Wisconsin Department of Natural Resources
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Re: Recommendations: North Central Forest Draft Regional Master Plan

Wisconsin's Green Fire: Voices for Conservation reviewed the draft North Central Forest Regional Master Plan. In our review we consulted the Ecological Landscapes of Wisconsin, the Wildlife Action Plan, the North Central Forest and Upper Wolf River Fishery Area Rapid Ecological Assessments, the Flambeau River State Forest Biotic Inventory, appropriate Common Element planning documents, the Wisconsin Silviculture Guide, Wisconsin Forest Management Guidelines, A Guide to Forest Communities and Habitat Types in Northern Wisconsin, Administrative Code NR 44 and WI Statutes 28.04(2) and 28.04(3).

The focus of our review is public land and water management for biodiversity. We did not review recreational infrastructure such as trails, boat landings, and campgrounds. We did not review road access plans. We did recommend removal of failing dams on State Fishery Areas.

We are pleased that many of our recommendations from our August 15, 2022 letter for the public scoping process were included in the draft North Central Plan.

We recognize the huge effort by DNR staff in developing this 1,100-page document. The detail, organization and maps are excellent.

Link to the plan:
https://widnr.widen.net/s/frrjxjqdzq/fl_mp_ncf_draftplan_withmaps

Baseline Information

Our recommendations are based, in part, on information in the Department's Rapid Ecological Assessment:

"The NCF EL offers the state's best opportunity to maintain or recreate large blocks of interior forest. It was historically covered by vast forests, and remains the most heavily forested EL, although most areas have been highly altered by historical logging. From the mid-1800s through the early 1900s, most of forested areas were heavily cut, and much of it was also severely burned. The composition and age structure of the northern forests were dramatically altered, with eastern hemlock virtually disappearing from many areas in which it had previously been dominant, and important trees such as yellow birch and eastern white pine greatly reduced in abundance. The major canopy increasers following the cutover included trembling aspen, paper birch, and sugar maple. The old forest characteristics of the EL are vastly diminished, persisting only as widely scattered remnants. The resulting decline in mature forest has also lead to the decline of obligate older forest species such as American marten and northern goshawk. Historical cutting combined with current management practices have tended to result in a

homogenization of mesic forests (Schulte et al. 2007), with a lack of both tree species diversity (especially mesic conifers) and structural diversity.

Older forests with trees older than 120 years are particularly rare, especially with structural attributes such as trees with a range of diameter sizes including very large sizes, large den trees, dead snags, and large-diameter coarse woody debris. The NCF EL offers excellent opportunities to manage areas for older forest within a context of outstanding aquatic features, intact wetlands, and vast, sometimes adjoining, public landholdings. Opportunities to expand patches of mesic conifers (hemlock and white pine) and boreal spruce-fir forest within the much more extensive matrix of northern mesic forest are also extremely important. This would benefit many species of wildlife strongly associated with or dependent on conifers and add structural and compositional features that contribute to landscape diversity and resiliency.

Current threats to mesic forests include excessive browsing by locally high white-tailed deer populations resulting in difficulties in regenerating hemlock, white pine, and yellow birch, as well as a decline in browse-sensitive herbaceous vegetation. Invasive species such as garlic mustard are also a threat as well as the widespread invasion of non-native earthworms, which destroy the duff layer. Emerald Ash Borer (EAB) is also present in the EL, which eliminates 98% ash within six years of infestation. Although ash is rarely dominant in northern mesic forests, its loss will result in lower tree species diversity and resiliency, especially as ash otherwise enhances forest resiliency by occupying a niche as a common species capable of rapidly filling canopy gaps caused by windthrow or the death of other individual trees."

Our recommendations are based on the status of the North Central Forest:

- Forest composition and age structure of forests and populations of plants and animals have changed dramatically from presettlement conditions.
- The 350 species of terrestrial vertebrates that occur in the North Central Ecological Landscape require habitats that range from young forests to old forests.
- Forests older than 120 years are rare.
- Northern dry-mesic and boreal forests are uncommon, reduced in diversity, and need special management to maintain.
- Non-native pests and pathogens are having severe impacts to forests and aquatic systems.
- Deer browsing, in a large area of the North Central Ecological Landscape, is severely impacting the natural history and ecology of forests by preventing tree regeneration and simplifying forest understories.
- There is an abundance of ephemeral ponds in many properties.
- High quality forested and non-forested wetlands, including calcareous forested wetlands, northern wet-mesic forest and hardwood swamp are present.
- Compared to southern Wisconsin, watersheds, lakes and rivers have good water quality, low sediment & pollution loads; normal hydrologic regimes and high diversity of aquatic organisms.

Recommendations

Integration. Use an integrated team (Wildlife, Natural Heritage, Forestry, Fisheries, Parks) to plan and implement land and water management.

Inventories. Conduct a Biotic Inventory/Rapid Ecological Assessment for large properties of groups of small properties that lack this analysis.

Species of Greatest Conservation Need. We support management to protect habitat and increase populations of Species of Greatest Conservation Need (97 animal and 74 plant species) as well as state and federal endangered and threatened species.

Areas of Special Conservation Interest, pages 536 - 547. To the extent possible, we support management to protect and enhance habitat on all the Conservation Opportunity Areas, Primary Sites, Important Bird Areas, Important Water Resources (Outstanding and Exceptional Waters, Trout Waters), the 10 Wetland Gems identified by the Wisconsin Wetlands Association, and Areas of Special Natural Resource Interest.

DNR Public Land Portfolio

We fully support the plan's expansion of state-owned lands: 58,682 acres of boundary expansion including an additional 21,543 acres of acquisition authority within the boundaries. This effort will help bring state-owned properties up their full potential for public recreation, economic development and the conservation of resources.

Public Land Boundary and Management Designations

We support:

- Expansion of The Upper Wolf River Fishery Area, DNR's preferred alternative, including expanded property boundaries, State Natural Area designations and designation as a Scenic Resources Management Area.
- Expansion of the Prairie River Fishery Area for the Prairie and Hunting Rivers.
- The Moderate Alternative to the Brook Trout Reserves conservation easement proposal.
- Expansion of the Brunet Island State Park boundary and Habitat & Native Community Management Area designations.
- Property boundary expansions at the Turtle Flambeau Scenic Waters Area, the Little Turtle Waterfowl Production Area, and land exchanges and contractions with the Silvernail Wildlife Area.
- The Preferred Alternative (4) for real estate adjustments at the Upper Flambeau River Scenic Waters Area: split between the Turtle Flambeau Scenic Waters Area and Hay Creek - Hoffman Lake Wildlife Area.
- Establishing the Bootjack Bog State Natural Area (Pursue purchase from the Board of Commissioners of Public Lands).

- Establishing the New Grandfather Falls State Ice Age Trail Area (Alternative 1 Designate a Project Boundary).
- Designating a State Natural Area on the Totagatic Lake Wildlife Area.
- Expanding property boundaries at Caroline Lake, Crandon Ribbed Fen, Fox Maple Woods, and Swamp Creek Fen State Natural Areas.
- Expanding property boundaries at Niebauer Springs Fishery Area, Chippewa Moraine State Recreation Area, Kimberly Clark Wildlife Area, and the North Country National Scenic Trail at Mellen.
- Implementing the boundary and land management designations on the Flambeau River State Forest.

Flexible Active Resource Management Alternative

We support the Flexible Active Resource Management Alternative as stated below. Resource management decisions must be made using an integrated team of staff from Wildlife, Forestry, Fisheries, Parks and Natural Heritage Conservation and follow the Common Element recommendations for wildlife habitat and forest management.

Page 641:
"Under this alternative, the management previously authorized in past master plans and Interim Forestry Management Plans would be reviewed for sufficiency. Management needs would be reviewed under a lens of how conditions on the ground had changed since the last resource management documentation was generated. Impacts of changing climate or recreation needs would be considered, as well as lessons learned since the last resource management was written and the anticipation of new techniques being developed and utilized in the future. This alternative would allow flexibility where appropriate, to respond to threats such as disease, invasive species, disaster events and climate change. Where needed, passive management would be the preferred method on sites or for resources that are more sensitive, difficult to access or where a more natural, untouched setting is preferred. Forest management would continue and expand in some places to allow for the production of forest products, the improvement of wildlife habitat
and the controlled maintenance and improvement of certain cover types and conditions. Old growth forest conditions would be enhanced through management actions and young forest would be created where appropriate through harvest and regeneration activities."

Wild Rice Resources

We support increased management to protect and restore wild rice.

Page 598:

"*Management in support of and to encourage the spread and propagation of wild rice is proposed at many wildlife areas including Bog Brook, New Wood and Spring Creek wildlife areas. Wild rice beds are important natural communities for many wildlife species, and also*

have a high cultural value. Water level manipulation can be important to both encourage and maintain wild rice. This mostly entails controlling the water levels in lakes and flowages to match the narrow range of water depths preferred by wild rice and to encourage repeated regeneration year after year. Drawdowns during the winter can help control against perennial species that out-compete wild rice."

Climate

We support increased efforts to manage natural resources in ways that address a changing climate and help sequester carbon in vegetation and soils.

Pages 22, 587 – 589:

"The North Central Forest Master Plan considers multiple factors when determining management of resources and uses on department lands. One consideration is how to manage resources and recreation opportunities in a changing climate, including which management actions should be prioritized in support of climate mitigation. Some of the management prescriptions that come out of this consideration include reforestation, allowing old growth forest conditions to perpetuate, protecting and promoting peatland communities, restoring and enhancing wetlands, protecting seeps and springs through riparian management and dam removal and considering water and watershed quality when determining management activities."

Prescribed Fire

Prescribed fire is an important management tool. We recommend adding a section in the plan on the benefits prescribed fire and adding an active prescribed fire regime to the management options for appropriate wildlife areas, parks, natural areas and recreation areas.

Tribal Resources, pages 18, 556 -557

The department must make all efforts to coordinate and cooperate with tribal nations in the North Central Forest Ecological Landscape.

Economic Impacts

We agree with the economic analysis on page 603:

"Implementation of the proposed plan would likely have a positive impact on the regional economy. As discussed in Chapter 3, the region's state parks, fishery and wildlife areas, flowages and forest are a significant tourist attraction. Visitor spending on goods and services associated with visiting DNR-managed properties support retail businesses within the region and the broader tourism and outdoor recreation industries. Increased visitation would likely increase the direct, indirect and induced impacts (sales and employment) associated with this spending. Forest management on the properties contribute to the local logging industry. Timber harvests that occur would contribute to the local supply of wood products. These harvests would add to the local economy through wages for laborers in the field and primary and secondary forest products industries."

Forest Management Recommendations for all DNR-managed Properties including the Flambeau River State Forest

Our recommendations are based on the Department's Regional & Property Analysis and the Regional Rapid Ecological Assessment. In addition, we referred to the wildlife and ecological guidelines in the Wisconsin Silviculture Guide, the Wildlife Action Plan, the SGCN Species Guidelines, Common Element documents for various habitats and forest types, the Old Forest & Old-growth Handbook, the American Marten Species Guidance document, the Bat Habitat Conservation Plan as well as published literature on ecological silviculture and DNR documents on irregular shelterwood techniques.

Property Planning Common Element Documents. The Common Element documents for general forestry and forest types are very good and offer an excellent summary and guide that includes management for forest biodiversity and ecological silviculture. We recommend property managers follow these management guidelines. In the case of white pine and white cedar the Common Element recommendations are far better than the outdated chapters in the Wisconsin Silviculture Gude.

Composition & Structure. A general concept is that terrestrial vertebrate wildlife diversity increases in forests that have high tree species diversity (composition) and high vegetative complexity (structure).

Irregular Shelterwood and Ecological Silviculture. These are important forest management systems. They are emerging as very useful concepts for managing forests for multiple resources on public lands. We recommend incorporating these concepts in property management.

Snags and Cavity/Den Trees. In northern mesic forests, snags stay standing for a relatively short time (5 years or less). While it is a good practice to maintain snags it is a much better strategy to maintain large-diameter live trees that have current and future cavity/dens. These trees remain standing for a very long period as they slowly decay and die. They end up as snags and, eventually, coarse woody debris. Trees greater than 21 inches dbh are required by some wildlife (pileated woodpeckers, wood ducks, barred owls, American martens, and fisher). A total of 61 species of Northwoods terrestrial vertebrates require cavity/den trees in their life cycle. Cavity/den trees are an important habitat element for federally listed bat species in the Bat Habitat Conservation Plan.

Reserve and Legacy Trees. A very important consideration for plant and animal diversity is applying legacy and reserve management. Legacy and reserve trees are typically large diameter, mature and old trees that are reserved during commercial tree harvests to meet composition and structure objectives. They are applied in coppice and standard, shelterwood, gap & group selection, and single-tree selection prescriptions. Guidelines for legacy and reserve trees are found in chapters of the Wisconsin Silviculture Guide, the Wildlife Action Plan, and many Species Management Plans.

Eastern Hemlock, Yellow Birch, and White Cedar. Expand their distribution and abundance and manage existing stands for old growth characteristics.

White Pine. We emphasize paying particular attention to management of white pine. White pine was once a common associate in forests throughout the North Central Forest Ecological Landscape. It can grow on a wide spectrum of Forest Habitat Types from wet to dry and from nutrient poor to nutrient rich. We recommend maintaining existing white pine trees throughout northern hardwood, oak and aspen forests and managing individual trees and stands for old growth characteristics.

Northern Hardwoods. Diversify northern hardwood stands. Many northern hardwood stands are relatively young, even-aged, and lack tree species diversity and a complex vegetative structure.

- Manage maple-dominated northern hardwoods to maintain and increase tree species diversity (especially white pine, yellow birch, red and white oak, and eastern hemlock).
- Manage northern hardwood stands to increase vegetative structure. Maintain existing complex structure and manage toward a future complex structure with coarse woody debris, sapling layers, den/cavity trees, a component of large-diameter trees, and a component of super-canopy trees.

Aspen. Diversify aspen stands. Many aspen stands contain only two or three tree species and have a simple vegetative structure. Manage to increase tree species and structural diversity. We recommend managing for mature reserve and legacy trees such as white pine, eastern hemlock, white spruce, red oak and white oak.

Oak. Maintain and Regenerate Red and White Oak Stands. Many oak-dominated stands are about 85 years old and managers are applying two-stage shelterwood silviculture. There are many reports of failure to regenerate oak due to deer browsing and competition from maple stump sprouts and ironwood. All efforts must be made to regenerate oak stands to oak. Carefully apply oak silviculture guidelines including all the steps needed for successful regeneration. Site prep and control of maple and ironwood may have to be conducted multiple times for successful oak regeneration. In many cases an oak-white pine mix is a good combination. After successful establishment of oak saplings, reserve 3 to 5 large mature large-crowned oaks per acre during overstory removal. These reserve trees provide wildlife habitat structure, cavities & dens, a constant supply of acorns, aesthetic appeal, and some will become coarse woody debris. Large reserve oaks in regenerating stands are an important habitat feature for golden-winged warblers (a species of special concern in the Upper Midwest's forests).

Ephemeral Ponds. Ephemeral ponds (vernal pools) are important habitats in forest landscapes. They are especially common on Flambeau River State Forest. We recommend procedures to keep logging equipment from entering ephemeral ponds.

Turtle Flambeau Flowage Scenic Waters Area, pages 37 – 74

We support:

- The proposed 3,500-acre property boundary expansion at the Little Turtle Waterfowl Production Area and minor expansions and redesignations at the Turtle Flambeau Peatlands State Natural Area.

- Redesignation between the Turtle Flambeau Scenic Waters Area and Hay Creek Hoffman Lake Wildlife Area to improve access for management purposes along the Xcel Energy Road easement.
- Redesignations along the North Fork Flambeau River from Flambeau River State Forest along the North Fork Flambeau River to both Turtle Flambeau Scenic Waters Area and Hay Creek-Hoffman Lake Wildlife Area.
- To the degree feasible and practicable, to design and conduct timber and other management activities to maintain and enhance an attractive, natural-appearing landscape (i.e., a landscape that looks untouched by human intervention)
- The property-wide Natural Resource Objectives and Prescriptions on pages 46 through 48.
- The specific Objectives and Prescriptions for each of the nine Land Management Areas. In particular, we support management of individual trees and stands of white pine, eastern hemlock and white cedar for old-growth characteristics and passive management of these forest types where appropriate.

We reviewed the recommendations developed by the Turtle Flambeau Flowage and Trude Lake Property Owners Association. We support their recommendations including the retention of the Quiet Area designation and inclusion of a 300-foot inland extension of the Quiet Area.

State Fishery Areas and Aquatic Resources, pages 75 – 155

We support the management objectives and prescriptions for the fishery areas in the North Central Forest Ecological Landscape, as listed on pages 75–79 of the plan document. These objectives and the proposed prescriptions are based on sound ecological principles that should support healthy and intact aquatic ecosystems and their watersheds as well as recreational fisheries and non-game fishes. We support the department's approach of holistic and collaborative watershed management.

An important concept reiterated in the objectives is the connectivity of aquatic and semi-aquatic habitats: streams, lakes, wetlands and riparian areas. Such connectivity allows for the movement of organisms (fish, invertebrates, avian and herptile species) among habitats needed for survival and reproduction. Impoundments created by animals and humans can impede movements and habitat connectivity. Several prescriptions in this plan address the management of impoundments created by beavers and dams built and maintained by humans. As stated in several property-specify management prescriptions, beaver and beaver dams should be adaptively managed "as necessary to maintain the cold-water stream environment for robust, self-sustaining brook trout populations."; whereas, beavers should be "allowed where their presence does not negatively affect trout habitat and neighboring or property infrastructure." Beaver management is controversial and decisions regarding the removal of beaver dams for enhancing brook trout populations should be weighed against the ecological role of beavers in enhancing aquatic ecosystem structure and function on a case-by-case basis.

Human-constructed impoundments create barriers that limit and often disconnect and fragment river ecosystems. However, they also provide habitat for migrating birds and waterfowl. As

stated in the prescriptions (p. 78), the maintenance of dams on department property serves to control water levels in impounded wetlands for different plant communities and wildlife species. However, dams on small streams can be vestiges of former mills and logging operations, and no longer serve a useful function. Such impoundments should be removed as appropriate to reconnect streams and lakes, providing free movement of fish and other aquatic organisms.

We recommend the removal of abandoned or failing dams on state fishery areas. These include the dam in the Eddy Creek Fishery Area that was “abandoned in the past.”, and the failing dam outlet structure at the Niebauer Springs Fishery Area, which created a pond that was drained in 2022. Removing (Eddy Creek) or not replacing (Niebauer Springs) these impoundment structures will allow for reconnection of stream segments and tributaries with mainstem rivers, thus allowing fish and other aquatic organisms to move throughout the river system.

We support the expansion of existing fisheries area properties or boundaries through land acquisition. These acquisitions include the: Bensen Creek Fishery Area (40 acres), Niebauer Springs Fishery area (568 acres), Prairie River Fishery Area (2,592 acres), and Upper Wolf Fishery Area (8,000 acres). Such expansions and acquisitions will further protect riparian areas and watersheds for cold- and cool-water streams in the North Central Forest region.

We support the Brook Trout Reserves Easement Program designed to conserve and protect brook trout populations from changing environmental conditions through the acquisition of potential easements by the department. These proposed brook trout reserve easement areas include 26 reserves and the redesignation of 3 properties in the North Central Forest Region. Such acquisitions and redesignations will further support brook trout populations likely to be at risk from the reduction of suitable habitat due to climate change and land development.

Staff and Funding

We understand that successful implementation of the North Central Forest Regional Plan will require additional staff and funding. This will require the State Legislature to enact laws and authorities to secure staff and funding.

Sincerely,

Meleesa Johnson,	Ron Eckstein
Executive Director,	Chair, Public Lands and Forestry Work Group
Wisconsin’s Green Fire	Wisconsin’s Green Fire

References

Wisconsin Forests at Risk: Engaging Wisconsinites in Another Century of Forest Conservation, Wisconsin’s Green Fire
https://wigreenfire.org/opportunities-now-2024-wisconsin-forests-at-risk/

Ecological Silviculture:
https://yff.yale.edu/speaker/anthony-damato

Wisconsin Silviculture Guide: https://dnr.wisconsin.gov/topic/forestmanagement/wsg

Ecological Landscapes of Wisconsin: https://dnr.wisconsin.gov/topic/Lands/Book.html

Wisconsin Wildlife Action Plan:
https://dnr.wisconsin.gov/topic/WildlifeHabitat/ActionPlan

Wisconsin Forest Management Guidelines:
https://dnr.wisconsin.gov/topic/forestmanagement/guidelines

North Central Forest Ecological Landscape Rapid Ecological Assessment:
https://widnr.widen.net/s/b78j8mtwnk/northcentralforestel

A Guide to Forest Communities and Habitat Guide for Northern Wisconsin (Second Edition):
https://dnr.wisconsin.gov/topic/forestmanagement/wfhtguide

Common Elements for Property Management:
Management Common Elements

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- Ecological Silviculture, Nagle, D'A

Irregular Shelterwood Definition [See embedded Word document below]

- Irregular Shelterwood Definitio

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