

## Recreation Use Study: Lake Flower and Second Pond State Boat Launches

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Figure 1-Lake Flower, Saranac Lake (1).

### Introduction

Paul Smith's College Watershed Stewardship Program posted Watershed Stewards at both the Lake Flower and Second Pond Boat Launches during the summer of 2012 due to a generous grant from the Lake Champlain Basin Program and support from Paul Smith's College's Adirondack Watershed Institute. The Lake Flower and Second Pond state boat launches are both located along the Saranac chain of lakes, which also includes Oseetah Lake, Kiwassa Lake, and the three Saranac Lakes. These lakes contain the same aquatic invasive species (AIS) because they are hydrologically connected and experience heavy recreational boating through-traffic. These lakes receive the most AIS pressure in the High Peaks area of the Adirondack Park due to their heavy public visitation.

Being the primary launching points for both Lower and Middle Saranac Lakes, both these boat launches offer access to the very popular Saranac Lake Islands Campground. The campground originally began in 1934 when public land was leased from the state by individuals, but became the attraction it is today when the Department of Environmental Conservation opened the sites as a public campground in 1974. The campground is composed of 87 campsites as well as 5 lean-to sites, and day-use sites on many of the islands. With a variety of activities from hiking to fishing, the Saranac Lake Islands Campground is one of the most desirable attractions in the area.

The Lake Flower State Boat Launch is located within the Village of Saranac Lake on Route 86. In 1829 the Saranac River was dammed in order to create the lake (1). Lake Flower encompasses approximately 202 acres and is no deeper than fifteen feet (2). The lake was initially called Newell Pond, but was renamed for the former New York State Governor Roswell P. Flower following the end of his term in 1894. The lake is primarily owned by private

individuals and is the last body of water in the Saranac Chain of Lakes before the water flows into the Saranac River.

The Saranac Chain of Lakes is known to possess Eurasian watermilfoil (*Myriophyllum spicatum*), variable-leaf milfoil (*Myriophyllum verticillatum*), and curly leaf pondweed (*Potamogeton crispus*). Eurasian watermilfoil has the ability to aggressively reproduce from small fragments. Once introduced to a waterway, Eurasian watermilfoil can quickly outcompete other plant species within the lake, transforming the native ecology. It forms thick mats of vegetation which then chokes out other species and hampers recreation. Both Lake Flower and Second Pond are potential sources of invasive species moving to other bodies of water and therefore high priority locations for efforts to prevent the spread of AIS.

Paul Smith's College Watershed Stewardship Program (WSP) has been engaging with boaters at Lake Flower since 2011. Lake Flower is the second busiest launch within the program's eastern section and is frequented by boaters from out of town as well as many from the immediate area (3). The Lake Flower location proved to be ideal for public outreach and education, as its location in town proved to be a busy area for recreationists on the water and on land.

The WSP is a public outreach program designed to educate and increase public awareness of AIS in addition to other environmental issues regarding the waterways of the Adirondack Park. The outreach at Second Pond began in 2005 and has been recurring every year since 2008. The continuity of the waterways from Second Pond makes the launch a high priority, being a primary source of Eurasian watermilfoil, which can easily be transported throughout the region.



Figure 2- Watershed Stewards educating operator of stand-up paddleboard at Lake Flower boat launch.

## Methods

For the fifteen weeks between May 26<sup>th</sup> to September 3<sup>th</sup>, a steward was on site at both the Lake Flower State Boat Launch and Second Pond Boat Launch from 7:00AM to 4:00PM with one hour off for breaks and lunch.

Watershed Stewards were stationed at the New York State Department of Environmental Conservation (NYSDEC) Second Pond boat launch five days per week (Thursdays- Mondays) and the Lake Flower State Boat Launch six days per week (excluding Tuesdays). Watershed Stewards provided boaters and visitors with interpretive information concerning AIS. Boaters were surveyed by the stewards concerning where the most recent body of water their boat had been in. Data was additionally collected on what steps the visitor took to prevent the transport of invasive species from lake to lake. Information was also collected concerning the group size, horsepower of outboard engines, state registration and if the outboard engine was a 4-stroke or direct injection 2-stroke.

All stewards provided a courtesy inspection for boats entering and leaving Lake Flower and Second Pond. Propellers, outdrives, trailer bunks, axles, standing water, and other nooks and crannies were areas of high focus due to the potential for harboring invasive hitchhikers. Boaters were then offered informational literature on aquatic invasive species and how to prevent them from infecting other waterways. Although the Watershed Stewards performed inspections for visitors they also recommended that boaters take responsibility for washing and inspecting their own boats. All viable boater responses were recorded in a Microsoft Excel database for future study and determination of use and risk.

### **Results**

During the summer months of 2012, the WSP observed and inspected a total of 1,498 boats that were recreating on Lake Flower. From Labor Day to Memorial Day stewards interacted with 2,995 visitors accompanying the vessels. Of the 1,498 entering and exiting the lake, 567 boats visiting stated that the Saranac Chain of Lakes had been their last body of water visited in the prior two weeks, with many boats stating that their boats exclusively stayed on Lake Flower. 1,010 boaters recreating on Lake Flower possessed motorboats, accounting for two thirds (68%) of the total visitors. After motorboats, canoes totaled 14% (204) of launches, followed closely by kayaks at 13% (200). The remaining percentage of boats was divided between personal watercraft (63 for 4%), rowboats (14 for 1%), stand up paddleboards (1 rounding to 0%), and construction barges (4 rounding to 0%).

In 2012, watershed stewards encountered a total of 3,003 boats and 5,393 visitors at the Second Pond boat launch between May 26th and September 3rd. There were a total of 870 motorboats (29% of all launched), 1,091 kayaks (36%), 936 canoes (31%), 55 personal watercraft (2%), 22 rowboats (1%), and 19 (1%) stand up paddleboards.

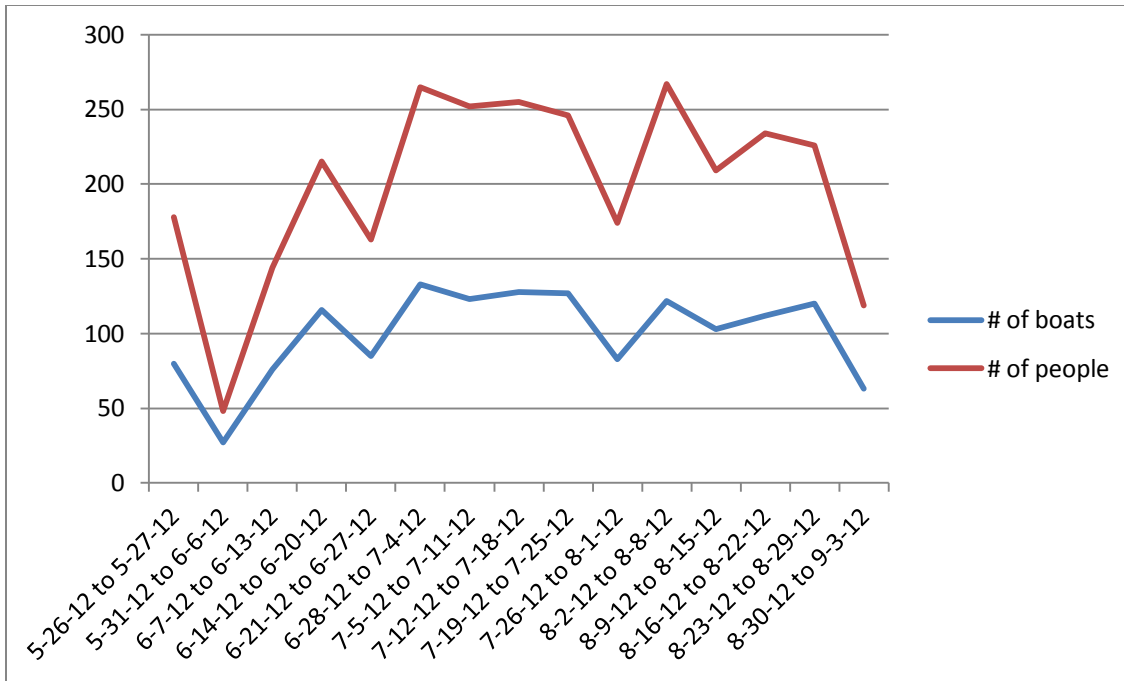


Figure 3- Lake Flower Boat Launch Use, 2012.

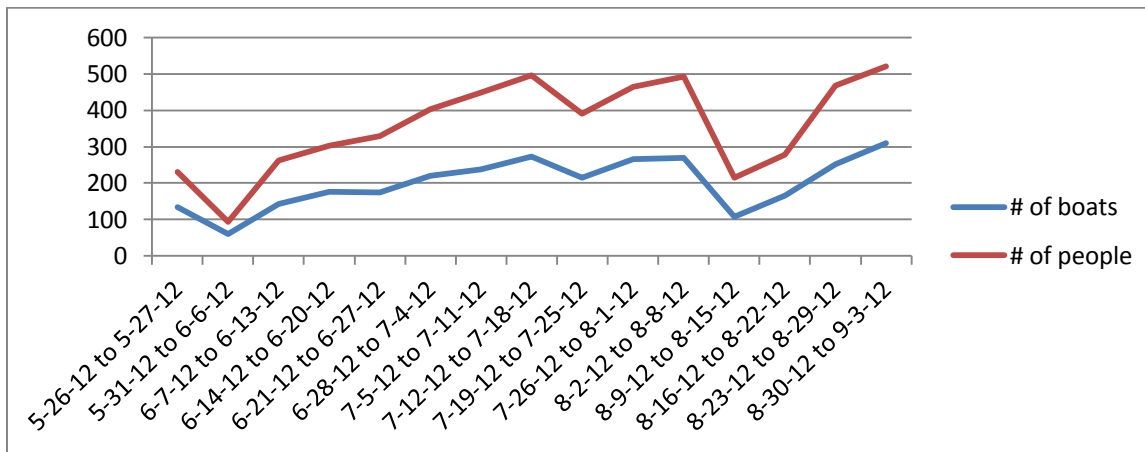


Figure 4- Second Pond Boat Launch Use, 2012.

The greatest usage at Lake Flower State Boat Launch occurred during the week ending in Independence Day and the first week in August. Second Pond State Boat Launch had the most use during the middle of July, the week of the 12<sup>th</sup>-18<sup>th</sup>, the first week in August, and over Labor Day weekend. These numbers indicate that in the future the WSP should, at a minimum, be fully staffed throughout July into the beginning of August.



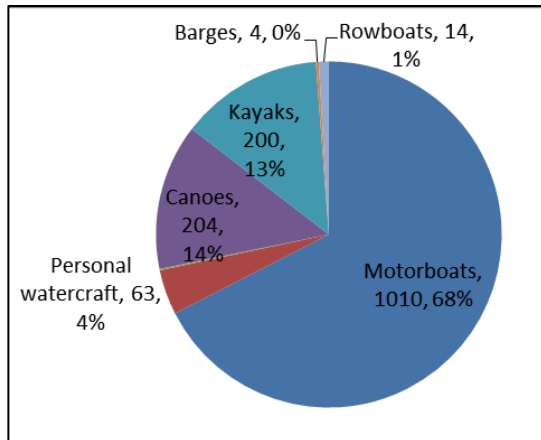


Figure 5-Types of watercraft launched, Lake Flower 2012.

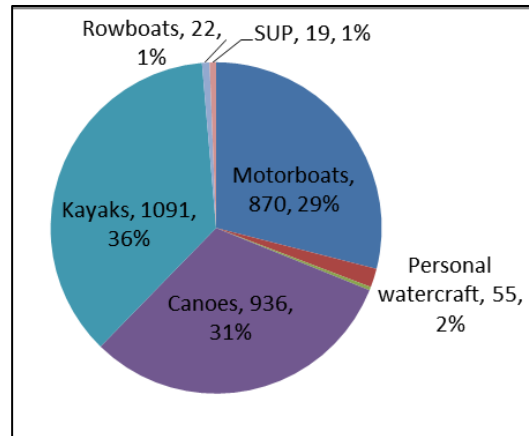


Figure 6- Types of watercraft launched, Second Pond 2012.

#### Aquatic Invasive Species Spread Prevention Measures Taken by Visitors

Watershed Stewards recorded any preventative measures boaters took to stop the spread of both native and non-native species from one waterway to the next, including visual inspections of boats, washing or drying boats, draining the bilge, live well, or bait buckets, and disposing of any found species in the indicated disposal sites. During the season, 62% of boaters said that they took some prevention step before launching or after retrieving their vessel at the Lake Flower State Boat Launch. Most of these boaters washed (41%) and/or visually inspected their boat (39%) for AIS. 4% of boaters allowed their boats to dry up to two weeks between launches, an important threshold for the viability of AIS. 2% of boaters drained their bilge between visits. It is important to note that many visitors took multiple steps while others took no actions at all, often citing that they never switched waterways with their boats. At the Second Pond State Boat Launch a total of 57% of boaters took some kind of prevention steps. 33% of groups inspected their boats, 39% washed their boats after use, 7% dried their boats, 2% drained the bilge, and a negligible number of groups, bait bucket, live well, or disposed of bait properly.



Figure 7- Canoe inspection, Lake Flower boat launch

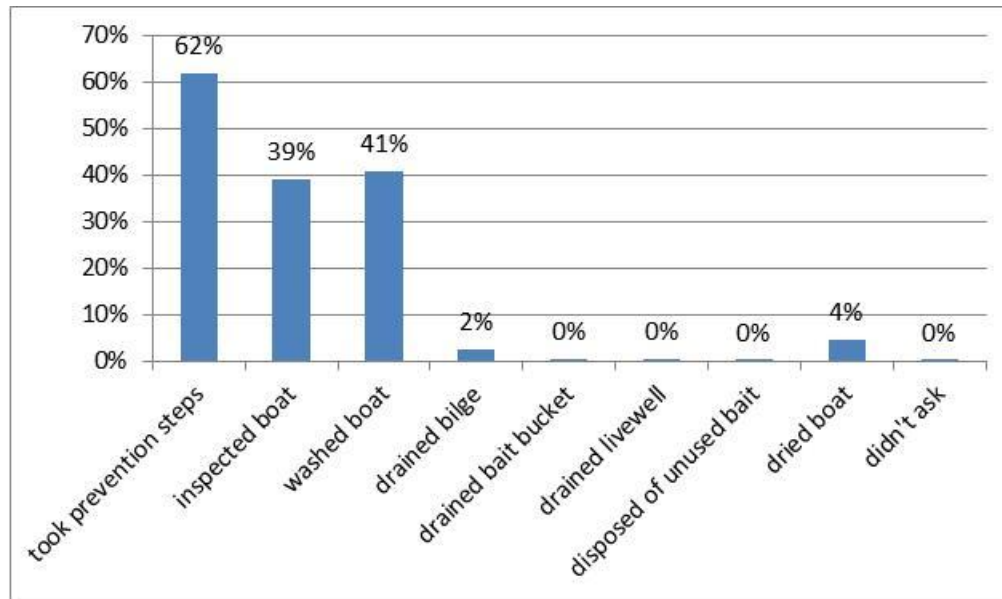


Figure 8-Aquatic invasive species spread prevention measures taken at Lake Flower Boat Launch, 2012.

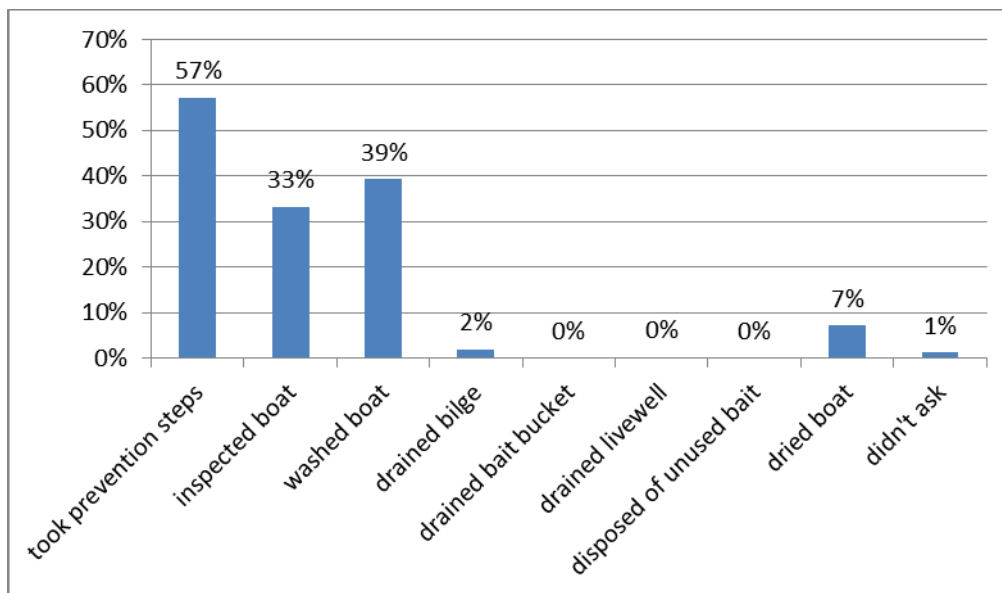


Figure 9- Aquatic invasive species spread prevention measures taken at Second Pond Boat Launch, 2012.

### Organisms Removed from Watercraft

During the summer of 2012 watershed stewards removed a total of 267 aquatic plant species from vessels entering and/or leaving Lake Flower. Of these species 99 were confirmed AIS, potential vectors for spread. The majority of the species found were from boats that were retrieving from Lake Flower. These 185 incidents accounted for 36% of the 508 boats leaving. Of the 1,008 boats entering the waterway only 8% (81) had organisms attached to the boat or trailer. There were over four times as many species found on boats leaving than entering, making Lake Flower a highly probable source of AIS infestation for the Adirondacks. The AIS that were found on boats throughout the summer were primarily Eurasian watermilfoil; 36 instances of this organism were recorded. There were also 24 specimens of variable leaf milfoil, 4 curly leaf pondweed and 35 unidentified species. For the

2012 summer there were no recorded instances of zebra mussels, down from one the previous summer. Many of the recorded organisms found and removed were common indigenous grasses (152).

Watershed Stewards saw and removed organisms, both native and non-native, from boats entering and leaving Second Pond. In 2012, stewards removed 33 organisms (3.1% of all launches) from boats entering the waterway, and 73 (11.9% of all retrievals) from those leaving. The frequency of organisms found on boats leaving Second Pond was almost three times greater than those found entering the waterway. Overall, a total of 36 fragments of Eurasian watermilfoil, 12 bladderwort fragments, and 3 fragments of both curly leaf pondweed and variable-leaf milfoil were removed. A total of 64 AIS were found in the 3,003 boats inspected, making the species transport rate 3.1%. Eurasian watermilfoil was frequently found on boats exiting Second Pond, as the lake is a source of the invasive. However, prior waterway history shows that many of the recorded water bodies are known hosts as well.

**Table 1- AIS found at Lake Flower and Second Pond State Boat Launches, 2012**

Aquatic Invasive Organism	Entering Lake Flower	Leaving Lake Flower	Entering Second Pond	Leaving Second Pond	Waterway Visited in Previous 2 weeks
Curly Leaf Pondweed			2	1	Upper St. Regis (1), none (1)
Curly Leaf Pondweed	3	1			None (3)
Eurasian Watermilfoil	30	8			Chateaugay Lake, Chazy Lake, Lake Champlain (2), Lake Flower (3), Saranac River, Seneca River, none (16)
Eurasian Watermilfoil			29	19	Lake Champlain (2), Saranac River (2), Second Pond (3), none (22)
Variable Leaf Milfoil	18	6			Keuka Lake, Lake Flower (5), Saranac River (2), none (10)
Variable Leaf Milfoil			1	2	Canandaigua Lake
Totals	51	15	32	22	

Although the Second Pond State Boat Launch saw double the number of boats seen at Lake Flower during the summer it is still extremely important to have a Watershed Steward present at Lake Flower State Boat Launch because both launches provide access to the Saranac Chain of Lakes. Even though there were fewer boaters using the Lake Flower State Boat Launch, the boats at that launch were more likely to be transporting AIS. Both launches had a similar number of Eurasian watermilfoil fragments on boats entering while boats at Lake Flower were more likely to be carrying fragments of variable leaf milfoil. The two boat launches had similar spread prevention statistics, with the boaters at Second Pond being slightly more likely to take any measure.

Table 2- Lakes visited in previous two weeks to use of Lake Flower Lake Boat Launch, 2012.

Body of Water	# visits	AIS Present	Body of Water	# visits	AIS Present
Lake Flower	473	Yes	Lake George	1	Yes
Saranac Chain of lakes	106	Yes	Little Magothy River, MD	1	Yes
Lake Placid	51	Yes	Niagara River	1	Yes
Lake Champlain	17	Yes	Port Bay, NY	1	Yes
Tupper Lake	15	Yes	Sacandaga Lake	1	Yes
Chateaugay Lake	8	Yes	Saranac River	1	Yes
St. Lawrence River	8	Yes	Taylor Pond	1	Yes
Lake Colby	7	Yes	Thompsons Lake, East Burn, NY	1	Yes
Lake Ontario	6	Yes	None	371	
Fish Creek Pond	5	Yes	Rental	41	
Bantam Lake, CT	4	Yes	Rainbow Lake	7	
Black Lake	4	Yes	Lake Clear	5	
Connecticut River	4	Yes	Upper St. Regis	5	
Hudson River	4	Yes	Mirror Lake	3	
Kiawassa Lake	4	Yes	Raquette River	3	
Long Lake	4	Yes	Little Moose Pond, Old Forge	2	
Mountain View Lake, NY	4	Yes	Lower St. Regis	2	
Brandt Lake	3	Yes	Rollins Pond	2	
Erie Canal	3	Yes	St. Regis	2	
Follensby Clear	3	Yes	Barnum Pond	1	
Lake Dunmore, VT	3	Yes	Big Moose Lake	1	
Meacham Lake	3	Yes	Blue Lake	1	
Raquette Lake	3	Yes	Blue Mountain Lake	1	
Schroon Lake	3	Yes	Canada Lake, Caroga, NY	1	
Loon Lake	2	Yes	Chittendon Dam, VT	1	
Oseetah Lake	2	Yes	Fern Lake	1	
Saratoga Lake	2	Yes	Jones Pond	1	
Atlantic Ocean	1	Yes	Jones Pond, Angelica, NY	1	
Canadarego Lake, NY	1	Yes	Kushaqua Lake	1	
Canandaigua Lake	1	Yes	Lake Everest Wilmington, NY	1	
Candlewood Lake, Brookfield, CT	1	Yes	Lake Lillinonah Newtown CT	1	
Cayuga Lake	1	Yes	Lake Whitaker	1	
Congamond Lake, MA	1	Yes	Little Clear	1	
Forked Lake, Long Lake, NY	1	Yes	Little Tupper	1	
Franklin Falls	1	Yes	Little Wolf	1	
Grafton Lake, NY	1	Yes	Long Pond	1	
Grasse River	1	Yes	Lost Pond	1	
Hinkley Reservoir	1	Yes	Spitfire Lake	1	
Houstonic River, CT	1	Yes	Stony Creek	1	
Hyde Lake, Redwood, NY	1	Yes	Turtle Pond, NJ	1	
Lake Bonaparte	1	Yes	Total	1237	



Paul Smith's College Watershed Stewardship Program:  
Second Pond and Lake Flower Report, 2012

Table 3- Lakes visited in previous two weeks to use of Second Pond Boat Launch, 2012.

Body of Water	AIS Present	# Visits	Body of Water	AIS Present	# Visits	Body of Water	AIS Present	# Visits
Saranac Chain	Yes	345	Lake Titus	Yes	2	Mirror Lake		5
Second Pond	Yes	226	Loon Lake, Chestertown, NY	Yes	2	Rainbow Lake		5
Lake Placid	Yes	47	Meacham Lake	Yes	2	Ausable River		4
Lake Champlain	Yes	31	Otsego Lake	Yes	2	Cascade Lakes		4
Fish Creek Ponds	Yes	24	Sacandaga Reservoir	Yes	2	Moose Pond		3
Follensby Clear Pond	Yes	22	Skeneateles Lake, NY	Yes	2	Abanaki River		2
Hudson River	Yes	21	Arrowhead Lake	Yes	1	Averill Lake VT		2
Tupper Lake	Yes	19	Butternut Pond NY	Yes	1	Boyd Pond, Russell, NY		2
Lake Colby	Yes	14	Canadarago Lake	Yes	1	Heart Lake		2
Lake Ontario	Yes	11	Canadice Lake	Yes	1	Hoel Pond		2
Atlantic Ocean	Yes	10	Caroga Lake	Yes	1	Lake Clear		2
Chateaugay Lake	Yes	10	Cassadaga Lake	Yes	1	Lake Eaton		2
Long Lake	Yes	10	Cayuga Lake	Yes	1	Lake Everest		2
Lake George	Yes	9	Cazenovia Lake	Yes	1	Little Wolf Lake		2
Canadaigua Lake	Yes	7	Chazy Lake	Yes	1	Loon Lake, Vermontville, NY		2
Saratoga Lake	Yes	7	Chazy River	Yes	1	Lowes Lake		2
St Lawrence River	Yes	7	Dog Pond CT	Yes	1	Monksville Reservoir NJ		2
Rollins Pond	Yes	6	East Fork Lake OH	Yes	1	Abel Lake VA		1
Long Island Sound	Yes	5	First Lake Fulton Chain	Yes	1	Arnold Lake		1
Mohawk River	Yes	5	Forked Lake	Yes	1	Assateague Bay MD		1
Oneida Lake	Yes	5	Glen Lake VT	Yes	1	Barnum Pond		1
Saranac River	Yes	5	Grasse River	Yes	1	Blue Marsh Lake PA		1
Cranberry Lake	Yes	4	Hinkley Reservoir	Yes	1	Blue Mountain Lake		1
Floodwood Pond	Yes	4	Housatonic River CT	Yes	1	Blue Mountain Reservoir PA		1
Lake Erie	Yes	4	Hunt Lake	Yes	1	Casey Park NY		1
Lincoln Pond	Yes	4	Kinderhook Lake	Yes	1	Cedar River Flow		1
Mountain View Lake, NY	Yes	4	Lake Cochituate	Yes	1	Chapel Pond		1
Taylor Pond	Yes	4	Lake Nockamixum PA	Yes	1	Chittenden Reservoir VT		1
Black Lake	Yes	3	Lake Ronconcoma	Yes	1	Connery Pond		1
Cossayuna Lake NY	Yes	3	Lake St Louis QC	Yes	1	Dyken Pond		1
Delaware River	Yes	3	Lake Superior	Yes	1	Eagle Creek		1
Erie Canal	Yes	3	Niagara River	Yes	1	Eaton Pond NY		1
Franklin Falls	Yes	3	Ostego Lake	Yes	1	Genesee River		1
Hemlock Lake	Yes	3	Oswego River	Yes	1	Gillette Pond VT		1
Horseshoe Pond	Yes	3	Pontoosuc Lake MA	Yes	1	Henderson Lake		1
Indian Lake	Yes	3	Rhode Island Sound	Yes	1	Lake Marburg		1
Kiawassa Lake	Yes	3	Round Lake	Yes	1	Lake Redman PA		1
Lake Bonaparte	Yes	3	Sacandaga Lake	Yes	1	Lamoille River VT		1
Lake Durant	Yes	3	Seneca Lake	Yes	1	Lewey Lake		1
Putnam Pond	Yes	3	Seneca River	Yes	1	Long Pond		1
Raquette Lake	Yes	3	Sodus Bay	Yes	1	Long Pond ON		1
Schroon Lake	Yes	3	Spring Lake RI	Yes	1	Moody Pond		1
Tupper Lake	Yes	3	Stony Creek Ponds	Yes	1	Moose River		1
Union Falls Reservoir	Yes	3	Summit Lake NY	Yes	1	Mt Arab Lake		1
Black Pond	Yes	2	White Lake	Yes	1	Oak Orchard Creek		1
Buck Pond	Yes	2	None		839	Oswagatchie River		1
Conesus Lake	Yes	2	Rental		375	Piseco Lake		1
Connecticut River	Yes	2	Upper St. Regis Lake		19	Polliwog Pond		1
Fern Lake	Yes	2	Raquette River		9	Splitrock Reservoir NJ		1
Fourth Lake	Yes	2	Osgood Pond		7	Stillwater Reservoir		1
Great Sacandaga Reservoir	Yes	2	Black River		6	Sunrise Lake NJ		1
Greenwood Lake NY	Yes	2	Little Clear Pond		6	Wallenpaupack Lake PA		1
Kayuta Lake	Yes	2	Lower St. Regis Lake		6	Waterbury Reservoir		1
Lake Algonquin	Yes	2	Big Bass Lake PA		5	Whaley Lake NY		1
Lake Dunmore, VT	Yes	2	Lake Kushaqua		5	Total		2350

As expected the majority of watercraft entering Lake Flower and Second Pond State Boat Launches were registered in New York State. New Jersey, Connecticut, Massachusetts, Vermont, and Pennsylvania were the registrations most often seen at these two boat launches. Overall, boaters were reported coming from 18 different states and provinces.

Table 5-State of origin, motorboats, Lake Flower.

State	# boats	State	# boats
AR	2	NJ	37
CT	22	NV	1
DE	4	NY	983
FL	6	OH	2
KY	1	ON	1
MA	15	PA	5
MD	3	QC	5
ME	1	RI	1
MT	1	SC	2
NC	2	VT	10
NH	2	Total	1106

Table 4-State of origin, motorboats, Second Pond.

State	# boats	State	# boats
NY	788	DE	6
NJ	56	KY	2
MS	22	OH	2
VT	18	RI	2
CT	13	MA	1
PA	11	ME	1
FL	10	MO	1
MD	7	NH	1
QC	7	Total	948

## Discussion

During Lake Flower's second summer of program monitoring it continues to be a concern for the health of Adirondack lakes. Lake stewardship worked effectively to prevent the infection of many new introductions to the waterway while also thwarting organisms that could have potentially been removed and introduced to other lakes. Lake Flower is one of the most highly used of all the tri-Lakes area boat launches and this makes it a great location for further data collection and a crucial site for continued prevention inspections. Although most boats visiting claim to exclusively recreate at Lake Flower the organisms removed was each a possible vector for other pristine lakes around the Adirondacks.

The mixed composition of out of state versus instate boaters provided a great demographic for the continuing education of the public. Unfortunately, since the inaugural year in 2011 at Lake Flower State Boat Launch there was a decrease in percentage of boaters who took preventative steps. In 2011 79% of boaters employed some method to prevent the spread of invasives but during the 2012 season only 62% did so. The drop off in preventative steps shows that continuing education is important at this crucial site.

The importance of the Lake Flower boat launch cannot be understated. Many believe that since the waterway already has invasive species present that resources would be better used at other locations. This point has some validity but it is also important to recognize that the lake is a highly probable source for invasives being transported to other invasive free bodies of water. Its proximity to many key pristine lakes (Lake Placid, Osgood Pond and the St. Regis waterways) illustrate that an effort of prevention at Lake Flower could mean that these other waterways stay clean.

Lake Flower has become a vital part of the Paul Smith's Watershed Stewardship Program through its continued efforts in the community to prevent the spread of invasive species. Its positive impact on community education and involvement cannot be understated as it continues to combat the growing problem of invasive species. The program has been able to interact with a variety of boaters; the weekend water skiers to the canoe camping gurus. This continued outreach allows people far and wide to begin to understand the impact invasives can have upon our communities and our lakes. This summer the Paul Smith's Watershed Program continued to spread the message concerning why early detection and prevention are important to keeping our environments clean for us and our natural ecosystems.

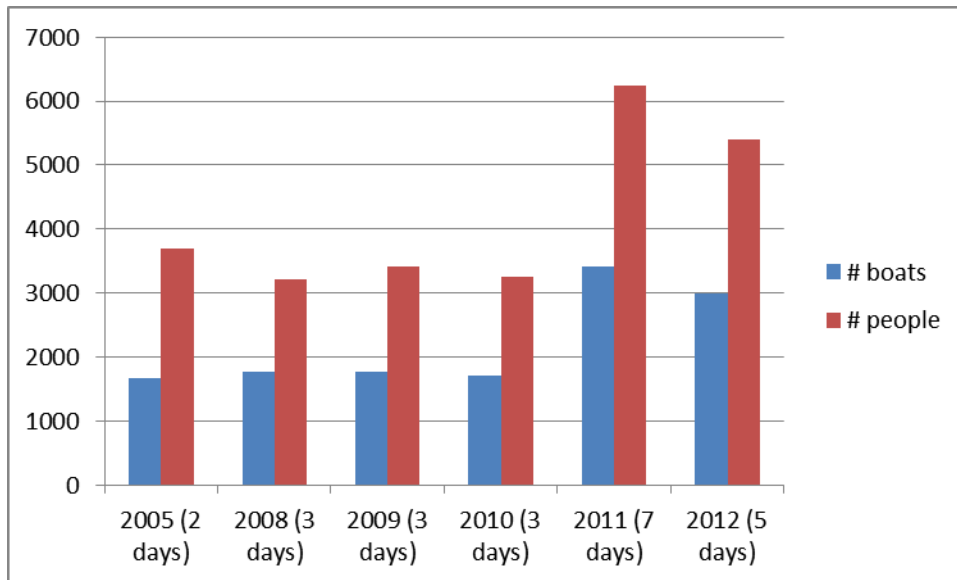


Figure 10- Second Pond historical usage data (Year, number of days of boat launch coverage per week).

Usage at the Second Pond State Boat Launch decreased from 2011 numbers owing to decreased steward coverage, but had remained fairly steady for the three years of three day per week coverage prior to that. This launch remains one of the most critical in the WSP coverage area due to its high visitation rates and potential for moving AIS throughout the Adirondacks.

The Lake Flower and Second Pond State Boat Launches are important because of the high potential for AIS education, pressure for AIS being imported to the Saranac Chain of Lakes, and the potential of exporting AIS to other areas. The Watershed Stewardship Program recognizes the support and collaboration of the Lake Champlain Basin Program and the Adirondack Watershed Institute for both underwriting and helping to train and guide the stewards posted to these important public waterway access points.

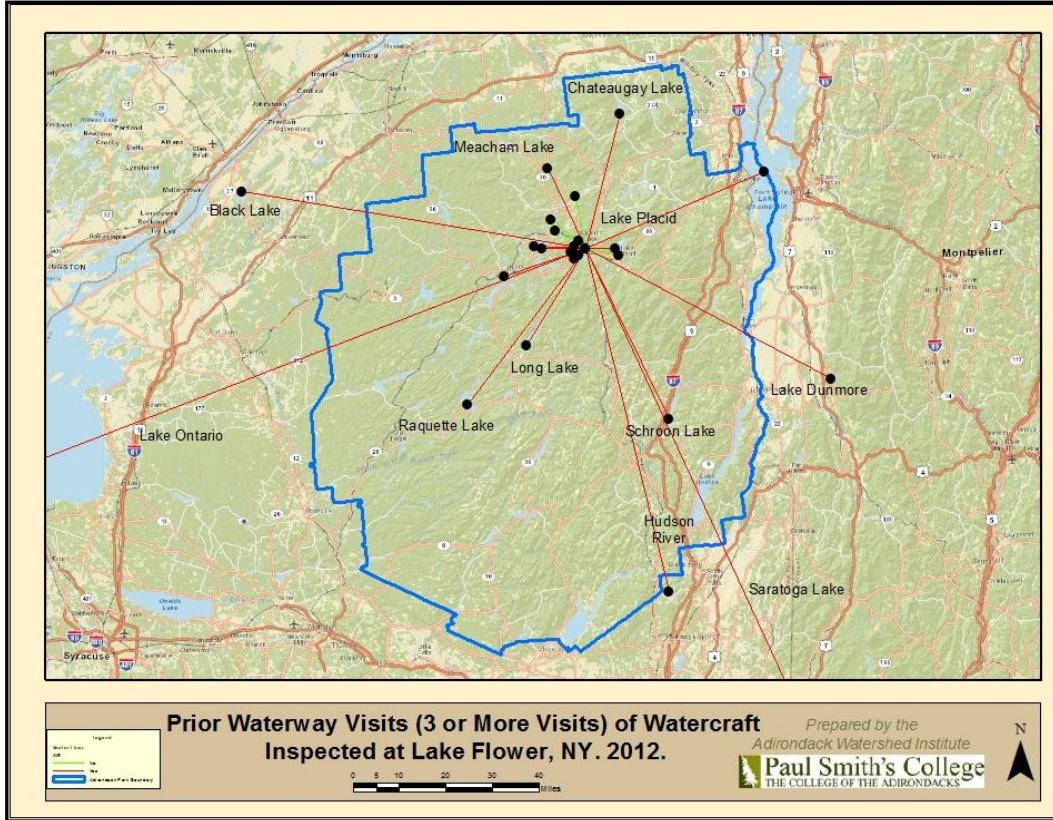


Figure 11- Previous waterway visitation map, Lake Flower, 2012.

**Lake Flower Recreation Study 2012**

Week	Boat Type									total # boats	Weekly Avg HP outboard	Four stroke	Group Size	# groups launching	# groups retrieving	organisms found	
	M	PWC	S	C	K	B	R	SUP	entering							leaving	
5-26-12 to 5-27-12	66	2	0	6	6	0	0	0	80	61	31	178	69	24	1	1	
5-31-12 to 6-6-12	20	0	0	4	2	0	1	0	27	54	5	48	23	14	6	6	
6-7-12 to 6-13-12	58	7	0	3	7	1	0	0	76	72	18	144	67	23	1	7	
6-14-12 to 6-20-12	88	4	0	8	16	0	0	0	116	63	26	215	82	44	11	13	
6-21-12 to 6-27-12	69	4	0	2	10	0	0	0	85	81	20	163	61	48	11	12	
6-28-12 to 7-4-12	79	7	0	22	15	1	9	0	133	65	35	265	101	47	6	13	
7-5-12 to 7-11-12	93	6	1	10	12	1	0	0	123	70	15	252	87	37	5	19	
7-12-12 to 7-18-12	71	9	0	37	11	0	0	0	128	64	27	255	81	36	7	11	
7-19-12 to 7-25-12	82	2	0	9	31	0	3	0	127	62	28	246	87	52	4	20	
7-26-12 to 8-1-12	58	4	0	9	11	1	0	0	83	64	19	174	67	19	9	6	
8-2-12 to 8-8-12	71	3	0	34	13	0	1	0	122	64	30	267	60	47	5	22	
8-9-12 to 8-15-12	58	2	0	18	25	0	0	0	103	73	17	209	50	44	4	22	
8-16-12 to 8-22-12	71	5	0	22	14	0	0	0	112	61	27	234	70	39	2	12	
8-23-12 to 8-29-12	80	4	1	13	21	0	0	1	120	61	33	226	83	27	6	3	
8-30-12 to 9-3-12	46	4	0	7	6	0	0	0	63	70	12	119	20	7	3	19	
<b>totals</b>	<b>1010</b>	<b>63</b>	<b>2</b>	<b>204</b>	<b>200</b>	<b>4</b>	<b>14</b>	<b>1</b>	<b>1498</b>	Summer Avg = 65 Median HP = 50	<b>343</b>	<b>2995</b>	<b>1008</b>	<b>508</b>	<b>81</b>	<b>186</b>	

Table 6– Lake Flower use figures, 2012. KEY: M=motorboat; PWC=personal watercraft; S=sailboat; C=canoe; K=kayak; B= construction barge; R=rowboat

Lake Flower Recreation Study 2012																			
Week	organism type										visitor prevention steps								# groups
	BW	CLP	EWM	GRS	NM	VLM	WC	ZM	other	yes	I	WB	DB	BB	LW	Dis	Dry	didn't ask	
5-26-12 to 5-27-12	0	0	0	1	0	1	0	0	0	44	31	31	2	1	2	1	3	0	77
5-31-12 to 6-6-12	0	0	1	6	0	1	0	0	4	11	10	4	0	0	0	1	0	25	
6-7-12 to 6-13-12	1	0	2	4	0	0	0	0	1	39	26	28	2	0	0	0	3	74	
6-14-12 to 6-20-12	0	1	4	14	1	2	0	0	2	52	42	30	4	0	0	0	0	100	
6-21-12 to 6-27-12	1	0	5	11	0	3	0	0	3	47	22	34	3	2	0	0	1	78	
6-28-12 to 7-4-12	0	1	5	9	0	2	0	0	2	65	34	45	1	0	1	0	1	117	
7-5-12 to 7-11-12	1	0	2	12	0	4	0	0	5	72	42	50	2	0	0	0	2	113	
7-12-12 to 7-18-12	0	0	0	11	0	5	0	0	2	67	38	44	0	0	0	0	9	99	
7-19-12 to 7-25-12	1	0	4	13	0	1	0	0	5	75	50	46	1	0	0	0	11	110	
7-26-12 to 8-1-12	1	1	1	9	0	1	0	0	2	45	26	28	2	0	1	0	5	69	
8-2-12 to 8-8-12	1	0	4	17	0	2	0	0	3	66	50	45	0	0	0	0	1	95	
8-9-12 to 8-15-12	1	1	3	17	0	1	0	0	3	56	35	36	2	0	0	0	5	78	
8-16-12 to 8-22-12	0	0	0	11	0	0	0	0	3	47	22	34	2	0	0	0	3	94	
8-23-12 to 8-29-12	1	0	3	5	0	0	0	0	0	68	47	47	3	0	0	0	3	96	
8-30-12 to 9-3-12	1	0	2	12	6	1	0	0	0	70	46	42	9	0	1	0	10	107	
<b>totals</b>	<b>9</b>	<b>4</b>	<b>36</b>	<b>152</b>	<b>7</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>824</b>	<b>521</b>	<b>544</b>	<b>33</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>58</b>	<b>2</b>	<b>1332</b>

Table 7– Lake Flower use figures, 2012. Key: EWM = Eurasian Watermilfoil; BW = native bladderwort; NM = native milfoil; GRS = grass; WC = water chestnut; ZM = zebra mussel; VLM = variable leaf milfoil. I = Inspected boat; WB = washed boat; DB = drained bilge; BB = emptied bait bucket; LW = drained livewell; Dis = discarded unused bait; Dry = dried boat.

Second Pond Recreation Study 2012																	
Week	Boat Type									total # boats	Weekly Avg HP outboard	4 stroke/ 2 strk DI	Group Size	# groups launching	# groups retrieving	organisms found	
	M	PWC	S	C	K	B	R	SUP	entering							leaving	
5-26-12 to 5-27-12	32	2	0	41	59	0	0	0	134	56	1	231	73	25	0	0	
5-31-12 to 6-6-12	8	0	0	30	22	0	0	0	60	55	4	94	18	20	0	1	
6-7-12 to 6-13-12	48	4	4	55	25	0	3	3	142	58	26	262	76	41	2	5	
6-14-12 to 6-20-12	67	7	0	38	63	0	0	1	176	50	19	302	106	62	1	6	
6-21-12 to 6-27-12	60	0	0	65	48	0	2	0	175	51	13	329	78	70	3	12	
6-28-12 to 7-4-12	70	2	0	79	66	0	1	2	220	70	10	403	125	65	8	6	
7-5-12 to 7-11-12	79	4	1	58	88	0	1	7	238	61	20	448	129	70	4	15	
7-12-12 to 7-18-12	76	6	0	94	91	0	2	0	273	59	26	496	141	74	3	8	
7-19-12 to 7-25-12	68	7	0	58	81	0	0	3	214	65	21	390	117	65	3	10	
7-26-12 to 8-1-12	62	2	0	75	121	0	3	3	266	52	18	465	143	62	6	3	
8-2-12 to 8-8-12	75	3	3	77	110	0	1	0	269	49	18	493	110	86	5	12	
8-9-12 to 8-15-12	28	0	0	50	25	0	5	0	108	58	6	214	48	30	1	4	
8-16-12 to 8-22-12	39	5	0	54	67	0	1	0	166	53	10	278	78	44	4	9	
8-23-12 to 8-29-12	77	9	2	68	94	0	2	0	252	53	23	468	130	81	3	16	
8-30-12 to 9-3-12	81	4	0	94	131	0	1	0	310	53	34	520	162	81	6	13	
<b>totals</b>	<b>870</b>	<b>55</b>	<b>10</b>	<b>936</b>	<b>1091</b>	<b>0</b>	<b>22</b>	<b>19</b>	<b>3003</b>	<b>Summer Avg = 57</b>	<b>249</b>	<b>5393</b>	<b>1534</b>	<b>876</b>	<b>49</b>	<b>120</b>	
										<b>Median HP = 40</b>							

Table 8- Second Pond use figures, 2012. KEY: M=motorboat; PWC=personal watercraft; S=sailboat; C=canoe; K=kayak; B= construction barge; R=rowboat.

Second Pond Recreation Study 2012																			
Week	organism type									# groups taking spread prevention measures									# groups
	BW	CLP	EWM	GRS	NM	VLM	WC	ZM	other	yes	I	WB	DB	BB	LW	Dis	Dry	didn't ask	
5-26-12 to 5-27-12	0	0	0	0	0	0	0	0	0	50	22	35	2	0	0	0	6	1	88
5-31-12 to 6-6-12	0	0	0	1	0	0	0	0	0	21	18	13	0	0	0	3	0	36	
6-7-12 to 6-13-12	0	0	2	5	0	0	0	0	0	50	34	36	5	0	0	6	3	99	
6-14-12 to 6-20-12	0	0	2	4	0	0	0	0	1	80	48	52	1	0	1	5	2	139	
6-21-12 to 6-27-12	1	1	6	7	0	0	0	0	0	84	51	60	3	0	3	1	3	158	
6-28-12 to 7-4-12	0	0	5	6	0	0	0	0	3	102	61	69	1	0	1	7	3	170	
7-5-12 to 7-11-12	0	0	8	9	0	0	0	0	2	93	63	74	1	0	0	6	5	177	
7-12-12 to 7-18-12	1	0	3	4	0	1	0	0	2	127	61	92	8	0	0	15	3	195	
7-19-12 to 7-25-12	0	1	4	7	0	0	0	0	1	102	62	75	3	0	1	14	3	161	
7-26-12 to 8-1-12	0	0	1	7	0	0	0	0	1	106	61	69	0	0	0	20	1	184	
8-2-12 to 8-8-12	0	1	5	9	0	2	0	0	0	131	72	88	2	0	0	19	2	187	
8-9-12 to 8-15-12	0	0	0	4	0	0	0	0	1	42	3	39	1	0	0	2	0	158	
8-16-12 to 8-22-12	0	0	2	9	0	0	0	0	2	64	45	36	3	0	0	13	2	149	
8-23-12 to 8-29-12	1	0	8	10	0	0	0	0	0	131	78	69	9	0	0	18	1	193	
8-30-12 to 9-3-12	0	0	2	12	0	0	0	0	5	140	88	102	4	0	1	30	0	219	
<b>totals</b>	<b>3</b>	<b>3</b>	<b>48</b>	<b>94</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>1323</b>	<b>767</b>	<b>909</b>	<b>43</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>165</b>	<b>29</b>	<b>2313</b>

Table 9- Second Pond use figures, 2012. Key: EWM = Eurasian Watermilfoil; BW = native bladderwort; NM = native milfoil; GRS = grass; WC = water chestnut; ZM = zebra mussel; VLM = variable leaf milfoil. I = Inspected boat; WB = washed boat; DB = drained bilge; BB = emptied bait bucket; LW = drained livewell; Dis = discarded unused bait; Dry = dried boat.

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