

How is EAB Spread?

EAB is spread mainly by the transportation of infested ash wood, such as firewood, logs, and nursery stock. It also spreads naturally through forest and urban forest ecosystems. Current steps being taken to slow its arrival in Winnipeg include collaborative efforts in monitoring, public education and awareness, and restricting the transportation of firewood into Manitoba.



What Can You Do to Keep Emerald Ash Borer out of Winnipeg?

Join the effort!

- Don't move firewood and especially, don't move firewood into Manitoba that was obtained outside the province. Buy it locally and leave it where you bought it.
- Learn the symptoms and signs of EAB.
- Report suspect ash trees to the City of Winnipeg by contacting 311 or the Urban Forestry Branch at:
1539 Waverley Street
Winnipeg, MB, R3T 4V7

Information sources and photo credits listed below. Please visit these websites for more information on emerald ash borer.

- <http://www.emeraldashborer.infolindex.php>
- www.winnipeg.ca/emeraldashborer
- <http://winnipeg.ca/publicworks/insectcontrol/insect/emeraldashborer.stm>
- https://www.gov.mb.ca/conservation/forestry/health/eab_2014.html
- <http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/26856.pdf>
- <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/emerald-ash-borer/eng/1337273882117/1337273975030>
- <http://www.nrcan.gc.ca/forests/fire-insects-disturbances/top-insects/13377>
- Steven Katovich, USDA Forest Service, bugwood.org
- Joseph O'Brien, USDA Forest Service, bugwood.org

City of Winnipeg

**Public Works Department
Urban Forestry Branch**

Phone: 311

Email: 311@winnipeg.ca

Website: www.winnipeg.ca/urbanforestry

REV: May 2, 2016



Embrace the Spirit • Vivez l'esprit

Ash Tree Inventory and Emerald Ash Borer Information

*Help Protect
Winnipeg's Urban Forest*



Green Ash Tree

Why Are We Conducting an Ash Tree Inventory?

The City of Winnipeg's Urban Forestry Branch is tasked with maintaining a healthy urban forest for the citizens of Winnipeg. It is important to collect information about the trees to be able to plan for and appropriately allocate resources to manage these valuable assets.

The City has inventoried all tree species on boulevards and in parks. In 2015, the City completed an inventory of elm trees (*Ulmus* species) on private property and in natural areas to augment the City's Dutch Elm Disease (DED) management program. To further supplement the current tree inventory, the City's Urban Forestry Branch is conducting an inventory of ash trees on private property and in natural areas.

Winnipeg's ash trees (*Fraxinus* species) are faced with the imminent threat of the emerald ash borer (*Agrilus planipennis* Fairmaire) or EAB. EAB has not been found in Manitoba yet. As part of our preparation for EAB, it is important to know the number of ash trees in Winnipeg, their general size, and where they are located throughout the city. We use this information to assess potential high risk areas, to plan how to mitigate the risks, and to identify resources required to manage the pest when it is discovered in Winnipeg.

As we conduct the inventory, Urban Forestry Branch staff enter private property under the authority of the Forest Health Protection Act to collect data on tree size, location, and general health. Urban Forestry Branch staff wear high visibility vests, official City of Winnipeg identification badges, and carry Manitoba Forest Health Protection Act Inspector cards.

Ash Trees

Ash trees are common deciduous trees found throughout Winnipeg's urban forest. Branches and buds on these trees grow in an opposite arrangement along the stems, as opposed to a staggered or alternating arrangement. Leaves are compound with 5 to 11 leaflets. The bark of young trees is relatively smooth but rough with a diamond-shaped pattern on older trees. Seeds are dry, flat and oar-shaped. Ash trees are usually the last to leaf out in spring and the first to drop their leaves in fall.



Ash trees are important shade trees in Winnipeg's urban forest. They provide essential habitat for animals and shade, protect us from the harsh winter winds and hot summer temperatures, intercept storm water, and aid in stabilizing river banks to prevent erosion. Green and black ash are native to our region and comprise a significant portion of our urban forest, particularly along our rivers and streams. Native and introduced ash species were heavily planted in neighbourhoods as alternatives to elm for many years after Dutch elm disease was discovered in Manitoba. Over 30% of Winnipeg's public tree inventory is ash.

Emerald Ash Borer

The emerald ash borer (EAB) is an invasive pest introduced to North America from Asia. It was first discovered in North America near Detroit, Michigan in 2002. It is a wood-boring insect that kills all ash trees. EAB has spread throughout 25 states in eastern and central USA, and into Ontario and Quebec.

It has decimated millions of hectares of ash trees. These losses have had significant impacts on forests and urban areas, resulting in significant costs for removals, replanting and overall urban forest management. Ecological impacts continue to be assessed. EAB has not been found in Manitoba, but it is as close as Duluth and Minneapolis, Minnesota - approximately 500 kilometers away.

EAB is a metallic green-coloured beetle 1.0 to 1.5 cm in length. Every life stage of this insect makes its home in ash trees, but it is the larval stage that kills the tree. Adult females lay eggs on the bark of ash trees in late summer. The larvae create S-shaped tunnels underneath the bark as they feed. This feeding activity disrupts the tree's ability to transport nutrients. The larvae overwinter within the tree. Adult beetles emerge in late May and June through characteristic D-shaped holes in the bark. Adults feed on foliage through the summer.



Symptoms and signs of EAB infestation include crown dieback, shoot suckers along the stem and/or at the base of the tree, D-shaped exit holes, woodpecker damage and vertical splits most noticeable in the bark of younger trees.

