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Private Woodland Management in Anticipation of Emerald Ash Borer
Cornell University Cooperative Extension
November 2007

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Background and Overview

Emerald Ash Borer (*Agrilus planipennis,* EAB) is a non-native insect that will infest and kill ash trees. EAB is specific to ash, but will affect all ash species, of any age, size, and vigor. This publication serves to alert private forest owners to the potential for changes in their woods and considerations for their management actions. EAB and its potential impact is relevant to forest owners who have more than scattered or occasional ash trees and who want to accomplish specific vegetation-related goals on their property.

Infestation and subsequent management actions at the original North American points of discovery and dispersal have resulted in the death or destruction of more than 20 million ash trees. Ash trees are an important ecological and productive component of private forest land in the Northeast and New York. Many abandoned agricultural fields were partially or completely reforested by wind-dispersed ash seeds. Ash dominates many NY forests along with maple, aspen, cherry and oak. Infestation in New York, if and when it occurs, likely will be dramatic, especially in forested areas, ash is the dominant species. The potential effects of EAB are on the same scale of disturbance as chestnut blight and Dutch elm disease. Reasonable management goals in anticipation of EAB include: reducing the probability and rate of spread, managing the impact on forests, and sustaining the important contributions of ash and other hardwoods in New York forests and woodlands. Success towards these goals depends on early detection, owner recognition of their objectives, and the deliberate and informed actions of private forest owners and managers. The best management strategy depends on numerous factors.

Current information on the EAB is critical to effective management. Prior to any action, contact your local office of the NYS Department of Environmental Conservation or Cornell University Cooperative Extension. The insect is relatively new to the eastern US and management recommendations will change as experience and research is shared among professionals. Consult with knowledgeable professionals before taking action. The most effective strategies to avoid excessive losses in our ash woodlands and forests are those which provide early detection of EAB infestations and rapid responses to remove the threat. Owners and managers of ash forests should familiarize themselves with the evidence for EAB infestations and remain vigilant in the search for these symptoms whenever and wherever ash decline is noted. Several state agencies and universities in the Lake States and eastern US have informative web sites and on-line material. Additional sources of information are provided

below. Ohio State University Extension has a particularly useful publication describing alternatives for several options that apply to forest land management in New York.

Currently, EAB is not known to occur in NY. The insect is known in PA and OH and is thus likely to arrive soon in NY. EAB also occurs in MI, IN, IL, and MD. When the insect is detected in NY, legal constraints may be imposed to quarantine some or all of the state and prohibit or restrict the movement of potentially infected material. The western and southern tiers of NY are likely points of first evidence, but any location in the state is possible given the potential for human-assisted transport. All forest owners in NY should consider how EAB may affect their forests.

The most likely mode of spread into NY will be in firewood that people transport for use while camping. Responsible campers should not transport any firewood.

Forest and Woodlot Management Considerations

This document can not address the full range of management alternatives, or the details of implementation. The specific course of action a landowner selects will depend on at least the following variable: timing of EAB arrival in NY, owner objectives, abundance and maturity of ash in their woodland, the abundance and quality of other species in the woodland, owner's geographic proximity to EAB infestation, the availability of markets, and owner's ability to complete or coordinate work tasks in the woods.

The attitudes and resources of the private forest owner should guide how they respond to EAB if and when it spreads into NY. Management actions will influence the impact EAB has on a particular forest. Forest owners who seek productive forests may want to be proactive to capture current value while a variety of local and distant markets remain accessible. A forest owner who can use ash personally or sell in nearby markets may wait for the insect to arrive and address tree mortality as it occurs. This strategy assumes no regulatory actions were enacted to limit this option. Owners who desire minimal manipulation of their woods similarly may wait and then respond to manage effects that may cascade from ash mortality, such as invasive plants, less desirable regeneration, loss of diversity, or reduced forest stocking. Each owner needs to personally reaffirm their objectives to develop a strategy and timing for a response to EAB.

In anticipation of EAB, forest owners require knowledge of their forest characteristics, such as, the variety of other desired tree species, presence of invasive plants, forest density, tree age and average tree diameter. Most forest owners should work with a forester to acquire this information. Selecting a forester needs to be a deliberate process. The NYS Department of Environmental Conservation provides free Stewardship management planning advice to forest owners upon their request. Contact the local DEC forestry office to obtain assistance from a DEC Forester. The NYS Department of Environmental Conservation also maintains a list of Cooperating Foresters, foresters in the private sector who provide services to forest owners. Information on how to select a forester is available through Cornell University Cooperative Extension and at www.ForestConnect.info.

Because the arrival of EAB appears imminent, and there are no known methods of control, forest owners should determine their interest in managing impacts and, if appropriate,

capturing the value that exists in ash on their property. Young, fully forested areas with low abundance of ash stems will experience minimal ecological effect from the insect. Forests that are increasingly mature or having greater abundance of ash will be more dramatically affected when the insect arrives. Owners should strive for a mixture of species and forests that are adequately stocked for optimum growth.

In young forests or forests having few ash trees per acre, owners may benefit from non- or pre-commercial thinning to reduce the number of ash in favor of alternative desired species. This will shift growth to other desirable species and ensure they are thrifty if and when ash mortality occurs. In areas planned for planting, species other than ash that are suited to soil conditions should be used.

In maturing forests, where the average tree is 12 inches diameter or larger, owners should evaluate their desire to capture any value that exists in ash. However, owners should strongly avoid the temptation to unnecessarily harvest other high value trees that may provide an important seed source to restock the forest following the death or removal of ash. Management in mature stands with abundant ash may seek to naturally establish seedlings and saplings of other species in anticipation of EAB's arrival. In woodlands with abundant ash, this management strategy will result in a dramatic visual change. Owners should carefully consider their ownership goals and all management options. Complete liquidation of ash from a woodland is not recommended.

When forests are disturbed through natural or deliberate processes, they experience some type of change. Forests typically display predictable patterns of response, depending on local condition, existing vegetation, current deer populations, and the type of disturbance. The pattern of response will be desirable or undesirable depending on local conditions. Specific conditions or actions that might inhibit the development of healthy and ecologically functional forests following EAB include: the spread of invasive plants that compete with desirable plants, deer browsing that reduces desirable species, logging disturbance without attention to water quality best management practices, high-grade (diameter limit) harvests that remove all or most of the valuable trees prior to effective forest regeneration, damage to the root systems or stems of residual trees during logging, or removal of desired trees needed for seed production.

Cornell University Cooperative Extension recommends these steps for private forest owners:

1. Work with professionals to evaluate your need and desire to manage the impact and extent of mortality associated with EAB relative to your ownership objectives. Your ownership objectives influence the following recommendations. Be calm and deliberate in your decision making.

2. If you actively participate in forest operations (e.g., cutting, skidding, etc.) use appropriate personal protective equipment and learn appropriate techniques such as directional felling.

3. Determine the current status of EAB in New York and identify any revisions to management recommendations. EAB status may change more than once each year. Consider geographic location and the need for timely actions.

4. Assess the abundance and age of ash in your forest. Consult with a forester to learn how ash abundance in your woodlands, relative to other species, will be affected by the potential complete loss of ash.

5. In young forests or those that have low ash density, you could harvest or kill the ash that compete (shade) with other desired trees. This will retain some ash that are not competing and will ensure that a mixture of species is thriving in the event that EAB arrives and affects your forest.

6. In mature forests or those with high densities of ash, identify potential markets and harvest ash trees to capture current values. The arrival of EAB into NY will likely result in quarantines that restrict access to a variety of markets.

7. Call Before Your Cut: Consult with a forester, DEC or Cooperating Forester, prior to making decisions to cut or not to cut.

Additional Information:
www.emeraldashborer.info
www.na.fs.fed.us/fhp/eab/
http://paemeraldashborer.psu.edu/
www.ForestConnect.info
http://www.dec.ny.gov/lands/4972.html
www.nyfoa.org

Hargrave, R., E. Selleck, and K. Fallone. 2006. Controlling invasive species in woodlots. ForestConnect Fact Sheet Series. 4 pages. http://www.dnr.cornell.edu/ext/info/pubs/FC%20factsheets/FCFSinvasives.pdf

Heiligmann, R. and K. Smith. 2006 (revised). Management options for minimizing emerald ash borer impacts on Ohio woodlands. Ohio State University Extension Fact Sheet F-59-rev06. available at www.ForestConnect.info

Smallidge, PJ. 2005. Working with Foresters, Chapter 10: Enhancing the Stewardship of Your Forest. 5 pages. http://www.dnr.cornell.edu/ext/info/pubs/Stewardshipmanual/10Working%20with%20Foresters.pdf