

Recreation Use Study: Saratoga Lake State Boat Launch

By: Corrie Mersereau and Emily Russell, Watershed Stewards



Figure 1- View from Saratoga State Boat Launch.

Introduction

During the summer of 2011, the Saratoga Lake Protection and Improvement District (SLPID) sponsored the Paul Smith's Watershed Stewardship Program (WSP) for the second time to provide visitor education and boat inspection at the State Boat Launch site on Saratoga Lake. This initiative continued to expand the WSP outside the Adirondack Park to the program's busiest boat launch. Aided by a small group of volunteers, the lake stewards inspected boats and educated launch users about the dangers of invasive species. Saratoga Lake is known by anglers as "the fish factory" and hosts many fishing tournaments throughout the summer. Sport fishermen came from as far away as Florida while local fisherman came every day. Saratoga Lake is also highly used by recreational boaters, sail boats, and crew boats as well.

Saratoga Lake is home to many aquatic invasive species including Eurasian watermilfoil, curly-leaf pondweed, zebra mussels, and water chestnuts. The Saratoga Lake community is actively engaged in a multi-element lake management initiative intended to control existing invasive species infestations and to prevent the spread of new invasives. In addition to their support of the Saratoga Lake stewards, SLPID administered chemical treatments (Sonar and Renovate 3) in an attempt to control Eurasian watermilfoil and curly leaf pondweed. SLPID also operates two harvesters that cut down densely weeded areas of the lake. Along with addressing the invasives

in Saratoga Lake, SLPID is also concerned with limiting the possibility that boaters from Saratoga Lake carry invasive species to uninfected lakes near and far. For this reason, the Saratoga Lake stewards were instructed to inspect boats leaving the lake as well.

Methods

The Saratoga lake Stewards were on duty seven days a week, from 7:00 AM -3:00PM. The Cornell Cooperative Extension provided their intern to assist the watershed stewards on Sundays, as public education was a part of the summer internship. Stewards approached boaters with a smile and asked each one if their boat had been in any body of water in the past two weeks, if the boater had washed it, drained the bilge, inspected the boat, drained bait buckets and live wells, disposed of bait properly, and dried the boat. The stewards also noted the time, type of boat, horsepower of the motor (if outboard), if it was a four stroke or not, and the state the boat was registered in. If the stewards found any plant debris on the boat they recorded what type of invasive it was and removed it. On the way out they removed plants that came off the boats and recorded findings.



Figure 2- Steward Emily Russell inspecting a boat (Erica Miller- Saratogian).

Results

At the Saratoga Lake State Boat Launch stewards collected data from 4,121 boats and 9,264 people between May 28th and September 5th. The busiest day of the summer was June 19th (Fathers' day), which saw 132 boats. The slowest day of the summer was June 2nd with 3 boats. All summer attendance varied depending on the day of the week and the current weather conditions.

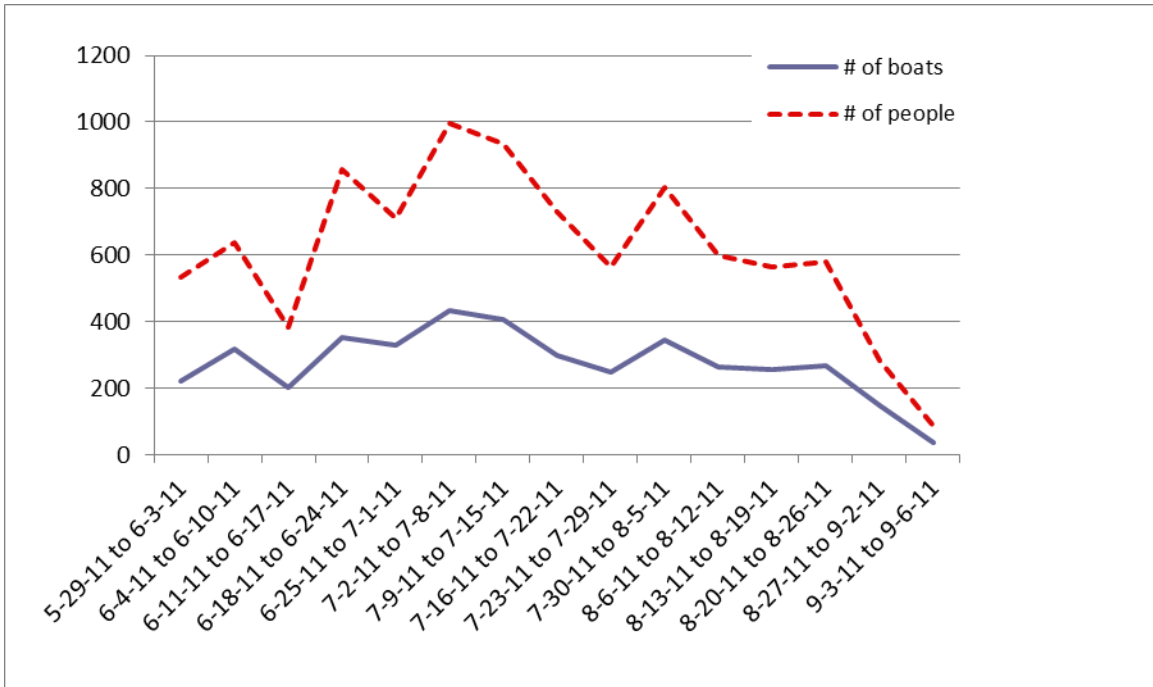


Figure 3- Boat launch usage, Saratoga Lake, 2011.

Saturday was the busiest day of the week with 993 boats, Sunday was second with 952 boats and Friday was third with 529 boats. According to the data Monday was the slowest day of the week with 355 boats, followed closely by Tuesday with 384 boats and Wednesday with 474 boats. Thursday was the busiest weekday with 490 boats.

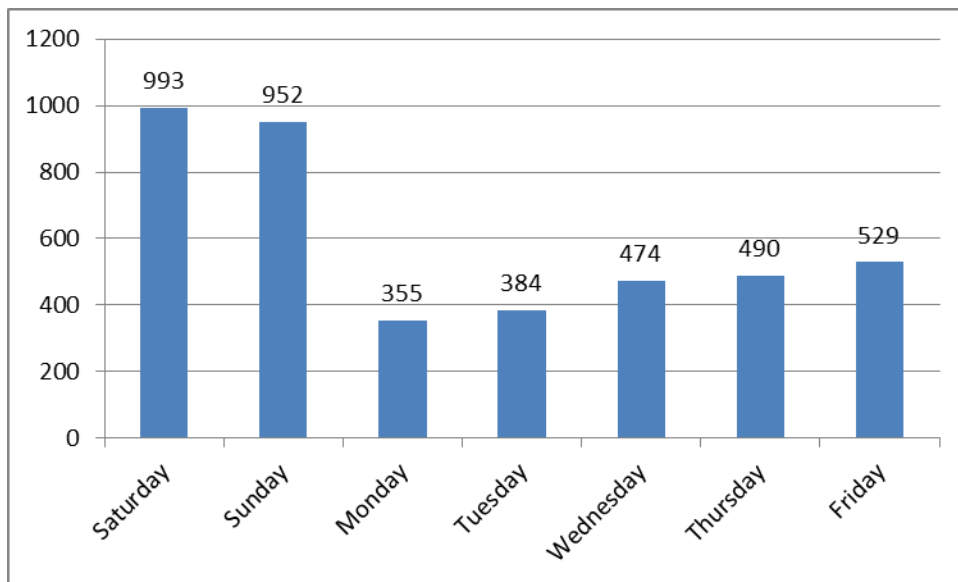


Figure 4- Boat launch usage, number of boats launched, Saratoga Lake, 2011.

Out of the 4,121 boats stewards inspected in 2011, 3,542 were motorboats, 255 were personal watercrafts, 220 were kayaks, 31 were sailboats, 58 canoes, 12 rowboats and 3 barges. Many boaters attached small motors to

canoes, kayaks, and rowboats; for data purposes we consider these motorboats. With two stewards on busy days it made it easier to talk to both small boaters at the dirt launch and motor boaters at the main ramp.

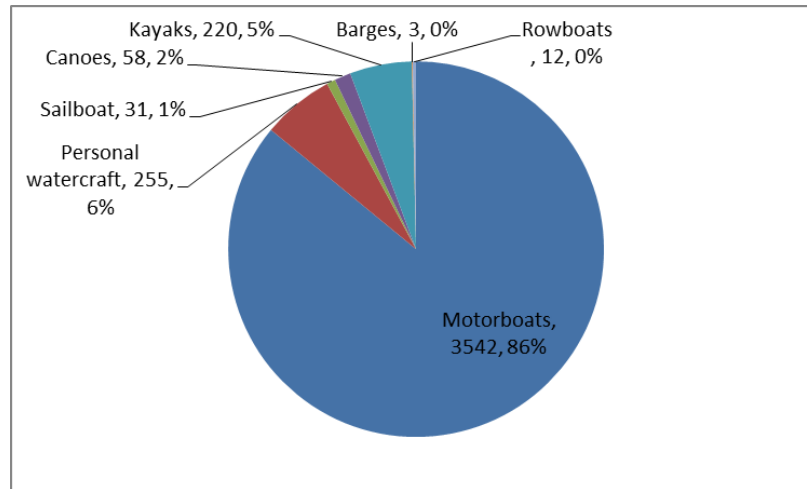


Figure 5- Watercraft types, Saratoga boat launch, 2011.

The most important question the stewards asked boaters this summer was where their boats had been in the last two weeks. 1,511 boats had not been in the water in the past two weeks. Out of the remaining 2,593 boats, 82% or 2,114 were returning to Saratoga Lake. 87 boats had been in Lake George, 66 from the Mohawk River, 65 from Great Sacandaga Reservoir (spiny waterflea source), 46 boats came out of the Hudson River and 27 boats out of Lake Champlain. 4 boats had traveled to Saratoga Lake after being in the Atlantic Ocean in the past two weeks.

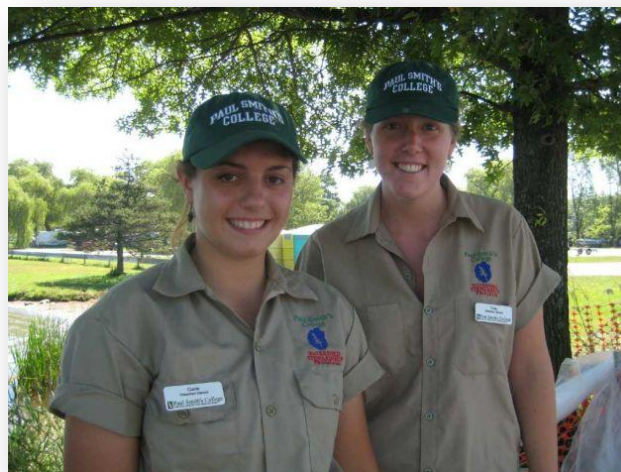


Figure 6- Stewards Corrie Mersereau and Emily Russell (Leigh Hornbeck- *Times Union*).

Water body	# Visits	Water body	# Visits
Adirondack Lake	2	Lake St. Catherine	1
Atlantic Ocean, ME	4	Long Lake	7
Ballston Lake	18	Manasquan Reservoir, NJ	2
Battenkill Creek	2	Merrimack River	1
Black Lake	1	Mohawk River	66
Brant Lake	6	Moreau Lake	3
Burden Lake	1	None	1511
Butterfield Lake	1	Onderdonk Lake	1
Canada Lake	1	Oneida Lake	4
Candaraga	1	Oswego Lake	1
Candlewood	1	Paradox Lake	3
Chataouqua Lake	1	Rainbow Lake	1
Connecticut River	1	Raquette Lake	3
Cossayuna Lake	17	Reynolds Lake	1
Caroga Lake	1	Richmond Pond	1
Dopler River	1	Round Lake	17
Dunham Reservoir	1	Sebago Lake	1
Fish Creek Pond	1	Saranac Lake	1
Glen Lake	3	Saratoga Lake	2114
Granger Lake	1	Schroon Lake	20
Great Sacandaga	65	Second Pond	1
Harriman Reservoir, VT	1	Somerset, PA	1
Hopkinton Reservoir, MA	1	South Bay, NY	2
Hudson River	46	Speculator	1
Indian Lake	2	Spier Falls	1
Indian River	1	St. Catherine Lake	1
Kayaderosseras Creek	3	St. Lawrence River	4
Kinderhook Lake	4	Stewarts Pond	1
Lake Bomoseen	1	Swinging Bridge Reservoir	1
Lake Catherine	1	Terrance Lake	1
Lake Champlain	27	Thompsons Lake	3
Lake George	87	Ticonderoga	1
Lake Hopatcong, NJ	2	Tupper Lake	1
Lake Lonely	9	Virginia Chicahomany River	1
Lake Mahopac	1	Warners Lake	1
Lake Ontario	3	Whitehill Lake, MA	1
Lake Pleasant	1	Williams Lake	1
Lake Simcoe, Canada	1	Wolf Lake, Canada	1
		total	4104

Table 1- Waterways visited in prior two-week period, Saratoga Lake, 2011.

Because of the high number of boats visiting from Saratoga Lake, the Hudson River, The Great Sacandaga, The Mohawk River and Lake George, it became evident that most boaters lived in the area. Out of 4,097 boats providing state of origin information, 4,003 (98%) were registered in the state of New York. Boats did come as far away as Florida, Georgia, Utah, and South Carolina. 16 states were represented. The stewards also noticed that at times boaters had different plates on their car than on their boats.

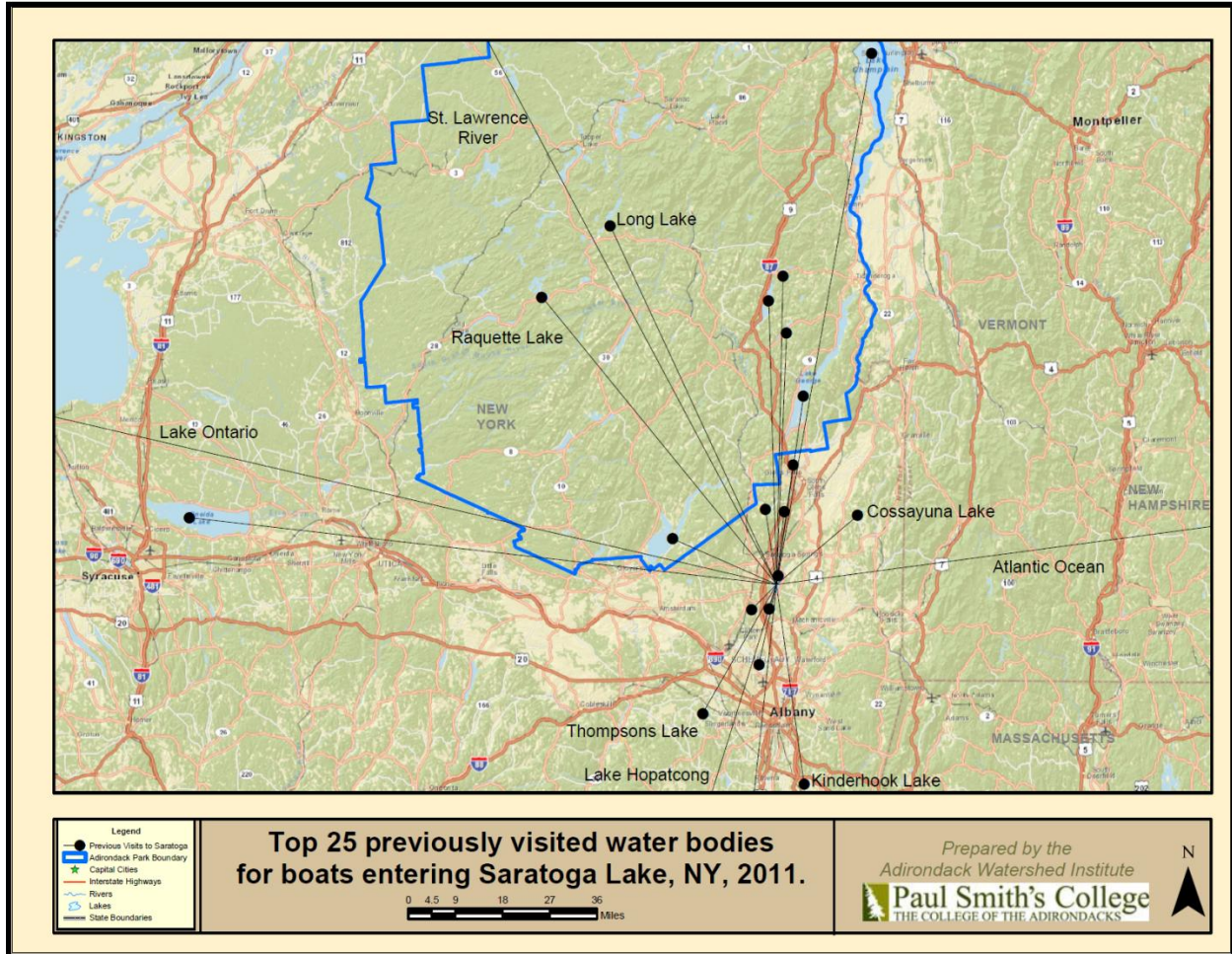


Figure 7- Prior waterway visits, Saratoga Lake, 2011.

State	# Visits
Connecticut	10
Delaware	6
Florida	6
Georgia	1
Maryland	1
Massachusetts	12
New Hampshire	3
New Jersey	30
New York	4003
North Carolina	1
Pennsylvania	2
South Carolina	2
Tennessee	1
Utah	2
Vermont	16
Virginia	1

Table 2- State of origin, boats using Saratoga Lake boat launch, 2011.

73% of boaters claimed to have taken some sort of invasive species prevention measure prior to entering Saratoga Lake. Out of the 4,029 visitor groups, 839 inspected their boats before launching, 1860 boaters washed their boats before entry, and 720 boaters drained bilge water before entry. Eight boaters were not asked if they took preventative steps for various reasons.

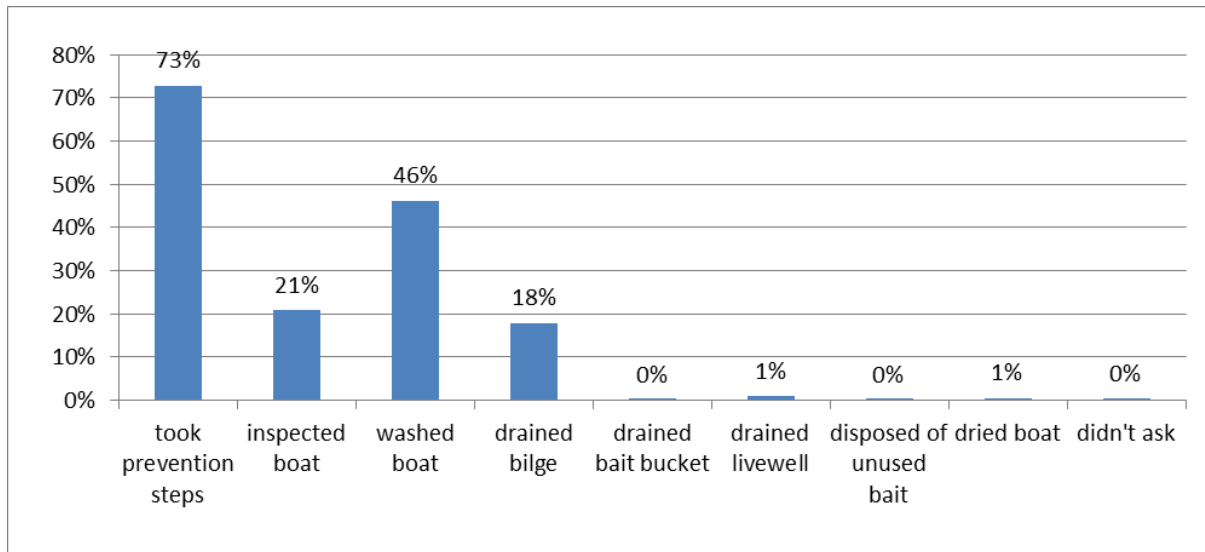


Figure 8- Aquatic invasive species spread prevention measures, Saratoga Lake 2011.

52 organisms or fragments were found on boats entering Saratoga Lake State boat launch while 4 were found leaving. Eurasian water milfoil was found 19 times, Grass was found 24 times, native milfoil was found 3 times, zebra mussels were found twice, and other unidentified organisms were found 8 times.



Figure 9- Boat inspection (Erica Miller- Saratogian).

Comparison with 2010 findings

Returning to the Saratoga State Boat Launch for a second summer allowed the stewards to compare data from the 2010 summer to the 2011 summer. The most significant difference between the two summers was the increased numbers of boaters that the stewards conversed with and boats that stewards inspected. This was due in large part to the stewards' increased presence at the launch in 2011 versus 2010. In 2010, there was a steward at the launch five days per week, compared to 2011 where there was at least one steward at the launch every day of the week. This allowed the stewards to talk to more boaters and get a better sense of what the seasonal traffic is at the launch.

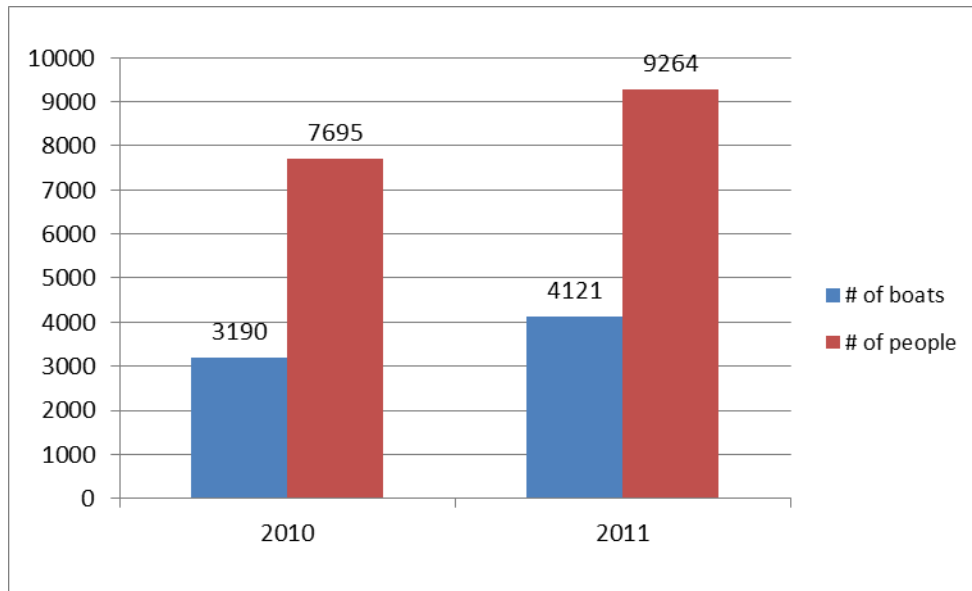


Figure 10- Saratoga Lake boat launch usage comparison.

Another visible difference between the data from the 2010 summer to the 2011 summer was how many boaters had at least inspected their watercrafts for invasive species. This summer boaters were not only more responsive to the stewards, but also more informed about the threat of invasive species and the benefit of taking the necessary precautions with their boat before and after they use Saratoga Lake.

Discussion

Returning to the Saratoga Lake for a second summer allowed a comparison of the two seasons. During the summer of 2010 the steward felt a lot of resistance from boaters, which seemed to dissipate in summer of 2011. Because one of the stewards had the benefit of experience from last summer, she was able to better notice changes between the 2010 and 2011 seasons, and to compile a list of what changes could be made to make the program more effective. Between the two summers, the veteran steward noticed an obvious difference between the boaters' perceptions of the stewards from the first summer to the following summer. During this season, boaters did not have to pay the eight-dollar fee because of construction to the highway 9P bridge. Boaters were happy not to pay the eight-dollar fee and therefore were less likely to complain about the inconveniences made by the ongoing construction. As a result, boaters were more open to talk to the stewards. Another difference between 2010 and 2011 was that many of the boaters were returning to the lake from the previous season, so they anticipated the questions before the stewards asked them. Both stewards agreed that they made better connections with boaters this summer compared to last summer. Questions about the construction were a good transition into talking about the Paul Smith's College Watershed Stewardship Program. Regular boaters began to rely on the stewards for updates.

Another difference between the two seasons was the publicity that the stewards received. In early June there was a short article in the Shore Lines Extra, a local monthly newsletter published and distributed by the Saratoga Lake Association. In early July, *The Saratogian* published an article about the aquatic invasive species problem in the lake as well as what the Stewards were doing to address this problem. *The Saratogian* interviewed one of the stewards and the video of this interview was published on the newspaper's website. Weeks later, the Times Union published an article about the stewards and their return to Saratoga Lake for a second summer. As well as the publicity received this summer, the stewards made a presentation at a monthly Saratoga Lake Association meeting presenting an overview of the Paul Smith's College Watershed Stewardship Program, what work was being done on Saratoga Lake, and what data might be useful for the Saratoga Lake Association.

Recommendations

After the second season at the Saratoga State Boat Launch both stewards gained a better understanding of how the Watershed Stewardship Program worked on Saratoga Lake and how things could run more smoothly for the summers to come. For 2012, SLPID has established a petty cash fund to support incidental purchases to support the steward program. Another issue the stewards encountered was a need for support and additional staffing during weekends. The Cornell Cooperative Extension intern provided extremely helpful support on the days she was available. On the weekends when the Paul Smith's Steward was alone, the traffic at times became overwhelming.

The stewards also considered ways to positively impact the fight against invasive species. After spending a summer watching boaters launch and retrieve their boats from the launch, the stewards noticed how many invasives became attached to trailers and the bottom of boats simply within the launching area. The stewards recommend putting extra effort into keeping the area where boats are launched free of weeds. This effort may decrease how many invasive species are transported from Saratoga Lake to other lakes in the region. The stewards also recommend asking boaters whether they are aware of the invasive species problem to begin with.

These recommendations are not only to help the stewards, but also to help in the fight against the spread of aquatic invasive species from one water body to the next in the Adirondack Lake region.

Conclusion

Paul Smith's College Watershed Stewardship Program expanded outside of Adirondack Park to a very busy lake with great success. Awareness of invasive species has risen in the area. Many boaters were very concerned when they heard about the Asian clam outbreak in Lake George and the spiny water flea in Great Sacandaga Lake. Boaters began to appreciate that SLPID was actively doing something to keep these aquatic invaders out. Along with stewardship, SLPID continued the chemical treatments and both mechanical and hand harvesting Eurasian watermilfoil to create a trifecta of invasive species control.

The new awareness of invasive species on Saratoga Lake will help keep aquatic hitchhikers from making their way into the Adirondack Park watershed and other watersheds. We thank the Saratoga Lake Protection and Improvement District, especially Alan McCauley, for both their support and their vision in creating a stewardship program on Saratoga Lake.

Saratoga Lake Recreation Study 2011												
Week	Boat Type							total # boats	Weekly Avg HP outboard	Four stroke	# of people	
	M	PWC	S	C	K	B	R					
5-29-11 to 6-3-11	190	13	5	2	8	0	0	218	100	42	532	
6-4-11 to 6-10-11	290	14	4	3	8	0	0	319	83	52	639	
6-11-11 to 6-17-11	179	6	2	0	13	0	2	202	84	34	383	
6-18-11 to 6-24-11	326	12	2	0	11	0	0	351	107	76	859	
6-25-11 to 7-1-11	286	20	3	5	13	3	0	330	51	41	712	
7-2-11 to 7-8-11	375	33	3	5	17	0	2	435	102	66	995	
7-9-11 to 7-15-11	340	31	1	5	29	0	0	406	97	66	933	
7-16-11 to 7-22-11	247	28	1	7	15	0	0	298	86	39	731	
7-23-11 to 7-29-11	212	21	1	3	11	0	0	248	104	38	566	
7-30-11 to 8-5-11	281	15	6	11	30	0	2	345	87	43	802	
8-6-11 to 8-12-11	229	16	1	3	15	0	1	265	100	47	599	
8-13-11 to 8-19-11	211	16	2	4	17	0	3	253	92	50	566	
8-20-11 to 8-26-11	225	18	0	4	22	0	0	269	51	61	578	
8-27-11 to 9-2-11	122	7	0	4	11	0	2	146	119	36	282	
9-3-11 to 9-6-11	29	5	0	2	0	0	0	36	102	11	87	
totals	3542	255	31	58	220	3	12	4121		702	9264	

Table 3- Saratoga Lake use figures, 2011. Key: M = Motorboat; PWC = personal watercraft; S = sailboat; C = canoe; K = kayak; B = barge (construction); R = rowboat.

Saratoga Lake Recreation Study 2011												
Week	# groups launching	# groups retrieving	organisms found		organism type							
			entering	leaving	EWM	BW	NM	GRS	WC	ZM	VLM	other
5-29-11 to 6-3-11	218	1	3	0	0	0	0	1	0	1	0	1
6-4-11 to 6-10-11	319	2	1	0	1	0	0	0	0	0	0	0
6-11-11 to 6-17-11	202	6	2	0	1	0	0	0	0	0	0	1
6-18-11 to 6-24-11	351	8	1	0	0	0	0	0	0	0	0	1
6-25-11 to 7-1-11	330	6	7	0	2	0	0	2	0	0	0	3
7-2-11 to 7-8-11	435	0	5	0	3	0	0	1	0	0	0	1
7-9-11 to 7-15-11	407	0	4	0	4	0	0	0	0	0	0	0
7-16-11 to 7-22-11	295	5	4	1	3	0	0	0	0	1	0	1
7-23-11 to 7-29-11	246	5	2	1	0	0	0	3	0	0	0	0
7-30-11 to 8-5-11	343	9	3	0	1	0	1	1	0	0	0	0
8-6-11 to 8-12-11	264	2	1	1	0	0	1	1	0	0	0	0
8-13-11 to 8-19-11	251	4	9	1	4	0	0	6	0	0	0	0
8-20-11 to 8-26-11	269	0	7	0	0	0	0	7	0	0	0	0
8-27-11 to 9-2-11	126	19	3	0	0	0	1	2	0	0	0	0
9-3-11 to 9-6-11	36	0	0	0	0	0	0	0	0	0	0	0
totals	4092	67	52	4	19	0	3	24	0	2	0	8

Table 4- Key: EWM = Eurasian Watermilfoil; BW = native bladderwort; NM = native milfoil; GRS = grass; WC = water chestnut; ZM = zebra mussel; VLM = variable leaf milfoil.

Saratoga Lake Recreation Study 2011											
Week	visitor prevention steps										# groups
	yes	I	WB	DB	BB	LW	Dis	Dry	didn't ask		
5-29-11 to 6-3-11	184	49	144	14	0	1	0	0	3	221	
6-4-11 to 6-10-11	259	59	189	51	0	8	0	0	0	325	
6-11-11 to 6-17-11	156	29	109	40	0	9	0	0	0	208	
6-18-11 to 6-24-11	280	70	204	31	0	3	0	0	1	357	
6-25-11 to 7-1-11	257	108	148	51	2	2	0	2	0	244	
7-2-11 to 7-8-11	331	130	187	44	0	11	0	1	2	425	
7-9-11 to 7-15-11	266	60	164	69	0	0	0	3	0	413	
7-16-11 to 7-22-11	204	55	131	51	1	0	0	2	0	304	
7-23-11 to 7-29-11	157	49	87	51	0	0	0	3	0	253	
7-30-11 to 8-5-11	216	51	142	56	1	1	0	4	1	351	
8-6-11 to 8-12-11	173	34	108	72	0	0	0	2	0	253	
8-13-11 to 8-19-11	155	46	78	69	0	0	0	2	0	244	
8-20-11 to 8-26-11	170	51	95	75	0	0	1	2	0	269	
8-27-11 to 9-2-11	102	40	56	42	0	0	0	0	0	135	
9-3-11 to 9-6-11	24	8	18	4	0	0	0	0	1	27	
totals	2934	839	1860	720	4	35	1	21	8	4029	

Table 5-Key: I = Inspected boat; WB = washed boat; DB = drained bilge; BB = emptied bait bucket; LW = emptied livewell; Dis = disposed of bait; Dry = dried boat.

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