

USDA Forest Service

URBAN FOREST CONNECTIONS

webinar series

Second Wednesdays | 1:00 – 2:00 pm ET

www.fs.fed.us/research/urban-webinars

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EMERALD ASH BORER: STATUS, MANAGEMENT OPTIONS, AND COST CALCULATORS



Deborah McCullough

Professor

Michigan State University



Cliff Sadof

Professor

Purdue University



Richard Hauer

Professor

*University of Wisconsin –
Stevens Point*

EAB Cost Calculator

Cliff Sadof

Purdue University

PURDUE
EXTENSION

LOCAL FACES
COUNTLESS CONNECTIONS

Emerald Ash Borer Cost Calculator

PURDUE
UNIVERSITY

Runs Best on Google Chrome.

Welcome to the Emerald Ash Borer Cost Calculator 2.0

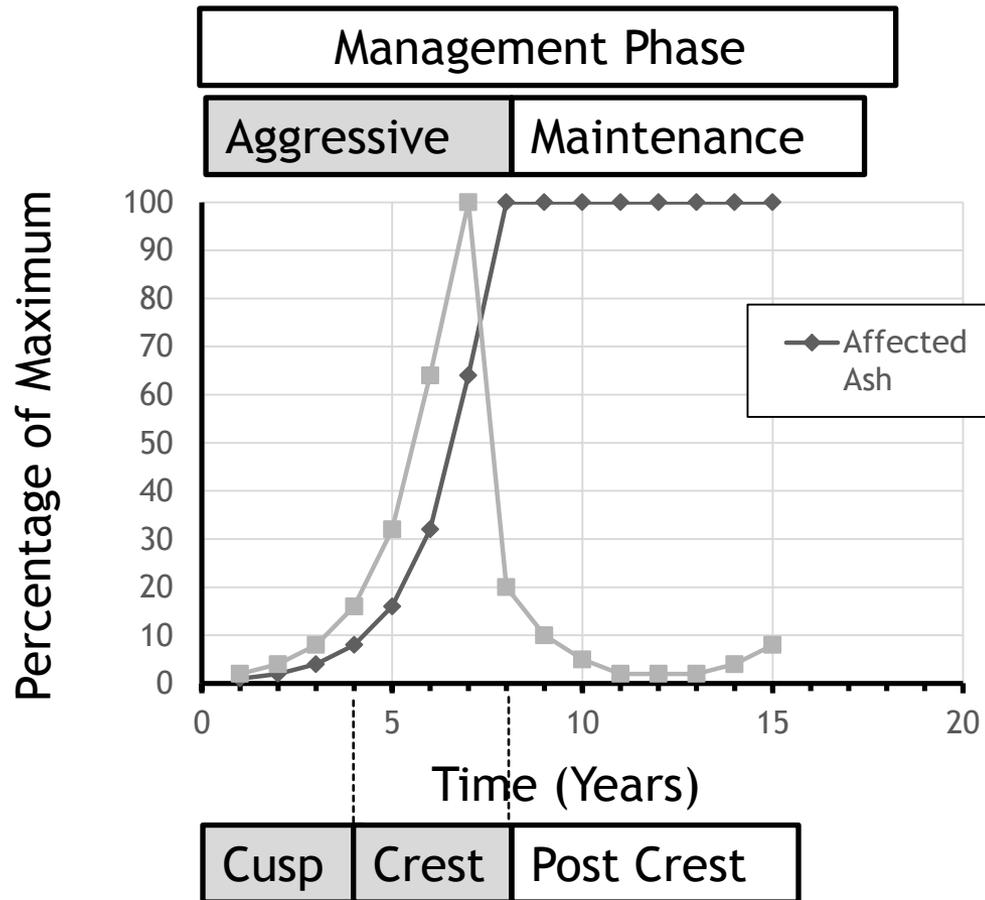
This version is driven by an EAB invasion wave model that assumes it takes 8 years for EAB to kill all the ash trees in your city after it has been detected in your county. In this new version you can:

- Stage your response to an EAB invasion based on the percentage of ash trees that are dying.
- Evaluate management plans that reduce the frequency of ash treatment after the initial wave of EAB has passed through your forest.
- Compare the annual and cumulative costs over a 25 year period for ANY management strategy that includes a mixture of tree removal, replacement, and insecticide treatment.
- Compare size of the forest remaining over a 25 year period for ANY management strategy that includes a mixture of tree removal, replacement, and insecticide treatment.
- Generate printed reports of projected costs of up to 3 management strategies at a time.

To run the calculator you will need:

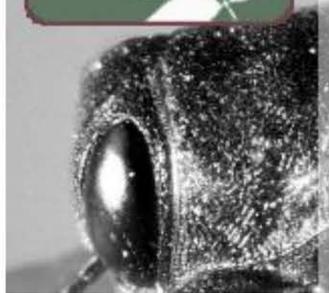
- An inventory of the number and size of ash trees
- An estimate of costs for removing and treating trees based on the size of each tree.
- An estimate of costs for replacing each ash tree that is removed.

Destruction Wave and Management



Protection needs and populations waves of EAB and dying ash trees

Emerald Ash Borer Cost Calculator

PURDUE
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You're using **Firefox 31** on Windows.

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If using Internet Explorer (IE) 8, please click the compatibility view button for compatible viewing.



(Found in menu bar above) For more information, please visit [Microsoft](#)

[Getting Started](#) [Entering Tree Inventory Data \(Tree Size Class Distribution\)](#)
[Entering Costs and Staging Your EAB Infestation \(Costs and Infestation Stage\)](#)
[Building Management Plans](#) [Making Comparisons](#) [Printing Reports](#)

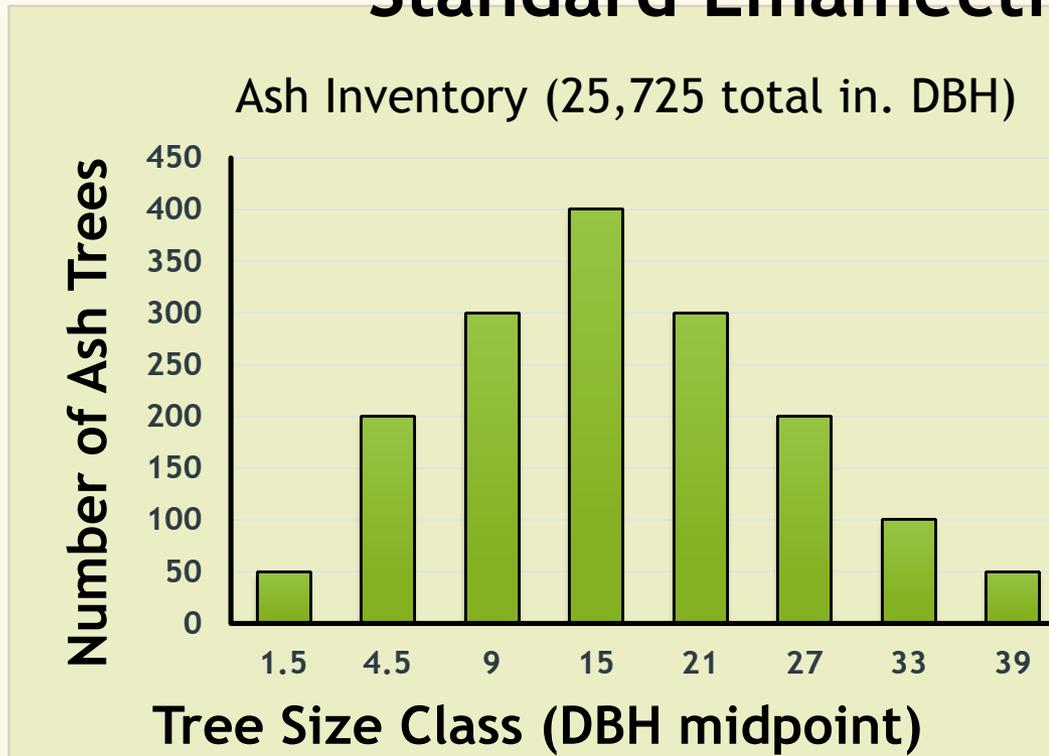
Welcome **cliff sadof** ([logout](#))

Tutorials

- [Getting Started](#)
- [Entering Tree Inventory Data \(Tree Size Class Distribution\)](#)
- [Entering Costs and Staging Your EAB Infestation \(Costs and Infestation Stage\)](#)
- [Building Management Plans](#)
- [Making Comparisons](#)
- [Printing Reports](#)

Representative Forest with 1600 Ash Trees

Standard Emamectin Benzoate Trt Bid



Strategies

Replace Unsafe Ash

Replace ash as they die

Replace All Ash

Replace over 8 years

Treat best 80%

Treat 80% of ash and replace the rest over 8 years

Treatment Assumptions

Costs

\$10.00/ in DBH every 2 years

Frequency

Aggressive = every 2 years

Maintenance = every 4 years

Treatments save 95% of trees

Annual mortality of replaced or saved tree is 2%

Cost of removal +
Stump grinding
(Actual Indianapolis
Prices)

DBH ¹	Avg. Cost / DBH
1 - 3	\$ 14.00
3 - 6	\$ 14.00
6 - 12	\$ 14.75
12 - 18	\$ 18.00
18 - 24	\$ 21.75
24 - 30	\$ 25.10
30 - 36	\$ 30.50
36 -	\$ 36.00

Replacement Tree Assumptions

Tree Size is 2.5" DBH

Trees Cost \$400 to purchase, plant and stake

Costs for Std Spray Bid

Aggressive trts @ 2 yrs; Maintenance trts @ 4 yr

Highest annual cost

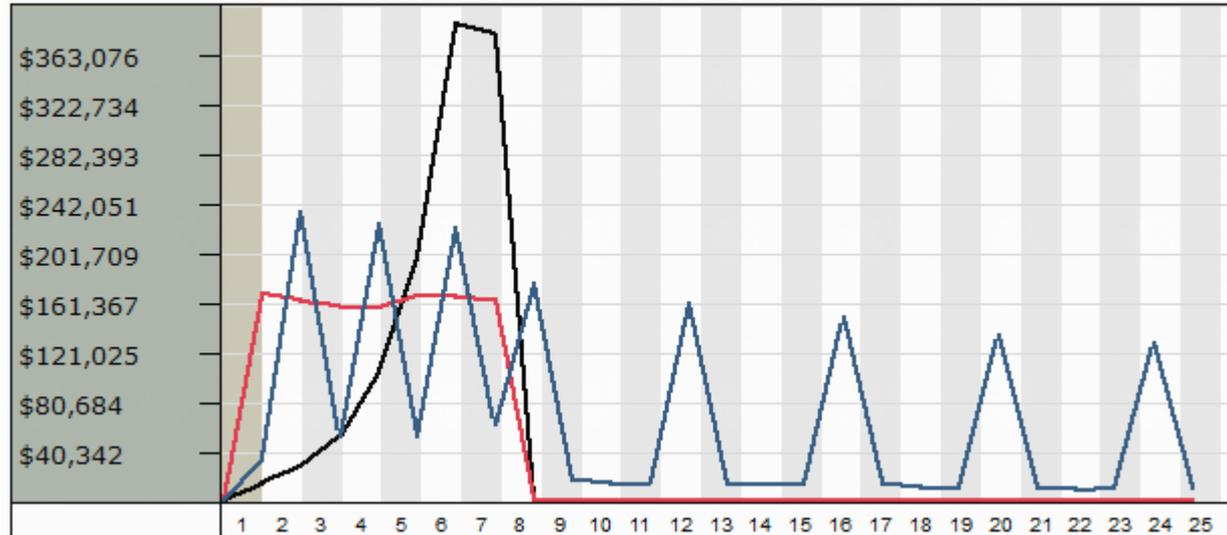


Replace Unsafe Ash
Replace All
Treat best 80%

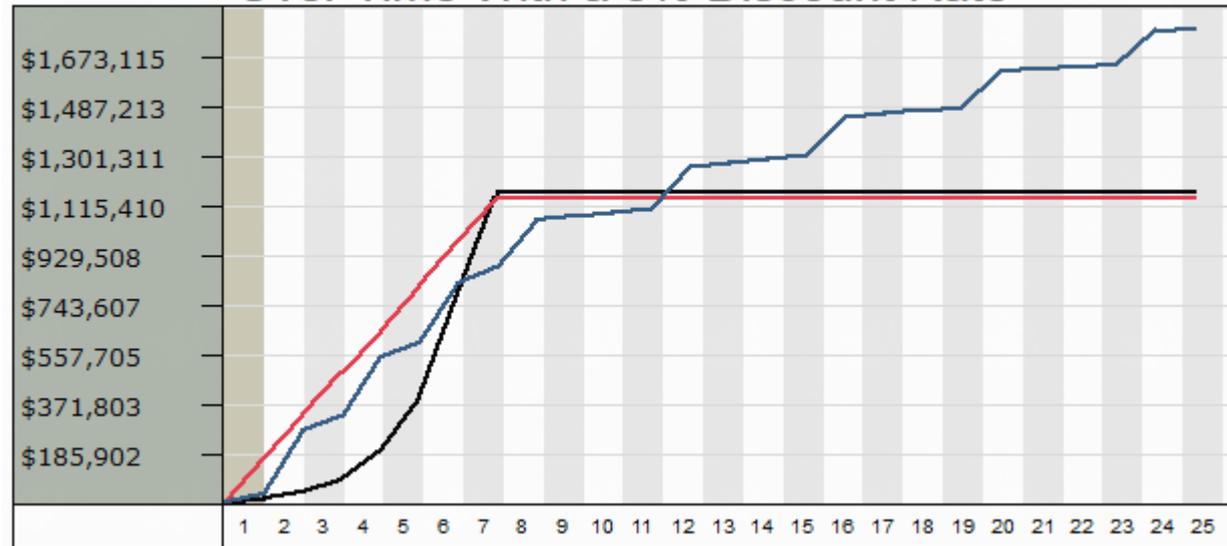
Lowest annual cost



Annual Cost Comparison in Today's Dollars Over Time With a 3% Discount Rate



Cumulative Cost Comparison in Today's Dollars Over Time With a 3% Discount Rate



Time (years)



Press Releases

- \$46 to treat a tree vs \$1000 to remove and replace
- 93% successful treatment



Press Room Facts

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September 18, 2014

Over 90 percent of Trees Inoculated in 2011 and 2012 Still Viable

Dedicated Workforce Continues Inoculation of All Viable Parkway Ash Trees, Including Ash Tree Retreatment

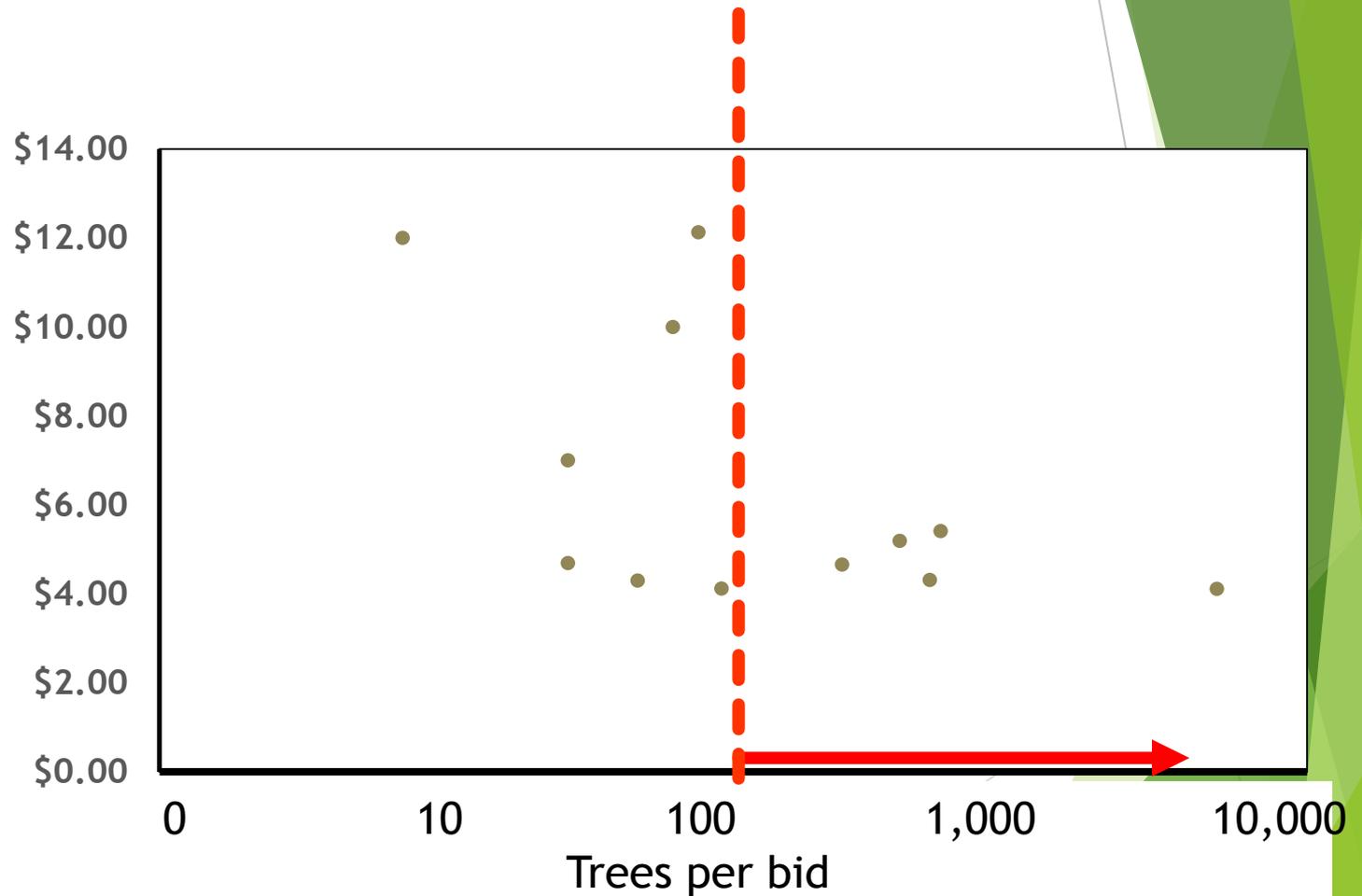
Mayor's Press Office 312.744.3334

Mayor Rahm Emanuel and the Department of Streets and Sanitation (DSS) announced today a 93 percent survival rate for Emerald Ash Borer (EAB) retreatment for Ash trees treated in 2011 and 2012. DSS inoculated 5,400 Ash trees in 2011 and 2012, and of those previously treated trees, 93 percent or over 5,000 trees remain viable parkway trees and accepted EAB retreatment this year.

"The Emerald Ash Borer treatment program is a common sense investment in Chicago's parkway trees," said Mayor Emanuel. "By providing a dedicated workforce for Ash tree inoculation in 2013 and 2014, we are protecting the viability of our Ash tree population for many years to come."

The EAB treatment, TREE-age, became available in 2009. TREE-age utilizes emamectin benzote to inoculate Ash trees, which has been proved to kill 99 percent of Emerald Ash Borer insects within a tree. An Ash tree receives a self-contained injection into the vascular system of the tree, which then pulls the treatment throughout the base of the tree up to the canopy. This treatment method will kill existing pests as well as prevent new infestations for two to three years. Retreatment needs to be applied after two years to continue to protect the Ash tree against EAB. The average cost to inoculate a tree is \$46, compared with \$1,000 to remove and replace a tree.

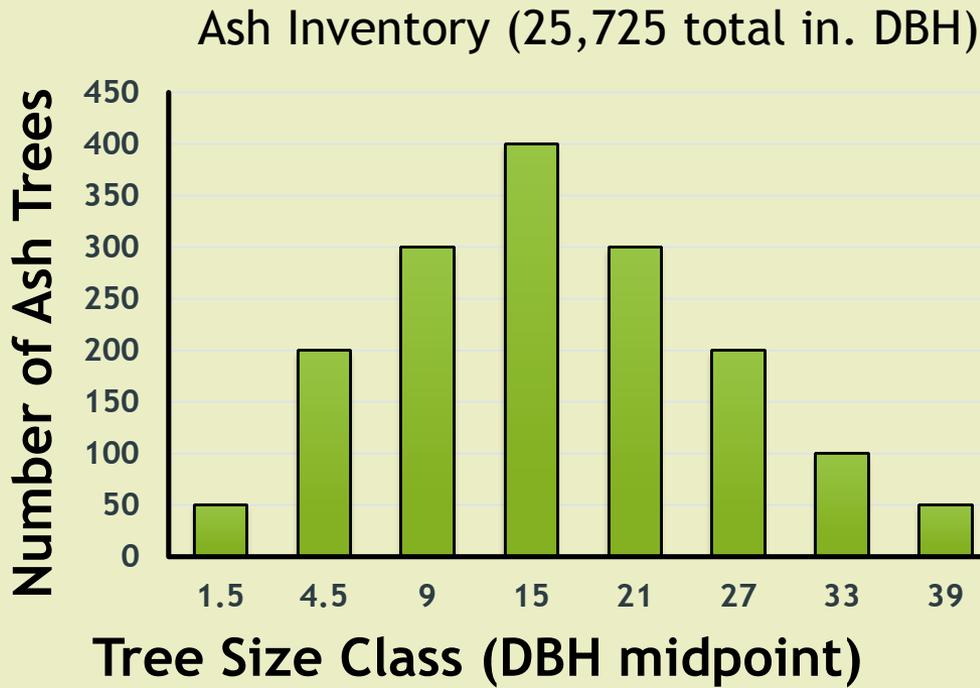
Reality Check: Treatment \$ /DBH is always lower for bids with > 200 trees



Source: Ongoing survey of Municipal Bids in IN, IL, KY, OH, MI, WI

Representative Forest with 1600 Ash Trees

Bulk Discount for Emamectin Benzoate Trt



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30 - 36	\$ 30.50
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Costs for Low Spray Bid

Aggressive trts @ 2 yrs; Maintenance trts @ 4 yr

Highest annual cost

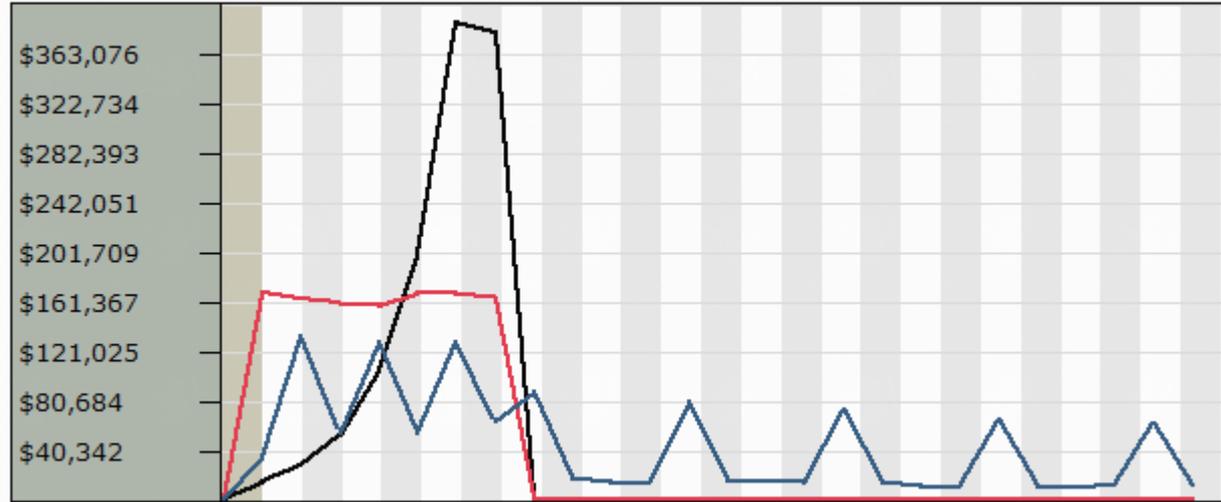


Replace Unsafe Ash
Replace All
Treat best 80%

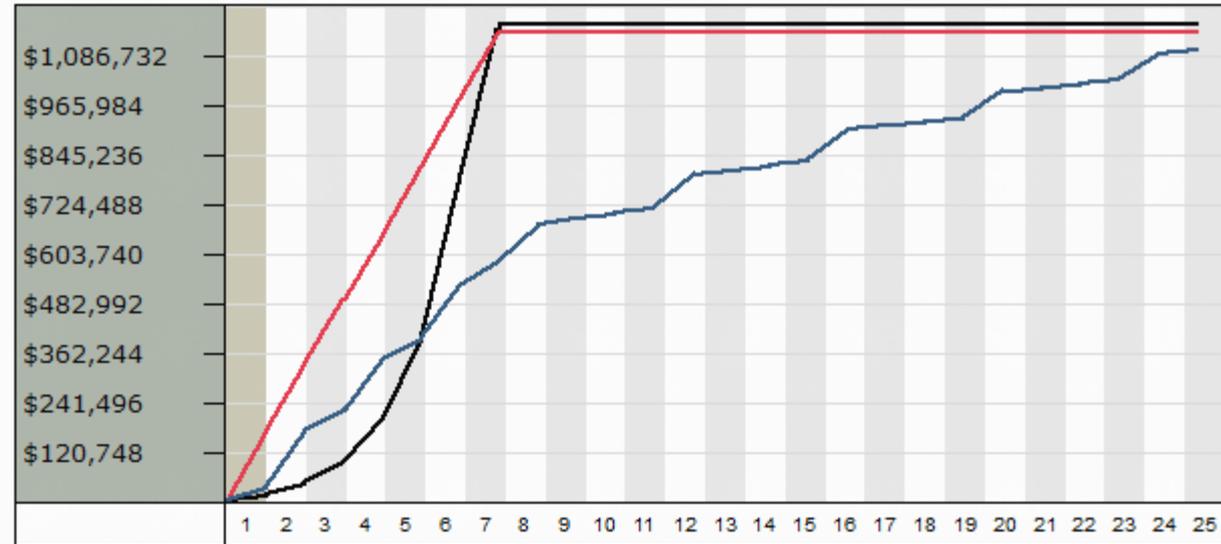
Lowest annual cost



Annual Cost Comparison in Today's Dollars Over Time With a 3% Discount Rate



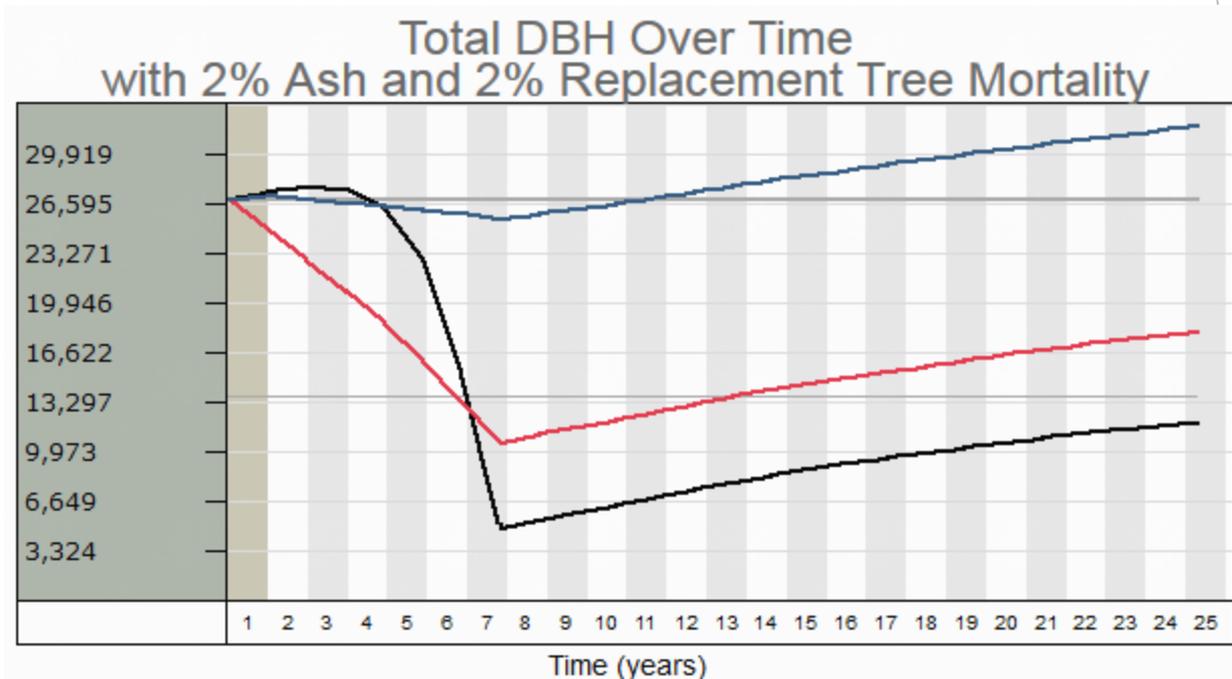
Cumulative Cost Comparison in Today's Dollars Over Time With a 3% Discount Rate



Time (years)

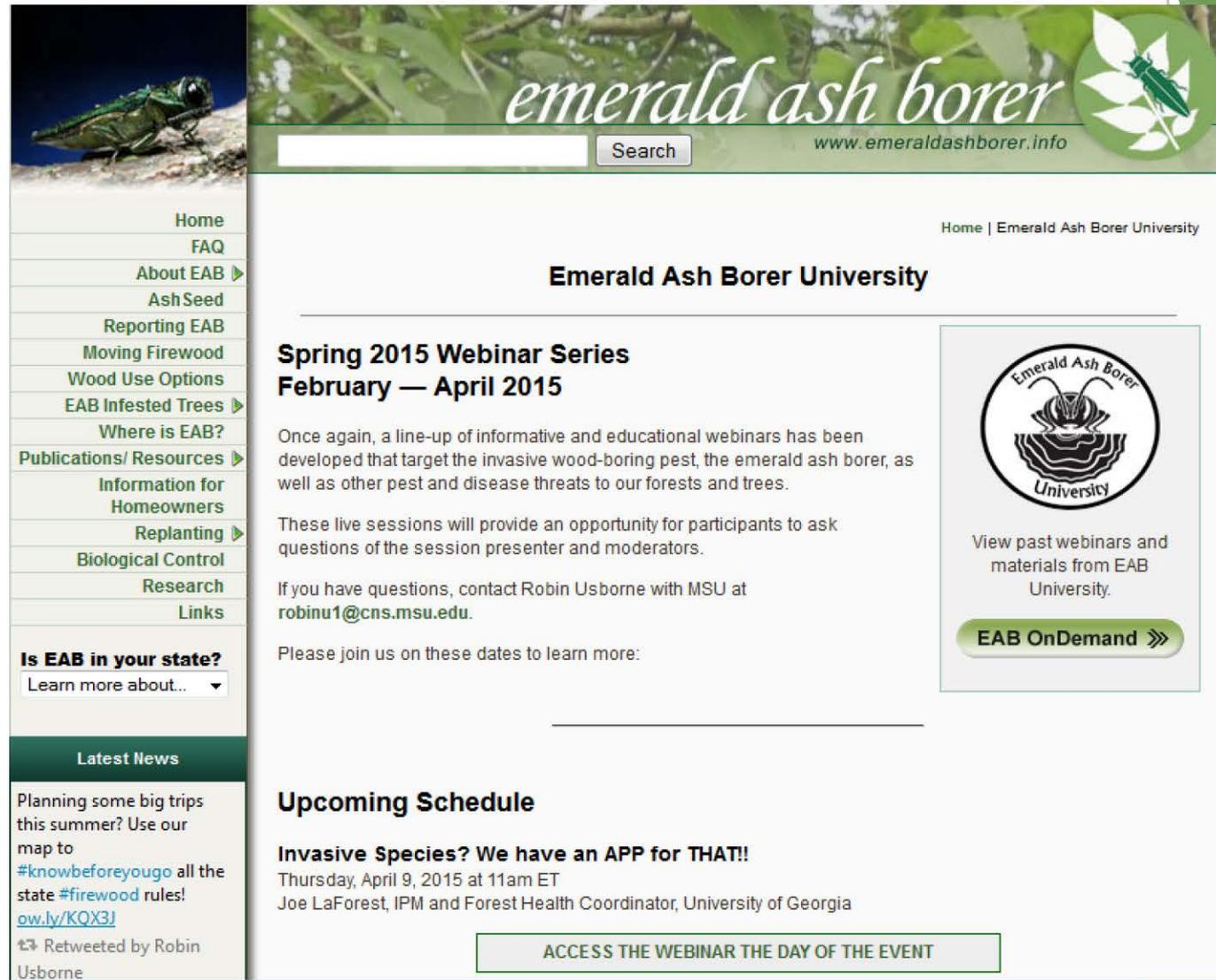
Relative Benefits in Forest Size

- Treated forest is largest



Replace Unsafe Ash
Replace All
Treat best 80%

Stay Tuned to EAB University



emerald ash borer 
www.emeraldashborer.info

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Spring 2015 Webinar Series February — April 2015

Once again, a line-up of informative and educational webinars has been developed that target the invasive wood-boring pest, the emerald ash borer, as well as other pest and disease threats to our forests and trees.

These live sessions will provide an opportunity for participants to ask questions of the session presenter and moderators.

If you have questions, contact Robin Usborne with MSU with robinu1@cns.msu.edu.

Please join us on these dates to learn more:



View past webinars and materials from EAB University.

EAB OnDemand »

Upcoming Schedule

Invasive Species? We have an APP for THAT!!
Thursday, April 9, 2015 at 11am ET
Joe LaForest, IPM and Forest Health Coordinator, University of Georgia

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Retweeted by Robin Usborne

http://www.emeraldashborer.info/eab_university.cfm