Water-Data Report 2011

01074520 EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH

Merrimack River Basin

LOCATION.--Lat 44°02′51″, long 71°39′37″ referenced to North American Datum of 1927, Grafton County, NH, Hydrologic Unit 01070001, on right bank at old crib dam, locally known as"the old hole", 800 ft upstream of bridge, 1,900 ft downstream of Pollard Brook, 1.8 mi above mouth, east of the center of Lincoln.

DRAINAGE AREA.--115 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: March 1993 to current year. Records for November 1928 to March 1953 at site 2.7 mi upstream published as "near Lincoln" (station 01074500) are not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 821.03 ft above National Geodetic Vertical Datum of 1929. Prior to August 17, 2001, at datum 5.00 ft higher.

COOPERATION.--New Hampshire Department of Environmental Services and Town of Lincoln, NH.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 19, 1936, reached a stage of 9.80 ft, former site and datum, discharge, 17,000 ft^3/s. Flood in October 1959 reached a discharge of 24,200 ft^3/s, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 28	1915	6,260	10.65
Aug 28	1530	*29,300	*17.50

Minimum discharge, 58 ft^3/s, July 25, Aug. 6, 7, gage height, 3.88 ft.

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 01074520, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01074520.2011.pdf

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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	3,210	327	405	214	e102	e73	167	1,320	323	147	63	489
2	1,610	296	1,490	267	e97	e68	160	1,170	297	135	63	401
3	855	272	614	239	e100	e65	155	1,300	274	124	69	343
4	616	287	e425	195	e93	e67	159	1,830	246	125	65	307
5	484	1,100	e342	e179	e92	e73	201	1,620	224	109	61	428
6	409	875	e290	e158	e97	e577	234	1,010	205	106	59	797
7	446	588	e254	e142	e99	1,890	185	871	187	126	61	583
8	453	576	e220	e162	e96	710	182	877	174	106	65	715
9	412	560	e188	e153	e88	421	194	821	171	99	62	547
10	324	533	e166	e143	e91	320	262	771	187	93	79	433
11	275	456	e211	e139	e81	408	1,470	745	166	88	99	368
12	245	411	e312	e139	e82	759	2,180	701	215	84	72	330
13	222	375	1,890	e136	e79	449	1,320	712	201	83	70	301
14	204	343	1,070	e139	e77	337	1,150	727	242	79	64	274
15	1,350	316	572	e135	e72	287	954	1,400	196	75	122	264
16	1,170	290	e439	e133	e70	267	720	1,690	176	73	356	264
17	798	632	e387	e129	e74	259	1,190	1,030	157	70	214	225
18	624	580	e345	e127	e93	395	966	1,060	176	70	144	204
19	502	408	e321	e142	127	530	718	1,550	153	78	111	190
20	433	345	e288	e137	95	361	690	1,050	137	70	119	184
21	415	299	e268	e129	88	314	630	1,030	127	66	128	178
22	409	308	e253	e124	e80	287	545	786	120	64	1,310	178
23	331	377	e235	e120	e80	258	535	731	131	61	355	250
24	297	380	e211	e113	e74	238	595	691	183	60	215	227
25	287	e258	e196	e108	e74	223	857	594	284	61	210	202
26	567	e255	e185	e108	e74	202	2,170	513	192	128	333	177
27	602	e230	e189	e104	e72	190	2,570	509	164	100	195	161
28	546	e206	e189	e103	e72	183	4,610	478	140	77	8,480	153
29	430	e198	e198	e103	---	180	2,960	416	131	69	2,630	298
30	398	206	e205	e100	---	171	1,730	425	125	74	981	622
31	376	---	e200	e101	---	165	---	362	---	68	649	---
Total	19,300	12,287	12,558	4,421	2,419	10,727	30,459	28,790	5,704	2,768	17,504	10,093
Mean	623	410	405	143	86.4	346	1,015	929	190	89.3	565	336
Max	3,210	1,100	1,890	267	127	1,890	4,610	1,830	323	147	8,480	797
Min	204	198	166	100	70	65	155	362	120	60	59	153
Cfsm	5.41	3.56	3.52	1.24	0.75	3.01	8.83	8.08	1.65	0.78	4.91	2.93
In.	6.24	3.97	4.06	1.43	0.78	3.47	9.85	9.31	1.85	0.90	5.66	3.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	358	398	315	233	139	249	839	718	311	209	202	183
Max	1,054	760	742	564	389	558	1,325	1,323	646	525	619	655
(WY)	(2006)	(1996)	(2004)	(1996)	(1996)	(2010)	(2008)	(1996)	(1998)	(1996)	(2008)	(1999)
Min	78.7	139	83.5	65.0	54.8	52.8	264	412	179	67.0	31.3	59.0
(WY)	(2002)	(1995)	(1998)	(2002)	(2003)	(2001)	(1995)	(1993)	(1999)	(2001)	(2001)	(2002)

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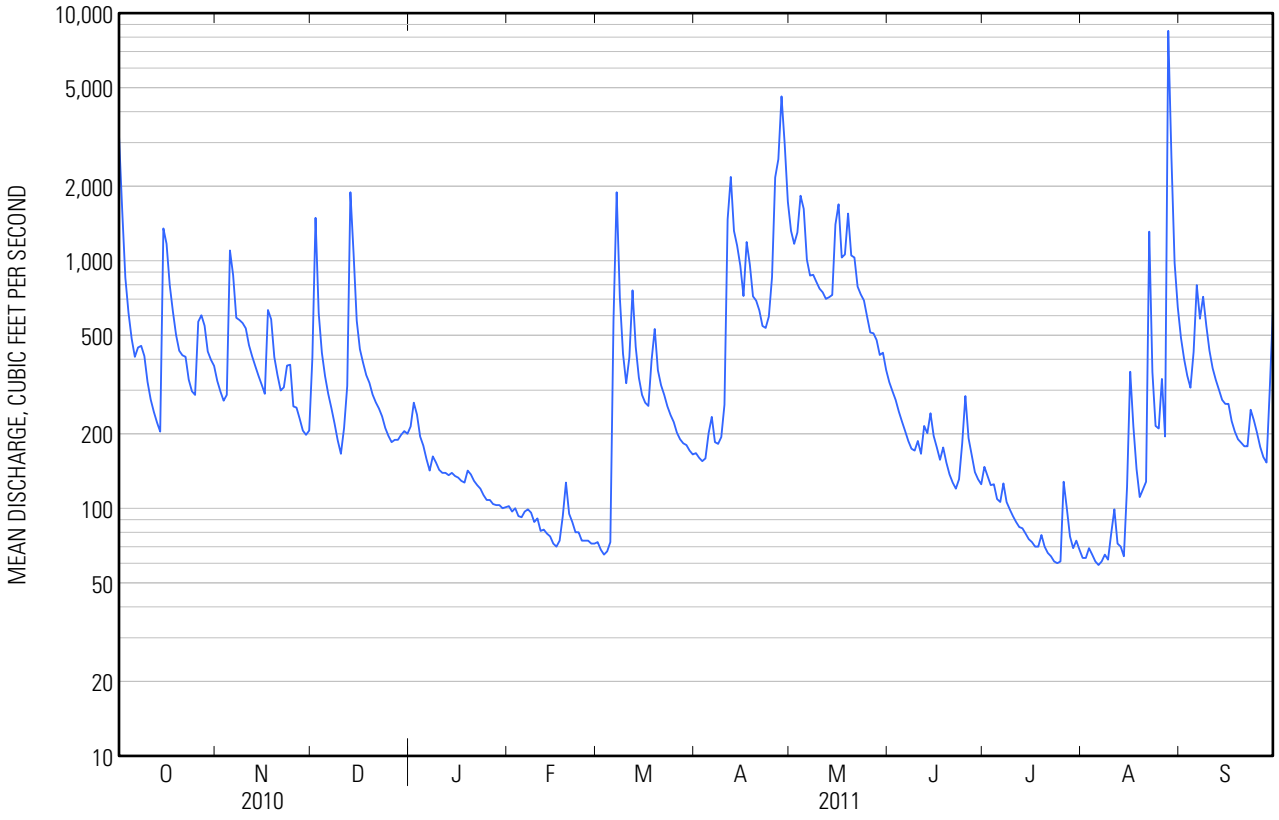
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1993 - 2011	
Annual total	147,785		157,030			
Annual mean	405		430		348	
Highest annual mean					507	1996
Lowest annual mean					202	1995
Highest daily mean	3,210	Oct 1	8,480	Aug 28	9,090	Apr 14, 2002
Lowest daily mean	66	Sep 3	59	Aug 6	25	Sep 18, 2001 [a]
Annual seven-day minimum	78	Aug 28	63	Aug 1	26	Sep 14, 2001
Maximum peak flow			[b]29,300	Aug 28	[b]29,300	Aug 28, 2011
Maximum peak stage			17.50	Aug 28	17.50	Aug 28, 2011
Instantaneous low flow			58	Jul 25 [c]	25	Sep 18, 2001 [d]
Annual runoff (cfsm)	3.52		3.74		3.03	
Annual runoff (inches)	47.81		50.80		41.14	
10 percent exceeds	884		972		757	
50 percent exceeds	224		227		193	
90 percent exceeds	110		74		74	

[a] Also September 19, 2001
[b] From rating curve extended above 7,200 ft³/s on basis of slope-area measurement of peak flow at 17.50 ft.
[c] Also August 6, 7.
[d] Also September 19, 20, 2001