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Web Site: www.wvic.com Email: staff@wvic.com

December 28, 2012

The Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426
eFiled FERC Online 12/28/2012

RE: WVIC Project 2113; Purple Loosestrife Control Plan – 2012 Annual Monitoring Report

In accordance with the Federal Energy Regulatory Commission (FERC) "Order Amending Purple Loosestrife Control Plan" (Order) issued June 16, 2009, Wisconsin Valley Improvement Company (WVIC) herewith submits the Purple Loosestrife Control Plan - 2012 Annual Monitoring Report (Attachment 1).

In compliance with the Order, page 5, (B), the Report includes: 1) annual monitoring results identifying locations and abundance of purple loosestrife..., 2) information and/or results identifying the distribution and effectiveness of *Galerucella sp.* beetles ..., and 4) the Proposed Purple Loosestrife and Beetle Monitoring Plan for 2013 (management options that will be used in 2013). Management options that were followed in 2012 were presented in the 2011 annual report (...Monitoring Plan for 2011). Documentation of comments or recommendations from the U.S. Fish and Wildlife Service (USFWS) and Wisconsin DNR (WDNR) are included in Attachment 2, as required in the Order, page 5, (B) 3) as discussed below.

WVIC submitted the 2012 annual monitoring report and the proposed monitoring plan for 2013 to the WDNR and USFWS for review and comment via email on November 28, 2012. The same day, the USFWS notified WVIC that they would not be providing any comments. Kevin Gauthier, WDNR Lakes Management Coordinator, responded via email December 10, 2012 with two comments, the first regarding purple loosestrife seed viability and the other addressing the need to quantify the beetle population. The same day, WVIC addressed the comments via email and scheduled a follow-up conference call. All email correspondence is included in Attachment 2. The conference call between WVIC and WDNR was held on December 13, 2012. A summary of the conference call is also included in Attachment 2. WVIC modified the draft 2012 annual monitoring report to include a pilot study in the proposed 2013 monitoring plan as recommended by the WDNR. The modified 2012 Purple Loosestrife Annual Monitoring Report is herewith submitted.

Sincerely,

Cathy J. Wendt
Director of Environmental Affairs

Enclosures:
Attachment 1: WVIC Purple Loosestrife Annual Monitoring Report – 2012.
Attachment 2: Documentation of agency consultation and correspondence.

Cc: Pat Grant, Environmental Protection Specialist, FERC, Room 3130, 230 South Dearborn Street, Chicago, IL 60604

Attachment 1

Wisconsin Valley Improvement Company

Purple Loosestrife Annual Monitoring Report – 2012

December 28, 2012

Wisconsin Valley Improvement Company

Purple Loosestrife Annual Monitoring Report – 2012

December 28, 2012

Introduction

In compliance with Wisconsin Valley Improvement Company's (WVIC) 1996 FERC license (Project No. 2113), the purple loosestrife control program became a part of WVIC's FERC approved 1997 Fish and Wildlife Management Plan (Article 413). The Fish and Wildlife Management Plan was updated in 2001, 2006 and 2011 in accordance with a five-year update requirement in WVIC's FERC license. WVIC drafted a Modified Purple Loosestrife Control Plan in November 2008. The purpose of the Modified Plan was to terminate and/or phase out chemical control of loosestrife and implement biological control with *Galerucella sp.* beetles. The Plan was sent to Wisconsin DNR (WDNR) and US Fish and Wildlife Service (USFWS) for review and comment. Comments were received from WDNR and incorporated into the Plan. The Plan was sent to FERC November 26, 2008 as an amendment request to WVIC's Fish and Wildlife Management Plan. FERC issued an Order Amending the Plan June 16, 2009 and approved the Plan with minor reporting modifications.

This report represents the fourth in a series of five annual Purple Loosestrife Monitoring Reports required in the June 16, 2009 FERC Order.

2012 Field Monitoring Results

Willow Reservoir - On July 31, 2012 WVIC monitored the area of Willow Reservoir where loosestrife has historically occurred. Reservoir elevation was 1525.74 ft NGVD (3.61 ft. below full). The area was accessed by boat and then surveyed by walking the islands and exposed shoreline and counting both immature and mature plants. GPS readings were taken every 100 ft where plants were observed. Loosestrife relative abundance was recorded as A (1-5 plants), B (6-50 plants), or C (50+ plants). Figure 1 is a distribution and relative abundance map of recorded locations in 2012 and Table 1 lists GPS coordinates for each observation.

Distribution of loosestrife in 2012 was limited to the general area of small islands in the southeastern most portion of the reservoir where loosestrife was first observed in 1997 and has been observed annually since. In addition to the islands several small beds were observed on the adjacent shoreline where loosestrife had not been observed since 2008. After declining for the previous two years, relative abundance of loosestrife beds with 6-50 plants and dense beds with 50+ plants increased to levels similar to 2008. One dense bed was observed both years, six beds with 6-50 plants in 2008 and five beds (6-50 plants) in 2012. The number of beds observed with 1-5 plants tends to vary annually depending on specific water levels and growing conditions with nine beds (1-5 plants) observed in 2012. The general increase in loosestrife abundance and distribution in 2012 could be attributed to the favorable growing conditions for the existing seed bank. Timely rains throughout spring and early summer would have produced favorable germinating conditions for the seeds that remain viable for up to 7 years after production. Loosestrife was not observed outside of its historic range at Willow.

Galerucella sp. beetles have not been observed at Willow Reservoir to date although they are present in the Tripoli area to the southwest, Rice Reservoir to the southeast and the Minocqua Reservoir system to the northeast, all within 10-12 miles of Willow. It is unlikely that the low relative abundance of loosestrife would support a sustained beetle population.

Rice Reservoir – On July 24, 31, and August 1, 2012 WVIC monitored the portions of Rice Reservoir where loosestrife has historically occurred. Reservoir elevation went from 1460.50 ft. to 1459.99 NGVD (2.75 to 3.26 ft below full) during the monitoring period. The general areas were accessed by boat and by walking the exposed shoreline and counting both immature and mature plants.

Relative abundance and distribution of loosestrife and *Galerucella sp*. beetle distribution was recorded with GPS. Figure 2 is a distribution map of recorded loosestrife and beetle activity locations in 2012 and Table 2 lists GPS coordinates for each observation.

After a 50% decline in 2011, purple loosestrife distribution increased to similar levels found in 2010. Several locations where loosestrife was absent in 2011 saw a reoccurrence in 2012. Relative abundance was comparable to 2010 with 108 beds observed in 2010 and 103 beds in 2012. Dense loosestrife beds of 50+ plants increased from 14 beds in 2010 to 16 beds (50+ plants) in 2012. The greatest increase in relative abundance was loosestrife beds with 6-50 plants from 39 beds in 2010 up to 51 beds (6-50 plants) in 2012. Conversely beds with 1-5 plants decreased from 55 beds in 2010 to 36 beds (1-5 plants) in 2012. As discussed in earlier annual reports, many plants that that had migrated outward from shore during the drought years were flooded in 2011. In 2012 reservoir levels were one to two feet lower exposing additional shoreline area. This combined with favorable growing conditions promoted germination of the seed bank on the exposed shoreline. Loosestrife was not observed outside of its historic range at Rice.

Galerucella sp. beetle activity was observed at thirteen loosestrife beds in 2012. The number of beds with observed beetles has increased annually since first being confirmed in two beds at Rice Reservoir in 2009. Adult beetles were observed in all thirteen beds with larvae also being present in one bed. Significant leaf and stem damage characteristic of *Galerucella sp*. beetles was also observed in each of the beds. Seven of the dense beds of 50+ plants are now inhabited by beetles. The remaining six beds with beetles present contain 6-50 plants and are in close proximity to dense beds. Since this is only the fourth year beetles have inhabited Rice Reservoir, their effectiveness in controlling loosestrife at this point has been limited but appears to be promising since they have already expanded to three separate areas within the reservoir (Figure 2). Continued monitoring will determine their ultimate effectiveness and ability to expand naturally.

Spirit Reservoir – On July 31, 2012 WVIC monitored the portion of Spirit Reservoir where loosestrife has historically occurred. Reservoir elevation was 1434.22 ft. NGVD (3.66 ft below full).The general areas were accessed by boat and by walking the exposed shoreline/causeway and counting both immature and mature plants. Relative abundance and distribution of loosestrife was recorded with GPS. No *Galerucella sp*. beetles were observed in 2012. Figure 3 is a distribution map of recorded loosestrife locations in 2012 and Table 3 lists GPS coordinates for each observation.

Distribution of loosestrife in 2012 (Figure 3) remained confined to the Highway 86 bay and similar to previous years. Relative abundance of dense loosestrife beds (50+ plants) increased to two dense beds with only one dense bed being reported the previous three years. Overall relative abundance of less dense beds was identical to 2011 with twenty-one beds reported both years but five had increased in density from 0-5 plants to 6-50 plants. Similar to the other reservoirs, optimal germinating conditions may have attributed to the increased number of loosestrife plants observed in 2012. Loosestrife was not observed outside of its historic range at Spirit.

The same area on Spirit where beetles were previously observed was being chemically treated by a riparian landowner who approached us while monitoring. He indicated he had been cutting and spraying the loosestrife since he recently acquired the property. This was the only property where adult *Galerucella sp*. beetle activity had been observed in 2011. The other location (a small island) where beetles were observed in 2010 continues to be void of loosestrife. Beetles have now inhabited Spirit Reservoir for three of the last five years in the same area they were first observed in 2008. The reason for their absence in 2012 is unknown but could be due to the landowner chemically treating the same area previously inhabited

by beetles. Their effectiveness in controlling loosestrife at this point has been limited pending further expansion/distribution of the beetle population to other parts of the bay where loosestrife is present. Continued monitoring will determine their ultimate effectiveness.

Proposed Purple Loosestrife and Beetle Monitoring Plan for 2013

Results from 2012 monitoring indicate a general increase in relative abundance of purple loosestrife at Willow, Rice and Spirit reservoirs compared to 2011. The increase can likely be attributed to more exposed shoreline area with all three reservoirs being one to two feet lower in elevation in combination with an extended growing season from a record early spring followed by timely precipitation and continued warm temperatures. The decline reported in 2011 appeared to be related to higher water levels during the mid-2010 and entire 2011 growing seasons that flooded many of the loosestrife plants that had migrated outward from the shoreline during the preceding years of low water levels. In 2012 these shoreline areas were again exposed and the accumulated seed bank had optimal conditions for germination.

Based on the natural expansion of the beetle population at Rice Reservoirs, introductions of additional beetles are not being proposed for 2013. Although no beetles were observed at Spirit in 2012 they are most likely still present in the area. If none are observed in 2013 reintroduction will be addressed in the five-year monitoring report. Although the relative abundance of loosestrife at Willow Reservoir increased in 2012, it is likely still too low to support a sustained beetle population but introducing a small number of beetles may be worth considering if loosestrife abundance continues to increase.

WVIC proposes to repeat the same monitoring survey at the three reservoirs (Willow, Rice and Spirit) during late-July or early-August in 2013 to document loosestrife distribution and abundance along with documenting any continued immigration and distribution of *Galerucella sp*. beetles. In addition to presence and absence monitoring, WVIC will initiate a pilot study to test monitoring protocol designed to provide a quantitative assessment of G*alerucella sp*. beetle populations. The pilot study will use existing monitoring methods tailored to the unique conditions found on WVIC reservoirs in an attempt to determine the impact beetles are having on purple loosestrife densities and distribution.

WVIC will submit the 2013 results in the five year monitoring report to WDNR and USFWS for review and comment. This report will also include WVIC's proposals for future monitoring and management options. After consultation with the agencies, WVIC will submit the five-year monitoring report to FERC by December 31, 2013 in compliance with the June 16, 2009 FERC Order.

Figure 1

Table 1

Purple Loosestrife Survey - 2012					
Willow Reservoir					
Number	**Latitude**		**Longitude**	**Amount**	**Beetle Activity**
1	45°	41.41405	89° 50.45485	1-5 Plants	
2	45°	41.32794	89° 50.46003	50+ Plants	
3	45°	41.34448	89° 50.44978	6-50 Plants	
4	45°	41.36135	89° 50.43072	6-50 Plants	
5	45°	41.27464	89° 50.33198	1-5 Plants	
6	45°	41.40041	89° 50.43413	6-50 Plants	
7	45°	41.30456	89° 50.46978	6-50 Plants	
8	45°	41.28887	89° 50.48624	1-5 Plants	
9	45°	41.26923	89° 50.44737	1-5 Plants	
10	45°	41.16216	89° 50.44278	6-50 Plants	
11	45°	41.21448	89° 50.41639	1-5 Plants	
12	45°	41.18980	89° 50.40525	1-5 Plants	
13	45°	41.14552	89° 50.41580	1-5 Plants	
14	45°	41.22381	89° 50.38153	1-5 Plants	
15	45°	41.33398	89° 50.29263	1-5 Plants	

Figure 2

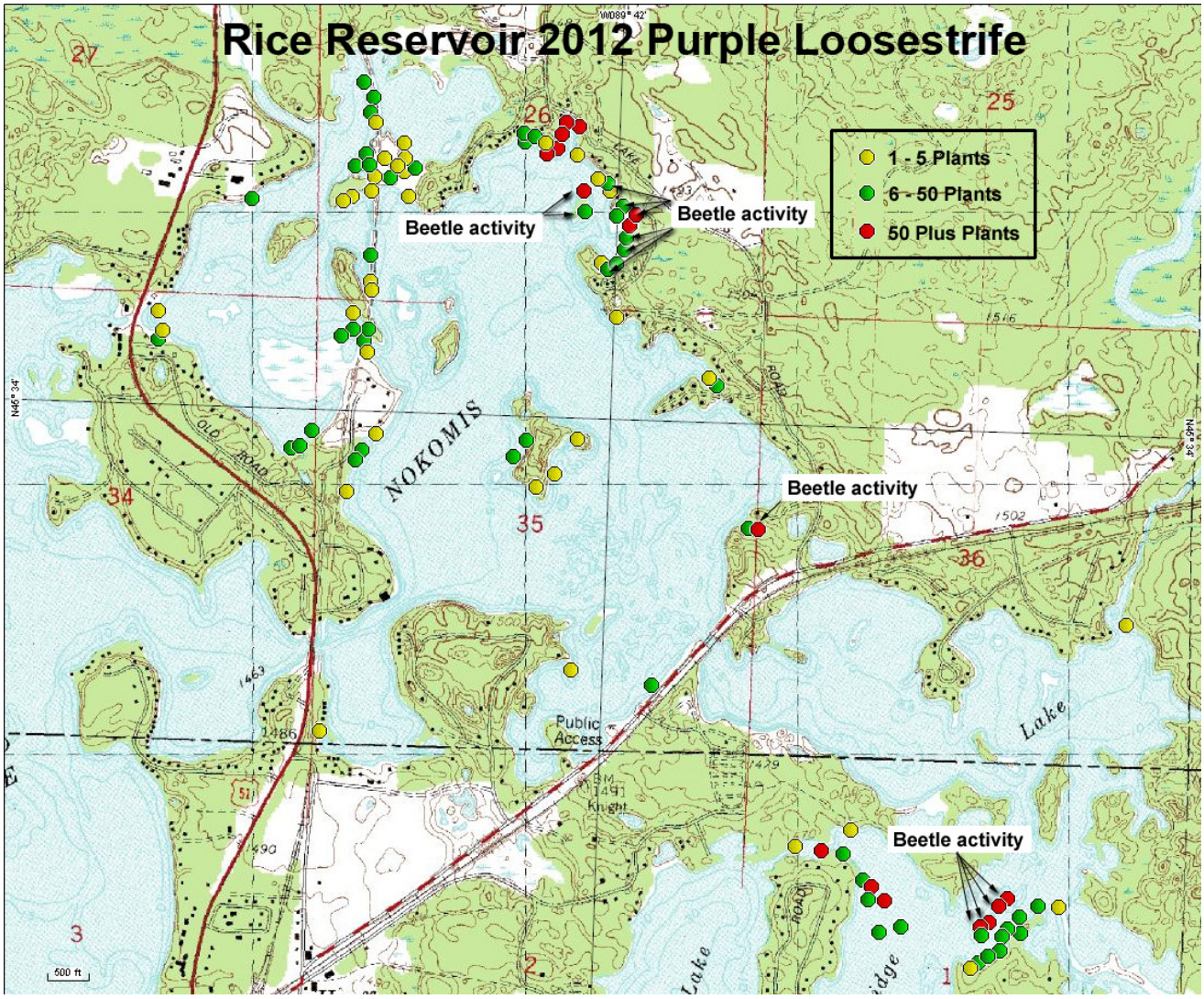

Table 2

Purple Loosestrife Survey - 2012				
Rice Reservoir				
Number	**Latitude**	**Longitude**	**Amount**	**Beetle Activity**
1	45° 33.47582	89° 41.85777	6-50 Plants	
2	45° 33.79278	89° 41.59996	6-50 Plants	
3	45° 33.79214	89° 41.57155	50+ Plants	yes
4	45° 34.07214	89° 41.70336	6-50 Plants	
5	45° 34.08674	89° 41.72402	1-5 Plants	
6	45° 34.20204	89° 41.99171	1-5 Plants	
7	45° 33.95841	89° 42.09074	1-5 Plants	
8	45° 33.88726	89° 42.15140	1-5 Plants	
9	45° 33.85944	89° 42.20323	1-5 Plants	
10	45° 33.92026	89° 42.27094	6-50 Plants	
11	45° 33.95251	89° 42.23423	6-50 Plants	
12	45° 34.30840	89° 42.04077	1-5 Plants	
13	45° 34.29768	89° 42.02094	6-50 Plants	yes
14	45° 34.30857	89° 41.99644	6-50 Plants	
15	45° 34.33659	89° 41.97608	6-50 Plants	yes
16	45° 34.36101	89° 41.97334	6-50 Plants	yes
17	45° 34.38490	89° 41.96377	50+ Plants	
18	45° 34.40660	89° 41.94685	50+ Plants	yes
19	45° 34.42223	89° 41.98324	6-50 Plants	yes
20	45° 34.40245	89° 42.00252	6-50 Plants	
21	45° 34.40981	89° 42.09240	6-50 Plants	yes
22	45° 34.44985	89° 42.09602	50+ Plants	yes
23	45° 34.45201	89° 42.02144	1-5 Plants	
24	45° 34.46763	89° 42.02980	6-50 Plants	yes
25	45° 34.47578	89° 42.05655	1-5 Plants	
26	45° 34.52133	89° 42.11832	1-5 Plants	
27	45° 34.57859	89° 42.11560	50+ Plants	
28	45° 34.58502	89° 42.15353	50+ Plants	
29	45° 34.53197	89° 42.17314	6-50 Plants	
30	45° 34.53210	89° 42.17313	50+ Plants	
31	45° 34.52182	89° 42.20374	50+ Plants	
32	45° 34.13706	89° 42.70233	6-50 Plants	
33	45° 34.16287	89° 42.69217	6-50 Plants	
34	45° 34.11768	89° 42.69290	1-5 Plants	
35	45° 33.95480	89° 42.66084	1-5 Plants	

Table 2 (cont.)

Purple Loosestrife Survey - 2012				
Rice Reservoir				
Number	**Latitude**	**Longitude**	**Amount**	**Beetle Activity**
36	45° 33.92305	89° 42.69893	6-50 Plants	
37	45° 33.90140	89° 42.71504	6-50 Plants	
38	45° 33.49956	89° 42.08647	1-5 Plants	
39	45° 34.47672	89° 42.60617	1-5 Plants	
40	45° 34.48457	89° 42.57344	6-50 Plants	
41	45° 34.42904	89° 42.58978	1-5 Plants	
42	45° 34.46437	89° 42.64606	6-50 Plants	
43	45° 34.46477	89° 42.68774	1-5 Plants	
44	45° 34.62173	89° 42.69849	6-50 Plants	
45	45° 34.42363	89° 42.74940	1-5 Plants	
46	45° 34.41476	89° 42.77529	1-5 Plants	
47	45° 34.48512	89° 42.74434	6-50 Plants	
48	45° 34.41269	89° 43.03148	6-50 Plants	
49	45° 34.18405	89° 43.28568	1-5 Plants	
50	45° 33.92082	89° 42.89964	6-50 Plants	
51	45° 33.92579	89° 42.87471	6-50 Plants	
52	45° 33.95727	89° 42.84149	6-50 Plants	
53	45° 34.16072	89° 42.73338	6-50 Plants	
54	45° 34.19375	89° 42.73753	1-5 Plants	
55	45° 34.14720	89° 42.76717	6-50 Plants	
56	45° 34.30877	89° 42.69122	6-50 Plants	
57	45° 33.62566	89° 40.52446	1-5 Plants	
58	45° 33.07544	89° 40.83329	50+ Plants	yes
59	45° 33.06003	89° 40.85901	50+ Plants	yes
60	45° 33.02735	89° 40.88492	50+ Plants	yes
61	45° 33.01762	89° 40.90812	50+ Plants	yes
62	45° 33.00029	89° 40.90527	6-50 Plants	
63	45° 32.94746	89° 40.90989	6-50 Plants	
64	45° 32.93491	89° 40.93174	1-5 Plants	
65	45° 33.16490	89° 41.43708	1-5 Plants	
66	45° 33.20085	89° 41.28404	1-5 Plants	
67	45° 34.25665	89° 42.68925	1-5 Plants	
68	45° 34.12945	89° 43.28407	6-50 Plants	
69	45° 34.14689	89° 43.27368	1-5 Plants	

Table 2 (cont.)

Purple Loosestrife Survey - 2012				
Rice Reservoir				
Number	**Latitude**	**Longitude**	**Amount**	**Beetle Activity**
70	45° 34.65052	89° 42.72737	6-50 Plants	
71	45° 34.59057	89° 42.70758	6-50 Plants	
72	45° 34.57233	89° 42.6894	1-5 Plants	
73	45° 34.50840	89° 42.71317	6-50 Plants	
74	45° 34.48731	89° 42.70354	6-50 Plants	
75	45° 34.43694	89° 42.69438	1-5 Plants	
76	45° 34.50317	89° 42.60368	1-5 Plants	
77	45° 34.53443	89° 42.60861	1-5 Plants	
78	45° 34.50255	89° 42.6617	1-5 Plants	
79	45° 34.48801	89° 42.62309	1-5 Plants	
80	45° 33.36168	89° 42.79042	1-5 Plants	
81	45° 33.83916	89° 42.73616	1-5 Plants	
82	45° 34.54306	89° 42.2674	6-50 Plants	
83	45° 34.56033	89° 42.2721	6-50 Plants	
84	45° 34.55415	89° 42.23891	6-50 Plants	
85	45° 34.54368	89° 42.20932	1-5 Plants	
86	45° 34.56152	89° 42.16203	50+ Plants	
87	45° 34.24090	89° 42.68656	1-5 Plants	
88	45° 33.06160	89° 40.68823	1-5 Plants	
89	45° 33.04076	89° 40.79952	6-50 Plants	
90	45° 33.06206	89° 40.7486	6-50 Plants	
91	45° 33.15972	89° 41.36452	50+ Plants	
92	45° 33.15375	89° 41.30304	6-50 Plants	
93	45° 33.10218	89° 41.2434	6-50 Plants	
94	45° 33.01284	89° 41.13389	6-50 Plants	
95	45° 33.06460	89° 41.18073	50+ Plants	
96	45° 33.09187	89° 41.21821	50+ Plants	
97	45° 33.06555	89° 41.22621	6-50 Plants	
98	45° 33.00116	89° 41.19275	6-50 Plants	
99	45° 33.00888	89° 40.79392	6-50 Plants	
100	45° 33.01663	89° 40.83283	6-50 Plants	
101	45° 33.00075	89° 40.84756	6-50 Plants	
102	45° 32.97278	89° 40.85258	6-50 Plants	
103	45° 32.95987	89° 40.88415	6-50 Plants	

Figure 3

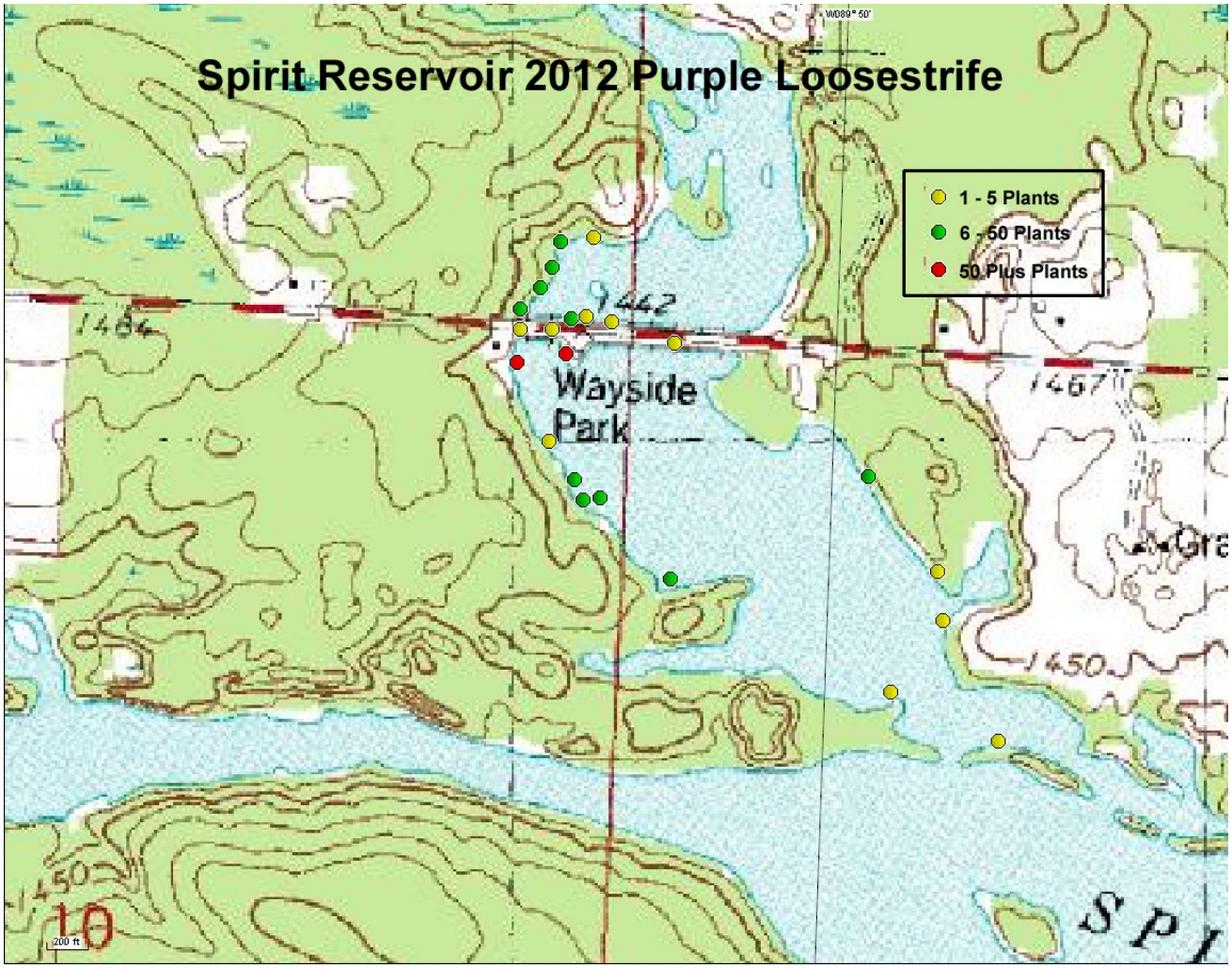

Table 3

Purple Loosestrife Survey - 2012					
Spirit Reservoir					
Number	**Latitude**		**Longitude**	**Amount**	**Beetle Activity**
1	45°	27.09526	89° 49.87978	1-5 Plants	
2	45°	27.05690	89° 49.87199	1-5 Plants	
3	45°	27.15633	89° 50.28460	6-50 Plants	
4	45°	27.27218	89° 50.35090	1-5 Plants	
5	45°	27.27257	89° 50.31514	1-5 Plants	
6	45°	27.28167	89° 50.29446	6-50 Plants	
7	45°	27.28416	89° 50.27806	1-5 Plants	
8	45°	27.28016	89° 50.24949	1-5 Plants	
9	45°	27.16722	89° 49.96005	6-50 Plants	
10	45°	26.96543	89° 49.80625	1-5 Plants	
11	45°	27.00071	89° 49.92733	1-5 Plants	
12	45°	27.08253	89° 50.17472	6-50 Plants	
13	45°	27.14077	89° 50.27483	6-50 Plants	
14	45°	27.14297	89° 50.25650	6-50 Plants	
15	45°	27.18617	89° 50.31422	1-5 Plants	
16	45°	27.24601	89° 50.35320	50+ Plants	
17	45°	27.25390	89° 50.29976	50+ Plants	
18	45°	27.28770	89° 50.35113	6-50 Plants	
19	45°	27.30531	89° 50.32962	6-50 Plants	
20	45°	27.32139	89° 50.31751	6-50 Plants	
21	45°	27.34140	89° 50.30996	6-50 Plants	
22	45°	27.34567	89° 50.27316	1-5 Plants	
23	45°	27.26570	89° 50.17927	1-5 Plants	

Attachment 2

Consultation/Correspondence with Wisconsin DNR and USFWS

Cathy Wendt

From: Utrup, Nick [nick_utrup@fws.gov]
Sent: Wednesday, November 28, 2012 10:08 AM
To: Cathy Wendt
Cc: 'Kevin Gauthier; Cheryl Laatsch; Ben Niffenegger
Subject: Re: 2012 Purple Loosestrife Annual Monitoring Report

Hi Cathy,

The USFWS will not be providing any comments on the 2012 Purple Loosestrife Monitoring Report.

Nick

Nicholas J. Utrup
U.S. Fish and Wildlife Service
Wisconsin Ecological Services Office
2661 Scott Tower Drive
New Franken, WI 54229

Office: (920) 866-1736
Cell: (920) 530-9937
FAX: (920) 866-1710
Email: Nick_Utrup@fws.gov

On Wed, Nov 28, 2012 at 9:44 AM, Cathy Wendt <Wendt@wvic.com> wrote:

> Kevin, Cheryl, and Nick:
>
> In compliance with the FERC Order Amending WVIC's Purple Loosestrife Control Plan dated June 16, 2009, I am submitting WVIC's Purple Loosestrife Annual Monitoring Report – 2012 for your review and comment. The report also contains WVIC's proposed purple loosestrife monitoring plan for 2013.
>
> Please provide any comments to my attention via email or at the mailing address below by December 28, 2012
>
> *Thanks,*
>
> *Cathy*
>
> Cathy J. Wendt
>
> Director of Environmental Affairs
>
> Wisconsin Valley Improvement Company
>
> 2301 North Third Street
>
> Wausau, WI 54403
>
> 715-848-2976 Ext. 310
>
> wendt@wvic.com

Cathy Wendt

From: Cathy Wendt
Sent: Monday, December 10, 2012 4:15 PM
To: 'Gauthier Sr, Kevin J - DNR'
Cc: Laatsch, Cheryl - DNR; Ben Niffenegger; Plude, Timothy M - DNR
Subject: RE: 2012 Purple Loosestrife Annual Monitoring Report
Attachments: Becker Research.pdf (Attached)

Kevin,
Thank you for you comments. I have addressed them below.

- I would be interested in the research showing the viability of the loosestrife seeds reaching 20 years. Several years ago when we were deciding if we needed to chemically treat twice per year I looked for sources of information on the longevity of purple loosestrife seeds. I contacted Dr. Roger Becker at the University of Minnesota who sent me results from his research which I attached for your information. He concluded that most seeds lost viability after 7 years. I have seen the 10-20 years used in some literature but never found the research to back it up.

- We would welcome discussing putting quantitative numbers to the beetle population with WDNR. Let us know when you'd be available and we can set up a conference call sometime this week to discuss. I need to submit our final report to FERC before the end of the year.

Thank you again for taking time to review the annual report.

Cathy

Cathy J. Wendt
Director of Environmental Affairs
Wisconsin Valley Improvement Company
2301 North Third Street
Wausau, WI 54403
715-848-2976 Ext. 310
wendt@wvic.com

From: Gauthier Sr, Kevin J - DNR [mailto:Kevin.GauthierSr@wisconsin.gov]
Sent: Monday, December 10, 2012 10:55 AM
To: Cathy Wendt
Cc: Laatsch, Cheryl - DNR; Ben Niffenegger; Plude, Timothy M - DNR; Gauthier Sr, Kevin J - DNR
Subject: FW: 2012 Purple Loosestrife Annual Monitoring Report

Hi Cathy,

We have reviewed the WVIC 2012 PL report and offer these comments:

- Willow Reservoir Section. 2nd Par. PL seeds may be viable for up to 10-20 years
- Putting quantitative numbers to the beetle population would help assess population trends beyond a presence/absence qualitative assessment. We would be willing to discuss this further.

Thanks.

Kevin

Kevin J. Gauthier

Lakes Management Coordinator
Wisconsin Department of Natural Resources
107 Sutliff Ave
Rhinelander, WI 54501
(☎) phone: (715) 365-8937
(☎) fax: (715) 365-8932
(✉) e-mail: Kevin.GauthierSr@wisconsin.gov

From: Cathy Wendt [mailto:Wendt@wvic.com]
Sent: Wednesday, November 28, 2012 9:44 AM
To: Gauthier Sr, Kevin J - DNR; Laatsch, Cheryl - DNR; US Fish & Wildlife Service
Cc: Ben Niffenegger
Subject: 2012 Purple Loosestrife Annual Monitoring Report

Kevin, Cheryl, and Nick:

In compliance with the FERC Order Amending WVIC's Purple Loosestrife Control Plan dated June 16, 2009, I am submitting WVIC's Purple Loosestrife Annual Monitoring Report – 2012 for your review and comment. The report also contains WVIC's proposed purple loosestrife monitoring plan for 2013.

Please provide any comments to my attention via email or at the mailing address below by December 28, 2012.

Thanks,
Cathy

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Cathy Wendt

From: Roger Becker [becke003@umn.edu]
Sent: Thursday, June 12, 2003 10:32 AM
To: Cathy Wendt
Subject: Re: Purple Loosestrife Seed Longevity

In general, most seed lost viability after 7 years, a few hanger-ons still by year 10 though.

hope this helps. at least we are not dealing with the 50 year mallow species or legumes!

roger

At 09:37 AM 6/5/03 -0500, you wrote:

> Dr. Becker,
> I was reviewing literature on purple loosestrife and am very interested in your seed longevity experiment described in the Minnesota Dept of Natural Resources Special Publication 146 (1992). Has any additional work been completed on the project?
>
> I work for a company that owns and operates 21 dams on storage reservoirs in northern Wisconsin. We exist to produce a uniform in the Wisconsin River for all the hydros on the river. We are licensed by FERC and like most other licensees we are developing a purple loosestrife management plan for our reservoirs. I have been chemically treating purple loosestrife on 3 of our man-made reservoirs for 7 years and am very interested on when the seed bank (if ever) will become exhausted. Because our reservoirs are typically being drawn down throughout the summer, new purple loosestrife seedlings continually germinate as the growing season progresses. I am trying to determine if 2 sprayings are necessary during the summer to prevent any plants from maturing and producing viable seeds and if we succeed in preventing seed production how long will the original seed bank be a source of recruitment.
>
> Any additional information you can provide will be much appreciated.
>
> Cathy
>
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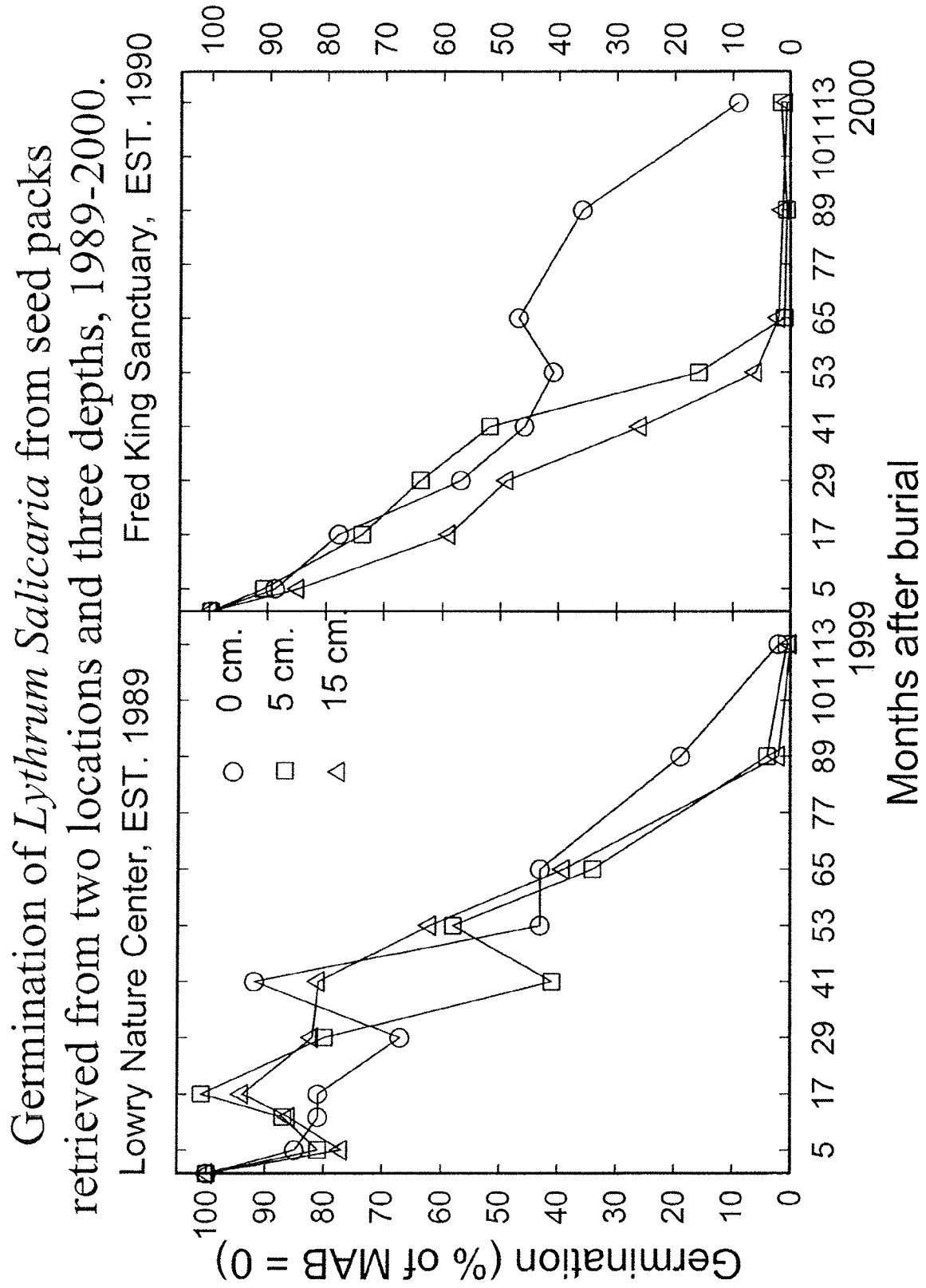

Welling and Becker, unpublished data

ATT00995

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Wisconsin Valley Improvement Company
TELEPHONE MEMORANDUM

Subject:	Loosestrife Monitoring Protocol	WVIC File:	ENV02.0702
To/From:	WVIC/WDNR	Date:	12/13/2012
Recorded by:	C Wendt		

OUTCOME: To follow-up on the 12/10/2012 email, Kevin Gauthier and Tim Plude (WDNR) called to discuss WDNR's comments to WVIC's 2012 Purple Loosestrife Annual Monitoring Report with Cathy Wendt and Ben Niffenegger (WVIC). Two comments were made in the email and both discussed.

1. *"Purple Loosestrife seeds may be viable for up to 10-20 years"*

Cathy was interested in the research behind the 10-20 year range since she had only found research suggesting viability from 7-10 years. DNR replied the number came from the DNR website but is not substantiated by citation. They are looking into where the numbers may have come from. The point is they are viable for a long time and the specific number doesn't really make that much of a difference. WVIC was just interested in the research that was cited since they previously haven't found numbers that high.

2. *"Putting quantitative numbers to the beetle population would help assess population trends beyond a presence / absence qualitative assessment"*

Tim found some quantitative survey information from USFS, Dept of Ag, and Idaho State where they have developed protocol for counting beetles. Cathy wanted to know what the advantage was to quantifying beetles and Kevin responded that with any monitoring project it is beneficial to know what is happening to the agent responsible for the control and we do know that beetles are effective but don't have any science to back it up. DNR has not done any quantitative assessments in Wisconsin so far. Tim asked some specific questions about our current beetle monitoring and it was described to him that when we see damaged plants we look for adult beetles and larvae. He then described some specifics on the protocol he found. WVIC's study would be a pilot to see what kind of information is found and if it is worth continuing. Ben added that he searched on-line and found a WDNR Purple Loosestrife Site Revisit Form that appears to include several of the different techniques that could be used for monitoring with tables to designate abundance and the form indicates it is used for previously released bio-control insects. Kevin thought that between the form Ben found and ones Tim found we should be able to come up with something to use for next year. Tim said the protocol he found is setting up a quadrat, looking for adults, larvae, eggs, and counting stems in a set 3-5 minute time period. Cathy inquired about how the sites are selected. Tim replied it is a random selection with generally 4-5 quadrats per site with sites generated by random GPS points. Cathy wasn't sure random generated points would work since some areas don't contain any loosestrife. Also areas exposed one year could be flooded the next year. Kevin added that we will have to use professional judgment as we develop our protocol. One thing we would want to do would be revisit the same quadrats the next year to be able to compare results annually and determine if the population is increasing or decreasing.

Cathy said WVIC would like to have a protocol in place prior to the end of the year when we submit our report to FERC. However, if it is not finalized yet we could just state in our report that we are working with DNR on developing a protocol to be implemented in 2013. To follow up Ben & Tim will exchange information and work on the details. Also DNR offered to provide field training if WVIC thought it was necessary.

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