

Wisconsin River Power Company

(owners of the Petenwell & Castle Rock Hydroelectric Plants)

P.O. Box 19001 Green Bay, WI 54307-9001

December 19, 2014

FERC Project No. 1984

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

Dear Secretary Bose:

Petenwell and Castle Rock Hydroelectric Project Invasive Species Report for the Petenwell and Castle Rock Hydroelectric Project

As per the Order Approving the Revised Invasive Species Monitoring Plan for the Petenwell and Castle Rock Hydroelectric Project (FERC Project No. 1984) issued on July 13, 2005, Wisconsin River Power Company (WRPCO) is submitting the survey results for purple loosestrife, Eurasian water milfoil (EWM) and zebra mussels.

Purple Loosestrife

Surveys for purple loosestrife were completed on July 10 and July 17, 2014. The surveys identified a total of eighteen (18) purple loosestrife colonies at the project. Seventeen (17) of those were located on the Petenwell Flowage and one (1) was located on the Castle Rock Flowage.

Colonies were not cut or sprayed with herbicide in order to avoid impacts to existing or potential new populations of *Galerucella sp.* beetles (beetles). Each colony located during the survey was issued an individual number and mapped on the WRPCO GIS system. Plant vigor information was recorded for each colony. Of the eighteen (18) colonies noted during the survey, fifteen (15) showed signs of beetle feeding. In 2014, approximately 16,000 beetles were released on the northern end of the Petenwell flowage. Beetles were released in eight (8) different locations to supplement existing beetle populations.

The 2014 Petenwell and Castle Rock Project purple loosestrife figures including colony locations, identification numbers, beetle release locations, and plant vigor survey forms are included in Appendix A. A spreadsheet summarizing the purple loosestrife survey data collected from 2009-2014 is located in Appendix B.

A review of the monitoring data from 2009 to 2014 shows that there are active beetle populations at the project. The percentage of loosestrife colonies with beetle feeding has ranged from 61 to 91 percent and currently sits at 83 percent. The overall number of loosestrife colonies has been reduced. The number of large colonies has decreased while the number of medium sized colonies has increased.

Ms. Kimberly D. Bose December 19, 2014 Page 2 of 2

WRPCO proposes to continue conducting annual purple loosestrife surveys and releasing beetles as a biological control measure. WRPCO also proposes to increase the minimum number of beetles released each year to 4,000. These are to be released in at least two different locations each year in an attempt to establish healthy beetle populations throughout the entire project.

Eurasian Water Milfoil

Eurasian water milfoil (EWM) surveys are conducted every three years. The next EWM survey is scheduled for 2015.

Zebra Mussels

Since zebra mussels have been identified in both the Petenwell and Castle Rock Flowages, WRPCO is no longer sampling for them. WRPCO agreed to provide notice to the Wisconsin Department of Natural Resources (WDNR) and US Fish and Wildlife Service (FWS) if significant changes in the number of zebra mussels are noted during routine operations and maintenance activities. No significant changes to the number of zebra mussels were noted in 2014.

Documentation of consultation with resource agencies is located in Appendix C. No comments were received.

If you have any questions regarding this report, please contact Darrin Johnson 715-345-7509.

Sincerely,

Gil Snyder

Manager – Regional Generation for Wisconsin Public Service

DMJ/rjf

Enc. Appendix A, Appendix B, Appendix C

cc: Mr. Shawn Puzen, IBS - D2

Ms. Joan Johanek, WPS - D2 Mr. William Bosacki, WPS - D2 Mr. John Myers, IBS - D2

Ms. Pat Grant, FERC - CRO

Mr. Dave Harpole, IBS - D2

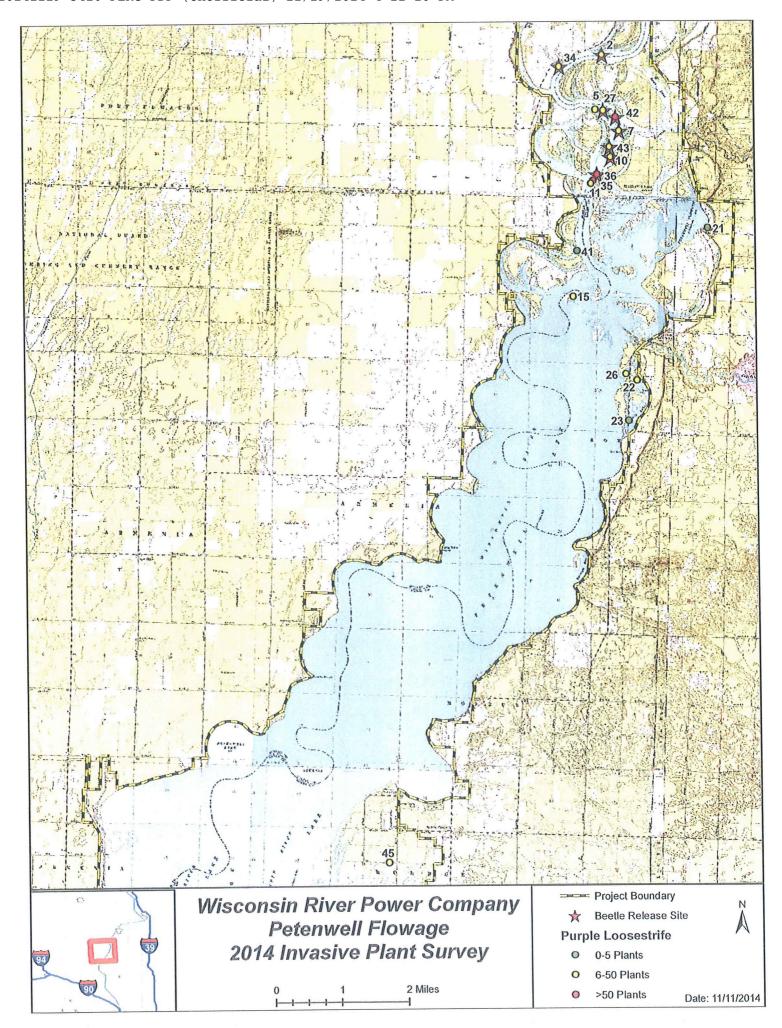
Mr. Joseph Sukana, WPS - WRP

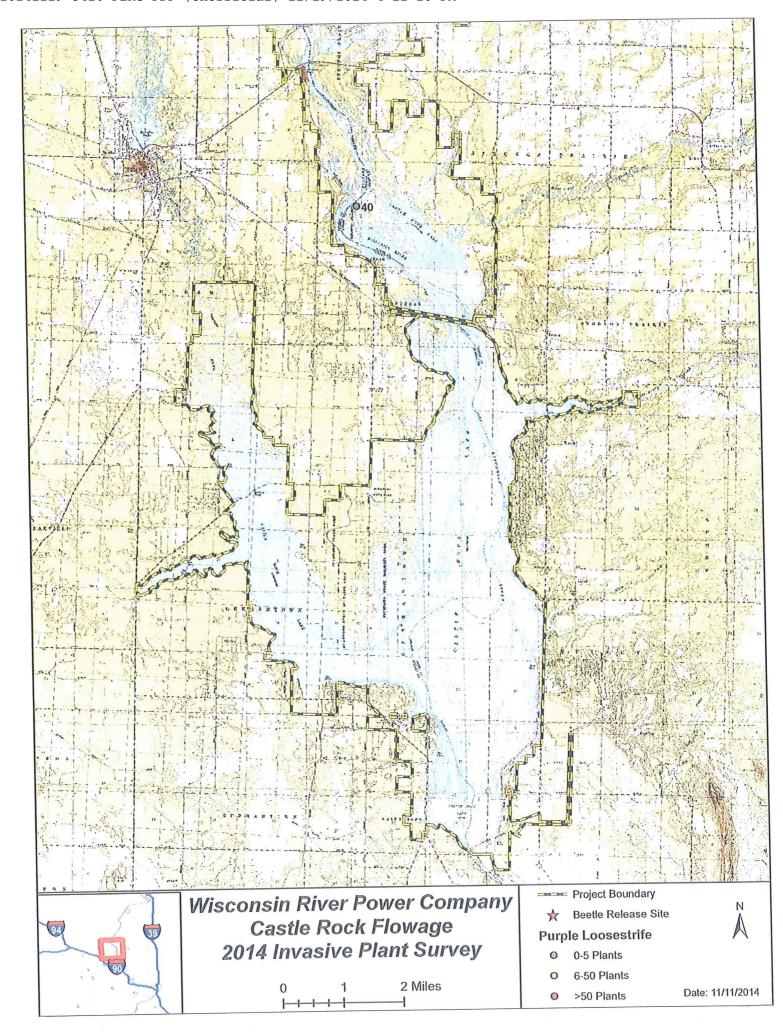
Mr. Ed Brandt, WPS - CRI

Mr. John Zygaj, FERC – CRO

Appendix A

2014 Purple Loosestrife Survey Results





Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

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			General Plant Vi	gor			
Colony Number	Colony Size S 0-5 M 6-50 L >50	Plant Height 4=>4ft 3=2-4ft 2=1-2 ft 1= <1 ft	Plant Flowering 4=100% of plants 3=51-99% of plants 2=26-50% of plants 1= <25% of plants	Beetle Feeding 4=0-25% feeding 3=26-50% feeding 2=51-75% feeding 1=76-100% feeding	Total Plant Vigor 10-12=good 7-9=fair 4-6=poor 0-3=very poor	Notes	GPS Point
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18 sites. (7 Pet. - 10R

3 small 12 Med 3 Large beetle feeding @ 15 sites

Purple Loosestrife Survey Form Hydroelectric Project Inspection Date Purple Loosestrife Survey Form | Compared | Compa

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Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

Purple Loosestrife Survey Form

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Hydroelectric Project Inspection Date

Purple Loosestrife Survey Form
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Purple Loosestrife Survey Form

Hydroelectric Project
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45	M	3	4	3	10		45

Appendix B 2009 – 2014 Purple Loosestrife Survey Data

		Beetles	Released	8,000	8,000	2 000	2,000	2,000	2.000	000	To'OOO			
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Appendix C Documentation of Consultation



Wisconsin River Power Company (owners of the Petenwell & Castle Rock Hydroelectric Plants) P.O. Box 19001 Green Bay, WI 54307-9001

November 14, 2014

Ms. Cheryl Laatsch WDNR-FERC Coordinator N7725 Hwy 28 Horicon, WI 53032 Mr. Nick Utrup USFWS Ecological Services Field Office 4101 American Blvd. East Bloomington, MN 55425

Dear Ms. Laatsch and Mr. Utrup:

Petenwell and Castle Rock Hydroelectric Project (P-1984)
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Please provide any comments you may have regarding this report within 30 days. If you have any questions, feel free to contact me at 715-345-7509.

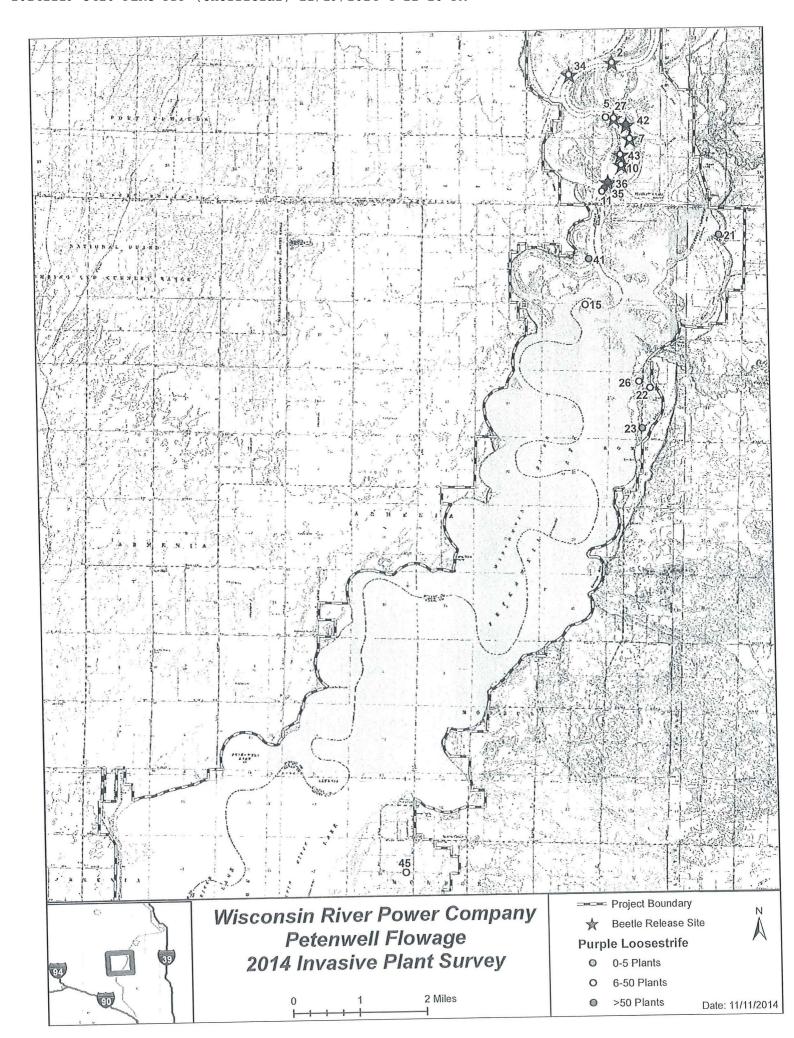
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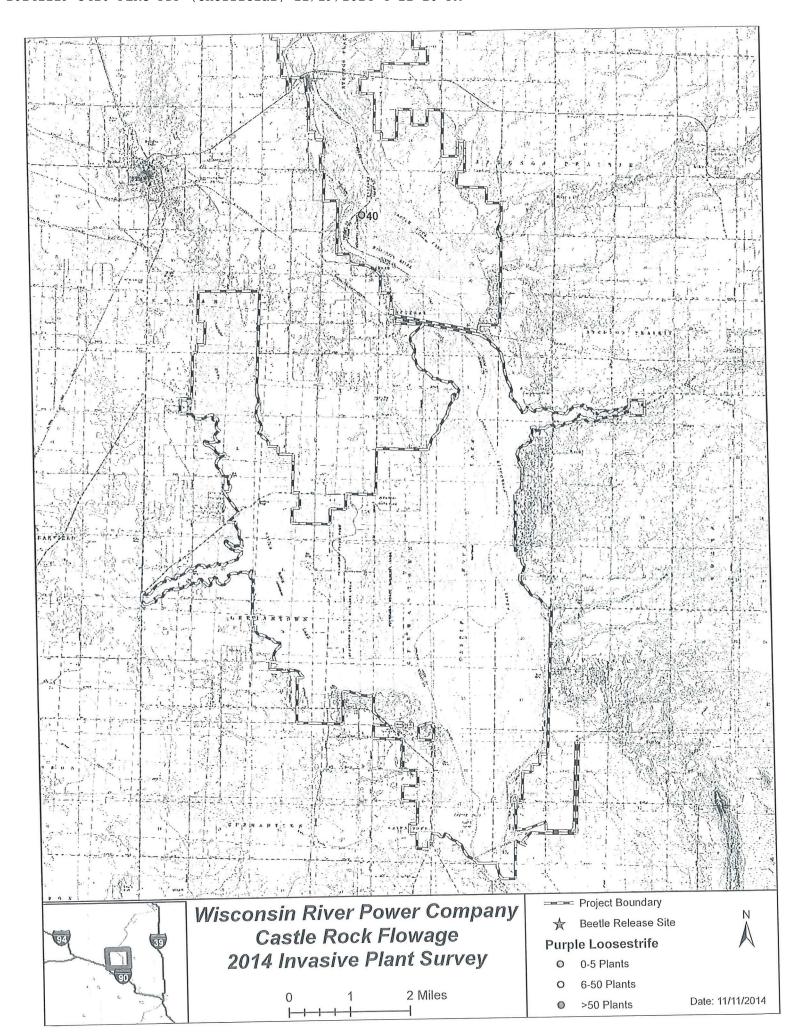
Darrin Johnson

Sincerely,

Environmental Consultant

Appendix A 2014 Purple Loosestrife Survey Results





Purple Loosestrife Survey Form

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Inspection Date

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Note: The purple Loosestrife Survey Form

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Purple Loosestrife Survey Form

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Appendix B

2009 – 2014 Purple Loosestrife Survey Data

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Number of small	colonies(0-5 plants)	9	5	13	4	9	33		62
Total Number of	Colonies	25	22	23	17	20	18		20.8
	Year	2009	2010	2011	2012	2013	2014	6 year	average

No Comments From WNDR

No Comments from FWS

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Document Content(s)
20141219 WRPCO Invasives Report to FERC.PDF1-2
20141219 WRPCO Invasive Report Apendices.PDF3-27