



Innovative, large scale restoration of a buckthorn monoculture with dead ash overstorey



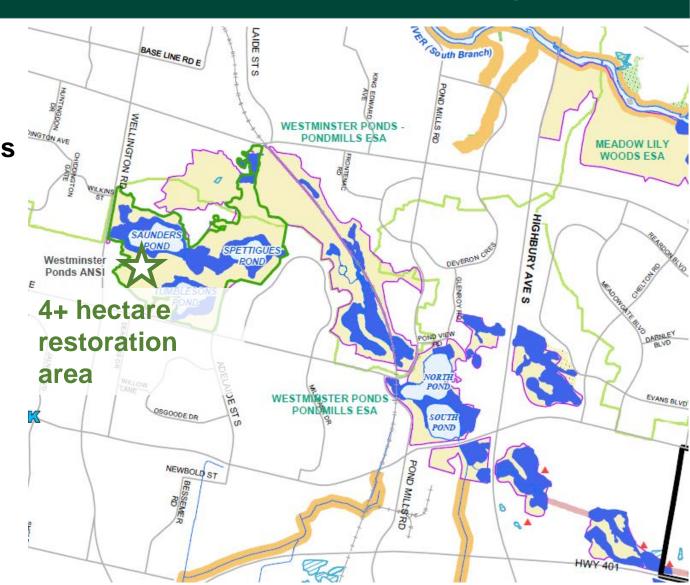
Westminster Ponds Environmentally Significant Area, London, ON

Linda McDougall, Ecologist, City Planning, City of London





- Westminster
   Ponds ESA –
   Ecological
   boundary includes
   ~250 hectares on
   Map 5 London
   Plan
- Provincially Significant Wetland (PSW)
- Westminster
   Ponds Area of
   Natural and
   Scientific Interest
   (ANSI)







- City funded / led ecological inventory process completed in 2015 by North South Environmental Inc.
- Identified invasive species and percent cover of buckthorn.
- Priority assigned to areas of highest sensitivity and least invasion.



Westminster Ponds/Pond Mills ESA: Ecological Inventory & Management Zone Report

Prepared for the City of London

#### Prepared by:

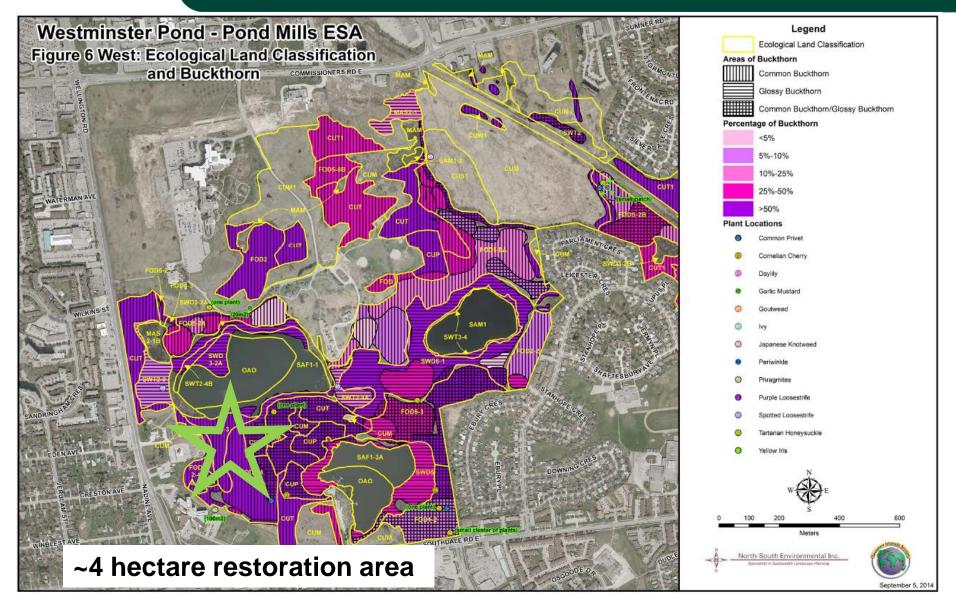
North-South Environmental Inc. with support from Schollen and Company Inc.
Hutchinson Environmental Sciences Ltd.
Norbert Woems

April 2015











- UTRCA are funded by the City to kill Buckthorn using basal bark application of Garlon RTU (Ready to Use) since 2011
- Garlon RTU is applied to stems / trunks to most efficiently treat and kill thousands of Buckthorn every year in the ESAs
- Garlon RTU can be applied anytime stems/trunks are dry and easily identifiable with UTRCA finding best results from May 1 to Nov. 15
- Buckthorns are stressed after 10-14 days of application of Garlon RTU and die after 3-4 weeks. Left standing dead as "bird perches" to decompose naturally.

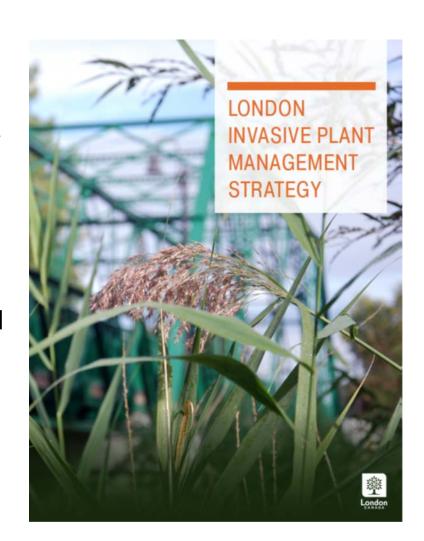


Eastern Bluebird, WMP ESA Restoration 2019, Photo by UTRCA





- Buckthorn is nearly 20% of our tree cover in London and Ash were 10%.
- Densely infested areas are not the first priority to focus on using a EDRR approach under the London Inv. Plant Management Strategy (2017).
- Priority is protecting the ecological integrity of areas of least invasion, and most sensitive habitats first.
- Where infestation is over 80% and confounded with dead ash, innovative approaches like the ongoing restoration plan for the 4 Hectare Westminster Ponds ESA are needed.







**Ontario Invasive Plant Council, 2017**:

"The City of London is a **provincial** leader in municipal action against invasive plants. They're doing great work prioritizing invasive plant species and populations to help safeguard urban biodiversity hubs... London's strategic approach to invasive plant planning has helped provide a model for other municipalities to build from."









#### Westminster Ponds / Pond Mills **ENVIRONMENTALLY SIGNIFICANT AREA** Welcome to the Westminster Ponds / Pond Mills Environmentally Significant Area (ESA). This is the largest ESA in the City of London, at just over 250 hectares, with the majority of the lands in public ownership The ESA is significant for its size, rich variety of natural habitats, rolling topography and unique "kettle" ponds, all within an urban setting. The map shows the 11 km of hiking trails that wind their way through the ESA. To minimize your impact on the sensitive habitats, please keep your pets on a leash and stay on the marked trails.

#### Accessible Trail Information

- Kiosk north to Saunders Pond viewpoint
- Kiosk east to Saunders Cabin (0.2km) Saunders Cabin east to trail fork (0.2km)
- Kiosk south to Dearness (0.4km)



Avg. 2%

#### Accessible Amenities:





#### Things to Remember

- 1. Use only the official access points indicated on the trail maps.
- 2. Walk only on the managed trails (marked with yellow blazes).
- 3. All pets must be on a leash (2 m/6 ft max.). Please pick up after your dog.
- 4. Do not disturb wildlife or pick or transplant flowers.
- 5. Access is allowed from 6:00 am to 10:00 pm.
- Bicycles are not permitted in ESAs except on specifically designated pathways indicated by signs.
- 7. Keep the ESAs litter free PLEASE pick up after yourself.
- 8. Fishing is permitted with a provincial fishing licence. Hunting is not permitted.
- 9. Do not release goldfish or other pets into the ESA.

The ESA provides habitat for a large number of bird species. Woodpeckers, nuthatches and other birds nest in the woodlands while Field Sparrows and Eastern Meadowlarks prefer the grasslands. Mallards, Wood Ducks and Canada Geese nest near the ponds.

The ESA is situated on the Ingersoll Moraine, an east-west ridge of till (soil) deposited more than 12,000 years ago by a glacier. The kettle ponds were created when large blocks of ice from the

The upland ridges between the ponds support a diverse hardwood forest of Sugar Maple, American

Beech, Red Oak, White Oak, Black Cherry, and Shagbark Hickory. Spring wildflowers include White

In low wet areas, swamp forests contain Red Maple, Silver Maple, and White Elm. The swamps are

home to several species of ferns, and to wildflowers such as Skunk Cabbage and Canada Mayflower.

glacier formed permanent depressions that filled with water when the ice melted.

Among the 20 species of mammals recorded are White-tailed Deer, Red Fox, Raccoon, Beaver, and Coyote. Salamanders, Spring Peepers and Gray Treefrogs rely on the vernal pools within the forest to complete their life cycle. The ponds support fish species such as Largemouth Bass, Yellow Perch and Pumpkinseed.

#### Community Partners

Plant Communities

Trillium, Bloodroot and Trout Lily.

Glacial Soils and Kettle Ponds

Numerous organizations, clubs, committees and local Adopt an ESA volunteers have been involved in the stewardship of the ESA. Their efforts have enhanced the health of this unique natural area.





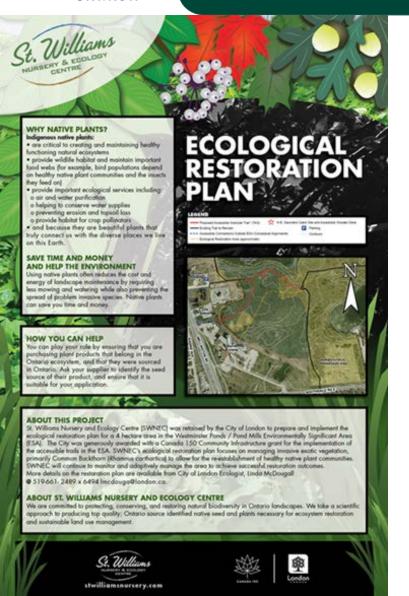




Looking for More Information? www.London.ca/ESA, 519-661-4980 Upper Thames River Conservation Authority www.thamesriver.on.ca, 519-451-2800







Ecological Restoration Plan for Westminster Ponds/Pond Mills ESA

Saunders Cabin Area Ecological Restoration Plan



Prepared by: St. Williams Nursery & Ecology Centre 885 Hwy 24 West St. Williams Ontario NOE 1P0

> Prepared for: Linda McDougall Ecologist Environmental & Parks Planning Services 519-661-2500 x 6494



#### **Restoration Plan Objectives**

- Identify, retain and seed salvage, existing native elements representative of the sites natural history and biodiversity (to the extent possible);
- manage invasive species, notably common and glossy buckthorn;
- fell dead trees that pose a hazard, while retaining some snags for habitat;
- remove dense stands of buckthorn, to allow ecological restoration to proceed, and,
- establish self-sustaining, native plant communities, with improved biodiversity consistent with the natural history of the area.

Westminster Ponds/Pond Mills ESA - Saunders Cabin Area Ecological Restoration

St. Williams Nursery and Ecology Centre (SWNEC) Invasive Non-Native and Native Plant Data



#### Legend

Proposed Accessible Granular Trail (Trails Advisory Group)

Proposed Accessible Boardwalk (Trails Advisory Group)

Existing Trail to be Removed (Trails Advisory Group)

Existing Trail to Remain (Trails Advisory Group)

- O Control Flag (Invasive Species) St. Williams Nursery and Ecology Centre (SWNEC) Data
- Salvage Flag (Native Species) St. Williams Nursery and Ecology Centre (SWNEC) Data
- ■ Accessible Connections on Dearness Home Grounds/Fire Station Grounds (Proposed)

Existing Accessible Connections

--- Ecological Restoration Area (approximate)

W.E. Saunders Cabin Site







**Timeline** 

Buckthorn and dead Ash mulching – winter 2017 Multi-year ecological restoration process begins – spring 2017

Boardwalk/Trail implementation – summer 2017





Buckthorn and dead Ash mulching – winter 2017 Multi-year ecological restoration process begins – spring 2017 Boardwalk/Trail implementation – summer 2017







<u>UTRCA are funded by the City to manage the ongoing restoration - killing buckthorn etc.</u> – link to UTRCA's video





Yellow Warbler, WMP ESA Restoration Area 2019, Photo by UTRCA



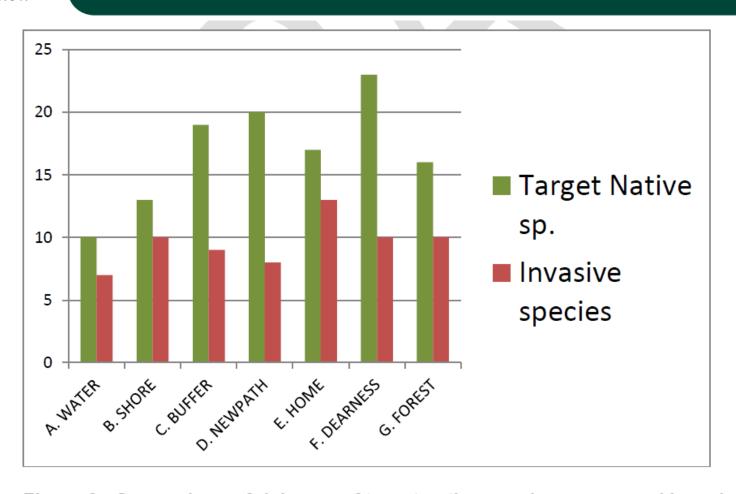


Figure 3. Comparison of richness of target native species versus and invasive species observed by transect (habitat type).

2018 Monitoring Report by St. Williams Nursery and Ecology Centre



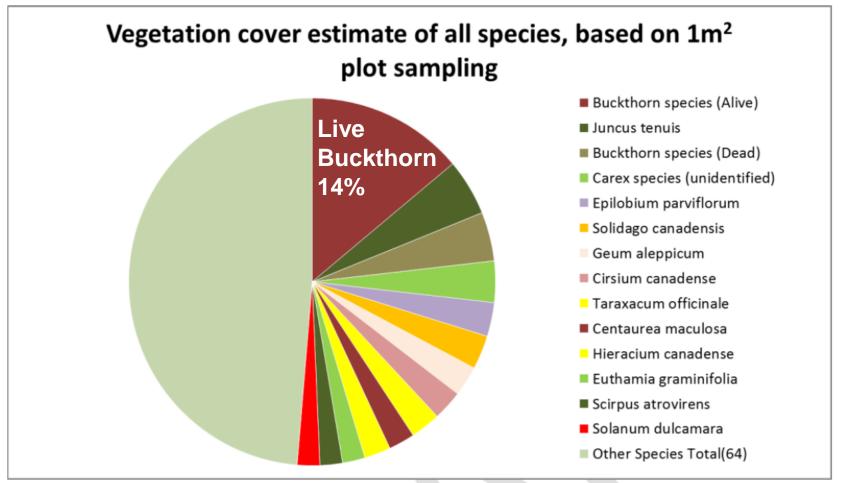


Figure 5. Site vegetation cover estimates based on 1 m sampling plots.

2018 Monitoring Report by St. Williams Nursery and Ecology Centre



Westminster Ponds ESA – Ecological restoration of 4+ hectare area that was 80% non-native invasive buckthorn and dead ash trees in 2016.



Canada 150 Grant from Federal Government helped fund project which began in 2017 with wintertime mulching of the buckthorn and many standing dead ash trees. Project is successful and native species are now dominant.





# In 2019 the <u>Invasive Species Centre</u> commended the City for excellent work completed under the Strategy:

- "London is the first municipality in Ontario to create, approve and implement an invasive species strategy."
- "Beyond the tremendous ecological benefits of this strategy, London is enabling community-led engagement around invasive species control."

