



# CURRENT WATER RESOURCES CONDITIONS IN CENTRAL NEW ENGLAND



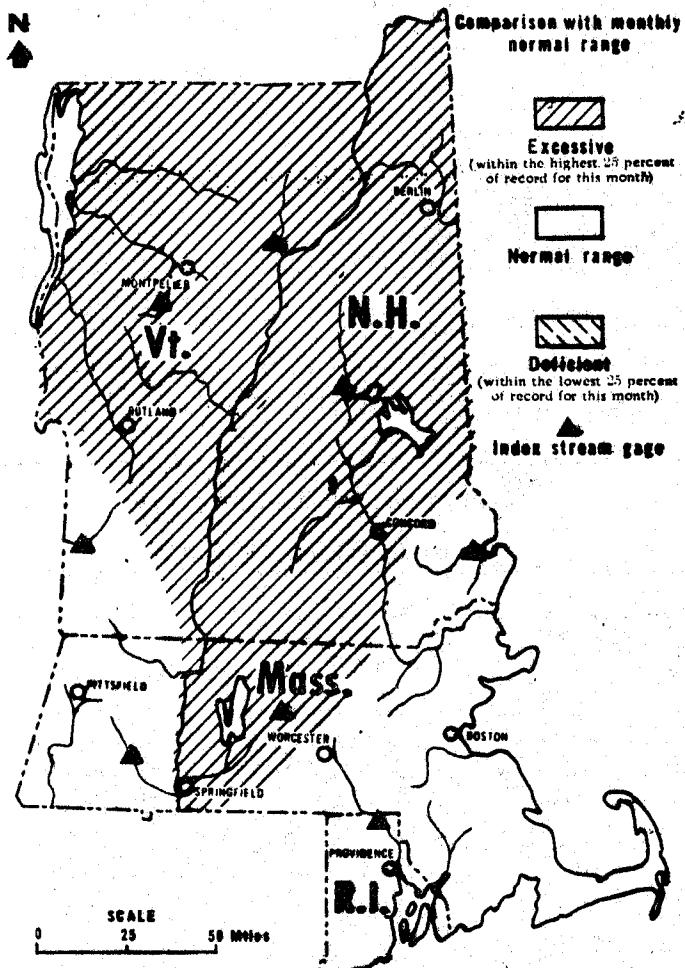
WATER RESOURCES DIVISION, U.S. GEOLOGICAL SURVEY

IN COOPERATION WITH THE STATES OF

MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, AND VERMONT

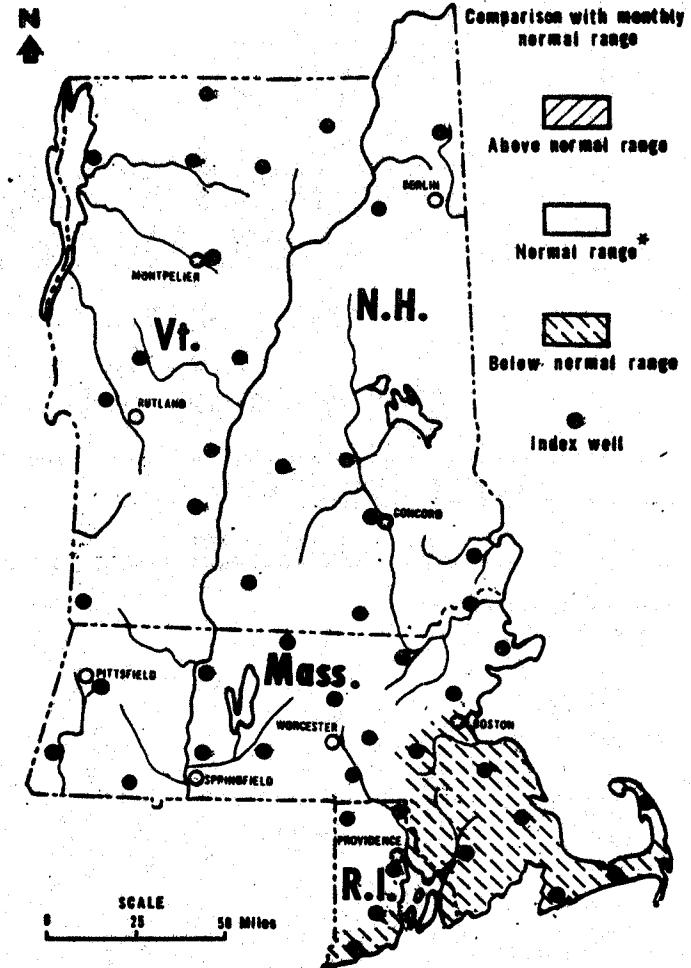
## SURFACE-WATER RUNOFF

SEPTEMBER 1981



## GROUND-WATER LEVELS

SEPTEMBER 1981



\* Within 30% above or below monthly average water level

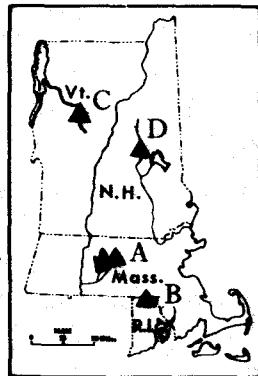
Runoff during September was excessive in most of Vermont and New Hampshire and in central Massachusetts, and was in the normal range elsewhere, as shown on the map above. With normal precipitation during October, runoff is expected to be excessive in New Hampshire, northern Vermont, and possibly in central Massachusetts, and in the normal range elsewhere in central New England.

Cumulative runoff for the period April to September was above median only in central New Hampshire. In all other areas it was below median, and was in the deficient range in Vermont, southwestern Massachusetts, and southeastern New Hampshire. Runoff for the water year October 1980 to September 1981 was in the normal range in New Hampshire and Vermont and was deficient in Massachusetts and Rhode Island. Runoff at the index station in southwestern Massachusetts, West Branch Westfield River at Huntington, was below median in every month except February.

Ground-water levels during September were generally in the normal range except in southeastern Massachusetts and southern Rhode Island, where they were below normal. If present trends continue, water levels near the end of October are expected to remain in the same ranges in the same areas.

Storage in major reservoirs declined slightly and ranged from 71 to 140 percent of average near the end of September. Total contents of all index reservoirs was about 102 percent of that of a year ago.

MONTHLY MEAN DISCHARGE, IN CUBIC FEET PER SECOND



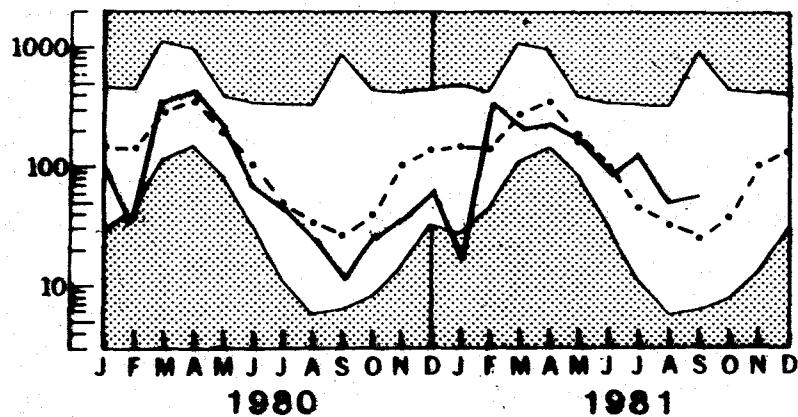
## STREAMFLOW AT SELECTED INDEX GAGES

UNSHADeD AREA SHOWS RANGE  
BETWEEN HIGHEST AND LOWEST  
MONTHLY MEAN DISCHARGES OF RECORD

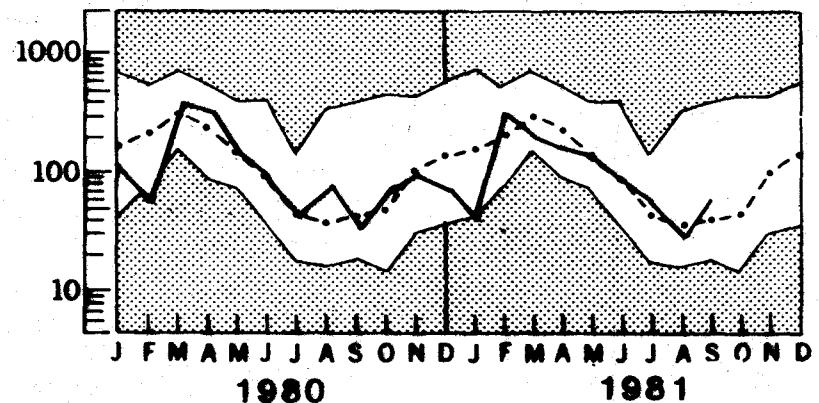
CURRENT RECORD —————

MEDIAN -----

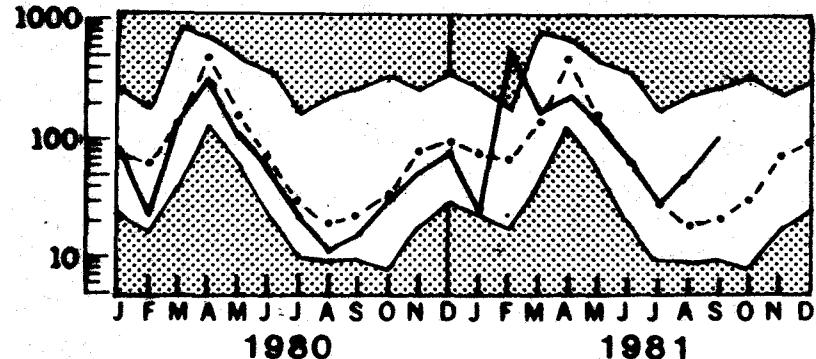
WARE RIVER AT INTAKE WORKS NEAR BARRE, MA (A)



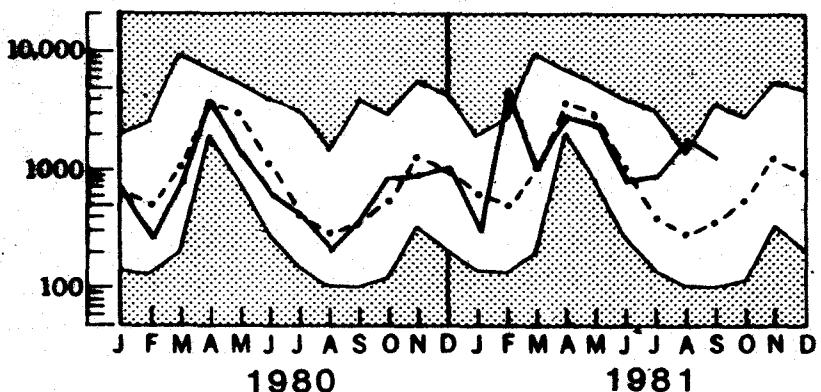
BRANCH RIVER AT FORESTDALE, R.I. (B)



DOG RIVER AT NORTHFIELD FALLS, VT. (C)



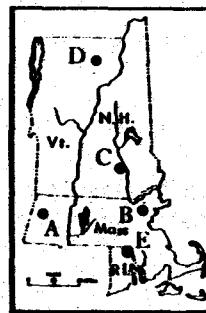
PEMIGEWASSET RIVER AT PLYMOUTH, N.H. (D)



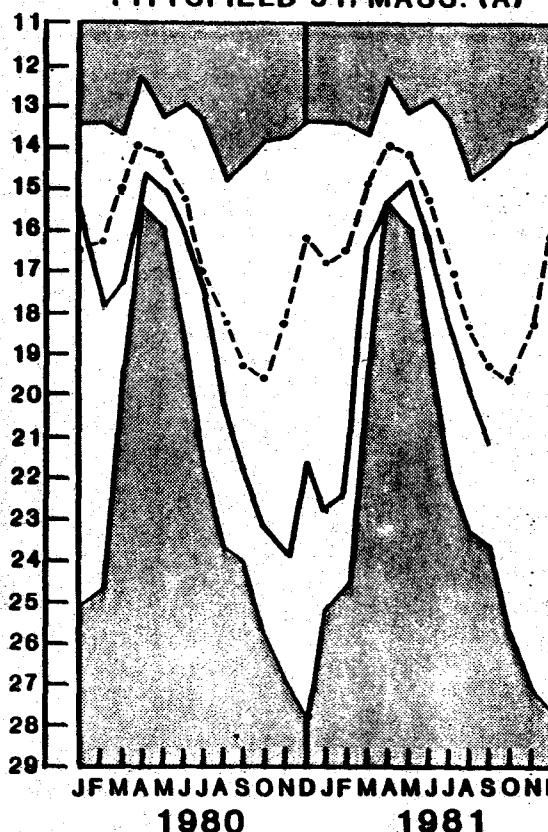
## GROUND-WATER LEVELS IN SELECTED OBSERVATION WELLS

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

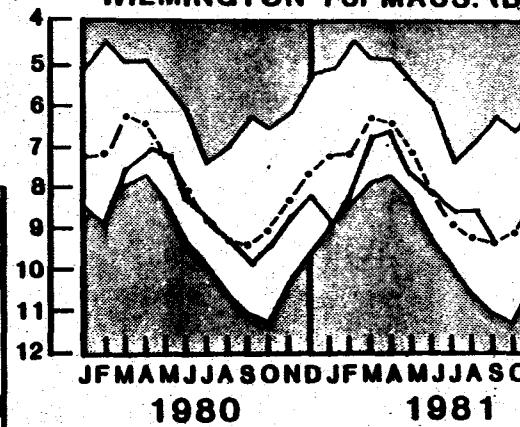
WATER LEVEL IN FEET BELOW LAND SURFACE



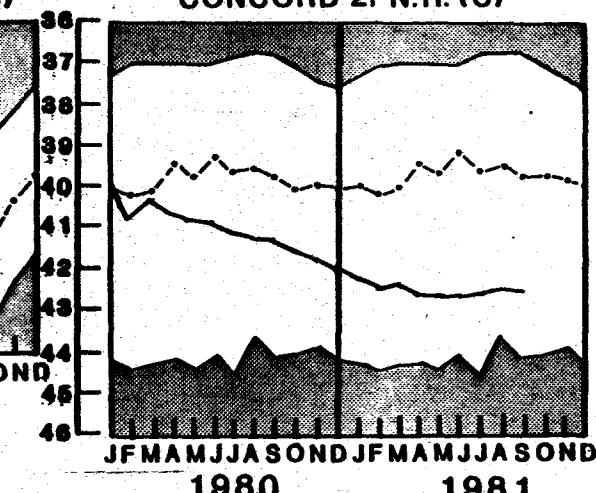
PITTSFIELD 51, MASS. (A)



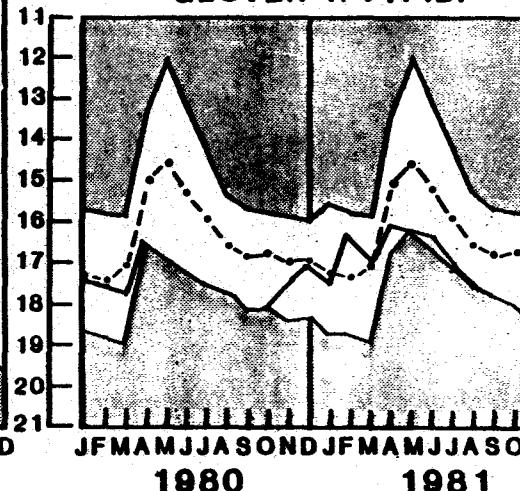
WILMINGTON 78, MASS. (B)



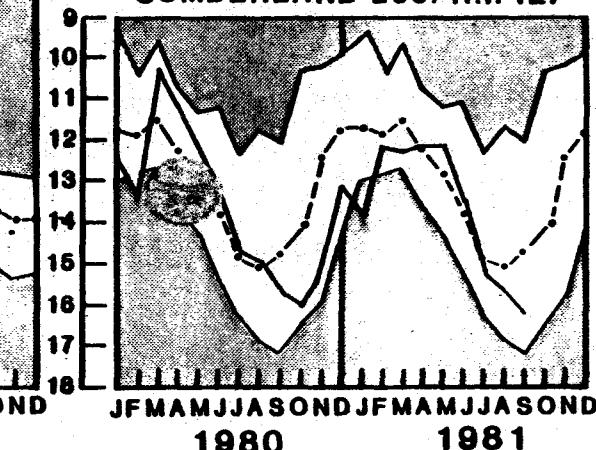
CONCORD 2, N.H. (C)



GLOVER 1, VT. (D)



CUMBERLAND 265, R.I. (E)



## SUMMARY OF GROUND-WATER LEVELS, SEPTEMBER 1961

PROVISIONAL  
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WELL	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM SEPTEMBER AVERAGE* (FEET)	WATER LEVEL BELOW LAND- SURFACE DATUM (FEET)
<b>MASSACHUSETTS</b>					
ACTON 158	1965	- 0.39	- 0.21	- 0.44	20.49
BARNSTABLE 230	1957	- 0.58	- 0.22	- 1.27	25.73
BARNSTABLE 247	1962	- 0.29	- 0.92	- 1.63	26.57
BOURNE 198	1962	- 0.37	- 0.24	- 0.74	34.77
BREWSTER 21	1962	- 0.23	- 1.84	- 2.72	12.67
CHATHAM 138	1962	- 0.27	- 0.35	- 1.26	25.63
DEDHAM 231	1965	- 0.87	+ 0.54	- 1.45	12.34
DOVER 10	1965	- 0.61	- 0.68	- 0.98	35.38
EAST BRIDGEWATER 30	1958	- 1.95	- 0.70	- 2.58	15.98
FREETOWN 23	1964	- 0.35	- 0.42	- 1.13	15.04
GRANVILLE 5	1965	- 0.27	- 1.38	- 0.87	34.26
GREAT BARRINGTON 2	1951	- 0.16	+ 0.06	- 0.50	12.90
HAVERHILL 23	1960	- 0.57	+ 0.16	- 0.11	13.97
LOWELL 14	1939	- 1.02	- 0.40	- 0.78	16.37
MONTAGUE 5	1942	- 0.0	- 0.87	- 1.37	5.85
NORTHBOROUGH 38	1962	- 0.22	+ 3.88	+ 1.42	8.12
NORTHBIDGE 1	1965	+ 0.07	- 0.05	- 0.12	3.61
PITTSFIELD 51	1963	- 1.23	+ 0.75	- 1.89	21.19
PLYMOUTH 22	1956	- 0.42	- 1.13	- 2.22	27.16
SANDWICH 252	1962	+ 0.06	+ 0.09	- 0.24	47.76
SANDWICH 253	1962	- 0.28	- 1.10	- 2.16	52.06
STERLING 1	1947	- 1.43	+ 3.78	+ 1.20	9.03
TRURO 89	1962	+ 0.09	+ 0.25	- 0.09	12.59
WELLFLEET 17	1962	- 0.20	- 0.01	- 1.10	11.91
WENHAM 76	1965	+ 0.15	+ 0.38	+ 0.09	3.69
WEST BROOKFIELD 10	1970	- 0.50	+ 1.43	- 0.23	9.75
WEYMOUTH 2	1965	- 1.68	+ 1.13	- 2.25	20.08
WILMINGTTON 78	1951	- 0.76	+ 0.39	+ 0.02	9.32
WINCHENDON 13	1939	+ 1.25	+ 2.16	+ 0.95	9.27
WINCHESTER 14	1940	- 1.02	- 0.23	- 0.67	13.70
<b>NEW HAMPSHIRE</b>					
CONCORD 2	1963	- 0.05	- 1.21	- 2.58	42.59
CONCORD 3	1966	- 0.44	- 0.11	- 0.99	57.85
CONCORD 4	1966	- 0.30	+ 0.79	- 0.62	18.79
FRANKLIN 1	1966	- 0.13	+ 1.84	+ 0.14	12.63
KEENE 2	1963	- 0.40	+ 0.58	- 0.21	4.62
LEE 1	1953	- 0.21	+ 0.06	- 0.11	31.76
MERRIMACK 22	1958	- 0.14	- 0.02	- 0.26	10.14
MILFORD 36	1962	+ 0.45	+ 1.62	+ 1.69	8.58
NASHUA 218	1964	- 0.96	+ 0.36	+ 0.41	28.91
NEW LONDON 1	1947	- 1.18	+ 3.03	+ 0.95	11.83
WARNER 1	1965	- 0.39	+ 0.85	- 0.30	31.86
<b>RHODE ISLAND</b>					
BURRILLVILLE 187	1968	- 0.91	- 1.27	- 1.01	18.43 ##
CHARLESTOWN 18	1946	- 0.83	- 0.37	- 1.46	20.92
CUMBERLAND 265	1946	- 0.35	- 0.56	- 1.39	16.21
EXETER 16	1946	+ 0.15	- 0.06	- 0.07	12.67
PROVIDENCE 48	1944	+ 0.15	- 0.23	+ 0.73	6.85
WEST GREENWICH 181	1969	- 0.24	+ 0.27	- 0.07	16.89
<b>VERMONT</b>					
BERKSHIRE 1	1966	- 1.95	+ 0.06	+ 0.04	14.74
BRIGHTON 1	1966	- 0.24	+ 0.98	+ 0.22	3.96
CHESTER 1	1966	- 0.02	+ 0.24	- 0.05	5.77
GLOVER 1	1966	- 0.41	+ 0.23	- 0.87	17.89
HARTLAND 54	1969	+ 0.21	+ 0.54	+ 0.04	9.35
MILTON 3	1956	- 0.68	+ 1.28	- 1.99	34.47
MONTPELIER 2	1966	- 0.45	- 0.26	- 0.44	16.36
MORRISTOWN 1	1966	- 0.19	+ 0.08	+ 0.20	19.58
PITTSFORD 6	1957	+ 0.24	+ 0.91	+ 0.92	36.10
POWNAL 1	1964	+ 0.53	+ 0.41	+ 0.78	13.56
ROCHESTER 1	1966	+ 0.66	+ 2.12	+ 1.66	10.43
WEST FAIRLEE 1	1966	+ 0.16	+ 1.56	+ 0.49	3.42 #

\* SET NEW HIGH OR EQUALLED HIGHEST RECORDED WATER LEVEL FOR END OF SEPTEMBER

## SET NEW LOW OR EQUALLED LOWEST RECORDED WATER LEVEL FOR END OF SEPTEMBER

\* - MONTHLY AVERAGE INCLUDES CURRENT MEASUREMENT

A MONTHLY REPORT PREPARED BY THE  
 U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION  
 150 CAUSEWAY STREET, BOSTON, MA. 02114

IVAN C. JAMES II, DISTRICT CHIEF

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