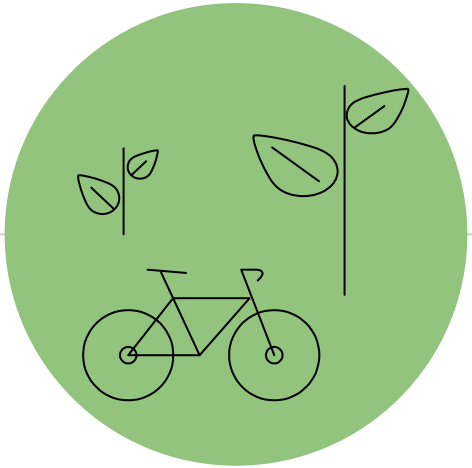
Emerald Ash Borer Community Meeting

October 25, 2018
City of Somerville High School Cafeteria, 6pm

Vanessa Boukili, Urban Forestry & Landscape Planner
Luisa Oliveira, Senior Parks & Open Space Planner
Eric Weisman, SomerStat Analyst
Steven MacEachern, Superintendent of Highways and Tree Warden

Agenda

- Urban forestry 101
- Ash trees
- Emerald Ash Borer
- Treatment plan
- Removals
- Replanting
- What are other communities doing?
- How to stay informed



Urban Forestry 101

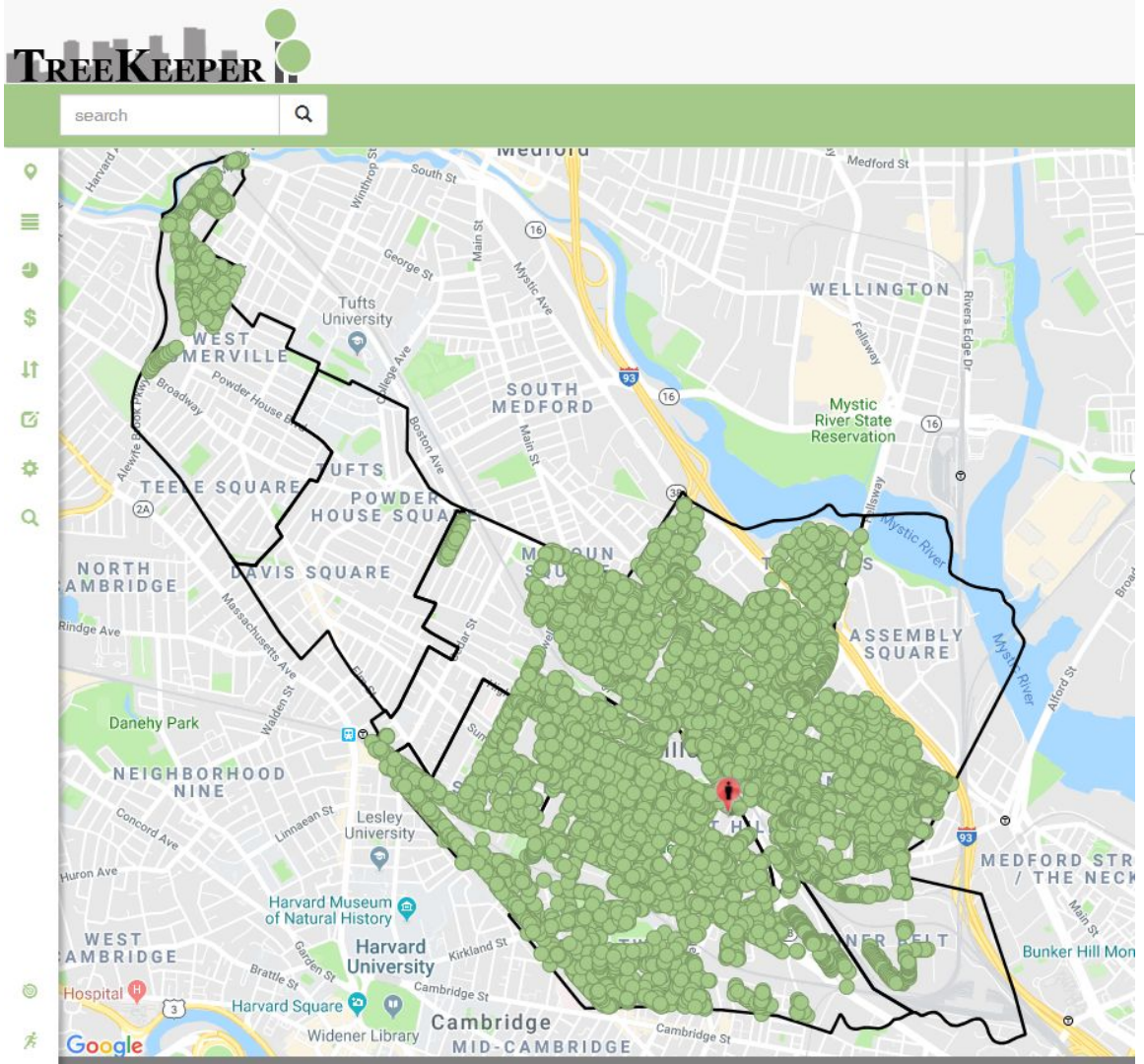
The mission of the Urban Forestry Division is to maintain, preserve, and expand a healthy and diverse urban forest to maximize environmental, economic, safety and aesthetic benefits for the Somerville community today and in the future

Creating a Vibrant Urban Forest

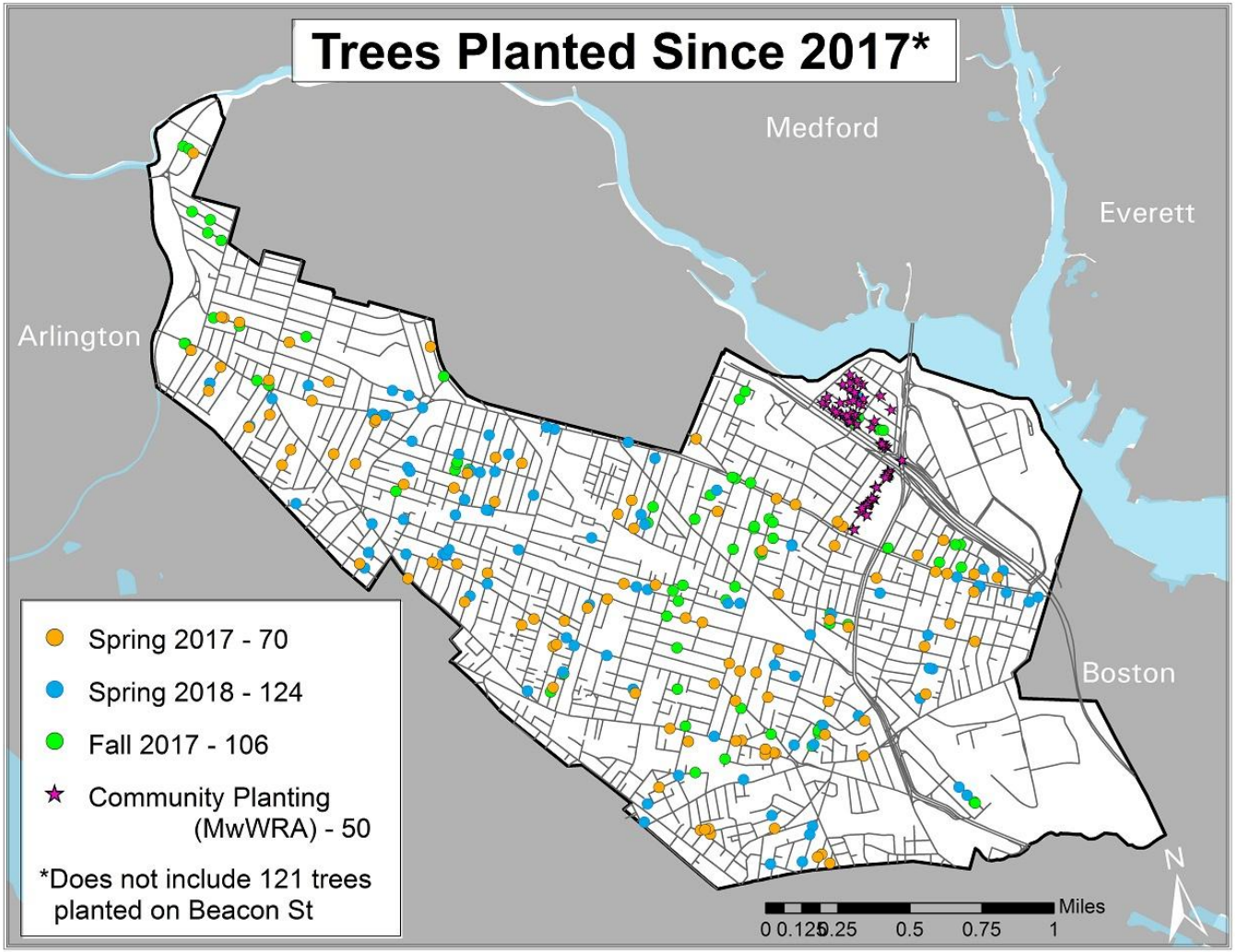
- **Tree benefits depend on species and tree size**
  - Many benefits scale exponentially with tree size
- **Maximizing benefits through planting and maintenance**
  - Strategically plant new trees to increase diversity and canopy cover, use best planting practices (ex. right tree, right place)
  - Tree maintenance (ex. pruning, mulching) to enhance tree health and survival
  - Protect trees from pests and diseases when possible
- **Keeping people safe**
  - Trees that are a risk to public safety need to be removed

Tree Inventory

- Half the city in 2017
- Rest of inventory 2018 (now!)



Planting


Trees Planted Since 2017*
Medford
Everett
Arlington
Boston
Spring 2017 - 70
Spring 2018 - 124
Fall 2017 - 106
Community Planting (MwWRA) - 50
*Does not include 121 trees planted on Beacon St
N
Miles
0 0.125 0.25 0.5 0.75 1

Urban Forest Planning

Urban Forest Management Plan

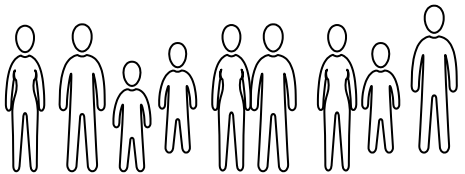
Comprehensive guiding document detailing current status of our urban forest, goals for the future, and how to reach those goals.

→ DCR Community and Urban Forestry Grant

Urban Forestry Committee

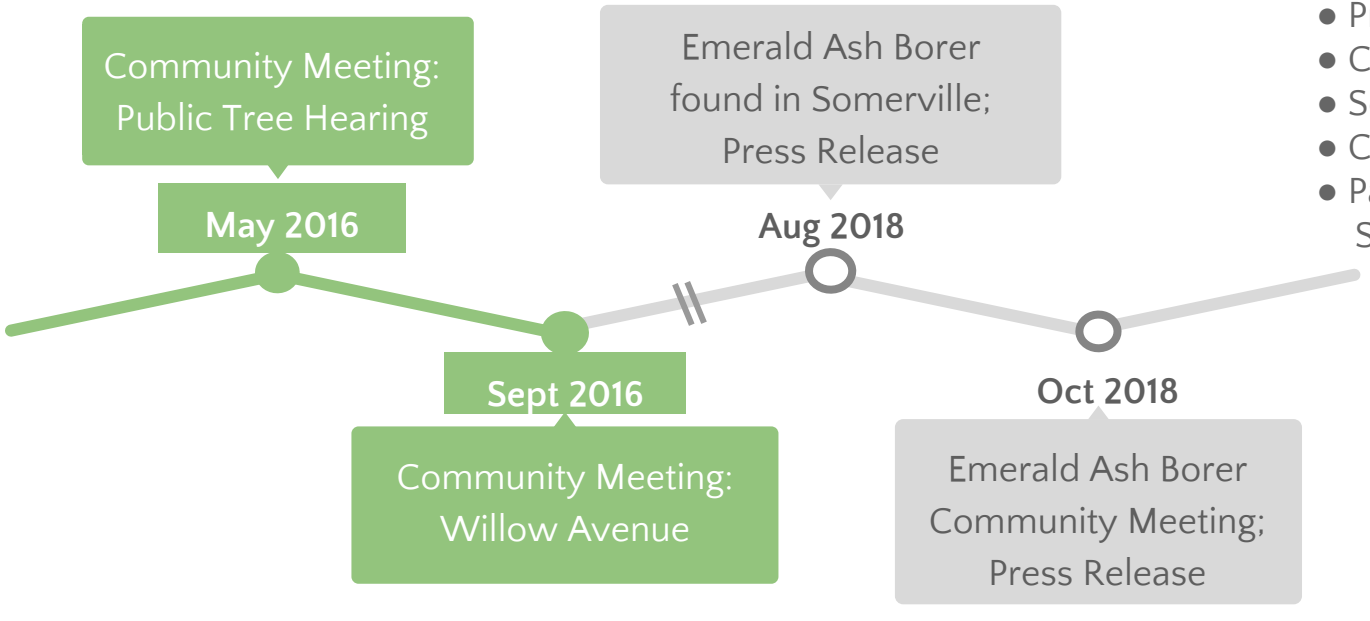
9 people (2 city staff)

→ 30 applications received, currently under review



Ash Trees

Communication Strategy



Meeting Outreach

- Press Release
- City Website
- Social Media
- Cable Wheel
- Parks & Open Space Instagram

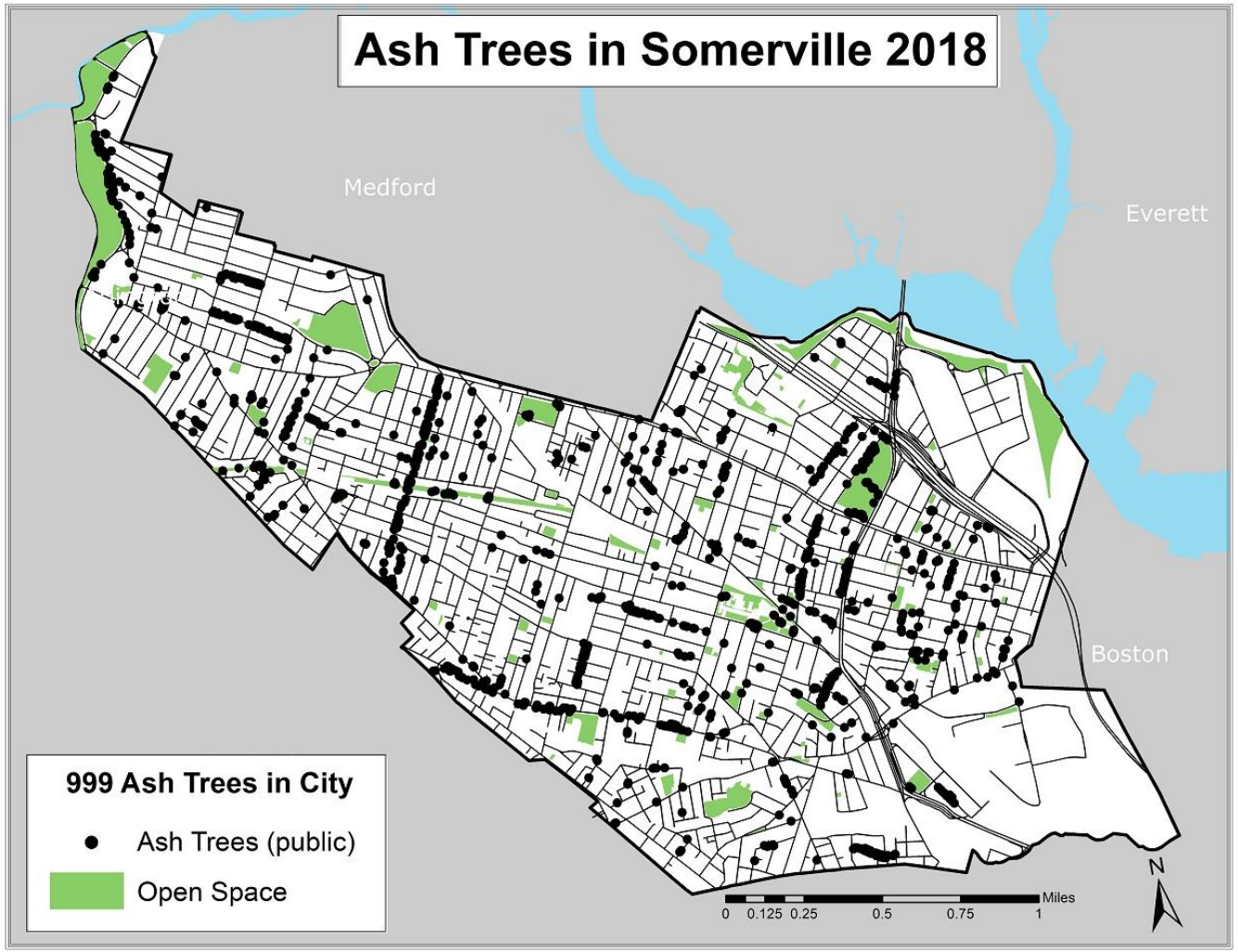
Ongoing: Website Updates, EAB monitoring, Ash Tree treatments

City of Somerville has 999 Ash trees on public land

Fraxinus pennsylvanica Green Ash
Fraxinus americana White Ash
Fraxinus excelsior European Ash

882 Ash trees along streets

117 Ash trees in parks

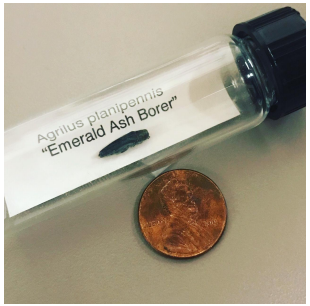

Ash Trees in Somerville 2018
Medford
Everett
Boston
999 Ash Trees in City
Ash Trees (public)
Open Space
0 0.125 0.25 0.5 0.75 1
Miles
N

Emerald Ash Borer

Emerald Ash Borer

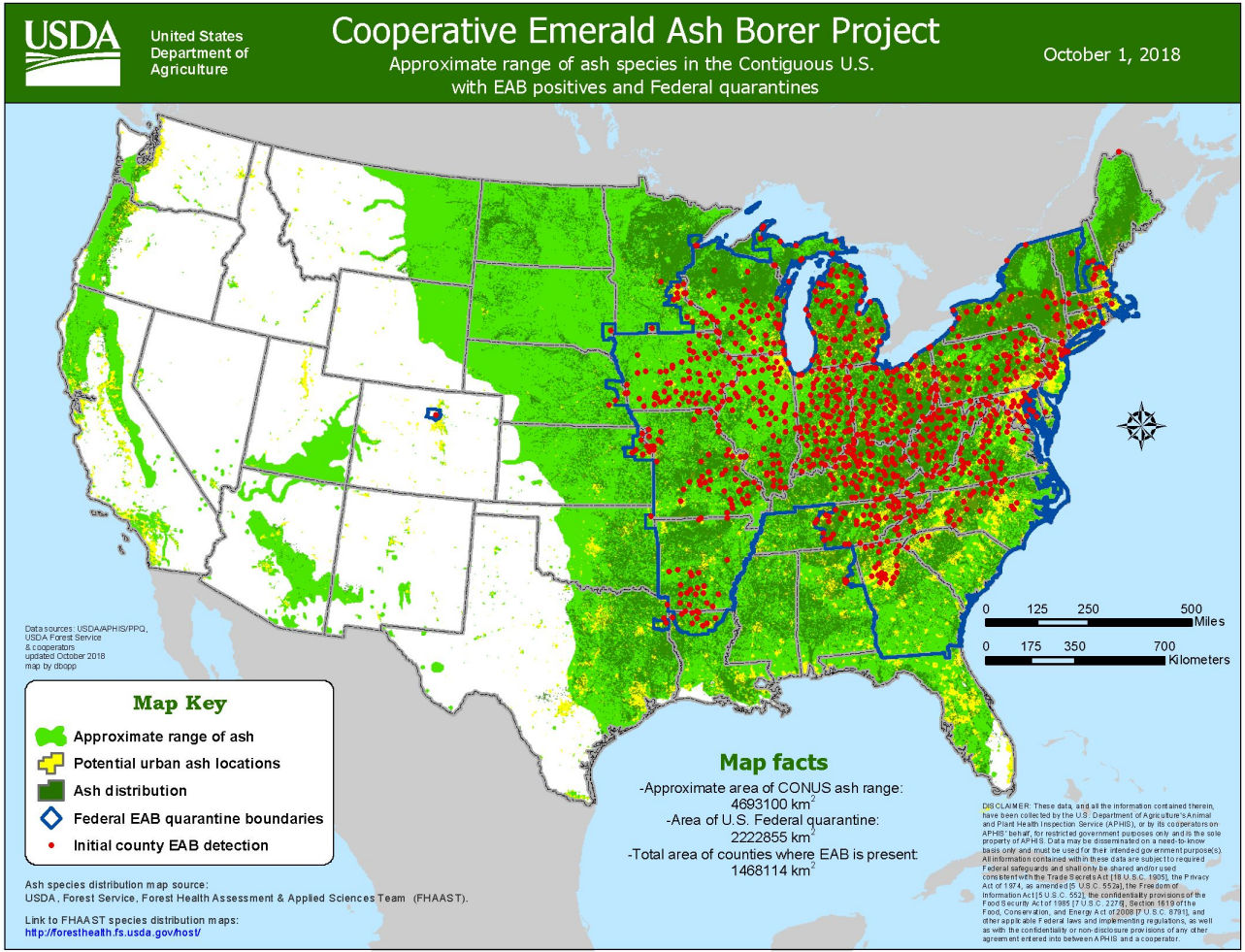
Invasive insect from Asia

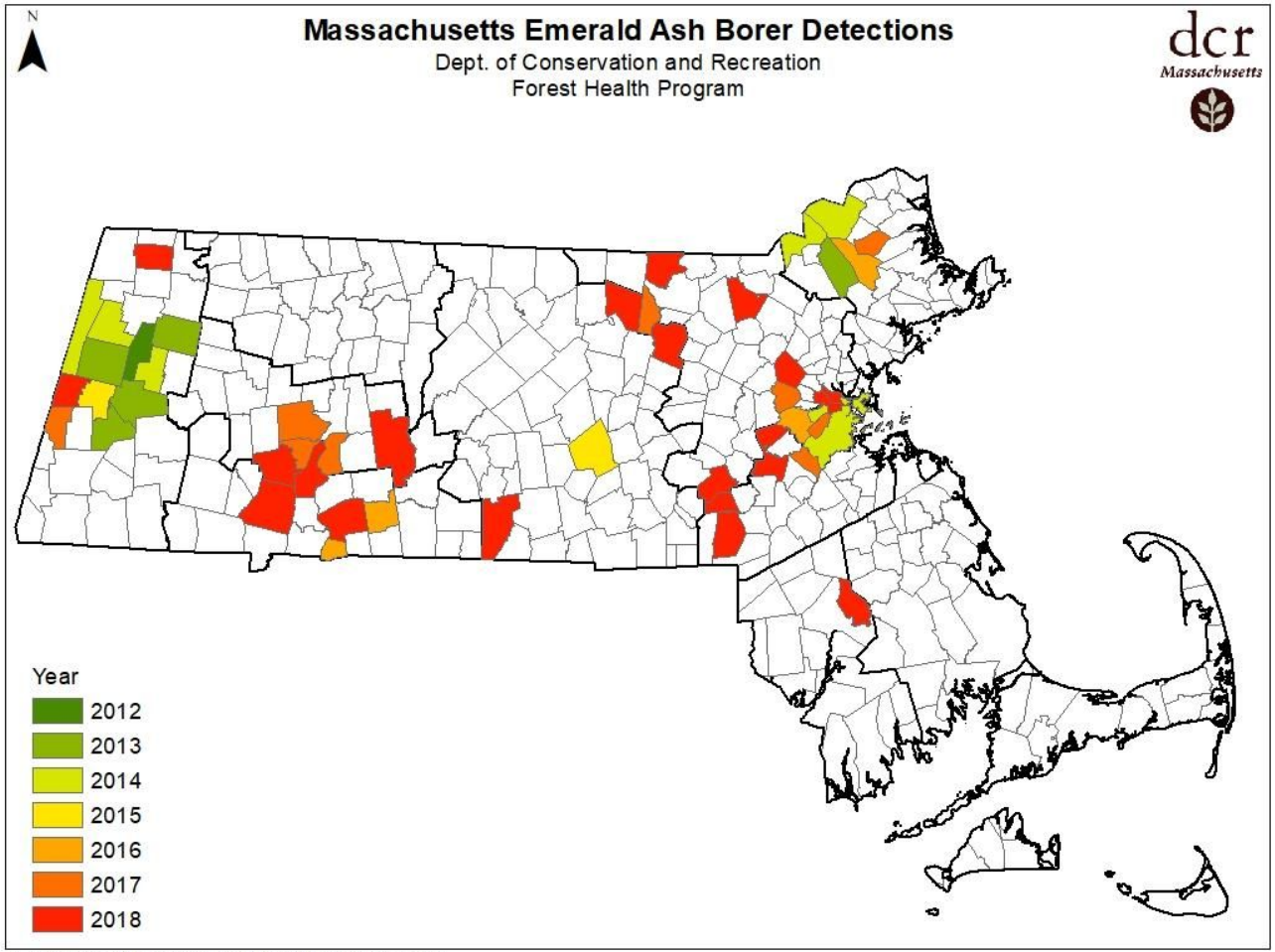
Adult beetles are metallic green, and approximately ½-inch long



Emerald Ash Borer (EAB)

- Attacks all species of Ash
- First discovered in Michigan in 2002
- Has killed hundreds of millions of Ash trees in North America
- First discovered in MA in 2012 (Dalton)
- DISCOVERED IN SOMERVILLE IN 2018


USDA
United States Department of Agriculture
Cooperative Emerald Ash Borer Project
Approximate range of ash species in the Contiguous U.S.
with EAB positives and Federal quarantines
October 1, 2018
Data sources: USDA/APHIS/PPQ, USDA Forest Service & cooperators
updated October 2018
map by dbopp
Map Key
Approximate range of ash
Potential urban ash locations
Ash distribution
Federal EAB quarantine boundaries
Initial county EAB detection
Ash species distribution map source:
USDA, Forest Service, Forest Health Assessment & Applied Sciences Team (FHAAST).
Link to FHAAST species distribution maps:
http://foresthealth.fs.usda.gov/host/
Map facts
-Approximate area of CONUS ash range:
4693100 km2
-Area of U.S. Federal quarantine:
2222855 km2
-Total area of counties where EAB is present:
1468114 km2
0 125 250 500 Miles
0 175 350 700 Kilometers
DISCLAIMER: These data, and all the information contained therein, have been collected by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), or by its cooperators on APHIS' behalf, for restricted government purposes only and is the sole property of APHIS. Data may be disseminated on a need-to-know basis only and must be used for their intended government purpose(s). All information contained with in these data are subject to required Federal safeguards and shall only be shared and/or used consistent with the Trade Secrets Act [18 U.S.C. 1905], the Privacy Act of 1974, as amended [5 U.S.C. 552a], the Freedom of Information Act [5 U.S.C. 552], the confidentiality provisions of the Food Security Act of 1985 [7 U.S.C. 2276], Section 1619 of the Food, Conservation, and Energy Act of 2008 [7 U.S.C. 8791], and other applicable Federal laws and implementing regulations, as well as with the confidentiality or non-disclosure provisions of any other agreement entered into between APHIS and a cooperator.


N
Massachusetts Emerald Ash Borer Detections
Dept. of Conservation and Recreation
Forest Health Program
dcr
Massachusetts
Year
2012
2013
2014
2015
2016
2017
2018
Map Created By N Keleher, DCR Forest Health 10/15/2018

Signs of Emerald Ash Borer

Larval gallery: When the larva feeds between the bark and sapwood, it makes an S-shaped, "zig-zag," or serpentine gallery. When the young larva enters the wood to begin feeding, it may move up or down the tree bole or branch. You can tell which way it moved by looking at the width of the gallery: as the larva gets bigger so does the width of the gallery. In this picture, the larva moved down the tree (from the top of the picture to the bottom).

Exit hole: As a new adult exits the tree, it chews a D-shaped hole in the bark (A). The holes are slightly bigger than the adult, and are about 3.5 to 4 mm wide. These D-shaped holes are unique to the group of beetles to which the emerald ash borer belongs. Although the holes are a very good indication that the emerald ash borer has infested the tree, it is not an absolute proof because there are other beetles that can cause similar holes. Nevertheless if you see these holes and the S-shaped galleries underneath the bark, report your discovery.

When a tree is infested, birds and other animals can damage the bark to feed on the larvae. Various species of woodpeckers feed on emerald ash borer and produce holes in the bark surrounded by light coloured patches (A, B). Occasionally black and grey squirrels will feed on the larvae and leave ragged strips of bark on the stem (C). Look closely where the bark has been stripped and you will see the S-shaped galleries produced by the larvae (see arrow).

Epicormic shoots: These shoots are also called suckers, water

Images from "A Visual Guide to Detecting Emerald Ash Borer Damage", Canadian Forest Service, 2006.

Treatment Plan

Somerville has a three-pronged Ash tree strategy

Somerville's Ash Tree Strategy Began in 2016

Monitoring

We use traps to detect the presence of EAB and monitor population densities

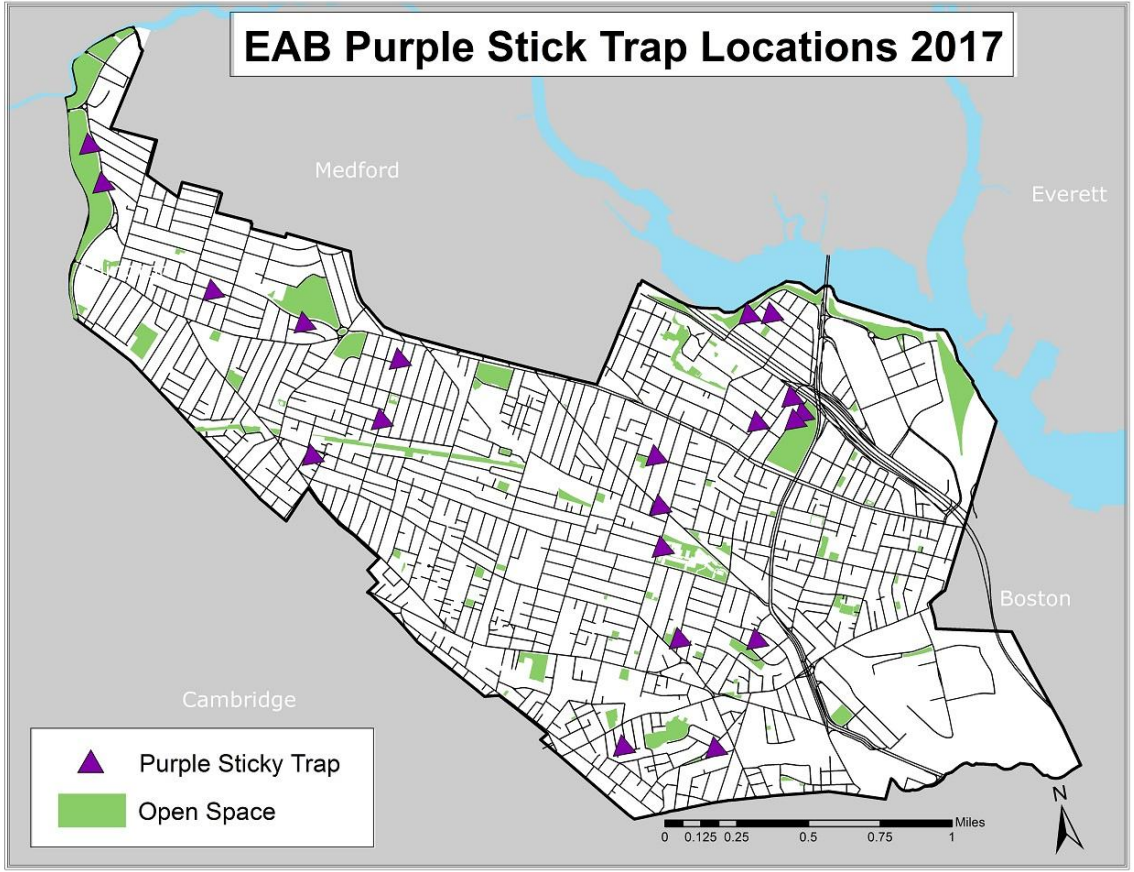
Treatments

We are treating our healthy Ash trees with a systemic insecticide

Removals

We are removing trees that are not healthy enough to treat

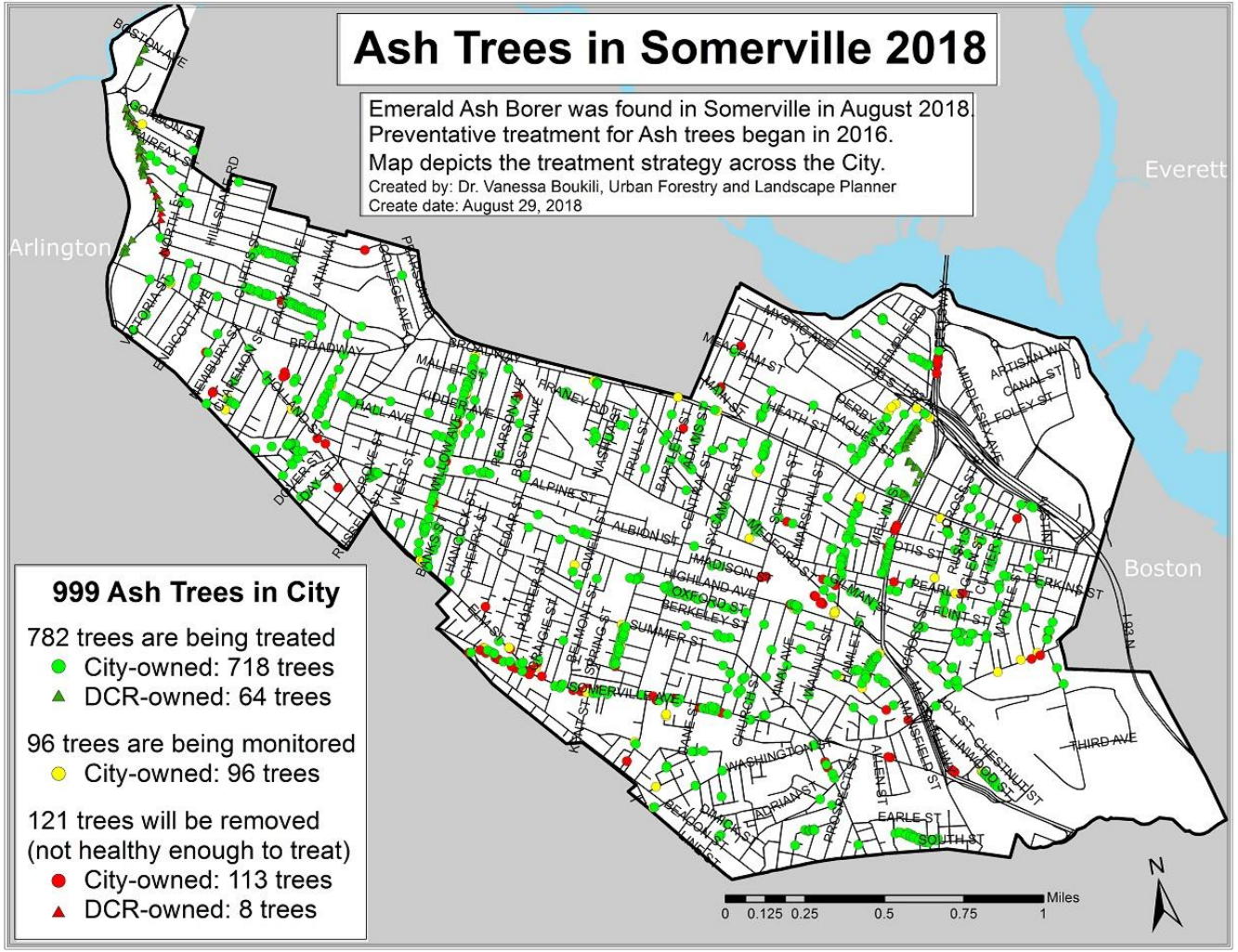
Monitoring


EAB Purple Stick Trap Locations 2017
Medford
Everett
Boston
Cambridge
Purple Sticky Trap
Open Space
0 0.125 0.25 0.5 0.75 1
Miles
N

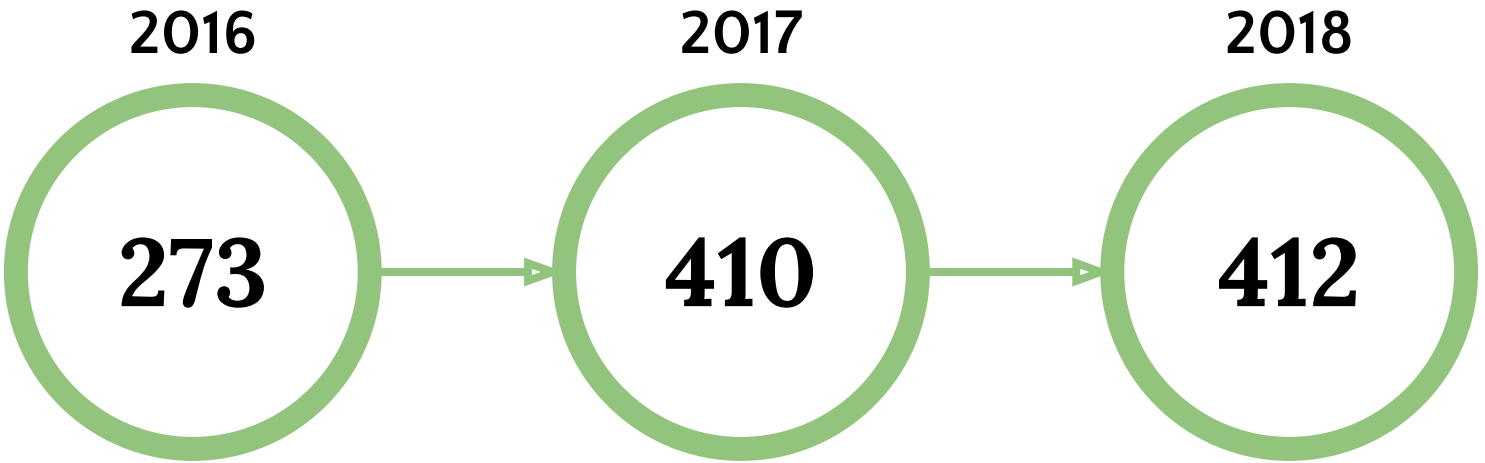
Treatments

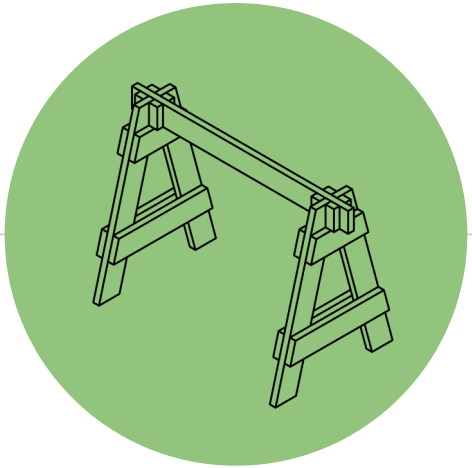
- TreeAzin organic insecticide, systematically distributed
- Injected into base of tree
- Must reapply every two years
- Works by inhibiting larval development and reducing adult fecundity
- Minimal risk to people, pets, insects and wildlife, soil or aquatic ecosystems

Treatments


Ash Trees in Somerville 2018
Emerald Ash Borer was found in Somerville in August 2018.
Preventative treatment for Ash trees began in 2016.
Map depicts the treatment strategy across the City.
Created by: Dr. Vanessa Boukili, Urban Forestry and Landscape Planner
Create date: August 29, 2018
Arlington
Everett
Boston
999 Ash Trees in City
782 trees are being treated
City-owned: 718 trees
DCR-owned: 64 trees
96 trees are being monitored
City-owned: 96 trees
121 trees will be removed
(not healthy enough to treat)
City-owned: 113 trees
DCR-owned: 8 trees
0 0.125 0.25 0.5 0.75 1 Miles
N

Number of Ash trees treated per year





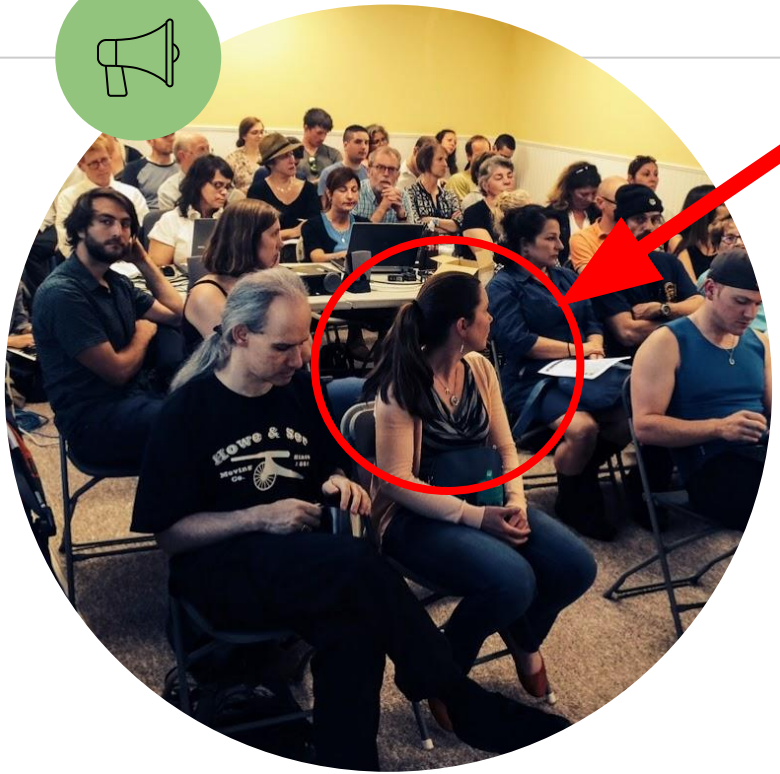
Removals

Removals

- Dead, dying, or damaged trees
- More vulnerable to EAB
- Cannot effectively take up TreeAzin insecticide

Public tree hearing May 2016

Discussed planned removal and replacement of approximately 124 sick, dying, or otherwise particularly vulnerable ash trees



Public tree hearing May 2016

Discussed planned removal and replacement of approximately 124 sick, dying, or otherwise particularly vulnerable ash trees

Removals

24 trees

Have been removed so far

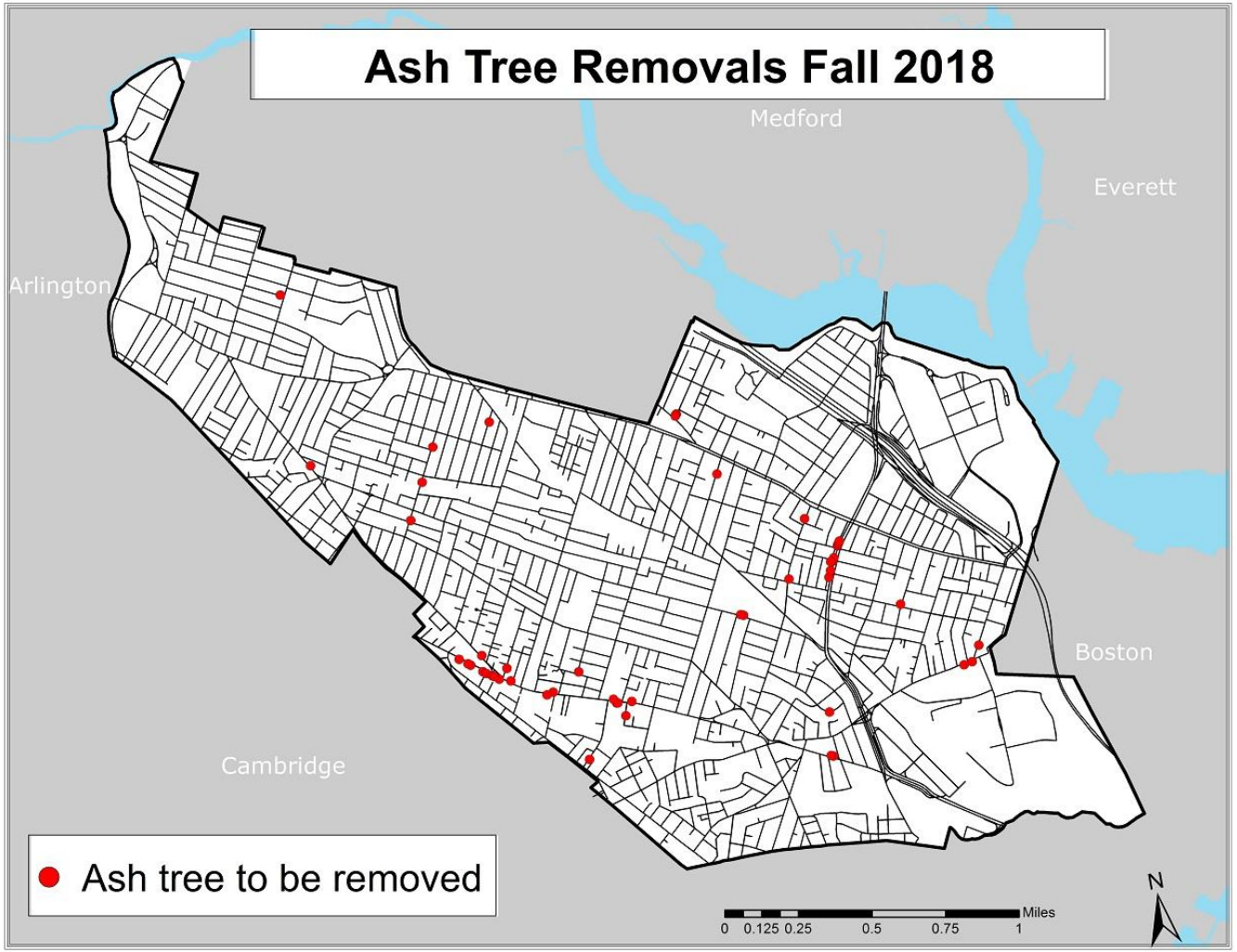
51 trees

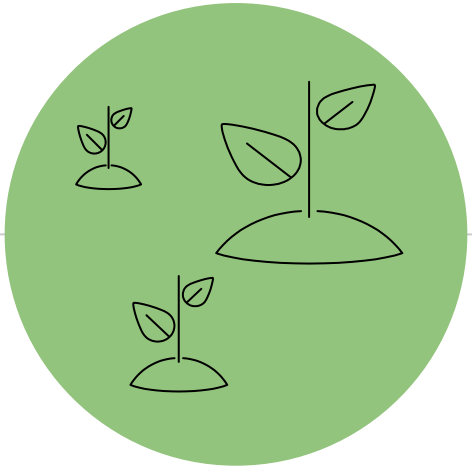
Are marked for removal this November

At least 64 additional trees

Will be removed this winter or next spring, pending arborist re-assessment

Removals


Ash Tree Removals Fall 2018
Medford
Everett
Arlington
Boston
Cambridge
Ash tree to be removed
Miles
0 0.125 0.25 0.5 0.75 1
N



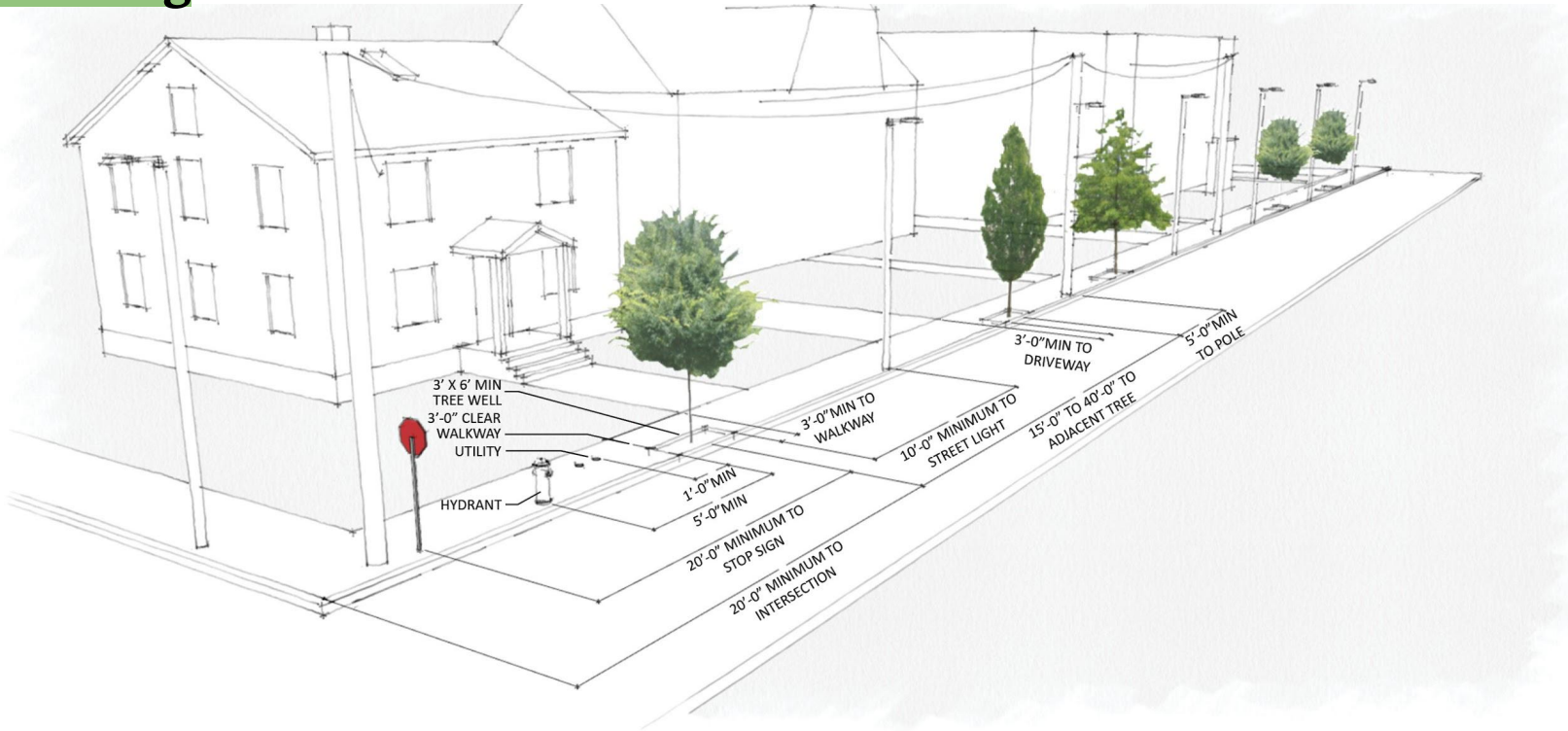
Replanting

When possible, we are replanting sites where Ash trees are removed

Replanting

- Replanting in or around the locations where Ash trees are removed, whenever possible.
- Replanting has already started (13 trees on/around Willow Ave, a handful on Somerville Ave, etc.)
- Plant species that are appropriate for each site, and maintain diversity in the area and citywide. We no longer plant Ash trees in the city.

Replanting


3' X 6' MIN
TREE WELL
3'-0" CLEAR
WALKWAY
UTILITY
HYDRANT
1'-0"MIN
5'-0"MIN
20'-0" MINIMUM TO
STOP SIGN
20'-0" MINIMUM TO
INTERSECTION
3'-0"MIN TO
WALKWAY
10'-0" MINIMUM TO
STREET LIGHT
3'-0"MIN TO
DRIVEWAY
15'-0" TO 40'-0" TO
ADJACENT TREE
5'-0"MIN
TO POLE

Other communities

What are other communities doing?

Treat and Remove

As in Somerville, some communities are treating their healthy ash trees and removing trees that are dead, dying, or dangerous (ex. Cambridge)

Monitoring Only

Some communities are monitoring for the pest, but have not started a treatment program (ex. Arlington)

Remove Only

Some communities are preventatively removing all Ash trees, and replanting when possible

Nothing (yet)

Some communities do not have the resources to treat or remove, and are not doing anything at this time

What is the State doing?

Quarantine

The entire state is part of the national quarantine zone; no movement of firewood, green wood products, nursery stock, any plant materials from any ash species

Monitoring

Trapping program throughout state forests to find new infestations and to map progression and spread of known populations

BioControl

Working to establish biocontrol species to minimize the impact of EAB. Establish populations of parasitic wasps from EAB native range to help regulate population growth

www.somervillema.gov/urbanforestry

Stay informed

- Information about Emerald Ash Borer and our treatment strategy is online
- Sign-up for email updates

Thanks!

Any questions?

You contact me, Vanessa Boukili, here:

- trees@somervillema.gov
- 617-625-6600 x 2516
- 311