

Eliminating hydrilla from inlet is attainable goal

Herbicides are best answer to invasive plant menace

By Frank P. Proto and Roxanna Johnston

The June 2 Guest Viewpoint by Brian Caldwell expressed some concerns regarding aquatic herbicides which are shared in general by the Tompkins County Water Resources Council. With the application of the herbicide(s) taking place shortly, it's important to address those concerns to reduce some anxiety.

The Water Resources Council supports the work of the Hydrilla Task Force, which has made every effort to collect sound scientific data regarding likely effects from hydrilla. This information is available at stophydrilla.org for anyone to review. More information can be obtained by contacting those involved in the effort or by attending the monthly public meetings being held at Corks & More. Task force representatives are also available for comments at the Farmers' Market. No attempt has been made to exaggerate the effects hydrilla has on local economies or the ecology of the systems it invades.

Management decisions are being made with the help of six experts across the United States familiar with hydrilla, along with input from state and local resource managers and stakeholders. The decision to use herbicides was not made lightly. The only other possible option, diver-assisted dredging, was tested late in 2011 and found to be both ineffective at biomass and tuber removal as well as providing a mechanism for spreading broken fragments of the plant throughout that system. The work was done by experienced professionals, so it is clear that the procedure itself will not work for hydrilla removal. Mowing also provides a mechanism for spread of the plant. At this time, both Seneca and Cayuga counties, which have weed harvesting operations, are planning to have staff attend training sessions on the identification of hydrilla so that they can cease their

work if they encounter the plant.

In Florida or other states where hydrilla is mowed, the goal is management, not eradication. Eradication is possible even on a lake the size of Cayuga, as demonstrated by California's successful eradication of hydrilla in a lake equally as large. The most difficult part of the program is maintaining the "staying power." Killing the tubers takes several years. Monitoring must go on into the indefinite future, and legislation to prevent re-introduction would be a big help and is being pursued.

With respect to the herbicides endothall and fluridone, they are both highly effective on hydrilla. A few other plants are also highly susceptible and a few more are moderately susceptible. Many plants will not be affected at all. Those that are susceptible have seed banks and/or nearby populations that can re-colonize the treated areas once herbicide use has stopped. Hydrilla does not build a seed bank, the tubers will be killed and there are no neighboring populations. Effects on non-plant species are very limited.

Part of our monitoring plan includes tracking the abundance of all the species of aquatic plants in the inlet and on the south shelf of the lake to determine if the management efforts are having unintended impacts on those communities and if the treatment was successful on hydrilla. The task force has firmly embraced the concept of adaptive management and will review data annually to inform future years' management decisions. Eradication is achievable on this scale. And, hydrilla has not yet been found established in the lake. We know this is a long-term effort, and one year will not be enough to eradicate this plant.

With respect to the source of nutrients for the plants, it is a common misconception that soluble phosphorus inputs, such as that from wastewater treatment plants, contribute significantly to aquatic plant growth. Aquatic plants are drawing their nutrients from the phosphorus bound in the sediments. The sediment load to the

inlet and lake is greatly influenced by the glacial history of the area and agricultural practices from a century or two ago, when all vegetation was removed from the steep hillsides. Inputs from the eroded hill slopes and glacial deposits will continue in this system for decades to come. Even if one could stop all inputs, the available phosphorus in the sediment already in the inlet and Lake has ample phosphorus to feed aquatic plants well into the future. This is called a "legacy effect" and can prove frustrating to communities who implement environmental improvements but don't see quick ecological responses.

The efforts of our task force, local governments, the Soil & Water Conservation District, Cornell Cooperative Extension, and those doing educational outreach and providing technical guidance, primarily as volunteers, have been astounding. The rapid response locally also moved several state and federal offices as well as legislators to support funding, though its release has been slow, to address this problem.

The WRC encourages all citizens to stay engaged in the hydrilla eradication effort. Learn about the plant and how to avoid spreading it or any other invasive species. More information on the herbicides may be found at cctetompkins.org/environment/invasive-species/fluridone-herbicide-treatment-faq and cctetompkins.org/environment/invasive-species/hydrilla-endothall-treatment-faq. At either of these websites you may sign up for the list serve to receive timely updates on the process and feel free to contact local task force officials to make your concerns known. Adaptive management is only as successful as the information it is based on.

Please address any comments to the attention of Water Resources Council at planning@tompkins-co.org

Proto is the chairman of the Tompkins County Water Resources Council, and Johnston is the chairwoman of the Hydrilla Task Force. The Water Resources Council is a citizen board that advises the Tompkins County Legislature on matters relating to the management of water resources, and does not necessarily express the views of the Legislature.

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