



# Upper Wolf River Fishery Area Interim Forest Management Plan

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## Property Identifiers

Property Name and Designation: Upper Wolf River Fishery Area

County: Langlade

Property Acreage: 9274

Forestry Property Code(s): 3410

Master Plan Date: Master Plan Conceptual Phase, November 29, 1979

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## Property Assessment

The Wolf River in Langlade County has long been recognized for its unique aesthetically pleasing characteristics. It is a wide, boulder-strewn, natural, undeveloped stream with a rapid gradient in many locations. Trout, smallmouth bass and a number of additional fish species inhabit its waters, and many anglers have persisted in recognizing it as their mecca of Wisconsin trout waters.

In June of 1966, the Upper Wolf River Fishery Area (UWRFA) was approved by the Wisconsin Conservation Commission (now the Natural Resources Board). The major goal of the property is: To obtain land control, and to manage, preserve and protect all property within the boundary of the UWRFA in Langlade County; to enhance fishing and other recreational activities while perpetuating or restoring the scenic and aesthetic qualities of the waterway.

DNR land control has provided the opportunity for public access to significant areas along the Wolf and Hunting Rivers and certain tributaries. Thus, while fishing interests were initially of primary concern, opportunities for hiking, cross-country skiing, hunting, rafting and canoeing have been enhanced as well, making this a property where one can enjoy an outdoor experience in a wilderness type setting in relative seclusion.

## LANDSCAPE AND REGIONAL CONTEXT

Refer to the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012) for more detailed information. Publications referred to in this document are available at the Department's website at: <http://dnr.wi.gov>

**Hydrology:** The Upper Wolf River Fishery Area is within the Wolf River Basin. The Wolf River flows in a southerly direction until it joins the Upper Fox River just above the Lake Winnebago Pool Lakes. There are five principle tributaries that flow into the Upper Wolf River in Langlade County: Swamp Creek, Pickerel Creek, Hunting River, Lily River, and Ninemile Creek, with all of these flowing to certain extents within the UWRFA. The hardwater, spring-fed Turtle Lake is the only named lake found within the property boundary. In the early 1970's, there was an effort by fisheries management staff to identify and classify all small creeks, springs, seeps, and tributaries to the Wolf River within the project boundaries of the UWRFA. These are small, unnamed waters that collectively provide important water volume, coldwater input, trout spawning and nursery habitat, and refugia habitat during periods of extreme warm and cold weather events when Wolf River water temperatures can become either extremely warm or cold for trout survival. A total of 105 of these waters were identified along the west bank of the Wolf River and 63 along the east bank

**Historical Vegetation:** Data from the original Public Land Surveys are often used to infer forest composition and tree species dominance for large areas in Wisconsin prior to widespread Euro-American settlement. Public Land Surveys for the area comprising the UWRFA were conducted between 1811 and 1870 and identifies the area as being dominated by mixed forests of eastern hemlock, American beech,



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sugar maple, yellow birch, eastern white pine, and red pine. There are pockets of swamp conifer scattered throughout the property that were historically dominated by northern white-cedar, black spruce and tamarack. In the northern part of the UWRFA, there are small areas of coniferous upland forests of eastern white pine and red pine.

**Current Land Cover:** The UWRFA is embedded within two largely forested ecological landscapes, the North Central Forest and Forest Transition Ecological Landscapes. Currently, much of the landscape within and surrounding the project area is largely dominated by deciduous forest, with scattered inclusions of conifers and forested wetlands.

## HISTORY OF LAND USE AND PAST MANAGEMENT

State owned land in the UWRFA is used primarily for recreation and protection of the Wolf River water quality and aesthetics. Land within view of the river provides a natural atmosphere for fishermen, rafters, canoeists, kayakers, hikers and others enjoying the out-of-doors. Land beyond view of the river is used primarily for hunting, hiking and forestry. These lands are important since they prevent private development near the river incompatible with property goals.

Past management of the property was basically a “hands off” approach other than providing a few parking areas and access trails to the river along with the removal of buildings and other man-made structures to help restore the natural aesthetic values of the property. Forest management activities are limited due to the scenic area land use designation along three large sections of the UWRFA and the requirement that commercial timber harvests must be 300 feet from the river. Lands within 300 feet of the river’s edge or in line-of-sight of the river require special measures to preclude inappropriate developments or uses which could originate an intrusion of sights, sounds or smells that would decrease recreational quality. Forest management activities are also restricted in the deferral and consultation sites, high quality natural communities and rare species habitat areas.

## CURRENT FOREST TYPES, SIZE CLASSES AND SUCCESSIONAL STAGES

**Aspen** – A total of 2,048 acres (31%) is currently typed as aspen. There are 703 acres in the 0-20 age class, 425 acres in the 21-55 age class and 920 acres older than 56 years. The aspen in the older age classes (70 years plus) are slowly dying and converting to a variety of types, from northern hardwoods to balsam fir.

**Northern Hardwoods** – There are over 2,000 acres (31%) typed as northern hardwoods. The northern hardwood type is a mix of white ash, birch, red maple, basswood and oak where sugar maple is the dominant species.

**Wetland Forests** – There are over 1200 acres (18%) of wetland forest types. These types are white cedar, black spruce, tamarack and black ash. Most of these stands are mixed with a variety of other tree species like white pine, hemlock, birch, red maple and balsam fir.

**Jack, Red and White Pine** – These three pine types combined total 524 acres. There are small pockets where the red and white pine occur naturally, but the majority of the acres in these types are plantations. Some older red pine that has been thinned several times is slowly converting to northern hardwoods.

**Hemlock** – There are about 332 acres with the primary type of hemlock. The majority of these areas have a mix of trees species growing with and under the hemlock. Depending on the soils, it ranges from white cedar to northern hardwoods.



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## **RARE SPECIES**

Numerous rare species and high-quality examples of native communities have been documented within the UWRFA. Refer to the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012) for more detailed information.

NHI screening will be conducted prior to all future management activities.

## **HIGH CONSERVATION VALUE FORESTS (HCVF) OR OTHER RESOURCES/ NATURAL COMMUNITY TYPES LIMITED IN THE LANDSCAPE**

Refer to the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012) for more detailed information.

Based on the current draft criteria for defining High Conservation Value Forest (Forest Stewardship Council 2009) the best opportunities for HCVF on the UWRFA are the Primary Sites, as well as high quality natural communities and rare species habitat areas that are outside the Primary Sites.

**BIOTIC INVENTORY STATUS:** A Rapid Ecological Assessment focusing on rare plants, selected rare animals, and high-quality natural communities was completed for the UWRFA. The document (publication: PUB-ER-835-2012) was published in February 2012.

## **DEFERRAL/CONSULTATION AREA DESIGNATIONS**

There are 5 Deferral sites and 2 Consultation sites developed on the property (primary sites). Refer to the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012) for more detailed information.

## **CULTURAL AND ARCHEOLOGICAL SITES (INCLUDING TRIBAL SITES)**

The Langlade County Archeological and other Cultural Resources map identify several historical and archeological sites within the UWRFA. Projects located within the UWRFA will follow manual code procedures to avoid impacts to cultural and archeological sites.

## **RECREATIONAL USES**

The UWRFA is extensively used by a wide variety of recreationalists. The most extensive use is rubber raft river float trips. Canoes, kayaks and inner tubes are also in common use. Fishermen, hunters, trappers, sightseers, skiers, berry pickers and scout groups are also common visitors to the property.

## **INVASIVE SPECIES**

A number of invasive plants (both terrestrial and aquatic) are present in and around the UWRFA mostly concentrated along the riverbanks. Exotic earthworms infest most upland stands surveyed within the UWRFA.

## **SOILS**

An excerpt from the Ecological Landscapes of Wisconsin Handbook (WDNR) and the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012).

Soils in the UWRFA are formed in brown non-calcareous loamy till, non-calcareous sandy loam and loamy sand till and in outwash. The dominant general soil type, Antigo Pence, is well drained and loamy with a sandy loam surface, moderate permeability, and moderate available water capacity. Overall, the



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upland soils formed in loamy alluvium over acid outwash sand and gravel on moraines or outwash plains, in brown non-calcareous sandy loam and loamy sand till or mudflow sediments on moraines and drumlins, or entirely in outwash sand on outwash plains. They range from excessively drained to somewhat poorly drained and generally have sandy loam to loamy sand surface textures, moderate to very rapid permeability, and moderate to low available water capacity. Soils on drumlins and moraines formed in brown non-calcareous loamy sand to sandy loam till with a fragipan. Some soils have carbonates within a 6 foot depth, but in most soils the carbonates have leached to a level below that. There are large areas of lowland soils due to impeded drainage from the underlying dense till; most lowland soils are very poorly drained acid peat or non-acid mucks, but some are poorly drained outwash sands.

Antigo soils are common in the UWRFA, are typically found on gently sloping, rolling, or undulating slopes, and are well-drained. Areas with these soils are usually retained as woodlands, though some are used as cropland or pasture. This soil is suited to trees, especially of sugar maple, but American elm (*Ulmus Americana*), trembling aspen (*Populus tremuloides*), white ash, black cherry (*Prunus serotina*), yellow birch, and American basswood are associates in most stands (Mitchell 1986). Balsam fir, paper birch (*Betula papyrifera*), white spruce (*Picea glauca*), eastern white pine, eastern hemlock, northern red oak, and red pine are in some stands (Mitchell 1986). Pence soils are typically on steeper slopes, hills and ridges. Most areas with these soils are retained as woodlands as these soils are suited to trees. Common trees in this soil are sugar maple, red pine, eastern white pine, American basswood, balsam fir, trembling aspen, paper and yellow birch (Mitchell 1986). Pence soils are generally not suited to cultivated crops because of the slope, the very low available water capacity, and a severe hazard of erosion (Mitchell 1986).

## **FUTURE MANAGEMENT**

### **MANAGEMENT OBJECTIVES**

There are a total of 5 deferral sites developed on the property. All timber management within these areas will be deferred until a master plan is developed and approved for the property. There are 2 consultation sites developed for the property. Timber management within these areas should be completed only after consulting with an integrated team, including staff from Facilities and Lands, Wildlife Management, Endangered Resources and Fisheries. Refer to the Rapid Ecological Assessment for the Upper Wolf River Fishery Area (Publication PUB-ER-835-2012) for more detailed information on the location of these sites.

Forest management activities are restricted in the three large sections designated as scenic areas within the UWRFA and commercial timber harvests must be 300 feet from the river. This 300-foot minimum timber harvest buffer will be observed on the Wolf River, Hunting River, and Ninemile Creek. All timber harvests will be beyond the view of these three rivers. In situations where activities may be in the line-of-sight of the river, the buffer will be extended from 300 feet to be beyond the view from the river. A 100-foot minimum timber harvest buffer will be observed between all other waters, including creeks, springs, seeps, ponds, and lakes. Buffers along these smaller waters may be increased to address resource concerns on a case-by-case basis. All timber harvests will follow BMP's at a minimum to generally address invasive species, erosion, water quality, and fish and wildlife resource concerns. Added measures may be applied on a case-by-case basis to preclude inappropriate developments or uses which could originate an intrusion of sights, sounds or smells that would decrease recreational quality.

Aspen – The primary objective is to regenerate this type to the extent possible for the benefit of a variety of wildlife species. Additional objectives include increasing age class diversity and leaving selected reserve trees as appropriate.

Northern Hardwoods – The primary objective for northern hardwoods is to regenerate and maintain this type while enhancing wildlife habitat.



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Wetland Forests – Forested wetlands comprise a significant acreage on this property. The majority of these stands are not scheduled for management.

Pine – Natural pine stands will be managed on extended rotations. Increasing the number of acres of red and white pine where natural regeneration is occurring will be encouraged. Plantations will slowly be converted to a mix of tree species where pine will continue to be a component of the stand.

Hemlock – To maintain and increase this forest type where opportunities exist.

**Property Prescriptions** (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives)

Aspen – Aspen regeneration is achieved through coppice harvesting (even-aged management). The rotation age for aspen varies based on site conditions, but it is generally 50 to 60 years. On some of the mesic sites an extended rotation of up to 80 years could be implemented. Large aspen stands should be divided and harvested years apart to increase age-class diversity. As appropriate, snags, high quality cavity, mast and conifer trees along with green tree retention areas will not be harvested.

Northern Hardwoods – Uneven-aged management with selection harvests that will improve stand quality by removing poor quality trees and releasing crop trees. Canopy gaps will be included to attempt to increase the regeneration of species such as white ash, birch, oak and basswood. Big tree silviculture and increasing some old growth characteristics can be implemented throughout this type.

Wetland Forests – As stated above in management objectives, these types are not currently scheduled for harvesting. In the future there may be areas where regeneration harvests should be considered to maintain those types.

Pine – Even-aged management with periodic thinnings and an extended rotation age. Conversion to other species mixed with pine in the pure plantation type stands.

Hemlock – This type will be managed with an extended rotation and implementing regeneration harvests where opportunities exist.



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Approvals:

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Regional Ecologist Date

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Forester Date

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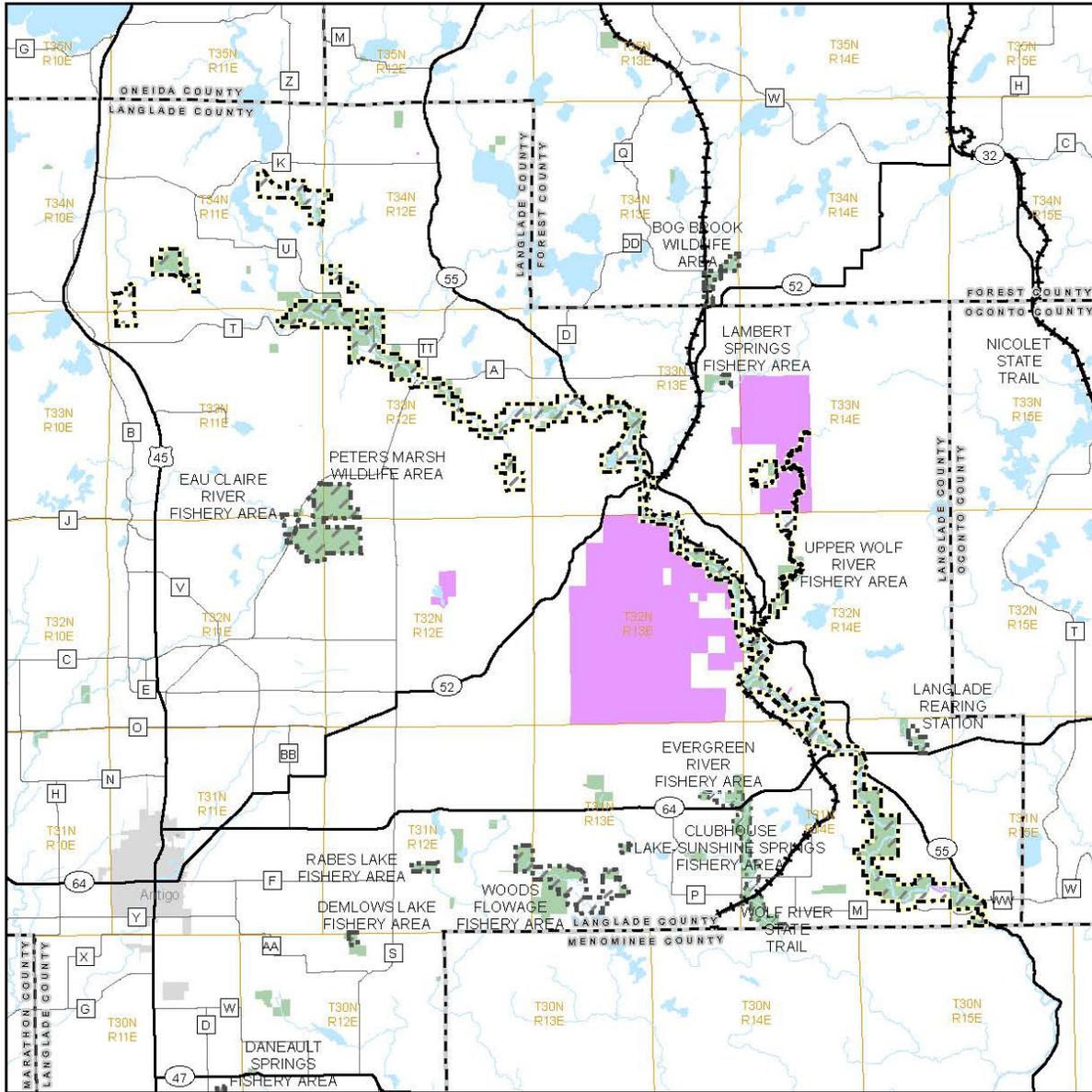
Property Manager Date

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Area/Team Supervisor Date



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## UPPER WOLF RIVER FISHERY AREA PROJECT BOUNDARY

The DNR Managed Land appears the boundary of lands managed by the Wisconsin Department of Natural Resources. The Wisconsin DNR manages these lands through various programs for public use. This data is a general representation of the Wisconsin DNR's current management of the land. It is not intended to be used as a legal instrument or to create a legal interest in land. The Wisconsin DNR is not responsible for any errors or omissions in this data. The Wisconsin DNR is not responsible for any damages or losses resulting from the use of this data. For information about the interim management plan, including public use and public access of the lands, contact the Wisconsin DNR. Contact a Wisconsin DNR Regional Office and Bureau of Facilities and Lands at 2020 N. Lincoln Avenue, P.O. Box 43120, Madison, WI 53740-0320. For more information, visit [dnr.wisconsin.gov](http://dnr.wisconsin.gov).

- DNR Fee
- DNR Easement
- DNR Lease
- Subject Boundary
- Project Boundary



WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
Bureau of Facilities and Lands  
PM-2740-07/27/2011 SWM

