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December 22, 2015

The Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20426  
*eFiled FERC Online 12/22/2015*

**RE: WVIC Project 2113; 2015 Purple Loosestrife Annual Monitoring Report**

In accordance with the Five-Year Summary and Proposed Purple Loosestrife Monitoring Plan Wisconsin Valley Improvement Company (WVIC) submitted on December 30, 2013, WVIC hereby submits the 2015 Purple Loosestrife Annual Monitoring Report (Attachment 1). The Report includes: annual monitoring results identifying relative abundance of purple loosestrife, locations with *Galerucella* sp. beetle activity, vegetative damage assessments, and corresponding tables and figures. Documentation of consultation with the U.S. Fish and Wildlife Service (USFWS) and Wisconsin Department of Natural Resources (WDNR) is included in Attachment 2.

Sincerely,

Ben Niffenegger  
Senior Environmental Specialist

Enclosures:

Attachment 1: 2015 Purple Loosestrife Annual Monitoring Report  
Attachment 2: Documentation of agency consultation.

# **Attachment 1**

**Wisconsin Valley Improvement Company**

**2015 Purple Loosestrife Annual  
Monitoring Report**

**December 22, 2015**

**Wisconsin Valley Improvement Company**  
**2015 Purple Loosestrife Annual Monitoring Report**

## **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 submitted a Modified Purple Loosestrife Control Plan on 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. In accordance with the Five-Year Summary and Proposed Purple Loosestrife Monitoring Plan submitted December 30, 2013, WVIC's Annual Monitoring Report for 2015 follows.

## **2015 Field Monitoring Results**

**Willow Reservoir** – On August 5, 2015 WVIC monitored the area of Willow Reservoir where purple loosestrife (PL) has historically occurred. Reservoir elevation was 1524.66 ft. NGVD (4.69 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. The relative abundance of PL 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 2015 and Table 1 lists GPS coordinates for each observation. There were 3 sites of 1-5 plants, 1 site of 6-50 plants, and 2 sites of 50+ plants identified in 2015. PL was not identified outside the historic range at Willow.

*Galerucella sp.* beetle activity and leaf damage was identified at 1 site with 50+ plants in 2015. Beetle activity had not been observed on the Willow Reservoir in the past although established populations 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 the site. The percent of plants within the site exhibiting damage from beetle feeding was recorded using a 1-4 scale with the following representative values: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Using the same scale and values, the average level of leaf tissue area removed by beetle feeding per plant within each site was also recorded. Table 1 provides the percent range of plants damaged at the site and leaf tissue removed per plant within the site.

**Rice Reservoir** – On August 6 & 10, 2015 WVIC monitored the portions of Rice Reservoir where PL has historically occurred. Reservoir elevation was 1460.37 & 1460.64 ft. NGVD (2.88 & 2.61 ft. below full). Figure 2 is a distribution and relative abundance map of recorded PL and beetle activity locations in 2015 and Table 2 lists GPS coordinates for each observation. There were 46 sites of 1-5 plants, 52 sites of 6-50 plants, and 13 sites of 50+ plants identified in 2015. PL was not observed outside the historic range at Rice.

*Galerucella sp.* beetle activity and leaf damage was identified at 44 sites in 2015 indicating beetle populations are continuing the natural expansion that has been observed since 2009 (Figure 4). Beetle activity was found at 11 of 13 sites with 50+ plants, 26 of 52 sites with 6-50 plants, and 7 of 46 sites with 1-5 plants. 2015 was the second season in which vegetative damage assessments were conducted at each site where beetle activity was identified. Table 2 provides the percent range of plants damaged at each site and leaf tissue removed per plant within the site. Figure 5 displays the average damage scores (1-4 scale) for each of the PL relative abundance categories. The highest level of beetle activity was found at sites with 50+ plants where more damage was observed throughout the site and within individual plants as compared to sites with only 6-50 or 1-5 plants.

**Spirit Reservoir** – On August 5, 2015 WVIC monitored the portion of Spirit Reservoir where PL has historically occurred. Reservoir elevation was 1433.26 ft. NGVD (4.62 ft. below full). Figure 3 is a distribution and relative abundance map of recorded PL locations in 2015 and Table 3 lists GPS coordinates for each observation. There were 13 sites of 1-5 plants, 6 sites of 6-50 plants, and 1 site of 50+ plants identified in 2015. PL was not identified outside the historic range at Spirit. *Galerucella sp.* beetle activity has not been observed since 2011.

**Eau Pleine Reservoir** – WVIC used chemical control to combat PL populations on the Eau Pleine in 1998 and 1999. Only one plant was identified during post treatment monitoring in 2000 and it was removed by hand. Since that time there have been no reports of PL on the reservoir until staff from the Golden Sands Resource Conservation and Development Council (Golden Sands RC&D) discovered an isolated population in August of 2015 and contacted WVIC. WVIC staff will meet with Golden Sands RC&D and interested members of the Big Eau Pleine Citizens Organization in 2016 to discuss potential monitoring and beetle release initiatives.

Figure 1

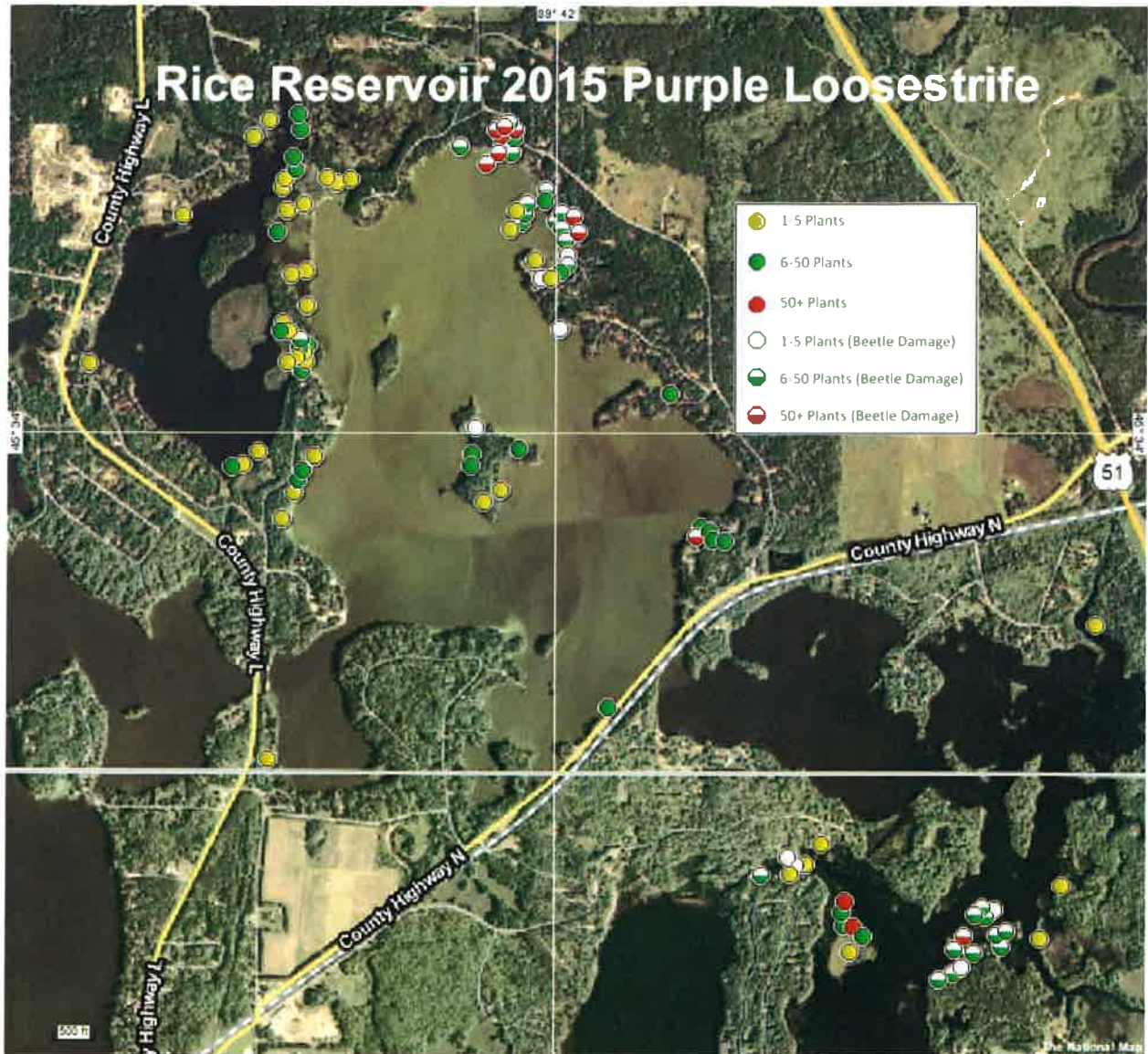


**Table 1**

Purple Loosestrife Survey 2015								
Willow Reservoir								
Number	Latitude		Longitude		Amount	Beetle Activity	% of Damaged Plants Per Site	% Tissue Damage Per Plant
1	45°	41.144774	89°	50.409885	1-5 Plants	no		
2	45°	41.156446	89°	50.39519	1-5 Plants	no		
3	45°	41.334398	89°	50.286077	1-5 Plants	no		
4	45°	41.324747	89°	50.455588	6-50 plants	no		
5	45°	41.357325	89°	50.430499	50+ plants	no		
6	45°	41.400314	89°	50.427989	50+ plants	yes	1-25	26-50



Figure 2



**Table 2**

Purple Loosestrife Survey - 2015								
Rice Reservoir								
Number	Latitude		Longitude		Amount	Beetles	% of Damaged Plants Per Site	% Tissue Damage Per Plant
1	45°	33.146835	89°	41.351451	1-5 plants	no		
2	45°	33.164839	89°	41.310183	1-5 plants	no		
3	45°	33.204831	89°	41.266954	1-5 plants	no		
4	45°	32.995671	89°	41.185806	1-5 plants	no		
5	45°	33.02175	89°	40.668191	1-5 plants	no		
6	45°	33.124424	89°	40.608487	1-5 plants	no		
7	45°	33.627455	89°	40.516149	1-5 plants	no		
8	45°	34.424319	89°	42.108956	1-5 plants	no		
9	45°	34.391187	89°	42.123571	1-5 plants	no		
10	45°	34.296362	89°	42.013959	1-5 plants	no		
11	45°	34.330922	89°	42.05484	1-5 plants	no		
12	45°	34.486939	89°	42.632768	1-5 plants	no		
13	45°	34.484433	89°	42.565174	1-5 plants	no		
14	45°	34.477754	89°	42.604591	1-5 plants	no		
15	45°	34.436968	89°	42.693297	1-5 plants	no		
16	45°	34.42435	89°	42.73993	1-5 plants	no		
17	45°	34.565045	89°	42.831779	1-5 plants	no		
18	45°	34.598232	89°	42.790878	1-5 plants	no		
19	45°	34.484172	89°	42.745905	1-5 plants	no		
20	45°	34.468797	89°	42.754253	1-5 plants	no		
21	45°	34.415338	89°	43.024735	1-5 plants	no		
22	45°	34.132107	89°	43.27896	1-5 plants	no		
23	45°	33.936875	89°	42.857362	1-5 plants	no		
24	45°	33.961724	89°	42.815466	1-5 plants	no		
25	45°	34.1346	89°	42.735022	1-5 plants	no		
26	45°	34.193512	89°	42.733564	1-5 plants	no		
27	45°	34.20969	89°	42.751382	1-5 plants	no		
28	45°	34.301941	89°	42.725508	1-5 plants	no		
29	45°	34.242989	89°	42.685623	1-5 plants	no		
30	45°	34.310208	89°	42.688258	1-5 plants	no		
31	45°	34.142568	89°	42.711512	1-5 plants	no		
32	45°	34.152534	89°	42.691311	1-5 plants	no		
33	45°	34.135445	89°	42.686347	1-5 plants	no		
34	45°	33.954411	89°	42.659935	1-5 plants	no		
35	45°	33.884672	89°	42.717909	1-5 plants	no		
36	45°	33.832953	89°	42.749486	1-5 plants	no		



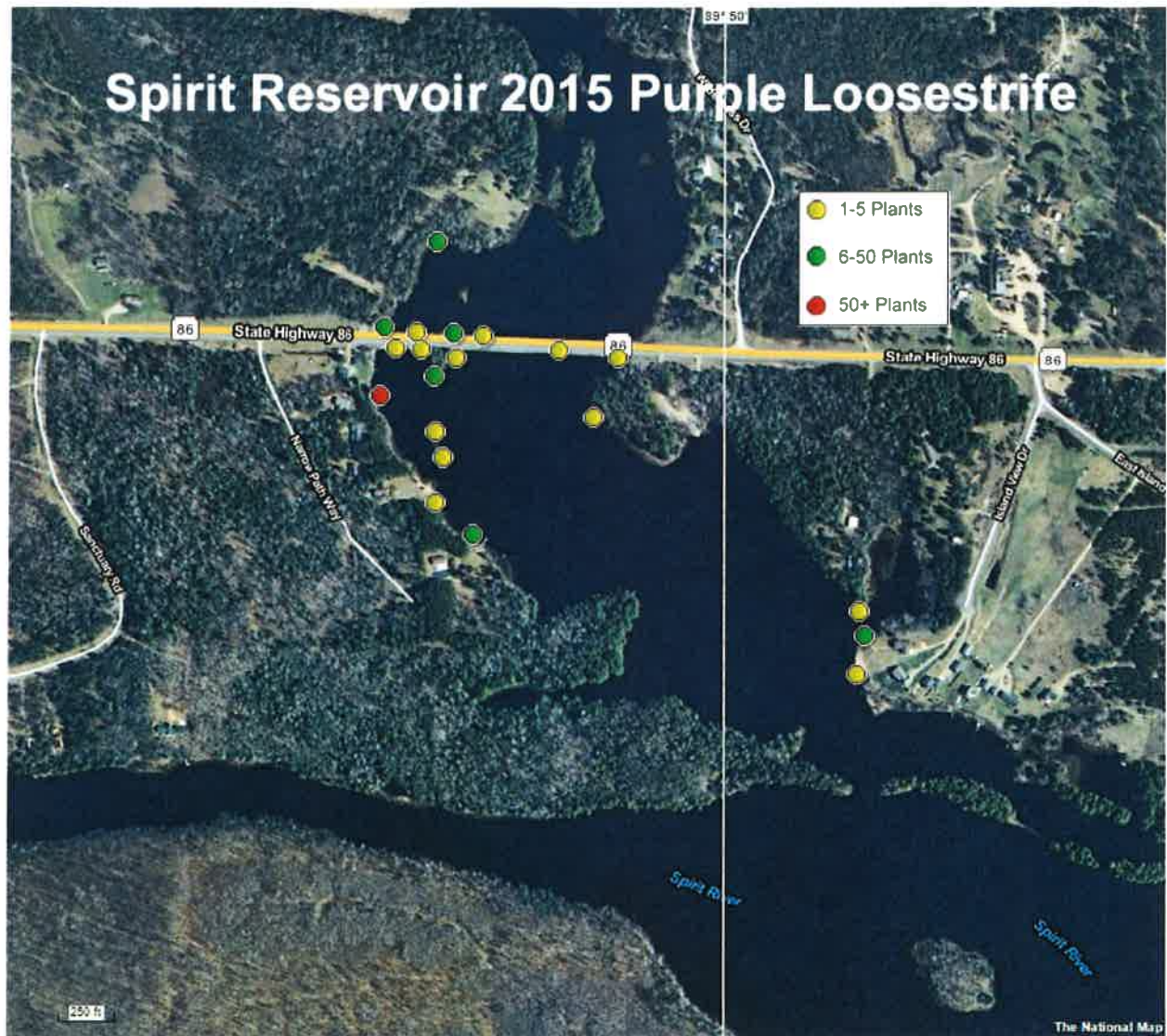
**Table 2 (cont.)**

Number	Latitude	Longitude	Amount	Beetles	% of Damaged Plants Per Site	% Tissue Damage Per Plant
37	45° 33.865314	89° 42.193786	1-5 plants	no		
38	45° 33.889334	89° 42.149285	1-5 plants	no		
39	45° 33.367464	89° 42.787411	1-5 plants	no		
40	45° 33.026121	89° 41.152027	6-50 plants	no		
41	45° 33.072848	89° 41.209724	6-50 plants	no		
42	45° 33.048055	89° 41.203612	6-50 plants	no		
43	45° 33.789942	89° 41.533825	6-50 plants	no		
44	45° 33.792459	89° 41.564431	6-50 plants	no		
45	45° 33.808832	89° 41.575691	6-50 plants	no		
46	45° 33.816164	89° 41.597165	6-50 plants	no		
47	45° 33.467649	89° 41.851807	6-50 plants	no		
48	45° 34.073179	89° 41.684849	6-50 plants	no		
49	45° 34.307321	89° 41.987296	6-50 plants	no		
50	45° 34.44432	89° 42.028936	6-50 plants	no		
51	45° 34.382814	89° 42.766287	6-50 plants	no		
52	45° 34.609377	89° 42.709032	6-50 plants	no		
53	45° 34.579363	89° 42.704672	6-50 plants	no		
54	45° 34.526522	89° 42.723164	6-50 plants	no		
55	45° 34.502704	89° 42.716927	6-50 plants	no		
56	45° 33.932484	89° 42.888275	6-50 plants	no		
57	45° 34.193155	89° 42.757949	6-50 plants	no		
58	45° 34.161446	89° 42.70431	6-50 plants	no		
59	45° 34.165711	89° 42.679186	6-50 plants	no		
60	45° 34.117688	89° 42.698568	6-50 plants	no		
61	45° 33.926353	89° 42.693991	6-50 plants	no		
62	45° 33.906594	89° 42.707233	6-50 plants	no		
63	45° 33.93532	89° 42.230603	6-50 plants	no		
64	45° 33.957609	89° 42.226232	6-50 plants	no		
65	45° 33.966697	89° 42.09728	6-50 plants	no		
66	45° 33.045592	89° 41.176164	50+ plants	no		
67	45° 33.093667	89° 41.199511	50+ plants	no		
68	45° 33.178111	89° 41.356918	1-5 plants	yes	76-100	76-100
69	45° 33.162334	89° 41.336178	1-5 plants	yes	1-25	1-25
70	45° 32.965458	89° 40.880901	1-5 plants	yes	76-100	76-100
71	45° 33.077814	89° 40.791692	1-5 plants	yes	76-100	26-50
72	45° 34.198761	89° 41.987945	1-5 plants	yes	1-25	1-25
73	45° 34.294356	89° 42.03929	1-5 plants	yes	1-25	1-25

**Table 2 (cont.)**

Number	Latitude	Longitude	Amount	Beetles	% of Damaged Plants Per Site	% Tissue Damage Per Plant
74	45° 34.339517	89° 41.966526	1-5 plants	yes	1-25	1-25
75	45° 34.009077	89° 42.215958	6-50 plants	yes	76-100	1-25
76	45° 33.143571	89° 41.430964	6-50 plants	yes	1-25	26-50
77	45° 32.943903	89° 40.942064	6-50 plants	yes	1-25	1-25
78	45° 32.955742	89° 40.902591	6-50 plants	yes	1-25	1-25
79	45° 32.995005	89° 40.847745	6-50 plants	yes	76-100	76-100
80	45° 33.001366	89° 40.900007	6-50 plants	yes	1-25	1-25
81	45° 33.068173	89° 40.843908	6-50 plants	yes	1-25	1-25
82	45° 33.080791	89° 40.824944	6-50 plants	yes	51-75	51-75
83	45° 33.062893	89° 40.816108	6-50 plants	yes	76-100	51-75
84	45° 33.036298	89° 40.757672	6-50 plants	yes	1-25	26-50
85	45° 33.029796	89° 40.786558	6-50 plants	yes	1-25	26-50
86	45° 33.00461	89° 40.771974	6-50 plants	yes	1-25	26-50
87	45° 34.437516	89° 42.077566	6-50 plants	yes	26-50	26-50
88	45° 34.418083	89° 42.084481	6-50 plants	yes	26-50	26-50
89	45° 34.401235	89° 42.096404	6-50 plants	yes	26-50	26-50
90	45° 34.320784	89° 41.967573	6-50 plants	yes	1-25	1-25
91	45° 34.366585	89° 41.972833	6-50 plants	yes	26-50	26-50
92	45° 34.421085	89° 41.98461	6-50 plants	yes	1-25	26-50
93	45° 34.390991	89° 41.982036	6-50 plants	yes	51-75	51-75
94	45° 34.403764	89° 41.998716	6-50 plants	yes	1-25	1-25
95	45° 34.464402	89° 42.024666	6-50 plants	yes	1-25	26-50
96	45° 34.594068	89° 42.127382	6-50 plants	yes	26-50	26-50
97	45° 34.564341	89° 42.115977	6-50 plants	yes	26-50	26-50
98	45° 34.535227	89° 42.120055	6-50 plants	yes	51-75	26-50
99	45° 34.546311	89° 42.263451	6-50 plants	yes	51-75	51-75
100	45° 34.177172	89° 42.700403	6-50 plants	yes	26-50	1-25
101	45° 33.026064	89° 40.875842	50+ plants	yes	76-100	76-100
102	45° 33.799432	89° 41.61021	50+ plants	yes	1-25	51-75
103	45° 34.383181	89° 41.936765	50+ plants	yes	76-100	51-75
104	45° 34.413365	89° 41.94991	50+ plants	yes	26-50	26-50
105	45° 34.534809	89° 42.158567	50+ plants	yes	51-75	51-75
106	45° 34.586072	89° 42.139548	50+ plants	yes	51-75	51-75
107	45° 34.57973	89° 42.164044	50+ plants	yes	51-75	51-75
108	45° 34.57974	89° 42.112044	50+ plants	yes	51-75	26-50
109	45° 34.567242	89° 42.150752	50+ plants	yes	51-75	51-75
110	45° 34.550586	89° 42.146749	50+ plants	yes	26-50	26-50
111	45° 34.51414	89° 42.191643	50+ plants	yes	76-100	51-75

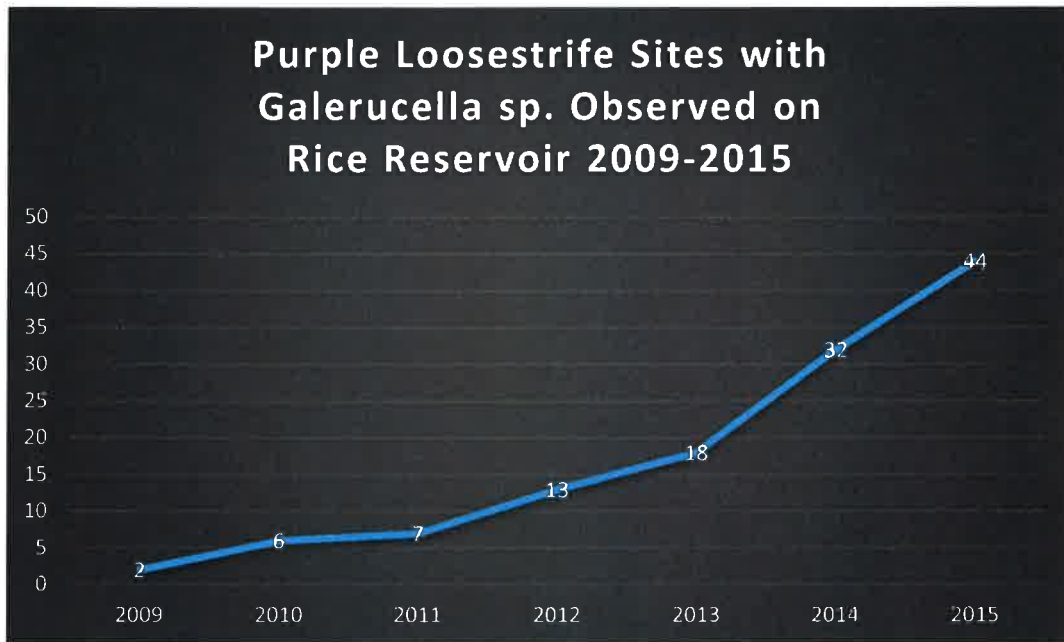
Figure 3



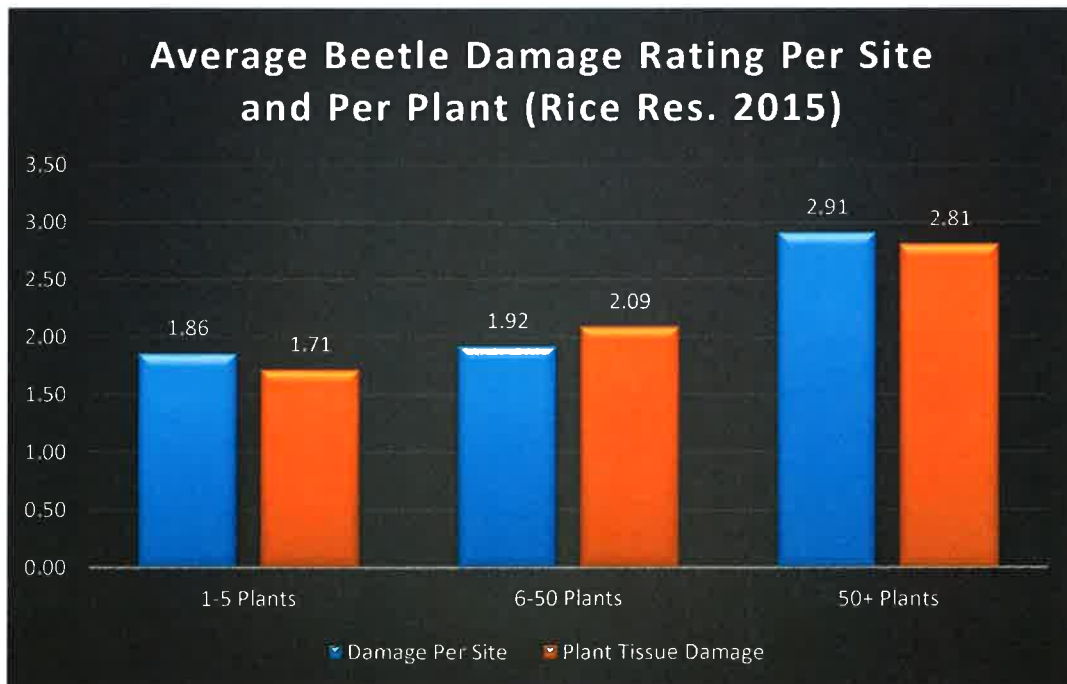
**Table 3**

Purple Loosestrife Survey - 2015						
Spirit Reservoir						
Number	Latitude		Longitude		Amount	Beetle Activity
1	45°	27.2643288	89°	50.10626	1-5 plants	no
2	45°	27.264686	89°	50.270536	1-5 plants	no
3	45°	27.2713046	89°	50.305769	1-5 plants	no
4	45°	27.2125189	89°	50.291276	1-5 plants	no
5	45°	27.2228286	89°	50.131767	1-5 plants	no
6	45°	27.1941421	89°	50.283209	1-5 plants	no
7	45°	27.2700319	89°	50.166849	1-5 plants	no
8	45°	27.1619557	89°	50.290818	1-5 plants	no
9	45°	27.0842348	89°	49.86215	1-5 plants	no
10	45°	27.2714456	89°	50.331910	1-5 plants	no
11	45°	27.0396518	89°	49.865469	1-5 plants	no
12	45°	27.2825246	89°	50.310643	1-5 plants	no
13	45°	27.2799295	89°	50.243431	1-5 plants	no
14	45°	27.2512784	89°	50.29292	6-50 plants	no
15	45°	27.0672164	89°	49.856769	6-50 plants	no
16	45°	27.281393	89°	50.273232	6-50 plants	no
17	45°	27.3464006	89°	50.289518	6-50 plants	no
18	45°	27.2861156	89°	50.342893	6-50 plants	no
19	45°	27.139068	89°	50.253765	6-50 plants	no
20	45°	27.2382782	89°	50.3467	50+ plants	no

**Figure 4**



**Figure 5**





# **Attachment 2**

**Consultation  
with  
WDNR and USFWS**

## Ben Niffenegger

---

**From:** Utrup, Nick [mailto:nick\_utrup@fws.gov]  
**Sent:** Tuesday, December 22, 2015 6:57 AM  
**To:** Ben Niffenegger <Ben@wvic.com>  
**Subject:** Re: FW: WVIC Purple Loosestrife Annual Monitoring Report-2015

Hi Ben,

I will not be providing any comments.

Thanks,

Nick

Nick Utrup  
U.S. Fish and Wildlife Service  
Twin Cities Field Office  
4101 American Boulevard East  
Bloomington, MN 55425

Office: 612-725-3548 Ext. 2204  
Cell: 952-567-9616  
FAX: 612-725-3609  
Email: [Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)

**From:** Ben Niffenegger  
**Sent:** Wednesday, December 02, 2015 2:59 PM  
**To:** Laatsch, Cheryl - DNR <[Cheryl.Laatsch@Wisconsin.gov](mailto:Cheryl.Laatsch@Wisconsin.gov)>; Nick Utrup - USFWS  
<[Nick\\_Utrup@fws.gov](mailto:Nick_Utrup@fws.gov)>  
**Cc:** Gauthier Sr, Kevin J - DNR ([Kevin.GauthierSr@wisconsin.gov](mailto:Kevin.GauthierSr@wisconsin.gov)) <[Kevin.GauthierSr@wisconsin.gov](mailto:Kevin.GauthierSr@wisconsin.gov)>  
**Subject:** WVIC Purple Loosestrife Annual Monitoring Report-2015

Cheryl and Nick:

Attached is WVIC's 2015 Purple Loosestrife Annual Monitoring Report for your review and comment.

Please provide comments by December 28, 2015.

Thanks,

## Ben Niffenegger

Senior Environmental Specialist

**Wisconsin Valley Improvement Company**  
2301 N. Third Street | Wausau, WI 54403  
715.848.2976 Ext. 304 | FAX: 715.842.0284

## Ben Niffenegger

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**From:** Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>  
**Sent:** Monday, December 21, 2015 1:48 PM  
**To:** Ben Niffenegger; Cathy Wendt  
**Subject:** comments on P-2113 PL monitoring

Hi Ben and Cathy –

We appreciate your efforts to monitor and control AIS (Purple loosestrife). We have not comments on the reports . Thank you.

**We are committed to service excellence.**

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Cheryl Laatsch

Statewide FERC Coordinator – Watershed Bureau

Wisconsin Department of Natural Resources

N7225 Highway 28, Horicon WI 53032

Phone: 920-387-7869

Fax: 920-387-7888

Cheryl.laatsch@wisconsin.gov



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