2019
Schroon Lake Boat Inspection & Invasive Species Prevention Program

Prepared by:
Warren County Department of Planning & Community Development
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Program History

The Schroon Lake Aquatic Invasive Species Prevention Program was started through a cooperative relationship between 2 municipalities (Schroon and Horicon) and the area lake associations (Schroon Lake Association and the East Shore Schroon Lake Association).

In addition to preventing the introduction of new invasive species, the communities in the watershed contribute annually to remove invasive Eurasian watermilfoil and Curly-leaf Pondweed. The AIS Prevention Program was started as a means of maintaining the gains made with AIS eradication efforts.

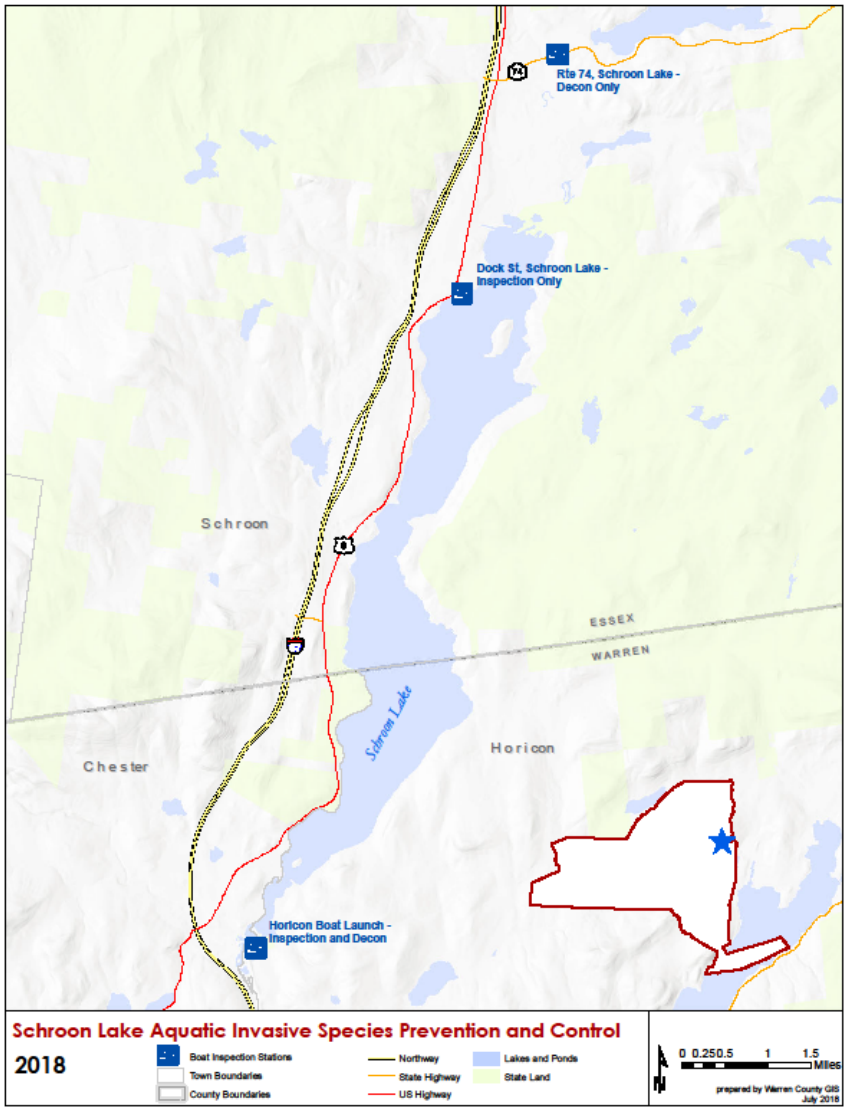
Program Overview

North Schroon Lake
The Town of Schroon operates a boat inspection station at the public boat launch, located on Dock Street (herein "Schroon Launch"). Additionally, the Town operates a decontamination station on Route 74 (herein "North Schroon Decon").

Horicon
The Town of Horicon operates a boat inspection station (herein "Horicon Launch") and decontamination station (herein "Horicon Decon") at the Department of Environmental Conservation public boat launch, located at the corner of Warren County Route 62 (Glendale Road) and County Route 15 (East Shore Drive).

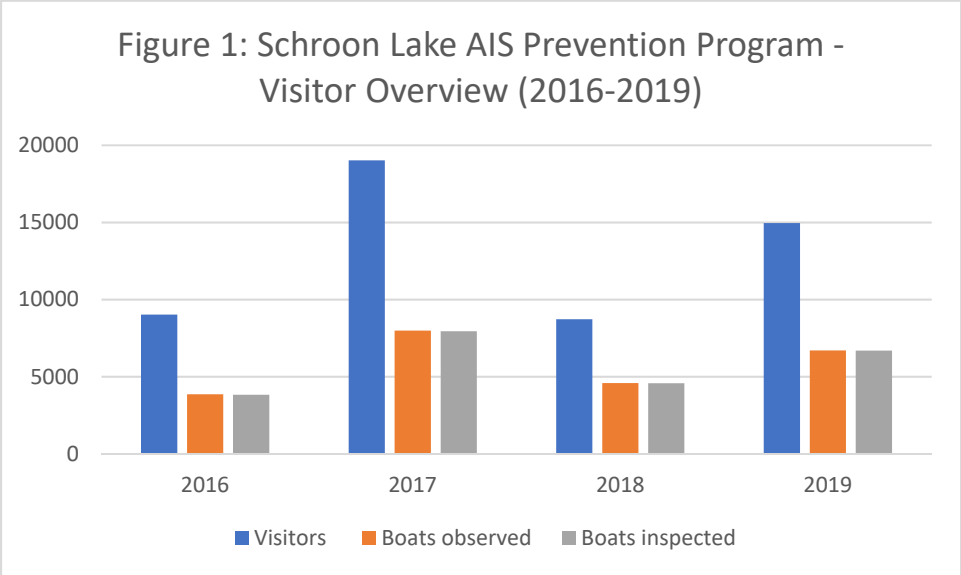
Staffing
Staffing for the boat inspection and decontamination stations is provided by seasonal town employees. Site supervision and collection of data is provided by the Adirondack Watershed Institute (AWI).

The seasonal town employees attend training provided by AWI, in which these lake stewards will learn how to properly inspect and clean watercraft.



Program Report – 2019

Since the program's inception in 2016, the lake stewards have welcomed almost 52,000 visitors and prevented the introduction of 84 aquatic invasive species into Schroon Lake.



As is evident from the graph above, 2019 was another record year for visitors to the boat inspection and decontamination stations around Schroon Lake. In late 2017, the Town of Schroon and the Schroon Lake Association constructed a decontamination station on the northern portion of the watershed, on Route 74. The availability of this decontamination station eliminated the need for visitors to overwhelm the decon station in Horicon. Additionally, Paradox Lake, which flows into Schroon Lake, benefits from its proximity to the North Schroon Decon Station (Note: Paradox Lake was named an in-land water in 2019).

AIS Spread Prevention Awareness

Another key component of the Schroon Lake AIS Prevention Program is educating the boating public about the importance of preventing the spread of non-native species. Building this awareness not only protects Schroon Lake, but can persuade boaters to practice "Clean, Drain, Dry" in any waterway.

The Town of Schroon and Horicon partner with the Adirondack Watershed Institute (AWI) to use tablets and track important field data at the inspection and decon sites. While one staff member is inspecting the vessel, another is obtaining data about the previous whereabouts and the awareness of invasive species spread prevention. Below (Table 1) is description of the boater AIS Prevention Awareness, collected in 2019.

Table 1: Schroon Lake AIS Prevention Program – Spread Prevention Awareness

	AIS Spread Prevention Awareness											
Visitor Responses	Yes	Inspect	Wash	Drain	Bait	LW	Dry	Decon	Same Lake	First/ Frozen	Didn't Ask	# Groups Asked
Total	5,117	1,951	491	196	5	34	934	494	1,218	736	908	5,517
% of total boats	93%	35%	9%	4%	0%	1%	17%	9%	22%	13%		

Yes = showed AIS spread prevention awareness; Drain = drained bilge; Bait = emptied bait bucket/ disposed of bait; LW = drained livewell; Dry = dried boat; Decon = visited decon station; Same Lake = boat only goes in this lake; First/Frozen = first launch of the season or frozen bait

Lake Steward Inspection Methods

Lake stewards provide a courtesy inspection of boats entering and leaving through the boat launch. Stewards perform a visual inspection of propellers, outdrives, trailer bunks, axles, live wells, bilges, areas containing standing water, and any other locations potentially harboring AIS. Stewards also ask visitors to lowers their motors to a vertical position to eliminate standing water and drain their bilges into a bucket provided by the steward. Visitors are then handed informational literature about the program and are encouraged to inspect and clean their boats before visiting the next time.

Any boats failing to meet New York State's Clean, Drained Dry standard are requested to comply with a voluntary decontamination at the nearest decontamination station. In order to keep the process quick and give boaters a positive experience, only the part of the boat failing inspection is decontaminated. Visible plants are removed by hand.

Stewards conduct decontaminations by moving from the inside to the outside of the vessel. Internal compartments found with standing water are flushed with low-pressure hot water (140 degrees F). This includes bilges, ballasts, and live-wells as well as any other area where standing water may have accumulated. If rigging fishing lines or other gear was found to need decontamination, the items were removed from the vessel if possible and placed on the ground for high-pressure hot water decontamination.

Outboards and lower units found with standing water in them undergo a flushing process, which consists of low-pressure hot water introduced to the lower unit via flushing muffs, the boater started the motor, and running the motor until the cooling water discharge was 140 degrees F. Hulls requiring decontamination are carefully washed with high pressure hot water. Technicians direct wash water to remove surface organisms by holding the wash want at a 45-degree angle to the hull of the boat and slowly sweep in one direction.

Town of Horicon lake steward employee inspecting a boat entering Schroon Lake for AIS

Schroon Lake Aquatic Invasive Species Spread Prevention

In 2019, the lake stewards found more organisms (any organic material) on vessels leaving Schroon Lake than those entering, by a 4:1 ratio. Of the total vessels inspected, only 5.4% were identified as having organic material present and only 3.44% of the vessels had AIS present.

Table 2: Schroon Lake AIS Prevention Program – Organisms Found

		Organisms Found								
	Total # Visitors	Entering	Leaving	Roadside	Total Organisms	# Boats Dirty	# Boats w/ AIS	# of Inspections	% of Inspected Boats Dirty	% of Inspected Boats w/ AIS
Horicon Decon	528	5	3		8	6	4	278	2.2%	1.4%
Horicon Launch	8983	4	36		40	36	14	3855	0.9%	0.4%
Schroon Launch	5114	1	4		5	4	1	2365	0.2%	0.04%
North Schroon Decon	324			4	4	4	3	192	2.1%	1.6%
Total	**14,949**	**10**	**43**	**4**	**57**	**50**	**22**	**6,690**	**5.40%**	**3.44%**

Boats dirty = watercraft with any organic material, invasive, non-invasive or unknown

As represented in Table 3, 60% of the inspected vessels found with organisms turned out to be non-invasive. Eurasian watermilfoil (23%) and Curly-leaf pondweed (9%) represented the largest percentage of invasive organisms found. The municipalities and lake associations in the Schroon Lake watershed have spent close to a decade hand-harvesting Eurasian watermilfoil and Curly-leaf pondweed (to a lesser degree) from the lake. Preventing the re-introduction of these invasive plants to Schroon Lake has proven to be one of the most important methods on controlling invasive plant growth in Schroon Lake.

Table 3: Schroon Lake AIS Prevention Program – Organisms Removed

Organisms Removed	Non-Invasive	BN*	CLP*	EF*	EWM*	VLM*	SWF*	WC*	ZM*	Total # AIS	% of Inspected Boats w/ AIS
Horicon Decon	4	0	1	0	2	1	0	0	0	4	1.4%
Horicon Launch	25	0	4	0	9	0	0	1	1	15	0.4%
Schroon Launch	4	0	0	0	1	0	0	0	0	1	0.04%
North Schroon Decon	1	0	0	0	1	0	0	0	2	3	1.6%
Total	**34**	**0**	**5**	**0**	**13**	**1**	**0**	**1**	**3**	**23**	**3.44%**
% of total boats	**60%**	**0%**	**9%**	**0%**	**23%**	**2%**	**0%**	**2%**	**5%**	**40%**	

Non-invasive = native aquatic or terrestrial material; BN = Brittle naiad; CLP = Curly-leaf pondweed; EF = European frogbit; EWM = Eurasian watermilfoil; VLM = Variable-leaf milfoil; SWF = Spiny waterflea; WC = Water chestnut; ZM = Zebra mussel; */AIS = Aquatic Invasive Species

The information collected by lake stewards at the launches and decon stations and provided to the staff at the Adirondack Watershed Institute (AWI) allows for a more comprehensive AIS spread prevention strategy. Part of that strategy is identifying the last waterbody entered by vessels wishing to enter Schroon Lake. The information provided in Table 4 comes from interviews of boaters at the inspection stations. This table indicates the last waterbody a boater entered, as well as, the AIS present at the Schroon Lake inspection stations.

Table 4: Schroon Lake AIS Prevention Program – Aquatic Invasive Species Intercepted by Stewards

Aquatic Invasive Species Intercepted by Stewards	# Found on Boats Launching/ Roadside	Previous Waterway	# Found on Boats Retrieving	Previous Waterway	# Found at Roadside	Previous Waterway
Curly-lead Pondweed	1	Saratoga Lake (1)	4	Schroon Lake (4)		
Eurasian watermilfoil	3	Saratoga Lake (1), Schroon Lake (1), South Pond, ME (1)	9	Schroon Lake (9)	1	Paradox Lake (1)
Variable-leaf milfoil	1	Hudson River (1)	0	N/A		
Water chestnut	1	Schroon Lake (1) - previous waterbody unknown	0	N/A		
Zebra mussel	1	Lake Champlain (1)	0	N/A	2	Ballston Lake (1), Lake Champlain (1)
Totals	**7**		**13**		**3**	

Similar to the identification of previously visited waterbodies, as a means of tracing the potential source of the AIS, is collecting previous waterbody information for all visitors. As is evident from the Table 5, most of the vessels entering Schroon Lake, last entered waterbodies in upstate New York. Regional organizations like AWI and the Adirondack Park Invasive Plant Program (APIPP) have gained the trust of boaters and have had success in encouraging these individuals to prevent the spread of AIS.

Table 5: Schroon Lake AIS Prevention Program – Previous Waterways Entered by Launching Boats

Previous Waterways for Launching Boats	# Visits Total	Previous Waterways for Launching Boats	# Visits Total	Previous Waterways for Launching Boats	# Visits Total
NONE	2786	Susquehanna River	3	Sagamore Lake (Hamilton County)	1
SAME LAKE - PREVIOUS VISIT	1792	Long Island Sound	3	Seventh Lake	1
Lake George	129	Schroon River, NY	3	Stillwater Reservoir	1
NOT ASKED	106	Glen Lake (Warren County)	3	Taylor Pond (Clinton County)	1
Lake Champlain	55	Lower Saranac Lake	3	Unspecified river in Alabama	1
Brant Lake	46	Middle Saranac Lake	3	Cassadaga Lakes (Chautauqua)	1

Hudson River	44
Saratoga Lake	42
Great Sacandaga Lake	33
Schroon Lake	25
Paradox Lake	24
UNKNOWN (boater doesn't know)	14
RENTAL	14
Loon Lake (Warren County)	13
Mohawk River	9
Eagle Lake (Essex County)	7
Putnam Pond (Essex County)	6
Ballston Lake	6
Round Lake (Saratoga County)	5
Caitlin Lake (Essex/Hamilton Counties)	4
Lake Louise Marie (Sullivan County)	4
Lincoln Pond (Essex County)	4
Candelwood Lake, Brookfield, CT	4
Lake Bomoseen, Castleton, VT	4
Lake Pleasant	4
Minerva Lake	4
Indian Lake (Hamilton County)	3
Lake Ontario	3

Owasco Lake	3
Forked Lake	2
Lake Winnipesaukee, Alton, NH	2
Palmer Pond (Warren County)	2
Lake Placid	2
Long Lake	2
Rushford Lake (Allegany County)	2
St. Lawrence River	2
Cayuga Lake	2
Lake Sunapee, Sunapee, NH	2
Saranax Chain of Lakes (unspecified)	2
Upper St. Regis Lake	2
Adirondacks (unspecified)	1
Augur Lake (Essex County)	1
Candlewood Lake, Brookfield, CT	1
Chateaugay Lake	1
Connecticut River	1
Fish Creek Ponds	1
Greenwood Lake (Orange County)	1
La Chute River, NY	1
Lake Wallenpaupack, PA	1
Merill Creek Reservoir, Harmony, NJ	1

China Lake, China, ME	1
Connecticut River	1
Delaware River	1
Finger Lakes (unspecified)	1
Greenwood Lake (Orange County)	1
Gull Pond (Franklin/St. Lawrence)	1
Hadlock Pond (Washington County)	1
Lake Durant (Hamilton County)	1
Lake Flower	1
Lake Harris, Yalaha, FL	1
Lake Lillinonoah, Brookfield, CT	1
Lake St. Catherine, Poultney, VT	1
Lake Wallenpaupack, PA	1
Peck Lake (Fulton County)	1
Sacandaga River	1
Snyder's Lake (Rensselaer County)	1
South Pond, Greenwood, ME	1
Tupper Lake	1
Upper Saranac Lake	1