

### Wisconsin Public Service Corporation

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

December 14, 2010

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

Dear Secretary Bose:

Invasive Species Monitoring Report for Alexander Hydroelectric Project (FERC Project No. 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 28, 2010. The survey results indicated that there were a total of 21 purple loosestrife colonies on the project. This includes the addition of four newly located colonies and the removal of three previously existing colonies that were identified in 2009. No colonies were cut or sprayed with herbicide in order 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 ten colonies. Five of those colonies had a plant vigor of less than good.

In 2010, WPS released beetles at the Alexander Project that were reared in potted purple loosestrife plants. The beetles were released near existing colonies. It is estimated that approximately 2,000 beetles were released on July 12, 2010.

A data sheet and figure providing the 2010 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.

Ms. Kimberly D. Bose, Secretary December 14, 2010 Page 2 of 2

### Eurasian Water Milfoil

A survey for EWM was conducted on July 28, 2010. 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 2010 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 2010 inspections. A summary of the results has been included in Appendix C.

Documentation of submittal of these reports to the resource agencies has been included in Appendix D.

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

Sincerely,

Terry P. Jensky

Vice President - Energy Supply Operations

Enc.

cc: Mr. Howard Giesler, WPS

Mr. Bruce Crocker, WPS Ms. Joan Johanek, WPS Ms. Pat Grant, FERC-Chicago Mr. Gil Snyder, WPS Mr. Bill Bloczynski, WPS

Mr. Shawn Puzen, IBS

## **APPENDIX A**

## **2010 PURPLE LOOSESTRIFE SURVEY RESULTS**

## **APPENDIX B**

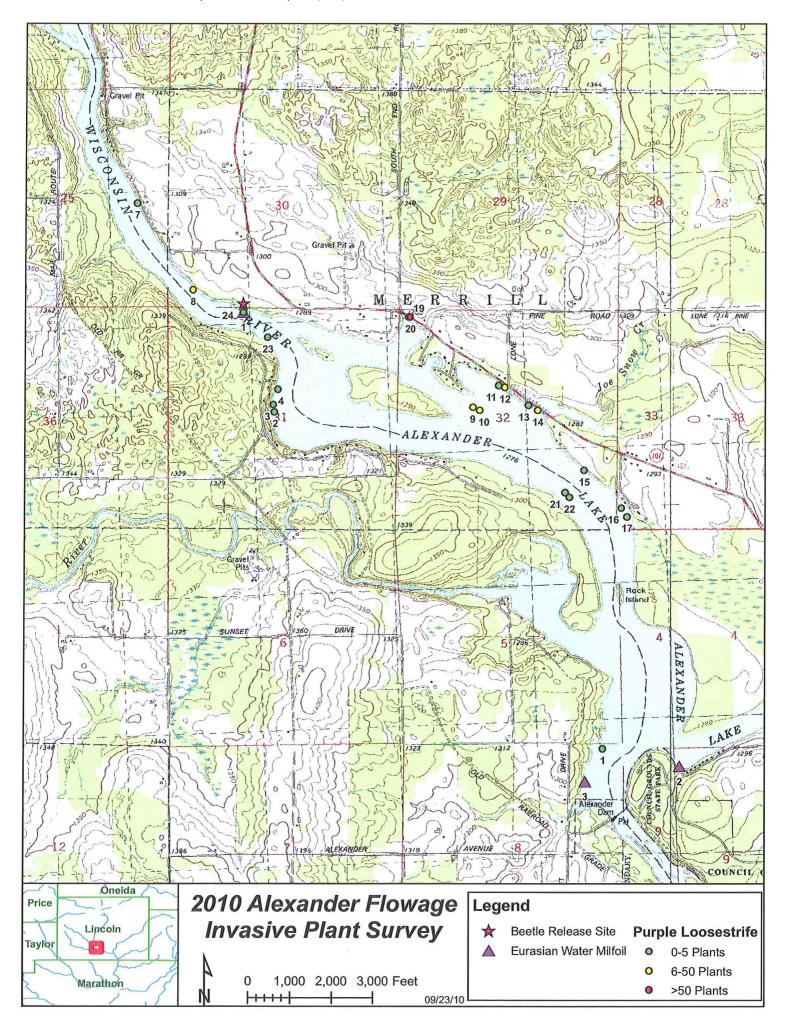
## **2010 EURASIAN WATERMILFOIL SURVEY RESULTS**

# APPENDIX C 2010 ZEBRA MUSSEL SURVEY RESULTS

## APPENDIX D

## **DOCUMENTATION OF CONSULTATION**

# APPENDIX A 2010 PURPLE LOOSESTRIFE SURVEY RESULTS



Purple Loosestrife Survey Form
Hydroelectric Project
Inspection Date

ALEXANDER 2010
28-Jul-10

			General Plant Vigo	r		
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		Notes
1	s	3	4	2	9	
2	s	4	4	4 No feeding	12	
3	s	4	4	4 No feeding	12	
4	s	4	4	4 No feeding	12	
5						No PL-removed from map
6						No PL-removed from map
7	s	4	4	4 No feeding	12	
8	М	3	4	3	10	
9	М	4	3	3	10	
10	М	4	3	3	10	
. 11	s	4	4	2	10	

Purple Loosestrife Survey Form
Hydroelectric Project
Inspection Date
Loosestrife Survey Form
ALEXANDER
1-Aug-09

			General Plant V	igor		
Colony Number	Colony Size S 0-5 M 6-50 L >50	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		Vigor 10-12=good 7-9=fair 4-6=poor 0-3=very poor	Notes
12	М	4	3	2	9	
13	S	4	3	2	9	
14	М	4	4	2	10	
15	S	4	4	4 No feeding	12	
16	S	4	4	4 No feeding	12	
17	S	4	4	4 No feeding	12	
18						No PL-removed from map
19	L	3	2	1	6	
20	L	3	2	1	6	
21	S	4	4	4 No feeding	12	New
22	S	4	4	4 No feeding	12	New

## **Purple Loosestrife Survey Form**

Hydroelectric Project

Alexander 2010

Inspection Date

28-Jul-10

			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
23	c	4		A NI - Consultant	40		
	3	4	4	4 No feeding	12	New	140
24	s	4	4	4 No feeding	12	New	141
						*	
	-				,		
0							
*							

## APPENDIX B 2010 EURASIAN WATERMILFOIL SURVEY RESULTS

## 2010 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 2010 ZEBRA MUSSEL SURVEY RESULTS

20101214-5057 FERC PDF (Unofficial) 12/14/2010 11:24:04 AM

## ZEBRA MUSSEL INSPECTION RESULTS WESTERN HYDROELECTRIC PROJECTS

## HYDRO NAME

☐ Grandfather Falls ☐ Wausau		Merrill Alexander		Tomahawk Jersey	☐ Otter Rapids ☐ Hat Rapids
INSPECTION TYPE DATE:	<u>ت</u>		N	☐ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE DATE: _ 5 - 7 - 10 COMMENTS/RESUL	MOM <b>A</b>	THLY INSPECTION	ON	☐ INSPECTION I	DURING DRAWDOWN
INSPECTION TYPE DATE: (0-\0-\) COMMENTS/RESUL	3		NC	☐ INSPECTION I	DURING DRAWDOWN
INSPECTION TYPE DATE: 7-8-10 COMMENTS/RESUL			ON	□ INSPECTION	DURING DRAWDOWN
INSPECTION TYPEDATE: 2~5~/(COMMENTS/RESU	)		ON	□ INSPECTION	DURING DRAWDOWN
INSPECTION TYP DATE: 9-9-10 COMMENTS/RESU NONC		THLY INSPECT	ION	□ INSPECTION	DURING DRAWDOWN

# APPENDIX D DOCUMENTATION OF CONSULTATION



Wisconsin Public Service Corporation

(a subsidiary of WPS Resources Corporation) 2001 Plover Road P.O. Box 637 Plover, WI 54467-0637

October 12, 2010

Mr. Nicholaus Utrup U. S. Fish and Wildlife Service Department of the Interior 2661 Tower Drive New Franken, WI 54229-9565

Dear Mr. Utrup:

### FERC Project No. 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 28, 2010. The survey results indicated that there were a total of 21 purple loosestrife colonies on the project. This includes the addition of four newly located colonies and the removal of three previously existing colonies that were identified in 2009. No colonies were cut or sprayed with herbicide in order 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 ten colonies. Five of those colonies had a plant vigor of less than good.

In 2010, WPS released beetles at the Alexander Project that were reared in potted purple loosestrife plants. The beetles were released near existing colonies. It is estimated that approximately 2,000 beetles were released on July 12, 2010.

A data sheet and figure providing the 2010 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 28, 2010. 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 2010 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 2010 inspections. A summary of the results has been included in Appendix C.

If you have any questions, please do not hesitate to call me at 715-345-7509.

Sincerely,

Darrin Johnson

**Environmental Consultant** 

L110.

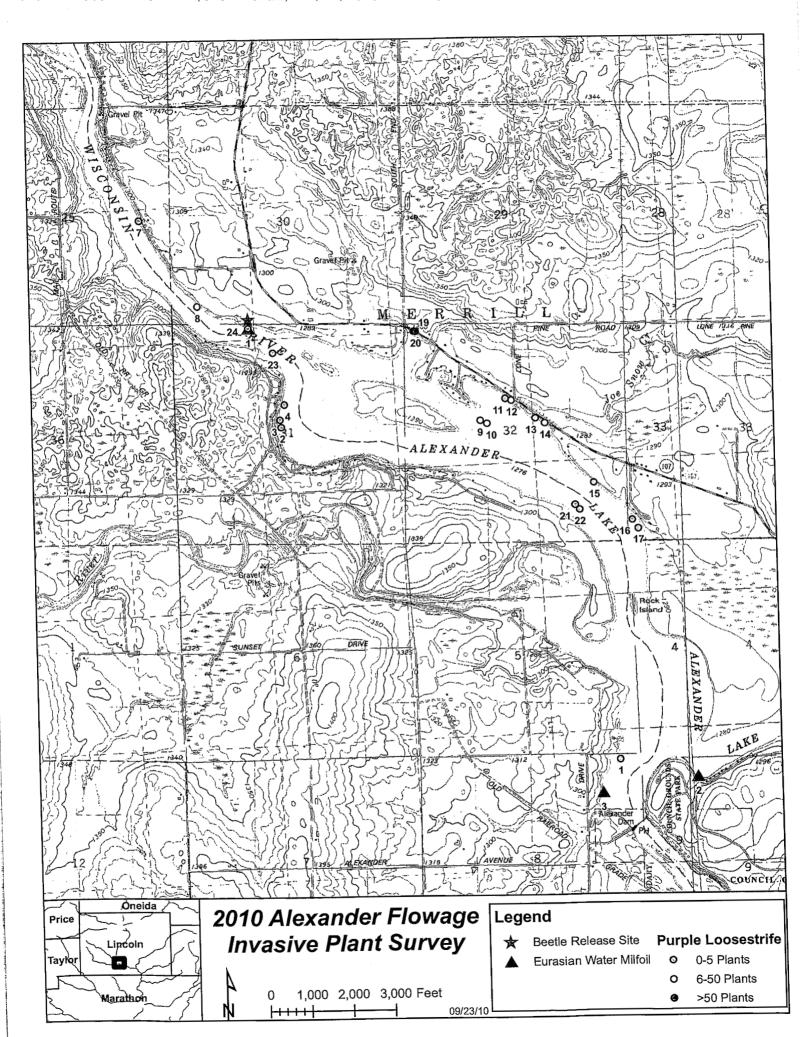
cc: Ms. Joan Johanek, WPSC

Mr. Bill Bloczynski, WPSC - MERH

Johns

Mr. Bruce Crocker, WPSC

## APPENDIX A 2010 PURPLE LOOSESTRIFE SURVEY RESULTS



Purple Loosestrife Survey Form
Hydroelectric Project Inspection Date

ALEXANDER 2010
28-Jul-10

			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		Notes
1	s	3	4	2	9	
2	s	4	4	4 No feeding	12	
3	s	4	4	4 No feeding	12	
4	s	4	4	4 No feeding	12	
5						No PL-removed from map
6						No PL-removed from map
7	s	4	4	4 No feeding	12	
8	М	3	4	. 3	10	
9	М	4	3	3	10	
10	М	4	3	3	10	
. 11	s	4	4	.  2	10	

Purple Loosestrife Survey Form
Hydroelectric Project
Inspection Date

ALEXANDER
1-Aug-09

			General Plant Vi	igor		
Colony Number	Colony Size S 0-5 M 6-50 L >50	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	Vigor 10-12=good 7-9=fair 4-6=poor 0-3=very poor	Notes
12	М	4	3	2	9	
13	s	4	3	2	9	
14	М	4	4	2	10	
15	S	4	4	4 No feeding	12	
16	S	4	4	4 No feeding	12	
17	S	4	4	4 No feeding	12	
18						No PL-removed from map
19	L	3_	2	1	6	
20	L	3	2	1	6	
21	s	4	4	4 No feeding	12	New
22	s	4	4	4 No feeding	12	New

## Purple Loosestrife Survey Form ctric Project Alexander 2010

Hydroelectric Project

Inspection Date 28-Jul-10

		General Plant Vi	gor			
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
S	4	4	4 No feeding	12	New	140
s	4	4		12	New	141
	-					
			1			
				,		
	S 0-5 M 6-50 L >50 S	Colony Size S 0-5 M 6-50 L >50 1 = <1 ft  S 4	Plant Height S 0-5 M 6-50 L >50 S 4  S 4  A 4  Plant Flowering 4=100% of plants 3=51-99% of plants 2=1-2 ft 1= <1 ft 1= <25% of plants	Colony Size S 0-5 M 6-50 L >50 1 = <1 ft   1 = <25% of plants   2 = 51-75% feeding   2 = 51-75% feeding   2 = 51-75% feeding   1 = 76-100% feeding   2 = 51-75% feeding   1 = 76-100% feeding   2 = 51-75% feeding   2 = 51	Colony Size S 0-5 M 6-50 L >50 4 4 Plant Flowering 4=100% of plants 1=<25% of plants 1=<25% of plants 1=<25% of plants 1= 4 No feeding 1=76-100% feeding 1=7	Plant Height

# APPENDIX B 2010 EURASIAN WATERMILFOIL SURVEY RESULTS

## 2010 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

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## APPENDIX C 2010 ZEBRA MUSSEL SURVEY RESULTS

## ZEBRA MUSSEL INSPECTION RESULTS WESTERN HYDROELECTRIC PROJECTS

## HYDRO NAME

☐ Grandfather Falls ☐ Wausau	☐ Merr Alex	ill ander		Tomahawk Jersey	☐ Otter Rapids ☐ Hat Rapids
INSPECTION TYPE:  DATE:	2	Y INSPECTION	Ē	INSPECTION DU	RING DRAWDOWN
INSPECTION TYPE: DATE: _ 5 - 3 - \C COMMENTS/RESULT	<u> </u>	Y INSPECTION		I INSPECTION DU	JRING DRAWDOWN
INSPECTION TYPE: DATE: (0-10-16 COMMENTS/RESULT		Y INSPECTION		I INSPECTION DU	JRING DRAWDOWN
INSPECTION TYPE: DATE: 7-8-10 COMMENTS/RESULT		Y INSPECTION	1	□ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE DATE: 2~5~10 COMMENTS/RESUL		LY INSPECTION	Ŋ	☐ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE DATE: 9-9-10 COMMENTS/RESUL NONC	•	LY INSPECTION	N	☐ INSPECTION D	OURING DRAWDOWN

US Fish and Wildlife Service did not provide any comments



Wisconsin Public Service Corporation

(a subsidiary of WPS Resources Corporation) 2001 Plover Road P.O. Box 637 Plover, WI 54467-0637

October 12, 2010

Mr. Dan Houston Wisconsin Department of Natural Resources 5291 N State House Circle Mercer, WI 54547

Dear Mr. Houston:

### FERC Project No. 1979

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### Zebra Mussels

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If you have any questions, please do not hesitate to call me at 715-345-7509.

Sincerely,

Darrin Johnson

**Environmental Consultant** 

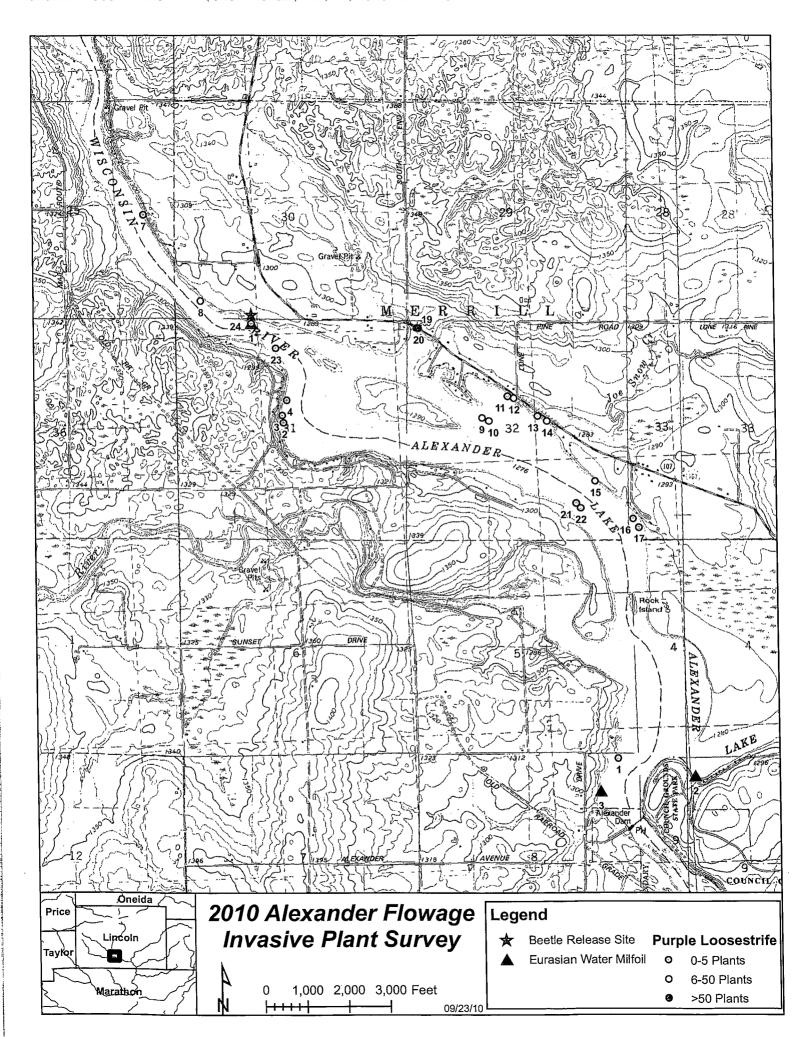
Enc.

cc: Ms. Joan Johanek, WPSC

Mr. Bill Bloczynski, WPSC - MERH

Mr. Bruce Crocker, WPSC

# APPENDIX A 2010 PURPLE LOOSESTRIFE SURVEY RESULTS



Purple Loosestrife Survey Form
Hydroelectric Project
Inspection Date

ALEXANDER 2010
28-Jul-10

			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		Notes
1	s	3	4	2	9	
2	s	4	4	4 No feeding	12	
	s	4	4	4 No feeding	12	
4	S	4	. 4	4 No feeding	12	
5						No PL-removed from map
6						No PL-removed from map
7	s	4	4	4 No feeding	12	
8	М	3	4	. 3	3 10	
g	м	4	3	3	3 10	
. 10	М	4	3	3	3 10	·
1 11	s	1 4	4		2 10	

Purple Loosestrife Survey Form
Hydroelectric Project
Inspection Date

ALEXANDER
1-Aug-09

			General Plant V	igor		
Colony Number	Colony Size S 0-5 M 6-50 L >50	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	Vigor 10-12=good 7-9=fair 4-6=poor 0-3=very poor	Notes
12	M	4	3	2	9	
13	S	4	3	2	9	
14	М	4	4	2	10	
15	s	4	4	4 No feeding	12	
16	s	4	4	4 No feeding	12	
17	S	4	4	4 No feeding	12	
18						No PL-removed from map
19	L	3	2	1	6	
20	L	3	2	1	6	
21	S	4	4	4 No feeding	12	New
22	s	4	4	4 No feeding	12	New

## Purple Loosestrife Survey Form ctric Project Alexander 2010

Hydroelectric Project

Inspection Date 28-Jul-10

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	s	4	4	4 No feeding	12	New	140
	s	4	4		12	New	141
						;	

## APPENDIX B 2010 EURASIAN WATERMILFOIL SURVEY RESULTS

## 2010 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

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

## APPENDIX C 2010 ZEBRA MUSSEL SURVEY RESULTS

## ZEBRA MUSSEL INSPECTION RESULTS WESTERN HYDROELECTRIC PROJECTS

### HYDRO NAME

☐ Grandfather Falls ☐ Merrill ☐ Wausau ☑ Alexander ☐		☐ Otter Rapids ☐ Hat Rapids
INSPECTION TYPE: MONTHLY INSPECTION  DATE: 4-3-10  COMMENTS/RESULTS: Nowe	☐ INSPECTION DU	JRING DRAWDOWN
INSPECTION TYPE: A MONTHLY INSPECTION DATE: 5-7-10 COMMENTS/RESULTS: Nowe	□ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE: MONTHLY INSPECTION  DATE: _(o-\to-\to  COMMENTS/RESULTS: Nowe	□ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE: MONTHLY INSPECTION  DATE: 7-8-10  COMMENTS/RESULTS: Nowe	□ INSPECTION D	URING DRAWDOWN
INSPECTION TYPE: MONTHLY INSPECTION DATE: 2-5-10 COMMENTS/RESULTS: NONE	□ INSPECTION I	DURING DRAWDOWN
INSPECTION TYPE: - MONTHLY INSPECTION DATE: 9-9-10 COMMENTS/RESULTS: NONC	□ INSPECTION I	DURING DRAWDOWN

WDNR did not provide any comments.



Wisconsin Public Service Corporation

(a subsidiary of WPS Resources Corporation) 2001 Plover Road P.O. Box 637 Plover, WI 54467-0637

October 12, 2010

Mr. Phil Moy UW Manitowoc 705 Viebann Street Manitowoc, WI 54220

Dear Mr. Moy:

## FERC Project No. 1979

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Mr. Bill Bloczynski, WPSC - MERH

Mr. Bruce Crocker, WPSC

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## ZEBRA MUSSEL INSPECTION RESULTS WESTERN HYDROELECTRIC PROJECTS

## HYDRO NAME

	Grandfather Falls Wausau		Merrill Alexander		Tomahawk Jersey	□ Otter Rapids □ Hat Rapids
DA	SPECTION TYPE: TE: \( \frac{1}{2} - \frac{1}{3} - \frac{1}{3} \)	2	MONTHLY INSPECTION	Ī	□ INSPECT	ION DURING DRAWDOWN
DA	SPECTION TYPE: TE: 5-7-10 MMENTS/RESULT	<u> </u>	MONTHLY INSPECTION  Now€	1	□ INSPECT	TON DURING DRAWDOWN
DA	SPECTION TYPE: TE: (0-\D-\& MMENTS/RESULT		MONTHLY INSPECTION	V.	□ INSPECT	TON DURING DRAWDOWN
DA	SPECTION TYPE: ATE: 7-8-10 DMMENTS/RESULT		MONTHLY INSPECTION	Ŋ	□ INSPECT	TION DURING DRAWDOWN
DA	SPECTION TYPE: ATE: Z^S-10 DMMENTS/RESULT		MONTHLY INSPECTION	Ŋ	□ INSPEC	TION DURING DRAWDOWN
D	ATE: 9-9-/0 OMMENTS/RESUL		-MONTHLY INSPECTIO	N	□ INSPEC	TION DURING DRAWDOWN

UW Manitowoc did not provide any comments.

Document	Content(s)	
20101214	Alex 2010 Exotics FERC letter (2).PDF1-6	
Appendix	A.PDF7-12	1
Appendix	B.PDF	13
Appendix	C.PDF14-3	15
Appendix	D.PDF	<del>1</del> 4

20101214-5057 FERC PDF (Unofficial) 12/14/2010 11:24:04 AM