



Urban Forest Health – Oak Wilt



Trees & Forests Advisory Committee
March 27, 2019



What is Oak Wilt



- Vascular disease of oak trees, caused by the fungus *Bretziella fagacearum*
- Fungus creates blockages in the tree's vascular system, killing it as water and nutrients cannot move throughout the tree
- Regulated pest under the Plant Health Act and Plant Protection Regulations enforced by the Canadian Food Inspection Agency (CFIA)
- There is no "cure" for Oak Wilt
- No confirmed cases in Canada



Where is Oak Wilt



- Oak wilt has spread throughout the Eastern United States.
- Origin unknown but confirmed in Wisconsin in 1942
- Thought to be present much earlier through historical records 1890's



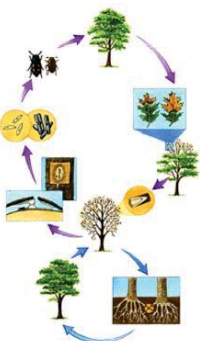
Where is Oak Wilt



- In 2016 Oak Wilt was confirmed on Belle Isle, Michigan
- 579 m from the Canadian Border
- 150 km from London



How Does Oak Wilt Spread



Above Ground

Beetles carry fungus spores from "spore mats" on infected trees to wounds on healthy trees during feeding or breeding.



Below Ground

Fungus travels from infected roots to healthy tree roots.



What Does it Look Like



FAST! Wilting and bronzing of foliage starting at top of the tree and moving downwards



What Does it Look Like



- Leaves turn dull green, brown or yellow
- Discolouration of leaves progressing from the edge of the leaf to the middle
- Premature leaf fall (including green leaves)



What Does it Smell Like



- White, grey or black fungal mats just under bark that emit a fruity smell
- Vertical black cracks in the trunk and large branches
- Fungal spore mats (also referred to as pressure pads) exerting outward pressure on the bark



Invasive Species Centre



Impact to Urban Forest

Proportion of Urban Forest at Risk

- Red Oak types vs White Oak types
- 2% of all London's trees are oaks or 140,000 trees; one-half of these trees are highly susceptible
- More oak are present in the rural areas of the City, located in woodlands and woodlots
- City urban area where oaks are the predominant species of the urban forest e.g. Oakridge, Warbler Woods, and Kiwanis Park
- 6,000 Street Trees are oak type species



What is the City Doing

Communicate & Educate

Brought Oak Wilt to the attention of Municipal Leaders

Report to Planning and Environment Committee

To: Chair and Members
Planning & Environment Committee

From: Kelly Scherr, P. Eng., MBA, FEC
Managing Director, Environmental & Engineering Services and City Engineer

Subject: Urban Forest Health - Oak Wilt

Meeting on: February 19, 2019

Recommendation

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, that this report BE RECEIVED for information.

Executive Summary

2015-2019 Strategic Plan Alignment: Building a Sustainable City: 3. Strong and Healthy Environment; C. Plant more trees and better protect them from deforestation, invasive species and other threats.

Council approved in its Urban Forest Strategy (2014) to plan for the effective management of invasive species of pests that will be harmful to trees, with the development of an Invasive Species Strategy.

The purpose of this report is to inform Council of the potential future forest health threat to London's urban forest from Oak Wilt. Oak Wilt is a fungal disease that poses a threat to oak trees and certain other species and could result in their rapid decline, death and removal throughout the city of London. We know where Oak Wilt is, we know how it has moved through parts of the United States, and we can assume that it may appear in London.



What is the City Doing



What is the City Doing

Communicate & Educate

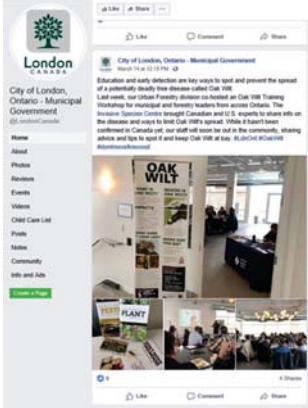


Maintaining Regional & Local Partnerships





What is the City Doing



Main Messages
 Overall positive
 Get out ahead of the disease
 Know what we are working with
 Know the strategies and techniques
 Early detection



What is the City Doing

Public Awareness Oak Wilt Campaign

- Spring coincide with camping season highlight the risks with moving fire wood
- Creation of videos for social media
- Plan to host local educational sessions for residents & lunch and learns for businesses



What is the City Doing?



Where is Oak Wilt?
 Oak Wilt has never been detected in Canada before, but the disease is widespread less than 400km from Windsor, Ontario, on Belle Isle, Michigan. That's only five football stadiums away! London is strategically located along the corridor where Oak Wilt could make its way into Ontario. Having an educated and engaged community aware of this disease that can help with early detection is especially important.

What is Oak Wilt?



What is the City Doing



What is the City Doing

Staff Training and Best Management Practices

- Staying current with industry research attending workshops
- Participating in the regional efforts; co hosting event
- Internal training of City Staff (Forestry, Parks)
- Oak Wilt Qualification designation
- Upper Thames River Conservation Authority staff staying current on the pest
- Forestry Operations Best Management Practices
- Reducing the number of red oak trees planted under the current tree planting contract; white oak species still permitted.
- Updating tree inventory to ensure accurate information



What Can Londoners Do

Public Awareness

Early Detection - Awareness

- Attend a public information session or research online
- Learn how to identify oak trees and signs of Oak Wilt

Follow best practices:

- Do not prune oak trees from April - August
- Paint pruning wounds
- Dispose properly of debris; grind stumps
- Keep trees healthy
- Be on the look out! Monitor your oak trees for sudden leaf drop or leaf colour in the summer
- Contact an arborist





What Can Londoners Do



What Can Londoners Do

Continue to Encourage Communities to Plant Trees



What Can Londoners Do

IF OAK WILT IS SUSPECTED, CONTACT:

Canadian Food Inspection Agency (CFIA)
www.inspection.gc.ca/pest

The City of London Urban Forestry Section
treeprotection@london.ca



Information

City of London's Website

www.london.ca/residents/Environment/Trees-Forests/Pages/Oak-Wilt

Canadian Food Inspection Agency (CFIA)

www.inspection.gc.ca/plants/plant-pests-invasive-species/diseases/oak-wilt

Invasive Species Centre

www.invasivespeciescentre.ca

Forest Invasives

www.forestinvasives.ca

Ontario's Invading Species Awareness Program

www.invadingspecies.com/oak-wilt