

Management of Purple Loosestrife and Reed Canary Grass
Grant # 07-019W
Wildlife Preservation Fund
Final Report

1. General information:

The Forest Preserve District- Kane County (hereafter the “District”) was awarded an Illinois Wildlife Preservation Fund grant in the amount of \$1800 on July 1, 2006. The original grant application was written and submitted to the IDNR by Mr. Chris Hauser-formerly of the District. This report has been written entirely by Mr. Drew Ullberg, Director of Natural Resources, whose contact information is as follows:

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2. Primary Objective

The primary objective of this project was to manage Purple Loosestrife and Reed Canary Grass using judicious herbicide applications. Backpack sprayers and other equipment were used by District staff and volunteers to control these and other invasive species.

Purple Loosestrife was managed at the following locations: Freeman Kame NP, LeRoy Oakes FP, Meissner-Corron FP, Nelson Lake Marsh NP, Nyman-Oury FP, and along the Fox River at the South Batavia Dam removal site.

Reed Canary Grass was managed at the following locations: Big Rock FP, Burlington Prairie NP, Freeman Kame NP, Meissner-Corron FP, Nelson Lake Marsh NP, and Pingree Grove FP.

3. Project Description

Purple Loosestrife (*Lythrum salicaria*) and Reed Canary Grass (*Phalaris arundinacea*) are two of the most problematic and invasive wetland species in Northeastern Illinois. Purple Loosestrife grows in several of the highest quality wetlands owned by the District, and would like to better manage this species using herbicide. Reed Canary Grass is ubiquitous in Kane County, and our objective was to manage it only in high-quality wetland communities.

Illinois Wildlife Preservation Funds supported the purchase of 6 professional quality backpack sprayers and quantities of concentrated Garlon 3A and Rodeo herbicides.

Wetland habitats were the focus of exotics control for the duration of this grant. These wetland sites include high quality emergent marshes, graminoid fens, sedge meadows, and wet prairies. Most of these wetlands mentioned below are part of larger restoration projects, most are on the original Illinois Natural Areas Inventory, and three sites are within dedicated Nature Preserves (Burlington Prairie, Freeman Kame, and Nelson Lake Marsh).

For control of Purple Loosestrife, Reed Canary Grass, and other invasive species, District staff have used ATV-mounted 50 gallon sprayer units (equipped with both boom and hand gun sprayers), one hand-carried 10 foot long herbicide wick, several 1 gallon hand sprayers, and two backpack sprayers. Prior to the grant award, a setback in the management of non-native herbaceous wetland species has been the lack of dependable and reliable backpack sprayers, for both staff and volunteers. The purchase of several backpack sprayers allowed both staff and volunteers to more effectively manage Purple Loosestrife and Reed Canary Grass on District properties.

4. Accomplishments:

The original grant agreement supported the District's purchase of 12 backpack sprayers. Staff purchased only 6 Professional grade SPO brand backpack sprayers in 2006. SPO products had never been field tested by staff up to that point and they proved expensive, but not a quality product.

The backpack sprayers were used by both staff and volunteers during the 2006 and early 2007 growing seasons to apply herbicide to infestations of Purple Loosestrife and Reed Canary Grass at numerous preserves. Considering the SPO sprayers did not meet initial performance expectations---they repeatedly and unexpectedly leaked---they were useful only to a limited extent. Having used --and repaired--the SPO sprayers during the 2006 growing season and reflecting upon their problems, by the close of 2006 the decision was made not to purchase this product again.

Between the grant award date of July 1, 2006 and June 2007, District staff dedicated more than 150 hours (valued at \$4450) to applying herbicide to the two main target species. A majority of the work occurred in high quality habitats at Freeman Kame, Dick Young-Nelson Lake Marsh, Big Rock, and Meissner Corron Forest Preserves each undergoing long-term restoration and management.

The only low-quality area treated was at the South Batavia Dam. There the District expended \$1,300,000 to remove the dam from the main stem of the Fox River and herbicide was applied to Purple Loosestrife growing along the banks of the Fox to reduce and ultimately eliminate a prominent seed source of this noxious species.

Generally, Purple Loosestrife was sprayed with 10% Garlon 3A during the growing season (May thru August). The herbicide Garlon 3A, a wetland-approved herbicide, was used to avoid killing native graminoid species.

Reed Canary Grass was sprayed with 5% Rodeo during the late fall (October and November) and early spring (April and May). Spraying was typically done when native plant species were dormant. The main exception to this rule was in the case of large monocultures growing adjacent to high quality wetlands: in this case we used our ATV-sprayer to boom spray during the growing season.

Significant strides were made at controlling well-established Purple Loosestrife and Reed Canary Grass populations at Freeman Kame FP. This preserve contains an unusual plant community where sedge meadow, fen-and a few relic bog plants intermingle. Staff has been managing Purple loosestrife in this wetland for many years and hopes to eradicate the species here by 2009.

Work conducted at Freeman Kame in the grant timeframe also entailed large-scale reed canary grass management efforts. Since 2004 staff has been repeatedly burning and applying herbicide to a 30 acre monoculture of reed canary adjacent to the fen-bog complex. Support from the Illinois Wildlife Preservation Fund allowed us to purchase large quantities of Rodeo needed for this project and applied using District boom-spray equipment.

5. Total project Expenditures

In timeframe of this grant expenditure for Purple Loosestrife (*Lythrum salicaria*) and Reed Canary Grass (*Phalaris arundinacea*) control are as follows:

\$899 for 6 SPO sprayers – of which \$594 reimbursement requested.
Purchased from Forestry Suppliers 205 W. Rakin St, Jackson MS 39201

\$1,332 for Rodeo herbicide purchase
\$1,117.05 for Tahoe 3A (Garlon 3A equal) both purchased from:
Martenson Turf products
PO Box 218
Waterman, IL 60556

Attached are purchase orders and invoices for these materials. The District respectfully requests \$1800 reimbursement for materials which were necessary to achieve the project objectives.