St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management

Special Note

The partners of the SLELO PRISM have identified 24 Priority Conservation Areas on which we conduct early detection surveillance on a two year rotation. This report is to be considered as an addendum to the field report from 2016. The previous reports are attached to the end of this report.

2017 Field Survey
Addendum to

Dexter Marsh Wildlife Management Area and Muskellunge Creek: Water Hyacinth (*Eichhornia crassipes*) Assessment

Figure 1: Panoramic view of Dexter Marsh WMA. Photo taken by Alicia Wood.

SLELO-PRISM Early Detection Surveillance
July 26, 28 & 31st, 2017

Report prepared by Bryna Daykin and Alicia Wood, 8/2/2017

Introduction and Background

Dexter Marsh Wildlife Management Area (WMA) is made up of 1,350 acres of wetlands, consisting of lands primarily underwater. It is found within Jefferson County within the towns of Brownville and Hounsfield, seven miles west of Watertown off Route 180 (**Figure 2; Figure 3**). The marsh has sparse patches of cattail, and is popular for fishing and hunting waterfowl. Northern pike, bass, panfish, black terns, shore birds, and a variety of waterfowl are commonly found in this management area. This management area contains three primary water access sites: Black River Bay Fishing Access Site, Muskellunge Creek Fishing Access Site, and Dexter Marsh Fishing Access Site. This WMA is free to use and open year round.[1]

[1] Department of Environmental Conservation, Web site: http://www.dec.ny.gov/outdoor/40663.html

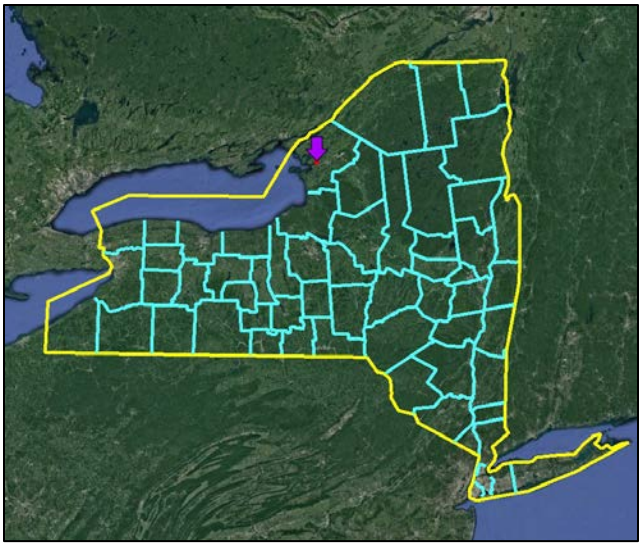

Figure 2: Location of Dexter Marsh WMA in New York State.

Figure 3: Close up of Dexter Marsh WMA.

Survey Methods and Observations

The Dexter Marsh WMA, with a special focus on Muskellunge Creek, was surveyed in July of 2017 by the SLELO Early Detection Team (**Figure 1**). A special focus was placed on surveying the area for water hyacinth (*Eichhornia crassipes*), which was found in Muskellunge Creek in August of 2015 at N 43.97728, W -76.05243. The water hyacinth was treated after it was detected in 2015, and was reported to be eradicated. The 2016 and 2017 surveys followed up these efforts to ensure that the plant had not reestablished itself in the area. In addition, this survey involved examining highly probable areas (HPAs) for both invasive terrestrial and aquatic species. HPAs are areas where human activities or site conditions increase the probability of invasive species becoming introduced and established. To determine which aquatic species were present at HPAs, the rake toss method was used. For this, a double sided rake was tossed off both ends of the canoe to collect aquatic vegetation. The vegetation attached to the rake was identified and determined to be invasive or native. Visual observations were used for both aquatic and terrestrial surveying to find and identify invasive species at the HPAs. The location of each HPA was marked using a handheld Garmin GPSmap 60CSx.

No 'Prevention "Watch-list" Species' were found in the 2017 survey.

Muskellunge Creek was surveyed in 2016 and resurveyed in 2017 for water hyacinth. The rest of Dexter Marsh WMA wasn't surveyed in previous years, so the 2017 Early Detection Team conducted a survey of the entire WMA adding twenty-eight new HPAs (**Figure 4**).

Launching from the Muskellunge Creek Fishing Access Site, nine new HPAs (2-10) were aquatically surveyed and one new HPA (1) was both terrestrially and aquatically surveyed (**Table 1, Table 2, Figure 4, Figure 7**). Launching from the Black River Bay Fishing Access Site, nine new HPAs (12-20) were aquatically surveyed and one new HPA (11) was both terrestrially and aquatically surveyed (**Table 1, Table 2, Figure 4, Figure 8**). Launching from the Dexter Marsh Fishing Access Site, seven new HPAs (22-28) were aquatically surveyed and one new HPA (21) was both terrestrially and aquatically surveyed (**Table 1, Table 2, Figure 4, Figure 9**). Note that higher waters were observed in 2017 compared to previous years. This change in water depth may have affected our visual observations during the aquatic survey.

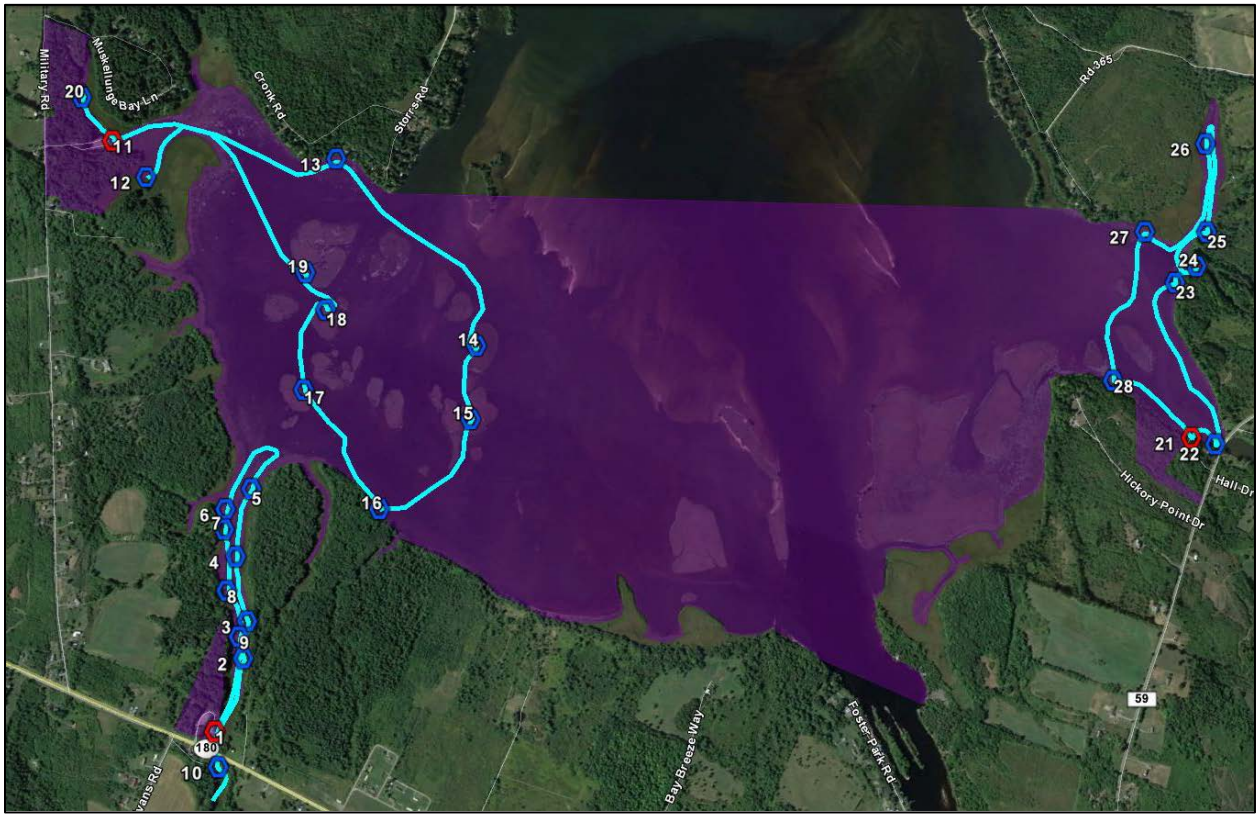

Figure 4: Survey route for the aquatic and terrestrial HPAs of Dexter Marsh WMA. The blue line indicates the canoe route taken to get to each aquatic HPA. Blue dots were surveyed aquatically, while red dots were surveyed both terrestrially and aquatically.

The following 'Target Management Species' were found during the field survey (**Table 1; Table 2**): Eurasian water milfoil (*Myriophyllum spicatum*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and pale swallow-wort (*Cynanchum rossicum*). The following 'General Species of Concern' were also found (**Table 1; Table 2**): honeysuckle (*Lonicera spp.*), spotted knapweed (*Centaurea stoebe*), wild parsnip (*Pastinaca sativa*), curly leaf pondweed (*Potamogeton crispus*), European frogbit (*Hydrocharis morsus-*

ranae), and variable leaf water milfoil (*Myriophyllum heterophyllum*). In addition to this, the invasive Japanese beetle (*Popillia japonica*) was found.

No Water Hyacinth was found in Muskellunge Creek in the 2017 survey.

Figure 5: Variable Leaf Water Milfoil found in Dexter Marsh WMA. Photos taken by Bryna Daykin.

Eurasian water milfoil was found at HPAs 1-4, 8-9, 13-14, 17, 19, 22-25, 27, and 28. Purple loosestrife was observed at HPAs 1, 11, and 20-21. Common buckthorn was seen at all three terrestrially surveyed sites (HPAs 1, 11, and 21). Additionally, it was observed on shore at aquatically surveyed HPA 22. Honeysuckle was also found at all three terrestrially surveyed sites (HPAs 1, 11, and 21). Spotted knapweed was seen at HPAs 1 and 11, while wild parsnip was only observed at HPA 21. Curly leaf pondweed was only found at HPA 10. European frogbit was observed at HPAs 1-12, 20-21, and 23-26. Variable leaf water milfoil was found in dense mats at HPAs 1-3, and 10 (**Figure 5**). Multiple Japanese beetles were seen at HPA 1. Pale swallow-wort was found at all three terrestrially surveyed sites (HPAs 1, 11, and 21). **Small patches of swallow-wort plants found at all three HPAs were removed by hand by the SLELO-PIRSM Early Detection Team** (**Figure 6**). **In addition to these small patches, a dense patch of swallow-wort (0.034 acres) was found at HPA 11** (**Figure 6**).

The pale swallow-wort found at HPA 11 was sprayed by the SLELO-PRISM Rapid Response Team.

Figure 6: Pale Swallow-wort found at Dexter Marsh WMA. Photos taken by Alicia Wood.

Table 1: Descriptions, coordinates, and invasive species sightings at each HPA at Dexter Marsh WMA. New HPAs terrestrially surveyed for the first time in 2017 are highlighted in yellow.

HPA	Habitat Description	Latitude	Longitude	Invasive Species
1	Upper and Lower Portions of Parking Area at Muskellunge Creek Fishing Access Site	43.97776	-76.04818	PSW, HS, CB, SK, JB, PL
11	Parking Area at Black River Bay Fishing Access Site	43.96643	-76.07068	PSW, HS, CB, SK, PL
21	Parking Area at Dexter Marsh Fishing Access Site	44.00303	-76.07732	PSW, WP, CB, HS, PL

Key: PL = Purple Loosestrife, WP = Wild Parsnip, HS = Honeysuckle spp., SK = Spotted Knapweed, CB = Common Buckthorn, PSW = Pale Swallow-wort, JB = Japanese Beetle

Table 2: Descriptions, coordinates, and invasive species sightings at aquatic HPAs at Dexter Marsh WMA. New HPAs aquatically surveyed for the first time in 2017 are highlighted in yellow.

HPA	Habitat Description	Latitude	Longitude	Throw	Depth (ft)	# Total Spp.	# Inv.	Inv. Type	Visuals
1	Muskellunge Creek Fishing Access Site Boat Launch	43.97776	-76.04818	1	5	5	1	EWM	EWM, VLM, FB, PL
				2		10	1	EWM	
2	Area with Slow Moving Water	43.97761	-76.05162	1	3	6	1	EWM	EWM, VLM, FB
				2		8	1	VLM	

3	Area with Slow Moving Water	43.97723	-76.05318	1	3.5	5	1	FB	FB, VLM
				2		8	2	FB, EWM	
4	Area with Slow Moving Water	43.97601	-76.05560	1	4	7	1	EWM	FB
				2		4	0		
5	Area with Slow Moving Water	43.97555	-76.05865	1	4	4	0		FB
				2		5	0		
6	Area with Slow Moving Water	43.97505	-76.05735	1	4	7	0		FB
				2		4	0		
7	Area with Slow Moving Water	43.97529	-76.05650	1	4	8	0		FB
				2		10	0		
8	Cove with Slow Moving Water	43.97620	-76.05405	1	3	11	1	FB	FB
				2		14	2	FB, EWM	
9	Area with Slow Moving Water	43.97719	-76.05241	1	3.5	7	1	EWM	FB
				2		9	1	FB	
10	Area with Slow Moving Water	43.97834	-76.04683	1	3.5	12	1	FB	FB, CLP
				2		4	1	VLM	
11	Black River Bay Fishing Access Site Boat Launch	43.96643	-76.07068	1	3	1	0		FB, PL
				2		2	0		
12	Area with Slow Moving Water	43.96797	-76.06976	1	4	5	0		FB
				2		5	0		
13	Cove Near Residences	43.97351	-76.07404	1	3.5	6	1	EWM	EWM
				2		4	1	EWM	
14	Cove with Slow Moving Water	43.98035	-76.06867	1	4	5	1	EWM	EWM
				2		4	0		
15	Cove with Slow Moving Water	43.98117	-76.06549	1	3.5	3	0		no invasives
				2		3	0		
16	Cove with Slow Moving Water	43.97965	-76.06013	1	3.5	2	0		no invasives
				2		4	0		
17	Cove with Slow Moving Water	43.97575	-76.06369	1	4	3	0		EWM
				2		4	1	EWM	

18	Cove with Slow Moving Water	43.97531	-76.06744	1	4	6	0		no invasives
				2		4	0		
19	Cove with Stagnant Water	43.97417	-76.06864	1	4.5	4	1	EWM	EWM
				2		4	1	EWM	
20	Area Near Shore with Stagnant Water	43.96487	-76.07197	1	3.5	2	0		FB, PL
				2		3	0		
21	Dexter Marsh Fishing Access Site Boat Launch	44.00304	-76.07775	1	1.5	0	0		PL, FB
				2		0	0		
22	Cove Near Bridge with Stagnant Water	44.00383	-76.07791	1	3	9	1	EWM	CB
				2		2	0		
23	Area with Slow Moving Water	44.00064	-76.08408	1	4	4	1	EWM	FB
				2		5	0		
24	Cove with Stagnant Water	44.00106	-76.08514	1	3.5	3	0		FB
				2		8	1	EWM	
25	Cove with Slow Moving Water	44.00097	-76.08685	1	3.5	8	1	EWM	FB
				2		9	1	EWM	
26	Cove with Stagnant Water	43.99983	-76.09068	1	3	4	0		FB
				2		5	0		
27	Area that Wind Pushes Vegetation into	43.99909	-76.08574	1	4	5	0		EWM
				2		6	1	EWM	
28	Area that Wind Pushes Vegetation into	43.99998	-76.07876	1	4	5	0		EWM
				2		6	1	EWM	

Key: PL = Purple Loosestrife, FB = European Frogbit, EWM = Eurasian Water Milfoil, CLP = Curly Leaf Pondweed, VLM = Variable Leaf Water Milfoil, CB = Common Buckthorn

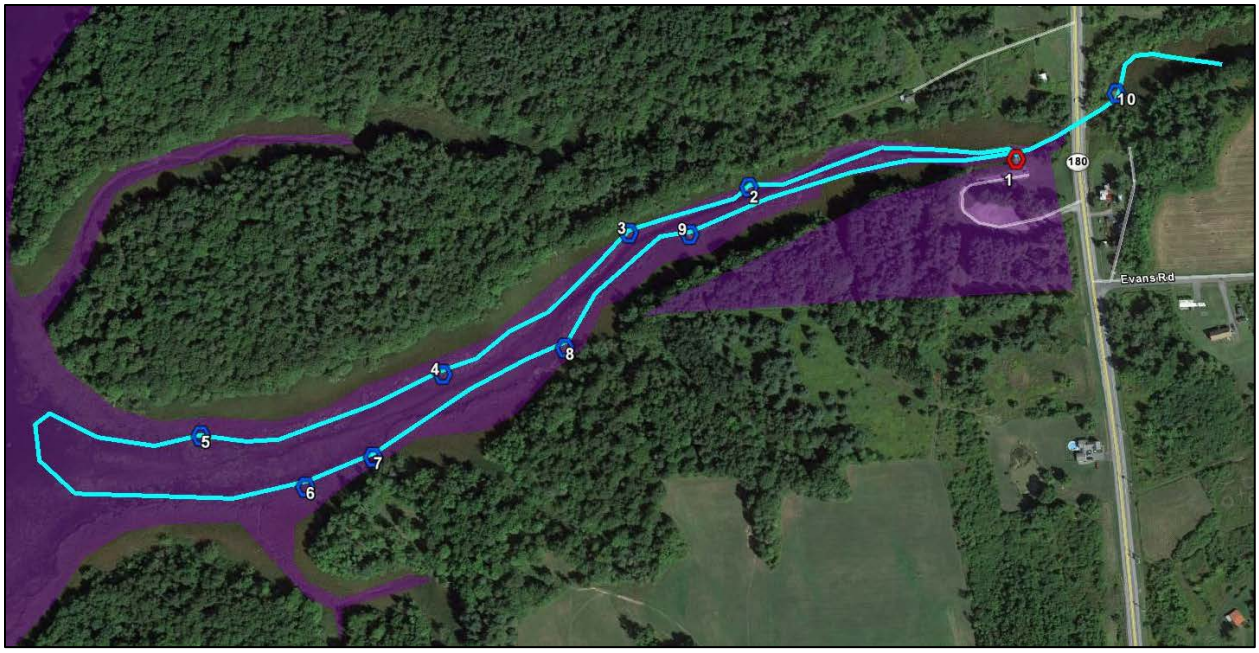

Figure 7: Survey route launching from Muskellunge Creek Fishing Access Site in Dexter Marsh WMA. The blue line indicates the canoe route taken to get to each aquatic HPA. Blue dots were HPAs surveyed aquatically, while red dots were HPAs surveyed both terrestrially and aquatically.

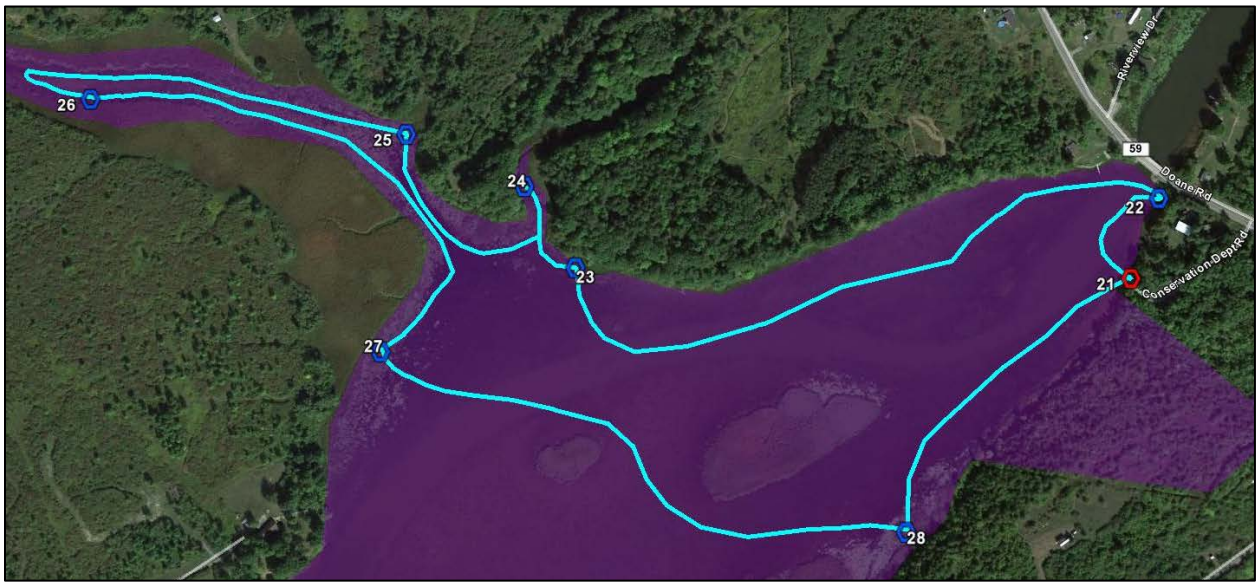

Figure 8: Survey route launching from Black River Bay Fishing Access Site in Dexter Marsh WMA. The blue line indicates the canoe route taken to get to each aquatic HPA. Blue dots were HPAs surveyed aquatically, while red dots were HPAs surveyed both terrestrially and aquatically.

Figure 9: Survey route launching from Dexter Marsh Fishing Access Site in Dexter Marsh WMA. The blue line indicates the canoe route taken to get to each aquatic HPA. Blue dots were HPAs surveyed aquatically, while red dots were HPAs surveyed both terrestrially and aquatically.