



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

December 11, 2013

FERC Project No. 1984

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
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 29 and July 31, 2013. The surveys identified a total of twenty (20) purple loosestrife colonies at the project. Eighteen (18) of those were located on the Petenwell Flowage and two (2) were located on the Castle Rock Flowage. This compares to a total of seventeen (17) colonies noted in 2012.

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 twenty (20) colonies noted during the survey, fourteen (14) showed some signs of beetle feeding, but the extent of beetle feeding was less than in past years.

WRPCO released beetles at the Petenwell Flowage on July 8, 2013. Approximately 2000 beetles were released. The beetles were reared in potted purple loosestrife plants. This year's survey indicated that beetle populations on the north side of the Petenwell Flowage have declined significantly. Therefore, beetle releases will be focused in that area in 2014.

The 2013 Petenwell and Castle Rock Project purple loosestrife figures including colony locations, identification numbers and beetle release location is included in Appendix A. The purple loosestrife general plant vigor survey forms are also included in Appendix A.

Eurasian Water Milfoil

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

Kimberly D. Bose
December 11, 2013
Page 2 of 2

Zebra Mussels

During the 2013 annual resource agency meeting, WRPCO discussed zebra mussel monitoring. According to the Invasive Species Monitoring Plan issued on July 13, 2005, once zebra mussels are present in a flowage, monitoring will discontinue on that flowage. Zebra mussels have been found in both the Petenwell and Castle Rock Flowages for a number of years. Therefore, WRPCO will implement the measures outlined in the FERC approved Invasive Species Monitoring Plan and discontinue monitoring for zebra mussels.

During the annual agency meeting, the Wisconsin Department of Natural Resources (WDNR) requested that WRPCO to provide notice to WDNR if high numbers of zebra mussels are found in future years. WRPCO agreed to provide notification to WDNR and the U.S. Fish and Wildlife Service (FWS) if any significant changes in the number of zebra mussels are identified during normal operations and maintenance activities. The 2013 annual resource agency meeting minutes are included in Appendix B.

Documentation of submittal of these results to WDNR and FWS has been included in Appendix C. WDNR provided comments on the report. No comments were received from FWS. Comments received and WRPCO's response is included in Appendix C.

If you have any questions regarding this information, please contact Darrin Johnson at (715) 345-7509.

Sincerely,



Terry P Jensky
Vice President-Generation Assets
For Wisconsin Public Service Corporation

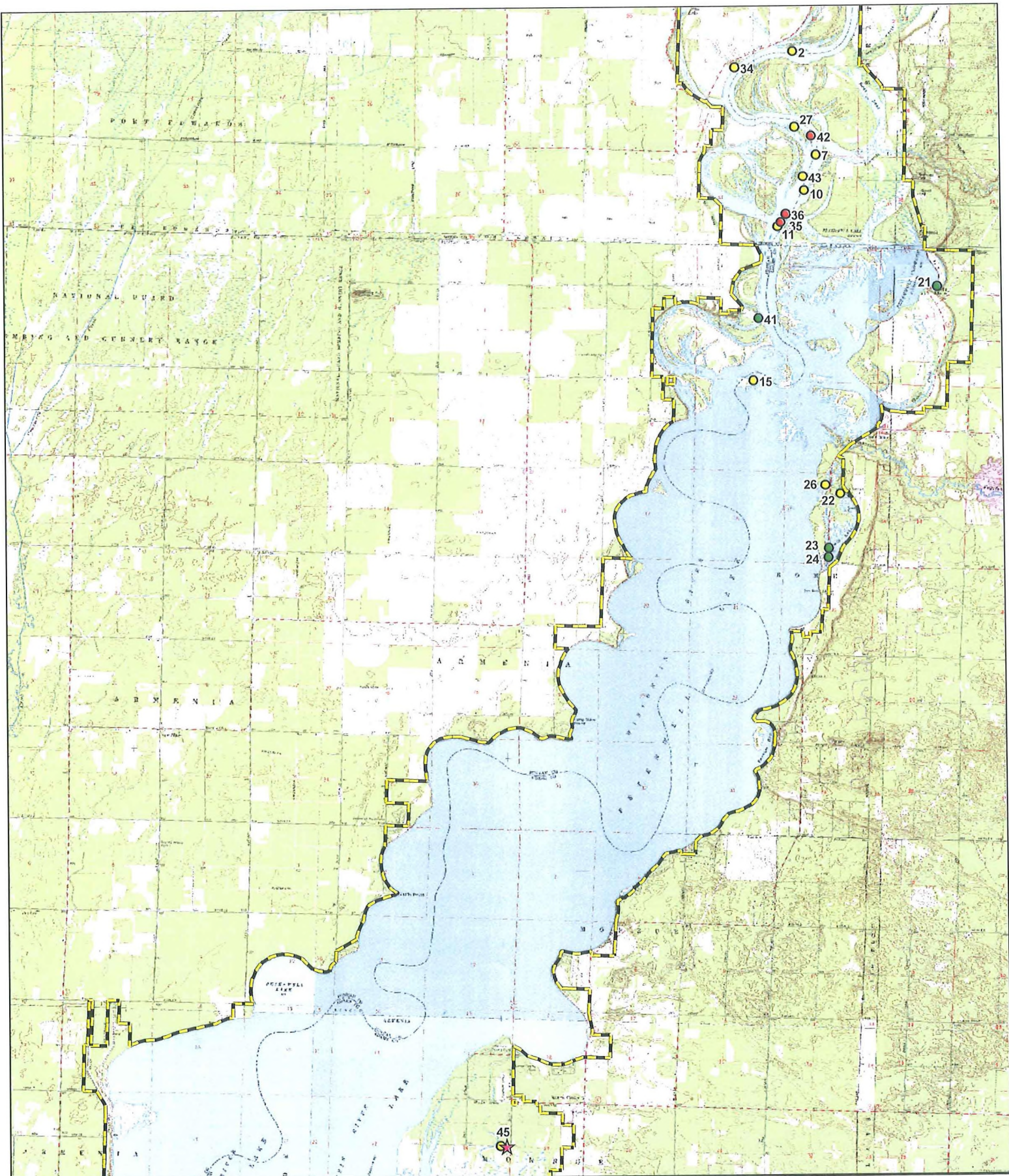
DMJ

Enclosed: Appendix A, Appendix B, Appendix C

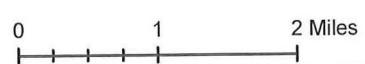
CC: Mr. Gil Snyder, WPSC-D2
Mr. Shawn Puzen, IBS-D2
Mr. Bill Bloczynski, WPSC-MERH
Mr. John Zygaj, FERC-CRO

Mr. John Myers, IBS-D2
Ms. Joan Johaneck, WPSC-D2
Mr. William Bosacki, WPSC-D2
Ms. Pat Grant, FERC-CRO

APPENDIX A
PURPLE LOOSESTRIFE SURVEY RESULTS



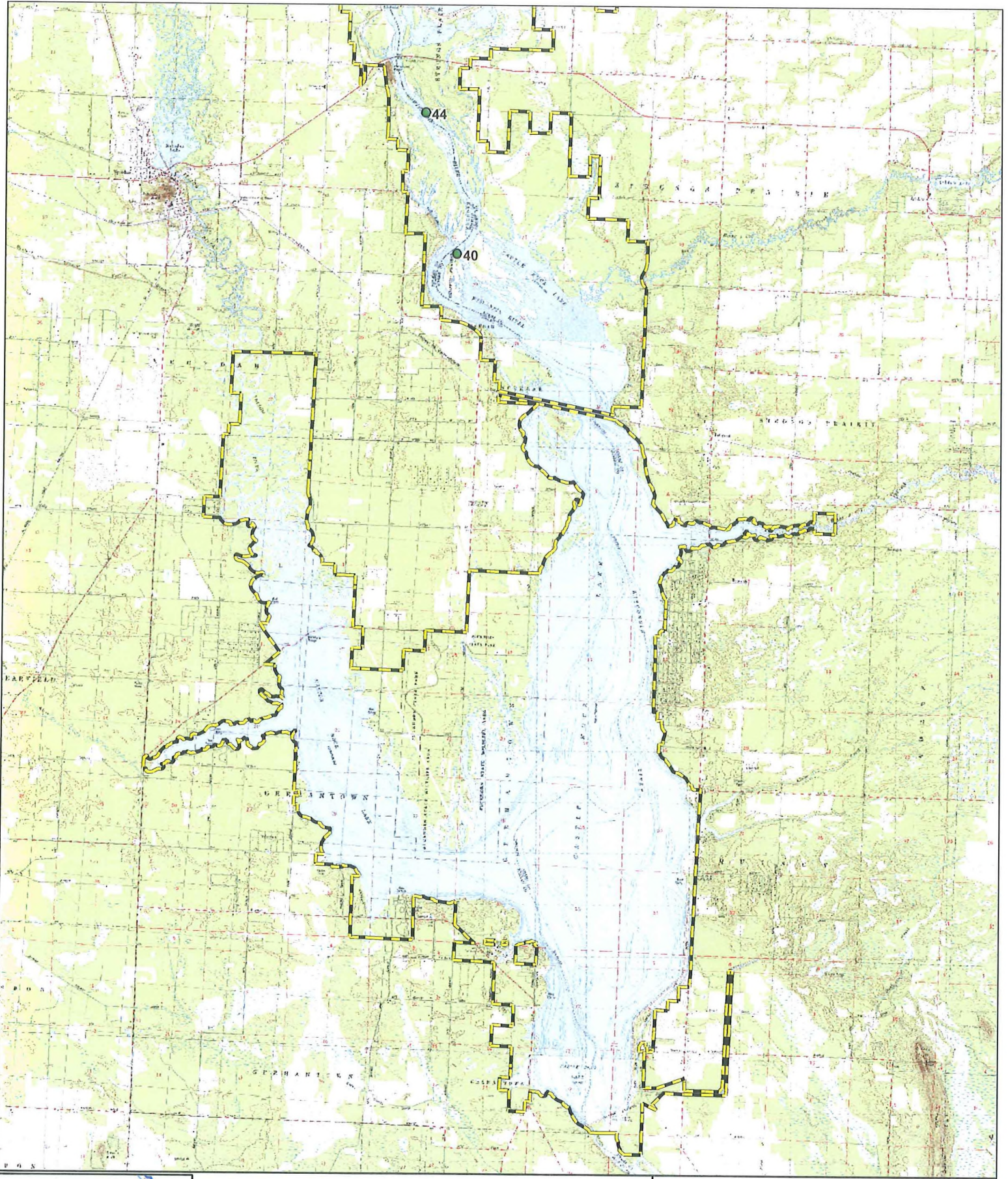
**Wisconsin River Power Company
Petenwell Flowage
2013 Invasive Plant Survey**



- Project Boundary
- Beetle Release Site
- Purple Loosestrife**
- 0-5 Plants
- 6-50 Plants
- >50 Plants



Date: 11/8/2013



**Wisconsin River Power Company
 Castle Rock Flowage
 2013 Invasive Plant Survey**



- Project Boundary
- Beetle Release Site
- Purple Loosestrife**
- 0-5 Plants
- 6-50 Plants
- >50 Plants



Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

WRPCO

7/29 & 7/31 2013

Colony Number	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=1-2 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			
1	NO	PLANTS		NOTED			
2	M	2	2	1	5	poor	
3	-	NO	PLANTS	NOTED	-	-	-
4	-	NO	PLANTS	NOTED	-	-	-
5	-	NO	PLANTS	NOTED	-	-	-
6	-	NO	PLANTS	NOTED	-	-	-
7	M	3	3	3	9	fair	-
8	-	NO	PLANTS	NOTED	-	-	-
9	-	NO	PLANTS	NOTED	-	-	-
10	M	4	3	3	10	good	
11	M	4	3	3	10	good	

20 sites 18 Pet
2 CR

6 No Feeding
14 with feeding

Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

W/RPCO
7/29 & 7/31 2013

Colony Number	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=1-2 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			
12	-	NO	Plants	Noted	-	-	-
13	-	NO	Plants	Noted	-	-	-
14	-	NO	Plants	Noted	-	-	-
15	M	4	3	3	10	good	
16	-	NO	Plants	Noted	-	-	-
17	-	NO	Plants	Noted	-	-	-
18	-	NO	Plants	Noted	-	-	-
19	-	NO	Plants	Noted	-	-	-
20	-	NO	Plants	Noted	-	-	-
21	S	4	4	1	9	fair	
22	M	4	4	1	9	fair	

Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

WRPCB
7/29/13 & 7/31/13

Colony Number	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=1-2 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			
23	S	4	4	4	12	NO	Feeding
24	S	4	4	4	12	NO	Feeding
25	-	NO	Plants	Noted	-	-	-
26	M	4	3	1	8	fair	
27	M	4	3	3	10	good	
28	-	NO	Plants	Noted	-	-	-
29	-	NO	Plants	Noted	-	-	-
30	-	No	Plants	Noted	-	-	-
31	-	No	Plants	Noted	-	-	-
32	-	No	Plants	Noted	-	-	-
33	-	No	Plants	Noted	-	-	-

Purple Loosestrife Survey Form

Hydroelectric Project
Inspection Date

W.R. PCO

7/29/13 & 7/29/13

Colony Number	Colony Size S 0-5 M 6-50 L >50	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
		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					
34	M	3	3	1	7	fair		
35	L	4	3	3	10	good		
36	L	4	3	3	10	good		
37	-	NO	Plants	noted	-	-	-	
38	-	NO	Plants	Noted	-	-	-	
39	-	NO	Plants	Noted	-	-	-	
40	S	4	4	4	12	NO feeding		
41	S	4	4	4	12	NO feeding		
42	L	4	3	2	9	fair		
43	M	4	3	3	10	good		
44	S	4	4	4	12	NO feeding		

APPENDIX B
2013 ANNUAL RESOURCE AGENCY MEETING MINUTES

2013 WRPCO Annual Agency Meeting Minutes

DATE: 03-12-2013

LOCATION: WRPCO Petenwell Office/Conference Call

PARTICIPANTS:

In Attendance: Scott Provost, DNR; Darrin Johnson, WRPCO; Joe Sukana, WRPCO; Jeff Klaas, WRPCO; Jennifer Bergman, DNR

Conference Call: Jamie Nuthals, WRPCO; Shawn Puzen, WRPCO; Nick Utrup, FWS; Cheryl Laatsch, WDNR; Bill Bosacki, WRPCO

Petenwell & Castle Rock Hydroelectric Projects

Introductions

FERC Overview

-Darrin J. provided an overview of FERC plans for WRPCO

Adaptive Management Plan Steering Committee Meeting

Members: Darrin Johnson –Chair, Shawn Puzen, Jeff Klaas, Bill Bosacki, Scott Provost, Cheryl Laatsch, Nick Utrup and Jennifer Begrman (To replace Justin Hasz).

- Darrin J. provided background on AMP, how it was developed during licensing to address items not worked out in the licensing process. The current project to delay the annual winter drawdown to reduce the amount of time that vegetation is dewatered and potentially frozen to attempt to stimulate aquatic vegetation growth. Darrin had provided information on Year 4 of the 5 year study. Aquatic vegetation has increased.
- WRPCO is looking at a 3.5 foot drawdown this year for anticipated spring runoff. WRPCO only draws down the reservoir as much as needed for anticipated spring runoff. The reservoir should be at its lowest level by March 22nd.
- Scott indicated that there is a direct correlation between an increase in aquatic vegetation and how long the vegetation can remain dewatered.
- After the end of the 5 year study stakeholders will meet and determine if the current activities are working or should be discontinued with FERC making the final decision.

2012 Activities:

- Scott P. - 25 plots were surveyed; recorded depth, plant species and density. Compared changes in density from previous surveys. Since 2010, there has been an overall increase in plant growth and habitat and less blue/green algae.

- Some plots showed no change, but that was due to bad substrate or high flow areas. This is a good Public Relations project.
- In addition to the AMP project, WRPCO worked with the PACRS citizen's organization to conduct a voluntary aquatic vegetation planting project in 2012.

Wildlife Management and Threatened & Endangered Species

1. Eagle/Osprey

- MOA in progress; should be in place prior to 2013 payment cycle.
- **2012 Survey Results**
Petenwell -3 bald eagle and 17 osprey nest observed.
Castle Rock – 2 bald eagle and 7 osprey nests observed.

2. Karner Blue Butterfly

- Darrin J – Timber management areas observed for upcoming timber events were necessary.

3. Disabled Hunt

- 4th year of hunt.
- 7 hunters harvested 7 deer (6 out of 7 harvested deer).
- Handicap accessible stands were created by Holly Cross School and Necedah High School.
- WRPCO is planning to close the Petenwell Wildlife Area (PWA) to bow hunters in 2013. Bow hunting was only allowed in a portion of the PWA (on a year to year basis) to prevent overpopulation of deer in the area. The area was set aside during relicensing to provide a refuge area for migratory waterfowl. The current disabled hunt allows WRPCO to keep the deer population in check. All other WRPCO lands are open to all public hunting.

Exotic Species (Zebra Mussels/Purple Loosestrife/EWM)

- Darrin provided update on purple loosestrife (PL). Majority of PL sites have beetle feeding. One site on northern end had less feeding, as flooding in 2010 most likely killed beetles. But they appear to be coming back.
- Scott P – Good, other parts of Wisconsin River lost beetles and they have not come back.
- Eurasian watermilfoil (EWM) -2013 results, no EWM at survey locations, however EWM observed in Petenwell.
- Darrin – indicated zebra mussels observed again in 2012. Per the FERC license, WRPCO will discontinue monitoring of zebra mussels.
- Scott –Can WRPCO still provide updates to WDNR if high number of zebra mussels is observed?

- Darrin- Yes, WRPCO will inform DNR if significant changes in zebra mussel populations are noted during routine operations.

2013 Planned Timber Management Activities

- There are four (4) proposed harvest areas for 2013.
- DNR oak wilt harvesting guidelines will be followed for all harvests with a potential to spread oak wilt.
- Pine stands will be treated for annosum root rot per current DNR recommendations at the time of harvest.
- All harvest areas will be surveyed for KBB presence/absence per the KBB HCP guidelines.
- A search of the NHI database for potential threatened and endangered species will be done for each harvest area, and harvests will be adjusted to ensure no adverse impacts to sensitive species occur.
- Phase I archaeological surveys will take place on all harvest areas not already surveyed.
- Snag, den, and super-canopy trees will be left unharvested to provide wildlife habitat.
- Riparian buffers will be left unharvested to protect water quality.
- Aesthetic forest management practices will be utilized along roads and high use areas.
- Jamie and Darrin discussed oak wilt being placed on the NR Chp 40 list as a restricted species.

Recreational Management

- Darrin indicated that all FERC required recreational requirements are completed.
- In addition, the Castle Rock Horse trail has been moved from non- project land to project land. WRPCO has a good working relationship with this organization.
- The Van Kuren ski trail has been moved from non-project to project land.
- The Petenwell Boat landing will be repaired in 2013 with the damaged boat plank being replaced.

Shoreline Stabilization

- Annual survey of flowage for erosion, dedicate \$140K per year for stabilization.

- Two areas identified on Petenwell. One is the Town of Monroe Road Project and second is Glacier Point. The work is ongoing and should be completed in March.
- Scott to provide Darrin with pamphlet on woody debris rip rap structures.
- Darrin also reported on the upcoming Phase II High Banks Project to begin next year once funding has been secured. Fish habitat will be incorporated into the design and provided in the permit application.

Shoreline Commons Area

- Darrin provided background on SCA.
- Discussed approval and review of SCA Application process.
- The SCA is inspected twice per year for encroachments. The encroachments have been reduced since 2007, from an average of more than 150 to about 50 a year. In addition, severe encroachments are down significantly from years past.

West Petenwell Ditch Project

- Jennifer provided information on the project, being completed to help control nearby flooding and fish habitat improvement.
- Fish habitat improvement for three mile stretch.
- Project being completed in conjunction with NRCS and Trout Unlimited.
- Project will reduce sediment loading and flooding while providing trout and other aquatic species habitat.
- Project is scheduled for the next two years.
- Shawn indicated that the project sounds like a good project, but please be advised that the ditch is a project facility and subject to FERC rules and regulations and FERC may require WRPCO to modify the ditch in a manner that would not be beneficial to the aquatic habitat in the future.
- Darrin indicated that this is a voluntary project on WRPCO's part and there are no FERC requirements to provide fish habitat within the West Petenwell Ditch.

Castle Rock Seepage Ditch

- Darrin provided an overview on the filling in of approximately 1,700 feet of the Castle Rock drainage ditch, because of boils within the ditch.
- WRPCO will be consulting and obtaining approval from the resource agencies, as necessary.

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 8, 2013

FERC Project No. 1984

Cheryl Laatsch	Nick Utrup
WDNR	USFWS
N7725 Hwy 28	4101 American Boulevard E
Horicon, WI 53032	Bloomington, MN 55425

Dear Ms Laatsch and Mr. Utrup:

RE: Exotic Species Report for the Petenwell and Castle Rock Hydroelectric Project

As per the Order Approving the Revised Invasive Species Monitoring Plan for the Petenwell-Castle Rock Hydroelectric Project (FERC Project No. 1984) issued on July 13, 2005, Wisconsin River Power Company 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 29 and July 31, 2013. The surveys identified a total of twenty (20) purple loosestrife colonies at the project. Eighteen (18) of those were located on the Petenwell Flowage and two (2) were located on the Castle Rock Flowage. This compares to a total of seventeen (17) colonies noted in 2012.

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 twenty (20) colonies noted during the survey, fourteen (14) showed some signs of beetle feeding, but the extent of beetle feeding was less than in past years.

WRPCO released beetles at the Petenwell Flowage on July 8, 2013. Approximately 2000 beetles were released. The beetles were reared in potted purple loosestrife plants. This year's survey indicated that beetle populations on the north side of the Petenwell Flowage have declined significantly. Therefore, beetle releases will be focused in that area in 2014.

The 2013 Petenwell-Castle Rock Project purple loosestrife figure including colony locations, identification numbers and beetle release location is found in Appendix A. The purple loosestrife general plant vigor survey forms are also found in Appendix A.

Eurasian Water Milfoil

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

Zebra Mussels

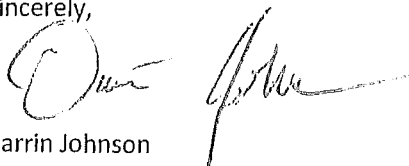
During the 2013 annual resource agency meeting, WRPCO discussed zebra mussel monitoring. According to the Invasive Species Monitoring Plan issued on July 13, 2005, once zebra mussels are present in a flowage, monitoring will discontinue on that flowage. Zebra mussels have been found in both the Petenwell and Castle Rock Flowages for a number of years. Therefore, WRPCO will implement the measures outlined in the FERC approved Invasive Species Monitoring Plan and discontinue monitoring for zebra mussels.

During our annual agency meeting, the Wisconsin Department of Natural Resources (WDNR) requested that WRPCO provide notice to WDNR if high numbers of zebra mussels are found. WRPCO agreed to provide notification to WDNR and the U.S. Fish and Wildlife Service (FWS) if significant changes in the number of zebra mussels are identified during normal operations and maintenance activities.

The 2013 annual resource agency meeting minutes are located in Appendix B.

Please provide any comments you may have regarding this report within thirty (30) days. If you have any questions please feel free to contact me at 715-345-7509.

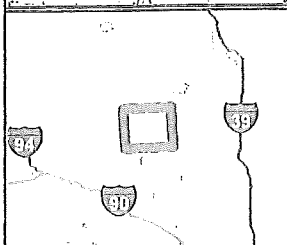
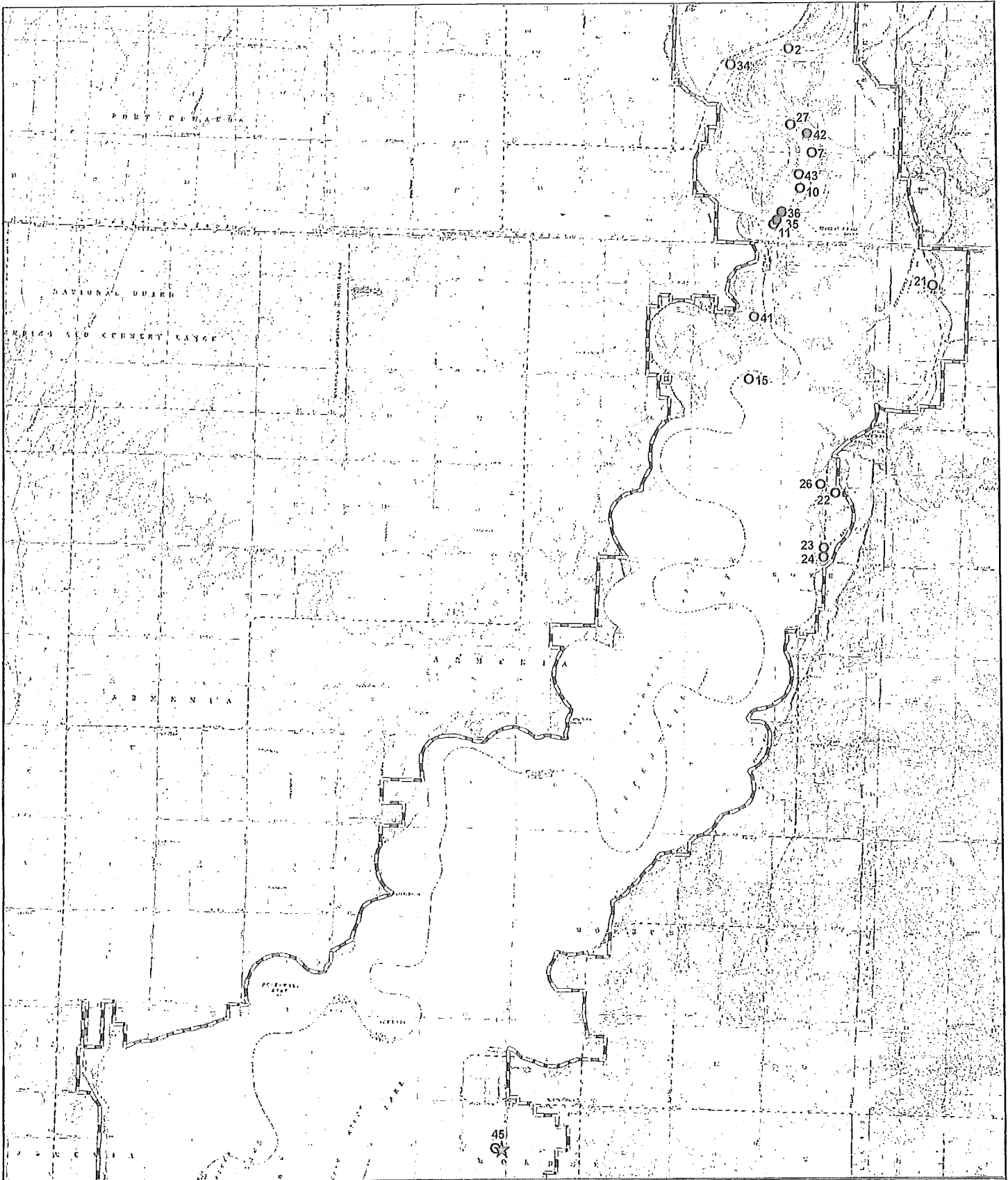
Sincerely,

A handwritten signature in black ink, appearing to read 'Darrin Johnson', written over a faint circular stamp or watermark.

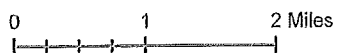
Darrin Johnson
Environmental Consultant






Enc.

Appendix A
2013 Purple Loosestrife Survey Results



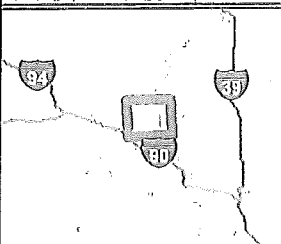
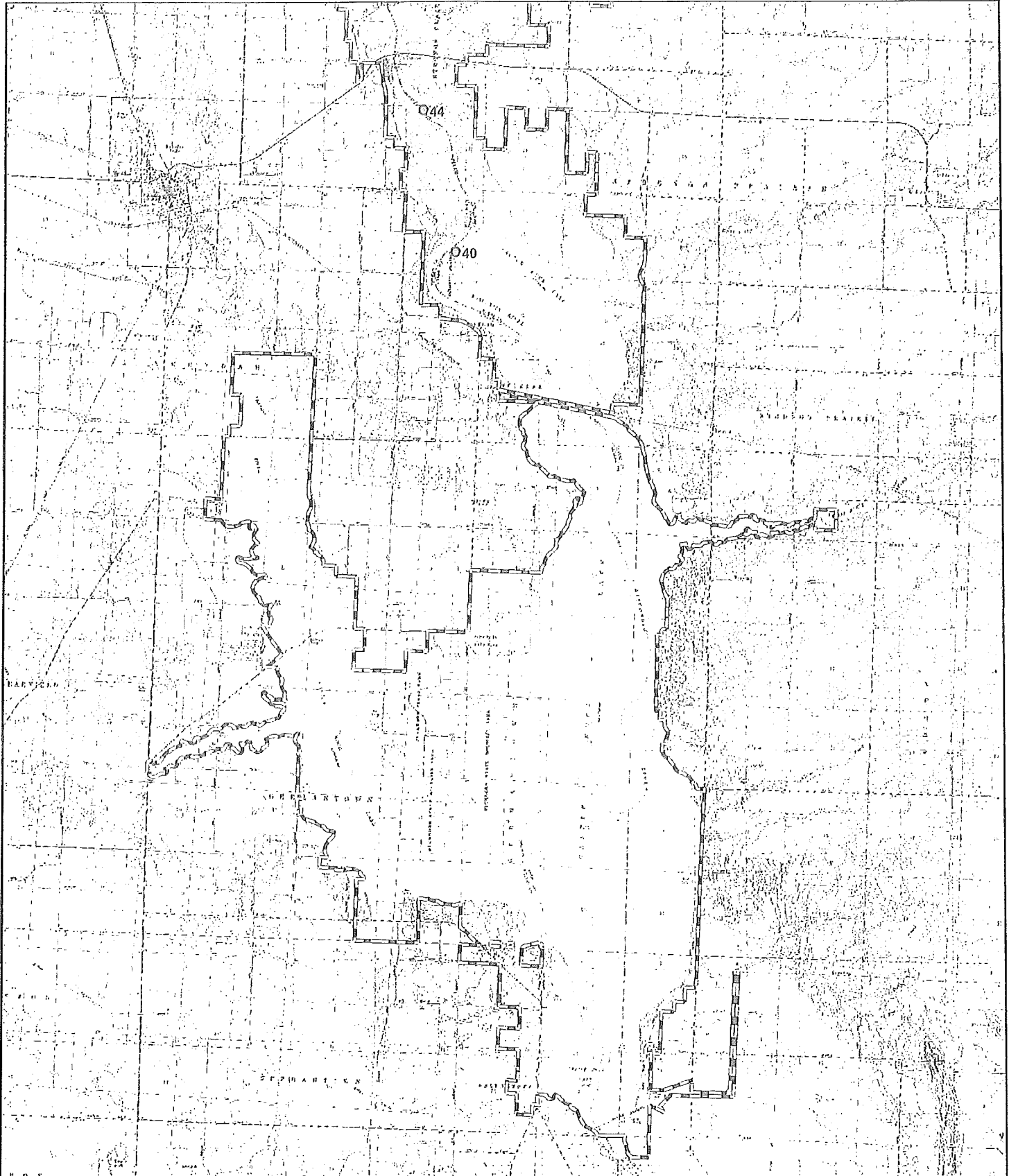
Wisconsin River Power Company Petenwell Flowage 2013 Invasive Plant Survey



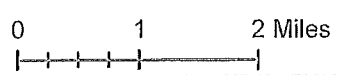
-  Project Boundary
-  Beetle Release Site
- Purple Loosestrife**
-  0-5 Plants
-  6-50 Plants
-  >50 Plants



Date: 11/8/2013



**Wisconsin River Power Company
Castle Rock Flowage
2013 Invasive Plant Survey**



- Project Boundary
- ★ Beetle Release Site
- Purple Loosestrife**
- 0-5 Plants
- 6-50 Plants
- >50 Plants



Date: 11/6/2013

Purple Loosetrife Survey Form

Hydroelectric Project W R P C O
 Inspection Date 7/29 & 7/31 2013

20 sites
 6 No Feeding
 14 with feeding
 18 Pet
 2 CR

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	General Plant Vigor			Total Plant Vigor 10-12=good 7-9=fair 4-6=poor 0-3=very poor	Notes	GPS Point
			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	PLANTS			
1	ND	PLANTS		NOTED				
2	M	2	2	1	5	poor		
3	-	NO	PLANTS	NOTED	-	-		
4	-	ND	PLANTS	NOTED	-	-		
5	-	NO	PLANTS	NOTED	-	-		
6	-	NO	PLANTS	NOTED	-	-		
7	M	3	3	3	9	fair		
8	-	NO	PLANTS	NOTED	-	-		
9	-	NO	PLANTS	NOTED	-	-		
10	M	4	3	3	10	good		
11	M	4	3	3	10	good		

Purple Loosestrife Survey Form

Hydroelectric Project
 Inspection Date

W/ R/ PCO

7/29 8/7/31 2013

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	-	NO	Plants	Noted	-	-	-
13	-	NO	Plants	Noted	-	-	-
14	-	NO	Plants	Noted	-	-	-
15	M	4	3	3	10	good	
16	-	NO	Plants	Noted	-	-	-
17	-	NO	Plants	Noted	-	-	-
18	-	NO	Plants	Noted	-	-	-
19	-	NO	Plants	Noted	-	-	-
20	-	NO	Plants	Noted	-	-	-
21	S	4	4	1	9	fair	
22	M	4	4	1	9	fair	

Purple Loosestrife Survey Form

Hydroelectric Project

Inspection Date

WAPCO

7/29/13 & 7/31/13

Colony Number	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=1-2 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			
23	S	4	4	4	12	NO	Feeding
24	S	4	4	4	12	NO	Feeding
25	-	NO	Plants	Noted	-	-	-
26	M	4	3	1	8	fair	
27	M	4	3	3	10	good	
28	-	NO	Plants	Noted	-	-	-
29	-	NO	Plants	Noted	-	-	-
30	-	No	Plants	Noted	-	-	-
31	-	No	Plants	Noted	-	-	-
32	-	No	Plants	Noted	-	-	-
33	-	No	Plants	Noted	-	-	-

Purple Loosestrife Survey Form

Hydroelectric Project

Inspection Date

WADPCO

7/29/13 & 7/29/13

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	M	3	3	1	7	Fair	
35	L	4	3	3	10	good	
36	L	4	3	3	10	good	
37	-	NO	Plants	noted	-	-	-
38	-	NO	Plants	Noted	-	-	-
39	-	NO	Plants	Noted	-	-	-
40	S	4	4	4	12	NO feeding	
41	S	4	4	4	12	NO feeding	
42	L	4	3	2	9	Fair	
43	M	4	3	3	10	good	
44	S	4	4	4	12	NO feeding	

Appendix B
2013 Annual Resource Agency Meeting Minutes

2013 WRPCO Annual Agency Meeting Minutes

DATE: 03-12-2013

LOCATION: WRPCO Petenwell Office/Conference Call

PARTICIPANTS:

In Attendance: Scott Provost, DNR; Darrin Johnson, WRPCO; Joe Sukana, WRPCO; Jeff Klaas, WRPCO; Jennifer Bergman, DNR

Conference Call: Jamie Nuthals, WRPCO; Shawn Puzen, WRPCO; Nick Utrup, FWS; Cheryl Laatsch, WDNR; Bill Bosacki, WRPCO

Petenwell & Castle Rock Hydroelectric Projects

Introductions

FERC Overview

-Darrin J. provided an overview of FERC plans for WRPCO

Adaptive Management Plan Steering Committee Meeting

Members: Darrin Johnson –Chair, Shawn Puzen, Jeff Klaas, Bill Bosacki, Scott Provost, Cheryl Laatsch, Nick Utrup and Jennifer Begrman (To replace Justin Hasz).

- Darrin J. provided background on AMP, how it was developed during licensing to address items not worked out in the licensing process. The current project to delay the annual winter drawdown to reduce the amount of time that vegetation is dewatered and potentially frozen to attempt to stimulate aquatic vegetation growth. Darrin had provided information on Year 4 of the 5 year study. Aquatic vegetation has increased.
- WRPCO is looking at a 3.5 foot drawdown this year for anticipated spring runoff. WRPCO only draws down the reservoir as much as needed for anticipated spring runoff. The reservoir should be at its lowest level by March 22nd.
- Scott indicated that there is a direct correlation between an increase in aquatic vegetation and how long the vegetation can remain dewatered.
- After the end of the 5 year study stakeholders will meet and determine if the current activities are working or should be discontinued with FERC making the final decision.

2012 Activities:

- Scott P. - 25 plots were surveyed; recorded depth, plant species and density. Compared changes in density from previous surveys. Since 2010, there has been an overall increase in plant growth and habitat and less blue/green algae.

- Some plots showed no change, but that was due to bad substrate or high flow areas. This is a good Public Relations project.
- In addition to the AMP project, WRPCO worked with the PACRS citizen's organization to conduct a voluntary aquatic vegetation planting project in 2012.

Wildlife Management and Threatened & Endangered Species

1. Eagle/Osprey

- MOA in progress; should be in place prior to 2013 payment cycle.
- **2012 Survey Results**
Petenwell -3 bald eagle and 17 osprey nest observed.
Castle Rock – 2 bald eagle and 7 osprey nests observed.

2. Karner Blue Butterfly

- Darrin J – Timber management areas observed for upcoming timber events were necessary.

3. Disabled Hunt

- 4th year of hunt.
- 7 hunters harvested 7 deer (6 out of 7 harvested deer).
- Handicap accessible stands were created by Holly Cross School and Necedah High School.
- WRPCO is planning to close the Petenwell Wildlife Area (PWA) to bow hunters in 2013. Bow hunting was only allowed in a portion of the PWA (on a year to year basis) to prevent overpopulation of deer in the area. The area was set aside during relicensing to provide a refuge area for migratory waterfowl. The current disabled hunt allows WRPCO to keep the deer population in check. All other WRPCO lands are open to all public hunting.

Exotic Species (Zebra Mussels/Purple Loosestrife/EWM)

- Darrin provided update on purple loosestrife (PL). Majority of PL sites have beetle feeding. One site on northern end had less feeding, as flooding in 2010 most likely killed beetles. But they appear to be coming back.
- Scott P – Good, other parts of Wisconsin River lost beetles and they have not come back.
- Eurasian watermilfoil (EWM) -2013 results, no EWM at survey locations, however EWM observed in Petenwell.
- Darrin – indicated zebra mussels observed again in 2012. Per the FERC license, WRPCO will discontinue monitoring of zebra mussels.
- Scott –Can WRPCO still provide updates to WDNR if high number of zebra mussels is observed?

- Darrin- Yes, WRPCO will inform DNR if significant changes in zebra mussel populations are noted during routine operations.

2013 Planned Timber Management Activities

- There are four (4) proposed harvest areas for 2013.
- DNR oak wilt harvesting guidelines will be followed for all harvests with a potential to spread oak wilt.
- Pine stands will be treated for annosum root rot per current DNR recommendations at the time of harvest.
- All harvest areas will be surveyed for KBB presence/absence per the KBB HCP guidelines.
- A search of the NHI database for potential threatened and endangered species will be done for each harvest area, and harvests will be adjusted to ensure no adverse impacts to sensitive species occur.
- Phase I archaeological surveys will take place on all harvest areas not already surveyed.
- Snag, den, and super-canopy trees will be left unharvested to provide wildlife habitat.
- Riparian buffers will be left unharvested to protect water quality.
- Aesthetic forest management practices will be utilized along roads and high use areas.
- Jamie and Darrin discussed oak wilt being placed on the NR Chp 40 list as a restricted species.

Recreational Management

- Darrin indicated that all FERC required recreational requirements are completed.
- In addition, the Castle Rock Horse trail has been moved from non- project land to project land. WRPCO has a good working relationship with this organization.
- The Van Kuren ski trail has been moved from non-project to project land.
- The Petenwell Boat landing will be repaired in 2013 with the damaged boat plank being replaced.

Shoreline Stabilization

- Annual survey of flowage for erosion, dedicate \$140K per year for stabilization.

- Two areas identified on Petenwell. One is the Town of Monroe Road Project and second is Glacier Point. The work is ongoing and should be completed in March.
- Scott to provide Darrin with pamphlet on woody debris rip rap structures.
- Darrin also reported on the upcoming Phase II High Banks Project to begin next year once funding has been secured. Fish habitat will be incorporated into the design and provided in the permit application.

Shoreline Commons Area

- Darrin provided background on SCA.
- Discussed approval and review of SCA Application process.
- The SCA is inspected twice per year for encroachments. The encroachments have been reduced since 2007, from an average of more than 150 to about 50 a year. In addition, severe encroachments are down significantly from years past.

West Petenwell Ditch Project

- Jennifer provided information on the project, being completed to help control nearby flooding and fish habitat improvement.
- Fish habitat improvement for three mile stretch.
- Project being completed in conjunction with NRCS and Trout Unlimited.
- Project will reduce sediment loading and flooding while providing trout and other aquatic species habitat.
- Project is scheduled for the next two years.
- Shawn indicated that the project sounds like a good project, but please be advised that the ditch is a project facility and subject to FERC rules and regulations and FERC may require WRPCO to modify the ditch in a manner that would not be beneficial to the aquatic habitat in the future.
- Darrin indicated that this is a voluntary project on WRPCO's part and there are no FERC requirements to provide fish habitat within the West Petenwell Ditch.

Castle Rock Seepage Ditch

- Darrin provided an overview on the filling in of approximately 1,700 feet of the Castle Rock drainage ditch, because of boils within the ditch.
- WRPCO will be consulting and obtaining approval from the resource agencies, as necessary.

WDNR Comments

Johnson, Darrin M

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>
Sent: Wednesday, November 20, 2013 9:34 AM
To: Johnson, Darrin M
Subject: DNR Comments, WRPCO Invasives Report-FERC Project No 1984

FERC No. 1984 (WRPCO). Purple Loosestrife beetles have declined so releasing more *Glacurella* spp. beetles would be appropriate in 2014 as WRPCO recommends. One more colony of Purple Loosestrife (PL) found this year so no net decrease in colony numbers. Continue monitoring and raise beetles. They may need to employ other tools if beetles cannot survive water level fluctuations. Adams County Land and Water Conservation Department may be able to assist with beetle rearing.

This report is also a good example of integration into the SWIMS database for data collection and tracking. I would like to see the facility trained on using the SWIMS data entry forms for AIS and use the SWIMS database as a means to track future monitoring of the populations in the extent of their project areas. I would like to see each population GPS's and tracked yearly with indications of management actions taken in future year's reports and this information also transferred into the SWIMS database. It would also be great if they could provide information on observations of any other non-native invasive species and use already established DNR forms to track all other species observations.

Please let us know if you any questions. Thanks

Cheryl Laatsch
Statewide FERC Coordinator
Wisconsin Dept of Natural Resources
N7725 Hwy 28
Horicon WI 53032
(T) 920-387-7869 (Fax) 920-387-7888
Cheryl.laatsch@wisconsin.gov

From: Johnson, Darrin M [<mailto:DMJohnson@integrysgroup.com>]
Sent: Friday, November 08, 2013 2:44 PM
To: Laatsch, Cheryl - DNR; Nick Utrup (nick_utrup@fws.gov)
Subject: WRPCO Invasives Report-FERC Project No 1984

Please see the attached invasive species report for the Petenwell and Castle Rock Reservoirs for 2013. If you have any questions, feel free to contact me.

Darrin M. Johnson
Environmental Consultant | Environmental Services | Integrys Business Support, LLC
715-345-7509
715-697-3130 *cell*

WDNR Comments on the Petenwell and Castle Rock Hydroelectric Project (P-1984) Invasive Species Monitoring Report

DNR Comment: Purple Loosestrife beetles have declined so releasing more *Glacurella* spp. beetles would be appropriate in 2014 as WRPCO recommends.

WRPCO Response: Comment noted.

DNR Comment: One more colony of Purple Loosestrife (PL) found this year so no net decrease in colony numbers. Continue monitoring and raise beetles.

WRPCO Response: Comment noted.

WDNR Comment: They may need to employ other tools if beetles cannot survive water level fluctuations.

WRPCO Response: Per the *Order Amending Purple Loosestrife Control Measures in Approved Monitoring Plan* issued on July 9, 2009, WRPCO will evaluate the success of beetle releases after at least 5 years (beginning in 2010) of using beetles as a biological control measure at the project. Beetle populations fluctuate, and one year of declining beetle populations in a portion of the project does not necessarily indicate that biological control is not an effective control measure. WRPCO has seen significant declines in the amount of loosestrife both in size of populations as well as overall colony numbers, and a reduction in overall plant vigor since the biocontrol efforts began.

DNR Comment: Adams County Land and Water Conservation Department may be able to assist with beetle rearing.

WRPCO Comment: WRPCO has worked with Adams County, the Tri-lakes Lake District, and the Central Wisconsin Nature Foundation in the past to assist with beetle rearing in the area. WRPCO will continue to work in cooperation with local groups interested in participating in biocontrol efforts.

DNR Comment: This report is also a good example of integration into the SWIMS database for data collection and tracking. I would like to see the facility trained on using the SWIMS data entry forms for AIS and use the SWIMS database as a means to track future monitoring of the populations in the extent of their project areas.

WRPCO Response: WRPCO will continue to provide the WDNR invasive species plant information as outlined in Article 408. The Surface Water Integrated Monitoring System (SWIMS) is a WDNR data system. The WDNR can choose to include this data into the SWIMS database as they see fit.

WDNR Comment: I would like to see each population GPS's and tracked yearly with indications of management actions taken in future year's reports and this information also transferred into the SWIMS database.

WRPCO Response: WRPCO will provide GPS locations of purple loosestrife colonies in future reports. WRPCO already provides a summary of management actions taken in the annual report and will

continue to do so. The Surface Water Integrated Monitoring System (SWIMS) is a WDNR data system. The WDNR can choose to include this data into the SWIMS database as they see fit.

WDNR Comment: It would also be great if they could provide information on observations of any other non-native invasive species and use already established DNR forms to track all other species observations.

WRPCO Response: WRPCO will continue to provide the WDNR invasive species plant information as outlined in Article 408.

WNR Comment: Please let me know if you have any other questions. Thanks.

WRPCO Response: Comment noted.

Document Content(s)

20131211 WRPCO Invasive Species Report.PDF.....1-2

20131211 WRPCO Invasive Report app a.PDF.....3-10

20131211 WRPCO invasive Report App B.PDF.....11-15

20131211 WRPCO Invasive Report app C.PDF.....16-35