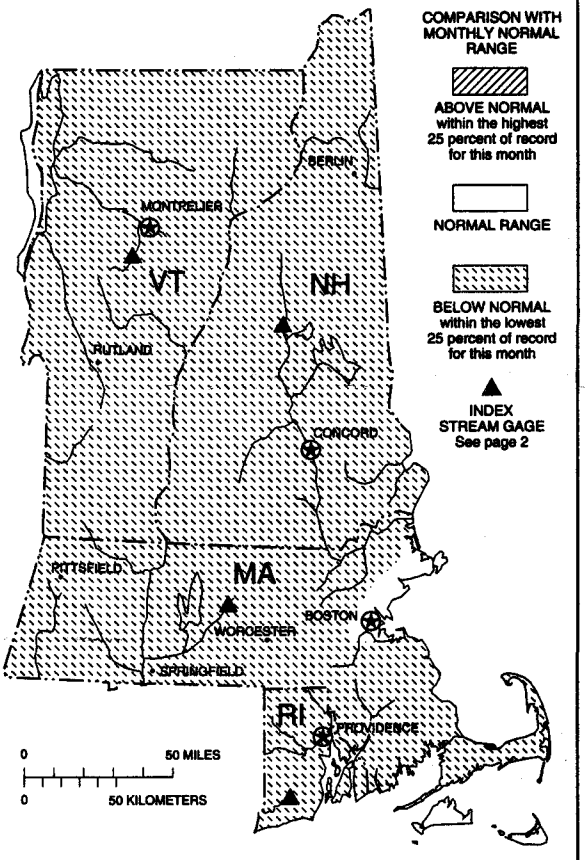
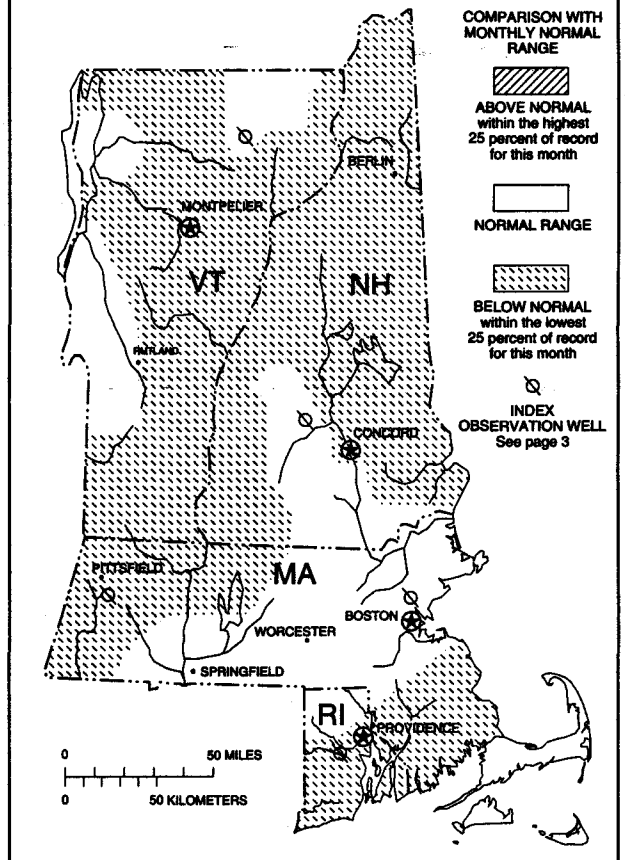
CURRENT WATER RESOURCES CONDITIONS IN CENTRAL NEW ENGLAND

WATER RESOURCES DIVISION, U.S. GEOLOGICAL SURVEY
IN COOPERATION WITH THE STATES OF
MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, AND VERMONT

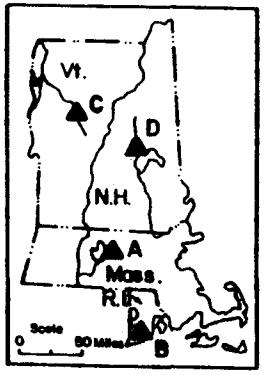
Surface-Water Runoff
November 1994



Ground-Water Levels
November 1994



The U.S. Geological Survey in cooperation with the Rhode Island Department of Environmental Management recently published the report, "A Technique for Estimating Ground-Water Levels at Sites in Rhode Island From Observation-Well Data," USGS Water-Resources Investigations Report 94-4138, by Roy S. Socolow, Michael H. Frimpter, Michael Turtora, and Richard W. Bell. The report describes the need for, development, and use of a ground-water level estimating technique for Rhode Island and nearby parts of Massachusetts. This technique utilizes a single water-level measurement at a site of interest, in combination with a long-term water-level record at an observation well, to estimate the long-term high, median, and low water levels at the site of interest. In general, most sites of interest are ones considered for septic-system installation. Copies of the report can be obtained by calling the USGS Open-File Reports Section, 303-236-7476 ($7.50 paper, $4.00 microfiche). If you have any questions about the report, please call Virginia de Lima, USGS Rhode Island Subdistrict Chief, 401-331-9050, ext. 11.



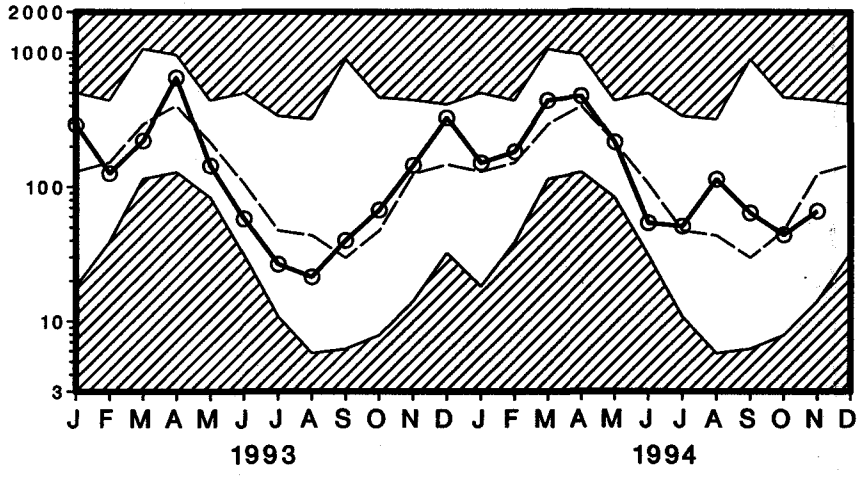
STREAMFLOW AT SELECTED INDEX GAGES

UNSHADED AREA SHOWS RANGE
BETWEEN HIGHEST AND LOWEST
MONTHLY MEAN DISCHARGE OF RECORD

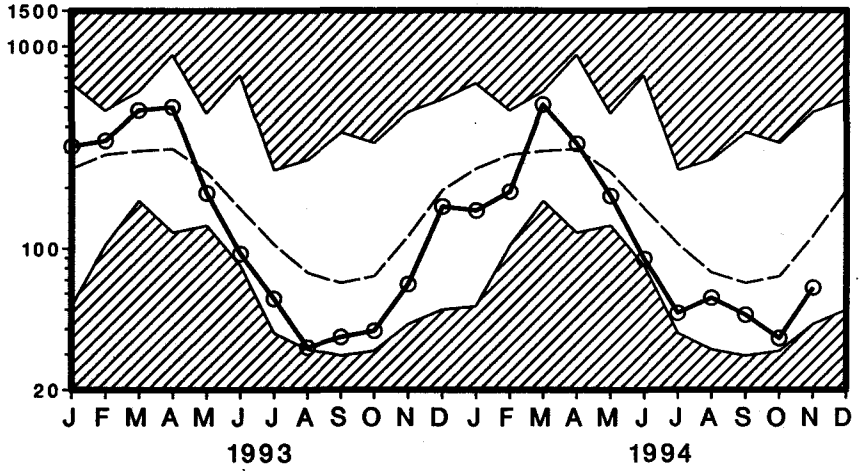
CURRENT RECORDS ——— MEDIAN --------

MONTHLY MEAN DISCHARGE, IN CUBIC FEET PER SECOND

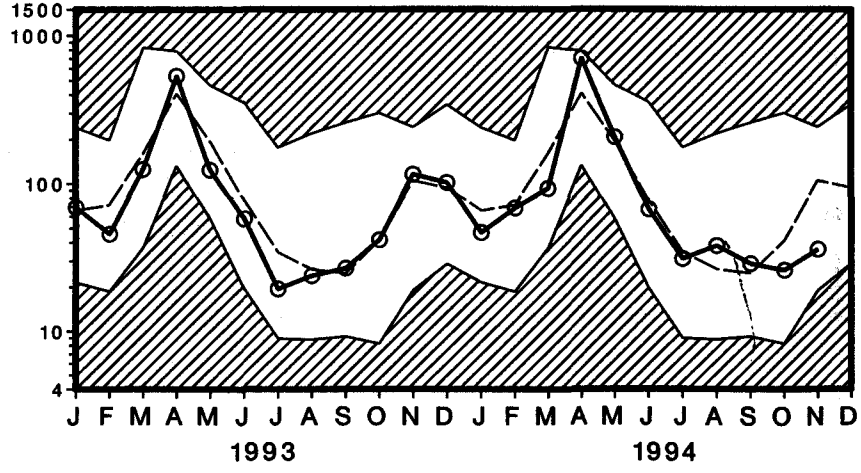
WARE RIVER
AT INTAKE WORKS NEAR BARRE, MASS. (A)



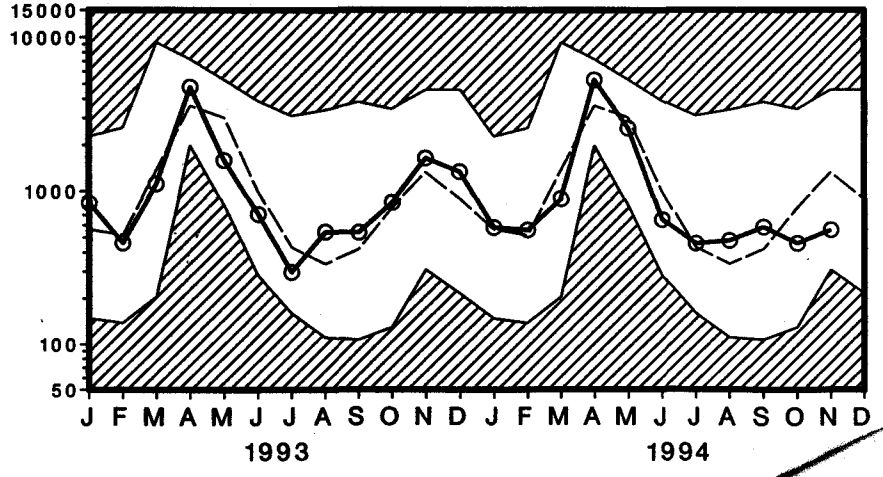
PAWCATUCK RIVER
AT WOOD RIVER JUNCTION, R.I. (B)



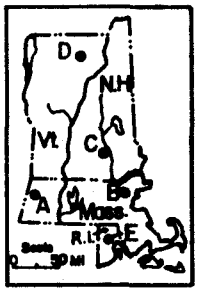
DOG RIVER
AT NORTHFIELD FALLS, VT. (C)



PEMIGEWASSET RIVER
AT PLYMOUTH, N.H. (D)



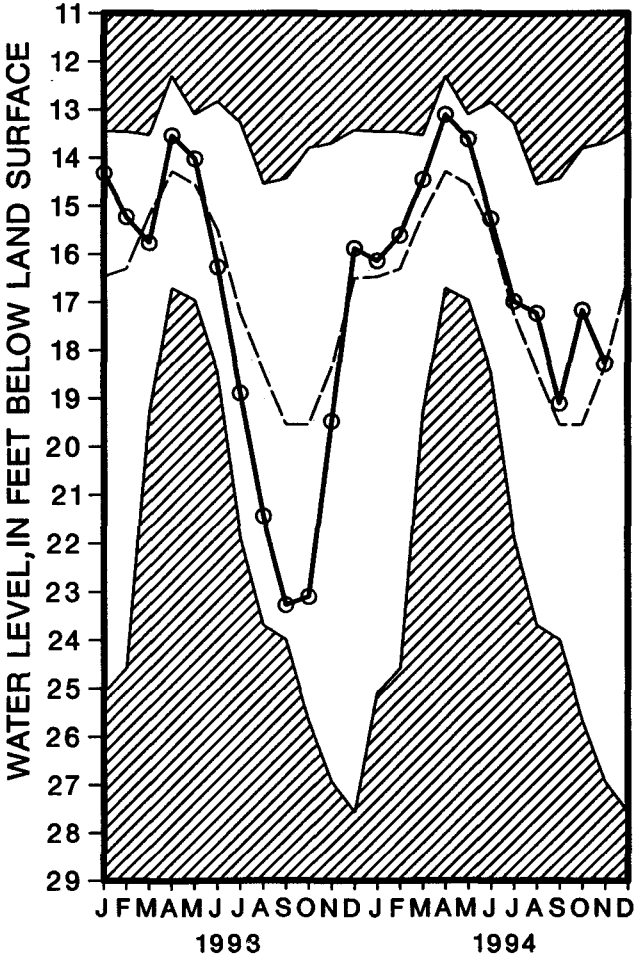
GROUND-WATER LEVELS IN SELECTED OBSERVATION WELLS



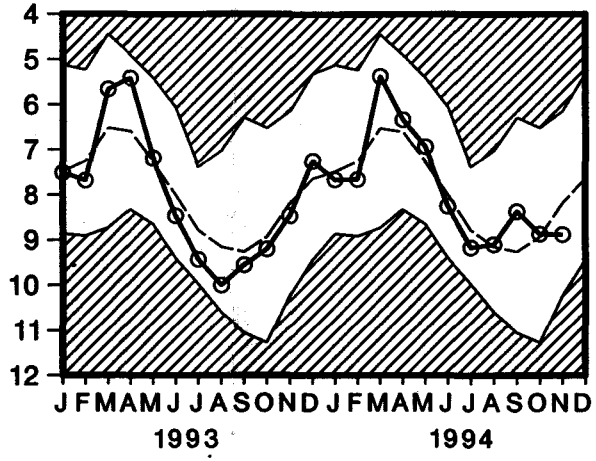
UNSHADED AREA SHOWS RANGE BETWEEN HIGHEST AND LOWEST MONTH-END WATER LEVEL

CURRENT RECORDS ——— MEDIAN --------

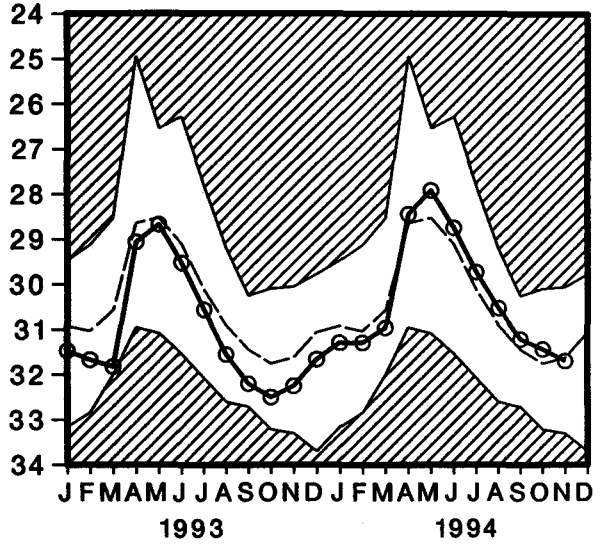
PITTSFIELD 51, MASS. (A)



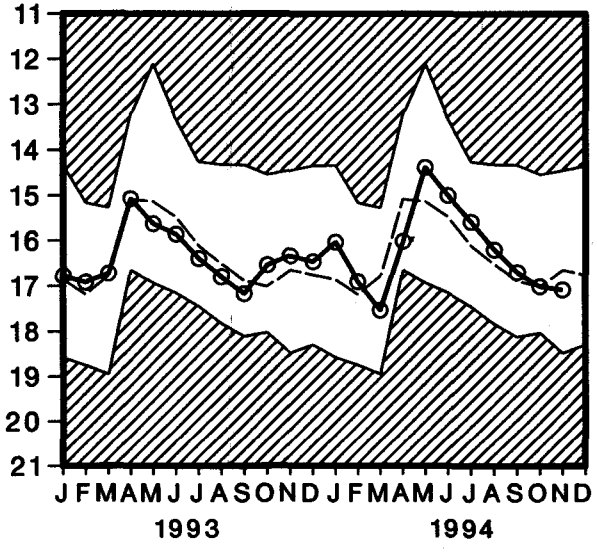
WILMINGTON 78, MASS. (B)



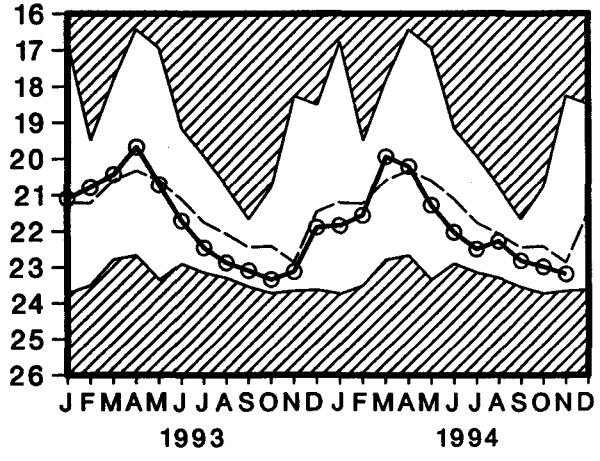
WARNER 1, N.H. (C)



GLOVER 1, VT. (D)



COVENTRY 411, R.I. (E)



SUMMARY OF GROUND-WATER LEVELS NOVEMBER, 1994 PROVISIONAL

WELL	TOPO	LITH	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM NOVEMBER MEDIAN (FEET)	WATER LEVEL BELOW LAND-SURFACE DATUM (FEET)	DAY
				MASSACHUSETTS				
ACTON 158	T	S	1965	- 0.13	+ 0.49	- 0.35	20.25	25
ANDOVER 462	V	S	1968	+ 0.40	- 4.02	- 5.72	20.30 <	30
ATTLEBORO 83	V	S	1964	+ 0.40	+ 0.20	- 0.36	4.00	21
BARNSTABLE 230	F	S	1957	- 0.43	+ 0.55	- 0.07	24.90	21
BARNSTABLE 247	F	S	1962	- 0.43	+ 0.73	+ 0.67	24.59	21
BECKET 12	T	S	1986	+ 0.23	- 0.25	- 0.07	3.45	22
BILLERICA 363	H	S	1962	- 0.32	- 0.87	- 1.65	10.02	25
BLANDFORD 9	V	S	1986	+ 0.04	- 0.66	- 0.67	2.79 <	22
BOSTON 925	S	R	1960	+ 0.09	+ 0.29	+ 0.09	23.01	30
BOURNE 198	F	S	1962	- 0.21	+ 0.10	- 0.23	34.48	22
BREWSTER 21	F	S	1962	- 0.30	+ 0.99	+ 0.00	10.50	23
BREWSTER 22	F	S	1962	- 0.30	+ 0.84	+ 0.03	31.61	23
CHATHAM 138	F	S	1962	- 0.26	+ 0.66	- 0.11	24.66	23
CHELMSFORD 68	T	S	1939	+ 0.06	- 0.46	+ 0.88	7.64	25
CHELMSFORD 384	T	S	1987	- 0.03	- 0.06	- 0.06	15.88	25
CHESHIRE 2	H	T	1951	- 2.85	- 10.67	- 12.70	17.75 <	22
CHICOPEE 95	T	S	1984	- 0.24	+ 0.67	+ 0.48	22.02	22
COLRAIN 8	V	S	1965	- 0.28	- 0.06	- 0.78	22.46	22
CONCORD 165	T	S	1965	- 0.36	+ 0.52	+ 0.57	41.56	25
CONCORD 167	T	S	1965	+ 0.25	- 0.54	- 0.34	7.67	25
CUMMINGTON 13	V	S	1986	+ 0.11	- 0.60	- 1.60	6.09 <	22
DEDHAM 231	S	T	1965	+ 1.68	+ 2.76	- 1.30	8.95	29
DEERFIELD 44	V	S	1965	+ 0.21	- 0.03	- 0.03	2.67	23
DOVER 10	T	S	1965	- 0.29	+ 0.72	- 0.15	34.85	29
DUXBURY 79	V	S	1965	+ 0.50	+ 0.45	- 0.25	8.60	29
DUXBURY 80	V	R	1965	+ 0.38	+ 0.39	- 0.06	22.22	29
EAST BRIDGEWATER 30	H	T	1958	- 0.79	+ 3.49	- 1.00	13.59	29
EDGARTOWN 52	V	S	1976	- 0.61	-----	- 0.34	18.86	27
FOXBOROUGH 3	T	S	1965	- 0.10	+ 0.35	- 0.75	20.60	21
FREETOWN 23	T	S	1964	- 0.30	- 0.02	- 1.30	15.25	21
GEORGETOWN 168	V	S	1965	+ 0.58	+ 0.25	- 0.04	4.56	30
GRANBY 68	V	S	1954	- 0.27	+ 0.66	+ 0.05	8.62	23
GRANVILLE 5	T	S	1965	- 0.83	+ 0.49	- 0.12	34.32	23
GRANVILLE 6	S	S	1965	+ 1.29	- 0.04	- 1.16	5.90	23
GREAT BARRINGTON 2	V	T	1951	+ 0.03	- 1.99	- 1.26	12.19	22
HALIFAX 97	V	R	1977	+ 0.45	+ 0.85	- 0.64	4.60	29
HANSON 76	V	S	1964	+ 0.47	+ 0.67	- 0.16	4.63	29
HARDWICK 1	T	S	1965	- 0.34	- 0.31	- 0.31	16.42	18
HARDWICK 31	T	S	1984	- 0.07	- 0.11	- 0.29	11.59	28
HAVERHILL 23	T	S	1960	- 0.40	- 0.05	- 0.46	13.72	30
HAWLEY 8	S	T	1986	+ 0.01	- 0.90	- 1.16	5.27	22
LAKEVILLE 14	T	S	1964	- 0.64	- 0.10	- 0.53	18.40	21
LEXINGTON 104	V	S	1965	+ 0.36	- 0.02	+ 0.34	2.30	25
MASHPEE 29	F	S	1976	- 0.22	- 0.11	- 0.58	9.77	22
MIDDLEBOROUGH 82	V	T	1965	+ 0.05	+ 0.66	- 3.22	15.90	29
MONTAGUE 5	S	S	1942	- 0.10	- 0.92	- 1.07	4.49	23
MONTGOMERY 19	S	S	1986	- 0.03	+ 0.16	- 0.60	2.36	22

WELL	TOPO	LITH	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM NOVEMBER MEDIAN (FEET)	WATER LEVEL BELOW LAND-SURFACE DATUM (FEET)		DAY
MASSACHUSETTS (CONTINUED)									
NANTUCKET 228	F	S	1976	- 0.89	+ 0.30	+ 0.37	25.01		22
NEW BEDFORD 116	V	S	1964	+ 0.47	- 0.04	- 0.10	3.98		21
NEWBURY 27	V	T	1965	+ 0.31	+ 0.02	- 1.03	8.70		29
NORFOLK 27	V	S	1965	+ 0.30	+ 0.15	- 0.06	6.25		21
NORTHBRIDGE 54	V	S	1984	- 0.14	+ 0.07	- 0.08	4.59		18
NORTON 37	F	S	1964	+ 0.22	- 0.04	- 2.32	9.00		21
ORANGE 63	T	S	1985	- 0.40	- 0.62	- 0.68	8.15	<	28
OTIS 7	V	S	1965	- 0.07	- 0.71	- 0.99	9.17		22
PELHAM 23	S	R	1984	+ 1.19	- 0.53	- 2.27	13.51	<	28
PELHAM 24	S	S	1984	+ 0.75	+ 0.52	- 0.53	4.23		28
PETERSHAM 16	S	T	1984	- 0.14	- 0.45	- 1.03	14.84		28
PITTSFIELD 51	V	S	1963	- 1.11	+ 1.19	- 1.14	18.28		22
PLYMOUTH 22	T	S	1956	- 0.45	+ 0.77	- 0.40	25.75		29
PLYMOUTH 494	S	S	1985	- 0.50	+ 0.94	+ 0.94	30.56	>	29
SANDWICH 252	F	S	1962	- 0.20	+ 0.08	- 0.10	47.66		22
SANDWICH 253	F	S	1962	- 0.27	+ 0.73	- 0.24	50.77		22
SEEKONK 275	V	S	1964	+ 0.80	+ 0.36	+ 0.53	6.15		21
SHEFFIELD 58	F	S	1987	- 0.43	+ 1.09	+ 0.04	14.06		22
SOUTHBOROUGH 12	H	T	1990	+ 1.47	+ 3.60	-----	7.41		25
SOUTHWICK 95	T	S	1986	+ 0.31	+ 0.14	- 0.90	4.66		23
STERLING 1	S	T	1947	- 0.04	- 1.30	- 1.96	6.42		18
SUNDERLAND 7	S	S	1957	- 1.22	+ 1.47	- 0.49	16.82		23
SUNDERLAND 68	V	S	1983	- 0.08	+ 0.01	- 1.02	3.95		23
TAUNTON 337	T	S	1964	- 0.02	+ 0.10	- 0.49	9.72		21
TEMPLETON 3	V	S	1957	- 0.14	- 0.63	- 0.59	3.95		18
TOPSFIELD 1	H	T	1936	+ 0.35	+ 2.25	+ 0.62	14.00		30
TOWNSEND 13	T	S	1965	- 0.30	+ 0.97	+ 0.27	14.07		25
TRURO 1	T	S	1950	- 0.23	- 0.01	- 0.15	10.91		23
TRURO 89	T	S	1962	- 0.14	- 0.05	- 0.19	12.43		23
WAKEFIELD 38	F	S	1965	+ 0.45	- 0.12	- 0.29	7.50		25
WARE 43	V	S	1965	- 0.72	+ 0.21	+ 0.06	9.34		28
WAREHAM 51	T	S	1959	- 0.07	- 0.13	- 1.68	10.42		21
WAYLAND 2	T	S	1965	+ 0.12	+ 0.32	- 0.06	16.49		25
WEBSTER 1	H	S	1958	- 0.05	- 0.89	- 1.07	15.65		18
WELLFLEET 17	V	S	1962	- 0.29	- 0.27	- 0.21	11.01		23
WENHAM 76	V	S	1965	+ 0.89	+ 0.47	+ 0.23	2.43		30
WEST BROOKFIELD 2	T	S	1959	- 0.26	+ 0.71	+ 0.50	19.38		18
WEST BROOKFIELD 10	S	T	1970	- 0.62	+ 0.09	- 1.26	10.32		18
WESTHAMPTON 20	S	S	1986	- 0.65	+ 1.09	- 1.72	16.50		22
WESTFIELD 62	S	S	1957	+ 0.10	+ 0.66	- 0.37	8.53		23
WESTFIELD 152	T	S	1986	+ 0.54	+ 0.24	+ 0.11	3.34		23
WEYMOUTH 2	F	T	1965	- 0.65	+ 0.60	- 4.46	19.95		29
WEYMOUTH 3	V	S	1965	+ 0.65	+ 2.53	- 3.92	9.00		29
WEYMOUTH 4	T	S	1965	+ 1.39	+ 0.60	+ 0.60	6.25		29
WILBRAHAM 55	T	S	1965	- 0.97	+ 1.16	+ 0.79	42.88		28
WILMINGTON 78	F	S	1951	- 0.01	- 0.42	- 0.63	8.88		25
WINCHENDON 13	S	T	1939	-----	-----	-----	-----		0
WINCHESTER 14	S	T	1940	+ 1.32	+ 1.26	- 0.46	10.56		25
WORCESTER 274	T	S	1965	- 0.06	- 0.46	- 0.38	23.96		18

WELL	TOPO	LITH	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM NOVEMBER MEDIAN (FEET)	WATER LEVEL BELOW LAND-SURFACE DATUM (FEET)	DAY
				NEW HAMPSHIRE				
CONCORD 2	T	S	1963	- 0.28	+ 0.20	- 2.49	43.82	23
CONCORD 4	F	S	1966	- 0.19	+ 0.26	- 1.27	19.28	23
ERROL 1	V	S	1966	- 0.5	-----	- 1.1	13.9	24
FRANKLIN 1	V	S	1966	- 0.32	+ 0.42	- 1.35	14.66	23
HOOKSETT 5	T	R	1965	- 0.69	- 0.39	- 0.39	49.57	23
KEENE 2	V	S	1963	-----	-----	-----	-----	--
LANCASTER 1	V	S	1966	- 0.05	- 0.47	- 0.75	2.25	19
LEE 1	F	S	1953	- 0.30	- 0.13	- 0.54	31.67	23
MILFORD 36	V	S	1962	+ 0.12	- 0.10	+ 0.78	7.20	22
NASHUA 218	T	S	1964	- 0.54	- 0.57	- 0.32	29.04	23
NEW LONDON 1	S	T	1947	- 0.87	+ 1.86	- 0.49	13.79	23
WARNER 1	T	S	1965	- 0.26	+ 0.56	- 0.07	31.69	23
				RHODE ISLAND				
BURRILLVILLE 187	T	S	1968	+ 0.23	+ 0.46	+ 0.14	15.95	28
BURRILLVILLE 395	U	T	1992	+ 1.83	-----	-----	8.30 >	28
BURRILLVILLE 396	V	T	1992	+ 1.10	-----	-----	4.72 >	28
BURRILLVILLE 397	H	T	1992	-----	-----	-----	23.17 >	28
BURRILLVILLE 398	H	T	1992	-----	-----	-----	8.65 >	28
CHARLESTOWN 18	F	S	1946	- 0.52	- 0.53	- 1.26	21.09	29
CHARLESTOWN 586	V	T	1992	+ 1.60	-----	-----	2.57 >>	28
CHARLESTOWN 587	S	T	1992	+ 1.98	-----	-----	9.66	28
COVENTRY 342	V	S	1991	+ 1.02	-----	- 0.64	9.33	28
COVENTRY 411	S	S	1961	- 0.20	- 0.06	- 1.02	23.18	28
COVENTRY 466	V	T	1992	+ 0.57	-----	-----	2.04 >>	29
CRANSTON CITY 439	S	T	1992	-----	-----	-----	DRY	29
CUMBERLAND 265	S	S	1946	+ 0.85	+ 0.46	- 0.49	12.78	28
EXETER 6	V	S	1948	+ 0.77	+ 0.54	+ 0.15	6.19	28
EXETER 158	S	T	1991	+ 0.37	-----	- 8.65	17.03	28
EXETER 238	F	T	1991	+ 0.11	- 0.07	- 0.67	12.60 <	29
EXETER 278	H	T	1991	-----	-----	-----	DRY	29
EXETER 475	V	S	1981	- 0.14	+ 0.06	- 0.79	16.36	28
EXETER 554	S	S	1988	- 0.61	- 0.68	- 1.82	12.20 <<	29
FOSTER 40	H	T	1991	+ 2.92	+ 3.80	+ 0.02	3.37	28
FOSTER 290	H	T	1992	-----	-----	-----	DRY	29
HOPKINTON 67	S	T	1991	+ 0.62	+ 0.77	- 2.11	20.73	29
LINCOLN 84	V	S	1946	+ 0.66	+ 0.56	- 0.49	5.88	28
LITTLE COMPTON 142	S	T	1992	+ 0.02	-----	-----	18.60	29
NEW SHOREHAM 258	U	T	1991	+ 1.00	-----	-----	12.45 >	23
NORTH KINGSTOWN 255	V	S	1954	+ 0.65	+ 0.33	- 0.91	9.64	29
NORTH SMITHFIELD 21	T	S	1947	+ 1.19	+ 1.85	- 0.70	8.89	28
PAWTUCKET 136	T	S	1962	+ 0.55	+ 0.80	+ 0.10	5.05	28
PORTSMOUTH 551	H	T	1992	- 0.32	-----	-----	49.90	29
PROVIDENCE 48	T	S	1944	+ 0.16	-----	+ 2.64	4.23	28
RICHMOND 417	V	S	1976	+ 0.48	+ 0.38	- 0.29	7.32	29
RICHMOND 600	T	S	1977	- 0.03	- 0.27	- 1.27	35.72 <	29
RICHMOND 785	F	S	1989	- 0.18	- 0.60	-----	26.52	29
SOUTH KINGSTOWN 6	V	S	1955	+ 0.04	- 0.51	- 0.33	13.69	29
SOUTH KINGSTOWN 515	U	S	1955	-----	-----	-----	DRY	29
TIVERTON 274	T	T	1990	+ 4.53	-----	-----	3.80	28
WARWICK 59	S	T	1991	+ 1.06	+ 8.13	- 4.82	12.55	28
WESTERLY 522	F	S	1969	+ 0.50	+ 0.05	- 0.79	13.44	29
WEST GREENWICH 181	U	S	1969	+ 0.84	+ 0.86	- 0.17	15.70	28
WEST GREENWICH 206	S	T	1991	-----	+ 0.81	- 0.48	4.67	28

WELL	TOPO	LITHO	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM NOVEMBER MEDIAN (FEET)	WATER LEVEL BELOW LAND-SURFACE DATUM (FEET)	DAY
				VERMONT				
BERKSHIRE 1	V	S	1966	+ 0.35	- 1.21	- 0.95	15.01	28
BRIGHTON 1	V	S	1966	- 0.27	- 0.02	+ 0.07	3.57	22
CHESTER 1	V	S	1966	+ 0.07	- 0.32	- 0.40	5.48	28
GLOVER 1	T	S	1966	- 0.07	- 0.74	- 0.43	17.08	28
HARTLAND 54	V	S	1969	- 0.01	+ 0.21	- 0.47	9.61	23
MILTON 3	T	S	1956	- 1.02	+ 1.46	+ 2.25	32.12	28
MONTPELIER 2	V	S	1966	+ 0.03	- 0.93	- 0.79	16.10	29
MORRISTOWN 1	S	S	1966	+ 0.08	- 0.54	- 0.70	20.10	28
PITTSFORD 8	T	S	1957	- 0.18	+ 0.86	+ 0.24	36.18	23
POWNAL 1	V	S	1964	- 0.25	- 1.18	- 1.43	15.17	29
ROCHESTER 1	V	S	1966	+ 0.10	- 0.26	- 1.09	11.78	23
WAITSFIELD 2	V	S	1975	+ 0.29	- 0.32	- 0.75	7.25	23
WAITSFIELD 3	V	S	1975	+ 0.03	- 0.87	- 1.34	7.64	23
WEST FAIRLEE 1	T	S	1966	+ 0.00	- 0.53	- 0.54	4.67	23

> SET NEW HIGH OR EQUALED HIGHEST RECORDED WATER LEVEL FOR END OF NOVEMBER
>> SET NEW HIGH OR EQUALED HIGHEST RECORDED WATER LEVEL FOR PERIOD OF RECORD
< SET NEW LOW OR EQUALED LOWEST RECORDED WATER LEVEL FOR END OF NOVEMBER
<< SET NEW LOW OR EQUALED LOWEST RECORDED WATER LEVEL FOR PERIOD OF RECORD
-- DATA NOT AVAILABLE

TOPOGRAPHIC (TOPO) SETTING: F=FLAT, H=HILLTOP, S=HILLSIDE, T=TERRACE, U=UNDULATING, V=VALLEY, W=UPLAND DRAW
LITHOLOGY (LITHO): G=GRAVEL, R=ROCK, S=SAND, T=TILL

CONTENTS OF MAJOR RESERVOIRS (ESTIMATED END OF MONTH READINGS)
(MILLIONS OF CUBIC FEET)

RESERVOIR	MONTH-END CONTENTS	% AVERAGE	% FULL
FIRST CONNECTICUT LAKE, NH	1927	79	58
LAKE FRANCIS, NH	3451	101	80
LAKE WINNIPESAUKEE, NH	4090	92	57
SOMERSET RESERVOIR, VT	1999	110	80
HARRIMAN RESERVOIR, VT	3738	112	74
BORDEN BROOK + COBBLE MTN RES., MA	2528	102	75
QUABBIN RESERVOIR, MA	48044	--	87
SCITUATE RESERVOIR, RI	3417	70	88

A MONTHLY REPORT PREPARED BY THE
U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION
28 LORD ROAD, SUITE 280, MARLBOROUGH, MA 01752

IN COOPERATION WITH THE STATES OF
MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, AND VERMONT