Village of Cooperstown
22 MAIN ST. P.O. BOX 346 COOPERSTOWN, NY 13326 (607) 547-2411 • FAX (607) 547-5487

To: NYS Department of Environmental Conservation
From: Otsego Lake Watershed Supervisory Committee
Re: dSGEIS Comments
Date: December 1, 2011

These comments on the draft SGEIS for gas drilling, issued September 2011, are being made on behalf of the Otsego Lake Watershed Supervisory Committee (WSC). The WSC has the authority under Public Health Law Section 1100 to protect Otsego Lake, the headwaters of the Susquehanna River, as a drinking water supply for the Village of Cooperstown, the hundreds of thousands of visitors to the area, and the 400 residences surrounding the lake. The WSC is very concerned about the potential impacts of gas drilling using the extraction method of high volume hydraulic fracturing (HVHF) , and recommends that it be banned from the Otsego Lake watershed due to the possible contamination of the drinking water supply. This will not only protect the lake as a source of drinking water, but also help preserve the Otsego Lake area, which is on the National Register of Historic Places.

Gas drilling using HVHF uses millions of gallons of water and over 100 tons of chemicals each time a well is hydraulically fractured. Some of the chemicals used in the fracturing process are toxic hydrocarbons and are listed as contaminants in EPA's drinking water standards. Following the fracturing process, approximately half of the water and chemicals injected into the shale formation return to the surface as wastewater. In addition, contaminants are picked up from the shale bedrock, including heavy metals, salt brine, and radionuclides such as radon, which are also listed as contaminants in drinking water standards. Importantly, except for a portion of the salt brine, these contaminants are dissolved in the wastewater.

There are a number of ways that surface waters can become contaminated from gas drilling operations.

1. With numerous wells, there will be thousands of large tanker trucks carrying chemicals and wastewater over secondary roads, with the potential for tanker spills highly probable.

2. According to DEC, there will be steel tanks used for storing gas drilling wastewater, but tanks and pipes can develop leaks.

3. There is also the potential for fracturing fluids, under high pressure, to migrate vertically through naturally occurring fractures in the overlying bedrock and contaminate ground and surface waters.

4. For the Otsego Lake watershed in particular, over half the area is karst topography, which is limestone bedrock with sinkholes and large solution conduits. A leak or spill in a karst area can quickly contaminate surface and ground waters.

Thus, given the multiple potential sources of contamination, there is a real possibility of ground and surface drinking water supplies becoming contaminated with toxic hydrocarbons, heavy metals, radioactivity, and high levels of chlorides.

The draft SGEIS proposes mitigation measures to protect drinking water supplies, the primary method being setbacks, or separation distances. Here are the main ones for drinking water:

- Reservoirs 2,000 feet
- Primary aquifers 500 feet
- Private wells 500 feet

However, the setback for a reservoir, which would include a natural drinking water lake, does not consider tributary streams in the watershed supplying the lake. The setback for a perennial stream is 150 feet. Thus, the regulations would allow a well pad to be located 2,000 feet upstream from a drinking water lake, but then 150 feet from a tributary stream to the lake. This completely negates the 2,000-foot "protection" for a surface drinking water supply.

Once contaminants from HVHF enter the drinking water supply, they cannot be removed by conventional filtration technologies. The contaminants of concern, toxic hydrocarbons, heavy metals, and radionuclides are in solution and pass completely through water filtration systems used by municipalities. The concentrations of these contaminants may be very low, but the long-term effect on public health of low-level exposure to the contaminants from HVHF is unknown.

Therefore, based on the foregoing discussion, the Otsego Lake Watershed Supervisory Committee strongly recommends that the setback for gas drilling well pads using HVHF be 4,000 feet from the Otsego Lake watershed drainage divide. This is the same setback granted to the New York City and Syracuse watersheds, the rationale being that these water supplies are unfiltered. This infers that drinking water supplies that are filtered are protected, which as pointed out above, is not the case. This means that all surface drinking water supplies and their watersheds are susceptible to contamination from HVHF, and singling out only two for special protection would be considered disparate treatment.

Respectively Submitted,

James LaCava, MD
Chairman, Otsego Lake Watershed Committee