



DNR Property Planning: Utilizing Ecological Landscapes for Regional Planning

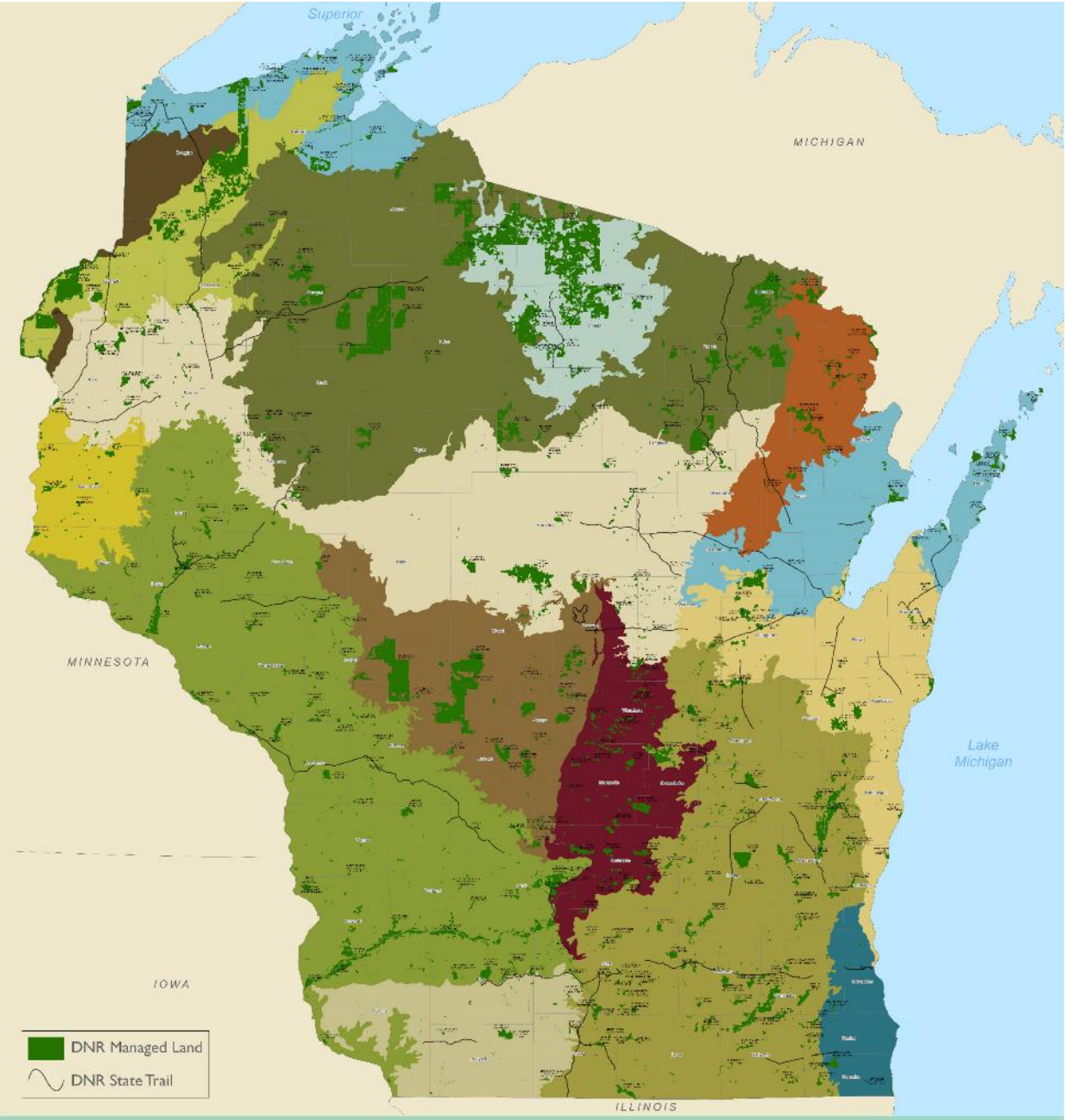
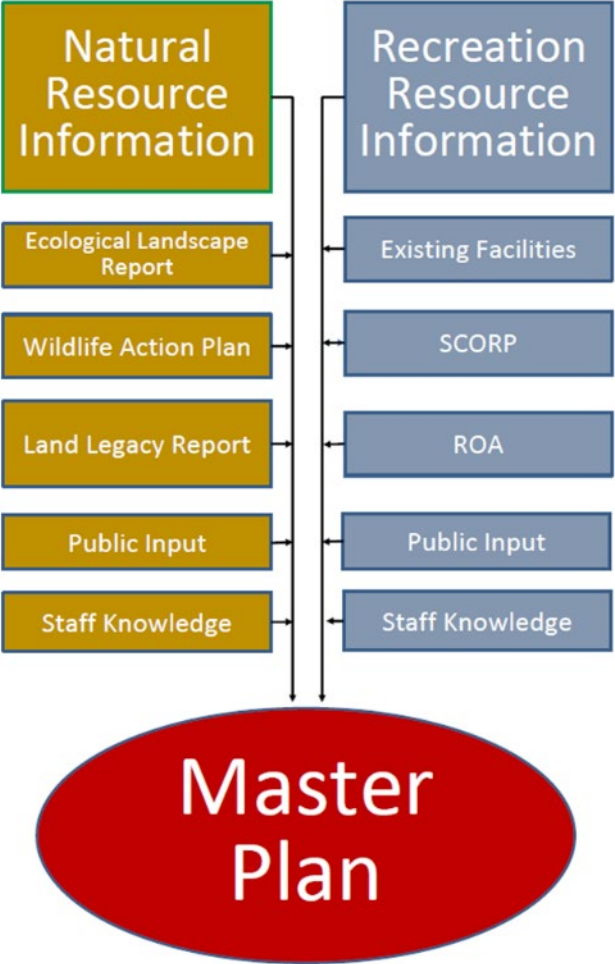
**Wisconsin Council on Forestry Meeting; March 21, 2023
Phil Rynish – DNR Property Planning Section Manager**

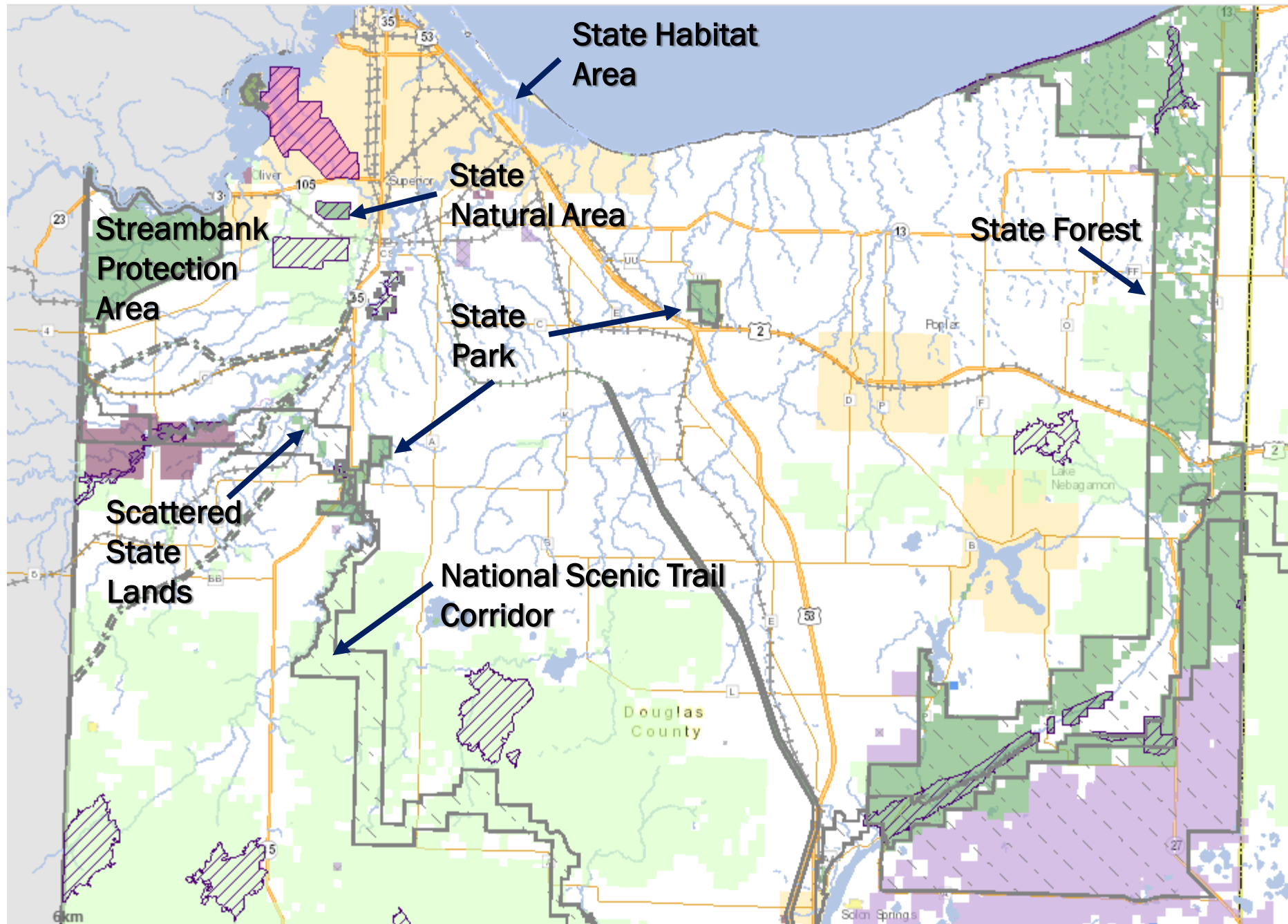
DNR Property Planning at a Glance

- Chapter NR 44, Wisconsin Administrative Code
- Defines authorized public use, recreation and resource management of DNR properties
- Regional planning model
 - Utilize ecological landscapes



DNR Property Planning at a Glance





The Master Planning Process

- Phase 1: Pre-planning & scoping
- Phase 2: Plan Development
- Phase 3: Plan Approval



Phase 1: Pre-Planning

- Background information gathering
 - Ecological assessment
 - Property and regional characteristics
 - Property profiles
 - Stakeholder ID
 - Getting the word out
 - Bring up existing and potential issues
- Regional and Property Analysis



ABOUT THE SOUTHWEST SAVANNA ECOLOGICAL LANDSCAPE

Ecological Characteristics and Management Opportunities +

Socioeconomic and Cultural Context +

Recreation Resources and Opportunities +

Considerations for Planning and Management +

Phase 1: Public Input - Scoping

- Opportunity and challenge identification
- **Public involvement**
 - Online
 - Public Meetings



Phase 2: Plan Development

- DNR planning team develops plan following the process and content requirements of Chapter NR 44 of the Wisconsin Administrative Code.
- Process utilizes many different information sources.



Phase 2: Draft Plan Public Input

- *Draft* Regional Master Plan is released for public review and comment.

Southwest Savanna Regional Master Plan



Draft Master Plan and Environmental Analysis



March 2021
PUB-LF-121 (2021)

Phase 3: Plan Approval

- *Proposed* Regional Master Plan considered for approval by Wisconsin Natural Resources Board.

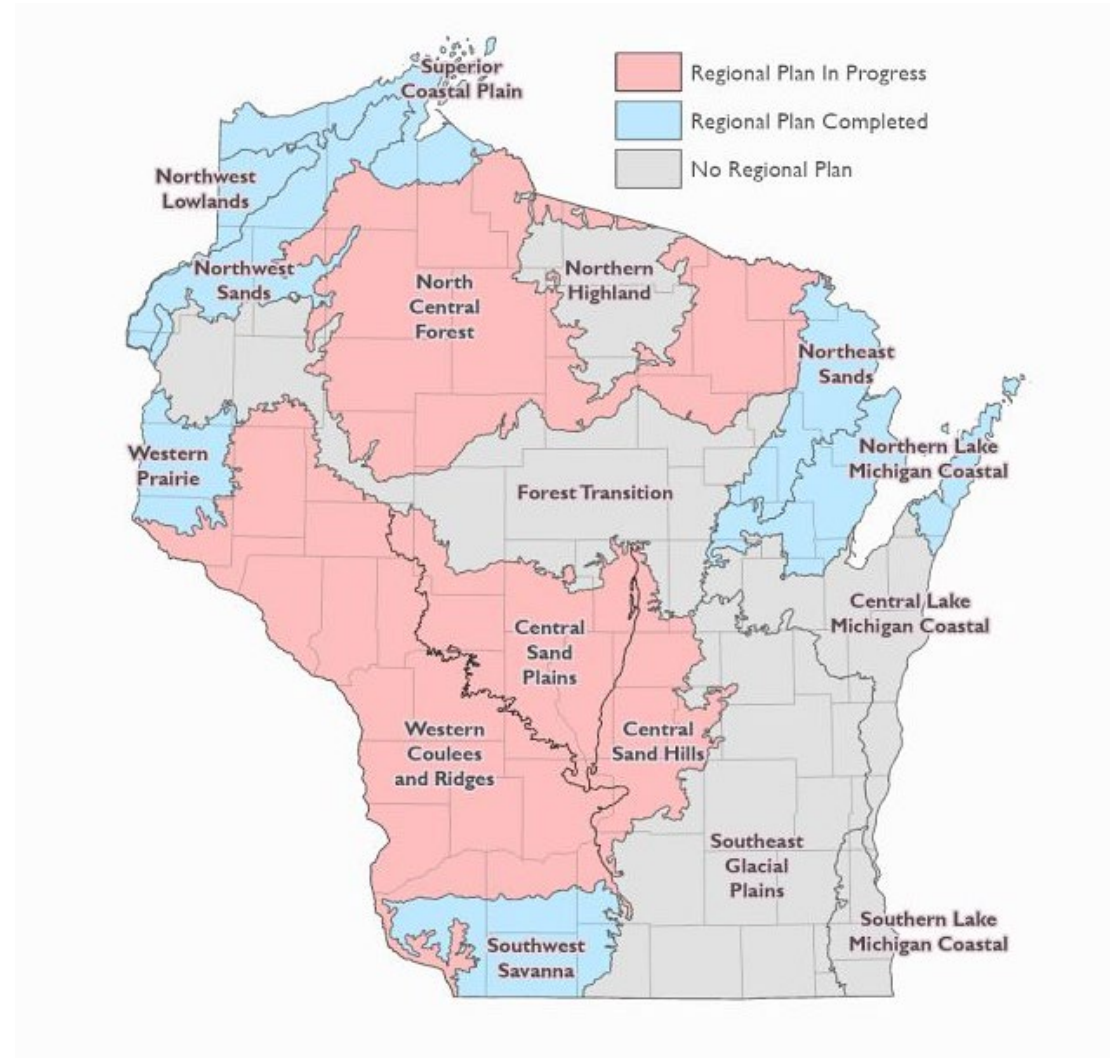


Takeaway

- Public input opportunities in every phase.
- Public encouraged to engage throughout the master planning process



Regional Planning Progress



CONNECT WITH US

**Phil Rynish, Property Planning Section
Manager**

Phillip.Rynish@wisconsin.gov

608-977-0286

dnr.wisconsin.gov; search: Property Planning



/WIDNR



@WIDNR



@WI_DNR



/WIDNRTV



"WILD WISCONSIN:
OFF THE RECORD"

Ecological Landscape Master Planning: Overview of Forest Management Challenges and Opportunities

**Wisconsin Council on Forestry Meeting
March 21, 2023**

**Brad Hutnik
Silviculturist / Forest Ecologist
WDNR Division of Forestry**

**Brian Zweifel
Forest Products Specialist
WDNR Division of Forestry**

Silviculture Prescription Process

DEFINE management goals and objectives:

- interview landowner
- forest plan / master plan

ASSESS site and stand conditions and delineate stand boundaries

Forest Inventory:

- Species Composition
- Density
- Structure
- Site Quality (SI, FHT)
- Timber Quality (AGS/UGS)
- Growth

DEFINE management goals and objectives:

- interview landowner
- forest plan / master plan

IMPLEMENT Rx

Written Marking Guide

MONITOR and FOLLOW-UP

Modified from:
L. Nagel NASP 2015, J. Kotar 1997

To assist society in defining forest management goals and objectives, we may want to answer 2 questions:

1. What input can the forestry community uniquely provide to assist decisions about goals and objectives?
2. How does the forestry community inform Ecological Landscape Master Planning?

1. What input can the forestry community uniquely provide to assist decisions about goals and objectives?

Provide society with information and insight it cannot get elsewhere.

- Examples: Forest products info, unique management issues

Forest Products Industry: North Central Forest

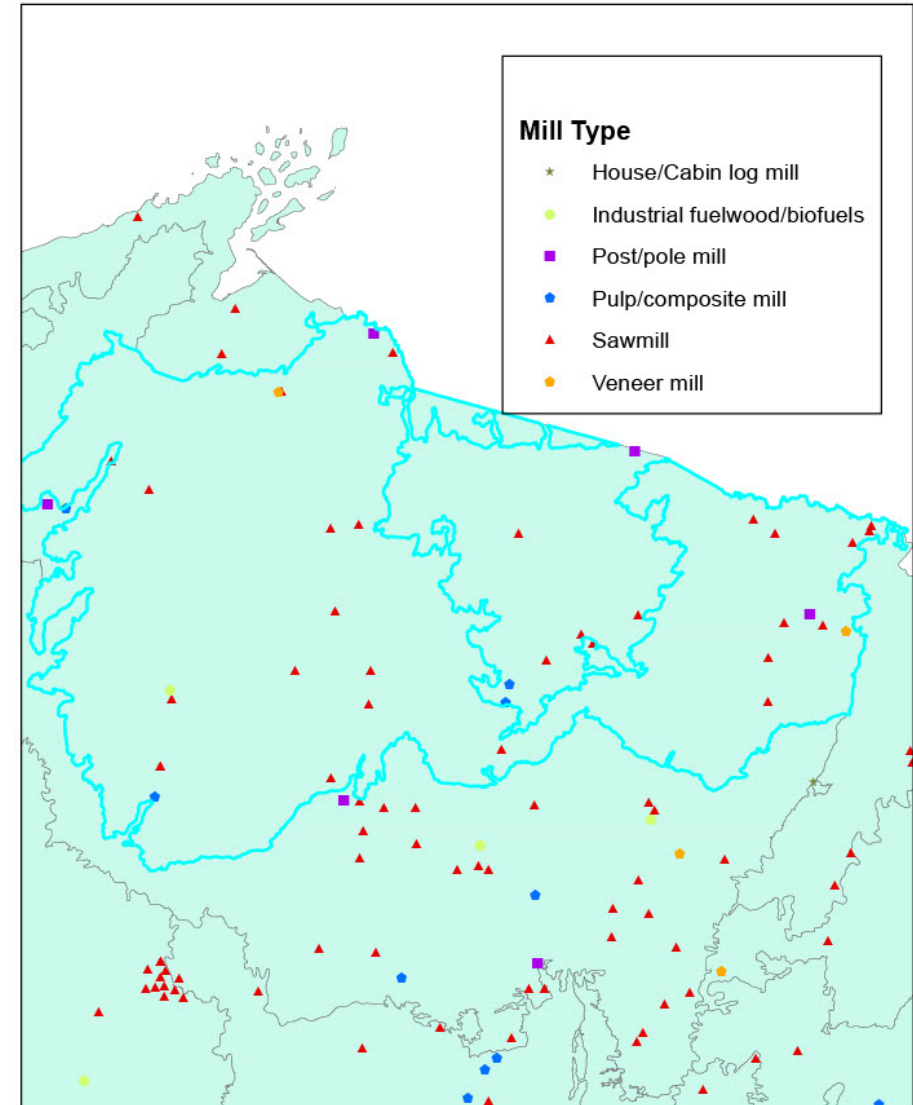
Forestry is the #1 employer in:
Taylor, Rusk, Price, Florence, and Iron counties.

Top-10 employer in:
Chippewa, Langlade, Washburn, Ashland, Sawyer, and
Forest counties.

Forest products is the largest industry in: Florence, Iron,
Price, Sawyer, Rusk, Chippewa, and Ashland counties.

Top-10 industry in:
Taylor, Langlade, Washburn, Lincoln, and Forest
counties.

Mills within and near North Central Forest Ecological Landscape



Forest Products Industry: North Central Forest

- Relatively flat topography makes for easy harvesting and hauling
 - Widespread wetlands can create seasonal challenges



- The two largest softwood lumber producers in the state are located near the North Central Forest EL
 - Approx. 150 million BF annual production
- The two OSB producers in the state are located in or very near the border of the NCF
 - Utilize aspen and some basswood
- Several large hardwood sawmills are located in or very near the NCF

Forest Products Industry: North Central Forest



One large pulp user at the border of the NCF

- Most of NCF within reasonable hauling distance of additional pulpwood markets
- Pulpwood users enable sustainable forestry most easily
 - If pulpwood markets falter, selling the abundance of lower quality hardwood logs in the NCF would be very challenging, if not impossible
 - Verso is a telling example – lost 25% of pulpwood consumption virtually overnight

- Markets for higher value products are fairly consistent
- This area is well-known for producing high quality hard maple
 - Maple and other “white” woods pulp more easily than some other hardwood species



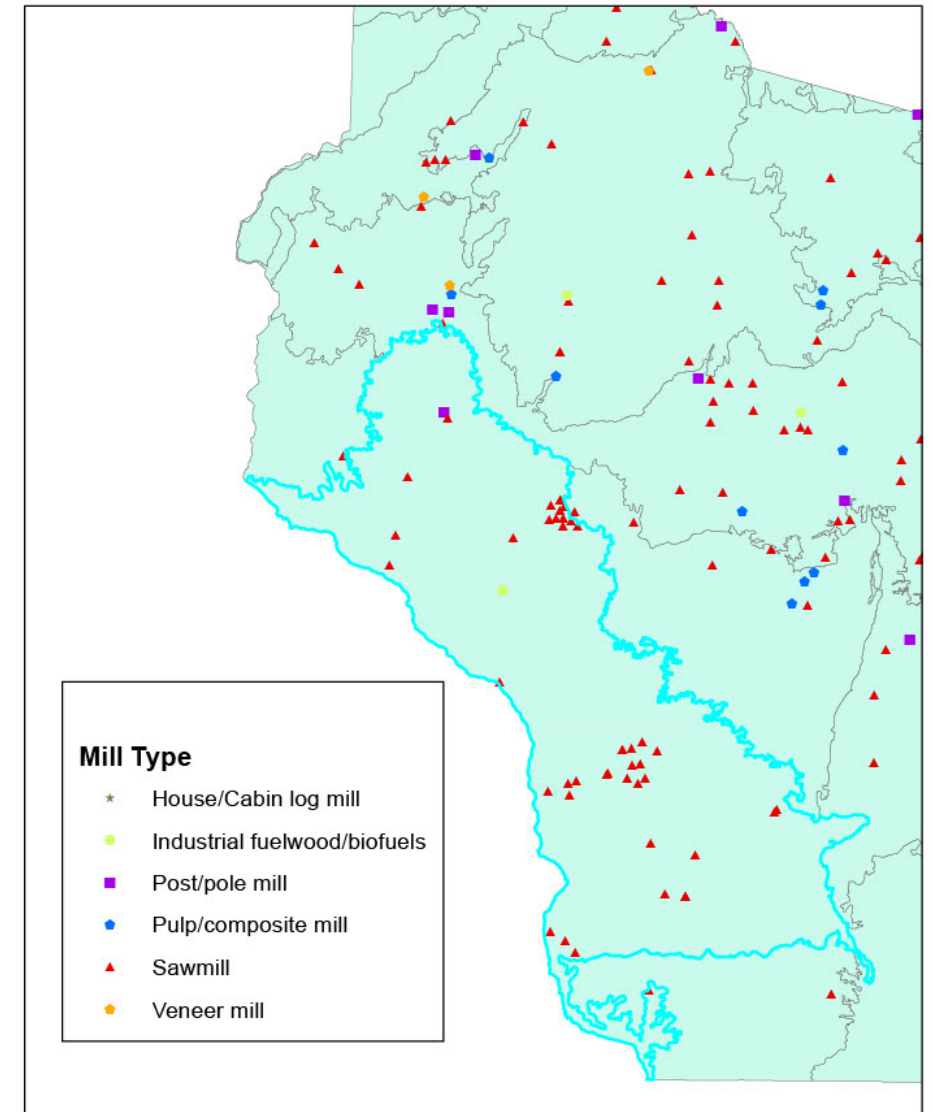
Forest Products Industry: Western Coulees and Ridges

Mills within and near Western Coulee and Ridges Ecological Landscape

Forestry is the #1 employer in Trempealeau, and in the top-10 in Crawford, Dunn, and Vernon counties.

Forest products is the largest industry in Dunn, and in the top-10 in Eau Claire, Grant, and Monroe counties.

Northern portion of WC&R EL has access to more diverse markets than southern portion



WC&R Opportunities



- Significant concentration of some of the state's most valuable species
 - Walnut & White Oak
- Many sites have excellent soil and can grow high quality trees faster than anywhere else in the State
- Specialty markets utilizing cherry and hickory for smoking pellets/firewood
- Black locust being utilized for lumber and structural elements
- Funding for non-commercial harvests could offer benefits when trying to do TSI, low-quality hardwood management, etc.

WC&R Challenges

- Challenging terrain makes logging difficult in many places
 - Limited to hand felling in steeper areas
 - Insurance is bordering on prohibitively expensive for many hand fellers
- Lack of direct transportation routes makes transportation costs more expensive
- Lack of proximity to pulp markets makes some timber sales challenging
 - Unsurprisingly, high grading has occurred on many sites

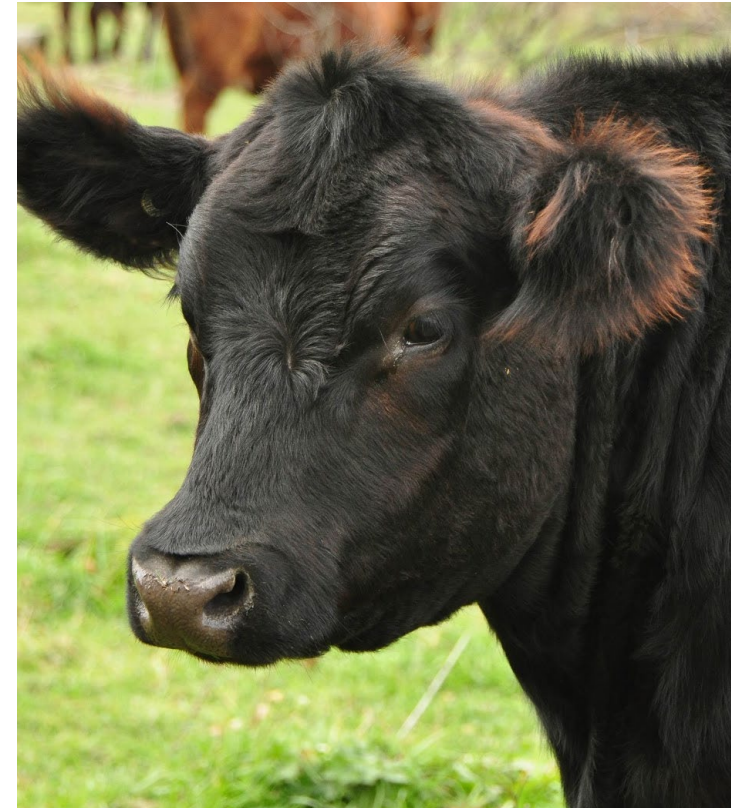


Forest Cover Type Age Class Imbalances

Age class imbalance is largely a result of the Cutover and the cessation forest grazing. The impact on forest ecology and forest management is widely recognized in the forestry community.

2020 Statewide Forest Action Plan Goals

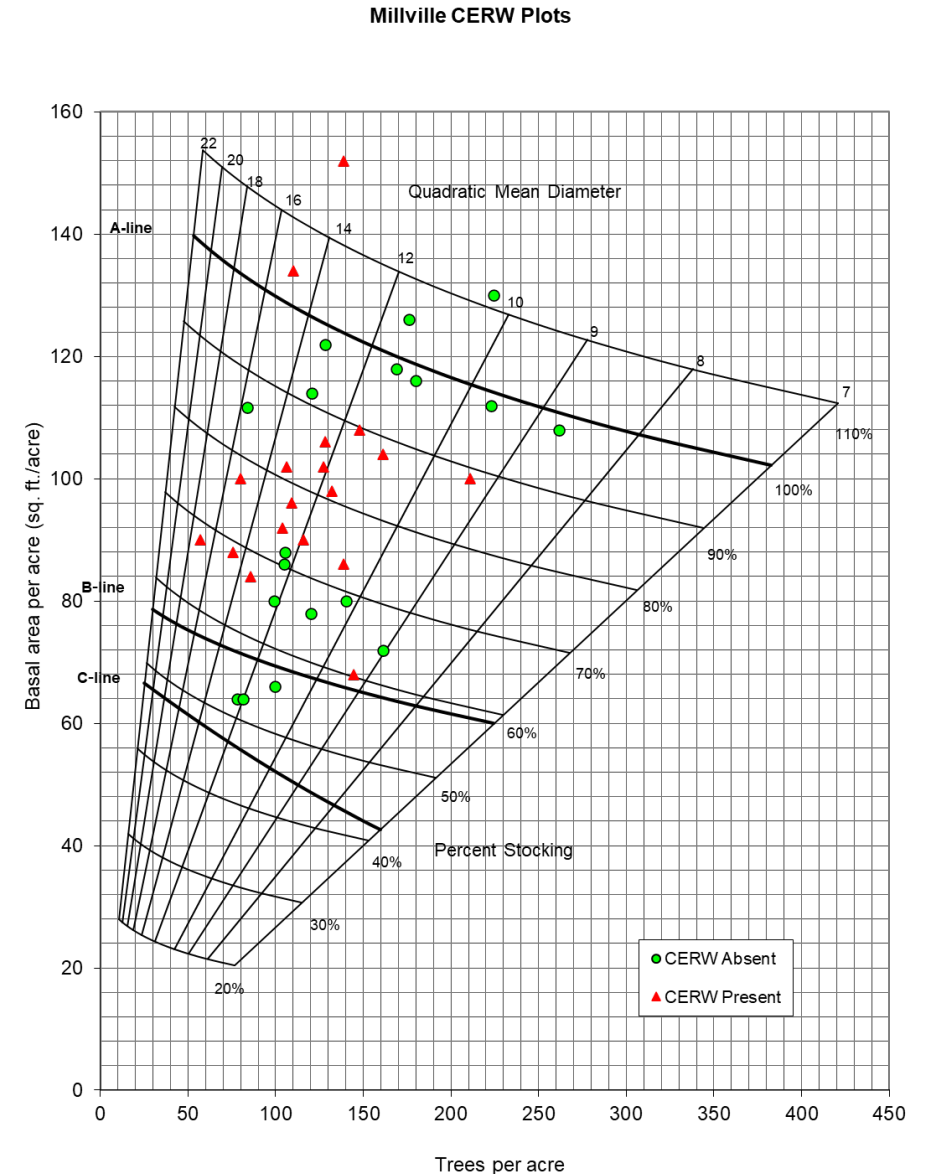
- A. Forests are diverse in structure, composition, function & complexity across all forested landscapes.
- B. Forested landscapes provide connectivity between patches of forests of all seral stages & types for forest-dependent species & related natural communities.



Forest Cover Type Age Class Imbalances

Impact on Forest Management

- Cover type age imbalance means there is a discontinuous flow of value from the landscape.
 - Note: Value is not only economic, this is a wildlife habitat imbalance as well.
 - Our history is not our future
- Diverse systems (age classes, size classes, etc.) are more resilient to disturbance.
 - Analogy: Lump sum investing vs. DCA



Forest Cover Type Age Class Imbalances

Strategies and Tactics

- Recognize landscape conditions & goals as a part of local forest management.
- Define a desired future condition (DFC) to establish goals for all age/size classes.

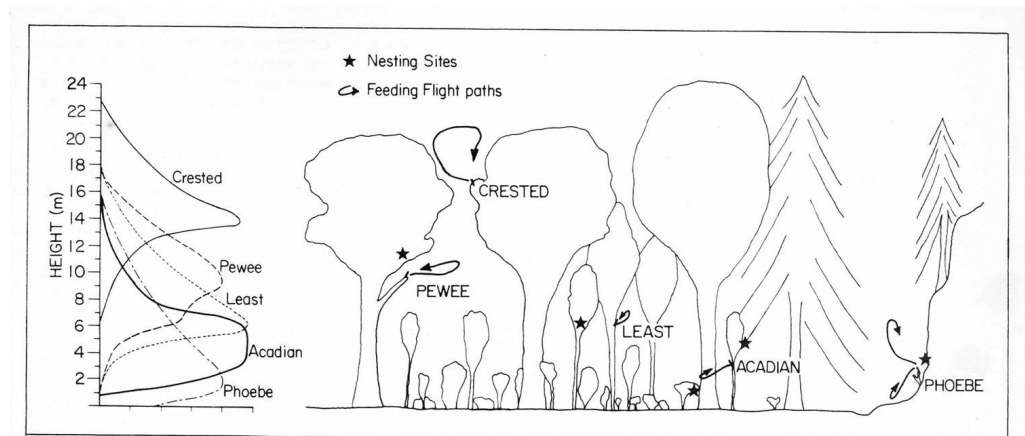
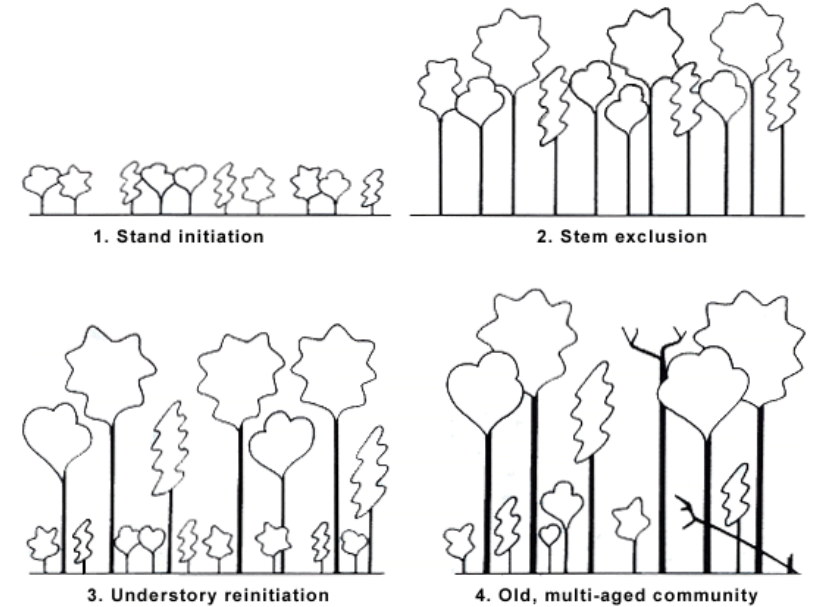


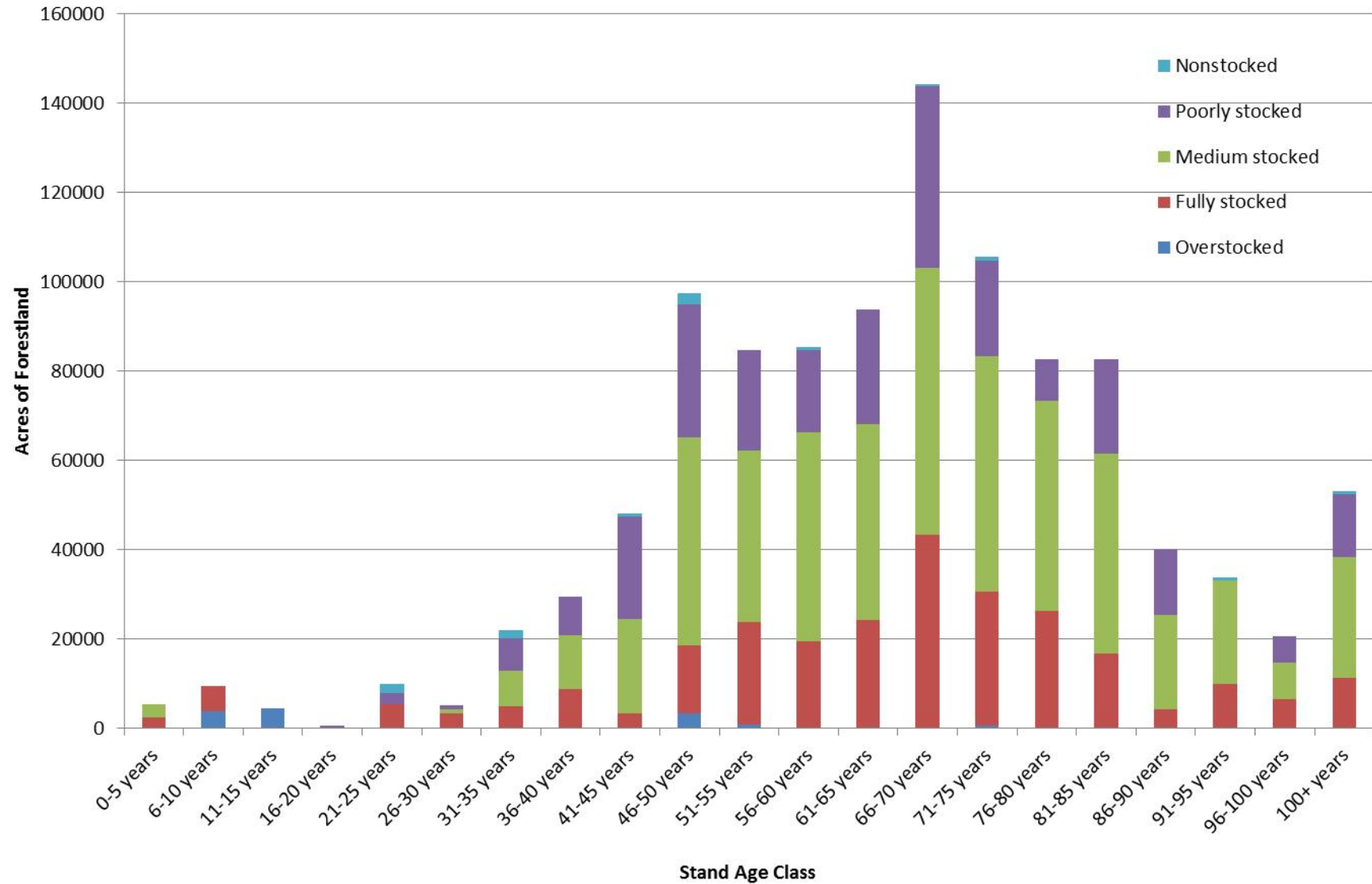
FIGURE 22. Flycatcher foraging height distributions, and locations of typical feeding and nesting sites in Baraboo Hills stream gorges.

Table 1. Desired landscape (forest) conditions within the Mississippi Alluvial Valley. See Glossary for definition of terms.

Habitat Type	Percent of Area	Description
Forest Cover	70-100%	Large (>10,000 acre) contiguous forested areas are desired. At any point in time, a minimum 35% and optimum 50% of the forest should meet the desired stand structure conditions (See <i>Management of Bottomland Hardwood Forests, Table 2</i>).
Actively Managed Forest	70-95%	Forests that are managed via prescribed silvicultural treatments to meet desired stand conditions.
- Regenerating Forest	$\leq 10\%$	Forest regeneration on areas > 7 acres (e.g., clearcuts where >80% of overstory has been removed) or forest restoration on agricultural lands (i.e., reforestation). However, achieving increased forest cover via reforestation overrides the 10% limitation.
- Shrub/Scrub	$\leq 5\%$	Thamnic woody vegetation (hydric or mesic) within bottomland forests, including forests in early seral (successional) stages.
Passively Managed Forest	5-30%	Forest areas that are not subjected to silvicultural manipulation (e.g., no-cut, wilderness, set-aside, and natural areas).

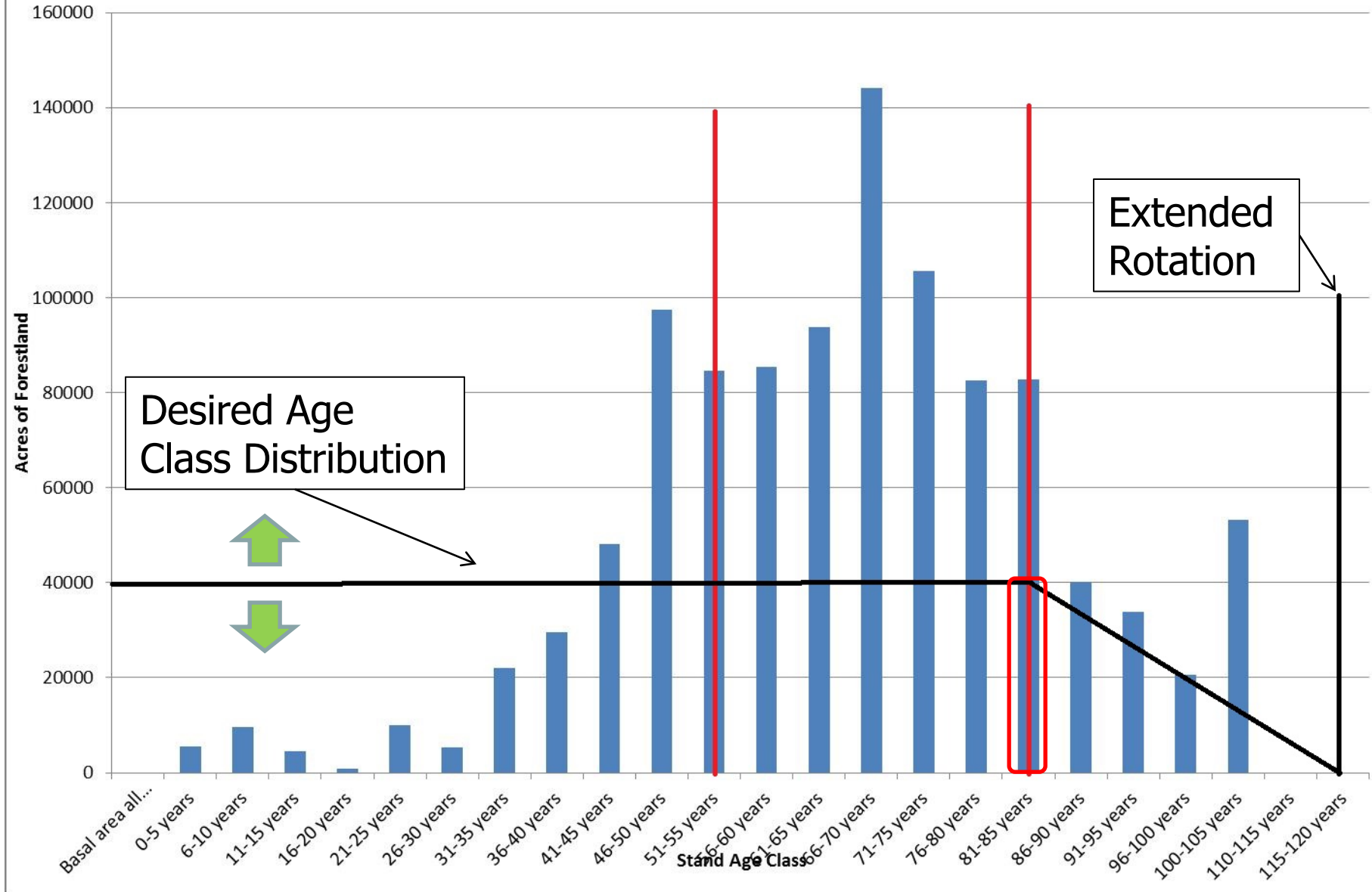
<https://www.lmvjv.org/desired-forest-conditions>

Stocking Levels by Age Class of Oak/Hickory Forest Type in Western Coulee & Ridges EL - FIA 2011



Desired Future Condition Potential Elements

Example: Oak/Hickory Forest Type on the Western Coulees & Ridges EL - FIA 2011



Regeneration Issues

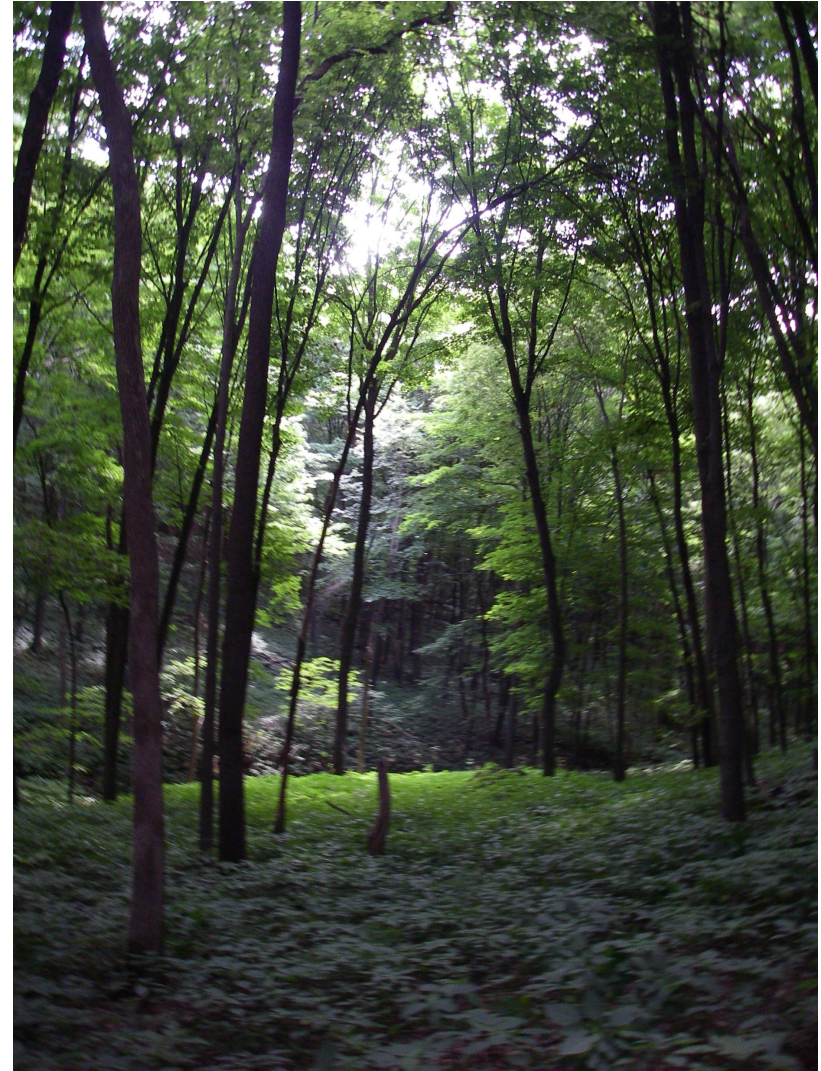
Some stands are experiencing problems with oak or northern hardwood regeneration. The source of the problems are diverse

Note: Some of these are unforced errors.

2020 Statewide Forest Action Plan Goals

A. Forests are diverse in structure, composition, function & complexity across all forested landscapes.

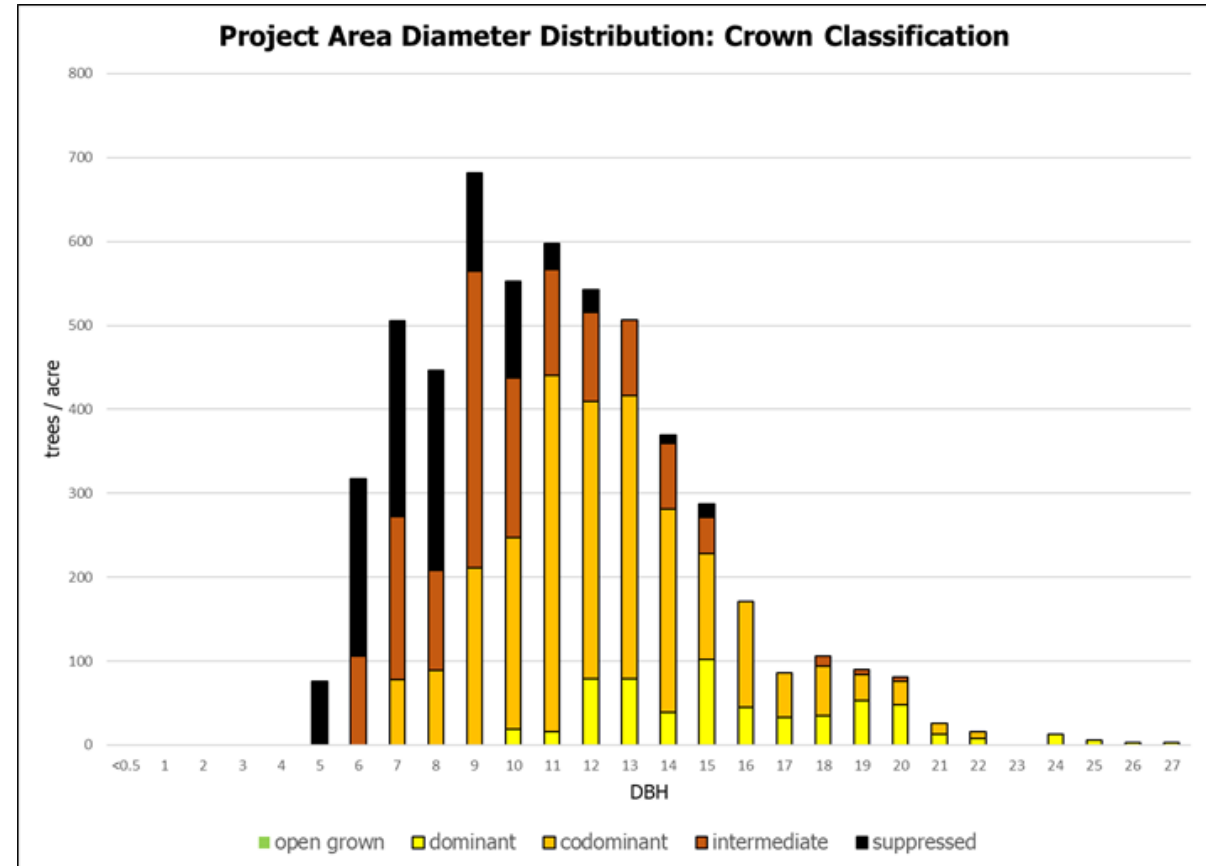
J. Forests are resilient & adaptable to future conditions.



Regeneration Issues

Impact on Forest Management

- A lack of regeneration means there is a discontinuous flow of value from a stand.
 - Note: The “value” is not only economic. This is a wildlife habitat imbalance as well.
- Conversion to cover types type may result in lower volume and value stands.
- This is occurring across a range of cover types including hemlock and cedar.
- Lack of stand ingrowth changes expected stand growth rates.





To more thoroughly investigate trends across the state, the Wisconsin DNR Forest Regeneration Monitoring Program (FRM) was launched in 2018. FRM data from approximately 160 different stands and nearly 1,000 plots located primarily on privately owned land within counties that are 30 percent or more forested, show that recently harvested stands being managed for oak are predominantly composed of non-oak species, and do not meet recommended regeneration criteria on average. **This suggests that current oak regeneration efforts** may be inadequate and further investigation is needed. ...

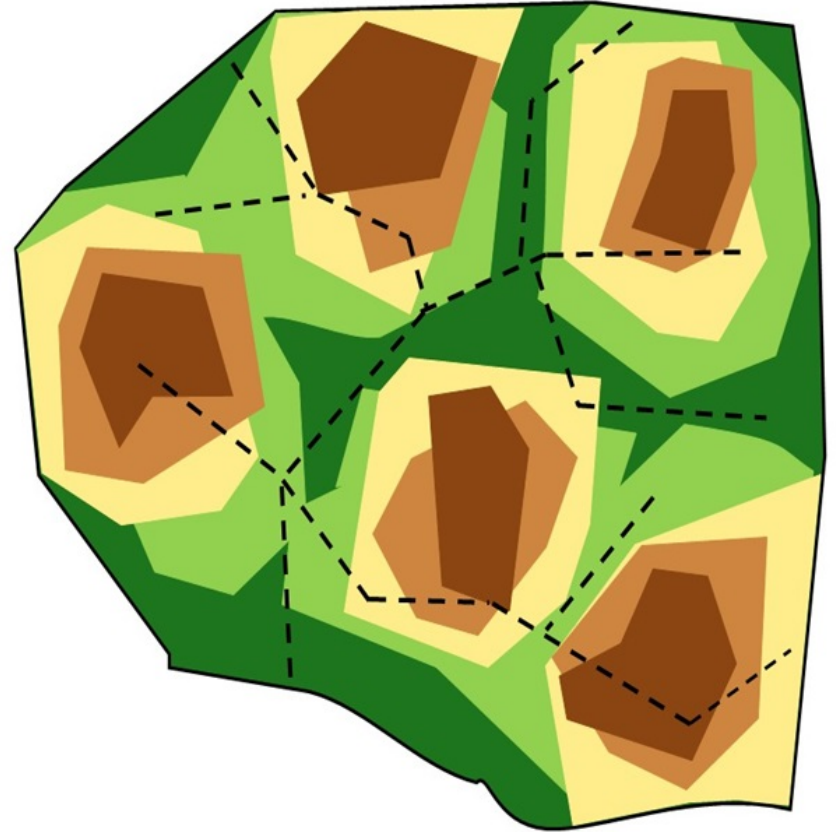
Page 27



Regeneration Issues

Strategies and Tactics

- Recognize when single tree selection is not the right tool. Single tree selection is been relied on too heavily and improperly executed in the past.
- Be creative and be open to irregular shelterwood and area regulated uneven-aged natural regeneration systems (group and patch selection) as well as even-aged systems.
- Work with habitat managers to help them recognize mixed regeneration with a component of oak as potentially successful. Oak is about playing the long game.
- Fire is a useful tool, put it in the toolbox



Master Planning Call to Action

1. Forestry community input is needed
 - Identify groups to include in plan review process
2. Long-term planning and preparation
 - Set timeline and trigger points



CONNECT WITH US

Brad Hutnik

Silviculturist / Forest Ecologist

Bradley.Hutnik@wi.gov

(608) 574-5642

Brian Zweifel

Foerest Products Specialist

Brian.Zweifel@wisconsin.gov

(715) 605-2615



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