

1.1 Northerly migration of invasive species

An increase in annual average temperatures of over 2 degrees over the next 35 years may seem insignificant but the implications to the natural environment and biodiversity are broad. Oakville is home to many threatened, endangered, invasive and noxious species and as our local climate changes, so do the migration patterns of plant and wildlife species.

The presence of invasive species in Oakville may not have a direct link to climate change, but as temperatures increase these invasive species will likely migrate even farther north, to places that were previously too cold for them. Not only will their migration patterns change, these species may live longer each season which will increase the amount of damage done each year. Native species will likely suffer since the conditions to which they are adapted are changing, while invasive species better adapted to the new conditions will spread northward and flourish to replace them.

These extended seasons and changing migration patterns will cause personal health and wellness issues as well as environmental impacts such as disrupted ecosystems, loss of biodiversity.

A few of Oakville's current and projected invasive species monitoring and eradication programs are discussed below.

Emerald Ash Borer (EAB)

Emerald Ash Borer is an invasive insect from Asia that attacks and kills untreated Ash trees. The town has a strategy to detect and manage EAB in Oakville. For more information about EAB, what the town is doing and how you can help, visit the [Emerald Ash Borer](#) page.



Figure 1.1: (a), (b) and (c): the trunk damage from the Emerald Ash Borer is depicted in Figure (a). Figure (b) depicts a Green Ash leaf, showing 7 leaflets that are arranged opposite one another on the stem. Black, White and Green Ash are all common in Ontario. Figure (c) shows the Emerald Ash Borer bug.



Building your resiliency to EAB

- The Ontario Invading Species Program states that you can help to prevent the spread of unwanted forest pests by:
 - Learning to identify invasive forest pests that are a threat to Ontario
 - Don't move firewood. Burn it where you buy it
 - Don't move infested wood material to new areas
 - If you see suspected signs of infection on your trees or if you plan on moving firewood, contact the Canadian Food Inspection Agency (CFIA) for more information. 1-866-463-6017 or visit www.inspection.gc.ca
 - Report all sightings to the Invading Species Hotline 1-800-563-7711 or [report a sighting online](#)
- To learn more about identifying ash trees, emerald ash borer devastation in Oakville visit the town's [Ash Treatment, Removal and Replacement](#) webpage.
- Visit the Town of Oakville's [Canopy Club facebook page](#), [@OakCanopy](#) Club on twitter or the [town's website](#) for information on the identification, treatment and removal of invasive species.
- Join the town's community-based forest monitoring group. Contact the town's Forestry department at canopyclub@oakville.ca for further details and how to join.
- Ensure proper pruning and maintenance of trees on your property.
- For information on wildlife in Oakville, visit the town's [Wildlife and Biodiversity](#) page.

Asian Long-Horned Beetle (ALHB)

As mentioned above, we must be aware that species currently causing devastation in other parts of North America have the potential to infest Oakville as temperatures warm.

ALHB is not native to Canada and was first detected in the cities of Vaughan and Toronto in 2003. The CFIA announced on April 5, 2013, that ALHB has successfully been eradicated from that area. The Asian Long-Horned Beetle (ALHB) has not been detected in Oakville but on September 20, 2013, the Canadian Food Inspection Agency (CFIA) confirmed the presence of (ALHB) in an industrial area near Pearson International Airport in Mississauga, Ontario. Review the full news release [here](#).



The damage it can cause extends to many broadleaf trees, such as maple, birch, elm, poplar and willow. For more information on ALHB, please visit [YouTube](#).

Figure 1.1 (d), compliments of the US Department of Agriculture this picture shows the ALHB and at the tree damage that it causes.

Building your resiliency to ALHB

- The [Ontario Invading Species Program](#) states that you can help to prevent the spread of unwanted forest pests by:
 - Learning to identify invasive forest pests that are a threat to Ontario
 - Don't move firewood. Burn it where you buy it
 - Don't move infested wood material to new areas
 - If you see suspected signs of infection on your trees or if you plan on moving firewood, contact the Canadian Food Inspection Agency (CFIA) for more information. 1-866-463-6017 or visit www.inspection.gc.ca
 - Report all sightings to the Invading Species Hotline 1-800-563-7711 or [report a sighting online](#)
- ALHB may be confused with some native insects. Please compare the photos on the CFIA website when trying to identify ALHB. If you think you have seen the beetle or signs of its damage within Oakville, please take a picture if you can and report your findings to the CFIA at 1-800-442-2342.
- Visit the Town of Oakville's [Canopy Club facebook page](#), [@OakCanopy](#) Club on twitter or the [town's website](#) for information on the identification, treatment and removal of invasive species.
- Join the town's community-based forest monitoring group. Contact the town's Forestry department at canopyclub@oakville.ca for further details and how to join.
- Ensure proper pruning and maintenance of trees on your property.
- For information on wildlife in Oakville, visit the town's [Wildlife and Biodiversity](#) page.

Garlic Mustard

One of the greatest threats to woodlands in Oakville and across Ontario is Garlic Mustard (*Alliaria petiolata*), an invasive plant that displaces native wild flowers and plants, including White Trilliums.



Figures 1.1 (e), (f) and (g): Figure (e) courtesy of ontariowildflowers.com depicts first year garlic mustard growth as Figure (f) and (g) courtesy of the Ontario Invading Species Program depict (f) the tall mature garlic mustard plant and flower and (g) a forest understory blanketed with garlic mustard.

Building your resiliency to Garlic Mustard

- Refer to Conservation Halton's [invasive species webpage](#) to learn about the problematic species in our area. Access the on-line [Grow Me Instead](#) brochure for Southern Ontario to learn how to remove and replace invasive species with native ones. For a copy of this brochure please email environment@oakville.ca.
- Email environment@oakville.ca to inquire about participating in or organizing a community garlic mustard pull in your area.

Common Buckthorn

According to Ontario's Invading Species Awareness common, or European buckthorn is a small shrub, native to Eurasia and introduced to North America in the 1880s. After being planted as an ornamental shrub or used as fencerows and windbreaks in agricultural fields, it aggressively spread throughout southern Ontario and in other provinces.

As other species of trees are seeing damage and decline, the persistence and abundance of European Buckthorn is becoming problematic. Town foresters are once again innovative and proactive in their approach, according to John McNeil,

manager of Forestry Services for the town, "A prescribed burn is a deliberately set and carefully controlled low fire that consumes dried leaves and invasive exotic shrubs, but doesn't harm larger trees, Oak trees grow more vigorously after a prescribed burn and each of our successful burns encourages the natural regeneration of our white and red oak woodlands that were impacted by oak decline in 2003."



Figure 1.1 (h) Courtesy of the Ontario Invading Species Program showing Common Buckthorn leaves and flower.

Building your resiliency to Common Buckthorn

- Refer to Conservation Halton's [invasive species webpage](#) to learn about the problematic species in our area. Access the on-line [Grow Me Instead](#) brochure for Southern Ontario to learn how to remove and replace invasive species with native ones. For a copy of this brochure please email environment@oakville.ca.

To learn more about how the town is building its resilience to invasive species visit:

- Refer to the Natural Environment and Biodiversity section of the town's Climate Change Strategy.