

Watershed Stewardship Program

of Paul Smith's College



Summary of Programs and Research, 2002



**A facet of the Adirondack Watershed Institute
of Paul Smith's College**



Watershed Stewardship Program

Summary of Programs and Research, 2002

| Report Title | Author(s) | Page |
|---|-----------------------------------|------|
| Recreation Studies | | |
| 1. Introduction and Summary | Eric Holmlund | 1 |
| 2. Recreation Study: St. Regis Lake | Molly Shubert, Danielle Davenport | 8 |
| 3. Recreation Study: Upper Saranac Lake | Molly Shubert, Danielle Davenport | 14 |
| 4. Recreation Study: Lake Placid | Molly Shubert, Danielle Davenport | 20 |
| 5. Recreation Study: Summary/Comparison | Danielle Davenport | 26 |
| 6. Recreation Study: St. Regis Mountain | Danielle Davenport | 37 |
| 7. Recreation Study: Fish Creek Bay | Jeremy Riedl | 38 |
| Invasive Species Studies | | |
| 8. St. Regis Lakes Loosestrife Project | MacKenzie Hall | 40 |
| 9. Upper Saranac Lake Loosestrife Survey | Jeremy Riedl | 45 |
| 10. St. Regis Lakes Invasives Map | MacKenzie Hall | 46 |
| Aquatic Ecosystem Studies | | |
| 11. St. Regis Lakes Loon Monitoring Program | Amy Fleischut | 48 |
| 12. Lake Placid Bird Survey | Amy Fleischut | 51 |
| 13. St. Regis Lake Wetland Study | MacKenzie Hall | 54 |
| 14. St. Regis Lakes Water Chemistry Study | Justin Levine | 57 |
| Miscellaneous Reports | | |
| 15. Upper Saranac Lake Shoreline Study/GIS | Eric Holmlund | 65 |
| 16. Lake Placid Clean-up Day Report | MacKenzie Hall | 69 |
| 17. Campsite Maintenance Report | Justin Levine | 72 |
| 18. Educational Program Report | Justin Levine | 73 |
| 19. <i>Forest Preserve</i> Article | Eric Holmlund | 76 |

Watershed Stewardship Program

Section 1: Introduction and Key Findings - 2002

Prepared by Eric Holmlund,

Director of the Watershed Stewardship Program of Paul Smith's College

Once again, 2002 brought growth and expanded service to the Watershed Stewardship Program. We were fortunate to have the Lake Placid Shore Owners' Association sponsor one steward for five days per week at the Lake Placid State Boat Launch. We continued service to Upper Saranac Lake and the St. Regis Lakes, as well as a weekend presence on St. Regis Mountain. I am pleased to see that the impetus of the program has borne fruit and seems to be attractive to local resident groups in the region. Another development that bears noting for 2002 is the formation of the Adirondack Watershed Institute of Paul Smith's College. The Watershed Stewardship Program is now one of three pillars within the AWI, and as such gains momentum and resources from the partner programs- the Aquatic Program (formerly the Adirondack Aquatic Institute), and the Research and Educational Outreach Program. Of course, the Stewardship Program would be nothing without its Stewards, and once again I enjoyed working with a group of dedicated young scholars who might just have surpassed the efforts of last year's exemplary group.

Background

The Watershed Stewardship Program (WSP) at Paul Smith's College is a community-based program designed primarily to educate the public about conservation, preservation, and stewardship issues of the Lower and Upper St. Regis Lakes, Spitfire Lake, Upper Saranac Lake, Lake Placid and the St. Regis Mountain trail and summit. The WSP also fulfills research and service functions. Baseline data concerning recreational use patterns and vegetation cover gathered through this program aids in the development of area unit management plans being prepared by the Department of Environmental Conservation. Stewards also maintain and clean up public campsites on the program area lakes and the St. Regis Mountain summit and identify and remove invasive purple loosestrife plants from the waterfronts of agreeable property owners. The WSP takes

advantage of the skills and training of students from Paul Smith's College's Natural Resources, Environmental and Forestry programs with direction from one of the College's professors. An advisory committee of community stakeholders (including lake associations and The Nature Conservancy), state organizations (including the DEC and APA) and Paul Smith's College faculty help guide the program.

Summer, 2002

The Watershed Stewardship Program enjoyed a successful and rewarding summer of service to the resources and people of the St. Regis Lakes, Upper Saranac Lake and Lake Placid.

Personnel. The program provided funding for five full-time Stewards and one Assistant Director/Steward. Four positions were filled by Paul Smith's College students and recent graduates in the Natural Resources baccalaureate program at the college. One position was filled by a Paul Smith's College faculty member who is a graduate of the EET program. The final position was filled by a student from St. Lawrence University who is also a Lake Placid resident. The first month of program operation, May, was devoted to staff training and program development. After an intensive initial week of orientation to program policies, equipment, interpretive methods and safety, the stewards attended training sessions specific to their areas over the following two weeks. The stewards attended instructional sessions by the Director of the program (policies, research projects, interpretive methods, map and compass, etc.), DEC Forest Ranger Joe Rupp (orientation to St. Regis Canoe Area and St. Regis Mountain), DEC Forester Steve Guglielmi (land classification issues and unit management planning process/data collection), Aquatic Program employee Sarah Mochamer (basic limnology and water testing methods), Jane LaVoy (boater safety), the Red Cross (First Aid and CPR), the Adirondack Park Agency's Hilary Oles (exotic aquatic invasive species identification), the St. Regis Owners' Association's John and Mike Quenell (orientation to St. Regis Lakes history and current water quality and recreation issues), Curt Stiles (orientation to Upper Saranac Lake program requirements and background), and Georgia Jones, LPSOA President (orientation to Lake Placid).

Steward Duties. All stewards were on duty during the day and returned to their

homes in the evening. Stewards were responsible for environmental education/interpretation at the St. Regis, Saranac Inn, and Lake Placid boat launches, focusing on the control of exotic invasive plant and animal species, recreational information and local history. Stewards also conducted research throughout the lake systems and performed service projects. Steward research projects included a shoreline development assessment on Upper Saranac Lake, water quality monitoring of the St. Regis Lakes, a bird survey of Lake Placid, purple loosestrife assessment and removal on the St. Regis Lakes and Upper Saranac Lake, design and delivery of educational outreach programs, and a clean up day on Lake Placid. Stewards also compiled statistics on recreational use at both boat launches (every day, Memorial Day to Labor Day) and on St. Regis Mountain on the weekends. Stewards stationed at the summit of St. Regis Mountain on the weekends offered interpretation and education to the public.

Stewards continued to monitor and employ the boat wash station at Upper St. Regis landing. This summer, stewards noted better compliance and use of the boat wash station as a method of reducing the introduction of exotic plant fragments.

Staff: Summer, 2002

| <u>Name</u> | <u>Position</u> |
|---------------------|-----------------------------|
| Davenport, Danielle | Steward |
| Fleischut, Amy | Steward |
| Hall, MacKenzie | Steward |
| Holmlund, Eric | Director |
| Levine, Justin | Steward |
| Riedl, Jeremy | Assistant Director, Steward |
| Shubert, Molly | Steward |

Important Research Findings

Watershed Stewards conducted several research projects over the course of the summer which gathered information about recreational use and flora characteristics in the region. The table below summarizes recreational use findings at the three boat launches addressed by the recreation study. The study was performed from Memorial Day until Labor Day. Details for each lake may be found within this document.

| Summer '02 Boat Launch | Boat Type/Size (indicate hp for MO) | | | | | | | | | | | Total # Boats | # of People | Registr- ation | | Avg Time at Launch (minutes) | Gender | | Pets | 4 stroke motor on outboard |
|------------------------------|--|-----|-----|-----|----|----|----|----|-----|-----|----|------------------|----------------|-------------------|-----|------------------------------------|--------|--------|------|----------------------------------|
| | (hp) | MO | MI | I/O | P | J | S | R | C | K | B | | | Avg. Yr | No | | Male | Female | | |
| | | | | | | | | | | | | | | | | | | | | |
| St. Regis | 59.76 | 170 | 3 | 8 | 3 | 0 | 0 | 10 | 478 | 182 | 53 | 907 | 1701 | 2004 | 12 | 19.46667 | 1098 | 575 | 56 | 16 |
| Upper Saranac | 68.41 | 624 | 61 | 210 | 38 | 36 | 29 | 14 | 188 | 63 | 35 | 1291 | 3210 | 2004 | 77 | 17.02403 | 2110 | 1105 | 104 | 72 |
| Lake Placid | 60.74 | 485 | 162 | 281 | 34 | 3 | 10 | 17 | 153 | 228 | 37 | 1410 | 3302 | 2004 | 101 | 13.36902 | 2139 | 1153 | 143 | 35 |

Table 1: Recreational data sheet from all three boat launches, St. Regis Landings, Upper Saranac Lake State launch, and the Lake Placid State launch. The values are from the grand totals of all launches from the summer of 2002. (hp) indicates average horsepower of all observed motors. In the registration column, No = the amount of boats with expired registration stickers. MO = outboard engine, MI = inboard engine, I/O = inboard/outboard (stern drives), P = pontoon boat, J = jet ski (personal watercraft), S = sailboat, R = rowboat, C = canoe, K = kayak, B = *barge. *Barges were recorded each time they utilized the launch area in an attempt to assess commercial/ construction use of the launch.

As the table shows, there were 907 total watercraft reported as launched at St. Regis Landing, of which canoes were the most common, followed by kayaks and motorboats. 1701 people were tallied as passing through the boat launch area. These statistics represent a fair amount of use, a good opportunity for educational contacts by the stewards, and many boat hulls and props that could be cleaned of invasive species.

Lake Placid and Upper Saranac Lake withstood far greater use, with 3302 and 3210 visitors, respectively. Average horsepower size at both sites was larger than St. Regis, and motorboats were the predominant watercraft. Interestingly, Lake Placid saw far more kayaks launched than Upper Saranac Lake, which may reflect a trend toward kayaks and possibly greater proximity of kayak sales and rental opportunities.

Watershed Stewards were based on St. Regis Mountain only on weekends between Memorial Day and Labor Day, due to staffing constraints. They monitored the summit for 12 weekends and offered their educational message about soil conservation and summit natural history to 554 hikers. The average hiker spent 47 minutes at the summit, 64% of hikers were wearing cotton clothing. Summit behavior by hikers showed some improvement compared to 2001. Few people climbed the firetower (3%) and there was a measured decrease in the number of people walking on grass (31% in '02 and 43% in '01) and an increase in people staying on rocks.

In addition to recreational data, stewards collected information about water quality and vegetation present in wetlands. Stewards also mapped and removed over 3,000 specimens of the invasive plant, purple loosestrife, at 11 sites on Spitfire and Upper St. Regis Lake.

Program Recommendations

The Watershed Stewardship Program continues to provide a suite of services to local watersheds. We have again attracted a cast of motivated, engaging students to deliver the messages associated with watershed health along with providing hours of field time dedicated to research and service. We continue to refine our model and our activities and remain an important part of the Adirondack natural resources protection system, as evidenced by the dynamic partnerships the program enjoys with the APA, DEC, Nature Conservancy, ACLP and other partners. We have built on the accomplishments of the first summer and have expanded our offerings to a third lake. In total, our Stewards contacted almost 9,000 people this summer!

Specific Recommendations:

Personnel

- § Maintain a mixture of seniors, juniors and (exceptional) sophomores to prevent wholesale turnover each year.
- § Build in substantial pay raises both for beginning and returning stewards.
- § Increase collaboration within the Adirondack Watershed Institute, especially with Dr. Evans, Dr. Mihuc, Dr. Stager, Professor DeAngelo.
- § Retain one steward to continue research projects part-time over the Fall and Spring semesters.

Equipment

- § Continue to use PSC=s Campus Safety/Recreation johnboat. It served our purposes well and is an existing resource.
- § Purchase a laptop computer for administrative use by the director and lake stewards while on duty at the St. Regis Landing.

Information/Education

- § Upgrade the registration box at St. Regis Landing to include a map and other visual aids to help communicate stewardship message.
- § Complete the web-based guide to local vegetation that uses the digital camera to take images.
- § Work with NCPR to produce a radio news piece featuring our program and its interaction with local interest groups.
- § Upgrade and streamline the webpage presentation of data.

Research

- § Finish construction of a pressed-plant herbarium of wetland plants.

Programs

- § Assign one steward to educational outreach programs. Plan and release entire

summer's schedule of educational programs early in summer. Repeat throughout summer.

- § Revisit our coverage of St. Regis Mountain and other local trail systems. Investigate alternative partners interested in land-based conservation.
- § Do a program wide risk management assessment; write a risk management plan.
- § Do more intensive safety and contingency planning for staff, especially for our educational programs with area children.
- § Investigate program expansion to Lower Saranac Lake.
- § Investigate the addition of a boat wash station at the Saranac Inn public launch.

Finances

- § Work with Institutional Advancement Office to approach funding sources in a timely manner. Goal: secure funding by December 2002 for summer, 2003.

WSP Funding

The Watershed Stewardship Program is funded by the Upper Saranac Lake Foundation, the St. Regis Lakes Foundation, the Lake Placid Shore Owners' Association and Paul Smith's College. We invite current donors to continue their support of this successful and innovative program, and welcome new donors to join in this exemplary effort. The Watershed Stewardship Program is an exceptional example of a cooperative, community-based effort to protect threatened natural areas within the Adirondacks. I am available to meet with interested parties to discuss future plans and opportunities for program support in detail.

Section 2: Recreation Study - Upper St. Regis Lake, 2002

Prepared by: Molly Shubert and Danielle Davenport, Watershed Stewards

Introduction

The recreation use study of the Upper St. Regis Landings was conducted from Friday, May 25, 2002 to Monday, September 2, 2002. There were two main objectives of the recreation use study. The first objective was to assess the amount and type of public recreational use on the St. Regis Lakes Chain and in the Saint Regis Canoe Area. The second objective was to educate the users of the launch about exotic invasive species including Eurasian Milfoil, Purple Loosestrife, and Zebra Mussels. Stewards had a lead sinker exchange box on hand—compliments of the Adirondack Cooperative Loon Program—so that fishers could sample steel sinkers as an alternative to lead sinkers. Stewards offered brochures to users that included “Exotic Invasive Species,” “Birds you might see on the St. Regis lakes and Upper Saranac Lake,” “The St. Regis Lakes: Historical Information,” and “Wetlands and Wetland Plants of the St. Regis Lake Chain.” Stewards also had brochures on hand that covered New York State boating regulations, the Adirondack Cooperative Loon Program and a map of the St. Regis and Saranac Lake chains.

Methods

The study was conducted seven days a week, Saturday through Friday, from 7:00 a.m. to 4:00 p.m. daily. The parameters examined in the study included boat type/size, motor outboard and horsepower, motor inboard, stern drive (inboard-outboard), pontoon, sail, rowboat, canoe, kayak, and barge. The group size was recorded as well as the gender of the people in the group. The amount of time users utilized the launch was also recorded. It was noted whether or not the group had pets with them, whether or not a brochure was given, and if the outboard motor was a four-stroke engine. Users that came to the launch with canoes and kayaks were also asked if they intended to enter the St. Regis Canoe Area. After recording the necessary data stewards approached the users, introducing themselves and the Watershed Steward program. Stewards then delivered a brief

message about exotic invasive species and how to prevent the spread of these species, encouraging recreaters arriving at the launch to use the high-pressure, cold water wash station. Stewards also informed users of the launch of the Adirondack Cooperative Loon Program and the lead sinker exchange program.

Results

Total usage of the launch for the period from Memorial Day to Labor Day totaled 907 boats and 1,701 people (Table 1). Users spent an average of 19 minutes at the launch (included in this are barges and other construction boats, which tend to take longer). Peak use of the Upper St. Regis launch site occurred during week number 6 (4th of July week) to week number 13 (August 17 – 23), with respectively 75% of the totals of people and boats utilizing the launch at this time period.

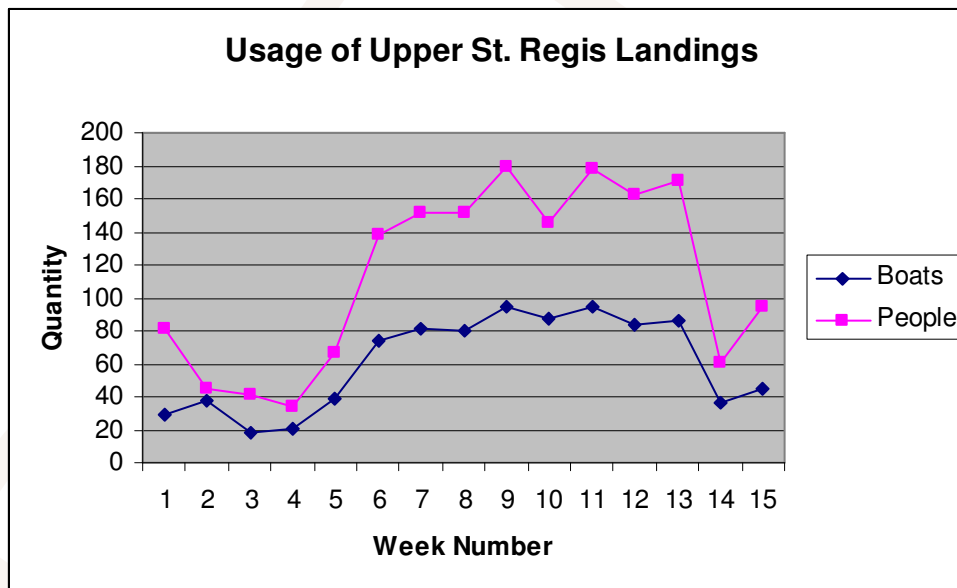


Figure 1: The amount of boats and people that used the Upper St. Regis Landings boat launch between Memorial Day week and Labor Day week. Peak times of usage are between week number six and thirteen.

| Weeks Summer '02 (Sat. to Fri.) | WK # | Boat Type/Size (indicate hp for MO) | | | | | | | | | | | Total # of Boat | Grou Size | Registration | | | Total Time Launc | Gender | | Pets | Out Only | Brochure | St. Reg Canoe Area? | 4 stroke motor on outboard |
|---------------------------------------|---------|--|------------|----------|----------|----------|----------|----------|-----------|------------|------------|-----------|-----------------------|--------------|--------------|-------------|-----------|------------------------|-------------|------------|-----------|-------------|-----------|---------------------------|----------------------------------|
| | | (hp) | MO | MI | I/O | P | J | S | R | C | K | B | | | Y | yr | N | | M | F | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/25-31/02 | 1 | 60.3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 10 | 29 | 81 | | | | 13 | 66 | 10 | 1 | 3 | 2 | 10 | NA |
| 6/1-7/02 | 2 | 133 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 6 | 38 | 45 | | | | 21 | 37 | 8 | 1 | 3 | 4 | 6 | NA |
| 6/8-14/02 | 3 | 57.8 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 3 | 18 | 41 | | 2003 | 3 | 13 | 30 | 9 | 1 | 1 | 2 | 9 | NA |
| 6/15-21/02 | 4 | 52 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 1 | 21 | 34 | | 2005 | 0 | 16 | 26 | 8 | 2 | 2 | 1 | 6 | 0 |
| 6/22-28/02 | 5 | 77.1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 5 | 5 | 39 | 67 | 14 | 2003 | | 27 | 45 | 22 | 2 | 1 | 0 | 5 | 0 |
| 6/29-7/5/02 | 6 | 79.6 | 24 | 0 | 3 | 0 | 0 | 0 | 0 | 29 | 14 | 4 | 74 | 138 | 31 | 2004 | | 15 | 101 | 39 | 9 | 7 | 5 | 12 | 0 |
| 7/6-12/02 | 7 | 62.5 | 16 | 0 | 0 | 0 | 0 | 0 | 2 | 39 | 15 | 9 | 81 | 151 | 25 | 2004 | | 26 | 98 | 53 | 2 | 7 | 4 | 18 | 0 |
| 7/13-19/02 | 8 | 60.8 | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 42 | 15 | 1 | 80 | 152 | 20 | 2004 | 3 | 16 | 103 | 50 | 7 | 6 | 4 | 19 | 2 |
| 7/20-26/02 | 9 | 56.7 | 9 | 1 | 0 | 0 | 0 | 0 | 1 | 47 | 33 | 3 | 94 | 180 | 12 | 2004 | 1 | 28 | 111 | 69 | 6 | 6 | 0 | 27 | 3 |
| 7/27-8/2/02 | 10 | 53.3 | 8 | 0 | 0 | 1 | 0 | 0 | 4 | 50 | 22 | 2 | 87 | 146 | 8 | 2004 | 3 | 24 | 95 | 52 | 6 | 7 | 0 | 24 | 1 |
| 8/3-9/02 | 11 | 47.5 | 12 | 0 | 0 | 0 | 0 | 0 | 1 | 66 | 15 | 1 | 95 | 178 | 13 | 2004 | 0 | 20 | 100 | 58 | 3 | 9 | 2 | 29 | 1 |
| 8/10-16/02 | 12 | 33.7 | 12 | 1 | 2 | 1 | 0 | 0 | 0 | 50 | 17 | 1 | 84 | 162 | | 2004 | 1 | 16 | 102 | 56 | 5 | 14 | 2 | 27 | 3 |
| 8/17-23/02 | 13 | 43.8 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 58 | 11 | 5 | 86 | 171 | | 2004 | 0 | 25 | 91 | 80 | 3 | 7 | 1 | 26 | 4 |
| 8/24-30/02 | 14 | 22.5 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 13 | 15 | 2 | 36 | 61 | | 2004 | 1 | 23 | 36 | 24 | 3 | 2 | 1 | 8 | 0 |
| 8/31-9/1/02 | 15 | 55.8 | 9 | 0 | 2 | 0 | 0 | 0 | 1 | 23 | 10 | 0 | 45 | 94 | | 2004 | 0 | 9 | 57 | 37 | 5 | 10 | 3 | 15 | 2 |
| Grand Total: | | 59.8 | 170 | 3 | 8 | 3 | 0 | 0 | 10 | 478 | 182 | 53 | 907 | 1701 | 123 | 2004 | 12 | 19.47 | 1098 | 575 | 56 | 85 | 31 | 241 | 16 |

Table 1: Recreational data sheet from St. Regis Landings. The totals are calculated by week from Memorial Day weekend to Labor Day weekend of the the summer of 2002. The grand total is the results from the 15 week season. **MO** = outboard engine **MI** = inboard engine **I/O** = inboard/outboard (stern drives) **P** = pontoon boat **J** = jet ski (personal watercraft) **S** = sailboat **R** = rowboat **C** = canoe **K** = kayak **B** = *barge.

*Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

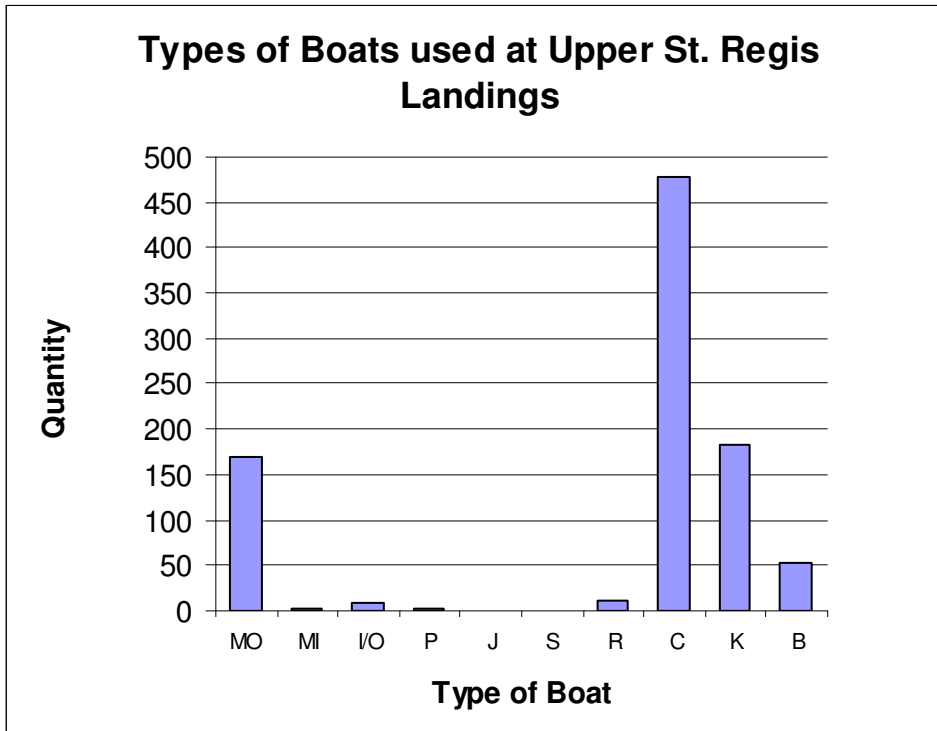


Figure 2: The amount of different types of boats launched at the Upper St. Regis Landings boat launch between Memorial Day week to Labor Day week. **MO** = outboard engine **MI** = inboard engine **IO** = inboard/outboard (stern drives) **P** = pontoon boat **J** = jet ski (personal watercraft) **S** = sailboat **R** = rowboat **C** = canoe **K** = kayak **B** = *barge. *Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

The most popular usage at the Upper St. Regis Landings was of non-motorized vessels: 53% canoes and 20% kayaks. A total of 74% of the usage involved non-motorized boats. There were 19% outboards engines with an average horsepower of 60 hp, and 7% of these outboards had four-stroke motors. The other categories of motorized boats represent 7% of the total usage. Most boats had a current registration sticker (95%), with the average registered year being 2004. Only 11% of the total boats launched at the Upper St. Regis Landings were from other states (Figure 3). Of that 11% the state of Connecticut was the highest with 26%, followed by the state of Pennsylvania and Ohio (21%), and the state of New Jersey with 14% respectively. Four states represent 18% however, each of these states recorded was only seen once or twice by the steward.

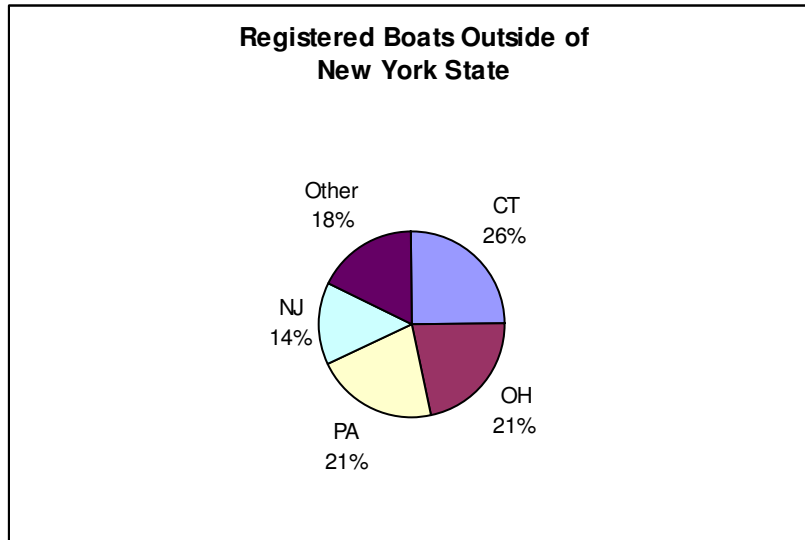


Figure 3 : The amount of boats registered outside of New York State and the percent of states that used the Upper St. Regis Landings boat launch. “Other” represents states that were at 6% or less. These states include (listed by highest to lowest percentage), VT, FL, LA, RI.

Discussion

The Upper St. Regis launch site had the least amount of traffic compared to the Upper Saranac Lake boat launch and the Lake Placid boat launch. Perhaps this can be attributed to the fact that you must know where the launch is if you want to find it. There is no signage on Route 30 directing boaters to the launch and a couple stewards had difficulty finding the site on their first days of duty there.

The Upper St. Regis launch site is unique to the other sites in that it provides access to the St. Regis Canoe Area, a series of ponds and lakes that are for non-motorized craft, canoes and kayaks. This explains the high percentage of non-motorized boats launched at the landing. The stewards spoke to many groups entering the canoe area from the Upper St. Regis site and some of the information we gathered showed that 43% of the groups went into the canoe area (Table 1).

Although the Landing had a higher percentage of non-motored boats, only 7% of the motorized boats had 4 stroke engines. The recording of 4 stroke engines on the data sheet started the week of June 15. Most of the 4 stroke engines were mostly construction boats and boaters that visited the launch often. This means that the same 4 stroke engines

were recorded more than once throughout the summer. This is also the case for many other boats at the other boat launches as well. Again, the program has six stewards which means six different perspectives.

Another issue at the St. Regis launch that came to the attention of stewards was parking at the launch. Parking on the private side of the launch seemed to be limited so there was overflow of caretakers, shore owners, and construction workers onto the public side from the private side. This made it difficult for public users of the launch to launch their boats off of trailers because there is already not adequate room to maneuver a trailer.

There was also an addition to the boat launch, a register box. Amy Fleischut, with Justin Levine's help (stewards), made a register box in the month of August. The box was only used for a short period of time; however the response from the public has been positive. The old register box was not in good condition and people had a hard time seeing the box that provided some additional information for the public. Because of the deterioration of the old box from staying at the launch throughout the year, the box will only be at the launch during the duration of the Watershed Stewardship Program.

Section 3: Recreation Study - Upper Saranac Lake, 2002

Prepared by: Molly Shubert and Danielle Davenport, Watershed Stewards

Introduction

The recreation use study of the Upper Saranac Lake (Saranac Inn) boat launch located on Back Bay was conducted from Friday, May 25, 2002 to Monday, September 2, 2002. There were two main objectives of the recreation use study. The first objective was to assess the amount and type of public recreational use on Upper Saranac Lake. The second objective was to educate the users of the launch about exotic invasive species including Eurasian Milfoil, Purple Loosestrife, and Zebra Mussels. Stewards had a lead sinker exchange box on hand, compliments of the Adirondack Cooperative Loon Program so that fishers could sample steel sinkers as an alternative to lead sinkers. Stewards offered brochures to users that included “Exotic Invasive Species,” “Birds you might see on the St. Regis lakes and Upper Saranac Lake,” “The St. Regis Lakes: Historical Information,” and “Wetlands and Wetland Plants of the St. Regis Lake Chain.” Stewards also had brochures on hand that covered New York State boating regulations, the Adirondack Cooperative Loon Program and a map of the St. Regis and Saranac Lake chains.

Methods

The study was conducted seven days a week, Saturday through Friday, from 7:00 a.m. to 4:00 p.m. daily. The parameters examined in the study included boat type/size, motor outboard and horsepower, motor inboard, stern drive (inboard-outboard), pontoon, sail, rowboat, canoe, kayak, and barge. The group size was recorded as well as the gender of the people in the group. The amount of time users utilized the launch was also recorded. It was noted whether or not the group had pets with them, whether or not a brochure was given, and if the outboard motor was a four-stroke. After recording the necessary data stewards approached the users, introducing themselves and the Watershed Steward program. Stewards then delivered a brief message about exotic invasive species and how to prevent the spread of these species. Stewards also informed boaters of the Adirondack Cooperative Loon Program and the lead sinker exchange program.

Results

Total usage of the launch for the period from Memorial Day to Labor Day totaled 1,291 boats and 3,210 people (Table 1). Users spent an average of 17 minutes at the launch (included in this are barges and other construction boats, which tend to take longer). Peak use of the Upper Saranac Lake launch site occurred during week number 6 (4th of July week) to week number 13 (August 17 – 23). This peak usage time represents an estimated 70 – 76% of the total amount of people and boats utilizing the launch (Figure 1).

At the Upper Saranac Lake boat launch, 48% of the total watercraft were outboards with an average horsepower of 68hp, and 11% of these outboards had four-stroke motors. There was 16% inboard-outboards (stern drives) and a total of 78% motorized vessels launch at Back Bay and recorded by the stewards. The additional 22% boats that launched were non-motorized vessels including 15% canoes, 5% kayaks, and 2% of the other non-motorized categories (Figure 2).

Most boats had a current registration sticker (93%), with the average registered year being 2004.

Discussion

The Upper Saranac State boat launch (Bay Back) had similar results to Lake Placid. The number of boats and people are very similar. The types of boats are slightly different. There were more motorized boats on the Upper Saranac Lake. The Upper Saranac Lake is much bigger in size, so motorized boats are more acceptable to traffic on the lake. Lake Placid is much smaller in size and non-motorized boats (canoes and kayaks) can tour the lake easier. The carry between Mirror Lake and Lake Placid was a popular recreational activity. The Indian carry on the Upper Saranac Lake was not as popular. Of course, the Stewardship Program only collected data at Indian carry for one weekend however; the weekend was during the peak season of usage of the other boat launches. The distance between Indian carry and Back Bay is very far, which could be a

factor in the low percentage of non-motorized boats. From the experience of the stewards at the boat launch, most people traveling to Indian carry were competitive racers. Also, people traveling by non-motorized boats seemed to be campers or members of clubs or groups (boy stouts, PSC, etc.).

The stewards' message was received by over 3,000 people. Most of these people remembered the stewards from last year and looked forward to seeing them next year. For the most part, people were very interested in the messages and had lots of questions regarding Eurasian Milfoil. Some questions included, how well was the hand harvesting working, can it still grow after being dried out, and does the lake have a problem with Zebra Mussels? Most people were also aware of washing their boats between visits to different lakes. A boat wash would be useful at the Back Bay boat launch. This boat launch is the most spacious of all the launches serviced by the Stewardship Program, and a wash station would be visible to visitors. The wash station at the Upper St. Regis Landing launch was used by boaters, especially when the stewards asked boaters to use the high pressure hose to wash away any unwanted guest.

Although many people were aware of the Stewardship Program and the issues of taking care of our watershed, there were still a percentage of people who were not aware. These people seemed to be highly concentrated during the peak usage time period of the Stewardship Program.

The program has been successful in the past at the Upper Saranac Lake State boat launch and could be just as successful for the future. The program also seems to evolve with each year. Not only do the stewards give the public important messages, the public enjoys having the stewards there for different reasons like safety, questions about the

lake, and for do's and don'ts. We also help the Department of Environmental Conservation (DEC) just by being at the boat launch because the stewards are often mistaken for enforcement. This plays an important role in people's behavior at the boat launch. This past summer was very dry causing many forest fires in the Adirondack Park. This occupied the DEC officers time during the peak usage time. Maybe next year the stewards can have a project day patrolling the lake on the donated boat. The stewards could stop at camp sites and talk to the visitors about fires, camp safety, and reminding them to carry out what they carried in at the camp site.

| Week Summer '02 (Sat. to Fri.) | Week # | Boat Type/Size (indicate hp for MO) | | | | | | | | | | | Total # Boats | # of People | Registration | | Total Time | | | Out Only | Broc hure | 4 stroke motor on outboard? | |
|--------------------------------------|-----------|--|-----|----|-----|----|----|----|----|-----|----|----|------------------|----------------|--------------|----|------------------------|--------|------|-------------|--------------|-----------------------------------|------|
| | | (hp) | MO | MI | I/O | P | J | S | R | C | K | B | | | AVG. | | at Launch (minutes) | Gender | | | | | Pets |
| | | | | | | | | | | | | | | | Year | N | | M | F | | | | |
| 5/25-31/02 | 1 | 74.2 | 31 | 1 | 8 | 3 | 0 | 0 | 0 | 2 | 4 | 0 | 49 | 125 | NA | 2 | 20 | 88 | 39 | 4 | 0 | 0 | NA |
| 6/1-7/02 | 2 | 75.7 | 25 | 4 | 7 | 1 | 0 | 1 | 2 | 6 | 15 | 0 | 61 | 103 | 2004 | 2 | 25 | 79 | 22 | 7 | 12 | 5 | NA |
| 6/8-14/02 | 3 | 53.8 | 37 | 7 | 7 | 4 | 1 | 1 | 0 | 0 | 1 | 2 | 60 | 135 | 2003 | 6 | 14.38145 | 85 | 34 | 4 | 15 | 5 | NA |
| 6/15-21/02 | 4 | 77.6 | 35 | 3 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 51 | 106 | 2002 | 5 | 12.97089 | 17 | 17 | 4 | 9 | 2 | NA |
| 6/22-28/02 | 5 | 62.5 | 39 | 6 | 6 | 2 | 4 | 4 | 1 | 4 | 0 | 22 | 88 | 172 | 2004 | 0 | 29.9606 | 128 | 41 | 4 | 10 | 2 | 3 |
| 6/29-7/5/02 | 6 | 81.4 | 62 | 7 | 21 | 2 | 6 | 2 | 0 | 14 | 4 | 5 | 123 | 409 | 2004 | 0 | 12.96332 | 259 | 151 | 9 | 3 | 3 | 0 |
| 7/6-12/02 | 7 | 74.9 | 42 | 0 | 12 | 2 | 2 | 1 | 0 | 15 | 0 | 2 | 76 | 214 | 2004 | 8 | 20.63492 | 150 | 64 | 4 | 18 | 2 | 6 |
| 7/13-19/02 | 8 | 76.1 | 63 | 6 | 24 | 1 | 3 | 1 | 2 | 20 | 5 | 0 | 125 | 323 | 2004 | 12 | 15.74411 | 217 | 111 | 16 | 14 | 2 | 13 |
| 7/20-26/02 | 9 | 80.2 | 51 | 0 | 27 | 3 | 2 | 5 | 1 | 13 | 6 | 0 | 108 | 277 | 2004 | 9 | 14.1 | 168 | 209 | 11 | 11 | 2 | 14 |
| 7/27-8/2/02 | 10 | 69.2 | 47 | 4 | 11 | 2 | 2 | 3 | 1 | 24 | 4 | 0 | 98 | 245 | 2004 | 9 | 15.7 | 160 | 86 | 11 | 19 | 4 | 7 |
| 8/3-9/02 | 11 | 51 | 46 | 4 | 18 | 5 | 1 | 2 | 1 | 22 | 3 | 0 | 102 | 251 | 2004 | 8 | 12.738 | 181 | 73 | 4 | 11 | 0 | 12 |
| 8/10-16/02 | 12 | 72 | 52 | 4 | 22 | 6 | 8 | 3 | 3 | 30 | 7 | 0 | 207 | 338 | 2004 | 3 | 14 | 237 | 93 | 13 | 20 | 0 | 7 |
| 8/17-23/02 | 13 | 57 | 35 | 4 | 16 | 4 | 4 | 3 | 1 | 11 | 8 | 0 | 143 | 203 | 2004 | 5 | 17 | 128 | 74 | 8 | 17 | 1 | 4 |
| 8/24-30/02 | 14 | 46.5 | 28 | 5 | 8 | 1 | 1 | 1 | 2 | 18 | 6 | 0 | 70 | 146 | 2004 | 5 | 14.17115 | 100 | 42 | 4 | 13 | 1 | 5 |
| 8/31-9/2/02 | 15 | 74 | 31 | 6 | 16 | 2 | 2 | 1 | 0 | 8 | 0 | 0 | 66 | 163 | 2004 | 3 | 15.99603 | 113 | 49 | 1 | 19 | 1 | 1 |
| Grand Totals | | 68.407 | 624 | 61 | 210 | 38 | 36 | 29 | 14 | 188 | 63 | 35 | 1291 | 3210 | 2003.8 | 77 | 17.02403 | 2110 | 1105 | 104 | 191 | 30 | 72 |

Table 1: Recreational data sheet from the Upper Saranac Lake State boat launch (Back Bay). The totals are calculated by week from Memorial Day weekend to Labor Day weekend of the the summer of 2002. The grand total is the results from the 15 week season. MO = outboard engine MI = inboard engine I/O = inboard/outboard (stern drives) P = pontoon boat J = jet ski (personal watercraft) S = sailboat R = rowboat C = canoe K = kayak B = *barge.

*Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

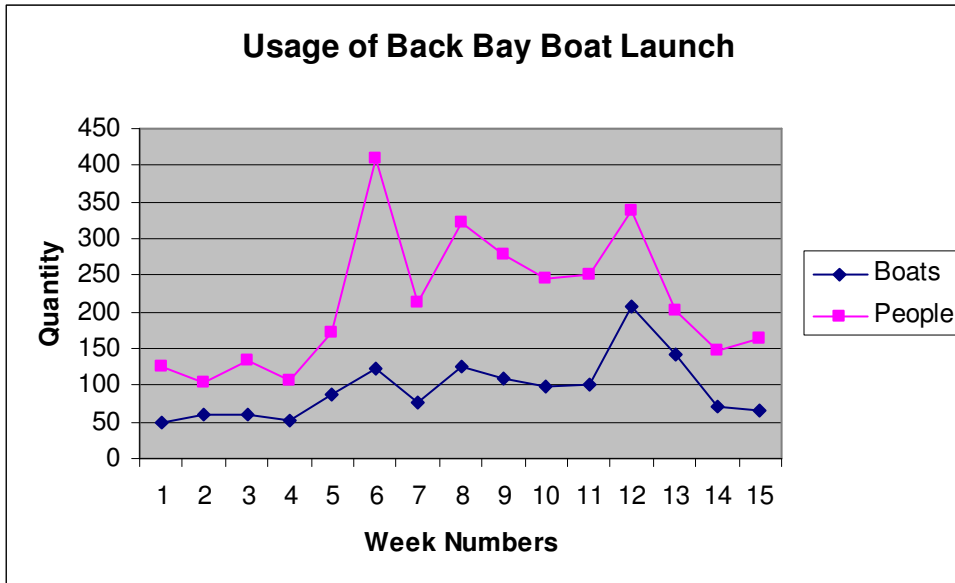


Figure 1: The amount of boats and people that used the Upper Saranac Lake State Boat Launch between Memorial Day week and Labor Day week. Peak times of usage are between week number six and thirteen.

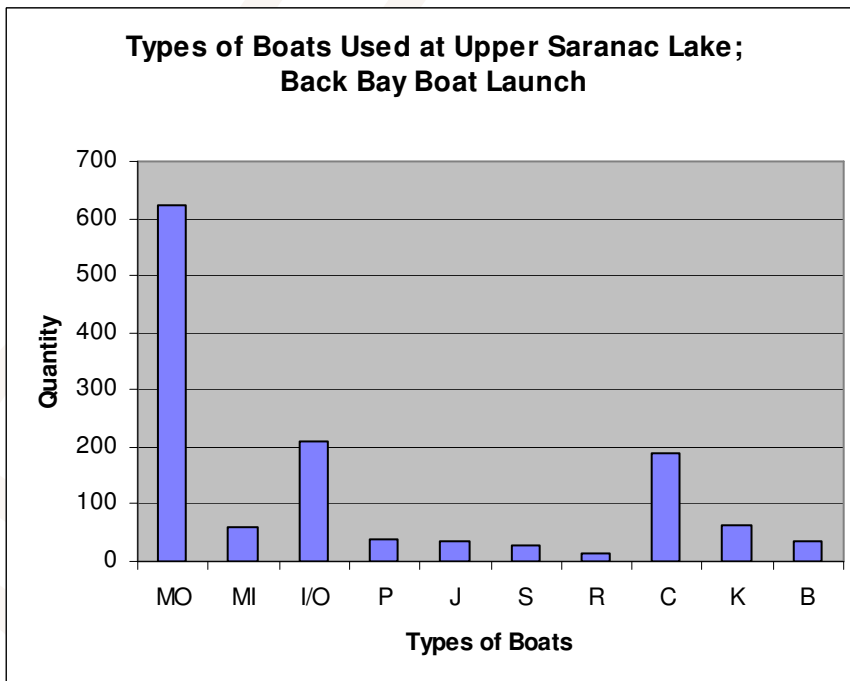


Figure 2: The amount of different types of boats launched at the Upper Saranac Lake State boat launch between Memorial Day week to Labor Day week. **MO** = outboard engine **MI** = inboard engine **I/O** = inboard/outboard (stern drives) **P** = pontoon boat **J** = jet ski (personal watercraft) **S** = sailboat **R** = rowboat **C** = canoe **K** = kayak **B** = *barge. *Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

Section 4: Recreation Study – Lake Placid, 2002

Prepared by: Molly Shubert and Danielle Davenport, Watershed Stewards

Introduction

This year was the first year that the Watershed Steward Program operated on Lake Placid. Stewards were stationed at the launch five days a week from Saturday, May 25, 2002 to Monday, September 2, 2002, Wednesday through Sunday. For the month of August, the stewards used Wednesday as a project day. Projects included clean-up day (on Lake Placid), bird survey, and a search for aquatic invasive species which will be documented by the Aquatic Invasive Species Program, APA.

The first objective of the study was to assess usage of the Lake Placid State boat launch, both recreational and commercial. The second objective of the study was to educate the people using the launch. One focus of education was to let people know that Lake Placid is the water supply for the Village of Lake Placid and Town of North Elba, encouraging users to utilize the public restroom at the launch and not to dump anything into the lake. The second focus in educating users was to inform them about exotic invasive species including Eurasian Milfoil, Purple Loosestrife, and Zebra Mussels. Stewards handed out brochures, including one published by the Shore Owners Association titled “Boating Guide: Lake Placid Lake,” including a map, important regulations, general information about the lake, and information on exotic invasive species, and another brochure titled “Save That Lake.” Other brochures on hand included the New York State boating guide and information on the Adirondack Cooperative Loon Program. Stewards responded to questions about the lake.

Methods

The recreation use study was conducted from 7:00 a.m. until 4:00 p.m., five days a week until August when a project day was added to Lake Placid duties and launch duty was decreased to four days a week. The parameters examined in the study included boat type/size, motor outboard and horsepower, motor inboard, stern drive (inboard-outboard), pontoon, sail, rowboat, canoe, kayak, and barge. The group size was recorded as well as the gender of the people in the group. The amount of time users utilized the launch was

also recorded. It was noted whether or not the group had pets with them, whether or not a brochure was given, and if the outboard motor was a four-stroke. Stewards also made note of comments that the users had or any observations the stewards had about the users. After recording the necessary data stewards approached the users, introducing themselves and the Watershed Steward program. Stewards then delivered a brief message about exotic invasive species and how to prevent the spread of these species, encouraging users to examine their boats, including the hull, propeller, and bilge water, and trailers before and after entering bodies of water.

Results

Total usage of the launch for the period from Memorial Day to Labor Day totaled 1,410 boats and 3,302 people (Table 1). Users spent an average of 13 minutes at the launch (included in this are barges and other construction boats, which tend to take longer. Peak use of the Lake Placid launch site occurred during week number 6 (4th of July week) to week number 13 (August 17 – 23) with respectively 67% of the totals of people and boats utilizing the launch at this time period (Figure 1).

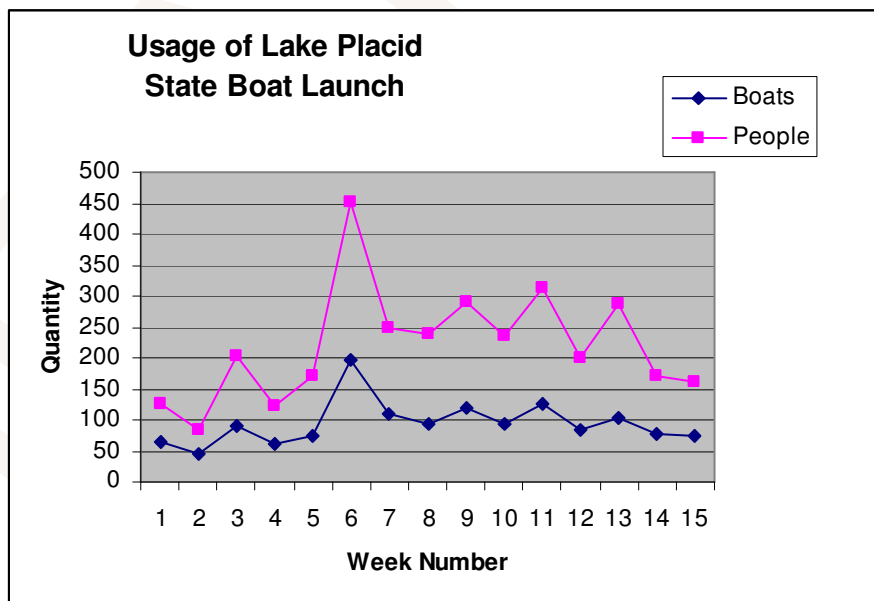


Figure 1: The amount of boats and people that used the Lake Placid State Boat Launch between Memorial Day week and Labor Day week. Peak times of usage are between week number six and thirteen.

| Week Summer '02 (Sat. to Fri) | WK # | Boat Type/Size (indicate hp for MO) | | | | | | | | | | | Total # Boats | # of People | Registration | | Avg Time at Launch | | Gender | | Out Only | Broc hure | 4 stroke motor on outboard? |
|-------------------------------------|---------|--|-----|-----|-----|----|---|----|----|-----|-----|----|---------------------|----------------|--------------|-----|-----------------------|------|--------|------|-------------|--------------|-----------------------------------|
| | | (hp) | MO | MI | I/O | P | J | S | R | C | K | B | | | Avg. Yr | N | (minutes) | Male | Female | Pets | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 5/25-31/02 | 1 | 58 | 29 | 11 | 6 | 1 | 1 | 1 | 0 | 3 | 12 | 0 | 64 | 127 | | 1 | 12 | 100 | 27 | 3 | | 0 | NA |
| 6/1-7/02 | 2 | 48.1 | 25 | 9 | 4 | 1 | 0 | 0 | 1 | 0 | 2 | 2 | 44 | 83 | | | 16 | 63 | 14 | 3 | | 0 | NA |
| 6/8-14/02 | 3 | 61.5 | 30 | 19 | 13 | 5 | 0 | 1 | 0 | 12 | 8 | 2 | 90 | 202 | 2003 | 4 | 13.65814 | 155 | 54 | 5 | | 0 | NA |
| 6/15-21/02 | 4 | 46.1 | 28 | 6 | 7 | 0 | 0 | 2 | 2 | 3 | 9 | 5 | 62 | 121 | 2004 | 11 | 16.64 | 81 | 22 | 10 | 8 | 4 | 2 |
| 6/22-28/02 | 5 | 42.9 | 26 | 14 | 12 | 1 | 0 | 0 | 0 | 2 | 16 | 3 | 74 | 172 | 2003 | 5 | 15.27773 | 132 | 40 | 7 | 12 | 8 | 1 |
| 6/29-7/5/02 | 6 | 52.9 | 70 | 22 | 56 | 2 | 1 | 2 | 0 | 8 | 33 | 3 | 197 | 451 | 2004 | 26 | 11.39 | 286 | 164 | 20 | 17 | 1 | 6 |
| 7/6-12/02 | 7 | 55.1 | 32 | 12 | 25 | 5 | 0 | 0 | 3 | 11 | 22 | 0 | 110 | 247 | 2004 | 13 | 15.23223 | 152 | 94 | 8 | 19 | 0 | 1 |
| 7/13-19/02 | 8 | 53 | 30 | 10 | 21 | 5 | 0 | 0 | 1 | 11 | 14 | 2 | 94 | 239 | 2004 | 10 | 12.5 | 135 | 111 | 9 | 8 | 2 | 4 |
| 7/20-26/02 | 9 | 56 | 46 | 4 | 24 | 3 | 0 | 1 | 2 | 26 | 12 | 1 | 119 | 291 | 2004 | 8 | 13.07238 | 169 | 122 | 12 | 18 | 0 | 1 |
| 7/27-8/2/02 | 10 | 50.7 | 34 | 13 | 11 | 2 | 0 | 1 | 0 | 12 | 16 | 4 | 93 | 237 | 2004 | 9 | 12.64652 | 162 | 75 | 10 | 28 | 4 | 5 |
| 8/3-9/02 | 11 | 65.3 | 33 | 19 | 29 | 3 | 1 | 0 | 2 | 21 | 17 | 1 | 126 | 313 | 2004 | 5 | 11.5625 | 196 | 118 | 21 | 17 | 0 | 5 |
| 8/10-16/02 | 12 | 79.46 | 24 | 7 | 16 | 2 | 0 | 0 | 4 | 6 | 19 | 6 | 84 | 200 | 2004 | 4 | 12.97333 | 131 | 71 | 5 | 14 | 5 | 1 |
| 8/17-23/02 | 13 | 65.5 | 36 | 5 | 29 | 1 | 0 | 0 | 0 | 16 | 9 | 7 | 103 | 288 | 2004 | 2 | 13.9425 | 185 | 102 | 13 | 22 | 0 | 2 |
| 8/24-30/02 | 14 | 94.46 | 22 | 8 | 10 | 2 | 0 | 0 | 0 | 15 | 18 | 1 | 76 | 170 | 2004 | 1 | 10.34 | 97 | 73 | 9 | 13 | 1 | 1 |
| 8/31-9/1/02 | 15 | 82.1 | 20 | 3 | 18 | 1 | 0 | 2 | 2 | 7 | 21 | 0 | 74 | 161 | 2004 | 2 | 13.3 | 95 | 66 | 8 | 15 | 5 | 6 |
| Grand Totals | | 60.74 | 485 | 162 | 281 | 34 | 3 | 10 | 17 | 153 | 228 | 37 | 1410 | 3302 | 2003.8 | 101 | 13.36902 | 2139 | 1153 | 143 | 191 | 30 | 35 |

Table 1: Recreational data sheet from the Lake Placid State boat launch. The totals are calculated by week from Memorial Day weekend to Labor Day weekend of the the summer of 2002. The grand total is the results from the 15 week season. **MO** = outboard engine **MI** = inboard engine **I/O** = inboard/outboard (stern drives)

P = pontoon boat **J** = jet ski (personal watercraft) **S** = sailboat **R** = rowboat **C** = canoe **K** = kayak **B** = *barge.

*Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

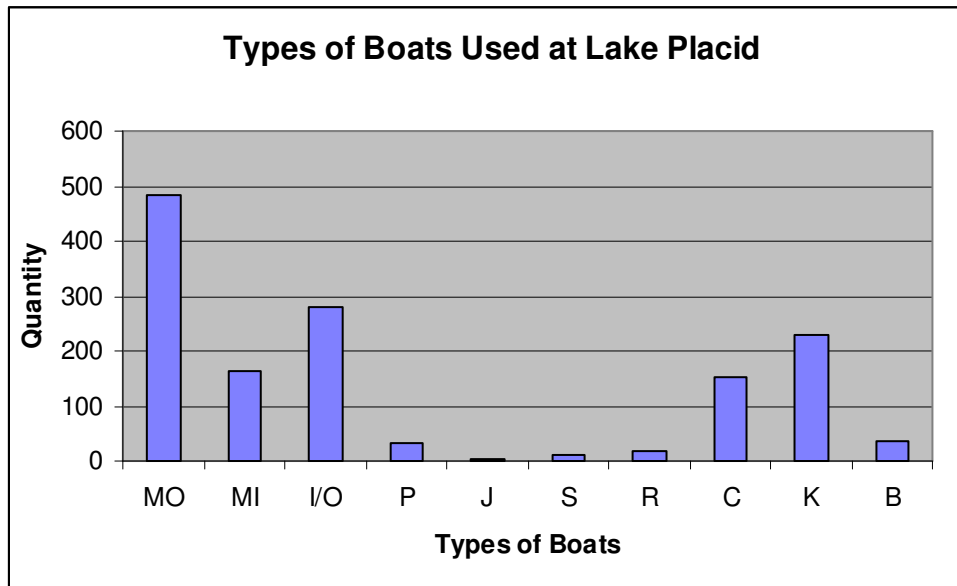


Figure 2 : The amount of different types of boats launched at the Lake Placid State boat launch between Memorial Day week to Labor Day week. **MO** = outboard engine **MI** = inboard engine **I/O** = inboard/outboard (stern drives) **P** = pontoon boat **J** = jet ski (personal watercraft) **S** = sailboat **R** = rowboat **C** = canoe **K** = kayak **B** = *barge.
*Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch

The outboard engines were the most popular type of boat launched at Lake Placid with 34% usage (Figure 2). The average horsepower was 60 hp, and 3% of these outboards had four-stroke motors. Inboard/outboard engines represented 20% of total use at the state boat launch. Inboard engines make up an estimated 11%, which means 65% of the boats launched were motorized vessels. The non-motorized vessels were not used as much with 16% kayaks and 11% canoes, respectively. The other categories only represent 3% or less of the total usage. Only two personal watercrafts were used on the lake during the stewardship program data collection. Personal watercrafts were banned on Lake Placid in late June; 1 was on the lake the last week in May, 1 was towed to the Northern end of the lake, Echo Bay which lies in the town of St. Armand. Most boats had a current registration sticker (90%), with the average registered year being 2004. Only 13% of the total boats launched at the Lake Placid were from other states and Canada (Figure 3). Of that 13% the state of New Jersey was the highest with 28%, followed by the state of Pennsylvania (12%), Florida (11%), and the state of South

Carolina with 9% respectively. Thirteen (including Canada) states represent a very small percent, however this small percentage represent almost half the out of state boats visiting Lake Placid.

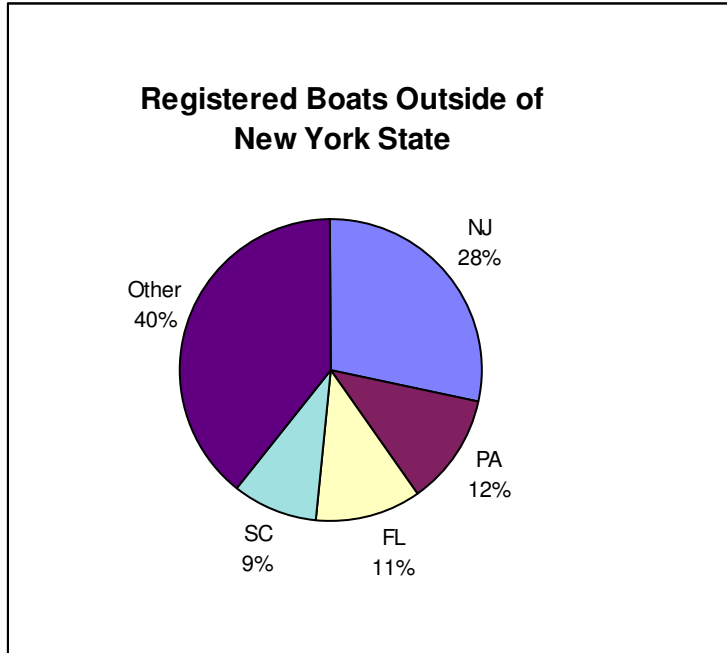


Figure 3 : The amount of boats registered outside of New York State and the percent of states that used the Lake Placid State boat launch. “Other” represents states that were at 6% or less. These states include (listed by highest to lowest percentage), CT, NH, VT, VA, MA, MD, OH, WS, MS, CO, IL, NC, and the country of Canada.

Discussion

This was the first year that Lake Placid was included in the Watershed Steward program and many regular users of the Lake Placid launch site felt that the program is important and beneficial at this site, with the high volume of use.

There are two launching sites on Lake Placid, a village launch site located in Paradox Bay and the DEC (state) launch site. The stewardship program was conducted at the DEC launch site. Before the summer season began the Village of Lake Placid banned commercial uses of the village launch, meaning that all construction and commercial uses came through the DEC site this summer. Weekdays the launch site was primarily used by construction companies and barges hauling materials and man power onto the lake. There were many “regular” users of the Lake Placid launch site, families and groups that the stewards would see using the launch at least once or twice a week throughout the

summer. Many of these regulars were people who reside in the area but do not have access to a permanent boat slip or dock on Lake Placid.

The launch site was also utilized for the delivery and pickup of boats, boats rented by groups renting camps on the lake, boat repair companies performing work on boats owned by camp owners on the lake, and camp owners launching boats for the summer season.

Many of the users coming through the Lake Placid launch site were aware of the issues that the Stewardship Program focused on, such as the exotic invasive plant and animal species, the Adirondack Cooperative Loon Program, etc. Many boaters were surprised that Lake Placid does not have a boat wash station to keep exotic invasive species out of the lake, and commented that they wash their boat before and after each use.

We saw considerable traffic coming from Mirror Lake, crossing Mirror Lake Drive, and launching canoes, kayaks, and rowing sculls into Lake Placid. Parking was a constant source of frustration at the Lake Placid launch site as it is not always enforced and the signs and lines are unclear. Many users of the launch site assumed that one of the roles of the stewards was to be a parking attendant, and oftentimes this is what we became, either asking people not to park in the lot unless they were launching or hauling boats, making sure that single cars were not parking in spots for trucks with trailers, and mediating when users became irate over parking issues.

Some limitations to the study include, the recording of boats did not include the amount of boats that were regulars are used the boat launch on a daily bases. For example, one boat from New Jersey that used the launch throughout the summer was recorded as a different boat each time it launched. Of course, trying to calculate this issue is difficult because of the amount of stewards and their individual perspectives. However, the end result does show how much traffic is present at the launch regardless of regular users.

Section 5: Recreation Study – Summary and Comparison, 2002

Prepared by: Danielle Davenport, Watershed Steward

Summary and Comparison of Boat Launches

This is a summary of a comparison of the total numbers of all three boat launches of the summer of 2002 (Table 1). Upper Saranac Lake (USL) and Lake Placid (LP) are the most similar in numbers of people and boats, however the type of boats was different. Both are state boat launches which are clearly marked on maps and easily seen on roads, unlike St. Regis (SR) which is difficult to see from the road and is not clearly marked on maps as well. LP had well over 100 (respectively) more non-motorized boats launched compared to USL. LP also has a carry from Mirror Lake that is a much shorter distance than the carry used at USL. It seems as though USL users are generally people who race canoes and kayaks and LP has more tourists or people just looking for a shorter route or day trip. This statement is an observation made by a steward with the experience of the launches and also by reading the comments made by other stewards. The SR boat launch is known for being the entrance way to the St. Regis Canoe Area, which is why the launch has the most non-motorized boats of all three launches.

The most time (average) spent at the launch was at SR. SR has the least amount of space for launching a boat and some boaters had a difficult time getting their boats in the water. Also, parking after launching could be a distance from the launch which took up time at the launch. Canoes and kayaks sometimes spent lots of preparation time at the launch, packing the boat for overnight camping trips, putting on sunscreen, and chatting with the stewards. LP had the least amount of time spent at the launch. There is more space and it has two launches to be utilized by boaters. The launch also had many local boaters who used it often and are very familiar with the launch. LP was the busiest of all the launches which limits the amount of time people can utilize the space. USL had a higher average time spent at the launch than LP although it was not as busy, so people had more time to launch their boats. LP's location attracts people walking on the main road.

| Summer '02 Boat Launch | Boat Type/Size (indicate hp for MO) | | | | | | | | | | | Total # Boats | # of People | Registr- ation | | Avg Time at Launch (minutes) | Gender | | | Out Only | Broc hure | 4 stroke motor on outboard? |
|------------------------------|--|-----|-----|-----|----|----|----|----|-----|-----|----|------------------|----------------|-------------------|-----|------------------------------------|--------|--------|------|-------------|--------------|-----------------------------------|
| | (hp) | MO | MI | I/O | P | J | S | R | C | K | B | | | Avg.Yr | No | | Male | Female | Pets | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| St. Regis | 59.76 | 170 | 3 | 8 | 3 | 0 | 0 | 10 | 478 | 182 | 53 | 907 | 1701 | 2004 | 12 | 19.46667 | 1098 | 575 | 56 | 85 | 31 | 16 |
| Upper Saranac | 68.41 | 624 | 61 | 210 | 38 | 36 | 29 | 14 | 188 | 63 | 35 | 1291 | 3210 | 2004 | 77 | 17.02403 | 2110 | 1105 | 104 | 191 | 30 | 72 |
| Lake Placid | 60.74 | 485 | 162 | 281 | 34 | 3 | 10 | 17 | 153 | 228 | 37 | 1410 | 3302 | 2004 | 101 | 13.36902 | 2139 | 1153 | 143 | 191 | 30 | 35 |

Table 1: Recreational data sheet from all three boat launches, St. Regis Landings, Upper Saranac Lake State launch, and the Lake Placid State launch. The values are from the grand totals of all launches from the summer of 2002. In the registration column, No = the amount of boats with expired registration stickers.

MO = outboard engine MI = inboard engine I/O = inboard/outboard (stern drives) P = pontoon boat J = jet ski (personal watercraft) S = sailboat R = rowboat

C = canoe K = kayak B = *barge.

*Barges were recorded each time they utilized the launch area in an attempt to assess commercial/construction use of the launch.

Section 6: Recreation Study – Recreational Use Study of St. Regis Mountain, 2002
Prepared by: Danielle Davenport, Watershed Steward

Introduction:

St. Regis Mountain is located in the St. Regis Canoe Area, near Paul Smith's College, and has an elevation of 2873 feet. The Canoe Area is managed as 'wilderness' as defined by the Adirondack Park State Land Master Plan. According to the plan, wilderness is an area of land that is undisturbed by human habitation. These areas should have the opportunities for solitude, primitive, and unconfined type of recreation. The plan also has a goal to protect and preserve the ecological, educational, and scenic or historical value of the land (DEC, 1999).

The watershed stewardship program has kept these goals as objectives on the summit of St. Regis Mountain. In the year 2000, the program had a mountain steward seven days a week. The last two years (2001-2002), the program has had a mountain steward only on the weekends. However, our message and data collection have been consistent. The data collection includes how much the hiking trail and summit is being used on the weekends. The stewards also record the public's behavior on the trail and summit. The steward's main objective on the summit is to deliver an interpretive message on ways to protect and preserve our ADK alpine forest and watersheds. Our main message to the public was to encourage people to walk on durable surfaces such as the bedrock on the summit and staying on the trail and not walking on the outskirts of the trail where erosion can become a problem. While the steward is interpreting, this opens the door for questions and concerns the public may have for the steward. The stewards were available to offer information regarding camping/hiking, flora/fauna identification, natural/cultural history, rules/regulation, and helping people interpret the mountains and lakes that inhabit the St. Regis summit view.

The data collected will be available for the Department of Environmental Conservation when preparing the St. Regis Canoe Area Unit Management Plan. The mountain steward had been a successful awareness tool for the public. However, educating the public on ecological integrity is a long-term objective that must be

continued in order to have manageable results.

Method:

The mountain steward arrived at the St. Regis mountain trailhead at 8:00 am on both Saturday and Sunday from May 25 (Memorial Day) to September 1, 2002 (Labor Day weekend). In the case of unfavorable weather (rain or thundershowers), the steward stayed at the trailhead and approached people entering the trail. The steward had until 10:00 am to reach the summit. From 10:00 am to 3:30 pm the steward remained on the summit for interpretation and data collection.

Data Collection:

The steward was equipped with a data form to record several questions the program had regarding the hikers on St. Regis mountain for the summer of 2002. These questions included: How large of a group was hiking together? How much time do they spend on the summit? (1) How much of the population is male vs. female? (2) How many and what kind of pets are ascending to the summit? (3) How well was the population equipped for hiking a summit? Under the category of equipment, the things that were recorded were whether or not they had backpacks, cotton clothing, and sneakers. Any hikers that had backpacks, no cotton clothing, and no sneakers were said to be well equipped. (4) What kind of behavior did the population have on the summit? Under the category of behavior, it was recorded whether they mainly stayed on the bedrock or on grassy areas. Additional room on the data form was available for comments that the steward thought was relevant to the questions. The weather was also recorded (clouds, wind, and sometimes estimates on the temperature) because the daily weather as a significant affect on human activity.

Interpretive Message:

After each hiking group had time to settle down and relax, they were approached

by the Mountain Steward. The steward would introduce themselves and briefly describe the Watershed Stewardship Program. Then the steward could use creative ways to convey the message of stewardship. For example, a steward may say,

“Hello, my name is ____ and I work for the Watershed Stewardship Program funded by the Shore owners Association and Paul Smith's College. We are here to inform the public on way to protect and preserve our Adirondack alpine forests and watersheds. One of our concerns is that the soil and vegetation is very fragile and sensitive to any kind of disturbance. So we encourage you to step on the rock instead of the grass...”

This usually led into various conversations related to the natural/cultural history, interpreting the summit view, and questions about the fire tower, to name a few topics of interest. Also, the conversations enabled the steward to have a closer look at the population's behavior on the mountain.

At 3:30 pm the steward would descend the mountain. In some cases, the steward would stay longer if the summit was busy. However, it was encouraged to leave the summit at 3:30 for the safety of the steward. The trailhead at the bottom of the mountain was usually approached at 5:00 pm and this concluded the day for the steward.

Results:

When looking at the results, they were compared to last year's data of the Stewardship Program. The year 2000 of the program had a much more extended study of St. Regis Mountain, which is why it was not compared with the following years. The year 2000 had a mountain steward every day of the week. The years 2001 and 2002 only collected data on the weekends. However, the findings do correspond with the trends found in the High Peaks Wilderness Management Plan (DEC, 1999).

This summer (2002), there was a total of 22 days of data from the summit of St. Regis Mountain (Table 1). This was only 6 days less than the total for 2001. Again, some days were missed due to weather and sickness of stewards. There was only a difference of 78 people more in 2001 with the extra 6 days. The average amount of hikers per day was 25 in 2002 and the average was 23 hikers last year in comparison. In

22 days, a total of 554 people hiked to the summit. Between the two years, the average group size was 2-3 people and spent an average of 40 – 47 minutes respectively. The amount of large groups—defined by the DEC as 10 or more people—was 2 – 3% of the population of both years. The average group size in 2001 was 18 people and in 2002 the average was only 12 people in a group (data not shown).

| Weekend # | Date | Total # of Hikers | | Avg. Group Size | # of Groups | Avg. time spent at summit | |
|----------------|--------------------|-------------------|------------|-----------------|-------------|---------------------------|-------------------|
| | | 2002 | 2001 | | | 2002 | 2001 |
| 1 | 5/25 - 26/02 | 87 | 33 | 4 | 25 | 40 | 30 |
| 2 | 6/1 - 2/02 | 21 | 5 | 2 | 9 | 50 | NA |
| 3 | 6/8 - 9/02 | 30 | 52 | 2.5 | 12 | 33 | 53 |
| 4 | 6/15 - 16/02 | 9 | 34 | 3 | 3 | NA | 53 |
| 5 | 6/22 - 23/02 | 15 | 10 | 2 | 7 | 40 | 55 |
| 6 | 6/30 - 31/02 | 37 | 2 | 3 | 12 | 48 | 15 |
| 7 | 7/6 - 7/02 | 7 | 34 | 2 | 4 | 71 | 32 |
| 8 | no stewards | NA | 25 | NA | NA | NA | 54 |
| 9 | 7/20 - 21/02 | 97 | 117 | 3 | 32 | 45 | 39 |
| 10 | 8/3 - 4/02 | 52 | 65 | 3 | 16 | 48 | 37 |
| 11 | 8/10 - 11/02 | 76 | 37 | 3 | 23 | 55 | 33 |
| 12 | 8/17 - 18/02 | 67 | 87 | 3 | 23 | 40 | 42 |
| 13 | 8/24 - 25/02 | 56 | 66 | 3 | 18 | 42 | 35 |
| 14 | 8/31– 9/1/02 | NA | 65 | | | NA | 45 |
| Totals: | | 554 | 632 | 3 | 184 | 47 minutes | 40 minutes |

Table 1: Summary of 2002 and 2001 of the amount of hikers to the summit, the number of groups, the average group size, and the average time the groups spent on the summit of St. Regis Mountain. The numbers on the left side are the most recent data from the year 2002 and the numbers on the right side of the column is the previous year 2001. Dates are based on 2002. NA = data not available

The difference in ratio of male vs female was close to an even amount for the past two years. Respectively, the male ration was slightly higher with 55% and 45% women. The amount of pets (dogs) hiking with groups have stayed the same (17%) for both years (Table 2).

| Weekend # | Date | # of Males | | # of Females | | # of Groups With Pets | |
|-----------|--------------------|------------|------------|--------------|------------|-----------------------|------------|
| | | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 |
| 1 | 5/25 - 26/02 | 45 | 18 | 42 | 15 | 3 | 1 |
| 2 | 6/1 - 2/02 | 15 | 3 | 6 | 2 | 0 | 0 |
| 3 | 6/8 - 9/02 | 23 | 29 | 7 | 24 | 1 | 3 |
| 4 | 6/15 - 16/02 | 5 | 17 | 4 | 17 | 1 | 1 |
| 5 | 6/22 - 23/02 | 8 | 6 | 7 | 4 | 0 | 0 |
| 6 | 6/30 - 31/02 | 21 | 0 | 16 | 2 | 1 | 0 |
| 7 | 7/6 - 7/02 | 4 | 14 | 3 | 20 | 1 | 3 |
| 8 | no stewards | NA | 14 | NA | 11 | NA | 0 |
| 9 | 7/20 - 21/02 | 48 | 77 | 40 | 49 | 8 | 3 |
| 10 | 8/3 - 4/02 | 21 | 35 | 30 | 30 | 1 | 0 |
| 11 | 8/10 - 11/02 | 47 | 18 | 29 | 20 | 6 | 4 |
| 12 | 8/17 - 18/02 | 33 | 55 | 34 | 32 | 5 | 6 |
| 13 | 8/24 - 25/02 | 29 | 30 | 27 | 36 | 5 | 4 |
| 14 | 8/31- 9/1/02 | NA | 36 | NA | 27 | NA | 3 |
| | Totals: | 54% | 56% | 46% | 44% | 17% | 17% |

Table 2: Summary of 2002 and 2001 of the ratio of gender and the amount of pets (dogs) with groups that traveled to the summit of St. Regis Mountain. The numbers on the left side are the most recent data from the year 2002 and the numbers on the right side of the column is the pervious year 2001. Dates are based on 2002. NA = data not available

The question of how well people were equipped for hiking has general declined slightly in comparison (Table 3). The number of groups without a backpack is similar between years, respectively. However, people unprepared for a hike by wearing cotton clothes increased by about 20%, while there was a 10% increase of people wearing sneakers to the summit.

| | | # of groups | | # of groups with Cotton Clothes | | # of groups wearing Sneakers | |
|------------------|--------------------|--------------------------|-----------|--|------------|-------------------------------------|------------|
| Weekend # | Date | without Backpacks | | 2002 2001 | | 2002 2001 | |
| 1 | 5/25 - 26/02 | 1 | 1 | 18 | 2 | 1 | 1 |
| 2 | 6/1 - 2/02 | 3 | 1 | 4 | 1 | 3 | 0 |
| 3 | 6/8 - 9/02 | 0 | 0 | 5 | 9 | 4 | 2 |
| 4 | 6/15 - 16/02 | 1 | 0 | 1 | 5 | 0 | 0 |
| 5 | 6/22 - 23/02 | 1 | 0 | 4 | 0 | 1 | 0 |
| 6 | 6/30 - 31/02 | 4 | 0 | 10 | 0 | 3 | 0 |
| 7 | 7/6 - 7/02 | 0 | 1 | 2 | 11 | 1 | 10 |
| 8 | no stewards | NA | 1 | NA | 5 | NA | 1 |
| 9 | 7/20 - 21/02 | 5 | 2 | 14 | 7 | 3 | |
| 10 | 8/3 - 4/02 | 0 | 0 | 14 | 4 | 11 | 1 |
| 11 | 8/10 - 11/02 | 0 | 1 | 6 | 8 | 3 | 2 |
| 12 | 8/17 - 18/02 | 1 | 7 | 17 | 11 | 4 | |
| 13 | 8/24 - 25/02 | 1 | 3 | 13 | 5 | 14 | |
| 14 | 8/31- 9/1/02 | NA | 2 | NA | 5 | NA | 2 |
| Totals | | 9% | 8% | 64% | 41% | 27% | 17% |

Table 3: Summary of 2002 and 2001 of how the population of hikers was prepared for hiking. There are three categories; hikers with no backpack, and how many hikers were wearing cotton clothes and sneakers. The numbers on the left side are the most recent data from the year 2002 and the numbers on the right side of the column is the pervious year 2001. Dates are based on 2002. NA = data not available

An encouraging factor is the improvement of people’s behavior on the summit (Table 4). Only 3% of the population, seen by the steward, climbed the fire tower. Meanwhile, there was a 12% decrease of hikers walking on the grass and a 14% increase of hikers on the summit rocks.

BEHAVIOR ON THE SUMMIT:

| Weekend # | Date | # of people climbed | | # of groups walking On Grass | | # of groups walking on rocks | |
|-----------|--------------------|---------------------|-----------|------------------------------|------------|------------------------------|------------|
| | | the Fire Tower | | 2002 | 2001 | 2002 | 2001 |
| 1 | 5/25 - 26/02 | 3 | 0 | 9 | 1 | 15 | 7 |
| 2 | 6/1 - 2/02 | 0 | 0 | 0 | 0 | 7 | 0 |
| 3 | 6/8 - 9/02 | 1 | 2 | 3 | 3 | 8 | 10 |
| 4 | 6/15 - 16/02 | NA | 0 | NA | 2 | NA | 5 |
| 5 | 6/22 - 23/02 | 0 | 0 | 1 | 0 | 4 | 2 |
| 6 | 6/30 - 31/02 | 0 | 0 | 6 | 0 | 2 | 1 |
| 7 | 7/6 - 7/02 | 0 | 0 | 0 | 8 | 4 | 3 |
| 8 | no stewards | NA | 0 | NA | 2 | NA | 6 |
| 9 | 7/20 - 21/02 | 1 | 1 | 16 | 0 | 17 | 22 |
| 10 | 8/3 - 4/02 | 0 | 2 | 3 | 12 | 16 | 11 |
| 11 | 8/10 - 11/02 | 0 | 1 | 2 | 5 | 22 | 8 |
| 12 | 8/17 - 18/02 | 0 | 0 | 12 | 19 | 12 | 11 |
| 13 | 8/24 - 25/02 | 1 | 0 | 5 | 7 | 17 | 8 |
| 14 | 8/31– 9/1/02 | NA | 0 | NA | 20 | NA | 3 |
| | Totals | 3% | 3% | 31% | 43% | 67% | 53% |

Table 4: Summary of 2002 and 2001 of the behavior of the hiking population on St. Regis Mountain. Behavior, such as, climbing the fire tower and whether or not the hikers were walking on the grass or the summit rocks. The numbers on the left side are the most recent data from the year 2002 and the numbers on the right side of the column is the pervious year 2001. Dates are based on 2002. NA = data not available

Discussion and Recommendations:

The number of visitors to St. Regis Mountain is understated in this report. Visitors have been seen while the steward is hiking up the mountain in the morning and many visitors hike up the summit after the steward has left the summit at 3:30 pm. A number to show the evidence of this statement is not available. However, adding a column to the data form to record the amount of visitors that signed the register form at

the trailhead would be of great information.

Although the percentage of pets/dogs was at a fairly low rate, pets can have a significant impact on the trail and the summit. Pets can travel off trail easily and the owners do not normally dispose of their waste properly (Cole, 1989). In section VIII of the DEC management proposal, there is no policy on pets only lawsuits or fines for dogs off the leash.

Interestingly, the percent of hikers that are equipped decrease and at the same time their behavior improved. Now, the topic of behavior was mention in the interpretation message given by the steward along with the natural/cultural history of the park and knowing the high peaks and lakes from the view. Personally, the topic of being prepared to hike was not a subject in the conversation. Maybe by mentioning to hikers the risk of wearing cotton clothes or/and sneakers and having a lack of supplies can enlighten the visitors awareness. The improvement in the visitor's behavior may have been influence by the steward's message from the previous years. However, it does depend on how the data was collected by the individual steward. For example, the steward may have recorded their behavior before the message or after the message or both. Recording both would be ideal and a possibility for next year. Also, the results are coming for four different stewards which mean four different perspectives.

The issue of visitors climbing the fire tower has not been a problem for the stewards. However, just having a steward present on the summit may influence a person's behavior. The stewards may not see many people climbing the fire tower but that does not mean that visitors are not climbing the tower when the steward is not there. There is a popular question upon the visitors regarding the fire tower; when are they taking it down?

Comparing data from a 2 year period does not accurately show trends of how the St. Regis Mountain trail has been used by the public. However, the results have been similar to findings in the High Peaks Wilderness Management Plan (DEC, 1999). The plan states that 2 – 3 people are the common group sizes for hiking, which is shown in this data. Also, large parties (10 more people) represent a small proportion of the total use of trails and for the past 2 years on St. Regis Mountain the percent of large parties has been 2 – 3% respectively. However, they do have a large impact on natural resources and

the experiences of other visitors. Wilderness managers believe that large groups impact congestion of trails, higher noise level, and greater visual impacts (DEC, 1999). From personal experience of observing visitors at the summit, the impacts are present. Large parties make the summit feel crowded and noisy. Some visitors have warned the stewards of large parties arriving soon that they have passed on the way up the summit. According to the DEC management plan, the amount of use of a trail may not be as important as the visitor's behavior when determining the amount of impact.

Some of the problems stated in the DEC management proposal could be some simple project ("X") days for the future in the Watershed Stewardship Program. One concern is the trailhead; the sign does not identify the trail as "wilderness." This makes the public unaware of certain regulations and restrictions present in this land classification. A steward(s) could work on a model of a new sign for the trailhead mentioning awareness issues instead of "regulations and restrictions." People seem to listen more when the words "rules and restrictions" are not used to describe their experience into the wild. In the DEC management plan it states: "*wilderness use figures indicate little information on the pressures sustained by the resource nor the experiences of visitors.*" If the program decides to discontinue the summit steward, maybe a small survey at the trailhead with questions regarding their wilderness experience could be useful data.

In summary, the mountain steward was a success this year for the watershed stewardship program. Five hundred and fifty – four visitors to St. Regis Mountain received the stewards' message on protecting the Adirondack alpine forest. The protection is used to keep the land wild for future generations to enjoy. The only way to protect the land is by managing the people who use the land. This data may be used to help understand the public's behavior, their safety precautions, and their impacts when hiking in the wilderness.

References:

Cole, David N. (August 1989). Low-Impact Recreational Practices for Wilderness and Backcountry. Gen. Tech. Report INT – 265. USDA Forest Service, Intermountain Research Station. Ogden, UT.

NYS Department of Conservation (DEC). March 1999. High Peaks Wilderness Complex Unit Management Plan: Wilderness Management for the High Peaks of the Adirondack Park. Office of Natural Resources – Regional 5.

Section 7: Recreation Study – Fish Creek Bay, Indian Carry, 2002
Prepared by: Jeremy Riedl, Assistant Director

Background:

This rather short project was originally initiated as a roving interpretation project where stewards would be stationed at both Indian Carry and Bartlett Carry. However, with the increased traffic at the entrance to Upper Saranac Lake from the Fish Creek Campground area it was suggested that we abandon the Bartlett Carry station and instead install a steward in Fish Creek Bay for the duration of the study to gather data regarding recreational use of the area from Fish Creek Campground.

Methods:

This project was undertaken on Saturday August 10th and Sunday the 11th. Weekend usage of the Fish Creek area and Indian Carry being more intense, we believed that it was best to collect data then. We set out both days around 7:30 a.m. from the Saranac Inn State Launch and first installed the steward at Indian Carry. (On Sunday the steward drove to the Indian Carry site to save boat gas. Probably more efficient) The steward at Indian Carry arrived by 8:00 and the steward at Fish Creek shortly thereafter. The Fish Creek steward was positioned in Fish Creek Bay to the right of the last red channel marker in the boat. Midday, stewards would rotate their positions on the lake. This gave them an opportunity to share duties and information regarding both sites. All data was compiled using the standard recreational use data sheets, however the steward at Fish Creek Bay recorded the amount of users entering the lake and also those traveling back into the Fish Creek area. The day ended between 3:30 and 3:45 for the steward at Fish Creek and at about 4:00 at Indian Carry.

| | | |
|--------------|----------------|--|
| Data: | 8/10/02 | Indian Carry |
| | . | Total # of users: 17 |
| | | Gender of users: 9 male 8 female |
| | | Total # of watercraft: 8 |
| | | Outboard motors: 2 |
| | | Canoes: 5 |
| | | Kayaks: 1 |
| | | Average time spent at launch: 15.6 minutes |

8/11/02 Indian Carry

Sunday morning there was a 30 mile canoe/kayak race with a total of 62 craft. The number of actual racers is unknown but is estimated at around 100. All race contestants arrived at Indian Carry between 10:14 a.m. and 11:25 a.m. and stayed only long enough to carry to Stony Creek Ponds for the next segment of the race. Race data not reflected below.

Total # of users: 80*
 Gender of users: 45 male, 35 female*
 Total # of watercraft: 7
 Outboard motors: 4
 Canoes: 3
 Average time spent at launch: 8.6 minutes
**refers to an approximate value*

8/10/02

Fish Creek Bay

Total # of groups entering USL: 98
 Total # of users: 293
 Gender of users: Male 166, Female 127
 Total # of watercraft: 99
 Outboard motors: 45
 Inboard motors: 29
 Jet skis: 12
 Canoes: 6
 Kayaks: 6
 Jet Ski boat: 1
 Total # of groups entering F.C. 76

8/11/02

Fish Creek Bay

Total # of groups entering USL: 94
 Total # of users: 260
 Gender of users: Male 147, Female 113
 Total # of watercraft: 102
 Outboard motors: 49
 Inboard motors: 26
 Jet Skis: 9
 Canoes: 2
 Kayaks: 16
 Total # of groups entering F.C. 87

Results:

As recreational use is higher on weekends it is expected that these numbers do not reflect typical daily traffic, however the numbers from Fish Creek do betray the significant use the area gets. It was difficult to ascertain how many users were campers

at Fish Creek. We did observe more traffic entering USL than returning to F.C. This could be due to traffic between the Campground and USL or any number of other factors. The reasons why traffic is so heavy was not a concern of this study, but instead to provide those concerned with information regarding traffic between these two recreational areas and its density. Observation of the actual campground area would provide better data regarding where boats are actually coming from and their destinations.

Section 8: St. Regis Lakes Purple Loosestrife Project, 2002
Prepared by: MacKenzie Hall, Watershed Steward

Background

Purple loosestrife (*Lythrum salicaria*) is a European wetland plant that was introduced to the northeast U.S. and Canada in the 1800s for its ornamental and medicinal values. Outside its native range, purple loosestrife is dreadfully invasive. Mature plants can produce as many as 3 million seeds each year. Their roots spread beneath the ground, crowding out native vegetation and giving rise to more loosestrife plants. In addition to its tremendous reproductive potential, purple loosestrife has no natural predators outside of Europe. Consequently, this exotic species can grow to complete dominance in host wetlands.



A myriad of wildlife species depend on wetland ecosystems for at least part of their life cycles. Wetlands are particularly important to nesting waterfowl and migratory birds, but all types of organisms – from microbes to mammals – benefit from the water, shelter, and diverse food resources that wetlands provide. As purple loosestrife comes to dominate an area, many of those values are lost.

Since its introduction, purple loosestrife has spread through both freshwater and saltwater wetlands all over the U.S. and has become the target of active management strategies. The Watershed Stewardship Program has been involved in purple loosestrife monitoring and removal since its inception in 2000, when populations were documented

in the slough between Lower Saint Regis Lake and Spitfire Lake.

Methods

In late July, 2002, when purple loosestrife is flowering but not yet seeding, Watershed Stewards MacKenzie Hall and Jeremy Riedl joined efforts with The Nature Conservancy's Invasive Species Project Coordinator, Steven Flint. As part of the Adirondack Park Non-Native Invasive Plant Species Initiative, the work involved mapping and harvesting populations of purple loosestrife around the Saint Regis Lakes chain.

Each of the previous year's seven project sites was revisited. Additional suspect locations – like shallow bays with open wetland areas – were investigated for occurrences of the plant. Two days were dedicated to harvesting. Whenever possible, the root stock was removed with the plant to ensure no future re-growth. This was most easily accomplished where the substrate was loose, as in areas with mucky peat or simply high soil moisture. Firmly anchored plants were clipped near the base instead to avoid breaking the roots, since root fragments can give rise to new plants. Steven Flint explained that the act of clipping can cause enough trauma to stifle a plant's re-growth. Just preventing the spread of seeds is progress in itself.

All of the purple loosestrife material was contained in durable black garbage bags and left in the sun for a few days before being transported to the landfill. The heat essentially cooked the plants and their seeds, making them unviable and thus incapable of using the landfill as a new breeding ground.

Materials

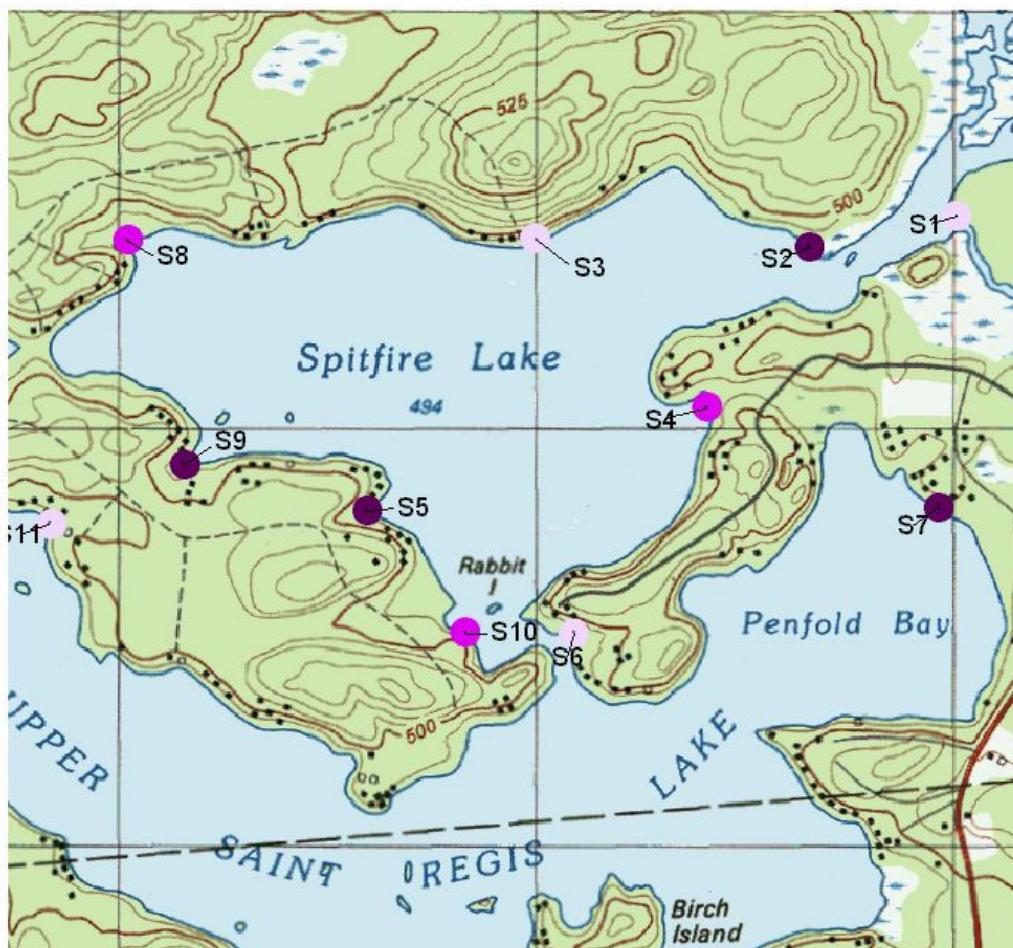
Stewardship Program boat, pruning shears, 50 gal black garbage bags, topographic map, spaded shovel, four pronged pitchfork.

Results & Discussion

Each of the seven sites from 2001 were found to still host purple loosestrife populations. Although fewer individuals were harvested this year at three sites (S1, S3, and S4), *many* more were removed from the others. In addition, four new populations

were discovered around the lakes chain (see map). In total, fewer than 900 individuals were harvested in 2001, while over 3,000 individuals were harvested this summer (see chart below).

-Saint Regis Lakes Chain- 2002 Purple Loosestrife Occurrences



Loosestrife Sites

- low abundance
- medium abundance
- high abundance



| Site Name | Estimated # Removed: 2001 | Estimated # Removed: 2002 |
|-----------|---------------------------|---------------------------|
| S1 | 30 | 8 |
| S2 | 25 | 260 |
| S3 | 18 | 11 |
| S4 | 110 | 49 |
| S5 | 250 | 915 |
| S6 | 5 | 63 |
| S7 | 450 | 1400 |
| S8 | - | 123 |
| S9 | - | 437 |
| S10 | - | 74 |
| S11 | - | 14 |

One explanation for this year’s larger harvest is that the 2001 Stewards were still removing purple loosestrife into August and were pressed for time before the seeds began to drop. They probably overlooked individuals at the different sites. Also, large loosestrife plants with multiple branches at sites S8 through S11 suggest that those populations have existed for at least a few years. This year’s work took place on July 26th and 27th (with the exception of site S11, which was harvested on August 16th after its discovery by lake residents). Each site was combed over very carefully to be sure that few plants were overlooked, even the smallest of them. Only at site S9 were individuals left behind, and this was due to time constraints and the high density of native plant growth. All flowering seed heads – totaling 437 – were removed, however.

A less optimistic explanation is that purple loosestrife is spreading. Its reproductive potential has already been discussed. Perhaps the best we can hope to do is keep it in check. With continued monitoring and meticulous harvesting, though, eradication may not be an impractical goal.

Sites S5, S7, and S9 hosted particularly large populations of purple loosestrife, possibly due to the expanse of wetland area available for occupation at each. Sites S5 and S9 may be distributing seeds to other areas because of their western positions and the tendency for winds to blow from west to east. These sites should be considered high priority because they present large areas for invasion and potential for spreading purple loosestrife to other vulnerable shores.

Prognosis

Eradication of purple loosestrife is a long-term process. Monitoring and harvesting must continue around the Saint Regis Lakes chain for a number of reasons: Some plants and inconspicuous young are invariably overlooked during a harvesting effort. Also, plants that are clipped one year *may* re-grow the next, and if roots have been torn, even more plants can spring up from them. Another reason for continued monitoring is that purple loosestrife seeds can remain viable in the soil or underwater for years. Finally, plants that go unnoticed can seed other locations and compound the problem.

One obvious success of the lakes' Shore Owners' Association has been education on the purple loosestrife issue. Residents around the lakes chain have been receptive, cooperative, and even helpful to the Program's cause. The Watershed Stewards are able to perform more effectively and efficiently when residents are respectful of our conservation goals. We thank everyone on the Saint Regis Lakes chain for *their* stewardship!

Reference:

Swearingen, J. M. 1997. Purple loosestrife. U.S. National Park Service [Online]. 7/20/02. <http://www.nps.gov/plants/alien/facts/lysa1.htm>

Section 9: Upper Saranac Lake Purple Loosestrife Survey, 2002
Prepared by: Jeremy Riedl, Assistant Director

Background:

Because of the prevalence of Purple Loosestrife in area wetlands, the USLA (Upper Saranac Lake Association) requested that stewards do a shoreline survey of Upper Saranac Lake to confirm the presence and quantity of Purple Loosestrife on Upper Saranac Lake. Having spent two days identifying and removing purple loosestrife from the St. Regis chain of lakes with the Nature Conservancy, Mackenzie Hall and Jeremy Riedl headed up the project as the most experienced with the terrestrial invasive plant. Purple Loosestrife is a terrestrial invasive plant which favors wet and sunny conditions common to area wetlands and swamps. A single plant when flowering can produce up to two million seeds which makes the plant very abundant in wet soils.

Methods:

Both Stewards spent between four to six hours each in the association boat trolling the shoreline of the lake in search of purple loosestrife. A map was used to identify areas of potential occupation as well as for navigation. Purple loosestrife is a very distinct plant with a tall, tight, magenta/purple flowering head which is easily recognizable from a distance. Trolling the shoreline at a distance up to 100 feet therefore is sufficiently close to identify this invasive species.

Results:

Neither steward in their observations of the shoreline observed a flowering purple loosestrife plant. On occasion we did observe “look-alike” species such as blazing star, however they resemble loosestrife in looks only. One of the main reasons it is believed that Upper Saranac Lake has no purple loosestrife presence is the nature of the littoral zone. The Upper Saranac shoreline is for the most part very rocky and quickly emerges into forest and heavily shaded regions. In contrast with this, purple loosestrife prefers a larger, sunnier littoral zone such as exists in the St. Regis slough which is perfect for the germination and growth of this species.

Recommendations:

Regardless of the fact that no purple loosestrife has been found as of yet, it would be best to monitor the shoreline in subsequent years to prevent a community of these plants from establishing themselves. Stewards could easily monitor the shoreline every summer during the flowering season of the plant and if any loosestrife were sighted, removal could be facilitated by stewards as well. If yearly monitoring continues it is possible to keep purple loosestrife from establishing itself on Upper Saranac Lake.

Section 10: St. Regis Lakes Invasives Mapping Project, 2002
Prepared by: MacKenzie Hall, Watershed Steward

Introduction

Adirondack waters are valued fisheries, wildlife habitats, recreational hot spots, and scenic meccas. Exotic invasive species can compromise all of these assets. Non-native aquatic plants like Eurasian watermilfoil and European water chestnut have no natural predators in this region and can out-compete important native species for sunlight, nutrients, and space. Invasive populations can grow so densely that fish are crowded out and recreation becomes nearly impossible. When all of that added biomass decomposes, oxygen is depleted from the water to the detriment of aquatic life.

Exotic invasive species have been documented in numerous Adirondack waters. Eurasian watermilfoil is perhaps the most threatening because it has spread to so many water bodies already and is easily transported by boats to new lakes and ponds. Small fragments of the plant can cling to props or trailers then later re-root to start new colonies in new places.

On August 23, 2002, Watershed Steward MacKenzie Hall joined Hilary Oles of the Adirondack Park Invasive Species Program to investigate the invasive aquatic plant species status of Upper Saint Regis Lake and Spitfire Lake.

Methods

In a motorboat graciously provided by lake resident John Quenell, Hilary and MacKenzie scanned the perimeters of Upper Saint Regis and Spitfire Lakes – as well as the slough between Spitfire and Lower Saint Regis – for aquatic plant life. A rake was dragged along the lake bottom in areas of plant growth to sample the community. The plant material was inspected for Eurasian watermilfoil, the primary object of that invasive species investigation.

Results & Discussion

There was no evidence of Eurasian watermilfoil or any other exotic aquatic plant species in either Upper Saint Regis Lake or Spitfire. Native species that were found included bur-reed, large- and small-leaf pondweed, pipewort, bladderwort, pickerelweed,

hornwort, a few species of lilies, and a native milfoil.

Interestingly, some areas were found to host dense populations of native milfoil. One location is in the slough where inlet waters enter; another is west of the public boat launch on the south end of Upper Saint Regis Lake. Both sites are shallow and warm and border wetland areas. The inlet drains a wetland area, which could provide nutrients to support dense plant growth.

Whatever the explanation, both sites exemplify a native species having an invasive role. They also represent an opportunity for monitoring to determine whether the beds of native milfoil are growing and expanding or remaining stable. The consequences of an infestation are much the same as those of an invasive species infestation, including nutrient loading, decreased oxygen levels and impacts on aquatic organisms, crowding out fish, reduced biodiversity, restricted navigation and recreation, and degraded aesthetics. Continued monitoring is recommended for both exotic and native invasives.

The absence of exotic species on the Saint Regis Lakes chain* may be partly attributable to the boat wash station at the public landing, which was installed as a safeguard against foreign materials entering the water via boats. Public education at the launch has been provided by Stewards for three years, also helping to keep invasive species from entering the lakes chain. Furthermore, a great deal of visitor traffic to the lakes consists of canoeists and kayakers drawn by the Canoe Area. Canoes and kayaks are far less likely to transport foreign materials than are motorboats.

* Lower Saint Regis Lake was surveyed earlier in the summer of 2002 during a Watershed Stewardship Program training session and was also found to be free of exotic invasive aquatic plant species.

Section 11: St. Regis Lakes Loon Nest Monitoring Program, 2002
Prepared by: Amy Fleischut, Watershed Steward

Throughout the duration of the Watershed Stewardship Program, steward Amy Fleischut monitored loon nests on Upper St. Regis and Spitfire lakes. This project was in correlation with the Adirondack Cooperative Loon Program (ACLP). The ACLP is concerned with the status of the Common Loon (*Gavia immer*) in the Adirondack Park. Toxins such as mercury, lead and acid rain are some of the problems afflicting the birds within the Park, as well as all of North America. These toxins could potentially cause reproductive failures, as well as harm live, adult birds. Another problem the loons are faced with is human disturbance. Boaters coming too close to a loon nest could cause the incubating bird to slip off the nest and leave the eggs unattended. If the loon is repeatedly forced off the nest, the eggs will not stay warm enough to develop properly. In addition, motor boaters or personal watercraft coming too close to a nest can create a wake that may flood the nest, resulting in chilling of the eggs and failure of the eggs to hatch or nest abandonment.

Once a week, the steward would kayak on Upper St. Regis and Spitfire Lakes to check on the status of the loons. The steward was assigned to three nests; being responsible for weekly observations and data collection. Two nests were on Upper St. Regis, one near the boat launch bay and the other in Spring Bay. The third nest was on an island on Spitfire Lake.

Of the three pairs monitored, one did not show signs of reproduction. That was the territorial pair that lived near the boat launch bay. Each time the steward would paddle into their territory, they would quickly dive and disappear. Many weeks went by without seeing the loons at all. This pair did not nest until mid-July of 2001; by mid-July of 2002, there were still no signs of breeding behaviors. The loons were extremely territorial and private. Even when it was established that they were not nesting, they still disappeared out of sight when being observed.

The nesting pair on Spring Bay successfully brought two chicks into the world. From the first time of observation, one of the loons was sitting on the nest. Both the male and the female will sit on the nest. They share nesting responsibilities so that the adults

can fish for food, and so the eggs will stay warm. The two eggs that were laid hatched sometime in the week of June 19th to June 25th. Each week after that, the chicks were observed in Spring Bay. The week of August 22nd, the pair and the chicks were observed at the edges of their territory, indicating that the chicks were maturing and getting ready to fledge. The chicks were not seen the week of August 28th; up until that week, the chicks were looking healthy and strong.

The island pair on Spitfire Lake laid two eggs. Again, like in Spring Bay, from the first date of observation, one of the loons was sitting on the nest. One chick hatched during the week of June 25th and July 3rd; the other egg remained in the nest. Both adults were with the hatched chick. The steward was advised to wait and check the nest again in a week. The egg was pulled from the nest on July 11th. Loon chicks usually hatch within a few days of each other. An egg that has been on the nest for well over a week is not good. Once the egg was pulled it was sent to a lab for analysis.

The surviving chick on Spitfire Lake was developing normally throughout the rest of the observations. The weeks of August 22nd and August 28th, there were no sightings of loons, adults or chick, on the lake. It is possible that the adults left the chick along the shoreline and the steward did not notice. To the untrained eye, it is difficult to spot a brown, downy chick along the shoreline. This hopefully is what is happening with the two nest sites. If the Spitfire chick has perished, then the adults will move around more often. For both the Spring Bay and Spitfire chicks, if they have not been sighted in three or more observations, it is usually safe to say that they did not survive.

Sometime in the fall is the normal time for chicks to fly south for the first time. The steward plans to continue observations of the Upper St. Regis and Spitfire loons. Observations will stop when it has been determined that the chicks did not survive, or they have successfully fledged.

Lake Name: Spitfire
 DEC WIN #: 030264
 Observer: Amy Fleischut
 Territory: island

| Visit Information | | | | Weather Information | | | Loon Information | | | | | | | Band Information | | | | Nest Information | | | |
|-----------------------|---------|---------|------------------|-----------------------------|---------------------|-------|------------------|------------------|----------------------|------------------------|------------------|--------------|----------------|------------------|-------------|-------------------|--------------------|------------------|--------|-----------|-----------|
| Observation (visit) # | Date | Weekday | Observation Time | Weather | Beaufort Wind Scale | Water | Loons Obsvd | # Immature Loons | # Single Adult Loons | # Adult Loons in Group | Territorial Pair | Nesting Pair | Pair w/ Chicks | Legs Obsvd | Bands Obsvd | Loon #1: Left Leg | Loon #1: Right Leg | Original Nest | Renest | Nest Site | Nest Type |
| #1 | 6/11/02 | Y | 9:15-1:30 | Cloudy & Rainy 60 degrees | 3 | Swell | Y | | 3 | 2 | Y | Y | | N | N | | | Y | | Island | Scrape |
| #2 | 6/19/02 | Y | 8:30-11:00 | sunny clear 70 degrees | 2 | calm | Y | | | 2 | | Y | | N | N | | | Y | | Island | Scrape |
| #3 | 6/25/02 | Y | 9:15-12:45 | partially cloudy 60 degrees | 3 | calm | Y | | | | | Y | | N | N | | | Y | | Island | Scrape |

| Nest Site Information | | | | | | | | Nest Failure Information | | | | | Comments |
|-----------------------|--------|-----------|-----------|----------------|-------------------------|------------------|--------------------|--------------------------|------------------|------------------|-------------------------|--------------------------------|--|
| Original Nest | Renest | Nest Site | Nest Type | # Eggs in Nest | Actual Hatch Date/Range | # Chicks Hatched | # Chicks Surviving | Egg #1 Condition | Egg #2 Condition | Egg #3 Condition | Egg or Shell Collected? | Probable Cause of Nest Failure | |
| Y | | Island | Scrape | | | | | | | | | | female on nest. Male swimming around island. No bands observed. |
| Y | | Island | Scrape | | | | | | | | | | female on nest, didn't see band. Two loons in area, diving around nest, didn't see bands |
| Y | | Island | Scrape | | | | | | | | | | female still on nest, male patrolling area, no bands seen |

Figures 1 and 2- excerpts from Fleischut's data entry forms, which were sent to the Adirondack Cooperative Loon Program

Section 12: Lake Placid Bird Survey, 2002
Prepared by: Amy Fleischut, Watershed Steward

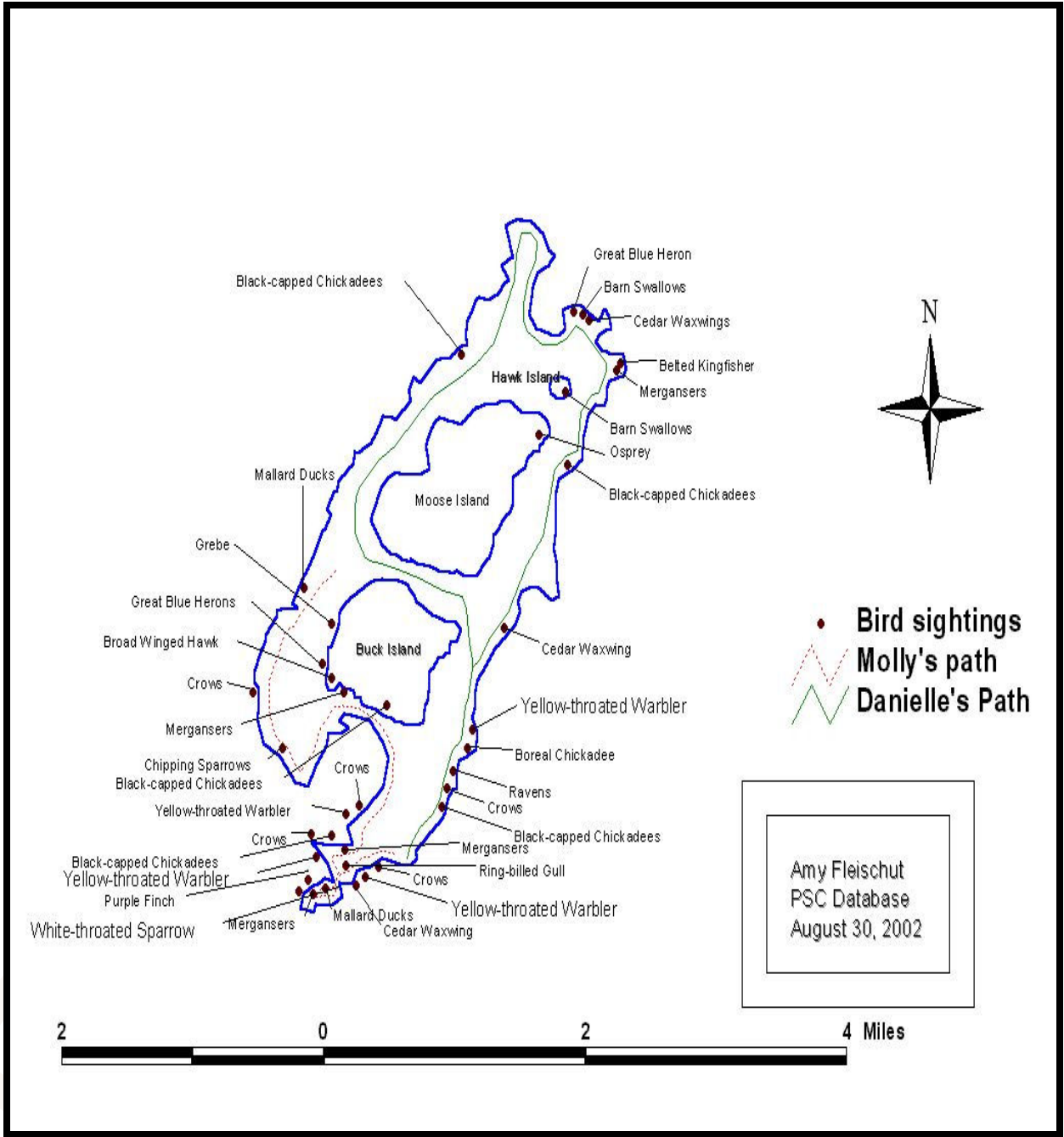
A bird survey was conducted on Lake Placid. The purpose of the survey was to observe bird species on the lake; this will give a general idea of the birds living on the lake, or in the immediate area. The information collected will be useful in the future for the creation of an interpretive brochure, as well as for preliminary data for future studies.

Two stewards divided the lake in half to conduct the survey. Danielle Davenport surveyed on July 31, 2002; she paddled in a kayak around the Eastern and Northern shores of the lake. Molly Shubert surveyed on August 7, 2002; she went around the Western and Southern shores of the lake in an outboard motor boat. The paths of the two stewards are shown on the attached map by two different lines; a solid line for Danielle and a dashed line for Molly. As each steward went around they recorded the species and the locations of where the birds were observed.

Below is a complete list of the species of birds observed on the two dates of the survey. The location of where the birds were seen is indicated on the attached map.

Bird Species Observed on Lake Placid, July 31 and August 7, 2002

| <u>Common Name</u> | <u>Scientific Name</u> |
|-------------------------|-------------------------------|
| Barn Swallow | <i>Hirundo rustica</i> |
| Belted Kingfisher | <i>Meaceryle alcyon</i> |
| Black-capped Chickadee | <i>Parus atricapilus</i> |
| Boreal Chickadee | <i>Parus hudsonicus</i> |
| Broad-winged Hawk | <i>Buteo platyperus</i> |
| Cedar Waxwing | <i>Bombycilla cedrorum</i> |
| Chipping Sparrow | <i>Spizella passerine</i> |
| Common Crow | <i>Corvus brachyrhychos</i> |
| Common Merganser | <i>Mergus merganser</i> |
| Great Blue Heron | <i>Ardea herodias</i> |
| Mallard Duck | <i>Anus platyrhynchos</i> |
| Northern Raven | <i>Corvus corax</i> |
| Osprey | <i>Pandion haliaetus</i> |
| Pied Billed Grebe | <i>Podilymbus podiceps</i> |
| Purple Finch | <i>Carpodacus purpureus</i> |
| Ring-Billed Gull | <i>Larus delawarensis</i> |
| White-throated Sparrow | <i>Zonotrichia albicollis</i> |
| Yellow-throated Warbler | <i>Dendroica dominica</i> |



Section 13: Upper St. Regis Lake Wetland Study, 2002
Prepared by: MacKenzie Hall, Watershed Steward

Introduction

Performing a species inventory is important for establishing data about community composition and biodiversity. This type of information can be used as a baseline for monitoring ecosystems over time, so that we may recognize changes in communities as they occur and perhaps correlate those changes with events in the surrounding environment.

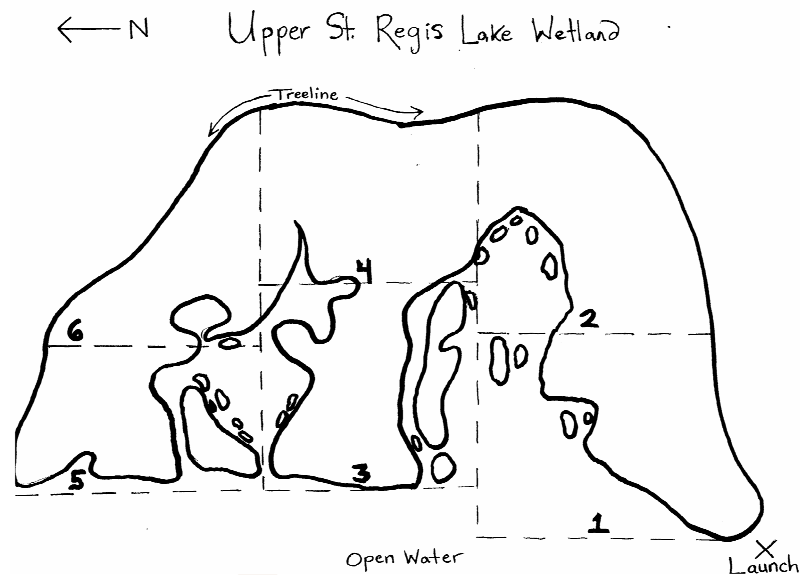
Monitoring wetlands is necessary because of their many values to wildlife and humans. Wetlands are prime habitat for various organisms. They feed and provide nesting grounds for migratory birds, filter surface waters, and moderate water levels in times of drought or flooding. Commercial products like cranberries, rice, fish, and peat are harvested from wetlands all over the world.

The wetland area that borders the public boat launch on Upper Saint Regis Lake is a diverse and active bog ecosystem. The objective of this study was to catalogue its species and their respective abundances within the community, perhaps to be referred to in the future for monitoring purposes.

Methods

Because vegetation types change noticeably across the wetland, the area was divided into six plots (as there were six Stewards to involve in the study). Three 3' x 3' random sample areas (labeled 'A,' 'B,' and 'C') were observed within each Steward's plot. A list of plant species was produced for each sample area, including an approximate percent cover value for each. Because birds, amphibians, insects, fish, and other critters are mobile, any fauna sightings within the wetland area were recorded, regardless of their exact location at the time.

A bird-watching outing and bog tour with Visitors Interpretive Center naturalist Brian McAllister and a wetland plant identification session with Paul Smith's College professor Celia Evans helped to build the Stewards' familiarity with wetland species. Wildflower and wetland plant guides also served as references for the study.



Results & Discussion

As is expected of a bog ecosystem, the wetland groundcover was found to be primarily sphagnum moss. In a bog, sphagnum is the ground itself and the substrate from which all other plants emerge. Only two of our eighteen sample areas are not dominated by the moss; they are more grown in with grasses and sedges.

The data sheets suggest that the insectivorous pitcher plant is scattered sparsely but evenly across the wetland. It shows up in about one-third of the sample areas and, overall, averages less than 5% of the ground cover. Sundews show a similar pattern.

Small cranberry is present throughout the wetland also, but his species seems to be more abundant on the south end of the bog (the end nearest the boat launch). Perhaps this is because taller vegetation like cattails, tall grasses, and trees are less dense on that end, allowing the ground-creeping cranberry plants to compete for sunlight and space.

Other plant species recorded in the wetland included leatherleaf, sweet gale, bog rosemary, marsh cinquefoil, Labrador tea (whose leaves *can* be boiled to make tea), bog laurel, cotton grass, tamarack, white pine, and common arrowhead and pickerelweed – two emergent plants found along the perimeter of the bog mat.

Several bird species were noticed in the wetland area. Great blue herons were common sights, and their relative, the American bittern, showed up on one data sheet. The cedar waxwing, wood duck, swamp sparrow, robin, hummingbird, red-winged blackbird, American goldfinch, grosbeak, white-throated sparrow, and raven were also

sighted in or in the vicinity of the wetland.

A bullfrog and garter snake made appearances for one Steward. Everyone recorded insects like crickets and grasshoppers, damselflies, dragonflies, deerflies, bumble bees, caterpillars, ants, moths, and a number of arachnid species.

The vegetation inventory was the most important part of this study (and the easiest, since plants can be approached and prodded). Vegetation is one of the most fundamental determinants of which fauna species will be found in an ecosystem. Certain insects, birds, mammals, and other organisms would not be present without the plants that they depend on for food, shelter, nesting, and so on. This being true, the wetland's floral composition can be used to infer which types of critters should be found there.

Because the inventory was performed in August, certain plants were more mature and easy to identify than they would have been earlier in the season. However, other species – like the orchids grass pink, rose pogonia, and blue flag – were past their peaks and didn't show up in the samples, even though they were spotted throughout the wetland early in the summer. A more complete species record could be produced by sampling at different times, from spring to fall.

Random sampling also risks missing less common plants. This is a risk that must be afforded, since covering the entire area would be extremely time-intensive and potentially harmful to the bog ecosystem.

Section 14: St. Regis Lakes Water Chemistry Study, 2002
Prepared by: Justin Levine, Watershed Steward

Introduction

Water quality monitoring in the St. Regis Lakes chain was continued during the 2002 Watershed Stewardship Program. This summer's findings may serve to supplement the data gathered by CSLAP, as well as independent researchers, and the previous findings of the Watershed Stewardship Program.

Methods/Constraints

Testing was completed in five parameters (pH, conductivity, dissolved oxygen, temperature, and transparency) described in the 2000 Water Chemistry Study report. There may have been certain deviations from the past two years due to technical and time constraints.

The same eleven sites were tested three times this year. We were able to avoid the pitfalls of last year by testing in the Deep Hole. However, the pH meter on the digital water tester was malfunctioning for the duration of the summer, and therefore, pH readings are not accurate. These measurements have been included in this report because while the actual readings may not be accurate, they may show a correlation between sites.

The testing did occur three times as planned, but due to boat malfunctions, the dates are not the originally planned dates.

Results/Discussion

Testing on the St. Regis chain was completed on three days (June 23rd, July 29th, and August 22nd) as opposed to two days last year. The first two testing days occurred after heavy rains, and this was believed to be the cause for the low pH. However, after a long drought, testing was again completed, and the tester showed very low pHs. This is what caused us to believe the digital tester was malfunctioning. Other than this, weather was rather mundane and caused no other problems in the testing. Due to a longer anchor rope, testing was completed in the Deep Hole, and allowed us to test on windy days with little interference from the wind.

Like last year, all results have been put into a spread sheet and included in the index section.

Conclusion

Due to equipment malfunctions, and the drought, this year's findings seem to hold no real pattern. They do seem to suggest that the lakes have taken neither a swing for the worse nor the better. In order to prove this decisively, though, testing needs to be completed in more parameters than we are capable of doing. This is not to say that this testing cannot be used for constructive purposes, but a more rounded testing schedule would certainly help.

Definitions

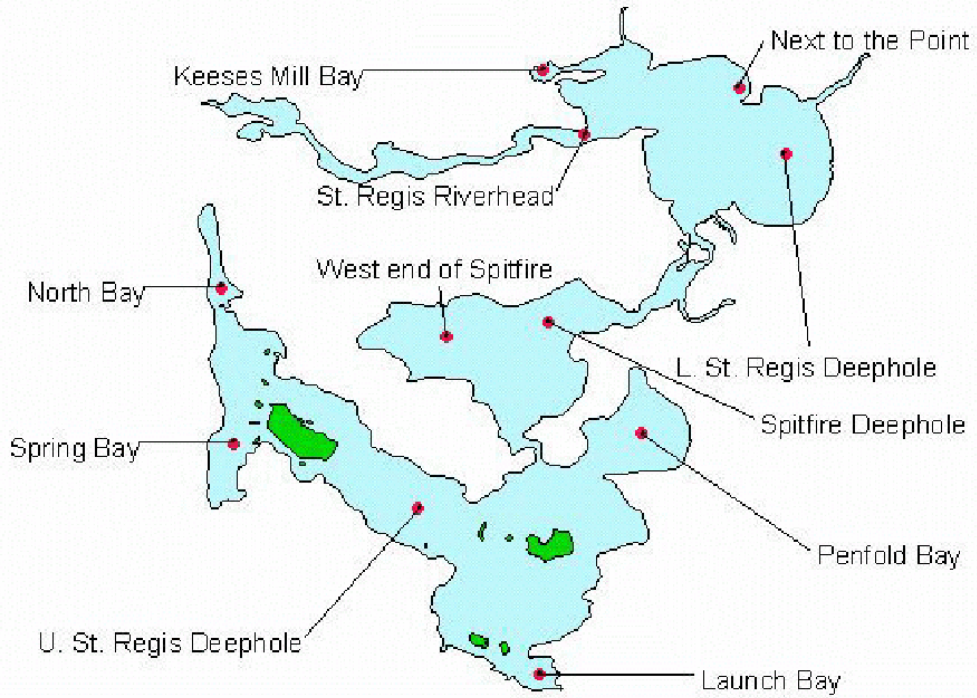
pH This parameter tests acidity or baseness of water. This has effects on all plant and animal communities in the lake.

Conductivity Ability of water to conduct an electric current. Higher conductivity values indicate pollution from either natural or human inputs.

Dissolved O₂ The oxygen content of lakes, with the oxygen coming from the atmosphere and photosynthesis processes. Oxygen plays a major role in overall lake health.

Transparency Measurement of water clarity based on how far light reaches into the water. This is obtained by a simple secchi disk reading and is a major indicator of the lakes= trophic state.

Water Chemistry Testing Locations



WATER QUALITY STUDY

Watershed Stewardship Program--2002

For 2002, water quality testing was performed at ten sites; the Upper St. Regis Deephole (the eleventh site from 2000) was eliminated this year. Four of the sites are situated on Upper St. Regis Lake, two are located on Spitfire Lake, and four can be found on Lower St. Regis Lake. There are two data sets for each site because monitoring was done twice this season (our third planned field visit did not happen).

Site Name Abbreviations

BLB=Boat Launch Bay (in front of the Upper St. Regis landing)

PB=Penfold Bay

NB=North Bay

SB=Spring Bay

WSS=West Side Spitfire

ESS=East Side Spitfire

LSRD=Lower St. Regis Deephole

SRRM=St. Regis River Mouth

KB=Keesemill Bog

TP=The Point (in front of college bookstore building)

Key to Data Table Abbreviations

m=meters

T.A.=time arrived at the study site

T.D.=total depth for the study site

Cond=conductivity (ms/cm)

Temp=temperature (°C)

D.O.=dissolved oxygen (mg/L)

BOAT LAUNCH BAY

Location Description: ~75 yards off the last dock at the Upper St. Regis landing

Date: 6/23/02
 Weather: sur sunny, windy, 75-85
 T.A.=10:30am
 T.D.=2.9m
 Transparency=2.06m; yellow green

| pH | Cond | D.O. | Temp | |
|-----|-------|-------|------|---------|
| 2.7 | 0.068 | 10.18 | 19.1 | surface |
| | | 10 | 18.6 | 0.5 |
| | | 10 | 17.9 | 1 |
| | | 10 | 17.4 | 1.5 |
| 2.7 | 0.064 | 10 | 17.6 | 2 |

Date: 7/29/02
 Weather: sunny, mild wind, 65°F
 T.A.=1:30pm
 T.D.=2.9m
 Transparency=2.9m; forest green

| pH | Cond | D.O. | Temp | |
|-----|-------|------|------|---------|
| 1.2 | 0.06 | 8.59 | 23.3 | surface |
| | | 8.4 | 23 | 0.5 |
| | | 8.2 | 23 | 1 |
| | | 8.2 | 22.8 | 1.5 |
| 1.3 | 0.054 | 8.31 | 22.1 | 2 |

PENFOLD BAY

Location Description: approximate center of this bay where
 Camp Regis Applejack, Camp Pine Tree Pt, etc., are found

Date: 6/23/02
 Weather: sunny, breezy, 7C zy, 75-85
 T.A.=10:30am
 T.D.=4.4m
 Transparency=2.65m; dark green

| pH | Cond | D.O. | Temp | |
|------|-------|-------|------|---------|
| 2.47 | 0.051 | 10.18 | 18.4 | surface |
| | | 10.18 | 18 | 0.5 |
| | | 10.18 | 18 | 1 |
| | | 10.16 | 18 | 1.5 |
| | | 10.15 | 16.5 | 2 |
| | | 10.17 | 16 | 3 |
| 2.46 | 0.05 | 10 | 15.5 | 3.5 |

Date: 7/13/01
 Weather: sunny, mild wind, 65°F
 T.A.=1:30pm
 T.D.=4.4m
 Transparency=3.25; light green

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 1.69 | 0.059 | 8.59 | 23 | surface |
| | | 8.4 | 22.9 | 0.5 |
| | | 8.1 | 23.1 | 1 |
| | | 8.3 | 22.4 | 1.5 |
| | | 8.1 | 22.5 | 2 |
| | | 7.9 | 21.9 | 3 |
| 1.69 | 0.06 | 8 | 22 | 3.5 |

NORTH BAY

Location Description: 50 yards past the danger bouy/rock island centered in the wide area before the bay starts to taper

Date: 6/23/02
 Weather: sunny, breezy, 70-75°F
 T.A.=10:30am
 T.D.=2.8m
 Transparency=2.653m; dark green

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 2.34 | 0.051 | 9.73 | 18 | surface |
| | | 9.71 | 18 | 0.5 |
| | | 9.7 | 17.6 | 1 |
| | | 9.7 | 16.5 | 1.5 |
| 2.33 | 0.05 | 9.71 | 16 | 2 |

Date: 7/29/02
 Weather: sunny, windy, 65°F
 T.A.=1:45pm
 T.D.=2.5m
 Transparency=2.9m; dark green

| pH | Cond | D.O. | Temp | |
|------|------|------|------|---------|
| 1.19 | 0.07 | 7.95 | 22.1 | surface |
| | | 7.9 | 22 | 0.5 |
| | | 8.4 | 20.1 | 1 |
| | | 7.9 | 20.4 | 1.5 |
| 1.2 | 0.07 | 8.1 | 19.1 | 2 |

SPRING BAY

Location Description: ~200 yards before the end of the bay, centered l east and west side shorelines, lined up with only camp

Date: 6/23/02
 Weather: sunny, breezy, 70-75°F
 T.A.=10:30am
 T.D.=9.2m
 Transparency=2.95m; yellowish green

| pH | Cond | D.O. | Temp | |
|------|-------|-------|------|---------|
| 2.55 | 0.044 | 10.11 | 19.7 | surface |
| | | 10.11 | 18 | 0.5 |
| | | 10.1 | 18 | 1 |
| | | 10 | 17.5 | 1.5 |
| | | 10.01 | 17 | 2 |
| | | 9.98 | 16 | 3 |
| | | 9.87 | 13.5 | 4 |
| | | 10.01 | 9 | 5 |
| | | 10 | 7 | 6 |
| | | 10 | 7 | 7 |
| 2.45 | 0.043 | 10.12 | 7 | 8 |

Date: 7/29/02
 Weather: sunny, windy, 65°F
 T.A.=1:45pm
 T.D.=9.5m
 Transparency=2.8m; black green

| pH | Cond | D.O. | Temp | |
|------|------|------|------|---------|
| 1.32 | 0.07 | 9.04 | 21.9 | surface |
| | | 8.4 | 19.3 | 0.5 |
| | | 8.6 | 19.2 | 1 |
| | | 8.8 | 19.1 | 1.5 |
| | | 8.6 | 19 | 2 |
| | | 8.7 | 18.9 | 3 |
| | | 8.6 | 18.1 | 4 |
| | | 11.2 | 12.3 | 5 |
| | | 7.7 | 8.9 | 6 |
| | | 0.4 | 7.5 | 7 |
| 1.3 | 0.07 | 0 | 6.9 | 8 |

WEST SIDE SPITFIRE

Location Description: west end of lake equidistance within triangle formed by biggest island and two camps

Date: 6/23/02

Weather: sunny, breezy, 70-75°F

T.A.=10:30am

T.D.=7.1m

Transparency=2.95m; dark green

| pH | Cond | D.O. | Temp | |
|------|-------|-------|------|---------|
| 2.33 | 0.044 | 10.44 | 18 | surface |
| | | 10.42 | 17 | 0.5 |
| | | 10.43 | 17 | 1 |
| | | 10 | 16 | 1.5 |
| | | 10.2 | 16 | 2 |
| | | 10 | 15.5 | 3 |
| | | 10.21 | 14 | 4 |
| | | 10.4 | 13 | 5 |
| 2.34 | 0.044 | 10.41 | 12 | 6 |

Date: 7/29/02

Weather: sunny, mild wind, 65°F

T.A.=1:30pm

T.D.=7.0m

Transparency=3.58m; green

| pH | Cond | D.O. | Temp | |
|-----|------|------|------|---------|
| 1.9 | 0.06 | 8.74 | 22.9 | surface |
| | | 8.2 | 21.8 | 0.5 |
| | | 8 | 21.4 | 1 |
| | | 8.43 | 21.8 | 1.5 |
| | | 8.2 | 22 | 2 |
| | | 8.3 | 19 | 3 |
| | | 7.5 | 18.8 | 4 |
| | | 6.7 | 17.7 | 5 |
| 2 | 0.06 | 1 | 14.5 | 6 |

EAST SIDE SPITFIRE

Location Description: east end of lake close to the slough entrance; off the danger buoy corner before Wind Rush camp

Date: 6/23/02

Weather: sunny, breezy, 70-75°F

T.A.=10:30am

T.D.=8m

Transparency=3.1m; lime green

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 2.54 | 0.054 | 9.58 | 20.9 | surface |
| | | 9.58 | 20.1 | 0.5 |
| | | 9.56 | 19.4 | 1 |
| | | 9.56 | 18.7 | 1.5 |
| | | 9.51 | 17 | 2 |
| | | 9.54 | 16 | 3 |
| | | 9.58 | 16 | 4 |
| | | 9.45 | 15 | 5 |
| | | 9.42 | 15 | 6 |
| 2.54 | 0.054 | 9.57 | 12 | 7 |

Date: 7/29/02

Weather: sunny, mild wind, 65°F

T.A.=1:30pm

T.D.=8m

Transparency=3.15m; very dark green

| pH | Cond | D.O. | Temp | |
|------|-------|------|-------|---------|
| 1.58 | 0.041 | 8.77 | 23.3 | surface |
| | | 8.4 | 22.4 | 0.5 |
| | | 8.5 | 22.89 | 1 |
| | | 8.4 | 21.5 | 1.5 |
| | | 8.3 | 21.9 | 2 |
| | | 8.4 | 21.4 | 3 |
| | | 8.3 | 20.6 | 4 |
| | | 8.3 | 20.7 | 5 |
| | | 7.9 | 20.1 | 6 |
| 1.58 | 0.045 | 5.5 | 18.9 | 7 |

ST REGIS RIVER MOUTH

Location Description: one tenth of a mile into river headwaters at the first bend (a left hand 90 degree turn)

Date: 6/23/02
 Weather: sunny, breezy, 70-75°F
 T.A.=10:30am
 T.D.=1.9m
 Transparency=2.3m; reddish brown

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 2.37 | 0.067 | 8.01 | 20.6 | surface |
| | | 8.01 | 19.4 | 0.5 |
| 2.37 | 0.066 | 8 | 19.1 | 1 |

Date: 7/29/02
 Weather: sunny, mild wind, 65°F
 T.A.=1:30pm
 T.D.=1.8m
 Transparency=1.45m; dark reddish-brown

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 2.25 | 0.07 | 4.92 | 21.4 | surface |
| | | 4.9 | 21 | 0.5 |
| 2.24 | 0.071 | 4.8 | 20.1 | 1 |

KEESEMILL BOG

Location Description: northwest corner of the lake (connected by narrow channel); beside Keesesmill Rd embankment

Date: 6/23/02
 Weather: sunny, breezy, 70-75°F
 T.A.=10:30am
 T.D.=2.9m
 Transparency=1.85m; dark brown

| pH | Cond | D.O. | Temp | |
|------|-------|------|------|---------|
| 2.67 | 0.067 | 8.91 | 22.1 | surface |
| | | 8.91 | 22.1 | 0.5 |
| | | 8.7 | 22 | 1 |
| | | 8.84 | 21.4 | 1.5 |
| 2.67 | 0.05 | 8.87 | 21.1 | 2 |

Date: 7/29/02
 Weather: sunny, mild wind, 65°F
 T.A.=1:30pm
 T.D.=2.8m
 Transparency=1.1m; dark brownish-red

| pH | Cond | D.O. | Temp | |
|-----|-------|------|------|---------|
| 2.1 | 0.059 | 4.32 | 20.9 | surface |
| | | 4.12 | 20.1 | 0.5 |
| | | 4.1 | 18.3 | 1 |
| | | 2.6 | 17.3 | 1.5 |
| 2.1 | 0.062 | 2 | 15 | 2 |

Section 15: Upper Saranac Lake Shoreline Study/GIS Project, 2002
Prepared by: Eric Holmlund, WSP Director

Summary: In the summer of 2001, the Watershed Stewardship Program initiated a project at the request of Curt Stiles of the Upper Saranac Lake Foundation with the following objective: to obtain a current perspective on the status of shoreline development on that lake. In 2001, Jeremy Riedl, a Watershed Steward, took a preliminary videotape of the entire shoreline of Upper Saranac Lake. We decided to take the project another step forward for the summer of 2002. We returned to Upper Saranac Lake and took digital images of the developed shoreline and integrated them into a multi-layer Geographic Information Systems (GIS) project using Paul Smith's College ArcView software.

Project goals:

1. to assess the current state of shoreline development on Upper Saranac Lake as a baseline for future comparisons
2. to make detailed information relevant to the natural character of Upper Saranac Lake available to the public

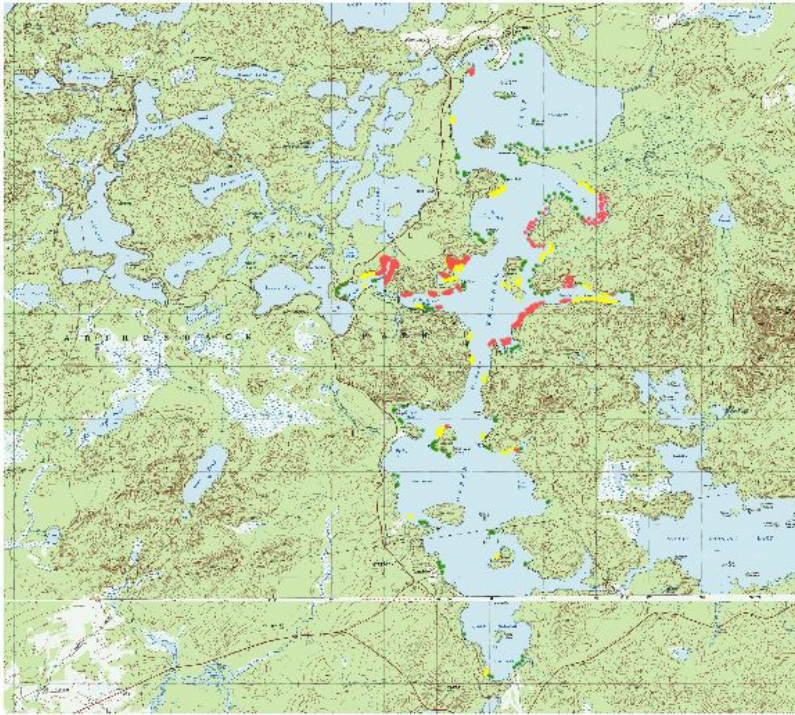
GIS Project features: Our map project, still a work in progress, contains the following information

1. topographic map of Upper Saranac Lake and surroundings
2. planimetric map of Upper Saranac Lake and surroundings (roads, structures)
3. orthographic map of USL and surroundings (aerial photographs)
4. Adirondack Park Land Use Classification map for the area
5. Franklin County tax roll information (owner of lots, structures)
6. 2002 Eurasian milfoil presence on USL
7. digital image library for privately owned shoreline, including camps, boathouses and undeveloped shoreline in private ownership

Accessing the project: Interested people may view the project by contacting Eric

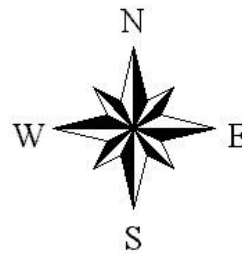
Holmlund. In short, the GIS project resides on a networked server (the P-drive) at Paul Smith's College and can be accessed in the Joan Weill Adirondack Library. Also, important images from the project are being converted to postable jpegs (graphic images) and posted on the program webpage, which can be reached from the college webpage. Sample maps are reproduced below.

Upper Saranac Lake Eurasian Watermilfoil July, 2002



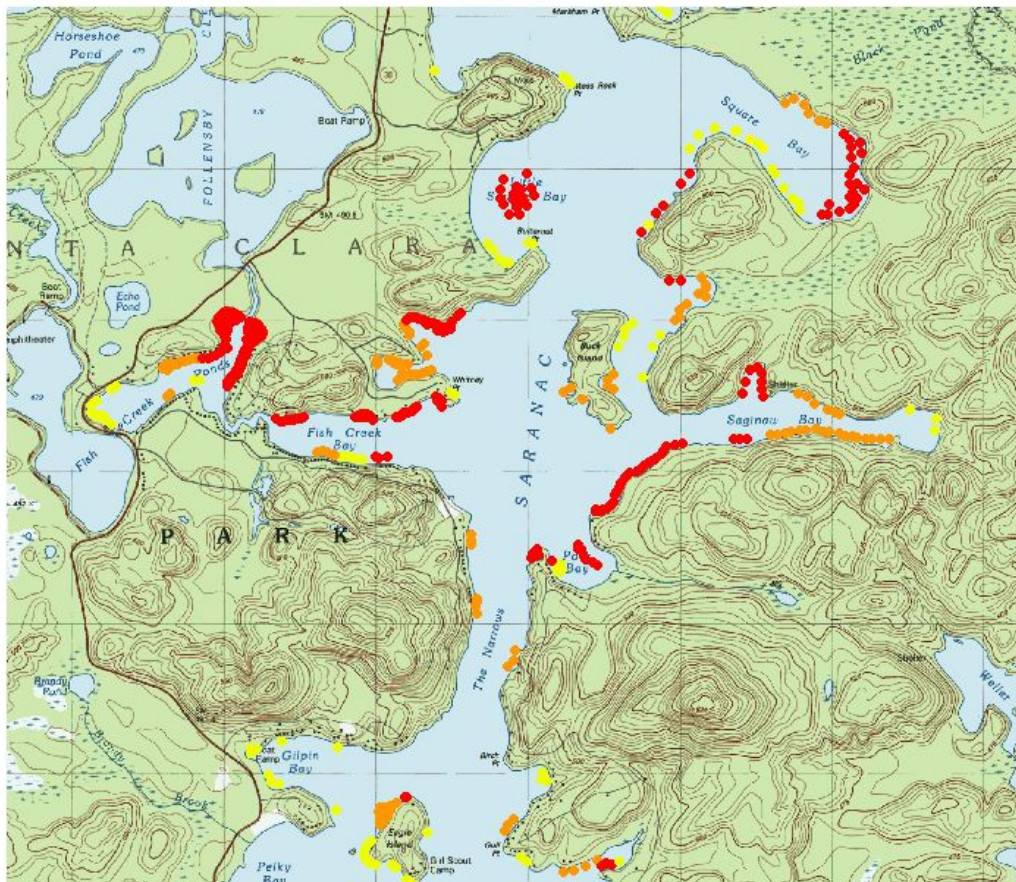
Eurasian milfoil map- July '02

- low density
- moderate density
- high density



Adirondack Watershed Institute
Paul Smith's College

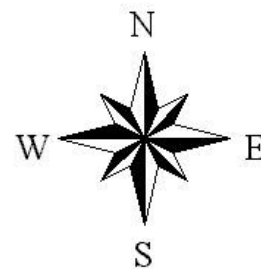
Eurasian Watermilfoil Presence Upper Saranac Lake- center region July, 2002



Eurasian milfoil map- July '02

- low intensity
- moderate intensity
- high intensity

Adirondack Watershed Institute
Paul Smith's College



Section 16: Lake Placid Clean-up Day, 2002
Prepared by: MacKenzie Hall, Watershed Steward



Introduction

On August 14, volunteers from Lake Placid joined Watershed Steward MacKenzie Hall for Lake Placid Lake Clean-Up Day. The activity was designed to benefit the lake aesthetically, but it also encouraged the lake community to take personal care of their waters. Two adults and eight children – representing both seasonal and year-round lake residents – donated time in active stewardship of their watershed.

Methods

The group piled into a couple of sturdy little Boston Whalers and, armed with garbage bags and work gloves, patrolled the shoreline for litter. They visited a number of predetermined “hot spots” as well, including the dam at Lake Placid’s outlet, nature trails, camp sites, and picnic areas.

With eleven pairs of eyes and arms, the volunteers could cover a lot of ground and collect a lot of junk. All of the trash was taken to the Lake Placid transfer station following clean-up.



Results & Discussion

The crew's first stop was the dam. In lieu of the usual Dam Clean-Up Day that was not organized this year, the volunteers had a couple of extra tasks here: in addition to collecting trash, they removed washed-up branches from the area and moved stones that were restricting water flow (an observer hinted that some people place stones around the outlet to enjoy a makeshift Jacuzzi!). The volunteers were heartened to find very little garbage in the dam area; there was some scrap lumber from construction projects but not much else.

The nature trails near the dam were in good order, but a walk through the forest revealed a network of abandoned party spots with enough beer bottles, cans, and food wrappers to fill two 30-gallon garbage bags.

Following the forest extravaganza, the group divided up to hit camp sites and picnic spots around the lake. They restructured fire pits, collected ashes, and picked up what little trash was to be found around each.

Just buzzing the shoreline produced the day's biggest finds. On the south end of Moose Island were a few foam blocks the size of small people. They probably once served as floatation materials at the marina, half a lake away. Another huge block of

foam was picked up near Barrel Bay on Lake Placid's north end.

The overall feeling was that construction-type debris made up the bulk of what was removed from Lake Placid that day...aside from those relics of parties long gone.

Thanks to all of the Lake Placid Lake Clean-Up Day volunteers for their commitment to stewardship on Lake Placid!

DRAFT

Section 17: Campsite Maintenance Report, 2002

Prepared by: Justin Levine, Watershed Steward

As part of the Stewardship program stewards spent four days assessing and cleaning the state campsites on both Upper Saranac Lake and Lower St. Regis Lake. The purpose of this assignment is not only to present a cleaner more enjoyable atmosphere to users of the campsites but also to assess what kind of use or abuse the campsites are receiving.

Typically stewards embark on a boat armed with shovels for cleaning out fire-pits, garbage bags for picking up refuse, and rakes for groundcover maintenance. Stewards also record the condition of outhouse facilities at these sites based on their physical condition and amount of use.

This season all campsites on Upper Saranac Lake were visited and cleaned by stewards on the following dates: 6/16, 6/21, and 6/22. June is typically the ideal month to visit and clean sites as the majority of tourist and camper population is not yet in residence. One site could not be found. One site at the southern end of the lake was unidentifiable from the water or unapproachable by land and so was not visited. It is likely that it gets little or no traffic considering its relative obscurity. As per last year's cleaning, the sites at Buck Island and Green Island exhibited the most use, while those at the south end of the lake and in Saginaw Bay exhibited less traffic. It is difficult to ascertain exactly how much use these sites receive as compliance with registration is minimal both at the Back Bay state launch and at other access points on the lake and beyond. However what was generally typical of these sites was little groundcover or flora in the immediate and surrounding campsite vicinity, some garbage left behind both in the fire-pit and in surrounding area as well as visible shoreline deterioration at main access points. In fact it is rare to have an open spot on Buck Island or Green Island for long during July and August. Most sites also exhibited signs of small tree cutting by campers for wood fires. In fact I observed a group of nine returning from Buck Island with a chainsaw. The relative lack of deadwood for fires is the most likely cause and the tree cutting will only be remedied by a long term closure of campsites by the state in order for re-growth to occur. Otherwise it is expected that the tree cutting will continue and may become indiscriminate to tree size or location. Outhouses were typically in decent shape although a couple require maintenance to reattach doors.

Section 18: Educational Outreach Program Report, 2002

Prepared by: Justin Levine, Watershed Steward

The Watershed Stewardship Program held three programs this year. The programs were designed for younger participants as fun and educational opportunities for kids to be outside and learn about the environment. All of this year's programs were open to all ages.

There were only three programs offered this summer, as opposed to weekly programs last summer. Also, last summer the programs were listed in one press release at the beginning of the summer. This year, we put out press releases for each program. It is highly recommended that one press release be issued at the beginning of the summer. Last year had a much higher turn out for these programs than we did this year. It is also recommended that there be more forceful insistence on the part of the stewards that the press releases be released on time and to as many outlets as possible, such as the Enterprise, Lake Placid News, North Country Public Radio, etc.

This summer we used one newly designed program and two that were designed last year by Steward Cherise Bailey. This year's programs received zero turnout, which was a great disappointment, but allowed us to learn what the best way to publicize these events is.

Dates and Times of Educational Programs for Summer, 2002

- Friday, July 19: Canoeing a Wetland, 9 am to 12 pm, ages 10 and up, PSC Campus, State Canoe Launch.
Will cover canoeing basics, canoe emergency procedures, a short paddle to a wetland to do wetland ecology, ornithology, and botany.
- Tuesday, July 30: It's All in the Leaves, 1:00 - 3:00 pm, all ages, Lake Placid State Boat Launch.
Kids will learn basic dendrology, and then use that knoweldge for non-harmful arts and crafts.
- Friday, August 9: The Ones that Got Away, 1:00 - 3:00 pm, Lake Flower State Boat Launch. This program focuses on invasive plants, identification of said plants, and the negative impacts these invasives have on our ecosystem.

Appendix: Program Write-up Forms

Name of Program: Canoeing a Wetland

Outcomes/Realizations: Safe canoeing and wetland knowledge

Audience: 10 and up

Length: Three hours

Location: PSC canoe launch, Lower St. Regis Outlet wetland

Activity Descriptions:

1. Intro and explanation
2. Canoe safety (i.e.: life jackets, t-rescues, simultaneous boarding, etc.)
3. Canoe basics (i.e.: strokes, canoe terminology, etc.)
4. Canoe to wetland
5. Ornithology
6. Botany
7. Ecology

Prep: secure canoes, paddles, life vests, binoculars, etc.

Prep time: 1 hour

Materials: botany book, binoculars, etc.

Designed: Justin on 6/02/02

Program Write-up Form

Name: It's All in the Leaves

Outcomes/realizations: Identification of trees and non-harmful use of leaves and twigs
in arts and crafts

Audience: all ages

Length: two hours

Location: Lake Placid State Boat Launch

Activity Descriptions:

1. Intro and name tags
2. Tell about plant survey, ID before adding to list
3. Hand out Paper and crayons
4. Do bark rubbings and look at the leaves - ID trees
5. Mock survey in small area
6. Back to classroom/launch site
7. Add leaf rubbings to sheet with bark rubbings
8. Bind together
9. Use rubbings to make to make pictures and postcards

Prep: copy leaf ID, gather materials, label two sets of trees, tape off test area

Prep time: 2 hrs

Materials: scissors, paper, glue, clipboards, tags for trees, surveyors tape

Designed: Cherise on 6/5/01

Program Write-up Form

Name of Program: The Ones that Got Away

Outcomes/Realizations: To understand what invasive means and how these plants can be a danger to our ecosystem.

Audience: All ages

Length of activity: two hours

Location: Lake Flower Boat Launch

Activity Description:

1. Intro and nametags
2. What is an invasive plant
3. Ask if they know any examples
4. Show pictures and examples of invasives
5. Evasive bugs/animals
6. Game (See Final Reports 2001)
7. What can we do about the problem
8. Look for said plants/animals

Prep: get material, check site

Prep time: 1 ½ hours

Materials: plants, pictures

Designed: Cherise 6/6/01

Section 19: Forest Preserve Article

Prepared by: Eric Holmlund, Director

Background: I was asked by Ken Rimany of the Association for the Protection of the Adirondacks to author an article on the Watershed Stewardship Program for the Association's Journal, Forest Preserve. It will be featured in the Fall, 2002 issue. My submission is below. It is not necessarily the version that will be printed, which will be subject to the editor's discretion.

(article for the Association for the Protection of the Adirondacks' journal, *Forest Preserve*, Fall, 2002 issue)

From Loons to Loosestrife

Paul Smith's College's Watershed Stewardship Program Features Young People as Advocates and Interpreters of Local Adirondack Landscapes

By Eric Holmlund, Director of the Watershed Stewardship Program and Assistant Professor, Paul Smith's College

Water drips audibly from the blade of Watershed Steward Amy Fleischut's paddle as she floats near a family of loons on Upper St. Regis Lake in the northern Adirondacks. She sits in a kayak, silently observing the behavior of the loon and two chicks, waiting to see the telltale colored band around the loon's lower leg. She records her observations in her field book and paddles her kayak over to the nest site, a grassy nook at the water's edge, to look for shell fragments. She reports her observations weekly to Dr. Nina Schoch of the Adirondack Cooperative Loon Program, which partners with the Watershed Stewardship Program (WSP) of Paul Smith's College—Amy's employer for the summer.

Other days, Amy's work as a watershed steward takes her to the public boat launches of Upper St. Regis Lake, Upper Saranac Lake, or Lake Placid, where she delivers an interpretive message to boaters about the threat of invasive plant species, recreational opportunities and regulations, information about flora and fauna, or any question you can imagine. She has answers to a surprising number of these questions.

Amy, a senior in Paul Smith's College's Natural Resources Management and Policy program, also gathers information about the character and scope of the recreational use of lakes in the WSP, which is used by New York State Department of Environmental Conservation (DEC) unit management planners. In addition to being posted at public boat launches, Amy and five other watershed stewards choose environmental projects for the summer. In 2002, these projects include monitoring water quality, mapping purple loosestrife and Eurasian watermilfoil, studying shoreline development, delivering educational programs, cleaning up public campsites and developing interpretive brochures. What an impressive mixture of duties!

The Grass Roots of Stewardship

Just what is this innovative and multifaceted program, and how did it come to be? What brings six college students into daily contact with thousands of recreators in the name of watershed health?

The Watershed Stewardship Program began as a brainchild of former Paul Smith's College Vice President and Professor Jim Gould, along with a small group of collaborators in 1999. The general concept is to provide holistic attention in the form of education, service and research to local waterways and landscapes in an intensive, interdisciplinary manner. The concept of stewardship is appropriate, since the original stewards of the Middle Ages did not necessarily own land and holdings, but kept them in good stead for the future while their kings were away. Likewise, the scope of the WSP encompasses not only private but public spans of mountains, forests, lakes and streams in local watershed units.

The vision for the Watershed Stewardship Program is for college watershed stewards to become localized, grass-roots advocates and activists for environmental awareness and ecosystem integrity, especially in their roles as educators stationed in locations where public contact is likely. I use the term "grass-roots" because the watershed stewards' mandate is to learn about local ecosystem conditions and issues and then make connections to regional and national trends, thus keeping the focus on this lake, this mountain, this bog. Such focus provides relevance and immediacy to the stewards' message to the public about ecosystem conservation, recreational impacts, wildlife and invasive species.

Clearly, the concept of stewardship is not a new one for the Adirondack Park. The WSP was partly inspired by the Summit Steward program jointly offered by the Nature Conservancy, the Adirondack Mountain Club and the DEC. This highly successful program places summit stewards on fragile summits of the highest High Peaks in an effort to preserve delicate alpine vegetation and soil. Paul Smith's College's stewardship program took the educational aspect of the Summit Steward program, added recreation research, ecosystem monitoring and invasive species control, and created a multi-element program that meets a wide variety of local needs.

The WSP works closely with New York State agencies, principally the Department of Environmental Conservation and Adirondack Park Agency, in order to coordinate activities and to deliver a message that meshes with state management priorities for public lands. As such, the program is a DEC "Adopt a Natural Resource" volunteer program. Watershed stewards gather information useful to the unit management planning process, specifically collaborating with Steve Guglielmi, a forester and planner in the Region 5 office in Ray Brook, New York.

The WSP began servicing the St. Regis Lakes chain and St. Regis Mountain in the

summer of 2000 with great success. The property owners' association of the St. Regis Lakes emerged as a source of support and collaboration in the early stages of program development and remains a stalwart partner. Word of the program spread to Upper Saranac Lake's association, which decided last year to sponsor a similar program at the Saranac Inn state launch. After a second year of successful programming, the association on Lake Placid decided to sponsor a steward at the state boat access, attesting to the enduring appeal of the stewardship concept. Each program is different in its focus and message, as these elements change to reflect the conditions and needs of individual watersheds.

Jet Skis and Horsepower at the Lake Placid Launch

At 7:00 am on a late July morning, the state boat launch at Lake Placid is quiet as Molly Shubert, watershed steward, takes her station. She knows the tranquility will be soon replaced by the bustle of boat launchings, cars parking, people loading and unloading equipment and by questions, concerns and challenges from the public. Lake Placid is the busiest of the three public boat launches in the Watershed Stewardship Program, and provides an often invigorating and challenging contrast to the more quiet posts of Upper Saranac Lake and Upper St. Regis Lake. Molly, a Lake Placid resident and senior at St. Lawrence University, was formerly a tour guide on the Lake Placid boat tour, which has prepared her well for sharing a host of details about Lake Placid's natural and cultural history. On a given day at the Lake Placid boat launch, Molly will record the types of boats being launched, motor sizes, group sizes and other observable information and then approach recreators to share her message about safe boating, water quality and invasive species.

Molly's work on this particular day was made more interesting when the Town of North Elba passed a ban on personal watercrafts (PWC) on the portion of Lake Placid within town boundaries. Since this includes the vast majority of Lake Placid, personal watercrafts are now effectively banned. Molly and the other stewards have had to share this new regulation with boaters, which presents a delicate challenge: watershed stewards are not DEC employees or rangers, but are essentially public educators. This relieves Molly and the others of the burden of enforcement, but also prompts the stewards to make sure people comply nonetheless, for the health of the lake.

A person seeking to launch a PWC arrives and Molly delivers her message about water quality. At the end of her short message, she points to a newly installed sign describing the ban. "Did you know that the town of North Elba just passed a ban on personal watercraft on Lake Placid? It's new this year, but you're no longer allowed to operate your PWC on the lake. I'm sorry."

This time, and most times, the jilted jetskier responds politely, but is disappointed that he will have to go elsewhere. He asks Molly's advice on where to go. Molly shares the information with the man and he drives away, having heard Molly's basic message about invasive species and the unspoken message that somebody cares about Lake Placid and is watching over it.

Later in the day, Molly is relieved by another steward and then drives to Paul Smith's College to compile recreational data from the other WSP boat launches into a database at the College's Joan Weill Adirondack Library. Molly selected the role of data manager for the program's recreational use studies, and she sometimes questions this responsibility when mountains of data pile up. She views the task as a good challenge, however, and organizes the data into tables and graphs, thereby enhancing the usefulness of raw numbers for a variety of constituents, including Steven Guglielmi at the DEC and the shore owner associations interested in use trends on lakes.

Testing the Waters

The surface of Spitfire Lake blurs with ripples as a dervish of wind blows off the shoulder of St. Regis Mountain and across the water, blowing over a small boat in the center of the lake. Justin Levine, watershed steward and the boat's pilot, peers down a rope to the black and white secchi disk he has lowered into the lake as he checks the clarity of the water. Water clarity is a good general indicator of what's going on in the lake, as decreasing clarity reflects increasing amounts of suspended particles, which could be plankton, algae or sediment, depending on conditions and location. Justin is halfway through the day's task of water quality monitoring, which he checks from a boat three times during the summer at eleven different sites through the St. Regis Lakes chain. Using equipment and training provided by the Water Quality Program of the Adirondack Watershed Institute of Paul Smith's College, Justin checks temperature, oxygen, pH, conductivity and clarity in order to gain a progressive picture of the status of the Upper St. Regis Lake, Spitfire Lake and Lower St. Regis Lake. He shares this information with the Adirondack Watershed Institute, the St. Regis Shoreowners' Association and posts it on the WSP website.

Justin, a Paul Smith's College senior from Gloversville, picked this project along with designing educational outreach programs. On his way through the winding, boggy waterway between Spitfire and Lower St. Regis Lake, Justin reconnoiters the location for the educational program he will present later in the month: an interpretive canoe trip into the wetland designed to familiarize participants with water quality issues, wetland plants and birds. He sees a great blue heron rise from behind the wetland grasses on heavy wings, like a lumbering yet graceful dinosaur. One small channel of water branches away from the main flow, disappearing around a bend rimmed by bog rosemary and leatherleaf and promising to be an interesting passage for the participants in his educational program.

Justin's choice of projects—water chemistry and educational outreach—reflects both his general interests and his intended career path. With his position in the Watershed Stewardship Program, Justin is indeed testing the waters of his future in the environmental professions.

Loosestrife and Boathouses on Upper Saranac Lake

MacKenzie Hall, watershed steward from Watertown, New York and recent Paul Smith's College graduate in Natural Resources scans the seemingly endless shoreline of Upper Saranac Lake for the tell-tale flashes of bright pink-purple that signify the flower spike of purple loosestrife, the lovely but insidious invader of wet shorelines. A garden ornamental introduced in the early 1800's, purple loosestrife "escaped" and now chokes many wetlands and roadsides due to its prolificness and lack of natural predators. On this day, MacKenzie hopes to map the presence of the invasive on Upper Saranac Lake while she completes another project: a shoreline structure inventory. She's working in conjunction with Steve Flint of the Adirondack chapter of the Nature Conservancy, as part of the larger effort to identify and control "outbreaks" of invasive species.

This second project, initiated by the Upper Saranac Lake Association, calls for watershed stewards to compile a visual record of the status of the shoreline on Upper Saranac Lake in an attempt to understand the dynamic relationship between shoreline vegetation and human influence. On a lake the size of Upper Saranac Lake, subtle changes such as adding or removing outbuildings, docks, trees, shrubs, swimming areas, gardens, etc. can be essentially unremarkable except when viewed over time. The idea is to create a database of information and images that allows viewers to clearly see the status and character of the shoreline in 2002, in order to compare trends and changes as the years pass. Memory becomes vague and general, as shoreowners and public land managers struggle to clearly recall what the lake was like 10 years, 20 years, or 50 years ago. The intent of this project is to use Geographic Information Systems to capture specific images of the shoreline along with additional layers of relevant information, spatially referenced to a topographic map, so that human memory has a digital correlate. MacKenzie chose this project because of her interest in land classification and management, wetlands in general and because she was intrigued by a project that addresses both esthetics and environment.

Expanding Ripples of Watershed Stewardship

In addition to the direct benefits the Watershed Stewardship Program confers upon recreators and the water, wildlife and vegetation, a lasting impact is upon the watershed stewards themselves. I recently received an email from Jason Bried, a Paul Smith's College graduate who was a stalwart steward from the first two years of the program, and who is now enrolled in a graduate program in wetlands ecology at Mississippi State University. He told me that he missed the program and especially the passionate residents of the lakes with whom he worked closely to protect native vegetation and wildlife. Jason's experience with outreach, program administration and field research gained from his two seasons with the WSP have given him a foundation on which his interests continue to grow.

He writes, "My new interest is dragonflies. I'm working on a statewide species survey of the dragons and damsels as a side project to my thesis, which will study wetland buffers and plant-dragonfly interactions. If I was with the WSP this year, I'd definitely do a dragonfly survey of the lakes. Who knows what the future will bring, but I know I'd be interested in another season with the program."

Like a beneficial invasive species, the Watershed Stewardship Program continues to flourish and grow. The concept of the program attracts interest from other shoreowner associations and from constituents of public tracts of land nearby. Paul Smith's College, with the blessing of the DEC, is seeking to adapt the program model to address the St. Regis Canoe Area starting in the summer of 2003. The Canoe Area faces tremendous recreational use pressure and the unit management planners could use more complete and reliable data about use patterns from the multiple points of entry into the network of ponds and carries that constitute the premier wilderness paddling destination in the Adirondack Park.



Amy Fleischut secures her paddle under the deck rigging as her kayak glides noiselessly up to the loon nest on the shoreline of Spring Bay. In May, she could hardly make out a loon nest—most of them just look like flattened twigs and mud—but now she can identify them at 20 yards. She looks carefully and finds what she came for: loon eggshell fragments. She leans over from her kayak to examine the fragments and then picks them up and bags them. She carefully completes a label, and inserts it and the bagged shell fragments into another plastic bag. Dr. Schoch will process the shells, checking for mercury and lead levels. Hearing a tremolo, the warning call of the loon, Amy quickly stows the shell bag and paddles away from the nest, out onto the smooth surface of Spring Bay. The watershed steward smiles to herself.