PROTECTING THE OSSIPEE AQUIFER

A Collaborative Effort to Safeguard Our Drinking Water

Communities within the Ossipee Aquifer contain:

- 159 sites generating hazardous waste
- 12 Solid waste sites
- 9 leaking underground storage tanks
- 2 sites contaminated with MTBE

Source: NH Dept. of Environmental Services

Definitions

Groundwater:[4] *Subsurface water occurring in soils and geologic formations beneath the water table.*

Aquifer:[1] *Supply of groundwater with enough capacity to supply springs or wells. Aquifers store water between grains of sand, gravel, soil, and rocks.*

Confined or Bedrock Aquifer:[1] *An aquifer that is characterized by being sandwiched between impermeable materials such as clay or bedrock.*

Stratified Drift or Unconfined Aquifer:[1] *An aquifer found between permeable materials such as sand and gravel. These aquifers are typically found closer to the surface than confined aquifers.*

Non-Point Source Pollution:[2] *Pollution occurring from stormwater running over or into the ground, picking up and carrying pollutants to streams, lakes, wetlands and groundwater.*

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Did You Know...

Oil from 1 car can contaminate 1 million gallons of groundwater[1]

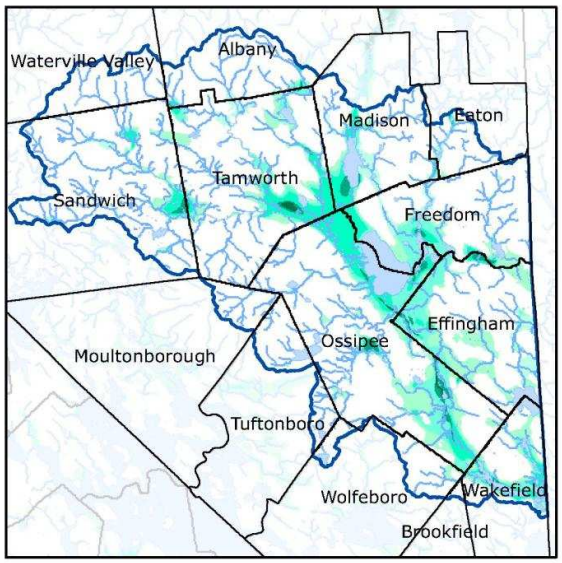
and…

10-20% of septic systems fail each year[1]

Why Protect Drinking Water?

Ossipee, Sandwich, Tamworth, Madison, Effingham, and Freedom currently enjoy the benefit of clean, drinkable water. Because of large-scale development and changes in land use, the communities need to take action in order to protect this valuable resource. According to the EPA the leading cause of drinking water degradation is from non-point source pollutants, or stormwater runoff. A large portion of the towns' residents receive drinking water from the Ossipee Aquifer; therefore it is important that this resource has safeguards. Expanding or upgrading treatment facilities or finding a new source of clean water are costly alternatives. The LRPC, GMCG, and Ossipee Watershed Coalition are working together to assist the Ossipee aquifer communities establish safeguards for the continued preservation and use of the aquifer.

Ossipee Aquifer Watershed—Direct Recharge Area



Courtesy GMCG

Enabling Legislation

The New Hampshire Groundwater Protection Act (RSA 485-C) went into effect on August 9, 1996 to protect the natural quality of groundwater resources by establishing standards and procedures to classify and protect groundwater.

The RSA enables municipalities to develop programs and ordinances for groundwater protection and the right to access, during reasonable times, any property subject to the Groundwater Protection Act[5]. Since groundwater travels across municipal boundaries the state maintains the responsibility to protect it, should local entities elect not to develop their own programs.

[1] *Environmental Protection Agency*
[2] *New England Interstate Water Pollution Control Commission*
[3] *The Groundwater Foundation*
[4] *New Hampshire Department of Environmental Services*

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Groundwater Classification

The state has four categories for groundwater. Initially all groundwater supplies are classified as GB or GA2. However, a municipality can improve drinking water protection by applying for reclassification.

Benefits of Reclassification:

- Active management ensures compliance with BMPs, or Best Management Practices
- Inspection, Investigation, and Cease and Desist powers are in the hands of municipal government
- Prior notice is given to the town for state environmental permits

Groundwater Classification

Class	Description/Comments
GAA	• Most Protected Class. • Includes groundwater flowing to public water supply wells (wellhead protection areas). • Prohibits six high risk land uses.
GA1	• Local entities identify valuable groundwater resources they want to protect via management of potential contamination sources.
GA2	• Includes high-yield stratified drift aquifers mapped by the USGS that are potentially valuable sources of drinking water.
GB	• Includes all groundwater not in a higher classification. As in all classes, groundwater must meet drinking water quality standards.

Source: NH Dept. of Environmental Sciences

How to Protect Your Drinking Water

Road signs are one tool communities can use to educate the public

- Establish goals for groundwater protection
- Inventory Potential Contamination Sources (PCSs)
- Develop Water Protection and Management Plans
- Educate the community on the importance of clean groundwater
- Develop vulnerability assessments for drinking water supplies
- Review regulations to ensure that they protect groundwater supplies
- Utilize zoning ordinances to protect water supply areas
- Preserve valuable open space to protect sensitive water supply lands

Use Best Management Practices

Promote BMPs in new construction and on redeveloped sites to protect drinking water.

- Use approved technologies for infiltration.
- Identify and inspect PCSs as identified in the Groundwater Protection Act (RSA 485-C).
- Properly store & handle regulated substances.
- Post steps to take if a spill occurs.
- Work with businesses to promote and integrate BMPs into everyday practices.

Additional Information for Drinking Water Protection:

Lakes Region Planning Commission: *www.lakesrpc.org/services_resources_aquifer.asp*
Green Mountain Conservation Group: *www.gmcg.org*
NH Dept. of Environmental Services: *www.des.nh.gov/organization/divisions/water/dwgb/dwspp/*
University of New Hampshire Stormwater Center: *http://www.unh.edu/erg/cstev/*
US Environmental Protection Agency: *www.epa.gov/safewater/*