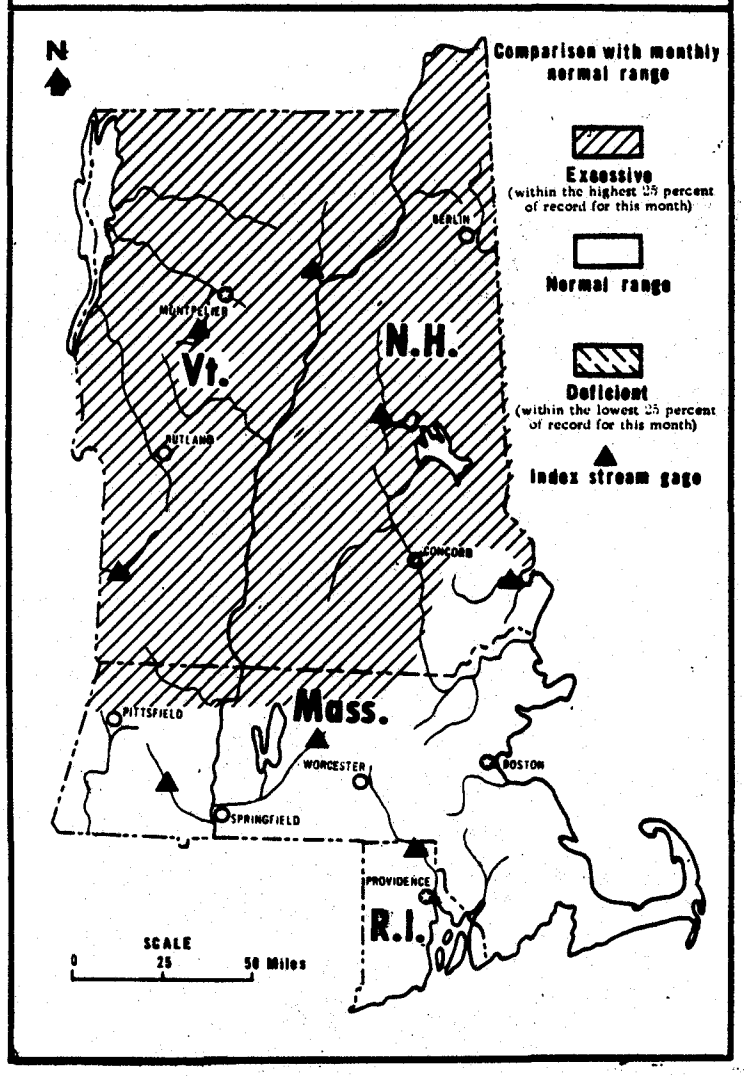
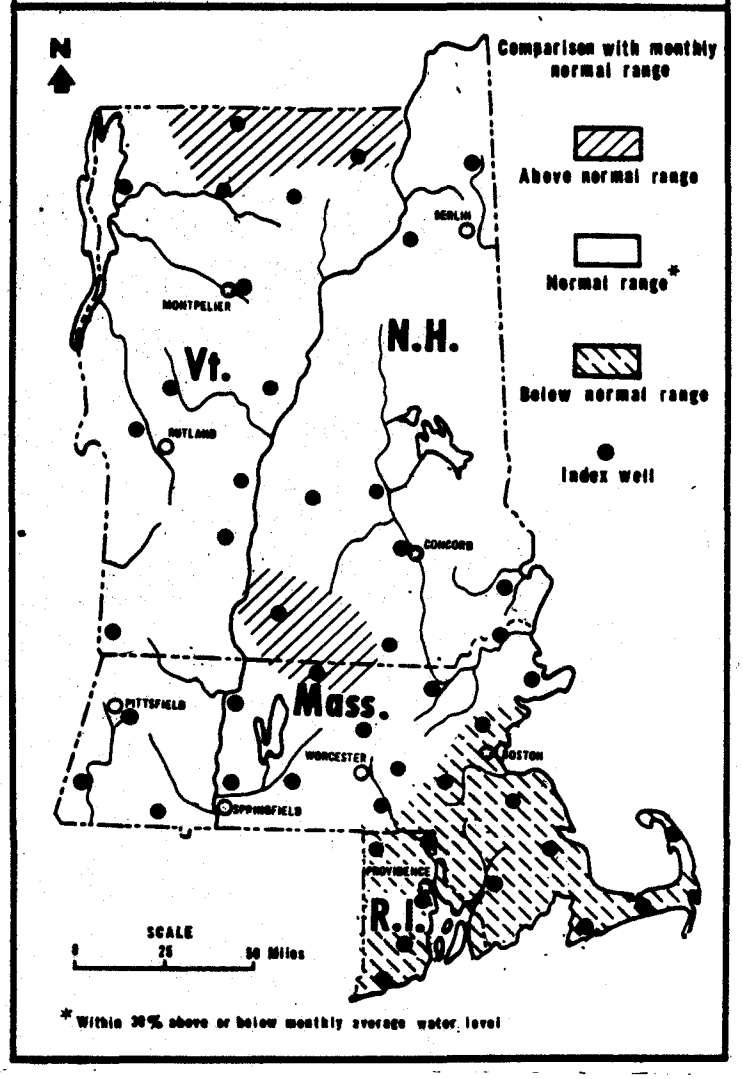
CURRENT WATER RESOURCES CONDITIONS IN CENTRAL NEW ENGLAND

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

SURFACE-WATER RUNOFF
AUGUST 1981



GROUND-WATER LEVELS
AUGUST 1981

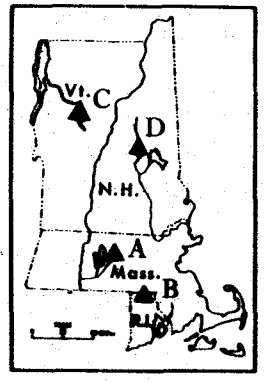


Runoff during August was escessive in Vermont, in all of New Hampshire except the southeast corner, and in northwestern Massachusetts. Runoff was in the normal range elsewhere in central New England. However, reports of low flow in areas ungaged by index stations suggest that runoff along the southern Massachusetts border and in southern Rhode Island may be in the deficient range. New high daily and monthly mean discharges for August for period of record were recorded at index station Pemigewasset River at Plymouth, New Hampshire (October 1903-). With normal precipitation during September, runoff is expected to be excessive in northern Vermont and northern New Hampshire, deficient in Rhode Island and southeastern and southwestern Massachusetts, and in the normal range elsewhere.

Ground-water levels were generally in the above-normal range in northern Vermont and southwestern New Hampshire, in the below-normal range in Rhode Island and southeastern Massachusetts, and were in the normal range elsewhere. If present trends continue, water levels near the end of September are expected to be in the same ranges in the same areas.

Storage in major reservoirs declined and ranged from 71 to 118 percent of average near the end of August. Total contents of all index reservoirs was about 100 percent of that of a year ago.

STREAMFLOW AT SELECTED INDEX GAGES

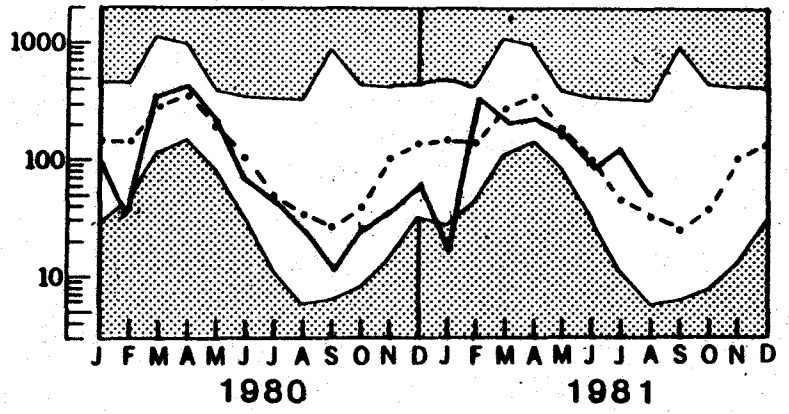


UNSHADED AREA SHOWS RANGE
BETWEEN HIGHEST AND LOWEST
MONTHLY MEAN DISCHARGES OF RECORD

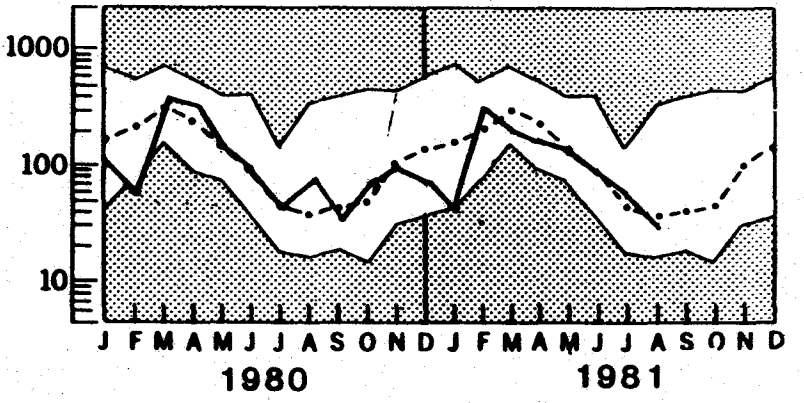
CURRENT RECORD ———— MEDIAN -·-·-·-

MONTHLY MEAN DISCHARGE, IN CUBIC FEET PER SECOND

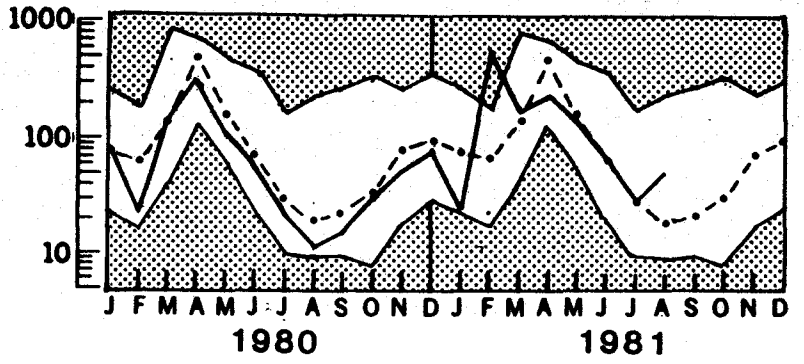
WARE RIVER AT INTAKE WORKS NEAR BARRE, MA (A)



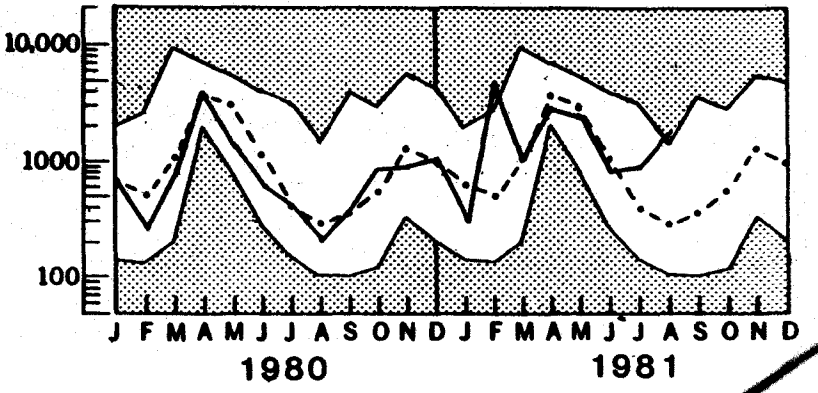
BRANCH RIVER AT FORESTDALE, R.I. (B)



DOG RIVER AT NORTHFIELD FALLS, VT. (C)



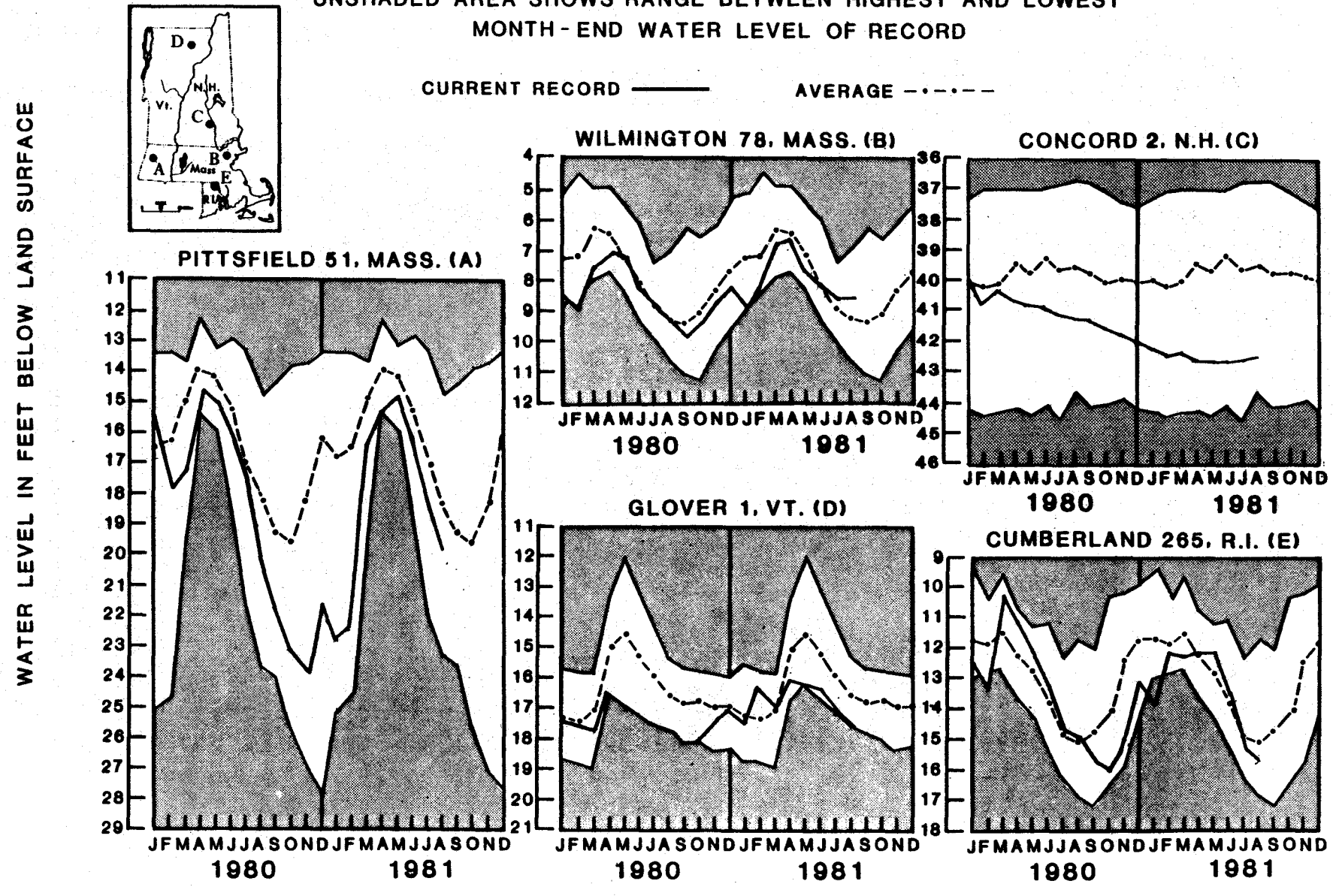
PEMIGEWASSET RIVER AT PLYMOUTH, N.H. (D)



GROUND-WATER LEVELS IN SELECTED OBSERVATION WELLS

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

CURRENT RECORD ——— AVERAGE –·–·– –



PROVISIONAL
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SUMMARY OF GROUND-WATER LEVELS, AUGUST 1981

WELL	START OF RECORD	NET CHANGE IN MONTH (FEET)	NET CHANGE IN ONE YEAR (FEET)	DEPARTURE FROM AUGUST AVERAGE* (FEET)	WATER LEVEL BELOW LAND-SURFACE DATUM (FEET)
MASSACHUSETTS					
ACTON 156	1965	- 0.26	- 0.26	- 0.61	20.10
BARNSTABLE 230	1957	- 0.81	- 0.22	- 0.96	25.15
BARNSTABLE 247	1962	- 0.28	- 1.22	- 1.73	26.28
BOURNE 198	1962	- 0.37	- 0.27	- 0.74	34.40
BREWSTER 21	1962	- 0.25	- 2.04	- 2.71	12.44
CHATHAM 138	1962	- 0.45	- 0.44	- 1.32	25.36
DEDHAM 231	1965	- 1.20	+ 0.02	- 0.91	11.47
DOVER 10	1965	- 0.43	- 0.69	- 0.85	34.77
EAST BRIDGEWATER 30	1958	- 1.59	- 0.74	- 1.67	14.03
FREETOWN 23	1964	+ 0.03	- 0.51	- 1.07	14.69
GRANVILLE 5	1965	- 0.46	- 1.89	- 1.13	33.99
GREAT BARRINGTON 2	1951	- 0.11	+ 0.02	- 0.01	12.74
HAVERHILL 23	1960	- 0.60	+ 0.23	+ 0.04	13.40
LOWELL 14	1939	- 0.99	- 0.37	- 0.64	15.35
MONTAGUE 5	1942	- 0.55	- 1.30	- 1.50	5.85
NORTHBOROUGH 38	1962	- 2.30	+ 1.25	+ 1.32	7.90
NORTHBRIDGE 1	1965	- 0.47	- 0.52	- 0.27	3.68
PITTSFIELD 51	1963	- 1.54	+ 0.03	- 1.56	19.96
PLYMOUTH 22	1956	- 0.15	- 1.32	- 2.36	26.74
SANDWICH 252	1962	- 0.17	- 0.17	- 0.38	47.82
SANDWICH 253	1962	- 0.36	- 1.24	- 2.13	51.78
STERLING 1	1947	- 4.43	+ 3.39	+ 1.76	7.60
TRURO 89	1962	- 0.16	+ 0.04	- 0.21	12.68
WELLFLEET 17	1962	- 0.24	- 0.12	- 1.20	11.71
WENHAM 76	1965	- 0.46	- 0.28	- 0.09	3.64
WEST BROOKFIELD 10	1970	- 2.68	+ 0.29	+ 0.20	9.25
WEYMOUTH 2	1965	- 1.69	+ 0.32	- 2.13	18.40
WILMINGTON 78	1951	+ 0.01	+ 0.62	+ 0.63	8.56
WINCHENDON 13	1939	- 2.74	+ 2.40	+ 1.72	8.02
WINCHESTER 14	1940	+ 0.06	- 1.23	+ 0.03	12.68
NEW HAMPSHIRE					
CONCORD 2	1963	+ 0.03	- 1.31	- 2.79	42.54
CONCORD 3	1966	+ 0.43	+ 0.15	- 0.54	57.41
CONCORD 4	1966	- 0.44	+ 0.61	- 0.70	18.49
FRANKLIN 1	1966	+ 0.42	+ 1.22	- 0.20	12.50
KEENE 2	1963	- 0.47	+ 0.83	+ 0.65	4.22
LEE 1	1953	- 0.13	+ 0.05	- 0.07	31.55
MERRIMACK 22	1958	- 1.86	- 1.89	+ 0.01	10.00
MILFORD 36	1962	- 0.52	+ 0.12	+ 1.08	9.03 #
NASHUA 218	1964	- 0.30	+ 0.79	+ 0.87	27.95
NEW LONDON 1	1947	*******	*******	*******	******
WARNER 1	1965	- 0.45	+ 0.61	- 0.62	31.47
RHODE ISLAND					
BURRILLVILLE 187	1968	- 0.91	- 1.43	- 0.77	17.52 ##
CHARLESTOWN 18	1946	- 0.64	- 0.29	- 1.15	20.09
CUMBERLAND 265	1946	- 0.72	- 0.87	- 0.86	15.86
EXETER 16	1946	- 0.28	- 0.99	- 0.65	12.82
PROVIDENCE 46	1944	+ 0.01	- 1.60	+ 0.45	7.00
WEST GREENWICH 181	1969	+ 0.03	+ 0.14	+ 0.09	16.65
VERMONT					
BERKSHIRE 1	1966	+ 2.58	+ 2.79	+ 2.35	12.79 #
BRIGHTON 1	1966	+ 0.61	+ 0.87	+ 0.53	3.72
CHESTER 1	1966	- 0.21	+ 0.38	+ 0.11	5.75
GLOVER 1	1966	- 0.37	+ 0.35	- 0.78	17.48
HARTLAND 54	1969	- 0.10	+ 0.25	- 0.28	9.56
MILTON 3	1956	- 0.74	+ 1.11	- 2.43	33.79
MONTPELIER 2	1966	+ 0.47	+ 0.71	- 0.01	15.91
MORRISTOWN 1	1966	+ 0.07	+ 0.90	+ 0.29	19.39
PITTSFORD 8	1957	+ 0.16	+ 0.61	+ 0.59	36.34
POWNAL 1	1964	- 0.38	+ 0.20	+ 0.35	14.09
ROCHESTER 1	1966	+ 1.00	+ 1.66	+ 1.08	11.09
WEST FAIRLEE 1	1966	+ 0.11	+ 1.36	+ 0.63	4.08

SET NEW HIGH OR EQUALED HIGHEST RECORDED WATER LEVEL FOR END OF AUGUST
SET NEW LOW OR EQUALED LOWEST RECORDED WATER LEVEL FOR END OF AUGUST
* - MONTHLY AVERAGE INCLUDES CURRENT MEASUREMENT
****** - DATA NOT AVAILABLE

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
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