20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

NRC
Natural Resources Consulting, Inc.
P.O. Box 128
Cottage Grove, WI 53527-0128
608-839-1998 • Fax 608-839-1995
www.nrc-inc.net

November 30, 2007

Ms. Louise Clemency
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
New Franken, WI 54229-9565

Mr. Andy Morton
Wisconsin Department of Natural Resources
1500 N Johns Street
Dodgeville WI 53533-2116

SUBJECT: Prairie du Sac Hydroelectric Project
2007 Purple Loosestrife Control Monitoring

Dear Janet and Andy:

In accordance with License Article 410 (Nuisance Plant Control Plan) as approved by the Federal Energy Regulatory Commission, we are pleased to provide you with the results of the 2007 purple loosestrife control monitoring effort on behalf of Wisconsin Power & Light Company (WP&L). After the third of the three annual monitoring surveys was completed in 2005 the status of this species was well documented within the project boundary. During our 2006 annual agency consultation meeting it was decided that WP&L would initiate a pilot project to test the effectiveness of releasing *Galerucella camariensis* beetles on several of the loosestrife infested project islands. The enclosed report summarizes the monitoring results following the first year of implementation. Please review the enclosed report and provide us with comments within 30 days. If we do not receive a response from you we will assume you have no comments. Otherwise, we can discuss the monitoring results at our annual meeting regarding Article 408 and determine the appropriate next step.

Please contact me if you have questions or require additional information regarding this submittal.

Regards,
Natural Resources Consulting, Inc.

William Poole

William R. Poole
Principal Scientist

Enclosure

Cc. Mildred Godoy-Daniels - Alliant Energy
Deb Frosch - Alliant Energy

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

PURPLE LOOSESTRIFE CONTROL MEASURES MONITORING
PRAIRIE DU SAC HYDROELECTRIC PROJECT
FERC Project No. 11162
PRAIRIE DU SAC, WISCONSIN

August 21, 2007

NRC Project # 07-015-01

NRC
Natural Resources Consulting, Inc.
119 South Main Street | PO Box 128 | Cottage Grove, Wisconsin 53527-0128
Ph: 608.839.1998 | Fax: 608.839.1995
www.nrc-inc.net

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

PURPLE LOOSESTRIFE CONTROLMEASURES MONITORING

PRAIRIE DU SAC HYDROELECTRIC PROJECT
FERC Project No. 11162

PRAIRIE DU SAC, WISCONSIN

August 21, 2007

Prepared For:

Ms. Mildred Godoy-Daniels
Wisconsin Power & Light Company
S9270A Dam Road
Prairie du Sac, WI 53578-9712

Prepared By:

Natural Resources Consulting, Incorporated
P.O. Box 128
119 South Main Street, Suite D
Cottage Grove, Wisconsin 53527-0128
phone: 608-839-1998
fax: 608-839-1995
www.nrc-inc.net

NRC Project # 07-015-01

William Poole
Principal Scientist

Regulatory and Scientific Expertise – Wetlands, Soils, Ecology, Restoration

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

INTRODUCTION AND OBJECTIVES

In accordance with Article 410 of the Federal Energy Regulatory Commission (FERC) Order Issuing Original License (June 27, 2002) for the Prairie du Sac Hydroelectric Project, FERC Project No. 11162-002, Wisconsin Power and Light Company (WP&L) was required to develop and implement a purple loosestrife (*Lythrum salicaria*) monitoring plan. The purpose of the monitoring plan was to assist the Wisconsin Department of Natural Resources (WDNR) and the U.S. Fish and Wildlife Service (FWS) in controlling the spread of this nuisance plant species. Results from annual loosestrife population monitoring surveys conducted during 2002-2005 documented a dense population located on a series of islands located at the upper reaches of the project impoundment.

During the 2006 annual agency consultation meeting it was decided that WP&L would initiate a pilot project to test the effectiveness of implementing biological control measures to combat the persistent loosestrife population. During the summer of 2006, a WP&L representative propagated and released *Galerucella camariensis* beetles, a loosestrife-eating insect, on several of the subject islands. During the release procedure existing *Galerucella camariensis* beetles were observed to be present on some of the loosestrife plants.

Natural Resources Consulting, Inc. (NRC) conducted a purple loosestrife monitoring survey on July 22, 2007 to assess and document the effectiveness of the beetle introduction into the subject loosestrife population.

SURVEY METHODS

The survey was conducted by canoe and involved slowly paddling along the subject island shorelines. The survey was conducted by a qualified botanist familiar with the ecology and identification of purple loosestrife. Current conditions of the subject loosestrife populations were recorded from strategic vantage points using a digital camera. The photographs and a photograph location map are attached.

RESULTS

The survey was conducted on July 22, 2007 while purple loosestrife within the general geographic area was in full bloom. This species was observed to be relatively absent within the study area in comparison to survey records from 2005. Only sporadic individual loosestrife plants were observed and, for the most part, these plants exhibited signs of insect-induced stress and did not develop flowers. Other vegetation on these islands appeared to be healthy.

CONCLUSIONS

The northeastern portion of the hydroelectric project boundary (impoundment), approximately 2 miles north of Tipperary Point, historically contained the most extensive purple loosestrife infestations within the impoundment due to the shallow water conditions, low lying islands, and extensive wetlands. One year following the release of *Galerucella camariensis* beetles, and the observation of an existing *Galerucella camariensis* beetle population on the subject islands it is apparent that the purple loosestrife population has been significantly reduced in comparison to the population levels recorded during the 2002 - 2005 purple loosestrife surveys. As such, it can be concluded that the *Galerucella camariensis* beetles are effectively reducing and controlling the spread of the local loosestrife population and no further loosestrife control methods are warranted at this time.

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

PHOTOGRAPHS

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Purple Loosestrife Monitoring July 22, 2007

Photograph Location Key

Map Area Shown in Red

N

Location

Columbia County & Sauk County, WI

Project Information

NRC Project Number : 07-015-01
Modified August 22, 2007

0 500 1,000 Feet

2005 Stand Size	2002 Stand Size
1-5	1-5
6-25	6-25
26-100	26-100
100-500	100-500
500+	500+

NRC Natural Resources Consulting, Inc.
119 South Main Street
P.O. Box 128
Cottage Grove, WI 53527-0128
phone: 608-839-1998
fax: 608-839-1995
www.nrc-inc.net

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 1

Photograph 2

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 3

Photograph 4

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 5

Photograph 6

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 7

Photograph 8

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 9

Photograph 10

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 11

Photograph 12

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 13

Photograph 14

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 15

Photograph 16

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 17

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 18

Photograph 19

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 20

Photograph 21

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Photograph 22

Photograph 23

20071204-5101 FERC PDF (Unofficial) 12/04/2007 07:24:26 PM

Submission Contents

Letter from the Natural Resources Consulting, Inc. on behalf of WPL providing the 2007 Monitoring Survey of the Purple Loosestrife Article 410
AgencySubmittalLetter.pdf····· 1-1

Purple Loosestrife control measures monitoring report Prairie du Sac hydroelectric project 2007
LoosestrifeMonitoring07.pdf····· 2-18