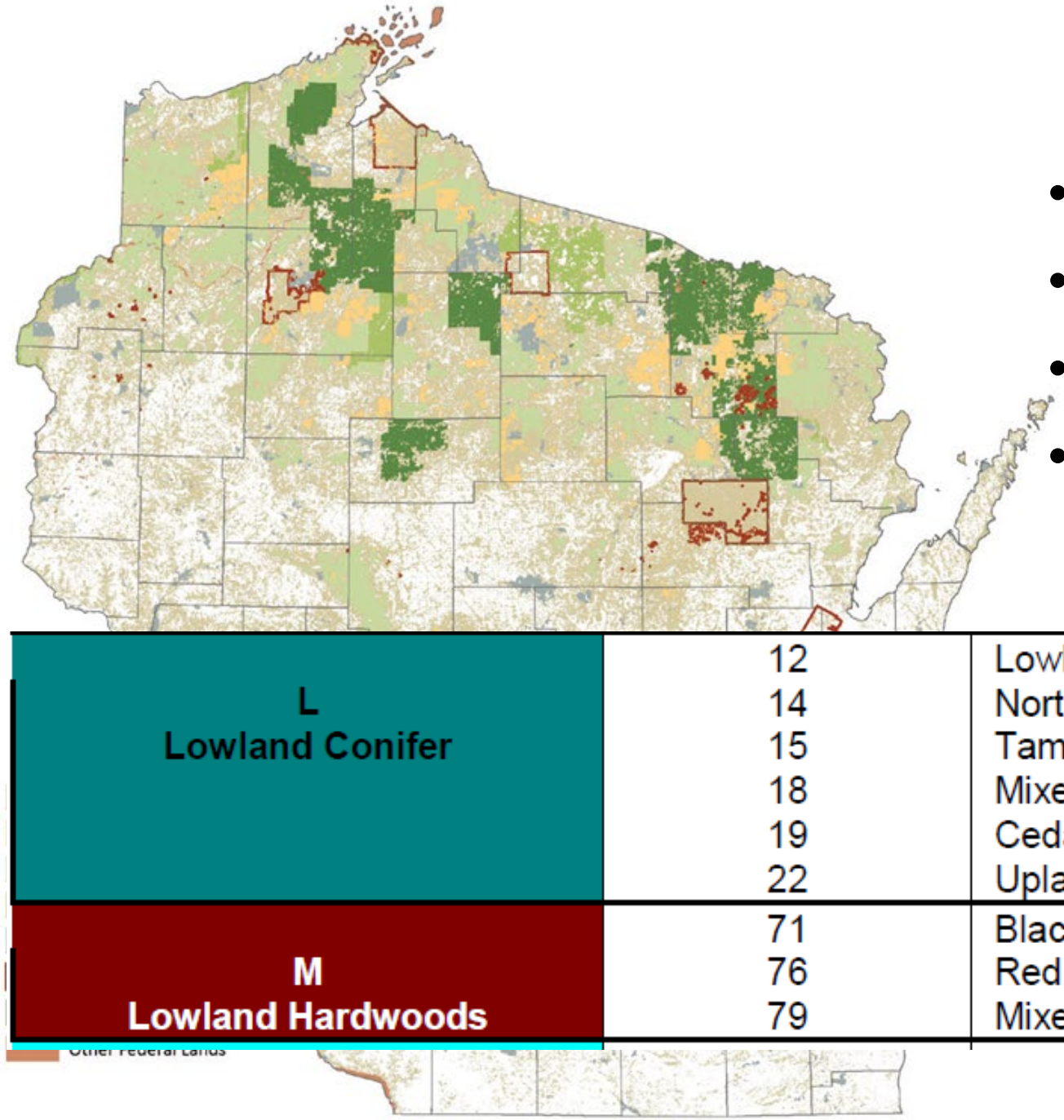
Ash-Dominated Lowland Underplanting Efforts on the CNNF

Jedd Ungrodt
Planning Forester
Chequamegon-Nicolet National Forest

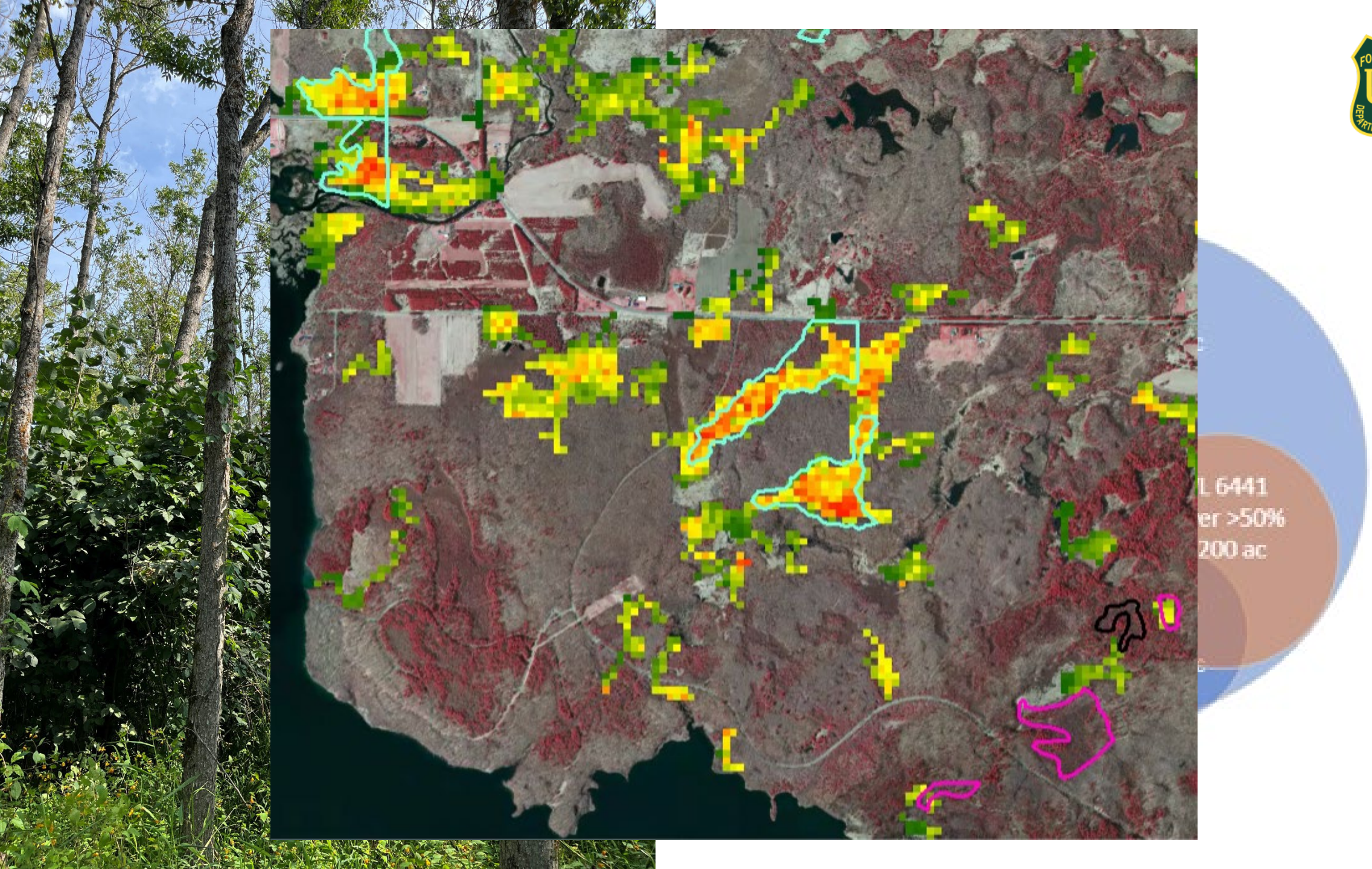
September 19, 2023

www.theways.org



- 1.5 million NFS acres
- 232,000 ac. lowland forest
- 41,000 ac. EV code 71 and 79
- 2,067 stands
  - Median exam age = 32 years

L **Lowland Conifer**	12	Lowland Black Spruce
	14	Northern White Cedar
	15	Tamarack
	18	Mixed Swamp Conifir
	19	Cedar-Aspen-Paper Birch
	22	Upland Northern White Cedar
M **Lowland Hardwoods**	71	Black Ash-American Elm-Red Maple
	76	Red Maple (wet site)
	79	Mixed Lowland Hardwoods


L 6441
er >50%
200 ac

Lowland Hardwood Management Goals

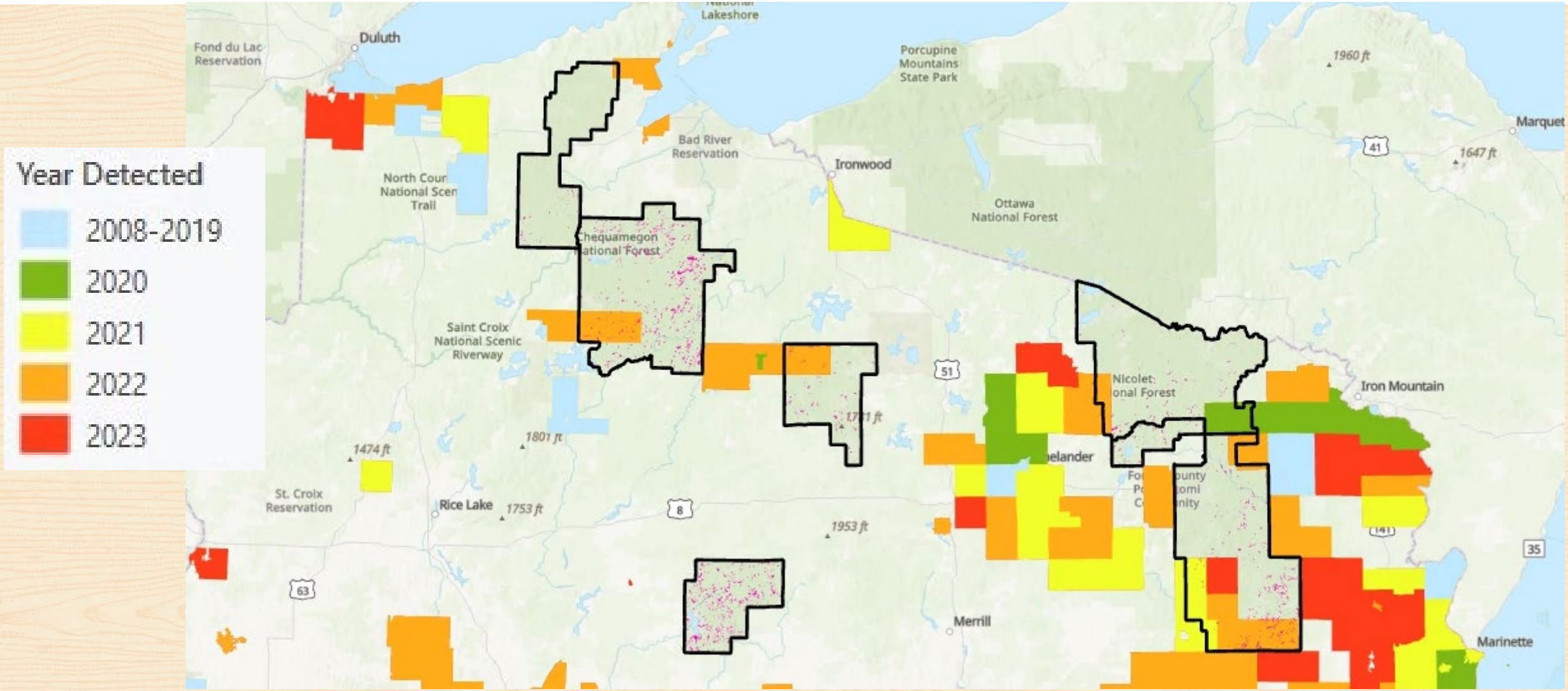
Mixed Lowland Conifers, Lowland Hardwoods, and Hemlock*

Guidelines:

- Harvest lowland conifers, lowland hardwoods, and hemlock only to benefit or maintain habitat for species of viability concern.
- Plant no more than 500 seedlings per acre when attempting to develop or improve hemlock composition in other forest types.
- Do not attempt natural or artificial hemlock regeneration within deer yards unless protection measures such as fencing are utilized.

- 2010 CNNF Ash Management Strategy
  - Future projects should incorporate thinning and underplanting conifers in "**key lowland hardwood stands which we desire to maintain in a stocked condition for wildlife habitat, hydrological or ecological reasons**."

EAB on the CNNF



2019 – Medford

- "Chippewa Lowland Ash" Decision Memo – 215 acres
- 115 acres planted in May 2021 under GNA/DNR contract
  - 55,000 trees, roughly 10' x 10' spacing or 436 trees per acre
  - Swamp white oak, silver maple, yellow birch, and northern white cedar
  - 1st year survival 10-50%
    - Closed canopy
    - Deer browse
    - Herbaceous layer competition
    - High water table
    - Heavy root trimming
    - Difficult to monitor planting

2022 – NRS Planting Trials

- 800 trees planted on two sites on the Great Divide RD
- Long-term monitoring of individual tree survival and growth
- Performance of 8 species will be compared

Bur oak
Swamp white oak
Silver maple
River birch

Red maple
Black spruce
Tamarack
Cottonwood

2022 – "Ash Dominated Wetland Underplanting Project"

- Proposed 200-600 acres per year Forest-wide to:
  - "Maintain tree cover" in stands with 50%+ black ash
  - Maintain/establish long-lived canopy on coldwater riparian corridors
  - Introduce southern species or genotypes
- Lacked geographic focus
- Concerns over "scaling up"
  - Site evaluations
  - Site heterogeneity
  - Contract specs
  - Seedling availability

2023 – Lakewood-Laona District

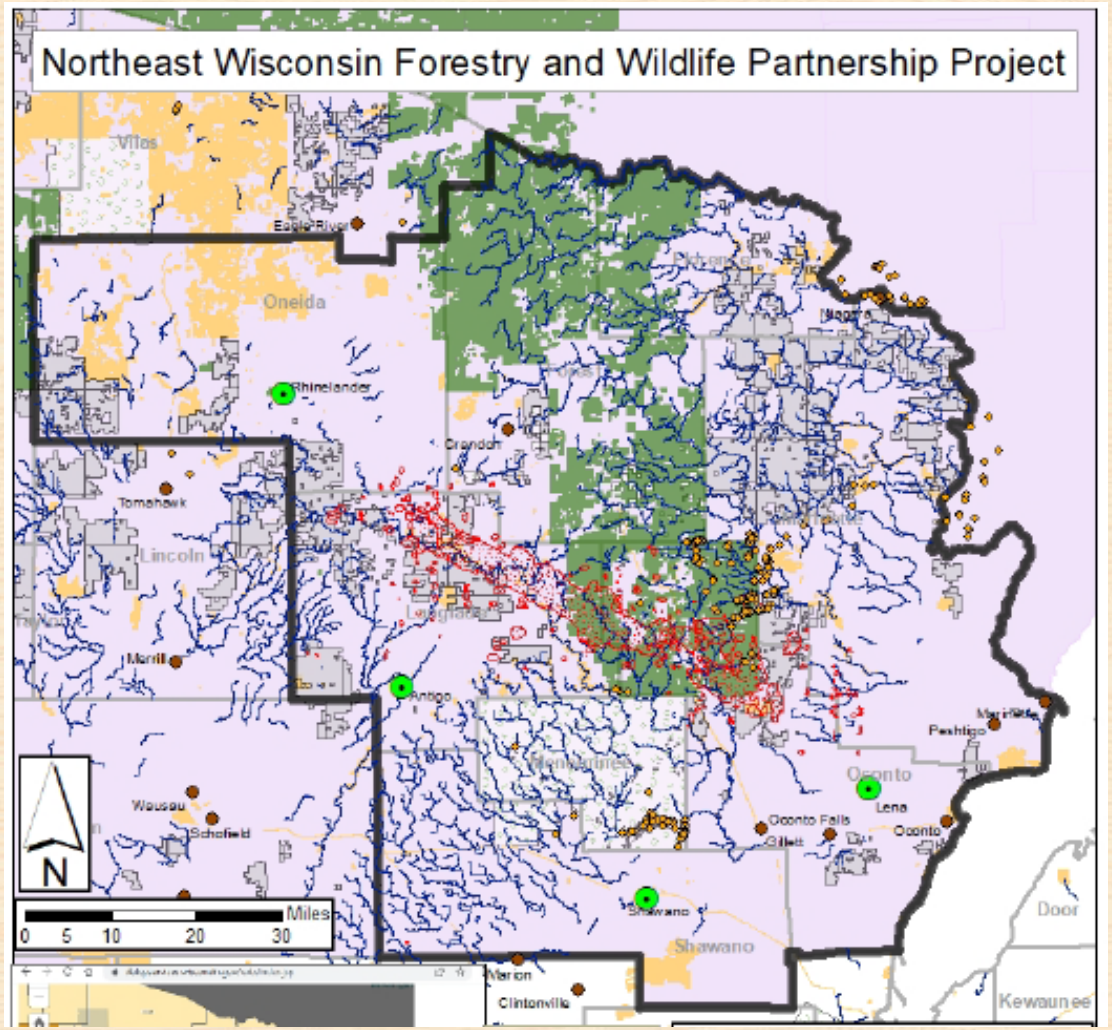
Trout Unlimited Field Day – Saturday, May 20th, 2023

Location: South Fork Thunder River, Oconto County, WI

In collaboration with the USFS

- 6,000 silver maple in areas with previous alder brushing
- "Ideal planting conditions"…no survival survey yet

2023-2025 – Joint Chief's Project

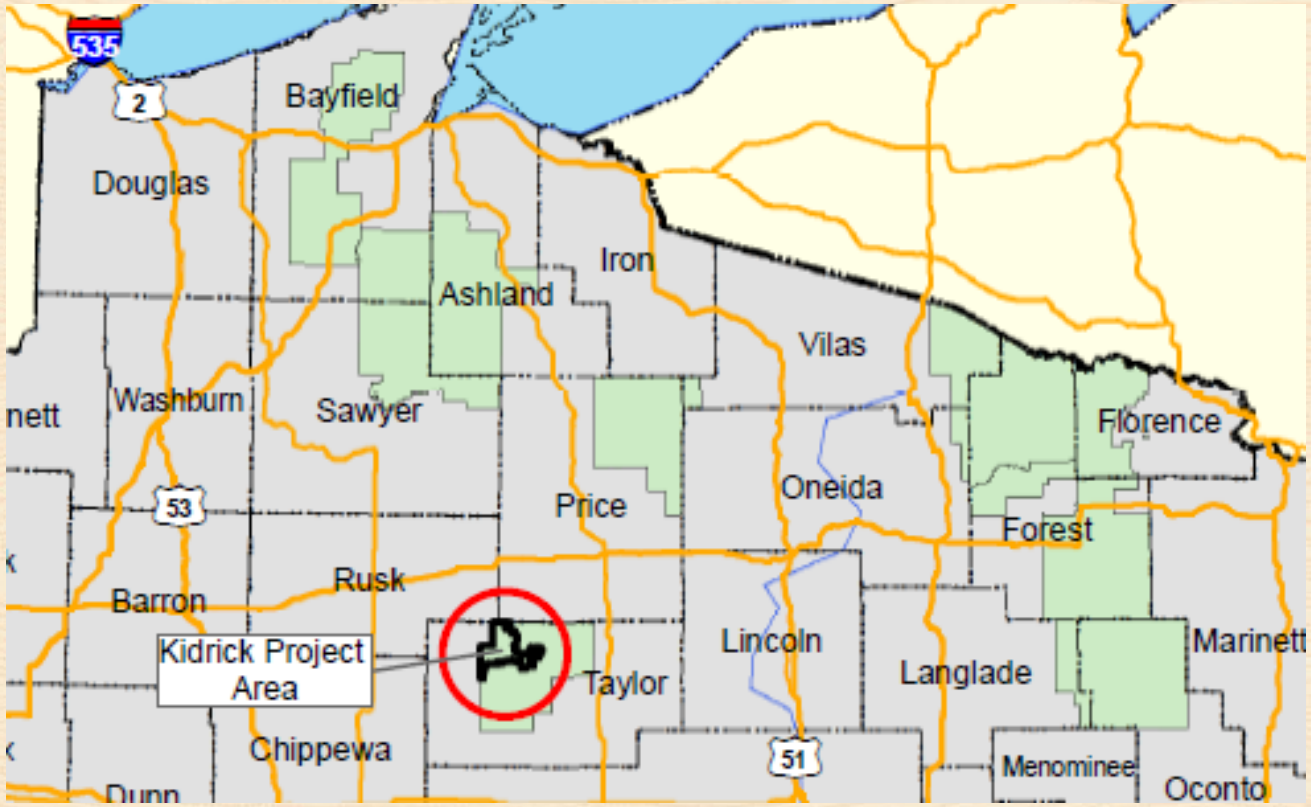


- 107 acres, 6 stands on ERLF RD
- NEPA/consultation in progress

Native	# Seedlings Fall Plant 2024	# Seedlings Fall Plant 2025
Swamp white oak	5000	2500
Tamarack	2500	2500
American elm	5000	3000
Edge		
Silver maple	4,300	3200
Assisted migration		
Bald cypress	1100	1000
Hackberry	1000	1000
Total	18,900	13,200

2024? – Medford, Kidrick EA

- 11,000+ acre EA
- 8 stands, ~200 acres being analyzed for group selection or strip shelterwood + supplemental planting.
- Retain 50-70% of standing basal area.



Lessons Learned

- NEPA, consultation, assisted migration approval can be a long process
- Need more reliable inventory or remote sensing analysis to determine area of ash dominance
- Micro-site matters
- Avoid planting during wettest periods
- Hard to plan w/o knowing what stock is available, hard to get stock without an approved plan

Ongoing Questions…

- Where on the landscape to prioritize planting efforts?
  - Need framework to identify risks and opportunities
  - When is it too late to plant? Too early?
- How do we streamline planning?
  - How to scale up and incorporate assisted migration.
- How to evaluate individual sites?
  - Once a target stand is identified, need a decision guide to determine what species to plant, when to plant, or when to walk away
- What does success look like?
  - Traditional contract specs and stocking/certification requirements don't apply