

1414 West Hamilton Avenue P.O. Box 8 Eau Claire, WI 54702-0008

November 13, 2009

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

Subject:

2009 Purple Loosestrife Report for 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,

Attached is a copy of the 2009 Purple Loosestrife Report for the above-referenced hydro projects. Pursuant to the Exotics Control Plan of the operating license for each project, Licensee (Northern States Power Company - Wisconsin, an Xcel Energy Company) is required to annually monitor and eradicate pioneering purple loosestrife plants on NSPW-owned shorelines.

The monitoring results for this year indicated a general decline in overall loosestrife infestation at all projects except for Jim Falls (Old Abe Flowage). Chippewa Falls Flowage and Lake Wissota continue to remain free of loosestrife. One plant was documented on Dells Pond (NSPW land) and was chemically treated. Results from Old Abe Flowage (Jim Falls) and Cornell Flowage were similar to last year. Holcombe Flowage continues to have the greatest infestation among the projects since the monitoring program began. This year's survey, however, showed a marked decline in loosestrife coverage versus last year. The previous biological control efforts, in combination with continued chemical treatment, seem to have been quite effective on Lake Holcombe.

Per the Commission's letter dated February 24, 2009, Licensee consulted with the resource agencies regarding possible additional control measures that may be undertaken at the Holcombe and Jim Falls Projects (Appendix A). The U.S. Fish and Wildlife Service deferred to the Wisconsin Department of Natural Resources (WDNR). Licensee spoke with Mr. Brock Woods, WDNR Purple Loosestrife Coordinator, via telephone on July 6, 2009. Mr. Woods stated that once a beetle population is established, it will eventually migrate to the remaining loosestrife stands.

Ms. Kimberly D. Bose, Secretary November 13, 2009 Page 2 of 2

Based on the WDNR's comments and the positive results of this year's survey, Licensee plans on allowing the current beetle population to continue to control the loosestrife on Holcombe Flowage. If future surveys indicate a significant resurgence in loosestrife infestation, Licensee will pursue a partnership with the Lake Holcombe Improvement Association and the WDNR to implement additional biological control methods.

In regards to the loosestrife population in the minimum flow channel at the Jim Falls Project, chemical treatment was not considered feasible. Therefore, Licensee plans on cooperating with local sportsmen's organizations and the WDNR to release beetles in 2010 prior to the loosestrife flowering season. It is hoped that periodic flood conditions in the channel will not deter the establishment of a viable beetle population.

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

Sincerely,

William Zawacki

Director, Hydro Plants

Attachment: Agency Correspondence

C: Mr. Brian Guthman (LHIA)

Mr. Bob Baczynski (WDNR)

Mr. Nick Utrup (USFWS)

H:\MLLM40\References\All Plants\Purple Loosetrife\Reports\Great Lakes\2009\2009 Purple Loosestrife Cover Letter 111309.doc

Attachment A Agency Correspondence

Miller, Matthew J

From: Kurz, Joseph E - DNR [Joseph.Kurz@wisconsin.gov]

Sent: Wednesday, July 01, 2009 3:27 PM

To: Miller, Matthew J

Subject: FW: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

From: Provost, Scott M - DNR

Sent: Wednesday, July 01, 2009 2:35 PM

To: Kurz, Joseph E - DNR; Sorge, Patrick W - DNR

Cc: Woods, Brock - DNR

Subject: RE: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

I would defer to Brock Woods, but I am a strong proponent to PL beetles. I've seen incredible control using these beetles on the Waupaca Chain and on the Fox River area where flooding is as common as wind change. If there is enough PL biomass to start a beetle population, I strongly advise the use of PL beetles. In my opinion they are much more efficient (long term control) than herbicides.

Scott Provost, P.S.

Water Resources Specialist-WDNR

473 Griffith Avenue

Wisconsin Rapids, WI 54494

(22) phone: 715.421.7881

(**a**) fax: 715.421.7830

(e-mail: scott.provost@wisconsin.gov

From: Kurz, Joseph E - DNR

Sent: Wednesday, July 01, 2009 1:26 PM

To: Sorge, Patrick W - DNR; Provost, Scott M - DNR

Subject: FW: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Please forward any thoughts and/or recommendations to Matt.

From: Miller, Matthew J [mailto:Matthew.J.Miller@xcelenergy.com]

Sent: Wednesday, July 01, 2009 12:46 PM

To: Baczynski, Robert J - DNR; (Nick_Utrup@fws.gov); Kurz, Joseph E - DNR

Cc: bguthman@lakeholcombe.k12.wi.us; Konkel, Deb J - DNR; Scheirer, Jeffrey W - DNR; Chrisopher

Turner (cjturner@wwt.net)

Subject: RE: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Hello Again,

Does anyone have information or suggestions on biological control (beetles) of purple loosestrife at Jim

Falls or Holcombe Flowage. Our consultant will be monitoring for purple loosestrife on both flowages at the end of July or early August. The minimum flow (spillway) channel at Jim Falls has a high concentration of plants and seed source and the use of herbicide would be ineffective. Would biological control work in the channel? Flood conditions can happen at any time and possibly wipe out the beetles. Any other alternatives? I've included FERC's comments for your review. Please advise. Thank you.

From: Miller, Matthew J

Sent: Tuesday, June 16, 2009 11:44 AM

To: 'Robert Baczynski (robert.baczynski@wisconsin.gov)'; ' (Nick_Utrup@fws.gov)' Cc: 'bguthman@lakeholcombe.k12.wi.us'; 'deb.konkel@wisconsin.gov'; 'Jeffrey Scheirer

(jeffrey.scheirer@wisconsin.gov)'; 'Chrisopher Turner (cjturner@wwt.net)'

Subject: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Hello Everyone,

Xcel Energy's annual purple loosestrife monitoring at Holcombe Flowage and Old Abe Flowage is fast approaching. The Federal Energy Regulatory Commission (FERC) made several recommendations after reviewing our 2008 annual loosestrife report. FERC directed Xcel Energy to consult with the Wisconsin DNR and USFWS about possible biological (or some other means) of controlling loosestrife at the two flowages. Please let me know of any projects that you may be aware of so that Xcel Energy may provide assistance. Herbicide treatment was not considered due to the heavy infestations in some areas. Let me know if you would like a copy of the 2008 report or FERC's review comments. I need to provide documentation of consultation to FERC so please provide a response on any information you may have. Thank you.

Sincerely,

Matthew Miller Hydro Licensing Specialist Xcel Energy 1414 W. Hamilton Ave. P.O. Box 8 Eau Claire, WI 54702 Office: (715) 737-1353

Mobile: (715) 225-8841

Miller, Matthew J

From:

Nick_Utrup@fws.gov

Sent:

Wednesday, July 08, 2009 1:05 PM

To:

Miller, Matthew J

Subject:

RE: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Attachments:

FERC Letter.PDF



FERC Letter.PDF

Hi Matthew,

I still don't know a whole lot about the beetles and when and where to use them for purple loosestrife management. However, I do know that they have been extremely effective as a control. I will defer my recommendation to the state as they are the experts on this subject.

Nick

Nicholas J. Utrup Wisconsin Hydropower Coordinator U.S. Fish and Wildlife Service Green Bay Ecological Services Field Office 2661 Scott Tower Drive New Franken, WI 54229

Office: Mobile:

(920) 866-1736 (920) 530-9937 (920) 866-1710

FAX: Email:

Nick Utrup@fws.gov

"Miller, Matthew <Matthew.J.Miller

@xcelenergy.com>

07/01/2009 12:46 PM

"Robert Baczynski (robert.baczynski@wisconsin.gov)" <robert.baczynski@wisconsin.gov>, " (Nick Utrup@fws.gov)" <Nick Utrup@fws.gov>, "Kurz, Joe" <KurzJ@dnr.state.wi.us>

"bguthman@lakeholcombe.k12.wi.us" <bguthman@lakeholcombe.k12.wi.us>, "deb.konkel@wisconsin.gov" <deb.konkel@wisconsin.gov>, "Jeffrey Scheirer (jeffrey.scheirer@wisconsin.gov)" <jeffrey.scheirer@wisconsin.gov>, "Chrisopher Turner (cjturner@wwt.net)" <cjturner@wwt.net>

Subject

To

RE: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Hello Again,

Does anyone have information or suggestions on biological control (beetles) of purple loosestrife at Jim Falls or Holcombe Flowage. Our consultant will be monitoring for purple loosestrife on both flowages at the end of July or early August. The minimum flow (spillway) channel at Jim Falls has a high concentration of plants and seed source and the use of herbicide would be ineffective. Would biological control work in the channel? Flood conditions can happen at any time and possibly wipe out the beetles. Any other alternatives? I've included FERC's comments for your review. Please advise. Thank you. From: Miller, Matthew J

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To: 'Robert Baczynski (robert.baczynski@wisconsin.gov)'; '

(Nick Utrup@fws.gov)'

Cc: 'bguthman@lakeholcombe.k12.wi.us'; 'deb.konkel@wisconsin.gov'; 'Jeffrey Scheirer (jeffrey.scheirer@wisconsin.gov)'; 'Chrisopher Turner (cjturner@wwt.net)' Subject: Holcombe Flowage & Old Abe Flowage Purple Loosestrife Management

Hello Everyone,

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2008 report or FERC's review comments. I need to provide documentation of consultation to FERC so please provide a response on any information you may have. Thank you.

Sincerely,

Matthew Miller
Hydro Licensing Specialist
Xcel Energy
1414 W. Hamilton Ave.
P.O. Box 8
Eau Claire, WI 54702
Office: (715) 737-1353

Mobile: (715) 225-8841 (See attached file: FERC Letter.PDF)

PURPLE LOOSESTRIFE ASSESSMENT – 2009

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

Prepared for:

Northern States Power Co. – Wisconsin (An Xcel Energy Company)

Matthew J. Miller

P.O. Box 8

Eau Claire, WI 54702

715-737-1353

Prepared by:



739 Hastings Street Traverse City, MI 49686

Principal contact: Christopher J. Turner Ph.: 715/829-3737 Fax: 715/874-5389

Email: cturner@glec.com

October 26, 2009

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 prevalent, 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 license agreement for the six Lower Chippewa River Hydroelectric Projects, Northern States Power Company – Wisconsin, an Xcel Energy Company (NSPW or Xcel Energy) has agreed to monitor each of the impoundments created by these hydroelectric projects for the presence and spread of purple loosestrife. The surveys are to take place each year in the late summer when loosestrife blooms are easily detectable. Additionally, Xcel Energy has committed to treating any small clusters of pioneering plants, which occur on Xcel Energy-owned lands with an approved aquatic herbicide.

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. Dates of the surveys fell between August 15 and September 30, 2009. The surveyor motored slowly around the shoreline looking for purple loosestrife plants. When loosestrife was discovered, the location was marked on a map of the waterbody. Loosestrife infestations were classified as either "present" or "abundant" and marked on the map with a specific color. "Present" indicated that a few plants were sparsely inhabiting the area, but they did not comprise a large percentage of the vegetation in that area. "Abundant" indicated that more dense loosestrife growth existed and that the loosestrife made up a significant portion of that shoreline's vegetation.

By referencing the location of the purple loosestrife plants with land ownership maps provided by Xcel Energy, the surveyor determined if the plants were on Xcel Energy-owned lands. 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. Through past work, it has been determined that herbicide application can be used as an effective treatment for small loosestrife populations, but it is much less effective at controlling larger infestations. If any 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 were taken in the field with a handheld receiver and notations made by the surveyor. The locations of purple loosestrife infestation were then noted on the field maps and catalogued in a spreadsheet. The locations were then digitized onto GIS basemaps (Wisconsin DNR 24K Hydrography version 6 and ESRI StreetMap USA). Locations of purple loosestrife are noted on the maps using green for present and red for abundant. Due the scale of the maps, locations covering less than 20 feet of shoreline are denoted by a dot; areas covering 20 feet of shoreline or more are denoted by a line drawn to scale. By using a combination of GPS, laser rangefinder, visual estimates, and GIS, a total distance of shoreline affected by purple loosestrife was calculated for each flowage (Table 1). Appendix A provides detailed information regarding each loosestrife location. Line and point GIS features are available for client use and include the following attributes: location ID, extent in feet, and coordinates. Previous years' surveys did not include the creation of digital maps, however, future surveys and mapping will allow for more direct comparisons of the loosestrife spread from year to year.

Additionally, an inspection was to be done in the Jim Falls spillway channel adjacent to the downstream powerhouse. This area has been known to contain purple loosestrife in locally large numbers; therefore the goal of this effort was to characterize the purple loosestrife infestation, not generate a comprehensive map of the area or monitor the spread of the loosestrife. This portion of the task was to be completed on foot.

RESULTS AND DISCUSSION

The number of purple loosestrife locations and the total number of feet of shoreline affected by purple loosestrife is presented for each flowage in Table 1. This was the first year where an effort has been made to tabulate abundance and shoreline coverage, so no direct comparison can be made to previous years. In general, however, this year's survey revealed a general decrease in purple loosestrife infestation in all the flowages except Old Abe, where a slight increase was noted.

Table 1. Summary of 2009 Purple Loosestrife Infestations on Six Lower Chippewa River Hydroelectric Projects

	Number of purple loosestrife locations		Shoreline Affected (ft)	
	Present	Abundant	Present	Abundant
Holcombe	62	2	379	135
Cornell	5	0	44	0
Old Abe	6	1	27	20
Wissota	0	0	0	0
Chippewa Falls	0	0	0	0
Dells	1	0	2	0

Through the roving shoreline surveys, no purple loosestrife was found anywhere in the Chippewa Falls Flowage which was consistent with findings from previous years' monitoring. Also, no purple loosestrife plants were found on Lake Wissota, even though two plants were observed two years ago in the upper-most portion of the flowage.

A single purple loosestrife plant was found on Dells Pond. This plant was observed on one of the islands just downstream from the Highway 312 bridge (see Dells Pond Map). Loosestrife plants were noted (and treated) in this location in 2005, but not in 2006; and three plants were seen in 2007, and then just one in 2008. It is common for purple loosestrife to grow some years and lie dormant during others. This island is owned by NSP, and this loosestrife plant was treated with herbicide.

Holcombe Flowage was found to contain the most purple loosestrife of any of the six impoundments surveyed; 62 locations were noted as present and two locations were

noted as abundant (see Holcombe Flowage Map 1). While a few new plants were found during the survey, the majority of the infestation areas have been noted in previous years. New infestation is generally associated with areas where the native plant life has been disturbed in some way. This disturbance can come from urbanization (clearing for home sites, swimming areas or fishing areas), road improvements, or from erosion. It is also common to have plants only grow during select years. This may be the case on Holcombe Flowage; new plants growing this year, while other plants that were previously noted did not grow at all this year.

Surveys of purple loosestrife on Holcombe Flowage in past years have typically documented continued improvement and the continued success of the beetle introduction on purple loosestrife infestation. In 2008, however; there appeared to be a slight increase in the loosestrife infestation. This year the amount of purple loosestrife has noticeably decreased again, showing marked improvement from 2008.

Single plants were observed at private residences at the end of 274th Ave and 259th Ave. Four single plant locations in this general area (these two and two that were not evident this year) have been noted on and off over the last few years. All four of these locations are on private lawn areas.

Two small plant clumps were noted on an island just north of Birch Creek Park. A single plant was found near the mouth of the riverine section of the Flowage. Several plant clumps of one to a few plants were found along the shores of the riverine upper section of the impoundment; approximately one-fourth of these plants are located on Xcel Energy land. This area has dramatically fewer plants than last year.

The majority of plants on Lake Holcombe were again found in the area on and around Pine Island and along Highway 27; none of these areas were classified as abundant (see Holcombe Map 2). Overall, the abundance in this area still represents an overall decrease in plant density from last year. Several small infestations and one abundant location were found just to the east of the Highway 27 bridge. This also shows a general decrease from previous years' surveys. One individual plant clump was found on the south shore of the flowage half way between Jump River and the Highway 27 bridge. No purple loosestrife was found in Main Creek, Jump River, Pine Lake, or Cranberry Lake.

Several plant clumps were found scattered along the north and south shores of the main flowage (see Holcombe Map 3), most if not all of these plants have been noted in the past. The large islands near the south shore of the main flowage contain numerous plants, including one area that was classified as abundant (approximately 15 feet of shoreline). Only a few of these locations are on Xcel Energy-owned lands. Overall, there seems to be little change in plant density in the main flowage area.

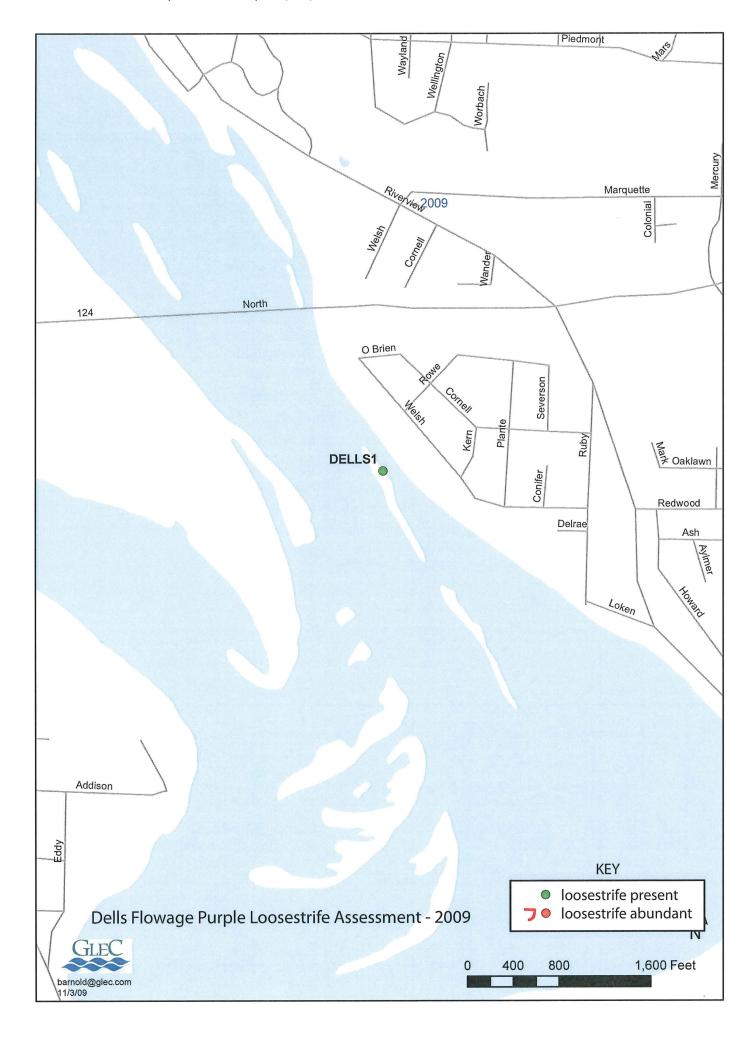
In total, approximately 514 feet of shoreline was found to contain purple loosestrife. A total of 135 feet was noted as abundant, and the remaining 379 feet was noted as present.

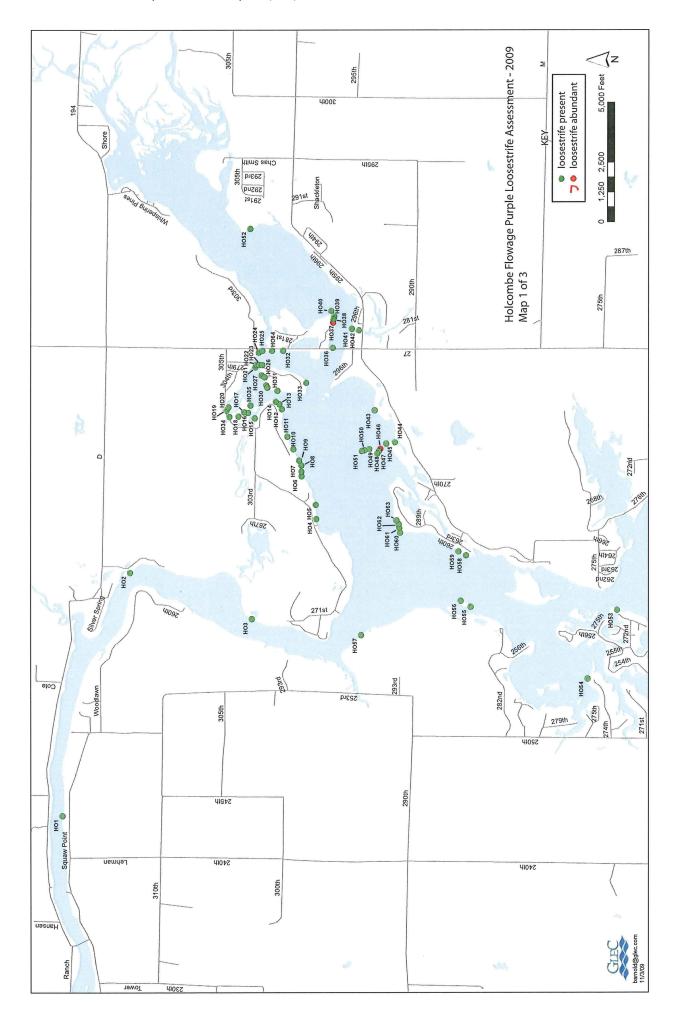
Cornell Flowage was found to contain five small infestations of purple loosestrife, all of which were classified as present (see map of Cornell Flowage). Two of the small infestations were located in the main flowage on the northwest bank and have been seen in past years. These plants are on the County Highway I right-of-way. Both of these occurrences were single clumps and each comprised 3 feet of shoreline. There appears to be a similar number of plants along this area as in last year's survey. The slightly heavier infestation was located on the first island upstream of the STH 64 bridge in the main flowage. Numerous loosestrife plants have populated a 35 foot low-lying stretch of shoreline for the past several years. These plants have been previously noted as abundant, but appear to be much more sparse this year and were noted only as present. One single plant was located on the second island upstream of the STH 64 bridge in the main flowage; and a second single plant was in the side channel that runs south of the Brunet Island State Park island complex. A total of 44 feet of shoreline was found to contain purple loosestrife. None of the current loosestrife locations were located on Xcel Energy lands.

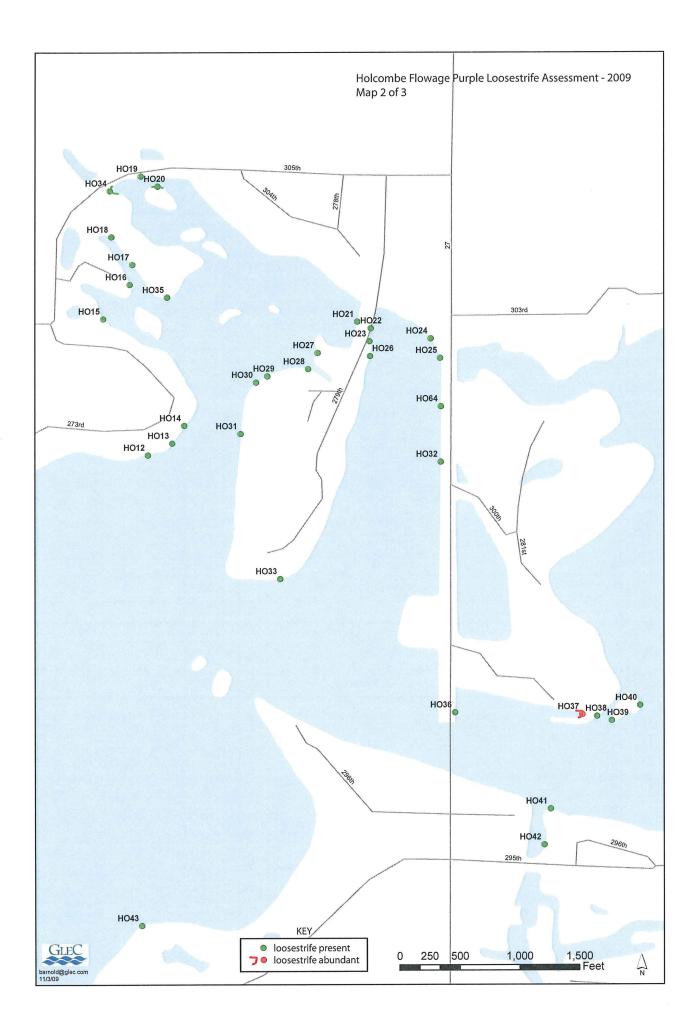
Seven areas of loosestrife infestations (six present and one abundant) were found on the upper portion of Old Abe Lake (see map of Old Abe Flowage). This represents an increase in plant abundance on Old Abe Flowage from last year. The abundant location was found at the mouth of Bob Creek, consisting of a number of plants spread over approximately 20 feet of shoreline. Single plants were found immediately upstream and downstream of this location. Four locations were noted near the upper extent of the flowage, consisting of single plants or a few plant clumps spread over a total of 23 feet of

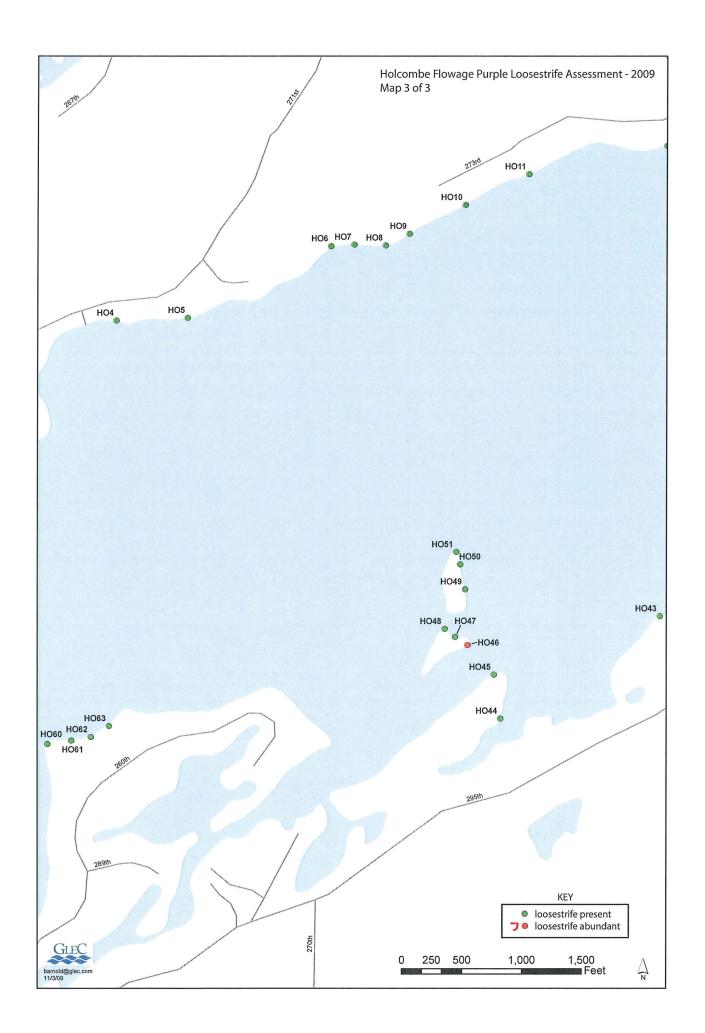
shoreline. None of the purple loosestrife locations on Old Abe Flowage are on Xcel Energy lands. The total amount of shoreline affected by purple loosestrife on Old Abe Lake is approximately 47 feet.

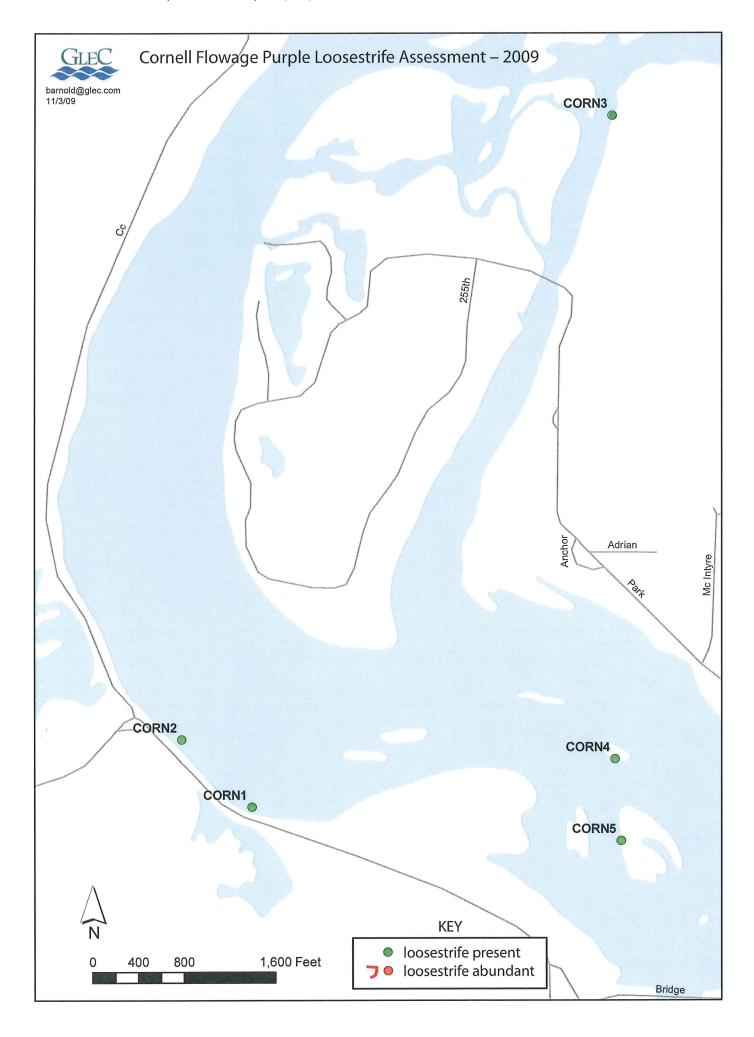
The minimum flow channel at the Jim Falls Hydro is still an area of high purple loosestrife infestation, though a sharp decline in the number of plants was noted since last year's survey. Loosestrife was found scattered throughout the channel, with the lower third of the channel being moderately infested. Several areas consist of fairly dense loosestrife growth (specifically under the CTH Y bridge).

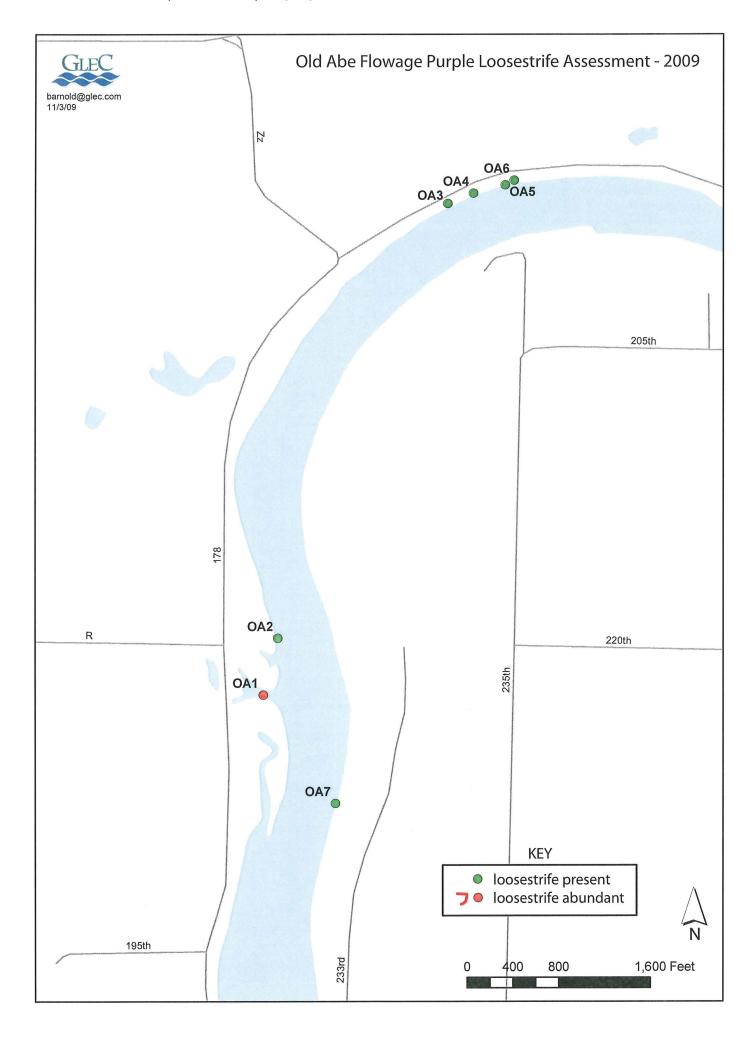












NSP PURPLE LOOSESTRIFE LOCATIONS 2009 HOLCOMBE

Location #	Degree of infestation	Coverage	Location #	Degree of infestation	Coverage (ft)
		(ft)	HO46	Abundant	15
HO1 HO2	Present	2 1	HO47	Present	1
HO3	Present Present	1	HO48	Present	2
	Present	2	HO49		5
HO4		2		Present	2
HO5	Present	2	HO50	Present Present	2
HO6	Present	1	HO51		3
HO7	Present	1	HO52 HO53	Present	3
HO8	Present	1	HO54	Present Present	3
HO9	Present	1			
HO10	Present	1	HO55	Present	15
HO11	Present	2	HO56	Present	2 2
HO12	Present	3	HO57	Present	3
HO13	Present	3	HO58	Present	3
HO14	Present	6	HO59	Present	3
HO15	Present	2	HO60	Present	3
HO16	Present	1	HO61	Present	3
HO17	Present	25	HO62	Present	3
HO18	Present	1	HO63	Present	3
HO19	Present	6	HO64	Present	2
HO20	Present	90		TOTALO	
HO21	Present	1		TOTALS	405
HO22	Present	1		Abundant	135
HO23	Present	1		Present	379
HO24	Present	1			
HO25	Present	1			
HO26	Present	3			
HO27	Present	1			
HO28	Present	1			
HO29	Present	1			
HO30	Present	1			
HO31	Present	2			
HO32	Present	2			
HO33	Present	2			
HO34	Present	120			
HO35	Present	1			
HO36	Present	2			
HO37	Abundant	120			
HO38	Present	8			
HO39	Present	6			
HO40	Present	3			
HO41	Present	2			
HO42	Present	2			
HO43	Present	2			
HO44	Present	1			
HO45	Present	1			

NSP PURPLE LOOSESTRIFE LOCATIONS 2009 CORNELL

Location	Degree of	Coverage
#	infestation	(ft)
CORN1	Present	3
CORN2	Present	3
CORN3	Present	1
CORN4	Present	2
CORN5	Present	35
	TOTALS Present	44

NSP PURPLE LOOSESTRIFE LOCATIONS 2009 OLD ABE

Location	Degree of	Coverage
#	infestation	(ft)
OA1	Abundant	20
OA2	Present	2
OA3	Present	6
OA4	Present	2
OA5	Present	12
OA6	Present	3
OA7	Present	2
	TOTALS	
	Present	27
	Abundant	20

NSP PURPLE LOOSESTRIFE LOCATIONS 2009 DELLS

Location	Degree of	Coverage
#	infestation	(ft)
DELLS1	Present	2
	TOTALS Present	2

Docur	ment Cor	ntent(s)		
2009	Purple	Loosestrife	Report.PDF1-24	4

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