COUNTY FOREST COMPREHENSIVE LAND USE PLAN

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CHAPTER 300

DESCRIPTION OF FOREST AND MANAGEMENT PLANNING

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300 DESCRIPTION OF FOREST

300.1 COUNTY FOREST OWNERSHIP

The County Forest is composed of 159 management compartments ranging in size from 55 acres to nearly 3,529 acres. Within the county forest blocking boundaries approximately 75 percent of the land is county owned with most of the remaining 25 percent in small private holdings.

300.2 NATURAL FEATURES

300.2.1 Topography

The Jackson County Forest, located in the west central part of the state, lies primarily between the central plains and western upland physiographic region(s) of Wisconsin. The topography of the forest and surrounding area has glacial origin. The glaciers eroded hilltops and filled valleys, thus reducing relief. Elevations range from 1400 feet on Saddle Mound south of Pray to about 700 feet in the Shamrock area. The last glacier (the Wisconsin Stage) produced two distinct types of topography in the county. These are known as the Western Uplands and the Central Plains region.

The Western Uplands, or “driftless” area of the county, are composed of hills, coulees and sandstone bluffs, some with dolomitic limestone “caps”. The North Alma Unit of the county forest is located along the northeastern fringe of the Western Uplands. The Western Uplands lie to the west of the Black River.

The Central Plains region is considered to be glaciated, although most of the area was not ice covered. Only the extreme northeastern corner of the county, in the Town of City Point, was covered by ice. The terrain is undulating to rolling, but no significant morainal features are evident. The balance of the Central Plains region was part of the bed of Glacial Lake Wisconsin and was under water. These sandy plains are characterized by low sandy upland generously interspersed with marshes. The flat landscape is broken by isolated sandstone mounds rising several hundreds of feet above the surrounding terrain. All of the County Forest east of the Black River lies within the Central Plains region.

The Black River and its tributaries once served to drain Glacial Lake Wisconsin along with the Wisconsin River to the east. It is the dividing line between the Western Uplands and the Central Plains region. The Black River runs through the county from north to south, nearly bisecting it.

300.2.2 Geography

Jackson County is the fifteenth largest county in Wisconsin with a land area of approximately 626,000 acres, plus another 5,800 acres of water included in lakes and streams. Roughly 60 percent of the land in the county is classified as forest land. The County Forest, which contains about 122,000 acres, is the tenth largest in the state operating under provisions of the County Forest Law.

Appendix 1000.1 contains maps showing the location of the County Forest.

300.2.3 Geology and Soils

The County Forest is underlain by Mount Simon sandstone. Elevations range from 1400 feet on Saddle Mound south of Pray to about 760 feet in the Shamrock area.

Soils of the County Forest were formed from siliceous sandy alluvium or siliceous residuum from sandstone. They have very low fertility and are characterized by shallow topsoils with little organic matter and noticeable leaching of iron compounds into the lower layers of the subsoil. These soils are generally poorly suited for agricultural use.

Soils formed in the sandy alluvium include three soil associations: The Tarr-Boone-Rockdam Association, the Ironrun-Pony Creek-Dawsil Association, and the Loxley-Dawsil Association. The soils vary mainly due to their position in the landscape which determines the level of the water table. Permeability is rapid and available water capacity is low restricting land use.

Soils formed in alluvium overlying loamy residuum from the underlying interbedded

sandstone and shale include the Merrillan-Veedum-Humbird Association and the Elm Lake-Fairchild Association. Clayey residuum weathered from shale restricts the permeability and the water capacity in these soils. Wetness is a problem, but the soils are somewhat droughty when drained. Areas of these soils are generally found north of Highway 54 in the eastern side of Jackson County.

Detailed soils information is available from the USDA Web Soil Survey at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx .

300.2.4 Ecological Landscapes

Ecological Landscapes are regions in Wisconsin containing similar ecology and management opportunities. Each landscape can present unique management opportunities and challenges. These landscapes are essentially based on the National Hierarchical Framework of Ecological Units (NHFUE) (Cleland et al. 1997). More information on the 16 Ecological Landscapes defined within Wisconsin is available at: https://dnr.wi.gov/topic/landscapes/index.asp?mode=Choose

The Jackson County Forest lies within the Central Sand Plains Ecological Landscape(s)

Central Sand Plains – Found in central Wisconsin. An extension, nearly level expanse of lacustrine and outwash sand that originated from huge glacial lake. Exposures of eroded sandstone bedrock remnants as buttes, mounds and pinnacles are unique to this Ecological Landscape.

300.2.4.1 Land Type Associations

Land Type Associations are units of the National Hierarchical Framework of Ecological Units (NHFEU) classification system. They are much smaller than Ecological Landscapes and are generally based on glacial features. They can be useful for planning at finer scales within a landscape. The following Land Type Associations are present within the Ecological Landscapes of the Jackson County Forest. More information is available at: https://dnr.wi.gov/topic/landscapes/index.asp?mode=detail&Landscape=11

Seven Land Type associations are found on the Jackson County Forest they include:

Arbutus Uplands- The characteristic landscape pattern is undulating erosional moraines. Outwash stream terraces are common in valleys. Soils are predominantly somewhat poorly drained loamy sands over loamy colluvium of residuum, over sandstone-shale bedrock. Soils in the valleys are predominantly sandy outwash over bedrock. Common habitat types include PArVRh, PArVHa and forested lowland.

Spaulding Uplands-The characteristic landscape pattern is undulating erosional moraine and bedrock-controlled hills and ridges. Soils are predominantly somewhat poorly drained loams over loamy or clayey colluvium or residuum, over sandstone-shale bedrock. Common habitat types include PArVRh, PArVHa, PVGy, AVb-V and forested lowland.

Fairchild Uplands-The characteristic landscape pattern is a rolling bedrock-controlled surface with a thin mantle if eroded glacial till. Outwash stream terraces are common in valleys. Soils an slopes and hilltops are predominantly moderately well drained loamy sands over loamy colluvium or residuum, over sandstone-shale bedrock. Soils in the valleys are predominantly sandy outwash over bedrock. Common habitat types include PArVRh, PArVHa, forested lowland, and AVb-V.

Black-Robinson-Harrison Terraces and Floodplains-The characteristic landscape pattern is gently sloping stream terraces and floodplains containing the area's larger rivers. A few bedrock-controlled knolls and ridges protrude. Soils are predominantly excessively drained sands over sandy alluvium; floodplain soils contain loamy sand strata and range from moderately well to poorly drained.

Jackson Siliceous Sand Plain-The characteristic landscape pattern is board, nearly level stream terraces formed over a glacial lake plain. A few bedrock-controlled knolls and ridges protrude. Soils are predominantly somewhat poorly and poorly drained mucky sands over sandy alluvium.

Jackson-Juneau Sandstone Knolls and Terraces-The characteristic landscape pattern is rolling, eroded, bedrock-controlled knolls and ridges, surrounded by nearly level glacial lake plain and stream terraces. Soils are predominantly excessively drained sands over sandy colluvium, residuum, or alluvium; some are over sandstone bedrock.

Northwest Outlet Cranberry Bogs-The characteristic landscape pattern is broad, nearly level stream terraces formed over a glacial lake plain. Soils are predominantly very poorly drained muck peats, mucks, and mucky sands aver sandy alluvium or glaciolacustrine residuum. A few bedrock-controlled ridges rise above the glacial lake plain; these have excessively drained sandy soils.

The Arbutus Uplands, Fairchild Uplands and Spaulding Uplands Land Type Associations occur exclusively in the northern areas of the Forest in City Point, Alma and Komensky Townships. These Associations have loamy soils and are well suited for growing quality hardwoods.

The Black-Robinson-Harrison Terraces and Floodplains, Jackson Siliceous Sand Plain, Jackson-Juneau Sandstone Knolls and Terraces and Northwest Outlet Cranberry Bogs Land Type Associations occur primarily on the southern two thirds of the Forest. These Associations have nutrient poor sandy soils that generally aren't capable of producing quality hardwoods and are better suited for scub oak, jack pine, white pine and aspen.

300.2.5 Vegetative Cover Types

Approximately 83 percent of the Jackson County Forest land base is forested, and approximately 17 percent of the Jackson County Forest is non-forested. The forest is composed of eleven commercial forest cover types. The major forest types among them are jack pine (about 16,400 acres), oak (32,000 acres) and aspen (27,100 acres). These three species represent about 80 percent of the commercial forest types on the forest. Chapter 800 (820.2), contains silvicultural prescriptions for the major forest cover types found in the County Forest. The non-forested is an open landscape comprised of wetlands, lowland shrubs, upland shrubs, bogs, lakes, streams, grassy openings, roads, rock outcroppings, and

utility right-of-ways.

The majority of the forest is located east of the Black River with a small block of land (about 5,300 acres) located north of the village of Merrillan. Chapter 1000, (1000.1), contains a map showing the location of the County Forest.

FORESTED COMMUNITIES

The forested cover types are made up or a variety of size classes (*regeneration, sapling-pole, and saw timber*) and structure (*canopy, layers, ground vegetation, dead and downed material and inclusions*).

NON-FORESTED COMMUNITIES

Non-forested habitats are important components of management within the County Forest. Up-land and wetland non-forest types provide important habitat for distinct groups of species.

Upland Non-Forest

Upland non-forest areas of the County Forest include:

Grass openings- consist of upland grasses such as brome, quack, bluegrass, timothy, big and little bluestem, and Indian grass.

Herbaceous vegetation- ground cover predominated by herbaceous species with bracken fern, sweet clover, giant ragweed, sting nettle, upland aster, goldenrod, and prairie dock being common.

Shrub opening- primarily upland site less than 10% stocked with tree species but having 50% or more of the area stocked with taller growing, persistent shrubs. This includes hazel, dogwood, juneberry, sumac, alder, willow, and prickly ash.

Rock outcrops- include rocky talus and bedrock.

Wetlands

Wisconsin State Statutes define a wetland as "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which has soil indicative of wet conditions." Wetland communities are recognized to be a complex association of plants and animals, soils and water levels having special natural values. They provide many functional values including shoreline and flood protection, water quality protection, groundwater recharge, and animal and plant habitat. Therefore, it is the policy of Jackson County to preserve, protect, and manage wetlands under its jurisdiction in manner that recognizes the natural values of wetland and their importance on the environment. Scientist distinguish dozens of wetland types, characterized by vegetation, soil type and degree of saturation or water cover. Some of the more prominent types found on the County Forest include:

Aquatic bed- plants growing entirely on or in a water body no deeper than 6 feet. Plants may include pondweed, duckweed, lotus and water-lilies.

Marshes- characterized by standing water and dominated by cattails, bulrushes, pickerelweed, lake sedges and/or giant bur-reed.

Sedge or "wet" meadows- these wetlands typically have saturated soils rather that standing water. Sedges, grasses and reeds dominant, but may also have blue flag iris, marsh milkweed, sneezeweed, mint and several species of goldenrod and aster.

Scrub/shrub- these areas, which include bogs and alder thickets, are characterized by woody shrubs and small trees such as tag alder, bog birch, willow and dogwood.

Forested- these areas, include bogs and forested floodplain complexes, are characterized by trees 20 feet or more in height such as tamarack, white cedar, black spruce, elm, black ash, green ash and silver maple.

Forest management is conducted on many of the forested wetlands with activities occurring primarily during frozen conditions.

300.2.6 Fish and Wildlife

Wisconsin supports over 650 different types of mammals, birds, reptiles, amphibians and fish as well as millions of invertebrates. Management of County Forest lands and the biotic communities they support provide a mix of habitat types and ages for a wide range of wildlife species. Each species, or interacting group of species, do best under different conditions. County Forest lands provide a full range of habitats from open grasslands/barrens to mature forests, from bogs to forested wetlands, from spring ponds to lake shorelines. County Forest staff work closely with WDNR fish and wildlife managers and conservation organizations to identify and manage critical habitat for breeding, migrating and wintering fish and wildlife.

While the Jackson County Forest provides for a wide range of fish and wildlife species, current management strategies or programs have emphasized the following species and/or communities*:* ruffed grouse, elk, white-tailed deer, wild turkey, black bear, gray wolves, waterfowl, and furbearers. Regular surveys and research are conducted for each of these species/groups to monitor population trends, habitat use, and distribution across the forest.

300.2.7 Rare and Endangered Resources

A review of the Natural Heritage Inventory (NHI) indicates the presence of a number of rare species, natural communities and unique natural features on the Jackson County Forest. All land disturbing projects will include an evaluation phase, to determine whether an NHI screening is required.

The Natural Heritage Inventory Database is the most comprehensive source of rare species data for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and

review of public and private activities across the state, The NHI Portal is currently available to DNR staff and County Forest staff who hold a data sharing license.

The Wisconsin Historical Preservation Database is the most comprehensive source of cultural resources for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and review of public and private activities across the state, the Wisconsin Historical Preservation Database is currently available to DNR staff and County Forest staff.

300.2.8 Water

Jackson County has approximately 5,800 acres of surface water in its lakes and streams. There are 144 lakes and flowages with a surface area of about 3525 acres. 32 of these waterbodies are named lakes and flowages covering about 1154 acres. Another 112 are unnamed flowages totaling 2009 acres. There are 667 miles of streams with a surface area of about 2275 acres. Of this, 79 streams, or 279 miles, are classified as trout streams.

Fishery resources within the County Forest are somewhat limited. Thirteen named and unnamed lakes and flowages have all or portions of their shoreline under county ownership. All but one is warm water fisheries. Wazee Lake, formerly an open pit taconite ore mine, has excellent quality water and has been stocked with rainbow, brown and brook trout, as well as walleye and smallmouth bass. The county owns limited frontage on four trout streams in the Towns of Brockway and Manchester. The streams are Robinson Creek, Clear Creek, Stoney Creek and Levis Creek.

Jackson County also has 54 streams totaling 132.31 miles which are classified as Outstanding and Exceptional Resource Waters. An entire listing of the outstanding and exceptional resource waters can be found in Wisconsin Admin. Code NR102.10 and 102.11

300.3 CULTURAL FACTORS

300.3.1 Economy

The importance of the County Forests to Wisconsin's economic health continues to rise. County Forests sustain over 60,000 full-time jobs derived from logging, trucking, paper production, manufactured building materials, and lumber. Many other jobs are created in such businesses as the expanding printing industry and are located far from the forested northland. County Forests contribute to the 24-billion-dollar forest industry in Wisconsin.

In addition, the lands managed by these 30 counties provide an important recreation resource to complement our state's valuable tourism industry. Tourists spend valuable money at local businesses. By providing 2.4 million acres of public recreation land, we bring tourist to our state. As population increases and public access to privately owned forestland decreases, the need for accessible lands unquestionably will assume an ever more important role. More information on the economic impact of the County Forest program can be found at https://www.wisconsincountyforests.com/

Production of forest products and spin-off industries derived from the recreational opportunities on the Forest and the forest products it produces are vitally important to Jackson County's economic well-being. Forest industry is the #30 ranked employer in the County. Tourism is ranked #3. This information can be found at the following link: https://dnr.wi.gov/topic/forestbusinesses/factsheets.html.

300.3.2 Education and Research

Education and research continue to be critical components in making decisions that affect our natural resources. As public needs and demands of our forest and its products increase, we must be prepared to assure that sound decisions result. To this end, Jackson County encourages and supports research efforts that relate to the forest, and educational opportunities that will promote a better understanding of forest communities and management.

300.4 OTHER PUBLIC LANDS OWNERSHIP

Jackson County Forest shares a common boundary with Black River State Forest and Clark County Forest. Roads and trails are connected without interruption between the public lands providing for a more enjoyable experience for the user groups. The similar forest cover type allows us to share ideas on how to best manage our forest sustainably. Jackson County Forest will continue to form and build on these relationships with other adjacent public lands in the best interest of the public.