Xcel Energy®

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October 30, 2015

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: **2015 Purple Loosestrife Monitoring Report**
Holcombe Hydro (P-1982), Cornell Hydro (P-2639), Jim Falls Hydro (P-2491), Wissota Hydro (P-2567), Chippewa Falls Hydro (P-2440) and Dells Hydro (P-2670)

Dear Secretary:

Enclosed is the 2015 Purple Loosestrife Monitoring Report for the above-referenced hydro projects. Pursuant to the 2001 Lower Chippewa River Settlement Agreement, Xcel Energy (licensee) is required to annually monitor for the presence of loosestrife at each impoundment and eradicate pioneering plants on company-owned shoreline.

This year there was a marked decline in loosestrife infestation on Holcombe Flowage compared to 2014. The remaining projects with loosestrife infestations (Cornell, Jim Falls and Wissota) displayed comparable populations to previous years. Chippewa Falls Flowage and Dells Pond continue to remain free of loosestrife.

Should you have any questions regarding this report, please contact Matthew Miller of this office at (715) 737-1353 or at matthew.j.miller@xcelenergy.com.

Sincerely,

William Zawacki
Director, Hydro Plants

Enclosure

c: Nick Utrup - USFWS (via e-mail)
Cheryl Laatsch – WDNR (via e-mail)
Brian Guthman - LHIA (via e-mail)
Jeanette Kelly – Beaver Creek Reserve (via e-mail)

PURPLE LOOSESTRIFE ASSESSMENT – 2015

Dells Pond, Chippewa Falls Flowage, Lake Wissota, Old Abe Lake, Cornell Flowage, Lake Holcombe and Jim Falls Spillway Channel

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October 28, 2015

INTRODUCTION

Purple loosestrife (*Lythrum salicaria* L.) is an erect, herbaceous perennial of Eurasian origin that became established in the estuaries of northeastern North America by the early 1800's. Since then, this highly invasive species has spread throughout much of the United States, including most of Wisconsin's counties. As purple loosestrife expands its local distribution and becomes more widespread, it poses a serious threat to native emergent vegetation in shallow-water marshes and shorelines by displacing native food and cover plants in the waterways.

As part of the 2001 Lower Chippewa River Settlement Agreement, Xcel Energy agreed to monitor for the presence and spread of purple loosestrife at its six Lower Chippewa River hydroelectric projects. The surveys are to take place each year in the late summer when loosestrife blooms are easily detectable. Additionally, Xcel Energy committed to treating any small clusters of pioneering plants which occur on company-owned lands with an approved aquatic herbicide.

In 2010, Xcel Energy partnered with Beaver Creek Reserve to introduce European beetles (*Galerucella calmariensis* and/or *Galerucella pusilla*) into the main spillway channel adjacent to the Jim Falls Hydro. Beetles were again introduced into the same area during the summer of 2011. The beetles are commonly referred to as "Cella" foliage beetles or purple loosestrife bio-control beetles and they feed specifically on purple loosestrife plants. Their use has shown to be successful at decreasing the overall population of purple loosestrife. The locations and density of loosestrife within the Jim Falls spillway channel are therefore being monitored to determine the success of the beetle introduction.

METHODS

Following the same approach as previous surveys, an inspection of the entire shoreline of Dells Pond, Chippewa Falls Flowage, Lake Wissota, Old Abe Lake, Cornell Flowage and Lake Holcombe was performed by boat. The surveys were conducted between August 15 and September 20, 2015. The surveyor motored slowly around the shoreline looking for purple loosestrife plants. When loosestrife was discovered, the location was marked on a map and

coordinates were saved into a handheld GPS unit. Loosestrife infestations were classified as either "present" or "abundant" and marked on the map with a specific color. "Present" was defined as a few plants that sparsely inhabited the area but did not comprise a large percentage of the vegetation in that area. "Abundant" indicated that denser loosestrife growth existed and that the loosestrife made up a significant portion of the shoreline's overall vegetation.

By referencing the location of purple loosestrife plants with land ownership maps provided by Xcel Energy, the surveyor determined if the plants were on company-owned land. If the plants were on Xcel Energy land, and if it was only a minor infestation, the plants were sprayed with Rodeo® (an aquatic herbicide) from a backpack sprayer. From past work, it has been determined that herbicide application can be used as an effective treatment for small loosestrife populations, however, it is much less effective at controlling larger infestations. If major infestations were noted on Xcel Energy land, they were not to be treated, but documented for the possibility of a different eradication method in the future.

Using field maps, GPS coordinates, and notations made by the surveyor, the locations of purple loosestrife infestation were noted on the field maps and catalogued in a spreadsheet. The locations were then digitized onto GIS base maps (Wisconsin DNR 24K Hydrography version 6 and ESRI StreetMap USA). Locations of purple loosestrife are depicted on the maps using green for present and red for abundant. Due to the scale of the maps, locations covering less than 20 feet of shoreline are denoted by a dot while areas covering 20 feet of shoreline or greater are denoted by a line drawn to scale. Through the combined use of GPS, laser rangefinder, visual estimates, and GIS, the total length of shoreline infested by purple loosestrife was calculated for each flowage (Table 1). Appendix A includes survey maps for each flowage infested with loosestrife along with a corresponding catalog of each loosestrife location.

A survey of purple loosestrife was also conducted in the Jim Falls spillway channel adjacent to the downstream powerhouse. This area has been known to contain purple loosestrife in locally large numbers which prompted the introduction of purple loosestrife bio-control beetles. A comprehensive mapping effort of the area began in 2010 to monitor the spread of loosestrife and the success of the beetle introduction. This portion of the fieldwork

was completed on foot using GPS and maps to identify the locations and densities of the loosestrife within the channel.

RESULTS AND DISCUSSION

The number of purple loosestrife locations and the total length of shoreline infested for each flowage over the last three years are summarized below in Table 1. The standard approach used to tabulate abundance and shoreline coverage allows for a direct comparison from year-to-year. When compared to the previous two years, this year's survey revealed a significant decrease in purple loosestrife infestation on Holcombe Flowage. However, the remainder of the impoundments with infestations (Cornell Flowage, Old Abe Flowage, and Lake Wissota) have shown little change over the past three years. Collectively, the amount of loosestrife infestation has decreased since 2014 by approximately 14 percent. Table 2 includes a summary of the total number of loosestrife infestations and the total length of shoreline infested for all six hydro projects over the past three years.

Table 1. Summary of Purple Loosestrife Infestations on Six Lower Chippewa River Hydroelectric Projects, 2013-2015

	Number of purple loosestrife locations						Shoreline Affected (ft)					
	Present			Abundant			Present			Abundant		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
Holcombe	151	185	167	0	0	1	2113	1685	1193	0	0	137
Cornell	16	18	25	1	1	0	49	67	151	90	60	0
Old Abe	26	13	27	0	0	0	142	85	134	0	0	0
Wissota	10	3	5	0	0	0	23	9	21	0	0	0
Chippewa Falls	0	0	0	0	0	0	0	0	0	0	0	0
Dells	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Total Purple Loosestrife Infestations on Six Lower Chippewa River Hydroelectric Projects, 2013-2015

	2013	2014	2015
Total number of loosetrife points at Impoundments	204	220	225
Total shoreline affected in Impoundments	2417	1906	1636

There was no purple loosestrife found on the Chippewa Falls Flowage in 2015 which is consistent with findings from previous years. Dells Pond was also absent from any loosestrife infestation this year as has been the case for the last six years.

The number of purple loosestrife locations found on Lake Wissota increased from three in 2014 to five in 2015, but was as high as 10 in 2013. These locations are all minor infestations with small plant clumps at each location (see map of Lake Wissota). Total shoreline infested on Lake Wissota increased from 9 feet in 2014 to 21 feet in 2015, but was as high as 23 feet in 2013.

Holcombe Flowage contained the most purple loosestrife among the six impoundments surveyed. There were 167 locations categorized as present and one location categorized as abundant (see Holcombe Flowage Map 1). Both the number of infestations and amount of shoreline affected decreased significantly from the previous year's survey. While a few new plants were found during the survey, the majority of the infested areas have been noted in previous years. New infestation is generally associated with areas where the native vegetation has been disturbed. This disturbance can come from urbanization (clearing for home sites, swimming areas or fishing areas), road improvements, or erosion. It is also common to have plants grow only during select years. This may be the case on Holcombe Flowage, with new plants growing this year, while previously observed plants did not.

The majority of plants on Lake Holcombe were again found in an area on and around Pine Island and along State Highway 27. A comparison to the 2014 survey shows a large degree of similarity in the overall loosestrife populations in this area (see Holcombe Map 2). Several small infestations were again found just to the east of the State Highway 27 Bridge. This area had a similar degree of infestation during last year’s survey. There was only one area of abundant plant growth documented in 2015. This site was classified as abundant in 2012 and as present in both 2013 and 2014, indicating a general consistency in the number of plants in this area. No purple loosestrife was found in the Pine Lake or Cranberry Lake areas.

Several plant clumps were found scattered along the north and south shores of the main flowage (see Holcombe Map 3 and 4) with many of these plants having been documented in the past. The large islands near the south shore of the main flowage also contain several plants. Overall, there was a slight increase in plant density in the main basin.

The upstream reach of the flowage (see Holcombe Maps 5 and 6) also contains a number of purple loosestrife plants that have been noted in past surveys. The overall plant density in these areas was slightly less than what was documented in 2014.

In total, approximately 1,330 feet of shoreline was found to contain purple loosestrife on Lake Holcombe compared to 1,685 feet in 2014. As stated above, all infestations but one were classified as present.

Cornell Flowage included 25 infestations classified as present and no locations classified as abundant (see map of Cornell Flowage). Many of these locations had been noted in surveys from previous years. The infested area located just upstream from the State Highway 64 Bridge was classified as present this year. This same area was classified as abundant from 2012-2014. While the overall number of loosestrife locations and total amount of shoreline affected increased somewhat from 2014, it is similar to 2013, indicating a relatively small amount of change over the past several years.

Twenty-seven areas of loosestrife infestation were found on Old Abe Lake (see map of Old Abe Flowage) all of which were classified as present. Although this represents an increase in plant abundance from last year, it is very similar to the degree of infestation found in 2013. Most of the locations consisted of single plants or a few plant clumps, many of which had been documented in past surveys. The largest increase in loosestrife abundance occurred in an area in the upper part of the flowage where the 2013 survey noted a large decrease in plant growth. The total amount of shoreline infested by purple loosestrife this year on Old Abe Lake was approximately 134 feet. This compares to 85 feet in 2014, and 142 feet in 2013.

The minimum flow channel at Jim Falls Hydro remains infested with a relatively high concentration of purple loosestrife plants. A significant decrease in the number of plants was noted in 2012 followed by a rebound in 2013 and 2014. This year, the degree of infestation decreased slightly (Table 3). Loosestrife was found scattered throughout the channel, with the lower third of the channel being moderately infested (see maps of Jim Falls Spillway Channel). The area of greatest concentration occurs just upstream from the County Highway Y Bridge (see Jim Falls Spillway map 2). The coverage of loosestrife in this area has decreased from approximately 11,064 square feet in 2014 to 9,461 square feet in 2015 (Table 4). The loosestrife is scattered throughout the area and appears to be less dense overall than

in previous years. The total number of loosestrife infestations in the spillway channel remained the same as in 2014 (42 total locations), however, coverage decreased slightly from the previous year. Collectively, these locations amounted to 217 feet of infested shoreline versus 239 feet in 2014. Most of these locations were comprised of small plant clumps infesting between one and ten feet of shoreline, with a few more significant areas of infestation. Five years have passed since the introduction of the bio-control beetles. While it is difficult to make a determination as to their success, the fact that the density of loosestrife in the lower area of the spillway channel is continuing to decrease, and the fact that loosestrife infestation in the remaining portion of the channel appears to be stabilizing are encouraging.

Table 3. Comparison of Purple Loosestrife Infestations in Jim Falls Spillway Channel – 2013 – 2015

	2013	2014	2015
Total number of loosetrife points at Jim Falls Spillway	36	42	42
Sq feet of Fim Falls Spillway infestation near Hwy Y	16,165	11,064	9,461
Total other shoreline affected at Jim Falls Spillway	153	239	217

Table 4. Summary of Purple Loosestrife Infestations in Jim Falls Spillway Channel – 2015

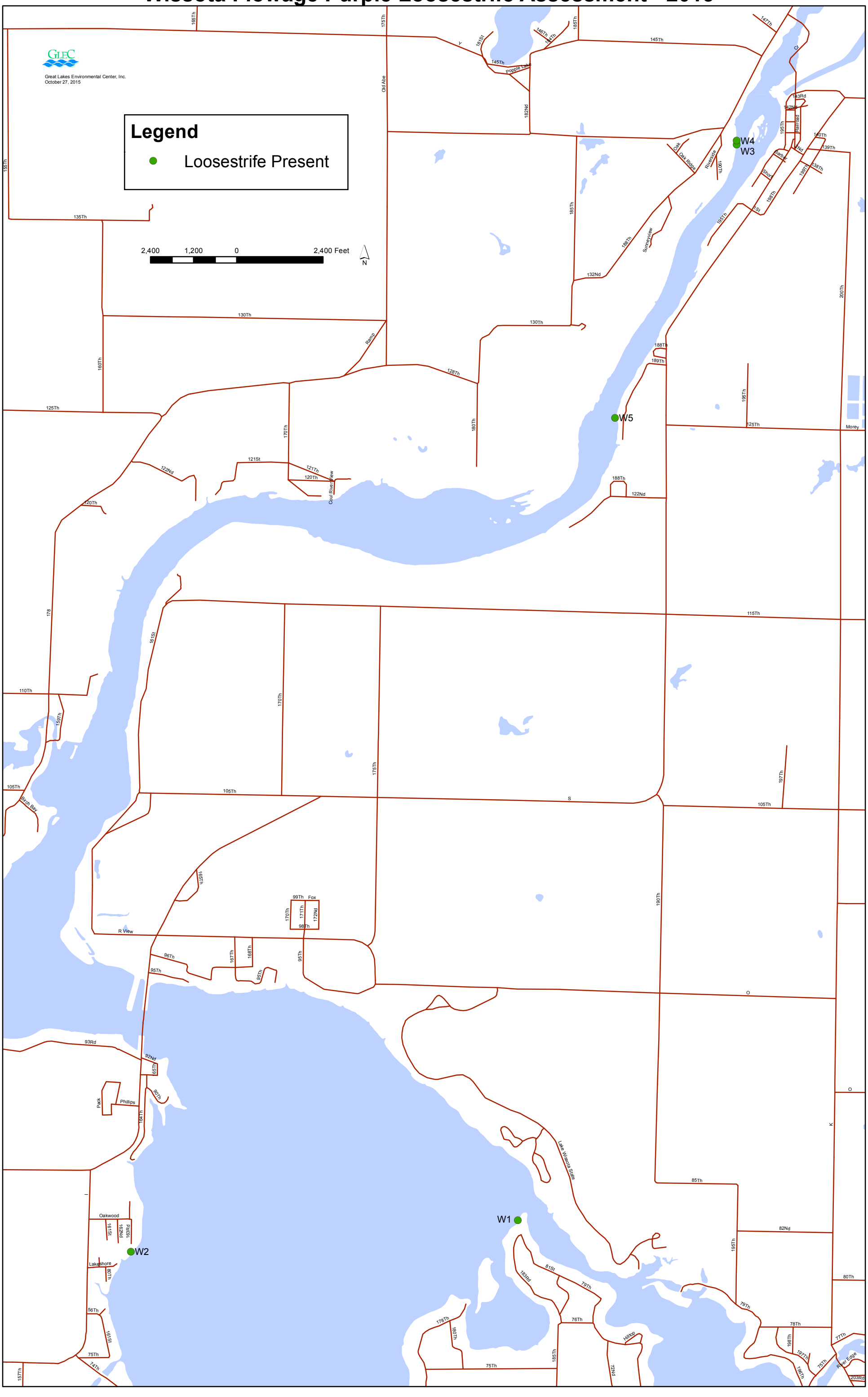
Map point	Abundant/ Present	# PLANTS	Coverage type	Area covered	
JF 1	Present	Multiple	Aerial	9,461	sq ft
JF 2	Present	Single	Point	1	ft
JF 3	Present	Multiple	Point	6	ft
JF 4	Present	Multiple	Point	10	ft
JF 5	Present	Multiple	Point	8	ft
JF 6	Present	Multiple	Point	10	ft
JF 7	Present	Multiple	Point	12	ft
JF 8	Present	Multiple	Point	6	ft
JF 9	Present	Multiple	Point	20	ft
JF 10	Present	Single	Point	2	ft
JF 11	Present	Single	Point	3	ft
JF 12	Present	Single	Point	5	ft
JF 13	Present	Multiple	Point	7	ft
JF 14	Present	Multiple	Point	9	ft
JF 15	Present	Single	Point	1	ft
JF 16	Present	Single	Point	1	ft
JF 17	Present	Multiple	Point	12	ft
JF 18	Present	Multiple	Point	6	ft
JF 19	Present	Single	Point	2	ft
JF 20	Present	Single	Point	4	ft
JF 21	Present	Single	Point	2	ft
JF 22	Present	Single	Point	1	ft
JF 23	Present	Single	Point	2	ft
JF 24	Present	Multiple	Point	3	ft
JF 25	Present	Multiple	Point	4	ft
JF 26	Present	Multiple	Point	6	ft
JF 27	Present	Single	Point	6	ft
JF 28	Present	Single	Point	1	ft
JF 29	Present	Single	Point	4	ft
JF 30	Present	Single	Point	3	ft
JF 31	Present	Single	Point	4	ft
JF 32	Present	Single	Point	3	ft
JF 33	Present	Single	Point	1	ft
JF 34	Present	Single	Point	3	ft
JF 35	Present	Single	Point	2	ft
JF 36	Present	Multiple	Point	6	ft
JF 37	Present	Single	Point	4	ft
JF 38	Present	Single	Point	5	ft
JF 39	Present	Multiple	Point	10	ft
JF 40	Present	Single	Point	5	ft
JF 41	Present	Multiple	Point	14	ft
JF 42	Present	Single	Point	3	ft

Appendix A

Survey Maps and Catalog of Purple Loosestrife Locations

2015

Wissota Flowage Purple Loosestrife Assessment - 2015



Holcombe Flowage Purple Loosestrife Assessment - 2015

Map 1 of 6

Legend

- Loosestrife Present
- Loosestrife Present

3,000 1,500 0 3,000 Feet

N

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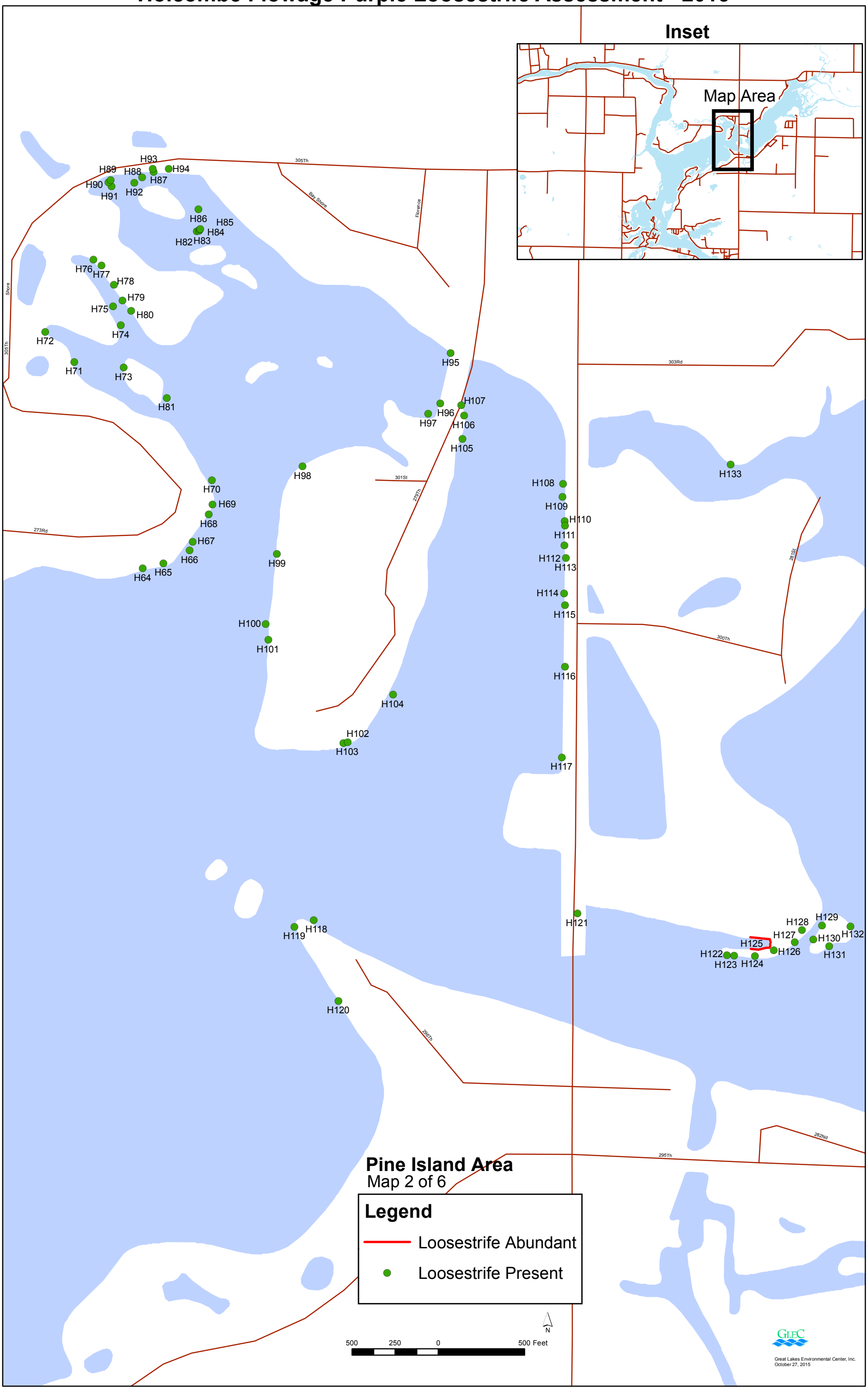
Holcombe Flowage Purple Loosestrife Assessment - 2015



Holcombe Flowage Purple Loosestrife Assessment - 2015

Main Basin
Map 3 of 6

Inset
Map Area

Legend
- Loosestrife Present

303Rd
273Rd
270Th
295Th
290Th
289Th
269Th
270Th
286Th
Vera
263Rd
265Th

H39 H40 H41 H42 H43 H44 H45 H46 H47 H48 H49 H50 H51 H52 H53 H54 H55 H56 H57 H58 H59 H60 H61 H62 H63 H138 H139 H140 H141 H142 H143 H144 H145 H146 H147 H148 H149 H150 H151 H152 H153 H154 H155 H156 H157 H158 H159 H160 H161

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N

600 300 0 600 Feet

Holcombe Flowage Purple Loosestrife Assessment - 2015

Lower Basin

Map 4 of 6

Legend

- Loosestrife Present
- Loosestrife Present

Inset

Map Area

H19
H18
H17
H13
H12
H11
H10
H9
H16
H14
H15
H8
H7
H158
H157
H159
H160
H161
H6
H1
H4
H5
H164
H165
H163
H2
H3
H166
H167
H168
H162

253Rd
293Rd
290Th
Park
256Th
279Th
264Th
265Th
286Th
Vera
283Rd
251St
275Th
274Th
Pine Point
276Th
262Nd
264Th
Anderson
266Th
254Th
263Rd
257Th
259Th
Skidmore
Warner
Flatdam
271St
255Th
259Th
M
263Rd
264Th
Willmarth

GLEC

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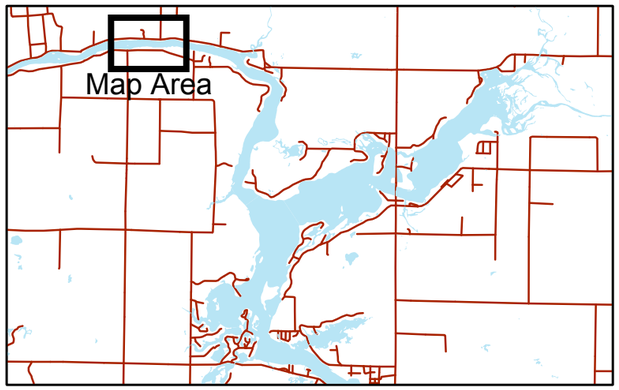
October 27, 2015

N

800 400 0 800 Feet

Holcombe Flowage Purple Loosestrife Assessment - 2015

Inset



Sheep Camp

H24 H25 H26 H27 H28 H29 H30 H31

H23 H22 H21

Squaw Point

Lehman

Upper River Area
Map 5 of 6

Legend

- Loosestrife Present

400 200 0 400 Feet

N

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Holcombe Flowage Purple Loosestrife Assessment 2015

H32
H33
H34
H35
H36
H20
H37
H38
H39

Colle
D
Squaw Point
Woodlawn
Silver Spring
Silver Springs
Sunnyside Point
Town Line
253Rd
305Th
280Th
293Rd
270Th
Shore

Inset

Map Area

Lower River Area

Map 6 of 6

Legend

- Loosestrife Present

800 400 0 800 Feet

N

GLEC

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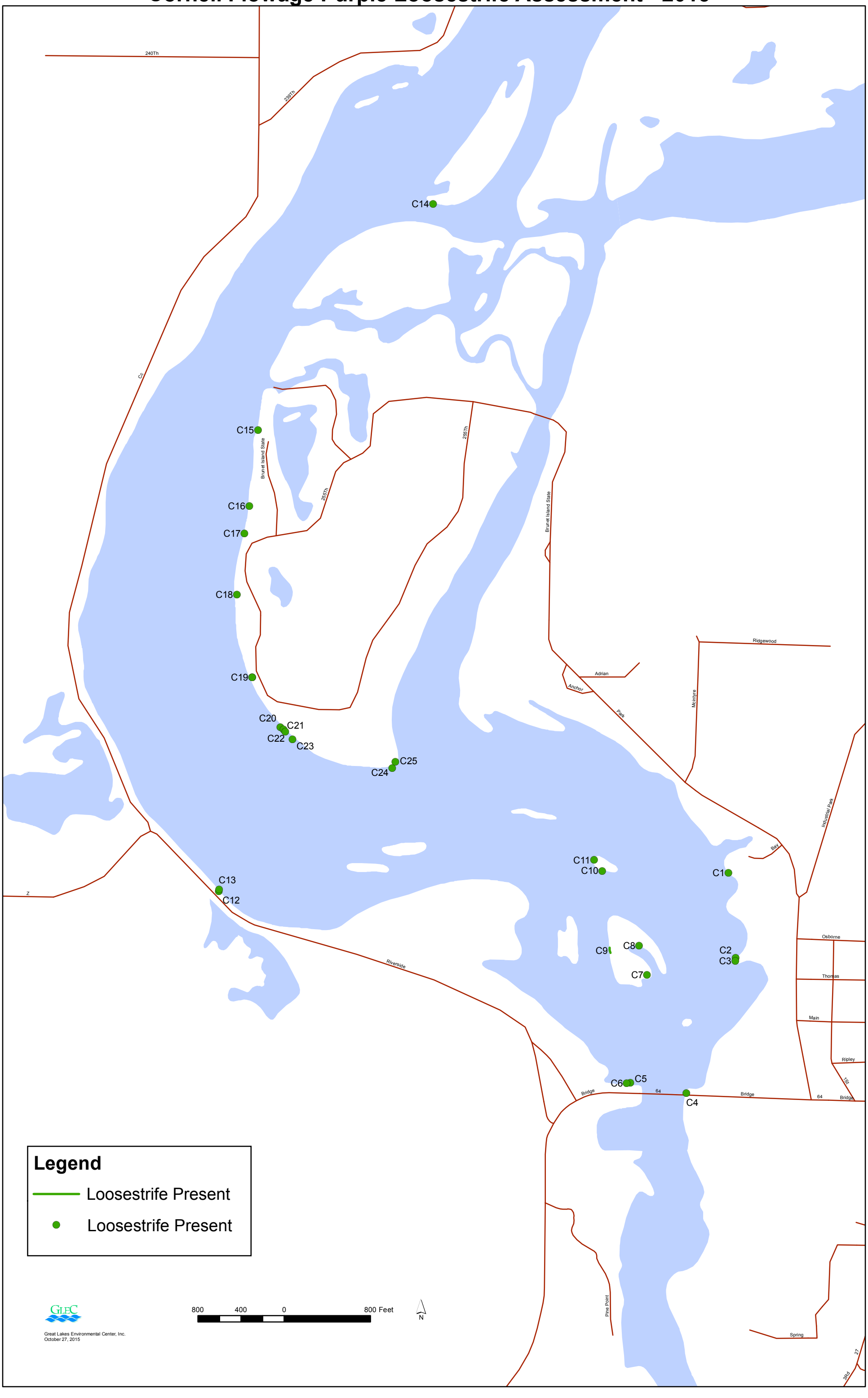
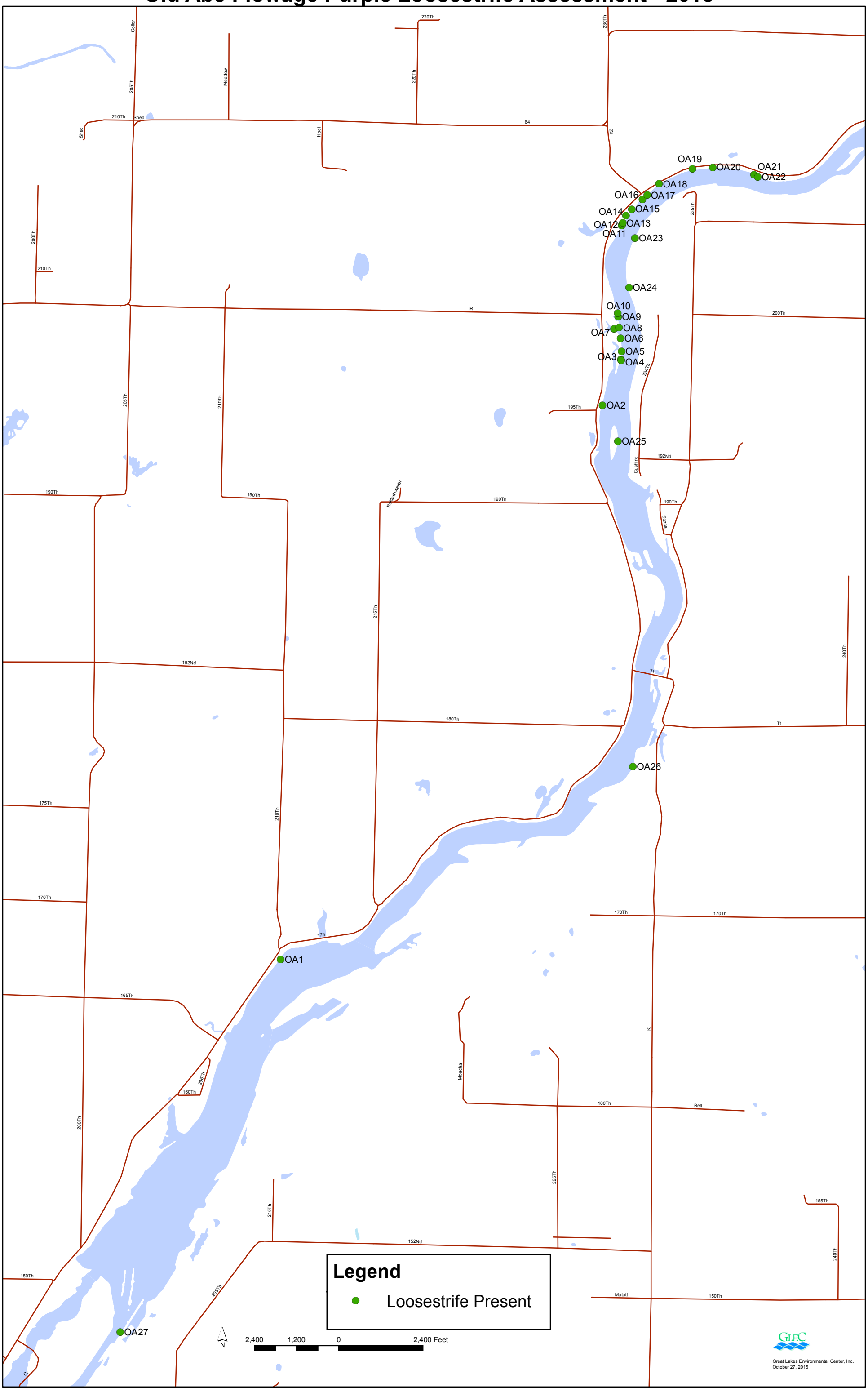
Cornell Flowage Purple Loosestrife Assessment - 2015



Old Abe Flowage Purple Loosestrife Assessment - 2015

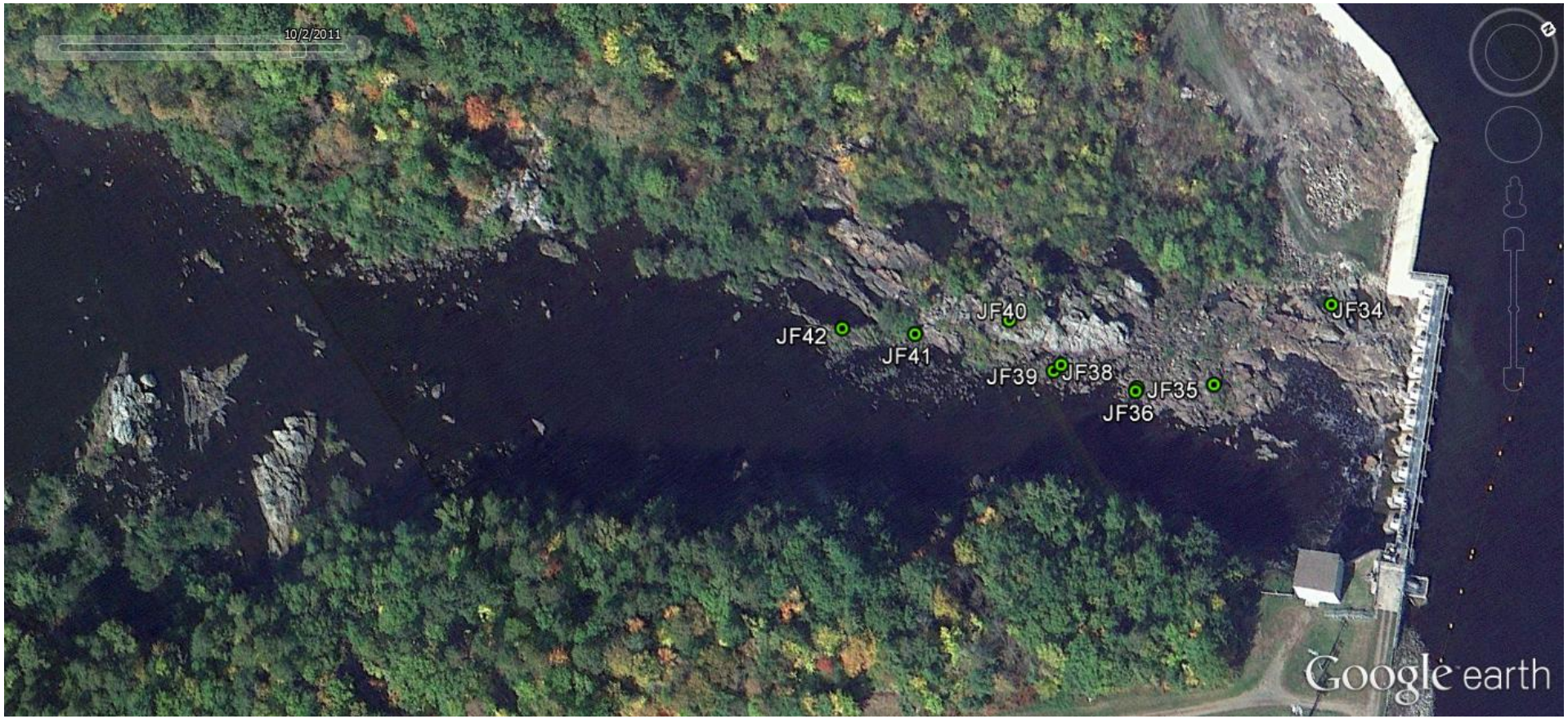


Jim Falls Spillway Channel Purple Loosestrife Assessment – 2015 (Map 1 of 4)

Jim Falls Spillway Channel Purple Loosestrife Assessment – 2015 (Map 2 of 4)

Jim Falls Spillway Channel Purple Loosestrife Assessment – 2015 (Map 3 of 4)

Jim Falls Spillway Channel Purple Loosestrife Assessment – 2015 (Map 4 of 4)



XCEL PURPLE LOOSESTRIFE LOCATIONS
2015
LAKE WISSOTA

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
W1	**Present**	Single	3
W2	**Present**	Single	3
W3	**Present**	Multiple	7
W4	**Present**	Multiple	4
W5	**Present**	Single	4

XCEL PURPLE LOOSESTRIFE LOCATIONS
2015
HOLCOMBE FLOWAGE

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
H1	Present	Single	2
H2	Present	Multiple	190
H3	Present	Single	3
H4	Present	Single	1
H5	Present	Single	2
H6	Present	Single	4
H7	Present	Single	1
H8	Present	Multiple	12
H9	Present	Multiple	3
H10	Present	Single	1
H11	Present	Single	2
H12	Present	Single	1
H13	Present	Single	1
H14	Present	Multiple	4
H15	Present	Single	2
H16	Present	Single	2
H17	Present	Single	2
H18	Present	Single	2
H19	Present	Single	1
H20	Present	Multiple	4
H21	Present	Multiple	3
H22	Present	Single	4
H23	Present	Multiple	5
H24	Present	Single	1
H25	Present	Multiple	8
H26	Present	Multiple	10
H27	Present	Single	1
H28	Present	Single	1
H29	Present	Single	1
H30	Present	Single	2
H31	Present	Single	2
H32	Present	Single	3
H33	Present	Single	2
H34	Present	Single	3
H35	Present	Single	4
H36	Present	Single	3
H37	Present	Single	4
H38	Present	Single	1
H39	Present	Single	2
H40	Present	Single	2
H41	Present	Single	3
H42	Present	Multiple	8
H43	Present	Multiple	12
H44	Present	Multiple	2
H45	Present	Single	1
H46	Present	Multiple	4
H47	Present	Multiple	10
H48	Present	Multiple	5
H49	Present	Multiple	10
H50	Present	Multiple	4
H51	Present	Single	2

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
H85	Present	Single	2
H86	Present	Multiple	8
H87	Present	Multiple	8
H88	Present	Multiple	20
H89	Present	Multiple	10
H90	Present	Multiple	6
H91	Present	Multiple	16
H92	Present	Multiple	15
H93	Present	Multiple	14
H94	Present	Multiple	7
H95	Present	Single	5
H96	Present	Multiple	5
H97	Present	Multiple	10
H98	Present	Single	1
H99	Present	Single	5
H100	Present	Multiple	10
H101	Present	Single	4
H102	Present	Multiple	8
H103	Present	Multiple	10
H104	Present	Single	1
H105	Present	Single	1
H106	Present	Single	5
H107	Present	Single	3
H108	Present	Single	2
H109	Present	Single	3
H110	Present	Single	5
H111	Present	Single	2
H112	Present	Multiple	8
H113	Present	Multiple	14
H114	Present	Single	1
H115	Present	Multiple	20
H116	Present	Single	5
H117	Present	Multiple	7
H118	Present	Single	5
H119	Present	Single	3
H120	Present	Multiple	6
H121	Present	Multiple	10
H122	Abundant	Multiple	137
H123	Present	Single	3
H124	Present	Multiple	10
H125	Present	Multiple	8
H126	Present	Single	4
H127	Present	Multiple	7
H128	Present	Multiple	5
H129	Present	Multiple	6
H130	Present	Multiple	20
H131	Present	Single	3
H132	Present	Single	3
H133	Present	Multiple	5
H134	Present	Single	3
H135	Present	Multiple	3

XCEL PURPLE LOOSESTRIFE LOCATIONS
2015
HOLCOMBE FLOWAGE

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)	Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
H52	**Present**	Multiple	5	H136	**Present**	Single	4
H53	**Present**	Single	4	H137	**Present**	Single	4
H54	**Present**	Multiple	4	H138	**Present**	Multiple	6
H55	**Present**	Multiple	4	H139	**Present**	Multiple	8
H56	**Present**	Single	1	H140	**Present**	Multiple	12
H57	**Present**	Multiple	10	H141	**Present**	Multiple	6
H58	**Present**	Multiple	6	H142	**Present**	Multiple	2
H59	**Present**	Single	2	H143	**Present**	Multiple	5
H60	**Present**	Single	1	H144	**Present**	Multiple	12
H61	**Present**	Multiple	5	H145	**Present**	Single	2
H62	**Present**	Multiple	12	H146	**Present**	Multiple	10
H63	**Present**	Multiple	7	H147	**Present**	Multiple	12
H64	**Present**	Multiple	12	H148	**Present**	Multiple	12
H65	**Present**	Multiple	5	H149	**Present**	Multiple	16
H66	**Present**	Multiple	8	H150	**Present**	Single	2
H67	**Present**	Multiple	4	H151	**Present**	Multiple	16
H68	**Present**	Multiple	9	H152	**Present**	Multiple	8
H69	**Present**	Multiple	7	H153	**Present**	Single	4
H70	**Present**	Multiple	5	H154	**Present**	Single	2
H71	**Present**	Single	2	H155	**Present**	Multiple	4
H72	**Present**	Single	6	H156	**Present**	Multiple	3
H73	**Present**	Multiple	15	H157	**Present**	Multiple	6
H74	**Present**	Single	3	H158	**Present**	Multiple	5
H75	**Present**	Single	3	H159	**Present**	Single	2
H76	**Present**	Multiple	8	H160	**Present**	Multiple	7
H77	**Present**	Multiple	30	H161	**Present**	Multiple	12
H78	**Present**	Multiple	25	H162	**Present**	Multiple	5
H79	**Present**	Multiple	50	H163	**Present**	Single	5
H80	**Present**	Multiple	4	H164	**Present**	Single	2
H81	**Present**	Single	4	H165	**Present**	Multiple	6
H82	**Present**	Multiple	5	H166	**Present**	Multiple	4
H83	**Present**	Single	2	H167	**Present**	Single	2
H84	**Present**	Single	3	H168	**Present**	Multiple	8

XCEL PURPLE LOOSESTRIFE LOCATIONS
2015
CORNELL FLOWAGE

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
C1	**Present**	Single	3
C2	**Present**	Single	1
C3	**Present**	Single	3
C4	**Present**	Multiple	6
C5	**Present**	Single	4
C6	**Present**	Single	2
C7	**Present**	Multiple	10
C8	**Present**	Single	3
C9	**Present**	Multiple	60
C10	**Present**	Single	2
C11	**Present**	Single	1
C12	**Present**	Multiple	6
C13	**Present**	Multiple	8
C14	**Present**	Single	4
C15	**Present**	Single	2
C16	**Present**	Single	3
C17	**Present**	Multiple	6
C18	**Present**	Single	3
C19	**Present**	Single	5
C20	**Present**	Single	2
C21	**Present**	Single	1
C22	**Present**	Single	1
C23	**Present**	Single	1
C24	**Present**	Multiple	13
C25	**Present**	Single	1

XCEL PURPLE LOOSESTRIFE LOCATIONS
2015
OLD ABE FLOWAGE

Location #	Degree of Infestation	Single / Multiple	Coverage (ft)
OA1	**Present**	Single	4
OA2	**Present**	Single	2
OA3	**Present**	Multiple	8
OA4	**Present**	Multiple	6
OA5	**Present**	Single	3
OA6	**Present**	Single	3
OA7	**Present**	Multiple	12
OA8	**Present**	Multiple	14
OA9	**Present**	Single	3
OA10	**Present**	Multiple	12
OA11	**Present**	Single	3
OA12	**Present**	Single	3
OA13	**Present**	Multiple	10
OA14	**Present**	Multiple	4
OA15	**Present**	Single	1
OA16	**Present**	Multiple	4
OA17	**Present**	Multiple	5
OA18	**Present**	Multiple	3
OA19	**Present**	Multiple	5
OA20	**Present**	Single	2
OA21	**Present**	Single	2
OA22	**Present**	Single	1
OA23	**Present**	Single	2
OA24	**Present**	Single	2
OA25	**Present**	Multiple	14
OA26	**Present**	Single	3
OA27	**Present**	Single	3