Wisconsin
Forest Health Update

Linda Williams

April 4, 2019

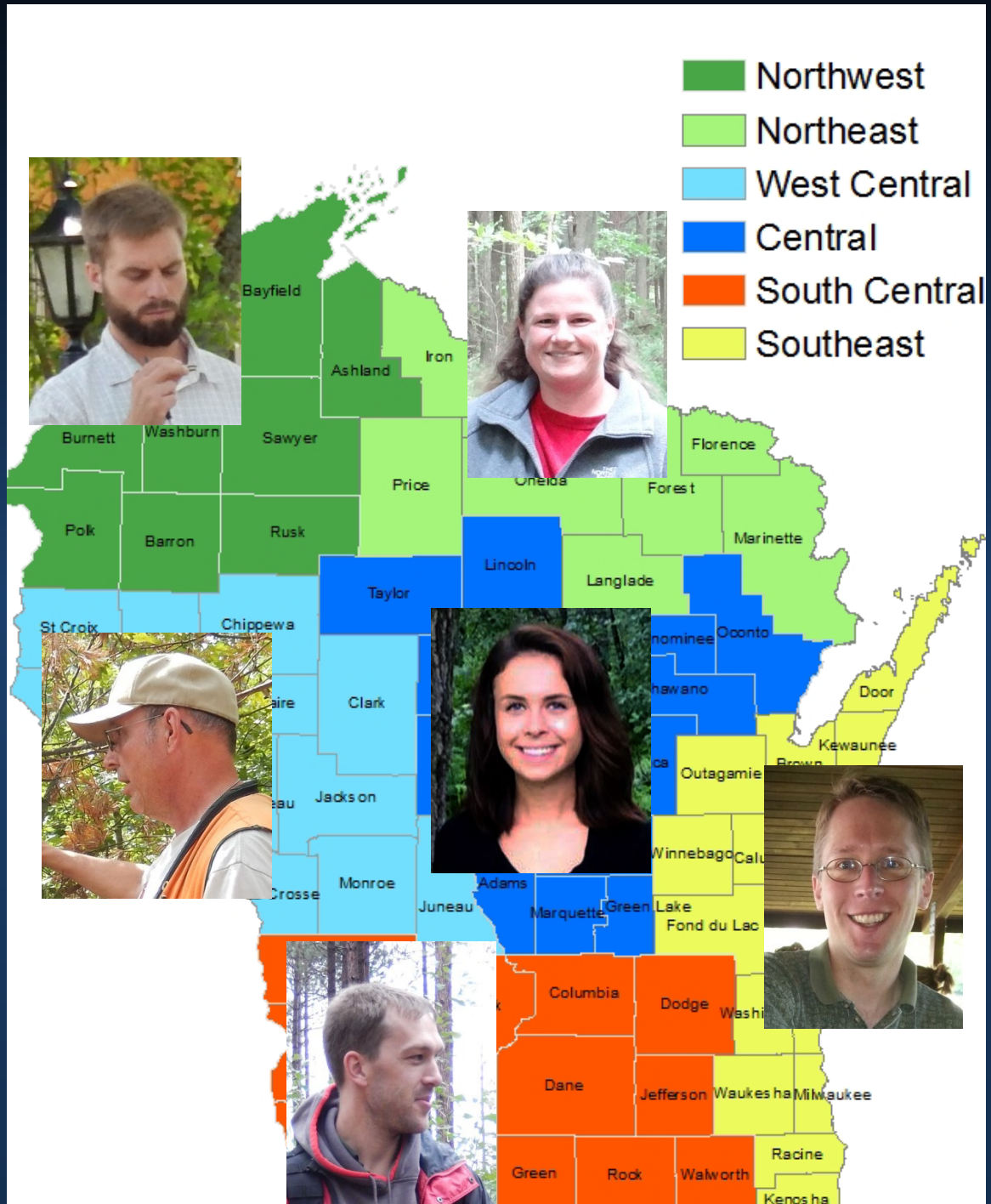
Sustainable Forestry Conference

New FH Work Zones for insect & disease specialists

New zones for 6 staff

Newest Forest Health Specialist:

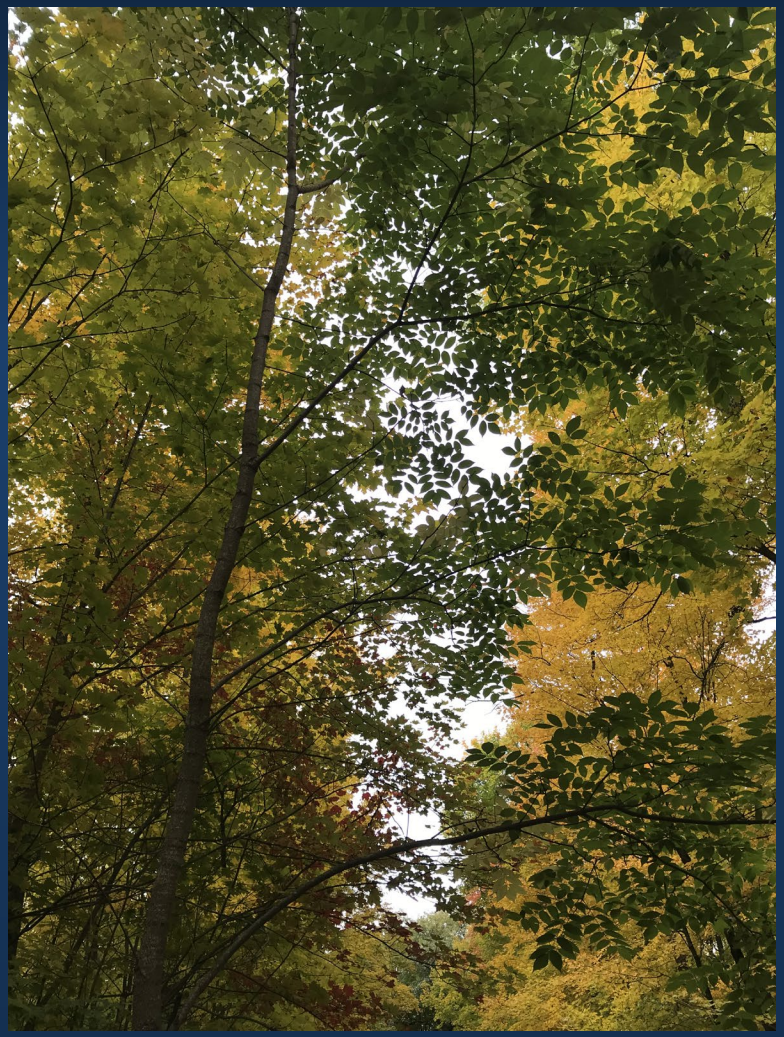
Alexandra (Alex) Feltmeyer



NR40: Prohibited

Amur cork tree

Phellodendron amurense

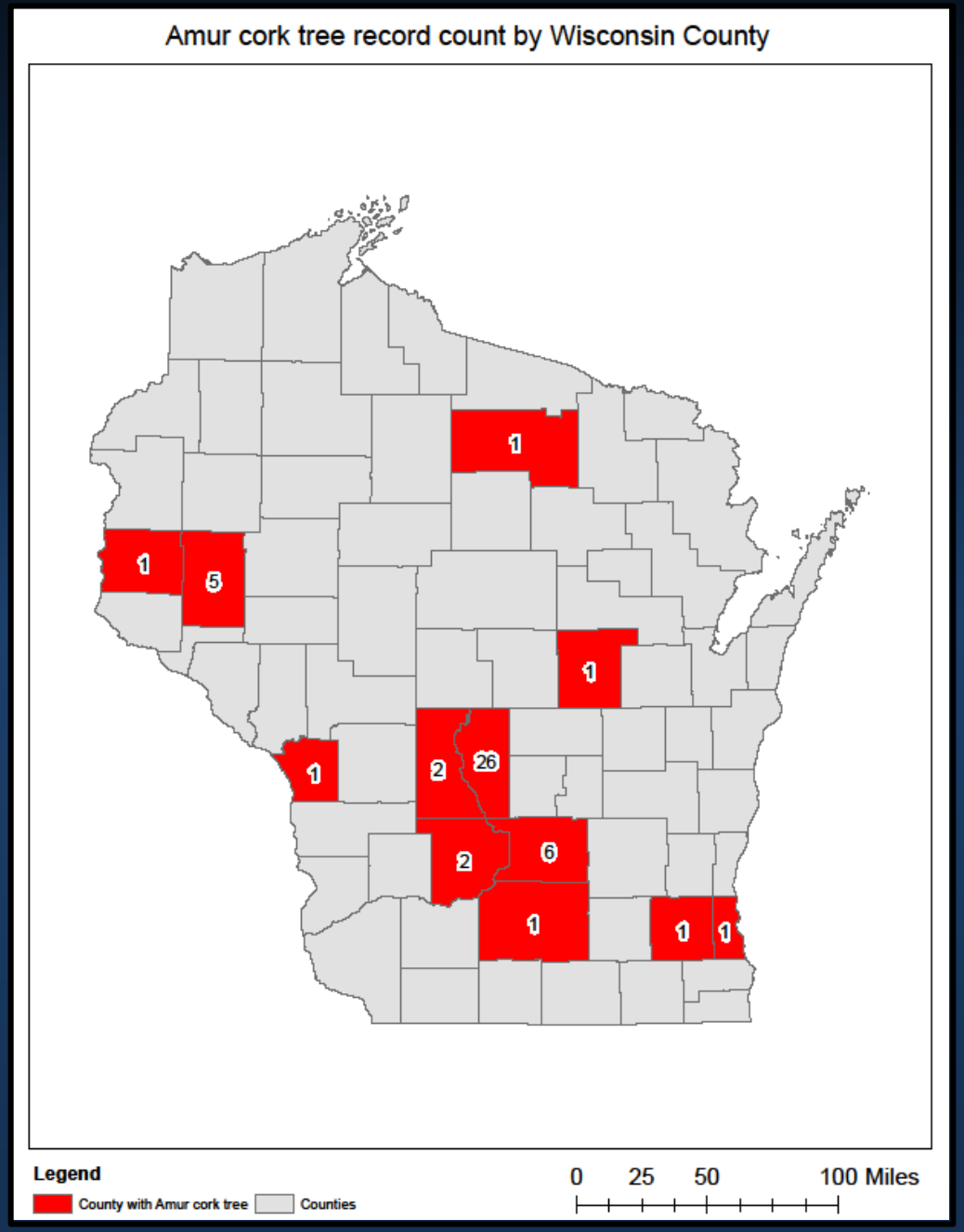


Corky bark

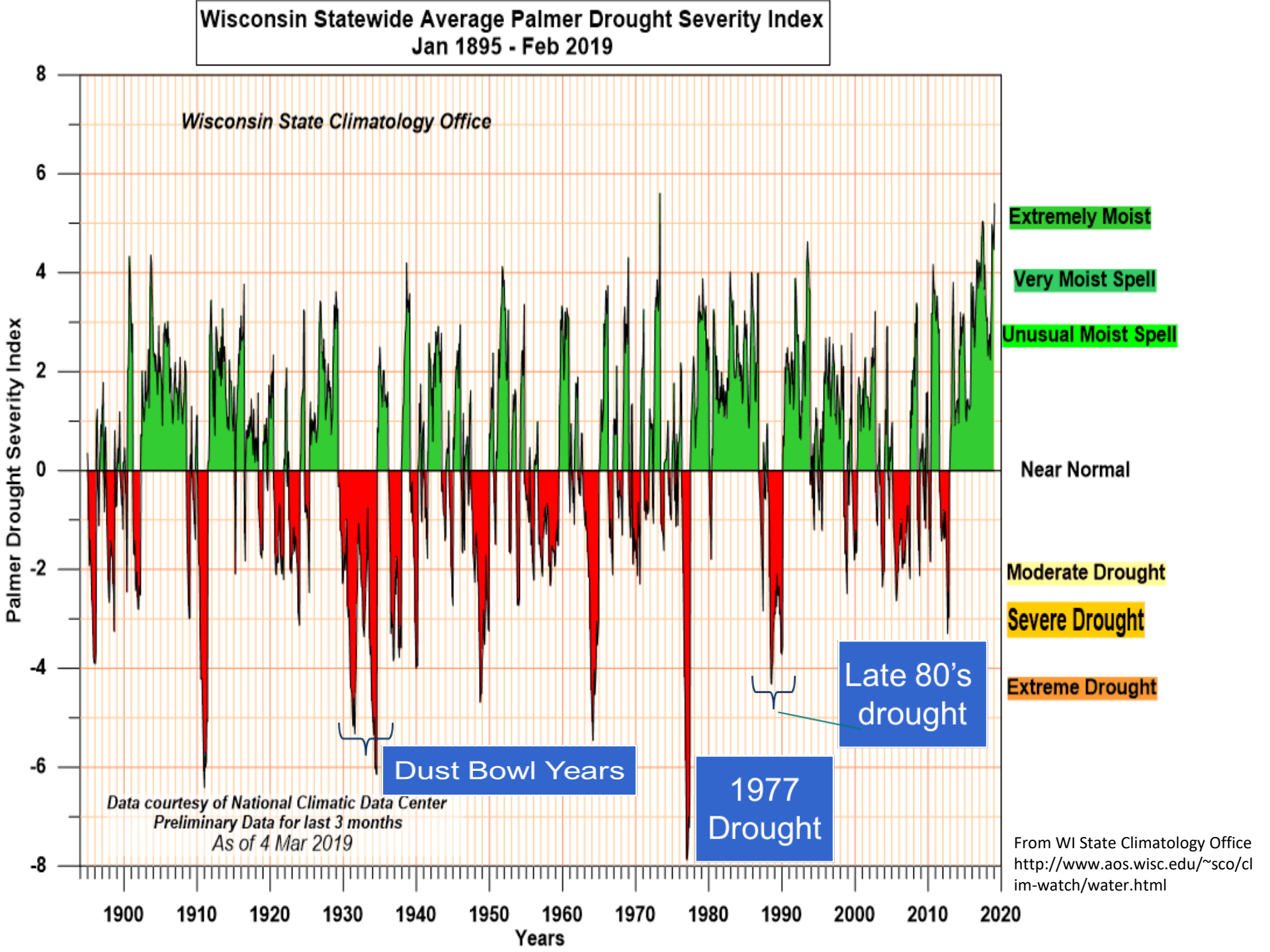
Furrowed, corky bark (soft like a cork), young bark looks like cherry

Distinctive winter buds

Bright yellow under bark


Amur cork tree record count by Wisconsin County
1
1
5
1
1
2
26
2
6
1
1
1
Legend
County with Amur cork tree
Counties
0
25
50
100 Miles

Amur River – boundary between Siberia and China



From WI State Climatology Office
http://www.aos.wisc.edu/~sco/clim-watch/water.html

What does that mean for 2019?

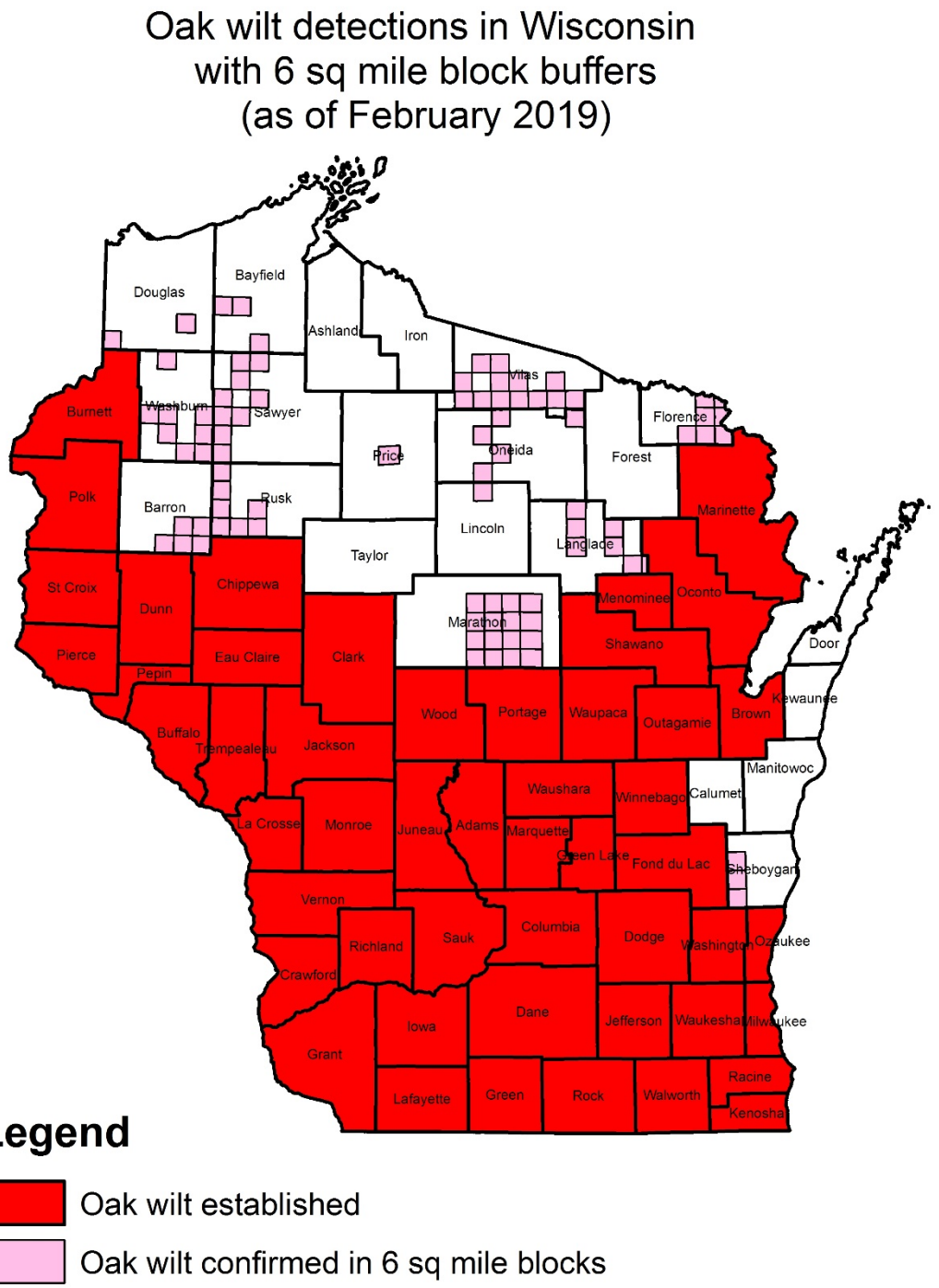
- High water issues
- Saturated soils during the growing season
- Dieback due to root mortality
- Leaf and needle diseases

Oak wilt

Deadly disease of oaks caused by the fungus

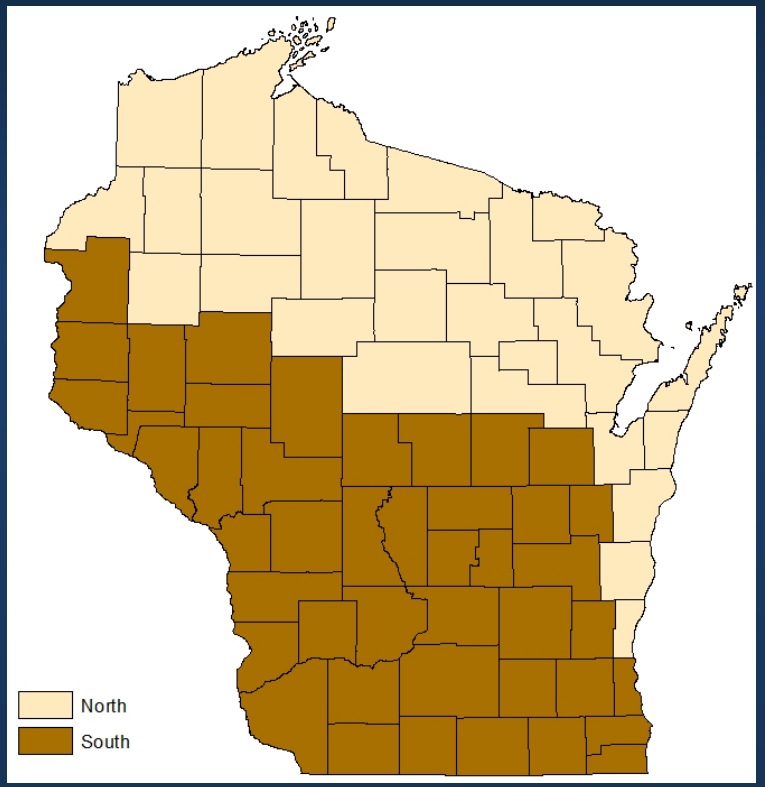
Bretziella fagacearum

*(*formerly *Ceratocystis fagacearum)*



Oak Wilt High Risk Periods

- Cutting restriction periods for timber sales
  - April 1 – July 15 (south)
  - April 15 – July 15 (north)
- Guidelines were revised in 2016
  - Exceptions and Modifications listed out



Oak Wilt Guidelines

- Chapter 1: Introduction
- Chapter 2: If your stand is in a county that does not have oak wilt AND is NOT within 6 miles of a county with oak wilt
- Chapter 3: If your stand is in a county that has oak wilt OR is within 6 miles of a county with oak wilt AND oak wilt is NOT in your stand
- Chapter 4: If oak wilt is present in your stand
- Chapter 5: Guideline Rationale and Implementation Notes

Oak Wilt Management Options

- Root severing
- Stump extraction
- Herbicide: chainsaw girdle
- Herbicide: stump treatment

To stop a pocket from expanding you must address the root system. Simply cutting the trees down will not work, and can make it spread faster

Heterobasidion Root Disease (HRD) (previously annosum)

- Previous names for this fungus include:
  - *Fomes anno*sus
  - *Heterobasidion annosum*
- Currently *Heterobasidion irregulare* with the common name of Heterobasidion Root Disease (HRD)
- Spreads by spores that require fresh cut pine or spruce stumps for new infections
- Established infections spread underground through connected root systems to kill neighboring trees

HRD Highlights & Changes

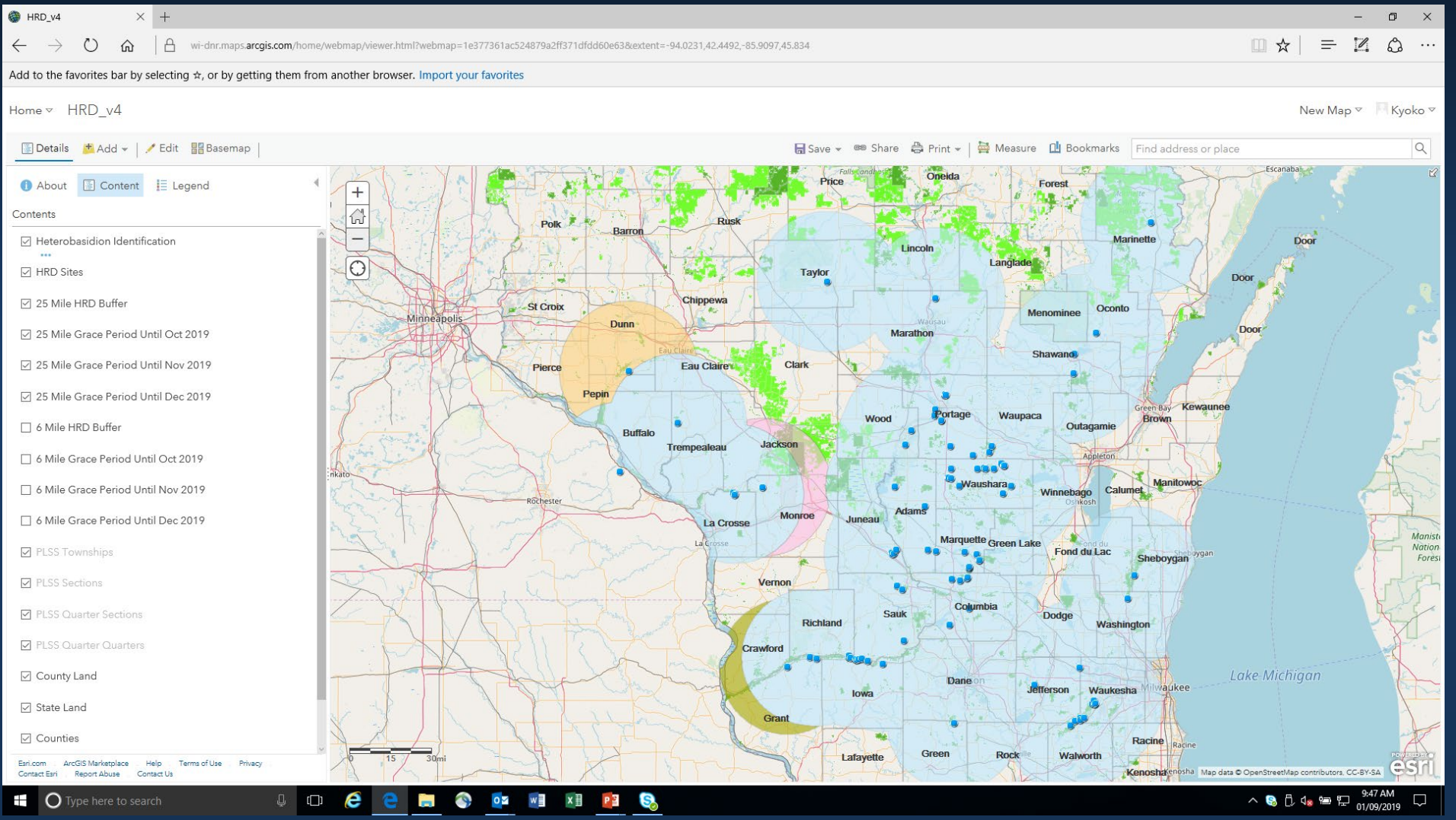
- New guidelines implemented January 1, 2019
- Spruce was added as a species for stump treatment, in addition to pine stumps
- Preventive stump treatment dates did not change:
  - April 1 – November 30 – treatment dates
  - Dec 1 – March 31 – treatment not required
- Recommended buffer distance from known HRD pockets remained 25 miles (Modification for 6 mile buffer except DNR lands)
- Includes flexibilities (Exceptions and Modifications) when stump treatment would not be required

HRD Guidelines structure

(Similar to oak wilt guidelines)

- Chapter 1: Introduction
- Chapter 2: HRD is not present in the stand AND the stand is NOT within 25 miles of a confirmed HRD stand
  - Exceptions/Modifications
- Chapter 3: HRD is not present in the stand AND the stand IS within 25 miles of a confirmed HRD stand
  - Exceptions/Modifications
- Chapter 4: HRD is present in the stand
- Chapter 5: Guidelines rationale and background information
- Additional information in Appendices A-F

HRD web viewer available on-line



Chapter 3: HRD is not present in the stand AND the stand IS within 25 miles of a confirmed HRD stand

- Recommendation: If harvesting occurs from April 1 – November 30, preventive stump treatment on pine and spruce is recommended if more than 50% of the stand is pine and/or spruce.
- Minimum tree size for treatment is merchantable size.

- Exceptions: 2
- Modifications: 4

Chapter 3: HRD is not present in the stand AND the stand IS within 25 miles of a confirmed HRD stand

Exceptions

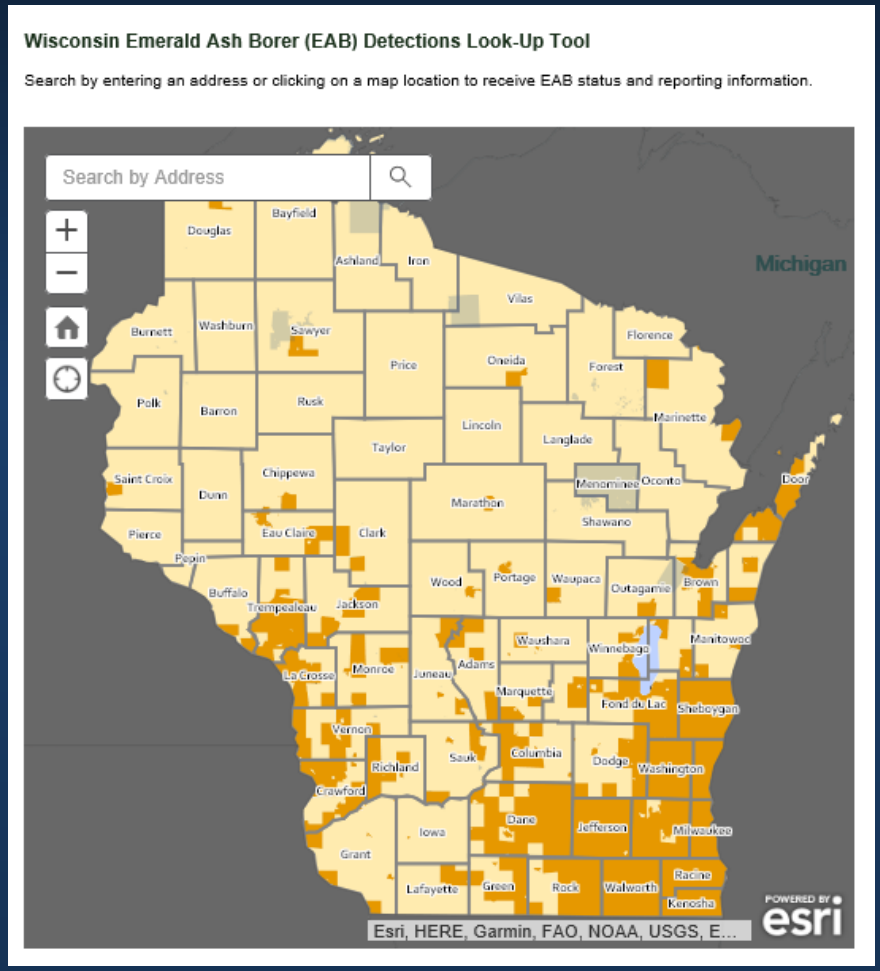
1. It is the final harvest and the future desired stand will be less than 50% pine and/or spruce combined
2. It is the final harvest, and pine and/or spruce is not an important part of the future stand

Chapter 3: HRD is not present in the stand AND the stand IS within 25 miles of a confirmed HRD stand Modifications

1. Unusual weather patterns
   - Prolonged, unusually warm weather during the winter period (December 1 – March 31)
   - Prolonged, unusually cold weather outside the winter period (December 1 – March 31)
   - Deep snow cover (at least 12 inches) outside the winter period (December 1 – March 31)
2. FOR NON-DNR LANDS ONLY – The stand is between 6 and 25 miles from a known infestation and you have a greater tolerance for risk

Emerald Ash Borer Silviculture Guidelines Revision

- New guidelines implemented January 1, 2019
- Statewide quarantine effective March 2018
- EAB much more common, and spreading, but still large areas of the state where EAB has not been found

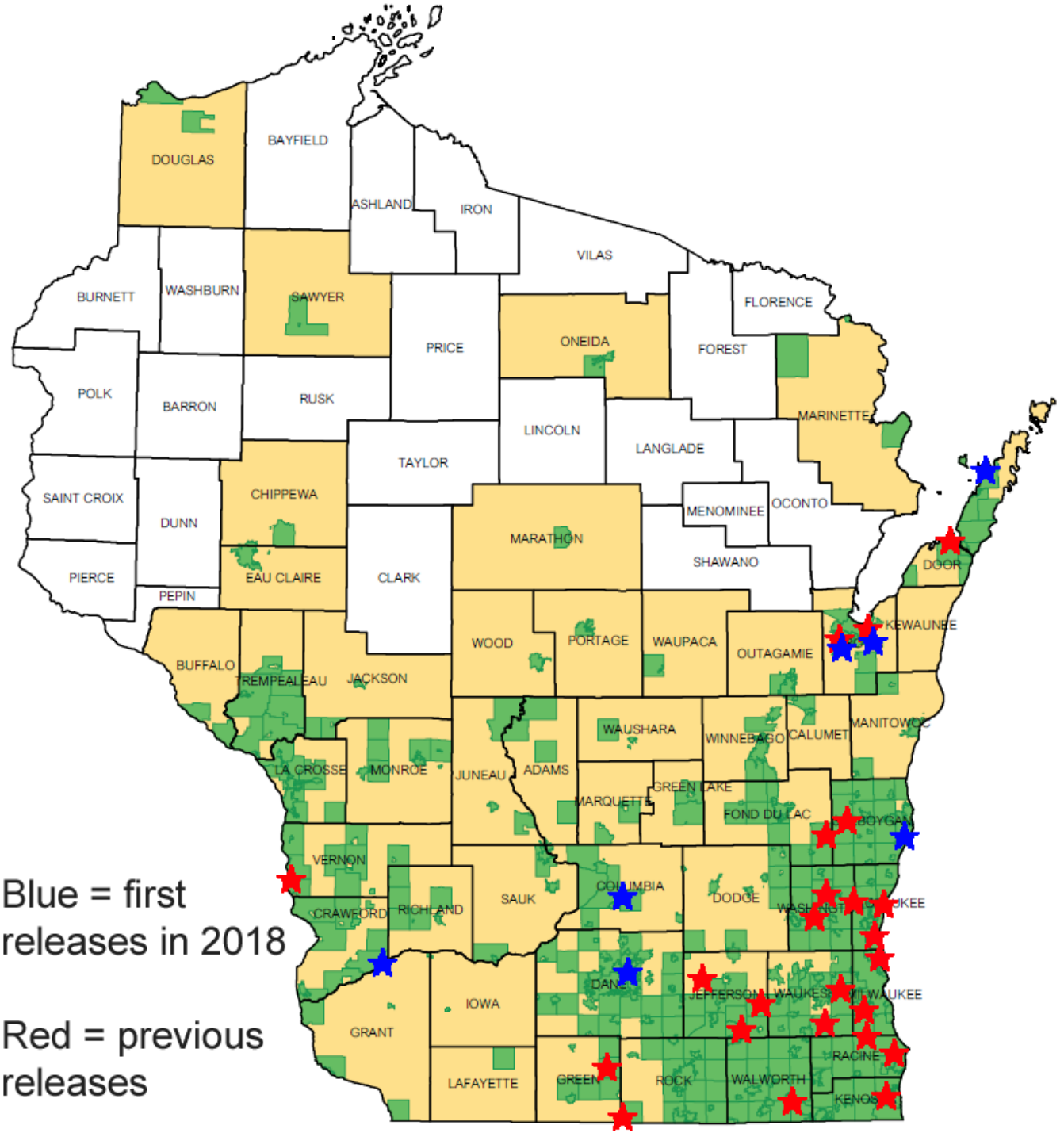


Highlights

- Anywhere in Wisconsin, manage stands for EAB as soon as practical (no longer only in quarantine counties and near known infestations).
- Stand assessment – increased emphasis on evaluating a stand, site and management goals before selecting a management strategy.
- Diversify – aim for less than 20% ash.
- Lowland stands can be difficult to manage, and many sites are not practical or feasible to regenerate.
- New sections include artificial planting considerations, a glossary, additional resources and refereces cited.

EAB Biocontrol Releases

Tetrastichus Oobius
S. galinae



The magic bullet?

- Parasitoids will NOT save ash trees
  - But it IS another tool for us to use
- Will slow the spread and prolong life
  - Seed production?
- Long term management
- Lingering ash in MI and OH are not resistant to EAB

Fatalities due to failing ash trees

Lansing State Journal HOME NEWS SPORTS BUSINESS LIFE ARCHIVES USA TODAY MORE Subscribe

Putnam: Driver nearly killed by roadside tree wants more cut down

Judy Putnam, Lansing State Journal Published 8:34 a.m. ET Jan. 26, 2017 | Updated 10:23 a.m. ET Jan. 27, 2017

Loss of life and limb: Michigan's weakened trees pose deadly threat

John Barnes, Special to The Detroit News Published 11:01 p.m. ET Oct. 27, 2018

(Photo: Livingston County Sheriff's

CONNECT TWEET LINKEDIN

The emerald ash borer is taking
Michigan, and not just on trees.

Weakened ash are toppling and
greater frequency since a tree-k

Falling tree hits moving vehicle, killing 16-year-old boy

By: Taylor Popielarz

Posted: Jan 4, 2017 11:28 AM EST | Updated: Jan 4, 2017 7:30 PM EST

Emerald ash borer:
the dangers and costs of infested trees

How does emerald ash borer kill ash trees?

Emerald ash borer (EAB) kills ash trees by cutting off the flow of water and nutrients as worm-like larvae create feeding galleries in the tissue beneath the bark. Signs of infestation include distinctive canopy thinning, branch decline and death, limb sprouting from the lower trunk, bark splitting above larval galleries and D-shaped exit holes created by emerging adults.

What should I do if I have healthy ash trees?

The first step is to decide if an ash tree in your yard is worth saving. If so, the only way to keep it alive long-term is to regularly treat the tree with insecticides. Several products are commercially available, although some can only be applied by a professional. Application methods and treatment frequency will vary for each product. Trees that are heavily infested are unlikely to be saved by insecticide application. For more information on chemical controls for EAB, explore the resources available at ***www.emeraldashborer.info***.

Thanks!
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