Emerald Ash Borer Preparedness Plan for Middlebury, VT

Updated June, 2019 Judy Wiger-Grohs

Ash Tree Statistics

One in twelve trees in Vermont is an ash tree

Altogether there are approximately 160 millions ash trees in the state
All ash trees in Vermont, including white, green and black, are susceptible to the Emerald Ash Borer (EAB).

It has been estimated that each 12" ash tree provides approximately \$130 annually in benefits by -

- filtering air pollutants,
- mitigating stormwater runoff,
- sequestering carbon and
- conserving energy.

More than just shade, baseball bats and hockey sticks!



ASH TREE IDENTIFICATION



Leaves are compound from 5-11 leaflets



Opposite Branch Arrangement



Seeds on Female Trees are paddle shaped



Mature Bark has diamond shaped ridges

What is EAB?

- Invasive insect from Asia
- Named for the beautiful emerald green color of the adult
- Detected in 36 states and five Canadian provinces including Quebec
- Main cause of EAB infestations is human transport



EAB in VT -

- Orange
- Caledonia
- Washington
- Grand Isle
- Bennington
- Addison



Signs and Detection



- Visual
- Traps
- Trap trees
- Biomonitoring

Impact on Middlebury

- Aesthetics
- Hazards
- Costs
- Local ecology



Credit: Dan Herms, Ohio State University

2006 (Before EAB)

2009 (After EAB)

Current Efforts

Public Ash Trees in Middlebury and East Middlebury

Vermont Urban and Community Forest Program

Middlebury Tree Committee

Trees in Poor condition have been removed.

DBH	Dead	Poor	Fair	Good
0-3"	0	1	0	5
3-6"	0	1	1	20
6-12"	0	4	4	26
12-18"	0	1	1	7
18-24"	0	1	1	12
24-30"	0	0	0	4
30+	0	1	0	2
Total	0	9	7	76
Total Number of Ash Trees				92

EAB Management Options

- Remove ash trees (reactively or proactively)
- Remove ash trees and replace them with resistant, (native) shade trees
- Treat trees with insecticides
- * Note about ongoing research

Middlebury EAB Management Plan

- A tree inventory has been completed for the Town (center) of Middlebury
- All dead ash trees and those ash trees in poor/fair condition have been removed.
- As ash trees in the public right-of-way are removed they will be replaced by one or two alternative **native** trees. Special attention will be given to **increasing species diversity**.
- Information on EAB will continue to be communicated to members of the community.
- A line item will be designated for EAB management in the Town of Middlebury budget each year until EAB is no longer deemed a threat.

Summary of Costs

Description	Cost	
scheduled removal of healthy ash trees <24" DBH (currently 70 trees)	\$11872.00	
treatment with systemic insecticide of trees > 24" DBH or of particular aesthetic or historic value (currently 6 trees) starting when EAB has been detected within 10-15 miles of Addison County	\$1140.00	
replacement with appropriate native species (2 for 1) at ~\$600.00/tree	\$103,200.00	
TOTAL	\$116,212.00	

Continuing Community Education and Outreach

Outreach and education strategies:

- Community presentations detailing the nature and extent of the problem, the impact on Middlebury and the proposed EAB management plan.
- Displays of EAB information in various locations including the library, local banks, community events, etc.
- Notification of community members well in advance of ash tree removal.
- Utilization of existing community communication networks.
- Provide information to the public on certified arborists, tree removal services and tree replacement options for property owners.
- Work with schools and community groups to "spread the word".



Imagine If Trees Gave Off Wifi Signals, We Would Be Planting So Many Trees And We'd Probably Save The Planet Too.



Too Bad They Only Produce The Oxygen We Breathe.

THE THINGSWESAY.COM

References

Emerald ash borer aftermath forests: the future of ash ecosystems

Emerald ash borer invasion of North American forests

Emerald Ash Borer Information Network

https://epress.earlham.edu/sustainability/files/2015/11/maxresdefault.jpg

Coalition for Urban Ash Tree Conservation

Insecticide Options for Protecting Ash Trees from Emerald Ash Borer

Evaluation of Insecticides to Control Emerald Ash Borer Adults and Larvae

Preparing Vermont Communities for EAB

What EAB looks like

EAB Cost Calculator

Local Resources

- Vermont Agency of Agriculture
- USDA APHIS Plant Protection & Quarantine
- VT Department of Environmental Conservation
- Vermont Department of Forests, Parks and Recreation
- Urban and Community Forestry
 Program

- VT Forest Pest First Detector Program
- University of Vermont Extension
- Middlebury Tree Committee
- Middlebury College Trees and the Urban Forest, Winter 2013
- Tim Parsons Landscape Horticulturist, Middlebury College