

Onota Lake 2016 Weed Report – October 25, 2016

Diane Pero, Director/Weed Management

Summer 2016 was a problematic year for invasive weed growth on Onota Lake, with mid-August re-growth inhibiting lake use in the north end and areas along Blythewood Dr. and West Street. This year proved the need for a funding strategy that allows for repeat treatment later in the season, if needed.

Reviewing the Year:

When the fall 2015 survey was conducted by Solitude Lake Management, invasive Eurasian milfoil growth in the targeted “systemic herbicide treatment area” (north end) did not warrant proceeding with this treatment in spring 2016, and Solitude Lake Management raised concerns about the effectiveness of the treatment given a recent experience in NY state. Thus the \$74,000 capital budget appropriation for herbicide treatment was not used and remains in reserve for systemic treatment as of this writing.

We experienced a very mild winter of 2015/16. During the 3’ drawdown period (Dec. 1, 2015 – Feb. 1, 2016), low and high temperatures averaged 27° F and 41° F, respectively, with only 10 consecutive days below 32° F. In order to impact weed growth, a successful drawdown requires a sustained period of freezing temperatures. Some areas of the lake remained open throughout the winter and there was little snowfall to inhibit light penetration. Ice was off the lake in mid-March, giving weeds an extended growing season.

Weed growth was stronger in many of the usual areas, and dense growth was apparent in deeper waters. In addition to invasive curly leaf pondweed and Eurasian milfoil, elodea was prevalent in the shallow areas, growing up to 3ft vs its typical 6-8” height.

Pre-treatment surveys were conducted on May 25 by Jim McGrath, Rob van der Kar, Jeff Rose, and Diane Pero and GPS coordinates were recorded. A confirmation survey was done June 1 with Jim McGrath, Bob Rennie and Diane. Given the \$15,000 budget, areas to be treated were prioritized as follows:

- Public areas (public beach, boathouse, boat livery, camp)
- Egress routes (from boat livery to main lake; from north end to main lake)
- Areas impacting homeowner access/use
- Shallow areas where invasive weed growth has the potential to contaminate additional acreage

Solitude Lake Management treated 100 acres of “dense growth” on June 13 with diquat contact herbicide - a 40% increase in acreage treated vs. 2015. Due to budget restrictions “Moderate” and “Sparse” growth areas were not treated. Wind was 15-20 mph from the northwest, and skies were cloudy. Die-back of curly leaf and Eurasian milfoil took several weeks, and growth was still evident in some areas when Solitude biologists, Jim McGrath and Diane Pero conducted the post-treatment survey on July 18.

Summer 2016 proved to be warmer than usual, with less rainfall. Many areas of the northeast experienced draught conditions from summer through late October. With the dam valves closed, water continued flowing naturally over the dam until July 24, when dam valves were opened. In the summer of 2015 a much higher water level and free flow continued until the end of August. (A higher water level inhibits light penetration to the lake floor, and keeps water temperatures cooler – helping to curtail weed growth. Supplying downstream rivers with minimum flow requires opening the dam valves when water stops flowing freely over the dam. Experts Dr. Ken Wagner and Solitude President Marc Bellaud agree that higher water levels are beneficial to reducing weed growth, and the practice of keeping the pipe closed as long as water is flowing over the dam to supply downstream is proving helpful.)

By mid-August, invasive weed regrowth was affecting many areas, including the boathouse, north end populated shore line, Onota Boat Livery, Bakers Island/Lakeway Dr., West St. and Blythewood areas. Emerging Eurasian milfoil was present throughout the north end (northwest corner and along causeway), affecting those who use the causeway for fishing. Tape grass (*vallisneria spiralis*), as also prevalent in many of these areas, clogging boat motors and impacting swimmers, kayakers/canoers.

For the second summer in a row, Pontoosuc Lake conducted a second treatment in August. Solitude reported that Pontoosuc did not have a prevalent Eurasian milfoil issue in the spring, and low-growing naiad was the focus of their August treatment. Taxpayers in Pittsfield subsidized this treatment while Onota Lake, the City's greatest natural resource, was impacted by significant regrowth and growth in areas that were considered "sparse" or "moderate" when the spring survey was conducted.

Last fall, Solitude provided a comprehensive report outlining treatment costs for 200 acres of Onota Lake at \$32,500-35,000, and recommending an annual budget level of \$40,000 - \$50,000 to allow for season-long control of invasive weeds. The City budget of \$15,000 for Onota treatment is significantly below the recommendation of lake managers – and the density and prevalence of weeds this year proves that adequate funding is needed to keep invasive weeds in check and protect this resource.

Solitude biologists completed the final Fall 2016 survey on September 23 to serve as a guideline for the spring survey and 2017 treatment. Also included was an emergent growth baseline survey. (See attached maps.) Both maps were distributed to property owners for review and confirmation. Milfoil was present in approximately 159 acres (26%) of the lake as follows: dense (75-100% coverage): 42.43 acres; moderate (50-74% coverage): 39.65 acres; sparse (25-49% coverage): 47.58 acres; trace (1-24% coverage): 29.28 acres.

Corrective Actions

- Jim McGrath has agreed to submit the treatment cost estimate provided by Solitude Lake Management as his FY18 treatment budget for Onota Lake. Based on Solitude's 2015 report, \$40,000 - 50,000 is recommended for adequate season-long management of invasive weeds.
- Solitude biologists will assist with the spring weed mapping survey, lending their expertise, underwater camera, depth finder and GPS to identify problem areas for treatment.
- Active engagement from LOPA members is needed to build awareness in the community for preserving this valuable City resource.

Regarding invasive water chestnuts: through mid-September, 78 were removed from the main body of the lake and 179 north of the causeway. This compares to 75 water chestnuts pulled in main lake; and 50 north of the causeway in 2015. Many thanks to Dave Wilson for assisting Chuck and Diane Pero with this effort!

Approximately 90 hours of my time were donated to securing funding in addition to routine work with Jim McGrath and Solitude on weed management.

Respectfully submitted,

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