

Washburn County Aquatic Invasive Species Infestation Control Project – Final Report

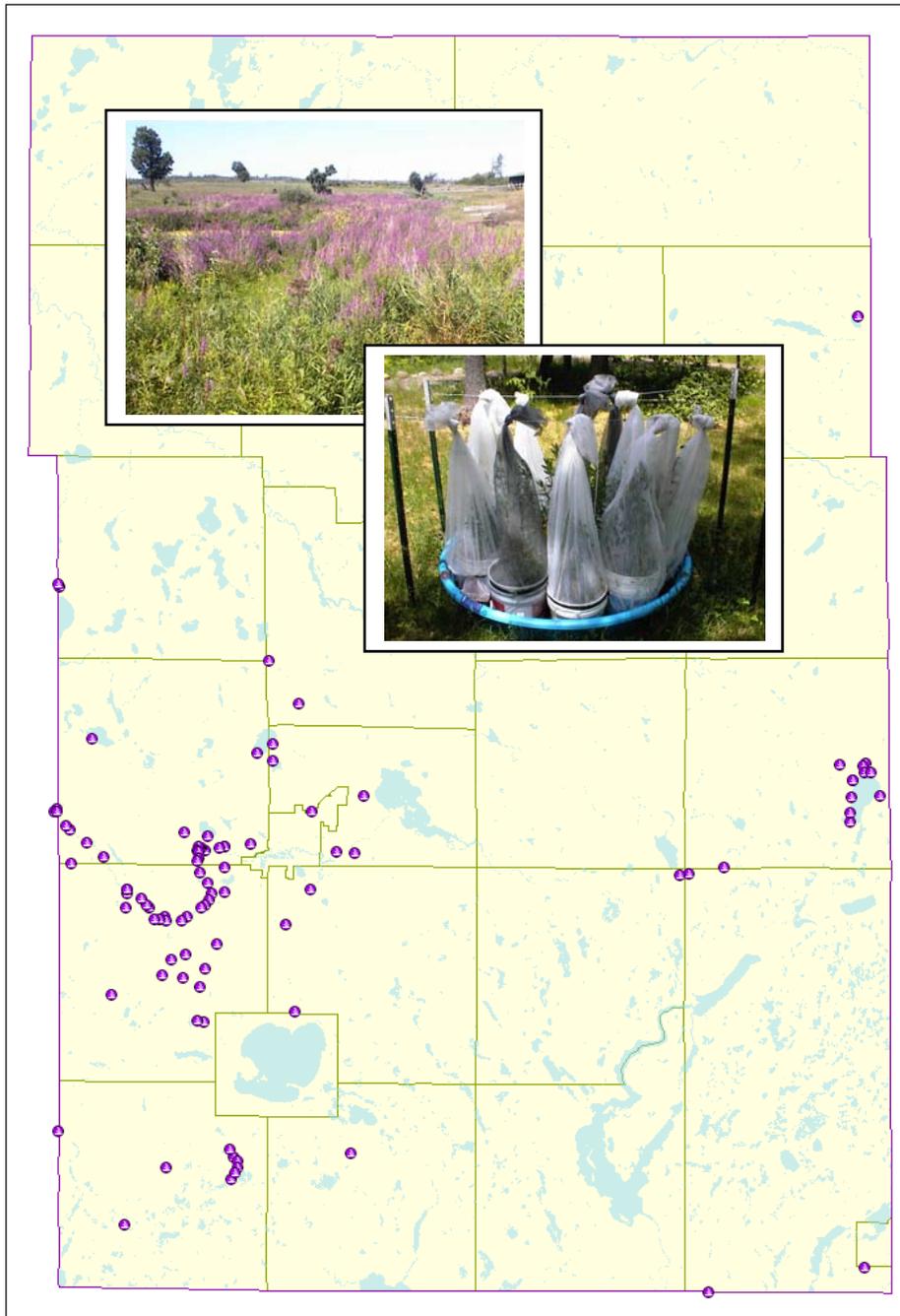
Washburn County Planning, Land & Resource Management Department

January 15, 2008



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Background

This project represented the initial phase of a long-term Aquatic Invasive Species Program in Washburn County. There were 2 major goals identified for this initial short term phase:

- 1) Control the purple loosestrife infestations throughout Washburn County through the use of biological, chemical or cultural controls.
- 2) Demonstrate the need for a limited-term Aquatic Invasive Species Coordinator position in the Washburn County Land and Water Conservation Department. The position would be funded through a second AIS Grant and in-kind from volunteers and existing staff members.

Arrangements were made with UW-Stevens Point to recruit and hire an intern to complete the tasks associated with the project. As part of the employment package, the intern was given free room and board at the Boy Scout Camp on Long Lake. This represented a \$2,000 in-kind contribution to the project.

Summary of Project Activities

Beetle Rearing Stations and Releases

The first major project activity involved setting up the beetle rearing stations. Three sites were selected based on the amount of plant stock available and the perceived benefit of having multiple sites for education purposes. The sites were:

1. William Campbell farm on Hwy 63
2. Hunt Hill Audubon Sanctuary
3. Tomahawk Boy Scout Camp on Long Lake

The rearing stations were assembled on May 11, 2006 with assistance from Dave Blumer, DNR-Spooner. Dave provided the purple loosestrife rootstock and the nets to cover the plants. The rest of the materials were either purchased with grant funds or collected from other sources. Many of the 5-gallon buckets were collected from various sources throughout the county. Each pool contained 10 buckets with plants and netting and 2 buckets had plants without nets. The plants grew well at Hunt Hill and the Scout Camp, but didn't fair as well at Campbell's farm.



By the end of May the purple loosestrife plants had grown to a height of approximately 20" and were ready for beetles to be introduced. On May 31, 2006 approximately 900 beetles were collected from two locations, but the majority of them came from the shores of Poquette Lake in Burnett County. The insects were brought back to the 3 rearing stations and distributed evenly with every bucket receiving 15 beetles.

Over the next several weeks the rearing stations were maintained by keeping the water at the appropriate level inside the pools. This was difficult due to the extreme heat and lack of precipitation. After about 4 weeks the damage caused by the beetles began to take a heavy toll on the plants. There was significant damage to the leaves and the plants generally stopped growing.

About 6 weeks after the beetles had been introduced in the rearing stations the new adults began to hatch. By the time this occurred the purple loosestrife plants in the nets were dead or nearly dead. Although Dave Blumer had suggested that we should collect the beetles so they could be counted, we didn't want to delay the process. We didn't want beetles to begin dying from a lack of food so the intern immediately began taking the pots directly to our release sites. Most of the beetles were released in purple loosestrife infestations on Cable Lake, Cyclone Lake, and the Tozer Springs Wildlife Area. It is estimated that Cable Lake and Cyclone Lake each received 3,000 beetles.

Inventory of Public Boat Landing Signage

The intern also inventoried the boat landings to document things such as AIS signage and the presence of any AIS. The summary of the boat landing inventory has been attached.

Purple Loosestrife Inventory

The purple loosestrife site inventory was the focus of our activities in 2006. In order to develop a control strategy, we needed to know where the plants were and how many were out there. A number of Washburn County Lakes and Rivers Association (WCLRA) members had volunteered to help with the inventory. Training was held on July 13th, 2006 to discuss the basic information needed to conduct the inventory. The first part of the training consisted of learning how to identify purple loosestrife along with the common look-a-likes. After the group was comfortable identifying purple loosestrife, we discussed the procedure for documenting the infestations and recording in-kind time and mileage. The group worked together to indicate which portions of the county each would be covering. Any road not covered by volunteers would become the intern's responsibility.

The intern and the WCLRA volunteers conducted the inventory in the weeks following the training. The intern was responsible for collecting the site data from each of the volunteers. The initial inventory efforts revealed 66 infestation sites, mostly in the southern part of the county. While all the roads were driven to look for purple loosestrife, only a small portion of the lakes was surveyed.

With assistance from other department staff, the intern conducted a purple loosestrife inventory of the Yellow River from the Spooner dam to County Line road. We knew that the Yellow River was infested in several areas, but the inventory revealed much more than we expected. The areas of slower water, mainly from Tozer Lake Road to Hector

Dam road, were severely infested with purple loosestrife. An additional 27 sites were found during the canoe survey in the Yellow River, which increased the total number of sites to 93. A map showing the location of the 93 sites has been attached.

Aerial Survey

The grant application included some discussion and funding for an aerial survey. The original idea was that there might be some purple loosestrife sites too remote to inventory from the road. Our department discussed this at length with Basin Educator John Haack and UW-Stevens Point Professor Eric Olson. In the end it was determined that a canoe survey through the remote areas of the Yellow River would be a more effective method to characterize the infestations. So after considering the benefits and cost of an aerial survey, our department decided against it.

Countywide GIS Layer

An Aquatic Invasive Species layer has been developed for Washburn County. Each infestation site has been geo-located with accompanying data. This information can be updated over time as sites change or as new sites are found. This data will be shared with DNR and Great Lakes Fish and Indian Wildlife Foundation.

AIS Education Presentations

The intern's final task for his internship was to make a PowerPoint presentation at the Long Lake Preservation Association Annual Meeting at Hunt Hill. A presentation was created that incorporated many of the digital photos that were taken throughout the summer. The presentation was well received and provided excellent information about the project to the LLPA members in attendance.

A final presentation about the year's AIS activities and results was given to the Washburn County Lakes and Rivers Association at their annual meeting in September. Lake association members throughout the county learned about Washburn County's efforts to start an AIS program.

Management Strategy for Controlling Aquatic Invasive Species

Purple Loosestrife

Going into this project, there was a perception that purple loosestrife infestations were expanding in several areas in the county. A limited survey that had been completed in 1989 identified less than 20 sites with established purple loosestrife infestations. A major task of this project was to complete an inventory that would show the locations and characteristics of the current infestations. From that, a management strategy could be devised to address the problem.

While the current infestation sites found in the county were wide ranging, purple loosestrife was predominantly found in 3 areas: the Stone Lake area, one small area in the Washburn County forest south of Shell Lake, and the entire Yellow River Watershed. The Yellow River Watershed is the epicenter of the most active infestations in the county. Plants can be found all along the main stem of the Yellow River and its tributaries. It is a threat to habitat not only in Washburn County, but also Burnett County and the National Park Service as well. Millions of purple loosestrife seeds flow down the Yellow River to Burnett County and eventually into the St. Croix River near Danbury. The National Park Service has noted a dramatic increase in the number of purple loosestrife plants immediately downstream from the confluence of the Yellow River and St. Croix River. For these reasons, the Yellow River Watershed has been identified as the focus of Washburn County's purple loosestrife management control strategy.

Attempting to control the purple loosestrife in the Yellow River watershed is a daunting task. It is generally very remote with only a few access points, it is subject to flooding, and the plants are well established in several areas. Of the methods available to control purple loosestrife (cultural, chemical, or biological), our department believes that biological control will be the most effective method over the long term. Biological control involves raising and releasing large quantities of *Galerucella* beetles, which feed exclusively on purple loosestrife. This approach has worked in other locations across the state, so it is reasonable to expect it to work in Washburn County.

The purple loosestrife control strategy for the next 3-4 years is to raise and release enough *Galerucella* beetles to create viable populations throughout the Yellow River Watershed. As the population grows, beetles can be harvested for the mass rearing cages and for relocation to those infestations outside the Yellow River Watershed.