

HOBART  
AND  
WILLIAM SMITH  
COLLEGES

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Geneva City Council:

I regret that I could not attend the Geneva City Council's meeting, I've been preoccupied with the recent death of my sister after a yearlong fight with cancer, but I write to urge your group to support a much more thorough analysis of the potential environmental consequences of the proposed ethanol plant for the old Seneca Army Depot land. I've been investigating water quality concerns in the Seneca watershed over the past 15 years, and note that water quality and degradation of water quality is a concern in this watershed. Two studies are of immediate importance here.

Former Hobart and William Smith students investigated the concentration and source of atrazine in the watershed in 1999 and 2000 before any thought of an ethanol facility in the watershed. Atrazine is an herbicide used mostly to support the growth of corn and related crops. It's widely used throughout the Midwest but a significant health threat at concentrations above 3 ppb. Under my direction and with support from the USGS labs in Ithaca, these students analyzed lake and tributary water and concluded that atrazine is in the Seneca watershed. The tributaries with the highest concentrations were those that drained the most agricultural land. Atrazine concentrations were detected above the EPA's maximum concentration limit (MCL) of 3 ppb on a number of occasions, as high as 8 ppb after a significant rainstorm. I wonder if the ethanol plant would stimulate additional use of atrazine in the watershed as more corn is locally grown to meet the demand by the proposed plant.

One of the waste products from ethanol production is "brewers" grain. This byproduct is a useful and relatively inexpensive animal feed. I wonder if the available feed stock would induce additional concentrated animal feedlot operations (CAFO) into the region. CAFOs are not environmentally friendly, and I have a number of examples across the region and within the Seneca watershed where CAFOs can be linked to impaired water bodies. The best example is Reeder Creek, the drainage for most of the Seneca Army Depot.

I also highly recommend a thorough study on how much water the plant requires to create ethanol and how much wastewater will be generated by making ethanol. The source is critical because the obvious source is Seneca Lake, and you should urge a more complete study to determine if this withdrawal will have a negative impact on the lake, especially during dry years like last year. I also strongly advise adequate study on the impact of the wastewater, and where the wastewater will be treated. Seneca Lake does have a nutrient loading problem. All of the major tributaries have larger (significantly larger) concentrations of phosphate (both total phosphate and soluble reactive phosphate) and other critical nutrients than the lake itself. The primary sources for these nutrients are runoff from agricultural activities, both crop and animal farming, and the discharge from wastewater treatment systems (municipal facilities lacking tertiary treatment and onsite systems). If left unchecked, the lake will become more productive over time, and stimulate more algal and nearshore weed growth despite the filter feeding zebra and quagga mussels. My data already indicate signs of a more productive lake, reduced water clarity and increased impairments over the past decade. I urge the City Council to do everything in your power to reduce these water quality threats, not add to them. If we don't, then Seneca Lake will no longer provide Class AA drinking water to the City, nearby residents and neighboring communities.

I invite the council to read about my current and frank assessment of Seneca Lake including the current threats in a recent Finger Lakes Institute report. It is available on my website. Alternatively, I'd be willing to chat with your group on this matter. The report is available at the link below:

<http://people.hws.edu/halfman/Data/2007%20Seneca%20Report.pdf>

These concerns deserve much closer scrutiny. I urge your council to push for that scrutiny that includes a more public and open evaluation of the potential environmental consequences of the plant. We don't want Seneca Lake to become an eutrophic lake resulting in thick films of algae and anoxic bottom waters.

Sincerely,

John D. Halfman  
Professor of Limnology and Hydrogeochemistry