Wisconsin Public Service Corporation
700 North Adams Street
P.O. Box 19001
Green Bay, WI 54307-9001
www.wisconsinpublicservice.com

December 11, 2012

FERC Project No. 1979

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

Dear Secretary Bose:

RE: Invasive Species Monitoring Report for Alexander Hydroelectric Project

As per the order approving the Invasive Species Monitoring Plan for the Alexander Hydroelectric Project (Project No. 1979) issued on March 4, 2005, Wisconsin Public Service Corporation (WPS) is submitting the purple loosestrife, Eurasian water milfoil (EWM) and zebra mussel survey results. Additionally, as per the Order Amending Purple Loosestrife Control Measures in Approved Monitoring Plan issued on July 9, 2009, WPS revised the survey methods to include general plant vigor information in its purple loosestrife survey results.

Purple Loosestrife

A survey for purple loosestrife was completed for the Alexander Project on July 31, 2012. The survey results indicated that there were a total of thirty-eight (38) purple loosestrife colonies on the project. No colonies were cut or sprayed to avoid adverse 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 WPS GIS system. Plant vigor information was recorded for each colony. Beetle feeding was noted at fifteen (15) colonies. Eleven (11) of those colonies had plant vigor classifications of less than good. For comparison, the 2011 survey noted a total of twenty (20) colonies. Beetle feeding occurred on fourteen (14) of those colonies and thirteen (13) colonies had plant vigor classifications of less than good.

In 2012, WPS released beetles at the Alexander Project that were reared in potted purple loosestrife plants. The beetles were released near existing colonies. Approximately 2,000 beetles were released on July 5, 2012.

The 2012 purple loosestrife figure, including colony locations, identification numbers, and beetle release locations can be found in Appendix A. The purple loosestrife general plant vigor survey forms are also found in Appendix A.

Eurasian Water Milfoil

A survey for EWM was conducted on July 31, 2012. Samples were collected at three sampling locations within the Alexander Hydroelectric Project. The sample locations were specifically chosen near boat landings. No EWM was identified during the survey. A summary of 2012 EWM survey results has been included in Appendix B.

Zebra Mussels

Monthly inspections of substrate samplers for the presence of zebra mussels were conducted during the months of May through September. Zebra mussels were not found during any of the monthly inspections. A summary of 2012 zebra mussel survey results has been included in Appendix C.

Documentation of submittal of these reports to the University of Wisconsin Manitowoc, the Wisconsin Department of Natural Resources and the United States Fish and Wildlife Service has been included in Appendix D. Comments received from the resource agencies are also included in Appendix D.

If you have any questions regarding this report, please do not hesitate to contact Darrin Johnson at (715) 345-7509.

Sincerely,

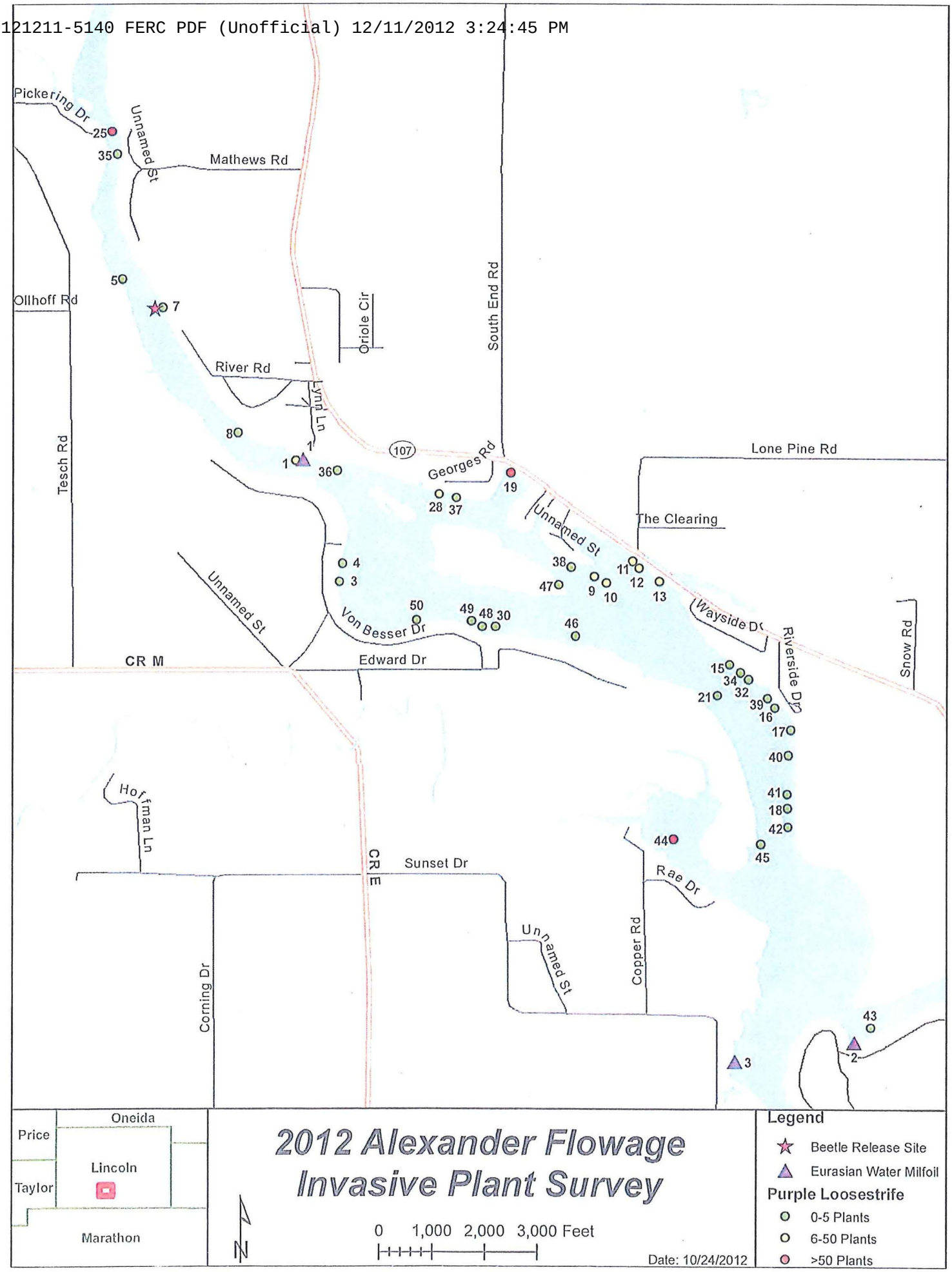
Terry P. Jensky
Vice President - Generation Assets

Enc.

cc: Mr. Gil Snyder, WPS
Mr. Bill Bloczynski, WPS
Mr. Shawn Puzen, IBS
Mr. William Bosacki, WPS
Ms. Joan Johanek, WPS
Ms. Pat Grant, FERC - Chicago

APPENDIX A

2012 Purple Loosestrife Figure and Survey Results



Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

		General Plant Vigor					
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
1	M	3	4	1	8	Heavy feed	APL1
2	NO	PLANTS		NOTED			
3	S	4	4	4	12	No Feed	APL36
4	S	4	4	4	12	No Feed	APL37
5	S	3	4	4	11	No Feed	APL6
6	NO		PLANTS	NOTED			
7	S	4	4	3	11		APL3
8	S	3	4	1	8	Heavy feed	APL2
9	M	3	2	1	6	Heavy Feed	APL11
10	M	3	2	1	6	Heavy feed	APL12
11	M	3	2	1	6	Heavy Feed	APL13

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/21/12

		General Plant Vigor					
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
12	M	3	2	1	6	Heavy Feed.	APL 14
13	M	3	2	1	6	Heavy Feed	APL 15
14	NO		PLANTS	NOTED			
15	S	3	4	4	11	No Feed	APL 17
16	S	4	4	4	12	No Feed	APL 21
17	S	4	4	4	12	No Feed	APL 22
18	S	4	4	4	12	No Feed	APL 26
19	L	4	3	1	8	Heavy Feed	-
20	NO		Plants	Noted			
21	S	4	4	4	12	No Feed	APL 29
22	NO		Plants	Noted			

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31

		General Plant Vigor					
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
23	no		Plants	Noted			
24	No		Plants	Noted			
25	L	4	4	3	11		APL4
26	No		Plants	Noted			
27	NO		Plants	Noted			
28	M	3	2	3	8		APL8
29	NO		Plants	Noted			
30	S	4	4	4	12	No Feed	APL-32
31	No		Plants	Noted			
32	S	3	4	4	11	No Feed	APL19
33	NO		Plants	Noted			

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

		General Plant Vigor					
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
34	S	3	4	4	11	No Feed	APL 18
35	S	4	4	3	11		APL 5
36	S	3	4	1	8	Heavy Feed	APL 7
37	S	4	4	3	11		APL 9
38	S	3	4	1	8	Heavy Feed	APL 10
39	S	4	4	4	12	No Feed	APL 20
40	S	4	4	4	12	No Feed	APL 23
41	S	4	4	4	12	No Feed	APL 24
42	L	4	4	4	12	No Feed	APL 27
43	S	4	4	4	12	No Feed	APL 26
44	L	4	4	4	12	No Feed	—

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

		General Plant Vigor					
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
45	S	4	4	4	12	No Feed	APL-28
46	S	4	4	4	12	No Feed	APL-30
47	S	3	4	4	11	No Feed	APL-31
48	S	4	4	4	12	No Feed	APL-33
49	S	4	4	4	12	No Feed	APL34
50	S	4	4	4	12	No Feed	APL35

38 sites

15 with beetle feeding

10 with heavy feeding

APPENDIX B

EURASIAN WATER MILFOIL SURVEY RESULTS

2012 Eurasian Water Milfoil Surveys

Alexander

Transect #	0-0.5M	0.5M-1.5M	1.5M-3M	>3M
1A	0	NA	NA	NA
1B	0	0	NA	NA
1C	0	0	NA	NA
2A	0	NA	NA	NA
2B	0	0	NA	NA
2C	0	0	NA	NA
3A	0	NA	NA	NA
3B	0	0	NA	NA
3C	0	0	0	NA

NA-Not applicable

Abundance Scale 0=Absent, 1-Present, 2 Presence < 1/2, 3-Equal presence to other species

4- Dominant Species Present, 5- Total Infestation

Note: all transects are 40 feet in length and proceed away from shore in a direction perpendicular to the shoreline

APPENDIX C

ZEBRA MUSSEL SURVEY RESULTS

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐	Grandfather Falls	☐	Merrill	☐	Tomahawk	☐	Otter Rapids
☐	Wausau	☒	Alexander	☐	Jersey	☐	Hat Rapids

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 11-22-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 12-3-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 1-16-12
COMMENTS/RESULTS: Froze under

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 2-8-12
COMMENTS/RESULTS: froze

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 3-8-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 4-13-12
COMMENTS/RESULTS: 0

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐ Grandfather Falls	☐ Merrill	☐ Tomahawk	☐ Otter Rapids
☐ Wausau	☒ Alexander	☐ Jersey	☐ Hat Rapids

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 5-13-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 6-9-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 7-6-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 8-10-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 9-6-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 10-3-12
COMMENTS/RESULTS: 0

APPENDIX D

Documentation of Consultation With Resource Agencies

Wisconsin Public Service Corporation
700 North Adams Street
P.O. Box 19001
Green Bay, WI 54307-9001
www.wisconsinpublicservice.com

October 24, 2012

Cheryl Laatsch
WDNR
101 S Webster St OE/7
Madison, WI 53703

Nicholas Utrup
US Fish and Wildlife Service
2661 Tower Drive
New Franken, WI 54429-9565

Dear Ms. Laatsch and Mr. Utrup:

RE: Invasive Species Monitoring Report for Alexander Hydroelectric Project (FERC Project 1979)

As per the order approving the Invasive Species Monitoring Plan for the Alexander Hydroelectric Project (Project No. 1979) issued on March 4, 2005, Wisconsin Public Service Corporation (WPS) is submitting the purple loosestrife, Eurasian water milfoil (EWM) and zebra mussel survey results. Additionally, as per the Order Amending Purple Loosestrife Control Measures in Approved Monitoring Plan issued on July 9, 2009, WPS revised the survey methods to include general plant vigor information in its purple loosestrife survey results.

Purple Loosestrife

A survey for purple loosestrife was completed for the Alexander Project on July 31, 2012. The survey results indicated that there were a total of thirty-eight (38) purple loosestrife colonies on the project. No colonies were cut or sprayed to avoid adverse 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 WPS GIS system. Plant vigor information was recorded for each colony. Beetle feeding was noted at fifteen (15) colonies. Eleven (11) of those colonies had plant vigor classifications of less than good. For comparison, the 2011 survey noted a total of twenty (20) colonies. Beetle feeding occurred on fourteen (14) of those colonies and thirteen (13) colonies had plant vigor classifications of less than good.

In 2012, WPS released beetles at the Alexander Project that were reared in potted purple loosestrife plants. The beetles were released near existing colonies. Approximately 2000 beetles were released on July 5, 2012.

The 2012 purple loosestrife figure, including colony locations, identification numbers, and beetle release locations can be found in Appendix A. The purple loosestrife general plant vigor survey forms are also found in Appendix A.

Eurasian Water Milfoil

A survey for EWM was conducted on July 31, 2012. Samples were collected at three sampling locations within the Alexander Hydroelectric Project. The sample locations were specifically chosen

near boat landings. No EWM was identified during the survey. A summary of 2012 EWM survey results has been included in Appendix B.

Zebra Mussels

Monthly inspections of substrate samplers for the presence of zebra mussels were conducted during the months of May through September. Zebra mussels were not found during any of the monthly inspections. A summary of 2012 zebra mussel survey results has been included in Appendix C.

If you have any comments regarding this report, please submit them within 30 days. If you have any questions do not hesitate to contact Darrin Johnson at 715-345-7509.

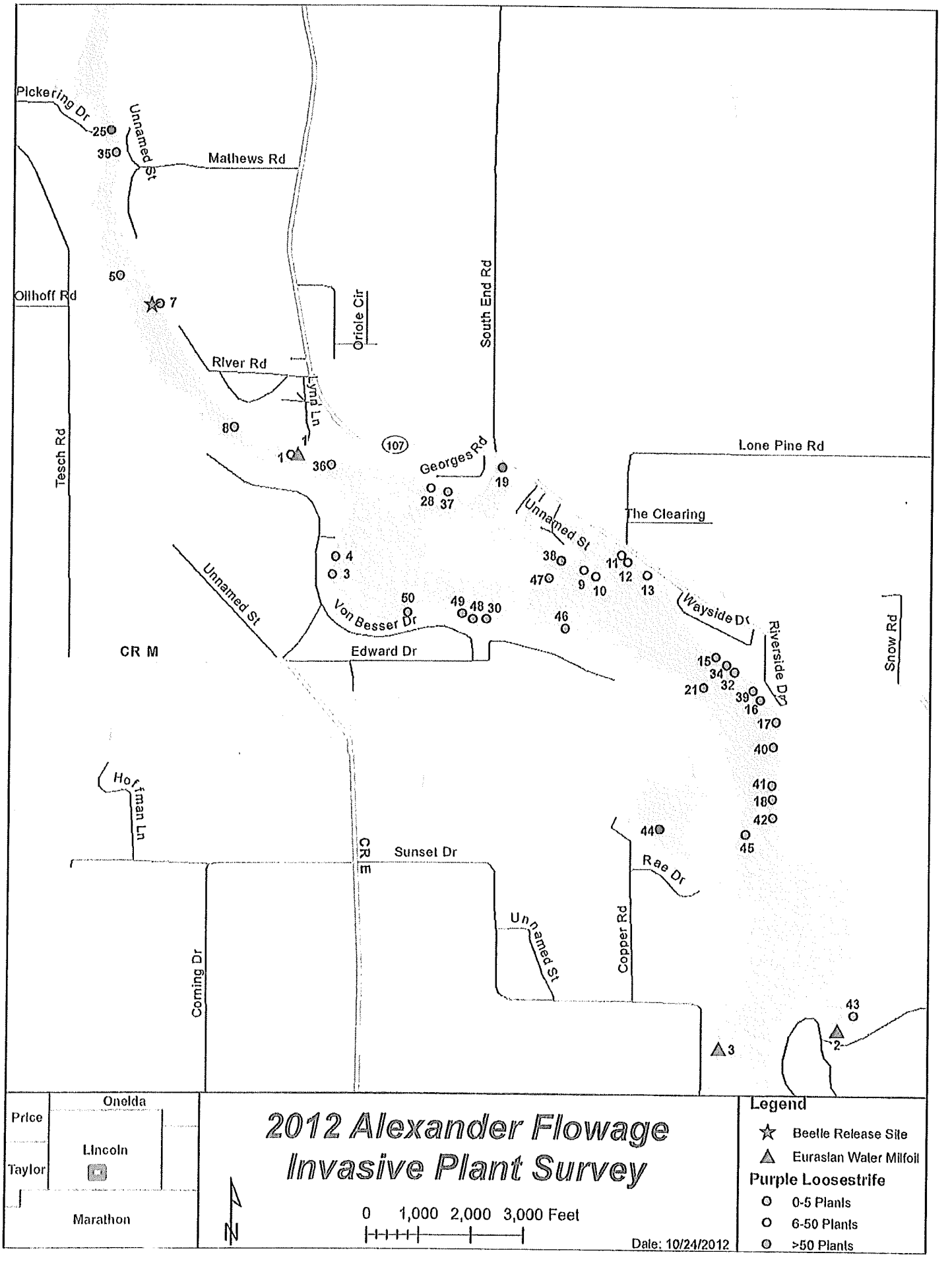
Sincerely,

Darrin Johnson
Environmental Consultant-Shoreline Management

Enc.

APPENDIX A

PURPLE LOOSESTRIFE FIGURE AND SURVEY RESULTS


Pickering Dr
Unnamed St
Mathews Rd
Ollhoff Rd
Tesch Rd
River Rd
Lynd Ln
Oriole Cir
South End Rd
107
Georges Rd
Lone Pine Rd
The Clearing
Unnamed St
Wayside Dr
Riverside Dr
Snow Rd
Von Besser Dr
Edward Dr
CR M
Hoffman Ln
Sunset Dr
Rae Dr
Copper Rd
Corning Dr
Unnamed St
Onelda
Price
Lincoln
Taylor
Marathon
2012 Alexander Flowage
Invasive Plant Survey
0 1,000 2,000 3,000 Feet
N
Date: 10/24/2012
Legend
Beetle Release Site
Eurasian Water Milfoil
Purple Loosestrife
0-5 Plants
6-50 Plants
>50 Plants

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/23/12

Colony Number	Colony Size S 0-5 M 6-50 L >50	General Plant Vigor: Plant Height 4=>4ft 3=2-4ft 2=1-2 ft 1=<1 ft	General Plant Vigor: Plant Flowering 4=100% of plants 3=51-99% of plants 2=26-50% of plants 1=<25% of plants	General Plant Vigor: 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
1	M	3	4	1	8	Heavy Feed	APL4
2	NO	PLANTS	NOTED				
3	S	4	4	4	12	No Feed	APL36
4	S	4	4	4	12	No Feed	APL37
5	S	3	4	4	11	No Feed	APL6
6	NO		PLANTS	NOTED			
7	S	4	4	3	11		APL3
8	S	3	4	1	8	Heavy Feed	APL2
9	M	3	2	1	6	Heavy Feed	APL11
10	M	3	2	1	6	Heavy Feed	APL12
11	M	3	2	1	6	Heavy Feed	APL13

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

Colony Number	Colony Size S 0-5 M 6-50 L >50	General Plant Vigor: Plant Height 4=>4ft 3=2-4ft 2=1-2 ft 1= <1 ft	General Plant Vigor: Plant Flowering 4=100% of plants 3=51-99% of plants 2=26-50% of plants 1= <25% of plants	General Plant Vigor: 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
12	M	3	2	1	6	Heavy Feed.	APL 14
13	M	3	2	1	6	Heavy Feed	APL 15
14	NO		PLANTS	NOTED			
15	S	3	4	4	11	No Feed	APL 17
16	S	4	4	4	12	No Feed	APL 21
17	S	4	4	4	12	No Feed	APL 22
18	S	4	4	4	12	No Feed	APL 26
19	L	4	3	1	8	Heavy Feed	
20	NO		Plants	Noted			
21	S	4	4	4	12	No Feed	APL 29
22	NO		Plants	Noted			

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31

Colony Number	Colony Size S 0-5 M 6-50 L >50	General Plant Vigor: Plant Height 4=>4ft 3=2-4ft 2=1-2 ft 1= <1 ft	General Plant Vigor: Plant Flowering 4=100% of plants 3=51-99% of plants 2=26-50% of plants 1= <25% of plants	General Plant Vigor: 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
23	no		Plants	Noted			
24	No		Plants	Noted			
25	L	4	4	3	11		APL 4
26	No		Plants	Noted			
27	NO		Plants	Noted			
28	M	3	2	3	8		APL 8
29	NO		Plants	Noted			
30	S	4	4	4	12	No Feed	APL 30
31	No		Plants	Noted			
32	S	3	4	4	11	No Feed	APL 19
33	NO		Plants	Noted			

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

Colony Number	Colony Size S 0-5 M 6-50 L >50	General Plant Vigor: Plant Height 4=>4ft 3=2-4ft 2=1-2 ft 1= <1 ft	General Plant Vigor: Plant Flowering 4=100% of plants 3=51-99% of plants 2=26-50% of plants 1= <26% of plants	General Plant Vigor: Beetle Feeding 4=0-26% 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
34	S	3	4	4	11	No Feed	APL.18
35	S	4	4	3	11		APL.19
36	S	3	4	1	8	Heavy Feed	APL.7
37	S	4	4	3	11		APL.9
38	S	3	4	1	8	Heavy Feed	APL.10
39	S	4	4	4	12	No Feed	APL.20
40	S	4	4	4	12	No Feed	APL.23
41	S	4	4	4	12	No Feed	APL.24
42	L	4	4	4	12	No Feed	APL.27
43	S	4	4	4	12	No Feed	APL.28
44	L	4	4	4	12	No Feed	—

Purple Loosestrife Survey Form

Hydroelectric Project: Alexander

Inspection Date: 7/31/12

		General Plant Vigor					
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
45	S	4	4	4	12	No Feed	APL-28
46	S	4	4	4	12	No Feed	APL-30
47	S	3	4	4	11	No Feed	APL-31
48	S	4	4	4	12	No Feed	APL-33
49	S	4	4	4	12	No Feed	APL 34
50	S	4	4	4	12	No Feed	APL 35

38 sites

15 with beetle feeding

10 with heavy feeding

APPENDIX B

EURASIAN WATER MILFOIL SURVEY RESULTS

2012 Eurasian Water Milfoil Surveys

Alexander

Transect #	0-0.5M	0.5M-1.5M	1.5M-3M	>3M
1A	0	NA	NA	NA
1B	0	0	NA	NA
1C	0	0	NA	NA
2A	0	NA	NA	NA
2B	0	0	NA	NA
2C	0	0	NA	NA
3A	0	NA	NA	NA
3B	0	0	NA	NA
3C	0	0	0	NA

NA-Not applicable

Abundance Scale 0=Absent, 1-Present, 2 Presence < 1/2, 3-Equal presence to other species

4- Dominant Species Present, 5- Total Infestation

Note: all transects are 40 feet in length and proceed away from shore in a direction perpendicular to the shoreline

APPENDIX C

ZEBRA MUSSEL SURVEY RESULTS

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐	Grandfather Falls	☐	Merrill	☐	Tomahawk	☐	Otter Rapids
☐	Wausau	☒	Alexander	☐	Jersey	☐	Hat Rapids

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 11-22-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 12-3-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 1-16-12
COMMENTS/RESULTS: Froze under

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 2-8-12
COMMENTS/RESULTS: Froze

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 3-8-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 4-13-12
COMMENTS/RESULTS: 0

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐	Grandfather Falls	☐	Merrill	☐	Tomahawk	☐	Otter Rapids
☐	Wausau	☒	Alexander	☐	Jersey	☐	Hat Rapids

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 5-13-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 6-9-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 7-6-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 8-10-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 9-6-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 10-3-12
COMMENTS/RESULTS: 0

No Comments Received from FWS

COMMENTS RECEIVED FROM WDNR

Johnson, Darrin M

From: Laatsch, Cheryl - DNR [Cheryl.Laatsch@Wisconsin.gov]
Sent: Monday, November 26, 2012 11:57 AM
To: Johnson, Darrin M
Subject: WDNR comments for 2012 Invasive Report for Alexander

Darrin – I am still waitinf for comments from regional staff. Here are our general comments.

Wisconsin is a mosaic of waterways representing the Mississippi River and the Great Lakes Regions. With this vast mosaic of waterways and river systems, comes an array of aquatic invasive species. As we move forward with identifying and eradicating AIS, there are basic steps that all hydro owners need to participate in, to help improve the resource. Some AIS can significantly hinder hydro operations that may result in excessive operation and maintenance costs, including lost generation. We encourage the utility to work with the WDNR to develop Best Management Practices for their operations and maintenance of the hydro, to reduce the introduction and spread of AIS. Additionally, the WDNR recommends revisions to the current AIS plan to address the following concerns:

a. Identify all existing AIS within the study area and discuss which new AIS are most likely to arrive (i.e. SMART analysis).
b. Determine an acceptable survey and mapping methodology
c. Identify and implement quality control measures, and equipment calibration measures
d. Improve awareness and the dynamics of the study area
e. Avoid duplicate workload for agency staff, utilities, and local associations
f. Manage and analyze the data collected to define population characteristics, establish trends, and evaluate management success.
g. Establish and implement protocols for management/removal of AIS
h. Provide a timeline to review the current AIS plans and revise the plans as appropriate for the project area

If purple loosestrife (*Lythrum salicaria*) is present, control or eliminate all small populations of loosestrife (usually 50 plants or less), with acceptable manual/chemical/mechanical methods annually, as necessary, and establish viable, on-going, and effective populations of biocontrol beetles (*Galerucella pusilla* and/or *G. calmariensis*) on all larger loosestrife populations.

Cheryl Laatsch, Water Mgt Specialist

Horicon DNR
N7725 HIGHWAY 28
HORICON WI 53032
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Website: dnr.wi.gov
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Johnson, Darrin M

From: Laatsch, Cheryl - DNR [Cheryl.Laatsch@Wisconsin.gov]
Sent: Tuesday, December 11, 2012 11:49 AM
To: Johnson, Darrin M
Subject: FW: Alexander Invasive Survey Results

From: Klosiewski, James M - DNR
Sent: Wednesday, December 05, 2012 1:01 PM
To: Laatsch, Cheryl - DNR
Subject: RE: Alexander Invasive Survey Results

Wow, this is way late. It was really buried because I've been out a while. I actually was in the hospital for three days and then out of commission for a week. Jim Kreitlow and I talked about some stuff and his comments covered everything. The only thing I thought about later was that I would like to see some long-term D.O monitoring in the bypass channel and below the discharge in the main stem of the river. Although, the fish surveys next summer will be good indications if there are any issues. I am back up to speed with everything now. Sorry.

From: Laatsch, Cheryl - DNR
Sent: Monday, November 19, 2012 1:14 PM
To: Klosiewski, James M - DNR
Subject: RE: Alexander Invasive Survey Results

Hi – Have you had a chance to review the Alexander project yet? Comments are due Nov 24. (basically Friday)..

Here is the template language that I will include with any comments:

Cheryl Laatsch, Horicon DNR
N7725 HIGHWAY 28
HORICON WI 53032
(920) 387-7869
(920) 485-3028 (Fax)

e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

From: Klosiewski, James M - DNR
Sent: Monday, October 29, 2012 11:23 AM
To: Laatsch, Cheryl - DNR
Subject: RE: Alexander Invasive Survey Results

Yes, it is I. My goodness, do you work out of both offices? I used to commute from Watertown to Brookfield every day and that got old.

WPS RESPONSE TO WDNR COMMENTS

WPS received comments from the Wisconsin Department of Natural Resources (WDNR) after submittal of the 2012 Alexander Hydroelectric Project Invasive Species Survey Results. As an overall comment, WPS is concerned that the WDNR comments are beyond the scope of License Article 406 and the approved Invasive Species Monitoring Plan, on which the WDNR reviewed and commented prior to their approval. The comments are general and are not directly related to the report submitted for review. WDNR has not provided specific data that additional Aquatic Invasive Species (AIS) are present within the project boundary. Additionally, no justification has been provided indicating that monitoring, control, or eradication of additional AIS species is warranted.

License Article 406 states the following:

> ***Article 406***
> ***Invasive Species Monitoring Plans. Within three months of license issuance, the licensee shall implement its invasive species monitoring and control plans (Final Application E.3b.3-2). The above plans include the: Purple Loosestrife Monitoring Plan; Eurasian Water Milfoil Monitoring Plan; and Zebra Mussel Monitoring Plan.***
>
> ***If the presence of zebra mussels is confirmed at the project, the licensee shall meet with the Wisconsin Department of Natural Resources (WDNR) and the US Fish and Wildlife Service (FWS) to determine appropriate control measures, if suitable.***
>
> ***As stated in each plan, documentation of submittal of the monitoring reports to FWS and WDNR shall be filed with the Commission no later than December 31 of each year.***

WDNR SPECIFIC COMMENTS

WDNR COMMENT: Wisconsin is a mosaic of waterways representing the Mississippi River and the Great Lakes Regions. With this vast mosaic of waterways and river systems, comes an array of aquatic invasive species.

WPS RESPONSE: Comment noted.

WDNR COMMENT: As we move forward with identifying and eradicating AIS, there are basic steps that all hydro owners need to participate in, to help improve the resource.

WPS RESPONSE: The Alexander Hydroelectric Project Invasive Species Plan already provides for identification and if necessary control of specific AIS. In addition, the eradication of AIS in most circumstances would be impractical if not impossible. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Some AIS can significantly hinder hydro operations that may result in excessive operation and maintenance costs, including lost generation. We encourage the utility to work with the WDNR to develop Best Management Practices for their operations and maintenance of the hydro, to reduce the introduction and spread of AIS.

WPS RESPONSE: The Alexander Hydroelectric Project Invasive Species Plan already provides for measures to control the spread of specific AIS, where necessary. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Additionally, the WDNR recommends revisions to the current AIS plan to address the following concerns:

WPS RESPONSE: WDNR has not provided specific data that additional AIS are present within the project boundary. No justification has been provided by WDNR indicating that monitoring, control, or eradication of additional AIS species is necessary. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Identify all existing AIS within the study area and discuss which new AIS are most likely to arrive (i.e. SMART analysis).

WPS RESPONSE: WDNR has not provided specific data that additional AIS are present within the project boundary. No justification that monitoring, control, or eradication of additional AIS species is necessary has been provided by WDNR. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Determine an acceptable survey and mapping methodology.

WPS RESPONSE: In the approved Invasive Species Monitoring Plan, protocols for monitoring methods, frequency of survey, mapping, and implementation of control measures have already been established. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Identify and implement quality control measures, and equipment calibration measures.

WPS RESPONSE: WPS ensures that all AIS surveying and control equipment is clean and in proper working condition. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Improve awareness and the dynamics of the study area.

WPS RESPONSE: The Invasive Species Monitoring Plan already requires WPS to display invasive species information at all WPS owned public access areas. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Avoid duplicate workload for agency staff, utilities, and local associations.

WPS RESPONSE: The annual agency meeting provides an opportunity for the WDNR to express its concerns about duplicate workload for agency staff, utilities and local associations.

WDNR COMMENT: Manage and analyze the data collected to define population characteristics, establish trends, and evaluate management success.

WPS RESPONSE: The Alexander Hydroelectric Project Invasive Species Plan already provides for specific AIS data to be provided to the WDNR for their analysis on an annual basis. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Establish and implement protocols for management/removal of AIS.

WPS RESPONSE: Under Article 406 of the license and the approved Invasive Species Monitoring Plan, protocols for monitoring methods, frequency of survey, mapping, and implementation of control measures have already been established. In addition, WPS would like to point out that some AIS species many fluctuate in population, but remain in check with the surrounding aquatic community and may not require management or removal. For instance, WPS has been completing Eurasian Water Milfoil (EWM) surveys at the Grand Rapids Hydroelectric Project (FERC Project # 2433) since 1998. Since 2006, EWM has shown fluctuations in populations but has overall remained in check. EWM stands encompassed 15.58 acres in 2006, 47.8 acres in 2007, 81 acres in 2008, 1.6 acres in 2009, 2.0 acres in 2010 and 10.9 acres in 2011. Based on these results, EWM is only one plant of many aquatic plant species located in a healthy aquatic plant community. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: Provide a timeline to review the current AIS plans and revise the plans as appropriate for the project area.

WPS RESPONSE: WDNR has not provided specific data that additional AIS are present within the project boundary. No justification that monitoring, control, or eradication of additional AIS species has been provided by WDNR. WPS will continue to implement the measures outlined in the FERC approved Alexander Hydroelectric Project Invasive Species Plan.

WDNR COMMENT: If purple loosestrife (*Lythrum salicaria*) is present, control or eliminate all small populations of loosestrife (usually 50 plants or less), with acceptable manual/chemical/mechanical methods annually, as necessary, and establish viable, on-going, and effective populations of biocontrol beetles (*Galerucella pusilla* and/or *G. calmariensis*) on all larger loosestrife populations.

WPS RESPONSE: WPS has been implementing biological purple loosestrife control measures per the Order Amending Purple Loosestrife Control Measures in Approved Monitoring Plan issued on July 9, 2009. WPS will continue to implement the measures outlined in the FERC order.

WDNR COMMENT: The only thing I thought about later was that I would like to see some long-term DO monitoring in the bypass channel and below the discharge in the main stem of the river.

WPS RESPONSE: This comment is not related to Article 406, the Invasive Species Monitoring Plan or the report submitted to WDNR for comment. Additionally, the Alexander Hydroelectric Project does not have a bypass channel.

Wisconsin Public Service Corporation
700 North Adams Street
P.O. Box 19001
Green Bay, WI 54307-9001
www.wisconsinpublicservice.com

October 24, 2012

Phil Moy
UW Manitowoc
705 Viebann Street
Manitowoc, WI 54420

Dear Mr. Moy:

RE: Alexander Hydroelectric Project (FERC Project No. 1979) Zebra Mussel Survey Results

As per the order approving the Invasive Species Monitoring Plan for the Alexander Hydroelectric Project issued March 4, 2005, Wisconsin Public Service Corporation (WPS) is submitting the survey results for zebra mussels.

Monthly inspections of substrate samplers for the presence of zebra mussels were conducted during the months of May through September. Zebra mussels were not found during any of the monthly inspections. A summary of the results has been included in Appendix A.

Please provide any comments you may have within 30 days. If you have any questions regarding this report, please contact Darrin Johnson at 715-345-7509.

Sincerely,

Darrin Johnson
Environmental Consultant-Shoreline Management
715-345-7509

Enc.

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐ Grandfather Falls ☐ Merrill ☐ Tomahawk ☐ Otter Rapids
☐ Wausau ☒ Alexander ☐ Jersey ☐ Hat Rapids

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 11-22-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 12-3-11
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 1-16-12
COMMENTS/RESULTS: Froze under

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 2-8-12
COMMENTS/RESULTS: Froze

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 3-8-12
COMMENTS/RESULTS: 0

INSPECTION TYPE: ☒ MONTHLY INSPECTION ☐ INSPECTION DURING DRAWDOWN
DATE: 4-13-12
COMMENTS/RESULTS: 0

ZEBRA MUSSEL INSPECTION RESULTS
WESTERN HYDROELECTRIC PROJECTS

HYDRO NAME

☐	Grandfather Falls	☐	Merrill	☐	Tomahawk	☐	Otter Rapids
☐	Wausau	☒	Alexander	☐	Jersey	☐	Hat Rapids

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	5-13-12	
COMMENTS/RESULTS:	0	

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	6-9-12	
COMMENTS/RESULTS:	0	

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	7-6-12	
COMMENTS/RESULTS:	0	

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	8-10-12	
COMMENTS/RESULTS:	0	

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	9-6-12	
COMMENTS/RESULTS:	0	

INSPECTION TYPE:	☒ MONTHLY INSPECTION	☐ INSPECTION DURING DRAWDOWN
DATE:	10-3-12	
COMMENTS/RESULTS:	0	

No Comments Received from UW Manitowoc

Document Content(s)