

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 138 management compartments ranging in size from 320 acres to nearly 1400 acres. Within the county forest boundaries, approximately 99 percent of the land is county owned with most of the remaining 1 percent in small private inholdings. A map of these compartments can be found in Chapter 1000.3.

300.2 NATURAL FEATURES

300.2.1 Topography

The Lincoln County Forest, located in the northcentral part of the state, lies primarily within the Northern Highland 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. The glaciers came southward in two different ages. The earlier ice sheet was called the Illinoian and covered the entire county. The later and principal glacier was the Wisconsin Ice Sheet, which stopped when it had covered slightly more than the northern one-half of the County. Lincoln County is home to some of the highest elevations that can be found within the state. Lookout Mountain located in the town of Harrison (T34N R8E Sec. 27) has an elevation of approximately 1,920 feet above sea level and is the fourth highest point in Wisconsin. The lowest elevation can be found in the southernmost part of the county along the Wisconsin River. The elevation here is about 1,220 feet above sea level. The topography on the County Forest is varied. While the landscape is level over much of the area, there are conspicuous exceptions. The Harrison, Mail Route and Underdown Blocks on the eastern side of the County are hilly with many steep slopes and small lakes. The western portion of the County is relatively level with few hills and more gentle slopes with a smaller number of lakes, although streams interlace the land. The Highway 8, Highway T, New Wood and Wildwood Blocks are low and quite flat with large swamp and marsh areas. The Pine Tree Lane Block is flat with the majority of the area being moderately well drained, sandy soil. All the drainage of the County flows through tributaries into the largest river, the Wisconsin, which flows southward and bisects the County.

300.2.2 Geography

Lincoln County has a land area of approximately 559,160 acres, plus another 16,840 acres of water included in lakes and streams. Approximately 60 percent of the land in the county is classified as forest land. The County Forest, which contains approximately 100,843 acres, is the 11th largest County Forest in the State.

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

300.2.3 Geology and Soils

The soils of Lincoln County have been derived largely from the weathering of the glacial drift deposits and show a great variation within relatively short distances. Since the glacial period, the soils have been modified by water action, wind, and the accumulation and incorporation of organic material. Soil types on the County Forest vary extensively. The New Wood, Wildwood and Highway T blocks of the county forest are dominated by highly fertile somewhat poorly drained silty Magnor soils. The northern portion of the Underdown block off David Road is dominated by Goodman silt loam which is highly fertile and has a high water holding capacity. The southern Underdown, Harrison and Mail Route blocks of the county forest are dominated by Keweenaw, Sarona, and Padus loamy sands that have a lower water capacity and are less fertile than silty soils. The Pine Tree Lane and Highway 8 Blocks are dominated by droughty infertile soils such as Crosswell, Crosswood and Sarwet sandy loams. A generalized soil map can be found in Chapter 1000.4. Detailed soils information is available from the USDA Web Soil Survey (websoilsurvey.nrcs.usda.gov).

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 Lincoln County Forest lies within the North Central Forest, Northern Highland and the

Forest Transition Ecological Landscapes.

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 Lincoln County Forest. Land Type Associations (LTA's) include: Jump River Ground Moraine (New Wood, Wildwood and CTH T Block), Chequamegon Washed Till and Outwash (New Wood, Pine Tree Lane and Highway 8 Block), Harrison Hills (Harrison Hills, Underdown and the Eastern Mail Route Block), Irma Moraines (Northern Underdown Block), and Northern Highland Pitted Outwash (Mail Route Block). LTA's, having common ecological characteristics, allow land managers to better plan for future vegetative communities, wildlife species to feature, and compatible recreation uses.

More information is available at:

<https://dnr.wi.gov/topic/landscapes/index.asp?mode=detail&Landscape=11>

300.2.5 Vegetative Cover Types

Approximately 83 percent of the Lincoln County Forest land base is forested, and approximately 17 percent of the Lincoln County Forest is non-forested. Forested uplands are comprised of primarily aspen and northern hardwoods while black spruce, swamp hardwoods, tamarack, and cedar occupy the forested lowlands. Non-forested includes types such as open water, wetlands, rights-of-way, grass openings, shrubs and bogs.

FORESTED COMMUNITIES

The forested cover types are made up of a variety of size classes (*regeneration, sapling-pole, and saw timber*) and structure (*canopy, layers, ground vegetation, dead and downed material and inclusions*). Forested communities associated with the Lincoln County Forest cover approximately 83% of the forest.

Forest cover types associated with the County Forest are:

Aspen	39 %
Bottomland Hardwoods	<1 %
White Birch	<1 %
White Cedar	2 %
Balsam Fir	<1 %
Hemlock	<1 %
Red Maple	1 %
Northern Hardwoods	23 %
Oak	2 %
Jack Pine	<1 %
Red Pine	2 %
White Pine	<1 %
Black Spruce	8 %
Swamp Hardwoods	2 %
White Spruce	1 %
Tamarack	2

NON-FORESTED COMMUNITIES

Non-forested habitats are important components of management within the Lincoln County Forest and cover approximately 17% of the forest. Upland and wetland non-forest types provide important habitat for distinct groups of species.

Upland Non-Forest

Upland non-forest areas cover approximately 2% of the Lincoln County Forest and 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, white clover, grasses. Sedges, giant ragweed, stinging 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, junberry, sumac, alder and willow.

See Chapter 830 for detailed discussion on Biological Community Types.

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 Lincoln County to preserve, protect, and manage wetlands under its jurisdiction in a manner that recognizes the natural values of wetlands and their importance to the environment. Scientists distinguish dozens of wetland types, characterized by vegetation, soil type and degree of saturation or water cover. Wetland communities make up approximately 15% of the Lincoln County Forest.

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 more often than not have saturated soils rather than standing water. Predominant vegetation included sedges, grasses and reeds 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. See Chapter 830 for detailed discussion on Biological Community Types.

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 including open grasslands/barrens, mature forests, bogs, forested wetlands, spring ponds and lake shorelines. County forestry 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 Lincoln 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:

The early successional stage habitat that aspen management provides within the upper Great Lakes Region (Minnesota, Wisconsin and Michigan) is becoming more critical as forests across the region continue to age and transition into longer lived forest communities. Emphasis on aspen management will continue on the Forest, and diversity of stand size will be taken into consideration when determining prescribed harvests. This does not diminish the significance of longer rotation forest communities, such as uneven aged northern hardwoods. Diverse forest management will continue. Lincoln County manages three ruffed grouse management areas (Underdown, Harrison Flowage and Camp 26 Unit). Development of the Four Mile Road Unit will take place as use indicates the need and funding is available.

Permanently sodded, grassy openings within the forest, many originating from old log landings, camps, old burns, or frost pockets are vital components of forest wildlife habitat. An effort is being made to maintain and improve the quality and, in some cases, the quantity of openings. Mowing is performed with the objective of setting back woody encroachment and promoting herbaceous (grass/forb) cover to benefit deer, woodcock, ruffed grouse, turkeys and many other forest wildlife species. This cover type is an important habitat component for many of our game species as well as numerous other non-game species. There are 345 managed openings on the Lincoln County Forest and openings are mowed on a 4-year rotation.

Historically, management of four man-made flowages within the Lincoln County Forest; (Camp 26, Trapper Morrison, Coffee Creek and Harrison Flowage) have taken place. The shallow water communities provided by the Camp 26, Trapper Morrison and Coffee Creek flowages offer habitat for a variety of waterfowl, songbirds, shorebirds, furbearers, reptiles,

amphibians and invertebrates. Efforts to increase the wild rice beds and desired emergent aquatic plants has been the goal on these flowages. Evaluation of the Coffee Creek Flowage will take place at some point in the future to define its benefit to wildlife and if management should continue. Active management of the Harrison Flowage will emphasize recreation, water conservation and a refuge for game, as originally intended in flowage construction.

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 Lincoln 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

Lincoln County has 16,840 acres of water involving 726 named lakes and 668 miles of streams. Of this total, 318 miles are classified as trout streams.

Within the County Forest boundaries there is a variety of fishery resources. Approximately 49 named and 140 unnamed lakes have all or portions of their shoreline under county ownership. In addition, the county owns frontage on 19 named trout streams totaling over 44 miles. A complete inventory of the surface water resources within the Lincoln County

Forest can be found in Chapter 1015.

Lincoln County also has several streams located within the County Forest boundary which are classified as Outstanding and Exceptional Resource Waters including:

- Central Fork New Wood River
- Little Pine Creek
- Big Pine Creek
- Green Meadow Creek
- Camp 26 Creek
- Armstrong Creek
- Flannigan Creek
- Hay Creek
- Squaw Creek
- Krueger Creek
- Prairie River

Note: 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 new jobs, such as in the expanding printing industry, are located far from the forests. 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 are valuable to the economy and spend a considerable amount of money at local businesses. By providing 2.4 million acres of public recreation land, county forests 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 Lincoln County's economic well-being. Forest industry is the #1 ranked employer in the County. Tourism is ranked #5. 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 make sound decisions based upon the best information available. To this end, Lincoln 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.