

Emerald Ash Borer Survey and Eradication in Maryland

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In strong partnership with the USDA, Maryland Department of Natural Resources, and Prince George's County

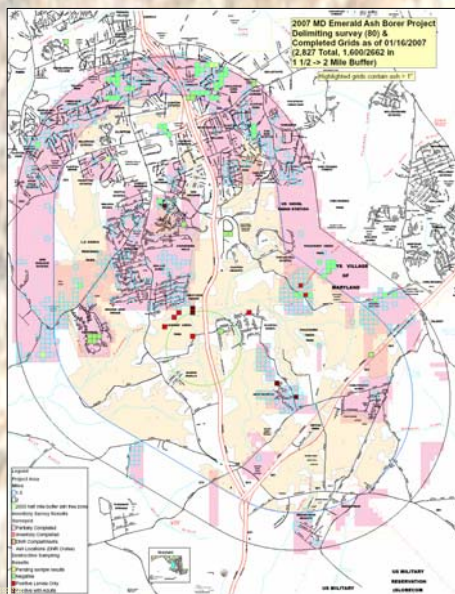


Emerald Ash Borer (EAB), *Agrilus planipennis* Fairmaire, is an exotic pest of ash trees. It is native to Asia, and thought to have arrived in the United States in solid wood packing material. It was first discovered in southeastern Michigan near Detroit in the summer of 2002. The beetle has spread and was found in Ohio in 2003, northern Indiana in 2004, and northern Illinois in 2006. It was found in Maryland in 2003 and 2006. Emerald ash borer also is established in Windsor, Ontario.



The adult beetles nibble on ash foliage, but do little damage. The larvae, however, feed on the inner bark of ash trees and disrupt the tree's ability to transport water and nutrients. Infested trees show die-back on the upper third of the tree, vertical splits in the bark, D-shaped exit holes, and distinct serpentine-shaped larval galleries beneath the bark in the cambium. Emerald ash borer can kill a tree in 1-3 years.

Emerald ash borer has killed over 20 million ash trees in Michigan, Ohio, and Indiana alone. Ash is one of the most common landscaping trees, and ash wood is used for traditional hardwood applications from flooring and cabinets to baseball bats. If left unchecked, emerald ash borer could cause losses nationwide ranging from 20 to 60 billion dollars. The devastation could be more serious than that caused by gypsy moth and chestnut blight.



The Maryland Story

On August 28, 2003, a Maryland Department of Agriculture (MDA) inspector found emerald ash borer-infested trees at a single nursery in Prince George's County. The nursery unknowingly accepted 121 ash trees in April of 2003 from a Michigan nurseryman, who shipped the trees in violation of a Michigan quarantine. In the spring of 2003, there was adult emergence from the ash trees shipped into Maryland. The adult females laid eggs, and actively feeding larvae were found in both nursery and outplanted trees.

The Maryland Department of Agriculture destroyed all ash trees still in the nursery and approximately 1100 ash trees in a 500 acre, 0.5 mile buffer around the nursery. A Quarantine Order was issued on March 16, 2004 restricting the movement of ash trees and ash material out of, and through an area around the affected nursery in southern Prince George's County.



On August 14, 2006, 100 sentinel trees that were planted across the state on April 10, 2006, as part of the on-going surveillance were harvested and completely stripped of their bark. One of the 20 sentinel ash trees planted inside the 2003 0.5-mile buffer in Brandywine was infested with three emerald ash borer larvae. No exit holes were found. Two native ash trees near, but outside the 0.5-mile buffer, that were girdled in November 2005 as part of the surveillance activities, were felled on August 16, and one was found to contain numerous larvae. No exit holes were found. A revised Quarantine Order (#06-01) was issued on August 22, 2006, that prohibits anyone from moving ash trees and wood, or any hardwood firewood out of Prince George's County.

An ash inventory survey began on September 25, 2006 in a 2.0-mile radius from the furthest known emerald ash borer-infested tree. All ash trees within a 1.5-mile buffer area will be eradicated, and a delimiting survey and sampling will be conducted in the 1.5-2.0 mile buffer area. As a result of these surveys and outreach, additional trees with emergence holes and galleries have been identified, and the eradication area expanded based on these detections. Removed ash trees are taken to a marshalling area, where they are chipped to less than one inch to destroy any larvae or pupae that may be overwintering under the bark.

In Maryland, ash is the most common street tree in Baltimore, making up about 10% of total trees. Ash accounts for over 3% (> 6 million) of trees in naturally wooded areas in Baltimore and surrounding counties. USDA has estimated that losses could exceed \$227,500,000 in the Baltimore area alone. The Maryland DNR also estimates that about 20% of our riparian trees, vital to the health of the Chesapeake Bay, are ash trees.

Stopping the spread of the emerald ash borer will take more than regulations. The emerald ash borer, which doesn't move much farther than 1/2 mile per year on its own, but can be carried by humans hundreds of miles to new areas in infested wood – most commonly firewood. Everyone can help! **Be an ambassador by watching for and reporting symptoms, not moving ash wood, and spreading the word about the quarantine and the perils of moving hardwood firewood.**

Prepared by John Bowers, MDA