Water-Data Report 2011

01173500 WARE RIVER AT GIBBS CROSSING, MA

CONNECTICUT RIVER BASIN
CHICOPEE RIVER SUBBASIN

LOCATION.--Lat 42°14′10″, long 72°16′23″ referenced to North American Datum of 1927, Hampshire County, MA, Hydrologic Unit 01080204, on right bank 0.5 mi upstream from Gibbs Crossing, 1.8 mi upstream from Beaver Brook, 2.5 mi southwest of Ware, and 8.8 mi upstream from mouth.

DRAINAGE AREA.--197 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: August 1912 to current year. Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 1031: 1944. WSP 1301: 1914(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 379.79 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1930, at site 0.5 mi downstream at different datum.

COOPERATION.--Massachusetts Department of Conservation and Recreation, Office of Water Resources; and Massachusetts Department of Environmental Protection, Office of Watershed Management.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion at times: Since March 1931 from 96.3 mi^2 for supply of metropolitan Boston area and since 1955 from 6.5 mi^2 for municipal supply of Fitchburg. Flow regulated by mills upstream and by Barre Falls Reservoir (see station 01172500) since 1958.

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 01173500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01173500.2011.pdf

01173500 WARE RIVER AT GIBBS CROSSING, MA—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	192	116	214	189	181	e731	570	519	257	340	128	641
2	313	148	434	203	181	e798	640	450	953	294	118	698
3	261	130	469	e219	200	e750	656	440	536	259	124	662
4	193	147	389	e211	191	e671	681	418	356	214	117	620
5	116	270	320	e202	193	e468	894	467	301	233	112	574
6	139	324	290	e211	208	e819	881	456	269	238	107	734
7	193	297	237	e222	227	4,200	780	427	231	225	119	860
8	212	293	e210	208	215	2,980	671	408	226	270	119	2,420
9	163	358	e199	e197	212	1,610	585	404	224	252	129	2,580
10	137	363	e189	e182	209	1,350	542	369	298	197	229	1,220
11	98	327	186	e182	197	1,750	512	327	260	189	172	931
12	119	273	191	181	195	1,980	467	330	344	148	193	837
13	101	248	634	e177	201	1,730	508	277	324	158	151	799
14	94	235	698	e197	206	1,480	627	264	274	191	122	784
15	139	224	e570	e197	220	1,290	753	374	279	139	275	760
16	293	193	e486	e187	217	1,400	550	831	299	144	539	719
17	282	294	e393	e195	214	1,750	1,180	870	246	135	385	684
18	242	409	e335	e184	e247	1,640	1,190	1,050	305	150	272	685
19	211	369	e297	e195	318	1,710	1,090	930	242	131	233	663
20	118	307	e289	e197	381	1,440	1,150	917	216	133	193	724
21	158	273	262	178	e285	1,250	1,010	873	192	132	150	691
22	143	246	242	206	e275	1,240	808	752	190	128	168	475
23	136	225	204	202	e279	1,230	735	589	622	125	130	399
24	107	229	e202	191	e293	1,150	900	584	713	124	130	845
25	141	211	e204	199	e470	1,200	837	587	602	132	111	754
26	112	186	190	205	e647	1,190	739	482	646	173	215	567
27	135	216	189	199	e552	1,140	682	407	579	131	253	590
28	181	218	256	198	e521	1,090	660	379	463	157	1,890	533
29	180	200	246	192	---	1,140	649	346	596	125	2,070	506
30	172	191	e211	185	---	1,110	571	316	508	136	944	602
31	160	---	e216	190	---	779	---	287	---	127	590	---
Total	5,241	7,520	9,452	6,081	7,735	43,066	22,518	16,130	11,551	5,530	10,488	24,557
Mean	169	251	305	196	276	1,389	751	520	385	178	338	819
Max	313	409	698	222	647	4,200	1,190	1,050	953	340	2,070	2,580
Min	94	116	186	177	181	468	467	264	190	124	107	399
Cfsm	0.86	1.27	1.55	1.00	1.40	7.05	3.81	2.64	1.95	0.91	1.72	4.16
In.	0.99	1.42	1.78	1.15	1.46	8.13	4.25	3.05	2.18	1.04	1.98	4.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	177	260	325	341	336	545	613	379	261	150	128	144
Max	976	922	1,295	976	1,053	1,838	1,420	830	746	714	890	1,707
(WY)	(2006)	(1956)	(1997)	(2006)	(2008)	(1936)	(2005)	(1996)	(1984)	(1938)	(1955)	(1938)
Min	29.0	37.6	68.5	29.6	77.7	210	231	167	60.4	30.9	16.0	14.5
(WY)	(1965)	(2002)	(1966)	(1981)	(1980)	(1989)	(1966)	(1965)	(1999)	(1999)	(1999)	(1953)

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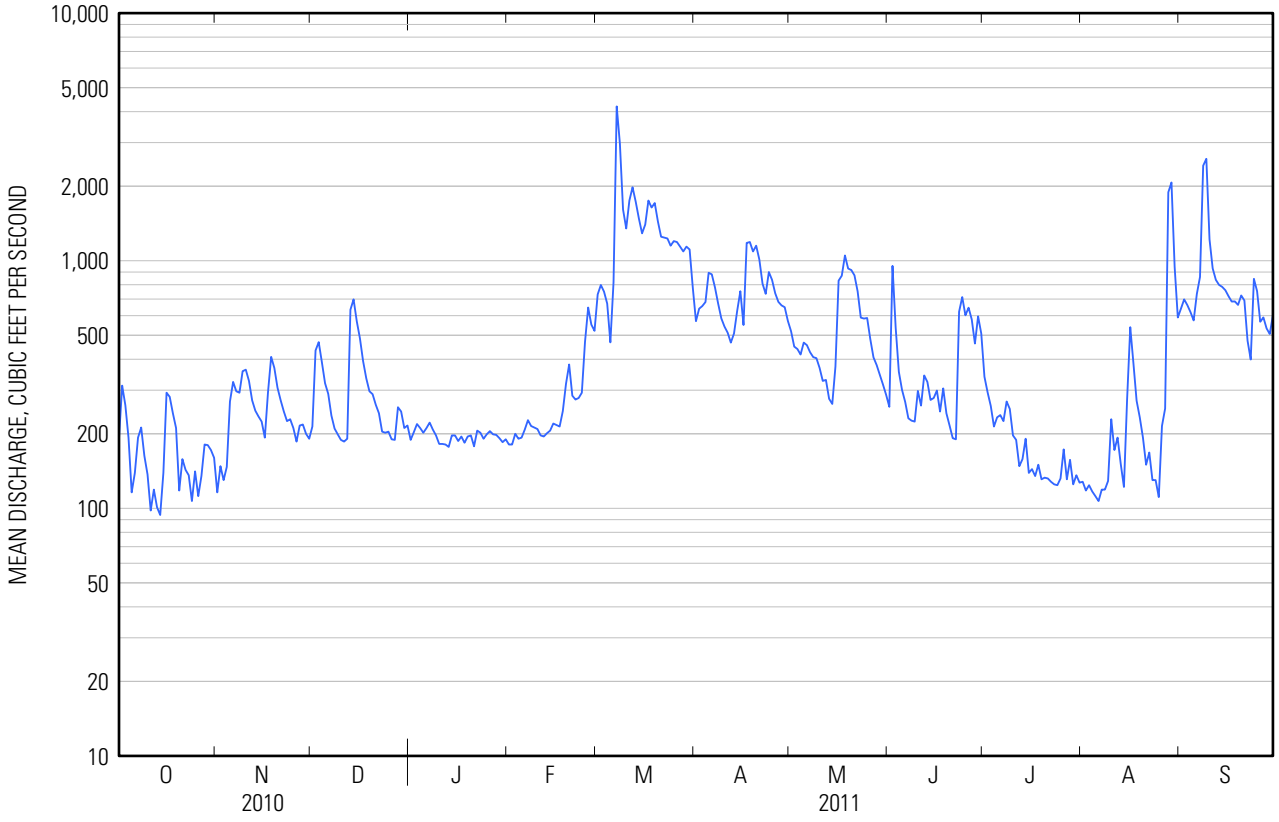
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1931 - 2011	
Annual total	125,424		169,869			
Annual mean	344		465		304	
Highest annual mean					581	1938
Lowest annual mean					107	1965
Highest daily mean	2,650	Mar 31	4,200	Mar 7	16,700	Sep 21, 1938
Lowest daily mean	37	Sep 25	94	Oct 14	7.0	Sep 12, 1953
Annual seven-day minimum	42	Sep 22	117	Aug 2	9.4	Sep 8, 1953
Maximum peak flow			5,530	Mar 7	[a]22,700	Sep 21, 1938
Maximum peak stage			8.73	Mar 7	[b]18.20	Sep 21, 1938
Instantaneous low flow			65	Oct 11[c]	4.2	Aug 24, 1995
Annual runoff (cfsm)	1.74		2.36		1.55	
Annual runoff (inches)	23.68		32.08		21.00	
10 percent exceeds	1,040		948		650	
50 percent exceeds	206		275		220	
90 percent exceeds	66		136		50	

[a] From rating curve extended above 4,600 ft³/s on basis of contracted-opening measurement at gage height 12.83 ft and slope-area measurement at gage height 18.20 ft.
[b] From floodmarks.
[c] Also occurred on Oct. 12, 2011.