



Emerald Ash Borer Update

**Public Works Department
City Operations**

**Environment Committee
October 18, 2011**

Emerald Ash Borer

- Wood boring beetle
- Attacks and destroys all species of ash trees
 - Does not attack other tree species
- Now found in many areas in Ontario (i.e. London, Toronto, etc.)
- Discovered in Ottawa in July 2008



Ash (genus *Fraxinus*)



Figure 1: Ash are typically large growing trees reaching up to 30m tall at maturity

Ash Trees

Ash trees, genus *Fraxinus*, are common street, park, and forest trees (Figure 1). There are three species of ash native to the Ottawa area: white ash (*Fraxinus americana*) and green or red ash (*Fraxinus pennsylvanica*), and black ash (*Fraxinus nigra*).

Branches and Leaves

Branches and leaves grow in an opposite pattern. Where one leaf or branch emerges, another grows directly opposite. When making an identification, consider that branches and buds may die therefore, not every branch and leaf will be opposite another.

Leaves are typically 5-15cm long and compound with 5-11 leaflets (Figure 2). Leaflets have either smooth or toothed margins (edges).



Figure 2: Green ash leaf

Seeds

Ash seeds hang in clusters of single, oar-shaped seeds and are often shrivelled (Figure 3). Clusters typically stay on the tree until late fall or early winter.

Trunk and Bark

Young trees have smooth, light grey bark. Older trees have furrowed bark with a diamond shaped ridge pattern (Figure 4).



Figure 4: Young ash bark (left); mature ash bark (right)

Similar species

Several common landscape trees may be easily confused with ash. Manitoba maple (*Acer negundo*) is the only other tree species with compound leaves and an opposite branch and leaf arrangement. Manitoba maple has distinctly lobed leaflets. Black walnut (*Juglans nigra*), Butternut (*Juglans cineria*) and Hickory (genus *Carya*) also have similar leaves to ash however, these have an alternate leaf arrangement.

For more information on tree identification, refer to *Trees in Canada* by J.L. Farrar, published by Fitzhenry and Whiteside Ltd.

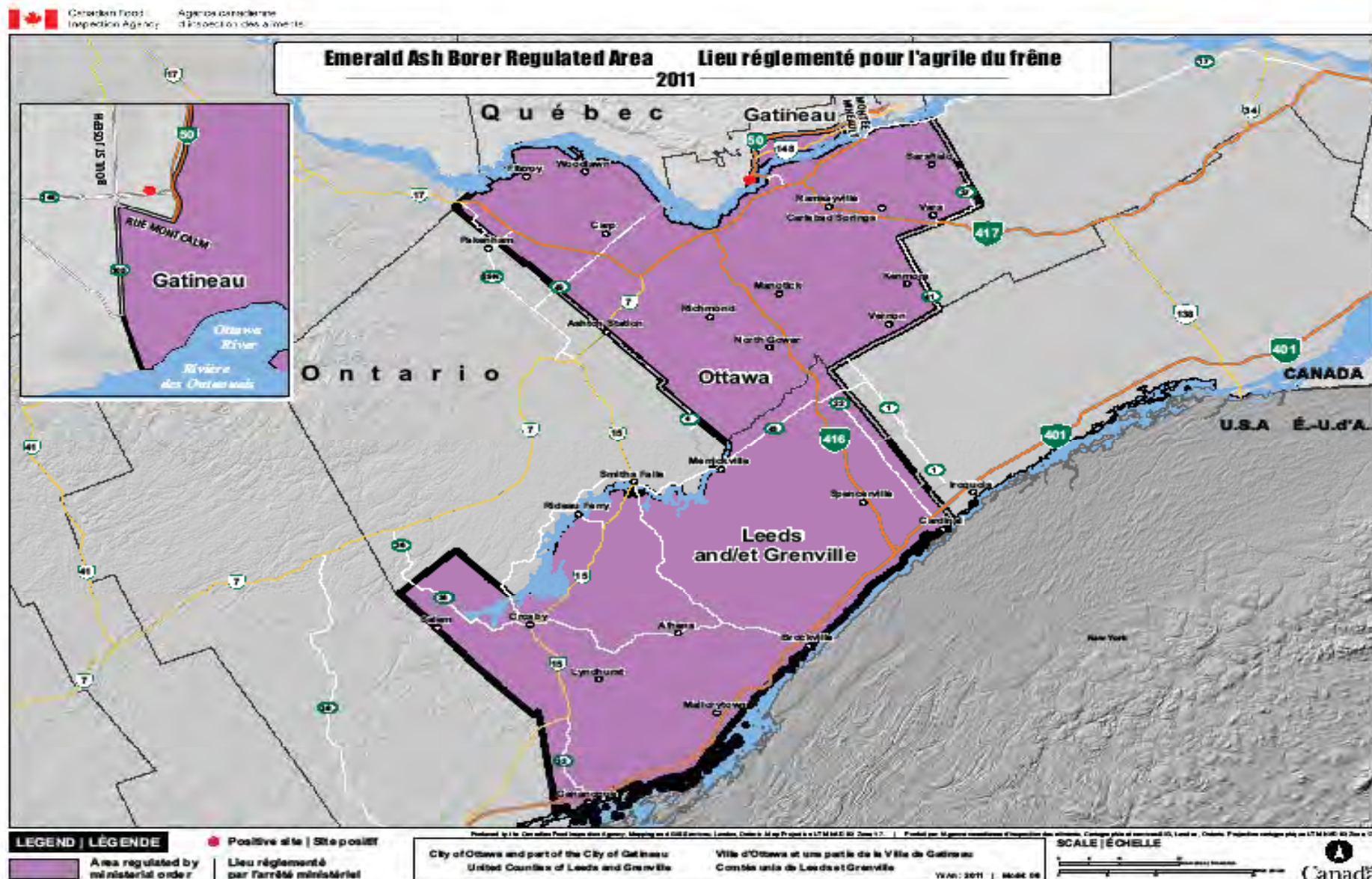


Figure 3: Hanging clusters of ash seeds

For more information:

City **3-1-1**
services
TTY 613-580-2401
ottawa.ca/forestry

2011 Wood Movement Boundary Map



Potential Impact on Forest Cover

- Ash trees make up 25% of Ottawa's urban and rural forests:
 - 2,600 hectares of urban forest cover (public and private land)
 - 18,000 hectares of rural forest cover (public and private land)
 - 75,000 ash trees on streets and in city-owned parks
 - 150,000 trees along edges of Municipal Natural Areas (city owned)

Claude St – Before



Claude St - During



Claude St – After



Five Steps to Manage the Impact:

1. Regulation of Wood Movement and Disposal
2. Tree Removal
3. Selective Tree Injections
4. Proactive Tree Planting and Replacement Planting
5. Public Awareness and Outreach

Tree Injection

- Annual/Biennial injection required
- TreeAzin
 - Emergency registered product
 - Biological-based insecticide made from neem trees
 - Delivered through a special tree injection system
- Potential for use to preserve large specimen or significant trees
- Forms a part of the strategy



Proactive Tree Planting

- Plant trees on City property in areas of high ash density in advance of removal
- Targeted community tree distribution for residents in areas of high ash density



Ash tree

New tree (maple)

Public Awareness / Outreach

- Communication Strategy
- Workshops
- Educational Materials
- Community Outreach
- Stakeholder awareness / promotion of management strategy

Forestry Budget Forecast

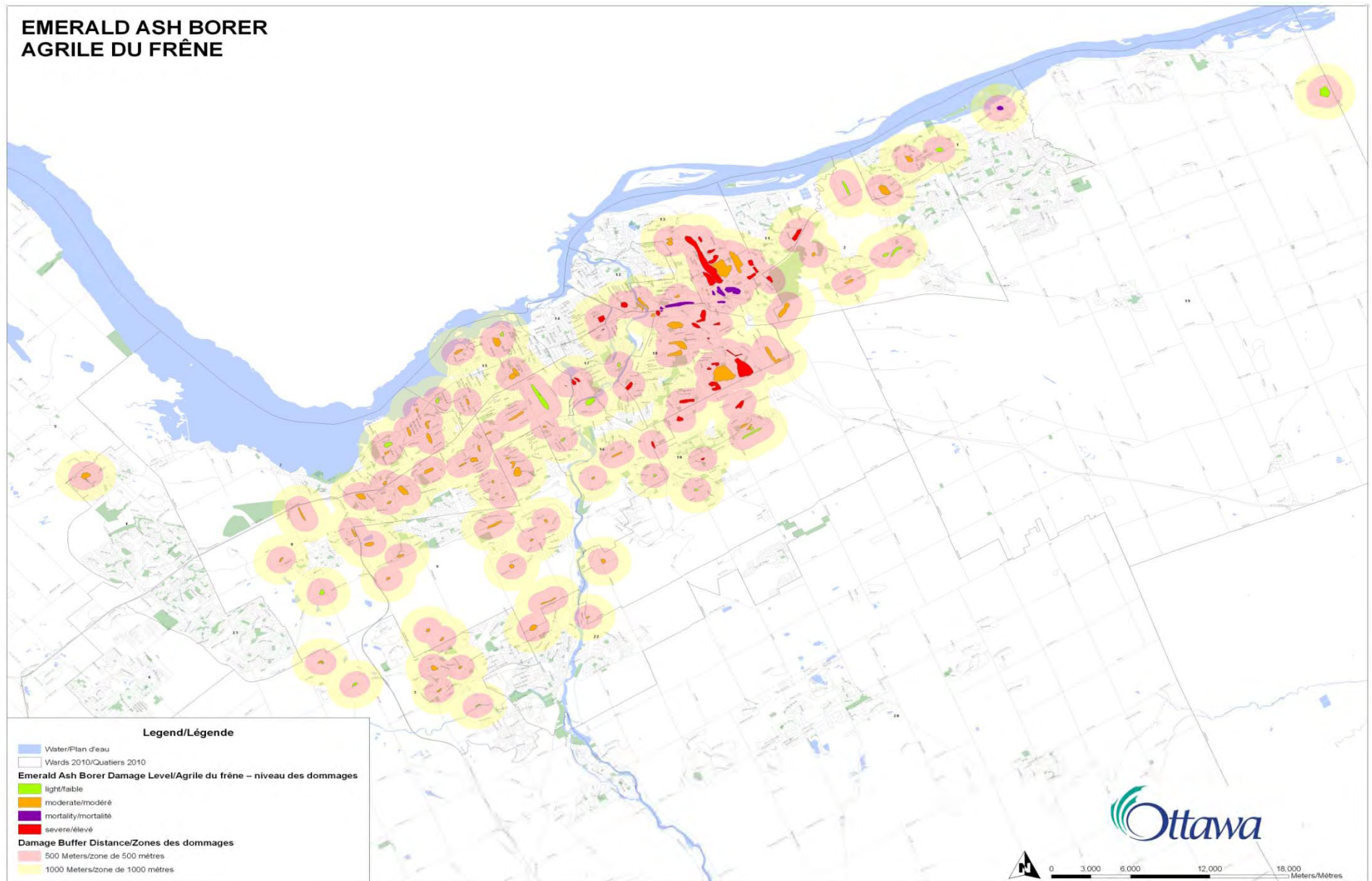
Maintenance & EAB Budget

YEAR	\$
2009	\$300,000
2010	\$445,000
2011	\$450,000
2012	\$700,000
2013	\$900,000
2014	\$1,350,000

Tree Planting Budget

YEAR	\$
2009	\$1,105,000
2010	\$946,000
2011	\$1,175,000
2012	\$1,175,000
2013	\$1,175,000
2014	\$1,200,000

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Neighbourhood Management Plan



Questions?