



15 years of Dutch Elm Disease Where are we now?



Pesticide ReCert
Nolan Rundquist
October 31, 2018

Presentation overview

- Introduction and background
- Life Cycle
- Management
- Questions



Dutch Elm Disease

- History – discovered in Holland in 1921
- Ohio in 1930
- Widespread in the 80's
- Tacoma & Bellevue in 1994
- Seattle in 2001



Dutch Elm Disease

How To Spot it.....

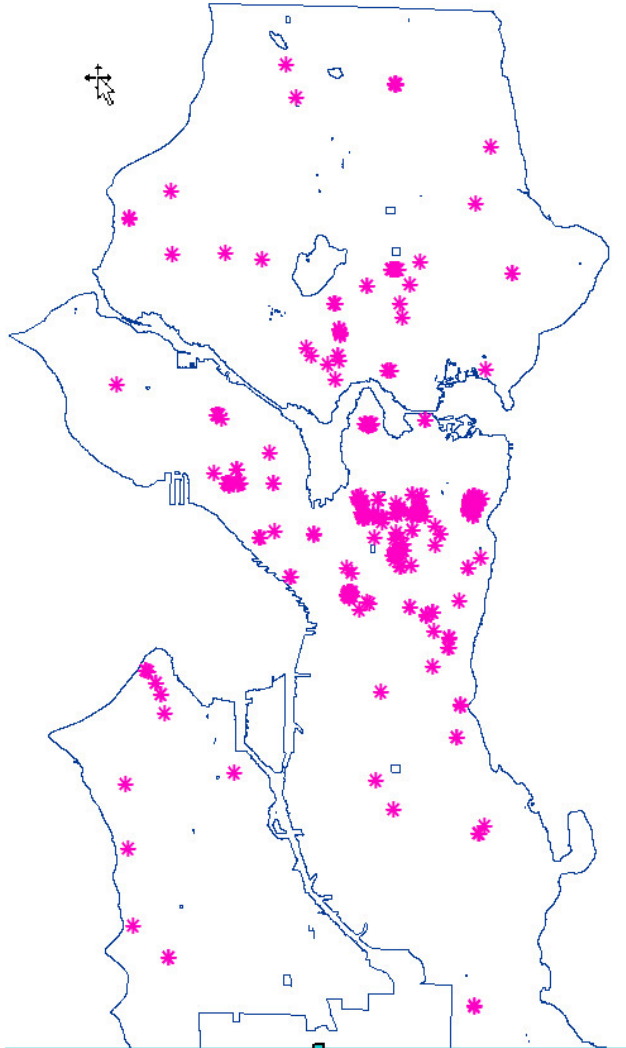
The initial symptom is called, "flagging." When this happens, the leaves will start to yellow, then turn brown as they wilt. The flagging doesn't effect the whole tree at once, however. It usually starts with one branch first. As the leaves from that branch drop, the disease spreads to nearby branches and then, eventually, the entire tree.



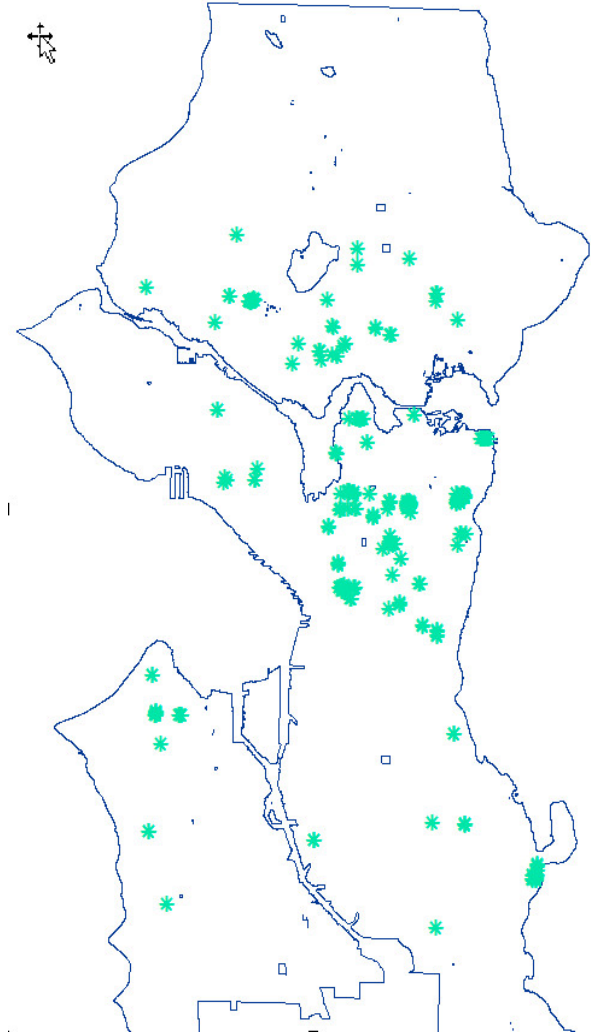
Dutch Elm Disease

Elm Status – 2001 through 2018

441 elms remain as street trees



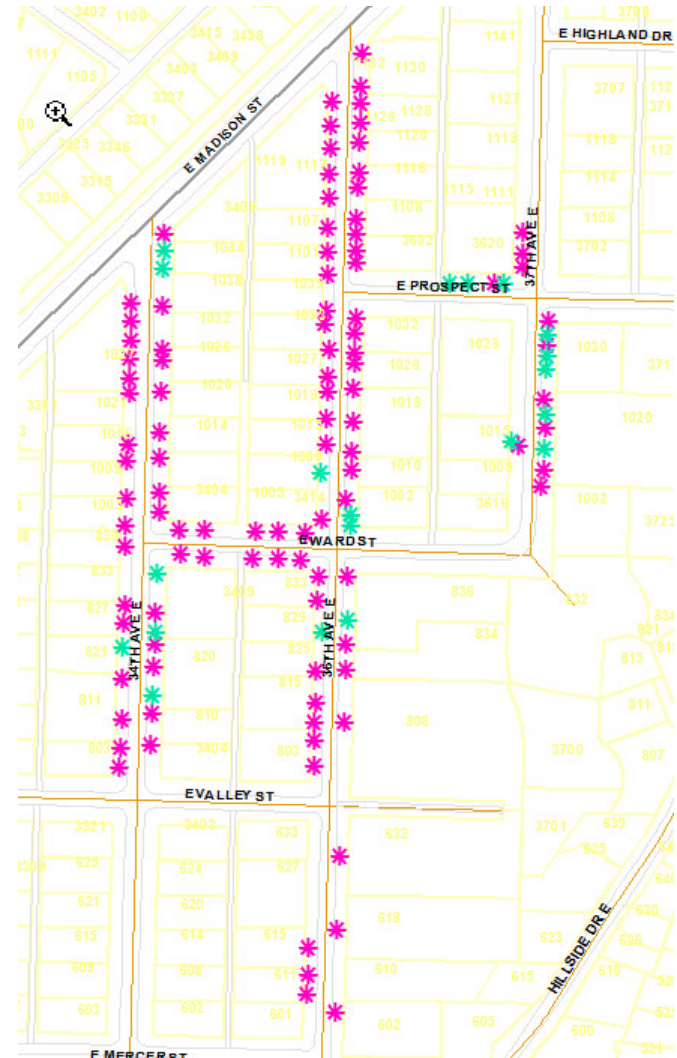
249 removed since 2001



Dutch Elm Disease

Elm Status – 2001 through 2018

Washington Park – 20 elms removed – all but 3 have been storm damage or construction impact. First DED came into the neighborhood last year (2017).

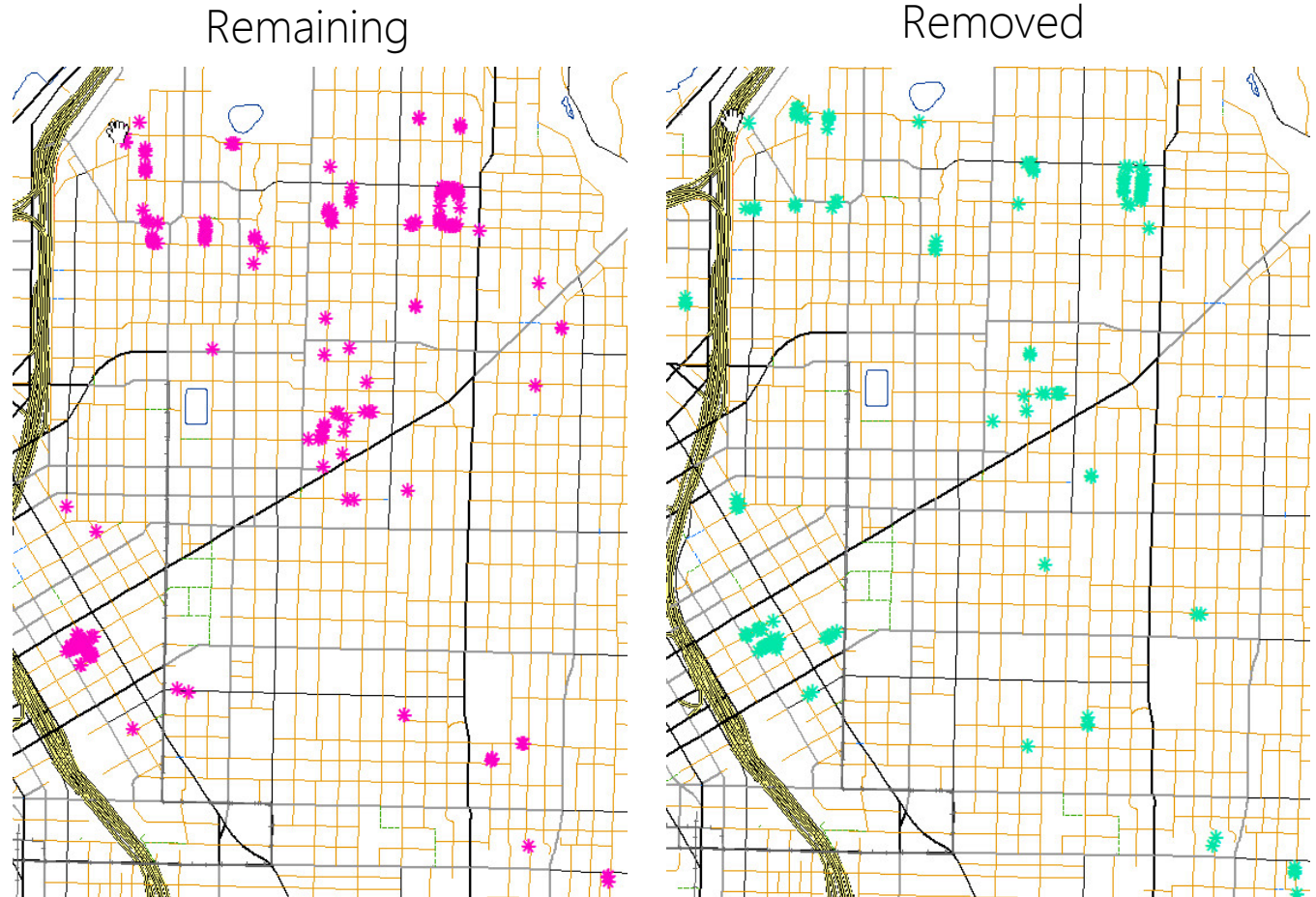


Dutch Elm Disease

Elm Status – 2001 through 2018

Holy Names –
(upper right)
has injected and
retained many
elms.

St James – lost
9 elms to DED
this year.
Disease went
into roots and
marched down
the street.



Dutch Elm Disease

Sending in a sample..

Select twigs about 6 inches long from recently killed branches or small pieces of living trunk that show a dark discoloration or brown streaking of the wood just below the bark. Try to include both live and dead tissue in the sample.

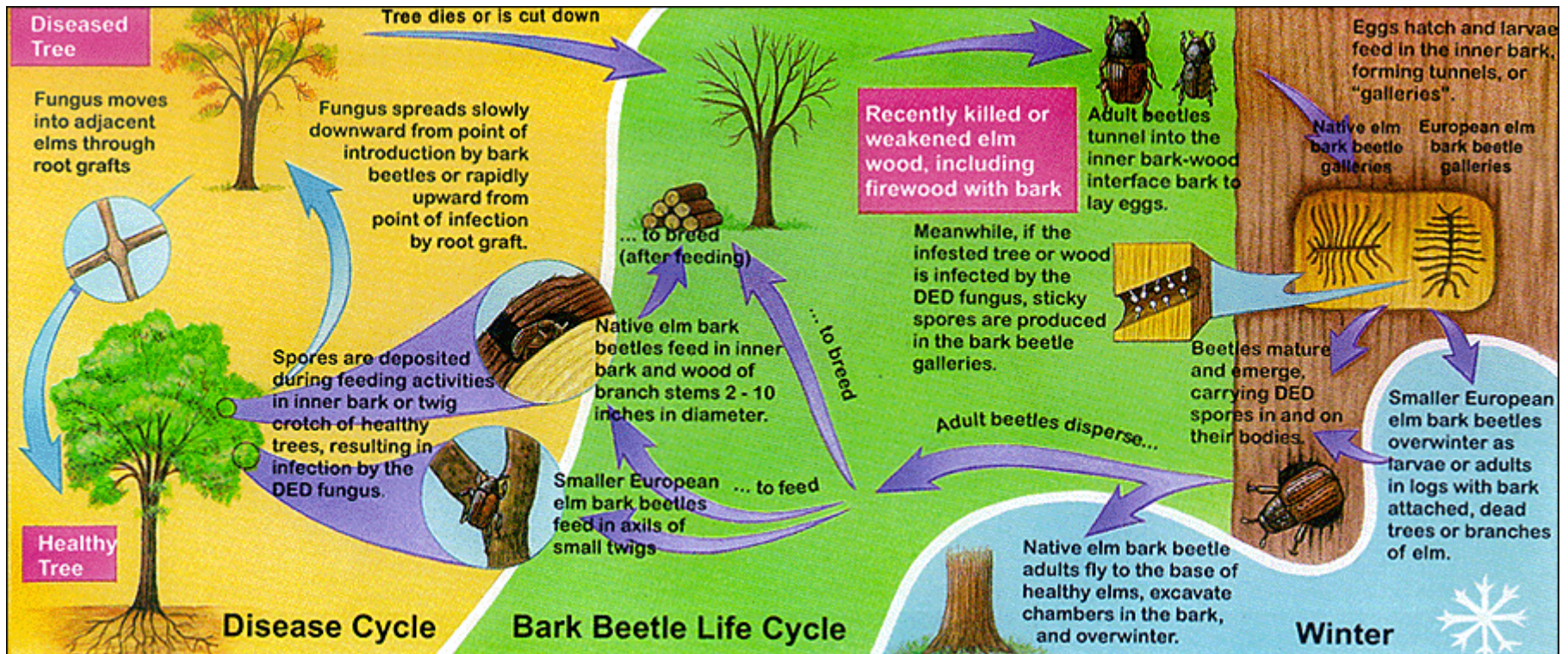


WSU Extension - <https://puyallup.wsu.edu/plantclinic/plant-problems/>

If you have questions regarding your sample, please contact the diagnostician (253) 445-4582 or jennyglass@wsu.edu during business hours.

Dutch Elm Disease

DED Life Cycle



New Invader...

The Banded Elm Bark Beetle: A New Threat to Elms in North America

- Also attacks Prunus, Pyrus, Salix, Malus and all of the 'new' hybrid elms.
- Stressed trees are susceptible
- Beetle causes more damage by boring, and doesn't always carry DED fungus



Control Measures

Injections:

Arbotect: ~24 to 36 months of protection.

Dutch Trig – still available

Fungisol, Propizol, Strider and Tebuject are also listed as controls



Control Measures

- Trunk
Girdling –
when is it
effective?
- Depth of cut
must disrupt
the phloem
to prevent
the fungus
from
entering the
root system.



Control Measures

- Bark Tracing and Saving Diseased Elms



Identify all limbs that are showing symptoms of the disease



Cut windows into the bark with a chisel and hammer to find the fungus



Remove infected limbs and isolate the fungus by "tracing" the path it is traveling. Go 10' feet beyond staining.

Final step is to inject the tree to prevent future infections.

Control Measures

- Sanitation: What is it???
- Chip smaller limbs and brush – beetles cannot breed in small chips
- Debark, burn, bury or tub grind larger limbs and trunks. Grind stumps. Wood chips will not spread the disease



Questions?

Nolan.Rundquist@seattle.gov | (206) 615-0957

<http://www.seattle.gov/transportation/forestry.htm>

www.seattle.gov/transportation

