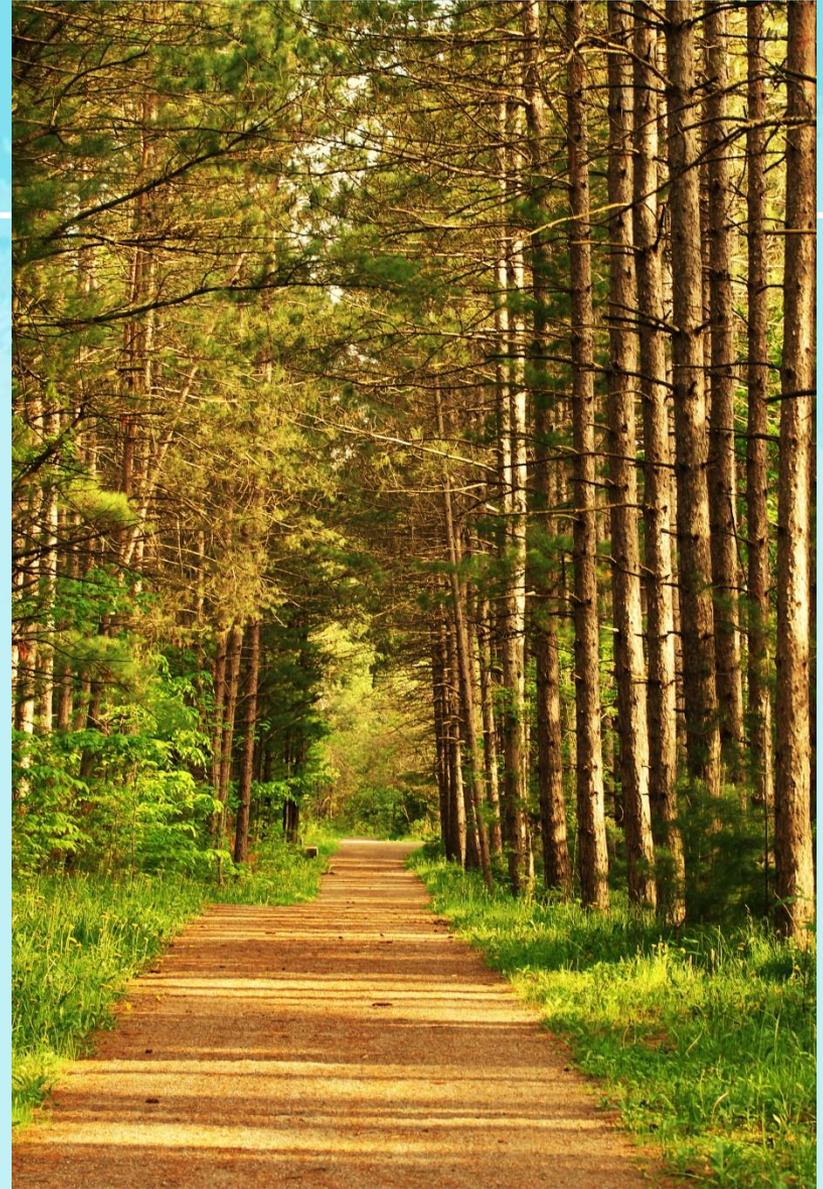


# Developing an Invasive Plant Management Strategy for the York Regional Forest

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# Overview

- Introduction to York Region's Forestry Section and the York Regional Forest
- Invasive Species threatening the York Regional Forest:
  - Priority Forest Pests
  - Priority Invasive Plants
- Invasive Plant Management Strategy for the York Regional Forest



# York Region Forestry – What we do

## Conservation and Stewardship

- Greening Strategy:
  - Securing conservation lands
  - Tree-planting programs
- Forest Conservation Bylaw
- **Invasive Species**

## Urban Forest Management

- ~ 50,000 street trees
- Hazard plant control on RROW (**Invasive Species**)

## York Regional Forest

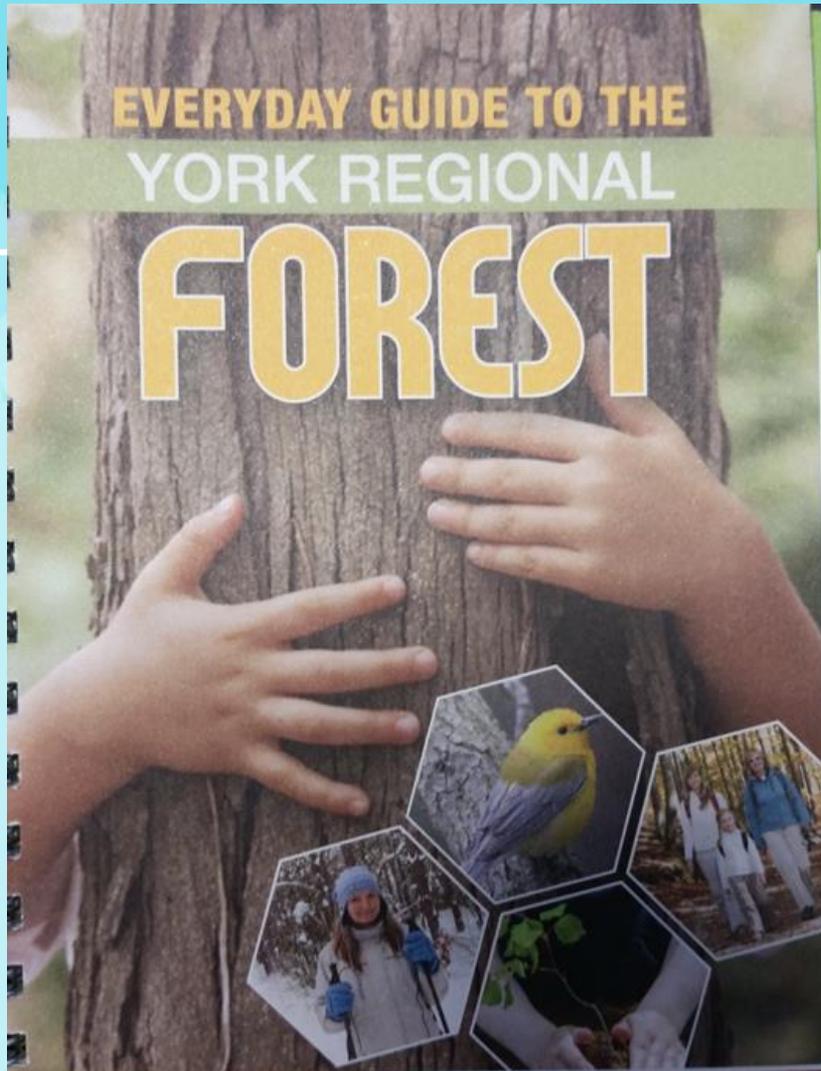
- 120 kilometers of trails in 21 public forest tracts (4.5 km of accessible trail – 3 tracts)
- **Invasive Species Management**

## Public Education

- Free walks and festivals in the York Regional Forest
- Programs for schools and community groups (AASC, Nature's Classroom)
- **Invasive Species awareness**



# EVERYDAY GUIDE TO THE YORK REGIONAL FOREST



York Region Forestry  
Healthy Trees, Healthy Communities



## York Regional Forest Tracts

**Legend**

- Multilane Provincial Highway
- Provincial Highway
- Road
- Railway
- Municipal Boundary
- Regional Boundary
- Lake \*
- River \*
- Town or Village
- Urban Area
- Regional Forest

**York Region yorkmaps**

Produced by Office of the Chief Administrative Officer,  
Geographic Information Services Branch.  
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- York Regional Forest**
- 1 - Robinson Tract
  - 2 - Pines Tract
  - 3 - Denny Tract
  - 4 - Clarke Tract
  - 5 - Patterson Tract
  - 6 - Hill Tract
  - 7 - Eased King Woodlands Tract
  - 8 - Knowledge Tract (meadowlands)
  - 9 - Skid Tract
  - 10 - Mitchell Tract
  - 11 - North Tract
  - 12 - Benson and Graves Tract
  - 13 - Zestful Tract
  - 14 - Brown Hill Tract
  - 15 - Varsity Road Tract
  - 16 - Cranberry Tract
  - 17 - Godfrey Tract
  - 18 - Pefferlaw Tract
  - 19 - Nobleton Tract
  - 20 - Davis Drive Property
  - 21 - Happy Valley Tract

# Some priority forest invaders in York Region

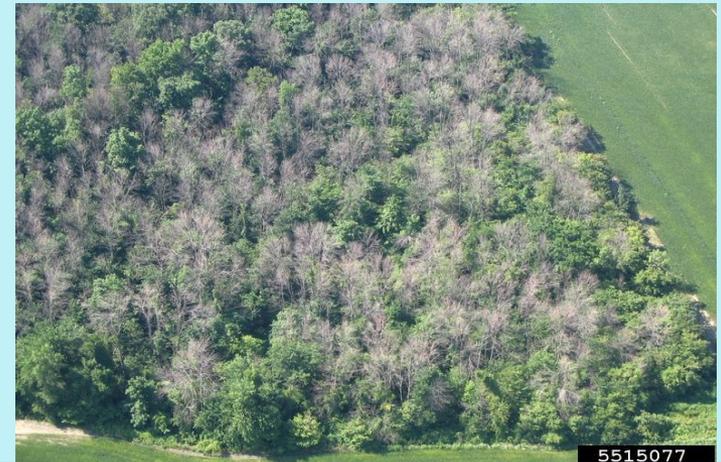
- Emerald ash borer (EAB)
- Asian long-horned beetle (ALHB)
- Hemlock Woolly Adelgid (HWA)



# Emerald Ash Borer (EAB)



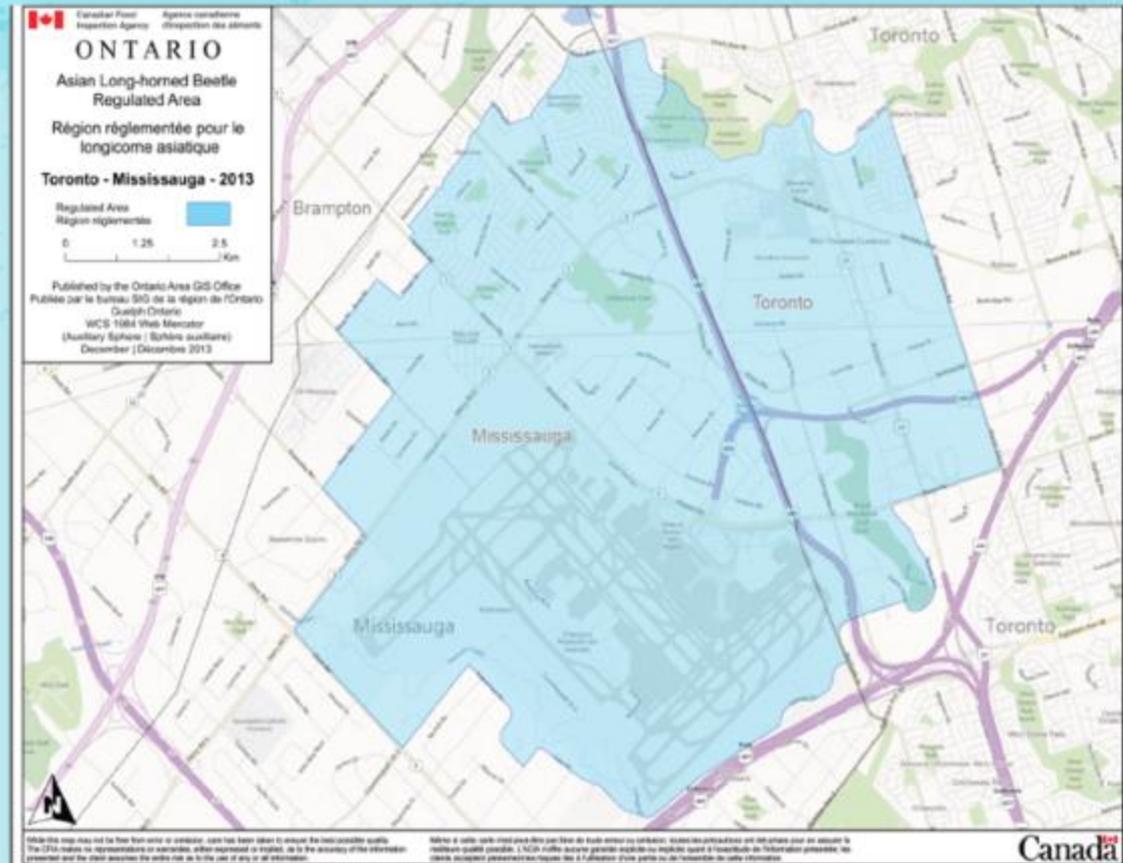
- Found in York Region in 2008 (Vaughan)
- In York Region:
  - York Region estimates there are 2.1 million ash trees in our woodlands and 700,000 in the urban forest (private and public lands)
  - Approximately 13,000 ash street trees have been removed to-date (both planted and naturally-occurring)
  - Estimate 65,000 mature (over story) ash trees in the York Regional Forest (mature = >20cm dbh)
  - 13,500 ash trees have been marked for removal along sanctioned trails and shared property boundaries



# ALHB Infestation in Toronto/Mississauga

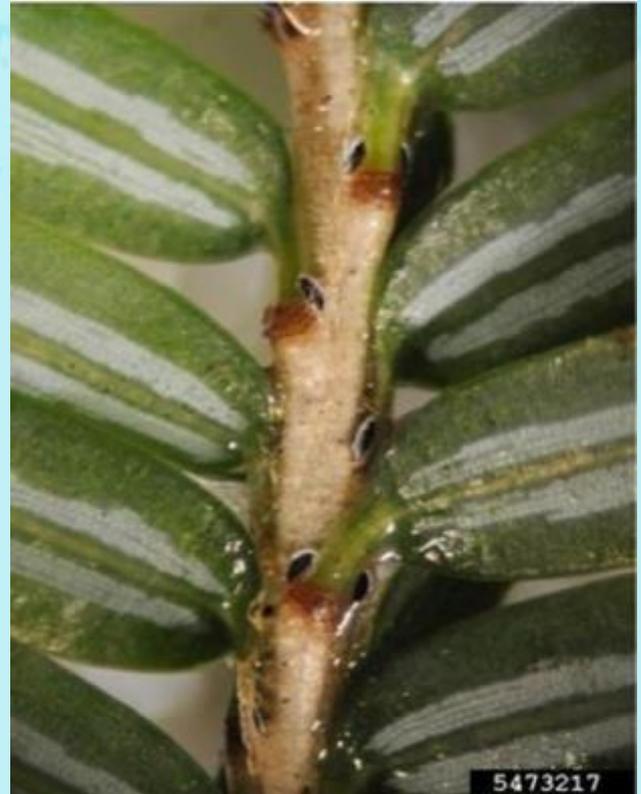


- Originally detected in 2003 in Vaughan, CFIA declared eradicated
- Rediscovered in August 2013 near Pearson Airport (not in York Region)
- Eliminated all infested trees and all host trees within 800m of infested trees
- Detection surveys on-going in grid-like pattern
- Quarantine will be lifted if no new detections are found in the next 5 years



# Hemlock woolly adelgid

- Tiny sucking insect that attacks and often kills Eastern Hemlock trees
- Nymphs feeds on tissues of tree's twigs
- Kills Eastern and Carolina hemlocks, but not western hemlock



# Hemlock woolly adelgid

- HWA found in Ontario in two isolated areas:
  - Etobicoke 2012
  - Niagara Gorge 2013, 2014, 2015
- CFIA destroyed infested trees and continues to survey these areas, as well as areas along the Canadian border close to US infestations
- HWA is currently present and spreading in the eastern United States – PA and NY



# Priority invasive plants threatening the York Regional Forest

1. Dog-Strangling Vine
2. Garlic Mustard
3. European Buckthorn
4. European Honeysuckle
5. Manitoba Maple



Invasive Honeysuckle

Lesser concern:

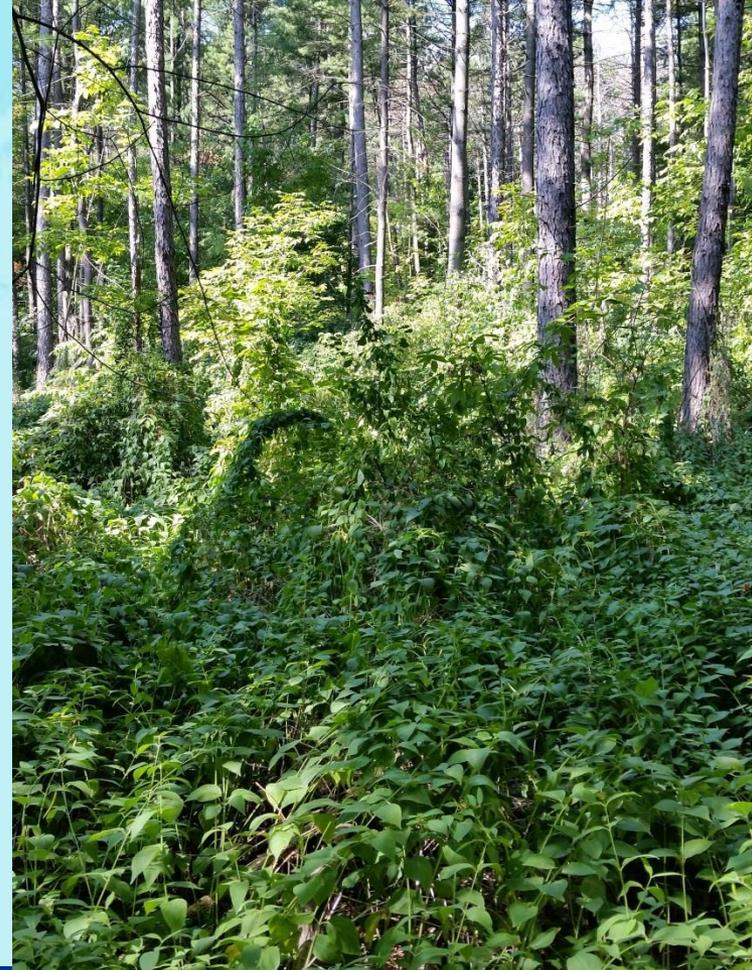
1. Phragmites
2. Japanese Knotweed
3. Wild Parsnip
4. Giant Hogweed



European Buckthorn

# The perfect storm: The York Regional Forest and DSV

- Thrives in plantations
- Creates a thick carpet smothering native herbaceous understory plants that have benefits to native wildlife
- Virtually eliminates natural regeneration
  - red pine are nurse trees
  - working to transition to native hardwood stands
  - costs associated with removal and underplanting



# Invasive Plant Management Strategy for the York Regional Forest (2014)

- Most of YRF is publicly accessible;
  - mixed uses: mountain bikers, hikers, dog walkers, horseback riders, foragers, hunters, photographers, contractors, staff and machinery

**Lots of traffic = high potential for introduction and spread**

- **Goal:** *To prevent, reduce and mitigate the effects of invasive plants in the YRF*
  - The Natural Heritage and Forestry Section (Environmental Services Department) the lead on implementing the Strategy
  - Ecosystem Approach
  - Four high-level main objectives....

# Objective 1

- *Prevent the introduction and spread of invasive plants in the YRF*
- **Potential Actions:**
  - Build an EDRR program for the YRF
  - Promote the use of EDDMapS
  - Manage contaminated materials and equipment
  - Train and educate staff (fulltime and seasonal)
  - Policies (e.g. Clean Equipment Protocol)

**EDD** **MapS** *Ontario*

Early Detection & Distribution Mapping System



# Objective 2

- *Raise awareness of, and educate the public and forest users about invasive plant threats and management*
- **Potential Actions:**
  - Enhance existing invasive plant communications to the public
  - Target audiences:
    1. General public(new users)
    2. Neighbouring landowners
    3. Contractors
    4. York Region staff
    5. Local municipal staff
    6. Other YRF user groups (schools, mountain bikers, equestrian riders, hiking groups (ORTA))

# Objective 3

- *Control existing invasive plants in the YRF and restore areas where invasive plants have been removed*
- **Potential Actions:**
  - Develop an invasive plant management plan for the YRF (Threat Assessment)
  - Address neighbouring private lands



# Objective 4

- *Enhance community and partnership collaboration*
- **Potential Actions:**
  - partner with local municipalities and non-profit organizations and optimize municipal resources
  - support stewardship groups and community volunteers



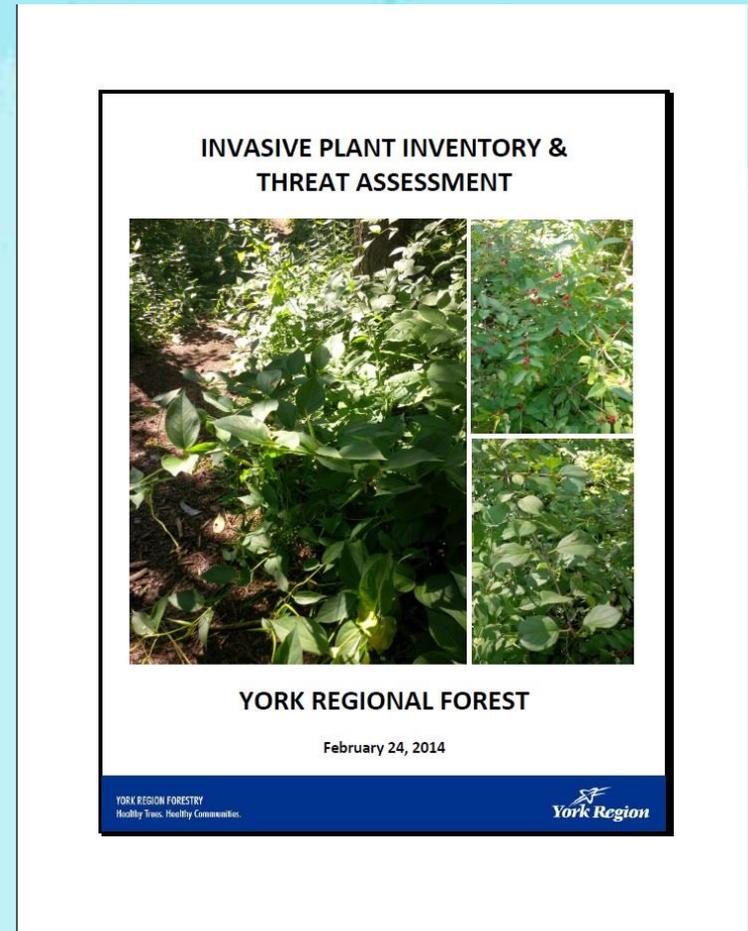
# Action Priorities Initiated To-date

- ✓ Develop a list of Target Species likely to invade the YRF, and eradicate those in their initial stages of infestation
- ✓ Conduct risk assessments for Target Species (Threat Assessment)
- ✓ Commence invasive plant control actions in the YRF, focusing on manageable populations with the hopes of eradication



# Invasive Plant Inventory and Threat Assessment for the YRF

- 2013 inventory – based on observations from 139 km of mapped trails
  - DSV
  - European Buckthorn
  - Garlic Mustard
  - Manitoba Maple
  - Eurasian honeysuckle
  - Other species
- Threat assessment and prioritization for treatment based on:
  - manageable size
  - proximity to environmentally-sensitive areas (greatest ecological impact )



# Action Priorities to Initiate

- Establish an internal staff EDRR team with a lead coordinator to develop an EDRR program (2017)
- Promote and host EDDMapS workshops to forest users and neighbouring landowners (2017)
- Define response plans for new invaders
- Adopt measures to eradicate, contain or control new high risk or established species
- Host a Clean Equipment Protocol Workshop for contractors and staff who undertake work within the YRF and along RROW
- Share Clean Equipment Protocol training materials with local municipalities to encourage them to enforce within their jurisdiction
- Host an annual (preferably spring) invasive plant workshop for year-round and seasonal staff to train and educate on plant ID, EDDMapS reporting tools, BMPs and tips on communicating with the public (on going)

# Moving Forward

- Original EAB budget: broaden to include invasive plants and other forest pests

**EAB** → **EAB & other invasive species** → **invasive species**

- Approved budget until approximately 2021
- Lots of work to plan, organize and implement Strategy Actions
- Look to collaborate with as many partners as possible
- Leverage funds from Invasive Species Budget to help on-the-ground action in the YRF and York Region



A landscape photograph showing a nursery of young pine trees planted in neat rows on a grassy slope. A dirt path leads from the foreground towards the trees. In the background, a dense forest of taller trees is visible under a sky filled with large, dramatic white and grey clouds. The overall scene is bright but slightly overcast.

Questions?

Thank You