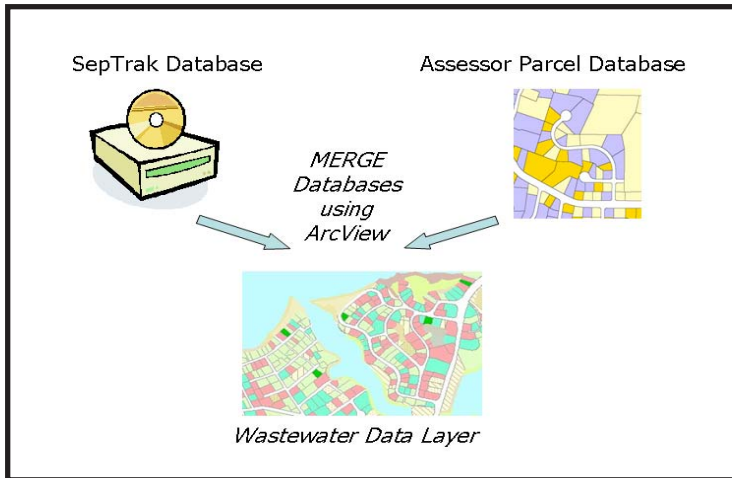
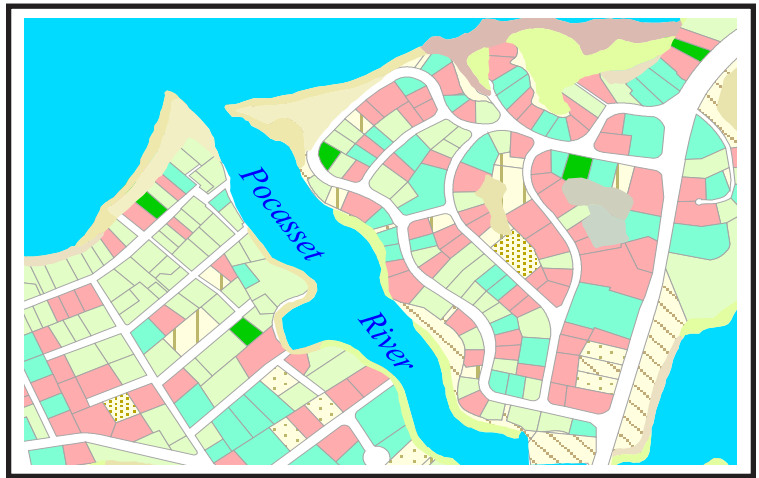


Wastewater Mapping Services: Town of Bourne



Wastewater diagram showing the steps for creating the data layer.



Close-up of a Bourne neighborhood showing the parcels color-coded by wastewater system type.

Wastewater Mapping Services

Norfolk Ram Group, LLC (Norfolk) was retained by the Town of Bourne, to complete a wastewater mapping project for the Town's Board of Health. The wastewater mapping initiative was funded through a grant received from the Barnstable County Wastewater Implementation Committee, and involved the merging of septic system records and assessor's parcel data, with mapping completed using the Town's ArcView Geographic Information System (GIS). The septic system information was obtained utilizing SepTrak, a proprietary, computerized database used by the Town to catalogue septic systems by type (*i.e.*, cesspool, conventional septic system, innovative/alternative treatment systems, or systems connected to sewers), age and condition.

Following the development of the wastewater data layer, an ArcView GIS project was created, and the color-coded wastewater information was added to the ArcView project. Ancillary layers were then added to identify the locations of sensitive environmental receptors, including public water supply wells, Zone II Wellhead Protection Areas, wetlands resources, ponds, streams, and embayments. Additional data categories were added to the wastewater layer to identify the location of all vacant or undeveloped land, and to identify and map the development potential, and/or the current level of protection (*i.e.*, Town owned or deeded open space) afforded to each parcel. Finally, all of the above layers were used to generate a GIS base map.

As an added benefit, the ArcView GIS project was customized through the addition of an "update" button, which enables the user to update the wastewater data layer utilizing newly entered SepTrak data. Selecting the "update" button prompts the user to provide the update time period, and revises the wastewater database through the use of the Spatial Query Language (SQL) and the Open Database Connectivity (ODBC) functions available within ArcView.

The final project was presented via a single town-wide map measuring 30 inches by 40 inches, which is available for viewing at the Board of Health. Additionally, the entire ArcView project was installed onto a lap-top computer, which is maintained at the Board of Health for internal use.

Scope of Services

- Created a parcel-based wastewater mapping data layer.
- Imported assessor's parcel data and sensitive environmental receptor data.
- Categorized vacant or undeveloped land, in order to identify potential, and/or current levels of protection.
- Developed an ArcView project, and created a 30 x 40 inch map, which was provided for use by the Town's Board of Health officials.
- Developed a new method, which automatically updates the wastewater data layer by accessing current SepTrak data.
- Presented the results of the wastewater mapping project to the Barnstable County Wastewater Implementation Committee.

If you would like to know about Norfolk's wastewater mapping services, please contact Mark S. Bartlett, P.E., or Kevin P. Klein, P.E., at (508) 747-7900, extensions 131 and 130, respectively. Norfolk can also be accessed on the internet at www.norfolkram.com

