

SAVING ASH TREES FROM THE EMERALD ASH BORER

By Joe McElroy & J. Bradford Bonham, Chicago

It was June 17, 2002. In downtown Detroit, a million fans celebrated the Detroit Red Wings' Stanley Cup victory.

But farther west in Wayne County, the news was not so good. A group of plant experts was studying ailing ash trees near Eight Mile Road. They did not yet know why the trees were dying, but feared the worst. After another scouting trip, to Novi a week later, Michigan State University forest entomologist Deb McCullough said, "This is going to be a bad thing. You watch."¹

That prediction has come true. The emerald ash borer (EAB), after arriving in metro Detroit from China, has killed at least 50 million ash trees in the United States. According to a 2014 journal article published by McCullough and Dan Herms, an entomologist at Ohio State University, "EAB is already the most destructive and costly forest insect to invade the United States."²

One well-traveled Michigan planner put it this way: "Everywhere I go in the state, I see dead ash trees."

Given the severity of EAB, and the benefits of urban tree canopy, it makes sense for Michigan planners to be up to speed on the issue, not just leaving it in the hands of city foresters, landscape architects and others who work with plants on a daily basis.

The planning profession can act as a bridge between those in the field—academic researchers, university Extension educators and municipal arborists—and those who make the final public policy decisions—mayors, city / county managers, and elected officials.

But at this point, is there anything that can be done, other than chopping down the remaining ash trees? *Have we lost the war?*

What to do about EAB depends largely on where you are. Although many trees are being successfully treated in the southeast part of the state where the problem started, it is too late to start treating ash trees there now.

However not all ash trees in Michigan have been attacked by the tiny green beetles. Among infested trees, most that exhibit low-level, external signs of EAB damage can be treated, withstand the peak beetle population, and resume green infrastructure and landscape function for their remaining service life.

These tools are best suited in areas of active tree management—private landscapes, commercial properties, the public right-of-way and urban/suburban parks. In cities, where the urban forest provides wide-ranging benefits—including storm water control and increased property values—treatment is more economical than removal and replacement.^{3,4,5,6}

So planners have two challenges: *where there are still viable ash trees, help other municipal officials understand there's no longer any doubt about the economics.* That said, most approaches will include a combination of treatment and staged removal of

trees that for one reason or another ought to be culled from the herd. *The other issue is what to do moving forward.*

After Dutch elm disease decimated American elms in the eastern U.S., and before resistant cultivars were widely available, many cities—especially new subdivisions—became home to millions of ash trees. This made sense; ash were inexpensive to produce in the nursery, flourished in the right-of-way, and were so easy to grow that one public works director says, "All you have to do is make sure you don't plant them upside down."

Also, with the exception of ash yellows disease, the pests and other diseases that typically affected ash trees were not life-threatening, despite the "piling on" with urban stressors.

In either case, the traditional planning process can help. According to Josh Behounek of Davey Resource Group, in some parts of Michigan,

"There is still time to manage EAB appropriately. You don't have to wait for them to die and you don't have to remove them all ahead of time. If you understand where the trees are, you can put together a proactive program."

"But if you don't have a plan, that will cost you more money and you will have less tree canopy, which will upset residents, and contribute to storm water runoff problems."

There's also the issue of liability. Dead ash trees become brittle within months, increasing the chance of a branch falling on a vehicle or pedestrian and posing risk to removal crews.

A look around the state and the region:

- **Grand Rapids:** In Michigan's second largest city, the form-based zoning code has been revised to expand the list of permitted trees, according to resident Lee Mueller, who works for Davey Resource Group. The City plans ongoing treatment of 1,400 of the 5,300 ash trees on public land. Initially, the City planned on removing all of its ash trees, at a cost of \$7-12 million, but citizen outcry led to a policy revision to include selected treatment.
- **Arcadia Dunes:** Seed will be collected and banked for future efforts to reintroduce legacy genetics, or perhaps for use in hybridizing projects to develop EAB-resistant ash trees. Meanwhile, the tree-protection aspect of this project allows hikers to appreciate the presence of ash trees with 30-inch diameter trunks—two-thirds to half the size that naturally-growing ash might eventually attain, given the chance. The Grand Traverse Regional Land Conservancy, based in Traverse City, runs the program.
- **St. Ignace:** Location of the pilot test of SLAM (Slow Ash Mortality), a management strategy aimed specifically at "outlier sites" of infestation. It is being developed by several university researchers and state and federal government agencies to curtail EAB through the use of surveys to determine pest location and density, selective removal, public education, insecticide treatment, and public information. This approach is an effort to protect forested areas rather than large urban areas.⁷
- **Milwaukee:** Several years ago, Wisconsin's largest city determined that ash trees comprised 17 percent of its urban canopy. Using hyperspectral imaging, a fly-over generated



Emerald ash borer.

Photo by James Zabiotny, PhD, USDA.

About the Authors

Joe McElroy is a principal and founder of a consulting firm in 1992 specializing in public policy, community planning, and marketing communications. He has a master's in urban planning from MSU. Clients include real estate development companies and local governments in the Chicago metropolitan area. He can be reached at joe@mcelroy-associates.com.

J. Bradford Bonham, DVM traded wrestling steers for wrestling shrubs when she had to return to life in the city. The principles that interested her didn't change—preventive health care is practiced in livestock medicine and ornamental horticulture. When EAB came along, she grasped the looming disaster in the framework of veterinary epidemics and figured there had to be a better solution than slaughtering the entire herd. So she sought alternative action, got certified as an arborist, and began developing educational programming for municipal officials.