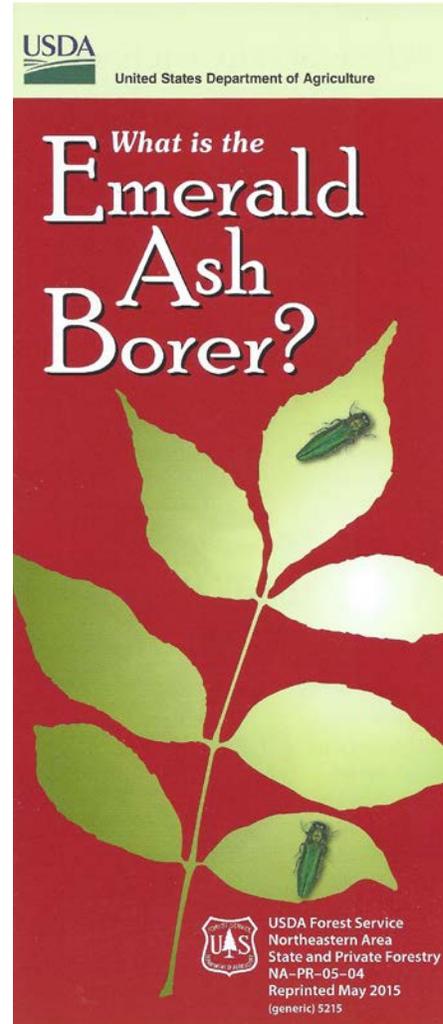


Emerald Ash Borer

in

South Brunswick

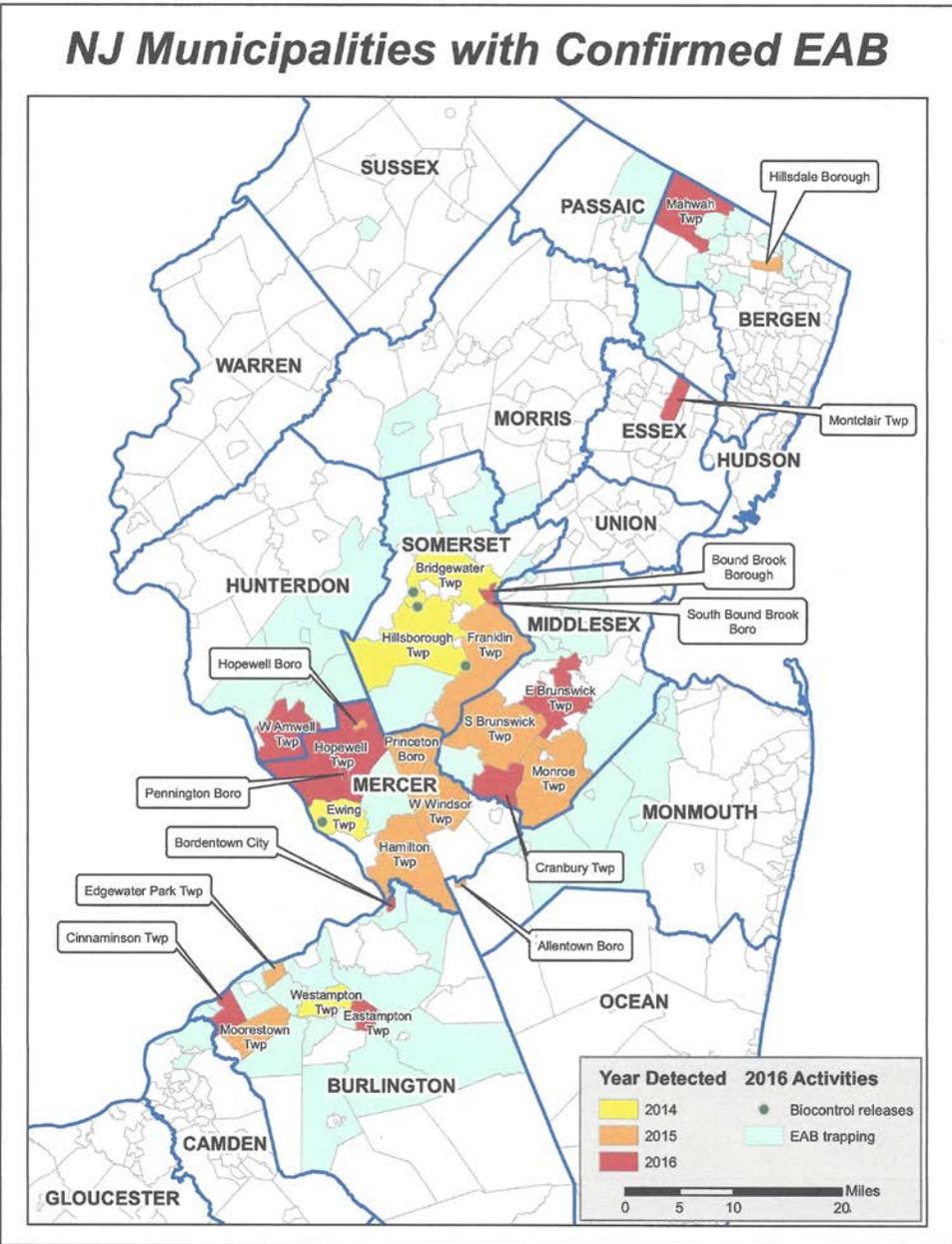
EAB Identification



EAB History

- Invasive from Asia – on shipping pallets
- Central Midwest – 2002
- Travels eastward across Midwest & Canada
- N.J. Bridgewater – 2012
- South Brunswick – 2015-2016

EAB in NJ



In the Press

APERS • www.gmnews.com

September 22, 2016

South Brunswick prepares for emerald ash borer

SOUTH BRUNSWICK - The South Brunswick Township Council has approved a township-wide street side and park tree inventory, with the major goal to identify the locations, quantity, condition and size of ash trees located on public property.

This inventory will provide data to develop a mitigation plan for the emerald ash borer, a devastating invasive insect that feeds on the inner bark of ash trees. Additional goals include removal of potentially hazardous trees and replanting with new al-

ternate species, according to information provided by South Brunswick Township.

The emerald ash borer has been identified in South Brunswick by the New Jersey Department of Agriculture in cooperation with the South Brunswick Shade Tree Commission.

It is very difficult to detect until tree decline has begun, according to officials. Very high, if not total, mortality of ash trees can be expected, with tree death usually occurring within two to four years as insect populations rise.

For more information, visit www.sbtnj.net and navigate to the Shade Tree Commission's FAQ page by clicking on DepartmentsWorks from the main page.

Residents with any other questions and/or concerns pertaining to the emerald ash borer and trees in their neighborhood can email sbtrees@sbtnj.net or call 732-329-4000, ext. 7278.

Additional information is also available at www.emeraldashborer.nj.gov.

EAB Identification

- Adult stage very small, bronze colored
- Adults emerge in early June through October
- Females lay 100 or more eggs
- Adults are good fliers- move rapidly to nearby Ash trees
- Larvae- cream colored, serpentine galleries beneath bark
- 'D' shaped exit holes
- Woodpecker "flaking" or "blonding"

EAB Identification



EAB Identification: Adult



Figure 1. Adult emerald ash borer.

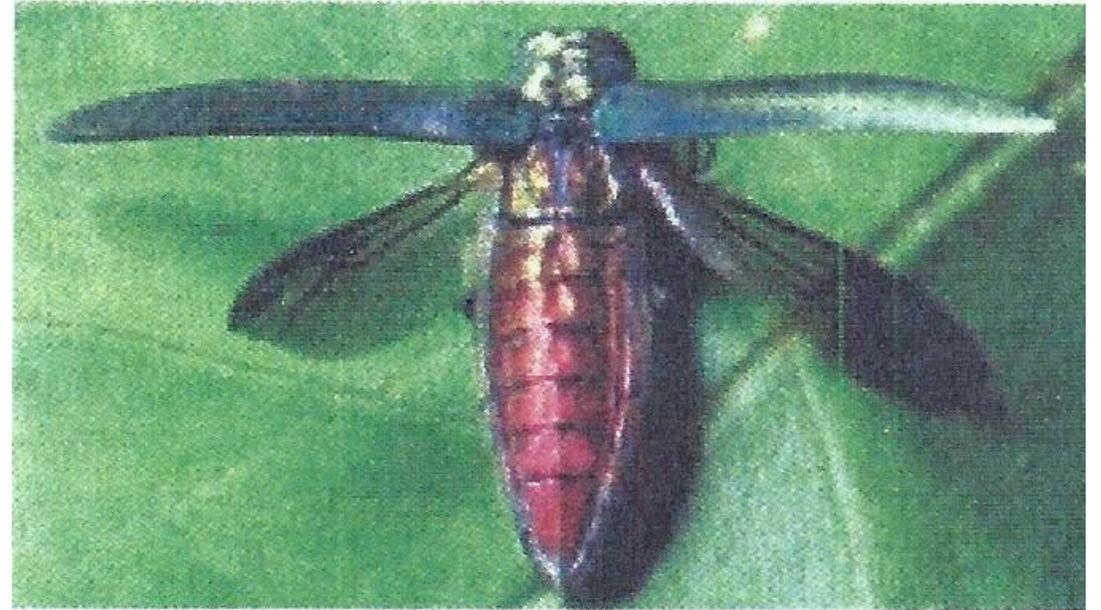


Figure 2. Purplish red abdomen on adult beetle.

EAB Identification: Larvae



Figure 3. Second, third, and fourth stage larvae.

EAB Identification: Galleries



Figure 4. Gallery of an emerald ash borer larva.

Signs of EAB

- Very difficult to detect until damage is done
- 'D' shaped exit holes from emerging adults
- "Flecking" or "blonding" by woodpeckers
- Possible bark splitting
- Epicormic growth
- Die-back of tree crown

EAB Exit Hole



Crown Dieback with Epicormic Growth



4/12/2017

Woodpecker Damage



How Do I Know I have an Ash Tree?

- Opposite pinnately compound leaves
- 5 – 9 leaflets each, 2-5” long x 1-2” wide
- Medium green top surface, light green bottom surface
- Oblong, lanceolate shaped

More Identification Clues

- Bark: dark brown
- Furrowed with crossing ridges
- Female trees have single winged seeds
- Upright, spreading crown
- Mature height: 50 feet

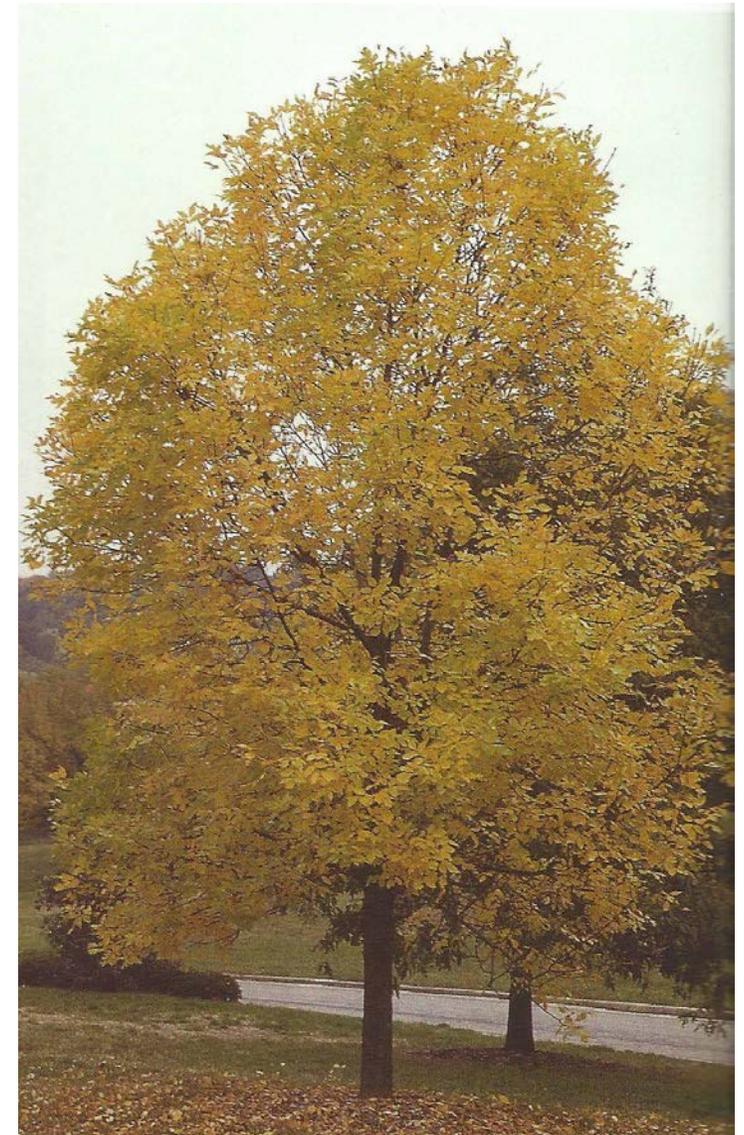
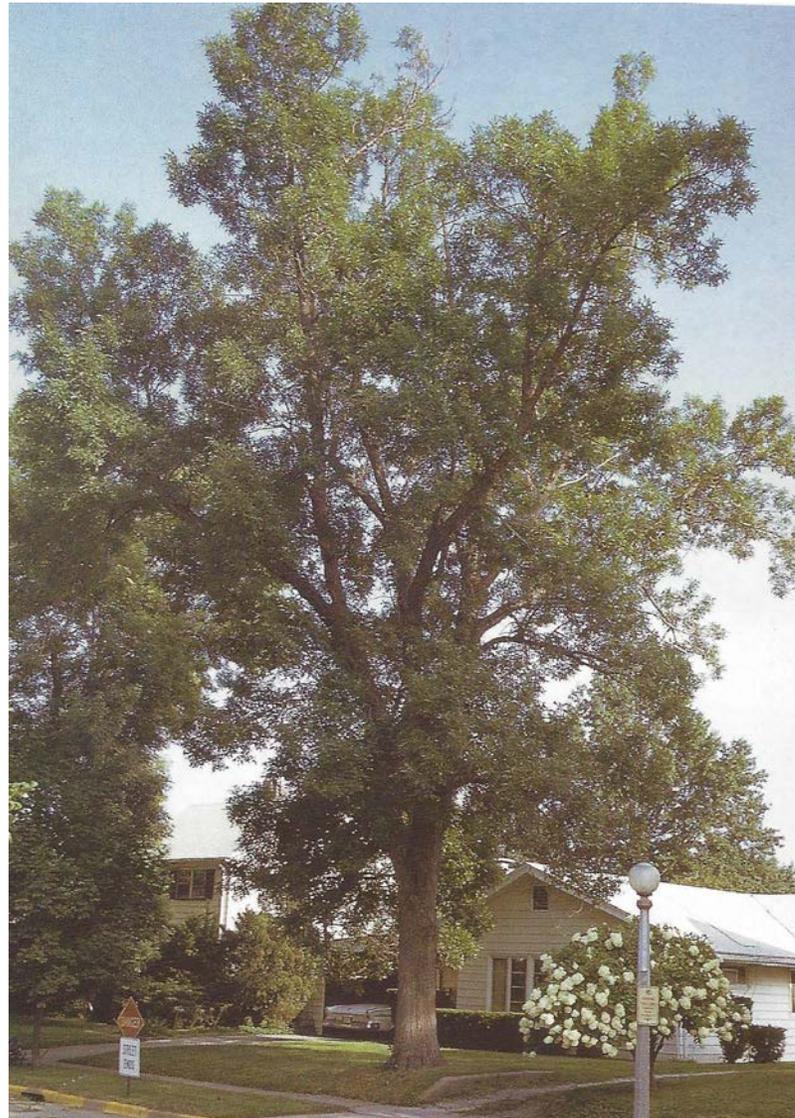
Ash ID: Bark and Leaves



“Marshall’s Seedless” Ash

- Most street and front lawn trees
- Seedless cultivar
- Soft yellow Fall color
- Upright, spreading form

Marshall's Seedless



Ash Trees – Twig and Leaves



Ash Identification – Growth Habit & Bark



Other Ash Problems

- “Ash Yellows” disease
- Grafting problems, basal swelling
- Compacted soils

Why Ash Trees were Planted

- Easily transplanted
- Grows almost anywhere
- Tolerates salt, drought, wind, high soil pH
- Medium to fast growth rate

Hence...

- Ash is a very popular suburban street and park tree
- Problem: planted in monocultures (one street in SB has 97 Ash trees)

Insecticide Options for EAB

Systemic Insecticides

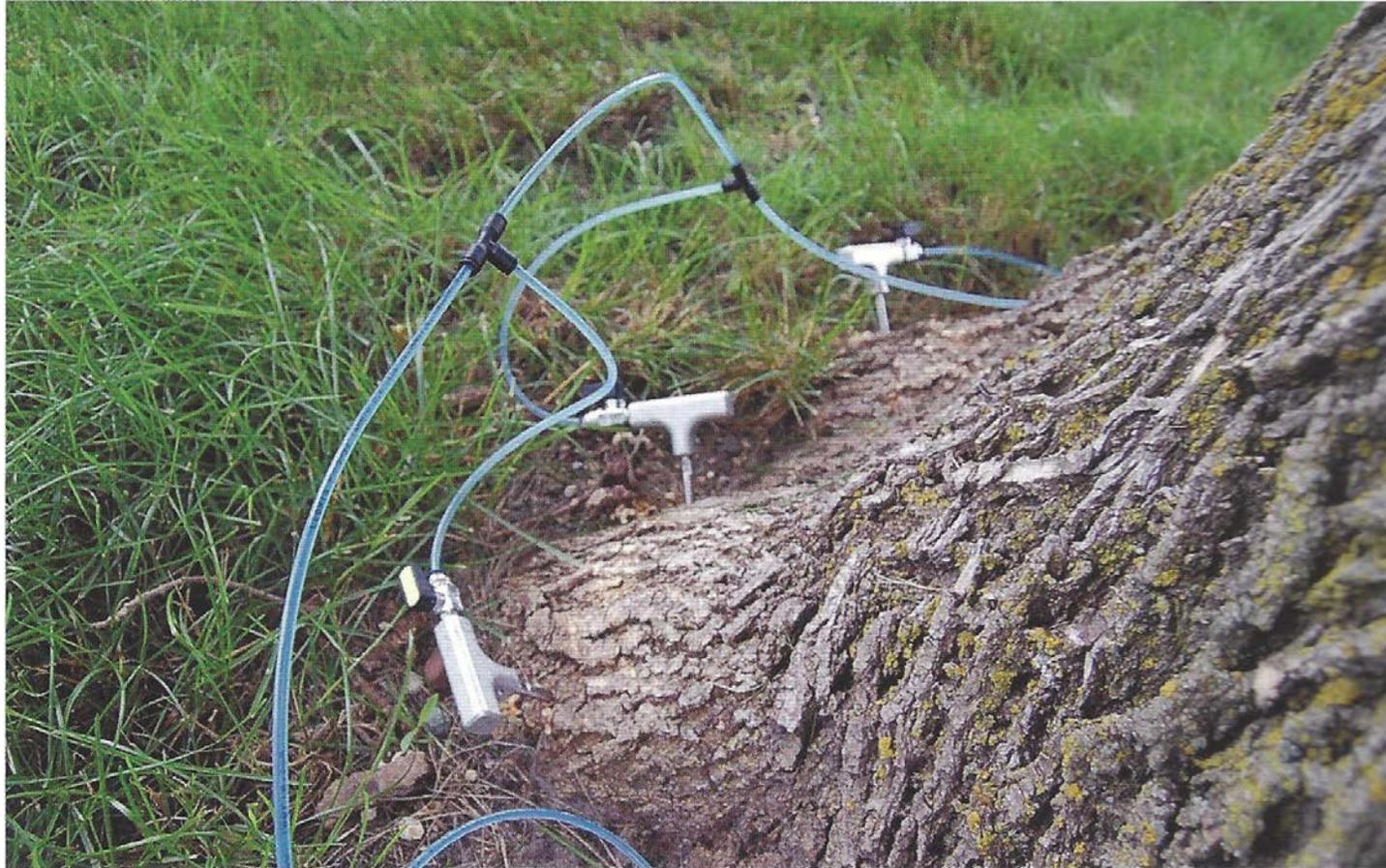
Trunk Injection

Soil Applied

Trunk Injection

- Use a professional: Licensed Tree Expert and pesticide license
- Effective for 2 to 2-1/2 years
- Best for environment
- Cost = \$10 - \$15 / inch diameter
- “TREE-AGE” = Emamectin benzoate

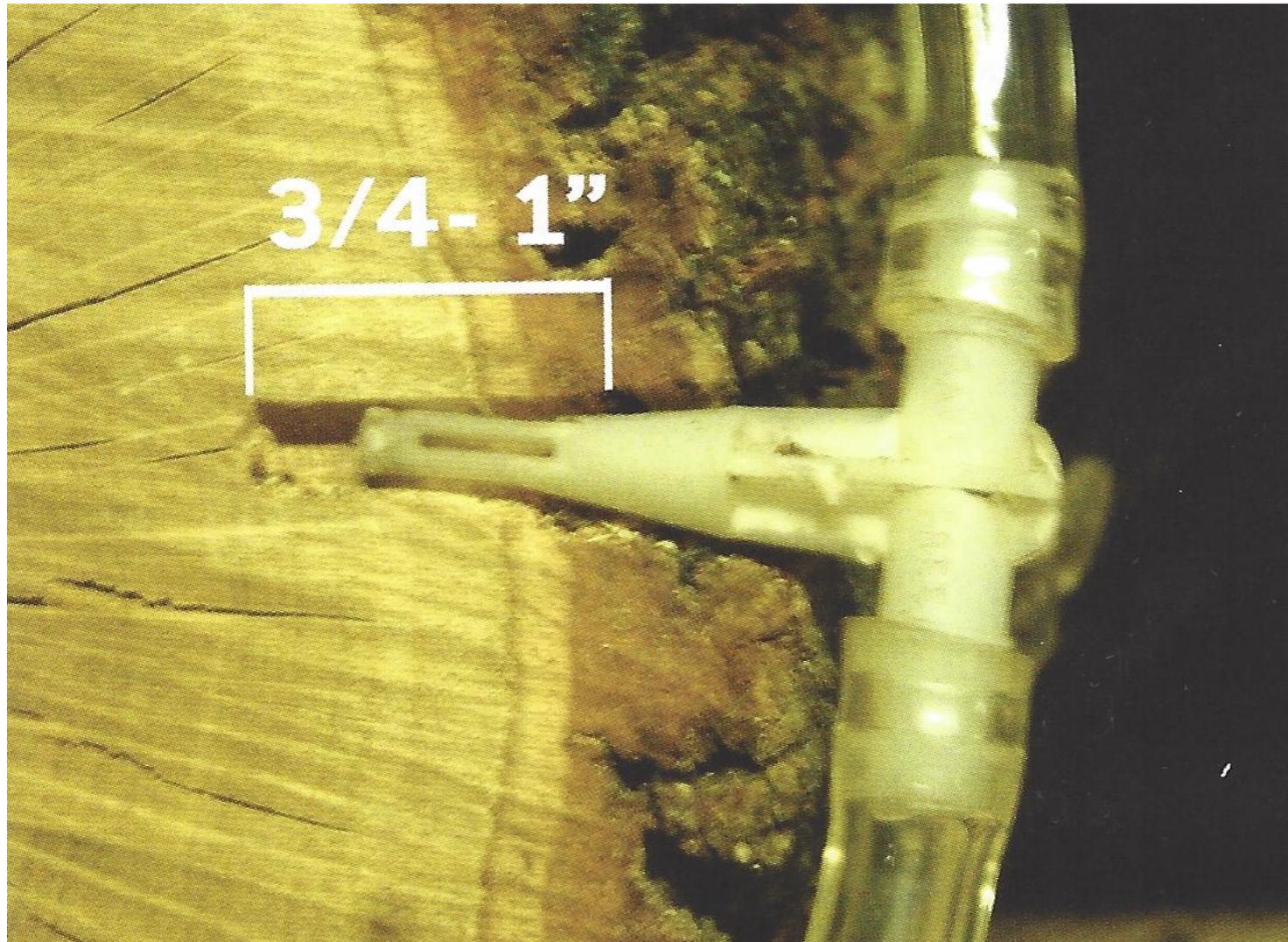
Trunk Injection



Trunk Injection



Trunk Injection



Trunk Injection: Guidelines

- Use a professional
- Use a higher rate
- May – early June is the best time
- Targets both larvae and adults
- Use micro injection (not macro)

Soil Drench

- Within 18" of base
- DIY or professional soil injected
- Cost = \$8 / inch diameter
- Effective 1 year

Soil Drench (Drawback Factors)

- Soil organics reduce effectiveness
- Potential for runoff or soil percolation
- Double rate may be required
- Harmful to honeybees
- Imidacloprid

Homeowner Use Options

- Soil drench only
- Must wear protective gear: goggles, gloves
- Keep children and pets away
- Bayer Advanced Tree & Shrub 2.4% Imidacloprid

Before Treatment: Assess Tree Condition

- <30% crown dieback
- EAB may have damaged xylem / phloem, so uptake not possible
- Health, size, location and value
- Cost factors: removal and replacement
- Must continue treatment, minimum 10 years

Measure Your Tree

- Diameter Breast Height (DBH)
- Circumference $\div 3 =$ Diameter
- Use as Cost Estimate for Treatments

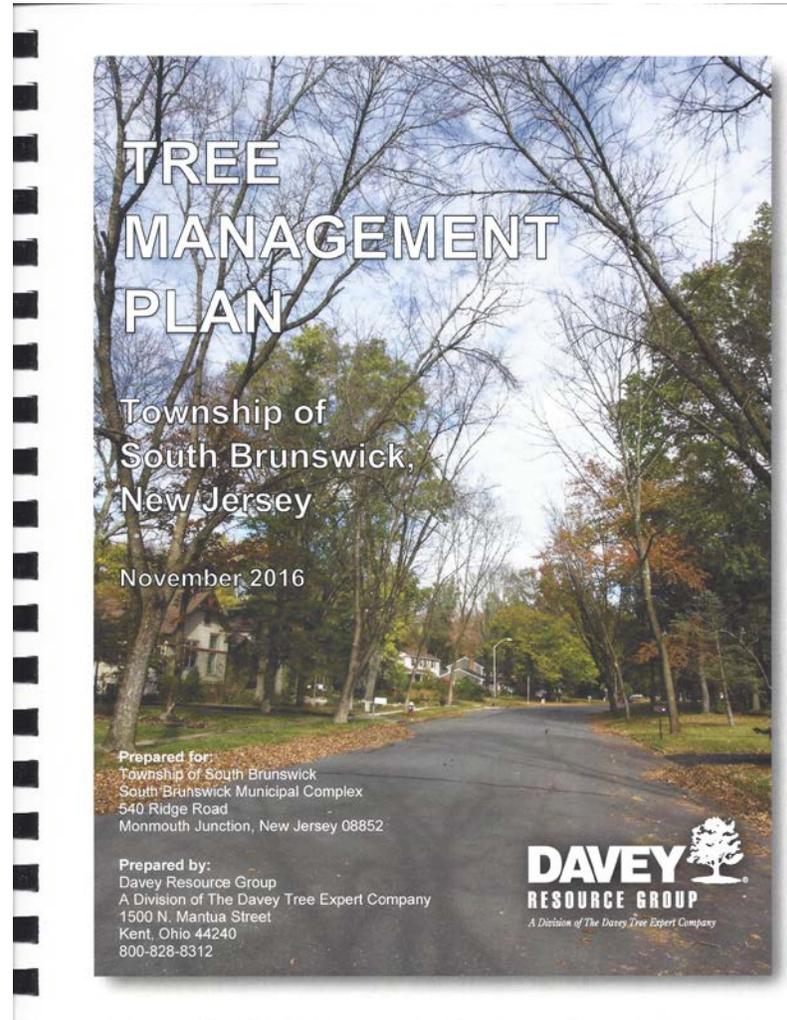
Measure Your Tree (DBH)



Actions Taken by Township

- Awarded \$10,000 State DEP grant
- Completed inventory of all Township trees
- 576 Ash trees located
- Updatable program
- Information available to the public

South Brunswick Inventory and Tree Plan



Township Action Planning

- Assess condition of Ash trees
- Staged removals for safety
- Cooperation with P.S.E.&G.
- Replanting with diversity

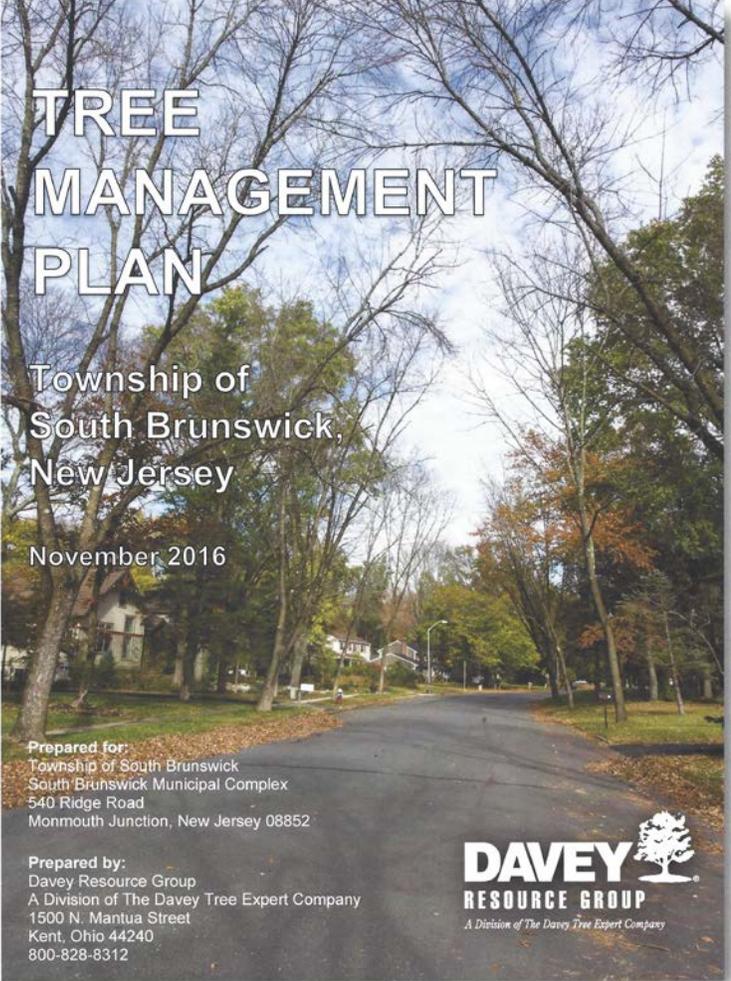
Township Action Planning



Is your Company Prepared?

Emerald Ash Borer

Understanding the Impacts to Distribution Electrical Systems



**TREE
MANAGEMENT
PLAN**

Township of
South Brunswick,
New Jersey

November 2016

Prepared for:
Township of South Brunswick
South Brunswick Municipal Complex
540 Ridge Road
Monmouth Junction, New Jersey 08852

Prepared by:
Davey Resource Group
A Division of The Davey Tree Expert Company
1500 N. Mantua Street
Kent, Ohio 44240
800-828-8312

DAVEY 
RESOURCE GROUP
A Division of The Davey Tree Expert Company

Why We Need to Replace our Trees

- Shade/cooling of “ heat islands”
- Adsorb CO₂ & produce O₂
- Filter dust from air
- Greatly reduces storm water run-off
- Aesthetic value
- Increased property values
- Wildlife habitat

Tree Replacement by Township

- ❖ Township ordinance already provides for cost of removal & replacement if on Township Right-of-way (no cost to adjacent owner)
- ❖ Township is prepared to replace each tree removed with 1-2 trees as space available
- ❖ “Right tree in right place” policy
- ❖ Rear of sidewalk: out of overhead wire zone
- ❖ Offer a variety of species appropriate to site
- ❖ Diversify our urban forest to withstand future problems

Information and Resources

- SB Township: SBTrees@sbtnj.net, or (732) 329-4000 x7278
- www.emeraldashborer.nj.gov
- “Insecticides for EAB” article
- www.NJTreeExperts.org
- www.SouthBrunswickNJ.gov (Shade Tree is under DPW)
- <https://southbrunswicknj.mytreekeeper.com/>

NJ Licensed Tree Expert



South Brunswick Shade Tree Commission

- Jeff Cramer, Chair
- Diane Leonard, Vice Chair
- Jo Hochman, Council Liaison
- Ray Olsen, Director Public Works
- Julie Moy, Secretary
- Amy Cramer, Member
- Steve Schulman, Member
- Paola Belloch, Member