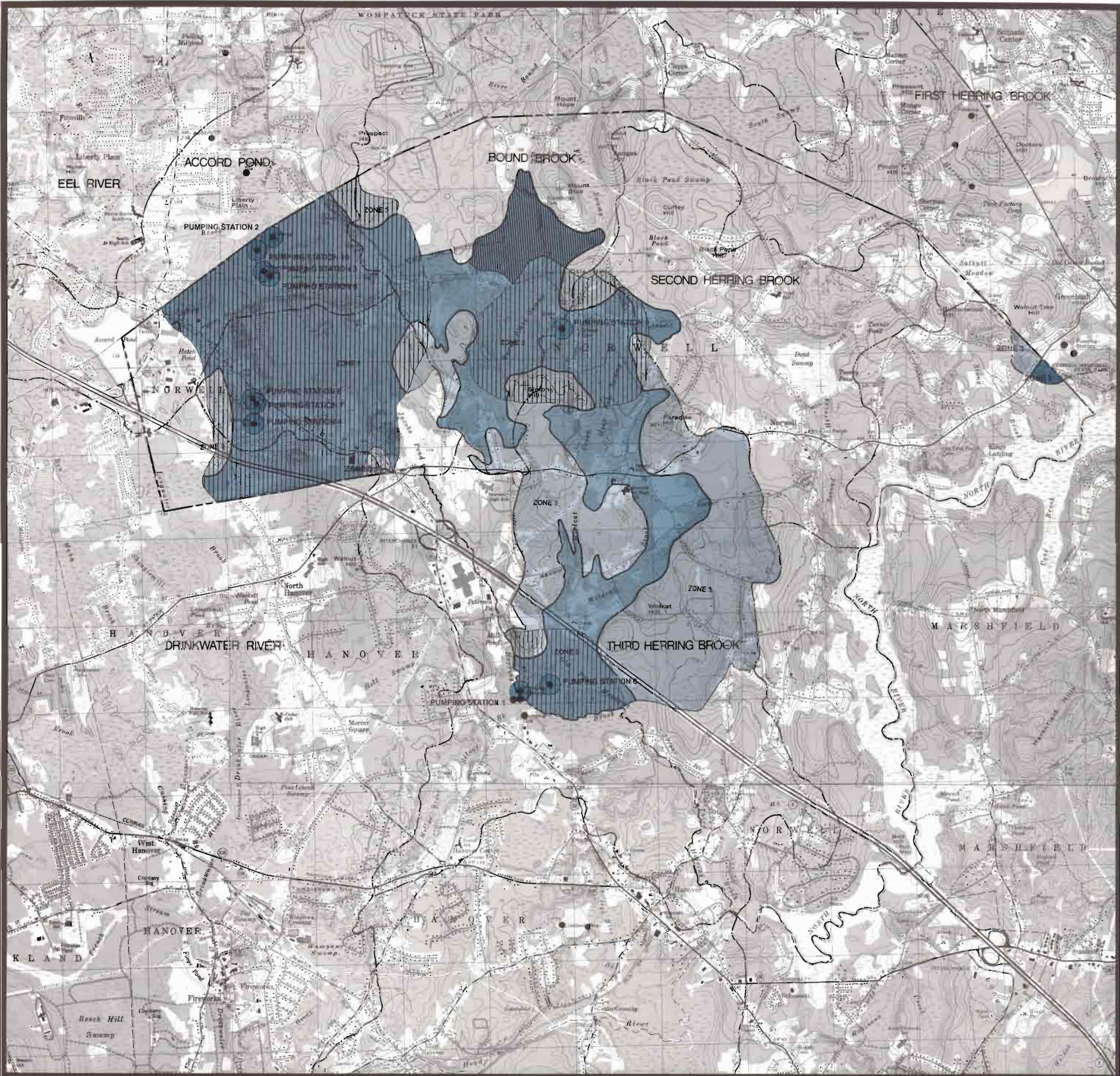


AQUIFER PROTECTION STUDY TOWN OF NORWELL

1988

AQUIFER PROTECTION DISTRICTS



EXPLANATION

- PUMPING STATIONS
- WATERSHED SUB-BASIN BOUNDARY
- TOWN BOUNDARY
- 0.1 FOOT DRAWDOWN AREA
- ZONE 1: The 400 foot radius or other designated area surrounding a water supply well is required by DEQE for its protection of the supply.
- ZONE 2: That area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can be realistically anticipated (i.e. pumping at the well's safe yield for 180 days with no natural recharge occurring). It is bounded by the ground water divides which result from pumping the well and by the contact of the edge of the aquifer with less permeable materials such as till and bedrock. The limit of the cone of depression (0.1 foot drawdown) was determined using a two dimensional numerical ground water flow model and then extended to the edge of the sand and gravel aquifer.
- ZONE 3: That land area beyond the area of Zone 2 from which surface and ground water drain into Zone 2. The surface drainage area as determined by topographic and the ground water drainage area as defined by the numerical ground water flow modeling were used to delineate Zone 3.
- FUTURE AQUIFER AREAS

REFERENCES:

- Raymond Co. Inc., Oakdale, MA
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- Brewster, R.A., W.B. Fleck, and R.E. Willey, 1977. Massachusetts Basic Data Report No. 14. Northampton and Weymouth River Systems. Reston, VA: USGS.

BASE MAP:

- USGS, 1974. Cohasset Quadrangle. 7.5 Minute Topographic Map, Reston, VA: USGS 1:25000
- USGS, 1978. Hanover Quadrangle. 7.5 Minute Topographic Map, Reston, VA: USGS 1:25000
- USGS, 1979. Weymouth Quadrangle. 7.5 Minute Topographic Map, Reston, VA: USGS 1:25000
- USGS, 1977. Whitman Quadrangle. 7.5 Minute Topographic Map, Reston, VA: USGS 1:25000

