

## Source Water Protection Sought by Communities

Candor Town, Village Collaborate on Plan

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On Thursday, December 17 Steven Winkley met with a handful of local citizens and officials representing Candor Village, the Town of Candor, and Tioga County to discuss aquifer protection. Winkley, a source water protection specialist from the New York Rural Water Association will be providing technical assistance for the project.

Source water, Winkley explained, is water from streams, rivers, lakes or underground aquifers that provides public drinking water and supplies private drinking water wells. "Groundwater is the source of all drinking water in Candor," he said.

Winkley listed a number of reasons communities might want to create a source water protection plan: to eliminate or reduce potential contamination threats; to ensure long-term sustainability of the system; to minimize impacts from external sources; and to plan for contingencies in event of an emergency. Candor Village, he noted, is interested in maintaining the long-term viability of the village wells. The town, on the other hand, is currently interested in minimizing potential impacts from industrial gas drilling.

"The plan is essentially a document designed to help achieve protection of an area, either an aquifer or a watershed," Winkley explained. In this case the plan would focus on the Catatunk Creek aquifer and the watershed that feeds into the system.

There are many elements in a plan and Winkley has already begun collecting detailed maps of current water sources, including public and private wells. In addition to compiling available data on water quality, Winkley will be assessing high-risk land uses. He will also be assessing which areas of the aquifer are more sensitive and might be in need of more protection.

Both town and village need to determine whether they will want local laws to protect the aquifer, or whether there are other strategies to pursue. But first there's a lot of information to gather.

Winkley presented a short slide show of Candor's source water setting. A public water system is one that provides water to at least 25 people; in Candor they include the village wells, Country Café and other restaurants with their own well, Bonita Camp, Iron Kettle Farm and the mobile home parks. There are another 2600 individual wells in town, Winkley noted. At least 71 percent of the population gets their water from the Catatunk Creek aquifer. But the aquifer isn't simply a single layer of water flowing beneath the ground. Some drinking wells tap into a shallow layer that runs as deep as 30 feet, while others tap into the deeper layer that is 50 to 130 feet down. Those shallow wells are more at risk for contamination, Winkley said.

Water quantity is not a concern, Winkley reported. Quality seems to be the issue. A potential problem in the village, should individuals begin to drill water wells, is the close

proximity between water sources and septic systems. Shallow wells would risk contamination, so there would need to be setbacks to ensure safety.

Winkley believes the village has a right to pass a law prohibiting the drilling of water wells within village limits. He noted that the potential for contamination provides a good reason for such a law. When you define a wellhead protection area you need to know what area contributes water to those wells, Winkley said.

Winkley went on to raise concerns about the impacts of horizontal drilling and hydraulic fracturing (fracking) on the aquifer. “Proposed wells located within 1,000 feet of a municipal water supply would trigger an individual environmental impact statement (EIS),” he said. “But that doesn’t include community systems such as your mobile home parks.”

Right now no gas wells are proposed in the watershed area. “What are your protection measures?” Winkley asked. He listed some measures to consider, including land-use regulations (zoning), wellhead protection laws, easements, and water monitoring and testing.

In considering industrial activity – or any other activity – Winkley reminded people that all water sources are connected. Streams flowing from the hills recharge the aquifer; these recharge areas are important places to protect, he said.

“We’ve got a lot of work to do,” Winkley said. Within the next two months he plans to finish mapping the aquifer, document water quality and inventory land use. Winkley suggested that the draft could be ready for consideration within 4 - 5 months. Before then, possibly in February, he will return with updated maps and summaries of his work.

“The more you understand the aquifer, the better you can protect it,” Winkley said, inviting people to attend the next meeting.

### **Sidebar:**

#### **Colorado Town uses Watershed Plan to Protect Water from Gas Drilling**

Two towns in Colorado, the town of Palisade and the city of Grand Junction, collaborated with a gas company to develop a watershed protection plan. They were concerned about risks to surface water from construction (roads, well pads, and pipelines), storm water runoff, and spills of drilling fluids, fracking chemicals or brine. Potential groundwater risks included percolation of contaminants from surface spills, leaky casings, and other below-ground accidents.

Over a period of many months citizens and municipal officials met with gas industry representatives to share concerns and develop a plan. In 2007 the communities drew up a document that goes beyond state regulations. While it is not a binding agreement, the gas company has agreed to comply with the plan’s provisions.

Key provisions in the plan include:

- Baseline studies- to define and map streams, lakes, springs, ponds and other sensitive source water-related areas.
- Clustered Development Well Pad Spacing – by clustering development there will be fewer roads, pipelines and other impacts on the environment as well as reduced traffic.
- Emergency Response Plan – the gas company will prepare an emergency response plan and provide training for local emergency squads
- Use of Closed Loop drilling systems instead of reserve pits
- A commitment to using “green” hydraulic fracturing procedures, processes and materials. This means that fracking chemicals used in the watershed area will be “biodegradable, non-toxic, neutral pH, residual free, non-corrosive, non-polluting, and non-hazardous in the forms and concentrations being used.” No known carcinogens will be used.

You may read the entire Watershed Plan at  
<http://www.dola.state.co.us/osg/docs/PalisadeWatershedPlan.pdf>