



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

December 18, 2018

Ms. Kimberly D. Bose, Secretary  
 Federal Energy Regulatory Commission  
 888 First Street NE  
 Washington DC 20425

Dear Ms. Bose:

**SUBJECT: Invasive Species Monitoring Plan – Purple Loosestrife and Eurasian Water Milfoil Report**

<u>Hydro</u>	<u>FERC Project No.</u>	<u>NATDAM No.</u>	<u>License Article</u>
<b>Petenwell</b>	<b>1984</b>	<b>WI00740</b>	<b>408</b>
<b>Castle Rock</b>	<b>1984</b>	<b>WI00724</b>	<b>408</b>

In accordance with the Federal Energy Regulatory Commission (FERC) Order Revising Order Approving Purple Loosestrife and Eurasian Watermilfoil Monitoring for the Petenwell and Castle Rock Hydroelectric Project issued on July 13, 2005 and the Order Amending Purple Loosestrife Control Measures issued on July 9, 2009, Wisconsin River Power Company (WRPCO) is required to provide monitoring reports of the purple loosestrife (PL) and Eurasian water milfoil (EWM) surveys to FERC by December 31, 2018 each year a survey has been completed.

2018 Purple Loosestrife Survey Results

Surveys for PL were completed on July 26, 2018 and August 14, 2018. A total of forty-three colonies of PL were identified at the Petenwell and Castle Rock Hydroelectric Projects. Of the forty-three colonies, twenty were small or medium colonies and were completely hand pulled and disposed of offsite. Appendix A includes the 2018 PL survey results.

In 2018, WPS released a sum total of approximately 8,000 *Galerucella species* beetles in three different locations to supplement existing beetle populations. WRPCO observed beetle feeding on twenty-eight of the forty-three colonies.

WRPCO will continue monitoring for PL and continue to release a minimum sum total of 4,000 beetles in at least two separate locations as outlined in the Order Amending Purple Loosestrife Control Measures. The next PL survey is scheduled for 2019.

2018 Eurasian Water Milfoil Survey Results

Surveys for EWM were completed on July 26, 2018 and August 14, 2018. EWM was identified in relatively low abundance at transect location 3B. Appendix B includes the 2018 EWM survey results. The next EWM survey is scheduled for 2021.

A copy of this report was submitted to the Wisconsin Department of Natural Resources (WDNR) and the US Fish and Wildlife Service (FWS) on October 30, 2018. The WDNR and FWS did not provide any comments. Appendix C includes the 2018 documentation of consultation.

Ms. Kimberly D. Bose  
December 18, 2018  
Page 2 of 2

Should you have any questions relative to this material, please do not hesitate to contact Jes Roloff at 920 433-5558 or [Jessica.Roloff@WECEnergyGroup.com](mailto:Jessica.Roloff@WECEnergyGroup.com).

Sincerely,

A handwritten signature in blue ink that reads "Todd P. Jastremski". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Todd P. Jastremski  
Asset Manager Hydro Operations  
We Energies  
800 Industrial Park Drive  
Iron Mountain, MI 49801

JRR/jmd

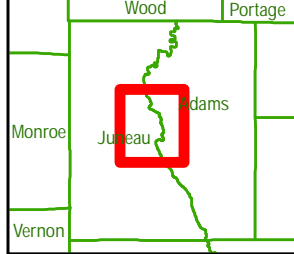
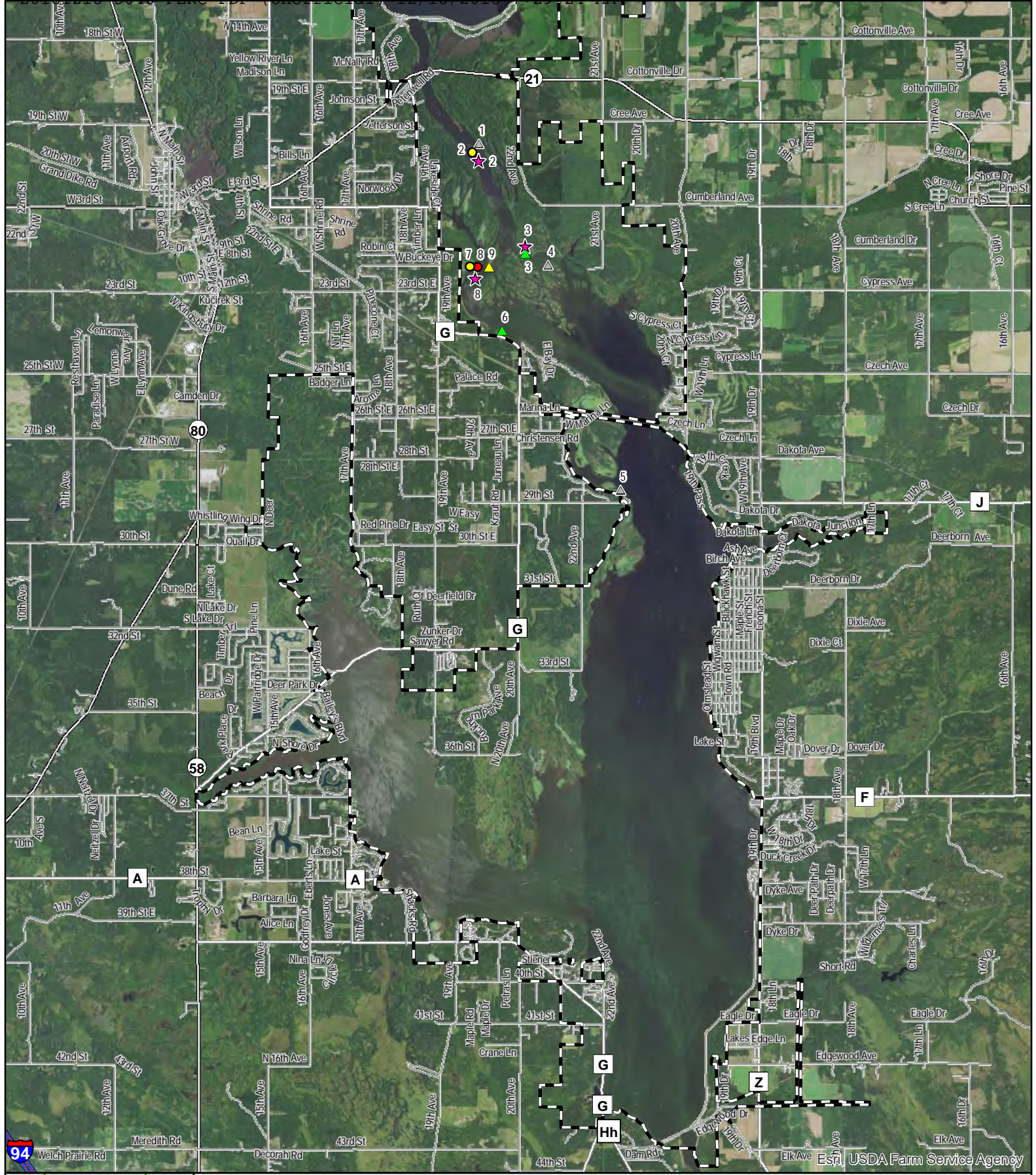
Enc: Appendix A – 2018 Purple Loosestrife Survey Results – 8 pages  
Appendix B – 2018 Eurasian Water Milfoil Survey Results – 7 pages  
Appendix C – 2018 Documentation of Consultation – 9 pages

cc: Ms. Cheryl Laatsch, WDNR  
Mr. Nicholas Utrup, USFWS  
Mr. John Zygaj, FERC - CRO

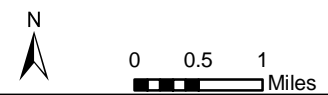
**APPENDIX A**

**2018 PURPLE LOOSESTRIFE SURVEY RESULTS**





## WRPCO Castle Rock Hydroelectric Project Purple Loosestrife Survey-2018



- Project Boundary
- Purple Loosestrife Severity
  - Low
  - ▲ Low, Pulled all Plants
  - Medium
  - ▲ High; Pulled all Plants
  - ▲ No longer able to identify
  - ★ Beetle Release Site

## 2018 Purple Loosestrife Survey Form

Hydroelectric project: Petenwell Hydroelectric Project

Petenwell Inspection date: August 14, 2018

Colony ID #	Colony Size S 0-5 M 6-50 L >50	General Plant Vigor			Total Plant Vigor 10-12 = good 7-9 = fair 4-6 = poor 0-3 = very poor	Notes	GPS Point
		Plant Height 4 = >4ft 3 = 2-4ft 2 = 1-2ft 1 = <1ft	Plant Flowering 4 = 100% of plants 3 = 51-99% of plants 2 = 26-50% of plants 1 = <25% of plants	Beetle Feeding 5 = 0% feeding 4 = 1 - 25% feeding 3 = 26-50% feeding 2 = 51-75% feeding 1 = >76% feeding			
1		No Longer Able To Identify					1092 (old point)
2	L >50	4	3	3	10		1649
3		No Longer Able To Identify					1109 & 1091 (old point)
4		No Longer Able To Identify					1110, 1111, 1094 (old point)
5		No Longer Able To Identify					930 (old point)
6	M 6-50	3	2	3	8		1644
7		No Longer Able To Identify					1096 (old point)
8	L >50	4	3	3	10		1643
9	M 6-50	3	2	2	7		Did not GPS
10		No Longer Able To Identify					924 (old point)
11	L >50	3	2	2	7		1640
12	L >50	4	3	3	10		1641
13	M 6-50	3	3	3	9		1638
14		No Longer Able To Identify					1099 (old point)
15	M 6-50	2	2	3	7	Pulled all plants.	1637
16	S 0-5	3	3	4	10	Pulled all plants.	1648

**2018 Purple Loosestrife Survey Form**Hydroelectric project: Petenwell Hydroelectric ProjectBeetle Release Date: June 27, 2018Petenwell Inspection date: August 14, 2018

General Plant Vigor							
Colony ID #	Colony Size	Plant Height 4 = >4ft 3 = 2-4ft 2 = 1-2ft 1 = <1ft	Plant Flowering 4 = 100% of plants 3 = 51-99% of plants 2 = 26-50% of plants 1 = <25% of plants	Beetle Feeding 5 = 0% feeding 4 = 1 - 25% feeding 3 = 26-50% feeding 2 = 51-75% feeding 1 = >76% feeding	Total Plant Vigor 10-12 = good 7-9 = fair 4-6 = poor 0-3 = very poor	Notes	GPS Point
17	S 0-5	4	3	5	12	Pulled all plants.	1647
18	S 0-5	4	2	4	10	Pulled all plants.	1646
19	M 6-50	4	2	4	10	Pulled all plants.	1645
20	S 0-5	3	2	3	8	Pulled all plants.	1642
21	M 6-50	3	3	3	9	Pulled all plants.	1639
22	No Longer Able to Identify						1636
23	M 6-50	3	3	4	10		1635
24	No Longer Able to Identify						1634
25	S 0-5	2	2	4	8		1633
26	S 0-5	4	4	4	12	Pulled all plants.	1632
27	S 0-5	3	3	5	11		1631
28	S 0-5	4	3	4	11	Pulled all plants.	1629
29	S 0-5	4	3	4	11		1650
30	S 0-5	3	3	4	10	NEW. Pulled all plants.	1955
31	S 0-5	4	3	5	12	NEW. Pulled all plants.	1956

## 2018 Purple Loosestrife Survey Form

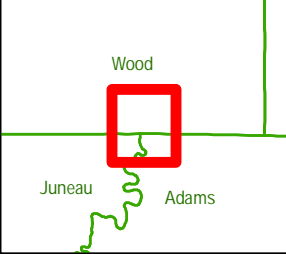
Hydroelectric project: Petenwell Hydroelectric Project

Beetle Release Date: June 27, 2018

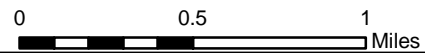
Petenwell Inspection date: August 14, 2018

General Plant Vigor							
Colony ID #	Colony Size S 0-5 M 6-50 L >50	Plant Height 4 = >4ft 3 = 2-4ft 2 = 1-2ft 1 = <1ft	Plant Flowering 4 = 100% of plants 3 = 51-99% of plants 2 = 26-50% of plants 1 = <25% of plants	Beetle Feeding 5 = 0% feeding 4 = 1 - 25% feeding 3 = 26-50% feeding 2 = 51-75% feeding 1 = >76% feeding	Total Plant Vigor 10-12 = good 7-9 = fair 4-6 = poor 0-3 = very poor	Notes	GPS Point
32	S 0-5	3	3	5	11	NEW. Private Prop.	1957
33	S 0-5	3	3	5	11	NEW. Private Prop.	1958
34	S 0-5	3	3	5	11	NEW. Pulled all plants.	1959
35	S 0-5	3	3	5	11	NEW. Private Prop.	1960
36	S 0-5	3	3	5	11	NEW. Pulled all plants.	1961
37	S 0-5	3	3	4	10	NEW. Pulled all plants.	1962
38	S 0-5	2	3	5	10	NEW. Pulled all plants.	1963
39	S 0-5	4	3	5	12	NEW.	1964
40	S 0-5	2	4	5	11	NEW. Pulled all plants.	1965
41	S 0-5	4	3	4	11	NEW.	1971
42	S 0-5	3	3	5	11	NEW.	1974
43	S 0-5	3	3	5	11	NEW.	1976
44	M 6-50	4	3	4	11	NEW.	1978
45	M 6-50	4	3	4	11	NEW.	1979
46	S 0-5	4	4	5	13	NEW. Pulled all plants.	1980



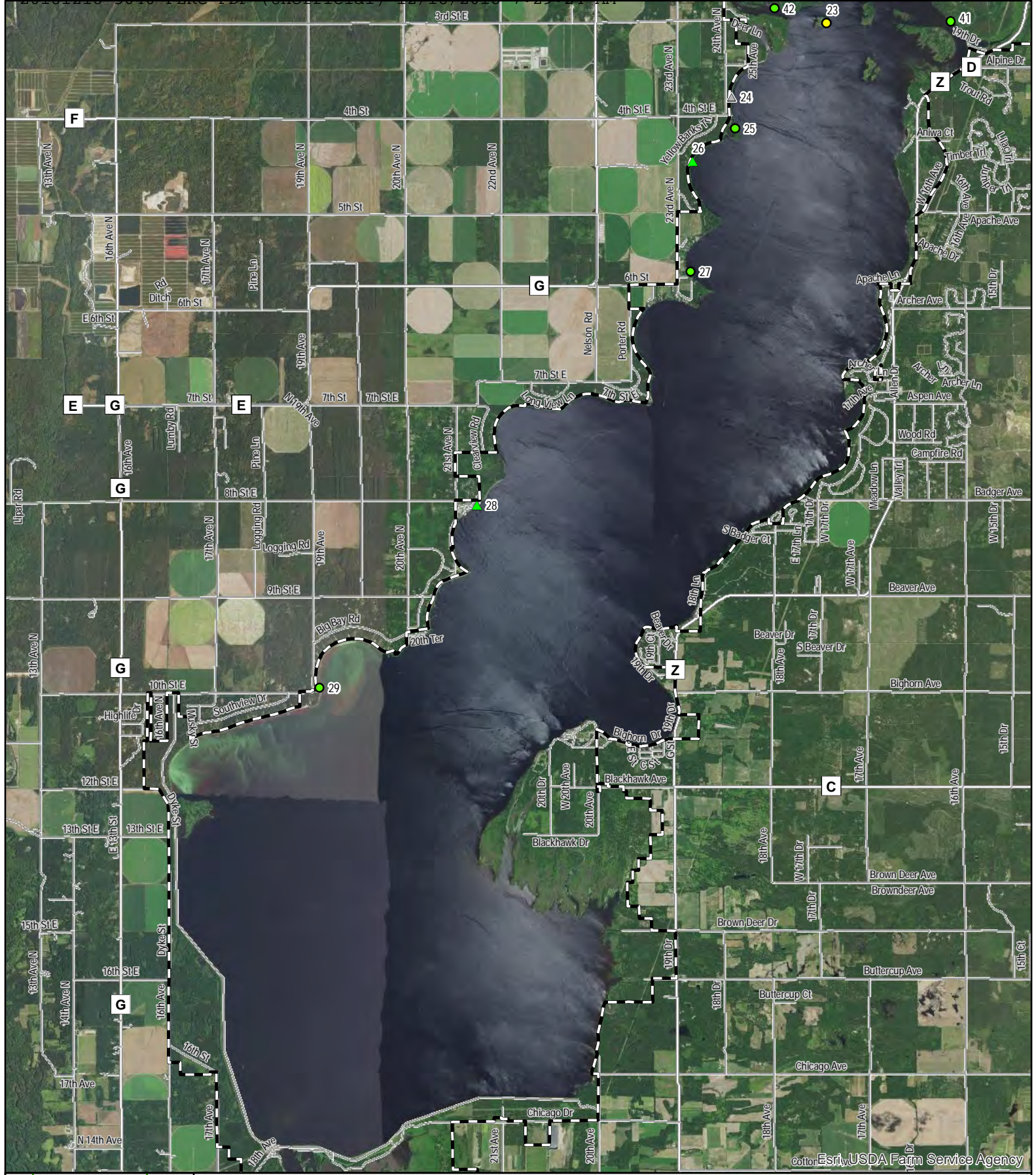


**WRPCO Petenwell  
Hydroelectric Project  
Purple Loosestrife Survey-2018  
Map 1 of 2 - North**

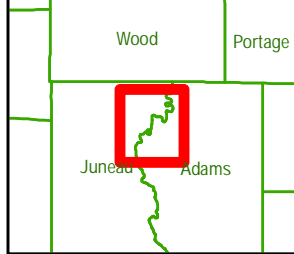


- Project Boundary
- Purple Loosestrife Severity**
- Low
- Low, Pulled all Plants
- Medium
- High
- High; Pulled all Plants
- No longer able to identify
- Medium; Pulled all Plants

Esri, USDA Farm Service Agency



data: Esri, USDA Farm Service Agency



# WRPCO Petenwell Hydroelectric Project Purple Loosestrife Survey-2018 Map 2 of 2 - South



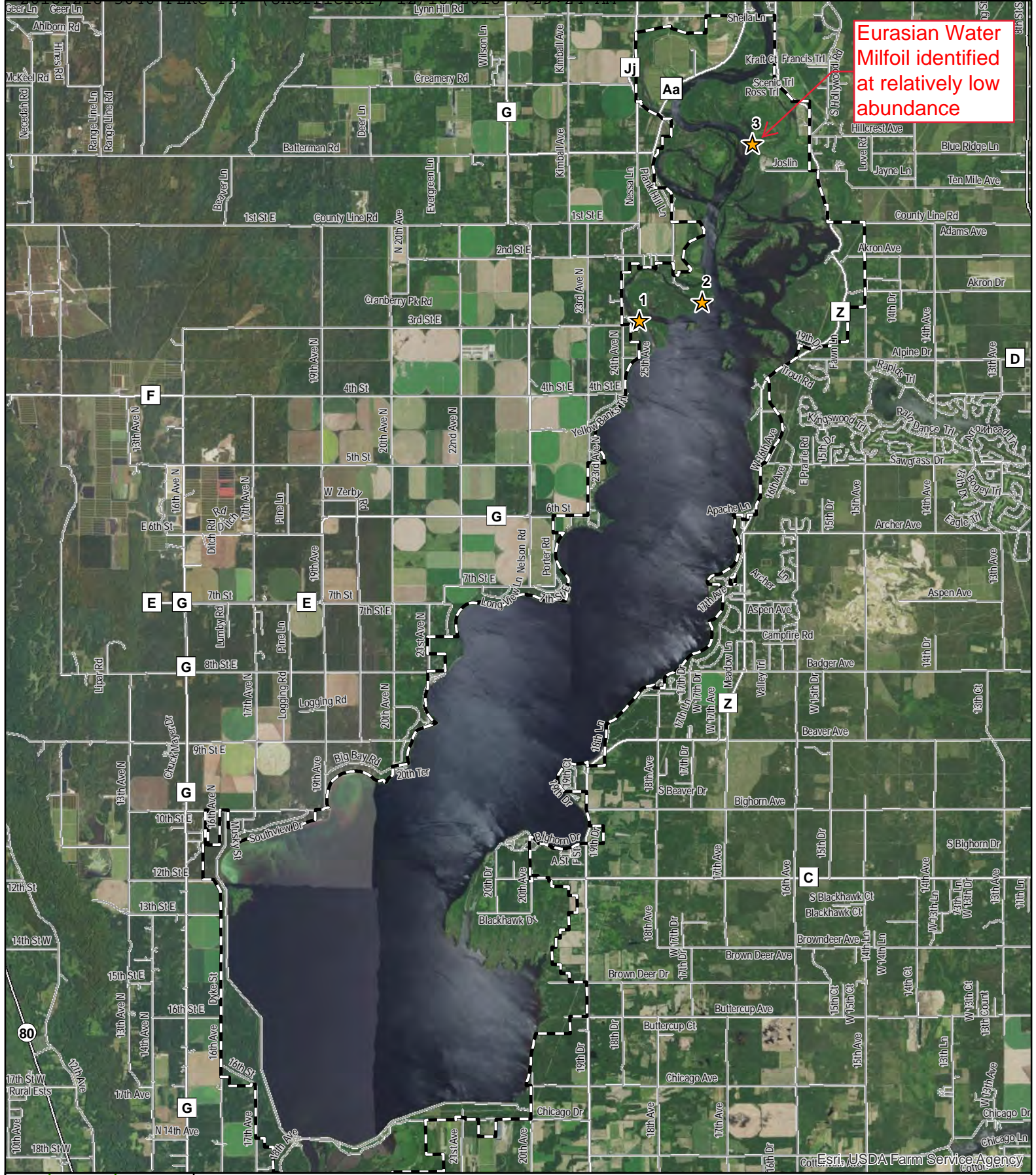
- Project Boundary
- Purple Loosestrife Severity
  - Low
  - High
  - ▲ Low, Pulled all Plants
  - ▲ Medium; Pulled all Plants
  - ▲ No longer able to identify
  - Medium

**APPENDIX B**



**2018 EURASIAN WATER MILFOIL SURVEY RESULTS**



Eurasian Water Milfoil identified at relatively low abundance

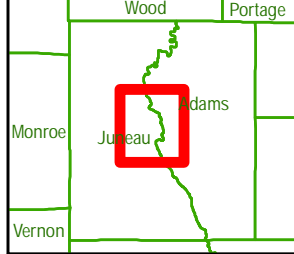
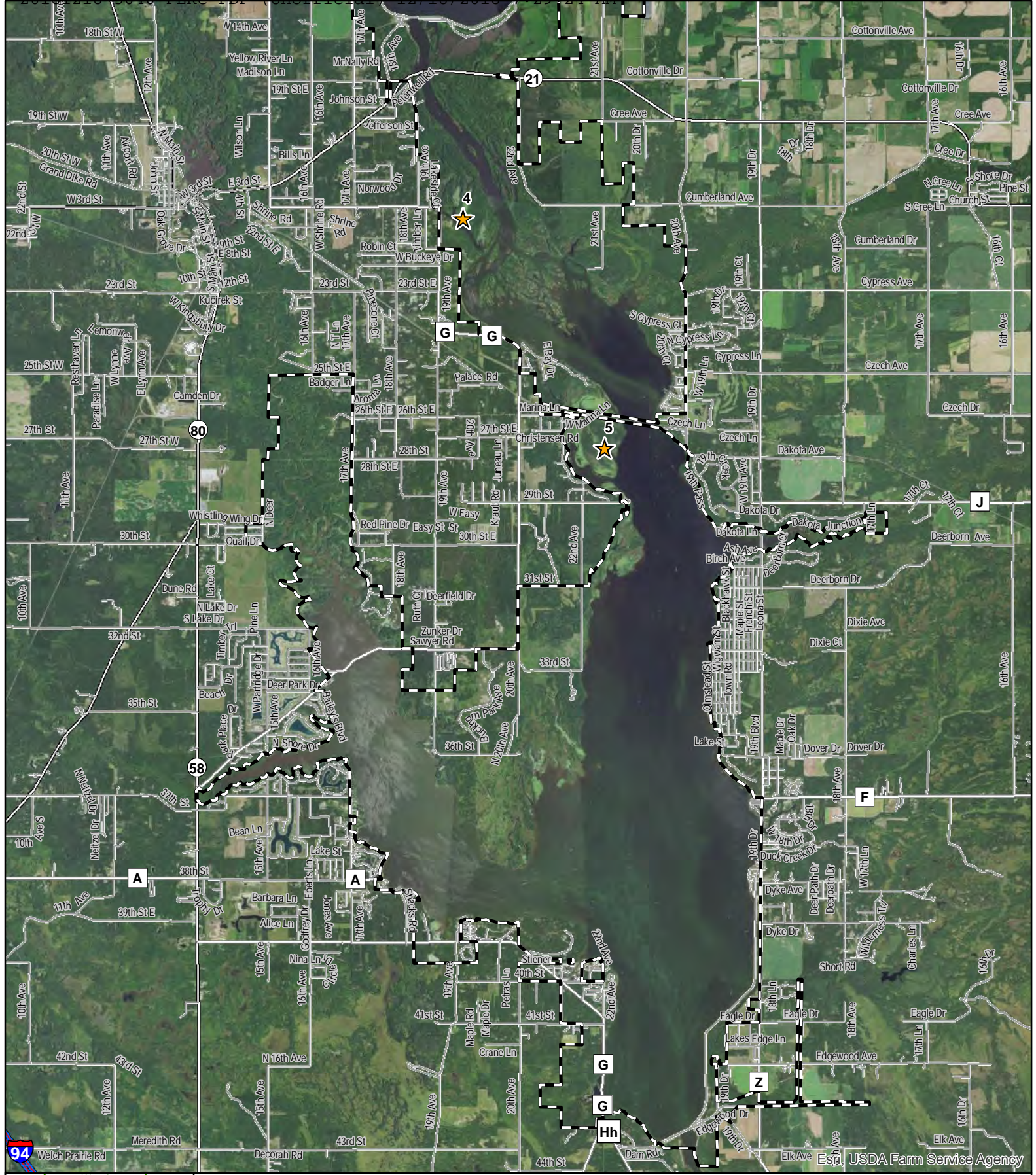


**WRPCO Petenwell  
Hydroelectric Project  
Eurasian Water Milfoil Survey-2018**

-  Project Boundary
-  Transect Point

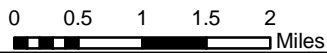
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10/10/2018



# WRPCO Castle Rock Hydroelectric Project Eurasian Water Milfoil Survey-2018

- Project Boundary
- ★ Transect Point



**APPENDIX C**

**2018 DOCUMENTATION OF CONSULTATION**



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

October 30, 2018

Ms. Cheryl Laatsch  
 Wisconsin Department of Natural  
 Resources PO Box 7921  
 Madison, WI 53707-7921

Dear Ms. Laatsch:

**SUBJECT: Invasive Species Monitoring Plan – Purple Loosestrife and Eurasian Water Milfoil Report**

<u>Hydro</u>	<u>FERC Project No.</u>	<u>NATDAM No.</u>	<u>License Article</u>
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2017 Purple Loosestrife Survey Results

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In 2018, WPS released approximately 8,000 *Galerucella species* beetles in three different locations to supplement existing beetle populations. WRPCO observed beetle feeding on twenty-eight of the forty-three identified colonies.

WRPCO will continue monitoring for PL and releasing a minimum of 4,000 beetles in at least two separate locations as outlined in the Invasive Species Monitoring Plan. The next PL survey is scheduled for 2019.

2018 Eurasian Water Milfoil Survey Results

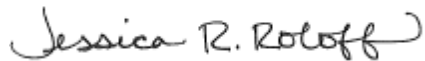
A survey for EMW was completed on July 26 and August 14, 2018. EWM was identified at transect location 3B and found to be present at a relatively low abundance. Appendix B includes the 2018 EWM survey results. The next EWM survey is scheduled for 2021.



Ms. Cheryl Laatsch  
October 30, 2018  
Page 2 of 2

Please provide any comments you may have regarding this report within 30 days. Should you have any questions relative to this material, please do not hesitate to contact me at (920) 433-5558 or [Jessica.Roloff@WECEnergyGroup.com](mailto:Jessica.Roloff@WECEnergyGroup.com).

Sincerely,

A handwritten signature in black ink that reads "Jessica R. Roloff". The signature is written in a cursive style with a large, sweeping flourish at the end.

Jes Roloff  
Environmental Consultant  
Wisconsin River Power Company  
700 North Adams Street  
Green Bay, WI 54301

Enc: Appendix A – 2018 Purple Loosestrife Survey Results  
Appendix B – 2018 Eurasian Water Milfoil Survey Results

**IN THE INTEREST OF PAPERWORK REDUCTION, REDUNDANT MATERIALS ARE NOT INCLUDED**

**NO COMMENTS RECEIVED BY THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES**



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

October 30, 2018

Mr. Nicholas Utrup  
 U.S. Fish & Wildlife Service  
 Department of the Interior  
 4101 American BLVD E  
 Bloomington, MN 55425

Dear Mr. Utrup:

**SUBJECT: Invasive Species Monitoring Plan – Purple Loosestrife and Eurasian Water Milfoil Report**

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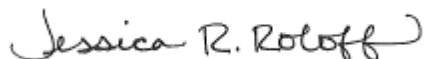
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Mr. Nicholas Utrup  
October 30, 2018  
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Jes Roloff  
Environmental Consultant  
Wisconsin River Power Company  
700 North Adams Street  
Green Bay, WI 54301

Enc: Appendix A – 2018 Purple Loosestrife Survey Results  
Appendix B – 2018 Eurasian Water Milfoil Survey Results

**IN THE INTEREST OF PAPERWORK REDUCTION, REDUNDANT MATERIALS ARE NOT INCLUDED**

**NO COMMENTS RECEIVED BY THE US FISH AND WILDLIFE SERVICE**

Document Content(s)

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