

Saratoga Lake



Watershed Stewards: Greg Redling, Cody Rickman

For the past two years SLPID, Saratoga Lake Protection and Improvement District, has had a steward at the state boat launch. SLPID has sponsored the Paul Smiths Watershed Steward Program once again for the summer of 2012. Saratoga Lake is the only lake in the program that is not part of the Adirondack State Park. The boat launch on Saratoga Lake has the highest boat traffic out of any of the lakes in the program. The lake is visited by an even mix of sports fisherman and pleasure boaters. Many weekend tournaments happen there throughout the summer which attracts a steady volume of people and boats in and out of Saratoga Lake.

Saratoga Lake is home to four invasive species including Eurasian Water Milfoil, Curly Leaf Pond-weed, Water Chestnuts, and Zebra Muscles. Chemical herbicides are being used that specifically target Curly Leaf Pond-weed and Eurasian Water Milfoil. Two mechanical harvesters are also being used to control the general weed population around the lake. SLIPD members are willing to take the necessary steps in not only managing the already present invasive species but also in preventing new species from entering the Lake. Saratoga Lake's location and popularity places it under stress from the possibility of contamination from

numerous boaters and or fisherman. Saratoga Lake is a convenient distance both from the Mohawk and Hudson Rivers and also larger popular lakes such as Lake George and Lake Sacandaga. SLIPD is concerned with the prevention of invasive species that could potentially travel from one of these water sources into Saratoga Lake, and also in preventing Saratoga Lakes already established Invasive Species from infesting one of these neighboring water bodies.

Methods

Paul Smith's provided two Saratoga Lake stewards that worked from Memorial Day through Labor Day at the State Boat Launch on Saratoga Lake off of 9P. They worked eight-hour shifts usually arriving sometime around seven o'clock in the morning and leaving at four o'clock in the afternoon. The Cornell Cooperative Extension provided an Intern again this year to help the stewards inspect boats on Sundays. Volunteer students from local high schools made intermittent visits to the launch during the week to also help with boat inspections.

The Paul Smith's Stewards inspected boats arriving at the launch to enter Saratoga Lake and also those leaving the lake. Before approaching the boat owner the stewards recorded the type of watercraft (e.g. motorboat, canoe or personal watercraft) they also recorded the state of registration if it was a motorboat, the horsepower of the engine, and the number of people using the watercraft that day. This could all be done visually without any verbal contact with the boat owner. The stewards then approached boat owners and introduced themselves. They described the intent of the Watershed Program to those who were visiting the lake for the first time and then asked a series of questions. Stewards asked boat owners what body of water the boat was in last and if any preventative steps were taken to mitigate the chances of spreading invasive species. Such steps include inspecting the boat for macro invertebrates, washing the boat, draining the bilge or live wells, dumping bait buckets, or drying it with a rag. Possible preventative steps are not limited to this list however these are the steps that the stewards most recommended. The stewards then proceeded to visually inspect each boat and remove any flora or fauna found on the boat or trailer. The answers given by the boat owners were hand recorded on data sheets and later entered into an Excel Spreadsheet on a weekly basis.

Special Project

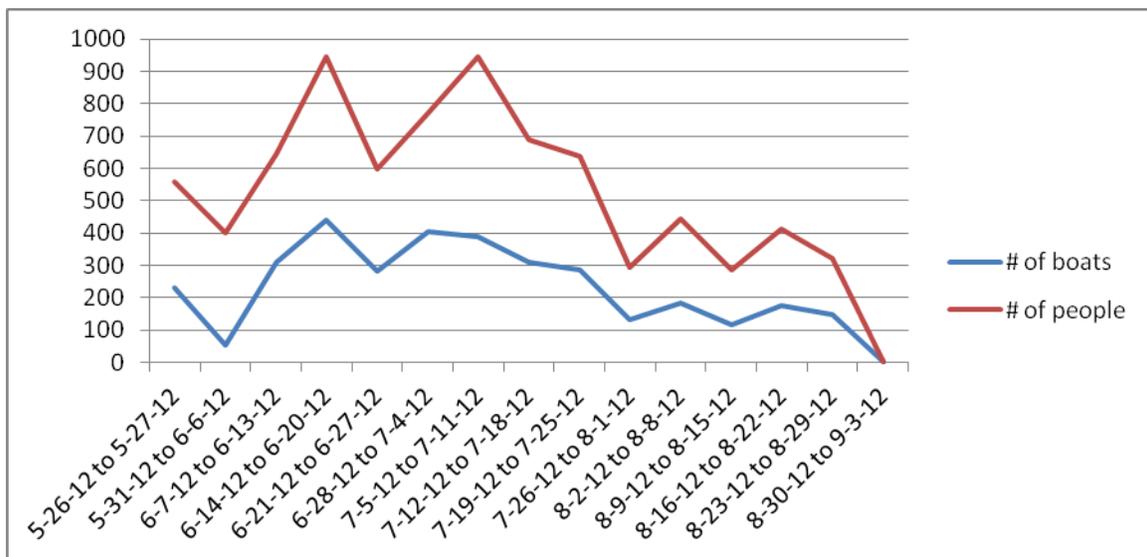
The Saratoga Lake Stewards were also required to do special research or projects throughout the summer. One such project was the acquisition of volunteers from a local high school. The stewards had three seniors from Ballston Spa Central High School that helped at the launch during busy hours. This project involved young students with the program and educated them on the growing issues that face an ecosystem connected with their own lives "close to home". Another project the stewards took part in was providing three local newspapers with information to write about the program. The newspapers involved were the Shoreline, Spotlight, and The Saratogian. All three newspapers published photographs of the boat

inspection along with a description of what boaters could expect when they met the stewards at the launch as well as the issues at hand.

Another project the stewards undertook was producing a GIS map of water chestnut beds in Saratoga Lake. The stewards used a GPS unit to trace large beds of water chestnut in the lake. This data was later used to produce a map in order to assist with a planned water chestnut pull in the near future. The stewards also removed a sizeable bed of the invasive weed that was on the north side of the main boat launch.

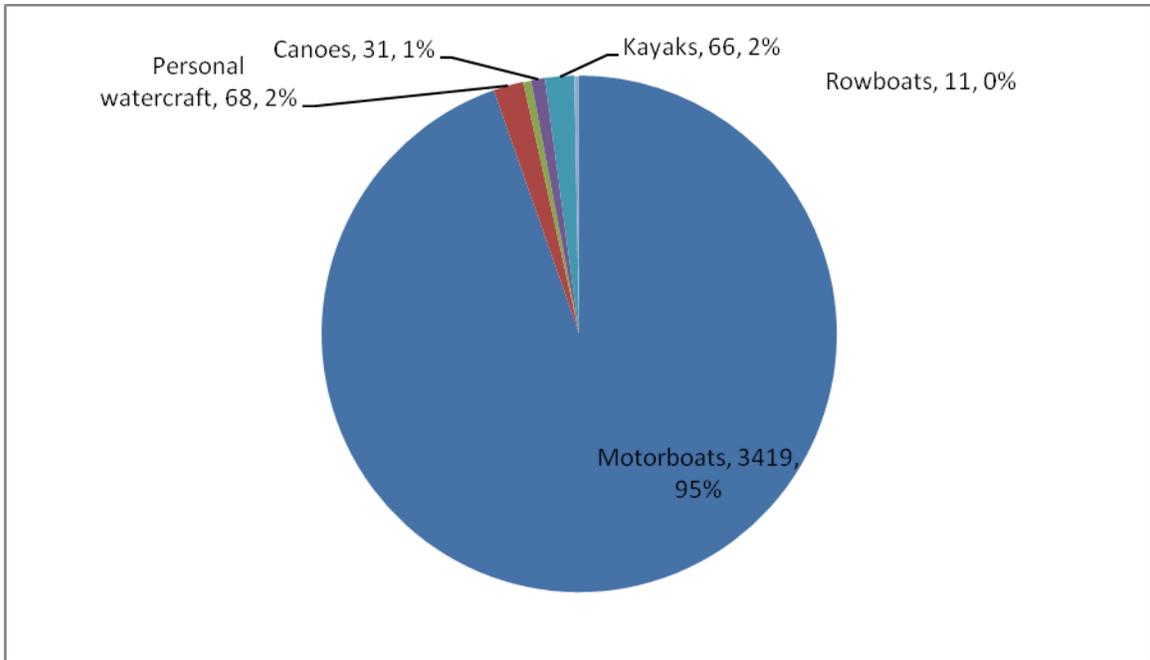
Data

Traffic/Survey

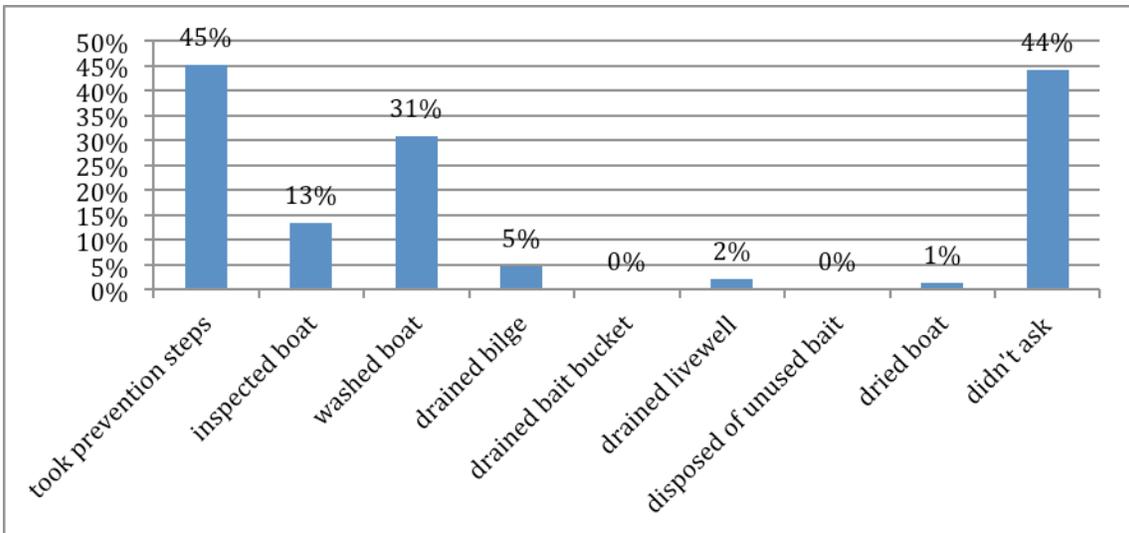


(Caption: Number of Boats and People per Week Throughout the Summer Season)

Boat traffic at Saratoga Lake seemed to decline since the opening of the Saratoga Race Course. However, throughout the season both Saturday and Sunday were the busiest days of the week.



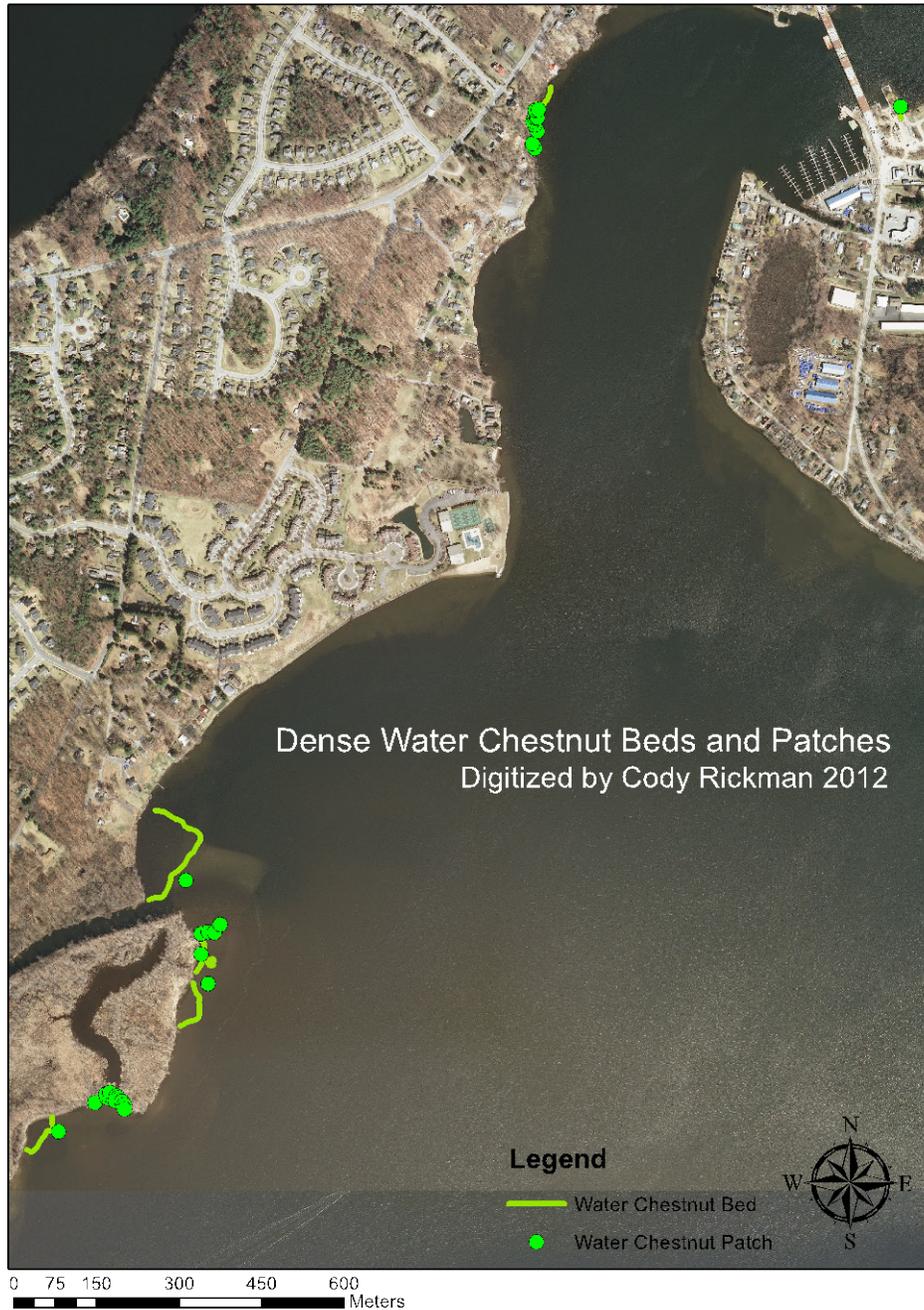
(Caption: Percentage of Watercraft Type of Total Boat Traffic for Summer Session)



(Caption: Percentage by preventative Method of Total Users that Took Precautions)

Water Chestnut Survey

Saratoga Lake Water Chestnut Survey



(Caption: Map of North End of Saratoga Lake and Water Chestnut Presence, Outlines represent large dense beds, Dots represent scattered patches.)

Discussion

Most of the invasive species found on incoming boats were Eurasian Water Milfoil and Curly Leaf Pond-weed. On incoming trailers there was a significant amount of other species, mostly this included twigs, leaves, and moss that was on the boat trailers from winter storage. While at the launch the stewards did not encounter invasive species that were not already present in Saratoga Lake. Most of the visitors were compliant with our survey and educational program. Boaters became more aware of the stewards presence as the season progressed and became more welcoming of the boat inspections. There was a fairly even split of lake users, with one-third being recreational users, another fisherman, and lastly non-motorized watercraft users. A Majority of the weeds found were usually on recreational user vessels as fisherman kept their boats cleaner for their own reasons and non motorized watercraft usually didn't contain weeds.

Conclusion

The stewards at Saratoga Lake worked a full summer inspecting boats and trailers. In total the two stewards with help from the volunteer high school seniors inspected nearly thirty six hundred boats. The task at times became load bearing when a rush of many boats would arrive at the launch at the same time, but the stewards worked diligently to inspect boats and record what they found.

The summer of 2012 quickly became distinguished from the program at Saratoga Lake during the previous year because of the added special projects. The special projects mentioned in an earlier section of this report was an attempt by the stewards to become more involved in both the education of invasive species and the creation of visual and literary sources of this phenomena so that they may be available to the public. These projects are something that can be built upon in the future if stewards continue to work at Saratoga Lake. They set examples for new project ideas which may evolve from these preceding ones.

Although the steward's main task was to inspect boats and remove any organisms entering or exiting the lake and launch , Greg and Cody also educated those who were completely unaware of the existence of invasive species. The stewards found that even though there had been stewards at that launch for three consecutive years, there was still a large number of boat users who had little to know knowledge about what an invasive species was or how to prevent spreading them. Fortunately the stewards possessed enough background knowledge about target invasive species and their impacts on ecosystems to communicate it effectively. The stewards also possessed pamphlets and other literature to aid in communicating information. The stewards found educating someone who had no previous knowledge about the subject to be the most rewarding aspect of inspections. This was especially true when the boaters thanked the stewards and were appreciative of what they learned. In the future it might be of some importance

to keep track of those people who have no knowledge about invasive species so that this data can be organized as a function of knowledge over time.

The stewards found a considerably larger amount of organisms entering and exiting the lake than in previous years. Some of this data might be attributed to the increased presence of invasive species in the lake over the years. It might be attributed to the increased fragments floating on the surface water due to the mechanical harvesting frequently done on the lake where un-harvested fragments float to the surface, or it might be attributed to the steward's rigorous boat inspections which occurred more efficiently than in other years. Although the cause for this cannot be determined there is evidence that the flora and fauna in the lake has changed from year to year.

This report suggests the reasons for why the Watershed Steward Program should continue at Saratoga Lake. The large number of boaters inspected in the summer of 2012 shows that the popularity of Saratoga Lake is increasing and therefore so is stress from outside ecosystems where potential invasive species might live already. The large number of people who are still unaware of this growing problem shows that further education and outreach is needed. There should be no reason why a large number of boaters have never heard of invasive species or any prevention steps. The growing number of organisms found on boats coming in or out means that more species are mobile and signals the need for boaters to be knowledgeable and for stewards to inspect boats diligently. Lastly the data and findings in the report show that people do care about preventing the spread of invasive species and are willing to take extra preventative steps. That is why it is important that stewards are at public launches educating the public and are participating in projects where information can be synthesized through newspapers, reports and other sources.