

Black Lake SLELO-PRISM Water Chestnut & Hydrilla Surveillance 2012

June 8, 11, 12 & 14 (Water Chestnut); August 8 (Hydrilla), 2012



Figure 1: Surveying of Fish Creek access to Black Lake (HPA-1) on June 8, 2012. Photo by Mike McHale.

Report drafted by Greg Chapman and Mike McHale, 6/15/12. Updated 8/21/12.

Introduction and Background

Black Lake is an approximately 4,593-acre freshwater lake located in St. Lawrence County, New York. The lake is regularly utilized for fishing and as a vacation destination, and large portions of its shoreline are developed with cottages and camps.

Public access to Black Lake is provided in several locations. An improved concrete boat launch, maintained by the NYS Office of Parks, Recreation and Historical Preservation

(OPRHP), is located on the northwestern shore of the lake off County Route 6. An unimproved car-top boat launch is located along State Route 58 near the hamlet of Pope Mills allowing access to Fish Creek approximately one mile upstream of the eastern shore of Black Lake. Shoreline fishing and informal launching of small watercraft is possible from a small island where Route 58 crosses a narrow northern section of Black Lake. Although Lonesome Bay State Forest approaches the southern portion of Black Lake, the shoreline itself is private property and public access to the water is not readily available from State Forest lands.



Figure 2: Black Lake and surrounding area.

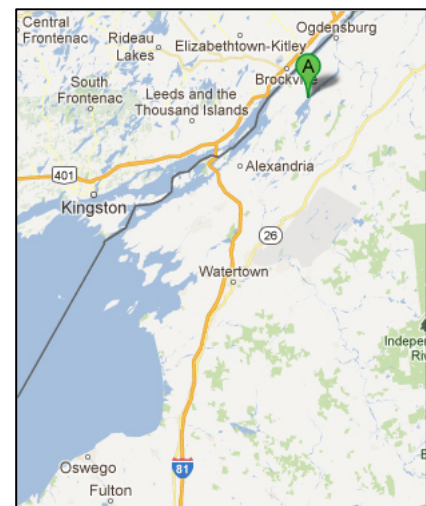


Figure 3: Location of Black Lake within northern New York.

Targeted Locations

Survey efforts were focused on four Highly Probable Areas (HPAs) that were identified¹ for Black Lake, as follows:



Figure 4: Map showing locations of the four HPAs chosen for Black Lake.

HPA-1: Begins at unimproved boat launch on Route 58 south of the hamlet of Pope Mills, giving access to Fish Creek leading into Black Lake. Survey area includes the length of Fish Creek leading to Black Lake and two quiet coves adjacent to Fish Creek's outlet on Black Lake.

HPA-2: McClear's Cottage Colony & Campground, 2477 County Route 6 on the northwest shore of the lake. Survey area includes the areas immediately surrounding the docks and informal boat launch. Access is by permission of the property owners.

HPA-3: New York State OPRHP Black Lake Boat Launch, located along County Route 6, north of McClear's. Survey area includes the areas immediately surrounding the improved concrete boat launch.

HPA-4: Bridges on Route 58, crossing narrow portion of Black Lake near the hamlet of Edwardsville. Visual survey conducted from both sides of the bridge; informal access to the water may allow for launching of canoe if necessary.

Actions Taken

A survey targeting water chestnut (*Trapa natans*) and other aquatic and riparian invasive species² was undertaken by SLELO-PRISM seasonal employees Mike McHale and Greg Chapman on June 8, 11, 13 and 14, 2012. Due to time constraints and the large size of the lake, extensive shoreline surveying was halted on June 13 in favor of surveys targeting the HPAs outlined above.

A subsequent survey targeting Hydrilla (*Hydrilla verticillata*) was undertaken by SLELO-PRISM seasonal employees Mike McHale and Greg Chapman on August 8, 2012.

At HPAs 1, 2 and 3, additional data detailing submerged aquatic vegetation was collected via rake toss. For each rake toss location, a weighted rake was thrown twice, once from each side of the canoe. Submerged aquatic vegetation collected on the end of the rake was then analyzed from each toss, and the total number of species present was recorded, as well as the number and

¹ See Appendix 1 for HPA assignment protocols.

² For a list of targeted species, see the SLELO-PRISM 2012–2016 Strategic Plan, pp. 36 – 37.

identification of all invasive species present. Aquatic vegetation samples for both native and invasive species were collected for later positive identification at the office.

Invasive species occurrences were recorded using the iMapInvasives Observation Field Form and reported to the iMapInvasives database. A Garmin hand-held GPS unit was used to record invasive species occurrence coordinates, locations of rake tosses as well as tracking the route taken during the survey.

After survey work was completed, the canoe and rake used during the survey were treated with a mild bleach solution, cleaned and allowed to thoroughly dry to prevent spreading invasive species to the next water body to be surveyed.



Figure 5: Example of typical results from a rake toss at Black Lake. Photo by Greg Chapman.

Observations



No occurrences of Water Chestnut or Hydrilla were observed during the partial survey of Black Lake shoreline or at any of the four HPAs. See Tables 1 & 2 below for observation and rake toss data for the Black Lake HPAs.

Small patches of European Frogbit (*Hydrochassis morsuranae*) were observed at HPA-1 during the Water Chestnut survey, often floating freely (possibly after being dislodged by boat motors or other disturbances). The small amounts observed and limited spread may indicate that European Frogbit has been only recently introduced to Black Lake. European Frogbit was observed to be much more widespread along the shoreline areas of Fish Creek during the subsequent Hydrilla survey on August 8, however it was still not observed at any other HPA.

Several invasive species were observed to be common in those portions of Black Lake that were surveyed. *Potomageton crispus* (Curly-leaf Pondweed) was consistently observed in quiet, shallow areas near shore and in quiet coves. *Dreissena* spp. (Zebra/Quagga Mussels) were observed in shallow water with rocky substrates, and were occasionally found attached to submerged vegetation collected during rake tosses.

Figures 6 & 7: Eurasian Water Milfoil (*M. spicatum*), top and Curly-leaf Pondweed (*P. crispus*) at Black Lake. Photos by Greg Chapman.

The presence of Eurasian Water Milfoil (*Myriophyllum spicatum*) has been previously noted in Black Lake³. Samples of *M. spicatum* were collected from locations along the northwestern shore of Black Lake (HPAs 2 & 3); however milfoil samples

3 See "Black Lake Eurasian Watermilfoil Management Plan" by Quantitative Environmental Analysis, LLC, 2008. (Available at http://www.weedinfo.blacklakeny.com/FINAL_Black_Lake_milfoil_plan_07_14_08-1.pdf.)

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collected from the southeastern shore of Black Lake (HPA-1) are likely Northern Water Milfoil (*M. sibericum*). Additional samples may be collected during a future survey of HPA-1 to better understand the extent of *M. spicatum* in Black Lake.

Data and Survey Maps

Key for all tables: EWM = Eurasian Water Milfoil; CLPW = Curly-leaf Pondweed; ZM = Zebra/Quagga Mussels; EFB = European Frogbit.

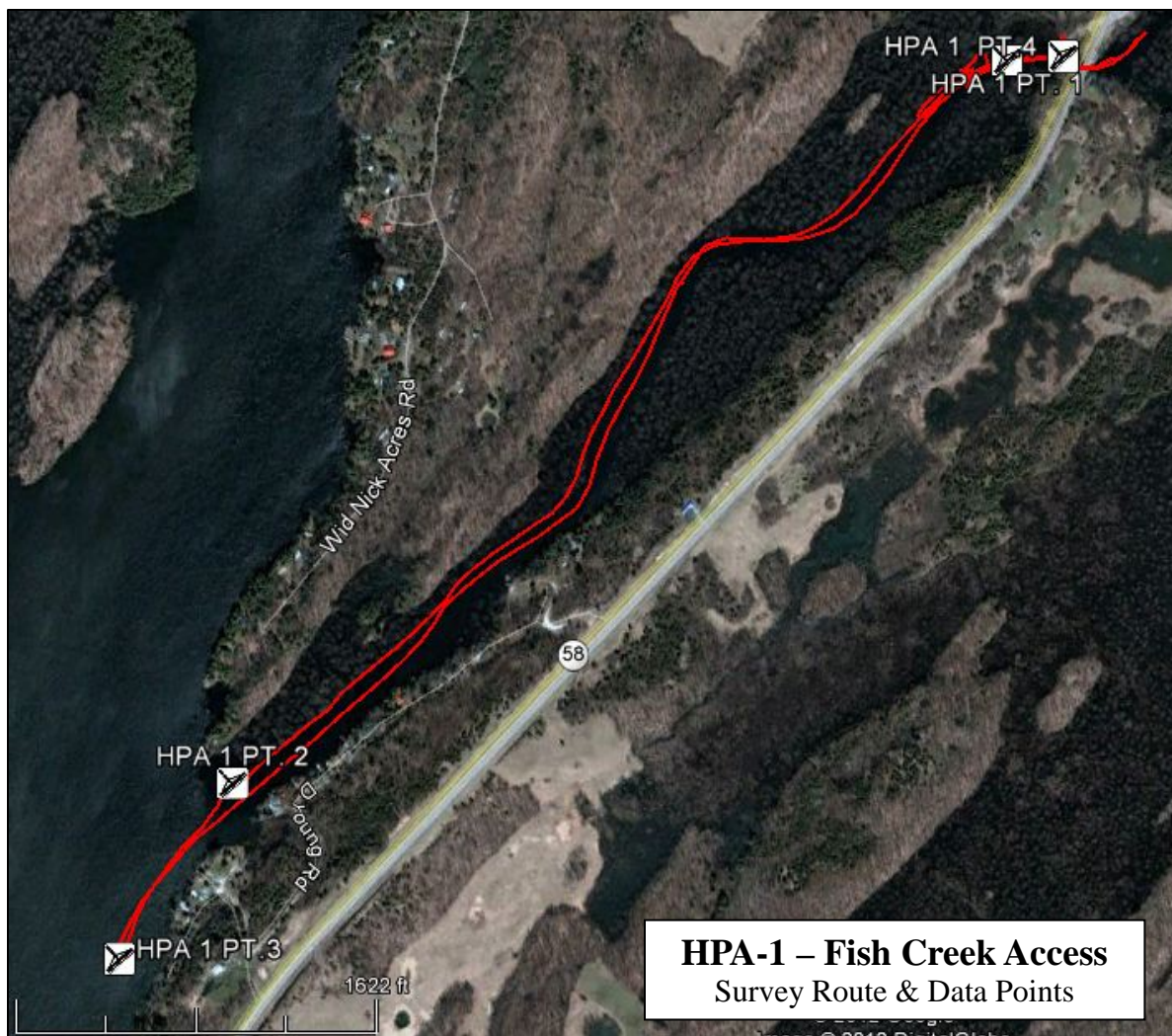
Table 1: Data from Water Chestnut surveillance rake tosses and visual observations at the four Black Lake HPAs.

Location: Black Lake						Date: 6/8, 6/11, 6/13, 6/14/12	
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
HPA 1 Pt. 1	44.48090916	1	8'	1	0		
	-75.58405794	2	9'	2	0		
HPA 1 Pt. 2	44.47206222	1	5'	4	0		Visual: EFB, CLPW
	-75.59734527	2	5'	1	0		
HPA 2 Pt. 1	44.48119892	1	5'	4	1	CLPW	
	-75.64684711	2	6'	3	1	EWM	
HPA 2 Pt. 2	44.48256894	1	4'	2	0		
	-75.64463169	2	4'	3	3	EWM, CLPW, ZM	
HPA 3 Pt. 1	44.5089027	1	4'	2	1	EWM	Visual: EFB, CLPW, ZM
	-75.61188075	2	4'	0	0		
HPA 3 Pt. 2	44.51017122	1	6'	0	0		
	-75.61073025	2	6'	2	1	ZM	
HPA 4 Pt. 1	44.52113592 -75.59162362	Visual: Phragmites					

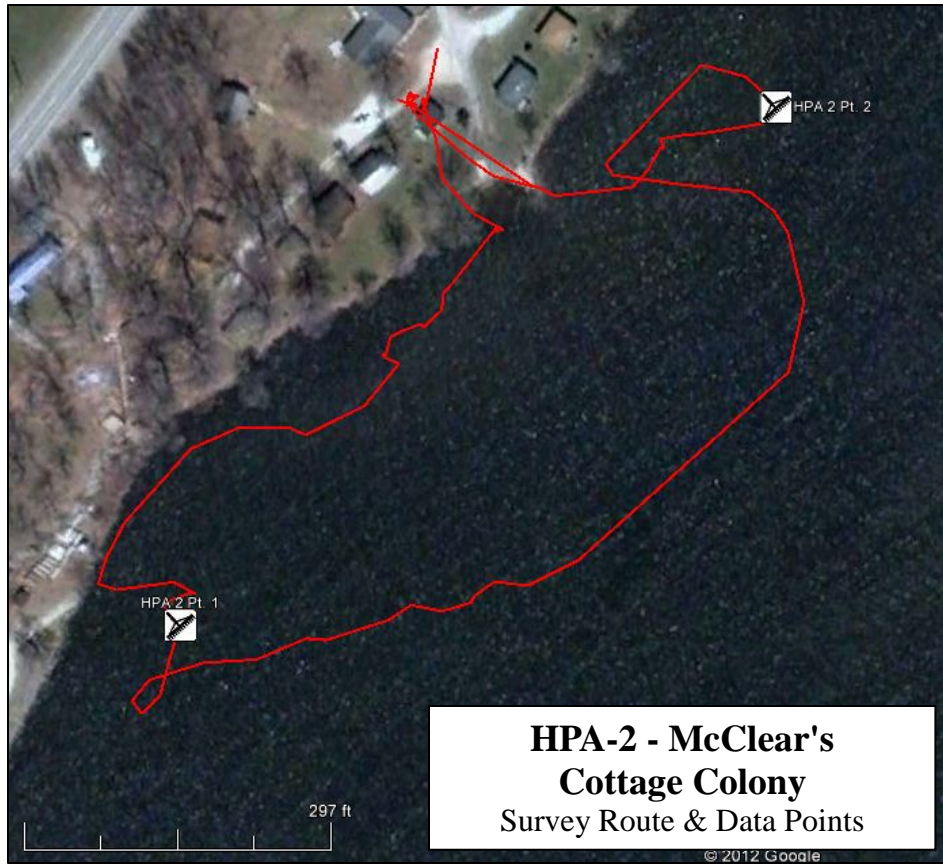
Table 2: Data from Hydrilla surveillance rake tosses at the four Black Lake HPAs. (Continued on next page.)

Location: Black Lake						Date: 8/8/12	
Point	Lat/Long	Throw	Depth	# Spp.	# Inv.	Invasive Spp. present	Notes
HPA 1 Pt. 1	44.48090916	1	6'	0	0		
	-75.58405794	2	7'	0	0		

HPA 1 Pt. 2	44.47206222	1	2'	3	1	ZM	
	-75.59734527	2	2'	2	0		
HPA 1 Pt. 3	44.46991486	1	7'	3	1	ZM	
	-75.59927772	2	5'	2	1	ZM	
HPA 1 Pt. 4	44.48095626	1	6'	0	0		
	-75.58309754	2	7'	0	0		
HPA 2 Pt. 1	44.48119892	1	5'	4	2	EWM, ZM	
	-75.64684711	2	5'	4	2	EWM, ZM	
HPA 2 Pt. 2	44.48256894	1	4'	4	1	ZM	
	-75.64463169	2	4'	4	2	EWM, ZM	
HPA 3 Pt. 1	44.5089027	1	10'	4	2	EWM	
	-75.61188075	2	7'	2	1	EWM, ZM	
HPA 3 Pt. 2	44.51017122	1	6'	3	1	EWM	
	-75.61073025	2	6'	4	2	EWM, ZM	



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