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 01112500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01112500.2011.pdf

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

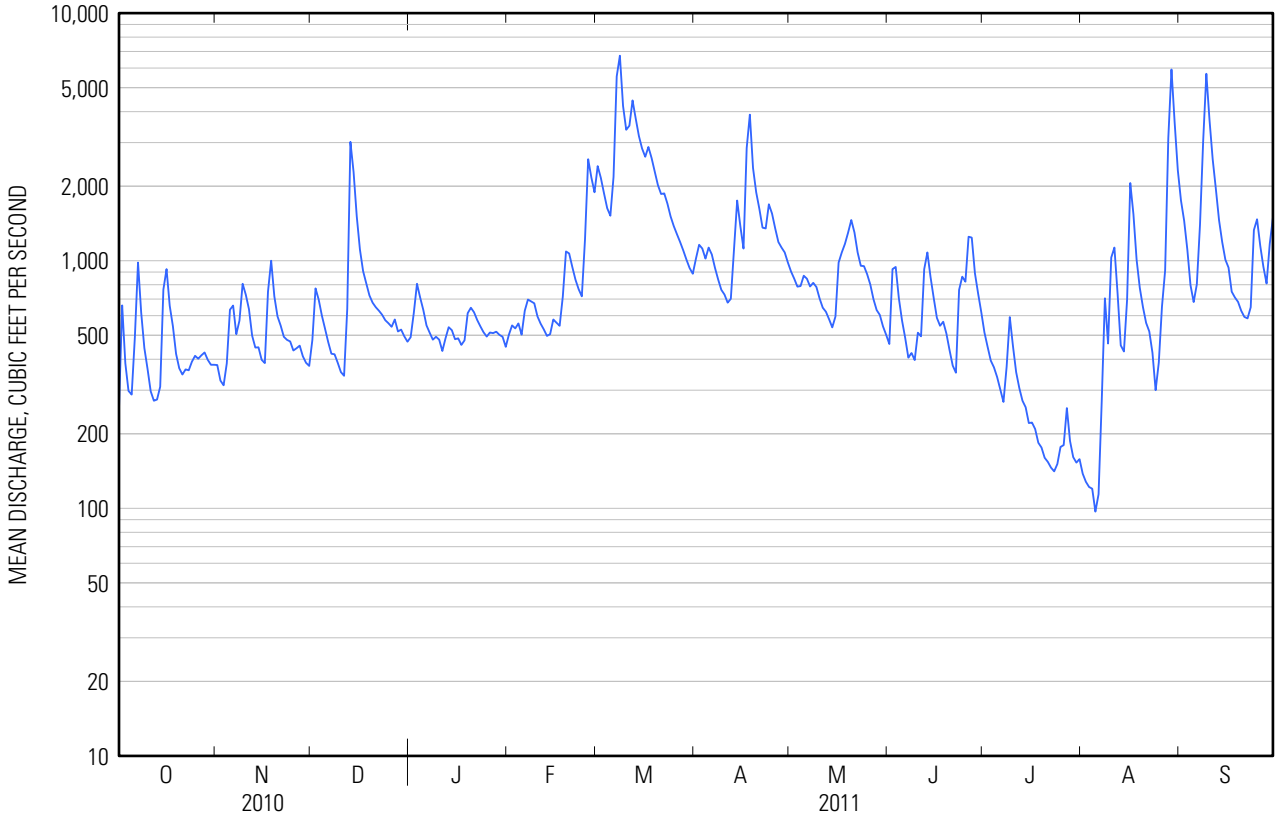
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	253	379	479	491	503	2,410	1,020	904	461	513	138	1,750
2	660	328	773	616	548	2,160	1,160	846	925	449	128	1,450
3	385	314	696	807	533	1,870	1,120	786	944	395	122	1,110
4	298	385	600	710	558	1,630	1,020	790	706	371	120	797
5	288	634	531	632	503	1,520	1,130	870	574	339	97	681
6	490	659	469	548	628	2,180	1,060	846	488	302	114	803
7	983	505	421	512	697	5,550	936	787	406	269	271	1,400
8	617	573	419	480	685	6,730	840	814	424	373	705	3,050
9	444	807	387	493	673	4,220	763	783	397	592	463	5,690
10	366	729	355	480	596	3,380	730	704	512	452	1,030	3,700
11	297	637	343	432	557	3,510	677	646	495	355	1,130	2,570
12	272	498	639	486	528	4,440	702	622	924	306	737	1,950
13	275	446	3,020	539	497	3,750	1,110	580	1,080	272	455	1,460
14	310	447	2,280	524	505	3,190	1,750	538	859	256	430	1,190
15	765	398	1,510	482	579	2,840	1,380	595	707	221	696	1,010
16	925	386	1,110	486	562	2,630	1,120	983	588	222	2,060	938
17	658	750	908	457	546	2,880	2,850	1,080	546	209	1,540	750
18	544	1,000	810	477	717	2,600	3,890	1,170	567	184	1,010	711
19	421	718	724	614	1,090	2,290	2,370	1,300	508	176	778	682
20	368	596	677	646	1,070	2,020	1,890	1,460	435	160	650	628
21	347	547	649	619	943	1,860	1,620	1,300	e377	154	561	593
22	364	493	628	576	838	1,870	1,360	1,080	e353	146	518	585
23	361	479	605	543	767	1,700	1,350	954	e762	141	425	649
24	391	472	575	514	718	1,510	1,690	951	862	151	300	1,330
25	413	434	559	494	1,220	1,380	1,550	882	823	177	388	1,470
26	402	443	541	513	2,570	1,280	1,350	801	1,250	180	652	1,150
27	415	454	579	510	2,170	1,190	1,190	699	1,240	254	914	944
28	426	411	518	517	1,890	1,100	1,130	632	890	187	3,130	809
29	398	387	527	502	---	1,010	1,080	604	738	161	5,920	1,170
30	380	376	495	493	---	934	983	543	620	153	3,620	1,490
31	380	---	471	449	---	886	---	502	---	158	2,320	---
Total	13,896	15,685	23,298	16,642	23,691	76,520	40,821	26,052	20,461	8,278	31,422	42,510
Mean	448	523	752	537	846	2,468	1,361	840	682	267	1,014	1,417
Max	983	1,000	3,020	807	2,570	6,730	3,890	1,460	1,250	592	5,920	5,690
Min	253	314	343	432	497	886	677	502	353	141	97	585
Cfsm	1.08	1.26	1.81	1.29	2.03	5.93	3.27	2.02	1.64	0.64	2.44	3.41
In.	1.24	1.40	2.08	1.49	2.12	6.84	3.65	2.33	1.83	0.74	2.81	3.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	456	669	898	974	1,022	1,533	1,451	893	643	345	314	334
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 2010		Water Year 2011		Water Years 1929 - 2011	
Annual total	338,117		339,276			
Annual mean	926		930		793	
Highest annual mean					1,249	2006
Lowest annual mean					345	1966
Highest daily mean	13,500	Mar 31	6,730	Mar 8	25,900	Aug 20, 1955
Lowest daily mean	74	Aug 21	97	Aug 5	[a]21	Aug 11, 1934
Annual seven-day minimum	85	Sep 21	125	Jul 31	55	Aug 30, 1999
Maximum peak flow			8,320	Mar 8	[b]32,900	Aug 19, 1955
Maximum peak stage			10.29	Mar 8	[c]21.80	Aug 19, 1955
Instantaneous low flow			53	Aug 5		
Annual runoff (cfsm)	2.23		2.23		1.91	
Annual runoff (inches)	30.24		30.34		25.89	
10 percent exceeds	2,210		1,880		1,700	
50 percent exceeds	534		634		546	
90 percent exceeds	113		308		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.