

Tug Hill Aquifer

July 2008 Update

U. S. GEOLOGICAL SURVEY STUDY

One year ago, a group of interested agencies, organizations, municipalities and citizens met at the Salmon River Fish Hatchery in Altmar to discuss the Tug Hill Aquifer. At that meeting the general consensus was that further study of the aquifer would be useful to provide additional information and knowledge to a variety of audiences. As a result, the U.S. Geological Survey developed a 6-year proposal to construct three numerical ground-water flow models to simulate ground-water flow conditions in the three segments that form the Tug Hill Aquifer system. In addition to further the understanding how the ground-water system works, the models will be important tools for Jefferson, Oswego, and Oneida counties and the towns and villages within these counties to develop more comprehensive water-management strategies. Local governments, water managers, businesses, and homeowners will also have the ground-water information needed to ensure that there will be (1) a safe drinking-water supply, (2) water available for economic development, and (3) healthy aquatic environments in the future.

The Tug Hill Commission has actively worked to identify and secure sources of funding to begin the extensive field work necessary to gather the data to input into the computer model. To date, the Commission has secured funding from the following:

NYS Department of State (Ecosystem-based Management funds):	\$65,000
Oswego County:	\$3,333
Jefferson Co. Water Quality Coordinating Committee:	\$3,334
Salmon Rivers Council of Governments:	\$1,000
USGS Matching Funds:	\$47,117
TOTAL	\$119,784

Although short of the \$325,014 the USGS had hoped to have for the first year of this data collection phase, the funding secured has allowed USGS to begin several tasks:

1. Establish, and operate for one year, a real-time continuous-recording stream flow gage on Trout Brook at Centerville
2. Compile base maps of the selected areas using GIS (ArcMap)
3. Start a well inventory of the northern and middle sections of the aquifer
4. Run levels to selected wells
5. Conduct seepage measurements on 14 stream sites in the middle aquifer segment and collect baseline water-quality samples at 8 sites
6. Conduct base-flow hydrograph separation analysis on Sandy Creek at Adams and for a 5-year period of record of an abandoned station on Orwell Brook near Orwell
7. Conduct a pair of seepage measurements on seven selected streams in the northern aquifer segment

8. Conduct additional seepage stream-flow measurements on selected streams connected for the Tug Hill aquifer study area

The Trout Brook gage is operational and can be viewed online at:

http://waterdata.usgs.gov/ny/nwis/uv/?site_no=0425040001&PARAMeter_cd=00065,00060

Looking forward into year two, the Commission has continued to look for opportunities for partnership and funding. That has included the submission of a member item request to Senator Clinton and working with Tug Hill Tomorrow Land Trust to submit a \$100,000 request to the Royal Bank of Canada's Blue Water grant program. No announcements have been made on those requests yet. The Commission is hopeful that additional Department of State funding will be made available for year two, focusing on the northern portion of the aquifer. Of course, all funds raised will be matched 30% with USGS under their Cooperative Water program.

For more information on the USGS study, contact Katie Malinowski at the Commission, (315) 785-2380, katie@tughill.org.

NESTLE CONTINUES BACKGROUND DATA COLLECTION

Nestle Waters North America, Inc. continues to investigate springs in Orwell, Altmar, Williamstown, and Camden to determine whether it's feasible to install a water bottling plant. Their data collection consists of monthly measurements of discharge at selected springs and streams and some test drilling to determine ground-water levels and framework of the aquifer. To date none of the sites have demonstrated the amount of water Nestle needs in order to build a plant.

SALMON RIVER FISH HATCHERY ADDRESSES WATER NEEDS

Over the past few years the Salmon River Fish Hatchery has been experiencing declining yields from their wells, which are needed to provide the large amount of water used for fish production. In order to address the issue, the Hatchery started last winter with redrilling a well near an existing high production well, which is yielding approximately 475 gallons per minute. The Hatchery also dug two shallow wells and connected them to an existing deep well via a gravity pipeline, which is currently yielding 230 gallons per minute. Future plans include digging another high capacity shallow well using a new technique with sheet piling.

RICHLAND PURCHASING SCHOELLER TECHNICAL PAPER WELLS

The Town of Richland in Oswego County is in the process of purchasing the wells formerly owned by Schoeller Technical Papers. The town currently has one operating water district, and plans to begin installing pipe for water district 2 in 2009. The town is proposing the creation of water district 3, which would potentially serve the Sandy Pond area in the Town of Sandy Creek. A preliminary engineering study is being prepared for the third water district.

GREAT LAKES COMPACT CLEAR 8 STATES AND TWO PROVINCES; SENT TO CONGRESS FOR RATIFICATION

The Great Lakes-St. Lawrence River Basin Water Resources Compact has now been signed by all eight states that encompass the region - Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin - and has been sent to Congress to become law. There is a similar agreement with the provinces of Ontario and Québec so there will be greater regional consistency.

The Compact includes the following points:

- Economic development will be fostered through the sustainable use and responsible management of Basin waters.
- The States will ensure that authority over Great Lakes water uses is retained in the region.
- Regional goals and objectives for water conservation and efficiency will be developed, and they will be reviewed every five years. Each State will develop and implement a water conservation and efficiency program.
- The collection of technical data will be strengthened, and the States will share comparable information, which will improve decision-making by the governments.
- There is a strong commitment to continued public involvement in the implementation of the Compact.

The Compact bans new or increased diversions with limited and strictly regulated exceptions. Under strictly defined circumstances, it is possible that communities located on or near the Great Lakes—St. Lawrence River Basin divide could obtain an exception from the ban. Communities that straddle the Basin and communities in straddling counties would only be eligible if the water is used for public water supply purposes. Depending on the location of the water use, an escalating series of other strict eligibility requirements would also have to be met, including requiring water remaining after use to be returned to the Basin, requiring the proposal to undergo regional review before it may be approved, and in some instances unanimous approval must be given before an exception can be granted. When reviewing a straddling county proposal, substantive consideration will be given to whether or not there is scientific evidence that the community's existing groundwater supply is hydrologically interconnected to the waters of the Basin.

The five Great Lakes comprise the world's largest surface freshwater system. The partners to the Compact have worked to develop a program to carefully manage and protect the freshwaters of the region. The Compact and additional information is available at www.cglg.org.