

# VERMONT URBAN AND COMMUNITY FORESTRY PROGRAM

## EAB Municipal Management Case Study

Upper Arlington, Ohio

### APPROACH

*Staying One Step Ahead*

### SUMMARY

Upper Arlington, Ohio is about 200 miles from Detroit, Michigan where emerald ash borer (EAB) was first discovered in 2002. In 2006, the Ohio Department of Natural Resources urged communities to adopt management plans for EAB. As soon as the staff of Upper Arlington's Parks and Recreation Department understood that this invasive pest was on its way, they took a very deliberate approach to managing the city's ash trees.

Parks Department staff first approached the tree commission about developing an EAB management plan. The tree commission helped develop educational materials for the public. After a series of public meetings, the city eventually adopted a management plan that called for removal of 10% of the 850 public ash trees per year, starting with street trees and then moving on to trees in the parks. Since the Parks Department normally removed 300 to 400 trees per year, when they decided to remove ash preemptively, Department staff thought that they could manage removing an additional 80 trees per year and spread the costs out over time. The city chose this path in the hopes of avoiding a financial tsunami of having to remove all the ash at once when EAB arrived.

Students from a local college conducted an inventory of roadside trees including ash trees. The trees were categorized as being in poor, fair,

or good condition. The city initially approached the tree removals based on condition (poor first, then fair, etc.) instead of on a street-by-street basis, to allow for the possibility of a "silver bullet" cure for EAB before high quality trees were removed. The Parks and Forestry tree crew conducted periodic inspections to determine the priority and timing of tree removals and followed the code compliance enforcement for nuisance ashes on private property.

The City hired contractors to do the majority of the removals, stump grinding, and planting of replacement trees. The Parks Department selected a diversity of replacement trees as an important part of the plan. The Parks staff knew if they were giving residents the unhappy news about removing trees, they would need to replace them. They started the removals in 2006, removing about 70 ash trees per year. The town also hired contractors to treat 22 "special" ash trees in the city's parks with insecticide.

Unfortunately, EAB was confirmed in Upper Arlington in 2009, and the city had to accelerate the removals to manage the many dead and dying trees. The EAB infestation peaked for Upper Arlington in 2013 and the city completed most of the removals by 2017. As of 2020, a few young ash trees remain and the city will continue to remove them on an as-needed basis.

## FAST FACTS

**Population:** 33,771

**Miles of Town Maintained Roads:** 150

**Number of Ash Inventoried on Town Roads prior to Removals:** 850 street trees (5% of street canopy), and 400 city park trees. (This does not include forested areas.)

**Normal Management of Public Trees:** A complete tree inventory was conducted in 1990. Parks and Forestry Division staff inventory and inspect public trees every three years (33% per year), and prune on a six-year cycle. They contract for tree and stump removal; historically remove 300-400 trees per year, and are required by City code to replace trees that are removed.

**Active Tree Board or Conservation Commission:**  
Tree Commission

**Local Tree Ordinance:** Yes. It has been changed since the arrival of EAB to make it easier for the city to condemn hazardous trees. If a tree on private property is considered a threat to others and the owner does not remove it, the city will order it removed and bill the property owner for 1.5 times the nuisance cost of the removal.

**Ash Inventory Conducted:** 2006

**EAB First Detected:** 2009

**Written EAB Management Plan:** 2006

**Ash Management Status in 2020:** Since 2006, 850 ash removed, starting with largest and poorest condition. Replanted 800 trees, some replanting ongoing. Treating 22 trees in parks with insecticides. EAB had mostly passed by 2020.

**Key Players:** Parks and Recreation Department staff, Tree Commission, Tree Removal Companies, Ohio Department of Natural Resources Urban and Community Foresters.

**Funding:** The Parks & Forestry Division has a \$1 million budget from the city's general fund. The City planned to phase removals over 10 years to spread the costs and absorb them into the budget by removing and replacing approximately 80 ash trees per year in addition to the 300-400 street trees typically removed and replaced annually. However, when EAB arrived 3 years into the plan, the plan was accelerated, and an additional \$15,000 was budgeted in 2011 for EAB work.

**Wood Utilization:** Removal contractors took the wood unless property owner wanted it.

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Steve Cothrel

**Sign posted to explain the ash removals**



Steve Cothrel

**Ash tree removal with crane**

## ACTUAL COSTS<sup>1</sup>

Although the costs of removals and replacements has increased over the past 15 years since Upper Arlington has been dealing with EAB, the inflation in costs has been offset by the city's decision to remove the largest and most expensive trees first, and leaving the smaller trees for more recent years. Subsequently, on average, the city has spent approximately \$500 for the removal and replacement of each of the ash trees.

Activity	Cost per Unit	No. of Trees	Work Done By	Total Cost
<b>Treatment</b>	\$1,170 per year or \$53 per tree	Lost a few trees over years, still treating 22 special trees	Contractor	\$17,550 for treatment of 22 trees over 15 years (ongoing)
<b>Removal &amp; Stump Grinding</b>	Average of \$400 per tree <sup>2</sup>	850 removed, removed largest trees first	Contractor (700 trees) Staff (150 trees)	\$340,000
<b>Replacement Trees</b> (1.5" caliper B&B)	Average of \$110 per tree <sup>3</sup>	800	Purchased from private nurseries	\$88,000
<b>Replanting Labor</b>	Average of \$60 per tree <sup>4</sup>	800	Contractor (750) Staff (50)	\$48,000
<b>Grand Total</b>	<b>\$493,550 Over 15 years (2006 to 2020)</b>			

<sup>1</sup> Street trees only, does not include costs associated with 400 park trees, or trees in woodlands. Trees in woodlands not removed or replaced.

<sup>2</sup> Average cost of removal increased from \$350 per tree in 2006 to \$450 per tree in 2020.

<sup>3</sup> Cost of trees for replanting increased from \$90 per tree in 2006, to approximately \$130 per tree in 2020.

<sup>4</sup> Average cost of replanting labor increased from \$40 per tree in 2006 to \$80 per tree in 2020.

## ON THE GROUND

*There was lots of debate about the right approach to take. We knew the wave was coming. We decided to remove ash prophylactically years before we thought EAB mortality would occur, starting with poor condition trees first. We started removing 10% of our ash per year in 2006 thinking we had 10 years to finish. Emerald ash borer was discovered in Upper Arlington in 2009, just three years into our planned removals. Then we had to accelerate removals through 2013. Everything between 3 to 6 inches DBH (diameter breast height) was infested but alive. All of the larger "bad" trees were gone by 2014; we had only about 200 smaller trees left that were treated by resident permit or monitored for removal as needed.*

**Steve Cothrel, Superintendent of Parks and Forestry, Parks and Recreation Department, the City of Upper Arlington**

## LESSONS LEARNED

- **Plan ahead.** The management plan will be controversial. Put together a plan when people have time to consider it, not when you are in crisis mode, with the pest upon you. There is no one size fits all plan or solution.
- **Get Creative.** In 2015, the Tree Commission worked with the Arts Commission to create the *Beyond Limbs & Leaves: Rekindling Upper Arlington Ash*, a successful art exhibit of items made from felled ash into bowls, spoons, and other pieces of art, as a way to memorialize the fallen trees.

## ABOUT THE PROJECT

The Emerald Ash Borer Municipal Management Case Studies were developed to help municipalities determine the best approach to ash management for their unique situation. The case studies were drawn from six municipalities in the Midwest, New England, and Vermont that vary in population, percentage of public trees that are ash, and resources.

### Vermont Urban & Community Forestry Program

Vermont Department of Forests, Parks and Recreation in partnership with University of Vermont Extension

