

WASHBURN COUNTY FOREST COMPREHENSIVE LAND USE PLAN
CHAPTER 300 – DESCRIPTION OF FOREST AND MANAGEMENT PLANNING

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Approved by Washburn County Board of Supervisors October 19, 2021

No Revisions

300 DESCRIPTION OF FOREST

300.1 COUNTY FOREST OWNERSHIP

The Washburn County Forest is consolidated into eight geographical units. The largest of these units is a block located in the northeast corner of the County. Within the County Forest blocking boundaries, approximately 88% of the total area is County Forest Land with a majority of the remainder in small private ownerships and some owned by other public agencies.

The Washburn County Forest is composed of 113 management compartments ranging in size from 213 to 4,140 acres. These compartments are combined into Integrated Resource Management Units as described in Chapters 800 and 3000.

300.2 NATURAL FEATURES

300.2.1 Topography

The Washburn County Forest, located in northwest Wisconsin, lies primarily in the northern highland physiographic region of the state. The topography ranges from the flat, poorly drained expanses in the northeastern part of the forest, to the gently rolling sandy pine areas in the west and central, to the more rugged terrain dotted with small lakes in the southeast. The topography of the forest and surrounding area is glacial in origin. Elevations range from about 1000 feet above sea level in the northwest, to about 1200 feet in the northeast and up to 1400 feet in the southeast and southwest.

300.2.2 Geography

Washburn County, located in the northwest part of the state, is the 29th largest county in Wisconsin with a land area of approximately 557,500 acres, including 35,000 acres of lakes and streams. Approximately 68% of the land in the County is classified as forested. The County Forest lands encompass 149,500 acres and comprise approximately 27% of the total County area. The Washburn County Forest is the 5th largest of the 30 County Forests in Wisconsin.

The County Forest is spread throughout Washburn County, with slightly more property in the northern one-half. The two largest contiguous blocks are located east of Minong and the other north of Birchwood.

300.2.3 Geology and Soils

The soils of Washburn County were derived largely from the weathering of glacial drift deposits and show a great deal of variation within relatively short distances. Since the glacial period, the soils have been modified by water, wind and the accumulation and incorporation of organic material.

There are two major soil groups within Washburn County. Generally the soils in the west central and northwest (Bayfield Sands region) are reddish brown sands. These soils are generally low in fertility, easily eroded and “droughty”. Soils in the remainder of the County are loamy sands, sandy loams, silt loams and other soils. Soil groups consisting of wet or flooded mineral soils, peat and muck occur in numerous depressions over most of the County.

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 (Cleland et al. 1997). More information on the 16 Ecological Landscapes within Wisconsin is available at:

<https://dnr.wi.gov/topic/landscapes/index.asp?mode=Choose>

A majority of the Washburn County Forest lies within either the North Central Forest or Northwest Sands Landscapes. There are smaller areas within the Forest Transition Landscape.

North Central Forest – Found across northern Wisconsin. Soils are generally sandy loams, sands and silts with forest types dominated by northern mesic forest types such as northern hardwood, aspen-birch and spruce-fir.

Northwest Sands – Found in northwest Wisconsin. Soils are generally well drained sands or loamy sands with forest types dominated by pine, aspen-birch and oak.

Forest Transition – Extends east-west across much of Wisconsin. Soils are generally well drained sandy loams but there’s a considerable diversity in soil attributes. Forest types are variable but locally are dominated by oak and aspen.

How the Forest areas relate to these landscapes is more specifically identified within the Integrated Resource Management Unit descriptions in Chapter 3000.

300.2.5 Vegetative Cover Types

The Washburn County Forest is approximately 84 percent forested and 16% non-forested. 74% of the Forest is considered upland, 99% of these uplands are forested. 26% of the County Forest is considered lowland, 42% of which is forested.

300.2.5.1 Forested Communities

The forested cover types on the Washburn County Forest are made up of a variety of size classes (regeneration, saplings, poles and sawtimber) and structure (canopy layers, ground vegetation and dead/downed material).

Forested cover types associated with the Washburn County Forest are:

Data is listed as a percent of total County Forest Acreage

Upland

Aspen	38.3%	57,058 acres
Oak	11.8%	17,514 acres
Northern hardwood	9.7%	14,390 acres
Red pine	6.9%	10,272 acres
Jack pine	5.0%	7,437 acres
White birch	0.8%	1,119 acres
Spruce/fir	0.7%	1,023 acres
White pine	0.4%	646 acres
Hemlock	0.0%	32 acres

In general, the trends on upland forest type changes since the last Plan period are as follows (*see Chapter 800 for additional information on how the County is addressing forest trends*):

- Slight increases in aspen acreage due to both acquisition of lands and aggressive management techniques to protect against statewide loses in this type.
- Slight increases in oak types, primarily due to changes in how forests are inventoried and typed.

- Slight reduction in northern hardwood types, which is primarily due to changes in type definition to northern red oak.
- Slight increases in red pine due to unavoidable losses in jack pine types
- Fairly significant drop in jack pine despite intensive site preparation efforts to retain the type on the landscape. Some of this drop resulted from better forest inventory data and subsequent changes to the primary forest type.

Lowland

Swamp Hardwood	4.4%	6,525 acres
Black Spruce	2.4%	3,510 acres
Tamarack	2.3%	3,397 acres
Cedar	1.1%	1,577 acres
Bottomland Hardwood	0.5%	740 acres
Swamp conifer	0.2%	263 acres

- A slight drop in swamp hardwood and black spruce, along with increase in tamarack are all primarily due to updated forest reconnaissance and changes to primary forest type designation
- The large drop in swamp conifer is due to the code being phased out and replaced with the predominant species as the primary cover type.

300.2.5.2 Non-Forested Communities

These are habitat types that are not occupied with trees, generally due to their native condition. They are important components of management within the forest.

Upland and wetland non-forest types provide important habitat for distinct groups of species. Non-forested communities associated with the Washburn County Forest are:

Data is listed as a percent of total County Forest Acreage

Upland

Right-of-way	0.4%	533 acres
Grass	0.3%	413 acres
Upland brush	0.1%	160 acres
Rock outcrop	0.0%	30 acres

Campground	0.0%	28 acres
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Lowland

Lowland brush	7.0%	10,372 acres
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Muskeg	5.3%	7,874 acres
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Open water	2.5%	3,795 acres
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Emergent vegetation	0.2%	317 acres
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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. *Refer to Chapter 800 for any specific management strategies.*

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 Washburn 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. Data is 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. Data is 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 only available to DNR staff.

300.2.8 Water Resources

Washburn County has approximately 38,000 acres of water, including 323 named lakes, 11 flowages, and 298 miles of named streams, of which, 85 miles are classified as trout stream.

Within the Washburn County Forest boundary, there are a wide variety of water resources, including many fisheries. There are approximately 108 named lakes and over 575 unnamed lakes and ponds either completely or partially within the Washburn County Forest. In addition, Washburn County owns frontage on 98 miles of stream, 19 miles of which is classified as trout stream. A complete inventory of surface water resources can be found in the appendix.

The Natural Resources Board recommends certain waters to be designated by the Wisconsin State Legislature as Outstanding Resource Waters (ORW) or Exceptional Resource Waters (ERW). These are surface waters which provide outstanding recreational opportunities, support valuable fisheries, have unique hydrologic or geologic features, have unique environmental settings and are not significantly impacted by human activities. ORW and ERW waters are effectively the same except ORW waters do not have any direct point sources discharging pollutants into the water. *Outstanding Resource Waters on the lists below are identified as **; Exceptional Resource Waters are identified as **

Note: an entire listing of outstanding and exceptional resource waters can be found in Wis. Admin. Code NR102.10 and 102.11

Major lake resources within, adjacent or near the County Forest include:

Bass Lake	L. McKenzie Lake	Potato Lake
Bear Lake**	McKenzie Lake**	Slim Creek Flowage

Casey Lake	McRae Lake	Spider Lake
Davis Flowage	M. McKenzie Lk**	Tranus Lake
Harmon Lake	Minong Flowage	
Long Lake**	Mud Lake	

Major river resources within, adjacent or near the County Forest include the Namekagon** and Totogatic Rivers**.

Major stream resources within, adjacent or near the County Forest include:

Bean Brook**	Frog Creek	Slim Creek
Bean Brook Spr**	Godfrey Creek*	Spring Brook*
Beaver Brook**	Gull Creek*	Spring Creek
Black Brook	Hay Creek	Stuntz Brook
Boyer Creek	L. Bean Brook*	Sucker Creek
Casey Creek	MacKay Creek	Tranus Creek
Chicog Creek	Maggie Creek	Westenberg Springs
Chippanazie Crk*	McKenzie Creek*	Whalen Creek*
Dugan Run	Potato Creek	
Elm Creek	Sink Creek	

* denotes *Exceptional Resource Water*

** denotes *Outstanding Resource Water*

300.3 CULTURAL FACTORS

300.3.1 Economy

The importance of the County Forests to Wisconsin's economic health continues to increase. 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 businesses such as the expanding printing industry, and are often located a great distance from Washburn County. County Forests contribute significantly to the 24 billion dollar forest products industry in Wisconsin.

In addition, the lands managed by these 30 Wisconsin counties provide an important recreation resource to complement our state's valuable tourism industry. By providing 2.4 million acres of public recreation land, we bring tourists to our state, who spend

money at local businesses. As population increases and public access to privately owned lands decreases, the need for accessible lands will become increasingly important. More information on the economic impact of the County Forest program can be found at <https://www.wisconsincountyforests.com/>

Forest products and spin-off industries derived from outdoor recreation and forestry are vitally important to Washburn County's economic well-being. Forest industry is the #2 ranked employer in Washburn County. Tourism is ranked #3. Statewide information on forestry related economic impact can be found at: <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 forests and its products increase, we must be prepared to assure that sound decisions are made. To this end, Washburn County encourages and supports research efforts that relate to the forest, and educational opportunities that will promote a better understanding of forest communities and sustainable management.

300.4 OTHER PUBLIC LANDS OWNERSHIP

The bulk of public lands in Washburn County are under the County Forest program. There are approximately 150,000 acres of County Forest, 10,000 acres owned by the Department of Natural Resources and 4,400 acres held by the National Parks Service. Washburn County does share some common boundaries with the National Parks Service, along the Namekagon River, and with the Department of Natural Resources along scattered parcels under numerous programs. In some cases, the Department of Natural Resources owns inholdings within the County Forest itself. Roads are connected, in some cases without interruption, between these public lands, providing for recreational opportunities. Washburn County will continue to form and build on relationships with representatives from adjacent public land owners.