

GALWAY LAKE PRESERVATION COMMITTEE REPORT FOR THE 2008 SEASON

ALGAE AND INVASIVE WEED PROBLEM

Background: The invasive weed and filamentous algae problem expanded significantly during the 2008 season. By the end of August 2008 the areas impacted included: the Adabar shoreline from the North Bay Inlet to the Harts boundary; the north end of the Harts shoreline and the West Bay Cove (see the attached map).

Cause: The aggressive growth of filamentous algae and lake weeds is primarily attributed to the presence of excessive nutrients in the impacted areas. Testing during the 2007/2008 seasons has suggested that the sources of these excessive nutrients include: agricultural activity; failing or inefficient septic systems (both on and off the lake) and resident waterfowl.

Past Actions: The Association has recognized for some time that controlling nutrients is the key to protecting the lakes' recreational quality and during the past few years several actions have been taken to address the nutrient issue:

- Hypolimnetic Withdrawal - This program has been successful in reducing the level of lake water nutrients when precipitation allows the removal of excess lake water through the lower gate of the control tower.
- Revised Onsite Wastewater Treatment (OWTS) Regulations - The Association worked with the Town of Galway to bring Galway OWTS Regulations in compliance with NY State standards. The provisions of the new regulation have the potential to significantly improve the quality of septic processing if the new regulations are properly enforced. Since the adoption of the new procedures in January 2008, the town has been of aid in addressing suspected septic failures in the Lake District. Continued support from the Town of Galway's Code Enforcement Officer will provide significant, positive results with regard to reducing nutrients and bacteria entering the water while ensuring improved OWTS around the lake.
- Septic Pumping Program - For the past several years the Association has negotiated a significantly reduced rate for septic pumping with Stone Industries. Only a few Campers have taken advantage of this program in spite of efforts to advertise it and stress the importance of having septic systems pumped on a recurring basis.
- Waterfowl Control - For the past several years, the Association has discouraged the feeding of waterfowl and encouraged Campers to take actions to discourage waterfowl from gaining access to floats, docks and shoreline property. These actions are intended to help protect the health of Campers and to reduce the resident waterfowl population. Over the past few years the resident waterfowl population has not grown to a significant extent, but the goose portion of the population has increased adding a significant quantity of nutrients to the lake environment.

CURRENT AND FUTURE ACTIONS

Pilot Tests: During the fall/ winter/ spring of 08/09, two projects were undertaken by the Lake Preservation Committee; one to test the feasibility of using a geo textile mat to suppress the growth of weeds and the second to test the use of Barley Straw as a means for controlling the growth rate and density of filamentous algae.

- Weed Suppression Test - West Bay Cove was the site selected for this test because it has a dense growth of Eurasian milfoil and green filamentous algae that significantly impacts the recreational use of the cove. Further, boats transiting the cove are cutting the milfoil and the fragments from these cuttings are being carried to other lake sections by the prevailing winds where they are establishing new growth areas. The objective of the test is to create a weed free path for recreational boats to move in and out of the cove (see map). Ed Forner from Camp Rd, with the assistance of Andy McPhearson, provided for the planning, construction and installation of the mat. The completed project involved the installation of a geo textile mat measuring 12.5 wide by almost 900 feet long which is weighed down with PVC tubes filled with rebar lashed to the mat every 10 feet.
- Barley Straw Test - Barley straw is thought to have chemical properties that suppress the growth of algae spores and has been successfully used to reduce the growth of filamentous algae in some applications. Three sites were selected for limited barley straw testing during the 2009 season; West Bay Cove, North Bay Cove and a section of the Harts' shoreline. Jim Lombard from the Harts Section led an effort to build and install 4 mesh tubes, measuring 2 by 20 feet, which were loosely packed with a bale of barley straw and anchored below the surface of the water with concrete blocks and marked with plastic bottles. One of the tubes is in West Bay Cove another in North Bay Cove and the remaining two were installed along the Harts shoreline in front of Jims' camp. (See Map on Page 4)

The success of the Geo Textile Mat and Barley Straw Tests will be evaluated during the 2009 season.

Contractor Support: Given the scope and significance of the weed and algae problem, the GLCA Board voted to hire a contractor to assist in researching the problem and developing courses of action. The Association has entered into a contract with the Darrin Fresh Water Institute (DFWI), which has a history with the Association. The Institute, which is part of RPI, was responsible for a significant study of the lake at the time of the deep draw down during the winter of 1989/90 and since that time has provided advice and assistance on a number of occasions. The contract involves two tasks: the first involves the identification of nutrient and contamination sources that are causing the aggressive weed and algae problems in North and West Bays. The final report will include suggestions for remedial actions and management efforts required to control nutrients and contaminants. The second task involves conducting an Aquatic Plant Survey in accordance with DEC Standards. This survey will provide information necessary to: compare historical and current plant levels; meet all permit requirements and help determine the effectiveness of present and future plant management efforts. The total cost of the contractor effort is \$9,000.00.

Other Actions: The following are other actions that will be taken during the 2009 season to help mitigate nutrient and bacteria problems:

- Insure that Association testing activities compliment contractor efforts.
- Continue to pursue the resolution of suspected septic failures with the town of Galway in accordance with the provisions of the Galway Zoning Ordinance.
- Encourage the Town of Galway to adopt Onsite Wastewater Treatment System (OWTS) Inspection Procedures that will insure the professional evaluation and mitigation of septic and other OWTS issues.
- Continue to place emphasis on the Bacteria Monitoring Program and the Septic Pumping Program. Stone Industries will give Campers a \$40.00 discount on septic pumping during the 2009 season. They will pump a 1000 gallon tank for \$140.00 Plus tax. For service Campers should call Stephanie at 584-1048.
- Support the Hypolimnetic Withdrawal Program.
- Evaluate alternative measures for dealing with the Waterfowl issues.
- Initiate plans for storm water control projects to address sediment/contaminant issues.

OTHER LAKE PRESERVATION ISSUES:

Zebra Mussels: Thus far the Zebra Mussel Monitors have not reported the detection of any mussels in the lake. To protect the lake from the devastating effects of zebra mussels, we must continue to emphasize the need to thoroughly wash and dry all boats or equipment that have been used in another water body before they are returned to the lake.

Spiny Water Flea: Another invasive species is invading water bodies in our area. The Spiny Water Flea has been found in Sacandaga Lake by the DEC. The flea is a crustacean that can have a huge impact on aquatic life in lakes due to their rapid reproduction rates. The flea feeds on tiny crustaceans and other zooplankton putting them in direct competition with fish and other native aquatic organisms for this important food source. In addition the tail spines of the flea hook to fishing lines and foul fishing gear. The same cleaning and drying procedures applicable to Zebra Mussels apply to the control of the Spiny Water Flea.

Bruce Kniskern, Lake Preservation Committee, May 14, 2009

Appendix I – Map Showing Algae/Weed Growth and Test Locations

