Water-Data Report 2013

01101000 PARKER RIVER AT BYFIELD, MA

MASSACHUSETTS-RHODE ISLAND COASTAL BASIN
PARKER RIVER SUBBASIN

LOCATION.--Lat 42°45′10″, long 70°56′46″ referenced to North American Datum of 1927, Essex County, MA, Hydrologic Unit 01090001, on left bank 1,400 ft downstream from dam, 0.5 mi south of Byfield, 0.7 mi upstream from Wheeler Brook, and 5.5 mi southwest of Newburyport.

DRAINAGE AREA.--21.3 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: October 1945 to current year. October 1945 monthly discharge only, published in WSP 1301. Water-quality records: water years 2003-04.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area; WDR MA-RI-00-1: 1999.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 23.46 ft above National Geodetic Vertical Datum of 1929 (levels by Massachusetts Department of Public Works).

COOPERATION.--Massachusetts Department of Conservation and Recreation, Office of Water Resources.

REMARKS.--Records fair except those for estimated daily discharges, and those for daily discharges less than 1.0 cfs, which are poor. Occasional regulation by mills and ponds upstream.

01101000 PARKER RIVER AT BYFIELD, MA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

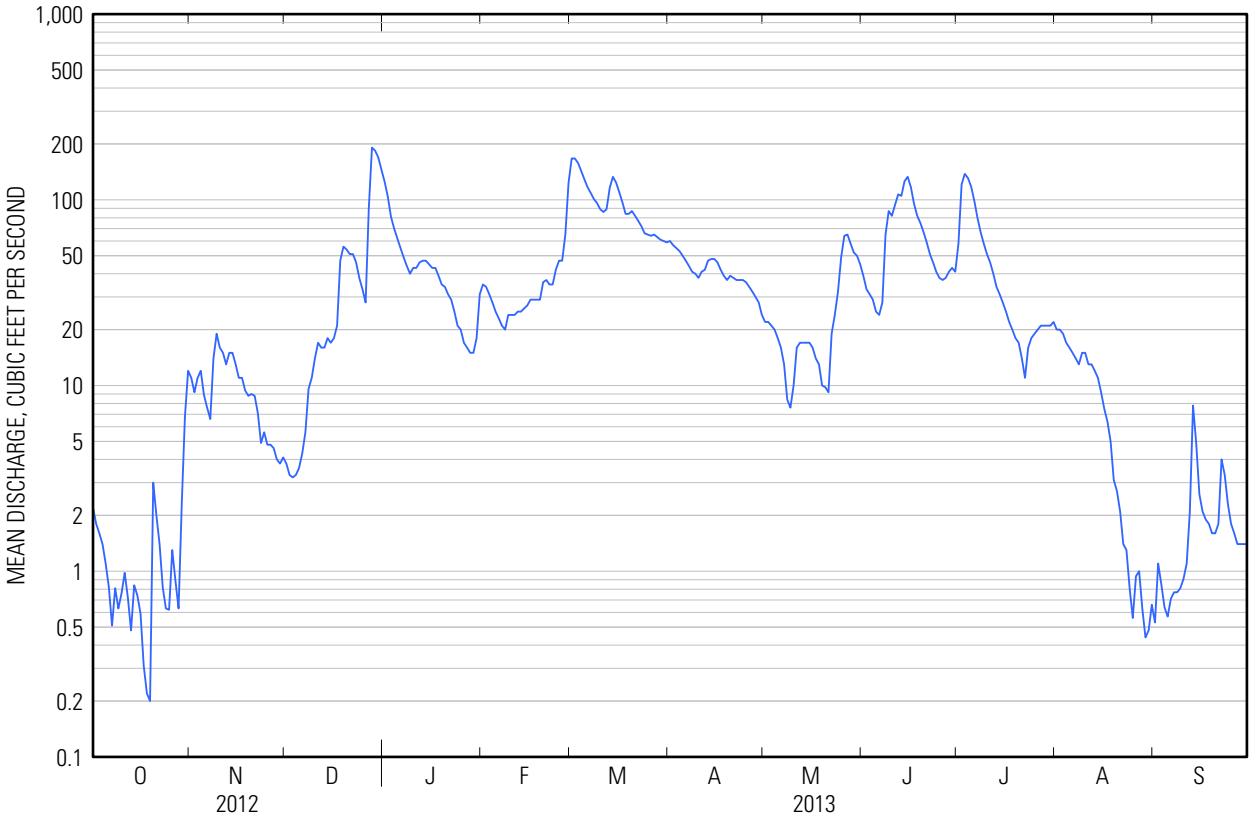
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.2	11	e3.8	125	35	167	60	22	39	58	20	0.53
2	1.8	9.2	e3.3	104	e34	167	57	22	33	121	20	1.1
3	1.6	11	e3.2	e81	31	158	55	21	31	138	19	0.85
4	1.4	12	3.3	70	28	143	53	20	29	131	17	0.64
5	1.1	8.9	3.6	62	25	129	50	18	25	118	16	0.57
6	0.82	7.6	4.3	55	23	117	47	16	24	99	15	0.71
7	0.51	6.6	5.6	49	21	109	44	13	28	80	14	e0.77
8	0.81	14	9.6	44	20	101	41	8.4	65	67	13	e0.77
9	0.63	19	11	40	24	96	40	7.6	87	58	15	e0.81
10	0.76	16	14	43	24	89	38	10	82	51	15	e0.91
11	0.98	15	17	43	24	86	41	16	94	46	13	e1.1
12	0.72	13	16	46	25	89	42	17	107	40	13	e2.1
13	0.48	15	16	47	25	116	47	17	105	34	12	e7.8
14	0.84	15	18	47	26	133	48	17	126	31	11	e4.9
15	0.74	13	17	45	27	124	48	17	133	28	9.2	e2.6
16	0.59	11	18	43	29	110	46	16	117	25	7.5	e2.1
17	0.31	11	21	43	29	97	42	14	95	22	6.4	e1.9
18	0.22	9.4	47	39	29	84	39	13	82	20	5.0	e1.8
19	0.20	8.8	56	35	29	84	37	10	75	18	3.1	e1.6
20	3.0	9.0	54	34	36	87	39	9.8	67	17	2.7	e1.6
21	2.0	8.8	51	31	37	82	38	9.2	59	14	2.1	e1.8
22	1.4	7.1	51	29	35	77	37	19	51	11	1.4	e4.0
23	e0.82	4.9	46	25	35	72	37	24	46	16	1.3	e3.3
24	0.63	e5.6	38	21	42	66	37	32	41	18	0.81	e2.3
25	0.62	e4.8	33	20	47	65	36	49	38	19	0.56	e1.8
26	1.3	e4.8	28	17	47	64	34	64	37	20	0.94	e1.6
27	0.89	e4.6	90	16	65	65	32	65	38	21	1.0	e1.4
28	0.63	e4.0	191	15	123	63	30	58	41	21	0.63	e1.4
29	2.3	e3.8	184	15	---	61	28	52	43	21	0.44	e1.4
30	6.8	e4.1	169	18	---	60	24	50	41	21	0.48	e1.4
31	12	---	145	31	---	59	---	45	---	22	0.66	---
Total	49.10	288.0	1,367.7	1,333	975	3,020	1,247	772.0	1,879	1,406	257.22	55.56
Mean	1.58	9.60	44.1	43.0	34.8	97.4	41.6	24.9	62.6	45.4	8.30	1.85
Max	12	19	191	125	123	167	60	65	133	138	20	7.8
Min	0.20	3.8	3.2	15	20	59	24	7.6	24	11	0.44	0.53
Cfsm	0.07	0.45	2.07	2.02	1.63	4.57	1.95	1.17	2.94	2.13	0.39	0.09
In.	0.09	0.50	2.39	2.33	1.70	5.27	2.18	1.35	3.28	2.46	0.45	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.2	30.6	44.3	44.4	51.1	86.7	83.9	51.6	30.8	10.7	6.55	6.85
Max	186	87.3	117	116	126	269	249	230	155	79.0	38.9	65.8
(WY)	(1997)	(1973)	(1997)	(1958)	(2008)	(2010)	(1987)	(2006)	(2006)	(2009)	(2009)	(1954)
Min	0.15	0.76	1.74	2.98	5.25	24.8	25.2	14.8	2.86	0.43	0.13	0.11
(WY)	(1998)	(2002)	(1966)	(1966)	(1980)	(2004)	(1985)	(2001)	(1999)	(1999)	(1995)	(1997)

01101000 PARKER RIVER AT BYFIELD, MA—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1946 - 2013	
Annual total	8,579.71		12,649.58			
Annual mean	23.4		34.7		38.6	
Highest annual mean					67.4	2006
Lowest annual mean					13.2	1966
Highest daily mean	191	Dec 28	191	Dec 28	858	Oct 22, 1996
Lowest daily mean	0.10	Jul 31	0.20	Oct 19	0.01	Aug 18, 2010
Annual seven-day minimum	0.23	Jul 25	0.48	Oct 13	0.01	Aug 16, 2010
Maximum peak flow			211	Dec 28	883	Oct 22, 1996
Maximum peak stage			3.63	Dec 28	7.85	May 15, 2006
Instantaneous low flow			[a]0.11	Oct 19		
Annual runoff (cfsm)	1.10		1.63		1.81	
Annual runoff (inches)	14.98		22.09		24.60	
10 percent exceeds	56		88		91	
50 percent exceeds	15		22		24	
90 percent exceeds	0.73		1.1		1.3	

[a] May have been less during periods of estimated daily discharge in September, 2013.