Water-Data Report 2013

01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH

Merrimack Basin
Merrimack Subbasin

LOCATION.--Lat 42°56′53″, long 71°27′50″ referenced to North American Datum of 1927, Hillsborough County, NH, Hydrologic Unit 01070002, on right bank, 600 ft upstream from bridge on Interstate Highway 293, 0.8 mi downstream from Bowman Brook, 1.3 mi north of Goffs Falls, 2.2 mi downstream from Piscataquog River, and 3.0 mi south of Manchester City Hall on Elm Street.

DRAINAGE AREA.--3,092 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: October 1936 to current year. October 1936 monthly discharge only, published in WSP 1301.

REVISED RECORDS.--WSP 1231: 1937. WSP 1271: 1937(M, m).

GAGE.--Water-stage recorder. Datum of gage is 109.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges which are poor. Flow regulated by power plants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft^3/s, March 20, 1936, gage height, 35.19 ft, from floodmarks, from rating curve extended above 48,000 ft^3/s on basis of computation of flow over dam at gage heights 25.87 ft and 35.19 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,500 ft^3/s, Nov. 1, gage height, 9.11 ft; minimum daily discharge, 1,340 ft^3/s, Aug. 25.

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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	2,950	22,000	2,140	4,960	9,050	3,860	10,100	4,490	6,610	13,700	4,580	2,720
2	2,860	20,200	1,860	e4,200	12,200	3,850	14,200	4,520	5,690	12,800	4,880	4,820
3	3,100	14,900	2,110	e3,940	9,470	3,850	14,800	4,390	6,030	16,800	5,070	6,450
4	2,810	10,900	2,840	e3,540	7,310	3,720	12,500	4,260	7,400	21,200	4,650	5,800
5	3,140	8,590	3,120	e3,900	e5,530	3,520	10,300	3,910	6,260	17,400	4,050	4,740
6	3,040	7,280	3,080	e4,010	4,720	3,420	9,100	3,830	5,310	12,800	3,550	3,630
7	2,830	6,270	3,300	e3,790	e4,100	3,400	8,590	3,670	5,210	8,750	2,920	3,310
8	2,670	5,980	2,840	e3,500	e4,050	3,390	8,020	3,470	8,440	8,220	2,740	3,060
9	2,680	5,620	3,000	e3,380	e2,970	3,330	8,090	3,520	12,400	11,000	2,930	2,850
10	2,970	5,340	3,070	3,490	e3,480	3,460	10,900	4,200	10,600	11,800	4,460	2,640
11	3,260	4,920	4,040	3,560	e3,480	3,770	15,600	4,420	9,890	10,300	5,190	2,570
12	3,250	4,720	5,260	3,660	3,640	4,390	17,500	4,230	13,200	11,000	3,810	3,060
13	2,800	4,330	4,810	3,730	3,770	7,920	16,500	5,930	15,700	9,680	3,180	5,570
14	2,720	4,370	4,080	4,360	3,780	15,600	14,800	4,820	14,500	7,800	3,220	7,450
15	2,850	4,410	3,570	5,270	3,490	14,900	13,800	3,830	12,200	6,490	3,260	7,210
16	3,270	4,120	3,180	6,290	3,470	11,500	12,100	3,350	9,620	5,460	2,750	5,700
17	3,130	3,790	2,900	6,020	3,260	9,110	10,900	3,130	7,760	4,710	2,390	4,680
18	2,900	3,510	3,300	5,030	2,990	7,360	10,600	2,830	6,440	4,220	2,090	4,190
19	2,860	3,300	5,680	4,060	3,070	6,560	10,400	2,640	5,700	5,280	2,000	3,690
20	3,840	2,860	7,830	4,290	3,220	6,290	9,420	2,580	4,980	5,030	1,860	3,230
21	6,540	2,700	8,140	e4,000	3,100	5,810	13,000	3,080	4,310	4,430	1,760	3,060
22	5,620	2,580	13,000	e3,820	2,960	5,530	12,100	4,400	4,090	4,030	1,750	3,310
23	4,480	2,540	16,400	3,200	2,970	5,180	9,350	6,930	3,660	5,640	1,690	3,850
24	3,860	2,500	13,700	e2,800	3,010	4,870	7,190	8,090	3,760	11,600	1,530	3,680
25	3,190	2,530	10,600	e2,510	3,070	4,870	6,380	9,740	4,060	11,100	1,340	3,030
26	3,030	2,510	8,350	e2,680	3,050	4,860	6,120	13,300	4,210	9,180	1,560	2,800
27	3,260	2,310	7,150	e2,700	3,240	4,950	5,770	15,400	5,700	7,630	1,480	2,660
28	3,400	2,040	6,720	e2,610	3,580	5,540	5,200	13,300	6,400	6,340	1,470	2,420
29	4,520	2,310	6,150	e2,570	---	6,100	4,840	10,000	10,200	5,440	1,520	2,180
30	6,780	2,180	5,450	e2,660	---	7,240	4,810	8,290	14,800	5,080	2,650	2,190
31	16,900	---	4,630	4,340	---	8,220	---	7,440	---	5,190	2,630	---
Total	121,510	171,610	172,300	118,870	122,030	186,370	312,980	177,990	235,130	280,100	88,960	116,550
Mean	3,920	5,720	5,558	3,835	4,358	6,012	10,430	5,742	7,838	9,035	2,870	3,885
Max	16,900	22,000	16,400	6,290	12,200	15,600	17,500	15,400	15,700	21,200	5,190	7,450
Min	2,670	2,040	1,860	2,510	2,960	3,330	4,810	2,580	3,660	4,030	1,340	2,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,480	5,049	5,652	4,704	4,698	8,058	13,960	8,682	4,753	2,699	2,181	2,261
Max	19,820	13,570	13,690	12,550	11,370	18,240	25,660	20,380	16,480	11,470	8,576	14,500
(WY)	(2006)	(2006)	(1984)	(2006)	(1970)	(1953)	(1969)	(2006)	(1984)	(1973)	(1990)	(1938)
Min	771	1,320	1,458	1,265	1,354	2,141	4,175	3,059	1,354	808	781	745
(WY)	(1965)	(2002)	(1979)	(2002)	(1980)	(1940)	(2012)	(1957)	(1964)	(1991)	(2002)	(1957)

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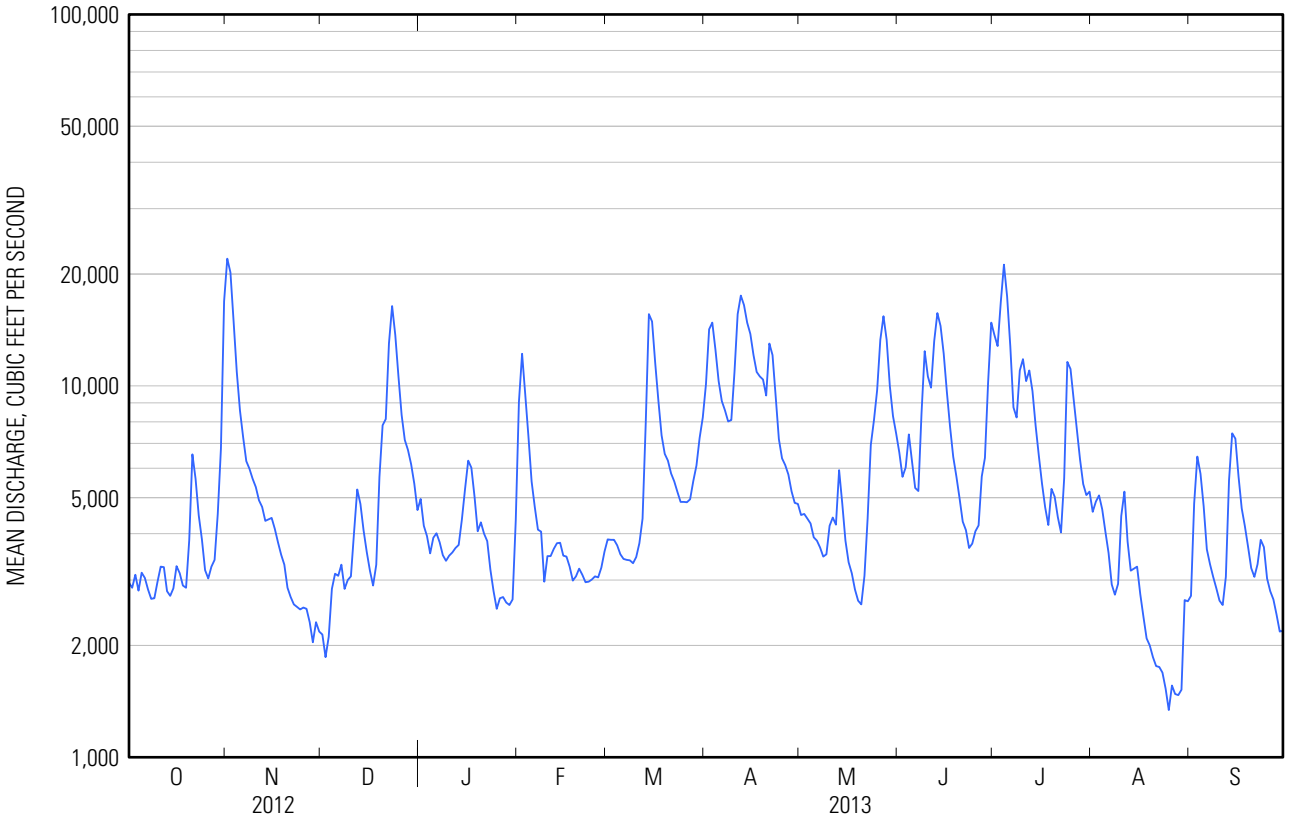
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1937 - 2013	
Annual total	1,708,396		2,104,400			
Annual mean	4,668		5,765		5,494	
Highest annual mean					10,330	2006
Lowest annual mean					2,248	1965
Highest daily mean	22,000	Nov 1	22,000	Nov 1	94,800	Sep 23, 1938
Lowest daily mean	946	Jul 12	1,340	Aug 25	98	Oct 11, 1964
Annual seven-day minimum	1,080	Jul 19	1,510	Aug 23	394	Sep 25, 1964
Maximum peak flow			22,500	Nov 1	[a]102,000	Sep 23, 1938
Maximum peak stage			9.11	Nov 1	25.87	Sep 23, 1938
10 percent exceeds	9,100		11,900		12,500	
50 percent exceeds	3,510		4,330		3,570	
90 percent exceeds	1,330		2,650		1,220	

[a] From rating curve extended above 48,000 ft³/s on basis of computation of flow over dam at gage heights 25.87 ft and 35.19 ft.