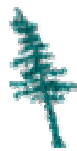


Watershed Stewardship Program

Summary of Programs and Research, 2004



Adirondack Watershed Institute



Paul Smith's College

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Introduction and Key Findings – 2004

Prepared by Eric Holmlund, Director and Associate Professor
Watershed Stewardship Program

Introduction

The Watershed Stewardship Program is a cooperative, community-based effort to conserve natural resources, including water quality, wildlife and soil, through targeted educational efforts at specific locations near Paul Smith's College. The program represents a convergence and synthesis of ideas and support from members of the Paul Smith's College faculty, New York State land management agencies, including the Department of Environmental Conservation, non-governmental environmental organizations including the Adirondack Park Invasive Plant Program and the Adirondack Cooperative Loon Program, and shore owner organizations from the St. Regis Lakes and Lake Placid.

The WSP is unique in its array of program efforts which include point-specific environmental interpretation, educational outreach, field-based invasive species monitoring and various data-collecting projects aimed at better understanding human pressures on waterways and local trails. College students and recent graduates are hired to provide an informed, high-energy, friendly presence at local boat launches and trailheads. This report is an annual effort to consolidate and report on all aspects of program activities. Much useful data is presented herein, the product of our dedicated staff's efforts throughout the summer season.

Summer 2004 Highlights

The Watershed Stewardship Program provided educational services at northern Adirondack boat launches and the summit of St. Regis Mountain for the fifth consecutive year. This year featured continuation of efforts to monitor and control the exotic invasive

plant purple loosestrife, monitor loon pairs on the St. Regis Lakes, assess invasive plant presence on Lake Placid and St. Regis Lakes, and provide educational outreach programs for area children. This year brought a resumption of trail maintenance duties on the St. Regis Mountain trail (last done in 2000), educational outreach programming at two area summer camps, a new study of coarse woody structure in the St. Regis Lakes and the development of an initial letter summarizing issues around the proposed Lake Placid boat wash station.

The primary thrust of this year's program was once again to educate people launching watercraft at our three primary launch locations - St. Regis Lake, Upper Saranac Lake and Lake Placid - about the threat of introduced invasive species, primarily Eurasian watermilfoil (*Myriophyllum spicatum*) and how to minimize exposure of lakes to the threat. Stewards also compiled detailed information about the character of boat launch use, including such information as total boats launched, type of watercraft, and demographic information. Watershed Stewards also conducted a program assessment study for the second year. Stewards were stationed at the boat launches, and had other shifts on the water, climbing St. Regis Mountain, paddling kayaks to observe loons, maintaining data bases and meeting weekly to share information.

Program Mission

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 the status of natural resources gathered by the WSP aids in the development of area unit management plans by the New York State Department of Environmental Conservation. Stewards also maintain and clean up public campsites on the program's associated 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 of Paul Smith's College's Natural Resources, Environmental and Forestry programs with direction from the Paul Smith's College faculty, including a faculty program director. An advisory committee of community stakeholders, state agencies and Paul Smith's College faculty help guide the program.

The Watershed Stewardship Program has evolved over the years from its first year of service in 2000. In that year, the program served the St. Regis Lakes and St. Regis Mountain, both seven days per week during the summer. In 2001, the program expanded to serve Upper Saranac Lake for seven days per week, and in 2002, the WSP was welcomed on Lake Placid for four days per week. In 2004, coverage on Upper Saranac Lake shrank to weekends while coverage on Lake Placid expanded to five days per week. Several other area lake associations have sought the services of the WSP, pending external funding.

Staff

The program was funded to employ seven employees for the summer of 2004 in a variety of full and part-time positions. Five of the employees were Paul Smith's College students while one was a recent graduate of St. Lawrence University. Positions included a half-time Director, a full-time Assistant Director/steward, 4 full-time stewards and a temporary/part time steward who filled some needed shifts near the end of the summer.

Staff Training

The first month of program operation, May, is typically the time for intensive staff training. The program begins with a full-time week of training sessions the week before the Memorial Day Holiday. Sessions in 2004 included program orientation, safety and risk management, interpretation principles, interpretive message development, role-playing public contact, St. Regis Mountain orientation, and introduction to WSP research program data collection and entry, all by the program director. Paul Smith's College's Recreation and Intramurals Director Jim Tucker provided First Aid and CPR instruction, Jane LaVoy provided Boater Safety certification, Forest Ranger Joe Rupp and Supervising Forester Kris Alberga provided an orientation to the Forest Ranger program and Unit Management Planning, Kevin Prickett of the Association for the Protection of the Adirondacks covered the history of unit management planning and the Forever Wild aspect of the New York State Constitution, Mike DeAngelo addressed principles of limnology and Steven Flint and Hilary Oles of the Nature Conservancy addressed invasive plants. Anne Weld provided an orientation to the St. Regis Lakes, Georgia Jones oriented us to Lake Placid, and Curt Stiles gave the stewards a boat tour and orientation to Upper Saranac Lake. The stewards also spent two days as attendees of the Adirondack Research Consortium's Conference on the Adirondacks in order to be exposed to the latest research and issues confronting the Adirondack Park.

We feel that the Watershed Stewardship Program offers a very impressive and comprehensive staff training and development effort in order to provide well-prepared and effective Watershed Stewards, who represent both the WSP and Paul Smith's College in the best possible light.

Key Findings and Program Activities

Overall, Watershed Stewards tallied 5,151 members of the public launching watercraft at the Lake Placid, Upper St. Regis

Lake Placid	Boat Type/Size (indicate hp for MO)											Total # of Boats	total users	Total Time at Launch	Gender		Pets	4 stroke motor on outboard?
	(hp)	MO	MI	I/O	P	J	S	R	C	K	B				M	F		
2004	70.2	455	112	183	43	4	6	9	106	192	50	1160	2694	15	771	42	118	78
2003	64	457	146	216	35	0	13	7	106	246	21	1247	3050	15	2079	998	103	33
2002	61	485	162	281	34	3	10	17	153	228	37	1410	3302	13	2139	1153	143	35

St. Regis	Boat Type/Size (indicate hp for MO)											Total # of Boats	total users	Total Time at Launch	Gender		Pets	St. Regis Canoe Area?	4 stroke motor on outboard?	Use Boatwash?
	(hp)	MO	MI	I/O	P	J	S	R	C	K	B				M	F				
2004	37	146	0	7	1	0	2	3	378	210	4	751	1374	17	871	491	30	14	3	99
2003	33	171	0	2	5	1	1	14	382	128	20	724	1446	19	928	490	42	180	38	n/a
2002	60	170	3	8	3	0	0	10	478	182	53	907	1701	19.4667	1098	575	56	241	16	n/a
2001	61	151	0	3	0	0	1	5	375	170	1	706	1417	19	882	535	44	n/a	n/a	n/a
2000	n/a	136	6	n/a	n/a	n/a	n/a	13	267	64	misc	489	1005	n/a	643	352	29	n/a	n/a	n/a

Upper Saranac Lake	Boat Type/Size (indicate hp for MO)											Total # of Boats	total users	Total Time at Launch	Gender		Pets	4 stroke motor on outboard?	
	(hp)	MO	MI	I/O	P	J	S	R	C	K	B				M	F			
2004	92.8	256	10	68	10	19	7	4	90	38	3	505	1083	n/a	701	424	49	24	(weekends only!)
2003	66	633	66	201	29	39	19	6	267	114	5	1379	3263	16	2207	962	226	71	
2002	68	624	61	210	38	36	29	14	188	63	35	1291	3210	17	2110	1105	104	72	
2001	78	569	68	178	34	47	20	n/a	199	64	25	1204	3036	18	1911	1125	93	n/a	

Table 1: Recreational data from WSP launches. The values are grand totals for the 15 week period (Memorial Day to Labor Day). (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. Note that data for Upper Saranac Lake were only recorded on weekends only in 2004, while the other years represented 7 day per week coverage.

and Upper Saranac Boat Launches. These recreators launched 2,416 watercraft. On the summit of St. Regis Mountain, Watershed Stewards counted 859 hikers traveling in 247 groups.

In general, Watershed Stewards have interpretive contact with at least one person per user group (1 boat or hiker group), although it is common for the entire group to listen to the Stewards' messages. With this in mind, well over 3,275 people were directly given an interpretive message centering on conservation and natural resource health in the summer of 2004 while untold numbers received the message indirectly through their peers or WSP publications. As compared to past years' use levels, 2004 saw moderate declines in users and watercraft launched. 2002 was the recent historical high.

Other Programs

Our Stewards are given the opportunity to pursue their interests beyond

public education in the Watershed Stewardship Program. This is what sets this program apart from similar efforts across the country. Our Stewards engage in public contact with experts from area natural resource management and advocacy agencies to solve conservation and research problems. You can probably imagine that a 15-week job sitting a local boat launches could become tedious. Some of our stewards agree. They find that the projects they work on that take them away from the boat launches serve to inform and invigorate them for their duties as public educators back at the boat launches. Stewards have from 1-2 days per week for these special duties. Watershed Stewards once again teamed up with Steven Flint from the Adirondack Nature Conservancy to track down, map, count and remove as many purple loosestrife plants as possible on the St. Regis Lakes Chain. Our program has been instrumental in this struggle against the exotic invasive plant for five years. This year's efforts

saw some rebound in plant populations from last summer, which had presented a heartening decrease from 2002. 1,345 purple loosestrife plants were counted, mapped and removed in 2004.

In the summer of 2004, one of the stewards became involved with tracking down and presenting information regarding the costs and feasibility of putting in a public boat wash for the village of Lake Placid. This steward prepared several letters to area officials describing his findings and his perspective as a member of the community on this issue. We hope that this additional effort helped add to the ongoing discussion.

Another steward initiated a study of submersed trees and rocks in order to begin understanding the role that waterlogged trees and other structures play in the aquatic ecosystem. He spent many hours swimming and observing underwater structures on Upper St. Regis Lake and Black Pond.

Once again, a steward spent one day per week monitoring the three pairs of banded loons that are residents of the St. Regis Lakes chain under the aegis of the Adirondack Cooperative Loon Program. This summer's loon monitoring program featured fitting selected loons with radio transmitters to follow migratory patterns. We are happy to report that the St. Regis loons had a good summer of health and parenting.

Finally, one steward prepared, advertised and offered educational outreach programs to the general public and to selected area summer camps in 2004. While the open enrollment programs failed to fill, the steward had good success with the programs offered to the summer camps.

In our second year of a self-study program entitled the WSP Program Assessment Study, we found once again that members of the public who had listened to a Watershed Steward's educational message in the past had significantly more knowledge of a key water quality issue than those with no prior contact with our program. This encouraging finding indicates that our message is reaching its mark.

Each of the special projects described above allows the WSP to respond to current needs, both of the community around us and of the students themselves. In this way, the program becomes a vital bridging experience between academic study and the world of productive conservation work.

Program recommendations

While the Watershed Stewardship Program has functioned, on the whole, quite successfully for five years, this summer did offer opportunities for adjustments in staff training, data processing systems and personnel management. The Director has worked closely with program advisors, both within Paul Smith's College and among external supporters, to fine-tune and adjust procedures. My principal recommendations are as follows:

- Ensure that the Director position returns to full-time status. This summer, the Director was only assigned half-time to the WSP.
- Purchase a laptop computer for the data manager. This person could have worked more productively on-site if they were able to enter data during down times. (Especially at the St. Regis landing, which experiences less traffic than the other stations.)
- Hire an Assistant Director who is familiar with the program or with Paul Smith's College. This would allow the person to be more effective, as they would have considerable background knowledge of PSC systems and personnel.
- Gain exclusive access to a motorboat for WSP projects. We shared access to a motorboat this summer with several programs at PSC. This caused some scheduling difficulties.
- Require weekly written status reports by each steward. Follow up and supervise closely to ensure timely progress on each independent project. Have weekly individual meeting with each staff member to provide support and accountability.

Equipment

- Acquire a laptop computer for student data managers so that they can more easily enter data during slow times at the boat launches.

Communication/Information

- Complete redesign of program website to integrate it more effectively into new Adirondack Watershed Institute website.
- Do bulk of website updating during the academic year, if possible.
- Complete new fishing brochure with Adirondack Forest Preserve Education Program panel

Programs

- Promote outreach programs more aggressively and effectively. Take that responsibility from front-line stewards and assign it to Assistant Director.
- Continue to partner with local summer camps and summer programs to ensure audience for outreach programs.
- Explore partnerships in terms of educational outreach programs with the Paul Smith's VIC and Natural History Museum of the Adirondacks
- Finalize program wide risk management plan
- Institute a pilot program on Lower Saranac Lake



Watershed Stewards being oriented by Georgia Jones from the Lake Placid Shore Owners' Association

Watershed Stewardship Program Funding

The Watershed Stewardship Program is funded by Paul Smith's College, the St. Regis Foundation, the Lake Placid Shore Owners' Association, the Glenn and Carol Pearsall Adirondack Foundation and the Kelsey Trust. We are profoundly grateful for their support and contributions to our program vision. We invite current funders to continue their support of this multifaceted and proven program and welcome new supporters to join this effort to serve Adirondack watersheds through education, research and service. The program director is eager to meet with interested parties to discuss future plans and opportunities for the Watershed Stewardship Program. We also would like to appreciate the readers of this document and the many members of the public with whom we have interacted over the past five years in the course of our efforts raise general awareness of critical watershed issues.

Staff Biographies – Summer, 2004



Matt Boss is a recent graduate of Paul Smith's College with a B.S. in Natural Resource Conservation. He views the Stewardship Program as a way

to get involved with conservation in a community that he cares about. To Matt, the Adirondacks represent the idea that we all can live with and be able to enjoy the benefits of our natural resources through responsible use. Part of responsible use is being aware of the issues that concern our resources as well as doing the little things that we should all do to help care for our environment.



Abbey Burke is a Recreation Adventure-Travel and Ecotourism (RATE) graduate of Paul Smith's College. Her capstone project at Paul Smith's focused on the use of alternative

energy, mainly biodiesel fuel. Working with other local agencies, she looked into the possibility of converting the Adirondack Scenic Railroad to biodiesel. She is hoping that through being a Watershed Steward, she can help curb and possibly stop the intrusion of invasive species in the waters of the Adirondack Park. She feels that this is her first step, post-graduation, that she is taking towards a more sustainable future.



Dan DeSorcy is currently a junior at Paul Smith's College and is majoring in Natural Resources Management and Policy. He chose to work with the Stewardship Program based on

the notion of helping to broaden public awareness about how invasive species can impact terrestrial and aquatic ecosystems in ways that not only affect the lakes, but also can change the recreator's experience on the lakes.



Erin Peterson is from quite a few different areas of the Midwest and Northeast and has spent a lot of time in Michigan, Northern New York, Connecticut, and Illinois. She

enjoys exploring the Adirondacks, mainly on foot, and in the summer months, enjoys fishing. Having always enjoyed the relationship between humans and nature, she is currently studying at Paul Smith's College, working towards degrees in both Environmental Studies and Fish and Wildlife. She will be working on a frog study on Upper St. Regis Lake and will also be providing educational programs as part of her duties as Educational Outreach Coordinator for the program this summer.



Kara Kushmerek is a graduate of St. Lawrence University and will be working as the Assistant Director of the Stewardship Program. She has a B.A. in

Environmental Studies and has been working in the environmental education field for the last couple of years for organizations such as the Appalachian Mountain Club and Massachusetts Audubon Society. Kara jumped at the chance to help protect this beautiful and unique area, so that others may enjoy it in the future. One of her projects this summer will be working with the Adirondack Cooperative Loon Program, as a banded Loon monitor.

Eric Holmlund, Director of the Watershed Stewardship Program, is an Associate Professor of Recreation in the Forestry, Natural Resources and Recreation Division at Paul Smith's College. In addition to his work as Director of the Stewardship Program, Eric



teaches in Paul Smith's College's baccalaureate program in Recreation, Adventure Travel and Ecotourism. Eric and his wife Kim have a six-year-old daughter, Dana, and twin four-year-old boys, Will and John. He enjoys most

outdoor activities, especially lake kayaking and camping in his family's pop-up trailer.

Watershed Stewardship Program: Program Assessment Study, 2004

Prepared by: Eric Holmlund, Director

Abstract:

The Watershed Stewardship Program has developed an internal study of program efficacy through assessing the level of user knowledge about a key water quality issue: invasive Eurasian watermilfoil and the methods of its spread and control. This study is now in its second year. Results from this second year of the study repeat the overall trend of the findings from 2003, in that respondents previously exposed to the Watershed Stewardship Program employee interpretive message exhibited a higher level of knowledge than those respondents with no prior contact with the Watershed Stewardship Program. We infer from this finding a positive net effect from the efforts of the Watershed Stewardship Program.

Introduction:

The Watershed Stewardship Program was founded in the summer of 2000 in order to offer a suite of educational, service and research activities to augment watershed health in specific locations adjacent to Paul Smith's College in New York State's Adirondack Park. The program is sponsored by Paul Smith's College, local property owner associations and a few external funding sources. The program places college students with majors in natural resources or biological sciences at area boat launches in order to deliver a 3-10 minute interpretive message about water quality to each group of recreators launching watercraft. The three boat launches are Upper St. Regis Landing, Upper Saranac Lake- Saranac Inn, and Lake Placid State Boat Launch. Watershed Stewards are also charged with collecting recreational use data and a host of smaller projects such as monitoring banded loons, surveying and controlling purple loosestrife, conducting educational outreach programs, educating hikers of St. Regis Mountain, and others. The program has run each of the past five summers from Memorial Day to Labor Day. The principle goal of the program is to stop or slow the spread of invasive plants from lake to lake through public education and visual inspection.

While the program has garnered local praise and regional attention, until 2003 there was no effort to measure program impact quantitatively. The current study design was implemented as a manageable, executable effort to measure changes in knowledge of a key watershed issue in respondents. This key issue – Eurasian watermilfoil growth and propagation – is seen as representative of the efforts made by Watershed Stewards to raise the awareness of water quality issues in boat launch users. Thus, for the purposes of this study, whether respondents have a high or low knowledge of the key issue is linked to the presence or absence of their prior exposure to the Watershed Stewards' message.

Project goals:

1. to assess the overall level of program effectiveness in delivering its primary and secondary objectives
2. to inform strategies to address perceived program weaknesses and to capitalize on program strengths.

Overarching Study Questions:

1. How effective is the WSP at delivering a message regarding invasive species?
2. Do the educational efforts of Watershed Stewards have an impact in altering visitor behavior regarding responsible boating, specifically in reducing the possibility of introducing unwanted invasive species?
3. Is visitor awareness of invasive species issues changing over time?
4. Is this awareness level changing as a result of the WSP?

Methods:

This study was conducted by front-line employees, referred to here as Watershed Stewards, in the context of their normal duties. Watershed Stewards are stationed at area boat launches between Memorial Day and Labor Day each year. Shifts run from 7 am to 4 pm. Stewards are instructed to approach users of the public boat launches, deliver their interpretive message about water quality and invasive species and record observable data for a separate study on recreational use characteristics (data points for this study include party size, composition, watercraft type, engine size and type, time at launch, etc.). The table below details the level of coverage each week by site.

Table 1: Watershed Stewardship Program Coverage- Northern Adirondack Boat Launches

WSP Program Site	Days per week of coverage	# Days/site/week
Lake Placid State Boat Launch	Wednesdays – Sundays	5
Upper St. Regis Landing	All week	7
Upper Saranac Lake- Saranac Inn	Weekends	2

A specific protocol for implementing the Program Assessment Survey was designed in order to instill as much consistency as possible in the delivery of the survey. Watershed Stewards were instructed to adhere to the following methods:

Figure 1: Method of conducting WSP Program Assessment Survey

1. When recreators arrive at boat launch, record the observable data for the regular recreation study as usual.
2. Approach the party, give your standard introduction/hook
3. Ask question Q1 below. Depending on response, then ask questions Q2-Q4 OR skip to Q4. Record data on the WSPAS (Watershed Stewardship Program Assessment Study) form provided. This should take 1-2 minutes.
4. After finishing with the WSPAS, proceed with your normal interpretive message as appropriate to the needs or desires of the recreator.

It should be noted that the Watershed Stewards were instructed to integrate the study into their normal operating procedures. Stewards were not making a separate intervention in order to glean the data for this study. Also, Stewards conducted this study, at the request of the Director, on selected weeks in order to get information about early summer versus late summer visitors. That is, Stewards conducted the survey in two bursts- June and late July-August.

The four survey questions, seen below, were designed to be very simple and pointed, in order to not displace the other duties and responsibilities the Stewards were charged with each day.

Question #1 was intended to break the respondents into two populations: those who had prior contact with a Watershed Steward and those who had not. Question #2 gave us the respondent's recollected overall impression of program value. Question #3 gave us an

interesting potpourri of information that ranged quite widely, but offered some insight into the messages that stayed with respondents. Question # 4 was our critical question, in that it allowed Stewards an opportunity to score or grade respondent knowledge on this key issue on a scale of 1 (low) to 5 (high). Stewards were requested to instantly score each subject's response to Question #4 according to the rubric below, which was printed on the reverse of each data sheet.

Figure 2: Survey Questions

Q1.	Have you encountered a Watershed Steward from our program before? (Y/N) (If yes, go to question 2. If no, skip to question 4)
Q2.	Did you learn useful information from the Steward regarding invasive species? (Y/N)
Q3.	What were the most important messages you can recall from your earlier meeting with the Steward?
Q4.	Can you tell me what you know about Eurasian watermilfoil?

1- no knowledge	2- vague knowledge	3- reasonable working knowledge	4- advanced knowledge	5- extensive knowledge
No knowledge	<ul style="list-style-type: none"> Noxious weed of some kind In lakes 	<ul style="list-style-type: none"> Invasive underwater plant Chokes lakes Transported by boats 	<ul style="list-style-type: none"> Catches in boat props and trailers Interferes with fishing, swimming, boating, skiing Knows that there are native species of milfoil 	<ul style="list-style-type: none"> Able to differentiate from native spec. Knows the relationship of infestation to reduced O2, shading of bottom, habitat change. autofragmentation

Figure 3: Scoring Rubric for Responses to Question #4:

(Note: each higher level assumes the knowledge of the preceding level, plus the new material as noted. These levels are approximate, subjective. Do the best you can at determining the closest level.)

Findings:

The following findings are from the summer of 2004.

Total number of respondents: 595

Total number of useful responses (less those with data recording errors): 582

The Watershed Stewardship Program Assessment Study was conducted during two general periods throughout the summer. The study was conducted every day for 17 days in June (early summer) and for 31 days in July, August and September (late summer). This structure was an important part of the study

design. In total, the study was conducted on 48 days throughout the summer of 2004.

Table 2: Survey dates, Summer, 2004

Month	Dates	Total per month
June	5, 6, 7, 8, 12, 13, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 30	17
July	1, 23, 24, 25, 26, 27, 29, 30, 31	9
August	1, 2, 3, 4, 5, 8, 12, 13, 14, 16, 18, 19, 20, 21, 22, 27, 28, 29, 31	19
September	1, 3, 4	3
Total for summer		48

Population Segmentation:

The 582 useful responses were divided into two populations for purposes of data analysis. P_n was defined as the population of respondents who indicated on Question # 1 that they had no prior contact with Watershed Stewards. P_y was defined as the population of respondents who indicated on Question #1 that they had prior contact with Watershed Stewards. P_t was defined as the entire population of respondents.

$P_n = 269$ respondents

$P_y = 313$ respondents

$P_t = 582$ respondents

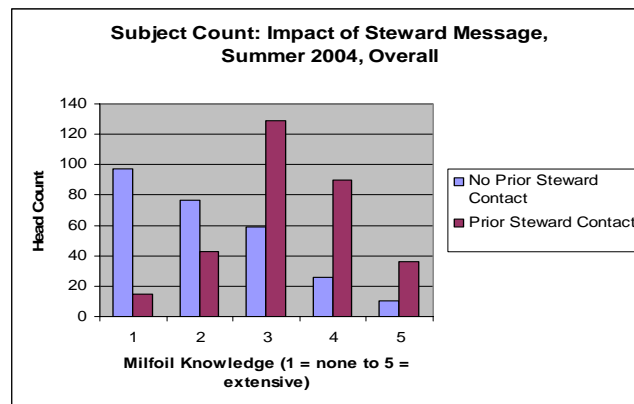
Means were calculated for respondents' scores on Question #4, which asked their general level of knowledge of Eurasian watermilfoil. Surveyors rated responses on a scale of 1 to 5, based on the criteria in Figure 2, above. Means are as follows.

- P_n mean score = 2.2
- P_y mean score = 3.3
- P_t mean score = 2.8

Discussion:

It is clear that the mean scores for the "treatment" group, i.e., those users of the boat launch who had experienced prior contact with Watershed Stewards, scored as a group over one point higher on the scoring rubric in terms of their expressed knowledge of Eurasian watermilfoil. This difference is highlighted when one examines the subject count and percent breakdowns of respondents who scored at each of the five levels.

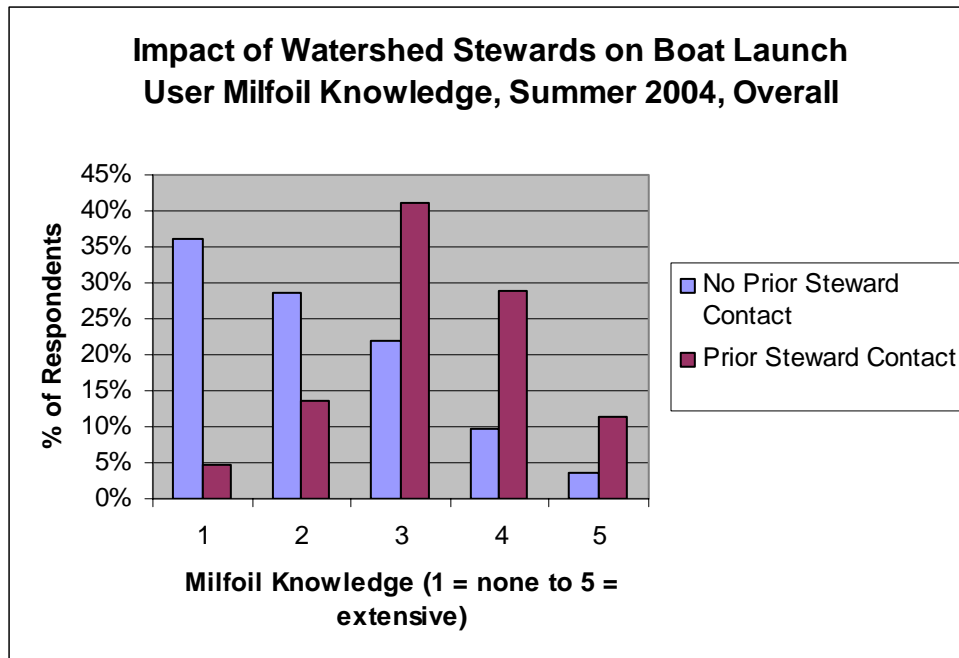
Figure 4: Impact of Steward Message by Number of Subjects



It is interesting to note that people with no prior contact with watershed stewards were highly likely to score a "1" and less and less likely to score at ever higher levels. In contrast, those people with prior Watershed Stewardship Program contact fell into a more normal bell-shaped distribution, with large numbers rated as "3's" and fewer rating as 1 or 5.

When one considers percents of respondents, the contrast is marked. A striking 65% of respondents with no prior contact with Watershed Stewards had either vague or no knowledge (scored a 1 or 2) of the natural history and threat posed by Eurasian watermilfoil, while 82% of those who listened to the Watershed Stewards on a prior occasion had a reasonable working knowledge of the plant or better (scored 3 or higher).

Figure 5: Impact of Watershed Stewards by Percent of Respondents



Based on this information, almost two thirds of the general public using Watershed Stewardship Program-addressed boat launches has inadequate information to make responsible decisions regarding the transport of invasive plants. Once exposed to the Stewards, this risk drops markedly.

Table 3: Percent Distribution of Scores- No Steward Contact vs. Steward Contact

Score	No Prior Steward Contact	Prior Steward Contact
1	36%	5%
2	29%	14%
3	22%	41%
4	10%	29%
5	4%	12%
	100%	100%

Early versus Late Summer

In order to approximate the design of the study from 2003, the survey was administered in two bursts- June and late July-August. These two periods were chosen to give insight into changes in user knowledge and satisfaction as the summer progresses.

Table 4: Mean Scores- Early Summer vs. Late Summer

	June	July-Aug
Pn	2.4	2
Py	3.4	3.2
Total respondents	226	356

The information in Table 4 indicates that there was a slight downturn in scores overall as the summer progressed, which might be attributed to the probable greater instance of out-of-the-area recreators in August at the boat launches. It is likely that early summer users tend to be from the nearby region, and are somewhat better informed about regional water quality issues.

Respondent Satisfaction

While Question #1 asked if recreators had encountered a Watershed Steward in the past, Question #2 on the survey asked "Did you learn useful information from the Steward regarding invasive species?" We looked to this question for an indication of satisfaction or impact from the user's gestalt memory of the past encounter.

There were 313 useable responses to this question, while 272 respondents reported that they had not encountered a Watershed Steward in the past. Of the 313 respondents with prior experience with Watershed Stewards, 299 responded "yes" to Question #2 while 14 responded "no." In percentages, 95.5% of respondents reported learning useful information about invasive species while a tiny 4.5% reported that they did not learn any useful information. This finding attests to the positive impact overall of the effort of the Watershed Stewards.

2004 compared with 2003

In 2003, there were 228 respondents surveyed, while in 2004 there were 582, a 155% increase in subjects. Mean scores for segmented populations for both years follow.

Table 5: Mean Scores Compared by Year of Study

Population	2003	2004
P _n	2.2	2.2
P _y	3.4	3.3
P _t	2.7	2.8

Table 5 illustrates that there was little change overall in mean scores on Question #4

from 2003 to 2004 despite the greatly increased pool of respondents. This suggests that the program design is comparable and reliable over the course of two years, with a workforce of Watershed Stewards/ researchers that was entirely new in 2004 as compared with 2003.

Conclusion:

The Watershed Stewardship Program Assessment Study has confirmed in 2004, using a much larger sample, what the study indicated in 2003. Both years show that there is a high correlation in the general public between heightened knowledge of Eurasian watermilfoil natural history and control methods and prior contact with representatives of the Watershed Stewardship Program. The program feels confident that it is having a positive impact on user knowledge of this critical watershed health issue and is protecting the waters not only of the lakes monitored by the program, but all the waterways that are potentially visited by each recreator educated by Watershed Stewards. Like ripples on a lake's surface emanating from the point of a pebble's impact, the message of watershed stewardship appears to be finding its way through time and space to a wider audience.

Recreation Use Study- St. Regis Lake Chain, 2004

Prepared By: Matthew Boss and Eric Holmlund

Introduction:

The main objectives of the St. Regis Lakes Recreational Use Study were to collect user information and to raise awareness to the threat of invasive species to the overall ecosystem health. The study allowed for interaction between watershed stewards and recreational users in which stewards delivered messages pertaining to issues such as invasive species management, loon population health and points of interest on and around the St. Regis Lakes Chain. The Watershed Stewardship Program also offered information through brochures pertaining to the history and ecology of the surrounding areas. A sinker exchange box, provided by the Adirondack Co-operative Loon Program, was maintained at the public boat launch at St. Regis Carry in order to allow anglers to exchange ecologically harmful lead sinkers for the more environmentally sound steel and ceramic sinkers.

The Watershed Stewardship Program also provided and maintained a register and sign-in materials in order to inform users when no steward was on duty as well as to provide information in case of emergency. A sign identifying and requesting the use of the high pressure boat wash station was constructed by the Watershed Stewardship Program staff and placed in front of the wash station in order to inform users of the importance of boat wash use before they arrived at the launch area. Boaters were asked to use the wash station if they had not and the steward felt it appropriate to do so. A visual inspection of boat and trailer was performed by the stewards on each and every boat encountered, with the goal being to remove invasive vegetation before it could be spread. The actions taken through this study were meant to help protect the lakes, users,

property owners and the overall environment of the St. Regis Lakes Chain.

Methods:

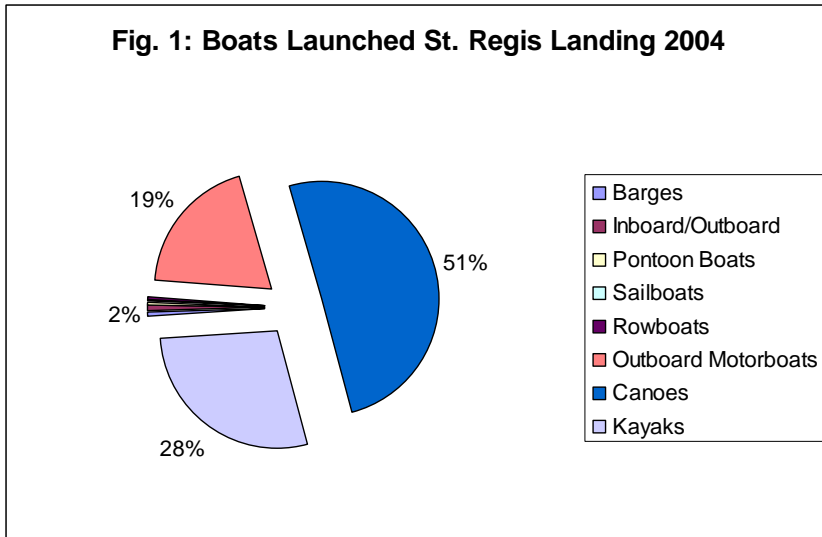
The Recreational Use Study began Saturday, May 29, 2004 and continued through Monday, September 6, 2004. The Stewardship Program stationed personnel at the public boat launch from 7:00 am until 4:00 PM, seven days a week in order to collect user statistics as well as interact with the public. The user statistics provided the main focus of the study including information such as type of boats (powerboat, canoe, kayak etc.), type and sizes of motors, group size and gender composition, boat wash use and the time of day that users arrived and departed from the launch area. Information regarding the numbers of pets, boat registration information, whether brochures were given, and additional comments were also recorded. After recording user data, the stewards would then approach the user, introduce themselves and then deliver a brief message concerning invasive species and the threat they posed to the St. Regis Lake Chain. The message also included information regarding the high pressure boat wash station located at the launch and the need to use a boat wash station whenever they are available as an effective means of invasive species control. The steward then conveyed specific information such as sail boat races that may be occurring as well as the loon monitoring program in order to help prevent on-water user conflicts.

The data collected by the stewards in the field was then entered into a database for user characteristics identification as well as multi-year use trends and developments. The user data collected is available from the Watershed Stewardship Program both in print and electronic form.

Results:

Total usage of the public launch located at St. Regis Carry on Upper St. Regis Lake, from Memorial Day to Labor Day, 2004 totaled 751 boats and 1374 people. Non-

motorized boats were the most commonly used watercraft, representing 78% of total boat launches. Of the boats launched, 50% were canoes and 28% were kayaks. Motorized boats comprised 20.5% of overall launch usage, with outboard motors being the most popular engine type (figure 1). The outboard motorboat group had an average horsepower of 36 and



motorized boats were the most commonly used watercraft, representing 78% of total boat launches. Of the boats launched, 50% were canoes and 28% were kayaks. Motorized boats comprised 20.5% of overall launch usage, with outboard motors being the most popular engine type (figure 1). The outboard motorboat group had an average horsepower of 36 and

comprised 19% of boat usage. I/O usage totaled 1% of overall boat launches. Motorboats with current registration greatly outnumbered the unregistered motorboat group (99% registered vs. 1% unregistered) with the majority of the boats being registered in New York State. Several other states and nations were represented by registered boats with some of those being Vermont, Connecticut, Massachusetts, Florida, and our northern neighbor of Canada.

Discussion:

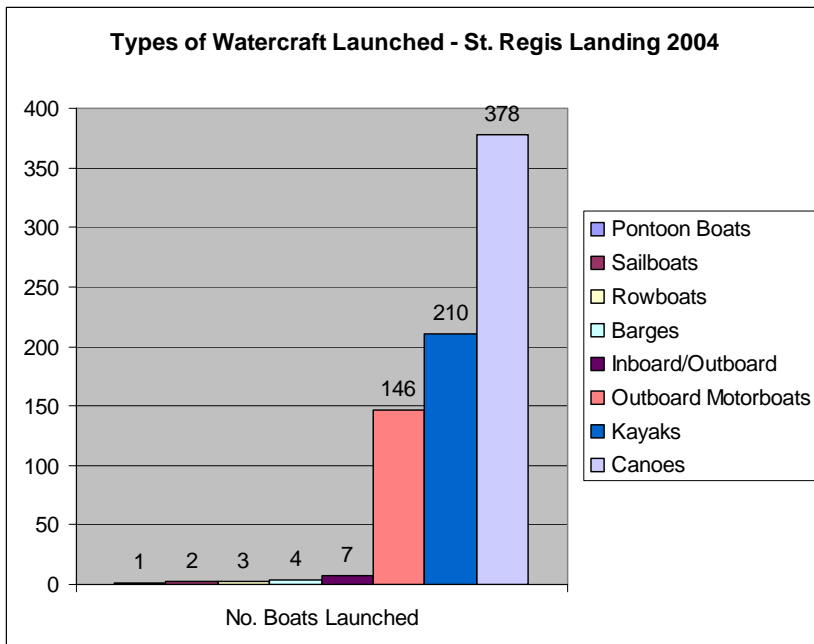
Once again, non-motorized craft dominated activity at St.

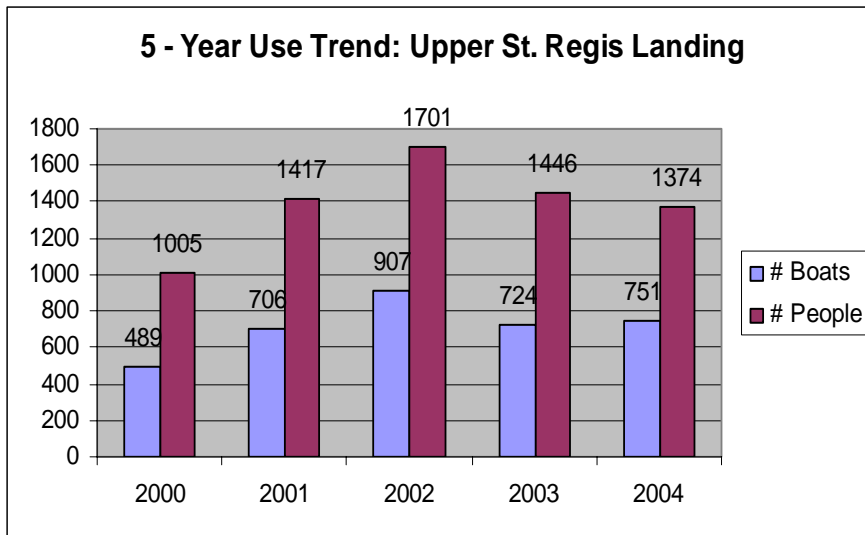
Regis Landing. Canoes and kayaks represented over three-quarters of total usage. Outboard motorboats were third in terms of numbers, indicating a healthy population of visiting fisherman by the consensus of the Watershed Stewards.

Canoes outnumbered kayaks once again, although kayaks continue to gain over the years. Canoe and outboard motorboat launchings were down from 2003, but kayak launchings soared higher than ever.

Multi-Year Trends

The "average" boater this season was a male, launching a canoe at approximately 12:00 pm. It took him on average 17 minutes to launch his craft. This year, data indicates a small increase in launchings compared with 2003; about 751 launches compared to last year's 724 launches. Overall use could have





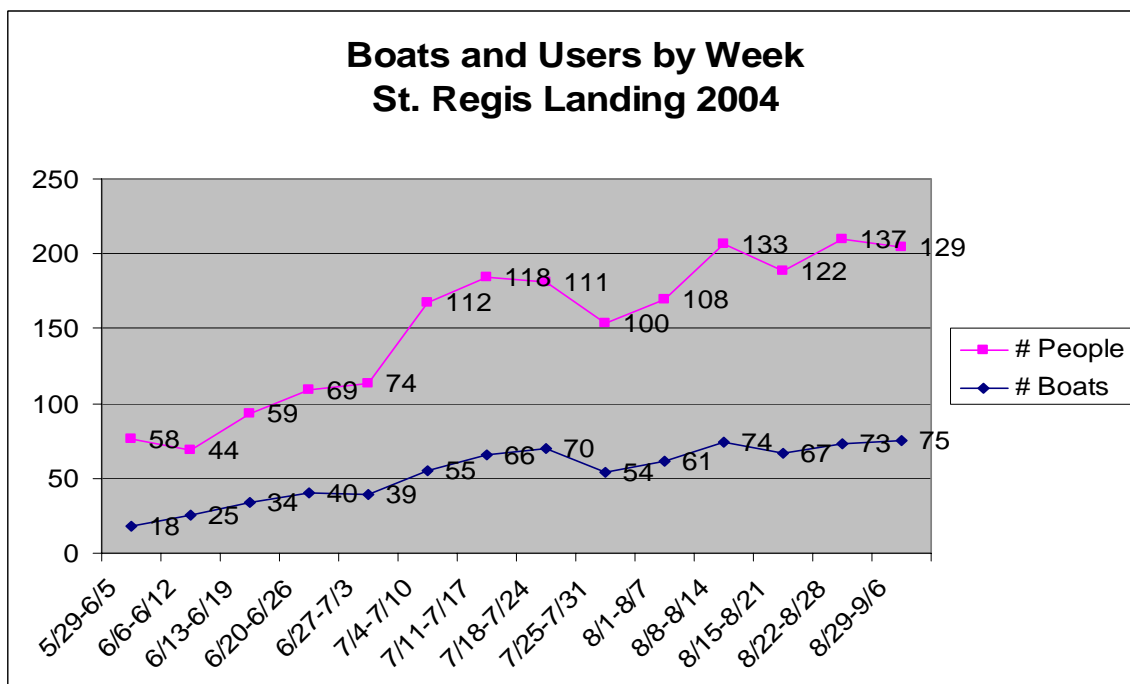
been affected negatively by the high instance of rain days (approximately 35) according to Paul Smith's College weather station. The 5 year trend shows a clear decline in the number of launches and people from the high point of 2002, but this year shows some signs of upward growth in usage. Some tourism officials speculate that 2002 was a high year for New York State tourism as a result of the terrorist attacks of September, 2001, which caused a vast number of New Yorkers to vacation in-state.

people were observed. While motorboat usage was relatively steady overall, canoes and kayaks became increasingly common over the summer.

Many of the boaters we encountered were heading into the St. Regis Canoe Area for extended trips. Many of these groups were guided but the majority of these visitors were on their own. They would often remark about the beauty (and the rain) upon their return and all groups encountered seemed to have a great

Use Pattern Over Summer

Watershed Stewards saw steadily increasing use over the course of the summer, with a high point falling during the week of August 8-14 when 74 watercraft and 133 people were tallied. Another peak usage week was August 22-28, when 73 watercraft and 137



time. The canoe area also proved to be a draw for day trips, with Bear Pond being one of the most popular destinations. Paddlers remarked about how much of the glacial erratic was covered by the high waters this season.

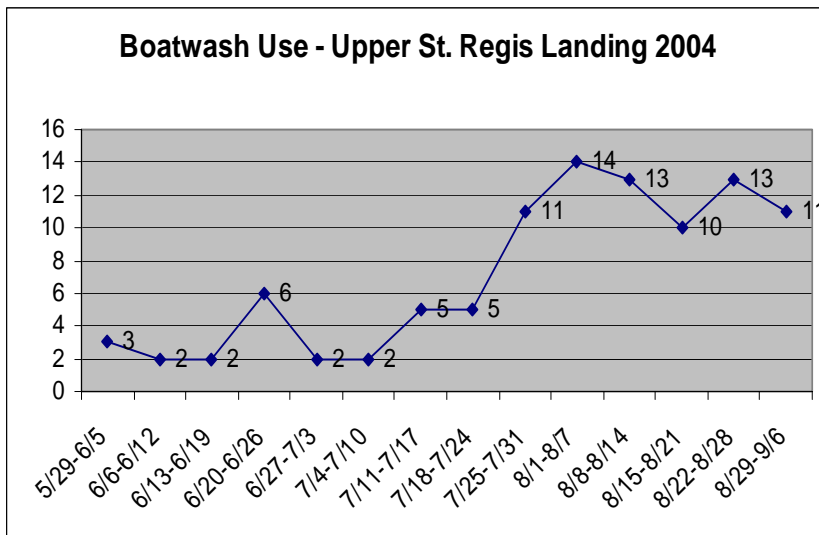
Boat Wash Station

The high pressure boat wash station provided by the St. Regis Lakes property

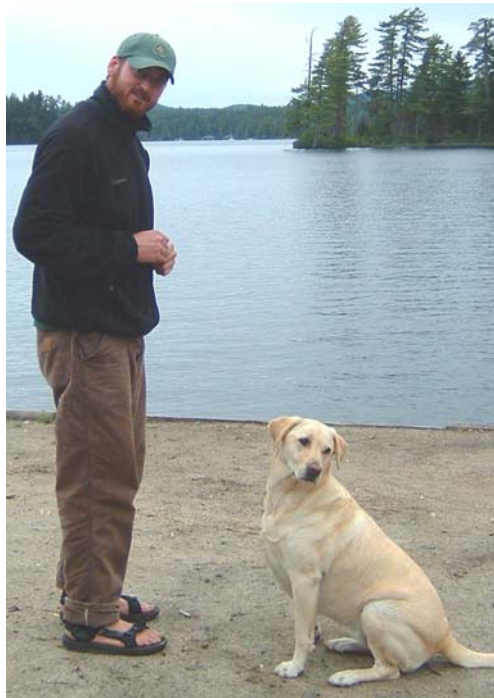
recreators used the boat wash station. Thus, the compliance rate overall was 13%.

Conclusion

In conclusion, the summer of 2004 was another great year for the stewards on Upper St. Regis Lake. We would like to thank the St. Regis Foundation and the wonderful people who gave us strength and support throughout another year. They made us feel welcome and helped us to become part of the St. Regis Community. We thank them, wish them well and hope to see them again in the coming seasons.



owners continued to be a benefit in the management of invasive species this summer. The boat wash is an effective way to make sure that boaters launching craft are not bringing any harmful invasive pests such as Eurasian Watermilfoil or zebra mussels into areas as yet unaffected. Boat washing was encouraged to all recreators as part of the stewards' message. Boat wash usage was also strongly urged by signage posted in front of the station, which seemed to be effective. Many shore owners as well as their guests were also observed using the station. As the season progressed, boat wash usage increased, no doubt a result of the new, more visible sign designed by the Watershed Stewards and placed in the boat wash lane of the access road and continual strong encouragement of the stewards. The boat wash station has again proved to be a wise investment and a benefit to both the lake and the shore owners. The total number of boats observed using the boat wash station in 2004 was 99 out of 751 possible boats, including canoes and kayaks, since some of these



Steward Matt Boss with "Launch Supervisor" St. Regis Carry

Table 1: Summary of Boat Launch Activity – Upper St. Regis Landing, Memorial Day to Labor Day, 2004

Summary of Week	Boat Type/Size (indicate hp for MO)												total boats	Group Size	Gender		Pets Y	Out Only	Brochure	St. Regis Canoe Area?	4 stroke motor on outboard?	boatwash	Avg Time
	(hp)	MO	MI	I/O	P	J	S	R	C	K	B	M			F								
5/29-6/5	28.38	2	0	0	0	0	0	0	12	4	0	18	58	38	20	1	0	3	5	0	3	11	
6/6-6/12	25	5	0	0	1	0	0	0	12	6	1	25	44	32	12	0	0	0	0	0	2	n/a	
6/13-6/19	21.38	11	0	0	0	0	0	0	14	8	1	34	59	42	17	1	0	1	1	0	2	12	
6/20-6/26	30.1	15	0	0	0	0	0	1	14	10	0	40	69	46	23	3	2	4	0	1	6	15	
6/27-7/3	57.22	10	0	3	0	0	0	0	21	5	0	39	74	49	25	1	4	0	0	0	2	13	
7/4-7/10	36.17	12	0	0	0	0	0	1	37	5	0	55	112	64	48	2	2	0	2	0	2	19	
7/11-7/17	34.1	12	0	0	0	0	0	0	38	16	0	66	118	70	44	1	9	0	4	0	5	17	
7/18-7/24	28.36	9	0	1	0	0	0	0	32	27	1	70	111	76	35	4	4	1	0	0	5	24	
7/25-7/31	51.01	15	0	0	0	0	0	0	30	9	0	54	100	69	31	1	4	6	0	0	11	15	
8/1-8/7	35.71	5	0	0	0	0	0	0	37	19	0	61	108	61	47	4	5	4	0	0	14	20	
8/8-8/14	30.66	11	0	0	0	0	0	0	36	27	0	74	133	93	40	0	4	19	0	0	13	32	
8/15-8/21	66.23	10	0	1	0	0	2	0	35	18	1	67	122	74	48	5	7	12	2	0	10	18	
8/22-8/28	39.51	13	0	0	0	0	0	1	33	26	0	73	137	76	53	3	7	12	0	0	13	16	
8/29-9/6	30.75	16	0	2	0	0	0	0	27	30	0	75	129	81	48	4	6	7	0	2	11	15	
totals	36.76	146	0	7	1	0	2	3	378	210	4	751	1374	871	491	30	54	69	14	3	99	17	

Table 1.- Upper St. Regis boat launch usage, 2004 summer season. MO = outboard motor; MI = inboard motor; I/O = inboard/outboard motor; P = pontoon boat; J = jetski; S = sailboat; R = rowboat; C = canoe; K = kayak; B = barge

Recreation Study: Lake Placid State Boat Launch, 2004

Prepared by: Dan DeSorcy (Introduction and Methods), Eric Holmlund (Results and Discussion)

Introduction:

This was the third year the Watershed Stewardship Program has had a Steward present at the state launch site of Lake Placid. Lake Stewards were stationed at the launch site between May 24, 2004 and September 1, 2004. Our program took on a five day work week at the Lake Placid State Boat Launch, from Wednesday through Sunday of each week.

The Lake Stewards had a significant duty while being present at the Lake Placid State Boat Launch. The Watershed Stewardship Program provided a crucial message to the boating community of how the spread of invasive species are affecting native terrestrial and aquatic ecosystems throughout not only the Adirondacks, but all of North America as well. The Stewards made it a point to talk to every boater that entered the lake from the hours of 7:00 am until 4:00 p.m. Our efforts were focused on encouraging the boaters to clean their vessels before transferring their boat from water body to water body. An inspection of each boat was performed by Stewards to try and notice any green plantlike material on their boat or trailer that may have been carried unintentionally by a boater from another lake, river, or pond. Stewards made a point to stress that each boater has a responsibility of washing his or her boat at their home. Brochures were handed out to people that were interested in learning more about exotic invasive species, and who wanted to do all they could to help maintain the quality of native habitats. Stewards also informed boaters about speed limits close to shore and advised them to slow down in the channels between islands.

Methods:

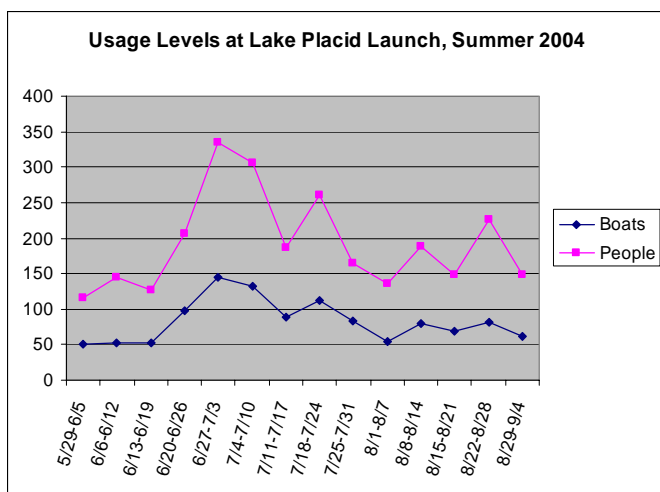
Stewards made their presence known between the hours of 7:00 am to 4:00 pm Wednesday through Sunday of each week from Memorial Day until Labor Day. Stewards were given data sheets to fill out daily at the launch site. A variety of information was taken from each boater that visited the launch site. This included boat size & type, which gets broken into ten different categories. The number of four stroke motors that were noticed by stewards was taken. Group size, with a break down of gender types was taken, along with the number of boats that had been registered. The time that the boater arrived to the launch site was recorded, along with the time that they departed from the dock; an average time spent by boaters to launch their boat was calculated. Numbers of pets were recorded, and an out only box was checked if a boater was hauling his/her boat out of Lake Placid. Boaters that were interested in our brochures were also noted.

In addition to recording data, stewards also tried to make the boating community feel responsible for maintaining healthy lake habitats. Stewards notified the public that the main cause of the spread of invasives is from careless boaters not taking the time to make a habit of washing their boat every time it comes out of the water. This wasn't successful with every boater, but the majority seemed interested to make up for their ignorance of not knowing the proper steps of trying to avoid the transportation of any type of exotic invasive organism. We also made it clear that we would be grateful to answer any question they might have about the Adirondack Park, and encouraged each boater to take a pamphlet provided by the Shore Owners' Association titled "Boating Guide to Lake Placid Lake,"

which included a map, important regulations, and information on general information about the area, as well on invasive species. Fishermen that Stewards encountered were asked to exchange their lead sinkers for a steel sample given for free. Provided by the Adirondack Cooperative Loon Program, steel sinkers do not poison the loon with high amounts of lead.

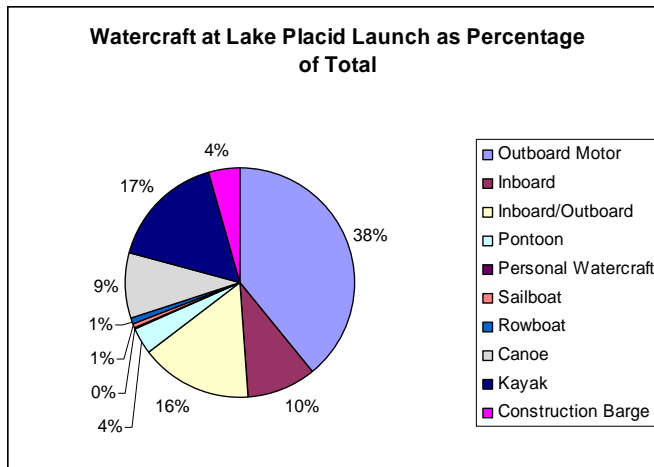
Results:

Of the over 14 weeks between Memorial Day and Labor Day that the Watershed Stewardship Program provided



interpretive and data collection services at the Lake Placid Boat Launch, a total of 2,694 people were counted as launching 1,160 watercraft of various types. The average time spent by each person at the boat launch was 15.3 minutes. Peak usage occurred during the July 4 weekend, July 24-25 and August 28-29. WSP Staff was not able to collect data for September 4 and 5, Labor Day. 277 boats were launched on July 3 and 4, the busiest weekend of the summer.

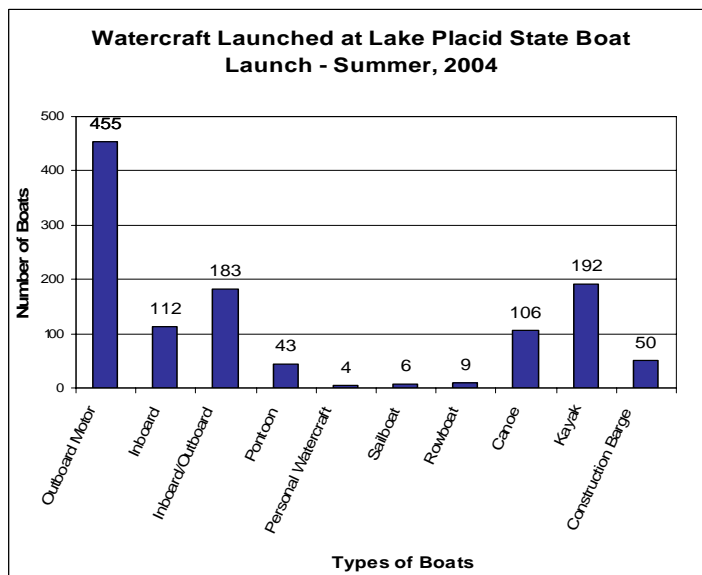
Outboard motors were the most numerous type of watercraft launched in 2004 (455 total; 39% of total watercraft), followed by kayaks (192; 16.5%), inboard/outboards (183; 16%) and inboard motor boats (112; 10%). Banned personal watercrafts were present in extremely low



numbers (4) along with small numbers of sailboats (6) and rowboats (9). Motorized watercraft outnumbered human-powered watercraft by a total of 797 (69% of total watercraft) to 307 (26%). The average horsepower of motors observed was 70, up from 64 in 2003. 78 4-stroke outboards were observed, which was 17% of the 455 total outboard motors recorded. As in 2003, 95% of boats were registered.

State/Province of Origin

As expected, most boats were registered in New York, while others came from a wide range of originating states and one Canadian province, Ontario. The second most represented state was New Jersey, with 35 boats, followed by Pennsylvania and



State	Number of Boats
CA	1
CT	14
FL	5
MA	8
MD	3
MI	1
MS	1
NC	7
NH	1
NJ	35
NY	656
ONT	1
PA	16
SC	2
VA	7
VT	11
WS	2
total	771

Connecticut (16 and 14 boats, respectively). Lake Placid attracts boaters from a wide range of states and Canada, with 16 states and one province represented. Watershed stewards determined originating state by observing registration stickers on motorized watercraft. It is likely that some of the unregistered watercraft would

have originated in states outside New York, as well.

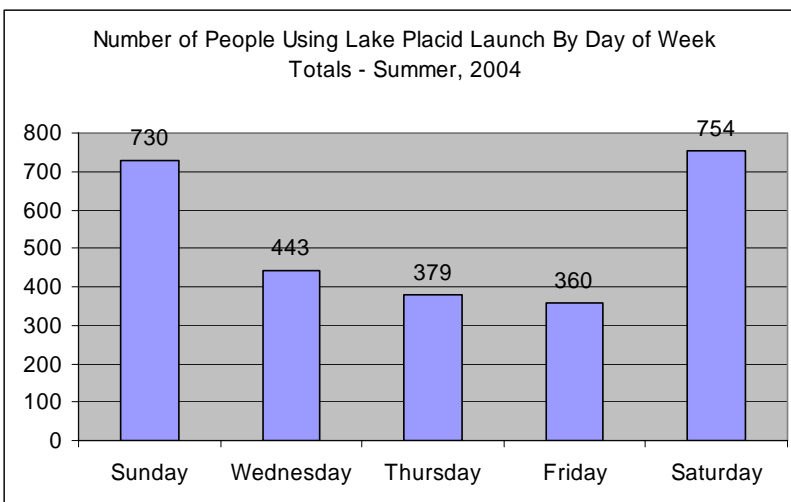
66% of the people launching watercraft were male and 34% were female. The average party size was 2.3 people. 118 pets were tallied; about 10% of the boats launched were accompanied by a (usually) canine co-pilot. About 15% of boats using the launch were taking out from the lake, not launching into the lake. This accounted for 184 boats designated as "out only." It should be noted

that some boats might have been counted twice because of this phenomenon. In other words, a boat may have launched on a Sunday and taken out on a Wednesday, and have been counted on both occasions. The intent of the study is to note total traffic impacting the boat launch. Each occasion of use is an opportunity for Watershed Stewards to educate the public and inspect boats.

In 2004, Watershed Stewards were stationed at Lake Placid 5 days per week, from Wednesday to Sunday. This was an increase of one day per week (Wednesdays) from the coverage level of 2003. We found that the busiest day of the week was Saturday (754 boats during the summer), followed by Sunday (730), which is to be expected. Surprisingly, Wednesdays ranked third highest in boat launches (443) followed by Thursdays (379) and Fridays (360). One might wonder why Fridays were the scene of the fewest relative launches during the week. The reader should note that the Watershed Stewardship Program staff meetings occurred on Friday mornings each week, which delayed the steward assigned to Lake Placid from reaching her post each week until between 10 and 11 am. This undoubtedly caused a smaller number of boats to be tallied than would otherwise be the case.

Discussion

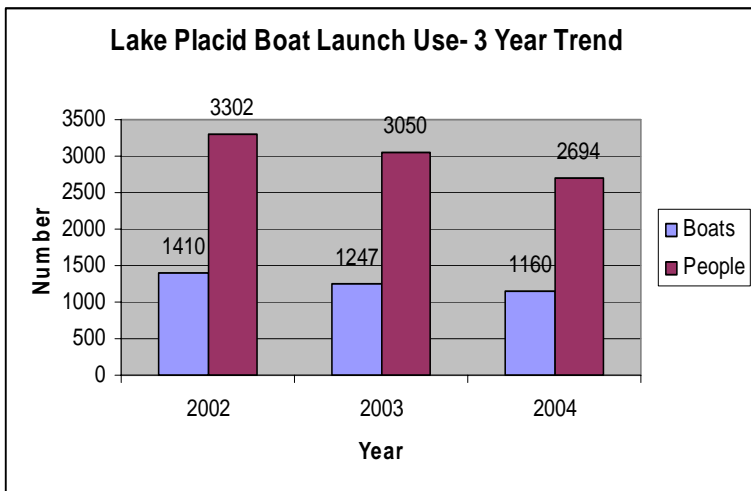
The Watershed Stewardship Program experienced another successful summer of service overall at the Lake Placid State Boat Launch in 2004. The program educated thousands of users and visually inspected over 1100 boats that otherwise would have entered the pristine waters of the lake without a second glance. Stewards reported that most people were open and receptive to both their presence and their message, with some notable exceptions. Stewards handed



out brochures throughout the summer, both the one prepared by the Lake Placid Shore Owners' Association as well as Watershed Stewardship Program literature.

Multi-Year Use Perspective

Usage of the boat launch is trending down over the past three years, despite increased coverage in 2004. This pattern is



likely a result of the wet summer weather, which discouraged residents and visitors alike. According to the Paul Smith's College weather station, 35 days this summer registered rain, which likely caused a decrease in usage. The addition of Wednesday coverage, however, resulted in a net gain of 443 people contacted who otherwise would have launched their boats without proper inspection or education. We suggest that concerned parties consider expansion of boat launch duties to yet another day to further fill the gap in coverage.

This summer was not without challenges, however. A visitor was reported around the public restrooms repeatedly looking in on females while they were in the lavatory. Two female stewards had encounters with this man, as yet unidentified. The Environmental Conservation Police were notified, along with the Lake Placid Village Police. Eventually a sting operation was planned which did not yield the offender. All concerned parties need to be aware of this situation for the future.

The program had unexpected lapses in coverage as well. On four occasions, stewards did not show up for their shifts. The dates of this lapsed coverage were August 1 and 13 and September 4 and 5. The stewards in question did not show for work despite being scheduled for the shifts. We will work to eliminate this situation in the future. The program will consider additional strategies for recruiting highly skilled and dedicated employees from a wide range of sources.

Conclusion

In sum, the Watershed Stewardship Program provided interpretive services on 66 of the possible 70 days of contracted boat launch coverage (94%) and contacted over 2600 people. Stewards were reportedly well-informed, friendly, and dedicated to their posts. Stewards at Lake Placid developed good relations with the Environmental Conservation Police force, village police and state troopers. They worked with LPSOA representatives to advance the discussion of a boat wash station on Lake Placid. The Watershed Stewards assigned to Lake Placid State Boat Launch provided a valuable and essential service in protection of the water quality and recreational experience of the lake.

Lake Placid State Launch, 2004 Data

Date 2004	Boat Type/Size (indicate hp for MO)											Total Boats	Group Size	Registered Boats	Unreg. Boats	Avg Time at launch	Male	Female	Pets	Out Only	4 Stroke Motor	Brochure
	(hp)	MO	MI	I/O	P	J	S	R	C	K	B											
	5/29-6/5	79	21	5	9	1	0	0	3	6	4											
6/6-6/12	55	27	6	4	2	0	0	0	1	6	7	53	145	38	1	19	107	40	7	10	2	2
6/13-6/19	69	22	3	12	3	0	0	0	2	5	6	53	126	45	0	25	88	38	6	5	4	1
6/20-6/26	72	42	11	14	8	0	0	0	7	6	9	97	206	75	1	17	161	41	11	18	6	3
6/27-7/3	47	49	8	35	8	3	1	1	15	19	6	145	334	99	8	13	221	108	15	25	14	2
7/4-7/10	61	46	10	25	3	0	0	1	15	27	5	132	306	83	4	18	191	111	11	14	7	0
7/11-7/17	87	29	9	17	3	0	0	1	5	21	3	88	186	56	4	15	121	73	11	15	4	1
7/18-7/24	66	54	10	15	5	0	0	1	3	23	2	113	261	77	2	13	167	94	8	24	2	0
7/25-7/31	65	31	9	8	4	0	1	0	11	18	1	83	165	48	4	16	103	54	4	6	6	6
8/1-8/7	75	18	8	4	2	0	2	0	12	3	6	55	136	34	0	15	92	44	5	11	7	1
8/8-8/14	74	37	7	8	1	0	1	1	6	14	4	79	189	53	6	14	127	59	10	9	7	23
8/15-8/21	73	30	6	6	0	1	1	1	7	17	0	69	149	37	3	10	104	48	9	9	3	14
8/22-8/28	88	25	9	17	0	0	0	0	12	19	0	82	226	40	5	11	132	92	13	8	5	16
8/29-9/4	71	24	11	9	3	0	0	0	4	10	0	61	149	47	4	12	95	54	4	24	9	4
Grand Total:	70	455	112	183	43	4	6	9	106	192	50	1160	2694	771	42	15.3	1690	880	118	184	78	75
Avg																Avg						

Table 1.- Lake Placid boat launch usage, Wednesdays - Sundays only, 2004 summer season. MO = outboard motor; MI = inboard motor; I/O = inboard/outboard motor; P = pontoon boat; J = jetski; S = sailboat; R = rowboat; C = canoe; K = kayak; B = barge

Recreational Use Study: Upper Saranac Lake Prepared By: Matthew Boss

Introduction:

The goals of the Upper Saranac Lake Recreational Use Study were to evaluate and characterize the recreational use of the lake as well as to raise awareness as to the threat of invasive species to the neighboring ecology. Upper Saranac Lake is currently undertaking extensive management actions for the control of Eurasian Water Milfoil (*Myriophyllum spicatum*). Part of the management process is education and information exchange. The Stewardship Program plays an important role in the delivery of that information to recreators who intend to use that resource. With the large quantity of invasive milfoil that exists in the lake, it is very important to make sure that it is not transferred to surrounding lakes. The Stewardship Program also maintained the sinker exchange box, provided by the Adirondack Co-operative Loon Program which allowed anglers to exchange environmentally harmful lead sinkers and sample more ecologically sound steel and ceramic sinkers.

This season, the presence of stewards was scaled back to Saturdays and Sundays only. The information gathered represents just those days. In the future we hope to resume our daily visits to the public launch at Saranac Inn.

Methods:

The Recreational Use Study of Upper Saranac Lake was conducted Saturdays and Sundays, from May 29 through September 9, 2004. Stewards were posted at the public boat launch located in Back Bay. The stewards collected data pertaining to the boat type (motorized, non-motorized etc.), mode of propulsion, group size and gender composition, time of arrival/departure, registration information (when applicable) and if any pets were accompanying users. After this data was recorded, stewards then approached the user, introduced themselves and delivered a brief interpretive message concerning the invasive

species that threaten the resource and how individuals can help in their management. The stewards then offered the opportunity for assistance with any additional questions that may arise such as the sinker exchange program and the Adirondack Co-Operative Loon Program. The stewards also visually assessed the vessel and equipment being launched or taken out in order to identify any vegetation that may be transferred either into or out of Upper Saranac Lake.

Results:

Total usage of the public launch located at Upper Saranac Lake on Back Bay, from Memorial Day to Labor Day, 2004 totaled 505 boats and 1083 people (Table 2). Motorized boats were the most commonly used watercraft, representing 72% of total boat launches. Outboard motors were the most popular engine type. The outboard motorboat group had an average horsepower of 93 and comprised 50% of the boat usage. Inboard/outboard usage totaled 13%, inboard motors 2%, pontoon boats 2%, jet skis 4%, and barges 1% of boat launches. Of the boats launched, 18% were canoes, 8% were kayaks and 2% were "other." Non-motorized boats comprised 28% of overall launch usage. 24 out of 256 outboard motors were observed as being 4-stroke engines (9%), which put far less oil and gas into the water. Peak usage was noted on the weekend of 8/14 and 8/15 with 131 boats launched, of which 59 were canoes on Sunday for the annual canoe race. July 3 and 4 was the next busiest weekend, with 68 boats launched. Labor Day weekend was not covered due to staff shortages.

Discussion:

Boat launch use in 2004 was difficult to compare to previous years as the number of days the stewards were present was greatly reduced, from 7 to 2, due to the milfoil management project currently underway

which absorbed all available support from the Upper Saranac Lake Foundation. Paul Smith's College was able to fund an abridged effort.

The shore owners encountered by the Stewards proved to be well aware of the problems that exist as a result of invasive species infestation. The awareness is no doubt a result of the efforts to educate shore owners in order to prepare them for the milfoil removal effort. The Upper Saranac Lake Foundation should be commended for their efforts in bringing this problem to the forefront and for taking the lead in the management of the lake they care so much about. Many shore-owners encountered commented on their desire to see the stewardship program stationed at Fish Creek

Ponds Campground in order to protect Upper Saranac Lake's headwaters from Eurasian watermilfoil and to educate a greater volume of boaters.

Visitors to the lake also seemed very aware of the threat that invasive species pose to our shared waters. A common suggestion was to construct a boat wash station for boats leaving Upper Saranac Lake at Saranac Inn. Visitor awareness can only benefit the public as a whole. As people discover the problems that result from careless use of natural resources and the threat this poses to continued recreation, people will begin to take the necessary steps in order to ensure that they are not contributing to the problem. Recreators will become a part of the solution.

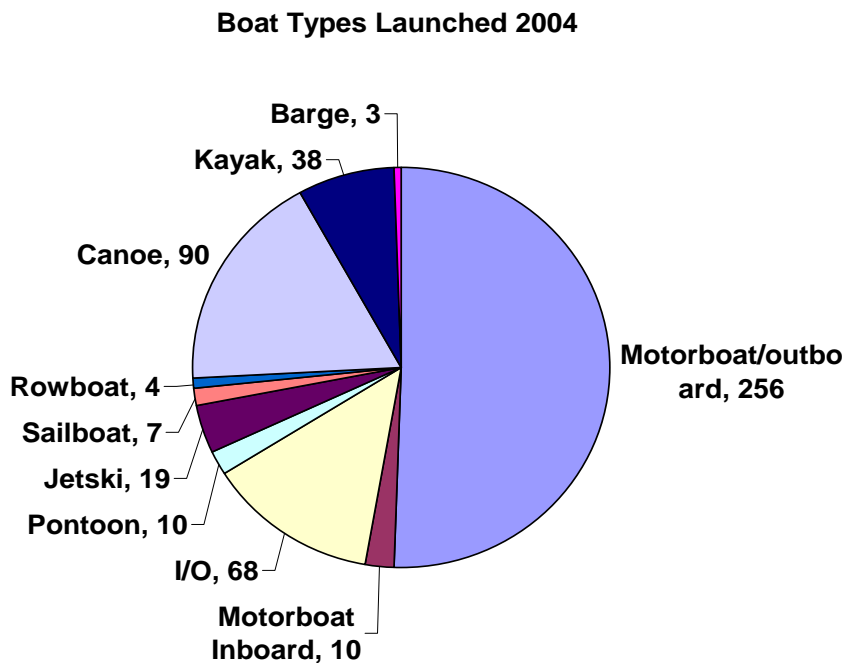


Figure 1. - Indicates the type and number of boats launched at the Saranac Inn Public Boat Launch, Summer 2004

Date/Day of Week	Boat Type/Size (indicate hp for MO)											total boats	Group Size	Gender		Pets	Out Only	Brochure	4 stroke motor on outboard?
	(Average hp)	MO	MI	I/O	P	J	S	R	C	K	B			M	F	Y			
5/29/04	95	11	2	6	0	2	0	0	1	0	0	22	45	35	10	2	1	0	2
5/30/04	0	0	0	0	0	0	0	0	0	1	0	1	28	17	11	0	1	0	0
6/5/04	79	7	0	5	0	1	2	0	0	0	0	15	32	22	10	0	3	3	0
6/6/04	113	3	0	0	0	0	0	0	1	0	0	4	10	6	4	0	0	0	0
6/12/04	41.5	5	1	1	2	0	0	0	0	0	0	9	12	11	1	1	1	4	4
6/13/04	127	7	2	0	0	0	1	0	0	0	0	10	25	18	8	3	0	0	0
6/19/04	108	6	0	3	0	0	0	0	0	0	0	9	18	15	4	1	3	0	0
6/20/04	188	3	0	3	0	0	0	0	0	0	0	6	17	9	8	2	3	6	1
6/26/04	137	8	1	5	1	0	0	0	0	1	0	16	39	24	15	1	1	0	0
6/27/04	130	4	0	2	0	0	0	0	0	0	0	6	16	11	5	0	1	0	0
7/3/04	82.5	20	0	14	2	3	1	0	1	0	0	41	122	70	53	10	1	0	2
7/4/04	91.7	23	0	0	0	2	1	0	1	0	0	27	84	47	37	3	5	0	3
7/10/04	88.1	12	2	5	1	0	0	0	8	1	0	29	86	48	31	2	4	0	0
7/11/04	78.3	24	0	2	1	1	1	0	0	5	0	34	77	46	30	5	3	2	4
7/17/04	64.8	12	1	2	0	0	0	0	1	1	0	17	43	29	14	3	5	0	2
7/18/04	86.8	9	1	0	0	1	0	0	1	1	0	13	30	18	11	2	0	11	0
7/24/04	83.9	15	0	3	0	1	0	0	1	0	0	20	60	35	22	0	4	20	0
7/25/04	84.9	19	0	1	0	1	0	0	0	5	0	26	76	45	32	4	5	25	2
7/31/04	96.7	3	0	2	0	0	0	0	5	0	0	10	22	17	5	0	10	1	1
8/1/04	108	21	0	1	0	0	0	0	3	3	1	29	4	38	19	2	2	25	0
8/7/04	61.4	6	0	5	1	1	1	0	0	2	0	16	42	28	14	1	5	0	1
8/14/04	106	9	0	6	2	4	0	0	7	3	0	31	68	39	24	3	7	0	2
8/15/04	104	22	0	0	0	0	0	4	59	15	0	100	98	50	48	4	0	22	0
8/29/04	72.8	7	0	2	0	2	0	0	1	0	2	14	29	23	8	0	8	12	0
TOTALS	92.8	256	10	68	10	19	7	4	90	38	3	505	1083	701	424	49	73	131	24

Table 1.- Upper Saranac Lake boat launch usage, weekends only, 2004 summer season. MO = outboard motor; MI = inboard motor; I/O = inboard/outboard motor; P = pontoon boat; J = jetski; S = sailboat; R = rowboat; C = canoe; K = kayak; B = barge

Recreation Use Study: St. Regis Mountain
Prepared By Matthew Boss and Eric Holmlund

Introduction:

St. Regis Mountain rises out of the St. Regis Canoe Wilderness Area to an elevation of 2873 feet. The mountain is well known for its relative ease of access as well as its extraordinary vista which is noted in the State Land Master Plan as a "Point of Interest" as prepared by the Adirondack Park Agency. The view from St. Regis Mountain is a highlight of many peoples' "Adirondack Experience" as evidenced by the large numbers of hikers that ascend to its peak every year. As a result of the mountains popularity, heavy use has led to a chronic soil erosion problem both at the summit and along the trail. In response to a degradation of the overall area, the Watershed Stewardship Program has endeavored to assist in the protection and management of this valuable resource.

This season, a steward was stationed at the summit of St Regis Mountain on weekends in order to meet, educate and assist hikers. Along with the public education, stewards collected data relating to the number, behavior and preparedness of hikers. The goal of this study is to gauge the amount of use the area is subject to as well as the types of users that take advantage of this incredible opportunity to see the Adirondacks from a different perspective.

Methods:

The mountain use study was conducted each weekend from Memorial Day through Labor Day, 2004. Each Saturday and Sunday a steward would begin hiking at 8:00 am. Once at the summit the steward would begin the data collection and interpretive messages. Once hikers made it to the summit, the steward would record

the group size, gender composition and time of arrival/departure. Data concerning the types of equipment used (sneakers, cotton clothes etc.), pets accompanying hikers, their general behavior (walking on rocks vs. on the grass, climbing the fire tower) and any additional comments were recorded. Once the data was recorded and the hikers caught their breath, stewards would approach them and introduce themselves. They would then deliver a brief interpretive message that relayed the importance of leave no trace etiquette. This meant explaining the erosion problem and suggesting that the hikers travel and rest on durable surfaces whenever possible. The steward would then offer the opportunity for more detailed information regarding the view, fire-tower, St. Regis Canoe Area, etc.

Results:

The Stewards encountered 859 hikers atop the summit between May 29 and September 4, 2004. The typical hiker would be a male who arrived around 12:30 pm and departed at around 1:30 pm. They would normally be outfitted with cotton clothes, sneakers and a backpack and they would most likely be walking on the hardened surfaces. They most often would not be accompanied by a pet. Males made up 54% of the overall population with females representing 46 %. The amount of hikers with pets was 52 which represented 8% of the overall hikers encountered. The heaviest use occurred July 4th weekend (figure 1). The data collected on July 3rd was impaired by the number of hikers at the summit. There were simply too many questions being asked of the steward. A survey of the trail register indicated that 107 hikers signed in on July 3rd.

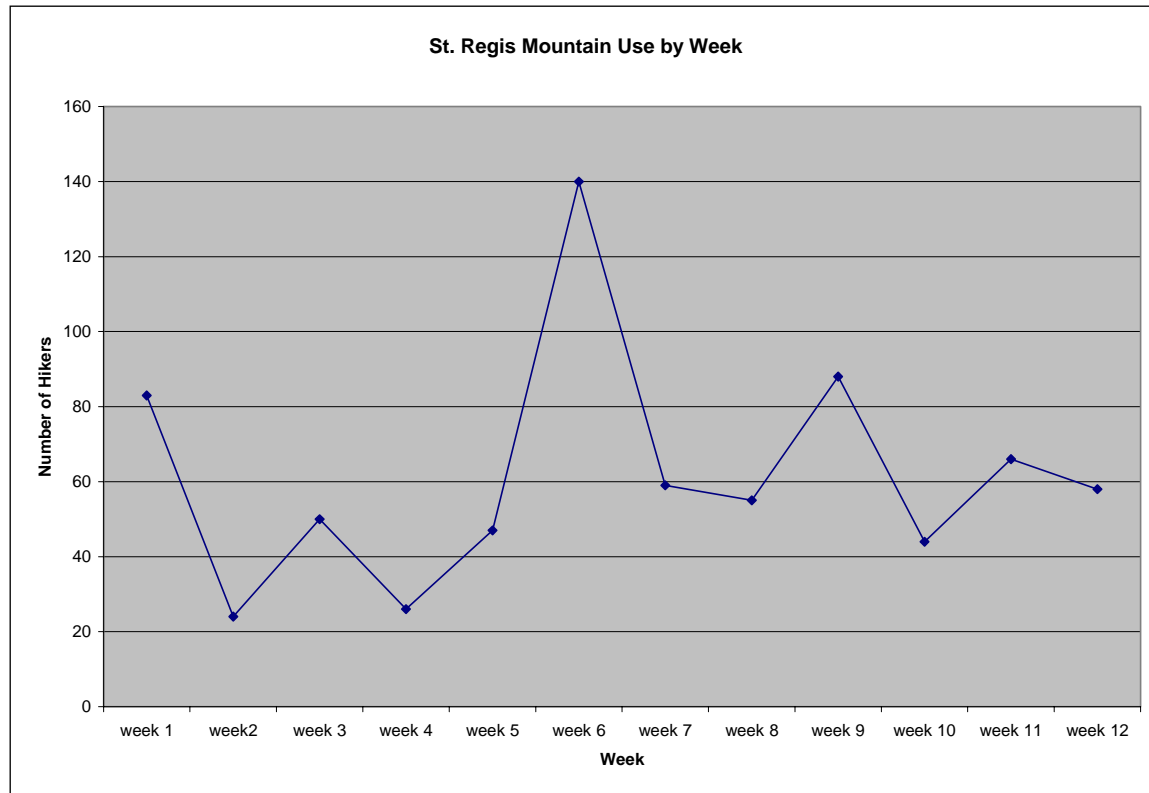
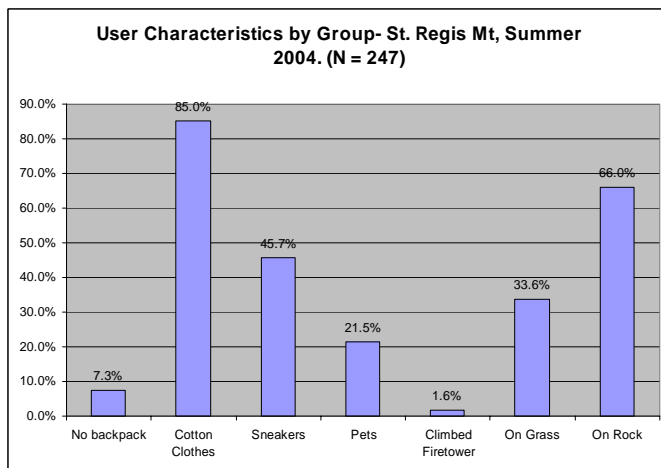


Figure 1- Graph indicates the use patterns by hikers of the St. Regis Mountain, separated into weeks. Greatest use occurred on July 4th weekend while least use occurred weekend after Memorial Day.

The 859 hikers recorded on St. Regis Mountain traveled in 247 groups, for an average group size of 3.5 people. Stewards recorded equipment and behavior by group, not individual hikers. The vast majority of groups (85%) were attired in cotton clothing, which is not the recommended fabric for outdoor recreation in

Number of Groups Where Individuals:	
Climbed Fire Tower	4
Walked on Grass	76
Walked on Rocks	152

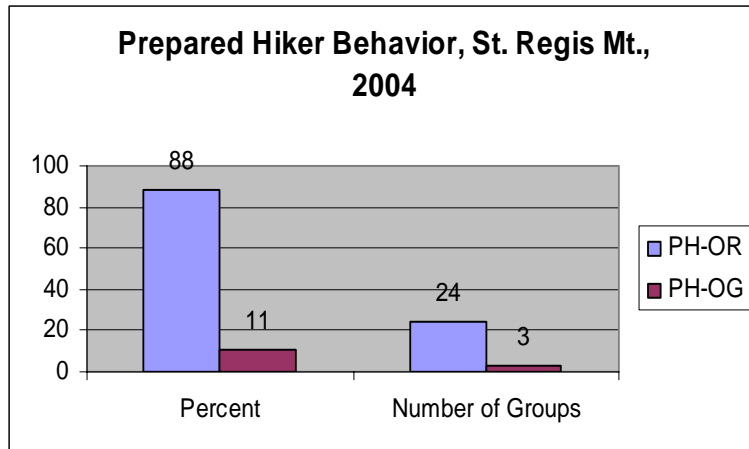
Table 1 – indicates group behavior while on Summit of St. Regis Mountain (as observed by stewards)



the Adirondacks due to the increased risk for hypothermia when the fabric becomes saturated with moisture from sweat or precipitation. Most groups were equipped with backpacks (over 96%) and hiking boots (over 54%). The majority of groups were observed walking and resting on exposed bedrock (66%) rather than grass/vegetation (33.6%). This is a useful behavior in terms of retaining soil and plant life on the heavily traveled summit of the mountain.

Hiker Behavior Analysis

Groups reaching the summit of St. Regis Mountain were observed as to equipment and



behavior. Prepared hikers are generally considered as having backpacks, non-cotton clothing and hiking boots. Unprepared hikers were deficient in one or all of the above categories. For the purpose of the following analysis, 228 hiker groups were considered, divided into prepared and unprepared groups. Unprepared hikers (UH) were determined to be those groups attired in cotton. Prepared hikers (PH) were attired in non-cotton clothing, carried backpacks and wore hiking boots. There were 27 hiker groups in the prepared hiker (PH) class (12%), while there were 201 hiker groups in the unprepared hiker (UH) class (88%). Next, hiker behavior was observed. Hikers were either seen walking predominantly on exposed rock (OR) or on summit grass and vegetation (OG). Trends within the groupings are evident as follows. Note that PH- OR indicates Prepared Hikers: On Rock. PH-OG indicates Prepared Hikers: On Grass.

Unprepared Hikers

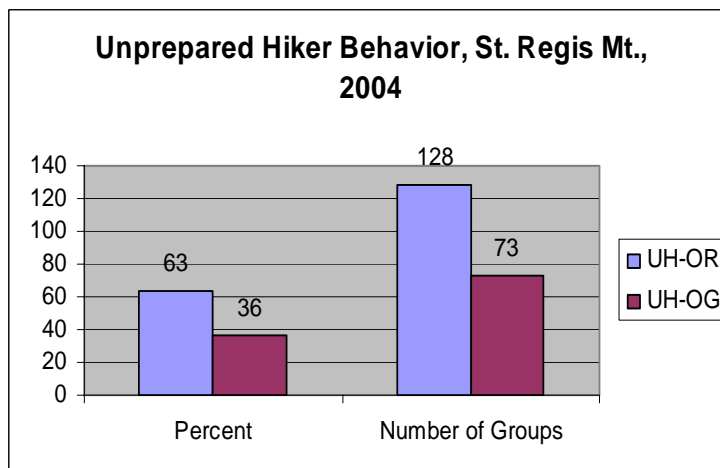
In the following chart, UH-OR indicates Unprepared Hikers: On Rock. UH-OG indicates Unprepared Hikers: On Grass.

The reader will see that there is a difference in the behavior of prepared and

unprepared hikers in terms of their willingness to avoid grassy areas on the summit. It is evident that more prepared hikers are less likely by a factor of at least 3 to tread on summit grass and vegetation. The chart below compares the two groups directly.

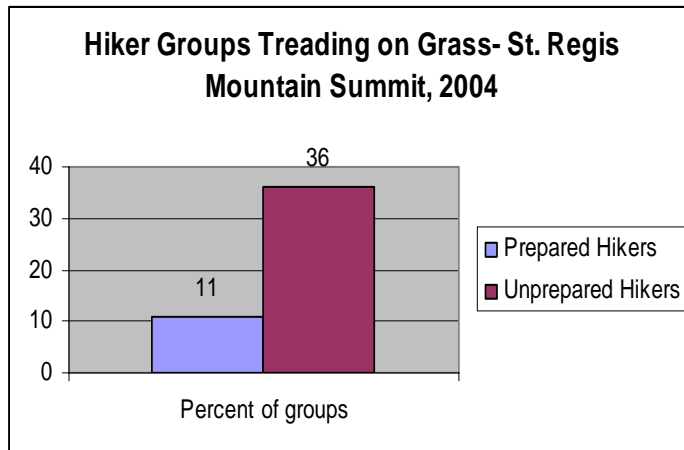
An obvious aspect of this portion of the study is that there are far more hikers classified as “unprepared” than “prepared.” Therefore, the greater percentage of hikers treading on summit grasses in the “unprepared” hiker group yields even more points of damaging contact than at first consideration. 33% of all groups in the study (76 out of 228

total groups) were observed treading on grass. Since hikers who are “prepared” are 3 times less likely to tread on grass, it might follow that efforts to increase preparedness through education would result in fewer people overall treading on alpine grass and vegetation.



Discussion:

During the 2004 season, stewards met and interacted with over 850 people at the summit of St. Regis Mountain. Many of these people were glad to see a steward and often remarked about how good it was to have someone there in case of emergency. Many families were encountered by the stewards. One particular father had his child of about 10 years of age explain to this steward why it was important to walk on the hard surfaces due to



thin soils and delicate plants. The St. Regis Mountain fire tower drew a minority of hikers and proved to be a topic of conversation among those who made it to the top. Many hikers believed that it was an important example of Adirondack history and that it should be restored while many others believed that it was an eyesore that should be removed as soon as possible. This steward often proposed that the tower should be removed and restored as an exhibit either at the Paul Smith's Visitors Interpretive Center or at the Paul Smith's College Campus. Most thought this was a reasonable alternative.

The data collected of St Regis Mountain this season represents the largest use of any season so far recorded. The total number of users represented in past reports was easily exceeded (table 2). The growing number of hikers utilizing St. Regis Mountain indicates a continuing need of education and interpretation by the Watershed Stewardship Program.

Total Number of Hikers-Weekends Only	
Year	# of Hikers Recorded
2001	632
2002	554
2003	689
2004	859

Table 2 - indicates the trend in use season by season. The 2004 season represents the largest use when compared to past data.

Conclusion:

St. Regis Mountain and the presence of the Watershed Stewards offers visitors of the Adirondacks an opportunity to see a wilderness recovering from wide scale logging, devastating fires and decades of intensive use. Were it not for the interpretation, many visitors would never be aware of the changes and growth occurring right before their eyes. Watershed Stewards also impart messages about soil and vegetation conservation as well as leave-no-trace ethics to a public in great need of such messages. The mountain duty also provided the Stewards with an excellent opportunity to enjoy a few minutes of solitude in which to recharge and reflect on the reasons why we need to advance the stewardship of this region and the irreplaceable natural world we are all a part of. Without it, we could not be.



Watershed Steward Matt Boss hard at work on a "classic" mountain day

St. Regis Lakes Purple Loosestrife Removal Project, 2004

Prepared by: Dan DeSorcy and Eric Holmlund

Background:

Purple Loosestrife (*Lythrum salicaria*) is a perennial herb native to Eurasian wetland soils. It was introduced to U.S during the 1800's for ornamental use of the strikingly beautiful magenta colored flower. Medicinal use of the herb was also used widely by our ancestors as a treatment for dysentery, as well to stop bleeding in some cases. Purple Loosestrife presented itself as a pioneering species for nearly 100 years. About 60 years ago, Purple Loosestrife began to spread in a rapid fashion around North America. The largest abundances are found in wet areas, such as roadside ditches, or wetland habitats.

Once Purple Loosestrife is introduced to an area, it rapidly out-competes the native vegetation. Purple Loosestrife's tendency to grow under various environmental conditions along with its extreme reproductive capacity makes the plant a critical threat to biodiversity. In addition to the plants that Purple Loosestrife out-competes, many other organisms are affected. Many plants and animals will suffer from Purple Loosestrife infestation, including migratory birds, reptiles, amphibians, larger mammals, and those many invertebrate species that depend on a wide variety of native plants for food and shelter.

The ability of Purple Loosestrife to produce up to 300,000 seeds per single stalk, and up to 3 million seeds per season when dealing with mature plants, makes for fierce competition between itself and native flora and fauna that depend on areas of high diversity. Seeds submerged in water remain viable for up to 20 months, and can be transported by water to different areas of shoreline by the highly unpredictable wind currents that are common to the northeastern jet stream.

Materials:

A handheld GPS unit was used for mapping and Ziploc bags to keep documents dry. The harvest of the Purple Loosestrife included the use of the Stewardship program boat, pruning shears, fifty gallon black trash bag, and topographic map.

Methods:

The removal of Purple Loosestrife in the St. Regis chain of lakes was focused on the site locations generated during the summer of 2002. Additional sites emerged from the years past, but population sizes in those areas remained significantly smaller than those of pre-determined sites.

For the third year the program acquired the help of the Terrestrial Invasive Species Project coordinator Steven Flint of the Nature Conservancy. Our program took part in the "Adirondack Park Non-Native Invasive Plant Species Initiative" which is a cooperative effort between the NYSDEC, APA, and the NYS DOT along with the Nature Conservancy/ Adirondack Land Trust. Steven Flint helped with mapping, and harvesting the Purple Loosestrife on the 27th, and 28th of July. GPS coordinates were recorded; along with the number of plants picked of each site that Purple Loosestrife was located. This effort also benefited from the interest, support and observations of Property Owners' Association members who alerted us to areas on the lake chain with Purple Loosestrife.

The majority of the plants that were located in thin soil were removed by the root. Exceptional rainy conditions made the removal of the root systems easier than if drier conditions were present. In the diversity of a wetland habitat, the soil community is a dense network of roots, creating the root system of Purple Loosestrife to become a hard candidate for root expulsion.



Table 1- Treatment Dates and Plants Harvested

Site	Treatment Dates- 2004 (# plants harvested)
S1	7/27-28/2004 Flint and DeSorcy (42)
S2	7/27-28/2004 Flint and DeSorcy (98) 8/16/2004 DeSorcy (13)
S3	7/27-28/2004 Flint and DeSorcy (3)
S4	7/27-28/2004 Flint and DeSorcy (41) 8/16/2004 DeSorcy (33)
S5	7/27-28/2004 Flint and DeSorcy (120) 8/16/2004 DeSorcy (26)
S6	7/27-28/2004 Flint and DeSorcy (26)
S7	7/27-28/2004 Flint and DeSorcy (0) 8/6/2004 DeSorcy (714) 8/16/2004 DeSorcy (28)
S8	7/27-28/2004 Flint and DeSorcy (34)
S9	7/27-28/2004 Flint and DeSorcy (116)
S10	7/27-28/2004 Flint and DeSorcy (50)
S11	7/27-28/2004 Flint and DeSorcy (0)
S12	7/27-28/2004 Flint and DeSorcy (1)
total	1,345 plants removed in 2004

Results

The 2004 Purple Loosestrife mapping and control efforts showed an increase in plant population compared to the 2003 effort. It is clear that Purple Loosestrife has not been dealt a decisive blow, and that some recovery of plant density has occurred over the last year. However we did not find plant infestations at the level of 2002, which remains the high point of Purple Loosestrife infestation (3190 plants removed).

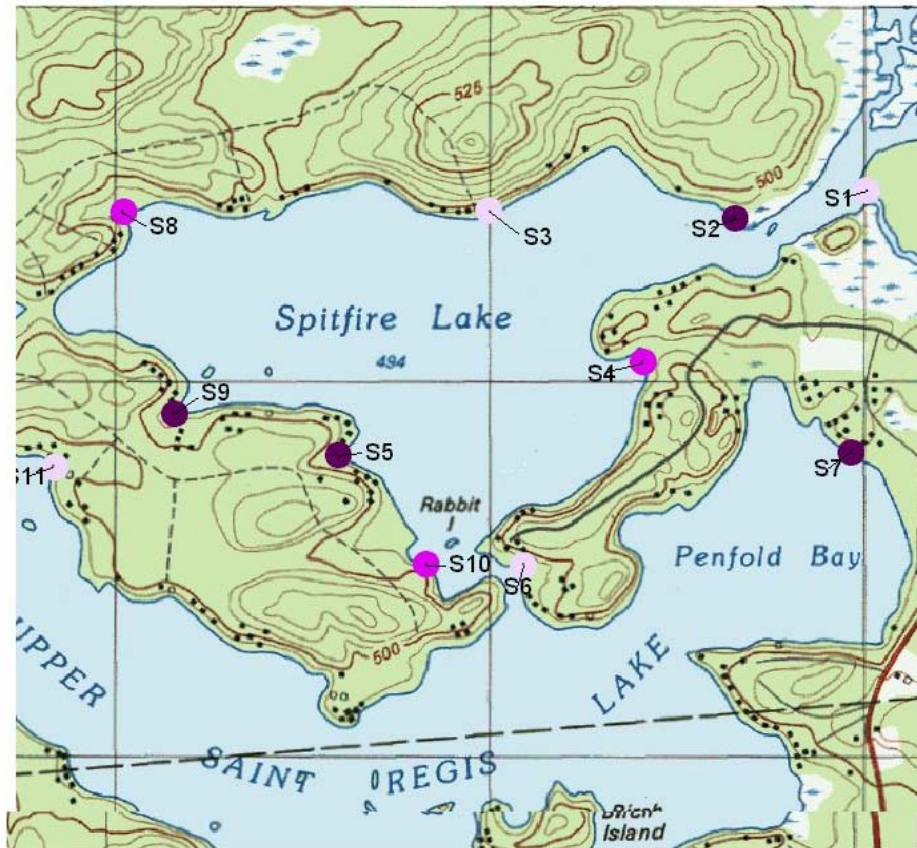
Eleven sites were investigated and cleared of Purple Loosestrife. Nine of these eleven sites, or 82%, experienced growth in numbers of Purple Loosestrife plants compared to 2003. The remaining 18% experienced a decline of numbers of Purple Loosestrife plants.

Overall, the effort discovered a 95% increase in Purple Loosestrife plants discovered from 2003 – from 690 to 1,345 plants in 2004.

Table 2 – 2004 compared to past years

Site	GPS	2001	2002	2003	2004
S1	N4918731 E559028	30	8	16	42
S2	N4918673 E558675	25	260	35	111
S3	N4918680 E557988	18	11	13	3
S4	N4918290 E558390	110	49	3	74
S5	N4918087 E557660	250	915	117	146
S6	N4917748 E558103	5	63	5	26
S7	n.a.	450	1400	330	742
S8	N4918636 E557038		123	5	34
S9	N4918149 E557190		437	143	116
S10	N4917831 E557837		74	23	50
S11	n.a.		14		
S12	N4918960 E559279				1
totals		888	3354	690	1345

It is important to note that the methods employed in this Watershed Stewardship Program effort were entirely human powered. That is, no pesticides were used. However, under the guidance of the Nature Conservancy and the Invasive Plant Program, there could be circumstances where other measures need to be considered to remove the threat decisively. The plant has shown tenacity and the ability to thrive despite fairly massive disruption by our crew.



- Loosestrife Sites
- low abundance
 - medium abundance
 - high abundance



Figure 1: Map of Purple Loosestrife Infestation Sites

Invasive Plant Monitoring: St. Regis Lakes
Prepared by: Kara Kushmerek

Introduction:

In conjunction with the Adirondack Park Invasive Plant Program, Watershed Stewards Kara Kushmerek and Matt Boss and volunteer, Alex Loth conducted an invasive plants survey on Upper St. Regis, Spitfire and Lower St. Regis Lakes.

Methods:

The mapping took place over two days, August 24 and 25, 2004. One steward drove the boat in a zig-zag pattern along the shoreline, while the other steward identified sample areas. Samples were taken via a "Weed Weasel", a short handled, double sided rake with a rope attached. The rake was thrown overboard from three sides of the boat and samples pulled were identified. The rake was thrown in randomly as well as in areas where heavy vegetation occurred (likely places for invasives to grow).

Results:

No invasive species were found in any of the three lakes. There were some areas with dense beds of native milfoils and Bladderwort. These areas were marked on the map as potential invasive species sites in the future.

Invasive Plant Monitoring: Lake Placid

Prepared by: Kara Kushmerek

Introduction:

In conjunction with the Adirondack Park Invasive Plant Project, Watershed Steward Kara Kushmerek and volunteer, Alex Loth conducted an invasive plants survey on Lake Placid. Free use of a small outboard was donated by local boat renter, Dan Kaestle. We are very grateful for his donation and support.

Methods:

The inspection took place on September 1, 2004. The volunteer drove the boat in a zig-zag pattern along the shoreline, while the other steward identified sample areas. Samples were taken via a "Weed Weasel", a short handled, double sided rake with a rope attached. The rake was thrown overboard from three sides of the boat and samples pulled were identified. The rake was thrown in randomly as well as in areas where heavy vegetation occurred (likely places for invasives to grow).

Results:

No invasive species were found in Lake Placid. In fact, very little plant life was found in any of the sample areas. The shoreline is very rocky and deepens rapidly, providing little space for aquatic plant life to grow.

Banded Loon Monitoring Report

Prepared by Kara Kushmerek

Background

Throughout the summer of 2004, steward Kara Kushmerek monitored loon nests on Upper St. Regis and Spitfire lakes. This project was in cooperation with the Adirondack Cooperative Loon Program (ACLP). The ACLP is concerned with the status of the Common Loon (*Gavia immer*) in the Adirondack Park. Loons are considered to be an indicator species, as they are high up in the food chain and thus demonstrate biomagnification of toxins in their environment. The status of the loon population helps to lead to other conclusions regarding the overall health of the bird's habitat. 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 sometimes 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.



Method

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 and was responsible for weekly observations and data collection. Two nests were found on Upper St. Regis, one on Birch Island and the other in Spring Bay. The third nest was on an island on Spitfire Lake. The entire process took between 3 and 6 hours.

Results

All three pairs were successful in their reproductive efforts this year. Although they laid two eggs, the nesting pair on Spring Bay only brought one chick into the world. It is not clear what happened to the other chick. 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 egg that was laid hatched sometime in the between of July 10th and July 14th. Each week after that, the chick was observed in Spring Bay. The week of August 25th, the pair and the chick were observed at the edges of their territory, indicating that the chicks were maturing and getting ready to fledge. It was also discovered this summer that this pair had replaced the previous year's pair (which was banded.) The steward discovered in her last couple of weeks of monitoring that this pair was in fact, not banded.

In late June, the steward discovered another nesting site on Birch Island. The pair had at least one banded bird and had just successfully hatched two chicks. Eggshell fragments were collected from the nest site to be sent in for lab analysis of mercury levels. The family moved across the lake near High and Pearl Islands to raise the chicks. This may have to do with the heavy boat traffic near Birch Island. The chicks both appear to be healthy and are diving and spending more time away from the adults. This pair was an exciting find, as the banded bird is a newcomer to Upper St. Regis Lake. The banded

bird has Red/Yellow on its right leg and white on its left.

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. Both chicks hatched during the week of June 28th to July 4rd. Both chicks have successfully grown with the adults. This pair had at least one unbanded adult, who was banded during late July. This was the male of the pair. He was also given a satellite telemetry antenna. He will become part of the research effort to learn more about loon migration patterns. The migration study hopes to be able to identify other possible threats the loons may face as they migrate, as well as learn more about their migration habits. The male has recovered well from his surgery and the family is still together.

Sometime in the fall is the normal time for chicks to fly to the coast for the first time. The chicks will then remain on the ocean for as long as five years before maturing and returning to the lake on which they were hatched, as adults.

Conclusion

The 2004 effort to monitor banded loons on the St. Regis Lakes again yielded important details about the natural history of this beloved lake resident. The information brings the human community closer to the world of the loon, and gives us insight into our affects on its ability to thrive. Lake residents and visitors alike feel part of the effort to protect the loon, and the Watershed Stewardship Program appreciates the many local residents who watch out for the loons and share information with the program.

Figure 3- Comments Field from Adirondack Cooperative Loon Program Data Form

Comments
Did not see any loons on Upper St. Regis. Heard calls from a distance and saw a pair fly over head--going towards Spitfire?
Saw a pair in Spring Bay--nearly missed them, they came back in as I was getting ready to move on. Watched them feed for a while. Was unable to see bands. Think they may have a nest in far corner of bay, will have to spend more time looking for both nest and bands.
Followed the spring bay pair around for a good couple of hours. Was unable to get close enough to see legs though as the birds kept moving away from me. Diving, feeding. Did not find nest site.
Saw one bird on nest, I think the mate was at the mouth of spring bay, feeding. I followed for a while and it began preening. Did not appear to have bands on legs, but could not tell for sure-- if they were white bands, it is possible that they blended in with his belly. I would need to get closer to tell for sure.
bird on nest, other feeding. Unable to see bands or how many eggs on nest. These birds don't let me get too close.
bird on nest, other feeding in bay. Rolled over a preened belly, saw no signs of color on legs. Sat on island and watched pari for a while. Bird on nest alert, but not moving. Had a good plan to watch for a while, when a couple of kayakers came along. they must've known where to look for the nest b/c they paddled right up to it, scared the loon off and then they left. bird got back on nest w/in 10 min or so. was not able to see bands though, too much grass in the way. they are still nesting though, no chicks yet that i could see.

Lake Placid Boat Wash Proposal 2004

Prepared by: Dan DeSorcy

One of the main duties that a Watershed Steward takes to his or her job everyday is that of interpretation. We seek to ensure that the boating public is aware of the harm that invasive species can pose to both aquatic and terrestrial eco-systems. Our program focuses its efforts on the Adirondack region with its vast expanse of rivers, lakes, streams and ponds. When educating the public about the harmful effects that invasive species pose to the native habitat, we also encourage them to wash down their vessel when transferring it from water body to water body, to help isolate the lakes that have exposed to the exotic invasive nuisance of Eurasian watermilfoil.

While working for the Watershed Stewardship Program over the course of the 2004 summer season, I found the same questions arising from almost every boater I came in contact with. Is there a boat wash station here? Why isn't there a boat wash station if this is such a large



priority? When asked questions of the sort, I had no choice but to sympathize with the boating community, and reassure them that I was employed by Paul Smith's College, and not by the New York State Department of Environmental Conservation (NYDEC), which owns the land that both the Upper Saranac Lake and Lake Placid boat launches are located.

It is unlikely that the NYSDEC will spend money on boat wash facilities located at the most highly used launch sites. This could be due to current budget issues that they are experiencing. Knowing that the money had to come from somewhere, I went to the Town of North Elba town offices in which the state boat launch is located. I gave a letter (see below) to the town supervisor Shirley Seney, pointing out the vested interest that Lake Placid is to them, and how its unique cleanliness is something that isn't going to last forever. This same letter was given to the mayor of Lake Placid Village, along with the Lake Placid Shore Owners Association (L.P.S.O.A). My goal is harmonize the efforts to try and keep Lake Placid the cleanest resource it could possibly be. If all parties including the NYSDEC, The Town of North Elba, the Village of Lake Placid, and the L.P.S.O.A would put funds aside to construct a \$10,000 boat wash, the amount spent by each party would be minimal.

I was informed that the issue was placed on the agenda for September town meetings of both the Village of Lake Placid, and The Town of North Elba. I hope that the creation of a boat wash station gains support around the North Country from recreators to fisherman alike.

Results from my investigation of the costs of the Upper St. Regis Lake Boat Wash Station:

St. Regis municipal boat launch wash down station:

- \$1,500 for Northwoods Engineering (Architect services)
- \$8,500 construction (performed by Tim Moody)
- Total: roughly \$10,000

Appendix: Letter to Shore Owners' Association,
Lake Placid Mayor Politi and Shirley Seney
Regarding Boat Wash Station at Lake Placid Launch

August, 2004

To: The Shore Owners Association of Lake Placid

My name is Dan DeSorcy. I am an Employee of Paul Smith's College Watershed Stewardship Program, as well as a member of the student body. Our program provides interpretive guidance to boaters about the threat, and ongoing problem that invasive species pose to this region.

As you know, we are stationed at the Lake Placid public boat launching site five days a week. We have noticed in the past years that the launch site in Lake Placid is the most heavily used, as compared to the Upper Saranac Lake and Upper St. Regis launch sites. This could be due to the popularity of Lake Placid being one of the cleanest lakes in the North Country, or because it is said to be an excellent fishing getaway.

While talking to numerous boaters through this half of the summer, a good many have asked me questions like; "Why doesn't this launch site have a boat wash for us to use?" Or, "If this is such a serious issue, why doesn't the state do something about it?" When boaters ask questions of this sort, I simply try to tell them that it is the state's responsibility, considering that it is a state owned launch site. When I tell the public this, they frown because they know that the state's budget is unlikely to include funds designed for projects of the sort. This ultimately delays the issue of implementing a boat wash station for the public boat launch of Lake Placid. There are a growing number of boat launches that provide a wash station, one being the Upper St. Regis municipal launch site. Other states such as Vermont, New Hampshire, and Maine are taking the initiative of helping preserve the natural and native habitat of their lakes, and ponds by providing wash down stations located at their boat launch sites.

The constructions of a boat wash station for the public launch site of Lake Placid would benefit both the economy, and the environment. In the wake of the spread of invasive species in the Adirondacks, (Mainly aquatic plants) it would be of the community's best interest to preserve Lake Placid's outstanding water quality to the furthest extent. Property owners of shoreline, along with recreational boaters, and fishermen are not going to want to encounter a shoreline that is choked, and taken over by plants like Eurasian Water Milfoil, Water Chestnut or Curlyleaf Pondweed.

The village of Lake Placid is known world wide as a tourist hotspot. People visit Lake Placid from all over, and if they have visited other lakes, not just in our

region, but from anywhere around the country, they could be a transporter of an invasive species. In order to ensure that the water body of Lake Placid stays as clean as can be, for both the human population and the native habitat that is present at this time, a boat wash station would help Lake Placid steer clear of an invasive attack on a precious body of water. The cost of construction for a sufficient wash station would be in the price range of around \$10,000; this is a small price to pay for such a gracious natural resource. The price that is barred with the introduction of a wash down station is far less than that of a possible future harvest of Eurasian Water milfoil. A boat wash station would be the best area of prevention against invasive species, and other possible pollutants carried in by the boating community.

Another area of concern that raises the need for cleaner watercraft entering Lake Placid is that the water body of Lake Placid is the town's drinking supply. It would be helpful from a water quality aspect that the water in the Lake be as clean as possible. The water used by the boater to wash his/her boat could be recycled and used again, after it passes through a filtration system.

Out of the major lakes in this area, Lake Placid is host to many boats throughout the summer season. I think that a boat wash station at the public boat launch at Lake Placid would be in both the town's, best interest and the habitat that makes Lake Placid what it is. The implementation of a boat wash station would not only please a majority in the boating community, but also the generations to come. I would want my children, and their children to enjoy such a naturally beautiful area of the Adirondack Park.

Sincerely,

Daniel DeSorcy

Student of Paul Smith's College, and Steward for the
Watershed Stewardship Program.

desorcd@paulsmiths.edu

Coarse Woody Structure Survey of Upper St. Regis Lake and Black Pond Prepared by Matthew Boss

Introduction:

Coarse woody structure in lakes is an important component to overall ecosystem health. Woody structure is created when trees that exist on shorelines fall into the aquatic environment by natural or other means. Once in the aquatic environment they increase the complexity of the ecosystem. This increase in complexity is brought about by the shelter and stabilization their structure provides. As the system becomes more complex, productivity increases and as a result more plant and animal life will be able to use the area in pursuit of habitat and prey.

The structure provided by these downed trees is especially important as habitat for plants and animals alike. Many fish species make their homes in and around these structures as they provide security and a steady food source. The food most fish seek comes in the form of aquatic invertebrates, such as insects that require sheltering structures in order to complete some of their life stages. The concentration of fish seeking invertebrates as food also attracts larger piscivorous (fish eating) fish. Without the coarse woody structure provided by the downed trees the habitat quality and as a result the total fish population would decline.

The increase in fish and insect populations also plays a part in other animals' lives. Birds such as Belted Kingfishers (*Ceryle alcyon*) and Blue Herons (*Ardea herodias*) are drawn to these areas because of their access to prey. Ducks such as the merganser and the wood duck often use trees as protective structure when they are moving with their vulnerable young. Turtles are very often seen sunning themselves on exposed branches. The benefit of submerged trees extends to all animals that exist in and around an aquatic environment (Bozek 2001).

The benefit of Coarse Woody Structure also extends to the non-living environment as well. The structure provided

by these submerged trees has been shown to provide water column stabilization. This decreased mixing of different temperatures and nutrient levels, helps in preventing events such as algae blooms near to shore where they are the most dangerous to animals such as house pets drinking from water affected by toxic algae concentrations. The structure provided also helps in the fight against erosion both by waves in the spring summer and fall as well as ice in the winter. The branches and boles (the thickest part of the tree including the trunk) provide a buffer against wakes from boats and moving ice sheets that grind away shoreline and disturb delicate riparian areas (Menashe 2001).

The end result of these benefits comes to the humans who enjoy their time in or near these properly functioning environments. The management of these areas should reflect a more natural approach to the history of these systems. They have relied on the input of trees into aquatic systems for thousands of years. With humans and our ability to cause large-scale environmental changes comes the responsibility to limit our impact in areas not immediately affected by our structures and activities. Areas where large trees in the water are not a direct impediment to humans should be left in a natural state, in order to make up for the areas we have changed.

This study evaluates the amount and composition of coarse woody structure in both developed and undeveloped areas of Upper St. Regis Lake. The same evaluation was performed on Black Pond which shares similar characteristics but is entirely undeveloped and does not allow motorboats to be used. A comparison of the results will be examined.

Methods:

A visual assessment scheme was devised as a means to identify and catalogue coarse woody structure in lacustrine environments. The assessment scheme

included the creation of data sheets and evaluation methods. Five developed and five undeveloped sites were chosen at random on Upper St Regis Lake (see map below). A transect was established that extended from shore to a depth of two meters for each site. These lengths were variable as shore gradients were variable. The transect width was 3 meters. The transect area was delineated by a system of floats and anchors. Coarse Woody structure was observed, measured and recorded for analysis. Measurements included each piece's length, diameter, percentage above water, its score on a decay index (1 being mostly decayed, 3 least decayed) any clue as to its mode of input such as a snapped trunk beaver cut etc., hardwood or softwood, its orientation to shore and whether it was still attached to shore. The same measurement scheme was also used at five locations on Black Pond. The results of the two locations were compared in order to identify differences in overall structure and composition.

Results:

Coarse woody structure (CWS) observed at Undeveloped St Regis sites were less overall than at forest preserve sites on Black Pond. There was no CWS observed at any of the developed St Regis sites. The average length of CWS was longer at undeveloped St Regis Sites than Forest Preserve sites; however the wood was thicker at the forest preserve sites. The CWS observed at Black Pond had a much higher instance of being above water than at the undeveloped St Regis sites. The CWS was much more decayed at the St Regis sites than at the Black Pond sites. The most common indicators of tree input at either of the CWS groups were snapped trunks. The most common CWS tree types were Conifers. The most common orientation to shore was 60-90 degrees and the trees were most commonly unattached to shore.

Type of Plot	overall CWS found	Average Length of visible section (0.5m)	Average Diameter of Midsection (0.1m)	Average % above water	Average Decay Index (1 most decayed-3 least decayed)	Most common Input Indicator	Most common type-Conifer/Hardwood	Most common Orientation to shore	Most Commonly Attached to shore (Y/N)
Undeveloped	18	9.5	0.3	0.242	1.4	Snapped Trunk	Conifer	60-90 degrees	No
Developed	none	none	none	none	None	none	none	none	none
Preserve (Black Pond)	24	7.5	0.7	15.5	2	Snapped Trunk	Conifer	60-90 degrees	No

Table 1- indicates the average and most commonly found traits for each group of land uses evaluated.

Discussion:

The results indicate that levels of CWS at Upper St. Regis Lake differ greatly with the land use of the terrestrial area. Areas with development offered no chance of continuing recruitment of CWS in the future. The areas of developed land surveyed did not all include boathouses. Some of the plots were adjacent to swimming areas or near house fronts. These areas could exist with some amount of CWS without losing the ability of the people to enjoy their shoreline property. The areas where boat traffic is inhibited by CWS such as in front of boathouses and channels, was understandably free of woody structure.

One of the plots assigned in the St. Regis/undeveloped group had a wetland area as shore. This could account for the decreased number of CWS when compared to the Forest Preserve/Black Pond group. No wetlands were observed in the Forest Preserve/Black Pond sites. The plots examined on Black Pond were shown to have a great deal of CWS. The land use in that area is strictly forest preserve and would account for the non-clearing of down trees in and around the lake.

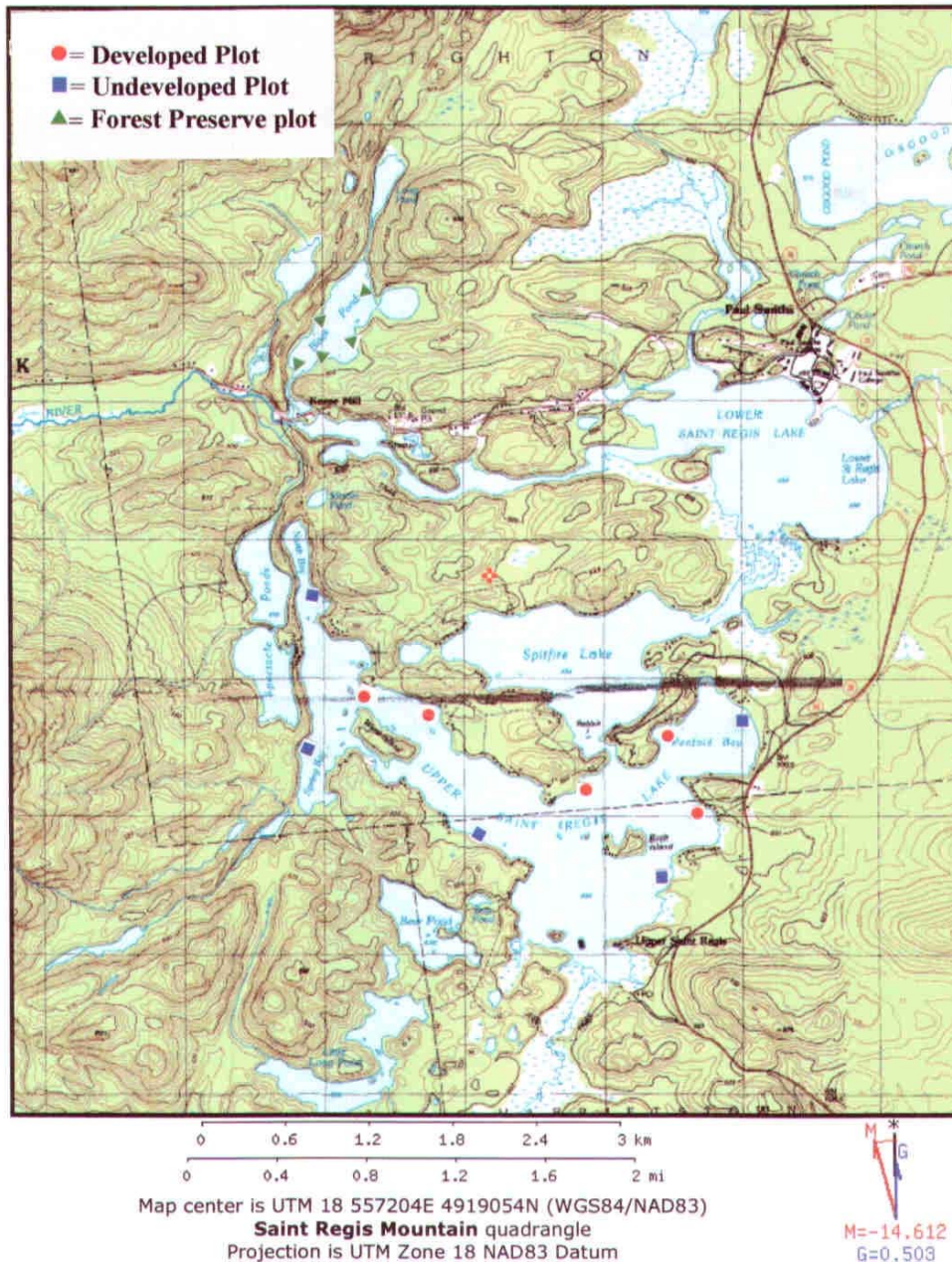
The Decay index shows that CWS located in the St. Regis group was much more decayed than the Black Pond group. This may be a result of increased wave action due to the

large volume of motor boats on The St. Regis Lakes chain compared to no motorized boats on Black Pond. The instance of CWS being above water was also much higher on Black Pond than St. Regis. This also may be due to the amount of wave action that could break branches and cause the tree to sink under the surface of water in a shorter amount of time.

The shortcomings of the study include a limited sample size, accuracy of the study techniques and the limited scope of the overall study. A larger sample size that could include more land use types and a greater survey of upland characteristics would give more accurate reflections of the type and amount of CWS present in the lake system. The resources available to this study limited the amount of data that could be collected.

In conclusion the study shows that there is a need for future study of the relationship between CWS and the overall ecosystem health of Upper St. Regis Lake. The benefits that CWS provides through system complexity, shoreline protection and water column stabilization are all important concerns to the St Regis community. A balance between human actions and ecosystem integrity should be examined and maintained in order to assure a healthy living environment for all species involved.

Coarse Woody Structure Study Transect Location Map



Appendix A- Data recorded from each study site

Plot type and transect # (Developed, Undeveloped, Preserve)	LWD #	Length of visible section (0.5m)	Diameter of Midsection (0.1m)	% above water	Decay Index	Input Indicator	Conifer/Hardwood	Orientation to shore (0-30, 30-60, 60-90 degrees)
Undeveloped 1	1	6.5	0.55	0	1	ST	CON	30-60
Undeveloped 1	2	13	0.75	0	1	ST	CON	60-90
Undeveloped 2	1	17	1.2	35%	2	ST	CON	0-30
Undeveloped 2	2	2.5	0.5	0	2	IN	CON	60-90
Undeveloped 2	3	7	0.6	0	1	IN	CON	0-30
Undeveloped 3	1	18.5	0.8	0	1	Hum	HARD	60-90
Undeveloped 3	2	16	0.6	0	2	Hum	HARD	60-90
Undeveloped 3	3	5.5	0.5	0	2	IN	CON	30-60
Undeveloped 3	4	15	0.6	0	1	IN	CON	60-90
Undeveloped 3	5	10	0.7	0	2	ST	CON	0-30
Undeveloped 3	6	7.5	0.6	0	1	IN	CON	0-30
Undeveloped 4	1	14.5	1.2	1	1	ST	HARD	60-90
Undeveloped 4	2	10	0.6	1	1	ST	HARD	60-90
Undeveloped 4	3	13	0.8	1	2	ST	HARD	60-90
Undeveloped 4	4	6.5	0.6	1	1	ST	HARD	60-90
Undeveloped 4	5	3	0.3	0	1	ST	CON	0-30
Undeveloped 4	6	4.5	0.4	0	1	ST	CON	0-30
Undeveloped 4	7	4	0.4	0	2	IN	HARD	30-60
Undeveloped 5	NWS		Wetland area					
Developed 1	NWS							
Developed 2	NWS							
Developed 3	NWS							
Developed 4	NWS							
Developed 5	NWS							
Preserve 1	1	6.5	0.5	10	3	B	CON	60-90
Preserve 1	2	6	0.6	30	3	IN	CON	60-90
Preserve 1	3	7	0.5	30	3	ST	CON	60-90
Preserve 1	4	6	0.5	35	3	ST	CON	60-90
Preserve 1	5	5.5	0.4	10	3	ST	CON	60-90
Preserve 1	6	7	0.6	0	1	B	CON	30-60
Preserve 2	1	7	0.7	3	2	R	HARD	60-90
Preserve 2	2	9	0.8	3	2	R	HARD	60-90
Preserve 2	3	7	0.6	3	2	ST	HARD	60-90
Preserve 2	4	6	0.6	5	2	R	HARD	60-90
Preserve 2	5	7	0.6	3	2	ST	HARD	60-90
Preserve 2	6	4	1.1	0	1	IN	CON	30-60
Preserve 3	1	11.5	1.2	40	3	IN	CON	0-30
Preserve 3	2	8	0.8	0	1	ST	CON	60-90
Preserve 3	3	8.5	0.8	0	1	ST	CON	30-60
Preserve 4	1	9	0.8	45	3	IN	CON	60-90
Preserve 4	2	10	0.7	35	2	ST	CON	60-90

Preserve 4	3	8.5	0.8	30	2	ST	CON	60-90
Preserve 4	4	7	0.8	40	2	ST	CON	60-90
Preserve 4	5	8.5	1	50	3	ST	CON	60-90
Preserve 5	1	5	0.4	0	1	ST	CON	60-90
Preserve 5	2	4.5	0.5	0	1	ST	CON	60-90
Preserve 5	3	7	0.4	0	1	ST	CON	60-90
Preserve 5	4	10	0.8	0	1	ST	CON	60-90

Appendix A- Data recorded from each study site. Key for Input indicator- B= Beaver cut, ST= Snapped Trunk, R= Rootwad Intact, Hum= Human cut, IN= Indeterminate. Decay index is a scale from 1-3, 1= most decayed (simple bole) 3= least decayed (branches and some leaves evident).

Steward Matt Boss Surveying Upper St. Regis Study Site.



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Campsite Maintenance Report
Prepared by Matthew Boss

Introduction:

Campground maintenance comprises one of the projects executed by the Watershed Stewardship Program. The goal is to provide safe, clean and enjoyable camping conditions at the designated campsites within the programs working area. Campground maintenance includes litter removal, fire ring cleaning and the reporting of any structural maintenance that should be performed in order to provide the public with a pleasant camping experience.

Methods:

The campground maintenance for the 2004 season was restricted to Lower St. Regis Lake and the St. Regis River upstream of the first dam. The Paul Smith's College Forest Recreation summer session class also performed a maintenance sweep of all camping locations independently of the Watershed Stewardship Program.

A canoe was borrowed from Paul Smith's College on June 18 and paddled to all of the lean-to and camping sites on Lower St. Regis Lake and the St. Regis River above the first dam. When a site was reached, the steward would collect any trash in the area and remove ashes and garbage from the fire rings. The steward then assessed the condition of the lean-to (if present) and note any need of repair. The collected garbage and ash would then be removed from the site and disposed of.

Results:

The steward found all the campsites to be in relatively good condition. Four large garbage bags of trash as well as one garbage bag of ash were removed from designated campsites this summer. None of the lean-tos encountered appeared to be in need of maintenance. The sites were cleaned and prepared for another summer of use.

Discussion:

The Steward encountered minimal trash at all of the campsites. When trash was encountered it was usually piled inside the fire ring. This practice of piling garbage in fire rings as a method of "disposal" is not part of a healthy camping ethic. Garbage and refuse should be removed from each site by the camper that brought it. Garbage left at campsites has the potential to habituate wild animals to seeking out campsites as a potential source of food. The abandoned litter is also unsightly and impacts people's outdoor experiences in negative ways. The fire ring is not meant as a

place to dispose of garbage when breaking camp. Always remember “leave no trace” practices. If you carry it in, carry it out.

The lean-tos provided by both New York State as well as Paul Smith's College seemed to be in excellent condition. Most had additional supplies such as cooking grates, small candles and in some cases boxes of newspaper or kindling that were left by previous campers. If you intend to leave goods at a lean-to, please make sure they are still useful and clean when possible. A dirty cooking grate also has the potential to attract animals.

In conclusion, the sites on Lower St. Regis Lake and the St. Regis River above the first dam appeared ready for another exciting summer camping season. The Stewardship Program hopes that all the users of these sites enjoyed the area as well as their time spent there, and that they will visit again soon.



Trail Maintenance: St. Regis Mountain

Prepared by: Dan DeSorcy

Introduction

The St. Regis mountain trail is subject to a significant amount of impact throughout the summer tourist season. This could be due to the fact that St. Regis Mountain is one of the more popular hikes that families tend to choose based on its relatively short distance to the summit, and its nostalgic fire tower. Others that venture up St. Regis Mountain may not be aware of simple trail ethics, like staying on the trail, and trying to create as little impact as physically possible. Some just look for the easiest way for themselves to get around simple impairments such as a muddy area or a rock in the middle of the trail. This ultimately widens the path that was previously made. The widening of trails makes them prime subjects for erosion. The more erosion the trail is subject to the muddier it will become over time.

Report

Due to the unusual amounts of rain in 2004, trail conditions were wetter than normal, which more than likely impelled hikers to venture towards drier areas of land when they found their feet encrusted in mud. Noticeable paths that were made by constant use to avoid a muddy part of trail were closed off with brush from trees subject to blow down. In some cases branches and tree trunks were used to fill in wet areas that were deeper than my hiking boot.

As the summer wore on I noticed that hikers were taking their own initiative to partake in placing sticks, branches or even whole logs (previously cut) along the trail where hikers might not want to get their feet dirty. It's great to see that other people are concerned with trail sustainability, and that they notice how much impact an exceptional rainy season can have on trail conditions.

The majority of branch placement on the sides of the trail was done within the first two thirds of the 3.3 mile hike to the summit. One site was located within one half of a mile from the summit (see figure 1.) The first two thirds of the trail from the trailhead is only five years old. I encourage future stewards and the NYSDEC to incorporate the usage of informative signs on how you can improve the trail's longevity by placing a sign asks the public to please stay on the trail, and to leave no trace.

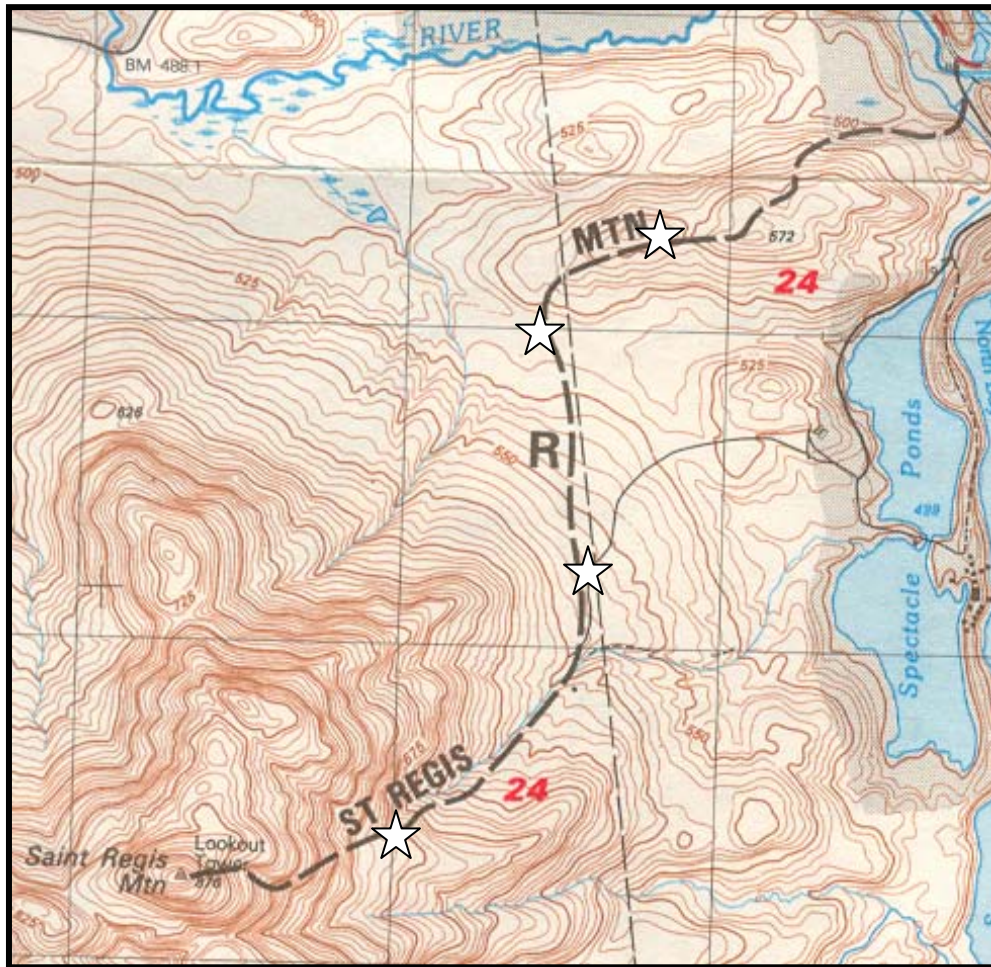


Figure 1: Note the stars indicate areas of trail work performed by Daniel DeSorcy in Summer, 2004

Educational Programs for Kids - Summer 2004

Prepared by: Erin Peterson

Introduction:

The Educational Programs for Kids are a way that education of the public can be attained through children in the local areas, primarily by informing them about their natural environment and allowing them to make their own conservation and preservation based judgments about their waterways, land, flora and fauna.

Goals:

The goal for the educational programs this summer was to not only make the programs successful, but to allow for the local and camp children to be able to experience all that the Adirondacks have to offer. Last summer there was a problem with the lack of enrollment for most of the programs. I encountered a similar issue this summer even after I maintained the proper contacts for advertising the programs. A press release was sent to the Adirondack Daily Enterprise under the consideration of Laurie Besanceney, as well as a program schedule to the school newsletter. Mid summer I contacted National Public Radio to see if they would feature the remaining programs on their community calendar.

Programs:

The following educational programs for kids were scheduled for the summer of 2004 :

Open-Enrollment Programs:

1. *Water World*, Wednesday , July 7th, 1-2:30 p.m. ages 5-11 at Lake Placid Boat Launch (cancelled)
2. *Lakes, Marshes and Bogs, Oh My!*, Wednesday~ July 14th, 1-3p.m. ages 5-11 at Upper St. Regis Boat Launch (cancelled)
3. *Acid Rain Go Away Don't Come Back Another Day!*, Wednesday, July 21st, 1-2p.m. ages 5-11 at Paul Smith's College (cancelled)
4. *Frog Festival*, Wednesday, July 28th, 1-3p.m. ages 3-5 at Upper St. Regis Boat Launch (cancelled)

5. *Alien Attackers*, Wednesday, August 4th, 1-3p.m. ages 5-11 at Paul Smith's College (cancelled)

6. *All About Bears*, Wednesday , August 11 th, 1-2p.m. ages 5-11 at Paul Smith's College (cancelled)

7. *Sneak A Peak with Nature*, Wednesday , August 18th, 2-3 :30p.m. ages 5-11 at Paul Smith's College (cancelled)

Camp Outreach Programs:

In addition to these scheduled programs, one outreach program a week was conducted for Camp Regis Applejack and Camp Bedford. The schedule for these programs are listed below:

Camp Regis Applejack- *Water World*, Friday, July 9th, 11:30 a.m. ages 6-12

Acid Rain, Friday, July 23rd, 10:30 a.m. ages 6-12

Frog Festival, Friday, July 30th, 10:30 a.m. ages 6-12

Camp Bedford- *Lakes, Marshes and Bogs*, Friday, July 16th, 10:15 a.m. ages 8-13

The programs for the camps were very successful. Each program had approximately 6-11 kids who were very interested in the topics that were presented. I had previously prepared posters for each of the programs so that I would be able to communicate pictures related to each program to the children. Dave Owens was the coordinator for Camp Regis Applejack with the help of Jamee Decker (counselor). Russell Wagner (Boy Scout - counselor) was the coordinator for Camp Bedford.

Camp	Title of Program	Date	# Participants
Camp Regis Applejack	Water World	7/9/2004	11
Camp Regis Applejack	Acid Rain	7/23/2004	6
Camp Regis Applejack	Frog Festival	7/30/2004	7
Camp Bedford	Lakes, Marshes and Bogs	7/16/2004	9
Total participants, 2004			33

Attendance for Open Enrollment programs:

The first four Open Enrollment programs were cancelled due to low enrollment. There was only one child signed up for each program. The other three programs were cancelled by the Educational Outreach Coordinator due to an emergency leave of absence. Factors that might have contributed to the lack of enrollment could include the problems with the Adirondack Daily Enterprise not posting our programs every week; another problem might be that families have other planned activities for the summer time.

Suggestions for Next Year:

Try to get in contact of different newspapers and any type of organization that is willing to post the programs throughout the surrounding areas of Saranac Lake, Gabriels, Paul Smith's, Brighton, and Lake Placid.

Program	Date	# Children Registered	Status
Water World	7/7/04	1	Cancelled
Lakes Marshes	7/14/04	1	Cancelled
Acid Rain	7/21/04	1	Cancelled
Frog Festival	7/28/04	0	Cancelled
Alien Attackers	8/4/04	1	Cancelled
All About Bears	8/11/04	1	Cancelled
Sneak a Peek	8/18/04	1	Cancelled
Total registrants		6	

Checking with local schools in the area might also help to bring up enrollment, as well as having programs where the parents can get involved as well. This year I made the offer to allow parents to accompany their children to the programs and not just to drop them off for a few hours. I hope to see this practice continued into the future of the program. It is as necessary to educate the children as it is their parents.

Appendix: Lesson Plans:

Name of Program: *Water World* **CANCELLED**

Location: Lake Placid Boat Launch

Date: *Wednesday, July 1h 1-2:30pm Age: 5-11*

Descriptor: Come explore the wonderful world of water through fun-filled facts and activities.

Objective: Steward and children will discuss the importance of water on an individual basis, community wide basis, as well as world wide basis. Children will learn how some of our watersheds came to be, what types of problems they are facing, and how they can help.

Materials: nametags, large piece of poster board or newsprint, markers, drawing pens and pencils, books, a variety of state and local newspapers about water, roll of newsprint, tape/glue, scissors, different size containers of bottled water, different size sponges, paper clips, other small objects (that can represent point and non-point pollution sources).

Activity:

1. Nametags
2. Introduction to the bathroom
3. Basic facts about water
 - *What do you know about water?
 - *Do we need water to live? ./ *What do we use water for?
 - *Why is water so important?
4. Sum of the Parts
 - * *Project WET: Curriculum and Activity Guide*. The Watercourse and the Council for Environmental Education, 1995: 267.
 - *Teaches kids about point and nonpoint source pollution
 - * Allows for recognition that everyone contributes to and is responsible for a river or lake's water quality
 - *Identifies Best Management Pmctices to reduce pollution.
5. Water: Read All About It!
 - * *Project WET: Curriculum and Activity Guide*. The Watercourse and the Council for Environmental Education, 1995: 400.

*Kids will recognize that water is a frequent subject in the news.

* Kids will demonstrate their skills and what they have learned about water by writing their own newspaper special edition.

6. Discuss newspapers and what kids have learned that they didn't already know about water.

7. Handout quiz on water

Name of Program: *Lakes, Marshes and Bogs, Oh My!* ****CANCELLED****

Location: Upper St. Regis Boat Launch

Date: *Wednesday, July 14th 1-3pm* Age: 5-11

Descriptor: Learn about what it takes to be a wetland and discover why each type of wetland is important to both animals and people.

Objective: To teach kids about the different types of wetlands: lakes, marshes and bogs, and what their role in the environment is.

Materials: Poster board, pictures of three wetland types, colored pencils.

Activity:

1. Nametags
2. Introduction
3. Ask kids how much they know about each of the habitat types
4. List their answers on a poster board
5. Explain the three different wetland habitat types, their uses in history as well as what types of plants and animals live in each. *Glaciers
6. Fish activity for lakes
7. Explain importance of certain species in each of the settings
8. Why are these areas threatened?
9. Show kids the bog, and some of the bog plants- pictures
10. Marsh activity- show plants and animal species
11. Explain succession of a lake- nutrients and human impacts

Name of Program: *Acid Rain Go A way, DON'T Come Back Another Day*
****CANCELLED****

Location: Paul Smith's College

Date: *Wednesday, July 21st 1-2 pm* Age: 5-11

Descriptor: Find out what acid rain is and how it is affecting the places we live and play In.

Objective: Kids to get a general idea of the many factors that contribute to acid rain, how it is a major problem in the Adirondacks, and how we can help to stop it.

Materials: pencils, construction paper, poster board, markers, glue, scissors, chalk and vinegar , buckets/pans.

Activity:

1. Nametags
2. Introduction and bathroom
3. Describe what acid rain is, go over vocabulary terms
4. Explain how acid rain eats away at buildings as well as makes soil and water too harsh of an environment for fish and plants to live in.
5. Do chalk experiment
6. Hand out crosswords
7. Kids recreate their own acid rain cycles.

Name of Program: *Frog Festival* **CANCELLED**

Location: Upper St. Regis Boat Launch

Date: *Wednesday, July 28'h 1-3 p.m. Ages: 3-5*

Descriptor: Learn all about these wet and wiggly critters and why they are celebrated, even in other countries.

Objective: Kids will learn about the life cycle of a frog, and identify different species of frogs in the area, learn what frogs eat, and why so many people love them!

Materials: Construction paper, scissors, glue, pencils, paint, markers, pictures of frogs.

Activities:

1. Nametags ...
2. Introduction
3. Show pictures of different frogs
4. Make a life cycle for a frog
5. Make bookmarks
6. Read, *Adirondack Fairy Tales II: Tell Me A Story, ' Ferdie 's Fabulous Firefly",2002:6-11.*
- 7 .Talk about why frogs are indicator species

Name of Program: *Alien Attackers!* **CANCELLED**

Location: **Paul** Smith's College

Date: *Wednesday, August 4th 1-3pm* Age: 5-11

Descriptor: Learn what an invasive species is and what they are doing in our land and waterways. Find out how you can stop the invasion,

Objective: Kids will trace the origins of various species of local aquatic animals, aquatic plants or both; categorize them into native and exotic species; evaluate the appropriateness of introducing new species.

Materials: List of local native and non-native plants and animals, pictures of exotic species found within the Adirondacks, paper, a world map, yarn.

Activities:

- 1, Nametags
- 2, Introduction
3. Find out what types of native plants grow in the area
4. Identify and describe invasive species
- 5, Show pictures of different types of aquatic and terrestrial invasive species
6. Aquatic Roots
- * *Project WILD Aquatic: k-12 Curriculum & Activity Guide*, Council for Environmental Education, 2001 : 163.
- * Teaches kids how to identify exotic invasive species in the area, how they differ from native plants, and how to prevent them.
7. Review materials

Name of Program: *All About Bears* ****CANCELLED****

Location: **Paul** Smith's CoUege

Date: *Wednesday, August 11th 1-2pm*

Age: 5-11

Descriptor: Explore the world of a Black Bear and learn how to share the Adirondacks with these furry and crafty creatures.

Objective: Students learn what it is like to be a bear, how limiting factors affect their survival, and how hard it is for bears to survive in the Adirondacks.

Materials: Nametags, five colors of construction paper(a couple sheets each of red, yellow, green, blue, and orange); one black felt pen, envelopes(one per child), pencils, one blindfold, and giant poster board and markers.

Activity:

1. Distribute nametags.

2. Introduction and Bathroom

3. Background of black bears

- Where can this bear be found?
- How long is the average lifespan of this bear?
- What types of food do black bears eat?
- Are they carnivores, omnivores, or herbivores?
- What types of habitat does a bear need to survive?
- What is a limiting factor?

4. How Many Bears Can Live in This Forest?

Project WILD: K-12 Curriculum and Activity Guide. Council for Environmental Education, 2001: 21-23.

.Teaches one or more components of habitat for a black bear and how much food is needed to support a population.

5. Question session

- .Which bears survived?
- .Is there enough to feed all of the bears?
- .How many pounds did the blind bear collect? .Will she survive?
- .What about the mother bear? Did she get twice the amount that she needed in order to survive? What will happen to her cubs? Will she feed her cubs first or herself?
- .What would happen to her if she fed the cubs? What if she ate first? If the cubs die, can she have more cubs in the future?

6. Dangers of having bears and humans coexisting together, and how to protect yourself from the hungry bears.

Name of Program: *Sneak A Peak with Nature!* **CANCELLED**

Location: Paul Smith's College

Date: *Wednesday, August 18'h 2-3:30 pm*

Age: 5-11

Descriptor: Go on a scavenger hunt and learn about many different types of plant and animal life. This will be an adventure looking at what we can find on the forest floor using our senses to look, feel, listen, hear, and smell everything in nature.

Objective: Kids will find things in the woods just by looking around them. Learn to only gather items found on the forest floor.

Materials: nametags, clipboards, whistles, pencils, scavenger hunt list (things on the trail), plastic bags.

Activity:

1. Nametags
2. Introduction and bathroom
3. Apply sunscreen/bug spray
4. Talk about senses to find objects
5. Put kids in pairs, give each pair a whistle, clipboard, list, and pencil. Talk about the items on list, explain that they need to find each of the items on the ground.
6. Walk out on trail, give kids 30-45 minutes to locate items on the list.
7. Gather the group and talk about what the kids found and compare.
8. Talk about other things on the trail that weren't on the list.
9. What was the most interesting thing that you found? Why do you think so?
How many things did you collect? Why did you pick the item that reminds you of yourself!
10. How do you think that the man-made items got there?
11. Bring out what you brought in- Leave No Trace