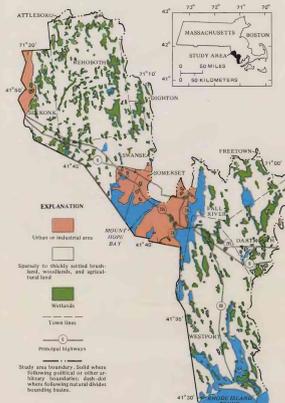


INTRODUCTION



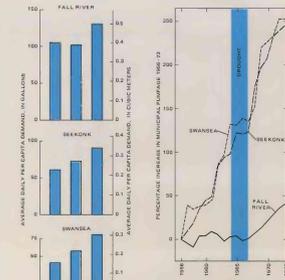
THE STUDY AREA INCLUDES PARTS OF FALL RIVER, ATTELBORO, NORFOLK, BARNSTABLE, DORSET, BRISTOL, DUNSTABLE, and WESTPORT, ALL ON THE STATE OF FALL RIVER and Seekonk. The area is largely to the south of the Fall River and Seekonk, and some branches of the Fall River and Seekonk, which are separated by stream valleys along north-south. Small water streams drain the area to the Fall River, Seekonk, and Seekonk.

About 55 percent of public water supply in the study area comes from surface water resources (primarily the Fall River system). The water supply is derived from the Fall River system, which is a natural stream with a flow of about 100 cfs at the mouth of the river. The water is pumped to the treatment plant and then distributed to the public.

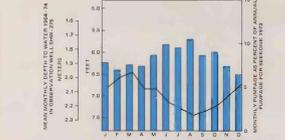
The most favorable areas for ground-water development are located in the western part of the study area, where the Fall River and Seekonk are in close proximity. The water table is generally high in these areas, and the water is of good quality. The water is used for domestic and industrial purposes.

Population increase in the town has been accompanied by a marked increase in municipal water demand. The population of Fall River has declined, but increased municipal water usage has caused an overall rise in municipal water demand. This has led to a marked increase in per capita demand for water. Maximum withdrawal from resources and levels and create water shortages for many public water systems during the summer.

POPULATION INCREASE IN THE TOWN HAS BEEN ACCOMPANIED BY A MARKED INCREASE IN MUNICIPAL WATER DEMAND. THE POPULATION OF FALL RIVER HAS DECLINED, BUT INCREASED MUNICIPAL WATER USAGE HAS CAUSED AN OVERALL RISE IN MUNICIPAL WATER DEMAND. THIS HAS LED TO A MARKED INCREASE IN PER CAPITA DEMAND FOR WATER.



RATES OF INCREASE IN MUNICIPAL WATER DEMAND WITHIN THE STUDY AREA REFLECT THE SUBURBANIZATION TREND IN POPULATION MOVEMENT. PROJECTIONS INDICATED DURING SUMMER CONDITIONS 1964-65, A 10 PERCENT ANNUAL RATE OF INCREASE IN WATER DEMAND FOR THAT PERIOD.

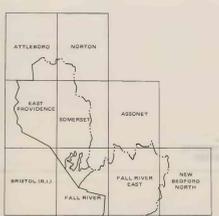
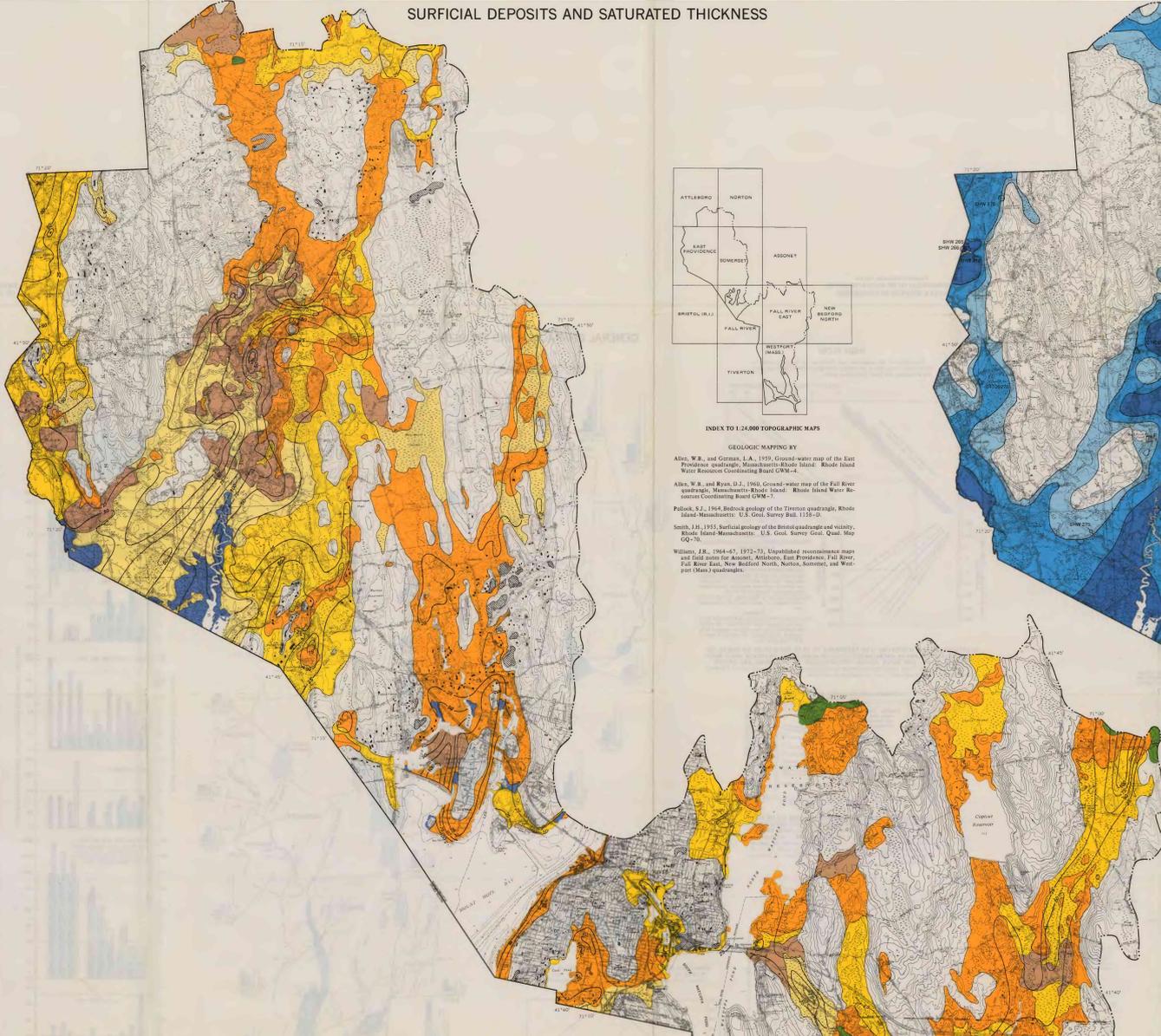


INCREASED MUNICIPAL WATER DEMAND DURING THE SUMMER (BAR GRAPH) CORRELATES WITH THE SEASONAL WATER-TABLE DECLINE, INTENSIFYING THE IMPACT OF SEASONAL GROUND-WATER STORAGE DEPLETION.

Table with 4 columns: Municipality, Ground water, Surface water, Total. Lists water supply for Attleboro, Duxbury, Dighton, Fall River, Freetown, Seekonk, Swansea, and Westport.

*Estimate based on reported data (1968 or earlier).
**Estimate based on 1971 population and reported water yield of reservoirs.

SURFICIAL DEPOSITS AND SATURATED THICKNESS



INDEX TO 1:24,000 TOPOGRAPHIC MAPS

ALLEN, W.B., and GREENE, J.A., 1959. Ground-water map of the East Providence quadrangle, Massachusetts-Rhode Island. Rhode Island Water Resources Coordinating Board (CRM-5).

ALLEN, W.B., and RYAN, D.J., 1960. Ground-water map of the Fall River quadrangle, Massachusetts-Rhode Island. Rhode Island Water Resources Coordinating Board (CRM-7).

WILLIAMS, J.R., 1964-67, 1972-73. Unpublished reconnaissance maps and field notes for Seekonk, Attleboro, East Providence, Fall River, Fall River East, New Bedford, North, Seekonk, and Westport (Mass.) quadrangles.

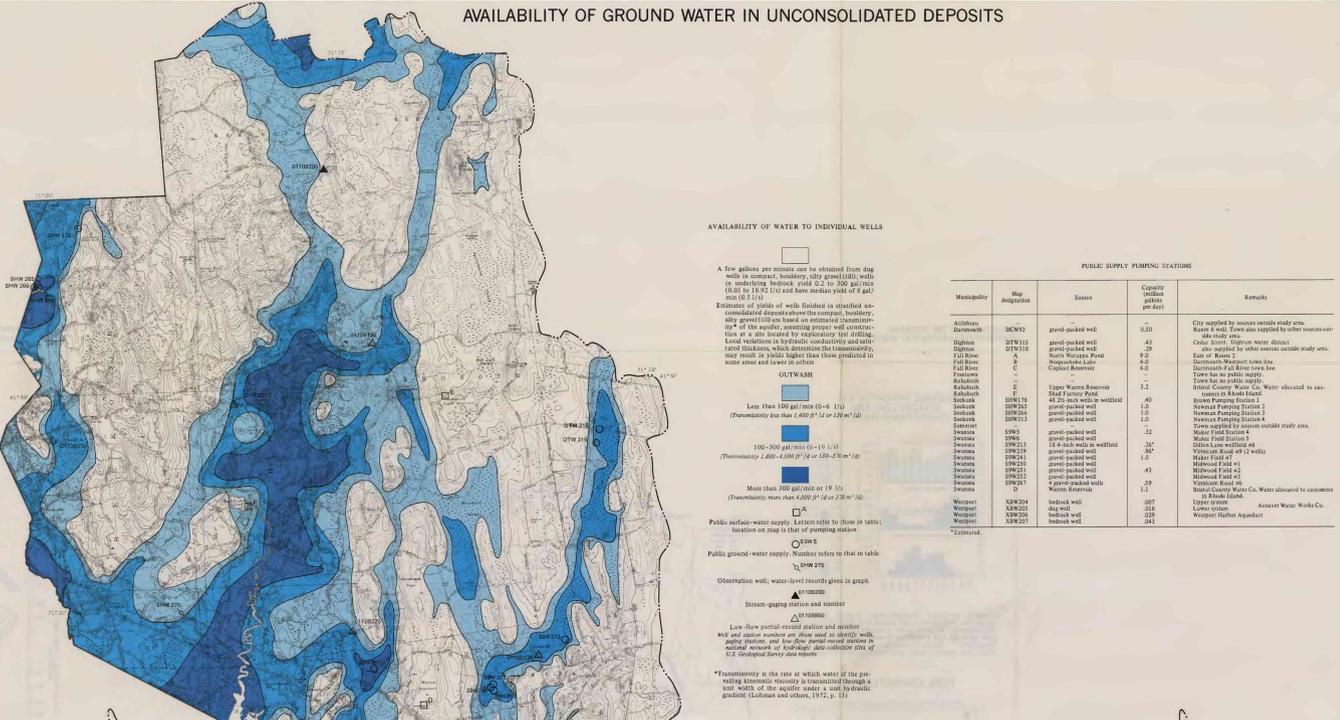
DESCRIPTION AND WATER-BEARING CHARACTERISTICS UNCONSOLIDATED DEPOSITS AND BEDROCK

Table with 4 columns: Description of material, Topographic expression, surface runoff, and infiltration capacity; Water table; Explanation for ground water. Describes various deposit types like well-sorted sand, tidal flats, and clayey sand.

By hydraulic conductivity of a porous medium containing a homogeneous fluid is the value of water at the existing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit cross-sectional area in the direction of flow. (Lighthill and others, 1972, p. 4)



AVAILABILITY OF GROUND WATER IN UNCONSOLIDATED DEPOSITS



AVAILABILITY OF GROUND WATER TO INDIVIDUAL WELLS

A few gallons per minute can be obtained from dug wells in compact, sandy, silty gravel (G1) wells in underlying bedrock yield 0.2 to 200 gal/min (0.01 to 15.2 l/s) and have median yield of 8 gal/min (0.5 l/s).

Public surface-water supply. Letters refer to those in table; location on map is that of pumping station.

Public ground-water supply. Number refers to that in table.

Table with 4 columns: Municipality, Map designation, Source, Capacity (million gallons per day). Lists public supply pumping stations for Attleboro, Duxbury, Dighton, Fall River, Freetown, Seekonk, Swansea, and Westport.

CONVERSION FACTORS

Table with 3 columns: Multiply English units by, To obtain SI units. Lists conversion factors for length, area, volume, mass, and flow rate.

REFERENCES

Hecht, R.J., and Backus, G.M., 1974. Reconnaissance of ground-water conditions of Homestead Beach and Goswami Neck, Westport, Massachusetts. U.S. Geol. Survey open-file report 74-10.

WATER RESOURCES OF THE COASTAL DRAINAGE BASINS OF SOUTHEASTERN MASSACHUSETTS, WESTPORT RIVER, WESTPORT TO SEEKONK

By R. E. Willey, J. R. Williams, and G. D. Tasker 1978