Update on Northern Long-Eared Bat in Minnesota

For

Joint Counties Natural Resources Board
December 17, 2018

By

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OUTLINE

- Background Biology and Policy
- 2015-2018 Northern Long-Eared Bat Research
- 2018 Township List and Map
- Lake States Bat Habitat Conservation Plan

A Little Bat Biology

- 4 of MN's 8 species winter in caves and mines
- All species can spend summer in forests
- Summer roosts are often in trees
  - Cracks
  - Crevices
  - Cavities
  - Under loose bark
- During the summer, females give birth
- Young are unable to fly for several weeks after birth

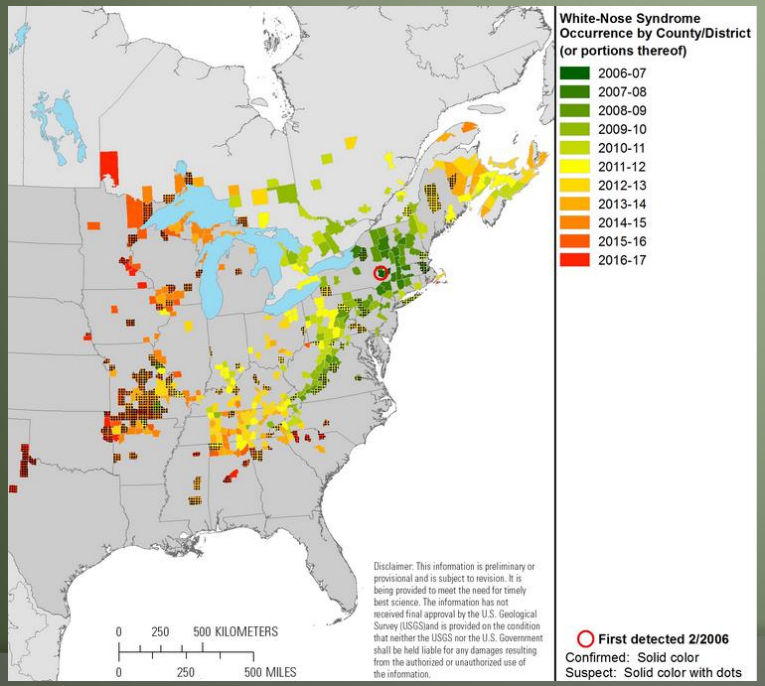
Why are bats important?

- Bats can eat their weight in insects every night
- Can equal 1,000 mosquito-sized insects per hour!
- Many bats consume moths that are forest pests
- One million bats will consume 700 tons of insects in a year
- The value of this insect control service is estimated at $1.4 billion dollars per year in Minnesota alone!!!

Why are Minnesota's bats in trouble?

White-nose Syndrome

- Spreading west since 2006
- Up to 99% mortality in caves in east
- First mortalities in Minnesota in March 2016
- Up to 70% killed in first year in MN



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Summary of Impacts of White-nose Syndrome in Minnesota Hibernacula 2016/2017

WNS now detected from 8 hibernacula in 6 counties

Soudan Underground Mine (second winter of WNS)

- 73% overall decline in bats
- 100% decline in NLEB and tricolored bats
- 73% decline in little brown bats

Other hibernacula

- 31 – 37% decline in bats
- 100% decline in NLEB and tricolored bats
- 40 -73% decline in little brown bats

Federal Response

- Northern Long-eared Bat was designated as a Threatened Species under the Federal Endangered Species Act (ESA) in March 2015
- Other bat species could be listed as Threatened or Endangered if declines continue
- ESA prohibits "take" without a permit
- Threatened status provides exemption: special regulation ("4(d) Rule") that allows forest management activities that might otherwise result in take
- Hard-won compromise
- Endangered status does not provide exemption

Current 4(d) Rule

- 4(d) rule permits some activities, including
  - Most forest management
  - Utility corridor and ROW maintenance and expansion
  - Permanent tree removal under 1 acre
- Activities must be more than ¼ mile from known, occupied hibernacula (wintering sites)
- Avoid cutting known, occupied roost trees during June and July
- Avoid clearcutting and similar methods (seed tree, shelterwood, coppice) within ¼ mile of roost trees during June and July

2015-2018 Research on Northern Long-eared Bat (NLEB)

ENRTF Funding: July 1, 2015-June 30, 2018

Project Activities

- Clarify distribution in Minnesota
- Capture and place radios on females with young
- Follow to roost trees and document use
- Characterize roost trees

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Mist-Netting

Mist-Netting

Radio-Tagging

Radio-Tracking

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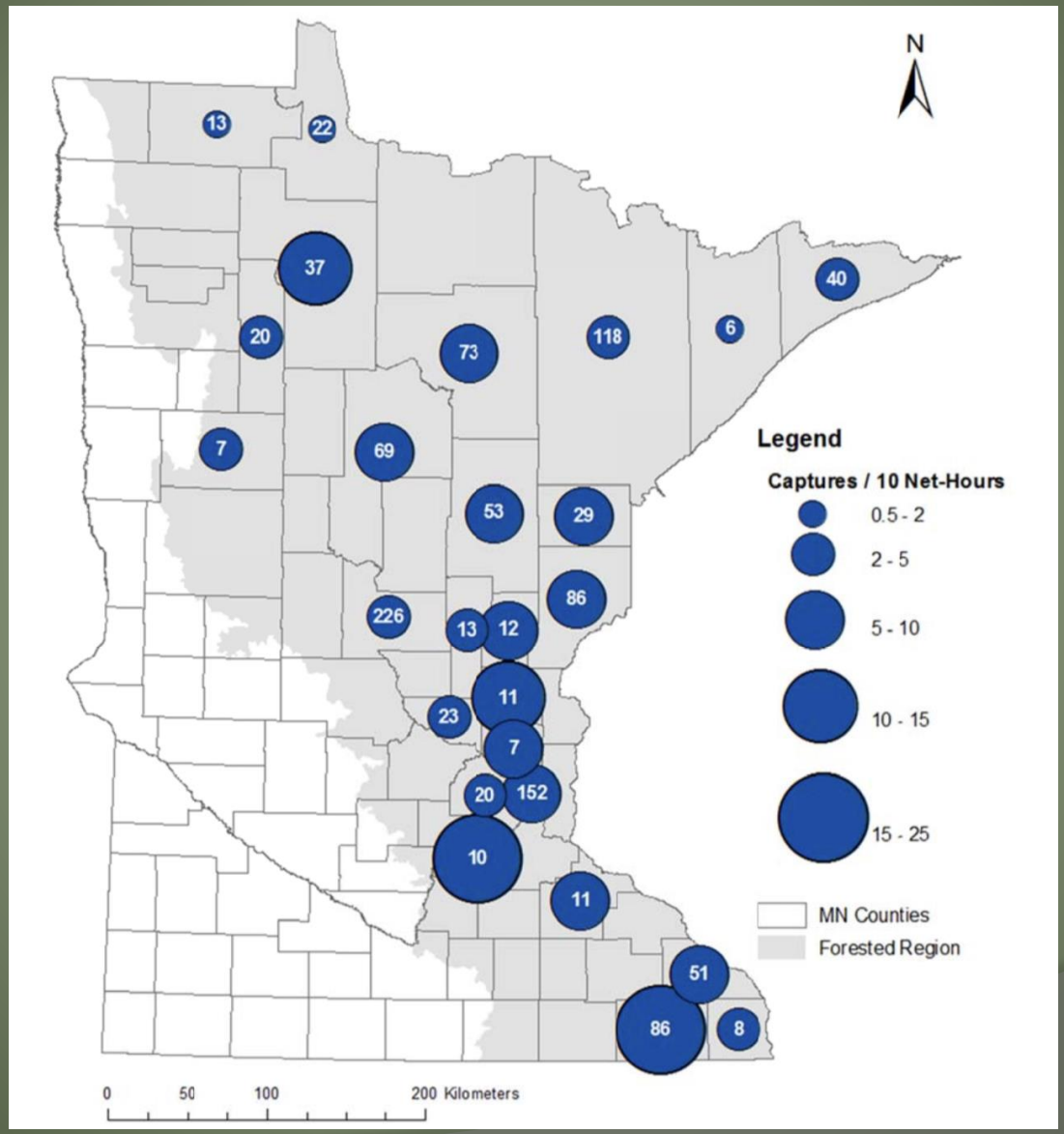
2015 - 2017 Netting Results: All Species



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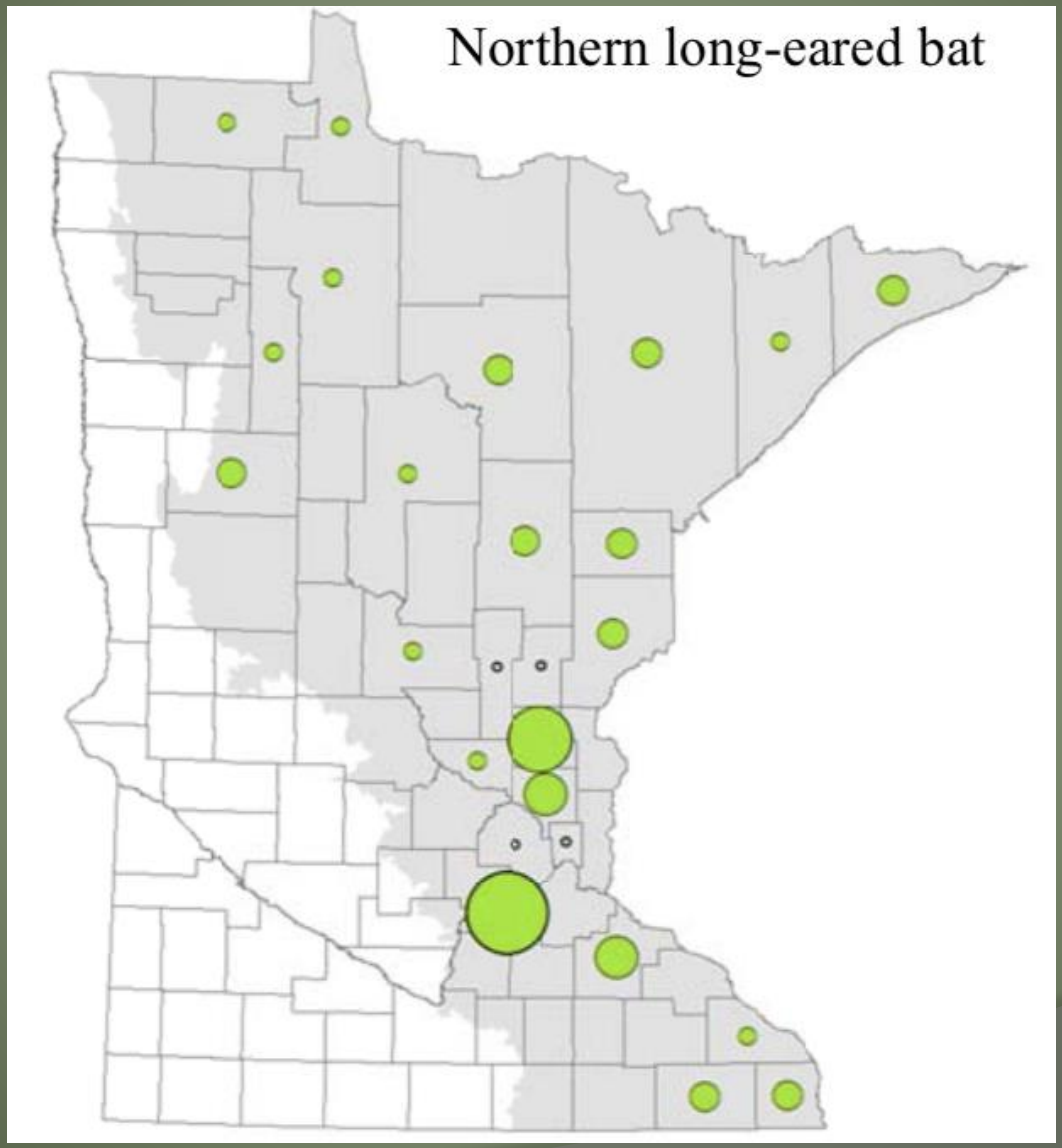
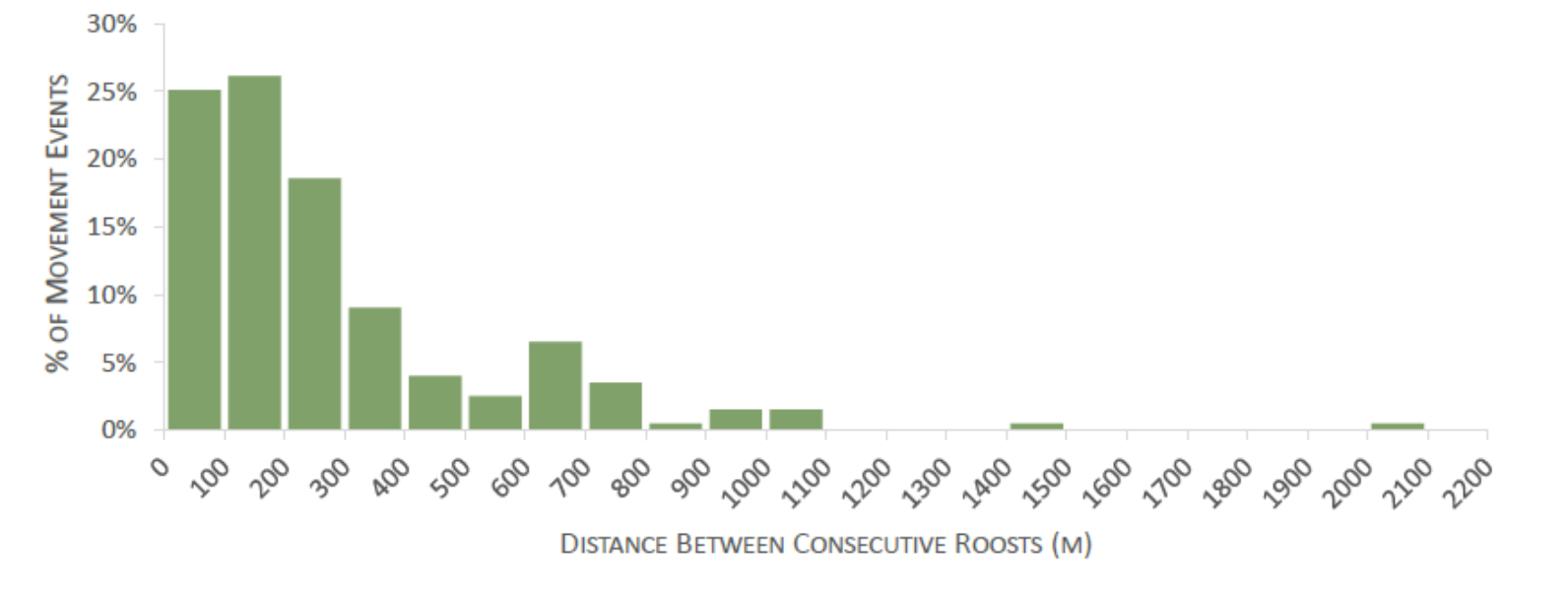
2015 - 2017 Netting Results: NLEB Only



Distance Between Roost Trees



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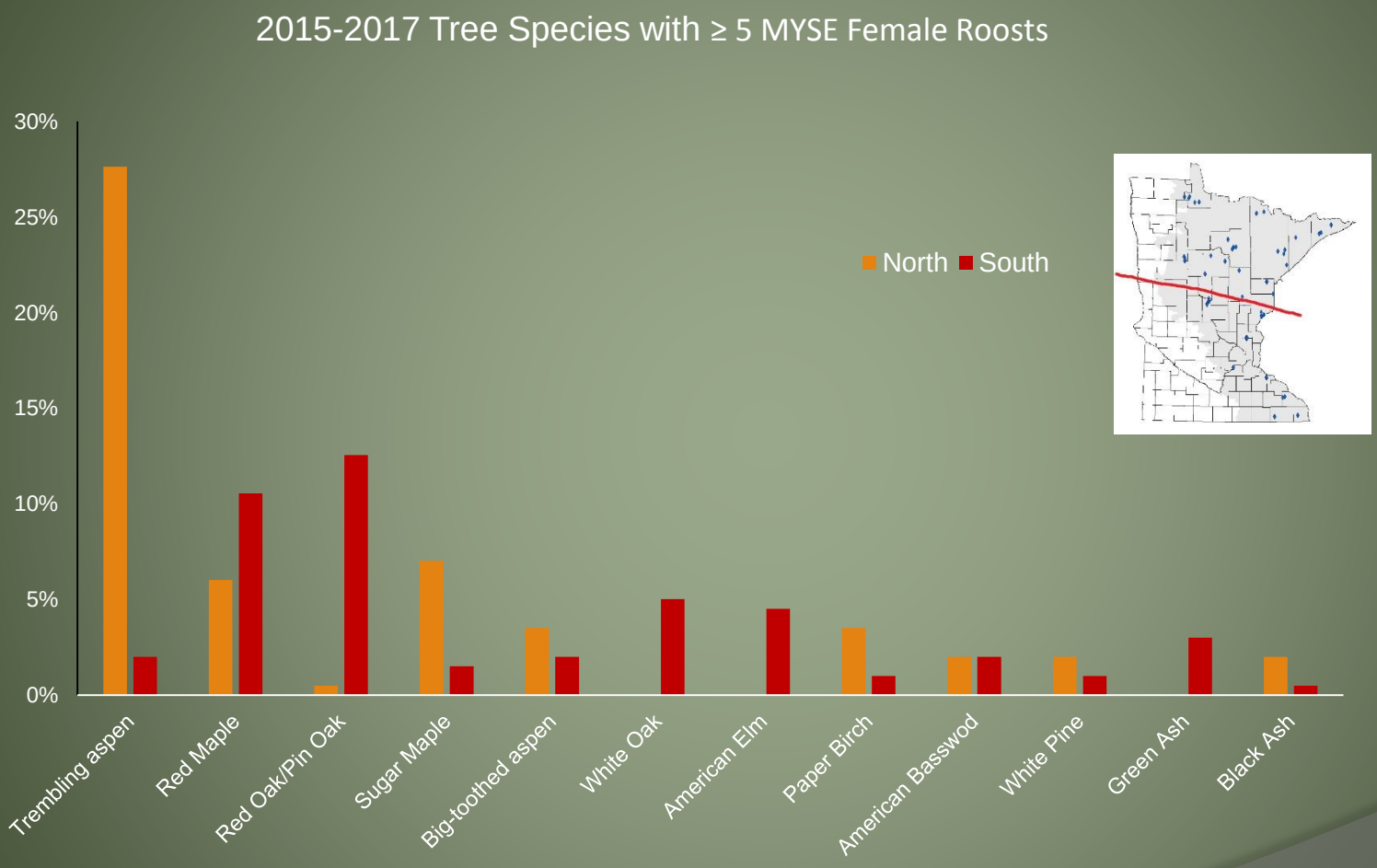
Species of NLEB Roost Trees 2015-2017



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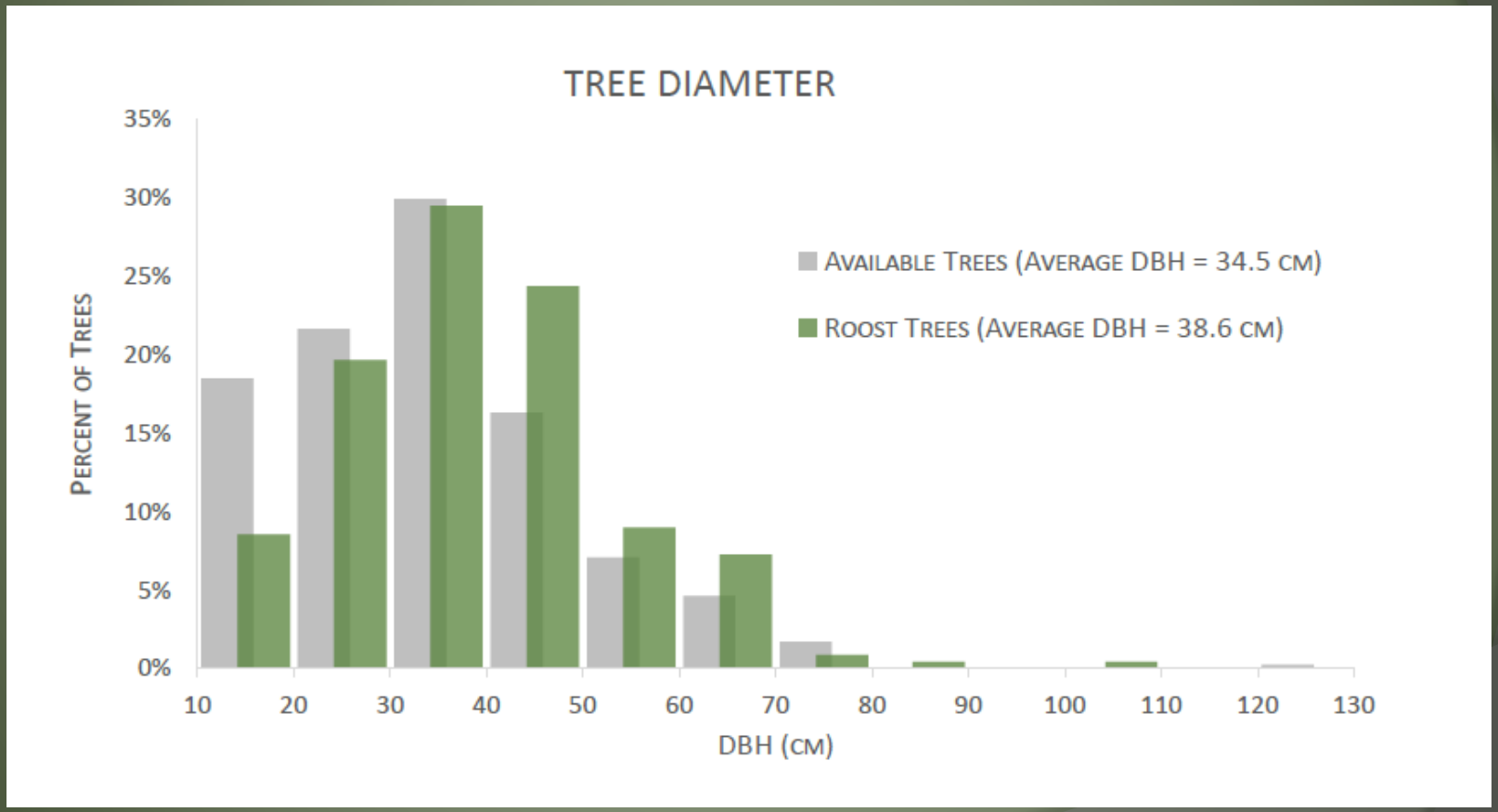
Size of NLEB Roost Trees 2015-2017



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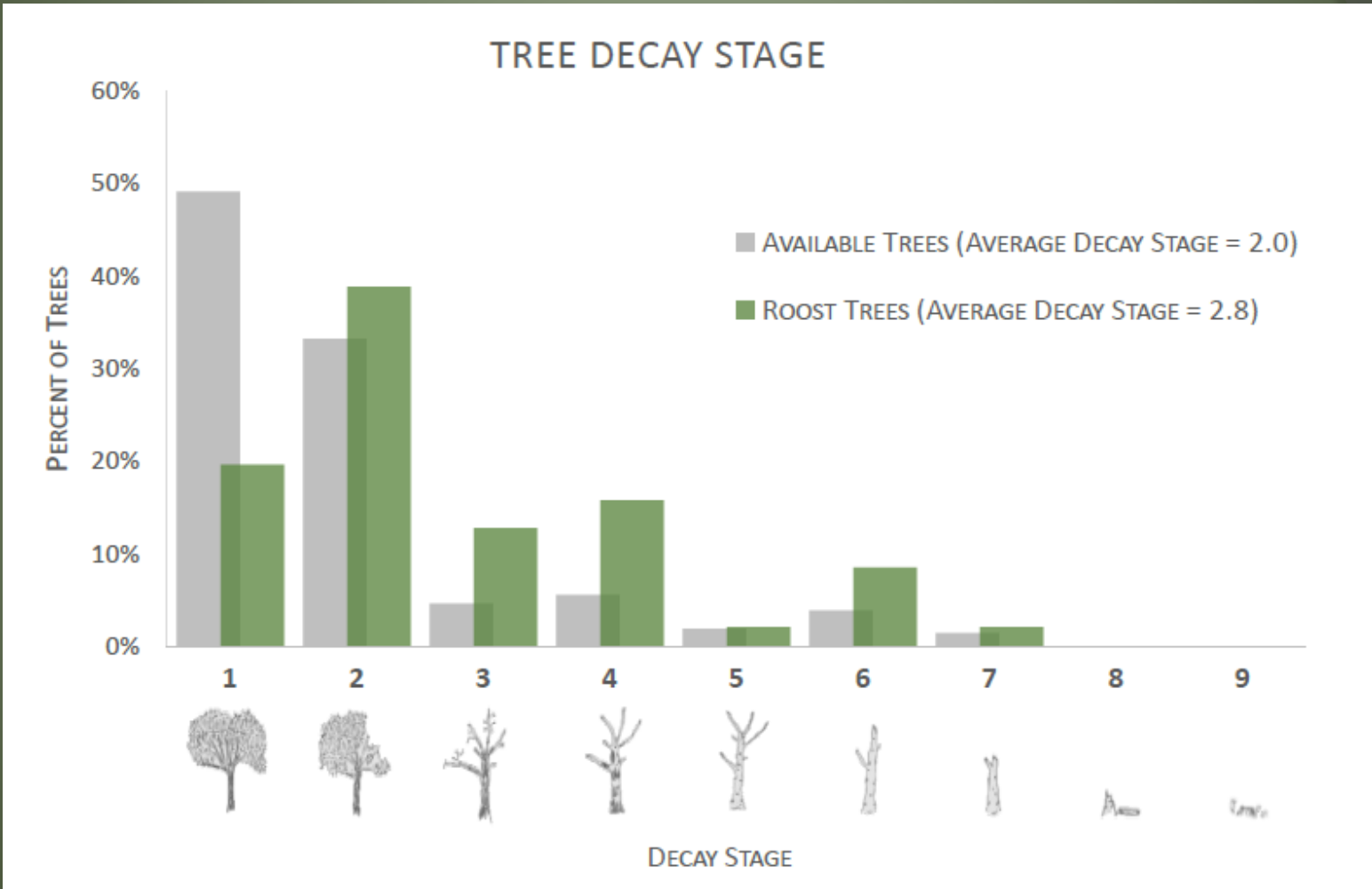
Decay Stage of NLEB Roost Trees 2015-2017



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Summary of 2015-2017 Results

- 155 nights of netting
- 1192 bats captured
- 84 female NLEBs followed to 237 roost trees
- Roost trees
  - Average DBH: 15.2 inches
  - Average height: 50.6 feet
  - Average decay stage: 2.8
- A female used an average of 3.3 roost trees while transmittered (average of 4.9 days)
- A female traveled an average of 894 feet between successive roost trees

Management Implications

- No obvious preference of tree species or size
- Many roost trees were in an early state of decay
- Bats less likely to use lone trees in cleared areas
- Bats will use legacy patches and clumps that have trees with little to much decay

2018 Township List and Map

TOWNSHIPS CONTAINING
DOCUMENTED NORTHERN LONG-EARED BAT (NLEB)
MATERNITY ROOST TREES AND/OR HIBERNACULA ENTRANCES
IN MINNESOTA

Minnesota DNR/U.S. Fish and Wildlife Service April 1, 2018

- The **federal 4(d) Rule for conserving the northern long-eared bat (*Myotis septentrionalis*; NLEB)** is administered by the U.S. Fish and Wildlife Service (FWS) and **may regulate tree removal or other activities if they are conducted:**
  - **within ¼ mile of an entrance to a known NLEB hibernaculum** (a cave, mine, or other feature in which NLEBs have been documented to overwinter)
  - **within 150 feet of a known NLEB maternity roost tree** (a tree in which a female NLEB has been documented to roost)
- Learn more about NLEBs, NLEB conservation, the NLEB 4(d) Rule, and how you may be affected by this regulation at http://www.fws.gov/midwest/endangered/mammals/nleb/4drule.html.
  See especially the "**FAQs About Final 4(d) Rule**" and "**Key to the 4(d) Rule for Non-federal Projects**".
- **Use the "Key to the 4(d) Rule" to determine if your activity is regulated by the 4(d) Rule.**
- **Use this Township List and Map to help you answer question #6 in the Key.**
  - **If your tree removal or other activity is not within a listed township, and does not involve federal funding, a federal permit, or federal lands, no further action is required.**
  - **If your tree removal or other activity is within a listed township, you can determine more precisely where in the township the 4(d) Rule restrictions apply** by requesting from the DNR a data printout or a data license to access additional details on the location of the feature within the township.
    (see http://www.dnr.state.mn.us/nhnrp/nhis.html#datarequest for instructions)
    - If you can determine from this additional information that your tree removal or other activity **is not within 150 feet of a documented maternity roost tree, or within ¼ mile of a hibernaculum entrance**, and if your project does not involve federal funding, a federal permit or federal lands, then **no further action is required**.
    - **Contact the FWS** (see below) to obtain guidance on how to proceed with your project if:
      - **you have chosen to not obtain additional locational information from the DNR**, or
      - **your tree removal or other activity is within 150 feet of a maternity roost tree**, or
      - **your tree removal or other activity could alter a hibernaculum interior, a hibernaculum entrance, or the environment within ¼ mile of a hibernaculum entrance**, or
      - **your tree removal or other activity involves federal funding, a federal permit, or federal lands.**
- These data are current as of April 1, 2018. Updates of this information will be released annually on April 1.
- This document should not be used to determine the distribution of the NLEB in Minnesota, since NLEB surveys in Minnesota are incomplete, and not all known locations of the NLEB were included in preparing the list and map.
- A township that lies within more than one county is listed under every county in which the township lies.

For more information, contact:

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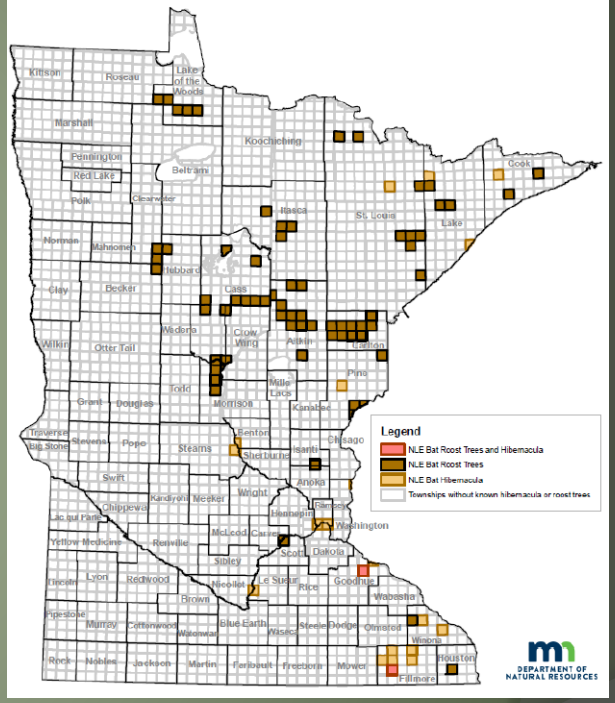
County	Township	Contains Hibernaculum	Contains Roost Tree
Goodhue	T112N R15W	X	X
Goodhue	T113N R14W	X	
Hennepin	T28N R23W	X	
Houston	T102N R6W		X
Hubbard	T144N R35W		X
Isanti	T34N R23W		X
Itasca	T146N R25W		X
Itasca	T57N R26W		X
Itasca	T58N R25W		X
Itasca	T58N R26W		X
Lake	T56N R7W	X	
Lake	T60N R10W		X
Lake	T60N R9W		X
Lake	T62N R11W		X
Lake	T63N R11W	X	
Lake of the Woods	T158N R32W		X
Lake of the Woods	T158N R33W		X
Lake of the Woods	T158N R34W		X
Lake of the Woods	T159N R35W		X
Lake of the Woods	T159N R36W		X
Le Sueur	T110N R26W	X	
Morrison	T130N R30W		X
Morrison	T131N R30W		X
Morrison	T132N R29W		X
Morrison	T132N R30W		X
Morrison	T133N R29W		X
Morrison	T133N R30W		X
Nicollet	T110N R26W	X	
Pine	T39N R19W		X
Pine	T40N R18W		X
Pine	T40N R19W		X
Pine	T42N R20W	X	
Pine	T45N R16W		X
Ramsey	T28N R22W	X	
Ramsey	T28N R23W	X	
Scott	T115N R23W		X
Sherburne	T35N R31W	X	
Stearns	T124N R28W	X	
St. Louis	T53N R12W		X
St. Louis	T56N R13W		X
St. Louis	T57N R12W		X
St. Louis	T57N R13W		X
St. Louis	T57N R14W		X
St. Louis	T62N R12W		X
St. Louis	T62N R15W	X	
St. Louis	T67N R18W		X
St. Louis	T67N R20W		X
Washington	T28N R22W	X	
Washington	T32N R19W	X	
Winona	T106N R7W	X	
Winona	T107N R10W		X
Winona	T107N R9W	X	

TOWNSHIPS CONTAINING DOCUMENTED NORTHERN LONG-EARED BAT MATERNITY ROOST TREES AND/OR HIBERNACULA ENTRANCES



What if continued declines or legal challenges lead to listing as Endangered?

- Take, harm, or harass would require a permit
- Permit application must include a Habitat Conservation Plan (HCP)
- Minnesota, Wisconsin, and Michigan working jointly on a Forest Bat HCP
- Will be used to apply for a permit that allows forest management to continue
- Designed to allow for coverage of forest management activities on public and private lands
- Should be completed in 2020

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Lake States Forest Bat Management Habitat Conservation Plan

- Helps endangered bats by maintaining habitat
- Allows forest management to continue
- Manages risk of forest management to bats
- Balances forest management and bat conservation
- Provides an opportunity for landowners to obtain permit for covered activities:
  - Timber harvest
  - Road and trail construction/operation/use
  - Prescribed fire

Content and Status of HCP Chapters

- Ch 1: Introduction – available for public comment
- Ch 2: Covered Activities – available for public comment
- Ch 3: Environmental Setting – available for public comment
- Ch 4: Impacts Analysis – in final drafting
- Ch 5: Conservation Strategy – in development
- Ch 6: Implementation – in development
- Ch 7: Funding – in development
- Ch 8: Alternatives – in development

Certificates of Inclusion: Possible approach for Lake States Bat HCP

- Incidental Take Permits will be issued by USFWS to each state DNR
- Forest landowners could apply to DNR for Certificate of Inclusion
- Each DNR would issue Certificates of Inclusion to landowners within the state
- No party would be liable for breach of obligations by any other party
- Currently discussing options for including coverage for landowners while continuing to encourage harvest by these landowners

Thank You!