

CURRENT WATER RESOURCES CONDITIONS IN CENTRAL NEW ENGLAND



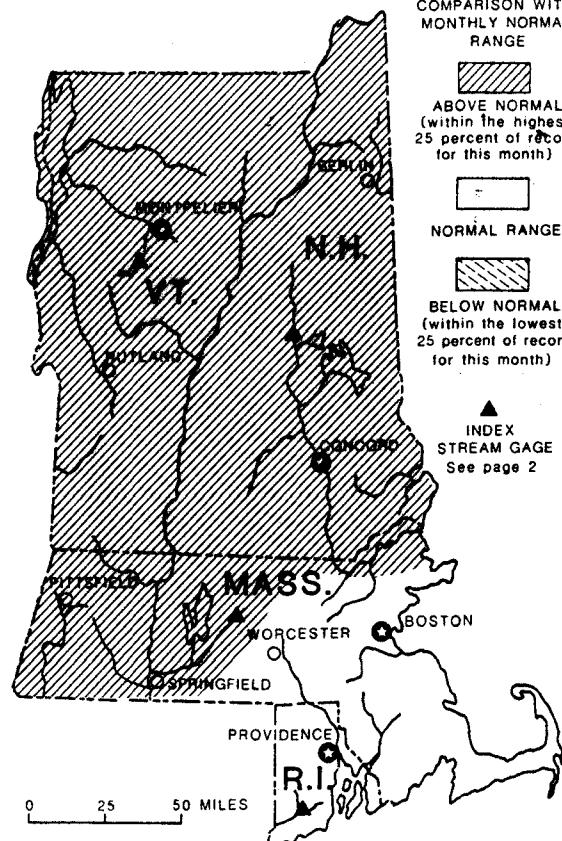
WATER RESOURCES DIVISION, U.S. GEOLOGICAL SURVEY

IN COOPERATION WITH THE STATES OF

MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND AND VERMONT

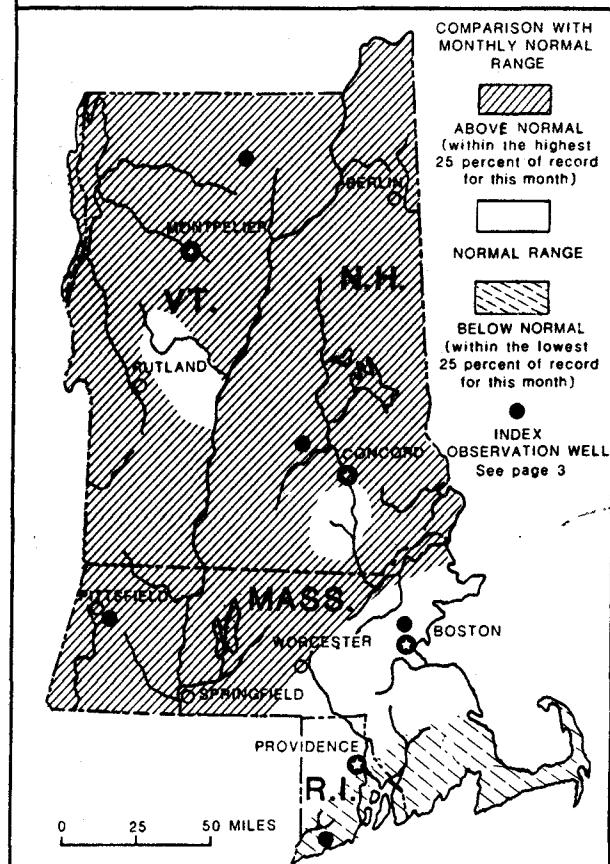
Surface-water Runoff

December 1990



Ground-water Levels

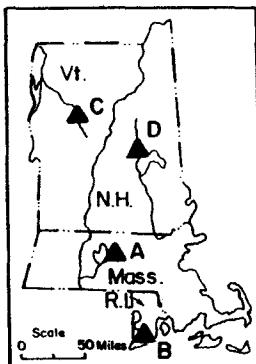
December 1990



Last one

for copies only

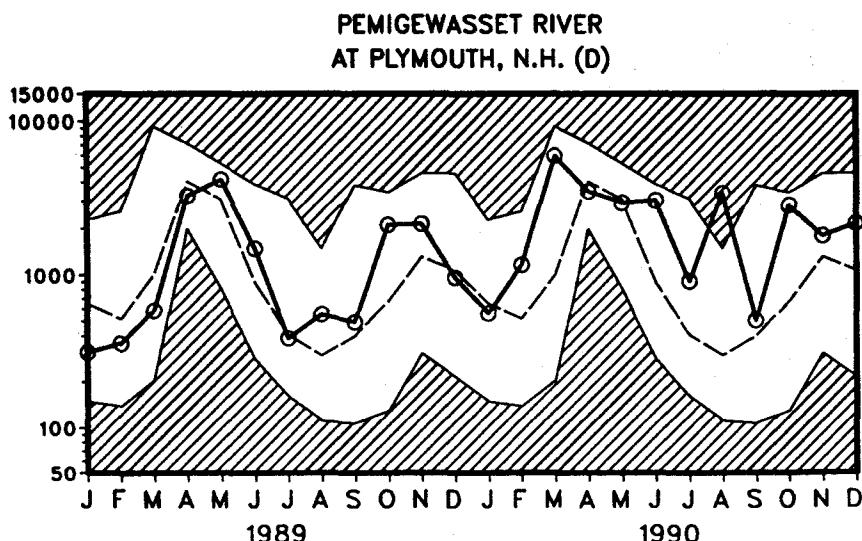
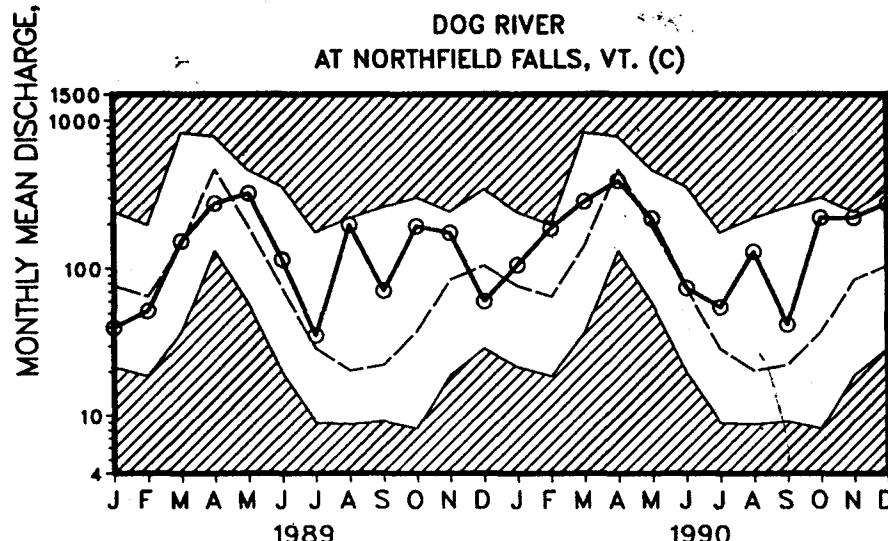
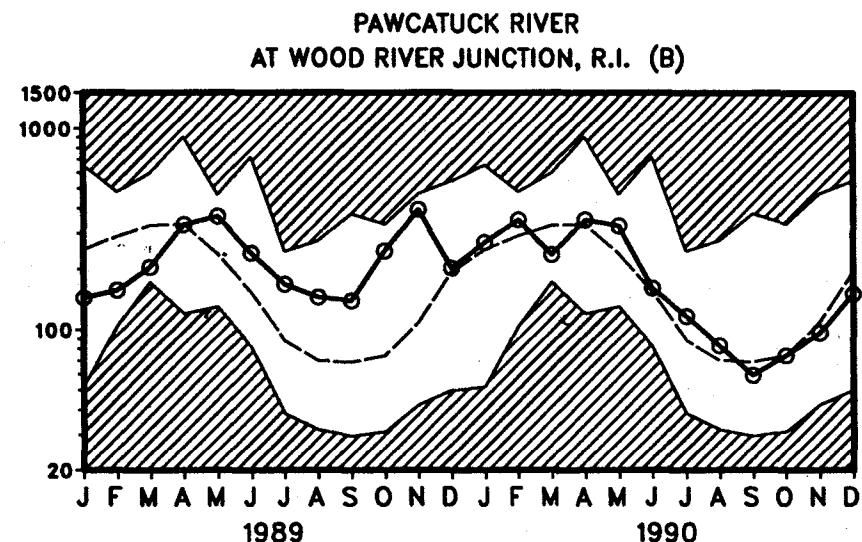
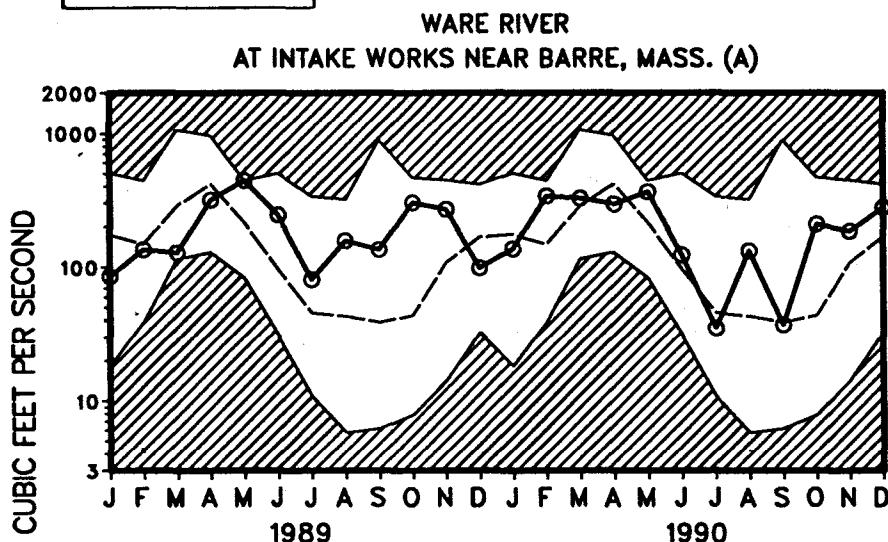
STREAMFLOW AT SELECTED INDEX GAGES



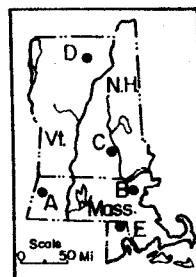
UNSHADED AREA SHOWS RANGE
BETWEEN HIGHEST AND LOWEST
MONTHLY MEAN DISCHARGE OF RECORD

CURRENT RECORDS —————

MEDIAN -----



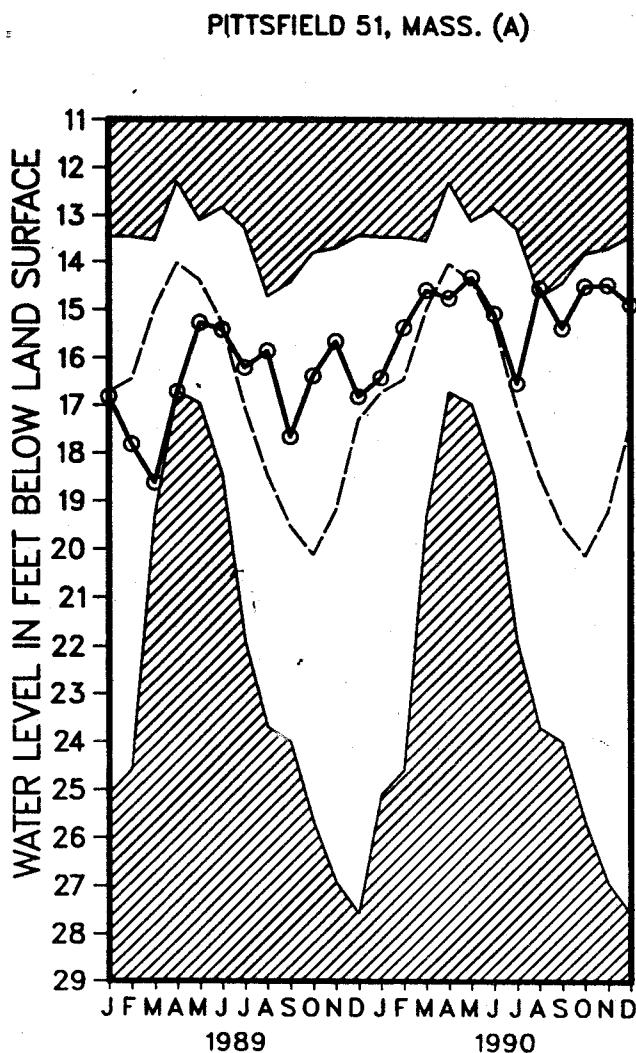
GROUND-WATER LEVELS IN SELECTED OBSERVATION WELLS



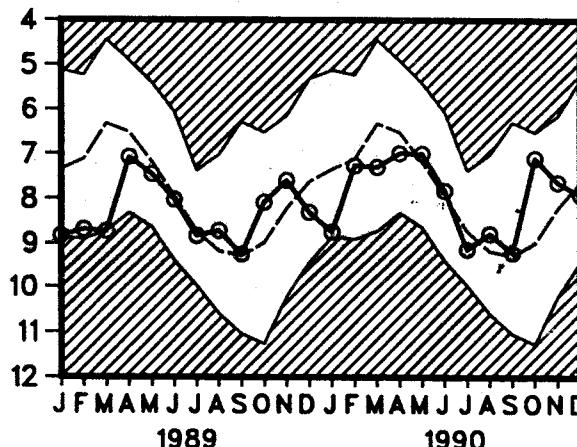
UNSHADED AREA SHOWS RANGE
BETWEEN HIGHEST AND LOWEST
MONTH-END WATER LEVEL

CURRENT RECORDS

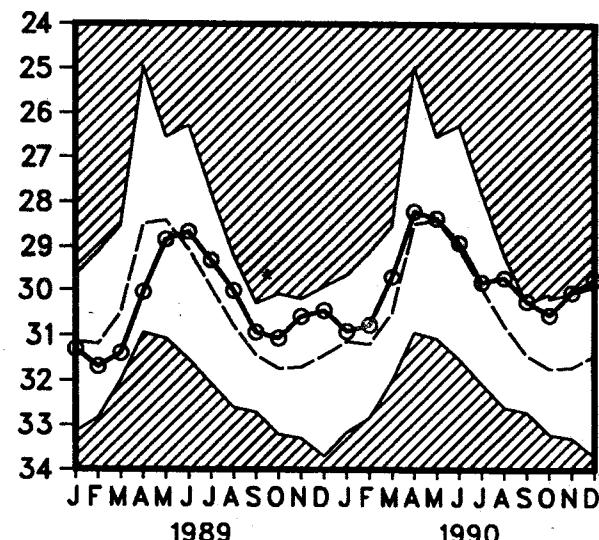
MEDIAN



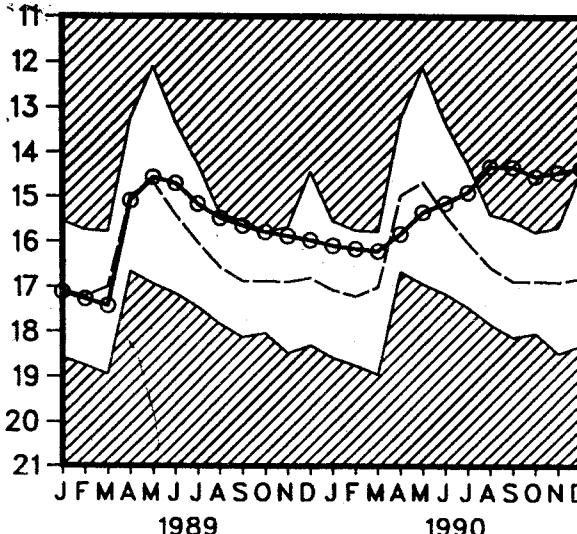
WILMINGTON 78, MASS. (B)



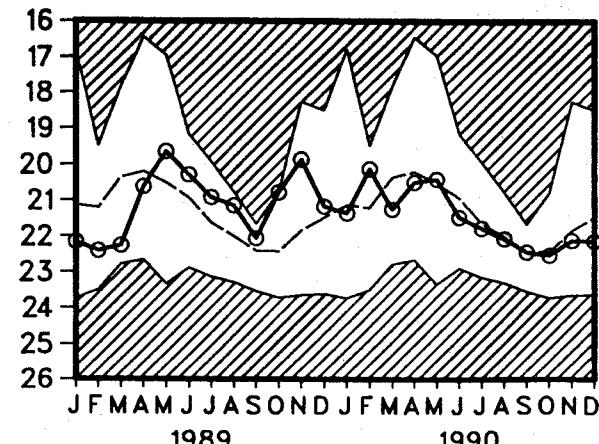
WARNER 1, N.H. (C)



GLOVER 1, VT. (D)



COVENTRY 411, R.I. (E)



SUMMARY OF GROUND-WATER LEVELS

DECEMBER, 1990

PROVISIONAL

WELL	START OF RECORD	NET CHANGE IN MONTH	NET CHANGE IN ONE YEAR	DEPARTURE FROM DECEMBER MEDIAN	WATER LEVEL BELOW LAND- SURFACE DATUM
		(FEET)	(FEET)	(FEET)	(FEET) DAY
MASSACHUSETTS					
ACTON 158	1965	+ 0.11	- 0.46	+ 0.65	18.88 26
ANDOVER 26	1962	- 0.57	+ 1.54	+ 0.54	9.96 25
ANDOVER 462	1968	- 0.15	+ 0.32	+ 0.01	14.25 25
ATTLEBORO 83	1964	- 0.11	+ 0.32	- 0.29	3.89 21
BARNSTABLE 230	1957	- 0.12	- 0.99	- 1.43	25.86 20
BARNSTABLE 247	1962	- 0.61	- 0.33	- 1.04	26.00 20
BECKET 12	1986	+ 0.16	- 0.16	-----	3.66 22
BILLERICA 363	1962	+ 0.92	+ 1.01	+ 1.10	6.31 26
BLANDFORD 9	1986	- 0.01	+ 0.48	-----	2.02 > 21
BOSTON 925	1960	-----	-----	-----	----- 28
BOURNE 198	1962	- 0.02	- 0.88	- 0.54	34.40 20
BREWSTER 21	1962	- 0.12	- 0.14	- 1.10	11.21 26
BREWSTER 22	1962	- 0.20	- 0.68	- 0.64	32.18 26
CHATHAM 138	1962	- 0.12	- 0.45	- 0.94	25.09 26
CHELMSFORD 68	1939	+ 0.10	+ 1.49	+ 1.28	7.11 26
CHELMSFORD 385	1965	+ 0.02	+ 0.78	+ 1.24	15.47 26
CHESHIRE 2	1951	+ 0.52	+ 4.42	+ 1.82	3.43 21
CHICOOPEE 95	1984	+ 0.24	+ 0.32	+ 1.51	20.89 > 23
COLRAIN 8	1965	+ 1.30	+ 0.08	+ 1.51	18.79 21
CONCORD 165	1965	- 0.07	+ 1.55	- 0.35	42.35 26
CONCORD 167	1965	+ 0.42	+ 1.11	+ 1.10	6.10 26
CUMMINGTON 13	1986	+ 0.17	+ 0.78	-----	4.23 > 21
DEDHAM 231	1965	+ 0.21	+ 0.09	- 1.82	7.44 20
DEERFIELD 44	1965	+ 0.18	+ 0.74	+ 0.42	2.35 23
DOVER 10	1965	- 0.43	- 0.48	+ 1.51	32.95 20
DUXBURY 79	1965	+ 0.14	- 0.64	- 0.60	8.55 21
DUXBURY 80	1965	+ 0.58	- 1.07	- 0.24	21.80 21
EAST BRIDGEWATER 30	1958	- 0.19	- 4.21	- 3.09	12.06 21
EDGARTOWN 52	1976	-----	-----	-----	----- 26
FOXBOROUGH 3	1965	+ 0.22	- 0.30	- 0.19	19.28 24
FREETOWN 23	1964	- 0.18	- 1.11	- 0.79	14.36 21
GEOGETOWN 168	1965	+ 0.08	+ 0.80	+ 0.47	3.85 25
GRANBY 68	1954	+ 0.29	+ 0.79	+ 1.22	6.59 23
GRANVILLE 5	1965	+ 0.01	- 0.14	+ 1.93	32.09 21
GRANVILLE 6	1965	+ 0.18	+ 2.86	+ 1.09	3.32 22
GREAT BARRINGTON 2	1951	+ 0.53	+ 3.80	+ 2.86	8.32 22
HALIFAX 97	1977	+ 0.15	- 0.20	- 0.13	3.89 21
HANSON 76	1964	+ 0.03	+ 0.09	+ 0.06	4.28 21
HARDWICK 1	1965	+ 0.29	- 0.39	- 0.30	14.77 19
HARDWICK 31	1984	+ 0.23	+ 0.04	+ 0.18	11.06 > 23
HAVERHILL 23	1960	- 0.20	- 0.14	+ 0.55	12.29 25
HAWLEY 8	1986	+ 0.00	+ 0.56	-----	4.04 > 22
LAKEVILLE 14	1964	+ 0.26	- 0.22	+ 0.73	16.28 21
LEXINGTON 104	1965	+ 0.24	+ 0.44	+ 0.26	2.35 26
MASHPEE 29	1976	+ 0.19	- 0.67	- 0.62	9.61 20
MIDDLEBOROUGH 82	1965	+ 0.99	- 4.33	- 2.32	10.48 21
MONTAGUE 5	1942	+ 0.07	+ 1.25	+ 1.60	1.55 23
MONTGOMERY 19	1986	- 0.64	+ 0.93	-----	0.72 > 22

WELL	START OF RECORD	NET CHANGE IN MONTH	IN ONE YEAR	DEPARTURE FROM DECEMBER MEDIAN	WATER LEVEL BELOW LAND- SURFACE DATUM (FEET)	DAY
		(FEET)	(FEET)	(FEET)	(FEET)	
MASSACHUSETTS (CONTINUED)						
NANTUCKET 228	1976	- 0.52	+ 0.01	- 0.08	25.88	21
NEW BEDFORD 116	1964	- 0.07	- 0.17	- 0.48	4.19	21
NEWBURY 27	1965	- 0.18	+ 1.00	+ 1.10	5.25	25
NORFOLK 27	1965	+ 0.11	+ 0.33	+ 1.00	4.90	24
NORTHBRIDGE 54	1984	+ 0.02	+ 0.13	+ 0.53	4.03 >	19
NORTON 37	1964	- 0.16	+ 1.04	- 0.61	6.88	21
ORANGE 63	1985	+ 0.01	+ 0.33	+ 0.51	6.82	22
OTIS 7	1965	+ 0.62	+ 1.33	+ 0.65	7.50	22
PELHAM 23	1984	+ 0.03	+ 0.34	+ 0.17	11.04	23
PELHAM 24	1984	+ 0.58	+ 1.89	+ 1.40	2.88 >	23
PETERSHAM 16	1984	+ 0.78	+ 1.44	+ 0.66	12.67	23
PITTSFIELD 51	1963	- 0.40	+ 1.94	+ 1.14	14.87	22
PLYMOUTH 22	1956	- 0.35	- 1.24	- 0.50	25.93	21
PLYMOUTH 494	1985	- 0.25	+ 0.26	-----	31.61 >	21
SANDWICH 252	1962	- 0.13	+ 0.05	- 0.12	47.70	20
SANDWICH 253	1962	- 0.08	- 0.37	- 1.28	51.41	20
SEEKONK 275	1964	- 0.19	- 0.09	- 0.07	6.41	21
SHEFFIELD 58	1987	- 0.05	+ 0.12	-----	12.42 >	22
SOUTHBOROUGH 10	1990	-----	-----	-----	-----	
SOUTHBOROUGH 12	1990	+ 1.61	-----	-----	2.80 >	27
SOUTHWICK 95	1986	- 0.04	- 0.31	-----	3.00	21
STERLING 1	1947	+ 0.03	+ 0.45	+ 0.19	3.07	19
SUNDERLAND 7	1957	- 0.59	- 4.10	+ 1.91	15.16	23
SUNDERLAND 68	1983	+ 0.15	+ 0.04	+ 0.21	2.45 >	23
TAUNTON 337	1964	+ 0.17	+ 0.36	- 0.23	9.13	21
TEMPLETON 3	1957	+ 0.20	+ 0.41	+ 0.15	3.35	19
TOPSFIELD 1	1936	+ 2.30	+ 0.33	+ 0.36	10.62	25
TOWNSEND 13	1965	+ 0.20	- 0.33	+ 0.34	13.49	26
TRURO 1	1950	- 0.03	+ 0.00	- 0.04	10.76	26
TRURO 89	1962	- 0.06	+ 0.11	- 0.38	12.46	26
WAKEFIELD 38	1965	+ 0.26	+ 0.62	+ 0.48	6.50	26
WARE 43	1965	+ 0.15	+ 1.16	+ 1.02	8.24	23
WAREHAM 51	1959	- 0.19	- 1.65	- 1.69	9.76	21
WAYLAND 2	1965	+ 0.12	+ 0.13	+ 0.17	16.07	26
WEBSTER 1	1958	- 0.05	+ 0.00	- 0.26	14.25	19
WELLFLEET 17	1962	- 0.17	- 0.45	- 0.58	11.30	26
WENHAM 76	1965	+ 0.00	+ 0.10	- 0.11	2.56	25
WEST BROOKFIELD 2	1959	- 0.07	+ 0.23	+ 2.12	17.78	19
WEST BROOKFIELD 10	1970	+ 0.94	- 0.41	- 0.65	6.11	19
WESTHAMPTON 20	1986	+ 0.89	+ 2.86	-----	11.27 >	22
WESTFIELD 62	1957	+ 0.12	+ 0.29	+ 0.71	6.85	22
WESTFIELD 152	1986	+ 0.11	+ 0.21	-----	3.38 >	22
WEYMOUTH 2	1965	+ 0.74	- 3.26	- 1.62	12.98	24
WEYMOUTH 3	1965	+ 0.81	+ 0.78	+ 0.64	4.27	24
WEYMOUTH 4	1965	+ 0.56	+ 0.65	+ 0.55	6.21	24
WILBRAHAM 55	1965	- 0.34	- 1.67	+ 2.22	41.04	23
WILMINGTOM 78	1951	- 0.28	+ 0.39	- 0.03	7.92	26
WINCHENDON 13	1939	+ 1.65	+ 1.54	+ 1.28	4.65	19
WINCHESTER 14	1940	+ 0.63	+ 1.73	+ 0.12	9.18	26
WORCESTER 274	1965	+ 0.13	- 0.43	+ 0.05	23.48	19

WELL	START OF RECORD	NET CHANGE IN MONTH	NET CHANGE IN ONE YEAR	DEPARTURE FROM DECEMBER MEDIAN	WATER LEVEL BELOW LAND- SURFACE DATUM
		(FEET)	(FEET)	(FEET)	(FEET) DAY

NEW HAMPSHIRE

CONCORD 2	1963	+ 0.08	+ 0.17	- 2.09	42.04	28
CONCORD 4	1966	+ 0.49	+ 1.04	+ 1.54	16.29	28
ERROL 1	1966	- 0.3	+ 1.4	+ 0.1	12.6	22
FRANKLIN 1	1966	+ 0.51	+ 3.01	+ 3.63	9.27 >	27
HOOKSETT 5	1965	- 0.06	+ 0.70	+ 0.74	47.16	28
KEENE 2	1963	+ 0.62	+ 1.86	+ 1.31	2.18	22
LANCASTER 1	1966	+ 0.46	+ 1.13	+ 1.07	0.68	27
LEE 1	1953	+ 0.24	+ 0.64	+ 0.51	30.58	28
MILFORD 36	1962	+ 1.28	+ 2.14	+ 2.58	5.50 >>	24
NASHUA 218	1964	- 0.46	- 2.72	- 2.78	31.23	28
NEW LONDON 1	1947	+ 2.23	+ 3.76	+ 3.64	4.72	27
WARNER 1	1965	+ -0.28	+ 0.69	+ 1.29	29.77 >	27

RHODE ISLAND

BURRILLVILLE 187	1968	+ 0.06	- 0.04	+ 0.58	14.40	20
CHARLESTOWN 18	1946	+ 0.11	- 3.53	- 1.74	20.14	20
COVENTRY 411	1961	- 0.02	- 0.97	- 0.65	22.14	20
CUMBERLAND 265	1946	+ 0.46	+ 1.44	+ 0.29	11.46	20
EXETER 6	1948	+ 0.80	- 0.14	+ 0.50	5.42	20
EXETER 475	1981	+ 0.55	- 1.91	- 0.32	15.16	20
EXETER 554	1988	-----	- 1.62	-----	10.91	14
LINCOLN 84	1946	+ 0.46	- 0.49	+ 0.70	4.50	20
NORTH KINGSTOWN 255	1954	+ 1.64	- 0.12	+ 0.29	8.27	20
NORTH KINGSTOWN 450	1961	+ 0.15	- 2.42	- 0.88	14.70	20
NORTH SMITHFIELD 21	1947	+ 0.77	+ 1.51	+ 1.02	6.71	20
PAWTUCKET 136	1962	- 0.16	- 1.40	- 0.32	5.23	20
PROVIDENCE 48	1944	+ 0.02	- 0.61	+ 2.49	4.48	20
PROVIDENCE 1051	1948	+ 0.03	+ 0.06	+ 5.88	-0.03	20
RICHMOND 231	1955	- 0.44	- 4.12	- 0.96	27.59	20
RICHMOND 417	1976	+ 0.39	- 0.51	- 0.39	7.17	20
RICHMOND 600	1977	+ 0.20	- 1.30	- 0.43	34.42	20
SOUTH KINGSTOWN 6	1955	+ 0.31	- 2.33	- 0.94	13.53	20
SOUTH KINGSTOWN 515	1955	+ 0.39	- 1.26	- 0.62	28.08	20
WESTERLY 522	1969	+ 0.57	- 0.57	- 0.74	12.65	20
WEST GREENWICH 181	1969	+ 0.31	+ 0.74	+ 0.30	15.15	20

WELL	START OF RECORD	NET CHANGE IN MONTH	IN ONE YEAR	DEPARTURE FROM DECEMBER MEDIAN	WATER LEVEL BELOW LAND- SURFACE DATUM	(FEET)	(FEET)	(FEET)	DAY
VERMONT									
~									
BERKSHIRE 1	1966	+ 1.94	+ 3.08	+ 2.47	11.10 >	26			
BRIGHTON 1	1966	+ 0.56	+ 1.38	+ 1.26	2.59 >	27			
CHESTER 1	1966	+ 1.80	+ 2.19	+ 2.11	2.86 >	24			
GLOVER 1	1966	+ 0.10	+ 1.61	+ 2.65	14.35 >	26			
HARTLAND 54	1969	+ 0.03	- 0.14	+ 0.05	8.79	21			
MIDDLESEX 3	1966	+ 2.96	+ 3.39	+ 3.38	18.24 >	26			
MILTON 3	1956	- 0.35	+ 6.90	+ 3.12	31.15	26			
MONTPELIER 2	1966	- 0.15	+ 1.76	+ 1.27	14.08	26			
MORRISTOWN 1	1966	+ 0.31	+ 1.84	+ 1.35	17.44	26			
PITTSFORD 8	1957	+ 0.12	+ 0.71	+ 1.60	34.80	21			
POWNAL 1	1964	+ 0.02	+ 0.63	+ 0.25	13.39	22			
ROCHESTER 1	1966	- 0.90	+ 0.17	+ 0.20	10.60	21			
WAITSFIELD 2	1975	- 0.21	+ 0.73	+ 0.41	6.15	21			
WAITSFIELD 3	1975	- 0.32	+ 0.88	+ 0.55	6.00	21			
WEST FAIRLEE 1	1966	- 0.30	+ 0.35	+ 0.66	3.20	21			

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

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

RESERVOIR	MONTH-END CONTENTS	% AVERAGE	% FULL
FIRST CONNECTICUT LAKE, NH	2594	135	78
LAKE FRANCIS, NH	4057	135	94
LAKE WINNIPESAUKEE, NH	6380	143	88
SOMERSET RESERVOIR, VT	1992	118	80
HARRIMAN RESERVOIR, VT	3926	129	78
BORDEN BROOK + COBBLE MTN RES., MA	3097	126	91

A MONTHLY REPORT PREPARED BY THE
 U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION
 SUITE 926, 10 CAUSEWAY STREET, BOSTON, MA 02222-1040

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