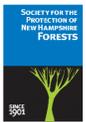


Potentially Favorable Areas for Future Municipal Wells in N.H. Stratified Drift Aquifers



Map Prepared by the
Society for the Protection of NH Forests
Land Protection Department
May 2010



Map Prepared for the
N.H. Department of Environmental Services
Drinking Water Source Protection Program

Funding to complete this project has been provided by the N.H. Department of Environmental Services Local Source Water Protection Grant Program

Roads & Highways	Favorable Gravel Well Areas
Interstate	Undefined
Primary State Route	<75 gpm
Secondary State Route	>75 gpm but <150 gpm
Local	150 gpm
Private	>150 gpm but upper limit unknown
Municipal Boundaries	>150 gpm but <300 gpm
	>300 gpm
	Aquifer Area Not Suitable

Water Features	
Lake/Pond/Reservoir	Conservation & Public Land
Treatment Pond	
River	
Inundation Area	
Perennial Stream	

NOTES

This map displays undeveloped land areas on sand and gravel aquifers that have the potential to serve as municipal water supply from high-yield wells pumping at least 75 gallons per minute. Higher potential pumping rates of at least 150 gpm and 300 gpm are also shown on the map in the purple colors; these areas are termed "very high yield well sites". The orange areas are undeveloped aquifer areas that will not likely produce high-yield well sites, but which provide important groundwater recharge functions.

The areas suitable for municipal wells are identified in a two-step process:

- Four suites of protective buffer distances are overlaid on the entire aquifer land area, effectively removing those areas from consideration. The four buffer suites include setbacks from hydrological features (lakes, ponds, rivers, wetlands), buffers along highways and road rights-of-way, protective zones around known and potential contamination sources (landfills, leaking storage tanks, hazardous materials spill sites, etc.), and buffers along urban features (railroads, transmission lines, pipelines).
- The aquifer area remaining after buffering is then classified by its water yield potential according to data and mapping developed by the U.S. Geological Survey.

The lavender colored areas shown on the aquifer formations represent the total land area that is buffered for protective reasons, and hence is developed for human use, or is part of a hydrological buffer area.

The data shown on this map is the product of a major update of the NH DES Favorable Gravel Well Analysis model which was conducted by the Forest Society for DES and completed in 2010. As such, it includes the most current data available for all the buffer suites noted above. A detailed description of the modeling process and interpretation of the results can be found in *A Guide to Identifying Potentially Favorable Areas to Protect Future Municipal Wells in Stratified Drift Aquifer: Updated Methodology and Data*, released in June 2010, and available at the Forest Society website.

Disclaimer

This map represents digital data available from state and federal agencies as of September 2009. It shows a computerized overlay analysis to determine areas of stratified drift aquifer potentially having both water yield and quality sufficient to serve as large public water supplies. Local land use information and further hydrogeologic analysis are essential to determine the suitability of any location as an actual well site. Buffers used to create this map do not guarantee protection from well contamination. The status of sites and associated buffers are subject to change when contamination has been cleaned up. Similarly, the existing source water protection areas may be revised as more site-specific hydrogeologic information becomes available.

The information provided in this map includes a subset of databases developed by the New Hampshire Department of Environmental Services. Development of these databases is ongoing and this map may not contain all existing and potential threats to groundwater. NHDES is not responsible for the use or interpretation of this information, nor any inaccuracies in site names, locations, projected yields, or groundwater flow direction. All information is subject to verification.

The data are intended for use at 1:24,000 scale. These data are to be used for planning or educational purposes only. The production of this map was performed under the auspices of the New Hampshire Comprehensive State Groundwater Protection Program with funding support from EPA Region I - New England.

Aquifer Basins in N.H.

