

# Vermont Forest Pest Planning: Overview

Until the 1960s, Vermont's streets were lined with towering elms. Since then, elms across the U.S. have succumbed to the Dutch Elm Disease, a disease introduced from Asia. Today healthy mature elms are uncommon. Currently the stakes are a lot higher. Three highly invasive forest pests—the emerald ash borer (EAB), Asian longhorned beetle (ALB) and hemlock woolly adelgid (HWA), are poised on Vermont's doorstep to pack a crushing blow to Vermont's woodlands and the wood products, maple sugaring, and tourism industries to which they are connected by a tight life line. Maples, ash, hemlocks and other host species that could be attacked by these pests make up nearly two-thirds of the trees in Vermont's woodlands and urban forests. The 26.9 million trees in Vermont's urban and community forests – along streets and in rights-of-way, parks, and public woodlots, provide millions of dollars of environmental, social and economic benefits annually.



Photo by Lee Krohn

## Vermont's trees:

- Remove 750 metric tons of air pollution/year at a value Of \$6.6 million/year.
- Store 11 million metric tons of carbon at a value of \$251 million.
- Draw in \$330 million in tourism revenue during foliage season alone.
- Provide sap to produce maple syrup, which contributes \$30 million of revenue annually.

While the hemlock woolly adelgid was detected in Windham County in 2007, the other two pests have yet to arrive in Vermont. Their introduction could have devastating impacts on Vermont's urban forests. For example, all ash species native to Vermont (green, white and black) have no known resistance to attack by EAB. Unless treated with insecticides, most trees infested by EAB will die within 2 to 4 years. Experience in Michigan and other states has shown that once EAB is detected in an area, more detections follow quickly and loss of ash trees increases rapidly over a few short years. If we can slow the spread of EAB and ash mortality, we can buy time for research to provide us with more options for managing EAB.

**The impact of these pests on Vermont's urban forests will be devastating.**



## Why plan? Because doing nothing is a risky option!

Many communities may choose to do nothing for a variety of legitimate reasons: no budget, no staff, higher priorities, etc. This strategy will work only until one or more of these pests are found in your community.

When pests such as EAB are first detected in an unprepared community, the number of dead trees multiplies rapidly. If infested trees are allowed to stand, the insects will breed and spread, both naturally and from residents moving firewood or other wood products and debris. Dead trees quickly become hazards to people and property. Staff, equipment, funding and contracts will have to be assembled on short notice. In addition, it will cost 2 to 3 times more to take down dead ash trees than live or dying trees because dead trees are more hazardous to work with and have a tendency to shatter into many pieces when they fall.

There are fewer utilization options for wood from dead trees, which can eliminate potential income to offset costs. Even chipping is more expensive because dead trees are harder on equipment. Where will you store the wood and debris?

Finally, how will you pay for replacing the trees? Experience in other states has shown that communities that don't prepare don't have funding to replace the lost trees, which just compounds the impact. If we do nothing, rapid loss of our urban ash trees will:

- **Cost communities more to remove and replace their trees.**
- **Increase stormwater runoff due to loss of tree canopy.**
- **Increase energy use and costs due to loss of shade.**
- **Increase water use for irrigating sun-parched landscapes due to loss of shade and windbreaks.**
- **Increase electric outages from dead trees falling on powerlines.**
- **Set the stage for repeated disasters if lost trees are replaced by too few species of all the same age.**

## The urban forest resource can be improved in the face of forest pests

Despite all the negative impacts of EAB, ALB and HWA, managing for forest pests can improve your community forest and its' overall management program by:

- **Improving diversity**—Ash and maple are over-represented in our urban forests. A long-term management plan to diversify the trees in our urban forests can help create a more diverse, adaptable and resilient forest in the future.
- **Improving public awareness**—An inventory can quantify the value of urban and community trees for community leaders and residents, engage them in the natural resource decisions and motivate them to get involved.
- **Fostering partnerships**—These forest pests threaten aspects of the community that people don't realize are impacted by the urban forest. Partnering with these interests—planners, businesses, utilities, environmental groups, and neighborhood associations, can result in stronger long-term support for tree management.



## Who is responsible for preventing, preparing for and responding to a forest pest infestation?

The short answer is: Everyone! While the USDA Animal and Plant Health Inspection Service (APHIS), Vermont Department of Forests Parks and Recreation, the Vermont Agency of Agriculture and UVM Extension play a role in educating the public, coordinating detection activities, regulating the movement of infested material, recommending control strategies, providing financial incentives and technical assistance, and supporting research, ultimately it is up to local governments, businesses and private property owners to regulate and manage trees and pests in their own towns. Research shows that 80% of the costs of non-native forest insects are borne by municipal governments and homeowners (Aukema et al. 2011).

## What can your community do? Prepare by developing a Forest Pest Preparedness and Response Plan

A Forest Pest Preparedness and Response Plan is a document that outlines a municipality's goals and objectives and the actions it will take to meet the current or anticipated impact of forest pests on its urban and community forests. A well-designed plan will establish a timeline and budget, identify essential personnel, resources and procedures, and be flexible enough to adjust to changing information.

Aukema, J.E., B. Jeung, K. Kovacs, C. Chhivers, K.O. Britton, J. Englin, S.J. Frankel, R.G. Haight, T.P. Holmes, A.M. Liebhold, D.G. McCullough, B. Von Holle. 2011. Economic impacts of non-native forest insects in the continental United States. *PLoS ONE* 6(9): 1-7.

## Beginning to manage for forest pests now can also stimulate local business

- Urban forestry, tree service and landscape professionals can provide tree inventories, GIS layers, urban forest management plans, staff training, tree health care, planting, maintenance and removal services.
- Communities can work with nurseries to develop innovative ways to provide a broad diversity of tree species.
- A pest infestation will generate a flood of wood to cope with. Large and small entrepreneurs can come up with creative solutions to produce products for a profit or at least offset some of the disposal costs not only for ash, but all urban wood.

On the other hand, waiting until EAB causes an emergency demand for services will overwhelm existing business and attract out of town disaster chasers.

A forest pest preparedness & response plan will allow you to accomplish the following recommended forest management goals related to forest pests:

- **Reduce the risk of introduction and spread of invasive forest pests.**
- **Minimize the impact of invasive forest pests.**
- **Prevent future catastrophic losses.**

When forest pests such as EAB arrive in Vermont, this plan will enable you to address public and private needs in an efficient and effective manner. The reality is that once forest pests become established, communities may be forced to deal with tough economic, environmental, legal and social issues. Towns will need to respond; at a minimum to remove trees that become public safety hazards. Towns may also need to:

- **Provide/arrange for debris disposal space.**
- **Inform/educate citizens about the forest pests and how to deal with private trees.**
- **Determine public policy for designating significant trees to be preserved and replacing trees that are lost.**
- **Modify budgets to accommodate increased tree-related costs.**
- **Ease costs by: forming partnerships/cooperative agreements; brokering group or volume prices; prearranging contracts; seeking grants.**



Planning in advance allows your community to be better prepared to minimize the severity of invasive pest impacts and establish a solid foundation for recovery.



The following resources will help you work through the process of planning for a pest infestation:

- **Vermont Forest Pest Planning Worksheet**—assists in assessing your community's level of preparedness and prioritizing what action steps need to be taken to prepare.
- **Vermont Forest Pest Planning: Community Resource Toolbox**—provides links and background information on all aspects of pest preparedness and response.
- **Vermont Forest Pest Planning: Communications Toolkit**—contains outreach resources, example press releases, PSAs, Powerpoint presentations, and other educational materials for educating your community's residents and decision makers about invasive forest pests.

# Vermont Forest Pest Planning: *Process*

1. **Form a local Forest Pest Planning Team**—Team members will help develop and implement the plan, keep abreast of information and communicate with residents.
2. **Brief the decision-makers**—Meet with your community's leadership and bring them up to speed on the issue. State staff can provide technical support with the latest information and strategies. Resources for briefing decision makers are available in the Vermont Forest Pest Planning: Communications Toolkit.
3. **Develop a timeline and who is responsible for writing the plan**—You'll need to decide whether one person will write it or whether team members will be tasked with researching and drafting certain sections. What is the timeline and process for developing, reviewing and adopting your preparedness plan?
4. **Conduct a rapid assessment of your community's level of preparedness and prioritize what action steps need to be taken to prepare your community**—This assessment will help your community identify the policies, protocols, resources (equipment, labor and funding) and other actions needed to efficiently and effectively respond to a pest infestation. Use the Vermont Forest Pest Planning Worksheet.
5. **Formalize the information and action steps into a forest pest preparedness plan** and have it officially adopted by the Selectboard, Conservation Commission and/or other appropriate town committees.
6. **Implement your preparedness plan.**

## For assistance with please contact:

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## Learn more:

[http://vtcommunityforestry.org/  
community-planning/tree-pests](http://vtcommunityforestry.org/community-planning/tree-pests)

