



Northern Hardwood Regeneration Challenges

Michigan SAF Fall
Conference

October 16 & 17, 2014
Bay Harbor Village Hotel

Overview:

- The State Forest northern hardwood resource
- DNR management regime
- Criteria for evaluating regeneration
- Challenges on State Forest lands

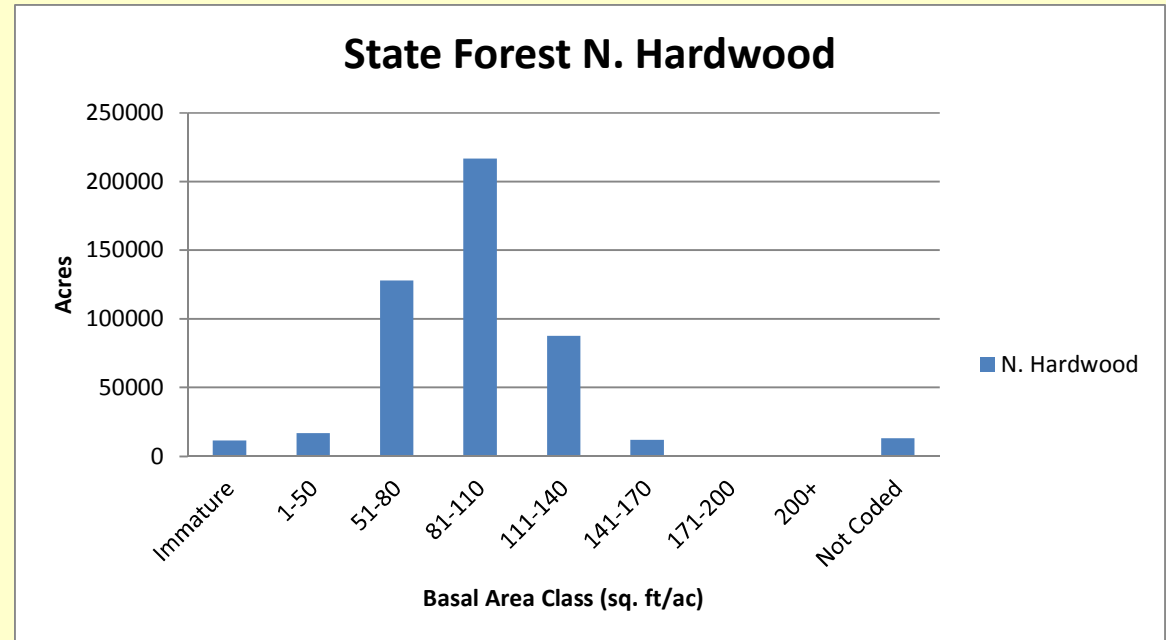


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State Forest N. Hardwood

Currently:

- 487,252 acres
 - EUP 118,206
 - NLP 212,191
 - WUP 156,855



State Forest N. Hardwood

- Range of quality
 - Poor quality hardwood being managed for fiber (even-age, some all age)
 - Higher quality being managed for bolts and sawlogs (striving for all age management)
 - Some high quality sites being affected by EAB and BBD could now be classified as even-age management



State Forest N. Hardwood

- Range of productivity
 - Low end sites ATFD, AVVb, TMC
 - High end sites AFOAs, AOCa



DNR N. Hdwd Management

- Pole Stands
 - Thin to improve quality of stand
 - ID and release crop trees
 - Target residual BA of 60-80 sq. ft/ac
 - Generally every 15-20 years
 - Striving to move to all age/size condition



DNR N. Hdwd Management

- Sawlog Stands
 - Thin or selectively harvest 15-20 years
 - Target residual BA of 70-80 sq. ft/ac
 - Improve quality and structure of the stand
 - Striving to create canopy gaps and obtain regeneration (where possible)



Photo courtesy of John Wills and Dr. Mike Walters, Emmet Co. Hardwood regeneration project



DNR N. Hdwd Management

- Regeneration standards:
 - Regen survey manual (primarily artificial)
 - Evaluated using ocular estimate
 - 1/110 ac (6 ft x 66ft) plot
 - Height of seedling
 - 6” confier, 12” hardwood
- 2,000 stems/ac (19 w/in plot)
 - If browsing is present then more plots are necessary



Common Challenges

SEDGE!





Common Challenges



Common Challenges



Common Challenges

- General overall lack of quality northern hardwood regeneration
 - Geographic in nature
 - Lake Superior watershed/snowfall zone vs rest of the state
- Regen is happening, but it's not going anywhere, i.e. not recruiting or surviving



Where do we go from here?

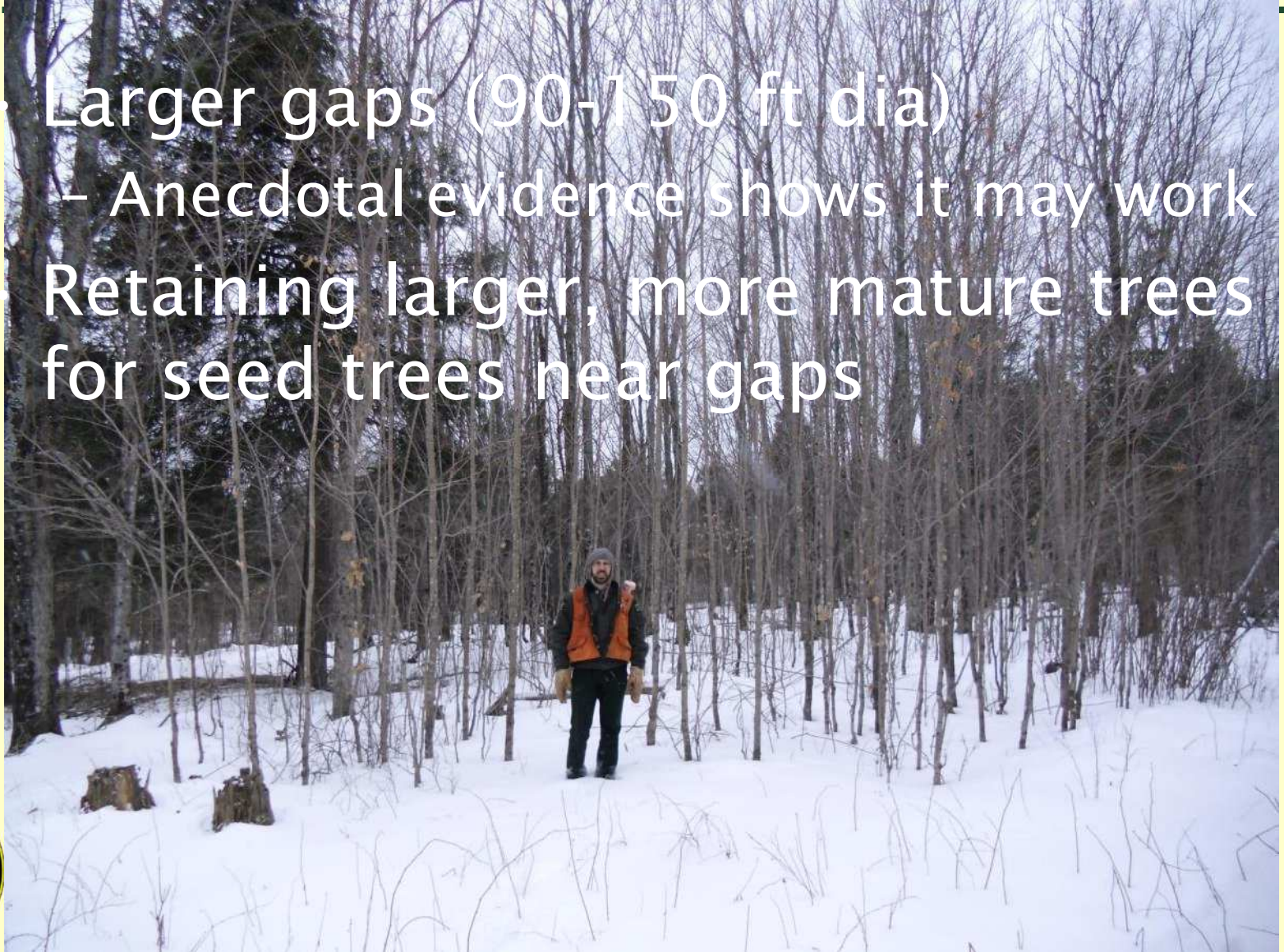
Traditional thinning and selection harvests

- No or very little regeneration present
- Gaps aren't big enough, not meeting prescribed goal to begin with
- Gaps not being cleaned up of 'craplings'
- No scarification happening in gaps due to being too gentle on the landscape



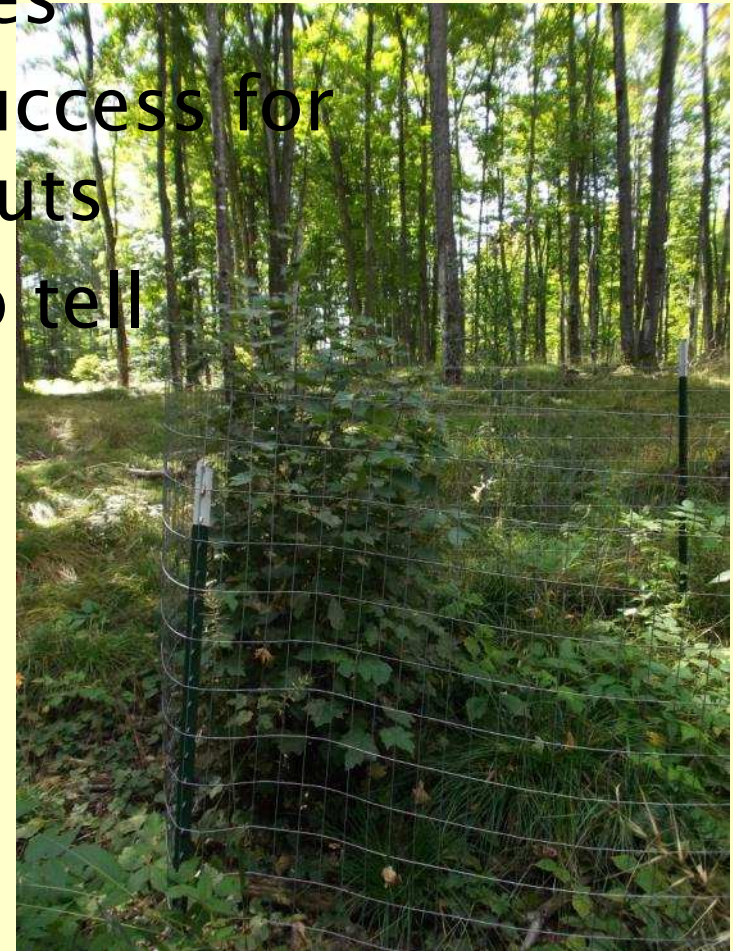
Where do we go from here?

- Larger gaps (90-150 ft dia)
 - Anecdotal evidence shows it may work
- Retaining larger, more mature trees for seed trees near gaps



Where do we go from here?

- Exclosures
 - Considered case studies
 - Results are showing success for protecting stump sprouts
 - Seed source too early to tell



Where do we go from here?





Thank You!

Questions?

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