

2012 Hydrilla Work Plan

April 2012 DRAFT

The overall goal of the project is to eradicate Hydrilla from the Cayuga Inlet and its connecting tributaries and prevent its spread to Cayuga Lake, the other Finger Lakes, and the Great Lakes. Eradication of Hydrilla will allow native species to return to the Inlet and will help prevent native species decline and habitat loss from Hydrilla in other areas. The objectives of the 2012-2013 component of the project are to: reduce the biomass by 98% and prevent tuber production in 166 acres of the Inlet, contain and prevent any movement of the plant out of the Inlet, and monitor for growth, re-growth, treatment efficacy, and spread. Funding from New York State aimed at these objectives will facilitate the goal of eradication within 5-8 years.

The activities listed below will be conducted in 2012 with support from New York State. These activities will reduce the ecological threat posed by Hydrilla by eradicating Hydrilla from the Inlet and preventing the spread of Hydrilla to Cayuga Lake, other Finger Lakes, and the Great Lakes.

- Herbicide treatment (May 2012– November 2012): Herbicide will be applied to approximately 166 acres of the Inlet. Aquathol K will be applied in the timeframe of May 15th to July 1st 2012, depending on plant growth. The Hydrilla Task Force has also proposed the use of Sonar Genesis (liquid) and Sonar One (pellet) following the Aquathol K application. There are some regulatory issues regarding the use of the chemicals, which the Hydrilla Task Force is working with the NYSDEC on. Experience and knowledge gained from the 2011 and 2012 herbicide treatments and plant monitoring, as well as knowledge and advice from aquatic plant experts, will be used to develop a treatment plan for 2013. **Cost: \$400,000**
- Security Costs: Security to maintain watch of the fluridone chemical storage units for the three drip units. **Cost: \$50,000 - \$75,000**
- Water Quality Monitoring (May 2012 – November 2012): Water quality monitoring will be conducted both during and post herbicide treatment. Monitoring during herbicide treatment will determine concentration of the chemical within the treatment area. Post-treatment monitoring will be used to determine spread of the chemical outside the treatment area, degradation of the chemical, and compliance with public notification requirements. **Cost: \$40,000**
 - FasTest Fluridone Monitoring: \$25,050 (w/ Allied collecting samples)
 - Endothall Monitoring (In Treatment Area and DEC stations ½ mile from ends of treatment area): \$13,450
 - ELAP Monitoring (Endothall): \$1,500
 - ELAP Monitoring (Fluridone): \$1,500
- Plant Monitoring (Continuous, already started for 2012): Monitoring of Hydrilla will take place in both the Inlet and the southern portion of Cayuga Lake to determine plant location, growth, spread, and treatment timing. Plant monitoring of the treatment area will be conducted in the spring (pre-herbicide application) and fall (post treatment). Fifty meter grids will be used to determine sampling points using the point intercept method and two rake-tosses while recording GPS coordinates. The total number of sampling points will likely be 300, which includes monitoring into the lake at the mouth of the Inlet and into the mouth of Fall Creek. In-lake monitoring will include more than 1000 sample points on a 50X50 meter grid and will be sampled around the third week in June through the third week in July. The metrics collected will include plant species presence, abundance and GPS locations following time-tested methodology commonly used to evaluate herbicide efficacy. Native and rare plant presence and abundance will be part of this monitoring. Measures of Hydrilla status

(dead, alive, re-growth, roots, tubers, turions) will be quantified after each survey to determine herbicide efficacy. Tuber monitoring will also be conducted in the spring and fall to determine density and treatment effectiveness. **Cost: \$170,000**

- **Tuber Monitoring**: Tuber monitoring began in the fall of 2011 and has continued on a weekly basis since and will continue through the 2012 growing season. Four sites have been monitored (Cornell Boatyard, Cascadilla Kayak Launch, Mouth of Linderman Creek, and South of the Route 79 bridge). **Cost: \$20,000**
- **Public Outreach (Continuous)**: Various public meetings and public education and outreach have been conducted and more are planned for 2012. These activities will further reduce the ecological threat from Hydrilla by educating the public on Hydrilla and how to prevent its spread. Three groups are involved in education and outreach efforts. **Cost: \$30,000**
 - Cornell Cooperative Extension of Tompkins County (CCE)**: Serve as the lead in education/outreach efforts. This includes development and updating of the CCE hydrilla website, leading public outreach meetings, and serving as the point of contact for hydrilla questions.
 - Cayuga Lake Watershed Network (CLWN)**: The Cayuga Lake Watershed Network (Network) will provide eight to ten public workshops around Cayuga Lake that will lead to widespread public understanding of and participation in the hydrilla eradication plan proposed by the Task Force. In addition to the workshops CLWN will conduct additional publicity, outreach and education work as needed during 2012, in cooperation with the Task Force and Tompkins County Cornell Cooperative Extension.
 - Floating Classroom (FC)**: Public cruises will be offered to the public to assist in plant monitoring in the lake. The FC will also print and distribute educational material to the public.
- **Benthic Mats**: Benthic mats are planned for several boat launches (3 acres) in the Inlet. They will also be used in any areas in the lake where hydrilla is found. We set aside 7 acres for use in the lakes, as necessary. **Cost: \$150,000**
- **Divers**: Divers will be used in the Southern portion of Cayuga Lake to enhance monitoring for hydrilla to determine if it has spread into the lake. This work is especially critical this year to make sure negative results aren't due to too little sampling. **Cost: \$50,000**
- **Coordination**: A Local Task Force Hydrilla Coordinator will be hired. This person will take the lead on tracking the numerous initiatives that need attention, keeping the message in front of all the stakeholders, coordinating the various groups, report writing, and providing a face/name for the local effort. Currently Scott Kishbaugh leads management efforts, Robert Johnson, local aquatic biologist, leads our science front, Sharon Anderson leads Outreach, TC SWCD leads permitting, and Roxy Johnston leads the Local Task Force. We don't have anyone looking at the big picture and that leads to a less efficient and forward looking effort. **Cost: \$90,000**
- **Late (Spot) Endothall Treatment**: A possible late treatment may have to occur in the inlet to treat areas without good mixing. Some potential areas that may require a late spot treatment include: Cascadilla Creek, Farmer's Market Area, and the southern portion of the inlet. We approximate these areas to be 25 acres. **Cost: \$33,000**
- **Flow Measuring Studies/Equipment**: Enhancing the USGS Lake level gage will provide detailed flow information for the Inlet. We are also exploring specific targeted flow monitoring efforts where Six Mile, the relief channel (behind the big box stores), the Inlet and the Flood Control Channel all converge. **Cost: \$15,000**

- Meetings and Coordination (\$167,170 on-going in-kind services): Task Force and Subgroup (Management, Education) meeting are conducted continuously (weekly/bi-weekly) to coordinate eradication efforts and plan for effective future eradication efforts.

-Tompkins County Health Department: Staff involvement in local Task Force meetings, management subgroup meeting, development of water quality sampling protocol, analysis of water quality test results, coordination with NYS Department of Health and Bolton Point Water Treatment Plant (**\$6,000**).

-Tompkins County Soil and Water Conservation District: Staff time spent on permit applications (herbicide, wetland, NPDES), staff involvement in Hydrilla Task Force and management subgroup, collecting water quality samples during and after herbicide treatment (**\$40,000**).

-City of Ithaca: Staff time contributed towards coordination of Hydrilla Task Force meetings, sub-group meetings, staff attendance at these meeting, installation and checking herbicide signs during and after herbicide treatment, installation of buoys to close Inlet (**\$60,000**).

-NYS Parks: Staff involvement in Hydrilla Task Force, management and education/outreach sub-groups, development and production of education/outreach materials, public and patron education, boat cleaning stations (**\$61,170**).

-Robert Johnson: Hydrilla Task Force Meetings, sub-group meetings, Development of monitoring and treatment plans, evaluation of hydrilla turion and plant densities within the Inlet, Evaluation of herbicide and hand-harvesting treatments, preparation and donation of plant and identification materials for hydrilla workshops, and participation in leading workshops. (**\$30,000**).

Total: \$1,073,000

Overhead: \$38,750 additional

The Tompkins County Soil and Water Conservation District (TCSWCD) is uniquely situated to coordinate this work. The District has county-wide authority on water quality issues including invasive species, unlike anyone of the jurisdictions (city or towns) that may be affected by this infestation. That was one of the deciding factors for the Local Task Force requesting the District to take on the role as the applicant for NYSDEC pesticide permit, NYSDEC wetlands permit, and Canal Corp permit, which it did effectively and expeditiously in the fall of 2011. The first permits for 2012 treatment have already been completed and submitted to DEC and others by the District, as well as notifications letters (over 200) to landowners, businesses and riparian users have already been sent by the District. The District accepted state funds for the treatment in the fall of 2011 and is poised to be the grantee of funds allocated through the ANS (Aquatic Nuisance Species) grant that is being administered by FL-LOWPA and other state funds. The District hired and signed contracts with the applicator in 2011 and was responsible for distributing the allocated funds, while also coordinating the work. Roles it will continue to serve as this project moves forward. There is no other entity within the county that has the breadth of responsibility and abilities to serve these important roles in as effective and efficient manner as the District.