

# White River Property Group

(Bayfield & Ashland Counties)

## Master Plan



23 October 2013  
Wisconsin Department of Natural Resources  
DNR PUB-LF-072





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# **Table of Contents**

	<b>Page</b>
<b>CHAPTER 1: OVERVIEW of PLAN and PROPERTIES</b>	
Purpose of the Master Plan	2
Community Involvement and Partnerships	2
Tribal Resources on Ceded Territory	3
Ecological Significance of the Properties	4
Recreational Significance of the Properties	5
<b>CHAPTER 2: MANAGEMENT, DEVELOPMENT and USE</b>	
Vision Statement & Property Goals	6
<b><u>Section One: Universal Plan Elements for all Properties</u></b>	7
<b>Resource Management by Land Management Classification</b>	
<b>Universal Objectives and Prescriptions</b>	
Fisheries Management	10
State Natural Areas	12
Management Prescriptions by Habitat and Forest Type	12
General Recreation Management and Uses	16
General Administration, Policies and Provisions	18
Implementation and Public Communications	25
<b><u>Section Two: Individual Property Elements</u></b>	
White River Fishery Areas; Sajdak Springs Natural Area ( <i>Bayfield &amp; Ashland Co.</i> )	26
Bibon Swamp Natural Area ( <i>Bayfield Co.</i> )	35
White River Wildlife Area ( <i>Ashland Co.</i> )	40
<b>CHAPTER 3: Supporting Information</b>	
Regional and Property Analysis: Findings and Conclusions	44
Ecological Significance	44
Recreational Significance	47
Summary	48
<b>REFERENCES and Information Sources</b>	50
<b>TABLES</b>	
2-1 Land Management Classifications	8
2-2 Area 1 - Headwaters – Current and Projected Cover	28
2-3 Area 2 - Transitional Boreal Fishery – Current and Projected Cover	30
2-4 Area 3 - Mid-River Boreal Slopes - Current and Projected Cover	32
2-5 Area 4 - Mid-River Uplands – Current and Projected Cover	33
2-6 Area 5 - Bibon Swamp Wetlands – Current and Projected Cover	37

2-7 Area 6 - Bibon Swamp Uplands - Current and Projected Cover	38
2-8 Area 7 - Boreal Forest & Floodplain - Current and Projected Cover	42
2-9 Area 8 - Wildlife Uplands - Current and Projected Cover	43

## **APPENDICES**

<b>A</b> MOA with White River Citizens Involvement Committee	52
<b>B</b> Natural Resource uses by Local Native American Tribes	56
<b>C</b> Public Investment in Public Lands	59

## **LIST OF MAPS**

**Map A: Regional Locator and Public Lands**

**Map B: White River Fishery Area Project/Watershed Boundary**

**Map C-Series\*: White River Fishery Area (headwaters in Bayfield Co)**

**Map D-Series\*: Bibon Swamp State Natural Area (Bayfield Co)**

**Map E-Series\*: White River Fishery Area (central parcels Bayfield/Ashland Co)**

**Map F-Series\*: White River Wildlife Area (Ashland Co)**

### **\* Series maps include the following:**

**1= adjacent public and tribal lands**

**2= infrastructure**

**3= land cover**

**4= NR 44 land management classifications**

**5= land cover, primary sites, & LTAs**

**6= wetland soils (C- and D-series only)**

**7= planned recreation infrastructure (F-series only)**

# CHAPTER 1: OVERVIEW OF PLAN & PROPERTIES

More than 15,000 acres are protected as state managed lands in the White River Property Group (WRPG). Approximately 1,628 acres are State Wildlife Area; 4,070 acres are Fishery Area, and 10,772 acres are State Natural Area (includes 900 acres imbedded within the Fishery and Wildlife Area property). Property locations are identified among regional landmarks on Map A (Appendix).

Properties in this planning group are:

1. **White River Wildlife Area** - northwest Ashland County, three miles south of Ashland. (includes White River Boreal Forest State Natural Area).
2. **White River Fishery Area** - White River headwaters in central Bayfield County including river corridor parcels through northwest Ashland County. (includes Sajdak Springs, White River Breaks, and Lake Two Pines State Natural Areas) .

Property	Acreage
1. White River Wildlife Area	1,280
2. White River Fishery Area	4,108
3. Bibon Swamp State Natural Area	9,872

3. **Bibon Swamp State Natural Area** - southeast Bayfield County, 1 mile north of Grand View. The White River horizontally bisects Bibon Swamp. State Highway 63 parallels the southern and eastern property boundary.

## Significance of the Plan Area

The White River Property Group lies within a 350 square mile watershed of wetlands, woodland, fields, streams and rivers that drain into Lake Superior in a predominantly remote, forested setting in Bayfield and Ashland Counties. The White River is one of Wisconsin's least developed river systems, highly scenic, historically known as a premier wild brown trout fishery in Bayfield County and attracts anglers from all over the Midwest. It is one of only eight rivers in Wisconsin with over 40 miles of Class I or Class II trout water. A 15-mile river segment between the Sutherland and Bibon Road bridges is the longest reach of high quality trout water in Wisconsin inaccessible by public road – a rare canoe fishery for wild brown trout.

The White River and watershed are important recreational and economic resources. The system's headwaters are located in the Drummond-Delta area of western Bayfield County; from there the White River flows east and north through the 10,000 acre Bibon Swamp, through the village of Mason, into a flowage formed by a hydroelectric dam, then ultimately to a confluence with the Bad River at Odanah, on the Bad River Reservation of the Lake Superior Ojibwe Tribe in Ashland County. In addition to being an outstanding inland trout producing stream in northwest Wisconsin, it is an important tributary to an **internationally** recognized wetland estuary complex of Lake Superior (Kakagon-Bad River Slough). The properties form an environmental corridor along the White River, and with its tributaries, reside almost entirely within the Superior Coastal Plain Ecological Landscape.

### **Purpose and Management Authority**

Property master planning, governed by ch. NR 44, Wis. Admin. Code, is a process that determines how a property will be managed and developed. The administrative code defines master planning, sets forth its purposes, and specifies the general planning process and content of a master plan. An Environmental Analysis (EA) analyzes the potential impacts of actions recommended in the master plan. Based on an evaluation of the required EA for the White River Property Group, the Department determined this master plan is not a major action and an Environmental Impact Statement is not required. This rule also establishes a uniform land management classification system to be applied in the master plan. By administrative code, the master plan is the controlling authority for all actions and uses on a property.

### **Wildlife and Fishery Areas**

Wildlife and Fishery Areas are acquired and managed under the authority of Wis. Stat. s. 23.09 (2) (d) 3, and s. NR 1.51 Wis. Admin. Code. Wildlife Areas are designated to provide places where people can hunt, trap or fish. Wildlife and Fishery Areas are also open for traditional outdoor uses of walking, skiing, snow shoeing, nature study, berry picking, and other low-impact recreational activities. As directed by s. NR 1.51 and s. NR 1.61, other recreational uses may be allowed by the master plan if those uses do not detract from the primary purpose of these properties.

### **State Natural Areas**

State Natural Areas (SNAs) are managed under the authority of s. NR 1.32 Wis. Admin. Code, and 23.27 to 23.29 Wis. Statutes. SNAs are sites that protect outstanding examples of the state's native natural communities. They are areas that are essentially unaltered by human-caused disturbances or that have substantially recovered from such disturbances. SNAs are considered the state's best examples of native biodiversity. Protection and enhancement of these natural features will receive major consideration in management planning for SNAs; other recreational uses are permitted if they do not threaten these natural values.

### **Community Involvement and Partnerships**

The **Friends of the White River** is a dedicated volunteer group who serve as an informational resource for White River area landowners and river users, with a vision of preserving the ecological integrity of the water resource, although it is challenged by habitat fragmentation within the central corridor. They advocate for the protection and preservation of the White River for all generations. The group serves as an advisory panel to DNR regarding purchase and management of state-acquired land within the central project boundary of the White River Fisheries Area (Appendix A, Memorandum of Agreement). Together with Trout Unlimited, the group coordinated development of the 2004 *White River Watershed Management Plan*.

Regional partnership was demonstrated by the authors of the 2004 White River Watershed Management Plan, including: the **Bad River Watershed Association, Friends Groups, Townships, University of Wisconsin – Extension, West Wisconsin Land Trust, Trout Unlimited, Bayfield Regional Conservancy, National Forest Service, Great Lakes Indian Fish & Wildlife Commission, National Park Service, School communities, USDA-NRCS**, and the **City of Ashland**.

The **Bibon Swamp Advisory Council**, consisting of representatives from the Bayfield County Board, the Townships of Mason and Grand View, a local resident from each of Mason and Grand View and the DNR property manager, meets periodically to: 1) review whether the management prescriptions of the Master

Plan are being carried out, 2) bring citizen ideas or problems concerning the Bibon Swamp to the attention of the Department, and 3) facilitate dissemination of information from the Department to the County Board, Townships and the local citizens.

The Master Plan recognizes that 90% of land within the central parcels of the White River Fishery Area project boundary is privately owned (Map E Series). The ability to achieve the vision and reach the goals for this area will be realized only if that vision and those goals are shared by the private landowners, local units of government, and other conservation organizations within the project boundary. The 2004 preparation of a collaboratively prepared, "*White River Watershed Management Plan*" by a diverse consortium represents the local sentiment of commitment with a shared vision and goals. The Master Plan provides for continued collaborations between the Department and private landowners, local units of government, and a variety of conservation organizations to protect and manage the natural resources of the plan area.

The population density of the Superior Coastal Plain counties is second lowest of any Ecological Landscape in Wisconsin. There are less than 20 persons/square mile, compared to 99 persons/square mile in Wisconsin as a whole according to 2009 US Census Bureau information. Government Service and Tourism/Outdoor Recreation are the primary contributors to the economy of the Superior Coastal Plain Counties.

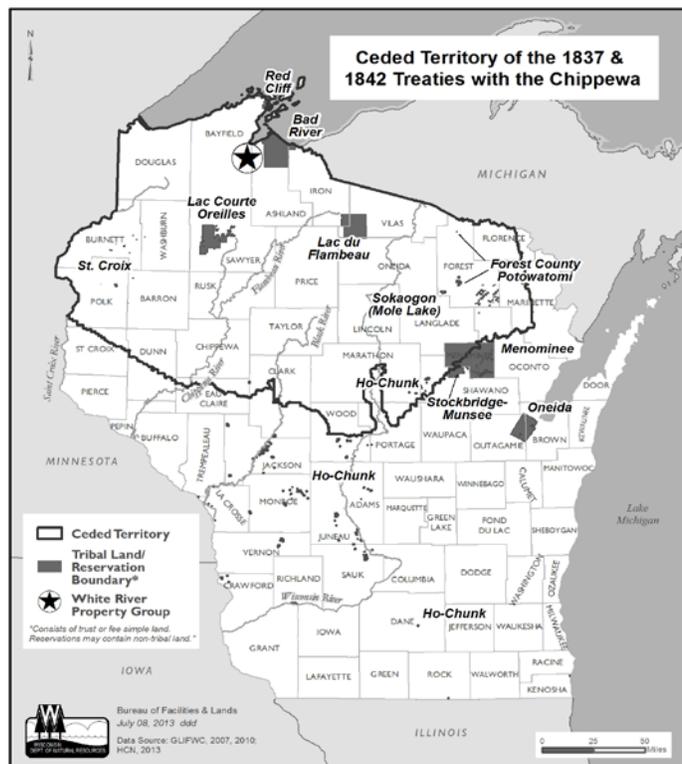
## Tribal Resources on Ceded Territory

The White River Property Group lies within the ceded territory of the Ojibwe Tribes and is located adjacent to and west of the Bad River Band of the Lake Superior Ojibwe.

Native American tribes are independent, sovereign nations, as they were prior to the arrival of Europeans in North America. The Ojibwe Tribes ceded some lands in the northern one-third of Wisconsin to the United States Government in the Treaties of 1837 and 1842 (Appendix B). In those treaties, they reserved their rights to hunt, trap, fish and gather within various publicly-owned lands. Treaty rights are currently being exercised and implemented by the Ojibwe Tribes.

## Plan Overview

The goal of this master plan is to be able to manage the WRPG properties so they will continue to provide high-quality natural resources, recreational experiences, and secondarily, timber resources for present and future generations.



This plan builds upon the substantial foundation laid by prior master plans, fish and wildlife program guidance, and habitat and biotic inventory work conducted over the last several decades. The planning process considered comments received during the July 26, 2012 and June 5, 2013 public meetings and associated comment periods, from the public at large, and from dialog with partner agencies and local officials.

### **Ecological Significance of the Properties**

Forest fragmentation and overall loss of forests have been identified as a major threat to northern forests in the Great Lake States. As Wisconsin forests become parcelized and developed, the White River properties and vast forests of the Chequamegon – Nicolet National Forest, Bayfield County Forest, Brule River State Forest, Bad River Reservation and Industrial Forest Lands collectively represent an important opportunity to maintain an intact forested landscape, serving important ecological functions on a regional and statewide level. Much of the landscape surrounding the WRPG is represented by young and medium-aged stands, often dominated by early successional species such as aspen, within small patches of older forests. Larger areas of older, less disturbed Northern Dry-mesic and Boreal Forests are not well represented. The WRPG offers opportunities to manage for a variety of age classes, including stands of older forest, within a context of outstanding aquatic features, intact and relatively undisturbed wetlands, and vast public landholdings (WDNR 2012b).

### **White River and Tributaries**

The free-flowing stretches of the White River provide important habitat for rare animal species. Management of lands adjacent to the river has important effects on water quality. Many of the areas along the river slopes contain mature forests and forested seeps that can harbor rare plant assemblages. A management “buffer” that accounts for steepness of slope, soil type, vegetative cover, and the habitat needs of sensitive species would be most effective for protecting species associated with the river.

Two tributaries of the White River with high ecological importance are Eighteen Mile Creek and Long Lake Branch. Eighteen Mile Creek is a high gradient, cold water stream that originates within the Great Divide District of the Chequamegon Nicolet National Forest (CNNF), at Eighteen Mile Creek State Natural Area. There are high-quality, old-growth hemlock hardwood stands on its banks. Eighteen Mile Creek has moderate aquatic taxa richness and two rare macroinvertebrate species. Long Lake Branch originates at Lake Owen in the CNNF eventually reaching the marshes of Bibon Swamp SNA where Eighteen Mile Creek joins it. Long Lake Branch had exceptionally high diversity of aquatic macroinvertebrates and high taxa richness during 1996 aquatic inventories.

### **Conservation Significance – Primary Sites and State Natural Areas**

Primary Sites are parcels within state lands identified by DNR Bureau of Natural Heritage Conservation review, that offer opportunities to protect rare and representative natural communities, and/or harbor rare species populations. Primary Sites are delineated on maps from inventory and other data, and they encompass a property's best examples of: 1) rare and/or high-quality representative natural communities, 2) documented occurrences of rare species populations and rare species habitat; and/or 3) opportunities for ecological restoration or connections. Some Primary Sites (such as Bibon Swamp SNA) are already State Natural Areas, yet others do not have special designation. In addition to Bibon Swamp and Sajdak Springs SNAs, three additional Primary Sites were identified and selected as SNA overlays on the WRPG. The Natural Heritage Conservation program uses a GAP Analysis to provide guidance on the number of State Natural Areas needed to meet the critical ecological reference area requirements for

forest certification, ecosystem/species preservation, research, and education goals of the program. Natural Areas are generally open to fishing, hunting, trapping and other traditional outdoor activities.

### **Control of Invasive Species**

Improved monitoring and control of invasive species will be a critical management activity. Control is a difficult task due to the tenacity of invasive species, the presence of multiple species on the properties, and the limited resources available to address this challenge.

### **Recreational Significance of the Properties**

This region contains some of Wisconsin's most attractive and diverse outdoor recreation opportunities with a blend of federal, state and local recreation resources. While this region's population density is low, its recreational resources are used by an active resident base, along with in-state and out-of-state visitors. Travel for the purposes of outdoor recreation is an integral part of the state's tourism industry and a key economic sector within this region.

The master plan provides for better access to interior sites within the WRPB for hunting opportunities, and improved water access for fishing. These types of recreational amenities can be provided with continued preservation and protection of the White River Land Legacy areas (2006b).

Providing increased user access that maintains the wilderness character of the properties is an objective of recreational facility changes. Current recreation and habitat management activities will largely be retained. The plan provides improved access for mobility impaired individuals and better hunter access in the Wildlife Area by development of new parking, a new trail system, and hunting blinds. The plan recommends development of a single 100-yard shooting range on the Wildlife Area. The fishery will be enhanced through removal of an undersized culvert, bridge replacement, and streambank restoration in the headwaters region. An historically popular artesian well will continue to have public access with the new bridge.

## CHAPTER 2: MANAGEMENT, DEVELOPMENT AND USE

*This chapter contains two sections related to the overarching vision and goals:*

**Section One** covers universal management elements which apply to all state properties in the plan area. **Section Two** provides a brief description of the individual properties followed by property-specific habitat and recreational management objectives.

*Factors considered when developing the management objectives and prescriptions include habitat distribution and quality, habitat needs of species of greatest conservation need, game species life cycle requirements, recreation usage and trends, land use patterns and trends, and public input.*

### Vision

The White River Property Group (WRPG) forms an ecological corridor along the White River in Bayfield and Ashland counties, primarily in the Superior Coastal Plain Ecological Landscape. Exceptional outdoor recreation opportunities will be available in lightly developed settings for current and future users, while also maintaining protection of the White River ecosystem corridor. These opportunities will be provided within a matrix of ecologically diverse springs and tributaries to the White River and adjacent forested uplands and wetlands. Natural communities will be managed in a sustainable way for user enjoyment, consistent with the designated purpose and ecological capacity of these properties. The most effective and sustainable habitat and game management includes efforts by citizens, private landowners and resource management agencies working together.

### Goals

- Protect and promote the outstanding sustainable game fisheries with an emphasis on preserving the coldwater riverine habitat (exceptional resource designation) for natural reproduction of trout species.
- Promote quality habitat for desirable game and non-game species, including rare and special concern species.
- Provide abundant recreational opportunities for fishing, hunting, trapping, canoeing, birdwatching, wildlife viewing, nature study or enjoyment, and other compatible outdoor activities, with an emphasis on non-motorized recreation.
- Provide a variety of high-quality open wetlands, fens, forested swamps, and upland forests.
- Restore and protect old growth Boreal Forest remnants and other significant natural communities of the Superior Coastal Plain ecological landscape, to provide a mosaic of habitat for numerous plant and animal species associated with these properties.

## **Section 1: UNIVERSAL ELEMENTS FOR ALL PROPERTIES**

### **Resource Management by Land Management Classifications**

Management of these properties is generally described by a specific land management classification (per NR 44) that describes the primary management objectives for a property or management unit within a property. These classifications are determined during the master planning process and help identify the preferred set of actions to achieve short and long-term objectives. Only management activities or techniques identified or referenced in this master plan and compatible with the site's ecological capability may be pursued in these management areas. Property parcels purchased after master plan approval will be classified and managed according to the surrounding land management areas, unless specified by DNR Board 'green sheet' materials. If different interests warrant another classification, a master plan amendment will be pursued.

The White River properties have been divided into eight land management areas, with three Land Management Classifications. Those classifications are as follows:

**Habitat Management Area** (NR 44.06(5)) - The primary objective for this classification is to provide integrated upland, wetland and/or aquatic habitat management that supports a variety of plant and animal species. Typically the emphasis is to provide habitats needed to sustain productive game species populations. Areas that initially do not have desired habitat conditions, but have a high potential to be restored may be included under this classification.

**Native Community Management Area** (NR 44.06(6)) – A significant majority of the land management areas are classified as Native Community Management on the WRPG properties, comprising about 9,963 acres, of which the majority are in Bibon Swamp State Natural Area. Native Community Management areas are managed to perpetuate pre-settlement plant and animal communities, whether upland, wetland or aquatic, and protect the biological diversity of the native ecosystems. A Native Community is a distinct and reoccurring assemblage of indigenous flora and fauna associated with similar physical settings. Areas that initially do not have the desired community conditions, but have a reasonable potential to be restored may be included in this classification.

All of the traditional recreational uses, such as fishing, hunting, trapping and nature enjoyment are allowed on the Native Community Management Areas, except if the area needs to be closed during breeding season or to protect a very fragile habitat.

**Scenic Resources Management Area** (NR 44.06(7)) with **Type 2 Recreational Use Setting** sub-classification (NR 44.07(5)) - This classification protects, maintains and enhances for long-term public enjoyment, waters and lands having unique aesthetic qualities or outstanding scenic beauty, protected due to significant or special public use of the area. It is typical of lands with high value for water-based recreation and to scenic rivers and streams. Vegetation management may vary from passive to active depending on the long-term scenic objective and ecological capability. Examples of potential vegetation management include timber harvesting, planting, herbicide application, mowing, burning, installation of fish habitat improvement devices and erosion control.

An area designated as a **Type 2 Recreational Use Setting** shall be managed to maintain or create a moderate to high perception of remoteness. The objective is to provide conditions where users of the

area may feel they are in a secluded setting. The area may be smaller in size and nearer to public highways than in a Type 1 setting. Typically, sights and sounds of human activity may not be entirely uncommon, but usually are distant. Management activities focus on providing and maintaining water and land areas for outdoor recreation and education.

The acreages falling within the recommended management areas by property are shown in Table 2-1 and their spatial relationship on each property can be viewed on the respective land classification maps.

<b>Property Name</b>	<b>Native Community</b>	<b>Scenic Resources</b>	<b>Habitat</b>
<b>White River FA*</b>	<b>466</b>	<b>3,553</b>	<b>129</b>
<b>White River WA</b>	<b>575</b>	<b>0</b>	<b>693</b>
<b>Bibon Swamp NA</b>	<b>9,872</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>10,913</b>	<b>3,553</b>	<b>822</b>

\* White River FA has an additional 222-acre hydroelectric dam and flowage zone, and approximately 100 acres of easement for public access to the White River, primarily for fishing, with no management privileges. Values include re-designation of 628 acres from FA to WA.

## Universal Objectives and Prescriptions

The following universal objectives and prescriptions apply to all the properties as appropriate. Property or unit-specific management objectives and prescriptions are described in Section 2 of this chapter. These objectives and prescriptions will be applied contingent upon the availability of staff and material resources, or modified as needed to respond to unpredictable or catastrophic events (e.g., storm damage or severe insect/disease infestations).

### Universal Management Objectives

- Maintain and improve habitat for a variety of fish and wildlife, both game and non-game species.
- Provide safe and sustainable recreational access while protecting the ecology and unique features of the properties.
- Protect and enhance habitats and populations of threatened and endangered species and species of greatest conservation need.
- Reduce the threat of invasive species to protect the biodiversity of the WRPB.
- Enhance and expand native communities at a landscape scale, with an emphasis on Boreal Forest, Northern Dry-Mesic Forest, and wetlands to benefit game and non-game species.
- Provide opportunities for habitat and species research and public education consistent with the approved management habitat and species objectives.

### **Vegetation Management Actions**

The primary management action used to implement the objectives and prescriptions in the actively managed portions of the WRPG is forest management. Forest management will maintain a diversity of forest cover types and age classes for forest health, wildlife habitat and aesthetic appeal. This will be accomplished through different management approaches, depending of forest cover type, site-specific goals and recreational or aesthetic considerations. Aspen will be maintained, with emphasis on creating greater age-class diversity. Conifers will remain an important element of most forest stands. White pine, red pine and oak covertypes will be maintained and increased in representation wherever possible.

**Other management actions** that can be used to implement the master plan prescriptions include:

- Mechanically cut (e.g., mowing and brushing), hand cut, pull, and bulldoze.
- Chemical control of vegetation or pests using approved products and application techniques.
- Bio-control measures may be used as deemed appropriate, safe and effective.
- Biomass harvests that follow approved Wisconsin Biomass Harvesting Guidelines.
- Seeding or planting native woody and herbaceous species.
- Prescribed burning.

**Other wildlife management tools** that may be used include:

- Use of nest boxes, platforms or similar devices to enhance reproduction of desired wildlife.
- Beaver population control.

### **Invasive Species Actions**

The threat of exotic and/or invasive species, including plants, animals, insects and diseases represent a significant and growing threat to our native plant and animal communities. To address this concern, invasive species inventory, monitoring and control actions shall be included in the annual property planning for each property. Inventory, monitoring and control efforts shall follow the guidance provided in the Department's *Property Managers Handbook* and reference the DNR website [www.dnr.gov](http://www.dnr.gov) key words: invasives, control, and by the Invasive Plants Association of Wisconsin (<http://www.ipaw.org>). Also refer to invasive species Best Management Practices (BMPs) for forestry, recreation, urban forestry, and rights-of-way, developed by the Wisconsin Council on Forestry (<http://council.wisconsinforestry.org/>).

Priority activities include:

- Monitor properties to detect new infestations and target these for rapid response. Annual property-wide inspections are ideal, but not always practicable. At a minimum, annual inspections should be conducted at entry points such as trails, roads, waterways, rights-of-way, and areas where soil has been disturbed.
- Control new or existing invasive species as practicable. Mowing should be timed to avoid dispersal of invasive plant seeds and mowing equipment should be cleaned as appropriate.
- Monitor control activities to assess effectiveness and determine if follow-up is needed.

Protecting wetlands and spawning habitat, and minimizing impacts from invasive species, such as carp, lamprey, zebra mussels and Eurasian milfoil, are needed to maintain native species abundance and diversity, and prevent species extinction. Glossy buckthorn removal currently underway within the

Fishery Area and targeted within Bibon Swamp are important to maintain site integrity. Other problematic species are phragmites, reed canary grass, Canada thistle, Helleborine orchid and spotted knapweed. Purple loosestrife is not noted within the WRP, but is abundant in open wetlands nearby and should be monitored closely. Early detection with rapid control of new and/or small infestations is top priority.

Five invasive species within the WRP pose a significant threat to the natural communities:

1. **Reed canary grass** (open meadows, shrub-carr/alder, and forested areas along the entire White River), mixed with native grasses and sedges, is not yet dominating these areas.
2. **Glossy buckthorn** (Fishery Area and Bibon Swamp open meadows, fen, shrub-carr/alder, and wet coniferous forests).
3. **Common reed grass** (near Bibon Swamp along highway 63, along Eighteenmile Creek near Taylor Lane within Bibon Swamp)
4. **Canada thistle** (low densities in the Fishery Area and Bibon Swamp; restricted to open fen, sedge meadow, and surrogate grassland areas.
5. **Helleborine orchid** (low numbers at the Wildlife Area in the upland Northern Mesic Forest areas.

These grassland species pose a lesser threat, though their spread should be limited if possible:

- white sweet-clover (*Melilotus albus*),
- orange hawkweed (*Hieracium aurantiacum*),
- reedtop (*Agrostis gigantea*),
- quackgrass (*Elytrigia repens*),
- bird's-foot trefoil (*Lotus corniculatus*),
- alsike clover (*Trifolium hybridum*),
- spotted knapweed (*Centaurea biebersteinii*), and
- smooth brome (*Bromus inermis*).

Informing property users of required and voluntary actions will help slow the spread of aquatic and terrestrial invasive species. Examples include cleaning and disinfecting boats and equipment; not transporting live fish or spawn away from their indigenous waters; not transporting bait species between waterbodies, and hunters/hikers cleaning boots and clothing to reduce the spread of seed.

### Universal Outreach Actions

Staff are encouraged to collaborate with volunteers as well as inform, educate and share information with users and private landowners, especially on parcels adjacent to department properties, as time and resources allow. Outreach issues of particular concern include:

- Monitoring and controlling invasive species.
- Collaborative habitat management to protect and enhance critical habitat for key game species, and Endangered, Threatened and Species of Greatest Conservation Need.

## Universal Fisheries Management

### Coldwater Streams

Coldwater streams are dominated by groundwater inputs and can sustain fish communities adapted to cold, oxygen rich, flowing water conditions. Important coldwater species include the following game fish - brook trout, brown trout, rainbow trout - and nongame species such as white sucker, mottled sculpin and

various minnow species. Coldwater streams will often support diverse communities of invertebrates as well as environmentally sensitive mayflies, stoneflies and caddis flies.

The physical habitat of a trout stream can be quite variable and is generally determined by watershed and landscape characteristics, specifically soils and geologic parent material as well as watershed size and gradient. Larger, lower gradient streams are often sinuous and have bottom material composed of fine grained sands and silts. Smaller higher gradient streams tend to be defined by riffles and runs with gravel and rock substrate. Habitat enhancements in both stream types can increase the carrying capacity, growth and natural recruitment of desirable fish species, specifically trout.

Coldwater streams often rely on external sources of energy for the aquatic food web. Small streams are often shaded by trees and grasses so the invertebrates are adapted to eating leaves and detritus from terrestrial sources. Management of the streamside vegetation can increase the productivity by allowing sunlight to penetrate directly into the stream to increase the production of algae and phytoplankton. This results in increases in invertebrate and fish populations, while balancing the need to remain sufficiently cold to sustain trout populations.

Management objectives and recommendations are provided by WDNR Fisheries Management Report No. 153, (Toshner and Manz, WDNR 2008). In addition, the following are provided:

**Management Objectives:**

- Manage and protect riparian vegetation along classified trout streams to enhance in-stream habitat quality and productivity of trout.
- Maintain, or increase as practicable, the extent and quality of Class 1 and Class 2 trout streams for brown and brook trout populations.
- Protect rare/endangered species and species of greatest conservation need in the streams and on fishery areas.
- Allow adequate aquatic organism passage, including at trail and road crossings.

**Management Prescriptions:**

- Install and maintain Department approved stream habitat enhancements, bank stabilization using rock rip rap, bank stabilization using vegetation root systems, lunker and boom cover installations, revetments and current deflectors, and brush bundling to protect or enhance in-stream habitat quality and diversity.
- Remove beaver dams to maintain the free flowing environment coldwater streams required to maintain robust trout populations.
- Consult with Natural Heritage Conservation during the planning of in-stream and riparian habitat enhancement projects.
- Continue to conduct electrofishing and netting surveys according to statewide monitoring protocols, track long-term trends and provide results to public.

Fishery Management staff will, as needed, manage vegetation in the streamside corridor to maintain high quality trout habitat and self-sustaining trout populations. Activities to protect in-stream and near stream habitats include the planting of desired native species as needed or removal of understory and young successional vegetation such as tag alder, aspen, box elder, black willow and invasive species to minimize bank erosion, excessive stream shading or degraded habitat quality.

### **Warmwater Segment**

The White River dam flowage and segment downstream of the dam provides an abundant, sustainable warmwater game fishery and habitat for diverse semi-aquatic and aquatic plant and animal communities. Currently, no stocking programs or habitat manipulations are being conducted.

### **Universal Fishery Outreach Actions**

Inform and educate landowners, agricultural interests and communities upstream of cold water fisheries about the adverse impacts of excessive nutrient inputs, sedimentation, stormwater runoff and reduced groundwater inputs to surface waters. Activities that lead to high summer water temperatures, low winter water temperatures and degraded in-stream habitats diminish efforts to sustain a high quality, self-sustaining trout fisheries.

## **State Natural Areas**

The primary purpose of State Natural Areas (SNAs) is to protect outstanding examples of Wisconsin's native natural communities, significant geological formations, and archeological sites.

SNAs are valuable for research and educational use, the preservation of genetic and biological diversity, and for providing benchmarks for determining the impact of use on managed lands. They also provide some of the last refuges for rare plants and animals. Sections 23.27-23.29 Wis. Statutes provide legislative authority and direction for the acquisition, designation, dedication, and management of SNAs. Section 23.27 (1) defines natural areas as "reserves for native biotic communities...habitat[s] for endangered, threatened, or critical species...or areas with highly significant geological or archaeological features". Section 23.28(1) provides authority to designate natural areas as SNAs, and Section 23.29 provides authority to legally dedicate and protect SNAs in perpetuity.

SNAs may be either stand-alone properties or embedded within another property type, such as a State Fishery Area. In the latter case, the SNA is an overlay designation.

### **Stand Alone SNA**

- Bibon Swamp

### **Overlay SNAs**

The WRPG Master Plan includes 4 overlay SNAs on lands owned by the Department. They are as follows:

- Sajdak Springs
- Lake Two Pines
- White River Boreal Forest
- White River Breaks

These are described in detail in section two of this chapter.

## **Management Prescriptions by Habitat and Forest Type**

The Department uses several habitat classification systems when planning and performing management activities. The two systems used in this plan are natural communities and forest cover types. Each has a

different purpose, function, and scale. The natural community system is broader and ecologically defined, based on assemblages of plant and animal species that are repeated across the landscape in an observable pattern. It is a particularly useful tool for identifying interconnected, functional natural elements. The forest cover type system was developed as a forest management tool, used to identify and apply management to different timber types and other types of vegetation. Specifically, a forest stand is designated as a certain cover type if  $\geq 50\%$  of its basal area is dominated by a particular tree species. Sites with  $< 10\%$  trees are considered non-forested and are classified (e.g., grassland, lowland brush, etc.) according to the predominant vegetation present. Forest reconnaissance data are collected using these cover types, and are stored in the Wisconsin Forest Inventory & Reporting System (WisFIRS).

Because the cover type system focuses on specific vegetation types, it is useful for directing and carrying out vegetation management activities. However, consideration of natural communities along with cover types is essential in planning and management to assure that the overall integrity and function of managed resources are maintained.

### Forested Habitats

All forest management activities follow the guidelines in the WDNR *Silviculture and Forest Aesthetics Handbook* (2431.5), *Public Forest Lands Handbook* (2460.5), *Timber Sale Handbook* (2461), *Old-growth and Old Forests Handbook* (2480.5), *Managing Woodlands for Wisconsin's Coastal Trout Streams* (FR-386) and *Management Recommendations for Forestry Practices along Wisconsin Coastal Trout Streams* (FR-388). Consult these handbooks for additional details and management considerations (<http://dnr.wi.gov> key words *forest handbook*, *forest trout streams*).

The prescriptions listed below are for the primary forest types found throughout the WRPG. The prescriptions include an overview of the general management methods and guidance from the *Silviculture Handbook* as well as some additional considerations to be applied to this group of properties.

### General Forest Management Prescriptions for All Forest Types:

- Require loggers to utilize established best management practices for all aspects of conducting timber harvest and removal. (e.g. *Best Management Practices for Water Quality*, FR-093)
- Retain snags and coarse woody habitat whenever their retention does not conflict with other management objectives or pose a danger to loggers.
- Leave long-lived reserve trees as individuals or in groups to provide timber, wildlife, and aesthetic value when retention does not conflict with regeneration and other forest management objectives.
- Salvage trees damaged by wind, ice, fire, insects, and disease as long as the salvage meets the overall objectives for the site and is economically feasible.
- Where appropriate, extend the rotation age for some stands of oak, red pine, white pine, and yellow birch in order to increase the abundance of older-age forest habitat, which is highly limited in the plan area.
- Maintain site hydrology for lowland forest types (bottomland hardwood, swamp hardwood, white cedar, tamarack); restore where feasible.
- Use intermediate forest treatments, such as release or crown thinning, where appropriate to develop young stands or improve composition (e.g., oak).
- Follow Wisconsin's Forestland Woody Biomass Harvesting Guidelines when conducting forest management where biomass harvesting is compatible with site objectives.

## Management Prescriptions by Primary Forest Type

For each forest-type there is a specific set of management techniques which favor the maintenance and regeneration of a given type. The following describes the general management prescriptions to be used for each primary forest type on the White River Property Group. Each prescription will be applied wherever management for that specific forest type is an objective, as stated in the individual management areas later in this chapter. The individual area management sections may modify or limit these general prescriptions to better fit specific area management objectives.

### Aspen Dominated Mixed Forest

This forest type is an early successional species that requires disturbance and abundant sunlight to regenerate. Depending whether the stand is in a pure or mixed community, different management activities will be used to move the forest toward the desired future state.

- In pure aspen stands, harvest and regenerate aspen naturally, through clearcutting simple coppice harvests (complete tree removal relying on stump or root sprouts).
- In stands where the objective is to develop or maintain mixed species or to convert to longer-lived species, the primary management strategy is to use “coppice with standards”, which means to harvest aspen trees but retain individual desired species, such as red oak, red pine, and white pine trees within a stand. This allows the remaining desired trees (oak and pine) to provide seed to the area for increasing the diversity of the stand.
- Provide a variety of age and size classes and stand sizes across the local landscape for wildlife habitat benefits, ecological diversity, and aesthetic value. Management considerations for wildlife and aesthetics may include variable harvest size and shape, maintaining individual reserve trees or islands, promoting wildlife travel corridors and varying age class diversity among adjacent stands.

### Red and White Pine Dominated Mixed Forest

Natural-origin stands of red and white pine, along with a few scattered pure red pine plantations, occur in several areas throughout the White River Property Group. Several management activities will be used to manage red and white pine stands toward desired future conditions.

- Where red pine and white pine of natural origin is the primary cover type, use selection harvests to maintain the health, vigor and growth of the pines, creating age and size class diversity. Remove selected individuals or small groups to maintain species diversity and structural diversity. At maturity (200 years red pine, 300 years white pine) harvest pine and replant or incorporate methods to enhance natural regeneration.
- Leave scattered large red pine and white pine in many harvest areas if they are healthy and do not pose a risk to human or forest health (Big Tree Silviculture).
- Where red and/or white pine is a viable understory component, use natural regeneration techniques, such as scarification, when that will meet the management objectives of the area.
- Prescribed fire may be used to promote natural regeneration of red and white pine.
- Perform periodic improvement thinnings within the pine plantations, according to prescription guidelines outlined in the DNR Silviculture and Forest Aesthetics Handbook. This will eventually create a structure similar to that of a naturally appearing pine stand. Convert these stands using natural regeneration if a more desirable species, either conifer or hardwood, is suited to the site.

### **Fir and Spruce Dominated Mixed Conifer Forest**

Balsam fir and white spruce commonly occur in the understory and in some stands are the dominant species on the uplands of the White River Property Group. Inclusions of these conifer components should be maintained throughout stands on these properties.

- Manage natural stands of balsam fir and/or white spruce to perpetuate these species, using the prescriptions outlined in the DNR Silviculture and Forest Aesthetics Handbook.
- Increase the white pine, white spruce and white birch components through shelterwood harvests, group selection and selective thinnings, where opportunities exist and when doing so meets the area-specific management objectives. Hand planting of white spruce and white pine should be considered as a means of maintaining and increasing these species.
- Retain White cedar and hemlock as a seed source for expanding the distribution of these species, where possible.
- Thin white spruce and black spruce plantations on a recurring basis, according to prescriptions outlined in the DNR Silviculture and Forest Aesthetics Handbook, to gradually create a structure similar to that of a naturally appearing spruce stand. Convert these stands using natural regeneration if a more desirable species, either conifer or hardwood, is suited to the site.

### **Red Oak Dominated Mixed Forest**

Oak stands are somewhat limited at these properties, only being found at the westernmost portions of the White River Fishery Area. Even-aged systems are used to regenerate these stands, but non-commercial treatments of oak saplings and seedlings may be needed in order to maintain oak in some stands. This forest type has high value for aesthetics, wildlife, and forest products.

- Use intermediate thinnings to maximize stand growth and quality of oak stands.
- Regenerate these stands at 115-145 years of age, depending on site characteristics. Good quality sites should be considered for extended rotations of up to 200 years. Regenerate by overstory removal or shelterwood methods.
- Prescribed fire may be used as a means of reducing competition for oak or improving the success of establishing natural regeneration.
- Encourage variety in age class and stand size, to provide wildlife habitat, aesthetic value, and diversity. Leave reserve trees as individuals or groups, with consideration given to aesthetics.
- Leave scattered healthy oak in any harvest areas that do not pose risk to human or forest health.

### **Forested and Unforested Wetlands**

Two types of wetland forest exist on the White River Properties. Swamp conifers, which contain tamarack and black spruce or in other areas are dominated by white cedar; and swamp hardwoods consisting primarily of black ash, green ash and red maple. Unforested wetlands primarily consist of alder thickets and sedge meadows.

- No management activities will be conducted within wetlands with small sized, slow growing, non-merchantable trees, lowland brush, or open bogs and marshes.
- Productive stands on wetlands capable of producing merchantable timber within their accepted rotation age may be regenerated by limited harvest activities following guidelines outlined in the DNR Silviculture and Forest Aesthetics Handbook. Timber harvests will only be conducted under frozen ground or very dry conditions, using techniques and equipment that prevent rutting.
- Due to Emerald Ash Borer (EAB) concerns, alternative management strategies outlined by DNR Forestry management guidelines for EAB will be considered in some swamp hardwood stands to encourage forest health and diversity, and protect wetland water quality.

### **Red Maple Dominated Mixed Forest**

Red maple dominated forest is a minor cover type on the White River properties, and is found primarily on the westernmost extent of the White River Fishery Area. It can grow on a variety of soil types, in both early and late-successional mixed stands, and is longer lived than pioneer species such as aspen and white birch.

- Even-aged management is the preferred silvicultural system to maintain Red Maple. Lower quality sites can be rotated and regenerated via coppice with fiber as the product objective. Higher quality sites should be managed with a sawlog objective by either shelterwood or group selection regeneration techniques.
- Conversion to a northern hardwood type on better quality sites or in more mixed stands should be pursued where opportunities arise. Perform intermediate thinnings or conversion thinnings with gaps to promote this diversity.

### **Northern Hardwood Forest**

This forest type is restricted in acreage on the White River properties, only being found in a few locations at the White River Fishery Area. Stands here contain a mix of sugar maple and basswood, with hemlock, yellow birch, white ash and red maple found as canopy associates. Northern Hardwoods will generally be managed as all-aged forest stands, with emphasis on increasing species diversity, wherever possible.

- Use selection harvest as the primary management tool, and vary harvest intensity according to site specific conditions and management objectives. Design harvests that will maintain or increase tree species diversity.
- Where northern hardwoods are to be maintained, generally schedule management entries at intervals of 15-30 years, with consideration given to wildlife habitat and aesthetics.

### **White Birch Forest**

White birch dominated forest is currently a minor cover type on the White River Properties. Although in decline, region-wide, this is an important species for wildlife and will be maintained as a component of these properties.

- Regenerate white birch using the following approved methods: clearcutting, strip cutting, shelterwood harvest, seed tree harvests, or by modified clear-cuts that open up stands. Create conditions to improve natural regeneration.

## **General Recreation Management and Uses**

All Department-owned lands within FAs, WAs, and SNAs, except for refuges that are closed to hunting during the waterfowl season and fish refuges closed to entry during fish spawning periods, are open to traditional outdoor recreational uses, including fishing, hunting, trapping, walking, and nature study (s. NR 1.61 Wis. Admin. Code). Asparagus, berry, and mushroom picking and nut-gathering are permitted on FAs, WAs, and SNAs.

### **Recreational Use Objectives for All Properties**

- Continue to support and provide high-quality fishing, hunting, and trapping opportunities.

- Provide opportunities for high-quality, nature-based, non-hunting-related recreational activities, such as paddling, hiking, cross country skiing, and wildlife viewing, as is compatible with the property's capabilities and the primary objective, above.
- To the degree practicable, accommodate compatible incidental open-space recreational uses; for example, nature study and berry picking (incidental uses are uses that are not specifically managed for on the property).
- Provide opportunities for research and educational activities consistent with the primary management purposes and user safety.
- Utilize educational presentations, exhibits and messages to enhance and protect natural resources.

### **Recreation Management Prescriptions for All Properties**

- Bicycle and horse use are prohibited on the properties, except on roadways open to public vehicles and on any state trails developed in the future on former railroad grades that traverse the properties. ATV and off-road vehicle use is prohibited except as authorized for mobility-impaired access.
- Snowmobile trails that are part of regional trail networks are permitted at the discretion of the property manager. Snowmobiles are otherwise prohibited on the properties.
- Increase public awareness of unique fishery resources by working with clubs, communities, and landowners to develop and improve access where feasible.
- Provide information and amenities at access points and/or trail heads to provide maps or information about recreational opportunities, policies, and invasive species.
- Property boundaries are posted with signs to assist visitors in finding and staying on state lands. Other property regulatory and informational signs are posted at parking lots and access points.
- Acquire property or establish land use agreements to enable recreational access to water resources as opportunity allows.

## General Administration Management Policies and Provisions

The following section describes general property administration and management policies and provisions that apply to all state managed lands.

### **Funding Constraints**

Implementation of the master plan is dependent upon staffing and funding allocations that are set by a process outside of the master plan. Operational funding for the Department is established by the state legislature. Development projects also follow an administrative funding and approval process outside of the master plan. Many of the initiatives contained within the plan are dependent upon additional funding and staffing support. Therefore, a number of legislative and administrative processes outside of the master plan will determine the rate this master plan will be implemented.

Properties that have been purchased or managed using funding from the Federal Aid in Wildlife Restoration Act (the Pittman-Robertson Act) or the Federal Aid in Sport Fish Restoration Act have additional management constraints that must be considered. The statutes and applicable regulations prohibit a state fish and wildlife agency from allowing recreational activities and related facilities that would interfere with the purpose for which the State acquired, developed, or is managing the land.

### **Facility Management Authority**

Property managers may relocate or temporarily close road and trail segments or other public use facilities as deemed necessary after appropriate authorization by normal Department approval processes. The new road or trail (or other facility) location and design must be consistent with the land classification requirements (NR 44) and the management objectives for the management area in which it is located.

### **Public Health and Safety**

All facilities will comply with federal, state, and local health and sanitation codes. The property manager has the authority to close trails and other facilities on the property when necessary due to health, safety, or environmental damage concerns. In designated public use areas, such as designated parking lots and designated trails, trees or other natural elements that are deemed public hazards will be removed. Safety inspections are done at least twice per year.

### **Refuse Management**

Visitors are required to carry out any refuse they bring in because no designated refuse or recycling receptacles are available. Burying of refuse is not allowed anywhere on the properties.

### **Road Management Plan and Public Vehicle Access Policy**

The properties have a network of primitive, lightly and moderately developed roads that are used for management purposes and public access. Except for roads that lead to public parking lots or boat access sites, all roads are closed to public vehicle access except for permitted use of power-driven mobility devices by the mobility-impaired. Closed roads are gated, bermed or signed.

All Department-maintained service roads that are not open to public vehicles will be maintained as primitive or lightly developed roads (NR 44.07(3), Wis. Admin. Code). On primitive roads, which are seasonal and not regularly maintained, ruts and downed trees may be present. Maintenance is done on primitive roads as needed. Public access roads managed by the Department shall be constructed and

maintained as lightly developed or moderately developed roads. The property manager may determine which of these road standards to apply on a case by case basis.

The following management prescriptions apply to Department managed roads:

- Maintain permanent service roads and public access roads in a sustainable condition according to Wisconsin Forestry's Best Management Practices for Water Quality.
- Maintain parking areas.
- Regularly inspect active roads, especially after heavy storm events. Clear debris as needed from the road surfaces, culverts and ditches to decrease unsafe conditions and prevent damage.
- Maintain stable road surfaces to facilitate proper drainage and reduce degradation from traffic during wet or soft conditions; or close the road when these conditions exist.
- Monitor soil disturbance and take measures to prevent excessive damage.
- Restore roads used in timber harvests to non-erosive conditions, in accordance with Wisconsin Forestry's Best Management Practices for Water Quality.

### **Public Access on Service Roads**

The public may use service roads and dikes to gain access on properties for wildlife watching, nature appreciation, etc. These are not designed or maintained as hiking trails, but people are free to walk anywhere on properties unless posted closed to the public.

### **Disabled Accessibility**

The Department is committed to providing exceptional outdoor recreation opportunities for people of all abilities. All new construction and renovation of infrastructure will follow guidelines set forth within the Americans with Disabilities Act and also be done in a manner consistent with ch. NR 44 standards of the land use classification of the site where the development is located.

The property manager has the authority to make reasonable accommodations for people with disabilities, consistent with the requirements of the area's land use classification. Property managers also may allow the use of power-driven mobility devices (PDMDs) on trails consistent with a federal law for PDMDs located in 28 CFR s.35.137.

### **Endangered, Threatened and Species of Special Concern Protection**

Individuals of all endangered, threatened, special concern species and populations of SGCN will be protected. All known critical habitat for these species will be protected or maintained through management which incorporates guidance from staff specialists, research and current literature, and consultation with the Bureau of Natural Heritage Conservation. The Natural Heritage Inventory (NHI) will be checked prior to any management activity to ensure that any adverse impacts associated with listed species are avoided or minimized to the greatest extent practical.

### **Archaeological Resource Protection**

Property managers will prevent physical disturbance of archaeological features on properties. This includes controlling woody species invasion. Managers will follow DNR guidelines outlined in "Burials, Earthworks and Mounds Preservation Policy and Plan". A cultural review indicated the presence of recorded prehistoric campsites and a historic foundation within the White River Fishery and Wildlife Areas. Management policy (Wis. Stats. 44.40 and Manual Code 1810.10) requires that any activities with

the potential to disturb archaeological sites will only be undertaken after consultation with the Department Archaeologist (Dudzik 2012).

### **Water Quality Issues**

Healthy aquatic ecosystems start with good water quality. Water quality on the White River can range from very good to poor depending on time of year and precipitation events. The primary challenge with water quality is erosion and turbidity along the central and eastern portion of the river. Erosion adds to sediment transport which can smother fish eggs and mussel beds. It can silt-in bayous, cutting off flows and spring water exchange. Siltation in the river channel can lead to navigation problems for recreational boaters. Turbidity can hamper sight feeding fish and detracts from the aesthetic quality of the river.

Best management practices (BMP's) for agriculture (buffer strips along waterways, leaving crop residue on fields, plowing in spring instead of fall, contour plowing, etc.) greatly reduce sediment transport and turbidity problems. Construction BMP's (seeding and mulching, silt fencing, straw bales, detention ponds, etc.) should be used for the same reasons on any construction project. All forest management activities will comply with the most recent version of Wisconsin Forestry's BMPs for Water Quality. Maintenance of natural shorelines and a minimum of a 30-ft-wide associated buffer should be encouraged on state lands to protect water quality and maintain the aesthetic quality of the river for recreational boaters. Buffer strips on developed lots should be encouraged to intercept the runoff from lawns, which can carry excess nutrients, fertilizers, herbicides and pesticides directly to the water.

### **Forest Certification**

In 2004, Wisconsin State Forests gained dual Forest Certification from the Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI). In 2009, State Forests were re-certified under FSC and SFI and the balance of DNR-owned land was added to the certification. Independent, third-party certification means that management of Wisconsin's DNR-owned land meets strict standards for ecological, social, and economic sustainability. Forest certification helps Wisconsin remain competitive in global markets that increasingly demand certified raw materials. Management of multi-use lands involves balancing the goals of conserving forestland, supporting economic activities, protecting wildlife habitat, and providing recreational opportunities. Forests and other lands on fish and wildlife properties are managed to meet the Forest certification principles.

### **Prescribed Fire**

Prescribed burns are a management tool that mimics natural fire disturbance and helps control many woody plants and invasive weeds, improves the quality of wildlife habitat, reduces fuels to lessen fire hazard, and liberates nutrients tied up in dead plant material. Upland nesting cover used by grouse, waterfowl and songbirds is more productive if periodically burned. Wetlands also benefit from fire. Prescribed fire may be used as a management tool where feasible and safe except when restricted by management area prescription.

### **Fire Suppression**

As stated in Wisconsin Statutes 26.11, "The Department is vested with power, authority and jurisdiction in all matters relating to the prevention, detection and suppression of forest fires outside the limits of incorporated villages and cities in the state except as provided in sub (2), and to do all things necessary in the exercise of such power, authority and jurisdiction." Wildland fire suppression actions will consider

the property management goals and the threats of the fire to life and property. Appropriate techniques will be used in each event to provide effective fire suppression while minimizing resource damage.

### **Forest Pest Control**

As stated in Wisconsin Statute 26.30, "It is the public policy of the state to control forest pests on or threatening forests of the state..." Any significant forest pest events will be evaluated with consideration given to the property management goals and the potential threat of the pest to other landowners. Infestations will be managed according to the respective management plan, if they exist. Responses to significant infestations from other pests, including but not limited to the emerald ash borer, may include timber salvage or pesticide treatments. Any response to a significant pest outbreak or threat of a significant pest outbreak will be evaluated by an interdisciplinary team of scientists and communicated through press releases and notices to interested parties. If necessary, an immediate emergency response to prevent a major outbreak may be authorized by the State Forester.

### **Authorized Response to Catastrophic Events**

Catastrophic events are rare, but allowances must be made to provide management flexibility when such events occur. These events may include severe flooding, ice and wind storms, insect and disease infestations, wildfires or other catastrophic occurrences. The immediate management responses to these events will follow existing Department protocols. If the management objectives and prescriptions need to be revised a variance to the master plan must be approved by the Natural Resources Board.

Wildfires, tree diseases and insect infestations shall be controlled to the degree appropriate to protect the values of each management area. However, emergency actions may be taken to protect public health and safety, or as directed by the State Forester to prevent a catastrophic incident from spreading to adjacent forest lands.

Management responses to catastrophic events are determined on a case-by-case basis. Salvage of trees damaged by wind, fire, ice, disease, or insects may occur if consistent with the objectives and prescriptions for the management area. Salvage may also occur as part of an emergency response plan authorized by the State Forester.

### **Chemical Use**

Herbicides and pesticides may be used on these properties, such as controlling invasive plants, limiting plant competition in restoration areas, and controlling insects, except as restricted in the property specific management prescriptions in this master plan. All chemical applications shall follow applicable department procedures and herbicide and pesticides label requirements.

### **Non-Metallic Mining Policy**

The Department may use gravel, sand, fill dirt, or other fill material from department-owned lands for Department use. Under certain circumstances other government bodies or agencies may also have access to these materials. Section 23.20 of the Wisconsin Statutes states, "the department may permit any town, county, or state agency to obtain gravel, sand, fill dirt or other fill material needed for road purposes from any department-owned gravel pit or similar facility if this material is unavailable from

private vendors within a reasonable distance of the worksite. The department shall charge a fee for this material commensurate with the fee charged by private vendors.”

Any nonmetallic mining is regulated under the requirements of NR 135 Nonmetallic Mining Reclamation, Wis. Adm. Code, except for sites that do not exceed one acre in total for the life of the mining operation. Site reclamation under NR 135 is administered by the county. NR 135 requires mining sites to be located appropriately, operated in a sound environmental manner, and that all disturbed areas be reclaimed according to a reclamation plan. New sites will not be considered if they will impact significant geological or ecological feature or sites within any designated State Natural Area.

Department of Transportation (DOT) projects are exempt because DOT projects have their own reclamation requirements.

## Real Estate Management

### Acquisition Policies

It is the policy of the Natural Resources Board and the DNR to acquire lands from willing sellers only. As required by state and federal laws, the Department pays just compensation for property, which is the estimated market value based on an appraisal. Staff may periodically contact landowners within the property boundary to explain the Department’s land acquisition program and determine if they have an interest in selling their property. Acquisition priorities for the properties vary from year to year and are based on a number of factors, such as resource management or recreation needs and the availability of funds from various government, non-profit and private sources.

It may be in the interest of the landowner and the Department to acquire only part of the rights to a property, or an easement. The Department has a number of easement options available to address these situations. Fisheries easements provide access for anglers, protection of riparian habitat and control of land to conduct habitat development or management projects. This option should be pursued on streams and rivers to protect critical or unique habitat when fee acquisition is not feasible due to costs, local concerns, or an owner’s desire to retain fee title to the land.

### **Land Acquisition Guidelines**

Criteria, such as the following, have been used to assess the conservation and recreation merits of property being offered by willing sellers.

1. Lands greater than 40 acres with no or low-value improvements.
2. Lands that could provide high quality wildlife habitats or contain critical habitat for Species of Greatest Conservation Need and/or contain Natural Communities identified as rare within the Northwest Sands and Superior Coastal Plain Ecological Landscapes.
3. Lands that can provide access to high-quality fishing, hunting, and trapping experiences as well as opportunities for other compatible nature-based outdoor activities.
4. Lands adjacent to current state lands or other protected lands, particularly if they can provide a buffer from existing or future incompatible land uses.
5. Lands that currently affect the hydrology of important conservation lands.
6. Lands affected by the restoration of wetlands (e.g., restoration efforts are constrained by flooding impacts on surrounding private lands).

Portions of properties not needed for conservation purposes may be sold/leased back for agricultural or other compatible uses, though the state may retain development and public access rights.

Adjusted project boundaries often follow roads or natural features (e.g., streams or rivers). This approach ensures adequate access is available for lands that may be acquired in the future and it is easier to portray where the boundaries are located. Project boundaries often encompass more land than their respective acreage goals. This provides the Department and partners with flexibility when negotiating the purchase, sale or trade of land for recreation and conservation purposes.

Using roads as boundaries will bring developed parcels (e.g., homes, farmsteads and other improvements) into the project boundary. The Department does not seek to acquire parcels with improvements. Acquisition criteria reduce the scores of parcels with substantial improvements. When buildings are purchased as part of a larger land holding, the buildings are typically split from the larger parcel and sold according to and consistent with local ordinances. An occasional purchase/easement may be needed for public access (e.g., upland parking area on a wetland dominated property).

Project boundary changes of more than 40 acres require approval by the Natural Resources Board. Wisconsin Administrative Code NR 44 provides a plan amendment process that may be used to make adjustments in the project boundary after the master plan is approved. Where land purchase or easements are being considered the Department can acquire land under the various authorities in State Statute 23.09.

Funding for land acquisition can come from a variety of federal (e.g., Pittman-Robertson and others), state (e.g., Stewardship), local and private (e.g., land trusts) sources as well as land donations.

### **Easement Acquisition Options**

There are 500 acres of easement authority on the Fishery Area. Easements have the following operational or funding characteristics that affect their options for providing conservation opportunities and public access:

- Conservation easements can be used to protect valuable habitat or create buffers around fish and wildlife lands. Emphasis is often placed on purchasing and retaining the development rights with improved public access typically a secondary benefit. Portions of conservation easements may be sold or leased back for other open space or agricultural uses.
- Scenic easements to protect critical visual buffers may not provide public access due to non-compatible land uses, lack of access and/or other physical constraints (e.g., steep slopes).
- Agricultural easements can purchase development rights while allowing the continued use of the land for farming or other suitable activities. An agricultural easement could include limited public access (e.g., hunting after crops have been harvested). Providing public access is not necessarily required to meet the goals of protecting farmland under some state and federal farm programs.
- Fishing easements provide public access and may be used to improve fishery habitat. Easements corridors are narrow (132 feet width) and do not readily accommodate hunting activities.
- Stewardship does not require public access on lands protected through an easement. However, the Department has a strong preference to secure public access for nature-based recreation (e.g., cross-country skiing, fishing, hiking, hunting, and trapping).
- Easements can be relatively expensive relative to purchase and the potential for limited to no public access and/or management opportunities can make easements a less attractive option.

### **Aides in Lieu of Taxes**

State law requires the Department of Natural Resources to make payments in lieu of property taxes (PILT). The Department uses an automated process for collecting information and calculating PILT payments. The process is determined by statute with little room for interpretation or calculation by the Department. There are two separate statutes and several formulas under each statute that dictate the amount of each individual payment.

Wisconsin statute s. 70.113 Stats. applies to land acquired by the Department prior to January 1, 1992. Payments under this statute are made directly to the taxation district in which the land is located. Schools, VTAE and counties do not receive any payment under this law.

Wisconsin statute s. 70.114 Stats. governs payments in lieu of property taxes for all lands purchased by the Department after January 1, 1992. This law has been amended several times so the specific formula used by the Department to determine each specific payment varies depending on when the property was acquired and how. Payments are made to each taxing district in January, similar to the way a private citizen would pay their property taxes and each taxing district then makes payments to all taxing jurisdictions in the taxing district.

For detailed information on how the Department pays property taxes, visit [dnr.wi.gov](http://dnr.wi.gov) and search "PILT".

### **Future Boundary Adjustments**

Adjustments in property boundaries are occasionally needed. In some cases parcels of land are removed from the boundary to allow alternative uses with public benefits. Other times small parcels adjacent to the property need to be added so they may be purchased for resource protection or to meet expanding recreational needs. Property boundary changes of more than 40 acres require approval by the Natural Resources Board. Wisconsin Administrative Code Ch. NR 44 provides a plan amendment process that may be used to make adjustments in the property boundary after the master plan is approved.

Where land purchase or easements are being considered the Department can acquire land under the various authorities in State Statute 23.09.

### **Conveyed Easements and Other Land Use Agreements**

Easements, access permits, land use agreements and leases across Department land require consultation and joint action by the affected program and the Bureau of Facilities and Lands Real Estate staff. While such situations may serve a public purpose (e.g., a utility corridor or a road) they can adversely affect a management unit by:

- Restricting the Department's future management options,
- Limiting the public's full use and enjoyment of a property,
- Preventing natural succession of cover types,
- Introducing exotic and invasive species to the property,
- Introducing additional herbicides and other contaminants to the property, and
- Creating liability concerns.

The conveyance of easements and other agreements is subject to sections NR 1.48 and NR 1.485, Wis. Adm. Code. Before any rights are conveyed, the Bureau of Facilities and Lands Real Estate staff must determine if federal funds were used to acquire the land and, if so, obtain the appropriate approvals.

## Implementation and Public Communications

Progress on implementing the habitat and recreation management objectives will be reported annually. These annual report will be available to the public on the WDNR Internet Web site and linked to the respective property descriptions. The report will provide information on how the public can become involved in master plan implementation and when significant, new property management issues arise.

The annual report will summarize the following:

- Management and development activities completed,
- Significant issues addressed,
- Planned management and development activities for the upcoming year, and
- Potential changes to management actions or approaches.

The annual report may also include information on topics related to property management and uses. Examples include: the status of forest insect or disease problems, storm damage, updates on endangered or threatened species, recreation management issues, and recreational use trends.

In the event the Department considers a substantive change to the master plan (i.e., a plan variance or amendment) the public will be informed of the proposal and the review and comment process. As appropriate, news releases will be used to announce master plan amendment/variance proposals and review procedures. The Department will also maintain a contact list of persons, groups, and governments who have requested to be notified of potential plan changes.

The following Department staff may be contacted regarding questions about the White River Property Group fish, wildlife, and natural area properties. At the time of this publication, the contact information is:

Scott Toshner	715-372-8539	<a href="mailto:scott.toshner@wisconsin.gov">scott.toshner@wisconsin.gov</a>	White River Fishery Area
Dave Lindsley	715-685-2931	<a href="mailto:david.lindsley@wisconsin.gov">david.lindsley@wisconsin.gov</a>	White River Fishery Area
Todd Naas	714-685-2914	<a href="mailto:todd.naas@wisconsin.gov">todd.naas@wisconsin.gov</a>	White River Wildlife Area
Ryan Magana	715-635-4153	<a href="mailto:ryan.magana@wisconsin.gov">ryan.magana@wisconsin.gov</a>	Bibon Swamp State Natural Area

## **Chapter 2 - Section 2: INDIVIDUAL PROPERTY PLANS**

A variety of DNR, federal and county sources were used to estimate the cover types and land uses on or adjacent to the WRPG properties. They include existing DNR Wildlife, Fisheries, and Facilities and Lands records, Forestry WISFIRS data base, Water Division Wetland acreages and WISCLAND cover types. These data sources use different criteria for assessing habitat types and land uses, so different estimates may be developed depending on the source(s) used. Also small inclusions of different cover types may be embedded within a more dominant cover type in the following acreage descriptions and related maps.

### **White River Fishery Area (Map B and Map Series C and E)**

*Current state ownership: 4,108 acres*

*Current acquisition authority: 10,126 acres*

*Current project boundary: 10,473 acres (includes 1000 acres of stream bank within watershed)*

#### **Property Description**

The White River Fishery Area was established in 1961 to manage and conserve the integrity of its ecological resources, together with its recreational and educational opportunities. The White River is the longest stream in Bayfield and Ashland counties. It is one of the outstanding inland trout producing streams in northwest Wisconsin and is heavily used for fishing and canoeing. Excellent water quality, thermal regimes, and instream habitat in the headwaters results in good natural reproduction of brook and brown trout. The stream begins near the Village of Delta, where it is formed by the confluence of the East, West, and South Forks of the White River just north of the 4,500 acre Rainbow Lake Wilderness Area of the Chequamegon-Nicolet National Forest. The Chequamegon-Nicolet National Forest virtually surrounds the river headwaters to the north, west, and south.

From the Bayfield County headwaters, the White River flows east through more than 10,000 acres of wetlands including open sedge meadows, shrub-carr, alder thicket, forested swamps, (including the Bibon Swamp State Natural Area) and areas of steep, forested clay banks. The river flows through the Bad River Reservation, where it enters the Bad River and drains into the Bad River-Kakagon Slough, a very large estuarine wetland complex on Lake Superior. This meandering wild river with mostly clay and unstable sand bottom is characterized by clear, fluctuating water levels. Numerous coldwater tributaries, springs, and outflows of several glacial lakes feed the river.

Timber harvesting is historically associated with the White River. Saw logs found and removed from the headwaters may indicate the river was used as a transportation route during the early logging era.

There are no Department-owned public buildings on the property; a couple of sheds from former landowners are being dismantled as time and resources allow, in Management Area Two. Property management and restoration activities are conducted and coordinated by DNR staff working out of the Brule and Ashland offices.

The Department maintains six gravel parking lots (W. Delta Road, Rocky Run Road, White River Fisheries Road, Delta Drummond Road (two), and White River Road). Seasonal parking is also permitted along the shoulders of most town and county roads. Several miles of unimproved service roads provide

interior property access for DNR maintenance, restoration, and walk-in public recreation, including access to springs and the stream. Service roads are closed to vehicular traffic to alleviate erosion problems. A popular artesian well is located west of Delta Drummond Road, accessible near the White River South Fork, from the terminus of White River Fisheries Road.

Canoe access with limited parking is possible at two stream crossings: at Pike River Road, with picnic area on land maintained by the Town of Delta, and at private property on Sutherland Road. Mean flow (at USGS gauge below hydroelectric dam on Highway 112) is 240 cfs and maximum flow is 997 cfs.

A club-maintained snowmobile trail exists on a former railroad bed from the gate at Delta Drummond Road to the gate at Pike River Road. A y-shaped utility easement crosses the property approximately one mile east of Pike River Road. A second utility easement parallels Delta Drummond Road north of Rocky Run Road.

The White River is a highly scenic stream in one of Wisconsin's least developed river systems. Signage at the headwaters area reads in part, "The White River Fishery Area was established in 1961 to manage and protect this unique and scenic trout stream and watershed. This multiple use area is dedicated to trout fishing, hunting, canoeing and other compatible outdoor recreational and educational opportunities. Numerous feeder streams, spring ponds and outlet flows of several glacial lakes provide the high quality water for this outstanding trout stream." Historically a premier brown trout fishery in Bayfield County, it is one of only eight rivers in Wisconsin with over 40 miles of Class I or Class II trout water. The White River system attracts anglers from all over the Midwest. In a 2003-2005 angler survey performed by Wisconsin DNR, an average of 31% of the trips was made by anglers living at least 100 miles from the river. A total of 39 fish species inhabit the White River.

In addition to the fishing and canoeing described above, hiking, wildlife viewing, cross-country skiing and snowshoeing are popular; however there are no groomed or designated trails. Hunting and trapping opportunities exist for muskrat, beaver, mink, otter, raccoon, weasel, skunk, red fox, gray fox, white-tailed deer, coyote, wolf, black bear, ruffed grouse, woodcock, fisher, bobcat, snowshoe hare, wild turkey, waterfowl and mourning doves. Dogs must be leashed April 15 – July 31. Snowmobiling occurs Dec 1-March 31, on the designated trail maintained by the county snowmobile club.

## Land Management Classifications

The White River Fishery Area is divided into four land management areas: two Scenic Resource Areas with Type 2 Recreation, one Native Community, and one Habitat Management Area. (Maps C-4, E-4)

### **Area 1: Headwaters (1,652 acres): Scenic Resources Management Area**

Found at the Westernmost extent of the White River Property Group, this Management Area contains a diverse mix of forest types, numerous wetlands, spring ponds, small tributaries and significant river frontage along the South Fork of the White River. The upland forest types include primarily aspen, oak and pine-dominated stands growing on rolling, morainal topography. However, the southwestern portions of the Area occur within the North Central Forest Ecological Landscape, and forest types here are much different, with northern hardwoods and red maple as the dominant species, along with some aspen. Wetlands are common throughout the Management Area, being found adjacent to the river and the several small tributaries and spring ponds that form the headwaters of the South Fork.

The **Lake Two Conifer Forest Zone** (369 acres) includes a diverse mix of upland forest, active springs and both open and forested wetland communities. A good-quality, mature Northern Dry-Mesic Forest on a rolling moraine with a mixed canopy of conifers and hardwoods comprises a portion of the northern half of the site surrounding Lake Two. Large diameter red and white pine dominates the canopy with sugar and red maple and white birch. Areas of Northern Sedge Meadow occur along the springs and Spring Runs. A Muskeg in the southern portion of the site surrounds a small bog lake with a fringe of Poor Fen. Outflow from the Muskeg flows into a small area of Northern Wet-mesic Forest dominated by white cedar.

**Lake Two Pines State Natural Area** (290 acres) overlays a portion of the Lake Two Conifer Forest Zone, within the Headwaters - Scenic Resources Management Area.

Table 2-2 details current and projected forestry-based cover for Area 1 public land (Maps C-3 to C-6). Projected forestry-based cover is not anticipated to change.

Current and Projected Cover *		
Cover Type	Acres	% Cover
Aspen	374	23
Developed	12	1
Grassland	53	3
Oak	236	14
Swamp Conifer	99	6
Swamp Hardwood	18	1
Upland Conifer	265	16
Upland Hardwood	309	19
Water	73	4
Wetland-Non-Forested	214	13
<b>Total</b>	<b>1,652</b>	<b>100</b>

\*100 acres of public access easement land not managed by DNR is not included in the acreages.

### Management Objectives

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Restore and protect the headwater springs, ponds and streams from environmental degradation.
- Maintain the Exceptional Resource Water designation.
- Maintain native vegetation along classified trout streams to provide high quality in-stream and riparian habitat.
- Maintain, or increase as practicable, the extent and quality of classified trout streams for brown and brook trout populations.
- Maintain and restore, where applicable, the free-flowing nature of the stream.
- Provide conditions where users of the trout stream and watershed area may feel they are in a secluded setting.

- Protect habitat for sustainable herptile populations along the White River, tributaries and ephemeral ponds.
- Enhance user awareness, safety, and appreciation of natural resources.
- Maintain vehicular access over a clear-span bridge to the existing parking area that provides access to in-stream fishing, upland hunting, and an artesian well located near the South Branch and White River Fisheries Road terminus.
- Manage for northern hardwood species in the Southwest area near Rocky Run Road.
- Provide active forestry management, including forest openings, consistent with BMPs to maintain the species diversity of plants and animals.

#### Lake Two Conifer Forest Zone

- Within the Lake Two Conifer Forest Zone, promote older age classes.
- Within the Lake Two Conifer Forest Zone, increase red and white pine, and oak.

#### Management Prescriptions

- Install and maintain Department approved stream habitat enhancements to protect or enhance in-stream and riparian habitat quality and diversity.
- Protect in-stream and near stream habitats by activities that include establishing desired native plant species and controlling invasive plant species.
- Replace undersized culvert with clear-span bridge to restore fish passage and support vehicle access to the existing parking lot and artesian well.
- Restore or replace the historic, educational sign located at the White River Road parking area.
- Remove beaver and beaver dams; maintain the free-flowing environment coldwater streams required for robust, self-sustaining trout populations.
- Inventory and monitor herptile populations to document and evaluate their habitat needs.
- Implement appropriate management actions to support herptile populations, using plan variance if necessary.
- Leave long-lived reserve trees as individuals or in groups to provide timber, wildlife, and aesthetic value whenever their retention does not conflict with regeneration and other forest management objectives.
- Require loggers to minimize visual and audible impacts by harvesting during leaf-off periods.

#### Lake Two Conifer Forest Zone

- Within the lake two conifer forest zone, use old growth pine management to promote pine dominated areas with older forest characteristics.
- Within lake two conifer forest zone, reduce aspen and red maple.
- No wildlife openings created within Lake Two Conifer zone.
- No biomass harvesting within Lake Two Conifer zone.

### **Area 2: Transitional Boreal Fishery (1901 acres): Scenic Resources Management Area**

This Area is characterized by a relatively undeveloped and meandering stretch of the White River, located between Delta Drummond and Mason Delta Roads. Upland forest types are dominated by early successional species including aspen, white birch and balsam fir. There are a few stands of northern hardwoods present as well. Low-lying areas adjacent to the river contain a mix of wetland types, both forested and unforested. Swamp conifers made up of both tamarack/black spruce and northern white

cedar are found in several areas. Black ash–dominated hardwood swamp is also common and mixed with areas of alder swamp and open sedge meadow.

**Sajdak Springs SNA.** This 32.2 acre site is characterized by a series of soft water springs originating from a north-facing moraine which feeds a small tributary to the White River. The springs originate under a variety of cover types, including second-growth aspen and maple woods, virgin white cedar, and cutover white cedar and alder. The scenic spring run contains emergent aquatics that border the sandy, firm-bottomed rivulets.

Table 2-3 details current and projected forestry-based cover for Area 2 public land (Maps C-3 to C-5). Projected forestry-based cover is not anticipated to change.

Current & Projected Cover		
Cover Type	Acres	% Cover
Aspen	833	44
Developed	18	1
Grassland	168	9
Shrub	26	1
Swamp Conifer	48	3
Swamp Hardwood	172	9
Upland Conifer	220	12
Upland Hardwood	162	9
Water	54	3
Wetland-Non-Forested	200	11
<b>Total</b>	<b>1,901</b>	<b>100</b>

### Management Objectives

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Protect the headwater springs, ponds and streams from environmental degradation.
- Maintain the Exceptional Resource Water designation.
- Maintain native vegetation along classified trout streams in order to provide high quality in-stream habitat.
- Maintain, or increase as practicable, the extent and quality of classified trout streams for brown and brook trout populations.
- Protect habitat for sustainable herptile populations along the White River, tributaries and ephemeral ponds.
- Active forestry management, including forest openings, consistent with BMPs to maintain the species diversity of plants and animals.
- Maintain aspen while allowing the conifer component to increase.

- Encourage maintenance of existing canoe landings and seek increased canoe and angler access points.
- Evaluate handicap accessible fishing access in partnership with Townships.
- Provide conditions where users of the trout stream and watershed area may feel they are in a secluded setting.
- Maintain, restore and enhance grasslands wherever practicable with an emphasis on control of invasive and woody species.

### **Management Prescriptions**

- No timber harvest within Sajdak Springs SNA.
- Activities to protect in-stream and near stream habitats include the establishment of desired native plant species and controlling invasive plant species.
- Install and maintain Department approved stream habitat enhancements to protect or enhance in-stream habitat quality and diversity.
- Assess the feasibility of offering nature interpretation material at landings, parking lots or wildlife observation areas by 2015. Take action as appropriate.
- Cost-share handicapped fishing on Township land at Pike River Rd access if feasible.
- Develop parking lot with walk-in river access on the Walker/Hanson parcel off Sutherland Road.
- Develop walk-in angler access near end of White River Road.
- Remove beaver and dams; maintain the free flowing environment coldwater streams required for robust, self-sustaining trout populations.
- Inventory and monitor herptile populations to document and evaluate their habitat needs.
- Implement appropriate management actions to support herptile populations, using plan variance if necessary.
- Restore wetlands on properties that were artificially drained.
- Actively manage aspen with minimal disturbance to existing conifer, following universal forest management prescriptions provided in Section 2-1.
- Require loggers to minimize visual and audible impacts by harvesting during leaf-off periods.
- Encourage white pine component in hardwood stands through underplanting.

### **Area 3: Mid-River Boreal Slopes (466 acres): Native Community Management Area.**

Conifer-dominated Boreal Forest and Clay Seepage Bluffs are the dominant native communities of this Management Area. The Area is bounded by the Bibon Swamp on the West and the White River Wildlife Area on the East. A mix of white spruce, balsam fir, white and red pine, white birch and aspen comprise a majority of the acreage along the slopes leading to the White River. No logging will occur because slopes are too steep and erosion is problematic. Clay Seepage Bluff, a native community unique to the Superior Clay Plain, is found along some of the steep slopes overlooking the White River. Vegetation within these natural communities is variable, some with scattered native conifers and shrubs, while others are nearly bare and have small seepages flowing from them. Some open areas have exceptionally high numbers of rare plant species.

**White River Breaks State Natural Area** (160 acres) overlays a portion of the Mid-River Boreal Slopes Native Community Management Area.

The **White River Dam/Flowage Zone** contains a hydroelectric dam that is operated by Excel Energy, along with a 220 acre impoundment that is just West of State Hwy 112. Outside of the improved areas, the forest types are similar to the rest of the Management Area, with aspen, balsam fir and white spruce as the dominant species present.

Table 2-4 details current and projected forestry-based cover for Area 3 public land (Maps E-3 to E-5).

Cover Type	Current		Change Predicted in 50 years	
	Acres	% Cover	Acres	% Cover
Aspen	281	61	57 (-224)	12
Grassland	2	0		
Shrub	4	1		
Swamp Conifer	8	2		
Swamp Hardwood	41	9		
Upland Conifer	98	21	322 (+224)	70
Upland Hardwood	18	4		
Water	3	1		
Wetland-Non-Forested	4	1		
<b>Total</b>	<b>460</b>	<b>100</b>	<b>460</b>	<b>100</b>

### **Management Objectives**

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Allow only natural processes to develop older forest characteristics.
- Increase opportunities for walk-in access and carry-in boat access.
- Evaluate disabled accessible fishing access in partnership with the village of Mason at the existing park.
- Use fee and easement purchase authority (Map B) to acquire land for watershed protection and stream access.

### **Management Prescriptions**

- Allow and encourage research and monitoring to reduce clay bank erosion.
- Passively manage this entire Management Area.
- Salvage may take place only after consultation from an integrated team of resource managers.
- Secure public access to the property and White River through land or easement donation or purchase, especially in the watershed segment between the Maple Ridge Road crossing and the White River Flowage boat landing. (Map B)
- Maintain and develop walk-in access; provide appropriate parking.
- Cost-share handicapped accessible fishing bulkhead at White River Park if feasible.

**Objective for Dam/Flowage Zone**

- Ensure an upstream barrier to invasion of exotic species from Lake Superior.  
*Note: Administrative jurisdiction resides outside DNR: A FERC license (updated 2010) is held by XCEL Energy utility to maintain dam impoundment and flowage.*

**Management Prescriptions within Dam/Flowage “Zone”**

- Passively manage the riparian areas and slopes.
- Allow only natural processes to develop older forest characteristics and maintain floodplain relics.
- Salvage may occur only after consultation from an integrated team of resource managers from Wildlife, Forestry, ER, Fisheries etc.
- No timber harvest.
- If the dam is ever abandoned, assure bedrock falls or other structure prevents passage of exotic invasive species (eg. lamprey) from downstream.

**Area 4: Mid-River Uplands (129 acres): Habitat Management Area**

This Management Area is located along the same stretch of river as Area 3 and represents a corridor of land adjacent to the steep slopes of the White River “escarpment”. Forest types are dominated by mixed forests of aspen, white spruce and balsam fir, with some areas of white birch. Some parcels in private ownership are managed in agricultural production.

Table 2-5 details current and projected forestry-based cover for Area 4 public land (Maps E-3 to E-5). Projected forestry-based cover is not anticipated to change.

Current & Projected Cover Types		
Cover Type	Acres	% Cover
Aspen	98	73
Grassland	18	13
Swamp Hardwood	1	1
Upland Conifer	7	6
Upland Hardwood	9	7
Wetland-Non-Forested	2	1
<b>Total</b>	<b>135</b>	<b>100</b>

**Management Objectives**

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Manage for protection of the slopes by minimizing run-off from adjacent uplands.
- Manage for grassland consistent with the Highway 2 Grassland Conservation Opportunity Area, where opportunities exist.

- Maintain aspen while allowing the conifer component to increase.
- Use fee and easement purchase authority (Map B) to obtain watershed protection and provide additional public access.
- Expand project boundary to protect water quality by preserving adjacent forested uplands along the lower White River. Adjacent deforested uplands contribute large deposits of clay and sand to the White River.

**Management Prescriptions:**

- To facilitate future land acquisition, allow farming to continue via agreements on select new purchases.
- Mitigate sediment loading using a combination of reforestation, brushland establishment, native plantings and/or wetland restoration.
- Work with Bayfield County Land Conservation Department to identify and replace stream crossings that contribute to excessive sediment loads, and with NRCS to protect and restore riparian areas damaged by agricultural erosion.
- Acquire lands and river access through easement or fee title.
- Provide minimal impact parking and walk-in access as opportunities are available.
- Actively manage aspen with minimal disturbance to existing conifer component.
- Actively manage aspen to provide breeding and nesting habitat for woodcock.

## **Bibon Swamp State Natural Area** (Map Series D)

*State ownership:* 9,872 acres

*Acquisition authority:* 13,264 acres

*Project boundary:* 13,264 acres

### **Property Description**

Bibon Swamp State Natural Area is almost 10,000 acres in size (over 15 square miles) along the White River, making it the largest wetland in Bayfield County and the largest non-coastal wetland in the Superior Coastal Plain. It is centrally located among the WRPB properties and occupies the basin of an extinct glacial lake drained by the White River. Land use history includes hydrological disruptions and impacts from heavy logging during the turn-of-the-century logging era and post-logging fires of the early 1900's, all of which affected land cover. Vegetation is diverse across this large expanse of land, influenced heavily by the behavior and chemical composition of groundwater. The southwestern portion of the Bibon Swamp contains a rich wet-mesic conifer swamp of 150 year-old white cedar, which supports a number of rare species. Bunchberry, twinflower, small bishop's-cap and a number of orchid species are representative of the groundlayer. The Bibon Swamp has been recognized numerous times as a priority aquatic conservation site (WDNR 2012b, 2013).

Several sites provide access to the White River. Along the northern boundary, parking and canoe landings are available at Sutherland Bridge (private landing - public welcome for small fee), Goldberg Landing and Bibon Bridge. These sites are located along Sutherland, Goldberg and Bibon Roads. Each site provides parking for 4-6 cars. Access to the west side of the property is from Nymphia Lake Road, which ends at the property entrance. An unmaintained two track road leads south to a gated entrance with parking for one to two cars, or north to an old log landing with parking for 2-3 cars. Along the southern boundary, Bergeman Lane leads to a former farm site turn-around with parking for 2-4 cars. Taylor Lane also leads north from North Sweden Road to the south property boundary, but dead ends at private property. There are no established parking areas along this road. Also along North Sweden Road, Matt's Lane leads north to an old farm site within the property, with parking for 4-6 cars. There are no established access points into the east side of the property along State Highway 63.

The only structure on the property is the concrete shell of an old farm silo located just east of 18 Mile Creek, north of Taylor Lane. There are two artesian wells on the property: one at Goldberg Landing and the other at the end of Matt's Lane. Use of these wells has predominantly been property users.

Recreational bird watching is growing in popularity. Bibon Swamp habitat provides nesting, migratory stopover, and wintering opportunities for an extensive list of birds (WDNR, 2010b). It is listed among the state Important Bird Areas (WDNR, 2007).

Float fishing is popular from canoes, as are recreational canoe and kayak trips through the property, with access points along the north property boundary. One primitive camp site exists along the White River, on county-owned land within the project boundary.

A significant proportion of fishing within Bibon Swamp is done from canoe. The 15-mile river segment between the Sutherland and Bibon Road bridges is the longest reach of high quality trout water in Wisconsin inaccessible by public road; it provides a rare canoe fishery for self-sustaining brown trout.

Primary game species are white-tailed deer, bear, wild turkey, grouse, and waterfowl (mallard, blue-winged teal, wood duck), followed by bobcat, beaver, muskrat, coyote, wolf, red and gray fox, raccoon, fisher, striped skunk, woodcock, snipe, rail, gray squirrel, snowshoe hare, and cottontail rabbits.

Due to sensitive ecosystem concerns associated with State Natural Area status, prohibited activities on the property include horseback riding, driving vehicles (bicycles, ATVs, aircraft). However, snowmobiling is allowed on one designated snowmobile trail located along the old railroad grade following Highway 63.

## Land Management Classifications

Bibon Swamp Natural Area has been divided into two Native Community Management Areas: Bibon Swamp Wetlands and Bibon Swamp Uplands (Map D-4). These parcels will be managed in accordance with the General Habitat Management Objectives and Prescriptions described in Section One of this Chapter or as supplemented below.

### **Area 5: Bibon Swamp Wetlands (7,295 acres): Native Community Management Areas**

The Bibon Swamp represents a relatively large and diverse assemblage of forested and unforested wetlands that surround a long stretch of the White River and several tributaries. Hardwood Swamp, Alder Thicket and Northern Sedge Meadow are among the lowland native communities to the south of the White River at Bibon Swamp. North of the river, a large complex of peatland communities occurs, including open bog, spruce-tamarack muskeg, and black spruce swamp. The natural communities in this Management Area provide ideal habitat conditions for numerous uncommon species of plants and wildlife.

Table 2-6 details current and projected forestry-based cover for Area 5 public land (Maps D-3 to D-6)

Cover Type	Current		Change Predicted in 50 years	
	Acres	% Cover	Acres	% Cover
Aspen	863	12	511 (-352)	7
Developed	23	0.3		
Grassland	1	0		
Shrub	870	12		
Swamp Conifer	1518	21		
Swamp Hardwood	1153	16	1505 (+352)	21
Upland Conifer	29	0.4		
Water	182	2		
Wetland-Non-Forested	2656	36		
<b>Total</b>	<b>7,295</b>	<b>100</b>	<b>7,295</b>	<b>100</b>

### Management Objectives

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Manage for a matrix of wetland and native plant communities.
- Allow old forest to develop through natural processes and passive management.
- Maintain primitively developed, current access to the river and tributaries.
- Provide access for non-consumptive users with an emphasis on bird observations, botanical observations, and hiking.
- Protect habitat for sustainable herptile populations along the White River, tributaries and ephemeral ponds.
- Maintain, or increase as practicable, the extent and quality of classified trout streams for brown and brook trout populations.

### Management Prescriptions

- Protect in-stream and all wetland habitats by emphasizing control and removal of invasive plant species, especially buckthorn.
- Remove beaver and dams when necessary to maintain the free-flowing environment of coldwater streams, required for robust trout populations.
- Inventory and monitor herptile populations to document and evaluate their habitat needs.
- Implement appropriate management actions to support herptile populations, using plan variance if necessary.
- Maintain existing canoe landings.
- Assess the feasibility of offering nature interpretation material at landings, parking lots or wildlife observation areas by 2015. Take action as appropriate.
- Allow only natural processes to shape matrix of wetland communities and develop older forest characteristics.

- Salvage operations due to catastrophic wind, ice, fire, disease or insects may take place. Prior to salvage, an interdisciplinary team from Wildlife, Forestry, NHC, and Fisheries will be formed to determine salvage or management, considering the original objectives of the area.
- Allow and encourage research and monitoring.
- No timber harvest.
- No additional recreational features will be developed.
- Appropriate fire suppression techniques will be used in each event to provide effective fire suppression while minimizing resource damage.

### **Area 6: Bibon Swamp Uplands (2,242 acres): Native Community Management Area**

Located directly southwest of Area 5, the Bibon Uplands Native Community Management Area features 2,032 acres of forested uplands. Several small tributaries flow through this Area, which is bounded on the west by US Forest Service lands and on the south by North Sweden Road. Aspen dominates the overstory of this Area, and there are several stands of white pine. Many stands have a well-developed component of understory hardwoods and conifers, including red maple, white spruce, balsam fir and white pine.

Table 2-7 details current and future forestry-based cover types for Area 6 public land (Maps D-3 to D-6). Projected forestry-based cover is not anticipated to change.

Current & Projected Cover		
Cover Type	Acres	% Cover
Aspen	1977	88
Grassland	17	1
Shrub	47	2
Swamp Conifer	25	1
Swamp Hardwood	8	0.4
Upland Conifer	93	4
Water	10	0.4
Wetland-Non-Forested	65	3
<b>Total</b>	<b>2,242</b>	<b>100</b>

#### **Management Objectives**

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Manage towards a mixed forest of long-lived species such as white pine, spruce, cedar, and Northern Hardwoods, while reducing aspen dominance. Provide older age classes.
- Provide a buffer zone to protect water quality during timber harvest.

#### **Management Prescriptions**

- Use active management, including underplanting, to convert aspen dominated stands to longer-lived species with a long-term goal (>50 years) of providing older forest characteristics.

- Discourage aspen in hardwood stands through implementation of uneven aged silvicultural harvesting.

**Sale or Exchange Parcels** – Two parcels outside the project boundary total approximately 30 acres and will be offered for sale or land exchange: DNR Real Estate File NA 51, and NA File 679.

## **White River Wildlife Area (Map Series F)**

*State ownership:* 1,280 acres

*Acquisition authority:* 1,628 acres

*Project boundary:* 1,628 acres

### **Property Description**

The White River Wildlife Area (1,280 acres) is an undeveloped tract of forest located in northwestern Ashland County, three miles south of the City of Ashland and 15 miles north of the City of Mellen, WI. It is the smallest property in this planning group and is bordered on the east by tribal land belonging to the Bad River Band of the Lake Superior Chippewa.

The wildlife area was established in 1946 primarily to protect winter habitat for deer and other wildlife. The Swamp Hardwood and aspen stands provide browse and a food source for a variety of wildlife. Compared to other northern lands, this area of poorly drained, red clay soils with deeply eroded gullies and balsam fir covered steep slopes offers deer a unique shelter from harsh winters. The varying age and size structure of the conifers offers thermal cover, nesting, and forage opportunities for numerous wildlife species. The White River flows diagonally through the property from southwest to northeast towards its confluence with the Bad River, emptying into Lake Superior. The area is mostly wooded and features good species diversity due to undisturbed habitat amidst varying topography and forest successional stages.

There are no DNR-owned buildings on the White River Wildlife Area. The property is managed by DNR Wildlife Management staff working out of the Service Center in Ashland, WI.

Property access is available from State Highway 13, where an unimproved parking area (owned by WI Department of Transportation) exists on the south side of the White River, serving a dual purpose as a canoe takeout for those floating the river from the west. No other boat access exists on the property. Additional foot access is available by driving from Highway 13 east 0.4 miles on Tapani Road, then north 0.7 miles on Park Road, where roadside parking is possible near a trail heading east from Park Road. Access to the Wildlife Area is by walking east-northeast on a two-track logging trail easement for 0.81 miles over adjoining private and industrial forest lands. The easement access is often wet, rutted, and unsafe for vehicular traffic. It leads to a gated DNR service road on the Wildlife Area, not specifically maintained for public use, though often used by hunters walking through the property.

A county-maintained snowmobile trail runs north–south along Park Road through the property. The trail crosses the White River via a large wooden bridge which spans the floodplain.

Primary public uses are hunting and trapping. Snowmobiling occurs on a small segment of county trail. Other permitted uses include fishing, canoeing, hiking, cross-country skiing, nature study, and berry picking. Despite its location near the City of Ashland, public use is limited due to difficult access.

Game and furbearer species include muskrat, beaver, mink, otter, raccoon, weasel, skunk, red fox, gray fox, white-tailed deer, coyote, wolf, black bear, ruffed grouse, woodcock, fisher, bobcat, wild turkey and snowshoe hare. Waterfowl include mallards, blue-winged teal, wood ducks, and hooded mergansers. Fishing opportunities are limited by challenging access to the river and difficult terrain.

Close proximity to the City of Ashland (three miles), Northland College, Wisconsin Indianhead Technical College campuses, and the Ashland school system provide potential opportunities for recreational and educational uses. Prohibited activities include horseback riding, vehicular use (including bicycles, ATVs, other vehicles), and snowmobiles except on the designated snowmobile trail.

## Land Management Classifications

The White River Wildlife Area has been divided into two land management areas: one Native Community and one Habitat (Map F-4). These areas will be managed in accordance with the General Habitat Management Objectives and Prescriptions described in Section One of this Chapter and as supplemented below.

### **Area 7: Boreal Forest and Floodplain (575 acres): Native Community Management Area**

This Management Area is defined by all of the Wildlife Area acreage below the steep slopes of the White River and an unnamed tributary on the eastern portion of the property. The primary features of this site are the good-quality Boreal Forest and Mesic Floodplain Terrace plant communities. These natural community types are largely restricted to the Superior Coastal Plain Ecological Landscape and both are considered rare or imperiled in the state with few good-quality examples known. Boreal Forest, in part consisting of white spruce, balsam fir, white cedar and both red and white pine, occurs on steep clay slopes and ravines with numerous seeps and an unnamed creek running to the White River. Stands of Northern Wet Forest, Mesic Floodplain Terrace, and Hardwood Swamp along the river terraces add diversity to the site. Mesic Floodplain Terrace is an unusual plant community, typically containing a mix of sugar maple and basswood with black and/or green ash, with a groundlayer of spring ephemerals that are typically found in Southern Wisconsin. This plant community is only known from a few river systems in Wisconsin, including the White and Nemadji Rivers.

**White River Boreal Forest State Natural Area** (446 acres) overlay a portion of the Boreal Forest and Floodplain Native Community Management Area.

Table 2-8 details current and projected forestry-based cover for Area 7 public lands (Maps F-3 to F-6).

Cover Type	Current		Change Predicted in 50 years	
	Acres	% Cover	Acres	% Cover
Aspen	62	11	55 (-7)	10
Developed	6	1		
Swamp Hardwood	208	35		
Upland Conifer	234	41	241 (+7)	42
Upland Hardwood	8	1		
Water	43	7		
Wetland-Non-Forested	15	3		
<b>Total</b>	<b>575</b>	<b>100</b>	<b>575</b>	<b>100</b>

#### **Management Objectives**

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Allow only natural processes to develop older forest characteristics.
- Provide habitat for plant and animal species that use old forest community types.

#### **Management Prescriptions:**

- Allow old forest to develop through natural processes and passive management.
- Allow no timber harvesting to take place.
- Salvage may take place only after consultation from an integrated team of resource managers from Wildlife, Forestry, ER, Fisheries etc.
- Maintain the existing connector snowmobile segment.
- No additional recreational amenities will be developed.

#### **Area 8: Wildlife Uplands (693 acres): Habitat Management Area**

The uplands above the steep slopes leading to the river at White River Wildlife Area make up the entirety of this Management Area, which is directly adjacent to Area 7. Aspen, much of it in younger age classes, dominates the forest cover here, with a majority of the area containing red and white pine “standards” and pockets of white spruce and balsam fir. In addition, there are several stands that are dominated by natural-origin red and white pine with understory fir/spruce, along with white birch and aspen. The few scattered wetland areas contain lowland brush with speckled alder as the dominant species.

Table 2-9 details current and projected forestry-based cover for Area 8 public land (Maps F-3 to F-6).

Cover Type	Current		Change Predicted in 50 years	
	Acres	% Cover	Acreage Objective	% Cover
Aspen	440	63	365 (-75)	53
Developed	1	0		
Upland Conifer	193	28	258 (+75)	37
Wetland-Non-Forested	59	9		
<b>Total</b>	<b>693</b>	<b>100</b>	<b>682</b>	<b>100</b>

### Management Objectives

Unless specifically addressed below, management will be in accordance with the “Universal Elements for All Properties” including “Management Prescriptions by Habitat and Forest Type” as provided in Section One of this chapter.

- Create age class diversity to maintain and improve wildlife habitat.
- Maintain the native origin conifer component.
- Provide accessibility for disabled users.
- Provide a shooting range to encourage hunting traditions.

### Management Prescriptions:

- Manage existing plantations towards natural appearance and do not replant.
- Vary rotation length among aspen stands across the property, in order to create better age class distribution.
- Maintain existing service road, wildlife openings and identify potential new wildlife openings.
- Develop recreational access improvements, including parking, accessible hunting blinds and accessible trails.
- Develop a single ADA accessible 100-yard shooting range.

## CHAPTER 3: SUPPORTING INFORMATION

Original master plans, other background and supporting materials, including original master plans for the White River Property Group (WRPG) are incorporated by reference and can be viewed on the web at <http://dnr.wi.gov> key words “master planning”. This chapter contains an updated version of the FINDINGS AND CONCLUSIONS from the WRPG *Regional & Property Analysis*.

Individuals interested in learning more about these properties and the underlying ecological and socio-economic context are encouraged to read the supporting material found in the *Regional & Property Analysis for the White River Property Group* (WDNR Pub #065).

### **Findings and Conclusions**

This section summarizes and updates the major findings and conclusions from the White River Property Group (WRPG) Regional and Property Analysis (WDNR, 2012). These Findings and Conclusions

identified key issues and helped guide the development of this master plan by highlighting significant opportunities and limitations on the property.

### **The WRPG Properties**

The White River Property Group consists of nearly 15,000 acres protected as state managed lands. Approximately 1,828 acres are State Wildlife Area; 4,070 acres are Fishery Areas, and 9,263 acres are State Natural Areas (includes 32.7 acre Sajdak Springs, within the Fishery Area property). An additional 900 acres within these lands are recognized through a State Natural Area overlay. These White River properties are located primarily in Bayfield County, though adjoining parcels follow the river into Ashland County.

### **Ecological Significance and Capability**

#### **Regional Context**

Forest fragmentation and overall loss of forests have been identified as a major threat to northern forests in the Great Lake States. As Wisconsin forests become parcelized and developed, the White River properties and vast forests of the Chequamegon – Nicolet National Forest, Bayfield County Forest, Brule River State Forest, Bad River Reservation and Industrial Forest Lands collectively represent an important opportunity to maintain an intact forested landscape, serving important ecological functions on a regional and statewide level. Much of the landscape surrounding the WRPG is represented by young and medium-aged stands, often dominated by early successional species such as aspen, within small patches of older forests. Larger areas of older, less disturbed Northern Dry-mesic and Boreal Forests are not well represented. The WRPG offers opportunities to manage for a variety of age classes, including stands of older forest, within a context of outstanding aquatic features, intact and relatively undisturbed wetlands, and vast public landholdings.

The following sections describe the most significant regional attributes to benefit from protecting these high quality and/or rare ecological landscapes. Protecting or restoring habitat at the landscape level maintains the widest variety of species. Discussion begins with protection opportunities for rare, threatened, and endangered species and closes with threats posed by invasive species. These are the major ecological attributes of the WRPG landscape of plant and

animal communities to be addressed during the Master Planning process.

## **Boreal Forest**

Before Euro-American settlement, white pine, white spruce, and paper birch were the dominant trees on uplands in the Superior Glacial Plain Ecological Landscape and this was the only area in the state to support sizable tracts of Boreal Forest (WDNR 2006a). This natural community, always geographically restricted in the state, is currently rare with limited suitable locations in Wisconsin. High-quality examples are found at White River Wildlife Area and in scattered stands throughout the White River Fishery Area on the highly-erodible slopes above the White River.

## **Northern Dry-Mesic Forest**

Once found throughout the Northwest Sands Ecological Landscape, extensive stands of natural-origin red and white pine are now relatively uncommon in the region. Although restricted to the westernmost portions of the White River Fishery Area, there are opportunities to manage pine-dominated Northern Dry-Mesic Forest in older age classes. Adding further value to these stands are the presence of aquatic and wetland features and several uncommon plant and animal species.

## **Forested and Non-forested Wetlands**

Wetlands of both forested and non-forested types are abundant throughout the WRPG. These include Northern Wet Forest, Northern Wet-mesic Forest, Muskeg, Alder Thicket, and Northern Sedge Meadow, with many in good to excellent condition. Coniferous wetlands support a high percentage of the rare species. Opportunities exist to manage forested wetlands and fens as part of a vegetation mosaic that includes open wetland communities, shrub swamp, and swamp conifer forest.

## **Forested Seeps and Springs**

Many springs and seeps exist along the White River, usually near the bases of steep slopes, where they often support a canopy of hardwoods or mixed conifer-hardwoods. Seepage areas, with active discharges of groundwater, sometimes host uncommon or rare plant and animal species. They also contribute to high water quality of the streams they feed. These features are highly susceptible to damage by land use practices that lead to soil or hydrological disturbance. Recharge areas are critical to the continued function and quality of the springs and seeps.

## **White River, Tributaries and Macroinvertebrates**

The free-flowing stretches of the White River provide important habitat for rare animal species. Management of lands adjacent to the river has important effects on water quality. Many of the areas along the river slopes contain mature forests and forested seeps that harbor rare plant assemblages. A management “buffer” that accounts for steepness of slope, soil type, vegetative cover, and the habitat needs of sensitive species would be most effective for protecting species associated with the river.

Two tributaries of the White River with high ecological importance are Eighteen Mile Creek and Long Lake Branch. Eighteen Mile Creek is a high gradient, cold water stream that originates within the Great Divide District of the Chequamegon Nicolet National Forest (CNNF). Its headwaters were designated as Eighteen Mile Creek State Natural Area in 2007 to protect the

high-quality, old-growth hemlock hardwood stand on its banks. Eighteen Mile Creek has moderate aquatic taxa richness and two rare macroinvertebrate species. Long Lake Branch originates at Lake Owen in the CNNF before flowing through rugged moraines and forested terrain, eventually reaching the marshy areas of Bibon Swamp SNA where Eighteen Mile Creek joins it. Long Lake Branch had exceptionally high diversity of aquatic macroinvertebrates and high taxa richness during 1996 aquatic inventories.

## Herptiles

A fundamental lack of data for herptile presence and sustainability on WRPG properties makes it difficult to gauge their ecological significance in the region. Inventory and monitoring is needed to document the presence and abundance of herptiles on the White River properties. Inventory and monitoring would likely reveal important links between ephemeral ponds and their surrounding forests that provide habitat needed for amphibians.

## Wildlife and Game

In addition to habitat for rare and sensitive wildlife species, WRPG properties provide high-quality habitat for common wildlife species. Primary wildlife game species include white-tailed deer, American black bear, bobcat, ruffed grouse, waterfowl and small game. The demand for wildlife-based recreation is likely to increase and opportunities exist on the WRPG properties to improve habitat for these common wildlife species. In addition to wildlife for hunting, these properties provide excellent birdwatching opportunities.

## Fish Communities

The White River and many of its tributaries are classified as either Exceptional or Outstanding Resource Waterways by WDNR. It is the largest river system in Bayfield County, an important tributary to the Bad River in Ashland County, and has a good warm water and trout fishery, with an annual anadromous run of steelhead from Lake Superior.

## Invasive Species & Other Biodiversity Threats

Invasive species are a significant and growing threat to native communities. Protecting wetlands, spawning habitat and minimizing impacts from invasive species, such as carp, lamprey, zebra mussels and Eurasian milfoil, are needed to maintain game and native species abundance and diversity. Glossy buckthorn removal efforts currently underway within the Fishery Area are important to maintain site integrity. Problematic species include common reed grass, Canada thistle, Helleborine orchid and reed canary grass.

Most importantly, monitoring for new or not yet widespread invasive species and rapid response to small infestations represent high-impact actions. For example, purple loosestrife is not noted within the WRPG but is abundant in open wetlands nearby and should be monitored closely. Early detection with rapid control of new and/or small infestations is top priority. Where large extensive infestations are present, control efforts target the highest quality areas first. Additional threats to maintaining current levels of biodiversity include habitat fragmentation, altered ecological processes, and deer herbivory.

## **Recreational Significance and Capability**

### **Regional Context**

This region contains some of Wisconsin's most attractive and diverse outdoor recreation opportunities with the blending of federal, state and local recreation resources. While this region's population density is low, its recreational resources are used by an active resident base, along with in-state and out-of-state visitors. Travel for the purposes of outdoor recreation is an integral part of the state's tourism industry and a key economic sector within this region.

Despite good opportunities, there is a need to provide better access to interior sites within the WRPG via a trail system for hunting opportunities, and improved water access. These types of recreational amenities can be provided with continued preservation and protection of the White River Land Legacy areas.

### **Hunting**

Hunting and trapping are major recreational activities in the WRPG region, with opportunities to pursue waterfowl, white-tailed deer, American black bear, wolf, bobcat, fisher, snowshoe hare, American beaver, North American river otter and small game. Hunting ruffed grouse is very popular on the forests of the region. Public lands are heavily used for hunting and crowding can be an issue, especially for deer, waterfowl, and bear hunting. Disabled users have requested ATV access in some areas of the WRPG; however access limited by the normally wet conditions and red clay soils cause concerns for user safety, potential trail maintenance and watershed health. Both DNR staff and the public have expressed interest in developing future trail access to enhance year-round recreation opportunities.

### **Fishing**

Approximately 39 species of fish inhabit the springs and streams within the White River properties. Brown and brook trout are the primary species sought by anglers. Trout angling is considered excellent and the trout population is self-sustaining. Game fish present in the warmwater areas include northern pike, largemouth bass, yellow perch and bluegill. Catostomids include shorthead redhorse and white suckers, and minnow species include central mud minnow, fathead minnow, creek chub, longnose and blacknose dace, common and golden shiners, slimy sculpin, brook stickleback and trout perch. No endangered or threatened fish species are known to exist within the fishery area.

### **Canoeing, Kayaking and Water-based Activities**

The region is a popular destination for water-based activities and the WRPG properties offer good opportunities for fishing, waterfowl hunting, and non-motorized boating. Floating the White River by canoe and kayak is an increasingly popular way to experience the properties.

### **Birdwatching, Wildlife Viewing, and Nature Study**

Birdwatching, wildlife viewing and nature study are popular activities in the region and on WRPG properties due to significant and diverse wetland habitat. Numerous bird species congregate in the region during migration due to the proximity of Lake Superior and the Mississippi River Flyway. Bibon Swamp is recognized as one of the Important Bird Areas of Wisconsin (WDNR, 2007).

Property Friends Groups, the Northern Great Lakes Visitor Center, Wisconsin Indianhead Technical College and Northland College all contribute to public awareness, education, and opportunities for conservation and enjoyment.

## Hiking, Cross-Country Skiing and Snowshoeing

Cross-country skiing, snowshoeing, and hiking are likely to increase in usage. Regionally, walking for pleasure, hiking and sightseeing are among the highest demanded activities by recreational users.

## Motorized Recreation

Segments of regional snowmobile trails traverse almost all WRPG properties. The trails and associated bridges are maintained by local snowmobile clubs. All-terrain vehicle (ATV) use is not authorized on the properties due to the combination of very wet soils and sensitive ecological communities. ATV and other off-road vehicle uses are generally considered not compatible with the purpose of state wildlife, fishery, and natural areas.

## Horseback Riding and Mountain Biking

Horseback riding and mountain biking are not authorized uses on the WRPG properties. Environmental and physical setting limitations of the properties present concerns that include a predominance of wet soils, limited contiguous uplands, and limited user access/parking. Significant biking trails exist within the region. Opportunities for horse and bike uses on these properties are limited by the requirement that non-primary uses not significantly detract from the primary purposes of the property (s. NR 1.51 Wis. Admin. Code).

## Camping

There are no public camping opportunities provided on the WRPG properties. Camping opportunities exist at nearby state parks, county and federal camping areas. There are 79 public and privately-owned campgrounds which provide about 2,393 campsites in the Superior Coastal Plain Counties.

## Summary

Ecologically significant attributes of all WRPG properties include remnant stands of Boreal and Northern Dry-Mesic Forests within a context of high quality rivers, streams and wetlands. They offer opportunities to protect good-quality examples of natural communities, rare plant populations and habitat for both common and uncommon wildlife species. The White River and watershed are important recreational and economic resources: it is one of the outstanding inland trout producing streams in northwest Wisconsin and an important tributary to an *internationally* recognized wetland estuary complex of Lake Superior. The properties offer regionally significant opportunities for hunting deer, bear, waterfowl and small game. Wildlife-viewing will continue to be a popular activity with opportunities for observing waterfowl, wetland birds, raptors and opportunities for in-the-field environmental education and research. The WRPG properties offer potential for lightly developed, non-motorized recreation experiences such as hiking, cross country skiing, snow shoeing, and nature study. Although the properties within the WRPG

grouping have various official designations and primary purposes, the properties come together in their significant recreational use as areas of fishing, hunting, trapping, and watershed protection.

Major threats to the biodiversity of the WRPG include habitat fragmentation, altered ecological processes, deer herbivory, and infestation by aggressive invasive species.

In some areas, opportunities for access are limited by the normally wet conditions and red clay soils, presenting concerns for user safety, potential trail maintenance and watershed health. Both DNR staff and the public have expressed interest in improving access to enhance year-round recreation opportunities. Thoughtful planning and management will help maintain high quality wildlife and fisheries habitat while also providing recreational experiences for an increasing number of users and uses.

## References and Information Sources

Acreages estimates in this master plan were generated from several web-based intranet data systems. All acreages for existing Department properties were derived from the DNR Land Division Land Records system.

Boundary adjustments and cover type acreages were derived from several databases including: DNR Lands Division Land Records System, DNR Forestry Division WisFIRS, DNR Water Division surface water and fisheries data, and Natural Heritage Conservation state natural areas. Soils information is from DNR Surface Water Body Integration System and NRCS Web Soil Survey.

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Fishery Areas - <http://dnr.wi.gov> key words *fishery areas*  
State Natural Areas - <http://dnr.wi.gov> key words *natural areas*  
Forestry Handbooks - <http://dnr.wi.gov> key words *forest handbook* and *best management practices* and *biomass and forest trout streams*  
Handicapped accessible recreation - <http://dnr.wi.gov> key words *Open the Outdoors*
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### Appended Maps

Visit <http://dnr.wi.gov> and search "Master Planning" then "White River Property Group"

## Appendix A: MOA with White River Citizens Involvement Committee

### Memorandum of Agreement

#### Department of Natural Resources White River Citizens Involvement Committee

**THIS MEMORANDUM OF AGREEMENT (MOA)** is entered into this 24th day of August 2005 by and between the Department of Natural Resources (DNR) and the White River Citizens Involvement Committee and is intended to assist in the development and implementation of a management plan for the DNR's Fish and Habitat program on the White River Fisheries Area in Bayfield and Ashland Counties.

This MOA delineates the responsibilities of each party and shall be effective for the IO-year period beginning with the date of execution.

This agreement shall be amended as desired by the mutual written agreement of the parties hereto. Either party shall advise in writing its desire to terminate this agreement with at least thirty (30) day's notice.

**WHEREAS**, the White River in Bayfield and Ashland Counties is known as one of the finest brown and brook trout fisheries in the Midwest and that the river has been identified in the DNR's Land Legacy Report and the Northern Rivers Initiative as a high quality stream.

**WHEREAS**, the expanded White River Fisheries Area has been approved by the Natural Resources Board (NRB).

**WHEREAS**, the Department of Natural Resources has authority to purchase up to 7,549 acres in fee title and easements from willing landowners in the project area.

**WHEREAS**, the Department has overall management authority on the project and the White River Citizens Involvement Committee has been constituted to play a significant role in participating with the Department in the future overall management efforts and considerations on the river.

**WHEREAS**, the primary goal of this project is to protect the river corridor and the river's high quality watershed.

**NOW THEREFORE**, in consideration of the mutual covenants hereinafter set forth, the White River Citizens Involvement Committee and the Department agree as follows:

## **1. WHITE RIVER CITIZEN INVOLVEMENT COMMITTEE RESPONSIBILITIES**

### **The White River Citizen Involvement Committee agrees to:**

- A. Continue to encourage ecological preservation/restoration in order to protect the scenic beauty and ecological health of the White River corridor and to make it accessible for future generations.
- B. Help the DNR identify potential land purchases and other real estate transactions from willing landowners in the designated area.
- C. Schedule, set-up and attend regular committee meetings.
- D. Work with the DNR to enlist the services and support of local citizens, landowners and organizations, including tribal, county, local and federal government agencies to affect the management goals and objectives for the property,

## **2. DEPARTMENT RESPONSIBILITIES**

### **The Department agrees to:**

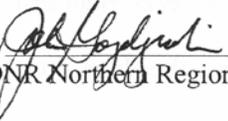
- A. Designate DNR staff to serve as consultants to the White River Fisheries Area Citizens Involvement Committee.
  - DNR staff representatives will include:
    - The property manager from Fisheries and Habitat
    - The property manager from Facilities management
    - Other Department staff as needed to meet committee needs
- B. Attend scheduled meetings of the White River Citizens Involvement Committee serving as consultants to the committee on a range of natural resource and environmental issues on the river.
- C. Participate with the White River Citizens Involvement Committee in the development and implementation of management plans that are consistent with the goals and-objectives of the management plan developed by the Friends of the White River and the Feasibility Study produced as a result of the expansion project.
- D. Work with the White River Citizens Involvement Committee to enlist the services and support of local citizens, landowners and organizations, including tribal, county, local and federal government agencies to affect the management goals and objectives for the property.
- E. Negotiate potential land purchases or other real estate transactions only with willing property owners.
- F. Develop a priority system to evaluate potential real estate opportunities and share the results with the White River Citizens Involvement Committee.

### **3. IT IS MUTUALLY UNDERSTOOD AND AGREED THAT:**

- A. Project Management goals include implementing provisions of the management plan developed by the Friends of the White River and the Feasibility Study produced as a result of the expansion project, including:
- Protecting an important piece of the White River corridor that is currently privately owned.
  - Create ecological connectivity between lands already protected through federal, state and tribal ownerships.
  - Protect the entire river system in the project area from detrimental development.
  - Protect important tributaries that feed into the White River to enhance brook and brown trout habitat and spawning areas.
  - Protect an important Lake Superior tributary stream.
  - Provide public outdoor recreation opportunities through limited walk-in public access points to the river and limited carry in canoe access sites.
- B. Existing state policies, statutes and administrative codes will govern development and implementation of management plans on the White River Fisheries area.
- C. Implementation of projects including land purchases or other real estate transactions are subject to the availability of funding or department staffing that will vary from year to year.
- D. Changes in the proposed management plans for the property will be mutually developed with the White River Citizens Involvement Committee prior to implementation.
- E. The initial term of the MOA shall be from August 2005 to August 2015. It may be extended beyond this initial time period by written mutual agreement of the parties involved.
- F. This MOA may be amended only in writing and signed by both parties.
- G. To the extent authorized by law, each party shall be responsible for its own actions and results thereof, and shall not be responsible for the acts of the other party and the results thereof. Each party, therefore, agrees that to the extent authorized by law it will assume all risk and liability to itself, its agents or employees, for any injury to persons or property resulting in any manner from the conduct of its own operations, and the operation of its agents or employees under this MOA, for any loss, cost, damage, or expense resulting at any time for any and all causes due to any act or acts, negligence, or by failure to exercise proper precautions, of or by itself or its own agents or its own employees, while occupying or visiting the premises under and pursuant to the MOA.

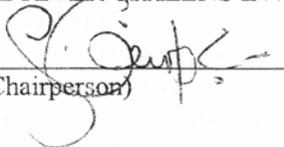
**IN WITNESS WHEREOF**, the Department and the White River Citizen Involvement Committee has caused this memorandum to be executed in their respective names by the respective duly authorized representatives.

STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES

By   
(DNR Northern Region Director)

8-22-05  
Date

WHITE RIVER CITIZENS INVOLVEMENT COMMITTEE

By   
(CIC Chairperson)

9-21-05  
Date

## APPENDIX B - Natural Resources Used By Local Native American Tribes

The Ojibwe<sup>1</sup> had long lived in the Lake Superior region (portions of modern-day Minnesota, Wisconsin, Michigan, and Canada) by the time European explorers first entered the area. At that time, the Ojibwe lived a semi-nomadic lifestyle, moving seasonally from camp to camp, harvesting from the earth (aki<sup>2</sup>) vital foods, medicines, utility supplies, and ceremonial items.

As more Europeans moved into the Lake Superior region in search of timber and minerals, the United States government obtained vast parcels of land from the Ojibwe through cession treaties. In many of these treaties, the Ojibwe retained the rights to hunt, fish, and gather in the ceded territories to meet economic, cultural, spiritual, and medicinal needs - in essence, to sustain their lifeway. Tribal negotiations for these rights were fastidious and purposeful, and only through the guarantee of these rights, did the tribes agree to sign the treaties. Today, these reserved usufructory rights are often referred to as treaty rights.

Treaties that reserved these rights include the Treaty of 1836, ceding land in Michigan's Upper and Lower Peninsulas and parts of the Upper Great Lakes; the Treaty of 1837, ceding land in north central Wisconsin and east central Minnesota; the Treaty of 1842 ceding land in northern Michigan and Wisconsin and the western part of Lake Superior; and the Treaty of 1854, ceding land in northeastern Minnesota and creating reservations for many Ojibwe tribes.

For many years following the ratification of these treaties, the Ojibwe continued to hunt, fish, and gather as always. However, over the years, as states passed various conservation laws, state game wardens enforced these laws against tribal members. Members exercising their treaty rights off reservation within the ceded territories were frequently cited and convicted in state courts. Many members paid fines, endured the confiscation of their rifles and fishing gear, and suffered incarceration.

Though the Ojibwe have always believed in the continued existence of their treaty rights, it was not until the 1970's, as part of a general resurgence of tribal self-determination, that Ojibwe governments and their members more aggressively and more formally challenged state conservation laws and enforcement activities. These challenges gave rise to many federal and state court decisions which reaffirmed Ojibwe off reservation treaty rights on public lands in the ceded territories<sup>3</sup>.

The courts confirmed the Ojibwe's understanding of their treaty rights: The treaties provide a "permanent" guarantee "to make a moderate living off the land and from the waters by engaging in hunting, fishing and gathering as they had in the past."<sup>4</sup> In essence, the courts found the Ojibwe treaties to be legally binding agreements to be respected within the framework of the United States Constitution, which defines treaties as the "supreme law of the land."

In addition, the courts recognized that by reserving the rights to engage in hunting, fishing, and gathering, the Ojibwe also retained their sovereignty to regulate tribal members exercising these treaty rights. Sovereignty refers to the right of inherent self-government and self-determination. Thus, tribal self-regulation is a requisite of treaty rights implementation. As the courts reaffirmed the Ojibwe's

ceded territory treaty rights, a number of tribes<sup>5</sup> in Michigan, Minnesota and Wisconsin chose to enhance their self-regulatory infrastructures through the formation of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC)...[GLIFWC] assists its member tribes with issues such as the application of tribal self-regulation within the off-reservation ceded territories, identification and condition assessment of treaty resources, negotiations and consultation with state and federal government agencies regarding the management of treaty resources within the ceded territories, and litigation pertaining to the treaties of member tribes.

**Excerpted from: Danielsen K.C. and J. H. Gilbert. 2002. Ojibwe off-reservation harvest of wild plants. E.T. Jones, R. J. McLain and J. Weigand. Eds. *In Non-timber forest products in the United States*. University of Kansas Press. Lawrence, KS. Pg 282-292.**

#### Footnotes:

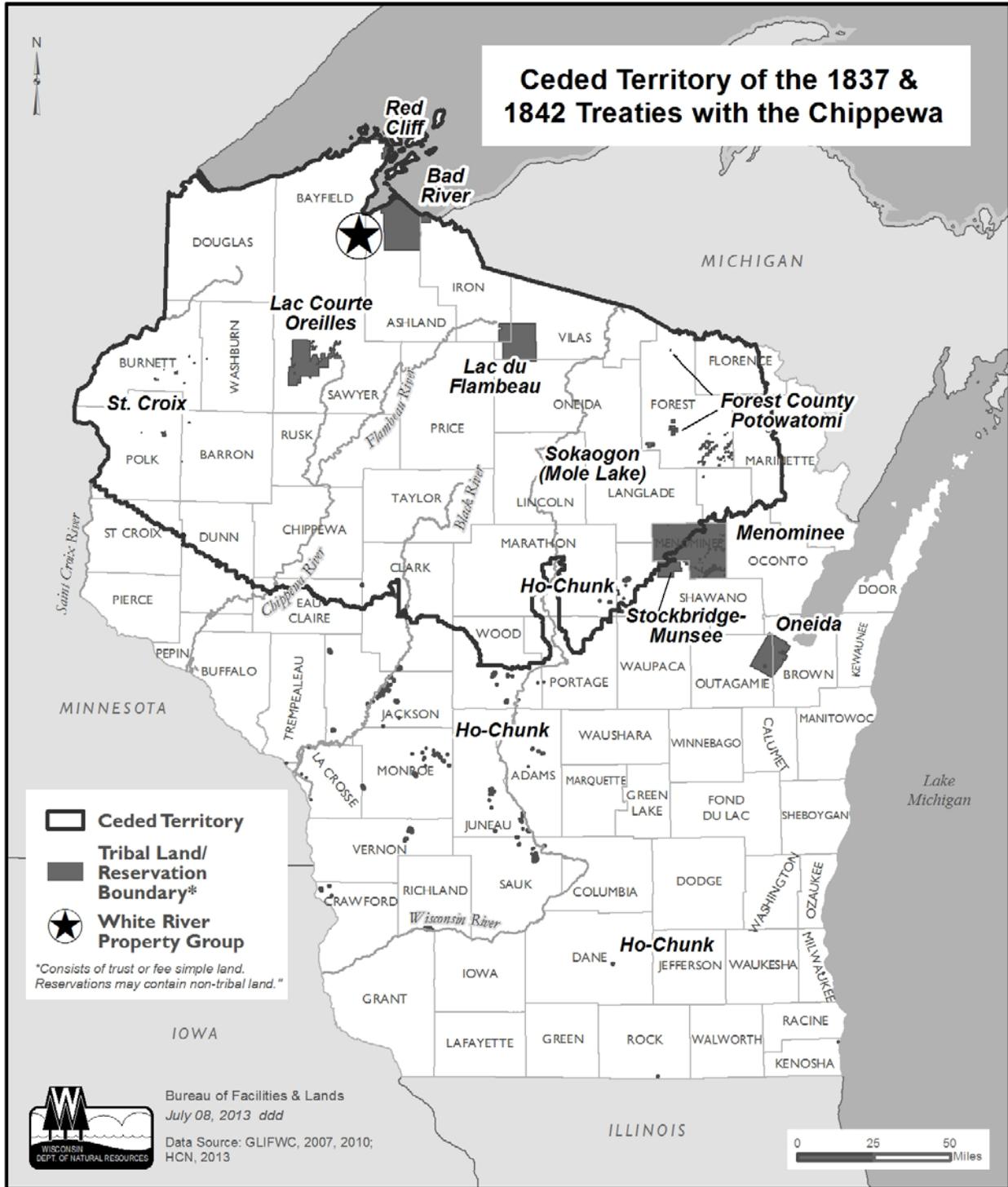
**1** *There are several terms used in reference to the Ojibwe people. The Ojibwe people often call themselves Anishinaabe which in their language means Indian person or original people. The anglicized word for Ojibwe is Chippewa.*

**2** *Ojibwe language*

**3** *See People v. Jondreau, 384 Mich 539, 185 N.W. 2d 375 (1971); State of Wisconsin v. Gurnoe, 53 Wis. 2d 390 (1972); U.S. v. Michigan, 471 F.Supp. 192 (W.D. Mich. 1979); Lac Courte Oreilles v. Voigt (LCO I), 700 F. 2d 341 (7<sup>th</sup> Cir. 1983), cert. denied 464 U.S. 805 (1983); Lac Courte Oreilles v. State of Wisconsin (LCO III), 653 F.Supp. 1420 (W.D. Wis. 1987); Lac Courte Oreilles v. State of Wisconsin (LCO IV), 668 F.Supp. 1233 (W.D. Wis.1987); Lac Courte Oreilles v. State of Wisconsin (LCO V), 686 F.Supp. 226 (W.D. Wis. 1988); Lac Courte Oreilles v. State of Wisconsin (LCO VI), 707 F.Supp. 1034 (W.D. Wis. 1989); Lac Courte Oreilles v State of Wisconsin (LCO VII), 740 F.Supp. 1400 (W.D. Wis. 1990); Lac Courte Oreilles v. State of Wisconsin (LCO VIII), 749 F.Supp. 913 (W.D. Wis. 1990); Lac Courte Oreilles v. State of Wisconsin (IX), 758 F.Supp. 1262 (W.D. Wis. 1991); Lac Courte Oreilles v. State of Wisconsin (X), 775 F.Supp. 321 (W.D. Wis. 1991); U.S. v. Bresette, 761 F.Supp. 658 (D. Minn. 1991); Mille Lacs Band v. State of Minnesota, 861 F.Supp. 784 (D. Minn. 1994); Mille Lacs Band v. State of Minnesota, 952 F.Supp. 1362 (D. Minn. 1997); Mille Lacs Band v. State of Minnesota, 124 F.3d904 (8th Cir. 1997); State of Minnesota v. Mille Lacs Band, 119 S.Ct. 1187 (1999).*

**4** *LCO III, 653 F.Supp. 1420, 1426 (W.D. Wis. 1987).*

**5** *GLIFWC's current member tribes include: in Wisconsin -- the Bad River Band of the Lake Superior Tribe of Chippewa Indians, Lac du Flambeau Band of Lake Superior Chippewa Indians, Lac Courte Oreilles Band of Lake Superior Chippewa Indians, Red Cliff Band of the Lake Superior Chippewa Indians, St. Croix Chippewa Indians of Wisconsin, and Sokaogon Chippewa Community of the Mole Lake Band; in Michigan -- Bay Mills Indian Community, Keweenaw Bay Indian Community, and Lac Vieux Desert Band of Lake Superior Chippewa Indians; and in Minnesota -- Fond du Lac Chippewa Tribe and Mille Lacs Band of Chippewa Indians.*



## **APPENDIX C: Public Investments in Public Lands**

In Wisconsin, our natural resources are not just a part of our landscape; they are a part of our heritage. Wisconsin residents value their rich traditions of hunting, fishing, trapping, camping and hiking, and our access to our public recreational land and wild places. The state manages about 1.6 million acres of public-owned forests, barrens and savanna, grasslands, wetlands, shrub lands, streams and lakes. Conserving these resources is an investment that pays many dividends, some economic, others social similar to our investments in roads and other infrastructure.

In assessing the economic importance of the Wisconsin State Park System, a study released in 2002 indicated the total visitor expenditures and the “multiplier” effect of new dollars flowing into the state accounted for roughly \$650 million annually (*WDNR, 2002*). The National Wildlife Refuge System generated almost \$1.7 billion in total economic activity, almost four times the \$383 million federal appropriation to the refuge system in fiscal 2006 (*Greenwire, 2007*). A 2006 report for the National Parks Conservation Association showed that for every \$1 appropriated in the annual national parks budget, the national park system generates at least \$4 for state and local economies (*Hardner and McKenney, 2006*). A University of Minnesota study found that for every \$1 invested in conserving natural areas in Minnesota, there is a return of up to \$4 (*Minnesota Environmental Partnership, 2010*).

According to the U.S. Fish and Wildlife Service’s *National Survey of Fishing, Hunting and Wildlife Report (2006)*, a total of 2.9 million residents and non-residents, 16 years old and older, fished, hunted and/or watched wildlife in Wisconsin spending \$3.7 billion in the process.

According to the 2006 national survey, nearly 1.39 million anglers spent 20.8 million days fishing. That accounted for \$1.66 billion in retail sales, \$2.75 billion in overall economic output, generating \$196 million in state and local taxes and providing 30,000 jobs (*Southwick Associates, 2008*). Nearly 700 thousand hunters spent 10 million days hunting, accounting for \$1.39 billion in retail sales, \$2.19 billion in overall economic impact, generating \$197 million in state and local tax revenue and providing 25,000 jobs (*Southwick Associates, 2007*).

Our \$12 billion tourism industry (*Tourism Federation of Wisconsin*) and \$23 billion forest industry (*WDNR 2009*) are inextricably linked to our abundant natural resources and, in part, to our public lands. All of Wisconsin DNR-managed lands have been certified as sustainable by two third-party audit firms. That means these lands meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations. Timber harvested on state land also has an enhanced value and can be marketed as sustainably harvested.

There is a growing understanding of the role that natural lands play in filtering pollutants and maintaining water quantity and quality for both surface and groundwater. Wetland protection and restoration can help reduce flood peaks and damage, protect human health and safety, and reduce the need for expensive projects such as levees, detention ponds and the reconstruction of flood-damaged roads.

Ingraham and Foster (2008) estimated the value of basic “ecosystem services” from natural lands. They calculated an economic value for the wildlife habitat, carbon sequestration, disturbance prevention (e.g. flood control), freshwater management and supply, nutrient regulation and waste management provided by USFWS National Wildlife Refuges in the contiguous United States. The value of these services

provided by federal lands amounted to \$2,900/acre/year. Using the same approach, Wisconsin's public land provides a total return of \$3.33 billion/year or \$2,400/acre/year.

Our public lands provide cultural and historical connections. They invoke a sense of place in the landscape and are important habitats for people. The majority of Americans agree that preserving undeveloped land for outdoor recreation is important (*Outdoor Foundation, 2011*). Evidence suggests that children and adults benefit from contact with nature that land conservation can now be viewed as a public health strategy (Frumkin and Louv, 2007). They also play an important role in providing access to the outdoors for people with varied physical abilities, support environmental education, and build a public commitment to environmental conservation.

Investments in public land in Wisconsin needs to balance the capital and operational costs with the full range of long-term recreation activities, environmental benefits, connections to nature, land health as well as economic dividends. Expenditures for public land conservation and management are best understood as an investment that will pay dividends, including economic ones, long into the future (*Gies, 2009*)