

# PROTECTING THE TRI-TOWN AQUIFER

*A Drinking Water Source for Belmont, Northfield & Tilton, NH*

In Belmont, Northfield and Tilton there are:

- ◆ 127 source water hazard sites
- ◆ 101 sites generating hazardous waste
- ◆ 91 potential contamination sites
- ◆ 8 salvage yards

Source: *Protecting Shared Drinking Water Resources, LRPC, 2003*

## Definitions

**Groundwater:**<sup>4</sup> *Subsurface water occurring in soils and geologic formations beneath the water table.*

**Aquifer:**<sup>1</sup> *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:**<sup>1</sup> *An aquifer that is characterized by being sandwiched between impermeable materials such as clay or bedrock.*

## **Stratified Drift or Unconfined**

**Aquifer:**<sup>1</sup> *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:**<sup>2</sup> *Pollution occurring from stormwater running over or into the ground, picking up and carrying pollutants to streams, lakes, wetlands and groundwater.*

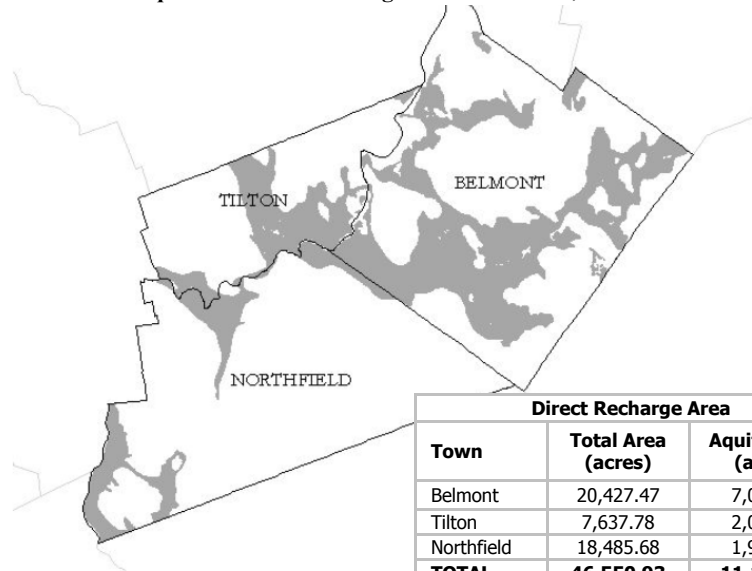


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## Why Protect Drinking Water?

Belmont, Northfield and Tilton 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 Tri-Town Aquifer; therefore it is important that this resource is protected. Expanding or upgrading treatment facilities or finding a new source of clean water are costly alternatives.

**Tri-Town Aquifer—Direct Recharge Area—Belmont, Northfield & Tilton**



Direct Recharge Area		
Town	Total Area (acres)	Aquifer Area (acres)
Belmont	20,427.47	7,053.11
Tilton	7,637.78	2,078.35
Northfield	18,485.68	1,976.86
<b>TOTAL</b>	<b>46,550.93</b>	<b>11,108.32</b>

Source: USGS and NHDES, 2000

## Enabling Legislation

The New Hampshire Groundwater Protection Act (RSA 485-C) went into effect on August 9, 1996. The stated purpose is 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<sup>5</sup>. Since groundwater travels across municipal boundaries the state maintains the responsibility to protect it, should local entities elect not to develop their own programs.

<sup>1</sup> Environmental Protection Agency

<sup>2</sup> New England Interstate Water Pollution Control Commission

<sup>3</sup> The Groundwater Foundation

<sup>4</sup> New Hampshire Department of Environmental Services

<sup>5</sup> New Hampshire Statutes, RSA 485-C

# Groundwater Classification

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

## Groundwater Classification

### Benefits of Reclassification:

- Active management ensures compliance with Best Management Practices
- Inspection, Investigation, and Cease and Desist powers to municipal government
- Prior notice for state environmental permits

Class	Description/Comments
GAA	<ul style="list-style-type: none"> <li>• Most Protected Class.</li> <li>• Includes groundwater flowing to public water supply wells (wellhead protection areas).</li> <li>• Prohibits six high risk land uses.</li> </ul>
GA1	<ul style="list-style-type: none"> <li>• Local entities identify valuable groundwater resources they want to protect via management of potential contamination sources.</li> </ul>
GA2	<ul style="list-style-type: none"> <li>• Includes high-yield stratified drift aquifers mapped by the USGS that are potentially valuable sources of drinking water.</li> </ul>
GB	<ul style="list-style-type: none"> <li>• Includes all groundwater not in a higher classification. As in all classes, groundwater must meet drinking water quality standards.</li> </ul>

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

## 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.


### Aquifer Protection Best Management Practices

**Tri-Town Aquifer Project**

**Protecting Shared Drinking Water Resources**

**Belmont Northfield Tilton**



LRPC  
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### Additional Information for Drinking Water Protection:

Lakes Region Planning Commission (*Tri-Town Reports*): [www.lakesrpc.org/services\\_resources\\_aquifer.asp](http://www.lakesrpc.org/services_resources_aquifer.asp)  
 NH Dept. of Environmental Services: [www.des.nh.gov/organization/divisions/water/dwgb/dwspp/](http://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/](http://www.epa.gov/safewater/)