Water-Data Report 2011

01168500 DEERFIELD RIVER AT CHARLEMONT, MA

CONNECTICUT RIVER BASIN
DEERFIELD RIVER SUBBASIN

LOCATION.--Lat 42°37'33.6", long 72°51'15.1", Franklin County, MA, Hydrologic Unit 01080203, on left bank 0.8 mi east of Charlemont, 2.5 mi downstream from Chickley River, and at mile 24.5.

DRAINAGE AREA.--361 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: June 1913 to current year. Water-quality records: Water years 1954-55, 1958, 1967-69, 1995.

REVISED RECORDS.--WSP 781: 1915(M). WSP 1301: 1918(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 517.36 ft above National Geodetic Vertical Datum of 1929.

COOPERATION.--Trans Canada Hydro of New England.

REMARKS.--Records fair except those for estimated daily discharge and those for discharges greater than 20,000 cfs, which are poor. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants upstream.

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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	3,180	1,210	3,270	1,250	1,010	898	1,970	2,380	e335	1,190	529	2,340
2	1,620	1,140	4,770	1,370	1,060	973	1,360	1,970	e367	787	293	2,180
3	649	1,060	2,670	1,380	1,030	905	1,290	1,670	e280	694	342	1,630
4	388	1,110	2,390	1,370	921	906	1,510	1,470	181	621	243	1,400
5	323	2,000	2,150	1,230	e850	883	2,110	1,640	169	616	262	2,720
6	595	1,590	2,020	1,210	e892	1,620	2,300	1,640	250	536	289	7,590
7	1,110	1,270	1,970	1,330	1,020	7,770	2,120	1,320	197	535	384	10,000
8	714	1,260	1,810	1,260	947	3,570	1,910	945	165	747	608	9,380
9	462	663	1,740	1,350	1,010	2,760	2,070	807	155	566	568	4,800
10	384	455	1,740	1,090	1,000	2,800	2,320	822	189	346	321	2,760
11	278	852	1,850	1,160	1,100	5,750	2,980	752	661	422	300	2,360
12	352	906	2,350	1,250	1,060	5,040	3,730	634	1,080	462	239	2,280
13	661	955	4,900	1,150	1,080	3,640	3,140	e443	572	330	255	2,060
14	761	923	3,190	1,160	1,000	3,200	2,570	394	469	308	247	2,100
15	2,680	935	2,680	1,210	1,150	2,870	2,060	473	697	305	699	2,120
16	2,790	925	2,290	1,140	964	3,140	1,760	1,530	798	284	1,550	1,990
17	1,830	1,670	2,110	1,150	928	3,480	4,040	1,430	672	280	921	1,320
18	1,390	1,830	1,980	e956	984	4,730	3,250	1,910	776	448	633	1,890
19	1,150	1,440	1,910	e883	1,220	4,890	2,840	2,980	667	274	766	1,220
20	816	1,270	1,920	987	1,140	3,210	2,870	2,940	515	289	844	594
21	865	1,130	1,910	981	1,200	2,700	2,340	2,470	571	346	780	631
22	985	1,090	1,490	1,140	1,100	2,140	2,250	1,790	1,070	775	1,510	990
23	878	1,130	1,810	1,090	1,130	2,140	2,500	1,610	3,540	323	879	1,440
24	863	1,080	1,640	1,130	976	1,950	3,170	1,140	2,910	283	1,100	1,920
25	674	980	1,660	1,200	852	1,750	3,560	911	2,850	298	1,350	1,290
26	890	1,140	1,520	962	765	2,620	3,190	1,050	2,990	252	1,830	1,140
27	1,590	1,110	1,540	901	868	2,730	3,940	745	2,250	272	1,840	901
28	1,840	1,260	1,490	934	814	2,740	3,870	589	1,690	255	e22,400	1,140
29	1,370	1,090	1,500	929	---	2,600	3,910	612	1,810	264	e15,000	4,020
30	1,220	1,400	1,420	1,220	---	2,520	2,900	577	1,540	281	e4,050	3,390
31	1,210	---	1,390	899	---	1,830	---	413	---	315	2,510	---
Total	34,518	34,874	67,080	35,272	28,071	88,755	79,830	40,057	30,416	13,704	63,542	79,596
Mean	1,113	1,162	2,164	1,138	1,003	2,863	2,661	1,292	1,014	442	2,050	2,653
Max	3,180	2,000	4,900	1,380	1,220	7,770	4,040	2,980	3,540	1,190	22,400	10,000
Min	278	455	1,390	883	765	883	1,290	394	155	252	239	594
Cfsm	3.08	3.22	5.99	3.15	2.78	7.93	7.37	3.58	2.81	1.22	5.68	7.35
In.	3.56	3.59	6.91	3.63	2.89	9.15	8.23	4.13	3.13	1.41	6.55	8.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	635	861	1,032	1,025	997	1,398	1,868	1,108	675	469	495	500
Max	2,766	2,123	2,216	2,092	2,450	3,642	4,106	2,889	1,820	1,611	2,050	2,653
(WY)	(1956)	(1956)	(2009)	(1978)	(1981)	(1921)	(1914)	(1943)	(1998)	(1915)	(2011)	(2011)
Min	90.8	177	133	363	268	429	529	280	188	78.1	131	74.0
(WY)	(1915)	(1915)	(1915)	(1914)	(1919)	(1931)	(1995)	(1995)	(1941)	(1962)	(1964)	(1953)

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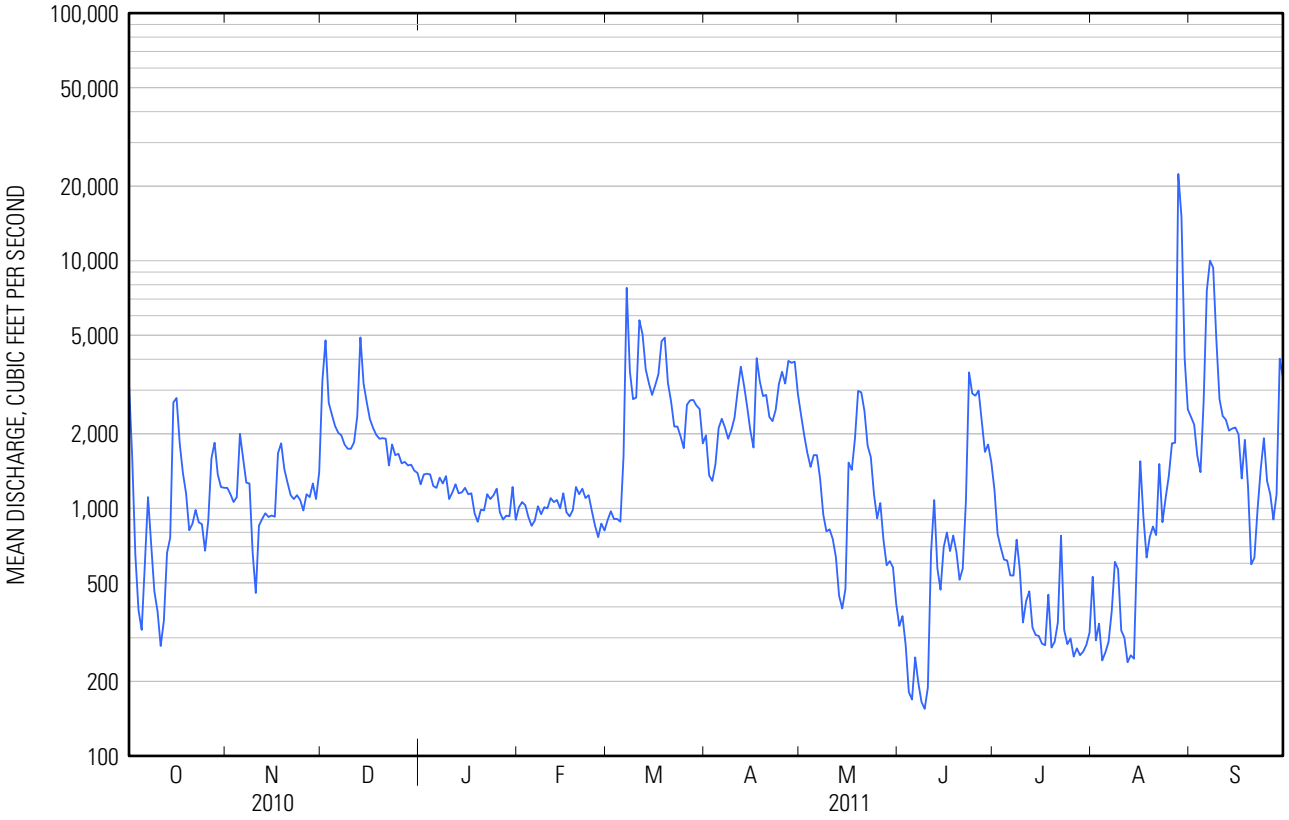
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1913 - 2011	
Annual total	393,379		595,715			
Annual mean	1,078		1,632		922	
Highest annual mean					1,632	2011
Lowest annual mean					455	1965
Highest daily mean	8,430	Mar 31	22,400	Aug 28	31,100	Dec 31, 1948
Lowest daily mean	127	Sep 21	155	Jun 9	5.0	Jun 17, 1921
Annual seven-day minimum	162	Sep 20	187	Jun 4	34	Sep 19, 1953
Maximum peak flow			[a]54,000	Aug 28	[a]56,300	Sep 21, 1938
Maximum peak stage			[b]20.17	Aug 28	[b]20.17	Sep 21, 1938
Instantaneous low flow			113	Jul 20[c]		
Annual runoff (cfsm)	2.99		4.52		2.55	
Annual runoff (inches)	40.54		61.39		34.69	
10 percent exceeds	2,310		3,050		1,740	
50 percent exceeds	799		1,160		707	
90 percent exceeds	253		339		200	

[a] From rating curve extended above 31,000 ft³/s on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft and 20.17 ft.
[b] From floodmarks.
[c] Also occurred June 9, 2011.