

## **Forest Pest Preparedness Plans**

### **A Plan for Massachusetts Communities**

Exotic invasive forest pests like emerald ash borer (EAB) and Asian longhorned beetle (ALB) threaten our community trees. Planning for forest pests is one way municipalities can reduce the burden of managing and responding to forest pests.

#### **Emerald Ash Borer—Inspiring Forest Pest Preparedness Plans**

EAB is an exotic invasive insect that threatens every ash tree, and probably every municipal budget, in the Commonwealth. It was first detected in Dalton, in Berkshire County, in late summer 2012, and since then it has been found in over ten communities from Berkshire to Essex Counties. Ash trees comprise around 5% of our forests and street trees. Once EAB infests an ash tree, the tree typically dies within a few years. When ash trees die, they decay quickly, becoming brittle and posing a risk for municipalities. Dead trees may fail at the base, or they may lose large limbs, injuring people and damaging property. Here in Massachusetts, we can learn from the experience of municipalities in the Midwest, and our communities can plan for the arrival of EAB, as well as other potential pests.

#### **Forest Pest Preparedness Plans**

A Forest Pest Preparedness Plan is a document outlining objectives and approaches to address and mitigate the impact of a forest pest on a community. Through planning, communities can minimize risk, spread out over time the costs of managing forest pests like EAB, and they can replant trees, minimizing the loss of benefits from the infested trees.

While EAB may be the impetus for developing a forest pest preparedness plan, it is a good idea to create a plan that is flexible to deal with other forest pest threats as well. After all, we don't know what the next "EAB" may be.

#### **To Plan or Not to Plan?**

Planning for EAB and other forest pests is a good idea for communities. Choosing not to prepare for EAB or other forest pests does not mean a community will dodge the expense of responding to EAB and other pests. No matter what, towns will have to address public trees that die in parks and along roads. This is particularly true for ash trees, which decay quickly. Choosing not to plan will mean that a community will face greater removal costs (as dead trees are more costly to remove than living ones) and that those costs will come in a shorter period of time, creating more of a burden for local budgets.

#### **Planning to Plan**

1. Learn about forest pests, particularly EAB.
2. Learn about Preparedness Plans and how other communities have responded to manage EAB or other forest pests.
3. Brief decision-makers about the issues. DCR program staff can provide support.

## Forest Pest Preparedness Plans, MA-DCR

4. Identify a group of people in your municipality who can work together to develop and implement the preparedness plan.

Individuals you should consider include: Tree Warden, staff from Department of Public Works/Highway Department, member(s) of Select Board, Tree Committee, local tree advocacy group, conservation commission, utility arborist, and local tree professionals.

### Elements of a Preparedness Plan

The following elements make up a comprehensive forest pest preparedness plan. Your plan may contain some or all of the categories below.

1. **Title:** Such as, Forest Pest/EAB Preparedness Plan as adopted by the Select Board/City Council on \_\_\_\_\_ (*date*).
2. **Purpose:** Identify the intent of the plan and how the plan impacts safety, health, and general welfare. The plan should be revisited annually. Other purposes may include:
  - a. Mitigating the spread of forest pests
  - b. Spreading the cost over a longer period of time to lessen the impact on local budgets
  - c. Mitigating the social and economic impact
  - d. Preserving canopy and maximizing benefits of the urban forest.
3. **Scope:** Identify where the plan applies—public or private property, as well as specifics beyond those designations.
  - a. Public property
    - i. Street trees
    - ii. Parks
    - iii. Rights of way
    - iv. Other areas
  - b. Private property
    - i. Residential
    - ii. Commercial
    - iii. Industrial
    - iv. Private trees that may impact the public way
4. **Administration:** Identify the agency or department that will be in charge of the response in your community. Choices may include the Forestry or Parks Department or the Department of Public Works. Who else may be involved? Some choices may include:

## Forest Pest Preparedness Plans, MA-DCR

- a. Tree Warden
  - b. Forestry or parks staff
  - c. Administrative staff
  - d. Commercial arborists or private consultants
  - e. Emergency response
  - f. Conservation Commission
  - g. Utility arborist
  - h. Tree Board members, Forest and Shade Tree Committee, or members of a local tree advocacy group
  - i. Volunteers
  - j. Others
5. **Definitions:** Define any terms in the plan that may be subject to interpretation
- a. Hazard/Risk tree
  - b. Certified Arborist
  - c. Insecticide
  - d. Tree Condition
  - e. Sample inventory
  - f. Others
  - g. Public/Street Tree
6. **Executive Summary:** Provide a brief summary of the impact of forest pests, such as EAB, on the community and highlight the critical elements of the plan. Include summaries of costs in the summary.
7. **Management Plan: Include a time line when the following activities will be conducted.**
- a. **Inventory:** Consider the level of inventory appropriate for your community
    - i. 100% inventory: All public trees
    - ii. Ash-only or other targeted inventory
    - iii. Sample inventory: A representative sample of the community. This type of inventory will be useful for estimating costs, but will not be as useful as an inventory that covers the entire community.
  - b. **Removals:** Based on the inventory, identify a removal plan and obtain quotes for removals.
    - i. Target removals/ prioritize based on tree condition and location
      1. With an inventory, start removing ash trees in poor condition first and those posing the greatest risk.
      2. Spread cost of removals out over time.
    - ii. Proactive removals

## Forest Pest Preparedness Plans, MA-DCR

1. Remove ash preemptively, regardless of infestation, condition, or location.
  2. Remove and replace smaller ash trees with non-ash trees. As these trees are small, they are not providing a lot of benefits, so less will be lost if they are removed and replaced when small.
  3. Remove and replace larger ash trees. While large trees do provide more benefits, removing large ash trees while they are still alive will be less costly than when they are dead. This may be an option if EAB is imminent, but if EAB is not imminent, communities will lose out on benefits that the large trees provide.
  4. Combine a removal strategy with insecticidal treatment. With use of insecticides, the death of ash trees can be delayed, buying time for the community to spread out removal costs.
- iii. Reactive removals -
1. Remove infested and/or dead ash trees. This may be costlier than planning a removal strategy that would remove trees in stages, based on criteria.
- c. **Insecticide treatment options:** Explore options
- i. Identify significant trees that the community would like to preserve through treatment.
  - ii. Use insecticides to treat ash trees in good condition to preserve tree canopy. The City of Cambridge is using this strategy to treat healthy ash trees so that canopy will be preserved in the community. The city's EAB plan called for the city arborist to inspect all ash trees and determine which trees were in poor condition and should be removed and which should be preserved through insecticidal treatment.
  - iii. Use insecticides to delay tree death and spread out removal costs over a longer period of time.
- d. **Tree replacement: Identify**
- i. Species
  - ii. Location
  - iii. Specifications
  - iv. Future care and maintenance
  - v. Timing of replacement
- e. **Wood utilization**
- i. Staging areas for processing
  - ii. Quarantine rules
  - iii. Costs for disposal

## Forest Pest Preparedness Plans, MA-DCR

- iv. Uses for material
  - 1. Mulch
  - 2. Lumber
  - 3. Cogeneration
  - 4. Wood bank
  - 5. Other users?
  
- f. **Permits and Licensing:** Are there special permits that will be required to remove trees? (e.g., conservation commission, public shade tree hearing, endangered species, scenic roads, etc.)
  
- g. **Impact on day-to-day operations**
  - i. Postponed tree work
  - ii. Pruning cycle
  - iii. Brush/wood pick-up
  - iv. Other operations that might be affected
  
- 8. **Monitoring and Reporting:** What methods will be used to remain on the lookout for forest pests, such as EAB? Identify the presence of an infestation or the extent of a known infestation.
  - a. Methods
    - i. Systematic visual survey
    - ii. Destructive sampling
      - 1. Sentinel trees: For EAB, trees girdled outside an infested area to determine if EAB is present
      - 2. Trap trees: For EAB, trees are girdled to entice EAB colonize a tree. The trap tree is removed and destroyed with high concentrations of EAB larvae inside.
  
  - b. Personnel
    - i. Municipal staff
    - ii. Volunteers
    - iii. Local arborists/landscape companies
    - iv. Utility arborists
  
  - c. Reporting
    - i. If a community has discovered EAB or another forest pest for the first time, report it at: <http://massnrc.org/pests/>.

## Forest Pest Preparedness Plans, MA-DCR

9. **Ordinances:** Ensure that local ordinances allow for the implementation of the forest pest preparedness plan. If ordinances are passed in response to EAB, ensure they are general enough for additional pests.
  - a. For EAB, policies prohibiting the planting of ash
  - b. Policies regarding the use of insecticides to treat public trees
  - c. Policies regarding nuisance trees
    - i. Public trees
    - ii. Private trees
  
10. **Resources, Needs, and Opportunities:** Identify what resources are present and what are needed to develop and implement a preparedness plan. Some resources may include:
  - a. Personnel
    - i. Forestry staff
    - ii. Consultants
    - iii. Volunteers
      1. Skills needed
      2. Hours for tasks
      3. Sources (master gardeners, garden club, tree board or committee, advocacy group, neighborhood groups, students)
  
  - b. Financial: Develop budget for:
    - i. Developing the preparedness plan
    - ii. Removals: Use the EAB Cost Calculator from Purdue University Extension: <http://extension.entm.purdue.edu/treecomputer/>.
    - iii. Treatment
    - iv. Replanting
    - v. Wood disposal
    - vi. Equipment needs
  
  - c. Partnership opportunities
    - i. Other municipalities: Opportunities to partner with nearby communities
      1. Multi-community removal or treatment contracts
      2. Share information and experiences
      3. Other resources
      4. Share wood utilization and staging areas
    - ii. Utility
    - iii. State officials
    - iv. Federal officials
    - v. Conservation organizations

## Forest Pest Preparedness Plans, MA-DCR

11. **Authorities:** Include current regulations on forests pests, including EAB.
  - a. Local policies and ordinances
  - b. State regulations and quarantine
  - c. Federal regulations and quarantine
  
12. **Communication:** When EAB or another forest pest is detected in your community, how will you communicate information about the infestation and the plan? Is there a protocol for communication that your municipality already has in place?
  - a. Communicate progress with decision-makers
  - b. Target groups
  - c. Tailored message for different target groups
  - d. Consistent and clear messaging
  - e. Identify appropriate methods for communication
    - i. Local newspaper
    - ii. Neighborhood listserv
    - iii. Bulletin Boards
    - iv. Municipal website
    - v. Advocacy organization website
    - vi. Public forum
    - vii. Other methods
  
13. **Education and Outreach:** What methods will be used to educate the public about the pest and the preparedness plan?
  - a. Presentations
    - i. Schools
    - ii. Libraries
    - iii. Public Meetings
    - iv. Local access TV station
  - b. Materials
    - i. Brochures
    - ii. Flyers
    - iii. Video
    - iv. Others
  - c. Topics
    - i. Forest pests (identification, threats, etc.)
    - ii. How to hire an arborist
    - iii. Monitoring

## Forest Pest Preparedness Plans, MA-DCR

- iv. Don't move firewood
- v. Other topics

14. **Contacts:** Provide contact information for those responsible for implementing the preparedness plan.