

LEWIS COUNTY SOIL AND WATER CONSERVATION DISTRICT

Purple Loosestrife Control in the Beaver River Watershed

ST. LAWRENCE EASTERN LAKE ONTARIO PARTNERSHIP FOR REGIONAL INVASIVE SPECIES MANAGEMENT (SLELO PRISM)

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Introduction

Invasive species are a serious threat to economic and environmental value throughout the world, Lewis County being no exception. Due to Lewis County's reliance on an economy based on natural resources, invasive species are a serious problem that must be addressed within the county. The Lewis County Soil and Water Conservation District has been involved with invasive species plant identification for many years, though a comprehensive invasive species inventory did not exist. Through a grant provided by the Beaver River Advisory Council (BRAC) an inventory of invasive species was conducted within the Lewis County portion of the Beaver River watershed. The inventory was conducted on roadways and major waterways within the watershed. Upon evaluating the inventory, each invasive found was assessed for management purposes. With Purple Loosestrife being the most manageable invasive found in the Beaver River Watershed, it was decided that a manual control project was the most valid method to rid the watershed of this invasive.

Purple Loosestrife is a very attractive flowering plant that is extremely invasive, harmful to wildlife and spreads very quickly. This plant, found along the Beaver River shoreline, is an invader that is typically found in wetlands, drainage canals and roadside ditches. It quickly crowds out most native vegetation, effectively taking away food or shelter from native wildlife. Because this plant is capable of producing millions of seeds, it was imperative to quickly remove it so the infestation does not continue to spread up and down the Beaver River and into the Black River and points beyond. Although the source for its original infestation is unknown, the Lewis County Soil and Water Conservation District is working to stop its continued spread.

As a partner of the St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management (SLELO PRISM), Lewis County SWCD applied for and received a grant from the PRISM to implement control measures. The PRISM receives their funding from the New York State Environmental Protection Fund.

Methods

The Beaver River inventory results indicated initial points of invasive species populations utilizing a global positioning system (GPS) unit (Trimble GeoXT 2005 Series Point Collection and GIS Entry.) Data points were compiled and downloaded using a geographic information system (GIS) ArcMap and those points of invasive species populations were also uploaded to iMapInvasives. Once uploaded to the GIS system the tax parcel layer was overlaid and parcels were selected where they intersected with an infected site. Landowners were then identified that had Purple Loosestrife on or near their property and the list was compiled.

The initial inventory identified landowners requiring notification that this invasive was found on their property. Mailings included an introductory letter, a fact sheet on Purple Loosestrife and its negative effects on the ecosystem, and a landowner permission form allowing the Soil and Water Conservation District staff to enter their property if they could not reach the plants from the river for purposes of removing it. Since this invasive plant was not found above Murmur Creek, it was thought that Murmur Creek itself may have been the initial

site of infection. The District staff canoed up the Murmur Creek tributary to assess if there are any other plants found. Fortunately, no additional plants were identified above the NYS Route 812 bridge on the Beaver River.

Once permission forms were received, the District planned control days to dig up plants and bring them back to the office for disposal. Many sites were accessed utilizing a 16 foot Old Towne Canoe. The first field control day identified the Castorland Boat Launch in Naumburg as an additional infected site that needed invasive species control. A Temporary Revocable Permit was quickly obtained from the NYS Department of Environmental Conservation in Dadville, NY in order to remove Loosestrife from this boat launch. This boat launch is located just below the mouth of the Beaver River on the Black River. Subsequent field control days commenced, maps and the Trimble were used to ensure that all initial sites were identified and the Loosestrife removed, while at the same time the staff was on the lookout for additional Loosestrife plants that were not identified in the initial survey.

After trial and error, it was found that spade foot shovels worked best to manually extricate plants from the ground. Plants were put in large black contractor bags and sealed to prevent any parts of the plant from escaping. Initial dig sites were inspected to ensure the plant was removed in its entirety. Most of the Loosestrife removal occurred before the flower went to seed. However, a new site was found at the end of the season and plants had already gone to seed. Therefore, they had to be handled with care so as to not spread the Loosestrife seed further.

Results

The Beaver River Watershed initial invasive species inventory identified 21 sites where Purple Loosestrife had been found. Results from the tax parcel overlay indicated which landowners needed to be notified that Loosestrife was found on their property. A total of 14 permission forms were initially received. After conducting visits to all 21 sites, our field staff identified and removed Loosestrife from a total of 16 sites. No plants were found at the 5 remaining sites. Populations varied from single plants to several hundred plants. Landowners that did not mail back their permission forms had door hangers and information packets placed on their front doors. Multiple phone calls and visits were made to the landowners where permissions forms had not been received, but for two sites, landowners could not be reached. The education packet was handed out if they did not want the District to remove the plant from their property. The optimistic expectation was that the homeowner was informed of the effects of the invasive plant and how best to remove it. The last permissions were received from non-resident landowners were received near the end of the season. These two sites were controlled late, after the plants had seeded out. However, removal was performed above the dam on both sides of the Beaver River, above and below the Croghan boat launch.

There were a total of 7 field control days, four staff and over 390 hours spent on press releases, mailings, manual control and disposal of Purple Loosestrife in the Beaver River Watershed. Subsequent site visits were made to ensure complete removal of this invasive plant in the Beaver River.

Summary

After a successful summer of Purple Loosestrife removal approximately **110 fifty five gallon garbage bags** full of plants were removed from the **16 sites** where loosestrife populations were found. The bags were sealed and stored outside in the sun where the plants were left to rot before being properly disposed of.

The majority of the landowners that we visited were very thankful for our efforts and were more than happy to let us remove plants from their property. Several Landowners were unaware of the negative effects that Loosestrife can have on the environment and were pleased to learn about this plant and offered to monitor their land and contact us in the future should they find more plants. Press releases proved to be successful as we received several phone calls from landowners throughout the county who found Loosestrife on their property. Although not all of these sites were on the Beaver River, the District recorded locations for possible future removal projects.

Monitoring

In the future the Lewis County Soil and Water Conservation District plans to continue landowner education as well as conduct yearly site visits to all of the sites along the Beaver River in order to ensure that every effort is maintained to hinder the spread of this detrimental plant.



Pictured Above: Purple Loosestrife being pulled in the Town of Croghan.



Pictured Above: Mike Durant (District Technician) removing loosestrife on Bridge Street in the Town of Croghan.



Pictured Above: Alexis Lyndaker (Program Technician) pulling loosestrife on Route 812 in the Town of Croghan.



Pictured Above: Katie Harvey (Summer Intern) pulling purple loosestrife along the Beaver River.



Pictured Above: Purple Loosestrife stocking area (over 100 bags filled).