Street Trees - Current Issues/Pests

Pesticide ReCert
Nolan Rundquist
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Our mission, vision, and core values

**Mission:** deliver a high-quality transportation system for Seattle

**Vision:** connected people, places, and products

Committed to 5 core values to create a city that is:

- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative

For all
Division mission

SDOT Maintenance Operations Division mission is to provide integrated maintenance, emergency response, and stewardship of the engineered and natural systems within the Right of Way to promote a safe, vibrant and interconnected city.
Presentation overview

• Introduction and background
• Street Tree Management and Inventory
• Issues
• Questions
At-a-Glance

Inventory & Analysis

Maintenance

Planting
9-year Street Tree Management Plan:

• Simple to communicate and easy to understand
• Data-driven approach
• Expands the use of best management practices
• Clear performance measures
Dutch Elm Disease

Yes, it’s still here, and killing trees.

Sanitation

Injections

DED Facts
Dutch Elm Disease

DED Life Cycle

Diseased Tree
- Fungus moves into adjacent elms through root grafts
- Tree dies or is cut down
- Fungus spreads slowly downward from point of introduction by bark beetles or rapidly upward from point of infection by root graft.
- Spores are deposited during feeding activities in inner bark or twig crotch of healthy trees, resulting in infection by the DED fungus.

Healthy Tree
- Native elm bark beetles feed in inner bark and wood of branch stems 2 - 10 inches in diameter.
- Smaller European elm bark beetles feed in axils of small twigs

Recently killed or weakened elm wood, including firewood with bark
- Adult beetles tunnel into the inner bark-wood interface bark to lay eggs.
- Beetles mature and emerge, carrying DED spores in and on their bodies.

Eggs hatch and larvae feed in the inner bark, forming tunnels, or "galleries".
- Native elm bark beetle galleries
- European elm bark beetle galleries
- Smaller European elm bark beetles overwinter as larvae or adults in logs with bark attached, dead trees or branches of elm.

Adult beetles disperse...

Disease Cycle
Bark Beetle Life Cycle
Winter
Dutch Elm Disease

European Beetle

Injections
Arbotect
Bronze Birch Borer

• Becoming more common in Seattle
Bronze Birch Borer

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Susceptibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>European White Birch</td>
<td>High</td>
</tr>
<tr>
<td>Black Birch</td>
<td>Moderate</td>
</tr>
<tr>
<td>Paper Birch</td>
<td>Moderate</td>
</tr>
<tr>
<td>Whitespire Birch</td>
<td>Moderate</td>
</tr>
<tr>
<td>River Birch</td>
<td>Very Low</td>
</tr>
<tr>
<td>‘Heritage’ River Birch</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

- Pupate – Spring
- Adults emerge – June/July
- Lay Eggs – July / August
- Eggs hatch and bore into trees in August
Emerald Ash Borer

Emerald ash borer attacks and kills all species of ash. Although stressed trees are always more prone to borer attack, evidence from Michigan suggests that healthy, well-maintained trees also are attacked and killed by this beetle, state officials say.

- **D-shaped holes on bark**
  - 1/8”

- **S-shaped tunnels beneath bark**

- **Split bark / bark chipped off by woodpecker**

**Symptoms of infestation**

- Thinning crown on tree
- New growth on trunk

Source: Wisconsin Emerald Ash Borer Program

Journal Sentinel
Emerald Ash Borer
Aphids
Aphids - Really!?!?! 

• Typically not plant killers
• Populations spike quickly
• Weakened plants can be more susceptible to other problems
• Honeydew can be a public relations issue, which puts pressure on the landscape manager to act
The Real Problem?

Death by 1,000 cuts

Uninformed property owners & untrained tree cutters
The Real Problem?

Death by Excess....
Too much of a good thing.
The Real Problem?
The Real Problem?

Always work with professionals....
Questions?

nolan.rundquist@seattle.gov | (206) 684-TREE (8733)
http://www.seattle.gov/transportation/forestry.htm

www.seattle.gov/transportation