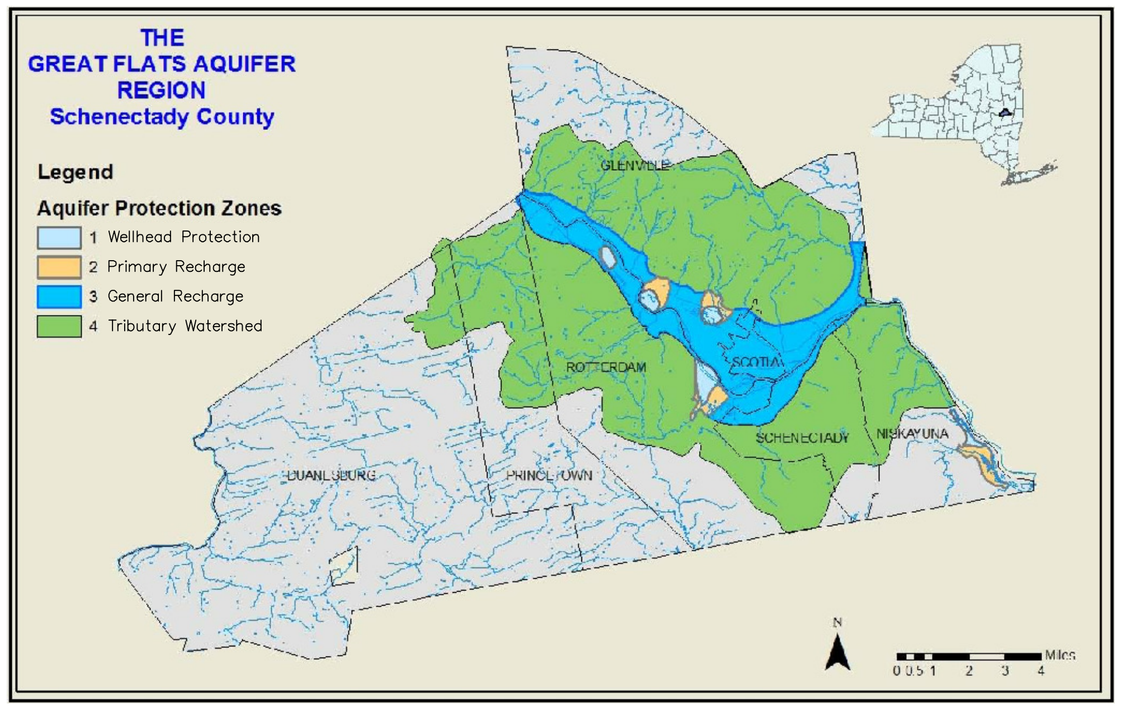
GLENVILLE'S WATER SUPPLY AQUIFER



Schenectady County Department of Economic Development and Planning

Our Water Supply - The Great Flats Aquifer

Glenville's water supply comes from ***"The Schenectady/Niskayuna Aquifer System"***, locally called the ***"Great Flats Aquifer"*** located in the Mohawk River Valley in Schenectady County, New York. In total, the aquifer comprises approximately **25 square miles** in Schenectady County.

Its Origin

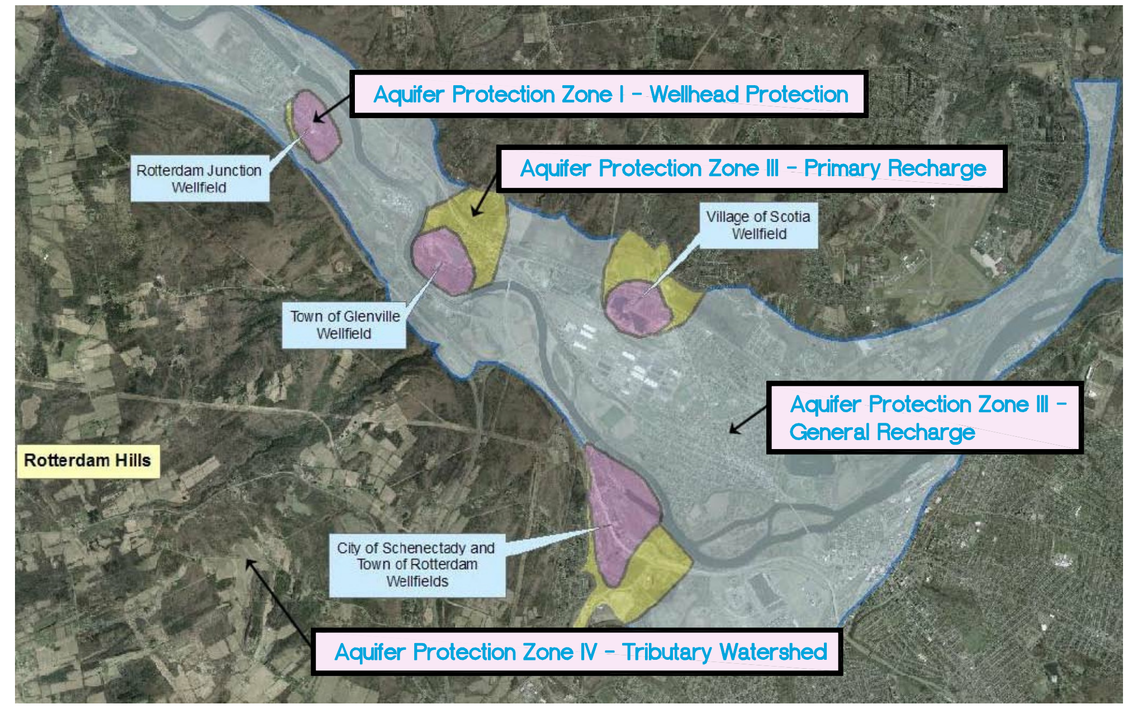
- A large deposit of saturated coarse sand and gravel…. deposited approximately 10,000 years ago as continental glaciers were retreating northward out of New York State.
- Researchers estimate that the flow in the Mohawk Valley was **over 100 times** greater than the current flow of the Mohawk River. This incredible flow provided the energy required to transport and deposit the large cobbles, coarse gravel, and sand that make up the aquifer system.

ref: Schenectady County - http://www.schenectadycounty.com/FullStory.aspx?m=143&amid=562

HIGH-LIFT PUMPS INSIDE THE GLENVILLE WATER TREATMENT PLANT

Photo by John Garver

GREAT FLATS AQUIFER WELL-FIELDS AND RECHARGE ZONES



Schenectady County Intermunicipal Watershed Rules and Regulations Board

The Aquifer's Value

The ***Great Flats Aquifer*** is a unique groundwater resource and one of the most productive aquifers in New York State. It is the only source of drinking water for many communities.

- The ***Aquifer*** serves as a reliable source of high quality drinking water for nearly ***150,000 residents*** of both Schenectady and Saratoga Counties. On an average day, approximately ***25 million gallons*** of water are withdrawn from the aquifer by five Schenectady County municipalities including the City of Schenectady, Village of Scotia, Town of Glenville, Town of Niskayuna, and Town of Rotterdam.
- ***Glenville's well field*** supplies water to ***serve over 16,000 households*** in Glenville and adjacent towns in Saratoga County.

ILLUSTRATION OF GROUNDWATER

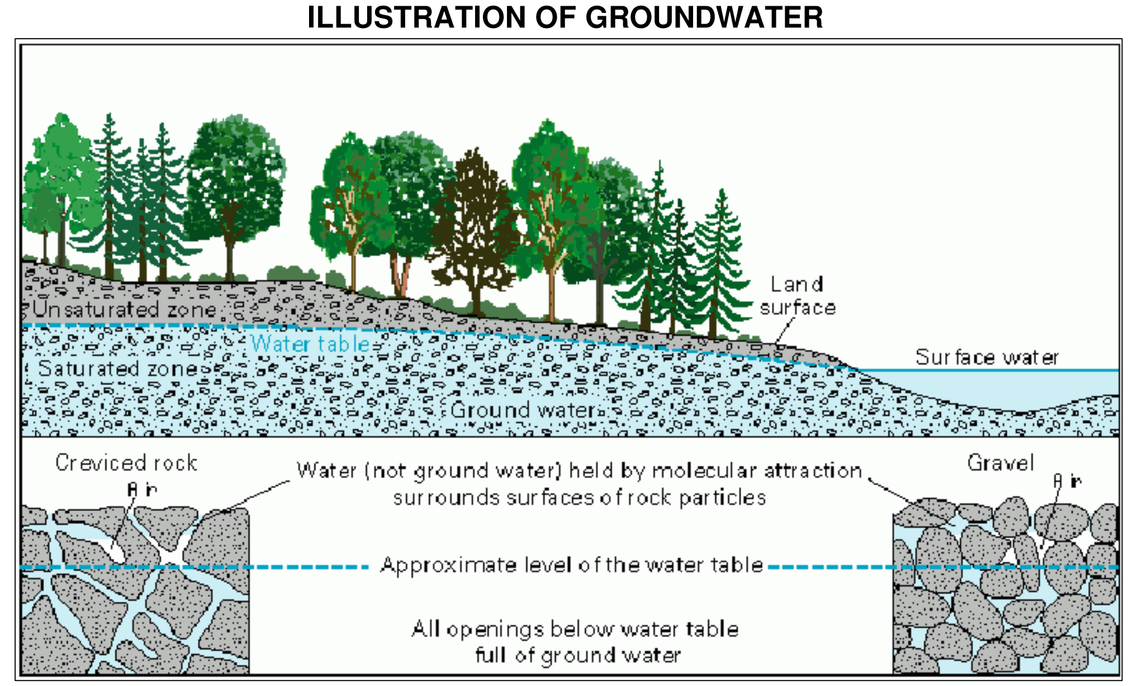
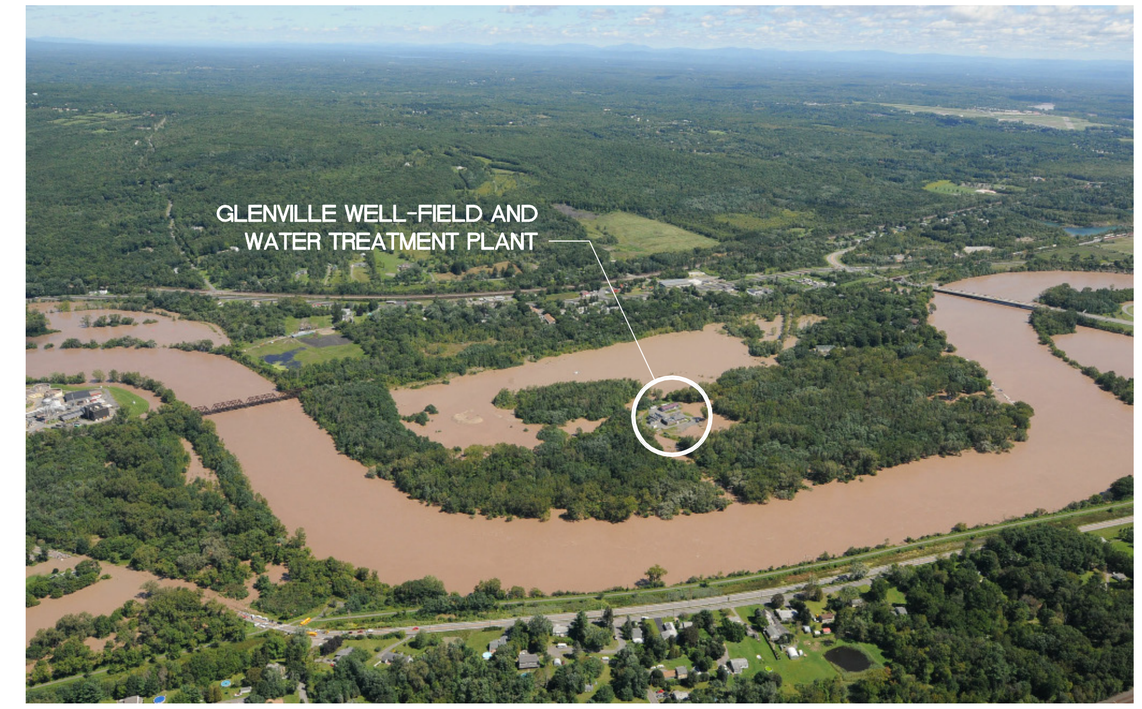


IMAGE FROM http://pubs.usgs.gov/gip/gw/how_a.html

The picture above illustrates how groundwater forms below the land's surface from rain & snow traveling down through the soil …or from the water in a river traveling into loose soil as it flows by. The ***"Great Flats Aquifer"*** gets its water from both…water seeping down through the land surface and water re-charging it from the Mohawk River.

MOHAWK RIVER FLOODING - HURRICANE IRENE, 2011



Times Union Photo by Will Waldron, August 29, 2011, used by permission

How we can protect our water…You can help!

Nearby industries, businesses, railroads and roads, and home dwellings…pose a number of potential and unpredictable threats to the ***Aquifer*** that could impair the water's quality. These steps can help to reduce the potential risks.

Businesses and residents who work and live in the aquifer recharge area:

Prevent Spills - Properly handle chemicals through good planning/management. Have plans in place for quickly responding to accidental spills.

Septic Systems - Limit the types of chemicals and hazardous liquids emptied into a septic system or other forms of on-lot disposal systems. Conduct routine septic system maintenance. When possible avoid disposing of pharmaceuticals in the septic system.

Landscape Maintenance & Gardening - Select the least toxic products for your home gardening and landscaping. Employ wise practices such as integrated pest management (IPM), using the least hazardous methods first to prevent and control pest or weed problems. For all products, follow manufacturers' directions and properly dispose of unused products.

Home/Building Cleaning - For cleaning, repair and maintenance service contracts, specify using the least toxic cleaning products available. Ensure the spent products are properly disposed. Look for alternative products & tips for using natural products.

Private Well Monitoring - Have your private well monitored/sampled if there is any indication (odor, taste) of an issue.

Town Actions:

Glenville's Well-field Protection Committee (GWPC) investigated (2012/2013) the range of threats to the aquifer and supply wells. From its research a set of conclusions and recommendations were developed to address the threats. Six principal areas of concern were identified and are being addressed:

1) **Taking steps to protect our water treatment plant and system from floods;**
2) **Restarting facilities following large storm events;**
3) **Interconnecting Glenville's water supply system with adjacent town's systems;**
4) **Monitoring the *Aquifer's* quality and ability for recharge;**
5) **Educating Glenville's residents on the value of the *Aquifer* and protecting its future;**
6) **Working with the municipalities in Schenectady County who draw their water from the Aquifer to protect the entire aquifer system.**