HORICON-SHAW PLANNING GROUP

DRAFT MASTER PLAN AND ENVIRONMENTAL ANALYSIS

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LIST OF ACRONYMS

BMPs	Best Management Practices
DBH	Diameter at Breast Height
EAB	Emerald Ash Borer
EL	Ecological Landscape
GSMT	Gold Star Memorial Trail
HMA	Habitat Management Area
HMEVC	Horicon Marsh Education and Visitor Center
HSPG	Horicon-Shaw Planning Group
NCMA	Native Community Management Area
NWR	National Wildlife Refuge
RMA	Recreation Management Area
RPA	Regional and Property Analysis
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SGCN	Species of Greatest Conservation Need
SMA	Special Management Area
SNA	State Natural Area
USFWS	U.S. Fish and Wildlife Service
WA	Wildlife Area
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation
WisFIRS	Wisconsin Forest Inventory and Reporting System

CHAPTER ONE: INTRODUCTION AND OVERVIEW

The Horicon-Shaw Planning Group (HSPG; also referred to as "the plan area") includes four properties located in Dodge County in southeast Wisconsin (Map A). There are two Wildlife Areas, Horicon Marsh and Shaw Marsh. Horicon Marsh contains an embedded State Natural Area, Fourmile Island Rookery. The third property is the Sinnissippi Extensive Wildlife Habitat parcel. The fourth property is a very small Fishery parcel known as the Horicon Rough Fish Station. In total, these properties comprise 12,446 acres of state protected and managed land.

Property acreages are provided in Table 1.1.

Table 1.1. Horicon-Shaw Planning Group Property Acreages.

Property	Acreage*	Embedded SNA	Acreage*
Wildlife Area			
Horicon Marsh	11,167	Fourmile Island Rookery	15
Shaw Marsh	928	-	-
Extensive Wildlife Habitat			
Sinnissippi Extensive Wildlife Habitat	350	-	-
Fishery			
Horicon Rough Fish Station	1	-	-
Total: 12,446 acres			

*Property acreages are extracted from the WDNR Managed Lands GIS spatial database and may differ from the acreages represented in property deed legal descriptions.

PURPOSE AND MANAGEMENT AUTHORITY

Property master planning is a process that determines how a property will be managed and developed. The development of master plans is governed by NR 44, Wisconsin Administrative Code, the master plan rule. This rule defines master planning, sets forth its purposes, and specifies the general planning process and content of a master plan. 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. The scope of management and use of state property depends upon its official designation.

WILDLIFE AREAS

Wildlife Areas (WAs) are acquired and managed under the authority of Section 23.09(2)(d)3, Wisconsin Statutes, and Chapter NR 1.51, Wisconsin Administrative Code. They are designated to provide places where people can hunt, trap, and fish. WAs also are open for traditional outdoor uses of walking, skiing, snow shoeing, nature study,

berry picking, and other low-impact recreational activities. As directed by NR 1.51 and NR 1.61, other recreational uses may be allowed on WAs 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 defined and authorized in Sections 23.27-23.29, Wisconsin Statutes and Chapter NR 1.32, Wisconsin Administrative Code as “an area of land or water which has educational or scientific value or is important as a reservoir of the state’s genetic or biological diversity and includes any buffer area necessary to protect the area’s natural value”. 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 areas as SNAs and Section 23.29 provides authority to legally dedicate and protect SNAs in perpetuity. While the intent of the SNA program is to preserve the best examples of the state’s diverse natural communities, other recreational uses may be allowed if they do not threaten the site's natural values.

OTHER STATE-OWNED LANDS

The HSPG also includes two properties that were acquired under the authority of the Extensive Wildlife Habitat Program and Fisheries Management, two statewide programs that permit purchase of small-acreage sites outside of existing property project boundaries. These parcels are acquired to protect important fish and wildlife habitat and provide public recreational opportunities.

SIGNIFICANCE OF THE HSPG PROPERTIES

The HSPG properties are contained within the Southeast Glacial Plains Ecological Landscape, a region notable for its abundance of glacial features (till plains, lake basins, drumlins, etc.), acreage of both open and impounded water, and diverse wetland communities. Open wetlands and water are dominant natural features on the HSPG properties. Some of these habitats exist in tracts that are extensive or that are regionally rare or significant. Notably, Horicon Marsh Wildlife Area is part of the greater Horicon Marsh, the largest fresh-water cattail marsh in the United States. The extensive wetlands at Horicon Marsh have been internationally recognized for their importance to both breeding and migrating birds, especially waterfowl, waterbirds, and shorebirds. The marsh, sedge meadow, shrub swamp, seasonal mudflat, and adjacent upland grassland habitats of the HSPG properties host a wide diversity of game and nongame wildlife species.

Recreationally, this region is notable for its diverse environments and unique geological features that support a variety of recreational activities. It is also notable for its mix of rural and urban influences, comparatively low proportion of public recreation land, and effects of a relatively dense and growing population. The main recreational uses of the

HSPG properties are the traditional outdoor pursuits of hunting, fishing, and trapping. The properties receive heavy hunting use, especially for deer, waterfowl, and pheasant hunting but also for turkey, mourning dove, and small game such as rabbit and squirrel. Trappers pursue primarily muskrat, mink, and raccoon, along with lesser numbers of beaver, otter, fox, coyote, opossum, skunk, and weasels. Horicon WA and Horicon Rough Fish Station offer the best angling opportunities, with both shore fishing and boat access sites. The properties also are used for other outdoor recreation, such as wildlife viewing, hiking, paddling, and cross-country skiing and snow-shoeing.

Horicon WA is unique among the four properties in the plan area. It is much larger in size than the others, has considerably more infrastructure, and offers facilities and recreational opportunities that the other properties do not, e.g., hunting and photography blinds, dog training area, designated trails. Horicon WA is well-known as an excellent place for wildlife viewing and nature enjoyment. The Horicon Marsh Education and Visitor Center is one of WDNR's premier centers for wildlife conservation education. The Explorium, an extensive new area of interpretive displays and interactive exhibits which opened to the public in August, 2015, has significantly expanded the facility's educational offerings and appeal.

A growing population in the region will likely create increasing demand for outdoor recreation. The HSPG properties are easily accessible from both local and regional population centers, including the Madison and Milwaukee metropolitan areas. Thus, they are and will continue to be important providers of outdoor recreation land close to where people live.

OVERVIEW OF THE PLAN

The HSPG Draft Master Plan describes how these properties will be managed, used, and developed. The plan focuses on maintenance and enhancement of wetlands, especially emergent marsh and sedge meadow, and associated uplands for an array of game and non-game species through habitat management, and protection of a colonial waterbird nesting area through native community management. Recreation management emphasizes the traditional outdoor activities of hunting, fishing and trapping, a high-quality wildlife conservation education program at Horicon Marsh WA, and other nature-based recreational pursuits such as hiking and wildlife viewing. The plan also recognizes the importance of working with external partners, including other government agencies (local, state, and federal) and nonprofit conservation groups, to achieve common goals.

RESOURCE MANAGEMENT

The plan emphasizes habitat management of open wetlands, including emergent and submergent marsh, sedge meadow, and wet prairie, and associated upland grassland and shrub habitats. These habitats support a wide variety of game and non-game wildlife species, including waterfowl, waterbirds, shorebirds, wild turkey, woodcock, pheasant, grassland-nesting songbirds, herptiles, and bats. Water level manipulation and hydrologic restoration will improve habitat for both breeding and migrating birds and for

fish. Nest boxes and other artificial structures will enhance reproduction for birds and bats. The plan also supports sustainable management of forested stands, particularly oak, aspen, and bottomland hardwoods, for forest health and wildlife benefit.

Native community management, including some habitat augmentation, of Fourmile Island Rookery SNA will maintain this important nesting area for colonial waterbirds.

RECREATION MANAGEMENT

The traditional uses of hunting, fishing, and trapping are the primary recreational uses of the HSPG properties, and are the focus of recreation management in the master plan. Deer, waterfowl, and pheasant hunting and wetland furbearer trapping are especially significant draws for users. Management to support these activities consists largely of habitat management, pheasant stocking, maintenance of existing facilities, and maintaining and improving access. New proposals include exploring opportunities to enhance accessible hunting and modifying existing closed/restricted areas to better reflect current administrative needs, wildlife populations, and recreational uses and to expand hunting opportunity.

An important secondary recreational focus in the master plan is on other nature-based outdoor activities such as hiking and wildlife viewing and on educational programming, particularly at Horicon Marsh WA. The master plan supports these activities through maintenance of existing trails and facilities, including the Horicon Marsh Education and Visitor Center (HMEVC) which is home to one of WDNR's premier wildlife conservation education programs. The plan calls for construction of a new picnic shelter/flush-toilet building at Palmatory Street.

Bicycle Trail Request

The Department received a request from proponents of the Gold Star Memorial Trail (GSMT), a non-motorized trail currently under development, to allow bicycle use on portions of existing hiking trails at Horicon Marsh WA as a connection between the HMEVC and the City of Horicon. The Department is willing to accommodate bicycle use on these trails only under certain conditions, due to Department concerns with the request (conflicts with other trail users; safety; wildlife impacts) as well as the property's statutory designation and primary purpose. Necessary conditions address trail routing, acceptable modifications to existing trails, trail standards and maintenance, funding, and the need for agreements between the Department and the GSMT.

EXTERNAL PARTNERSHIPS

Partnerships are critical to WDNR's work. The Department collaborates with various organizations and local governments to restore and manage wildlife habitat, monitor wildlife populations, control invasive species, and plan, develop, and maintain recreational and educational opportunities and facilities. These partners include the Friends of Horicon Marsh Education and Visitor Center, Ducks Unlimited, Wisconsin

Waterfowl Association, Horicon Marsh Bird Club, Pheasants Forever, and the Rock River Archaeological Society. The HSPG Master Plan acknowledges the importance of these public-private partnerships and calls for continuing collaboration with these and other partners and private landowners to achieve recreational resource management and protection objectives.

REAL ESTATE ACTION ITEMS

Boundary Modifications

Current state ownership on the HSPG properties is 12,446 acres. The master plan recommends a series of strategic boundary adjustments for these properties, including 656 acres of project boundary expansions, 5 acres of which are already DNR-owned, and 655 acres of boundary contractions. This yields a net boundary contraction of 4 acres. No changes to existing property acquisition goals are being recommended.

These recommendations are intended to meet the following goals:

- Include land within the boundary that is already DNR-owned.
- Exclude areas with incompatible land uses (chiefly urban development) and parcels currently in agricultural production for which the probability of acquisition is low.
- Improve public access and management efficiency and expand current recreational opportunities.

Land cover in the 651 expansion acres that are not DNR-owned consists primarily of agricultural fields (543 acres) with smaller amounts of wetlands, forest, developed areas, and grass/shrub.

Land Sales

A 31-acre parcel on Horicon Marsh WA and a 7-acre parcel on Shaw Marsh WA are being proposed for sale. These parcels are small and isolated. The Horicon parcel is in a proposed boundary contraction area and the Shaw Marsh parcel is outside the current and proposed project boundary. Neither parcel provides significant recreational or habitat value.

Project Boundary Establishment, Parcel Re-designation, and Property Naming

The Sinnissippi property was acquired under the Extensive Wildlife Habitat (EWH) program and thus lacks a project boundary. It is larger than many EWH parcels, with ownership in one contiguous block, and is owned and managed as a Wildlife Area. The property also lacks an official name. It is known locally as the Sinnissippi Public Hunting Ground. However, this is not an official designation, referring to an old leasing program, and is not appropriate given that the property is owned in fee title. Therefore, the master plan recommends that a project boundary and acquisition goal exactly

matching current ownership be established for the Sinnissippi parcel, that it be re-designated as Wildlife Area, and that the property be named Sinnissippi Wildlife Area.

Table 1.2. HSPG Proposed Real Estate Action Items Summary by Property. Figures are acres unless otherwise noted.

Property	Current DNR Ownership	Existing Project Boundary	Proposed Project Boundary	Change in Project Boundary	Existing Acquisition Goal	Proposed Acquisition Goal	Change in Acquisition Goal	Percent Complete	Parcel Re-designation	Proposed Land Sale
Horicon Marsh	11,167	12,014	12,011	-3	11,362	11,362	0	98%	0	31
Shaw Marsh	928	1,380	1,384*	4*	1,330	1,330	0	70%	0	7
Total	**12,095**	**13,394**	**13,395***	**1***	**12,692**	**12,692**	**0**	**-**	**0**	**38**
Sinnissippi	350	0	350	350	0	350	0	100%	350	0
Total	**350**	**0**	**350**	**350**	**0**	**350**	**350**	**-**	**350**	**0**

***These figures include a 5-acre boundary expansion over land that is already DNR-owned; taking this into account results in a net boundary contraction of 4 acres.

CHAPTER TWO: MANAGEMENT, DEVELOPMENT, AND USE

INTRODUCTION

This chapter details the management, development and use of the HSPG needed to achieve the properties' long-range vision and goals. Each property is planned and managed to optimize its own inherent capabilities, yet at the same time to realize its importance as a component of the larger landscape mosaic of public and private properties. Chapter Two is organized into three main parts: the **Introduction** contains an overview of the benefits of public land protection and the Vision and Goals that guide the overall project; **Section One** covers universal plan elements which apply to all the state properties in the plan area; and **Section Two** focuses on the individual properties, including property descriptions for each property followed by management objectives and prescriptions unique to that property.

PUBLIC LANDS: AN INVESTMENT IN WISCONSIN'S FUTURE

Wisconsin is known for its abundant natural resources, for the value our citizens place on the rich traditions of hunting, fishing, trapping, camping and hiking, and for the ease of access to recreational land and wild places for everyone who lives here, including those who live in our largest metropolitan areas. We are defined by our clean lakes and rivers, vast forests, and abundant fish and wildlife. Conserving these resources is not an expense, but an investment that pays many dividends, both economic and social. A University of Minnesota study found that for every $1 invested in conserving natural areas in that state, there is a return of up to $4 (MEP 2011). Although similar data are not available for Wisconsin, one can imagine that a similar return of $4 on each $1 investment in public land in Wisconsin is quite possible.

The State of Wisconsin manages about 1.6 million acres of publicly-owned forests, barrens and savannas, grasslands, wetlands, shrublands, streams and lakes. Most of these lands are open to hunting, fishing, trapping, hiking, cross-county skiing, wildlife watching, and other outdoor, nature-based recreation. The economic impact of fishing, hunting and wildlife watching in Wisconsin is considerable. According to the 2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, Wisconsin report (USFWS and USCB 2014), a total of 3.5 million residents and non-residents aged 16 years and older fished, hunted and/or watched wildlife in Wisconsin in 2011, spending $5.5 billion in the process.

Total wildlife-watching participants numbered 2.4 million, with over 6 million days of participation and total expenditures of almost $1.5 billion (USFWS and USCB 2014). Over 1.2 million anglers spent over 21 million days fishing in 2011, accounting for nearly $1.5 billion in retail sales and $2.26 billion in overall economic output. This generated $148 million in state and local taxes and provided over 21,000 jobs (Southwick Associates 2013). Over 894,000 hunters spent over 12.1 million days hunting in 2011,

accounting for over $2.5 billion in retail sales, almost $4 billion in overall economic impact, and generating over $228 million in state and local tax revenue and over 34,000 jobs (Southwick Associates 2012).

In addition, Wisconsin's $17.5 billion/year tourism industry (TFW 2015) and $23 billion/year forest industry (WDNR 2012a) both are inextricably linked to abundant natural resources and a vibrant public land base.

All WDNR-managed lands have been certified as sustainable by two separate third-party audit firms, indicating that these lands meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations. All timber harvested from state lands can be marketed as sustainable and therefore has an enhanced value.

Even those citizens who do not engage in hunting, fishing, hiking, camping, or other outdoor activities on public lands have a reason to value them. These lands provide "ecosystem services" that improve our quality of life in various ways. Ecosystem services are conditions or processes associated with natural ecosystems that provide benefits to humans.

For example, land conservation protects human health by keeping our drinking water clean and is a cost-effective tool in protecting water quality. A growing understanding of the role that forests and natural lands play in filtering pollutants and maintaining water quantity and quality has led many municipalities and water suppliers, particularly those in growing communities, to consider land protection as part of a multiple-barrier approach to providing safe drinking water. A study conducted by the Trust for Public Land and the American Water Works Association showed that forestland in particular greatly reduces the cost of treating drinking water. For every 10 percent increase in the source area's forest cover (up to 60 percent), treatment and chemical costs decreased approximately 20 percent (Ernst 2004).

Wetlands provide natural flood insurance by acting as sponges, storing rain that runs off the land and slowly releasing it to the atmosphere, groundwater, and adjacent lakes, rivers and streams. Strategic 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 some of these basic ecosystem services. 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 services provided by forests, shrublands, grasslands, and wetlands amounted to $2,900/acre/year. Using the same approach, Wisconsin's public lands provide a total return of $3.33 billion/year or $2,400/acre/year (Table 2.1).

Table 2.1. Estimated Annual Value of Ecosystem Services Provided by WDNR-owned Lands.

	Dollars/acre*	WDNR-owned acres	Value
Forests	$1,014.27	879,898	$892,454,144
Shrublands	$660.13	121,928	$80,488,331
Grasslands	$61.67	160,211	$9,880,212
Wetlands	$10,608.43	221,522	$2,350,000,630
Total		**1,383,559**	**$3,332,823,318**

*Source: Ingraham and Foster 2008

Our wild lands also provide a cultural and historical connection to who we are and where we've been. They provide a sense of place in the landscape and are important habitats for people. They include historic and archaeological sites, scenic views, water access, bridges and more. Trails, for example, are links to our natural resources. They 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.

The majority of Americans agree that preserving undeveloped land for outdoor recreation is important (Outdoor Foundation 2011). Lack of access to, and interest in, nature keeps kids from experiencing the outdoors, leading to a growing disparity between the time children spend indoors wired to technology and the time they spend outside enjoying nature (TNC 2011). Evidence suggests that children and adults benefit so much from contact with nature that land conservation can now be viewed as a public health strategy (Frumkin and Louv 2007).

It can be difficult to weigh the ultimate value of purchasing, conserving, and managing public land in Wisconsin. Upfront costs are obvious and immediate, while benefits are usually long-term and may seem vague by comparison. However, in addition to dollars and cents, land conservation also should be measured in the currency of recreation, environmental benefits, connections to nature, and land health. Expenditures for public land conservation and management are best understood not as a cost but as an investment that will pay dividends, including economic ones, long into the future (Gies 2009). Likewise, the land acquisition and management strategies outlined in this master plan will pay commensurate dividends to the region and its residents, long into the future.

VISION

The Horicon-Shaw Planning Group properties will provide high-quality habitats for diverse wildlife and fish species and high-quality outdoor, nature-based recreational and educational opportunities in lightly-developed settings for current and future users. These opportunities will be provided within a matrix of open wetland and associated upland communities, including emergent and submergent marshes, sedge meadows, wet-mesic prairie, shrub swamps and lowland hardwoods, rivers and streams, surrogate grasslands, and upland hardwoods. These natural communities, which have been internationally recognized for their extent, quality, and value to wildlife, will be managed sustainably for user enjoyment and ecological benefit in a manner consistent with their statutory designations and ecological capabilities. These properties will contribute to landscape-scale habitat, wildlife, and recreation management through collaborations with other resource management agencies, local governments, outdoor and non-profit groups, landowners, and citizens.

GOALS

Goal 1: Protect, restore, enhance, and manage for a variety of wetland and associated upland communities to maintain and enhance ecological health and diversity conserve biological diversity and provide high-quality habitats for animal and plant species, both common and rare.

Goal 2: Provide opportunities for high-quality hunting, trapping, and fishing and other compatible outdoor, nature-based recreational activities such as wildlife viewing, hiking, paddling, cross-country skiing, and nature study.

Goal 3: Provide high-quality educational programming and interpretive facilities for participants of all ages that promote appreciation of and support for wildlife management and conservation, with an emphasis on wetland ecosystems, and that support the local economy by attracting visitors to the area with outstanding programming and nature enjoyment opportunities.

Goal 4: Provide sustainable populations of both terrestrial and aquatic game species using scientifically sound management practices.

Goal 5: Protect, manage and enhance habitat on these properties to maintain their importance to breeding and migrating birds and foraging bats.

Goal 6: Practice and promote principles of ecosystem management and sustainable forestry.

Goal 7: Develop and maintain a fish community that promotes a healthy aquatic ecosystem, including good water quality, a diverse submerged aquatic plant

community, and habitat supporting diverse aquatic organisms including non-game fish, amphibians, and turtles.

SECTION ONE: UNIVERSAL ELEMENTS FOR ALL DEPARTMENT PROPERTIES

RESOURCE MANAGEMENT BY LAND CLASSIFICATION

Management of these properties generally is described by specific land management classifications per NR 44 that indicate the primary management objective for a property or area 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 will be pursued in these management areas.

All the lands within the HSPG are covered by the following land management classifications:

Habitat Management Area (HMA) (NR 44.06(5)): The majority of land within the HSPG (11,878 acres) falls into this classification. The primary objective for HMAs is to provide integrated upland, wetland and/or aquatic habitat management that meets critical life-cycle needs for 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 (NCMA) (NR 44.06(6)): One management unit comprising 162 acres on the Horicon Marsh WA is classified as NCMA. NCMAs are managed to perpetuate presettlement 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 a particular set of physical characteristics. 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 traditional recreational uses, such as hunting, fishing, trapping, and nature enjoyment, are allowed on NCMAs unless an area needs to be closed to protect a rare species during breeding season or to protect a very fragile habitat.

Recreation Management Area (RMA) (NR 44.06(8)) with Type 3 Recreational Use Setting (NR 44.07(6)): Lands in this classification are managed to provide and maintain land and water areas and facilities for outdoor public recreation and education. The Type 3 Setting is managed to provide readily accessible areas with modest recreational facilities offering opportunities at different times and places for a variety of dispersed recreational uses and experiences. Facility development is simple, providing a modest level of user convenience, and the full range of land management activities is permitted. One 380-acre area on Horicon Marsh WA encompassing the Bachhuber, Indermeuhle

Island, and Quick's Point hiking trails and Palmatory Street recreational facilities has been classified as a RMA with Type 3 Setting.

Special Management Area (SMA) (NR 44.06(7)): Lands in this classification are managed to provide and maintain areas or facilities for special uses not included under other land management classifications. One 26-acre area on the Horicon Marsh WA encompassing the Horicon Marsh Education and Visitor Center has been classified as a SMA.

The total acreages of these management areas by property are shown in Table 2.2. Refer to individual property map series (series B through D) for land classification maps.

Table 2.2. Land Management Classifications of the HSPG Properties.

Property	Classification (acres)*			
	HMA	NCMA	RMA, Type 3	SMA
Horicon Marsh WA	10,599	162	380	26
Shaw Marsh WA	928	-	-	-
Sinnissippi Extensive Wildlife Habitat	350	-	-	-
Horicon Rough Fish Station	1	-	-	-
Total	**11,878**	**162**	**380**	**26**

*Land management classification acreages are extracted from the WDNR Managed Lands GIS spatial database and may differ from the acreages represented in property deed legal descriptions.

Any additional lands acquired likely would be classified as HMA, and managed according to the general wildlife and forestry management objectives and prescriptions and Management Prescriptions by Cover Type, as appropriate to the habitats present. A NCMA classification may be considered if a habitat evaluation indicates the presence of, or potential to restore, high-quality examples of natural communities that are characteristic of the plan area or that are considered regionally rare or significant.

GENERAL WILDLIFE HABITAT MANAGEMENT

The following general wildlife management objectives and prescriptions apply, as appropriate, to all the properties in the plan area. Additional prescriptions are described in the Management Prescriptions by Cover Type section later in this chapter. Management objectives and prescriptions for specific habitats and management areas on individual properties are included in the individual property sections.

The following objectives and prescriptions will be implemented contingent upon the availability of staff and material resources, and may be modified as needed to respond to unpredictable or catastrophic events (e.g., storm damage, severe insect or disease infestations, new exotic/invasive species, etc.).

Objectives

- Provide the largest practicable blocks of habitat, particularly wetlands and grasslands, including a lowland-to-upland continuum.
- Establish or maintain linkages between habitat blocks to create travel corridors for the movement of species over time.
- Maintain and enhance the quality and extent of open wetlands, with particular emphasis placed on emergent marsh and sedge meadow, for the benefit of common (mallard, blue-winged teal, wood duck, muskrat, etc.) and uncommon (king rail, American bittern, black tern, willow flycatcher, bats, etc.) breeding species, as well as for migratory bird and bat stopover habitat.
- Maintain native upland brush and expand restored or surrogate grasslands to provide habitat for game species such as American woodcock and grassland-nesting waterfowl, particularly in sites where it helps create an upland-to-lowland habitat continuum.
- Maintain lowland shrub in areas that do not have high potential for sedge meadow or wet prairie management.
- Restore hydrology/hydrological connections between habitats where opportunities exist and conditions allow.
- Monitor and control populations of invasive species and eradicate them where feasible. Invasive species of particular concern currently include reed canary grass, non-native/hybrid cattail, *Phragmites*, common buckthorn, Asian honeysuckle, purple loosestrife, and common carp. Support efforts to manage and prevent spread of aquatic invasive species.
- Manage habitats to protect and enhance populations of rare species, including endangered, threatened, and special concern species and Species of Greatest Conservation Need (SGCN).
- As appropriate, follow the Management Prescriptions by Cover Type provided later in this chapter when conducting management actions that support the above objectives and prescriptions.

Prescriptions

- Manipulate water levels on flowages and impoundments to improve wildlife habitat, particularly for nesting and migrating waterfowl, waterbirds, and shorebirds and for game species such as muskrat.
- Plug ditches, break old drain tiles, and remove soil to restore hydrology and wetland habitat and to improve water level management.
- Use nest boxes, platforms, or similar devices to enhance reproduction of desired wildlife, such as colonial nesting birds.

- Control invasive species using appropriate techniques including prescribed fire, flooding, mechanical control (e.g., mowing, cutting, pulling), chemical control (e.g, herbicide application), biocontrol, and education and outreach.
- Provide a 'soft edge' of grasses or shrubs between cover types, as appropriate, to minimize sharp transitions and allow habitat types to shift in response to hydrologic changes.
- Restore native grasslands on formerly cropped fields except where farming agreements or food plots are being used to aid habitat restoration efforts or enhance hunting opportunity (e.g., for doves or geese).
- Maintain current maps of known cultural sites and features. Follow appropriate regulations (e.g., Section 44.40, State Statutes, Manual Code 1810.10) when proposing or planning any management activity that has the potential to disturb a cultural site.
- Maintain existing dikes and water control structures. However, some structures may be removed, and others added, where necessary after evaluation and consultation between appropriate programs.

GENERAL WARMWATER FISHERIES MANAGEMENT

Waters in the interior of Horicon Marsh are dominated by common carp, black bullheads, and brown bullheads. Occasionally, Northern pike, black crappie, and white crappie are caught by anglers; however, current surveys indicate that these populations are very small. Other species present include bowfin, yellow bullhead, central mudminnow, bluntnose and fathead minnow, white sucker, largemouth bass, black crappie, rock bass, bluegill, green sunfish, pumpkinseed, yellow perch, and walleye. The East Branch of the Rock River, a major tributary to the marsh, supports more diverse riverine habitat with improved angling opportunities for walleye and Northern pike.

On Shaw Marsh WA, Shultz Creek currently supports a limited forage fishery. Shaw Brook currently supports a warmwater sport fishery containing Northern pike, largemouth bass, central mudminnow, fathead minnow, white sucker, blackstripe topminnow, brook stickleback, tadpole madtom, black and yellow bullhead, bluegill, pumpkinseed, green sunfish, fantail darter and Johnny darter. There may be seasonal movement of fish from the Beaver Dam River into Shaw Brook's lower reaches.

At Horicon Rough Fish Station, the fishery includes Northern pike, walleye, bowfin, yellow, black and brown bullhead, central mudminnow, bluntnose and fathead minnow, white sucker, largemouth bass, black crappie, rock bass, bluegill, green sunfish, pumpkinseed and yellow perch.

The following general fisheries management objectives and prescriptions apply, as appropriate, to the Horicon Marsh. The general fisheries management objective for Shaw Marsh WA and Horicon Rough Fish Station is to maintain the existing fishery and habitat of Shaw Brook, Shultz Creek and the Rock River for anglers, public access and the

public. Wildlife management objectives and prescriptions for Shaw Marsh WA will assist in meeting this objective by improving water quality.

Objective

- Maintain and enhance existing native fish populations and diversity through habitat management, restoration, enhancement, gamefish stocking, control of non-native fish, and monitoring.

Prescriptions

- Monitor game and nongame fish populations using standardized fish surveys.
- Allow natural hydrologic processes to occur wherever possible, or restore where feasible.
- Utilize contract fishing as a rough fish removal method by continuing to issue Horicon Marsh/Rock River/Lake Sinnissippi rough fish removal contract and monitor contract removal.
- Provide angling opportunities in the East Branch of the Rock River and areas of better habitat through gamefish stocking, as state fish hatchery production allows.

GENERAL FOREST MANAGEMENT

Forest management activities follow the *Wisconsin Forest Management Guidelines* (PUB-FR-226-2011) as well as the WDNR *Silviculture and Forest Aesthetics Handbook* (2431.5), the *Public Forest Lands Handbook* (2460.5), the *Timber Sale Handbook* (2461), the *Old-growth and Old Forests Handbook* (2480.5), and Forestry Best Management Practices (BMPs) for water quality and invasives species. Consult these resources for additional details and management considerations. The objectives and prescriptions listed below are for the primary forest types found throughout the HSPG. 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 these properties. Additional prescriptions relating to management of specific forest types within the plan area are found in the Management Prescriptions by Cover Type section later in this chapter.

Objectives

- Maintain and enhance the extent, quality, and connectivity of lowland hardwood forests and maintain their connections to adjacent open habitats (e.g., marshes, shrub swamps), to benefit game species, furbearers, and breeding and migrating birds.
- Maintain and enhance oak and aspen stands for wildlife habitat value where this is practicable and does not conflict with other property objectives.

- Maintain the extent and enhance the quality of upland hardwoods with an emphasis on providing wildlife habitat and protecting aesthetic values, where this does not conflict with other property objectives.
- Maintain site hydrology for lowland forest types (bottomland hardwood, swamp hardwood); restore where feasible.
- Take advantage of opportunities to manage forest types in ways that make them more resistant to loss from invasive species such as emerald ash borer, buckthorns, and reed canary grass.
- As appropriate, follow the Management Prescriptions by Cover Type provided later in this chapter.

Prescriptions

- Provide a diversity of size and age classes across the forest types that occur in the plan area.
- Retain snags, living and dead cavity trees, 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 whenever their retention does not conflict with regeneration and other forest management objectives.
- Evaluate small, isolated forest patches adjacent to large blocks of wetland or grassland habitats for potential to convert to a non-forest cover type to increase open habitat block size. Convert where feasible and where conversion does not conflict with other management objectives.
- Require loggers to utilize established best management practices for all aspects of conducting timber harvest and removal, and require logging equipment to be cleaned prior to entry to and exit of state lands in order to prevent the spread of invasive plants.
- Salvage trees damaged by wind, ice, fire, insects, and disease as long as the salvage is compatible with the overall objectives for the site and is economically feasible.
- Follow Wisconsin's Forestland Woody Biomass Harvesting Guidelines when conducting forest management in cases where biomass harvesting is compatible with site objectives.

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 Wildlife Area. In the latter case, the SNA is an overlay designation where management for the natural area values takes precedence on the designated area.

There is one SNA on the HSPG properties: the Fourmile Island Rookery, located within the Horicon Marsh WA. It is described in more detail later in this chapter.

MANAGEMENT PRESCRIPTIONS BY COVER TYPE

The Department commonly uses several habitat classification systems when planning and performing management activities. The two that are used most in this plan are natural communities and 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 cover type system is more focused, generally looking at a finer scale. This system breaks out the primary vegetative types on the landscape and classifies them by the dominant vegetation present on a particular site. The 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 ≥50% of its basal area is dominated by a particular tree species or combination of species. Sites having <10% trees are considered non-forested and are classified as various other habitat types (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

Bottomland Hardwoods

Bottomland hardwoods in the plan area are composed of a combination of green ash, silver maple, cottonwood, black willow, and swamp white oak. Invasive exotic species, wet soil conditions, and high water tables can make timber management in this cover type a challenge. Many stands of bottomland hardwoods in the plan area are located on drumlin islands within wetlands and thus are inaccessible for management. The presence of the exotic insect pest emerald ash borer and of exotic plants such as reed canary grass and buckthorn creates additional management challenges. With the arrival of emerald ash borer in Dodge County, long-term perpetuation of ash-dominated stands may no longer be feasible.

Prescriptions

- Follow WDNR Forestry's management guidelines for emerald ash borer.
- Encourage silver maple, swamp white oak, or other desirable non-ash associates.
- In ash-dominated stands lacking other hardwoods, succession to shrub or open wetland may occur with the absence of ash. Any management strategy should focus on preventing the site's conversion to exotic invasive species (e.g., reed canary grass, glossy buckthorn, etc.).

Aspen

Aspen is a valuable wildlife cover type. Young aspen stands provide feeding and hiding cover for various game and nongame species, including woodcock and deer. This early successional forest type requires disturbance and abundant sunlight to regenerate. It is typically managed using complete even-aged harvests at intervals of 45-60 years.

Prescriptions

- Use coppice cutting at rotation age to manage aspen.
- In mixed stands, retain a component of other tree species, particularly oak.

Oak

Oaks have very high wildlife value, providing food resources through mast production, nesting/denning habitat, and cover for a wide variety of game and nongame species. Oaks also host a high diversity and abundance of insect populations, particularly lepidopterans (butterflies and moths), making them a critical food resource for migrating landbirds. White, bur, black, and red oaks all occur on the HSPG properties, with many trees grown to large size. However, understories are heavily invaded by aggressive exotic plants such as garlic mustard. Generally, site disturbance is necessary to maintain

or regenerate oaks, but heavy competition from shade-tolerant species (e.g., maples), exotic plants such as buckthorn, and deer browsing can greatly reduce regeneration success. Many mature oak stands on the properties are in the process of succeeding to central hardwoods. In many cases, regenerating these stands to oak may not be feasible.

Prescriptions

- Maintain oak stands where high potential for oak exists. Where conversion to central hardwoods is likely, maintain a component of oak in these stands. Oak stands may also be evaluated for potential conversion to open oak woodland or savanna.
- Maintain oak stands through management techniques appropriate for the stand and site conditions. Regeneration systems for oak on the HSPG properties may include shelterwood harvesting and group selection techniques.
- Artificial regeneration from seed or seedlings may be used to establish oak reproduction prior to or after timber harvests when natural regeneration is not adequate. Other management techniques that may be used to help regenerate oak stands include soil scarification, herbicide treatments, and prescribed fire where feasible and safe.
- If necessary, apply intensive pre- or post-harvest site treatments to ensure that successful regeneration of oak occurs, rather than conversion to shade-tolerant species.

Mixed Upland Hardwoods

Central hardwoods are a fairly common forest type on the HSPG properties, with northern hardwoods occurring as a minor component. Central hardwood stands can contain a mix of hardwood species, including black cherry, elm, black walnut, shagbark and bitternut hickories, hackberry, and honey locust. Northern hardwood stands are dominated by sugar maple and basswood, but can also contain some of these other species. In general, these stands are managed to provide a diversity of age classes and structural attributes for wildlife and for aesthetic and timber values.

Prescriptions

- Regeneration methods for central hardwoods include shelterwood and group selection techniques. Stands may be thinned periodically to promote forest health, improve or modify species composition, and to improve overall timber quality.
- Where oak stands are converting to central hardwoods, retain an oak component.
- Where northern hardwoods are to be maintained, generally schedule management entries at intervals of every 10-20 years. To develop a northern hardwood stand with many age classes, evaluate the regeneration, spacing, density and other stand conditions.

- Use selection harvest as the primary management tool for northern hardwoods, and vary harvest intensity according to site specific conditions and needs. Plan harvests to maintain or increase species diversity in these stands.

Non-forested Lowland Habitats

Emergent and Submergent Marsh

Emergent and submergent aquatic communities occur in areas with permanent water and low flow conditions. These communities develop in association with both natural water bodies and with impoundments and flowages where water levels may be controlled by pumps and control structures. Emergent marshes in the plan area are dominated by cat-tail, arrowhead, bur-reed, bulrush, common reed, and reed canary grass. Submergent aquatics typically occur in deeper water than emergent marsh species, though their boundaries overlap. Dominant species include various pondweeds, duckweeks, and milfoils. These communities provide critical habitat for many wildlife species including waterfowl, waterbirds, shorebirds, and wetland furbearers. An equal mix of open water and emergent vegetation, often referred to as "hemi-marsh", is considered optimal for many breeding migratory birds such as ducks, terns, and rails. Periodic water level reductions or "draw-downs" can provide mudflats for shorebirds and increase the amount of submergent and emergent vegetation once water levels are restored. Water quality and invasive species are particular challenges for emergent and submergent marshes in the plan area. Excess sediments and nutrients from elsewhere in the watershed have drained into wetlands and fostered exceptional growth of cat-tails, particularly the exotic and hybrid varieties. These have formed dense monotypic stands that have lower habitat value than a more diverse species mix interspersed with open water. The invasive common carp creates additional impact by roiling marsh sediments and uprooting aquatic plants.

Prescriptions

- Where possible, provide or maintain a 1:1 ratio of emergent vegetation to open water in a dispersed pattern using drawdowns or flooding, mowing, prescribed fire, or herbicide.
- Maintain or restore the hydrology of wetlands where feasible and where it does not conflict with other management objectives.
- Remove woody encroachment and exotic invasive plants through mowing, cutting, burning, herbicide treatment, biological control, or a combination of these. Species of particular concern include non-native/hybrid cattail, reed canary grass, purple loosestrife, and common carp.
- Maintain dikes and water control structures in good condition.

Sedge Meadow

Sedge meadows support many wildlife species, including birds (waterfowl, herons, bitterns, rails, sedge wrens, etc.) and rare herptiles such as Blanding's turtle. Today, these open wetlands are much less abundant than formerly. Draining, flooding, lack of fire, and invasive species have destroyed or degraded many sedge meadows. Degraded sedge meadows are often dominated by reed canary grass which creates a monotype with very low habitat value. Sedge meadow is present only in scattered patches on the HSPG properties, most of it dominated by reed canary grass with occasional forb generalists such as sawtooth sunflower, giant goldenrod, and New England aster. Occasional stands with more typical sedge meadow diversity occur, containing Canada bluejoint grass, swamp milkweed, Angelica, and prairie cordgrass.

Prescriptions

- Control woody vegetation and invasive species using the best available and economical methods, including prescribed fire, mechanical cutting, herbicide treatment, or biological control agents.
- Maintain or restore site's hydrology where possible and compatible with other objectives.

Shrub Wetlands

Shrub wetlands provide important wildlife habitat, especially as winter cover for ring-necked pheasants and white-tailed deer. Shrub wetlands in the plan area are dominated by willows, red-osier and silky dogwoods, and an understory of reed canary grass. Shrub wetlands may encroach on other wetland types (e.g., sedge meadows) where there is altered hydrology or the absence of fire. Periodic management treatments may be required to maintain the health and vigor of the shrub community and prevent encroachment on other wetland types.

Prescriptions

- Use prescribed fire, mowing, tree cutting, and herbicide treatments to maintain shrub wetland habitat.

Non-forested Upland Habitats

Grasslands

Upland grasslands are scattered throughout the HSPG properties and consist of oldfields dominated by exotic, cool-season grasses (e.g., smooth brome) and restored native prairie grasses and forbs. These areas can provide habitat for nesting grassland birds and buffer adjacent wetlands from deleterious agricultural runoff.

Prescriptions

- Use prescribed fire, herbicide treatments, mowing, shearing, and sharecropping to maintain grassland habitat with an emphasis on control of invasive and woody species.
- Remove hedgerows or other linear woody features, fence lines, and small, isolated forest patches to increase the size and/or connectivity of grassland blocks.

Agriculture Crops and Food Plots

Some parcels on wildlife areas may be used, temporarily or permanently, for agricultural practices compatible with the management purposes of the property. In some situations, these are newly acquired lands that are farmed for several years in order to prevent woody encroachment or invasion by exotic species while the site awaits restoration to a native cover type. In other situations, the Department continues to farm the land to meet management objectives for the site. Where appropriate and feasible, areas on the HSPG properties may be sharecropped for marsh hay mowing. Additionally, some food plots consisting of sunflowers, corn, and winter wheat have been planted in conjunction with sharecroppers for mourning dove and early goose season hunting.

Prescriptions

- Maintain agreements for marsh hay mowing on the HSPG properties.
- Annually assess the need for and provide agricultural crops such as sunflowers, corn, soybeans, and winter wheat on the HSPG properties to provide habitat and enhanced hunting opportunity for game species.
- Follow the Mourning Dove Field Guidance when establishing and managing crop fields for doves.

GENERAL RECREATION MANAGEMENT AND USES

All Department-owned lands within the HSPG properties are open to traditional outdoor recreational uses including hunting, fishing, and trapping except for refuges that are closed to all hunting, to hunting during the waterfowl season, or closed to entry during the nesting season. Other activities allowed on these lands include wildlife viewing, hiking, paddling, cross-country skiing, snowshoeing, collection of wild edibles, and nature study.

Edible fruits and nuts, wild mushrooms, wild asparagus, and watercress may be removed by hand without a permit for the purpose of personal consumption by the collector. Cutting of willow branches is allowed with a permit from the property manager. Collection of seeds, roots, or other plant parts is prohibited.

Foot travel (including skiing and snowshoeing) is allowed on all service roads, dikes, berms, and firebreaks unless restricted during habitat management activities (e.g., temporary closure during a prescribed burn) or due to safety concerns (e.g., flooding).

Motorized vehicle access is available on designated public access roads and parking lots (see Motorized Access plan, pp. 28-30). Snowmobiles and ATVs/UTVs are allowed only on trails designated for their use. There are allowances for motorized use by individuals with mobility impairments under the power-driven mobility device regulations of the Americans with Disabilities Act. For more information on these allowances, please refer to specific language under "Disabled Accessibility" in the General Administration Management Policies and Provisions section of this chapter.

Information on rules governing public use of Department-owned lands is found in Chapter NR 45, Wisconsin Administrative Code.

General Recreation and Public Use Objectives

- Provide high-quality hunting, fishing, and trapping opportunities.
- Provide opportunities for high-quality nature-based recreational activities such as wildlife viewing, hiking, paddling, and cross-country skiing as compatible with the properties' capabilities and the primary objective, above.
- Accommodate research and expand educational activities that are consistent with the primary management purposes of the properties and with user safety.
- Improve accessibility for mobility-impaired individuals where feasible.

General Recreation and Public Use Prescriptions

- Install, maintain, and monitor parking areas, access roads, boat access sites, and signage consistent with Department rules and policies.

- Post property boundaries with signs to assist visitors in finding and staying on state lands. Post other property regulatory and informational signs at parking areas and access points as appropriate.
- Stock pheasants immediately prior to and during the pheasant hunting season on sites with suitable cover to supplement natural pheasant production and provide improved opportunities for hunting success. Maintain a network of stocking lanes to provide WDNR vehicular access for pheasant stocking, habitat and facilities management, and hunter foot access.
- Explore opportunities to enhance accessibility of current recreational facilities or provide new accessible facilities where feasible.

Unique, property-specific recreation management and public use prescriptions are included in the individual property sections of this chapter.

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. 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. Capital and operational funding for the Department is established by the state legislature. Funds also are provided by federal programs and occasionally from private sources. Development projects similarly 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 at which this master plan will be implemented.

Properties that have either been purchased or managed using funding from the Federal Aid in Wildlife Restoration Act (also known as 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

All infrastructure used for habitat management and public access shall be inspected and maintained as required in program guidance and manual codes. This infrastructure includes, but is not limited to, dikes, spillways, water control devices, roads, gates, parking lots, boat launches and buildings.

The property manager may relocate or temporarily close road and trail segments or other public use facilities as deemed necessary to conduct timber harvests or other habitat management activities or for public safety or law enforcement reasons (see the Road Management section below for road closure information). The location and design of new roads or trails must be consistent with the land classification requirements (NR 44) and the management objectives for the area in which they are to be located.

Dikes and water control structures are essential for controlling water levels in flowages and enhancing emergent marsh habitats. The following routine activities apply to the maintenance of dikes and water control structures:

- Conduct dike maintenance and approved water manipulation activities.
- Maintain dikes to secondarily provide pedestrian access for hunters and trappers.
- Control beaver and muskrat populations to mitigate burrowing and damming.
- Plan and implement major maintenance of dikes on approximately 20-year rotations.

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 and Motorized Public Access

Under State Statute 23.116, WDNR is required to inventory the network of public access, service and habitat management roads on Department properties. Public access roads, service roads, permanent burn breaks, stocking lanes, dikes tops and other temporary roads (e.g., logging roads) are part of the transportation network for each property. Roads open to public vehicles along with their associated parking lots provide vehicle access for visitors to enjoy a variety of non-motorized recreational uses. Management roads provide access to WDNR staff for habitat and forest management activities. Additionally, some roads also serve as snowmobile routes in winter.

While management roads are not specifically designed or maintained as public use facilities, property visitors may walk, ski or snowshoe on them, unless posted closed to public access.

Federal highways, state highways and county/town roads bordering or passing through the property are the management responsibility of these respective jurisdictions and are not covered by this road management plan.

All permanently maintained Department-managed roads are shown on Maps B-3, C-3, and D-3. These maps also indicate which roads are open to public vehicle access (street-licensed vehicles). Motorized access and NR 44 road classifications are summarized in Table 2.3. NR 44 road classifications are described in Appendix B.

All roads are closed to ATVs unless designated for such use. Roads closed to public vehicles are gated, blocked or signed. However, they are open to foot access for hunting,

trapping, hiking and other general recreational uses. Most public-vehicle-access roads managed by the WDNR are constructed and maintained to be accessible by all street-licensed vehicles. However, primitive roads may not be accessible by all vehicles. If open, high-clearance four-wheel-drive vehicles may be required.

Table 2.3. Summary of Proposed Motorized Access and Road Classifications on the HSPG Properties.

NR 44 Road Classification	Status	Current (miles)	Proposed (miles)
Moderately Developed	Open	2.8	2.8
Total Open		**2.8**	**2.8**
Moderately Developed	Seasonal	0.6	0.6
Total Seasonal		**0.6**	**0.6**
Lightly Developed	Closed	3	3
Primitive	Closed	9.6	9.6
Total Closed		**12.6**	**12.6**

The property manager may temporarily close a road to public use to conduct habitat management activities (e.g., prescribed burn) or for safety or law enforcement reasons. In this case the road will be signed and may be gated or otherwise blocked. The property manager may open closed management roads to public vehicles for short-term, special events or activities (e.g., firewood cutting). The property manager also may develop or open temporary roads or access ways (not shown on Maps B-3, C-3, or D-3) as needed to conduct short-term management activities such as timber harvest or invasive species treatment. These access ways shall be closed and appropriately abandoned when the management activity has been completed.

The following management objectives and prescriptions apply to Department-managed roads.

Objectives

- Provide vehicle access to meet the management access needs of managers and the recreation access needs of the public in ways that are sustainable and compatible with the property's recreational use and resource management and protection objectives.
- Maintain roads at their designated road standard and in a sustainable condition while minimizing environmental impacts.

Prescriptions

- Maintain permanent roads, shown on Maps B-3, C-3, and D-3, to their designated road classification standard (road classifications are described in Appendix B).
- Route, design, and construct permanent and temporary roads to minimize habitat fragmentation and impacts to endangered, threatened and special concern species.

- Develop a road inspection and maintenance schedule, maintaining all roads in a sustainable condition following Wisconsin's Forestry BMPs for Water Quality.
- Grade roads periodically to maintain proper surface drainage and stable road surfaces. Inspect active roads after heavy storm events. Clear debris as needed from road surfaces, culverts and ditches to decrease unsafe conditions and prevent road and vehicle damage.
- Close and restore temporary access roads to non-erosive conditions in accordance with Wisconsin's Forestry BMPs for Water Quality after the management activity for which they were established is completed.
- Collaborate with municipal, town, and county roadside maintenance crews to protect and enhance the quality of roadside easement areas, especially to control the spread of invasive species.

Disabled Accessibility

The Department is committed to providing exceptional outdoor recreation opportunities around the state 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 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 with a WDNR-issued permit, consistent with a March 15, 2011 U.S. Department of Justice ruling. Approval will depend on various factors including: the physical characteristics of the device; the volume of pedestrian traffic at the location; the design and operational characteristics of the site; safety considerations; and whether the proposed use creates substantial risk of serious harm to environmental, natural or cultural resources.

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.

Protection of Cultural Resources

Due to a long history of human occupation in the area, various cultural sites (both archaeological sites and historic structures) are known from the HSPG area, specifically

the Horicon Marsh WA. These include effigy mounds and both prehistoric and historic campsites and workshops.

All sites occurring on public lands are protected against unauthorized disturbance under provisions of various federal and/or state laws, and burial sites (including cemeteries and mound sites) are protected on private lands as well.

Management policy requires that any activities with potential to disturb archaeological sites will only be undertaken after consultation with the Departmental Archaeologist. Any sites with cultural or historical value identified on the LWRBNRA or acquired with future land purchases will be managed in accordance with Department guidance and statutory requirements (see Wis. Stats. 44.40 and Manual Code 1810.10). Archaeological and other cultural resource investigations may be necessary before a project is approved, and projects should designate funds for required investigations as a component of the project budget.

Water Quality Issues

Water quality issues affecting the wetlands of the HSPG properties stem largely from agricultural, urban/suburban, and road runoff. This runoff introduces excessive sediments and nutrients that have fostered exceptional growth of cattails, particularly in Horicon Marsh WA, resulting in a near-monoculture of this aggressive plant in many places. Non-native carp, which are abundant at Horicon Marsh WA, further reduce water quality by roiling marsh sediments and uprooting aquatic plants.

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 WDNR-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. Objective review is also instrumental in improving how we care for the land we manage.

Prescribed Fire

Prescribed fire is 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 wildfire hazard, and liberates nutrients tied up in dead plant material. It can help regenerate forest cover types such as oak, and create or maintain grassland/prairie and savanna/barrens habitat. Upland nesting cover used by pheasants, 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 Statute 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

Wisconsin Statute 26.30 states, "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 relevant management plan, if such exists. Responses to significant infestations from pests (e.g., emerald ash borer) 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 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 also may occur as part of an emergency response plan authorized by the State Forester.

Control of Invasive Species

Invasive non-native species are a major threat to the integrity of most of our native plant communities, and can significantly harm the habitat and recreational value of Department lands. These species have the ability to invade natural systems and proliferate, often dominating a community to the detriment and sometimes the exclusion of native species. Invasive species can alter natural ecological processes by reducing the interactions of many species to the interaction of only a few species. Best Management Practices (BMPs) for Invasive Species will be incorporated into management practices on the HSPG properties. If detected, invasive species may be controlled using appropriate and effective methods, including but not limited to the use of bio-control, herbicides, cutting, smothering, hand removal, or fire. Control methods may be restricted in certain sensitive management areas. Before initiating control measures, the management prescriptions for the area being treated will be referenced.

The rules set forth in Chapter NR 40 of the Wisconsin Administrative Code create a comprehensive, science-based system with criteria to classify invasive species into two categories: "Prohibited" and "Restricted". These rules are aimed at preventing new invasive species from getting to Wisconsin, and enabling quick action to control or eradicate those here but not yet established. The rules also include preventive measures that are not species-specific but instead address common pathways that may allow invasives to spread.

In addition to control of terrestrial invasives, rules aimed at preventing the introduction and spread of aquatic invasive species also are important to the HSPG properties, where boating and fishing are popular. These rules include: cleaning and disinfecting boats and equipment before transport to another waterbody; prohibitions on transporting live fish or spawn away from waters; and rules governing transportation of bait species and surface water between waterbodies. These rules, if followed by all lake and river users, will greatly slow the introduction and spread of undesirable aquatic species.

Chemical Use

Herbicides and pesticides may be used for various purposes such as the control of invasive plants, controlling plant competition in vegetation regeneration areas, or insect control except as restricted in the management prescriptions in this master plan. All Department procedures and herbicide and pesticide label requirements will be followed.

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."

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 where they would impact geological or ecological features of significance or within any designated State Natural Area.

Department of Transportation (DOT) projects are exempt due to project reclamation requirements.

Real Estate Management

Acquisition Policies

It is the policy of the Natural Resources Board and the Department to acquire lands from willing sellers only. As required by state and federal laws, the Department pays just compensation (i.e., estimated fair market value based on an appraisal) for property. At times, it is in the interest of the Department and the landowner for 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.

Staff may periodically contact landowners within the property boundary to explain the Department's land acquisition program and to see 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 available funding, which may be from a variety of sources.

The following are some criteria typically used to assess the conservation and recreation merits of property being offered by willing sellers:

- Lands greater than 40 acres with no or low-value improvements.
- Lands containing high-quality wildlife habitats, including critical habitat for SGCN or natural communities identified as rare within the Southeast Glacial Plains Ecological Landscape.
- Lands that could provide high-quality hunting, trapping, and fishing experiences as well as opportunities for other compatible nature-based outdoor activities.
- Lands adjacent to current state lands or other protected lands, particularly if they can provide a buffer from existing or future incompatible land uses.
- Lands that currently affect the hydrology of important conservation lands (e.g., spawning marshes).
- Lands affected by wetland restoration projects (i.e., private lands affected by raising water levels).

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.

Project boundary adjustments often follow roads or natural features (e.g., streams or rivers). This approach greatly facilitates providing public access to lands that may be acquired in the future, and makes it easier to depict boundaries on maps. Nearly all project boundaries 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 some developed parcels (e.g., homes, farmsteads and other improvements) into project boundaries. The WDNR 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 across developed parcels may be sought to provide public access to an isolated portion of a property.

Project boundary changes of 40 acres or more require approval by the Natural Resources Board. Wisconsin Administrative Code, Chapter 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 described in S. 23.09, Wisconsin Statutes.

Aids in Lieu of Taxes

State law requires the Department 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.

Section 70.113, Wisconsin Statutes, 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 (Vocational, Technical, and Adult Education) institutions, and counties do not receive any payment under this law.

Section 70.114, Wisconsin Statutes, 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 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 http://dnr.wi.gov and search "PILT".

Future Boundary Adjustment Process

From time to time adjustments in property boundaries are needed. In some cases parcels of land are removed from the boundary to allow alternative, necessary public uses by local governments. In other cases it may be desirable to add small parcels adjacent to the property so they can be purchased for resource protection or to meet expanding recreational needs. Property boundary changes of 40 acres or more 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 to property boundaries after a master plan is approved.

Easements, Access Permits, and Land Use Agreements

Easements, access permits, land use agreements, and leases provide access across state property for utilities, public roads, or other public-benefit infrastructure, access to private ownership within a property boundary, and provide for a variety of temporary uses on a Department property (e.g., marsh hay cutting). Such arrangements require consultation and joint action by the affected program and the Bureau of Facilities and Lands, Real

Estate Program 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.

PUBLIC OUTREACH

The public and other governments are provided opportunities to have ongoing involvement both in the development of this Master Plan and in its implementation after the plan is approved by the Natural Resources Board (NRB). During the development of the Master Plan, stakeholders and the general public are invited to provide input through a public comment period and public meetings at two points in the planning process: after the completion of the Draft Regional and Property Analysis and after the completion of the Draft Master Plan.

Once the Master Plan is approved by the NRB, the Department communicates periodically with the public regarding activities and developing issues on the HSPG properties, and provides information on how the public will be notified of opportunities for involvement when significant new issues related to management of these properties arise. The three main avenues for this public outreach are the Master Plan Implementation Monitoring Report, the individual property Web pages, and the Master Plan variance or amendment notification.

The Master Plan Implementation Monitoring Report is a document prepared and released annually that summarizes for the past year the primary management and development activities that were completed as well as other significant issues that were addressed.

The Department will also use the individual property Web pages on its Web site to update the public regarding any planned management and development activities and any changing management actions or approaches. The individual property Web pages may also include other information of interest to the public on various topics related to management and use of the properties. Examples of additional types of information that may be included from time to time are: the status of forest insect or disease problems; storm damage; new information on endangered or threatened species; recreational management problems or new opportunities; and recreational use changes or trends.

A plan variance or amendment notification is released only if the Department is considering a change to the Master Plan. A variance is a relatively minor change to the plan, for example a new management activity or change to an activity or public use authorized in the plan that is consistent with the plan's land management classifications and objectives. An amendment is a more significant change to the plan, for example a change in land management classification. In the event the Department considers a variance or amendment to the Master Plan, 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 also will maintain a contact list of persons, groups, and governments who have requested to be notified of potential plan changes.

WDNR CONTACT PERSONS

The following Department staff may be contacted regarding questions about the HSPG properties or the master plan. At the time of this publication, the contact information is:

General HSPG or State Wildlife Area questions:

Bret Owsley, Area Wildlife Supervisor
920-387-7874
bret.owsley@wisconsin.gov

Fisheries management questions:

Laura Stremick-Thompson, Fisheries Biologist, Dodge County
(920) 387-7876
laura.stremickthompson@wisconsin.gov

Forest management questions:

Randy Stampfl, Forester, Dodge County
920-387-7884
randy.stampfl@wisconsin.gov

Rare species and natural communities questions:

Sharon Fandel, District Ecologist, Southeast District
(608) 275-3207
sharon.fandel@wisconsin.gov

SECTION TWO: INDIVIDUAL PROPERTY ELEMENTS

This section provides a description of each property in the HSPG as well as the management and development specific to each property.

Note: A variety of WDNR, federal and county sources were used to estimate the cover types and land uses on or adjacent to the HSPG properties. They include existing WDNR Wildlife, Fisheries, and Facilities and Lands records, Forestry WisFIRS database, 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.

HORICON MARSH WILDLIFE AREA

Current State Ownership:	**11,167 acres**
Current Acreage Goal:	**11,326 acres**
Current Project Boundary:	**12,014 acres***

***Incorrectly reported in the RPA as 11,762 acres

Property Description

Horicon Marsh WA is located in Dodge County, due north of the City of Horicon, due west of the City of Mayville, and approximately seven miles east of the City of Beaver Dam and 16 miles southeast of the City of Fond du Lac (Map B-1). It comprises roughly the southern third of the larger Horicon Marsh, the northern two-thirds of which is the Horicon National Wildlife Refuge. Acquisition for Horicon WA began in 1940 to provide public hunting, trapping, fishing, education, and other compatible recreational opportunities. The property consists of 11,167 acres owned in fee title by WDNR available for public hunting and other recreation. Horicon Marsh WA's unique history, size, and outstanding recreational and educational offerings make it one of WDNR's highest-profile wildlife areas.

Horicon Marsh was an important duck hunting area in the late 1800's and early 1900's, both for commercial and recreational purposes. During that time, several shooting clubs leased large acreages for exclusive hunting by membership. Local hunters voiced dissatisfaction with this arrangement, as it left them with no place to hunt. Their challenge resulted in a Wisconsin Supreme Court decision in 1914 stating that since the marsh was part of the navigable Rock River, it must remain public. This ended the era of private shooting clubs.

During the early 1900's, the "Main Ditch" was dug from north to south through the center of the marsh to allow for muck farming. Various factors, including poor drainage and lack of fertility, caused this drainage venture to fail. The marsh vegetation slowly began to re-establish, although during years of drought large peat fires burned sizeable holes in

the marsh. Due to the efforts of the Izaak Walton League (Horicon Chapter led by Louis "Curley" Radke), the Wisconsin Legislature passed the Horicon Marsh Wildlife Refuge Bill in 1927 for the restoration of the marsh. This bill provided $250,000 for land acquisition and $10,000 for building a dam in the City of Horicon. The bill is now embodied in Section 29.571 of the Wisconsin Statutes.

In 1930, despite the fact that insufficient funds were available to buy land, the dam was constructed in Horicon and the marsh was flooded. Flooded landowners successfully sued the state to open the dam, although this decision was later overturned by the Wisconsin Supreme Court. By 1940, the state was allowed to flood the marsh, with the provision that flooded landowners must be compensated. The state (using federal Pittman-Robertson funds) was able to finally purchase land, totaling 7,000 acres. At the same time, the federal government purchased the northern two-thirds of the marsh. By 1946, the state had acquired 10,478 acres, providing sufficient area to flood the marsh to the maximum level set by the Public Service Commission (contour level 75.30 feet, Horicon datum). One State Natural Area (SNA), Fourmile Island Rookery, was designated within Horicon Marsh WA in 1965.

The larger Horicon Marsh is the largest contiguous freshwater cattail marsh in the lower 48 states, and was designated as a Wetland of International Importance under the Ramsar Convention in 1991.

Horicon Marsh WA harbors approximately 9,000 acres of wetlands, more than 1,300 acres of open water/aquatic communities, and approximately 31 miles of river, creek, channel and ditch. Wetland habitats are dominated by emergent and submergent marsh. Bands of shrub-carr of variable widths grow along river margins. Forested areas comprise approximately 490 acres, mostly at the periphery of the core wetland areas and on 15 drumlin islands. Forest types include bottomland hardwoods, aspen, central hardwoods, and oak. Surrogate grassland in the form of oldfield vegetation or planted prairie occupies approximately 550 acres on the property, while 18 acres are still retained as cultivated cropland or food plots. Cover types are shown on Map B-4 and listed in Table 2.4.

These habitats support abundant and diverse wildlife resources. Game species include white-tailed deer, turkey, waterfowl, mourning dove, snipe, rails, rabbit, squirrel, and ring-necked pheasant, and woodcock. Furbearers include coyote, fox, raccoon, skunk, opossum, mink, weasels, beaver, otter, and muskrat. Many non-game species also occur here, including a wide variety of birds, reptiles, amphibians, and bats. Over 300 species of birds have been recorded on Horicon Marsh, including waterfowl, waterbirds, shorebirds, songbirds, and raptors, and over half stay to breed. The entire Horicon Marsh (including both the wildlife area and federal wildlife refuge) is identified as an Important Bird Area (IBA) which supports large numbers of waterfowl and shorebirds during migration. This IBA hosts the largest breeding population of redhead east of the Mississippi River, as well as significant numbers of wetland-dependent birds (Steele 2007).

Horicon Marsh WA contains a significant amount of infrastructure, much of it developed over the years to improve wildlife habitat and public recreation. Infrastructure is shown on Maps B-2 NW, NE, SW, & SE and motorized access is shown on Map B-3.

There are currently 12 parking lots and four boat launches scattered around the periphery of the marsh to provide public access. An accessible hunting blind was constructed on the east side of Burnett Impoundment in 2012. Shore fishing opportunities exist on the Rock River in Horicon and East Branch of the Rock River at the Greenhead boat launch and Northern Road. There are two photography blinds, a 1,250-foot-long boardwalk, five miles of designated hiking trails, a water trail, a picnic shelter, three designated picnic areas, restrooms, a gift shop, and an educational facility, the Horicon Marsh Education and Visitors Center, open to the public. The Explorium, a series of new interpretative displays in the Education Center, was completed and opened to the public in late summer, 2015.

There are two waterfowl closed areas on Horicon Marsh WA, a 260-acre one at Burnett Ditch in the northwest part of the property (NR 11.02(3)(a), Wis. Admin. Code) and a 1,400-acre one in the south-central portion (NR 11.05(1)(a)). A 230-acre refuge closed to all hunting is located near Palmatory Street (NR 15.10), and Fourmile Island SNA is designated as a seasonal no-entry refuge to protect nesting birds (NR 15.03(5)(a)). Closed/restricted areas are shown on Map B-5.

The WDNR Wildlife and Fisheries mechanical and woodworking shop is located on Palmatory Street, along with two equipment storage sheds, an air monitoring station, three boathouses, a pit toilet for the public, and an observation deck. Fisheries Management operates a storage building located off of Swan Road.

The creation of eight large sub-impoundments allows wildlife staff to manipulate water levels as desired. Approximately 12.5 miles of earthen dikes surround these impoundments and require significant staff time to maintain. There are 16 water control structures, 16 culverts, and two pumphouses used to divert water and manipulate water levels on the marsh. In addition, the WDNR maintains and operates the dam at the outlet of Horicon Marsh, which is on the Rock River in the City of Horicon.

The main recreational uses of Horicon Marsh WA are hunting, trapping, and fishing. The property provides excellent hunting opportunities for waterfowl, deer, turkey, pheasant, mourning dove, and small game such as rabbit and squirrel. In recent years food plots have been planted by WDNR staff and in conjunction with sharecroppers for mourning dove and early goose season hunting. Sunflowers, corn, and winter wheat generally are the crops planted on these sites. The accessible hunting blind may be reserved daily on a first-come-first-served basis. A 45-acre dog training area is designated near the northwest corner of the property and may be used by anyone with a dog training permit as long as Horicon Marsh WA is specified on the permit. Horicon Marsh is designated and managed as a State Fur Farm (NR 15.11, Wis. Admin. Code). Trapping and hunting of furbearing animals therefore is allowed only by written permit. Trapping rights for units within the marsh generally are awarded via an annual auction. Fishing opportunity

exists both in the interior waters of the marsh and on the East Branch of the Rock River, a major tributary to the marsh.

Wildlife viewing, hiking, paddling, and cross-country skiing also are popular activities. Many visitors come to Horicon Marsh to view wildlife. Horicon Marsh WA provides some of the best bird watching in the state, with over 300 different species documented on the property. Spring and fall migrations are peak viewing times. There are several featured overlooks and wildlife viewing areas. The Palmatory Street overlook, Horicon Marsh Education and Visitor Center, and the Greenhead Road parking lot all provide excellent viewing opportunities. The photography blinds located near the Education and Visitors Center may be used on a first-come-first-served basis. Canoes, kayaks, and boats are allowed throughout the state-owned portion of the marsh. A 6.7-mile-canoe/kayak trail starting at the Greenhead boat launch and terminating at the Nebraska Street boat launch has been established in recent years. In addition to the five miles of designated hiking trails, there are also many miles of dikes, pheasant stocking lanes, fire breaks, and interior access roads mowed for management purposes that are open to hiking year-round. The property is also open to snow shoeing and cross-country skiing in the winter, although there are no groomed trails specifically for these activities.

Over the years, much of the management focus on the Horicon Marsh WA has been on providing and enhancing wetland and associated upland habitats for waterfowl and other game species by developing nesting cover, controlling water levels to encourage natural wetland food plants, and controlling competition from non-native invasive species. These activities also benefit the host of non-game wetland-dependent species using the property. More recently, management activities have expanded to include protecting the biodiversity of the marsh and addressing land use practices in the surrounding uplands of the local watershed that affect the marsh's long-term health and integrity.

Common habitat management techniques employed by wildlife management staff include prescribed burning, chemical treatments of undesirable vegetation, timber harvesting, timber stand improvement cuttings, mowing, manipulating water levels, sharecropping, planting prairie, removing fencelines and treerows, and targeting invasive species. Many wildlife and vegetative surveys are conducted on the property each year. Special projects also are conducted to assist in the recovery of threatened and endangered species.

Much of the fisheries management focus at Horicon Marsh has been on rough fish control, especially of the non-native invasive common carp, which has been ongoing over the past several decades. The other primary fisheries management activity currently underway is stocking of Northern pike and walleye into the Horicon Marsh and its connected rivers. A Northern pike spawning marsh, located on the East Branch of the Rock River, has been utilized in the past. Providing a fishery within the confines of waterfowl management has proven to be challenging. High levels of sedimentation, low water flow and high turbidity all result in poor water quality and low dissolved oxygen for aquatic life.

Impaired water quality and exotic invasive species are the main management challenges at Horicon Marsh WA. Water quality issues stem largely from agricultural, urban/suburban, and road runoff, principally from the West Branch of the Rock River. This runoff introduces excessive sediments and nutrients that have fostered exceptional growth of cattails, resulting in a near-monoculture of this aggressive plant in many places. Non-native carp, which are abundant at Horicon Marsh WA, further reduce water quality by roiling marsh sediments and uprooting aquatic plants. Other problematic invasive exotic plants include reed canary grass and purple loosestrife.

Table 2.4. Horicon Marsh WA: Current and Desired Future Cover Types.

Cover Type	Current		Predicted 50 year	
	Acres*	% cover	Acreage Objective*	Future % cover
Forested Wetland				
Bottomland Hardwood	223	2	180	2
Non-forested Wetland				
Emergent Vegetation	9,631	87	9,000	81
Lowland Shrub	211	2	254	2
Water	210	2	841	8
Forested Upland				
Aspen	113	1	130	1
Oak	47	<1	47	<1
Upland Conifer	7	<1	7	<1
Upland Hardwood	96	<1	79	<1
Non-forested Upland				
Agriculture/Food Plot	18	<1	18	<1
Grassland	550	5	550	5
Upland Shrub	16	<1	16	<1
Other				
Developed	3	<1	3	<1
Total	**11,125**	**100**	**11,125**	**100**

*Cover type acreages are estimated from a variety of spatial databases and may differ from the acreages represented in property deed legal descriptions.

Land Management Classification

The majority of this property (15,599 acres) is classified as Habitat Management Area. Fourmile Island Rookery SNA (162 acres) is classified as Native Community Management Area. An area encompassing the Bachhuber, Indermuehle Island, and Quick's Point hiking trails and Palmatory Street recreational facilities (380 acres) is classified as Recreation Management Area with Type 3 Setting. The Horicon Marsh Education and Visitors Center area (26 acres) is classified as Special Management Area. Land management classifications are shown on Map B-7.

Resource Management, Development, and Protection

Habitat Management Area

Objectives

- Manage in accordance with the general wildlife, fisheries, and forestry habitat management objectives and prescriptions and the Management Prescriptions by Cover Type described in Section One of this chapter.

Prescriptions

- Follow the applicable general wildlife, fisheries, and forestry prescriptions and Management Prescriptions by Cover Type provided in Section One of this chapter.
- Pursue options for restoring historic water flow in the West and East Branches of the Rock River flowing through Horicon Marsh WA with the objectives of restoring natural meanders in water flow, increasing natural scour and sediment fall-out, and decreasing large, open, wind-driven silt flats. Waterfowl stamp funding will be available in 2017 for the first phase of this project, which will likely include herbicide application and initial water flow deflectors to direct water away from the main ditch and into the historic channel. Full restoration will proceed in phases. Results will be monitored and plans will be adjusted as needed to achieve full restoration.
- Explore the feasibility of repairing or replacing the main dam in Horicon. A minimal repair project will be conducted the week of June 6, 2016 by J.F. Brennan Company, Inc. for $49,500.00, overseen by the property manager and a WDNR engineer. This is an interim repair meant to ensure operation of the dam until full restoration or replacement funding is allotted. This will likely need to be done by 2021.
- Maintain the carp barrier (currently located below the main dam) and explore alternate placement locations/configurations for barrier. This will be done in conjunction with the full dam repair/replacement by 2021.
- Continue to explore new opportunities for rough fish removal, such as fish concentration areas.
- Work with the Wisconsin Bat Program to site bat roosting structures at appropriate locations around flowages. One bat house will be placed on each side of the marsh. One will be located near the HMEVC as a highly visible demonstration/education tool. The other will be located at the edge of the marsh south of the former Diana Shooting Club facility.
- Explore the possibility of adding an osprey nesting platform on the west side of Horicon Marsh WA by the end of 2018. Burnett or Chaya impoundments are likely locations. Staff will attempt to procure a used utility pole and installation through donations or funding by external partner groups.

- Continue managing Horicon Marsh WA as a State Fur Farm (NR 15.11, Wis. Admin. Code).
- Pursue opportunities to manage for quality sawtimber walnut on Horicon Marsh WA.
- Assist with watershed-wide initiatives to improve water quality.
- Maintain the mechanical and wood-working shop, equipment storage sheds, air monitoring station, and boat houses on Palmatory Street.
- Construct a new cold storage shed (approx. 100 ft. x 70 ft.) on Palmatory Street and remove the old one. This project is currently scheduled to move forward within the next five years, but exact timing is dependent on funding.
- Maintain the Fisheries storage building and seed storage shed off Swan Road.

Native Community Management Area

Fourmile Island Rookery State Natural Area

This narrow island, located near the center of Horicon Marsh WA, is forested with large oak, elm, basswood, aspen, and cottonwood, which are used for nesting by a variety of colonial waterbirds. For fifty years, this site harbored the largest colonial waterbird rookery in the state, with hundreds of nesting pairs of primarily great blue heron, along with great egret, black-crowned night-heron, and double-crested cormorant. Damage to trees from a 1984 windstorm, Dutch elm disease, and effects of heron guano build-up have reduced the available nesting habitat in recent years. Most nesting currently is limited to artificial nesting platforms on the east side of the island. Fourmile Island Rookery is SNA Number 41 and was designated in 1965.

Objectives

- Maintain the site as a heron rookery and breeding bird conservation site. Augmentation of habitat by construction of nesting poles appropriate for use by heron species is a desirable practice.
- Provide opportunities for research and education.

Prescriptions

- Maintain the seasonal no-entry refuge at this site.
- Explore the possibility of replacing and expanding colonial bird nesting structures on and near the site.
- Maintain the heron nesting web-camera.

Public Use Management and Development

The following prescriptions support the general recreation and public use objectives and prescriptions presented in the Universal Elements section at the beginning of this chapter.

Prescriptions

- Maintain 12 parking areas and four boat access sites on the property.
- Replace the fishing pier at the Greenhead Road boat access site by the end of 2018 (funding is already secured for this project).
- Maintain the 80-acre dog training area near the northwest corner of the property.
- Maintain the accessible hunting blind on the east side of Burnett Impoundment, and explore other suitable locations for additional blinds.
- Maintain the 6.7-mile water trail.
- Maintain the seasonal no-entry refuge at Fourmile Island SNA.
- Propose elimination of the Palmatory wildlife refuge and opening of the area to archery-only hunting (see Map B-6). This area was established as a wildlife refuge because of the WDNR office building on Palmatory Street and wildlife research enclosures in the adjacent wetland. Now that these facilities and activities are gone, the need for a refuge no longer exists. Opening this area to archery hunting would provide additional recreation opportunity without introducing the concern for firearms near trails or houses. It would also remove the de-facto deer refuge.
- Propose a reduction of approximately 685 acres in the Migratory Bird Closed Area by eliminating the western portion between Quick's Point and the main ditch and opening of this area to non-motorized hunting (see Map B-6). Horicon Marsh is a popular waterfowl hunting destination and there is minimal merit in the waterfowl closed area between Quick's Point and the main ditch as a "bird holding" area. Opening this area to non-motorized hunting would provide additional recreation opportunity while maintaining a "quiet" area.
- Propose elimination of the Waterfowl Closed Area at Burnett Ditch (see Map B-6). The Burnett Ditch closed area was established primarily as a goose resting area. This area has changed such that it no longer serves the original intent and should be opened for additional hunting opportunity.
- Propose making Indermuehle Island open to archery-only hunting (see Map B-6). Indermuehle Island is currently included within the Migratory Bird Closed Area and thus is closed to migratory waterfowl hunting, but open to other hunting seasons. With the volume of hikers and educational groups using the area, it would be best to limit hunting to archery only.
- By the end of 2017, staff, volunteers, and/or interns will begin to document the use of surface drive motors on Horicon Marsh and assess their effects on habitat and wildlife.

Recreation Management Area, Type 3 Setting

This area is adjacent to and southwest of the HMEVC. It encompasses the Bachhuber, Indermuehle Island, and Quick's Point trails, a 1,250-foot-long boardwalk, two photography/wildlife-watching blinds, and the public use facilities on Palmatory Street.

Objective

- Provide an area for dispersed recreation with modest facilities appropriate to the Type 3 setting that is consistent with the property's primary purposes and that supports the educational and interpretive mission of the HMEVC.

Prescriptions

- Maintain approximately 5 miles of lightly-developed multi-use trails (hiking; cross-country skiing; snowshoeing). Trails will not be groomed in the winter.
- Maintain the boardwalk and two photography/wildlife-watching blinds.
- Maintain the overlook on Palmatory Street for public use.
- Construct a building (approx. 30 ft x 80 ft) at Palmatory Street containing flush toilets and a three-season picnic shelter. A Development Project for this initiative will be written by the end of 2016, with completion expected by 2020.
- Resource management will be in accordance with the objectives and prescriptions specified in the Habitat Management Area section, above.

Bicycle Trail Request

The Gold Star Memorial Trail (GSMT) is a local trail initiative developed and supported by local businesses, nonprofit organizations, and Dodge County. The GSMT seeks to develop a 10-foot-wide, paved, non-motorized path, approximately 14 miles in length, between the City of Mayville and the City of Beaver Dam. Horicon Marsh WA is on the proposed trail route. Trail proponents have requested that WDNR allow bicycle use on portions of existing trails on the Horicon Marsh WA over a distance of approximately 1.6 miles, as the preferred connection between the HMEVC and the City of Horicon. The Department has concerns with this request, including: the potential for conflicts between bicyclists and existing trail users (hikers, wildlife watchers, school groups participating in educational programs, and hunters); safety concerns due to physical characteristics and limitations of the existing trails (dike-tops which are only about eight feet wide with 3:1 side slopes surrounded by water); and concerns over wildlife impacts, particularly disturbance to nesting birds and mortality to herptiles (e.g., frogs; snakes; turtles).

Horicon Marsh is statutorily designated as a Wildlife Area under section 23.09(2)(d)3, Wisconsin Statutes and section NR 1.51, Wisconsin Administrative Code. It is a property

whose primary purpose is to provide an area in which any citizen may hunt, trap, or fish. The property was acquired with federal Pittman-Robertson Wildlife Restoration grant funds, which carry as a principal requirement that the property continue to be used for the purpose for which it was acquired. As Horicon Marsh WA's primary purpose is to provide wildlife habitat (particularly wetlands and waterfowl) and public hunting, any secondary recreational uses may not detract from this primary purpose. Therefore, bicycle use may only be accommodated on the Horicon Marsh WA under certain conditions. These conditions must take precedence over contrary conditions that might be attached to potential trail development funding sources.

Necessary conditions for bicycle use on Horicon Marsh WA trails:

- Bicycle use would only be allowed to connect portions of the GSMT. Therefore, if the trail on either side is discontinued, the trail through Horicon Marsh WA would be discontinued as well.
- Only existing trails may be used.
- The Department shall determine which trail segments may be used. The southern portion of the Bachhuber trail loop will be avoided due to high levels of pedestrian use.
- Bicycle use must be consistent with the Recreation Management Area with Type 3 Setting land management classification assigned for this area, which indicates that recreational facilities "shall be simple" (section NR 44.07(6)(e)).
- Trail standards will not exceed the "lightly developed" classification as defined in section NR 44.07(3)(f).
- Any modifications to existing trails for the purposes of accommodating bicycle use will be limited to surface improvements only, and shall require that the surface of the trails continue to be pervious.
- The Department will not permit or authorize dikes to be widened or wetlands to be filled in order to accommodate bicycle use. This is due to the primary purpose of the property as wildlife habitat.
- The Department will maintain its existing trails according to current standards and following current inspection and maintenance schedules. Any additional maintenance needed to accommodate bicycle use would be the responsibility of the GSMT.
- Any funding necessary to establish, operate, and maintain trail segments for bicycle use is the responsibility of the GSMT.
- The Department and the GSMT must enter into agreements detailing establishment, operation, and maintenance responsibilities for accommodating bicycle use on Horicon Marsh WA.

Special Management Area

Horicon Marsh Education and Visitor Center

This area encompasses the Horicon Marsh Education and Visitor Center (HMEVC) and includes the main building and an adjacent cold storage shed/picnic shelter. The HMEVC is a WDNR-owned and operated education facility located in the southeastern portion of the Horicon Marsh WA, on State Hwy 28. Situated within an hour's drive of major population centers (Milwaukee; Madison; Oshkosh), HMEVC is one of WDNR's premier centers for wildlife conservation education, with a primary goal of providing quality wildlife education to the general public. WDNR staff have conducted a wildlife conservation education program at the marsh since the mid-1980s. This program focuses on the abundant wildlife resources of the marsh and their ecology and applied management. Public naturalist programs, special events, and school education programs aim to connect people with wildlife and their environment through educational activities focused on the outdoors. Over 12,000 students and adults participate in HMEVC programming each year and estimated yearly visitation is around 50,000 people, including a large proportion of out-of-state visitors. Programs occur in the classroom facility, the immediate grounds and trails, and on the Horicon Marsh WA. Appendix A contains lists and descriptions of educational programs and events offered at the HMEVC.

The process to develop the current facility began in 1992 when WDNR purchased the former Flyway Clinic, a 25,000-square-foot building located along Hwy 28, with the intent of developing an education center. The building had been abandoned with only the upper floor having been completely finished; this was serving as WDNR's Horicon Service Center and staff offices. Tentative plans were drawn up to incorporate an education facility, and a non-profit Friends Group was established in 1994 as a fund-raising organization to support this initiative.

Following a long campaign, sufficient funds were raised to allow hiring of an architect to develop the final construction plans. In the end, the Friends of the HMEVC raised $1.9 million towards construction of the center. The State of Wisconsin matched this through the building commission and additional funds were provided to WDNR for staff office renovations, resulting in a $4.8-million project. Construction began in 2007 and the new Center was completed in late March, 2009.

In August, 2015 a series of new interactive exhibits known as the Explorium opened in the lower level of the HMEVC. The Explorium provides a unique window to the distant past when glaciers carved a basin where a wetland would one day form. Visitors can get a glimpse of life at Horicon Marsh thousands of years before European settlement and witness how the current wetland came to be. The experience is narrated by a Clovis point spearhead that accompanies visitors throughout the journey as they view, listen to, touch, and even smell exhibits that document the changes to the marsh over time.

Current facilities include parking for approximately 212 vehicles, restrooms, a picnic shelter/cold storage building (24 ft. x 60 ft.), and classrooms, staff offices, meeting space, and exhibits in the main building. The building lobby features a Marsh Viewing Area, a Children's Discovery Area containing seasonally changing hands-on activities for children to explore various facets of nature, a front desk providing visitor information, and a gift shop. In the lower level are the Explorium exhibits, classrooms, and an auditorium. The auditorium seats up to 120 people and has an 8x12-foot-wide screen and a high-definition rear-projection audio-visual system, accommodating a wide range of meetings, conferences, workshops, and public education programs. The two classrooms can be opened up into one large room, and have direct access to an outdoor patio featuring a giant map of Horicon Marsh. From there, visitors can access five miles of multi-use trails (hiking; skiing; snowshoeing), a 1,250-foot-long boardwalk, and two photography/wildlife watching blinds.

WDNR staff lead the educational programs and maintain the HMEVC facilities. Volunteer members of the Friends of the HMEVC assist with educational programs and office support, operate the gift shop, and provide visitor services information to the public.

Objectives

- Provide areas and facilities to support operations and administration needs and to help deliver public services and educational programming.
- Provide a wildlife conservation education program that generates a land and wildlife ethic into perpetuity.
- Provide educational programs that develop outdoor skills, emphasizing both consumptive and non-consumptive uses of wildlife resources as well as other avenues to enjoying natural resources and the outdoors.
- Increase the number of both youth and adults participating in workshops, programs, and events offered through the HMEVC.
- Encourage research, educational activities, and workshops consistent with the property's primary management purposes and user safety.
- Increase the number of visitors to the Horicon Marsh Education and Visitor Center to 150,000 per year by 2018.
- Provide world-class interpretive opportunities to the general public through the Explorium exhibits.

Prescriptions

- Continue to provide and maintain office facilities, heated work area, and storage areas for use by Department staff. Existing buildings will be maintained, replaced, or enhanced and expanded as necessary to meet Department administrative, educational, and facility management needs.

- Maintain the grounds (turf, trees, etc.) around all buildings as appropriate to enhance building maintenance and to ensure visitor safety. As appropriate for improved aesthetics and visitor education through interpretation, utilize native landscape plantings in strategic locations. Away from buildings, manage the landscape to sustain existing native habitats and provide for visitor education through interpretation.
- Provide on-site programs to visiting school groups utilizing the grounds, trails, and classrooms.
- Provide on-site/on-property training and events geared toward development of outdoor skills and outdoor enjoyment for various age groups, including adults. Expand skills programs as volunteers and mentors are available to organize and lead training events.
- Provide on-site/on-property programs and events that increase environmental awareness and that interpret ecological processes, wildlife and natural resources conservation practices and management, and nature as may be found at Horicon Marsh Wildlife Area.
- Promote healthy lifestyles and physical fitness through a wide range of outdoor and nature-based activities and events, and accommodate disabled access needs to allow participation in activities and programs.
- Provide wildlife education programming compatible with the WDNR Bureau of Wildlife Management's Wildlife Education Strategic Plan.
- Provide information to support communication about HMEVC programs on the Friends of Horicon Marsh web pages and social media.
- Maintain and update the Horicon Marsh Explorium to keep content up-to-date and exhibits on the cutting edge to encourage first-time and repeat visitors.

Real Estate Action Items

Boundary Modifications

Proposed boundary modifications for the Horicon Marsh WA are shown on Map B-8. These proposals comprise 488 acres of boundary contractions and 485 acres of boundary expansions, for a net boundary decrease of 3 acres. No change to the current acquisition goal is being requested. These strategic adjustments seek to improve public access, increase management efficiency, and provide additional recreational opportunity.

Most of the proposed boundary contractions are along the southwestern boundary where there has been considerable urban development, resulting in little habitat management taking place and decreased recreational value for property users. Proposed expansion of the boundary out to roads in various areas will improve public access and enhance ability to conduct habitat management. In other areas, expansions seek to provide additional upland habitat, currently rare on the property, for recreational use and wildlife value.

Land Sale

A 31-acre parcel of land at Horicon WA is being proposed for sale (see Map B-8). This parcel is small and isolated. It is not connected to the rest of the property and is located in an area surrounded by urban development associated with the City of Horicon. It is also in a proposed boundary contraction area. It is unlikely that this parcel can ever be connected to the larger ownership, and its recreational and habitat value is limited.

SHAW MARSH WILDLIFE AREA

Current State Ownership:	**928 acres**
Current Acreage Goal:	**1,330 acres**
Current Project Boundary:	**1,380 acres**

Property Description

Shaw Marsh Wildlife Area (WA) is located about one mile south of Beaver Dam in Dodge County (Map C-1). The property consists of 928 acres owned in fee title by WDNR and available for public hunting and other recreation. There also are 12 acres of easements closed to public access. Acquisition for Shaw WA began in 1960 to protect the wetland for wildlife and to provide a public hunting area.

Shaw Marsh has approximately 700 acres of wetlands and approximately four miles of channels, ditches and creek. The main cover types on the property are emergent marsh and wet meadows. A small area of shrub-carr occurs along the west-central edge of the marsh, and is typified by willows and dogwoods with an understory of reed canary grass. Wet meadows are dominated by reed canary grass but are occasionally punctuated by small areas containing native species typical of wet-mesic prairie such as golden Alexander. Wooded uplands occur at the periphery of the core wetland areas and on drumlin islands. Very large black and bur oaks and sizeable white oaks, shagbark hickory, and swamp white oaks grow in these areas, but their ground layers are devastated by heavy infestations of aggressive or non-native invasive species such as garlic mustard. Approximately 187 acres of former cropland has been converted to prairie at Shaw Marsh. Some 20 acres currently are sharecropped and are planted to row crops and small grains, while 20-40 acres are share-cropped for annual marsh hay mowing. Cover types are shown on Map C-4 and listed in Table 2.5.

Habitats on this property are well-suited for white-tailed deer, wild turkey, ring-necked pheasant, waterfowl, wading birds, sandhill cranes, woodcock, furbearers, mourning doves, small game, as many non-game grassland- and wetland-dependent birds.

There are six gravel parking lots maintained on this property for public access. All were graded and re-graveled in 2012 using state Stewardship funding aimed at improving infrastructure and access. One building is present on the property off Blackbird Road and is maintained by WDNR Wildlife Management. WDNR Law Enforcement also utilizes storage space in this building through a 2012 Memorandum of Understanding with Wildlife Management. Access to the east side of Shaw Brook for management purposes is currently being planned. There is a degraded roadbed running north to south from Parker Road to the parking lot on Blackbird Road. This is currently only used as a firebreak but could potentially be used as a berm to help manage and maintain water levels on the west half of the marsh. Infrastructure is shown on Map C-2.

During the fall hunting season Shaw Marsh is stocked with pheasants from the State Game Farm to enhance public hunting opportunities. Various successful Learn to Hunt Pheasant programs also have taken place here. Because of this, and also due to its proximity to the City of Beaver Dam, Shaw Marsh receives heavy pheasant hunting pressure. In addition to pheasant hunting, very good opportunities exist for deer, turkey, waterfowl, and small game hunting. Occasionally WDNR staff coordinate with sharecroppers to plant sunflowers and wheat on the property to provide hunting fields for mourning doves and geese. Furbearer resources such as muskrat and raccoon also are abundant on Shaw Marsh, providing good trapping and hunting opportunities. In terms of wildlife viewing, Shaw Hill Road to the west offers an excellent overlook of the marsh, while Parker Road provides good waterfowl and wading bird viewing in the spring.

Habitat management on this property has focused primarily on grassland and wetland restoration and maintenance, with some attention also going to forest stands. Although there is little forested acreage on this property, Forestry and Wildlife staff continue to maintain the oak, hickory, and aspen components of the woodlots for wildlife benefits. Wildlife staff employ a number of techniques to maintain these habitats including periodic prescribed burns, invasive brush and tree removal, chemical spot treatments for exotic invasive vegetation, sharecropping, periodic timber harvest, and timber stand improvement thinning. Sharecropping is used as an intermediate tool to provide a 'clean slate' for new prairie plantings and also to attract wildlife for hunting and wildlife viewing opportunities.

No fisheries management activities are planned for the property. Shultz Creek currently supports a limited forage fishery. Shaw Brook currently supports a warmwater sport fishery containing Northern pike, largemouth bass, central mudminnow, fathead minnow, white sucker, blackstripe topminnow, brook stickleback, tadpole madtom, black and yellow bullhead, bluegill, pumpkinseed, green sunfish, fantail darter and Johnny darter. There may be seasonal movement of fish from the Beaver Dam River into Shaw Brook's lower reaches.

Table 2.5. Shaw Marsh WA: Current and Desired Future Cover Types.

Cover Type	Current		Predicted 50 year	
	Acres*	% cover	Acreage Objective*	Future % cover
Forested Wetland				
Bottomland Hardwood	2	<1	2	<1
Non-forested Wetland				
Emergent Vegetation	697	75	690	75
Lowland Shrub	1	<1	1	<1
Water	1	<1	8	<1
Forested Upland				
Aspen	3	<1	7	<1
Upland Hardwood	24	2.5	20	2
Non-forested Upland				
Agriculture/Food Plot	20	2	20	2
Grassland	178	20	178	20

Cover Type	Current		Predicted 50 year	
	Acres*	% cover	Acreage Objective*	Future % cover
Total	**926**	**100**	**926**	**100**

*Cover type acreages are estimated from a variety of spatial databases and may differ from the acreages represented in property deed legal descriptions.

Land Management Classification

This entire property is classified as Habitat Management Area (Map C-5).

Resource Management, Development, and Protection

Objectives

- Manage in accordance with the general wildlife, fisheries, and forestry habitat management objectives and prescriptions and the Management Prescriptions by Cover Type described in Section One of this chapter.

Prescriptions

- Follow the applicable general wildlife, fisheries, and forestry prescriptions and Management Prescriptions by Cover Type provided in Section One of this chapter.
- Continue to explore opportunities for water level manipulation to benefit wet-mesic prairie and other wetland communities.
- By the end of 2018, provide a crossing across Schultz Creek on the existing WDNR management access easement in order to access east side of the marsh for management. The crossing will consist of a culvert crossing or rock ford that can accommodate farm tractors and prescribed fire equipment.
- Maintain the cold storage building off Blackbird Road, and continue the MOU with Law Enforcement.

Public Use Management and Development

The following prescriptions support the general recreation and public use objectives and prescriptions presented in the Universal Elements section at the beginning of this chapter.

Prescriptions

- Maintain six parking areas on the property; however, consider abandoning the parking area in the northwest corner of the property if vandalism and dumping problems persist.

Real Estate Action Items

Boundary Modifications

Proposed boundary modifications for Shaw Marsh WA are shown on Map C-6. These proposals comprise 167 acres of boundary contractions and 171acres of boundary expansions, including 5 acres of land that is already DNR-owned. This results in a net boundary decrease of 1 acre. No change to the existing property acquisition goal is being requested. These strategic adjustments seek to improve public access and customer service and increase management efficiency.

Boundary contractions are largely excluding parcels that are currently in agricultural production and are very unlikely to become available for acquisition. These contractions will also bring the boundary in closer to current ownership, making it easier for property users to understand where public ownership begins and ends. Expansion areas are concentrated in the eastern portion of the property where there is currently no public access. These expansions provide the potential to greatly improve access to a large area of the property, both for public recreation and for maintenance and habitat management.

Land Sale

A 7-acre parcel of land at Shaw Marsh is being proposed for sale (see Map C-6). This parcel is small, isolated, outside the current project boundary, and provides no significant recreational or habitat value.

SINNISSIPPI EXTENSIVE WILDLIFE HABITAT

Current State Ownership:	**350 acres**

Property Description

The Sinnissippi Extensive Wildlife Habitat parcel is located approximately 2 miles south of the City of Horicon in Dodge County, on the north shore of Lake Sinnissippi (Map D-1). The property comprises 350 acres owned in fee title by WDNR, purchased in 1975 and 1984. It property was acquired under the authority of the Extensive Wildlife Habitat Program, a statewide program that permits the purchase of small-acreage sites outside of existing property project boundaries.

Habitats at Sinnissippi primarily consist of wetlands and open water; only about 27% of the property is uplands. The main cover type is emergent marsh dominated by cattail. Sedge and rush communities exist in pockets around open water and ditches. Small areas of Shrub-carr occur along the edges of the marsh/upland interface, typified by willows and dogwoods with an understory of reed canary grass. Wooded uplands occur on drumlin islands and along spoil piles from previous ditching. Large sugar maple, basswood, and aspen are dominant in the southernmost woodlots, while black oak, bur oaks, sizeable white oaks, shagbark hickory, and bitternut hickory occur elsewhere on the property. Bottlebrush grass is thriving in the understory of the east-central woodlot. Invasive species such as honeysuckle and common buckthorn are taking over the understory in most of the woodlots. Garlic mustard has been documented, but there is potential to eliminate it on the property. Approximately 52 acres of former cropland have been converted to native prairie grasses and forbs. Sharecropping was discontinued because of topography (steep hillsides with up to 30% slopes) and highly erodible soils. Cover types are shown on Map D-4 and listed in Table 2.6.

The habitat on Sinnissippi is well suited for white-tailed deer, wild turkey, ring necked pheasant, waterfowl, wading birds, and many other species of grassland- and wetland-dependent birds, frogs, turtles, small game and furbearers.

Sinnissippi Extensive Wildlife Habitat has very little infrastructure (Map D-2). There is one gravel parking lot near the center of the property on Horseshoe Road. A gated, unimproved service road runs from the parking lot all the way to Lake Sinnissippi and is used by WDNR staff for management purposes. Another cable gate is located a quarter mile north from the parking lot.

The major recreational uses of this property are hunting and fishing. For its size, Sinnissippi receives heavy hunting pressure in the fall, primarily for deer, pheasant, and waterfowl hunting. The property also receives some use by hikers and wildlife watchers. A short quarter-mile hike up the dirt two-track from the parking area offers a good vantage point with excellent views of the property and Lake Sinnissippi.

Habitat management on this property has focused primarily on grassland restoration and timber stand improvement. There is little potential to directly manage wetlands via water level manipulation due to the property's small size and likely effects on surrounding private ownerships. Grasslands and wetlands are managed with periodic prescribed burns to rejuvenate vegetation and with chemical spot treatments to control exotic invasive plants. Timber harvests and timber stand improvement activities have been conducted on Sinnissippi to promote the regeneration and vigor of trees such as aspen, oaks, sugar maple, and shagbark and bitternut hickories. The property is stocked with pheasants in the fall.

Table 2.6. Sinnissippi Extensive Wildlife Habitat: Current and Desired Future Cover Types.

Cover Type	Current		Predicted 50 year	
	Acres*	% cover	Acreage Objective*	Future % cover
Non-forested Wetland				
Emergent Vegetation	173	49	160	45
Water	75	21	88	25
Forested Upland				
Aspen	8	2	8	2
Oak	9	2	9	2
Upland Hardwood	16	4.5	16	4.5
Non-forested Upland				
Grassland	70	20	70	20
Upland Shrub	3	<1	3	<1
Total	**354**	**100**	**354**	**100**

*Cover type acreages are estimated from a variety of spatial databases and may differ from the acreages represented in property deed legal descriptions.

Land Management Classification

This entire property is classified as Habitat Management Area (Map D-5).

Resource Management, Development, and Protection

Objectives

- Manage in accordance with the general wildlife, fisheries, and forestry habitat management objectives and prescriptions and the Management Prescriptions by Cover Type described in Section One of this chapter.

Prescriptions

- Follow the applicable general wildlife, fisheries, and forestry prescriptions and Management Prescriptions by Cover Type provided in Section One of this chapter.

Public Use Management and Development

The following prescriptions support the general recreation and public use objectives and prescriptions presented in the Universal Elements section at the beginning of this chapter.

Prescriptions

- Maintain one parking area on the property.

Real Estate Action Items (Map D-6)

Project Boundary Establishment and Parcel Re-designation

This property was acquired under the Extensive Wildlife Habitat Program, and thus lacks a project boundary. The property is more sizeable than many Extensive Wildlife Habitat parcels, and the ownership is in one contiguous block. It is used and managed as a Wildlife Area. Therefore, as part of the master plan, it is proposed that a project boundary be established around the current ownership and that the parcel be re-designated as Wildlife Area. The acquisition goal for this property will exactly equal the current fee title ownership. No additional acquisition authority is proposed.

Property Naming

This property does not have an official name. Locally, it is known as the Sinnissippi Public Hunting Ground. However, "Public Hunting Ground" is not an official property designation; it refers to a leasing program that was in effect prior to the current Voluntary Public Access (VPA) program. As this property is owned in fee title, a "Public Hunting Ground" designation is not appropriate. Therefore, as part of the master plan, it is proposed that this property be named "Sinnissippi Wildlife Area".

HORICON ROUGH FISH STATION

Property Description

The Horicon Rough Fish Station is a very small parcel (1.41 acres) located less than one mile south of the City of Horicon, on the south bank of the Rock River (Map D-1). The parcel was originally leased in 1957 by the Wisconsin Conservation Department (precursor to the WDNR) as an access point to the Rock River for rough fish management operations. The parcel was named the Rock River Fisheries Station Trap #1 and was one of several stations on the Rock River where state crews operated carp traps and conducted seining to remove carp from the river. As part of the station, the state constructed a small building and a rough fish loading platform on the property and a rough fish trap was constructed in the Rock River at this location. The parcel was officially purchased in 1961 to secure rough fish management operations at this location and to provide public access for hunting and fishing on the Rock River if fisheries management operations ceased. By 1970, rough fish management methods had shifted towards chemical control and operation of the rough fish station ceased. The infrastructure, including the building, loading platform and fish trap, was removed.

Current vegetation on the property includes mowed lawn, disturbed wetlands consisting of reed canary grass and cattails, and shrubs.

The property currently provides public access opportunities for shore fishing, ice fishing and launch sites for canoes and other small craft. Public access currently is provided via foot travel. The fishery at this location includes Northern pike, walleye, bowfin, yellow, black and brown bullhead, central mudminnow, bluntnose and fathead minnow, white sucker, largemouth bass, black crappie, rock bass, bluegill, green sunfish, pumpkinseed and yellow perch. Current management of the property includes mowing, boundary and sign posting, and routine maintenance.

Land Management Classification

This entire property is classified as Habitat Management Area (Map D-5).

Resource Management, Development, and Protection

Objectives

- Manage in accordance with the general wildlife, fisheries, and forestry habitat management objectives and prescriptions and the Management Prescriptions by Cover Type described in Section One of this chapter.

Prescriptions

- Follow the applicable general wildlife, fisheries, and forestry prescriptions and Management Prescriptions by Cover Type provided in Section One of this chapter.

Public Use Management and Development

The following prescriptions support the general recreation and public use objectives and prescriptions presented in the Universal Elements section at the beginning of this chapter.

Prescriptions

- Maintain current public access to the Rock River for shore fishing, ice fishing, and unimproved boat access for canoes and other small craft. No new facilities will be provided.

CHAPTER THREE: SUPPORTING INFORMATION

This chapter presents an updated version of the Findings and Conclusions section from the *Horicon-Shaw Planning Group Regional and Property Analysis* (WDNR 2014), a document that lays out a foundation for the master plan by providing background information and describing how the property fits into a larger regional context. Individuals interested in learning more about the HSPG and its ecological, socio-economic, and recreational contexts are encouraged to consult this document, as well as the *Rapid Ecological Assessment for Shaw Marsh and Horicon Marsh State Wildlife Areas* (WDNR 2012b).

INTRODUCTION

This chapter contains a revised version of the Findings and Conclusions from the *Horicon-Shaw Planning Group Regional and Property Analysis* (WDNR 2014). The Findings and Conclusions section is a summary and synthesis of all the regional and property-specific ecological, socio-economic, and recreational information contained in the RPA. The first two sub-sections summarize existing conditions and trends on the properties and in the region, including the ecological opportunities, limitations, and significance. The final sub-section presents the main findings and conclusions, highlighting major themes.

THE HSPG PROPERTIES

The Horicon-Shaw Planning Group includes four properties located in Dodge County in southeast Wisconsin (Map A). There are two Wildlife Areas, Horicon Marsh and Shaw Marsh. Horicon Marsh contains an embedded State Natural Area, Fourmile Island Rookery. The third property is the Sinnissippi Extensive Wildlife Habitat parcel and the fourth is a very small Fishery parcel known as the Horicon Rough Fish Station. In total, these properties comprise 12,446 acres of state protected and managed land.

Open wetlands and water are dominant natural features on the HSPG properties. Some of these habitats exist in tracts that are extensive or that are regionally rare or significant. Notably, Horicon Marsh WA is part of the greater Horicon Marsh, the largest fresh-water cattail marsh in the United States. Open wetlands, including emergent and submergent marshes, sedge meadows, and shrub swamps, comprise approximately 81% of land cover in the plan area. Aspen, oak and other upland hardwoods, grasslands, upland brush, and agriculture make up the remainder.

The plan area is embedded in a mostly rural landscape dominated by agriculture. However, several local population centers, including Horicon, Beaver Dam, Waupun, and Mayville, are located close by and the larger, heavily populated cities of Madison and Milwaukee are only about an hour's drive away. Dodge County has a higher proportion of public land (8.3%) than surrounding counties, but still far below the 23% for the state as a whole. Therefore, the HSPG properties do receive fairly significant pressure for recreational use, especially at certain times of the year. Dodge County is in a densely populated part of the state that has exhibited faster-than-average population growth over the past decade or so. This growth is expected to continue through 2040, driven largely

by increases in Dane, Green, Rock, and Sauk counties. The Dodge County population also is expected to grow through this period, though at a more modest pace. This is likely to affect the HSPG properties, as regional population size and growth can be significant drivers of recreational demand on public lands. Like other surrounding counties and the state as a whole, the population of Dodge County is aging. Dodge County is projected to have between 25 and 30% of its population over the age of 65 by 2040.

Economically, Dodge County and the surrounding region are in transition. There is a shift away from manufacturing and towards a more services-based economy, with sectors such as health care and social assistance, tourism, and recreation showing gains.

RECREATIONAL SIGNIFICANCE AND CAPABILITY

REGIONAL CONTEXT

Recreationally, the region of south-central Wisconsin where the HSPG properties are located is notable for its diverse environments and unique geological features that support a variety of recreational activities. It is also notable for its mix of rural and urban influences, comparatively low proportion of public recreation land, and effects of a relatively dense and growing population. These characteristics are reflected in activities with high participation rates and in the recreational issues and needs and regional supply shortages identified by residents. Activities with high participation rates in this region include traditionally urban/developed-setting pursuits such as visiting a dog park and outdoor tennis as well as nature-based/less-developed-setting activities such as nature-based educational programs, kayaking, and dog sledding. Identified supply shortages reflect demand for recreation in both urban (dog parks, ice skating rinks, tennis courts) and rural (backcountry camping, natural areas) settings. Identified issues such as increased competition for natural resources, increasing multiple-use recreation conflicts, and overcrowding, as well as requests for both more ATV opportunities and protection of silent sport areas illustrate population pressures and competition for limited recreation land.

Dodge County is largely rural with an abundance of wetlands and surface waters, and supports recreational activities in mostly undeveloped or low-development settings. The county's federal and state lands (including the properties in the plan area) are the main providers of public lands open to the traditional outdoor pursuits of hunting, fishing, and trapping, activities which are popular in Dodge County. Cities, towns, and villages offer facilities in more developed settings such as playgrounds and ball courts. County and municipal parks do not allow hunting or trapping.

Projected population growth in Dodge County and in the surrounding region likely will lead to increased demand for outdoor recreational opportunities, and increased usage of public lands. A generally aging population may increasingly request physically less demanding pursuits such as wildlife viewing as well as more accessible infrastructure.

PROPERTY USES, CAPABILITIES, AND LIMITATIONS

The HSPG properties' proximity to several local population centers and location in a region of the state that is both densely populated and has a low proportion of public recreation land are significant from a recreational perspective. These properties provide public land nearby to various local towns and cities and are easily accessible from the larger Madison and Milwaukee metropolitan areas. The HSPG properties, therefore, are and will continue to be important providers of public outdoor recreational opportunities close to where people live and where recreational demand is high.

The main recreational uses of the HSPG properties are the traditional outdoor pursuits of hunting, fishing, and trapping. The properties receive heavy hunting use, especially for deer, waterfowl, and pheasant hunting but also for turkey, mourning dove, and small game such as rabbit and squirrel. Trappers pursue primarily muskrat, mink, and raccoon, along with lesser numbers of beaver, otter, fox, coyote, opossum, skunk, and weasels. Horicon WA and Horicon Rough Fish Station offer the best angling opportunities, with both shore fishing and boat access sites. The properties also are used for other outdoor recreation, such as wildlife viewing, hiking, paddling, and cross-country skiing and snow-shoeing.

Horicon WA is unique among the four properties in the plan area. It is much larger in size than the others, has considerably more infrastructure, and offers facilities and recreational opportunities that the other properties do not, e.g., hunting and photography blinds, dog training area, designated trails. Horicon WA is well-known as an excellent place for wildlife viewing and nature enjoyment. The annual Horicon Marsh Bird Festival is one of the most popular bird festivals in the state, and has even received some national visibility. Horicon WA is well-poised to meet additional demand for bird-watching, an activity that has greatly increased in popularity in recent years. The presence of the Horicon Marsh Education and Visitors Center also presents unique opportunities. This already excellent facility is one of WDNR's premier centers for wildlife conservation education. An extensive new area of interpretive displays and interactive exhibits, known as the Explorium, was completed and opened to the public in late summer, 2015, and has greatly increased the facility's educational potential.

Potential exists on the HSPG properties to enhance existing recreational opportunities or develop additional ones, particularly in cooperation with external partners such as the Friends of Horicon Marsh, Ducks Unlimited, and Horicon Marsh Bird Club. Examples may include interpretive features and accessible viewing platforms, hunting blinds, or shore fishing opportunities. Kayaking and stand-up paddling/paddleboarding both are activities projected to show increasing demand in Wisconsin over the next five years, and the HSPG properties may offer opportunity to meet some of this demand.

There may be potential to provide a public shooting range on the HSPG properties. Shooting opportunities are available at various facilities in Dodge County but many of these are not open to the general public. Increasing public access to shooting ranges is part of WDNR's efforts to promote responsible gun ownership and safe hunting

experiences. Target shooting is also becoming more popular as a sport. Shooting ranges, whether on public lands or leased private facilities, provide a valuable service, though noise, safety, and environmental concerns can cause conflicts if the activity is not well managed or the facility appropriately sited.

Some opportunity may exist to increase access to private land for public hunting in the plan area by seeking renewal of existing leases and soliciting additional enrollments of private land in the Voluntary Public Access (VPA) program now that this program has been reauthorized as part of the 2014 Farm Bill.

The HSPG properties are not well suited to meeting most of the activities projected in the 2011-2016 SCORP (WDNR 2012c) to have increasing demand in Wisconsin (e.g., adventure racing; developed/RV camping; visit a dog park; soccer outdoors; climbing), nor to addressing many of the regional nature-based supply shortages (campsites, parks, and land-based trails) identified for the Southern Gateways Region in the 2005-2010 SCORP (WDNR 2006). Recreational activities in developed settings, camping, and the majority of land-based trails (biking; horseback riding; ATV; snowmobile) generally are not permitted on WAs and SNAs; uses cannot be permitted if they are incompatible with the primary purpose of the property. Many soils on the plan area properties are wet, poorly drained, or permanently or seasonally inundated. Steep slopes and erodible soils pose limitations in some upland areas.

The traditional consumptive activities and other nature-based pursuits currently available are the most compatible with the properties' primary purpose, dominant wetland vegetation communities, and mostly rural character, as well as with the physical limitations imposed by soils and topography.

ECOLOGICAL SIGNIFICANCE AND CAPABILITY

REGIONAL CONTEXT

The HSPG properties are contained within the Southeast Glacial Plains Ecological Landscape, a region notable for its abundance of glacial features (till plains, lake basins, drumlins, etc.), acreage of both open and impounded water, and diverse wetland communities. Emergent and submergent marshes, sedge meadow, and shrub-carr are wetland types for which the HSPG properties offer significant management opportunities. The Horicon Marsh Conservation Opportunity Area, which encompasses all of Horicon Marsh WA, is considered to be a high-quality wetland community of State Significance due to its extensive size, impounded areas with the ability to manipulate water levels, and associated upland grass. Some opportunity may exist to restore examples of wet-mesic prairie, an exceptionally rare community in the state. Twenty-seven rare species, including 17 species of birds, have been documented on the plan area properties.

PROPERTY OPPORTUNITIES

Globally Important Bird Habitat

Horicon Marsh WA is part of the greater Horicon Marsh, the largest fresh-water cattail marsh in the United States. Horicon Marsh was designated as a Wetland of International Importance under the Ramsar Convention in 1991 and as an Important Bird Area of Global significance in 2001. The large emergent wetlands and associated open-water areas of Horicon Marsh WA, combined with seasonal mudflats, offer waterfowl, shorebirds, and colonial waterbirds diverse habitats during the migratory seasons. The site also provides important breeding habitat for both common and rare or declining waterfowl, marsh birds, and colonial waterbirds, and hosts the largest breeding population of redhead east of the Mississippi River. Horicon Marsh WA provides important winter habitat for wandering Arctic birds. Fourmile Island SNA, located within Horicon Marsh WA, once harbored one of the largest colonial waterbird rookeries in the state.

Grassland Bird Habitat

At Shaw Marsh WA and, to a lesser extent, at Sinnissippi Extensive Wildlife Habitat, a significant opportunity exists to promote much-needed grassland bird habitat within a largely agricultural landscape. The continued conversion of former croplands to native prairie plantings will expand the area of open landscape in natural cover (already fairly extensive at Shaw Marsh). Large areas within Shaw Marsh show evidence of degraded but unplowed Wet-mesic Prairie; restoration of these areas could provide a type of grassland that is usable by a greater variety of bird species than the existing reed canary grass-dominated wetlands.

Bat Conservation

Fall acoustical surveys conducted by WDNR at Horicon Marsh WA in 2005 recorded seven bat species. Horicon Marsh WA is in close proximity to the Neda Mine SNA, the largest bat hibernaculum in the state (and possibly the Midwest), and likely serves as an important foraging area for resident bats. Horicon Marsh provides an important source of insects, especially during the fall when bats need to build up fat reserves for winter hibernation and long-distance migration.

Prairie Restoration

At Shaw Marsh, an opportunity may exist to restore Wet-mesic Prairie and Southern Sedge Meadow, as areas on the property show evidence of remnant, unplowed sod. Wet-mesic Prairie is exceptionally rare in Wisconsin, and its protection and restoration is vital to the preservation of Wisconsin's native biodiversity, including SGCN that are specialists to this community type.

LIMITATIONS AND CHALLENGES

Hydrologic alteration, impaired water quality, development pressures, and invasive species all represent major challenges to maintaining the ecological integrity of the HSPG properties.

Many wetlands within the Southeast Glacial Plains EL, including in the plan area, already have been altered or lost due to conversion to agricultural use, dredge spoil disposal, stream channelization, road construction, and residential development. Residential and recreational developments (often with associated hydrological modifications such as ditching, diking, channelization, pond construction, and groundwater withdrawals) and infrastructure construction such as roads, power lines, culverts and ditches can disrupt hydrology, serve as a source of pollutants, facilitate the spread of invasive species, and act as physical barriers inhibiting or preventing the movements of some wildlife species. Water quality issues affecting the wetlands of the HSPG properties stem largely from agricultural, urban/suburban, and road runoff. This runoff introduces excessive sediments and nutrients that have fostered exceptional growth of cattails, particularly in Horicon Marsh WA, resulting in a near-monoculture of this aggressive plant in many places. Non-native carp, which are abundant at Horicon Marsh WA, further reduce water quality by roiling marsh sediments and uprooting aquatic plants.

Other invasive species also present a significant threat. Non-native invasive species thrive in newly disturbed areas, but also may invade and compromise high-quality natural areas. They establish quickly, tolerate a wide range of conditions, are easily dispersed, and are relatively free of the diseases, predators, and competitors that kept their populations in check in their native range. Non-native invasive plants can out-compete and even kill native plants by monopolizing light, water, and nutrients, and by altering soil chemistry and mycorrhizal relationships. In situations where non-native invasive plants become dominant, they may even alter ecological processes by limiting use of prescribed fire, modifying hydrology, impeding tree regeneration, and ultimately impacting forest composition. Eighteen non-native invasive species are widespread within the HSPG and pose the greatest immediate threat to native species diversity, rare species habitats, or high-quality natural communities. These include reed canary grass, hybrid cattail, purple loosestrife, common buckthorn, garlic mustard, and common carp.

SUMMARY

The HSPG properties contain significant wetland and open-water habitats, including emergent and submergent marsh, sedge meadow, shrub swamp, and seasonal mudflats, as well as associated upland grasslands. The extensive wetlands have been internationally recognized for their importance to both breeding and migrating birds, including waterfowl, waterbirds, shorebirds, and, to a lesser extent, landbirds. They also provide important foraging habitat for a number of rare bats.

Recreationally, the properties are important providers of public recreation land in close proximity to local and regional population centers. Deer, waterfowl, and upland game

hunting, wetland furbearer trapping, and fishing are popular pursuits. The properties also are used for wildlife viewing, especially for waterfowl, pelicans, herons, rails, and other wetland birds. Other activities include dog training, hiking, paddling, cross-country skiing, nature enjoyment, and environmental education. These activities are compatible with the properties' physical characteristics and mostly rural character. There is some potential to accommodate additional lightly-developed opportunities such as viewing platforms, hunting blinds, and interpretive features. The properties will also be evaluated for potential to site a public shooting range. However, wet or erodible soils limit development of most trails and other recreational infrastructure. Low-impact, outdoor, nature-based activities are and will continue to be these properties' best and most appropriate recreational use.

With projected increases in population growth and development pressure, recreational demand on these properties will increase. Thoughtful planning and management and creative partnerships will be needed to protect and maintain ecological values while providing a high-quality recreational experience for an increasing number of users.

CHAPTER FOUR: ANALYSIS OF IMPACTS OF THE PROPOSED PLAN

INTRODUCTION

This chapter, in combination with Chapters Two and Five, collectively constitute the Environmental Analysis portion of the HSPG Master Plan. The intent of this analysis is to disclose the environmental effects of an action (the master plan) to decision-makers and the public.

Chapter Two of this document describes the elements of the proposed action or preferred management alternative. Chapter Five describes and evaluates the various alternatives that were considered in the planning process, but not selected.

The Environmental Analysis meets the requirements of the Wisconsin Environmental Policy Act (WEPA) and Chapter NR 150 of Wisconsin Administrative Code. Based on information presented in this chapter, the proposed master plan is not anticipated to cause significant adverse environmental effects.

IMPACTS TO NATURAL RESOURCES

SOILS

The probability of significant short-term or long-term cumulative impacts due to soil erosion is low for the management activities prescribed in the HSPG Master Plan. This is due to the relatively low percentage of land in the plan area that is disturbed by management activities at any given time. The more disruptive management activities (e.g., timber harvesting) may affect 10-15 acres/year. Soil erosion on parcels during timber harvesting operations will be minimized by the use of the Best Management Practices (BMPs) for Water Quality guidelines. BMPs contain strict standards for road construction, water crossings, skid trails and logging landings. All trails and primitive roads will be monitored for signs of excessive soil erosion caused by management activities or recreational use and actions will be taken (e.g., BMPs or trail closings) to minimize the erosion potential. Soil erosion on any newly acquired agricultural land eventually will be reduced and eliminated in the course of restoration to a native cover type as described in the plan.

GEOLOGICAL RESOURCES AND LANDFORMS

Surface mining is not anticipated so no impacts are expected. If unforeseen circumstances would require surface mining in the future, site specific environmental impacts would be evaluated.

AIR QUALITY

Potential impacts to air quality would come primarily from prescribed burns. Local landowners and units of government will be notified prior to management burns. Prescribed burns will occur seasonally (typically spring and fall) on various wetland and grassland areas. Controlled burns may occur on a property every year though the area burned may be rotated between different management units. The burn plan contains best management practices and procedures to safely manage the fire and includes measures to minimize nuisance smoke impacts.

Construction activities that may generate dust include construction of the picnic shelter building and cold storage shed on Palmatory Street, removal of the old storage shed, parking lot maintenance, and any allowable surface improvements to existing trails on the Horicon Marsh WA for the purpose of accommodating bike use for a GSMT connector segment (see pp 47-48). Water is the most common dust suppression practice used during road construction. Impacts on air quality from fugitive dust particles and engine exhaust emissions from construction equipment will be small and transitory in nature. When construction is complete no residual impacts to air quality would be detectable.

Vehicle emissions generated by WDNR motor vehicles, property users and certain management activities, such as timber harvesting, will be less than or comparable to adjacent roadways and similar activities (e.g., forest management, agriculture) in the area.

WATER RESOURCES

Sanitary Systems and Vault Toilets

Any septic systems, drywells, or other wastewater disposal systems encountered as part of any future real estate transactions will be appropriately abandoned. This will have the effect of safeguarding groundwater quality.

Springs and Seeps

State ownership and management will have the effect of helping to safeguard water quality and biological diversity of any springs and seeps. BMPs for protecting water quality will be implemented around all springs and seeps.

Water Quality of Surface Waters and Wetlands

Providing permanent vegetative cover and the use of BMPs during management activities will have an overall positive impact on both surface waters and wetlands. No increase in impervious surface area is being proposed. Trail/road construction and infrastructure improvements will avoid changing watercourse direction and flow, volume, and velocity. New construction (e.g., new picnic shelter building at Palmatory) will meet all applicable permit and erosion mitigation requirements in order to avoid or minimize impacts to adjacent waterways and wetlands. Pervious road and pathway surfaces will be used

where impervious surfaces are not needed. Runoff from roadways and other impervious surfaces will not drain directly into nearby streams and lakes, minimizing water pollution risks. The impacts of stormwater runoff during timber harvesting will be mitigated by implementing appropriate best management practices. These practices are described in the "Wisconsin's Forestry Best Management Practices for Water Quality" field manual and are part of every timber harvest on the HSPG properties.

VEGETATION

The vegetation management strategies in this master plan (described in Chapter Two) are intended to maintain or improve the quality of native and restored habitats. The main objectives are to maintain and enhance open wetlands, including emergent/submergent marsh, sedge meadow, and wet prairie, and associated uplands.

Specific objectives outlined in the HSPG Master Plan include:

- Providing large interconnected blocks of wetland and grassland habitats, including a lowland-to-upland continuum.
- Maintaining and enhancing the quality and extent of open wetland communities, especially emergent marsh and sedge meadow.
- Maintaining and enhancing the quality of forested habitats, particularly lowland hardwoods, oak, aspen, and upland hardwoods.
- Providing a diversity of size and age classes and structural features across forest types.
- Monitoring and controlling invasive plants, insects, and forest pests and diseases as practicable.

Most of the planned changes to the composition and structure will occur slowly over the next 50 years so impacts are minimized. The changes to vegetative cover types will generally be slow and heavily influenced by natural succession.

WDNR policies that address the monitoring, inspection and control of invasive species will be followed. Some current common invasive exotics that will be monitored are reed canary grass, non-native/hybrid cattail, *Phragmites*, common buckthorn, Asian honeysuckle, purple loosestrife, and common carp. Control measures may include mechanical control, use of herbicides, and fire. The effect would be the maintenance of native biotic communities and protection from future invasions.

WILDLIFE AND FISHERIES

The actions in this master plan, if enacted, will have positive impacts on resident and migratory wildlife populations for decades to come. The habitat activities and boundary adjustments will enhance the quality and extent of the habitat and should improve the population status of important game and non-game species. Management objectives and prescriptions outlined in Chapter Two will create or maintain the diverse wetland,

grassland, shrub, and forest habitats needed by the game and non-game wildlife and fish populations found on the HSPG properties. Proposed boundary adjustments and habitat management activities would create larger habitat blocks that are more favorable for sustaining a wider array of species. The proposed management activities will be especially beneficial to game species such as waterfowl, pheasant, deer, and wetland furbearers as well as a host of other wetland-dependent species including herptiles, bats, waterbirds, shorebirds, landbirds, and invertebrates.

The accommodation of bike use on existing Horicon Marsh WA trails for the purpose of providing a GSMT connector segment (see pp 47-48) has the potential to cause disturbance to nesting birds and mortality to herptiles (e.g., frogs; snakes; turtles) using the diketops for thermoregulation or to move between wetland areas. While specific impacts are difficult to estimate without information on estimated volume of use, mortality of these types of species has been observed on similar bike trails traversing wetland areas (e.g., La Crosse River Marsh).

ENDANGERED, THREATENED, AND RARE SPECIES, NATIVE COMMUNITIES, AND SCARCE ECOLOGICAL RESOURCES

The *Rapid Ecological Assessment for Shaw Marsh and Horicon Marsh State Wildlife Areas* (WDNR 2014) identifies specific native communities and rare species occurrences on the HSPG properties. It also references supporting studies and documents describing the ecological assets found in the Ecological Landscape where these properties are located. The management plans as described in Chapter Two are designed to help protect and enhance the native communities that harbor known rare species. All management prescriptions in the proposed master plan consider the needs of endangered, threatened, and rare species and potential impacts to these species and their habitat.

The management objectives and prescriptions are expected to cause few, if any, negative impacts to endangered, threatened and rare species while yielding significant medium- to long-term benefits. Implementation of the proposed recommendations would ensure continued safeguarding of these species and under-represented ecological communities. These actions also are compatible with WDNR obligations to protect threatened and endangered species and plant communities.

IMPACTS TO RECREATIONAL FACILITIES AND OPPORTUNITIES

VISUAL/SCENIC RESOURCES

Small changes in the visual qualities and aesthetics of the plant communities will occur over time as sites are managed to meet objectives specified in the plan. This will be most noticeable where forests and shrubs are managed to maintain early-successional stages, or where closed-canopy mature forest stands develop.

Road and trail signs, informational signs, boundary markers and property identification signs consistent in appearance with other state-owned properties will be the main identifying markers for the properties. The proposed purchase of additional lands will also help protect the visual and auditory quality of recreational experiences.

LAND MANAGEMENT

The suite of land management objectives and prescriptions proposed in this master plan will have short- to long-term positive benefits on recreational activities occurring on the HSPG properties. These actions are designed to benefit wildlife populations and maintain and enhance the variety of habitats these species depend on. In turn, these habitat management activities will enhance both the primary recreational management objectives of hunting and trapping, as well as the increasing interest in accommodating wildlife viewing and other nature-based outdoor activities.

Temporary disruption to recreational activities will occur during management actions such as prescribed burns and forest management activities (e.g., timber harvest). These disruptions are short-term and negative impacts can be minimized by the timing and screening of management actions. Forest and habitat management near more heavily used sites such as parking areas will be designed to improve the aesthetic quality of these sites, and management activities will be timed to avoid conflict with primary recreational uses when possible.

RECREATIONAL USE

The HSPG properties are well-used for hunting, particularly for deer, waterfowl, and pheasant hunting but also for turkey, mourning dove, and small game such as rabbit and squirrel. The properties are also used for trapping, fishing, and other nature-based activities such as wildlife observation, hiking, and paddling. Environmental education is an important activity on the Horicon Marsh WA. The proposed habitat management recommendations and boundary adjustments will improve the quality of the habitat and expand the acreage available for these and other outdoor recreation activities. Most habitat management activities, such as prescribed burns and forest management to attain vegetation management goals, will take place during non-peak times of the year, thus substantially reducing potential conflicts with recreational users.

Proposed modifications to closed/restricted areas on the Horicon Marsh WA reflect changes in WDNR facilities, wildlife populations, and public use that have taken place in the decades since these areas were established. The modifications will result in expanded hunting opportunities, while preserving opportunity for other activities (e.g., hiking; educational programs). Exploring additional locations for accessible hunting blinds will improve opportunity for users of all abilities.

The accommodation of bike use on existing trails at Horicon Marsh WA for the purpose of providing a GSMT connector segment (see pp. 47-48) would authorize a new recreational use, biking, on trails currently used by hikers, wildlife watchers, educational

groups, and hunters. This change would benefit bikers, but could result in conflicts with existing trail users.

IMPACTS TO CULTURAL RESOURCES

Due to a long history of human occupation in the area, various cultural sites (both archaeological sites and historic structures) are known from the HSPG area, specifically the Horicon Marsh WA. These include effigy mounds and both prehistoric and historic campsites and workshops. As with other areas of the state, cultural resource investigations in Dodge County are ongoing. Management policies (S. 44.40, Wisconsin Statutes and Manual Code 1810.10) require that that any activities with the potential to disturb archaeological sites will only be undertaken after consultation with the Department Archaeologist. Any additional sites with cultural or historical value identified on the HSPG properties or acquired with future land purchases will be managed in accordance with WDNR guidance and statutory requirements (see Wis. Stats. 44.40 and Manual Code 1810.10).

SOCIO-ECONOMIC IMPACTS

TIMBER PRODUCTS

The primary purpose of forested areas on wildlife lands such as those in the HSPG area is to provide food and cover habitat for wildlife, protect native communities, and provide diverse hunting habitats. Timber production as part of sustainable forest management is an important management tool for meeting habitat objectives, but it is a secondary purpose of these forests. While not a primary goal, timber production has value and provides multiple benefits, including employment in forest-based industries, revenues for the Department, and habitat improvement.

Commercial timber harvests will continue to be an integral part of habitat management on the HSPG properties under this master plan. Between 2007 and 2015 approximately 148 acres were harvested on these properties, with receipts totaling $39,302.28.

INFRASTRUCTURE AND TRANSPORTATION

Recreational use on the HSPG properties generally is heaviest during the fall hunting seasons and moderate to light at other times of the year (e.g., summer berry-picking; winter trapping and cross-country skiing). The exception is Horicon Marsh WA, which is the largest property in the plan area and offers recreational opportunities and facilities not found on the other properties. Horicon Marsh WA attracts significant numbers of visitors for bird-watching during the spring and fall migration seasons. The HMEVC draws visitors year-round with activities offered during every season, and receives a heavy volume of student groups for educational programs during the school year. The new Explorium exhibits have attracted additional visitors and it is hoped that visitation to the HMEVC will triple from the current 50,000 per year to 150,000. While this may

result in a moderate increase in vehicle traffic to the HMEVC over the next 10-20 years, no significant impact to local traffic or corresponding local road maintenance levels is expected.

A slight increase in heavy truck traffic may be noted while timber sales are being conducted but the presence of logging trucks on local roads will be ephemeral and of limited impact.

Operation and maintenance of the HSPG properties generates minimal solid waste. The management philosophy of the WDNR is to reduce, reuse and recycle to diminish the use and disposal of non-recyclable materials. All debris from illegal dumping will be disposed of or recycled properly through the appropriate solid waste program or a licensed sanitary waste contractor.

NOISE

Noise impacts from management activities and most of the expected recreational uses are anticipated to be minimal on HSPG property neighbors and users. Wildlife use patterns may be temporarily impacted by most noises. Most other noise impacts would be generated primarily from land management, forestry and road/trail/ construction and maintenance activities. Such noise will be generated by chainsaws, skidders, machinery, and trucks. These noises will occur primarily during daylight hours and would be peak (high level, short duration) rather than continuous in nature. The noise often will be seasonal and transient (i.e., once the activity is completed the noise source will be eliminated).

PUBLIC SAFETY

There are no elements of the HSPG Master Plan that are anticipated to have a negative effect on public safety. Designated use areas (such as parking lots) are inspected semi-annually to locate and remove hazardous trees. In addition, public safety precautions are taken when using herbicides, pesticides, fire, and in other property management activities. Prescribed fires will be used in forest and native community management. All prescribed fires will follow WDNR safety and burn procedures.

LAND USE

The land uses and cover types on lands surrounding the HSPG properties will be minimally affected by the implementation of this master plan. The proposed project boundary expansions (not including land that is already DNR-owned) comprise some 651 acres. Land cover primarily consists of agriculture, forests, and wetlands/water (Table 4-1). Any developed acreage would be split off from the undeveloped portion of the property and retained by the willing seller or resold.

Table 4.1. Estimated Land Cover of Boundary Adjustment Acreage.

Current Land Cover (acres)						
Agriculture	Upland Forest	Grass/ Shrub	Wetland/ Water	Lowland Forest	Developed	Total
Horicon Marsh						
420	22	1	26	0	16	485
Shaw Marsh						
123	0	0	35	2	6	166
543	**22**	**1**	**61**	**2**	**22**	**651**

ECONOMIC EFFECTS AND THEIR SIGNIFICANCE

A discussion of various economic benefits of public lands from a statewide perspective is provided in the Introduction section of Chapter Two. The HSPG properties, particularly Horicon Marsh WA, draw visitors from local and regional population centers, and some users from out of state, primarily for hunting, bird-watching, and environmental education, as well as other nature-based outdoor activities (hiking, paddling, etc.). Considerable local economic benefits already result from these visitors to the plan area, primarily in the form of day-visit tourist expenditures (purchases for meals, gasoline, sporting equipment, etc.), and this is expected to continue and hopefully to increase with additional visitors drawn to the new Explorium exhibits at the HMEVC.

The Department also contracts with local vendors and/or parts suppliers to haul road material for maintaining roads and parking areas.

FISCAL EFFECTS ON LOCAL GOVERNMENT

State law requires the Department to make payments in lieu of property taxes (PILT) to ensure the affected town's property base is not adversely affected. There are two separate state statutes, and several formulas under each, that dictate the amount of these payments.

Wisconsin Statute 70.113 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 70.114 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 to determine individual payments varies depending on when the property was acquired and how it was acquired.

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. For further details, please refer to the applicable state

statutes or visit the Department Web site at http://dnr.wi.gov/ and perform a search for "Payment in Lieu of Taxes".

FISCAL EFFECTS ON STATE GOVERNMENT

Operational Costs

Implementation of the HSPG Master Plan will require new development and management costs in addition to recurring expenses. Estimated new development costs are shown in Table 4.2. These costs are based on 2016 dollar-values and assume full completion of all proposed construction. In actuality, work may be phased over several budget cycles. Construction costs for any infrastructure will vary based on soil conditions, grade/steepness, special conditions, infrastructure requirements and labor costs (e.g., seasonal labor, volunteers or contractor). Costs also vary with inflation and competitive bidding.

Table 4.2. Estimated New Development Costs for the HSPG Properties.

Activity	Estimated Cost
New picnic shelter/flush-toilet building at Horicon Marsh WA	$120,000.00
New cold storage building at Horicon Marsh WA	$740,200.00
Demolition/removal of old cold storage building at Horicon Marsh WA	$11,600.00
Total	**$871,800.00**

There may be additional costs associated with any allowable modifications to existing trails at Horicon Marsh WA for the purpose of accommodating bicycle use for a GSMT connector segment (see pp.47-48). These costs would be borne by the GSMT proponents.

Revenue from Timber Products

Forest management activities result in tremendous fiscal benefits to the state. Timber sales are established to maintain forest health and create the forest stand structures that help achieve the management goals of the Master Plan. Revenues from the sale of timber depend on the market price for wood as well as the number of acres and species of trees to be harvested in a given year.

An increased effort to establish timber sales on these properties has occurred since 2005, resulting in updated forest recon data and development of an active forest management program. Timber harvesting activities follow guidelines for sustainable forest management contained in WDNR's *Silviculture and Forest Aesthetics Handbook* and *Wisconsin Forest Management Guidelines*. The exception is when forested areas are being converted to another cover type in accordance with a property management objective authorized by the property manager. Since 2005, approximately 13 acres have been harvested annually on these properties. However, estimating timber revenues for the life of this master plan is very difficult. There is very little forest on these wetland-dominated properties. Much of the acreage in accessible stands has already been

harvested or will be in the near future. Future revenues will depend on what is harvested and what markets are available (e.g., pulp; firewood) at the time of harvest.

IMPACTS OF BOUNDARY ADJUSTMENTS

ESTIMATED COSTS OF LAND ACQUISITION

As required by state and federal laws, the Department acquires land only from willing sellers, and pays just compensation. Compensation is the estimated fair market value based on an appraisal, unless the seller chooses to make a gift or partial donation of the land. This master plan recommends 651 acres of project boundary expansions (not including land that is already DNR-owned) for the HSPG properties. Acquisition from willing sellers would occur as fee simple purchases or as easements.

The land uses in the expansion areas include approximately 543 acres of agricultural lands, 61 acres of wetlands and open water, 22 acres of upland forest, 22 acres of developed lands, 2 acres of lowland forest, and 1 acre of upland grass/shrub.

The estimated purchase prices for land in Dodge County used in this analysis were $4,614/acre for agricultural land; $2,459/acre for forested land; and $1,409/acre for wetlands and other undeveloped lands (APL 2010). The analysis assumed no purchase of developed lands. Using these values, the total cost for purchase of all undeveloped parcels in the proposed expansion areas is approximately $2.7 million.

Typically, parcels become available from willing sellers over a period of decades so the required expenditures would be spread over a considerable span of time. It also is assumed that some of these undeveloped parcels will never become available from a willing seller.

Developed lands are not included in this analysis because they are not sought by the Department for conservation purposes. Developed acres may come into Department ownership as part of a large land acquisition (e.g., purchase of a farm). Parcels with improvements may follow one of three tracks:

- Improvements may be split off and re-sold;
- Improvements may be auctioned and moved off the site;
- Improvements may be razed if their value is not significant.

IMPACTS TO LANDOWNERS WITHIN OR ADJACENT TO A PROJECT BOUNDARY

Impacts may be positive or negative depending on an individual's perceptions of potential changes, the habitat management objectives, and the types and amount of public usage. Some potential impacts include:

- Broadening the pool of potential buyers for those property owners within the boundaries. It enables the Department to offer fair market value bids to willing sellers for a property. It does not affect how, when, or to whom a landowner may sell their land.
- Changes in the quality and character of the plant and animal communities adjacent to a private property due to habitat management activities.
- Changes in recreational usage adjacent to a landowner, depending on the size of the acquisition parcel and the habitats present. Recreation may increase for a variety of hunting and fishing activities as well as for seasonal pursuits (e.g., snowshoeing). However, the change will depend in part on how the land was used and managed by the previous owner.
- No change in existing zoning, as this is a local government decision.
- No changes to how landowners can manage or use their property; nor does it provide Department staff, other governmental agencies, or the public access to private property.

CHANGES IN LAND USE

About 86 acres within the proposed expansion areas are undeveloped parcels containing forests, grass/shrub, and wetlands. If these parcels were purchased by the Department they would be kept in an undeveloped state, though some habitat changes (e.g., natural succession, forest management, restoration) may occur over a period of years. Some 543 acres are in agricultural use. This acreage likely would be restored to wetland or grassland, though portions may be kept in production temporarily through sharecropping agreements while they await restoration.

IMPACTS ON ENERGY CONSUMPTION

Due to the limited amount of infrastructure development and renovation proposed, no significant impacts to energy consumption are expected. Any new facilities, which are primarily replacing existing facilities, will be designed to meet current energy efficiency requirements.

CUMULATIVE EFFECTS, RISK, AND PRECEDENT

SIGNIFICANCE OF CUMULATIVE EFFECTS

The proposed actions are anticipated to have positive long-term effects on the quality of the natural environment and recreational users. The habitat changes and the proposed acquisition of additional lands are expected to provide the following cumulative benefits to users of these properties and the natural environment:

- More recreational land to meet the needs of a growing population.

- Quality recreational experiences for users through improved access, facilities, and sustainable wildlife for harvest and observation.
- Improved habitat for game and non-game species, including endangered, threatened and species of concern species.
- An excellent environmental education program focused on wildlife conservation education.

These benefits are consistent with the WDNR's mission and responsibilities, and the recognized need to provide and protect public lands for future generations.

SIGNFICANCE OF RISK

Management of the HSPG properties poses a low overall potential for risk to the environment. Proposed habitat management activities are similar to those used over the last several decades and these activities typically have less negative and more positive environmental impact than the surrounding residential and agricultural lands. Only a small percentage of the total HSPG land and water base will be actively managed (e.g., prescribed burns or timber harvesting) in any given year. No new, high-risk actions are proposed, nor are any actions which involve an irretrievable commitment of resources, or actions that could not be reversed in the future.

The presence of motor vehicles and other equipment during construction and logging may pose a slight but insignificant risk from spills and erosion. These risks would be mitigated by best management practice requirements and at preconstruction meetings with contractors.

Fire has been identified as one of the most effective vegetative management tools for management of grasslands and some wetlands and forests. Necessary precautions and WDNR procedures are always followed during prescribed burns, including having an approved burn plan and adequate fire-fighting equipment and personnel present on site. During periods of high fire danger, burning restrictions are put into effect and a complete burning ban may be implemented. Herbicide/pesticide use will strictly follow label instructions to protect the environment and public safety.

Risk of introduction of invasive exotic species may increase due to public entry and use of the properties. Actions will be taken to control infestations as practicable.

Similarly, proposed recreation management actions pose an overall low potential for risk to the environment. Accommodating bike use on existing trails at Horicon Marsh WA for the purpose of providing a GSMT connector segment (see pp. 47-48) could represent some risk of damage to water quality and wetland vegetation and disturbance to wildlife, but these impacts are expected to be temporary in nature and relatively minor.

SIGNIFICANCE OF PRECEDENT

Approval of this master plan would not directly influence future decisions on other Department property master plans. Implementation of the actions contained in this master plan would not be precedent-setting, primarily because the proposed habitat management, development, and recreational activities are not unique and occur regularly on state wildlife, fishery and natural areas lands across Wisconsin.

WEPA COMPLIANCE

Property planning under Ch. NR 44, Wis. Adm. Code, is an equivalent analysis action under NR 150.20(2)(a)1., Wis. Adm. Code, and therefore complies with the Wisconsin Environmental Policy Act, s. 1.11, Stats. and Ch. NR 150, Wis. Adm. Code.

CHAPTER FIVE: ANALYSIS OF ALTERNATIVES

This chapter describes the alternatives and anticipated impacts of alternatives *considered, but not selected* during the development of this master plan.

NO-CHANGE ALTERNATIVE

Under this alternative no changes would be recommended to habitat or recreation management, public access, or project boundaries. Existing management practices would continue to be applied within the existing boundaries. Such a plan might arguably meet the bare minimum needed for master planning, forest certification, and other program needs. However, it would result in staff continuing to address issues on an ad hoc basis rather than integrating and prioritizing the challenges and opportunities that increasing populations, changing land uses, emerging recreation trends, and technological advances pose.

This alternative was not selected because it would not meet the needs of the resources being managed, would perpetuate management inefficiencies, and would miss opportunities to provide the public with improved access. Importantly, such a master plan would not create the long-term improvement in property management that the process is intended to promote.

The impacts of this alternative would be similar to those presently occurring on the property.

PUBLIC USE ALTERNATIVES

SHOOTING RANGE

Increasing public access to shooting ranges is part of WDNR's effort to promote safe and accessible shooting opportunities for residents and visitors, responsible gun ownership, and safe hunting experiences. WDNR guidance indicates that considering a shooting range during the master planning process is a high priority for properties located in southeastern Wisconsin, the most populous region of the state, particularly if the properties are outside of a 30-mile radius or 100,000-resident buffer of an existing range. The HSPG properties meet all three of these criteria. Accordingly, the planning team considered whether a shooting range could be sited on the properties.

In evaluating the properties for potential to site a shooting range, the planning team employed the following criteria or suitability characteristics:

- Minimize the number of residences within the 1,000 yard buffer to minimize noise
- Avoid wetlands or hydric soils or soils with hydric inclusions
- Avoid State Natural Areas

- Avoid archeological sites
- Direct road access is preferred
- Located adjacent to major highways and roads
- Minimize impact on other recreational users
- Minimize impact on blocks of wildlife habitat
- Topography that is supportive of developing a shooting range

Horicon Rough Fish Station was not considered due to its extremely small size (1.41 acres). Horicon Marsh WA and Shaw Marsh WA, the two largest properties in the plan area, are both dominated by wetlands (>90%) and wetland soil types and so are unsuited to supporting a shooting range. These two properties were not considered further.

Sinnissippi Extensive Wildlife Habitat also has a significant proportion of wetland/water cover types (~70%) but has an area of open upland habitat in the central section of the property, served by a road and parking area. However, this area also presents unsuitable characteristics, particularly drumlin topography with steeply sloping sides and an upland area of insufficient size. In addition, there are residences located in close proximity, including an inholding directly adjacent to the area.

Based on this evaluation, the planning team concluded that none of the properties in the HSPG are suitable for siting a shooting range.

PUBLIC MOTOR VEHICLE ACCESS

As specified in 23.116(3), Wisconsin Statutes, the planning team conducted an evaluation of motorized access and opportunities for its expansion on the HSPG properties. The Department's currently maintained road system for each property, including the open and closed roads, is shown on Maps B-3, C-3, and D-3. The need and opportunity to provide expanded public vehicle access on the property was evaluated. The planning team considered current road use, physical characteristics (cover types, soils, topography, etc.), recreation access needs, and the public's access interests and desires for each property.

Horicon Marsh Rough Fish Station was not considered due to its extremely small size. The other three properties in the plan area are all dominated by wetland vegetation and/or wetland soils and so present very low suitability for roads and motorized use. There have been no requests from the public for additional motorized access or for changes to current access, suggesting that the current road network and access meets both current and anticipated future demand and access needs of property users.

Based on this evaluation, the planning team is not recommending any changes to motorized access on the HSPG properties.

CHAPTER SIX: SUMMARY OF PUBLIC INVOLVEMENT AND COMMENTS ON THE DRAFT MASTER PLAN

In accordance with Wisconsin Administrative Code, NR 44 – Master Planning for Department Properties – the HSPG project included an effort to involve the public in the process of developing a Master Plan. From its beginning, steps were taken to ensure opportunities for public involvement throughout the planning process.

The DNR initiated the master planning process for the Horicon-Shaw Planning Group (HSPG) with a public input process during the months of September and October, 2014. A statewide news release was sent out on August 26, 2014 announcing the start of the planning process. A public meeting was held at the Horicon Marsh Education and Visitor Center on September 10, 2014. At this meeting, the public was offered information about the properties and the planning process via informational displays, a short presentation, a question-and-answer session, and the opportunity to speak one-on-one with Department staff. The public also was invited to provide input on important issues that should be addressed in the master plan and to comment on several preliminary planning documents including the Draft Regional and Property Analysis (RPA), Preliminary Vision and Goals, and Public Involvement Plan. Some 30 people attended the public meeting. The Department received verbal and written comments, submitted both at the public meeting and thereafter. Twenty written comments were received.

In November, 2014, the HSPG master planning process was placed on hold due to the Natural Resources Board directing the Department to complete a master plan for another property by the end of 2015. That task was accomplished by October, 2015 and in November, 2015 the HSPG process was resumed. The public was offered another opportunity for input at that time via an online comment form. Eleven comments were received.

The public and stakeholders were reengaged after a draft master plan was completed in July, 2016. This public involvement process is described below.

PRIMARY STAKEHOLDERS

To develop an effective Master Plan, the Department listens to many voices. People of varied interests and backgrounds have participated in the HSPG Master Plan process. Some of these “stakeholders” with an interest in the future of the plan area include neighboring landowners, sportsmen’s clubs, recreation users, conservation organizations, friends groups, and community groups. Government-to-government contact was maintained with federal, state, local, and tribal governments.

METHODS OF PUBLIC CONTACT AND INVOLVEMENT

Various means were used to inform the public of the planning process and to promote public involvement throughout the development of the master plan.

COMMUNICATION METHODS

- Statewide news releases and media interviews.
- Direct mailings of public involvement notices and draft documents.
- Email correspondence and GovDelivery bulletins.
- Public meetings.
- Personal contacts with interested members of the public via email, telephone, or written communication.
- The HSPG Web site was a comprehensive resource used to facilitate public involvement. All documentation produced on the plan was made available at this Web site: http://dnr.wi.gov/topic/Lands/MasterPlanning/HoriconShaw/
- WDNR contact information was provided online for people to submit their comments, thoughts, and suggestions electronically.

TOPICS POSTED ON THE WEB SITE

- General information on the properties
- Planning process update
- HSPG Public Involvement Plan
- HSPG Vision and Goals
- HSPG Regional and Property Analysis
- HSPG Draft Master Plan
- HSPG Draft Master Plan Executive Summary
- Property planning maps
- Public comment summaries

PUBLIC COMMENT

Public comments were received from interested or affected parties throughout the master planning process. The public's input was received via email, written comment forms returned by regular mail, online comment forms, and verbal communication. Department staff analyzed and recorded comments for public record. A qualitative summary of comments reviewed key issues and described what was heard collectively.

ISSUE IDENTIFICATION AND CONSIDERATION

At each major step in the process, the public's input served as a planning tool to help identify issues and suggestions. The public's comments, the Regional and Property Analysis, WDNR staff technical input, and other considerations guided the master planning team. During this process decisions were made based on:

- The land's resource capability.

- The role of the plan area and the properties in their local and regional contexts.
- Applicable federal and state laws, administrative WDNR codes, and WDNR design standards.
- Policies and missions of WAs and other WDNR lands.
- Consideration of public input.
- The professional expertise of WDNR managers.

A broad range of interests was heard and considered in the development of the Master Plan. Final decision-making responsibility and authority rests with the WDNR's citizen policy-making Natural Resources Board (NRB). The NRB reviews the Draft Master Plan and Environmental Analysis and makes an approval decision on the plan. The public has a final opportunity to comment at the NRB meeting before the Board renders its decision.

PUBLIC REVIEW PROCESS FOR DRAFT PLAN

The DNR released the HSPG Draft Master Plan and Environmental Analysis for public review on July 19, 2016, with the comment period extending to August 19. A public meeting was held on August 3 at which the public was invited to view informational displays and draft plan documents, hear a short presentation, ask questions during a formal question-and-answer session, speak one-on-one with Department staff, and provide their comments on the draft plan. Approximately 36 people attended the public meeting. The Department received verbal and written comments submitted during and after the public meeting. A total of 23 written comments were received. The public involvement timeline is summarized in the table below.

Chronology of Public Involvement

Date	Contact
July 19, 2016	Invitation to public meetings sent to stakeholder list and planning documents posted on WDNR Web site. Statewide WDNR news release sent out announcing public meeting.
July 25, 2016	Hard copies of draft plan sent to WDNR Horicon Service Center and Beaver Dam, Horicon, Hustisford, Mayville, and Waupun public libraries.
August 3, 20176	Public meeting held at Horicon Education & Visitor Center, 5:30-7:30 pm.
July 19-August 19, 2016	Public comment period.
October, 2016	Public comment summary posted on WDNR Web site.

SUMMARY OF COMMENTS RECEIVED

The majority of verbal and written comments received on the draft master plan addressed specific issues, largely related to recreation management/public use or resource management. Very little general feedback was received.

A summary of comments on specific issues, along with responses where applicable, are listed below, grouped by topic area.

Gold Star Memorial Trail

Numerous comments were received regarding the Gold Star Memorial Trail (GSMT), a non-motorized trail to extend from the City of Mayville to the City of Beaver Dam, and including a connection to the Horicon Marsh Education and Visitor Center (HMEVC). Trail proponents have requested that biking be allowed on portions of existing hiking trails on the Horicon Marsh WA associated with the HMEVC, as the preferred connection between the HMEVC and the City of Horicon. The draft master plan includes two alternatives related to this request: Alternative 1, accommodating bike use on the Horicon WA trails; and Alternative 2, routing bikes along the shoulder of State Hwy 28.

- During the public meeting Q&A, a question was asked: ***Why does the master plan contain only these two alternatives, or why is the alternative relating to using the Horicon WA trails not more detailed about, for example, how conflicts could be mitigated between different users?***

Response: At this point, DNR is soliciting broad public opinion about the bike trail request, rather than describing different implementation scenarios. Also, the bike trail is being developed in phases and the segment between the HMEVC and the City of Horicon is the fifth and final phase. It may not be worked on until years in the future. Without knowing more about potential funding sources, it's very difficult to make the alternative more detailed. Anyone who has a different alternative should submit it in writing as a comment. [Questioner then clarified that even though the trail is divided into numbered segments, segments may be worked on in any order].

- The majority of written comments were supportive of the trail, and specifically of Alternative 1. These comments cited safety concerns as the primary reason for rejecting Alternative 2. Only one comment expressed preference for Alternative 2 due to concern over impacts to wildlife. A comment received from the USFWS Region 3 Wildlife and Sport Fish Restoration Program expressed concern over the bike trail request as a secondary use that could adversely affect the primary uses (wildlife habitat and public hunting) of this property, which was acquired with Pittman-Robertson funds. One comment suggested a third alternative – developing a separate path paralleling Hwy 28, likely via a boardwalk, and then connecting to the Bachhuber trail via the Indermuehle Island trail loop – but noted the likely high cost and impact to wetlands. One comment was neutral on the bike trail concept but its author opposes any trail south of the Palmatory hill. One comment expressed serious concern about safety hazards to existing users of the trails (particularly wildlife watchers and children participating in educational programs) under Alternative 1. Both this comment and all the comments supporting Alternative 1 suggested and expressed support for various ways to mitigate user conflicts and other safety concerns, including signage; speed limits; closing specific trail segments during special events or high-use times; implementing a "walk-your-bike" section along certain trail segments; and evaluating various routing options (e.g., northern vs.

southern portion of Bachhuber trail; Palmatory service road vs. eastern portion of Quick's Point trail).

Response: The Department is willing to accommodate bike use on Horicon Marsh WA only under certain conditions. These conditions are due to the statutory designation of the property as a Wildlife Area and to the fact that it was acquired with Pittman-Robertson Wildlife Restoration grant funds. Horicon Marsh WA's primary purpose is to provide wildlife habitat and public hunting; any secondary recreational uses may not detract from this primary purpose. Necessary conditions for accommodating bike use on Horicon Marsh WA address trail routing, acceptable modifications to existing trails, trail standards and maintenance, funding, and the need for agreements between the Department and the GSMT. These conditions will take precedence over contrary conditions that may be attached to potential trail development funding sources.

Proposed Changes to Closed Areas

Several questions and comments were received regarding proposed changes to closed-restricted areas.

- Question: ***Why is the master plan proposing only non-motorized hunting in the part of the Migratory Bird Closed Area that is being eliminated? If a formerly closed area is being opened up everyone should be able to access it, including people who can no longer get around in skiffs.***

Response: This area is currently posted as non-motorized and the proposal is maintaining that as a compromise for those more traditional hunters that prefer to hunt in boats without motors. There is already a process in place for disabled persons to gain access to areas that are closed to motorized access via a permit.

- Question: ***Is the master plan making the Fourmile Island SNA refuge a year-round closed area?***

Response: No. The master plan is not proposing any changes to that refuge. It will remain a seasonal no-entry refuge to protect nesting birds.

- One written comment requested that the area south of the current boundary of the migratory bird closed area and east of the main ditch be opened to non-motorized waterfowl hunting.

Response: This is precisely what is being proposed.

- One written comment expressed opposition to opening up closed areas to waterfowl hunting because ducks and geese will not have any areas to rest or feed. One comment asked whether access to Cotton Island Pond would be affected. Several

comments from neighboring residents expressed opposition to archery hunting in the Palmatory area due to safety concerns, and one comment author is opposed to any hunting (even archery-only) at Indermuehle Island because of its proximity to the HMEVC facilities and perceived conflicts with other users.

Response: The change to the migratory bird closed area was proposed because the area is no longer functioning as an effective refuge. The neighboring Horicon Marsh National Wildlife Refuge provides an extensive refuge for waterfowl. Access to Cotton Island Pond will not be affected. The master plan is proposing changes; however, the closed-restricted areas are defined in Wisconsin Administrative Code and any proposed changes have to go through the rule-making process to become implemented. Should the proposals become implemented, the Department will post signage prohibiting discharge of weapons within 100 yards of a residence. Regarding Indermuehle Island, it is likely that any archery hunters would concentrate their effort in the interior of this area away from trails, thus minimizing potential conflicts with other users.

Motorized Boat Access/Mud Motors

Several written comments addressed motorized boat access and mud motors (also known as “surface drive” or “pro drive” motors), with some comment authors requesting no additional restrictions on the use of motors and other authors expressing concerns about the effects of these motors on wildlife and wetland vegetation, and the need to regulate them. One comment proposed that all boats be restricted to the main ditch from April 1 to August 15 to protect breeding wildlife.

Response: The Department currently lacks documentation on the frequency of use of these motors and any effects on wildlife or vegetation. For this reason, the property-specific section on Horicon Marsh WA in the master plan contains a prescription to document the use of these motors on the property and to assess their effects on habitat and wildlife. Regarding the proposal to restrict boats to the main ditch, the Department does not have the authority to restrict access to navigable waterways of the state.

Palmatory Recreational Facilities

Several written comments addressed development of public use facilities at Palmatory Street. One comment proposed a substantial development of a community-center-type building containing a scenic overlook and extensive meeting space, at an estimated cost of $1.8 million which the proposal suggested should largely be state-funded. Another comment indicated that the facilities currently there are not well-maintained and that any additional developments should be modest and simple. One comment was opposed to the picnic shelter/flush toilet building proposed in the plan or to anything that would draw additional visitors to Palmatory Street.

Response: The establishment of the HMEVC, with its large size and many amenities, represents the Department’s investment in a substantial recreational/educational facility for the Horicon Marsh WA, a development which enjoys a high level of public support.

Prior to the master planning process, the Department solicited public input on facility development at Palmatory Street and the consensus from that process was for modest facilities only. The proposal in the master plan, for a small picnic shelter/flush toilet building is consistent with the Recreation Management Area, Type 3 setting land classification, providing opportunity to enjoy the area while keeping development and maintenance simple.

Non-toxic Shot

Two comments regarding the use of non-toxic shot for upland game hunting on Horicon WA were received, including one from a representative of the neighboring Horicon National Wildlife Refuge which shares a boundary with the state wildlife area. Both comments expressed disappointment that this issue was not addressed in the master plan despite previous input. Both comments noted that lead is well-known to be toxic to wildlife; and that non-toxic shot is already required for all bird hunting on federal refuges and waterfowl production areas, including upland areas. Because of the shared boundary, the state land should have the same requirement for the sake of consistency.

Response: It is outside the scope of master planning to address this issue. Horicon WA has a unique situation in sharing a boundary with a federal refuge, yet DNR has wildlife areas all over the state. This is a statewide issue; the Department cannot set property-by-property standards.

Real Estate Recommendations

Several questions and comments were submitted regarding the real estate recommendations in the master plan. One comment expressed support for the Sinnissippi Extensive Wildlife Habitat recommendations.

- Question: ***Why not more boundary expansions? The master plan is supposed to be a long-term document; DNR says 15-20 years for the life of a plan (although the previous plan is 30 years old already). If these areas are not identified and included in a boundary, partners can't work on them.***
- Question: ***If you tally up the acres of contractions vs. expansions, the change is actually net negative. Is this a new DNR policy?***

Response: Acquisition is a good tool for land protection. However, the Department recognizes that resources are limited and is currently focusing on acquiring lands already within project boundaries and doing a good job managing what is already owned. The Department is also committed to improving the process of updating master plans so it isn't such a long time between when a plan is approved and when the plan is updated or re-done. Master plans can also be modified after they are approved through the variance or amendment process.

- Question: ***Did you consider streams or waterways in the process of analyzing/deciding on boundary changes, and what might be happening to them farther upstream in the watershed (e.g., pollution)?***

Response: We did look at areas where water is flowing into the marsh during the process of deciding on boundary modifications. We understand that what is occurring outside of our boundary impacts our management and that likewise what we are doing impacts people outside of our ownership. We took a strategic approach to adding properties to the project boundary, adding parcels that we felt would complement or assist in our management goals.

Horicon Dam

- Question: ***Does the master plan address the Horicon Dam, and specifically the issue of a portage?***

Response: The Horicon dam is mentioned on page 43 of the draft master plan. This portion discusses the feasibility of repairing or replacing the dam. We did not directly address a portage around the existing structure but any discussion regarding replacing the existing dam would include discussion of a portage opportunity. We have worked with adjacent landowners to discuss the possibility of a portage around the dam. Under current management prescriptions for the state Wildlife Area and our current ownership, there is no feasible, safe place to put a portage at the existing structure. Currently, users can use Kiwanis Park and Legion Park to portage around the dam.

General Resource Management

- One written comment expressed concern over water level management at Shaw Marsh WA, specifically any changes that would raise water levels in Park Creek.

Response: There are no plans to raise water levels on Shaw Marsh.

- One written comment requested some treatment in the master plan of improving and enhancing fishing on Horicon Marsh and adjoining Rock River areas, including stocking of panfish and removing rough fish.

Response: Fisheries management is described in the master plan on pages 10-11; both stocking and rough fish control are specifically mentioned.

- One written comment expressed support for the proposal to restore historic water flow in the East and West branches of the Rock River through Horicon Marsh WA.

General Public Use

- One written comment stated that boat access areas need to be dredged.
- One written comment indicated that the main ditch needs to be cleared of fallen trees.

Master Plan Process

- Question: ***When a master plan contains language about 'assessing' or 'doing research' or 'looking into' something, what about any action that might follow from that? How can it be done if it isn't in the plan?***

Response: There often are different options for pursuing an action as well as uncertainties about when and how something might get done (e.g., whether funding can be found, etc.). Master plan language contains some flexibility to allow for situations where outcomes are not certain or when we need more information before we can make a decision or take action. We also recognize that things may change or unforeseen events may happen during the lifetime of a plan. The variance and amendment provisions allow a plan to be modified after it's approved.

- Question: ***What happens after the comment period ends on August 19?***

Response: After the comment period ends, all the comments submitted will be compiled and a public comment summary will be prepared and posted on the plan webpage. All subscribers to our contact list will be notified when the comment summary is available. We will then prepare a final draft of the master plan, taking into account all the public input received, and get it ready for presentation to the NRB. Once the plan gets on the agenda for an NRB meeting, there is another opportunity for public comment.

- One written comment expressed concern that standards for a public hearing were not met at the August 3 meeting because attendees could not make statements and have their comments recorded, and were asked to submit their comments in writing.

Response: There is a difference between a public hearing and public meeting. Public ***hearings*** are held in instances where they are required by state statute (e.g., for rule proposals), and are typically recorded. Master planning public input sessions are usually public ***meetings***, which are informational in nature, less formal, and are generally not recorded. Department staff urge attendees to submit their comments in writing in addition to stating them verbally because this ensures that the comments say exactly what the person wants them to say; it is very difficult for a staff person who may interact and speak with many different members of the public at a meeting to accurately remember every comment that is made.

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APPENDIX A: HMEVC MATERIALS

HMEVC EDUCATIONAL PROGRAMS AND EVENTS

School/Youth Programs	Public Events	Special Events
• Animal Habitats & their Management • Avian Adaptations • Birding Basics • Birds by Color • Critter Camo • Critter Scene Investigation (C.S.I) • Dabblers & Divers: Wisconsin Waterfowl • Discovery Hike • Exploring the World of Ice & Snow • Geocaching • History of Horicon • Hunt for Habitats • Horicon Marsh Amateur Tracker • Intro to Insects • Laws of Nature • Nature Detectives • Mammals of Wisconsin • Migration Challenge • Monitoring Aquatic Ecosystems • Wetland Exploration • Scatology • Slippery, Slimy, Scaly • Superhero or Villain? • Tricky Tracks • Web of Wonder • Would You Survive? • Wetland Sort • Wonders of Wetlands • Wildlife Olympics	• General Birding Hikes • Demonstration Prescribed Burn • Owl Prowl • Owl & Eagle Prowl • Crane Watch • Kayak Property Tours • Interpretive Hikes (herps; mammals; nocturnal animals, etc.) • Interpretive Snowshoe Hikes (tracking; winter tree ID, etc.) • Fall Migration Hikes • WILD Women Workshops (outdoor skills, vary seasonally) • Stories at the Marsh (various wildlife themes) • Movies at the Marsh (sponsored by Friends group) • Cooking Wild Game • Learn to Hunt Waterfowl • Trapper Education • Learn to Trap • Hunter Safety Education • Explore Bowhunting • National Archery in the Schools Program • Wildflower & Native Plant Walks • Wild Edibles	• Horicon Marsh Candlelight Hike • Horicon Marsh Nest Box Seminar • Horicon Marsh Bird Festival • Horicon Marsh Paddle • Horicon Marsh Outdoor Skills Day • Archaeology Weekend • Library Family Night • Wildflowers for Wildlife (native plant sale)

HMEVC EDUCATION PROGRAM BROCHURE

Program Information

The Wisconsin Department of Natural Resources' Horicon Marsh Wildlife Conservation Education Program offers a fun and exciting way for your class to explore the worlds of science and environmental education while meeting state academic standards.

All of the programs listed can be adapted to different age levels. We will also customize a program to your class's specific needs. Please notify us at least one month in advance.

Registration

Wildlife Educators are available for programs during regular office hours:
Monday-Friday: 8:30 a.m.-4:00 p.m.

If these hours don't suit your needs, please call us for alternatives.

Program Fees

All of our wildlife education programs are offered to you free of charge. Our salaries, supplies, and program services are paid by the license fees that DNR collects from Wisconsin's hunters and anglers. **Donations are accepted and VERY MUCH appreciated!**

Public Events

For a detailed list of Horicon special events please visit the Friends website at www.horiconmarsh.org or call 920-387-7893.

Contact Information

Wildlife Education Program
N7728 Hwy 28
Horicon, WI 53032
(920) 387-7893

Wisconsin Dept. of Natural Resources
Bureau of Wildlife Management
dnr.wi.gov keyword search Horicon

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication can be made available in alternative formats upon request. Please call 920-387-7893 for more information.

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Horicon Marsh
State Wildlife Area

Wildlife Conservation Education Programs

WISCONSIN
DEPT. OF NATURAL RESOURCES

Animal Habitats and Their Management

Adaptable for Grades: 5-12
How is it possible for a large number of animals to co-exist in a small space? After a quick review of what components need to be present for quality habitat, our Educators will take you on a hike around the education center to find out what animals reside in Horicon Marsh. Through discussion, your class will learn how Wildlife Managers work with the land so everyone can co-exist together in this relatively small place.
Time: 45-90 minuets

Avian Adaptations

Adaptable for Grades: 1– 6
When an owl eats its prey whole, where does it go? How does a hawk track rodents through tall grass? Learn the answer to these question and more when your class examines the different ways birds deal with everyday life, whether through adaptation or behavior.
Time: 1 hour

Birding Basics

Adaptable for Grades: 4-12
Your class can learn a great new skill while enjoying the great outdoors. The program begins with an introduction on how to identify birds by sight and sound. After a quick lesson on binocular use, they're off! This tour takes place in Horicon Marsh where your students can practice what they learned on the area's resident and migratory birds.
Time: 1 hour

Birds By Color

Adaptable for Grades PreK-3
Birds can add a lot of color and fun to back-yards. Learn what makes a bird different from other creatures and make your own binoculars to spot many colorful birds!
Time: 30-45 minuets

Critter Camo

Adaptable for Grades PreK-2
While participating in challenging games stu-dents will discover some of the amazing adapta-tions that animals have which help them survive.
Time: 30-45 minuets

C.S.I.

Adaptable for Grades 4-12
Calling all animal detectives…Help investigate the clues that animals leave behind. Tracks, scat, feathers, fur, and lots of other evidence found at a "critter-scene" can be revealing and helpful. Can you crack the case?
Time: 1 hour

Dabblers and Divers: Wisconsin Waterfowl

Adaptable for Grades 7-12
Wisconsin is home to more than 20 different species of ducks. Through the use of taxidermy specimens and a habitat hike, students will come to understand Wisconsin's waterfowl and their management.
Time: 30–45 minutes

Discovery Hike

Adaptable for Grades K-8
Students will get an overview of interactions within the marsh community. They will discover the wonders of nature that can only be experi-enced when they use all their senses to explore.
Time: 1 hour

Exploring the World of Ice & Snow

Adaptable for Grades: 5-12
Take a guided interpretive hike on the frozen marsh with snowshoes. Learn the history of snowshoeing in Wisconsin. Gain an understanding of the value many cultures placed on snowshoes to survive harsh winters. Discover walking techniques and the structure of snowshoes and how to dress appropriately for any winter outdoor activity.
Time: 1–1 ½ hours.

Geocaching

Adaptable for Grades 7-12
Explore the world of geocaching. Learn how to use a GPS and the proper techniques for hunting down a cache. **Time: 60–90 minutes**

History of Horicon

Adaptable for Grades: 5-12
Through a PowerPoint of historic photographs, learn the fascinating story of how, over time, Horicon Marsh was completely destroyed and then painstakingly re-built to its present condition. Through this program, students will study the impacts of people and their developments on an ecosystem both past, and present. **Time: 30–45 minutes**

Hunt for Habitats

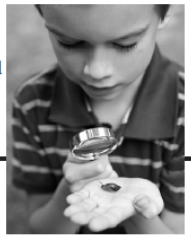
Adaptable for Grades: K-8
What is a habitat? After a quick review of what components make up a habitat, Wildlife Educators will take your class on a hike around the education center to find out what animals live in the marsh. Learn how everyone co-exists in this relatively small place and still manage to raise a family.
Time: 45-60 minuets

Horicon Marsh Amateur Tracker

Adaptable for Grades: 5-12
Hike into the ice-covered marsh by foot or snowshoe (snow permitting). Investigate how different plants and animals use adaptations to survive winter in an icy marsh. Search through the cattails for tracks and other signs or clues left by winter wildlife. Make a plaster cast in the classroom to take home.
Time: 1–1 ½ hours.

Intro to Insects

Adaptable for Grades: PreK – 8
What makes an insect? With sampling nets in hand, catch insects around the marsh. Compare insect behaviors and adaptations, and discover how these creatures survive as well as play an important role in the food chain.
Time: 1 hour



Laws of Nature

Adaptable for Grades: K-8
Students will discover the 4 laws that govern nature through various fun and active ecology games. From there is no such thing as a free lunch to everything must go somewhere students will have the chance to act out the 4 laws.
Time: 1 hour

Mammal Mania

Adaptable for Grades: PreK-1
Do you know what makes a mammal so unique? This program will explore mammals that live in the wild and near our homes. Play a game and use your imagination as we discover mammals.
Time: 1 hour

Mammals of Wiscosnin

Adaptable for Grades: K-8
Explore the exciting world of mammals as your class learns the identities of some Wisconsin native residents. By looking at their adaptations, students learn how they survive in a state with a wide array of temperatures and ecosystems.
Time: 30-60 minuets.

Migration Challenge

Adaptable for Grades: 1-8
Through interactive games students will explore the effective migration strategies that waterfowl use and what struggles they encounter during both spring and fall migration.
Time: 1 hour

Monitoring Aquatic Ecosystems

Adaptable for grade 9-12
By testing a series of physical, chemical and biological parameters of Horicon Marsh students will learn to appreciate the foundation of life in a wetland, their interactions and methods for studying these.
Time: 1–1 ½ hours.

Pond Study

Adaptable for Grades: 1-8
Students use a hands-on approach to explore the world beneath the water. Examining the creatures they catch, your class will learn about the adaptations these animals have that allow them to survive in this harsh environment.
Time: 1-1 ½ hours

Scatology

Adaptable for Grades: 5-12
It's kinda gross and smelly but it is a great way to see who is living in the marsh. Students will learn how to properly identify common animal scat. This is a great tracking skill that is sure to impress.
Time: 1 hour

Slippery, Slimy, Scaly

Adaptable for Grades: K-8
Often overlooked, reptiles and amphibians play an essential role in the marsh ecosystem. Students will have chance to learn about these amazing creatures and examine them in their natural habitats.
Time: 1 hour

Superhero Or Villain?

Adaptable for Grades: K – 8
This program packs a POW! Learn all about the powerful, daring, magnificent & mighty superheroes that call Horicon Marsh home! But wait! SLAM! Lurking around every corner is a villain…and we will do our best to prepare you for battle! This interactive program will introduce you to our marsh superheroes, and its evil villains. BAM!
Time: 1 hour

Tricky Tracks

Adaptable for Grades: 2 –8
Mud and snow are fantastic places to find signs of those animals we don't always see. In this program, your class will learn how to identify the tracks of some common Wisconsin animals. Finish up the program by making a plaster cast of a track to take home.
In winter months, when snow is on the ground, your class can go on an adventure as they identify tracks and discover activity signs left behind by Horicon's resident wildlife.
Time: 1-2 hours

Web of Wonder

Adaptable for Grades: K-8
Students learn how all living things in an ecosystem are connected in some way. By building their own "web" your class will be able to look at energy flow through the food web system and how environmental changes disrupt the system. This program can be conducted at Horicon Marsh, or right in your own classroom.
Time: 30 minutes

Would You Survive?

Adaptable for Grades: 1 – 12
Students will learn about the adaptations many animals have to help them survive harsh Wisconsin Winters. They will discover how and why animals make insulating shelters, store food, hibernate and migrate in order to live. Come experience winter education in a whole new way with this guided interpretive program.
Time: 1 hour

Wetland Sort

Adaptable for Grades: PreK – 1
Many creatures call wetlands home. Discover what makes these creatures so unique. Be prepared to get your hands wet!
Time: 1 hour

Wonders of Wetlands

Adaptable for Grades: K – 8
While enjoying a hike through the marsh students will learn about the many important functions of wetlands.
Time: 1 hour

Horicon Marsh on DVD

The Friends of Horicon Marsh in collaboration with Wisconsin DNR have created "The Horicon Marsh Story." This 20-minute film highlights the history, wildlife, wildlife management and recreational opportunities at Horicon Marsh. This educational documentary is appropriate for any age. If you are interested in viewing the film during your field trip as an introduction to the marsh, please inform a wildlife educator. If you are interested in purchasing the DVD to show classes before your trip to the marsh please visit the Education Center gift shop.

The Education Center is open to the public year round;
Weekdays: 9 a.m. - 4 p.m.
Weekends: 10 a.m. - 4 p.m.
Winter Weekends: 1- 4 p.m.

Interpretive Trunks

You and your class can begin exploring the world of wildlife by checking out and opening up three wildlife education trunks:

Wisconsin Mammals Trunk
World of the Whitetail
Whooping Crane Truck

Trunks come complete with skulls, bones, hides, tracks, and a complete curriculum. Developed by WDNR staff, these materials help students understand the biology, life histories, and management issues of some popular and less well-known Wisconsin animals. Call today to reserve your trunk for a two-week period with your class.

HMEVC FRIENDS GROUP AGREEMENTS

AGREEMENT BETWEEN
THE DEPARTMENT OF NATURAL RESOURCES
AND THE
FRIENDS OF HORICON MARSH INTERNATIONAL EDUCATION CENTER, INC.

This agreement (Agreement) between the Department of Natural Resources (hereinafter referred to as the "DNR"), acting through the Secretary, and the Friends of Horicon Marsh International Education Center, Inc. (hereinafter referred to as "FHMIEC"), acting through the President of its Board of Directors or the Board's designee.

WITNESSETH:

WHEREAS, it is the purpose of the DNR to preserve, interpret, and manage its properties for the benefit, education, and enjoyment of the people of the state; and

WHEREAS, the DNR desires to extend its program and services at Horicon Marsh Wildlife Area and International Education Center, (hereinafter referred to as "the Wildlife Area and Education Center "); and

WHEREAS, FHMIEC has incorporated to assist the DNR in extending its program and services at the Wildlife Area and Education Center,

NOW, THEREFORE, pursuant to authority contained in Chapter 27, Wis. Stats., and in consideration of the mutual benefits which will accrue to the DNR and FHMIEC, the parties agree as follows:

1. AUTHORIZATION

The DNR authorizes FHMIEC to provide, and FHMIEC agrees to provide when able, the hereinafter described services to the visiting public for a period of three years commencing on the day following the ratification of this Agreement by the DNR. The Agreement shall automatically renew for additional consecutive three-year periods, unless reasonable notice of cancellation is given by either party before the date of renewal. The DNR or FHMIEC reserve the right to terminate this Agreement or any part thereof, at any time upon 30 days written notice without the necessity of any legal process, after holding a meeting prior to the termination setting forth the reasons for termination.

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An evident and distinct separation shall be maintained between the management and decision-making activities of FHMIEC and those of DNR. All steps shall be taken to avoid even an appearance that the DNR directs the management or decision-making process of FHMIEC.

The management and operation of FHMIEC is subject to all applicable Wisconsin Statutes and the Wisconsin Administrative Code.

2. DNR RESPONSIBILITIES

The DNR shall allow FHMIEC to use facilities at the Wildlife Area and Education Center which are designated for the sale of educational and interpretive items for the benefit of the visiting public. The property wildlife educator, in consultation with the office manager, shall have sole discretion in decided which and how much display/sales area is used for FHMIEC items. Exhibit A. shows the location of such facilities.

A. Sales Items

The DNR shall cooperate with FHMIEC in the planning and design of merchandise appropriate for sale by FHMIEC at the facilities provided by the DNR.

B. Facilities

(1) The DNR shall at its sole discretion provide FHMIEC with offices and storage space and with such sales and other facilities as may be deemed necessary or desirable by the DNR. The DNR reserves the right to relocate or remove any such facilities in order to meet needs of the DNR upon reasonable notice. All facilities shall be subject to the right of the DNR to make such surveys and inspections as it deems necessary.

(2) The DNR reserves the right to design and construct any new facilities, and shall allow FHMIEC to review and comment on any plans therefore.

(3) The DNR shall provide FHMIEC with incidental utility services at each assigned facility, including water, local phone calls, copies up to 200 per month, electricity, heat, and air conditioning, to the extent these utilities are required for the operation of the building for governmental purposes. All other utilities shall be provided FHMIEC on a reimbursable basis.

(4) The DNR shall provide all general maintenance and repair services for the state-owned buildings.

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(5) FHMIEC shall be given special consideration in scheduling activities outside the normal building use schedule.

C. The DNR shall designate the property wildlife educator or the wildlife educator's designee as liaison or property coordinator with FHMIEC.

D. Monies donated by FHMIEC to the DNR shall be expended to support the mission and activities of the property.

E. The DNR shall promote FHMIEC in publications and announcements where DNR deems appropriate.

3. FRIENDS RESPONSIBILITIES

A. Exclusive Support

FHMIEC shall limit its official activities to the support of the Wildlife Area and Education Center.

FHMIEC may use facilities and equipment within the property at the sole discretion of DNR for its programs and activities for the benefit of the visiting public.

B. Organization

(1) FHMIEC's bylaws shall comply with the requirements of the State of Wisconsin. Nonprofit status must be maintained in accordance with state laws and FHMIEC shall make all such documents available for inspection, at the request of DNR, documents demonstrating nonprofit status. This Agreement shall automatically terminate if nonprofit status is lost, or if the bylaws are amended in such a way as to alter the intent of this Agreement.

(2) DNR employees may be members of FHMIEC, but shall not serve on the board of directors or as treasurer. DNR employees shall not represent FHMIEC in any matter between FHMIEC and the DNR.

(3) The role of the property wildlife educator or the wildlife educator's designee as liaison or property coordinator is to represent the interests of the DNR and to provide cooperative assistance to FHMIEC. The coordinator's responsibility to FHMIEC shall be limited to providing assistance to FHMIEC activities and serving as liaison between the DNR and FHMIEC.

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C. Interpretive Activities

Interpretive activities engaged in by FHMIEC must meet DNR standards and be approved by the wildlife educator.

D. Sales Items

(1) FHMIEC shall not sell any item that has not been approved by the property wildlife educator or designee. Whenever possible and appropriate, FHMIEC shall sell Wisconsin-made products. FHMIEC shall allow publications to be reviewed by the DNR for editorial and design quality.

(2) FHMIEC is not by this Agreement granted the right to sell items, the sale of which would infringe on applicable contract rights of a concessionaire, if any.

(3) FHMIEC shall maintain a high standard of quality as determined by the property wildlife educator in all items produced or sold.

(4) FHMIEC shall sell items at or near market value of similar goods or services in the area of the property and such prices shall be approved in advance by the DNR.

(5) FHMIEC shall display the sales items in good taste and in keeping with the general design and decor of the Wildlife Area and Education Center.

E. Fund-raising

Fund-raising events and activities sponsored by FHMIEC shall be approved by the property wildlife educator or wildlife educator 's designee.

F. Facilities

(1) FHMIEC may redesign and renovate existing sales facilities as necessary, including renovation of display structures, furnishing, equipment, signing, display lighting, and lighting in the immediate area of the facility, provided that all plans are approved in advance by the DNR.

(2) FHMIEC shall keep the sales facility clean and presentable throughout the work day.

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(3) FHMIEC shall exercise reasonable care to prevent damage to any DNR property used by it during its operation and shall, insofar as possible, protect all such property.

(4) The erection of signs and advertising or display materials relating to FHMIEC is not allowed unless authorized by DNR. All signs, advertising or display materials, and all publications, stationery, and other promotional material issued or used exclusively by FHMIEC shall be paid for by FHMIEC.

All these materials shall clearly identify the Wildlife Area and Education Center as a property of the State of Wisconsin Department of Natural Resources.

G. Records and Accounting

(1) FHMIEC shall conduct its fiscal operations in accordance with accepted business practices, using purchase orders, receipts, invoices, and inventory records.

(2) FHMIEC shall submit to DNR a complete financial report detailing, as a minimum, all income and expenditures to the wildlife educator, annually within 90 days following the end of FHMIEC's fiscal year January 1 to December 31. The report is not required to include a list of donors or itemized donations. The report shall be accompanied by a written summary of FHMIEC activities for the year.

(3) The DNR may review and/or audit the records of FHMIEC at any time during the term of this Agreement with reasonable notice.

(4) FHMIEC shall maintain a checking account in its name, and shall deposit proceeds from sales, donations and other revenue in the account at least once each month wherein there is revenue. Only the treasurer or the president's or treasurer's designee may make the deposits. Unless otherwise stipulated in FHMIEC's bylaws, all withdrawals and expenditures of funds shall require the signatures of two board members of FHMIEC.

(5) FHMIEC shall provide notice of its meetings in a manner that is reasonably likely to apprise interested persons.

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H. Personnel

(1) FHMIEC shall provide such personnel as are reasonably necessary to operate the sales facilities as indicated by the level of gross sales. These personnel may include, as necessary, a business office staff, facility managers, and sales clerks. Otherwise, DNR personnel may offer sales items to the public as an incidental supplement to their regular duties.

(2) FHMIEC shall designate one member or employee who is authorized to act as liaison with the DNR.

(3) All FHMIEC employees and volunteers involved in visitor contact shall be oriented in the Wildlife Area and Education Center's visitor service programs and shall be approved by the wildlife educator before assuming such responsibilities.

(4) FHMIEC personnel are not DNR employees and are not authorized to undertake any DNR function or activity on behalf of the DNR beyond routine visitor information services and participation in interpretive programs. FHMIEC employees and members shall not engage in activities that would reasonable lead the visiting public to conclude that they are DNR employees. No FHMIEC employee or member shall wear a DNR uniform. All FHMIEC employees and volunteers involved in public contact shall wear some easily observable and readily identifiable indicia of FHMIEC affiliation while at the Wildlife Area and Education Center on FHMIEC business. If the DNR specifies volunteer uniforms or indicia, FHMIEC employees and volunteers shall wear them while on duty.

(5) Where applicable, FHMIEC shall furnish full worker's compensation coverage for its employees and shall comply with all social security and withholding tax laws and rules. A person claiming that the coverage is not required under Chapter 102, Wis. Stats., shall upon request, provide the basis for such opinion in writing to the DNR. When required to furnish full worker's compensation coverage for its employees, FHMIEC shall provide a copy of the insurance certificate to the property wildlife educator. Any changes in insurance coverage shall require immediate notification to DNR.

(6) Nondiscrimination: In connection with the performance of work under this Agreement, FHMIEC agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01(5), sexual orientation or national

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origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

Except with respect to sexual orientation, FHMIEC further agrees to take affirmative action to ensure equal employment opportunities. If the annual work force is less than 10 employees, FHMIEC is exempted from this requirement.

I. Approvals

(1) Hours of operation, rates and prices, standards of service, and merchandise to be sold shall be subject to the approval of the property wildlife educator.

(2) FHMIEC may at any time make a written request to the property wildlife educator for such necessary approvals. Failure to disapprove within 30 days of receipt of such written request shall be deemed to constitute DNR approval.

4. INDEMNIFICATION AND INSURANCE

A. General

FHMIEC shall not be required to purchase liability insurance as long as it is engaged only in the sale of books, brochures, and other non-food items related to natural history, or in assisting DNR interpretive programs, or in assisting DNR in minor grounds maintenance projects.

B. Exception

In the event of FHMIEC sponsorship of events, programs, and projects beyond the scope of those noted in Paragraph A, FHMIEC shall purchase public liability insurance to be effective during a period of time specified by DNR to provide adequate protection of the state's interests. The liability insurance shall name the State of Wisconsin, Department of Natural Resources and its employees, and the Friends of Horicon Marsh International Education Center, Inc., as insureds in the minimum amount of $300,000 single limit per occurrence including coverage of $300,000 for bodily and personal injury and $25,000 for property damage so that the DNR shall be protected from any liability arising out of the activities of

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FHMIEC. FHMIEC shall furnish the DNR with a copy of the insurance policy or a certificate of insurance, to be placed in a file with the Agreement, at least two weeks before FHMIEC begins such events, programs, or projects. FHMIEC shall indemnify the DNR against any cause of action, claim, damage, cost of expense, including reasonable attorney's fees, arising from its management or operation, or from any breach or default by FHMIEC in the performance of this Agreement, or from any negligence of FHMIEC during such events, programs, or projects. If any action or proceeding is brought against the DNR by reason of any such cause or claim, FHMIEC, upon notice from the DNR, shall defend the DNR by counsel satisfactory to the DNR. If insurance is required, this Agreement shall be conditioned on the DNR's approval of the insurance policy. Any notice of cancellation of the insurance policy shall require immediate notice to the DNR.

C. Copyright Infringement

FHMIEC, in selling the articles described herein, guarantees that the sale or use of those articles shall not infringe on any copyright. FHMIEC covenants that it shall at its own expense defend every suit which shall be brought against the State of Wisconsin (provided that FHMIEC is promptly notified of such suit, and all papers therein are delivered to FHMIEC) for any alleged infringement of any copyright by reason of the sale or use of such articles sold or distributed by FHMIEC, and agrees that FHMIEC shall pay all costs, damages, and profits recoverable in any such suit.

5. ASSIGNMENT

No transfer or assignment of this Agreement or of any part thereof or interest therein, directly or indirectly, voluntary or involuntary, shall be made unless such transfer or assignment is first approved in writing by the DNR Secretary or the Secretary's authorized representative.

6. APPROPRIATIONS

Nothing herein contained shall be construed as binding the DNR to expend any sum in excess of appropriations made by the Legislature, or administratively allocated, for the purpose of the Agreement, or to involve the DNR in any contract or other obligation for the future expenditure of money in excess of such appropriations or allocation.

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7. MISCELLANEOUS

A. The rights and benefits conferred by this Agreement shall be subject to the laws of the State of Wisconsin governing the DNR and the rules and regulations promulgated thereunder, whether now in force or hereafter enacted or provided; and the mention of specific restrictions, conditions, and stipulations herein shall not be construed as in any way impairing the general powers of supervision, regulation, and control by the DNR.

B. Both parties agree to keep this Agreement in force when signed by both parties hereto until terminated by mutual agreement or at the option of either party upon three months notice given in writing upon any anniversary date hereof. DNR and FHMIEC shall review the Agreement every three years and at such other times as may be required by either party on 30 days written notice.

C. DNR or FHMIEC may terminate this Agreement upon 30 days written notice to the other party if, after reasonable effort by said party to correct a default, it is determined that conditions still exist contrary to this Agreement. In the event of a termination, FHMIEC's net assets shall become the property of the Wildlife Area and Education Center 's Gifts and Donations Account.

This Agreement is effective between FHMIEC and DNR with regard to, and only to, the following specified sites, which are collectively referred to throughout this Agreement as the " Horicon Marsh Wildlife Area and International Education Center " or "the property" or " the Wildlife Area and Education Center ", to wit:

(1) Horicon Marsh Wildlife Area and International Education Center

IN WITNESS WHEREOF, the Friends of Horicon Marsh International Education Center, Inc., has caused this Agreement to be executed this 28 day of DEC., 2005.

Friends of Horicon Marsh International Education Center, Inc.

By: Robert F. Weiss
President, Board of Directors

Attested: William K. Volkert

Position: President

IN WITNESS WHEREOF, the Department of Natural Resources has caused this Agreement to be ratified this 28th day of FEBRUARY, 2006.

Department of Natural Resources

By: Scott Hassett
Secretary

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State of Wisconsin
Department of Natural Resources
P.O. Box 7921
Madison, WI 53707-7921

CONCESSION AGREEMENT

Horicon Marsh Wildlife Area

Gift Shop, Related Services and Special Events Concession

This concession agreement (hereafter, the "Agreement") is entered into this day, April 20, 2011 by the State of Wisconsin Department of Natural Resources (the "Department") and the Friends of Horicon Marsh International Education Center, Inc. (the "Concessionaire") whose mailing address is:

Friends of Horicon Marsh International Education Center, Inc.
N7725 Hwy 28
Horicon, WI 53032

WHEREAS, the Department considers it necessary for proper comfort and benefit of the public to grant to the Concessionaire a concession for providing food, merchandise and to hold special events at the Horicon Marsh International Education Center and Wildlife Area to make it more attractive for public use;

NOW THEREFORE, in consideration of their mutual promises, the parties agree as follows:

1. **Term of Agreement:** The Department grants to the Concessionaire the right to hold special events and operate a gift shop with sole and exclusive rights to sell food and merchandise at Horicon Marsh International Education Center and Wildlife Area except for the area leased to other concessionaires from the date this agreement is signed, and any required insurance coverage is activated, through December 31, 2013 – a term of approximately three (3) years. This Agreement shall terminate on that date and the Concessionaire relinquish all claims and rights regarding this concession at that time. However, if the Concessionaire informs the Department in writing by November 1st of the final year of the Agreement term that the Concessionaire wishes to renew this Agreement, the Department may at its sole discretion renew the Agreement for additional three-year terms.

2. **Location:** The special events will be held on Department lands associated with the Horicon Marsh International Education Center and Wildlife Area and a gift shop and associated storage in the Horicon Marsh International Education Center Building hereafter referred to as the "Premises" described on Exhibit "A" which is attached and made a part of this Agreement.

3. **(a) Service Provided and Special Events:** The Concessionaire shall provide for the sale of printed material and merchandise as are ordinarily in demand by tourists and wildlife area visitors. The Department shall be provided with a list on or prior to April 1st of each year of the category of items to be sold and/or rented and all other services planned to be provided during the up-coming season described in paragraph #17 herein. The Department shall have final determination of what items are appropriate and allowed for sale and rental. The Concessionaire may also hold special events such as artist exhibits, provide for showing nature based movies, summer hikes and candlelight hike/snowshoe event. The Department must be given at least 30 days notice of any special events proposed to be held on the premises and the Department must approve all special events. The Department decisions in these matters shall be reasonable and based upon the mission of the Wildlife Management Program.

   (b) Food Service Provided: Additionally, the Concessionaire shall be offered first right for vending machine concessions subject to the provisions of 47.03, Stats. The Concessionaire may also provide food service for special events.

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4. **Concession Payments:** If the Concessionaire has a net profit exceeding $25,000, then the Concessionaire shall pay a 5 percent-of-gross-revenues payment to the Department on December 31st of each year. Gross revenues shall include all income generated from the operation of the concession on the Premises excluding state sales tax and income produced from the sale of permits and licenses. All gross revenue over and above the Concessionaire's operating expenses shall be deposited in an interest-bearing account in the Concessionaire's name. The funds in this account are to be used exclusively for improvements to and operation of the Horicon Marsh International Education Center and Wildlife Area. The Department shall approve such improvements in advance. All improvements made with funds from said account shall become the property of the Department. Upon termination of this agreement or dissolution of the Friends of Horicon Marsh International Education Center any remaining revenues in said account at the time the Agreement ends shall become the property of the Department and transferred in total to the Department Horicon Marsh Education Program gift account. All improvements shall comply with applicable codes and ordinances. The Department shall at all times have access to the records of said interest-bearing account.

5. **Sales Tax:** The Concessionaire shall obtain and maintain a sales tax number for the State of Wisconsin, comply with all sales tax requirements, and pay required sales tax if required to do so by current laws.

6. **Utilities:** The Concessionaire shall pay all utilities and services necessary to operate the concession including telephone and electrical service, but excluding water and solid waste/garbage. The Department shall provide electrical service to the gift shop so that electrical power is available to the concessionaire only. The Concessionaire shall make a reasonable effort to comply with the current Department recycling policies.

7. **Friends Group Volunteers:** The Concessionaire shall be allowed to use either paid staff or volunteers to accomplish the requirements of this Agreement.

8. **Hours of Operation:** The concession may be operated daily throughout the year, including weekends, between the hours of 8:00 a.m. and 4:30 p.m. and during special event. Specific annual and seasonal hours of operation must be agreed upon by both parties. Any changes to the hours of operations must be agreed upon by both parties at least one month prior to the proposed change and the hours of operation must be prominently posted at the Education Center at all times. In the event of inclement weather or low customer volume, a notice of temporary closure is allowed. However, consistent hours during the primary visitor season from the middle of April to the end of October are expected.

9. **Setting Prices:** The Concessionaire may set prices of goods and select which goods are sold dependent on local market forces and customer requests. The Concessionaire may charge prices that are reasonable yet profitable with regard to perceived value dictated by local market forces and customer satisfaction, for all goods and supplies sold, services performed or equipment rented to the public. The Concessionaire, upon request from the Department, shall inform the Department in writing of the current prices for the goods and supplies sold, equipment rented or services performed. If the Department determines that a particular price is too high or too low, the Concessionaire agrees to re-adjust its pricing structure to insure good value for the customer as well as maintaining a reasonable level of profit for the Concessionaire.

10. **Financial Reports:** The Concessionaire shall furnish the Department an annual cash flow statement for the concession and any sub-contractors or agents within 60 days of the close of business for the season or the end of the calendar year, whichever is sooner. The Concessionaire shall maintain a set of records and report on the operation of the concession and any sub-contractors including accounts for each category of expense and revenue, banking account balances, and improvements/equipment expenditures made. The books and records shall be made available to the Department at any reasonable time for the purpose of examination and shall be retained for at least five (5) years.

11. **Fiscal Year:** The business or fiscal year for the Concessionaire shall be a twelve-month period beginning January 1st and ending December 30th annually.

12. **Termination Rights:** If the Department determines that the Concessionaire's management or operation of the concession is unsatisfactory in any substantial respect or if the Department determines that the Concessionaire has failed to carry out this Agreement, the Department shall notify the Concessionaire of such substandard performance in writing and allow the Concessionaire 15 days to correct such deficiencies. If the Concessionaire cannot or will not comply with such written notice within the specified time period, the Department may terminate this Agreement immediately in writing. Upon written notice of termination of the Agreement, the Concessionaire shall be given 7 days to vacate the premises. The Department may thereafter take possession of and operate the concession.

13. **Indemnification and Insurance:** The Concessionaire shall indemnify the Department and its employees against any cause of action, claim, damage, cost, or expense, including reasonable attorney's fees, arising from the management or operation of the concession or from any breach or default by the Concessionaire in the performance of this Agreement or from any negligence of the Concessionaire at the Premises. In case any action or proceeding is brought against the Department by reason of any such cause of action or claim, the Concessionaire, upon notice from the Department, shall defend the Department by counsel reasonably satisfactory to the Department. The Concessionaire shall purchase public liability insurance to be effective on or before the day of the execution of this Agreement naming the **Concessionaire and the State of Wisconsin Department of Natural Resources and its employees as the named insured** in the minimum amount of $500,000.00 single limit per occurrence including coverage of $500,000.00 for bodily and personal injury and $25,000.00 for property damage so that the Department shall be protected from any liability arising out of the operation or management by the Concessionaire of the concession. The Concessionaire shall furnish the Department with a copy of the insurance policy or a certificate of insurance at least two (2) weeks before the Concessionaire begins operations. This Agreement is conditioned on the Department's approval of the insurance policy. Any cancellation or change in coverage of the insurance policy requires immediate notice to the Department.

    The Department shall provide insurance for the Horicon Marsh International Education Center which houses the gift shop through the Wisconsin Risk Management fund and the Concessionaire shall provide insurance coverage for all contents of the gift shop and associated storage. If the Premises or any part of it is destroyed or damaged by water, wind or fire, or by a human or a natural cause so as to make it necessary to rebuild, restore, replace or substantially repair the Premises or any part of it, the Concessionaire agrees that the Department need not rebuild, restore, replace or substantially repair the Premises. In that event, the Concessionaire may choose to rebuild the Premises at its own expense with prior written approval from the Department.

14. **Fire Extinguisher**: The Concessionaire shall provide and maintain at least one operable fire extinguisher and one first-aid kit in the gift shop covered under this Agreement.

15. **Management:** The property on which the Premises is located is managed and administered wholly and exclusively under the jurisdiction of the Department. The management and operation of the concession is subject to all applicable Wisconsin Statutes, Wisconsin Administrative Codes, Wisconsin Department of Commerce or OSHA requirements, and local zoning, health, fire, safety and sales laws. The Concessionaire shall ensure compliance with all such laws. All food preparation and serving procedures must meet applicable codes and ordinances.

16. **Signs:** The erection of signs and advertising or display materials relating to the concession are not allowed unless authorized by the Department. All signs, advertising or display materials, and all publications, stationery, printed or promotional material, and exhibits issued or used by the

Concessionaire shall be paid for by the Concessionaire and shall clearly identify the Premises as property of State of Wisconsin Department of Natural Resources.

17. **Orderly Operation:** The Concessionaire shall conduct and operate the concession in an orderly and business-like manner and shall not permit any disorderly conduct on the Premises. Music amplifying equipment or CD player may be installed only with prior written approval from the Department. The Concessionaire shall have exclusive and sole rights to merchandise on the Premises. Video gambling machines and the sale of pyrotechnic or pornographic or sexually offensive material are not allowed. The Department shall have the final decision on what is sold.

18. **Annual Meetings:** The Concessionaire shall meet with the Department once per calendar year prior to April 1st at a minimum to discuss plans for the forthcoming season. The meeting(s) may be a part of the Friends Group's regularly scheduled meetings or such other meeting dates as mutually agree upon.

19. **Customer Satisfaction:** The Concessionaire shall create and operate a self-evaluation system acceptable to the Department to monitor the public's perception of the quality and prices of goods and services they receive. This should consist of a written questionnaire readily available to the concession's customers instructing customers to respond directly to the Department. In addition, the Department may at its own expense conduct a customer service audit at any time and reasonably require the Concessionaire to adjust procedures to meet Department expectations for high-quality customer service.

20. **Uniforms:** All Concessionaire employees/volunteers dealing with the general public shall wear uniforms or standard clothing or a personal name tag or a combination thereof. Concession staff shall project a hospitable, friendly, helpful, and positive attitude in serving all customers. The Concessionaire shall take appropriate steps to train and monitor this customer service requirement.

21. **Complaints:** The Concessionaire must report all complaints, accidents, injuries and property damage over $100 to the Department within a reasonable time not to exceed 72 hours.

22. **Weapons:** Only authorized Department staff and credentialed officers of the jurisdiction where the property is located may carry weapons. No concession security employee or any other staff, agents or sub-contractors may carry weapons.

23. **Premises Maintenance:** The Concessionaire shall be responsible for minor maintenance of the Premises, including any building which is used for this concession, and shall keep the Premises and the immediate surrounding grounds in a clean, neat and sanitary condition at all times. The Concessionaire shall make no improvements, alteration, additions, or changes to the Premises without the prior written approval of the Department. All improvements made by the Concessionaire to the Premises shall become the property of the Department.

24. **Personal Property:** All personal property necessary to operate this concession shall be purchased by the Concessionaire from the funds generated by the concession and thereupon become property of the Department. The Concessionaire shall not remove such personal property at any time during the term of this Agreement and, upon termination of the Agreement, shall surrender use of said personal property which is affixed to the building.

25. **Fixed Assets**: The Concessionaire agrees to provide and maintain the shelves, counters and other displays used in the gift shop.

26. **Entry Rights:** The Department may enter upon the premises at any time for any reason and may inspect or make such repairs and improvements, upon reasonable notice, as the Department deems necessary. The Concessionaire shall not cause or allow any waste or nuisance upon the Premises. The

Concessionaire shall maintain all properties that are subject to this Agreement, both real and personal, in their present condition (ordinary wear and tear excepted), and shall maintain high standards of cleanliness and sanitation.

27. **Assignment of Agreement:** The Concessionaire shall not assign, sublease, sub-contract or otherwise transfer this Agreement, nor mortgage or pledge rights under it except with the prior written approval of the Department. Furthermore, the Concessionaire shall not create any lien, security interest or encumbrance on or in the premises, including any building.

28. **Adequate Stock:** The Concessionaire shall maintain an adequate stock of goods and supplies and provide appropriate and necessary services in accordance with the intent of this concession.

29. **Workers' Compensation:** Where applicable, the Concessionaire shall furnish full worker's compensation coverage for its employees and shall comply with all social security and withholding tax laws and rules. A person claiming that coverage is not required under Chapter 102, Wis. Stats., shall upon request from the Department, provide the basis for such opinion in writing to the Department.

30. **Non-discrimination:** In connection with the performance of work under this Agreement, the Concessionaire agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01(5), sexual orientation or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Except with respect to sexual orientation, the Concessionaire further agrees to take affirmative action to ensure equal employment opportunities.

31. **Affirmative Action Plan:** Agreements estimated to gross ten thousand dollars ($10,000) or more annually require the submission of a written affirmative action plan. Concessionaires with an annual work force of less than ten employees are exempted from this requirement. The plan shall describe where job vacancies are publicized and what action is expected to target minority or under-represented groups of citizens.

32. **Independent Contractor:** The Concessionaire is an independent contractor and not an employee or agent of the Department. The Concessionaire assumes full responsibility for any liability that may arise out of the management or operation of this Agreement.

33. **Trespass:** The Concessionaire agrees to take reasonable action necessary to guard against trespass and to keep secure any room or building used in the concession during the season that the concession is open.

34. **Temporary Closure:** If the Department determines that an emergency exists, the Department may order the concession to be temporarily closed.

35. **Included In This Agreement:** In this Agreement, the Department and the Concessionaire include their respective employees, officers, members; directors, agents, servants, contractors, representatives, partners, assignees and successors. If the Concessionaire ceases to exist in fact or by law, the Department may immediately terminate this Agreement and, without waiving any remedy available to it, perform this Agreement.

36. **Non-Competitive:** The Concessionaire agrees that the Department has the right to license or issue permits for external concessions. The Department agrees that it shall not knowingly permit any new concessions, either for-profit or non-profit, to directly compete with the Concessionaire within the Horicon Marsh International Education Center and State Wildlife Area.

37. **Other Agreements Superseded:** This Agreement, together with referenced parts and attachments, shall constitute the entire Agreement and previous agreements communications or agreements pertaining to this Agreement are hereby superseded. Any contractual revisions including payment adjustments and time extensions must be made by an amendment to this Agreement or other written documentation, signed by both parties in advance of the effective date. The Concessionaire shall notify its insurance company and its surety, if any, of any amendment.

In witness whereof, the State of Wisconsin Department of Natural Resources has caused this concession Agreement to be signed at Madison, Wisconsin, for the Department's Secretary by the Department's Regional Director.

State of Wisconsin
Department of Natural Resources
For the Secretary

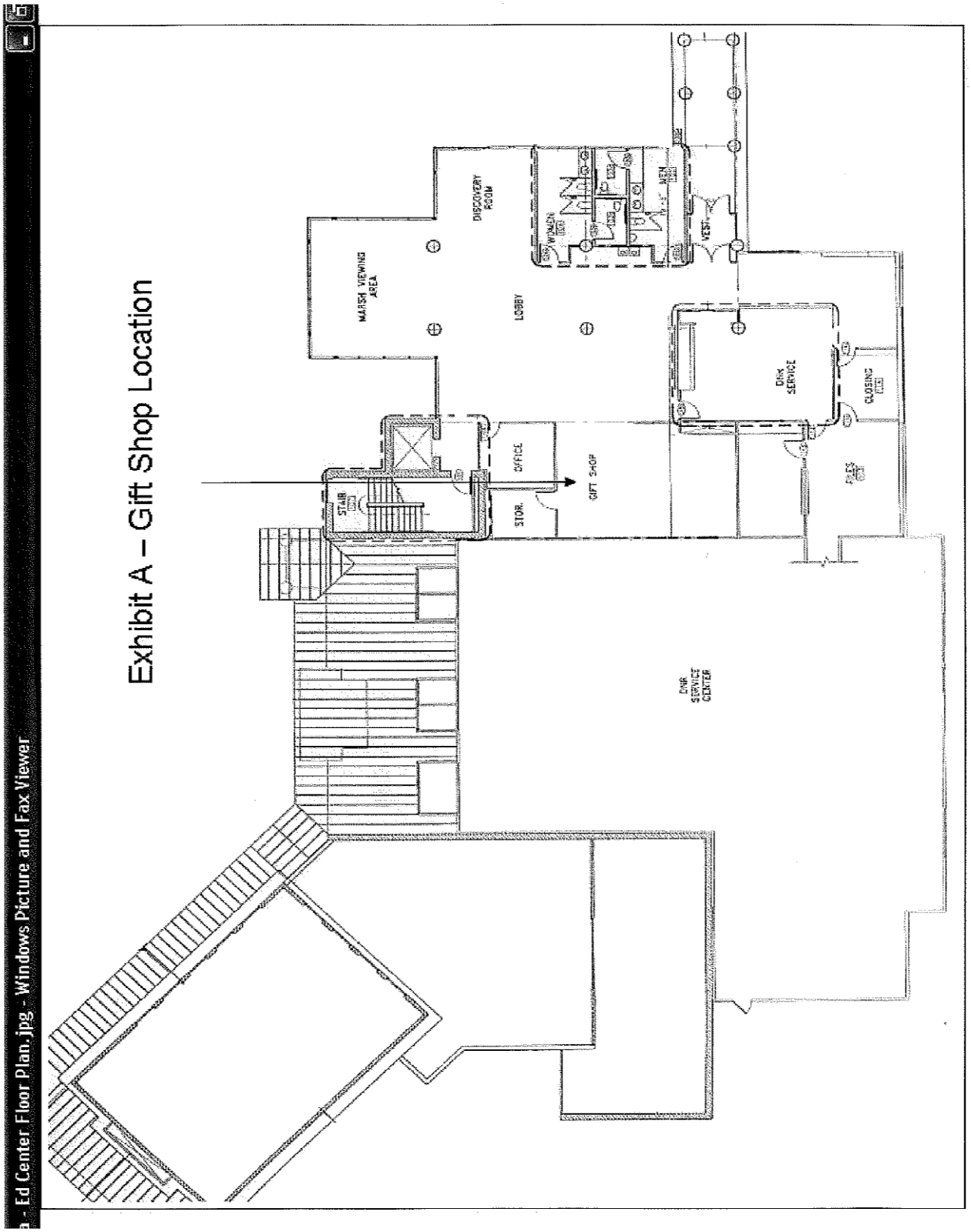
Date Signed 9/8/11 By Matt Moroney for ~~Regional Director~~ SECRETARY

Has caused this concession agreement to be signed at Horicon, Wisconsin, by its President and Secretary.

Date Signed 4/20/11 Frederick C. Schwertfeger
President

Date Signed 4/22/11 Nanette K. Gassner
Friends Group Secretary

attachments: A


Ed Center Floor Plan.jpg - Windows Picture and Fax Viewer
Exhibit A – Gift Shop Location
MARSH VIEWING AREA
DISCOVERY ROOM
LOBBY
WOMEN
MEN
VEST.
DRIVE SERVICE
CLOSING
FILES
OFFICE
STOR.
GIFT SHOP
STAIR
DNR SERVICE CENTER

APPENDIX B: NR 44 ROAD CLASSIFICATIONS

Public roads are defined in 340.01 (22), Wisconsin Statutes. Classifications for WDNR roads (NR 44.07(3), Wis. Admin. Code) reflect a range of development and maintenance standards:

- **Primitive roads** are temporary or permanent seasonal roads with a maximum sustained cleared width normally not exceeding 12 feet, with little or no roadbed grading, minimal cut and fill, and a surface of primitive or native material.

- **Lightly developed roads** are temporary roads, permanent seasonal roads or permanent all-season roads that are primarily a single lane with a maximum sustained cleared width normally not exceeding 16 feet, are lightly to well-graded with minimal cut and fill, are surfaced with native or aggregate materials except in limited special use situations where asphalt may be used, and have a maximum design speed of 15 miles/hour (mph).

- **Moderately developed roads** are permanent seasonal roads or permanent all-season roads that typically have 2-lanes, but may be one-lane, have a maximum sustained cleared width normally not exceeding 45 feet for 2-lane and 30 feet for one-lane, have a well-graded roadbed and may have moderate cuts and fills and shallow ditching, have a surface of aggregate, asphalt or native material, and a maximum design speed of 25 mph.

- **Fully developed roads** are permanent all-season roads with a cleared width normally of 50 feet or more, a roadbed with cuts and fills as needed, an aggregate, asphalt or other paved surface and are designed for speeds exceeding 25 mph.