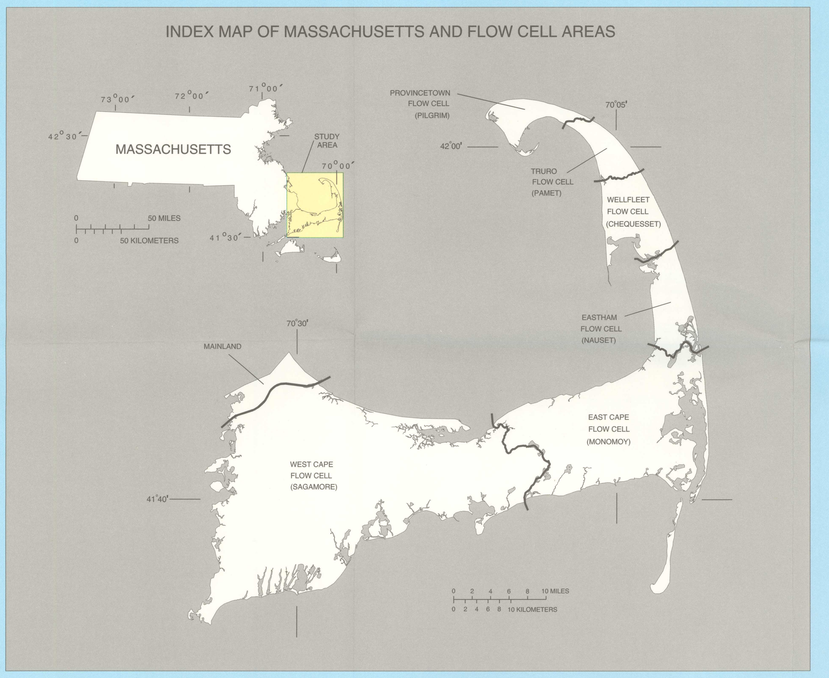
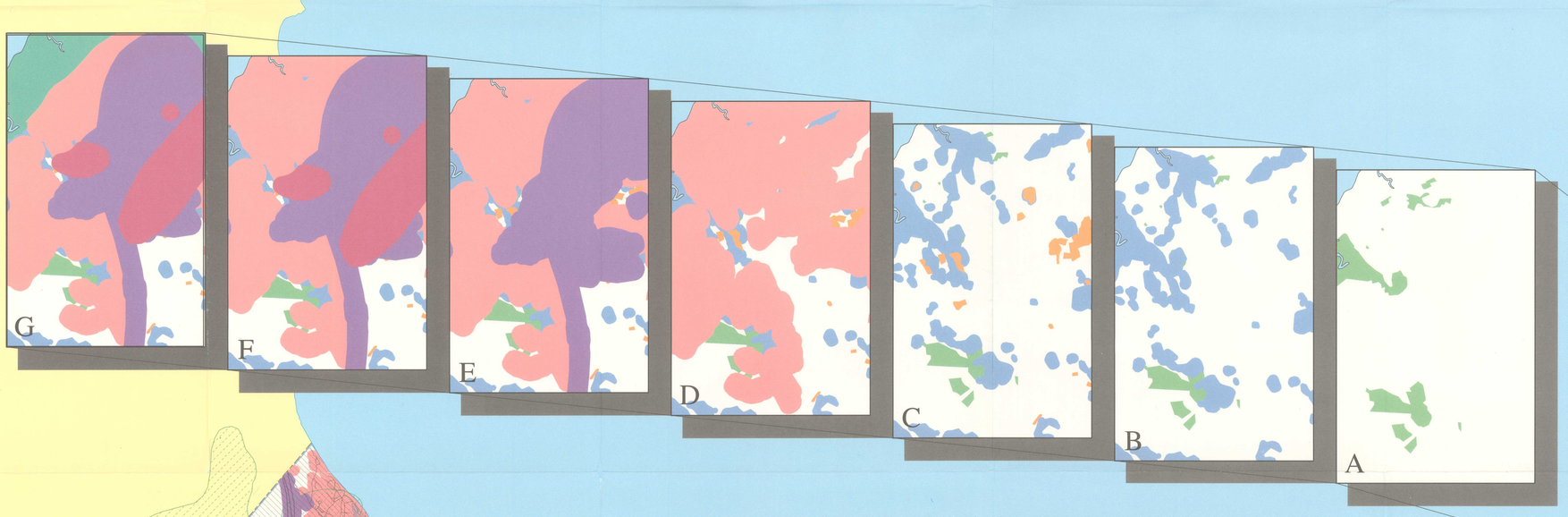
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
CAPE COD COMMISSION

WATER-RESOURCES INVESTIGATIONS REPORT 94-4156
Potential water-supply areas of Cape Cod - PLATE 1
Harris, S.L., and Steeves, P.A., 1994, Identification of Potential Public Water-Supply Areas of the Cape Cod Aquifer, Massachusetts, Using a Geographic Information System

INDEX MAP OF MASSACHUSETTS AND FLOW CELL AREAS





The overlay of ranked data layers is illustrated above for a generalized area. Areas with restricted use are shaded green in A, with light blue for ocean and bay areas. The remaining area shown in A consist of areas in which this criterion is not present. The next data layer, wetland zones, is overlaid on the previous data layer in B. The two components of the wetland zones criteria, the buffered coastline and wetlands, are clearly visible. Some restricted-use areas and some areas with no criteria have been covered by areas from the wetland zone. As all the data layers are overlaid, the screened area expands leaving only small areas with no criteria (A-G). The areas identified by the analysis as potential public water-supplies are the areas with no criteria, or the white areas, in G. Because of the ranking scheme, only the highest ranked criterion for a shaded area is shown in the final data layer (G).

EXPLANATION

Increasing Limitations

- PRIMARY AREAS FOR POTENTIAL PUBLIC WATER SUPPLY
- AREAS WITH LIMITATIONS ON THE POTENTIAL FOR PUBLIC WATER SUPPLY
  - Restricted use
  - Wetland zones
  - Agricultural land use
  - Residential land-use zones
  - Business / utility land-use zones
  - Ground-water contamination zones
  - Potential saltwater intrusion zones
- AREAS WITH LIMITED ANALYSIS– Provincetown flow cell and mainland Barnstable County
- WELLHEAD PROTECTION AREAS– (Department of Environmental Protection and Cape Cod Commission-defined Zone II)
- WETLANDS
- OCEAN, BAY, AND BRACKISH WATER
- FRESHWATER
- 40 SIMULATED WATER-TABLE CONTOUR– Shows altitude of water table. Contour interval, in feet, is variable. Datum is sea level. (From Masterson and Barlow, 1994.)
- BOUNDARY OF GROUND-WATER-FLOW CELL
- HAZARDOUS WASTE SITE–Priority (Massachusetts Bureau of Waste Cleanup, 1991; Massachusetts Division of Water Supply, 1991b)
- HAZARDOUS WASTE SITE–Location to be investigated. (Massachusetts Bureau of Waste Cleanup, 1991; Massachusetts Division of Water Supply, 1991b)
- PUBLIC WATER-SUPPLY WELL

SCALE 1:63,360
0 1 2 3 4 MILES
0 1 2 3 4 5 6 KILOMETERS

Note: Map in Massachusetts State Plane feet

Base from U.S. Geological Survey
Digital Line Graphs
1:24,000 1991 Massachusetts
Universal Transverse Mercator projection

IDENTIFICATION OF POTENTIAL PUBLIC WATER-SUPPLY AREAS OF THE CAPE COD AQUIFER, MASSACHUSETTS, USING A GEOGRAPHIC INFORMATION SYSTEM

By
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1994